


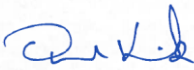


# Northumberland Line – Ashington

Transport Assessment

Northumberland County Council

January 2020

## Quality information

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# 1. Introduction

1.1.1 AECOM is currently working with Northumberland County Council to reintroduce passenger services on the railway line between Ashington and Newcastle. As part of the scheme, five new railway stations will be delivered, with a six station in North Tyneside upgraded to serve both heavy rail and the Tyne and Wear metro. The six stations are as follows:

- Ashington (Northumberland);
- Bedlington (Northumberland);
- Blyth Bebside (Northumberland);
- Newsham (Northumberland);
- Seaton Delaval (Northumberland);
- Northumberland Park (North Tyneside).

1.1.2 The route of the railway line and the proposed stations is shown in Figure 1. The scheme is hereinafter known as the Northumberland Line.

**Figure 1. Northumberland Line Scheme**



## 1.2 The Brief

- 1.2.1 AECOM has been commissioned by Northumberland County Council (NCC) to undertake a Transport Assessment (TA) to support a planning application for the construction of a new station with proposed car park at Ashington associated with the above proposals.
- 1.2.2 Each of the six proposed stations within the SEN corridor will be assessed on its own merits. This Transport Assessment will only assess the proposed station at Ashington.
- 1.2.3 The purpose of this TA is to provide an independent, comprehensive and systematic review of the transport implications relating to the proposed development. It identifies the anticipated transport impacts of the scheme and outlines whether any necessary improvements to accessibility and safety for all modes of travel are required.
- 1.2.4 The TA has been prepared in accordance with the Planning Practice Guidance – Travel Plans, Transport Assessments and Statements in Decision Taking (March 2014).
- 1.2.5 A Scoping Report was submitted to Northumberland County Council in April 2020 detailing the proposed methodology for undertaking the Transport Assessment and is attached to this TA as Appendix A. The Assessment has been prepared in accordance with the comments on the Scoping Report provided by NCC in September 2020. A level crossing impact study has also been undertaken and that report should be read as part of the planning application.
- 1.2.6 An outline Construction Environment Management Plan (CEMP) and signage strategy is envisaged to be conditioned as part of the planning decision.

## 1.3 COVID-19

- 1.3.1 Given the impact of the COVID-19 pandemic on the ability to collect up to date traffic data on the local highway network that is considered representative of 'normal' operating conditions, AECOM proposed assessing the potential traffic impact on the local highway network using historical data sources. This approach was agreed during scoping discussions with NCC.
- 1.3.2 Where no historical data exists, it has been agreed during scoping with NCC that some junction assessments will not be undertaken at this time.

## 1.4 Report Structure

- 1.4.1 The report from here on follows the following structure:
  - **Section 2** – Provides context for the development in relation to relevant policies and guidelines;
  - **Section 3** – Examines the existing highway conditions surrounding the proposed station;
  - **Section 4** – Examines the accessibility by sustainable transport;
  - **Section 5** – Provides details of the proposed development;
  - **Section 6** – Determines the Trip Generation and Distribution at the Site;
  - **Section 7** – Assesses the Impact on the surrounding highway network as a result of the proposed development;
  - **Section 8** – Considers recent accident data in relation to the site; and
  - **Section 9** – Provides a concise summary and conclusion.

## 2. Policy

### 2.1 Introduction

2.1.1 This Chapter will consider transport-related policy and guidance, as set out in the following documents:

- The National Planning Policy Framework (NPPF);
- Transport White Paper: The Future of Transport - A Network for 2030;
- Transport for the North – Strategic Development Corridors;
- The Local Transport Plan (LTP3);
- Northumberland Local Plan
- Northumberland County Council – Economic Strategy; and
- Nexus Metro and Local Rail Strategy;

### 2.2 National Planning Policy

#### National Planning Policy Framework (NPPF)

- 2.2.1 In England, there is a hierarchical structure of policy covering national and local planning. At a national level the National Planning Policy Framework (NPPF) sets out the Government's planning policies and how these are expected to be applied. At a local level, development plans set out planning policy for the area.
- 2.2.2 The NPPF is based on a range of core planning principles, which are aimed at supporting the focus on sustainable plan-led development.
- 2.2.3 Transport specific policies play a key role in supporting and achieving the core planning principles and are intrinsically linked to the objective of sustainable development. The NPPF specifically states that development should only be prevented or refused on transport grounds if there would be an unacceptable impact on highway safety or where the residual cumulative impacts of development are severe.
- 2.2.4 The NPPF seeks to encourage solutions to support reductions in gas emissions and reducing congestion which should be enshrined in Local Plans, including:
- Supporting key interchange facilities;
  - Provision of viable infrastructure to support sustainable development (e.g. electric charging points);
  - Prioritise sustainable modes of transport and support development with good access to public transport;
  - Provide a balanced land-use approach encouraging mixed use development which reduce the need to travel; and
  - Create attractive town centre environments which are supported by appropriate car parking charging mechanisms.
- 2.2.5 Paragraph 108 of the NPPF also states that whilst assessing applications for development, it should be ensured that:
- appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
  - safe and suitable access to the site can be achieved for all users; and
  - any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.
- 2.2.6 Paragraph 106 of the NPPF refers to parking standards and states that:
- “Maximum parking standards for residential and non-residential development should only be set where there is clear and compelling justification that they are necessary for managing the local road network, or for optimising the density of development in city and town centres and other locations that are well*

*served by public transport (in accordance with chapter 11 of the Framework). In town centres, local authorities should seek to improve the quality of parking so that it is convenient, safe and secure, alongside measures to promote accessibility for pedestrians and cyclists."*

- 2.2.7 In this respect, there should be no limit on the number of spaces provided at each of the stations unless the increased traffic around the station would impact on the performance of the highway network or where there is a case for optimising the density of development at town centre locations.
- 2.2.8 The core planning principles above provide a framework to provide inclusive, accessible, well connected and sustainable development.

#### **Transport White Paper: The Future of Transport - A Network for 2030**

- 2.2.9 The Government's vision for a sustainable local transport system is set out in the January 2011 Transport White Paper: "Creating Growth, Cutting Carbon – Making Sustainable local Transport Happen."
- 2.2.10 The White Paper acknowledges that transport provision is essential for economic growth if the Government is to improve the economic deficit which it is currently facing. However, the Paper also recognises, that the current levels of carbon emissions from transport cannot be sustained if the nation is to meet its national commitments on climate change as well as creating a safer and cleaner environment in which to live. With this in mind, the Government highlights sustainable transport solutions as a means by which the economy can grow which will also see a positive impact on the local environment.
- 2.2.11 The Transport White Paper highlights how local authorities are free to set their own parking policy and charges for the local area. Local authorities are encouraged to provide electric charging points in car parks.
- 2.2.12 In respect to the Northumberland Line, the aim is to restore a rail line to reach a wider area which currently has poor public transport facilities.

#### **Transport for the North (TfN) Strategic Development Corridors**

- 2.2.13 TfN has recently published a multi-modal, long-term Strategic Transport Plan for the North of England. The objective is to connect the key economic areas of the North to drive growth, improve access to jobs and ensure the North is a great place to invest and live. The Plan aims to inform how the Government, Network Rail, Highways England and HS2 Ltd work with TfN to deliver investment in transport infrastructure.
- 2.2.14 Seven broad corridors of opportunity have been identified. Each corridor represents an area where evidence suggests investment in transport infrastructure will enable transformational economic growth. The proposals for improvements in the Strategic Development Corridors will consider the needs of people and business and align with local transport investment.
- 2.2.15 'Connecting the Energy Coasts' is one such corridor aimed at:  

*Improving connectivity between some of the UK's important non-carbon energy advanced manufacturing, research assets, and economic centres in Cumbria, Lancashire, North Yorkshire, the North East and Tees valley.*

*Transport investment within this corridor could also unlock employment, supply chain and housing opportunities as part of the Government's Industrial Strategy... Poor transport infrastructure is currently a key constraint to securing this potential investment. Improving transport links within this corridor would also support growth in the tourism and leisure industry.*
- 2.2.16 This is particularly pertinent to the industries evolving around the Blyth Estuary and Energy Central. The aim for this corridor is to better connect people and goods between energy and research assets along the North West and North East coastlines and the national road and rail networks, to provide a more resilient East-West route across the North of England. In policy terms, the strategic development corridors support all of the more local policy documents summarised elsewhere in this assessment.

## 2.3 Local Policy

### The Local Transport Plan (LTP3)

- 2.3.1 The Third Local Transport Plan for Northumberland (LTP3) is the statutory transport plan for the Northumberland and sets out the overall vision and objectives for the period 2011-2026. The proposed car park will operate in line with LTP3 in supporting the growth of local economy, enhance accessibility to the town centre and promote low carbon initiatives by providing electric vehicle charging bays.
- 2.3.2 The LTP's vision for the 15-year period is as follows: "To make Northumberland a place that is resilient for the future."
- 2.3.3 The vision is underpinned by the following five objectives:
- Economy;
  - Low Carbon;
  - Accessibility;
  - Health and Safety; and
  - Quality of Life.
- 2.3.4 A Regional Transport Plan is currently under development following the broad vision set out in the NECA One Journey, a 20-year transport manifesto for the North East. The governance changes recently will still enable the North of Tyne Combined Mayoral Authority to help develop and advise the regional transport strategy, ensuring it is fit for purpose for the agenda of the newly formed combined authority.

### Northumberland Local Plan

- 2.3.5 The Local Plan set out policies to provide the needs for Northumberland for a 20-year period through to 2036. The Local Plan is currently is currently being examined and is therefore at an advanced stage of preparation.
- 2.3.6 The Local Plan for Northumberland sets out policies to provide the needs for Northumberland for a 20 year period through to 2036. One of the key strategic objectives of this plan is to improve connectivity and movement in order to meet the changing needs of people and places. This will be achieved by utilising existing infrastructure and securing the delivery of new and necessary infrastructure upgrades. The Northumberland Line scheme will make a big contribution to delivering this objective.
- 2.3.7 Given the nature of the Northumberland Line scheme, no minimum or maximum parking standards are provided by NCC in the Local Plan. However, the Plan states that the following should be taken into consideration:
- The road safety and environmental problems as a result of increased parking demand in the area; and
  - The impact on any parking restrictions, or lack of, in force on highways in the area.
- 2.3.8 Policy TRA 1 Promoting Sustainable Connection (Strategic Policy) states that the Council will support the development that:
- Promotes a spatial distribution which creates accessible development, reduces the need to travel by car, and maximises the use of sustainable modes of transport;
  - Promotes good design principles in respect of the permeability, connectivity and legibility of buildings and public spaces; and inclusive access;
  - Promotes sustainable transport choices, including supporting, providing and connecting to networks for walking, cycling and public transport; and infrastructure that supports the use of low and ultra low emission vehicles;
  - Ensures delivery of cycle parking and supporting infrastructure;
  - Protects, enhances and supports public rights of way;

- Supports the delivery of reliable, safe and efficient transport networks, in partnership with other organisations, service providers and developers;
  - Requires development to be designed to enable charging of plug-in and other ultra low emission vehicles in safe, accessible, convenient locations; and
  - Requires development proposals which generate significant amounts of movements to be supported by transport assessments/transport statements, and travel plans, and where appropriate delivery/servicing plans.
- 2.3.9 Policy TRA 2 The effects of development on the transport network states that all developments affecting the transport network will be required to:
- Provide effective and safe access and egress to the existing transport network;
  - Include appropriate measures to mitigate and manage any adverse impacts on the transport network including any contribution to cumulative impacts;
  - Minimise conflict between different modes of transport, including measures for network, traffic and parking management;
  - Facilitate the safe use of the network, including suitable crossing points, footways and dedicated provision for cyclists where necessary;
  - Suitably accommodate the delivery of goods and supplies, access for maintenance and refuse collection; and
  - Minimise any adverse impact on communities and the environment, including noise and air quality.
- 2.3.10 Policy TRA 5 focuses on securing the re-introduction of passenger services along the Northumberland Line. A key priority of the Council is the reintroduction of passenger services on the Northumberland Line. This will help facilitate development growth across the South East Delivery Area. The line has significant potential to improve links between the towns, encourage access to employment opportunities, and incentivise employers to locate in South East Northumberland, in addition to its current freight transport role.
- 2.3.11 The following sites for stations have been identified within the Policy TRA 5 and land will be safeguarded at the following locations:
- Woodhorn;
  - Ashington;
  - Bedlington Station;
  - Blyth Bebside;
  - South Newsham;
  - Seaton Delaval; and
  - Seghill (future phase)
- 2.3.12 This transport assessment will set out the proposals and suitability of the site for future development of the area and detail level of car parking required.

#### Northumberland County Council – Economic Strategy

- 2.3.13 NCC's economic strategy sets out two priorities for transport:
- Ensuring that Northumberland is well connected into the regional economy, with the best possible intra-regional connectivity and external connections via national and international road, rail and air routes;
  - Improving transport and infrastructure within Northumberland and the Region.
- 2.3.14 The economic strategy cites the reopening of the Northumberland Line to passenger services as a core project within Northumberland due to the catalytic effects it could have for other development. A strategic growth corridor is being promoted alongside the Northumberland Line and significant investment and regeneration is ongoing in Ashington town centre.



- 2.3.15 The strategy also recognises that the scheme will provide improved access to Tyne and Wear, which will allow local residents to access additional opportunities. The need to enhance economic growth in Northumberland, and provide improved connectivity to opportunities in neighbouring areas, is further emphasised when considering the proposals set out in the Northumberland Local Plan.
- 2.3.16 The Plan sets out the strategic planning policies for the County and makes provision for 17,700+ new homes in Northumberland between 2016 and 2036. The strategy acknowledges that the provision of new transport infrastructure will be essential to achieving these growth aspirations.

#### **Nexus Metro and Local Rail Strategy, 2016**

- 2.3.17 A new Metro and Local Rail Strategy was developed to cover the geography of the North East Combined Authority (NECA) area, the integration of local rail and Metro services, and the potential to exploit underused and disused railway assets and alignments across the region.
- 2.3.18 The objectives of the Metro and Local Rail Strategy are:
- To provide reliable, accessible and comfortable Metro and Local Rail services with high levels of customer satisfaction within available resources;
  - To grow the Metro and Local Rail network and their modal share as part of an integrated public transport network; and
  - To achieve value for money.
- 2.3.19 This strategy outlines plans to enable Metro and local rail to further develop the economy of the NECA area by providing reliable, sustainable transport for people to use to get to work, education, healthcare and leisure facilities. By providing centre-to-centre links avoiding highway congestion, the network will help to redefine the mental map of the region and encourage wider journey to work patterns and travel horizons.

## **2.4 Summary**

- 2.4.1 It is considered that the proposed development will operate in a manner in keeping with the overarching objectives of the Northumberland Local Plan and NPPF in terms of supporting local economic growth as well as ensuring the site is accessible with suitable level of parking.

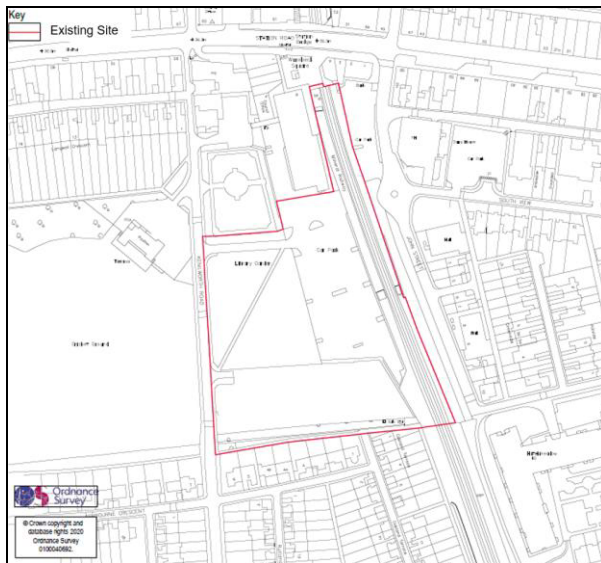


## 3. Existing Highway Conditions

### 3.1 Introduction

- 3.1.1 This section describes existing land uses and highway conditions both at and within the vicinity of the proposed station. The proposed station location is adjacent to Kenilworth Road and Station Yard car park.
- 3.1.2 The site is currently partially occupied by Station Yard car park which is to be expanded south into an existing field, and west into an existing green space area east of Kenilworth Road. The site is accessed via a priority T-junction at Kenilworth Road which serves as an access to the existing car park, which will also be utilised as a vehicular access to the proposed station. The existing site is shown in Figure 2.

**Figure 2. Existing Site**



Source: AECOM (Drawing Ref: 60601435-ACM-XX-ZZ-DRG-LEP-000015)

### 3.2 Surrounding Highway Network

- 3.2.1 Figure 3 shows the location of the proposed station in relation to the surrounding local road network (LRN).

**Figure 3. Surrounding Local Road Network**



Source: Googlemaps, 2020

3.2.2 The Local Road network described in this section, consists of:

- Kenilworth Road;
- Green Lane;
- Station Road; and
- A196 North Seaton Road.

#### Kenilworth Road

3.2.3 Kenilworth Road is subject to 20mph speed limit and runs in a north-south direction between Station Road and Green Lane. To the north, the carriageway operates a one-way system for approximately 75m running south from Station Road, beyond which it becomes a two-way carriageway. The carriageway is subject to traffic calming measures including road humps and chicanes consisting of road narrowing, with northbound traffic giving way to southbound traffic as shown in Figure 4.

**Figure 4. Traffic Calming Measures at Kenilworth Road**



*Source: Google Maps, 2020*

- 3.2.4 Towards the northern section of the carriageway, it is subject to a traffic regulation order of no stopping at any time which is indicated on-ground by double yellow lines.
- 3.2.5 Footways and street lighting are present on both sides of the carriageway throughout its duration. Uncontrolled pedestrian crossings consisting of lowered kerbs are accommodated at various points of the carriageway.
- 3.2.6 Kenilworth Road provides access to Station Yard car park via a priority T-junction, no footways are provided along the duration of the access road into the car park however, a pedestrian link is provided across the open greenfield space provided to the west of the car park, feeding into the footway provided to the east of the carriageway, as shown in Figure 5. At the entrance to the car park where it forms a T-junction with Kenilworth Road, there is a "no motor vehicles" sign present, also shown in Figure 5 on the right.

**Figure 5. Station Yard Car Park Access Priority T-junction**



Source: Google Maps, 2020

### Green Lane

- 3.2.7 Green Lane is a two-way single carriageway subject to 20mph speed limit. To the east, the carriageway feeds into the A196 North Seaton Road via a signalised T-junction with pedestrian crossing present at each arm which also include lowered kerbs and tactile paving.
- 3.2.8 There are traffic calming measures present consisting of speed bumps and on-road “20” speed limit and “slow” markings.
- 3.2.9 Approximately 90m west from its junction with the A196, an automatic half barrier level crossing is present with yellow junction box and level crossing lights. The crossing is protected by barriers on the approaching carriageways only as shown in Figure 6.

**Figure 6. Station Yard Car Park Access Priority T-junction**



Source: Google Maps, 2020

- 3.2.10 Uncontrolled pedestrian crossings are provided at various locations throughout the duration of the carriageway consisting of lowered kerbs and pedestrian refuge island. At the point where the Kenilworth Road forms a junction with Green Lane a crossing is provided on each side of the junction as shown in Figure 7.



**Figure 7. Uncontrolled Pedestrian Crossing at Green Lane**



Source: Google Maps, 2020

- 3.2.11 For the majority of the length of Green Lane a footway is provided on both sides of the carriageway; within proximity of the level crossing, a footway is only provided to the east of the carriageway.

### Station Road

- 3.2.12 Station Road is a two-way single carriageway subject to 20mph speed limit. The frontages along the carriageway are predominantly a mixture of retail and residential units. The carriageway runs in a west – east direction, running between Booths Road and the A196 North Seaton Road.
- 3.2.13 At the point where Station Roads meets the A196 North Seaton Road, the carriageway is subject to one-way operation for approximately 205m, only allowing westbound travel (from the junction of Station Road with the A196). No entry signs are present at the end of the one-way system as shown in Figure 8.

**Figure 8. Uncontrolled Pedestrian Crossing at Green Lane**



Source: Google Maps, 2020

- 3.2.14 Within the one-way system, a number of parking bays are present on the south side of the carriageway which are subject to operation times from 8am to 6pm, allowing parking for 30min and no return within 2 hours. Through this section of the carriageway, footways measure approximately 2.7m, accommodating street furniture consisting of benches and planting.
- 3.2.15 The carriageway accommodates a number of pedestrian crossings including signalised crossings, uncontrolled pedestrian crossings consisting of lowered kerbs and tactile paving as well as zebra crossings which also include a pedestrian refuge island.

- 3.2.16 At the point where Station Road becomes a two-way single carriageway, a number of parking bays are provided at various locations throughout the length of the carriageway which offer 2-hour free parking from 8am until 6pm, Monday to Saturday with no return for 2 hours.
- 3.2.17 There are also two taxi ranks present, one to the north and south of the carriageway, respectively. A number of bus stops are also accommodated.

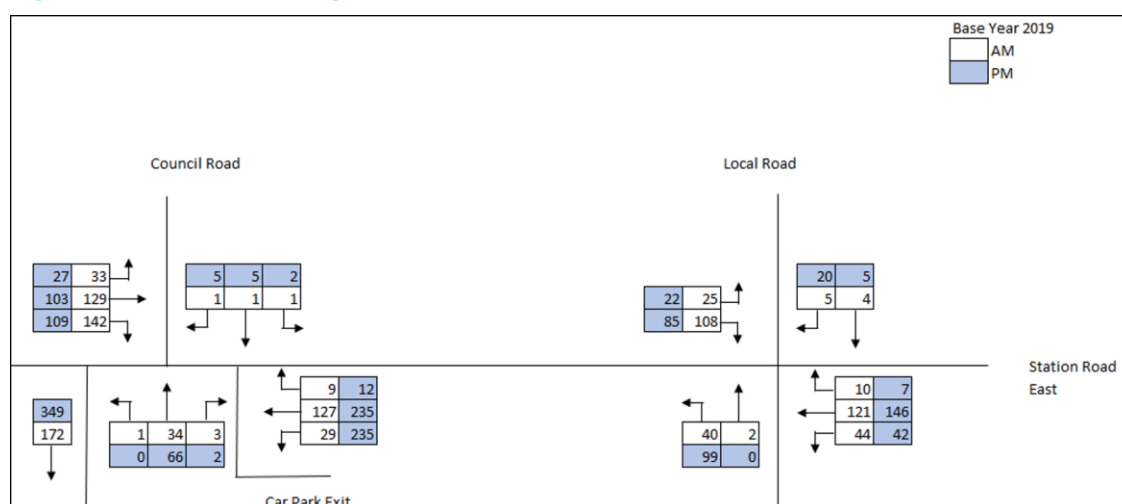
### A196 North Seaton Road

- 3.2.18 The A196 North Seaton Road runs in a north – south direction for approximately 9.7km between Morpeth and Ashington. Within close proximity of the site it is a two-way single carriageway subject to 30mph speed limit, street lighting is provided on both sides of the carriageway. The A196 North Seaton Road accommodates a number of signalised and uncontrolled pedestrian crossings consisting of lowered kerbs and tactile paving. Pedestrian guardrails are present in close proximity of the signalised crossings.
- 3.2.19 There are a number of parking bays present in addition to a taxi rank.

## 3.3 Baseline Traffic Flows

- 3.3.1 As part of establishing the existing condition and developing a robust baseline for assessment, a data collection exercise has been undertaken to establish current traffic flows on the network. AECOM utilised existing available data for the area, using Manual Classified Count (MCC) previously conducted by MHC in May 2019 on behalf of AECOM at Station Road / John Street T-junction and Station Road / Kenilworth Road / Council Road crossroads.
- 3.3.2 The MCC was conducted on Tuesday 21st of May 2019 for a duration of 12 hours between 07:00 and 19:00. The MCC revealed that 08:30 – 09:30 was the AM peak and 16:45 – 17:45 was recorded as PM peak. Baseline data is shown in Figure 9. Traffic Flow Diagrams are attached to this TA as Appendix B.

**Figure 9. Baseline Flow Diagram**



- 3.3.3 The MCC recorded that during the AM Peak there were 127 Passenger Car Unit (PCU) travelling westbound and 129 PCU eastbound along Station Road at its junction with Council Road. During the PM peak, there were 235 PCU travelling westbound and 103 PCU eastbound.
- 3.3.4 The MCC also revealed that during the AM Peak there were 172 PCU travelling southbound along Kenilworth Road. During the PM peak, there were 349 PCU travelling southbound.

### Baseline Traffic Flows Background

- 3.3.5 AECOM commissioned MCC and Queue surveys in order to inform the Grip 3 (optioneering) phase of the station design. The intention was to update these surveys prior to the preliminary design phase. As previously mentioned, the impact of COVID-19 meant that this was no longer possible, as such, in

agreement with NCC these surveys were utilised as part of the historic data set to establish the 2019 baseline flows. It is important to note that these surveys were carried out in 2019 during a neutral month and day and are therefore considered acceptable to use in establishing the 2019 baseline. The surveys were intended to be updated post optioneering primarily to address any shortfalls in count locations, however, these surveys are considered to be robust. The JTC and queue data can be found in the Appendix C.

### 3.4 Summary

- 3.4.1 This section has provided an overview of nearby local roads that will provide access to the proposed station.

## 4. Sustainable Access to the Site

### 4.1 Introduction

- 4.1.1 This sub-section summarises the accessibility to the proposed station, demonstrating the accessibility and connectivity of the site.

### 4.2 Pedestrian Connectivity

- 4.2.1 A distance of 2km is regarded as the preferred maximum acceptable walking distance for pedestrians without mobility impairments for some common facilities. The report 'Providing for Journeys on Foot', by the Institute of Highways and Transportation (CIHT) dated 2000 includes the preferred walking distances shown in Table 1.

**Table 1. CIHT Walking Distance Guidance**

CIHT Standard	Town Centres	Commuting/ School	Elsewhere
Desirable	200m	500m	400m
Acceptable	400m	1km	800m
Preferred Maximum	800m	2km	1.2km

Source: *Providing for Journeys on Foot. CIHT, 2000*

- 4.2.2 Table 1 illustrates that 2km is regarded as the preferred maximum acceptable walking distance for pedestrians for some common facilities such as commuting to work or school.
- 4.2.3 Table 2 summarises the approximate walking distance to a number of key local facilities within the vicinity of the proposed station, from the approximate centre of the site.

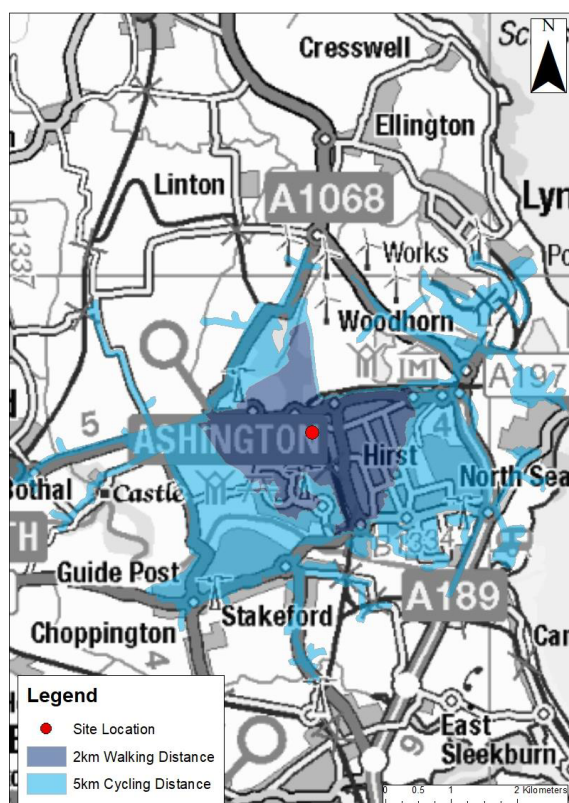
**Table 2: Desirable Walking Distance**

Facility	Walking Distance	Within 2km
Pubs and Restaurants	400m – 1.4km	Yes
Retail outlets	300m – 2km	Yes
Core retail area	500m	Yes

- 4.2.4 The area surrounding the proposed station has reasonable pedestrian links which are well lit, providing accessibility to local residential areas and local amenities. Existing access from the site to Station Street and east to Ashington centre can be made either via Kenilworth Road, or an existing pedestrian ramp leading to Wansbeck Square.
- 4.2.5 The proposed station is easily accessible to nearby residential areas which fall within 2km walking distance including residential streets accessed from Kenilworth Road as well as residential area bound by Booths Road to the west, Rotary Parkway to the north and Asda Supermarket to the east.
- 4.2.6 A controlled pedestrian crossing can be found 140m north of the existing access at Kenilworth Road / Station Road junction, this provides a safe crossing towards residential and retail areas within walking distance of the proposed station. There is a good provision of uncontrolled pedestrian crossings throughout the duration of Kenilworth Road and nearby residential roads.
- 4.2.7 The proposed station is within an acceptable walking distance of a wide variety of local amenities located along Station Road which is approximately 3-minute walk (210m) from the centre of the site.
- 4.2.8 Figure 10, shows the 2km walking and 5km cycling isochrones, demonstrating that the site is well within the maximum walking distance to the town centre and retail units located along Station Road and the A196 North Seaton Road.



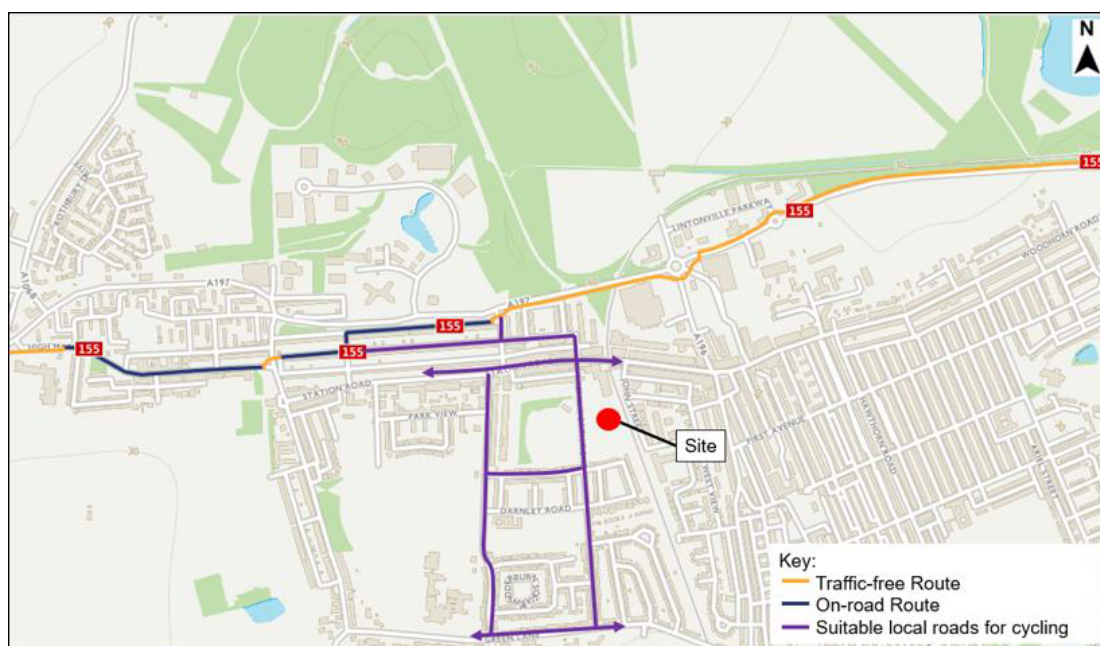
Figure 10. Walking and Cycling Isochrones



### 4.3 Local Cycle Network

- 4.3.1 Current planning guidance published by Sustrans and the National Travel Survey state that cycling has the potential to substitute short car trips, particularly those less than 5km and has the potential to cater for many more trips than current levels. Cycle use is considered a feasible means of transport over short to medium distances. As previously shown in Figure 11, majority of the residential areas are within Ashington's 5km cycling distance. Cycling network within close proximity of the site is shown in Figure 11.

Figure 11. Cycling Network



Source: Sustrans, 2020



- 4.3.2 A cycle route is provided to the north of the A197, known as route 155 of the National Cycle Network between Morpeth and Newbiggin by the Sea. The route is a combination of on-road and traffic-free provision and links in with a number of traffic-free local routes. Route 155 provides an opportunity to reach the station via cycling from residential areas of Ashington.
- 4.3.3 A number of surrounding local roads have been identified as suitable for more confident and experienced cyclists to reach Route 155 as well as residential and retail areas as shown in Figure 11. The local road identified as suitable for commuting purposes are subject to 20mph speed limit and speed calming measures therefore, encouraging low speeds and cycling.

## 4.4 Public Transport Connection

- 4.4.1 The bus is generally considered a viable mode of travel over short and medium distances although some routes and services with limited stops can make longer distances viable. The CIHT in their document 'Planning for Public Transport in Developments' (1999) advises that bus stops should be located within 400m of a development for ease of accessibility.
- 4.4.2 The proposed station is located approximately 750m from Ashington Bus Station to the east. As discussed in Section 4.2.4 an accessible route to central Ashington including this location is to be developed as part of the station proposals. It is anticipated that the presence of the rail station would ensure operators take advantage of the existing bus stop located along Station Road, approximately 250m from the centre of the site as shown in Figure 12. Currently, whilst the bus infrastructure is present at these locations, there are no active bus services using them.
- 4.4.3 Further two operational bus stops are located to the west of the Station Road, approximately 450m from the centre of the site.

**Figure 12. Bus Stop Locations**



- 4.4.4 A bus stop on the northern side of the carriageway along Station Road is provided with a shelter and timetable. Bus cages are present at both bus stops, with westbound services stopping on the main carriageway. The northern bus stop accommodates an inset bus layby. Both bus stops offer regular services to Morpeth and Bedlington. Table 3 provides summary of existing bus services.

**Table 3. Existing Bus Services**

Service	Route	Approximate Frequency	
		Monday - Fridays	Weekends
35	Woodhorn Church – Newbiggin by the Sea	Every 20 min	Every hour
434	Linton – Bedlington Station via Ashington	Every hour	Every hour*

\*No service on Sunday

- 4.4.5 The 35 operates from 06:23 until 18:17 on weekdays meanwhile 434 operates from 09:26 until 14:21. It is reasonable to assume that these services will have some attractiveness to commuters to reach residential areas and shopping area of Ashington as an alternative to walking and cycling.

## 4.5 Summary

- 4.5.1 This section also demonstrates that the proposed station is well connected to local pedestrian and cycling network and is within acceptable walking distance to greater majority of Ashington.

## 5. Development Proposals

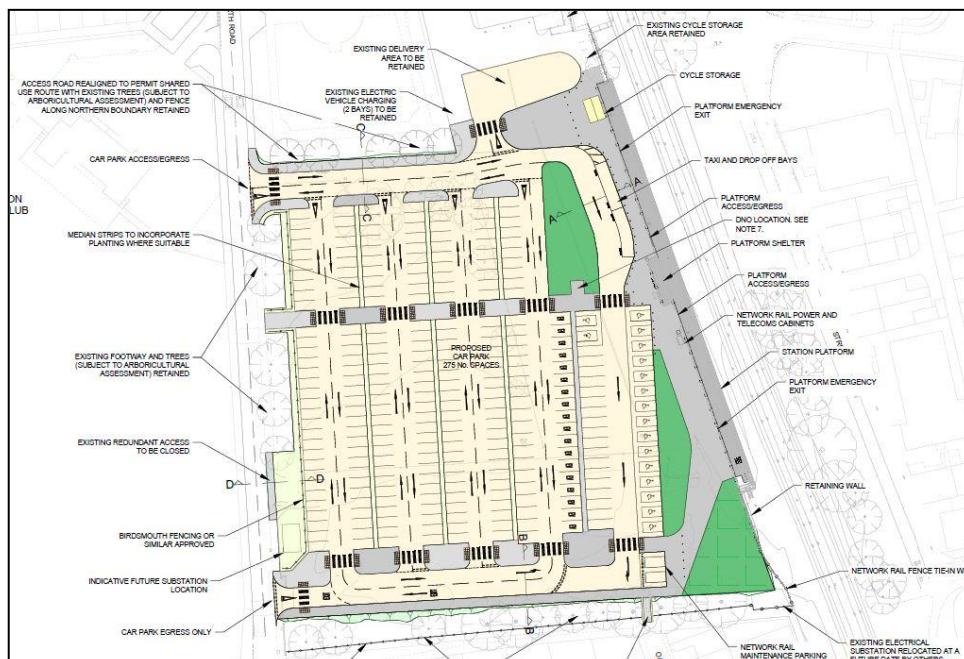
### 5.1 Introduction

- 5.1.1 This Section sets out the development proposals from NCC for the construction of a new station with proposed car park at Ashington associated with the proposed re-introduction of the Northumberland Line scheme.
- 5.1.2 The proposed station and re-introduction of the passenger services on Northumberland Line will offer a real alternative for commuting into Ashington and Newcastle as well as providing opportunities to travel further afield.
- 5.1.3 The route between Newcastle and Ashington station is 30 km in length. The first 6.8 km between Newcastle and Benton North Junction are part of the East Coast Main Line (ECML). The route between Benton North Junction and Ashington is cleared for passenger services (modern Diesel Multiple Unit (DMU)) as far as Bedlington North Junction only. The route has 10 timetabled freight services in each direction per weekday operating from the south serving Lynemouth and Port of Blyth and 1 movement per day between Blyth and Fort William running via Morpeth.
- 5.1.4 Bedlington station will operate two trains per hour. Newcastle Central can be reached within 30 minutes and the station will enhance the existing network and will provide the following:
- New station with ancillary uses;
  - 275 space car park;
  - Taxi / and passenger drop off areas;
  - A rail footbridge with accessible lifts; and
  - Upgrading the existing access road and junction.

### 5.2 Proposed Station

- 5.2.1 The proposed station will provide a car park which will also accommodate a passenger drop-off / taxi bays. Figure 13 shows the proposed station layout, the indicative layout can be seen in more detail in Appendix D.

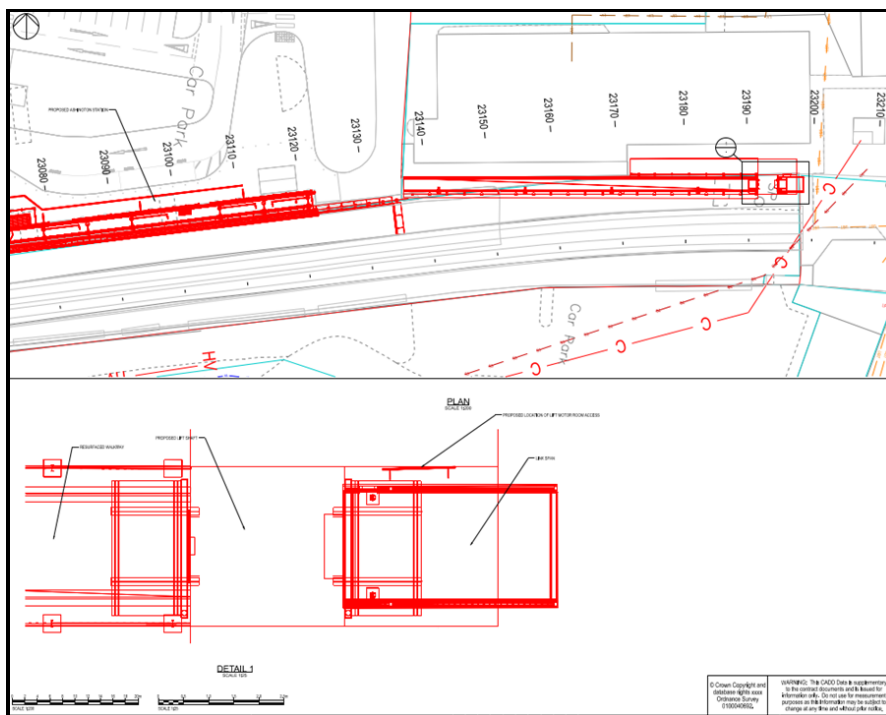
**Figure 13. Proposed Station Indicative Layout**



Source: AECOM, Drawing No. 60601435-ACM-07-ZZ-DRG-EHW-070001

- 5.2.2 Shelters will be provided at both platforms along with up to date timetables. Adequate signage will be provided for pedestrians and cyclists movements as well as vehicular traffic. Signage will be provided to amenities within the station such as lift and stairs.
- 5.2.3 The lift will be located to the north-east of the car park, it will provide an accessible pedestrian route to John Street to the east, enabling connectivity between the station and central Ashington via Station Road. The proposed lift is shown in Figure 14 and can be seen in more detail in Appendix D.

**Figure 14. Proposed Lift**



Source: AECOM, Drawing No. 60601435-ACM-07-ZZ-DRG-EST-001305 /P01.1

### 5.3 Proposed Car Park

- 5.3.1 Given the nature of the Northumberland Line scheme, no minimum or maximum parking standards are provided by NCC in the Local Plan. However, the Plan states that the following should be taken into consideration:
- The road safety and environmental problems as a result of increased parking demand in the area; and
  - The impact on any parking restrictions, or lack of, in force on highways in the area
- 5.3.2 AECOM has undertaken a demand and revenue forecasting to inform the reopening of the railway line to passenger services. This work included forecasting the number of passengers that will use each station and their mode choice in accessing each station. This provides an indication as to the level of car parking provision that is needed at each station. However, when making a decision around the size of car parks, local factors should be considered such as, policy objectives and development aspirations. The level of car parking provision appropriate at each station was calculated within the 'Northumberland Line Car Parking Requirements' Technical Note attached in Appendix E. The purpose of the technical note was to discuss the requirements for car parking at each new station and draw some conclusions as to the number of spaces that should be provided.
- 5.3.3 Based on a worst-case scenario the outputs from the demand forecasting state that, the maximum number of car park spaces required for this station is 186. It is proposed that the car park for Ashington Station is located on the site of an existing car park, which serves the town centre. The existing car park (known locally as Wilko car park) has 113 spaces and is well used. To ensure that this car park demand is not displaced, which could have implications on the performance of the highway network, the number

of car parking spaces at the proposed station was determined to be 299 which includes the existing car park spaces (113 spaces) and worst-case scenario output (186 spaces).

- 5.3.4 It is not possible to accommodate a total of 299 car park spaces within the existing available land with a surface level car park. A decked solution is not desirable due to the cost and the visual intrusion that it might create. The aim of car park design was to provide as many spaces as possible within the land available. A design for the car park has therefore been produced for 275 spaces and therefore does not fully accommodate the 299 spaces required for the demand for the Northumberland Line. This means a shortfall of 24 parking spaces.
- 5.3.5 However, as the proposed Ashington Station is located in the centre of Ashington and should be accessible by sustainable modes of transport (as stated in Section 4). It is recognised however, that public transport links to the station could be improved to compliment the benefits of the Northumberland Line. Given that the proposed car park will have a deficit of 24 spaces which cannot be accommodated within the available land, improved public transport links should help address any shortfall in supply of car park spaces.
- 5.3.6 Northumberland County Council will work with public transport providers to improve bus links to the proposed Ashington Station.
- 5.3.7 Following design development, the station and car park layout accommodates 275 spaces, including 17 accessible spaces (6%) and 18 EV charging bays (6.5%). The car park will operate a one-way circulatory system within the drop-off and accessible parking areas with two-way access to the other parking bays. Pedestrian footways are proposed within the car park including uncontrolled pedestrian crossings consisting of lowered kerbs to provide a safe pedestrian route towards the station. Cycle parking will be provided.

## 5.4 Proposed Access

- 5.4.1 The station proposals include a revised priority junction on Kenilworth road designed in line with DMRB standards, Manual for Streets 2 and NCC design standards.
- 5.4.2 Pedestrian connections will be provided to both sides of the access road, connecting with the existing pedestrian network along Kenilworth Road, the car park and platforms.
- 5.4.3 Access to the station car park will be provided via a new 2.0m wide unobstructed walking route adjacent to the platform. The current proposals include an accessible lift, to be located adjacent to the existing footbridge structure which would be a minimum Type 2 in accordance BS EN 81-70: 2018 meeting the requirements set out in Commission Regulation (EU) No. 1300/2014. A section of the existing footbridge parapet will be removed to accommodate pedestrian access to the lift directly from Wansbeck Square from the station platform.

## 6. Trip Generation and Distribution

### 6.1 Introduction

- 6.1.1 This Section of the report provides an assessment of the likely trip rate associated with the proposed station, based on the spreadsheet model developed by AECOM (and described in section 6.4 below).

### 6.2 Traffic Growth

- 6.2.1 Traffic growth factors have been obtained from TEMPro software. The use of TEMPro v7.2 software is generally recognised as the industry standard tool for determining traffic growth factors to apply to base flows in order to estimate future year traffic flows.
- 6.2.2 The local growth factors to be applied to the 2019 Base Flows are shown in Table 4. The TEMPro data is included in Appendix F.

**Table 4. TEMPro Growth Factors**

	AM Peak	PM Peak
2019 – 2039	1.12855	1.1201

### 6.3 Committed Developments

- 6.3.1 As agreed in the Scoping Note, Table 5 details the committed developments which have been included within the assessment.

**Table 5. Ashington Station Committed Developments**

Proposed Site	Size of Development Dwellings or HA	TA Available?
00/00009/REMA Seaton Vale, Land at Summerhouse Lane	622 dwellings	No
11/02572/OUT Land to the South East of Wansbeck General Hospital	97 dwellings	Yes (TS)
16/02432/OUT Land to the West, A189 between N.Seaton Road and Woodhorn roundabout. Proposed Housing Growth Point	Up to 600 dwellings	Yes
16/04348/OUT Land at North Seaton (North phase)	up to 200 dwellings	Yes
17/02323/OUT Former Alcan Site	c. 121,000sqm B1(c), B2, B8 and ancillary	
00/00009/REMA Seaton Vale, Land at Summerhouse Lane	622 dwellings	No
11/02572/OUT Land to the South East of Wansbeck General Hospital	97 dwellings	Yes (TS)
16/02432/OUT Land to the West, A189 between N.Seaton Road and Woodhorn roundabout. Proposed Housing Growth Point	Up to 600 dwellings	Yes

- 6.3.2 The following sites have been discounted from the assessment due to their long distance from the station and the available flow information within the planning portal documents not providing sufficient information on traffic movements to allow development trips to be applied to the network assessed:

- 00/00009/REMA Seaton Vale, Land at Summerhouse Lane
- 11/02572/OUT Land to the South East of Wansbeck General Hospital; and
- 16/04348/OUT Land at North Seaton (North phase)



### Land to the West, A189 between N.Seaton Road and Woodhorn roundabout

- 6.3.3 The available flow information for the development was interrogated. Based on the predicted flow information provided it was considered that the only impact to be assessed within this TA was at the A1068/A197 priority junction based on the assumption that the flow to/from the site using the A197 would be split by existing observed turning proportions. With no information to the contrary it was assumed that no development trips from this site would pass directly through the junctions in close proximity to the station assessed within this TA.
- 6.3.4 However as detailed earlier within this report, there is currently no turning count data available at the A1068/A197 priority junction and as a result flows from this development were not added to the assessed network.

### Former Alcan Site

- 6.3.5 The available flow information for the development was interrogated. Based on the predicted flow information provided it was considered that the only impact to be assessed within this TA was at the A1068/A197 priority junction and the Station Road West/Kenilworth Road junction. In the case of the A1068/A197 priority junction this was based on the assumption that the flow to/from the site using the A197 would be split by existing observed turning proportions.
- 6.3.6 However as detailed earlier within this report, there is currently no turning count data available at the A1068/A197 priority junction and as a result flows from this development were not able to be added at that junction.
- 6.3.7 The flow information within the planning documents also showed traffic using Kenilworth Road. However the provided flow diagrams have shown both Kenilworth Road and Park Road as having direct access onto the A197. Both of these roads however first connect to Station Road before connecting to an unnamed road (adjacent to Seventh, Eighth and ninth Row) before joining the A197 at a roundabout. The flows have therefore had to be interpreted and adjusted. As Kenilworth Road is one-way southbound, the flows entering Kenilworth Road have been assumed to be turning right from Station Road due to the routing from the A197 described above. Flows depicted as exiting Kenilworth Road to the north have been assumed to instead use Park Road and therefore not included in the assessment.
- 6.3.8 In summary, it is considered that this will provide a robust assessment of the committed development proposals.

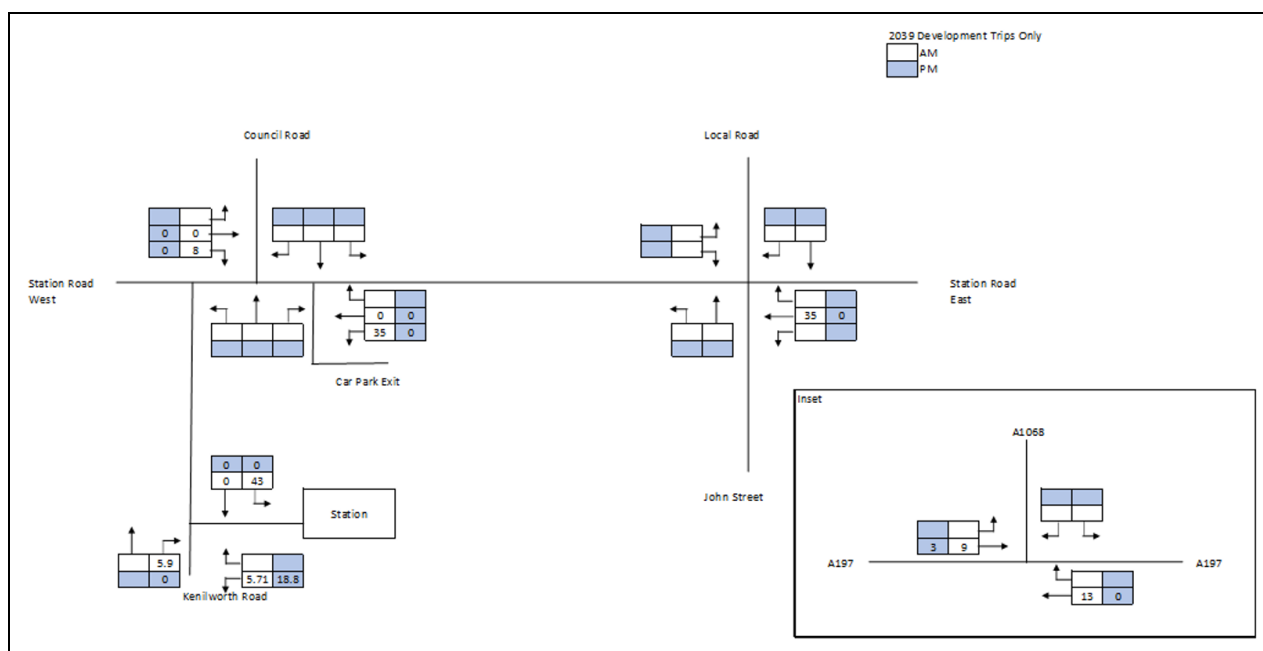
## 6.4 Trip Generation and Distribution

- 6.4.1 During the Outline Business case the demand modelling was agreed by NCC highways authority. Part of the agreed approach was the development of a spreadsheet based mode choice model.
- 6.4.2 The mode choice model represents trip decision making in the south east Northumberland corridor only. Longer distance movements are included within the model by an uplift factors derived from observed levels of rail demand on other rail corridors into Newcastle.
- 6.4.3 The basic model is a hierarchical logit model, with coefficients representing costs (e.g. fares, fuel costs, parking charges, etc.), in-vehicle time and out-of-vehicle time (e.g. walk time, wait time, etc.). There are also mode constants for the public transport and P&R modes (i.e.: a weighting to represent traveller's preference for one mode compared to another once time and cost impacts have been removed).
- 6.4.4 The way the model works is that the disutility to travel by each mode (in this case car, P&R (Metro), bus or rail) is calculated for each valid movement in the model. Disutility is another name for generalised cost and is made up of the costs of travel, the in-vehicle times and the out-of-vehicle times. A logit formula is then applied using these disutilities in order to determine mode shares by movement.
- 6.4.5 The spreadsheet model derived the matrix of person trips to each proposed station for the AM and inter peak (IP) average hour. Using TAG guidance, standard percentages were used to convert into journey purpose and vehicle trips using standard percentages. The return journeys were calculated using return factors derived from the Road Side Interviews conducted for Blyth.
- 6.4.6 Data from Morpeth's existing station and car park were used to form assumptions of modal shift and drops offs. It was assumed 62% of vehicles park at the station with 38% being dropped off by a partner. The drop off vehicles have been included with the traffic existing the station. For this TA a sensitivity test

has been included on all models, with includes 36% of vehicles entering and leaving the station within the modelled hour.

- 6.4.7 Trips are distributed on the network according to the lowest generalised cost, where both distance and journey time are taken into consideration. More information in relation to the demand modelling methodology is documented in the Northumberland Line Economic Appraisal Report.
- 6.4.8 This TA is focused on the local roads surrounding the proposed station at Ashington, Figure 14 illustrates the proposed impact of the introduction of the railway station for a typical morning and afternoon peak. Where trips increase above 30 two-way trips at junctions, they were highlighted for assessment which is detailed in Section 7 of this report.

**Figure 15. Proposed Trip generation 2039**





## 7. Impact Analysis

### 7.1 Local Highway Network Impacts

#### Introduction

- 7.1.1 The predicted traffic generated from the proposed development has been added to the baseline network data to assess how the site accesses will operate upon completion.
- 7.1.2 Due to the nature of the development it is expected that some of these trips will be existing trips on the highway network within the surrounding area. This is based on the assumption that the new station will provide an opportunity for Ashington residents to park at the station and reach their final destination such as Newcastle or Ashington via train. Therefore, a distribution and impact is only assessed at the junctions within immediate vicinity of the proposed station.
- 7.1.3 As part of scoping, NCC requested the following junctions be assessed:
- Proposed new access / Kenilworth Road (priority junction);
  - A1068 / A197 (priority junction);
  - Station Road / Kenilworth Road / Council Road / Car Park Access (signalised); and
  - Station Road / John Street (priority junction).
- 7.1.4 It is noted that the existing road network to the south of the station site offers a number of access and egress routes via streets including Briardene, North Seaton Road, and Green Lane. It is anticipated that traffic will distribute across a range of routes dependent on trip origin and destination. This will ensure limited impact on any one specific junction in addition to those scoped for assessment.
- 7.1.5 Assessment of the level crossing on Green Lane is presented in the level crossing impact study (AECOM 2016) submitted alongside this application.
- 7.1.6 The appropriate industry standard modelling software ARCADY from the TRL software 'Junctions 9' has been used to model the operation of the priority roundabout, with the geometric parameters and observed traffic flows of each junction entered into the computer package.
- 7.1.7 In ARCADY, the time periods assessed are divided into a number of 15-minute time segments in order to simulate the likely arrival pattern of traffic more effectively. The results returned in the models are the Ratio of Flows to Capacity (RFC) and Mean Maximum Queue (MMQ) in each time segment, measured in number of vehicles. The maximum RFC value for each movement is likely to be observed over the central 15-30 minute period of the hour under consideration.
- 7.1.8 RFC values between 0.00 and 0.85 are generally accepted as representing stable operating conditions, values between 0.85 and unity represent variable operation (i.e. possible queues building up at the junction during the period under consideration and increases in vehicle delay moving through the junction). RFC values in excess of unity represent overloaded conditions (i.e. congested conditions).
- 7.1.9 LinSig is used to model the operation of signalised junctions and has been used for the Station Road / Kenilworth signalised junction. LinSig reports a Degree of Saturation (DoS) for each link (i.e. demand / available capacity) and MMQ recorded in Passenger Car Units (PCUs). A DoS between 0% and 90% is generally considered as representing stable operating conditions, values between 90% and 100% represents a constrained scenario (i.e. possible queues building up at the junction and increases in vehicle delay). DoS beyond 1.00 represents overloaded conditions and a junction working beyond theoretical capacity.
- 7.1.10 The junction has been modelled with for following scenarios for both the AM and PM peak periods:
- Base (2019);
  - Base + Committed (2039); and
  - Base + Committed + Development (2039)
  - Base + Committed + Development Sensitivity Test (2039)

- 7.1.11 Full outputs can be found in Appendix G. The sensitivity test includes 36% of vehicles entering and leaving the station within the modelled hour. This represents people being dropped off in the morning.

## 7.2 Proposed Station Access / Kenilworth Road

- 7.2.1 As noted earlier in this report, due to Covid-19 undertaking representative surveys this year was not possible and no historical data for the proposed access junction was available. However, there was survey data for the adjacent junction along to enable a baseline assessment to take place. These surveys have been used for the proposed access.
- 7.2.2 The vehicles leaving the car park have been modelled to utilise the Wilkinson's car park exit onto Station Road within the sensitivity test, as agreed with NCC in September 2020. These trips have been accounted for within the Station Road / Kenilworth Road LinSig presented in sub-section 7.4.
- 7.2.3 Junction orientation is as follows:
- Arm A – Kenilworth Road SB
  - Arm B – Station Car Park
  - Arm C – Kenilworth Road NB
- 7.2.4 Table 6 shows the 2039 base + committed + development for do something scenario.

**Table 6. 2039 Model Outputs**

Arm	2039 Base + Committed + Development			
	AM Peak		PM Peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)
Stream B-C	0.00	0	0.03	0
Stream B-A	0.00	0	0.00	0
Stream C-AB	0.01	0	0.00	0

- 7.2.5 As demonstrated in Table 6, the junction will have no capacity issues in 2039 base + committed + development scenario due to the low levels of turning traffic meaning there is no delay on any arm.

### Sensitivity Test

- 7.2.6 As agreed with NCC a sensitivity test was undertaken, Table 7 shows the outputs from the 2039 base + committed + development sensitivity test.

**Table 7. Sensitivity Test**

Arm	2039 Base + Committed + Development Sensitivity			
	AM Peak		PM Peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)
Stream B-C	0.00	0	0.00	0
Stream B-A	0.00	0	0.00	0
Stream C-AB	0.01	0	0.00	0

- 7.2.7 The sensitivity test resulted in no change of queuing at the junction, there has been a decrease in RFC however as previously mentioned, for the sensitivity test vehicles are leaving the car park via the Wilkinson's car park exit onto Station Road hence, the reduction in RFC to 0.

## 7.3 A1068 / A198

- 7.3.1 During scoping discussions NCC requested the A1068 / A198 junction to be added to the assessment. However, due to COVID-19, NCC have agreed that no traffic surveys are required to be undertaken in support of this application. Therefore, no capacity assessments have been undertaken for this junction within this report.

## 7.4 Station Road / Kenilworth Road / Council Road

7.4.1 Table 8 show the results of the LinSig modelling of the Station Road / Kenilworth / Council Road signalised crossroads for the base year.

**Table 8. 2019 Base Model Output**

Arm	2019 Base			
	AM Peak		PM Peak	
	DoS (%)	MMQ	DoS(%)	MMQ
Station Road (east)	23.7	2.6	36	4.3
Council Road	0.9	0.1	4	0.2
Station Road (west)	33.5	2.5	26.6	1.9
Car Park Exit	11.7	0.7	20.9	1.3
<b>PRC Over All Lanes (%)</b>	<b>168.5</b>		<b>150</b>	
<b>Total Delay (pcu/hr)</b>	<b>2.7</b>		<b>3.36</b>	

7.4.2 In order to ensure the base models are representative of the on-ground conditions, the models has been calibrated and validated. The methodology has included:

- Model Calibration – geometric data for the junction was used for calibration purposes, geometries have been input into LinSig, these measurements have been validated within AutoCAD; and
- Model Validation – the model has been validated by achieving average queue in the model approximate to those observed.

7.4.3 Observed queues is shown in Table 9.

**Table 9. Base Queues Observed and Modelled**

Arms	AM 2020 Base (pcu)		PM 2020 Base (pcu)	
	Observed	Modelled	Observed	Modelled
Council Road	0	0.1	0	0.2
Station Road E	2	2.6	4	4.3
Car Park Exit	No data		No data	
Station Road W Lane 1	3	2.5	2	1.9

7.4.4 Table 9 shows that the base model for Station Road / Kenilworth Road / Council junction model is showing representative queues when compared to the observed queues.

7.4.5 Table 10 shows the results of the 2039 base + committed and base + committed + development scenarios.

**Table 10. 2039 Base + Committed + Dev Model Output with DM and DS Scenarios**

Arm	2039+Committed				2039+Committed + Development			
	AM Peak		PM Peak		AM Peak		PM Peak	
	DoS (%)	MMQ	DoS(%)	MMQ	DoS(%)	MMQ	DoS(%)	MMQ
Station Road (east)	21.2	2.5	35.1	4.6	25.5	3.1	35.1	4.6
Council Road	2.2	0.1	7.9	0.3	2.2	0.1	7.9	0.3
Station Road (west)	32.5	2.4	27.1	2	33.3	2.4	27.6	2
Car Park Exit	27	1	34.8	1.7	27	1	34.8	1.7
<b>PRC Over All Lanes (%)</b>	<b>176.9</b>		<b>156.5</b>		<b>170.3</b>		<b>156.5</b>	
<b>Total Delay (pcu/hr)</b>	<b>2.54</b>		<b>3.56</b>		<b>2.77</b>		<b>3.59</b>	

7.4.6 Table 10 shows that the junction will continue to operate within capacity both with and without the proposed development traffic, with highest MMQ of 3 and 5 vehicles at the Station Road (east) during

AM and PM peak, respectively. Similar MMQ are observed during the Do Something scenario with 4 and 5 vehicles queuing during AM and PM peak, respectively.

### Sensitivity Test

- 7.4.7 As agreed with NCC a sensitivity test was undertaken Table 11 shows the outputs from the 2039 base + committed + development for do something scenario sensitivity test.

**Table 11. Sensitivity Test**

Arm	2019 Base			
	AM Peak		PM Peak	
	DoS (%)	MMQ	DoS(%)	MMQ
Station Road (east)	23.9	2.8	38.6	4.9
Council Road	1.7	0.1	7	0.3
Station Road (west)	40.2	3	28.9	2.1
Car Park Exit	29.9	1.5	36.7	2.1
<b>PRC Over All Lanes (%)</b>	<b>123.8</b>		<b>132.9</b>	
<b>Total Delay (pcu/hr)</b>	<b>3.3</b>		<b>4.02</b>	

- 7.4.8 The sensitivity test resulted in no change to RFC or queuing at the junction, with highest MMQ of 3 and 5 vehicles at the Station Road (east) during AM and PM peak, respectively.

## 7.5 Station Road / John Street

- 7.5.1 Junction orientation is as follows:

- Arm A – Station Road (eastbound);
- Arm B – Station Road (westbound); and
- Arm C – John Street

- 7.5.2 Table 12 shows the result of the Junction 9 modelling of the Station Road / John Street junction for 2019 base.

**Table 12. 2019 Base Model Outputs**

Arm	2019 Base			
	AM Peak		PM Peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)
Stream B – AC	0.38	0.6	0.43	0.7
Stream C – AB	0	0	0	0

- 7.5.3 Table 12 demonstrates that the junction operates within capacity both with and without proposed development traffic with RFC of 0.38 and 0.43 during AM and PM peak, respectively. The maximum queuing during both peaks is 1 vehicle.

- 7.5.4 In order to ensure the base models are representative of the on-ground conditions, the models has been calibrated and validated. The methodology has included:

- Model Calibration – geometric data for the junction was used for calibration purposes, geometries have been calculated within ARCADY, these measurements have been validated within AutoCAD; and
- Model Validation – the model has been validated by achieving average queue in the model approximate to those observed.

- 7.5.5 Observed queues is shown in Table 13.

**Table 13. Base Queues Observed and Modelled**

Arms	AM 2020 Base (pcu)		PM 2020 Base (pcu)	
	Observed	Modelled	Observed	Modelled
Station Road E	2	0.6	2	0.7
John Street	0	0	1	0
Station Road W	1	0	0	0

7.5.6 Table 14 shows the 2039 model results for both with and without proposed development traffic.

**Table 14. 2039 Model Outputs**

Arm	2039 Base + Committed				2039 Base + Committed + Development			
	AM Peak		PM Peak		AM Peak		PM Peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
Stream B – AC	0.44	0.8	0.50	1	0.52	1.1	0.5	1
Stream C – AB	0	0	0	0	0	0	0	0

7.5.7 Table 14 shows, the junction will continue to operate within capacity 2039 base + committed scenario with an RFC of 0.44 and 0.50 queuing of 1 vehicle during AM and PM peak, respectively.

7.5.8 The junction will also continue to operate within capacity under the 2039 base + committed + development scenario with an RFC of 0.52 and 0.5 during AM and PM peak, with maximum queuing of 2 vehicles.

### Sensitivity Test

7.5.9 As agreed with NCC a sensitivity test was undertaken to Table 15 shows the outputs from the 2039 base + committed + development for do something scenario sensitivity test.

**Table 15. Sensitivity Test**

Arm	2039 DS Sensitivity Test			
	AM Peak		PM Peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)
Stream B – AC	0.44	0.8	0.5	1
Stream C – AB	0	0	0	0

7.5.10 The sensitivity test resulted in no significant change to RFC or queuing at the junction.

## 7.6 Station Road / John Street / Local Road

7.6.1 Junction orientation is as follows:

- Arm A – Station Road;
- Arm B – Local Road; and
- Arm C – John Street

7.6.2 Table 16 shows the result of the Junction 9 modelling of the Station Road / John Street / Local Road junction for 2019 base.

**Table 16. 2019 Base Model Outputs**

Arm	2019 Base			
	AM Peak		PM Peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)
Stream B – AC	0.02	0	0.06	0.1
Stream C – AB	0.03	0	0.02	0

7.6.3 Table 16 demonstrates that the junction operates within capacity during AM and PM peak with RFC of 0.03 and 0.02 during AM and PM peak, respectively. The maximum queuing during both peaks is 1 vehicle.

7.6.4 In order to ensure the base models are representative of the on-ground conditions, the models has been calibrated and validated. The methodology has included:

- Model Calibration – geometric data for the junction was used for calibration purposes, geometries have been calculated within ARCADY, these measurements have been validated within AutoCAD; and
- Model Validation – the model has been validated by achieving average queue in the model approximate to those observed.

7.6.5 Observed queues is shown in Table 17.

**Table 17. Base Queues Observed and Modelled**

Arms	AM 2020 Base (pcu)		PM 2020 Base (pcu)	
	Observed	Modelled	Observed	Modelled
Local Road	0	0	1	0.1
John Street	0	0	1	0
Station Road W	1	0	0	0

7.6.6 Table 18 shows the 2039 base + committed and 2039 base + committed + development scenarios.

**Table 18. 2039 Model Outputs**

Junction Arm	2039 Base + Committed				2039 Base + Committed + Dev			
	AM Peak		PM Peak		AM Peak		PM Peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
Stream B – AC	0.02	0	0.07	0.1	0.02	0	0.07	0.1
Stream C – AB	0.03	0	0.02	0	0.03	0	0.02	0

7.6.7 Table 18 shows, the junction will continue to operate within capacity with Do minimum scenario and Do Something scenario.

#### Sensitivity Test

7.6.8 As agreed with NCC a sensitivity test was undertaken Table 19 shows the outputs from the 2039 base + committed + development for do something scenario sensitivity test.

**Table 19. Sensitivity Test**

Junction Arm	2039 DS Sensitivity Test			
	AM Peak		PM Peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)
Stream B – AC	0.02	0	0.07	0.1
Stream C – AB	0.03	0	0.02	0

## 7.7 Sustainable Mode Shift to Rail Impacts

- 7.7.1 As part of the aforementioned Demand Modelling assessment a spreadsheet based mode choice model was built to represent trip decision-making in the South East Northumberland (SEN) corridor only. Longer distance movements would be represented by the application of an appropriate demand uplift factor based on observed levels of rail demand on other rail corridors into Newcastle.
- 7.7.2 The mode choices represented in the model are car, bus, Tyne & Wear Metro (via Park & Ride (P&R)) and rail.
- 7.7.3 The spreadsheet-based mode-choice demand model assessed a number of options. To identify the likely mode shift and car parking requirements the 'full scheme under a concession operation' option has been used as it is considered the 'worst case' scenario for design purposes as it generates the greatest demand.
- 7.7.4 With this option the predicted average weekday demand is 4,713 return journeys with an annual demand of 1,453,000 return journeys. The model estimates the mode source of patronage in 2039, as:
- 2.9% from Rail/Metro
  - 45.5% from car
  - 17.8% from bus
  - 21.9% induced (internal mode area)
  - 9% long distance (other modes)
  - 3% long distance (induced)
- 7.7.5 Car is the primary source of demand for the scheme in all cases, accounting for circa 45% of rail demand. Approximately 18% of journeys using the new rail service have transferred from bus. It should be noted that the long distance 'other' modes will include transfer from car, coach and rail too.
- 7.7.6 In terms of demand, there are two key impacts to the scheme; modal transfer to rail resulting in less usage of car, bus or P&R (Metro) and increased usage of these other modes as a means of access and/or egress to/from the rail stations.

## 7.8 Bus Impacts

- 7.8.1 The impact on bus usage demonstrates a slight net increase in bus journeys across the study corridor, as the new journeys by bus to access the rail stations outweighs the loss of bus trips due to the modal transfer from bus to rail.

## 7.9 Metro Impacts

- 7.9.1 The impact on Metro is different to bus as there is very little modal transfer to rail from Metro, but Metro benefits from the excellent connections provided between rail and Metro at Northumberland Park (and to a lesser extent at Manors and Newcastle).

## 7.10 Summary

- 7.10.1 Detailed junction capacity analysis has been carried out at the junctions within the study area to determine the impact of the proposed station. All junctions assessed will continue to operate within capacity under the 2039 base + committed + development. The results demonstrate that the proposed access will operate within capacity during all scenarios with the method applied.
- 7.10.2 The assessment methodology has been agreed during scoping discussions with NCC with full cognisance by both parties of the data limitations imposed by the current COVID-19 pandemic. It is considered that this agreed methodology as described within this TA represents an appropriately robust assessment despite the collection of new traffic flow data not being possible. Should NCC require future

data collection when traffic flows are deemed to have reverted to 'normal operation' and further assessment in order to check the impact assessment contained within this TA, then a programme of assessment/monitoring should be conditioned rather than affecting the determination of the application.



## 8. Highway Safety Analysis

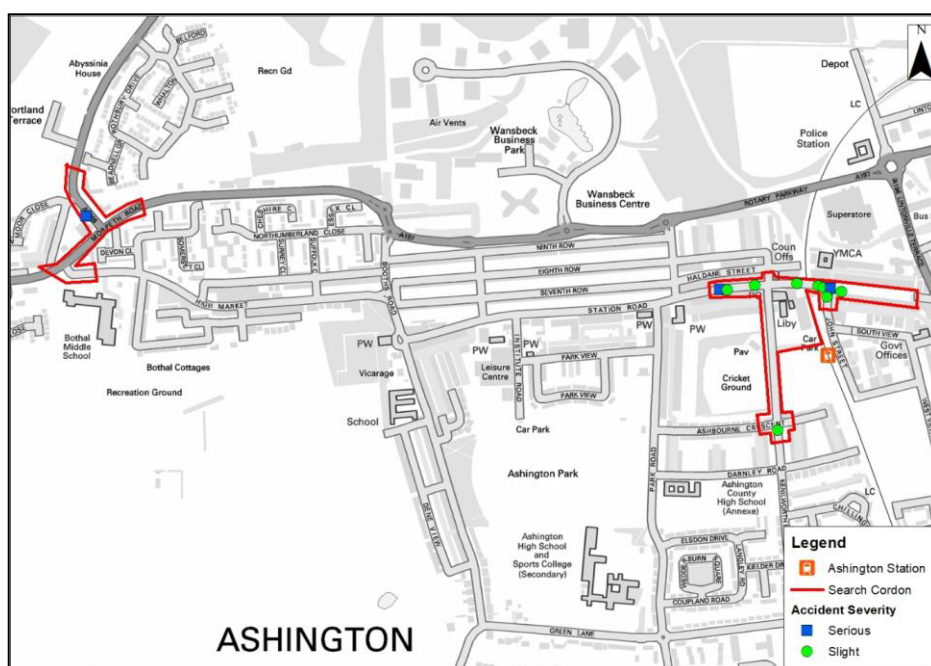
### 8.1 Introduction

- 8.1.1 To ensure that there are no underlying highway issues, collision data has been analysed and is attached to this TA in Appendix H.

### 8.2 Analysis

- 8.2.1 A review of the data has been undertaken using collision data provided by NCC for the most recent five - year period from September 2015 and ending in April 2020. The A1068 / A197 junction to the north – west of the main search cordon has been added to the study area upon request from NCC. The study area is shown in Figure 15.

**Figure 16 Personal Injury Collision (PIC) Search Cordon**



- 8.2.2 A total of 11 collisions occurred over the five-year period within the search cordon. No fatal collisions have been recorded. None of the collisions occurred within the close proximity of the proposed access to the station car park

- 8.2.3 Table 20 provides a summary of the collisions by the severity, year and casualty type.

**Table 20. Collisions by Severity and Year**

Year	Slight	Serious	Fatal	Total
2015	2	0	0	2
2016	3	0	0	3
2017	1	2	0	3
2018	2	1	0	3
2019	0	0	0	0
2020	0	0	0	0
<b>Total</b>	<b>8</b>	<b>3</b>	<b>0</b>	<b>11</b>

- 8.2.4 Of the three serious collision recorded, one involved a cyclist at Station Road junction with Duke Street. The collision can be attributed to poor turn / manoeuvre and failing to look; the accident occurred when a

vehicle turning right from Duke Street onto Station Road failed to notice / leave enough space for a cyclist turning right from Station Road to Duke Street.

- 8.2.5 The second serious collision can be attributed to poor manoeuvre, the accident happened when a motorcyclist attempted to overtake a vehicle, lost control and collided with an oncoming vehicle.
- 8.2.6 The remaining serious collision can be attributed to carelessness of the driver who was being pursued by a police vehicle. The vehicle has lost control on a bend, crossing the carriageway before hitting a metal pole and railing before coming to rest.
- 8.2.7 A total of five of eight collisions were recorded as slight and all involved a pedestrian movement. These collisions however, did not occur in a cluster and all have been attributed to “failure to look properly”.
- 8.2.8 The remaining three slight collisions were recorded along Station Road. Two occurred when a pedestrian failed to look whilst crossing the road and stepped into a path of oncoming vehicle. One occurred along John Street, when a pedestrian failed to look properly and stepped into the path of an oncoming vehicle.
- 8.2.9 Three slight collisions all happened whilst a parked vehicle was re-joining or reversing out of a parking bay. All three collisions can be attributed to driver of vehicle failing to look properly and carelessness. These did not occur at the same location.
- 8.2.10 Seven out of the eight collisions recorded occurred at different locations along Station Road. No collisions occurred at pedestrian crossings.
- 8.2.11 The eighth collision was reported along Kenilworth Road junction with Ashbourne Crescent when one of the two parked vehicles reversed at speed into the second vehicle, pushing it onto a pedestrian.

### 8.3 Contributing Factors

- 8.3.1 Table 21 summarises some of the attributes that contributed to the collisions.

**Table 21. Vehicle Collisions Attributes**

Attributes	Severity		
	Slight	Serious	Total
Failed to look properly	6	0	6
Carelessness	2	1	3
Poor Turn or manoeuvre	0	2	2
<b>Total</b>	<b>8</b>	<b>3</b>	<b>11</b>

- 8.3.2 As demonstrated in Table 21, none of the collision can be attributed to highway design issues, majority of the collisions are attributed to “failed to look properly” and “carelessness”.

### 8.4 Summary

- 8.4.1 This section has provided a review of the collision data for the most recent five - year period provided by NCC. The collision data revealed that there are no underlying highway design and / or safety issues within the search cordon.

## 9. Summary and Conclusion

### 9.1 Summary

- 9.1.1 AECOM has been commissioned by Northumberland County Council (NCC) to prepare a Transport Assessment in support of a planning application for the construction of a new station with proposed car park at Ashington associated with the proposed re-introduction of the Northumberland Line scheme.
- 9.1.2 This report has considered the key transport related strategies and policies at national, regional and local level that relate to the proposed residential development.
- 9.1.3 The existing baseline conditions of the site in relation to the existing local highway network have been reviewed to determine suitability for the proposed development.
- 9.1.4 The accessibility of the site has been considered. Particular attention has been paid to sustainable modes of travel. This exercise identified that the site is suitably accessible by sustainable modes of travel.
- 9.1.5 The proposed station facilities and car park design will be compliant to NCC design and parking standards, with secure cycle storage provided and provision of new uncontrolled pedestrian crossings.
- 9.1.6 The car park will consist of 275 bays, including accessible parking bays and electric vehicle parking bays.
- 9.1.7 The methodology for the vehicle trip generation and distribution has been provided and justified. Historical data has been utilised including Manual Classified Counts (MCC) undertaken in May 2019 to establish the baseline. The baseline traffic has been growthed using TEMPro v7.2 in order to model future scenarios.
- 9.1.8 The junctions on the local highway network have been assessed to ascertain the likely impact of the proposed development.
- 9.1.9 The road accident data for the most recent 5-year period was obtained from NCC. This data was analysed and as no obvious patterns or trends were discovered it is considered that the additional development traffic would not impact upon road safety on the road network.

### 9.2 Conclusion

- 9.2.1 The suitability of the site and the development has been considered in terms of highway and transportation issues.
- 9.2.2 The traffic impact analysis has established the existing junctions would operate successfully in the future years; however the proposed site access will need to be reassessed once new surveys can be undertaken.
- 9.2.3 The road safety record of the highway network within the study area has been examined and no significant road safety problems have been identified.
- 9.2.4 Thus, based on the findings within this TA, it is concluded that there will not be a significant impact on the surrounding highway network in terms of capacity and safety as a result of the development traffic. Therefore, in the context of paragraph 109 of the NPPF, planning permission should not be withheld for this application on transport or highway safety grounds.

# Appendix A Scoping Note

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Project:	<b>Northumberland Line</b>	Job No:	<b>60628487</b>
Subject:	<b>Transport Assessment Scoping Report</b>		
Prepared for:	<b>Northumberland County Council</b>	Date:	<b>5<sup>th</sup> June 2020</b>

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## 1. Introduction

- 1.1. AECOM has been commissioned by Northumberland County Council (NCC) to deliver six Transport Assessments (TA's) to support the planning application for six new stations along the proposed Northumberland Line Project within Northumberland and North Tyneside. Five stations are within Northumberland County Council's remit and one within North Tyneside.
- 1.2. A meeting between AECOM and NCC took place on 16<sup>th</sup> March 2019 to discuss the scope of the Transport Assessment and the Level Crossing Interventions within the planning application. In this meeting it was agreed each proposed station will have a standalone Transport Assessment.
- 1.3. This note forms a Scoping Report to set out AECOM's proposed scope for the Transport Assessments in order to assist the Local Authority in agreeing any transport concerns relating to the proposed development and identify any potential traffic impacts on the local road network.

## 2. Policy, Existing conditions and Accessibility

- 2.1. Each Transport Assessment for the five proposed stations located in Northumberland will contain sections providing:
  - A review of pertinent policy (local, regional and national) and best practice guidance will be undertaken. This will demonstrate the compatibility of the proposals with the relevant policies;
  - A review of the existing conditions at each site including local roads; and
  - Assessment of the proposed sites in terms of accessibility and connectivity for public transport, walking and cycling.

## 3. Car Parking Analysis

- 3.1. The maximum demand for each station is currently based on the Concession model with provision of car parking spaces enough to meet the demand in 2039.
- 3.2. The outputs from this exercise will be the baseline for the car parking proposals, which would then be subject to a justification for changes based on defined criteria and policy objectives.

## 4. Committed Developments

- 4.1. AECOM has reviewed committed developments in the Northumberland area and their significance on the proposed site. AECOM, where possible, will use the Transport Assessments as part of the planning applications to determine trip numbers and distribution. Where this is not available, distributions will be assigned using census data and the TRICS database will be used for trip generation. The datasets to be used, relevance to the proposals given their prospective opening years, and inclusion/exclusion from the assessment will be reviewed and agreed with NCC for each committed development.
- 4.2. Table 1 highlights committed developments for each station. The developments are categorised as:
  - Near Certain (NC); and
  - More than Likely (MTL).

**Table 1. Committed Developments**

Proposed Site	Size of Development Dwellings or HA	TA Available?	Station	Certainty?
Shiremoor West	460	No	Northumberland Park	NC
A19 Corridor 3: Backworth/Land at Castle Square: Backworth	290	No	Northumberland Park	NC
Scaffold Hill	460	No	Northumberland Park	NC
16/01885/FUL Station Road (West):	593	Yes	Northumberland Park	NC
Station Road east	650	No	Northumberland Park	NC
Murton Gap	3000	No	Northumberland Park	MTL
Killingworth Moor a (North)	566	No	Northumberland Park	MTL
Killingworth Moor b (South)	1154	No	Northumberland Park	MTL
Killingworth Moor c (Central)	428	No	Northumberland Park	NC
Tyne Tunnel Trading Estate	19ha	No	Northumberland Park	NC
Northumberland Park	10,000sq.m (GFA)	No	Northumberland Park	NC
Murton Strategic Development Site	1,000sq.m (GFA)	No	Northumberland Park	MTL
Killingworth Moor Strategic Development Site	500sq.m (GFA)	No	Northumberland Park	MTL
07/00434/REM, 09/00080/REM Land at West Blyth	258 dwellings (phase 3)	No	Newsham station	NC
16/03184/REM 14/04099/OUT Land North of Station Road	384 dwellings	Yes*	Newsham station and Seaton Delaval	NC
14/01449/FUL Land at Newsham	349 dwellings	No	Newsham station	NC
17/00499/OUT, 12/00250/OUT Land at South West Newsham	approx. 300 dwellings	Yes	Newsham station	MTL
00/00009/REMA Seaton Vale, Land at Summerhouse Lane	622 dwellings	No	Ashington	NC
14/03016/FUL Ellington (land at)	Up to 400 dwellings	Yes	Ashington	NC
00/00213/FUL Former NCB Workshops (Portland Park), Ellington Rd	13 dwellings	No	Ashington	NC
16/01363/OUT, 17/01595/REM Plot B, North Seaton Ind Est	Up to 240 dwellings	Yes	Ashington	NC
11/02572/OUT Land to the South East of Wansbeck General Hospital	97 dwellings	Yes (TS)	Ashington	NC
16/02432/OUT Land to the West, A189 between N.Seaton Road and Woodhorn roundabout. Proposed Housing Growth Point	Up to 600 dwellings	Yes	Ashington	MTL
16/04348/OUT Land at North Seaton (North phase)	up to 200 dwellings	Yes	Ashington	MTL
16/04348/OUT Land at North Seaton (South phase)	up to 200 dwellings	Yes	Ashington	MTL
15/01080/OUT, 16/01758/REM Land west of Bedlington	up to 180 dwellings	Yes	Bedlington	NC
16/02336/FUL Hepscott Park	89 dwellings	Yes	Bedlington	NC
16/04411/FUL Land north of Scotland Gate	327 dwellings	Yes	Bedlington and Blyth Bebside	MTL
16/04731/OUT Land to the South of Glebe Farm and the West of Choppington Road	approx. 500 dwellings	Yes	Bedlington	MTL
16/04731/OUT Land west of Glebe Farm, Bedlington	approx. 500 dwellings	Yes	Bedlington	MTL

Proposed Site	Size of Development Dwellings or HA	TA Available?	Station	Certainty?
16/04731/OUT Land to the East, Featherstone Grove	approx. 500 dwellings	Yes	Bedlington	MTL
16/04622/FUL 12/03370/REM Former Bates Colliery Site	257 dwellings	No	Blyth-Beside	NC
16/04411/FUL Land north of Scotland Gate	327 dwellings	Yes	Bedlington and Blyth Beside	MTL
15/00897/OUT Land South of B1326 at East Cramlington	192 dwellings	Yes	Seaton Delaval	NC
17/00393/REM, 15/00901/OUTES Land at South West Sector	up to 1600 dwellings	Yes	Seaton Delaval	NC
08/00465/FUL, 06/00358/OUT, 11/01040/REM South West Sector Application Site	715 dwellings	Yes**	Seaton Delaval	NC
15/00098/REM Land at South West Sector	up to 250 dwellings	No	Seaton Delaval	NC
12/03825/FUL Land to the rear of Wheatfields	190 dwellings	Yes	Seaton Delaval	NC
15/01182/FUL New Hartley Area 1, Land to the East of Seaburn Avenue	285 dwellings	Yes**	Seaton Delaval	NC

## 5. Development Trip Generation

### Base Year

- 5.1. Manual classified turning counts (MCCs) were carried out on Tuesday 21 May 2019 to establish the baseline traffic flows at junctions in close proximity to the proposed station locations. The resulting baseline flows have been converted to PCUs and are shown in Figures 1 – 5 below.

Figure 1. Ashington Baseline Flows

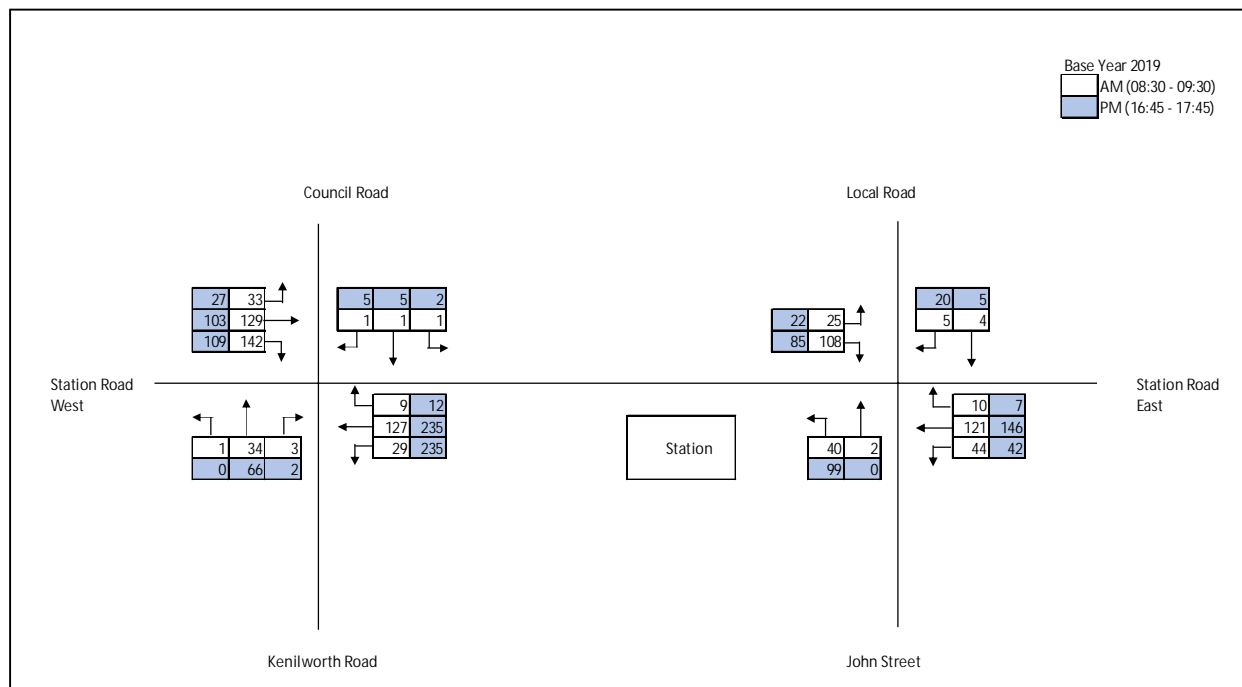


Figure 2. Bebside Baseline Flows

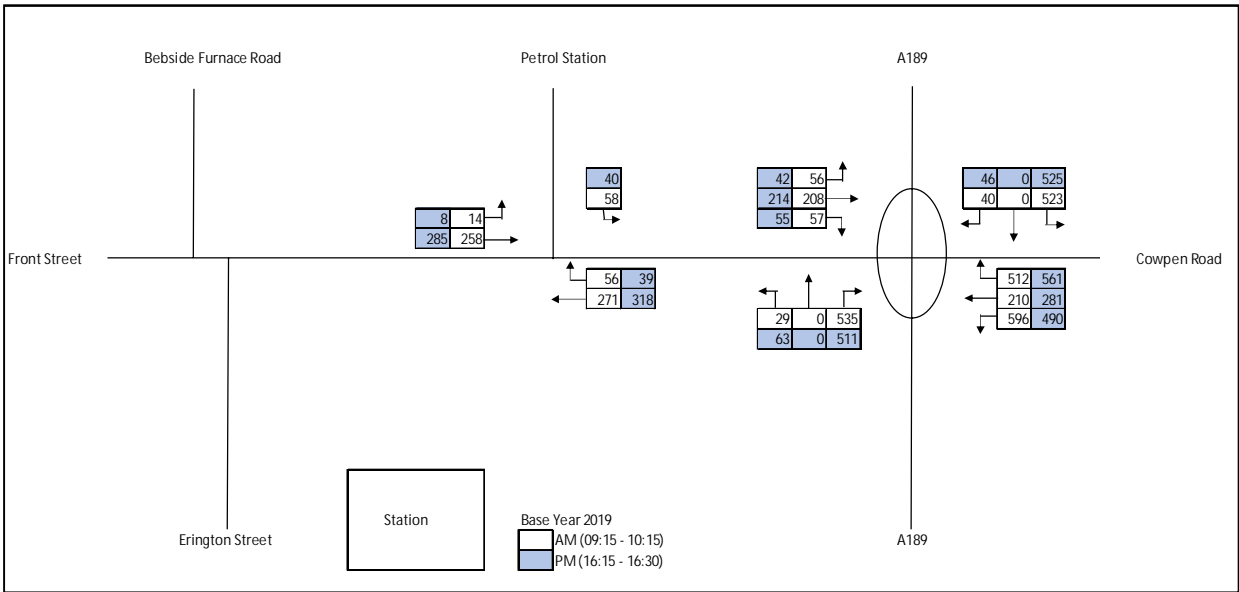


Figure 3. Bedlington Baseline Flows

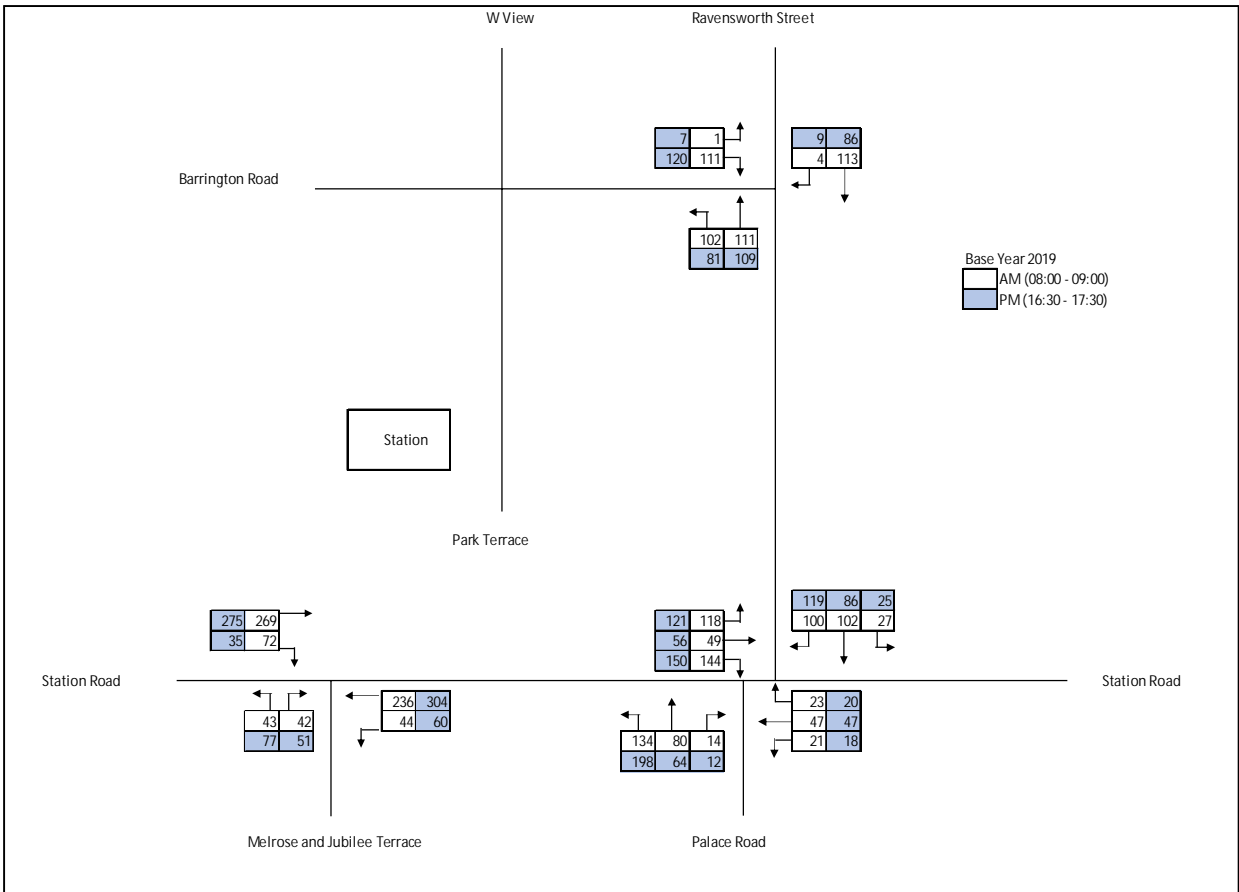




Figure 4. Newsham Baseline Flows

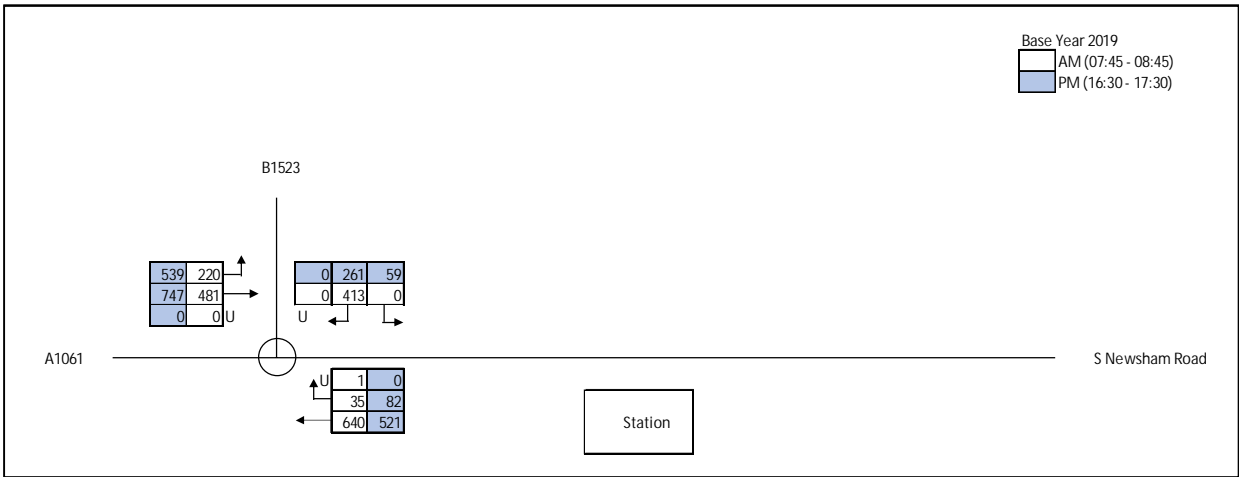
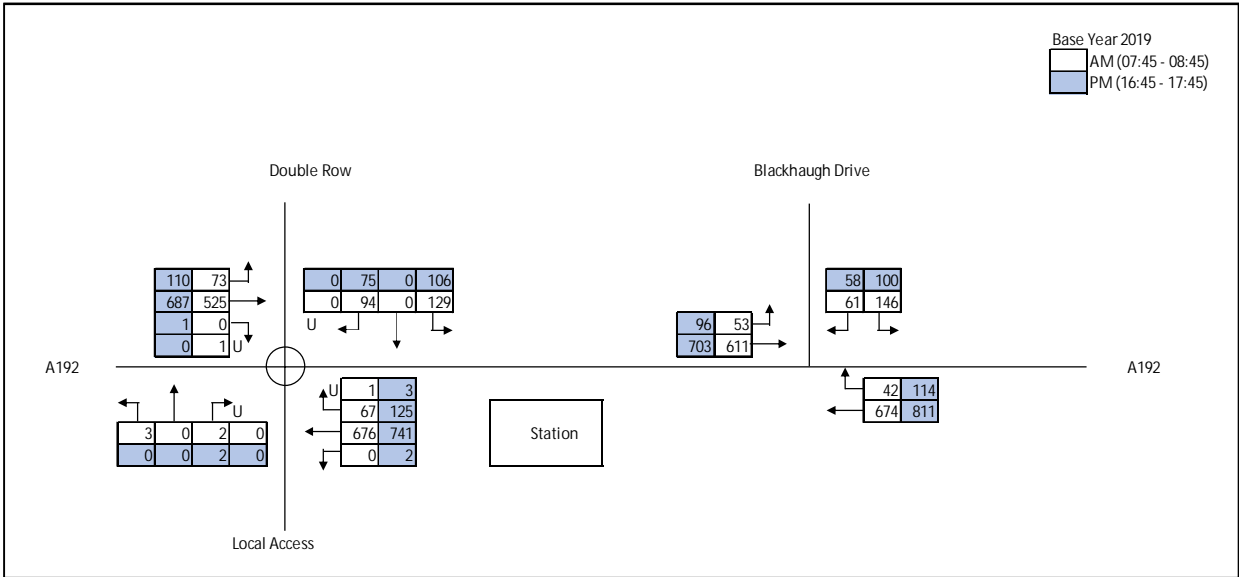


Figure 5. Seaton Delavel Baseline Flows



## Do Minimum and Do Something Assessment

- 5.2. Do Minimum flows have been derived by applying TEMPRO growth to the baseline flows for the assessment year of 2039.
- 5.3. Do Something flows have been derived from the outputs from the SATURN demand model. The demand model contains limitations on the junctions and links included and does not represent actual flows at junctions and rather the net effect in flow levels due to the Northumberland Line. Therefore a factor has been derived to determine the net difference in flows between the demand model do minimum and do something scenarios and this has been applied to the Do Minimum flows.
- 5.4. The resultant do minimum and do something flows are shown in Figures 6 to 10 below.

**Figure 6. Ashington DM and DS Flows**

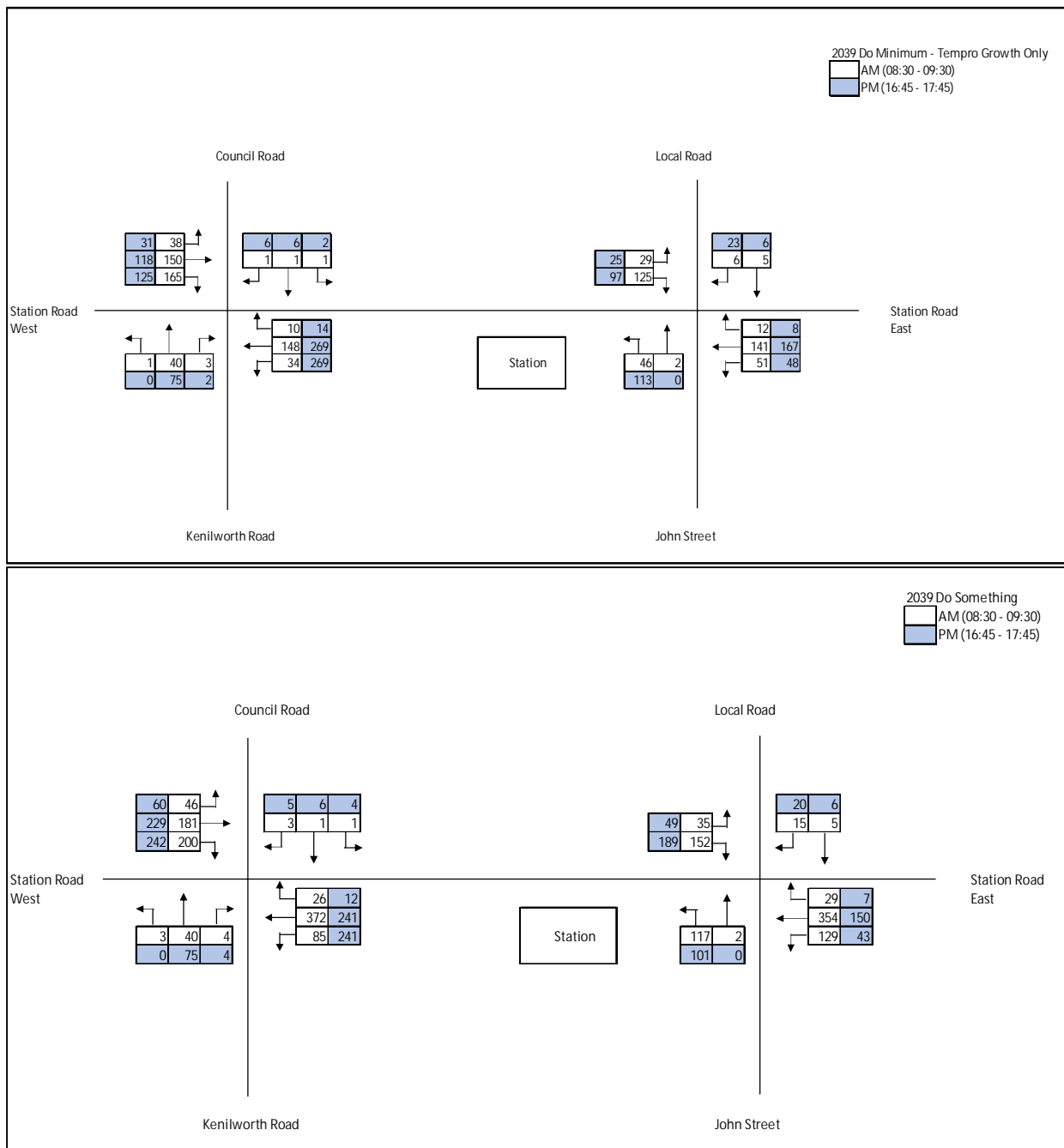


Figure 7. Bebside DM and DS Flows

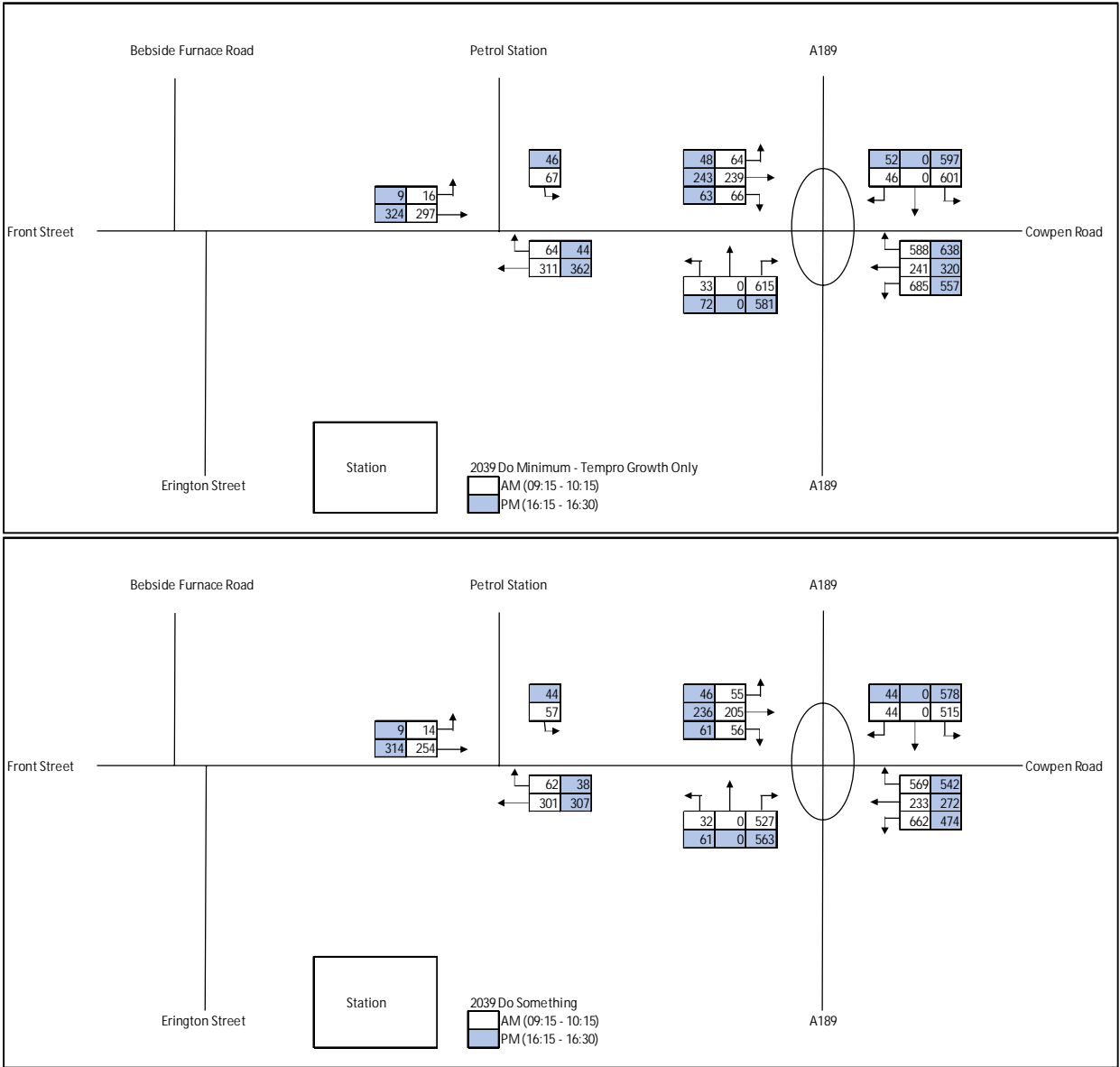


Figure 8. Bedlington DM and DS Flows

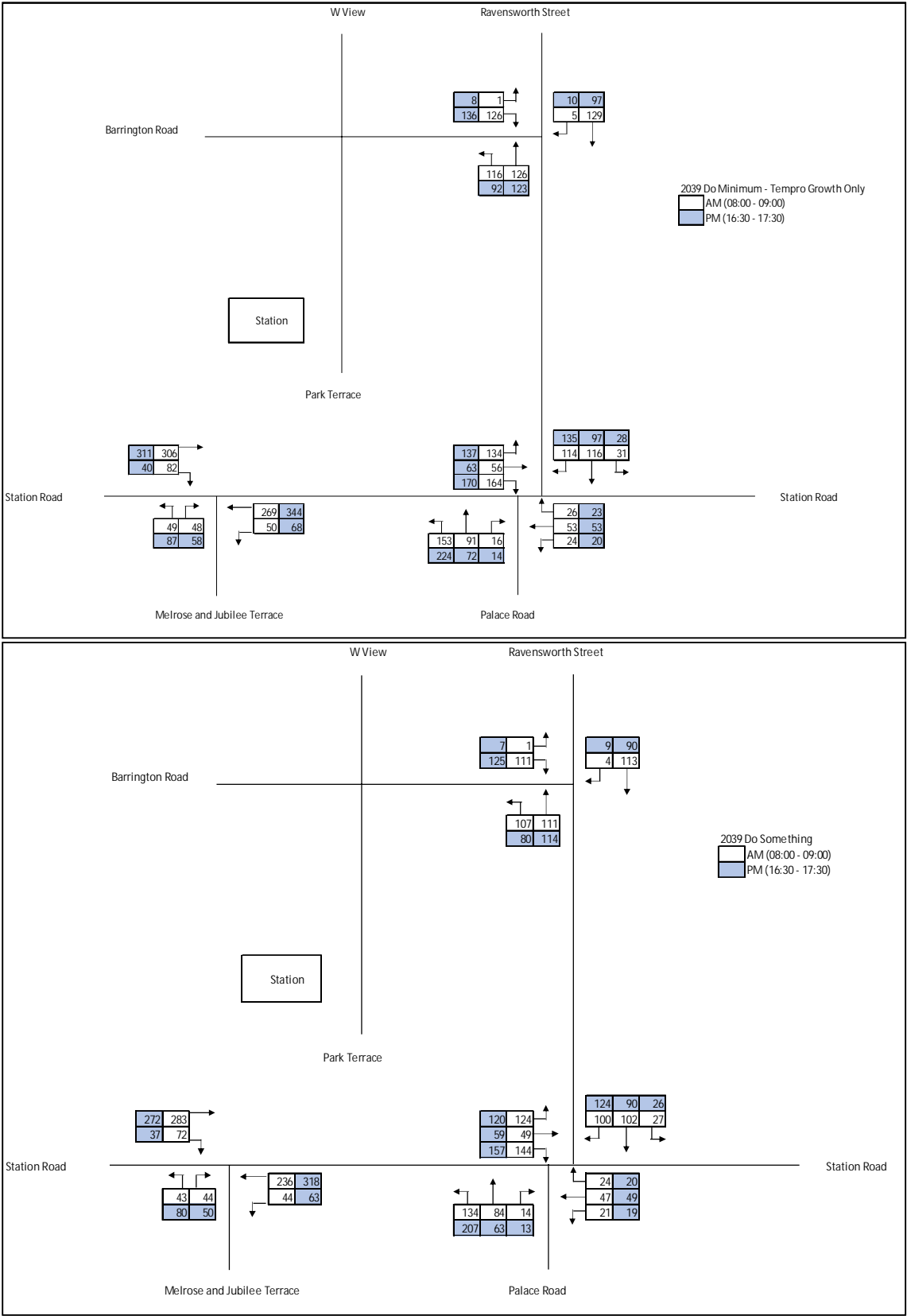


Figure 9. Newsham DM and DS Flows

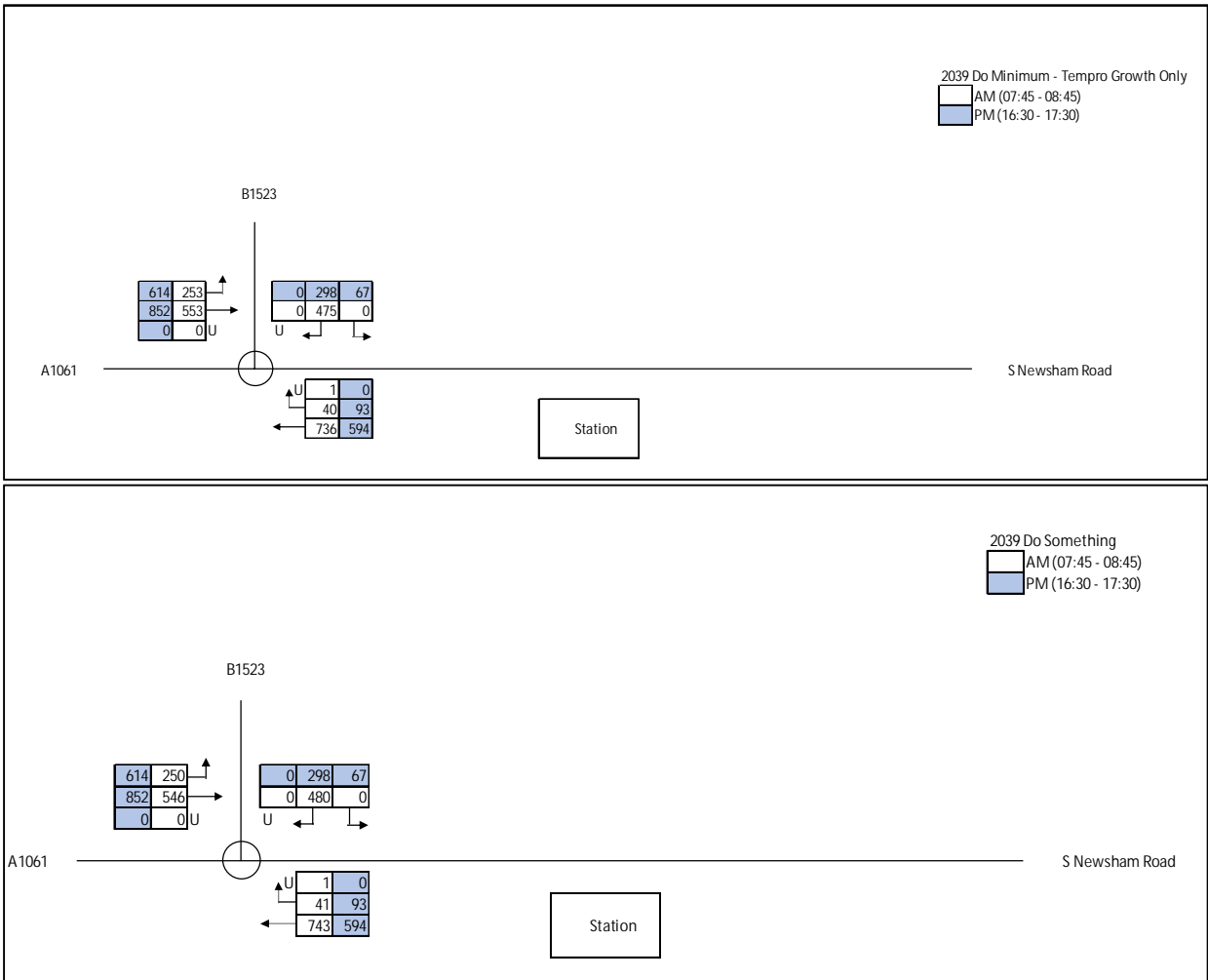
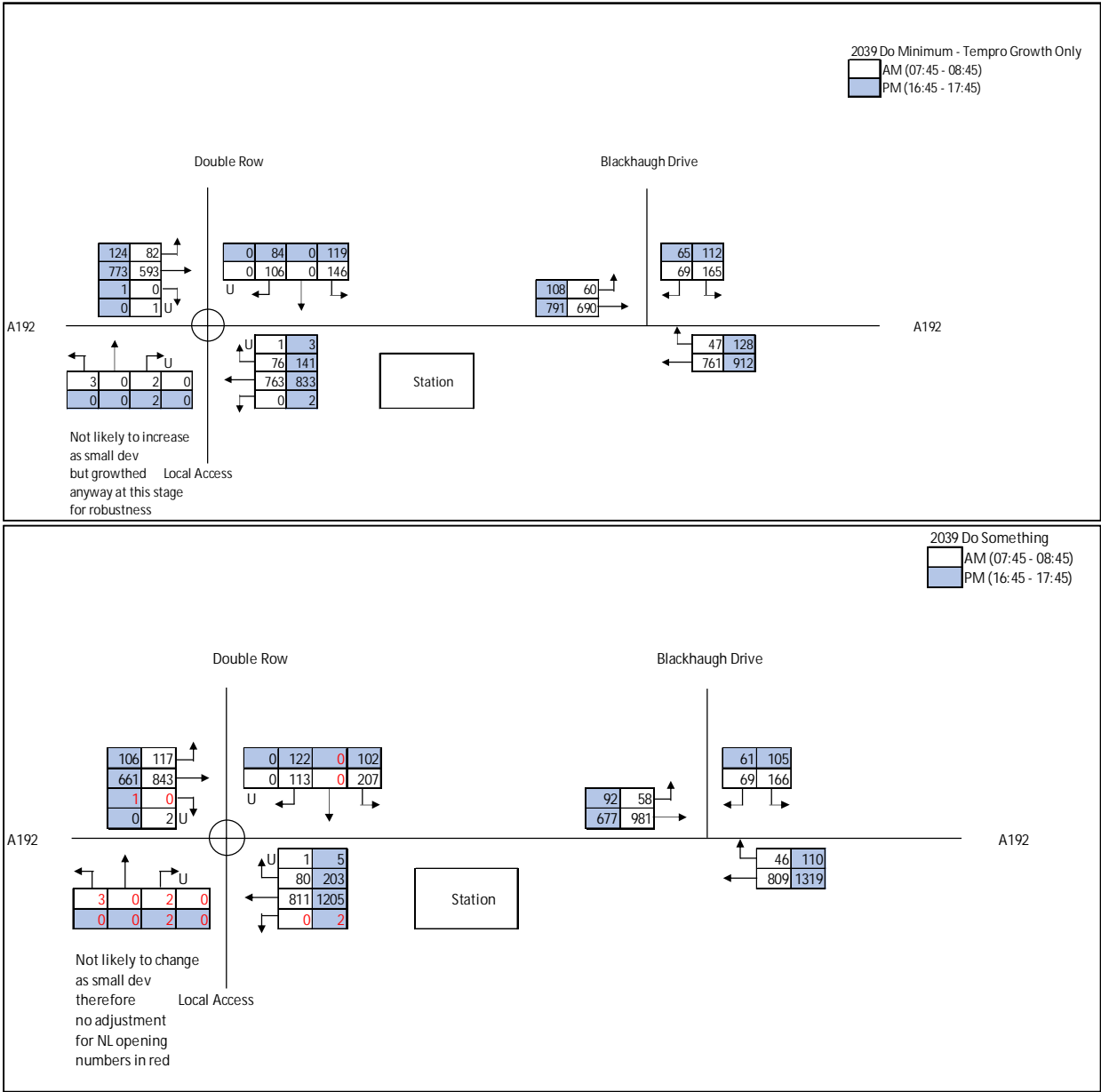


Figure 10. Seaton Delavel DM and DS Flows



- 5.5. The Do Something flows therefore represent the background traffic resulting from the implementation of the Northumberland Line scheme with individual station car park and access flows derived as discussed in Chapter 6. They also do not currently include committed development flows, which are discussed in Chapter 4 of this note, and will be added after they are agreed with NCC. AECOM would like to NCC to agree to the proposed approach in deriving the traffic flows in order to assess the traffic impact of the station proposals.

## **6. Development Trip Generation and Distribution**

- 6.1. The proposed car parking (including taxi, bus and coach parking and drop-off provision), has been identified for each station and is shown in Table 2.
- 6.2. A paper providing an evidence base in support of the identified number of car parking spaces is in development by AECOM. This approach was discussed and agreed in a NL Car Parking Strategy meeting on 20<sup>th</sup> May 2020.
- 6.3. It is assumed that all station traffic will be passenger cars. Taxi and drop off provisional is to be provided and these flows have been incorporated in the OBC demand model used to generate the Northumberland Line scheme traffic.

Table 2. Station Car Parking Provision

Station	Car Parking Spaces
Ashington	274 (additional 161 spaces as site area includes an existing car park containing 113 spaces)
Bebside	Max 300 (Final sizing decision to be made following junction modelling of Bebside grade separated junction (anticipated as limiting factor to car parking provision))
Bedlington	75
Newsham	232
Seaton Delavel	274 (phased to 361 so maximum demand can be accommodated at a later stage)
Northumberland Park	No additional spaces (LRN impacts to be agreed with NTC)

Source: AECOM

- 6.4. It is proposed to assess the access junctions based on an assumed 85% occupancy of each station car park, with 85% of the car park capacity (including taxis, drop off as applicable) arriving in the AM Peak and 85% leaving in the PM Peak.
- 6.5. Distribution for the sites onto the local highway network will be based on turning proportions and link flows obtained through the manual classified turning counts (MCCs).
- 6.6. Whilst it is accepted that there may be some 'double counting' with this approach, as the results of the demand modelling exercise will include an element of station car park demand within it, it is felt that this approach will allow for a robust assessment of the local highway networks to the stations.

## 7. Junction Analysis

- 7.1. The appropriate modelling software (Junctions 9 and LinSig) will be used to test each junction in the base year and development year (2039).
- 7.2. Manual classified turning counts (12-hr) and queue length surveys were commissioned in May 2019 at each site (except for Blyth Bebside where 2015 data was made available for the Bebside grade separated junction; supplemented with May 2019 survey data on one junction approach (A193 Front Street)).
- 7.3. All assessments will be undertaken for the following scenarios for both the AM and PM peaks:
  - Base (2019);and
  - Base plus Development (design year 2039).
- 7.4. AECOM has set out the junctions which will require analysis in the following sections. Junctions, for which there is no data, are highlighted and will result in additional surveys being undertaken if NCC agrees with the junction cordon.



## Newsham

7.5. Junctions which should be assessed as part of the Newsham station TA are shown in Figure 2.

**Figure 11. Newsham Junction Assessment**



7.6. One junction has already been surveyed which is:

- A1061/ B1523 (\*additional arm serving site) (priority roundabout).

## Ashington

7.7. Junctions which should be assessed as park of the Ashington station TA are shown in Figure 3.

**Figure 12. Ashington Junction Assessment**



7.8. Two junctions have already been surveyed, these are:

- Station Road/Kenilworth Road/Council Road/Car Park Access (signalised); and

- Station Road / John Street (priority junction).

7.9. The A1068 / A197 priority junction and the new access junction to the station car park will also be modelled as part of the Transport Assessment. Additional surveys will need to be undertaken at the A1068/A197 junction if no historical data is available.

## Bedlington

7.10. Junctions which should be assessed as part of the Bedlington station TA are shown in Figure 4.

Figure 13. Bedlington Station Junction Assessment



7.11. Four junctions have already been surveyed, these are:

- Station Road/ Melrose Avenue (priority junction);
- Station Road/ Clayton St/R'sworth St/ Palace Rd (priority staggered crossroads);
- Barrington Road/ Ravensworth Street (priority junction); and
- Barrington Road/ Station Access (priority junction).

## Blyth-Bebside

7.12. Junctions which should be assessed as part of the Blyth-Bebside station TA are shown in Figure 5.



Figure 14. Blyth-Beside Junction Assessment



7.13. Two junctions have already been surveyed which are:

- A189/ A193 Beside (Grade Separated roundabout); and
- A193 Front Street/ Errington Street (proposed upgraded access) (priority junction).

7.14. The TA will presents results from modelling currently being undertaken as part of the car park development. NCC should confirm if they would like additional surveys undertaken on the slip roads of this roundabout.

#### Seaton Delaval

7.15. Junctions which should be assessed as park of the Seaton Delaval station TA are shown in Figure 6.

Figure 15. Seaton Delaval Junction Assessment



7.16. Following junctions have already been surveyed, these are:

- A192/Double Row (priority roundabout); and
- A192/Blackhough Drive (priority T-junction).

7.17. AECOM advise the A190 / A192 roundabout to the east is also modelled as part of the TA. If NCC agree, additional surveys will need to be undertaken at this junction.

7.18. AECOM will also model the proposed access to the station car park.

## **8. Accident Analysis**

8.1. A full accident analysis will be undertaken for each TA and this will include the latest 3-year accident data around the vicinity of the site. AECOM request NCC provide this information for each proposed station.

## **9. Level Crossing Assessment**

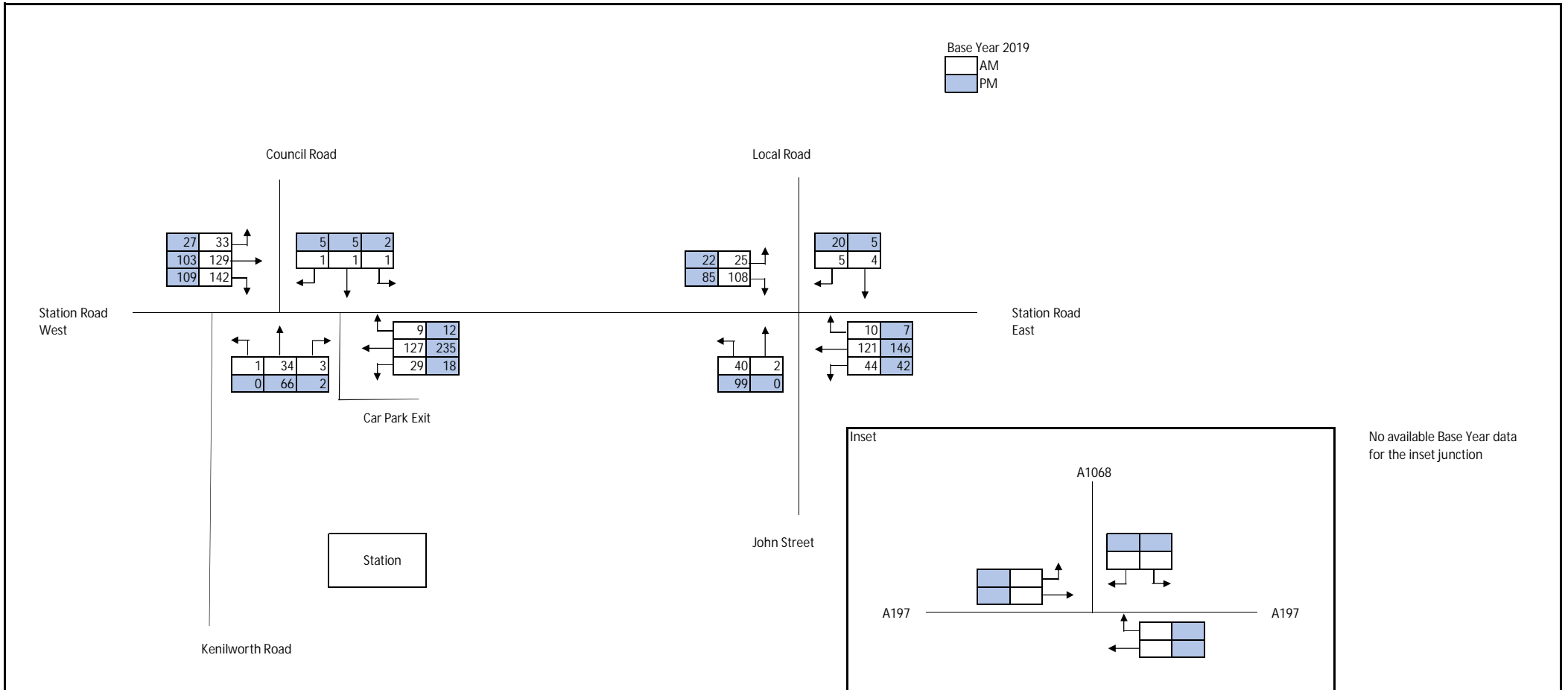
9.1. An assessment of the level crossings associated with the stations will be undertaken in a separate report from the five proposed station TA's.

## **10. Summary and Conclusions**

10.1. This note has been prepared by AECOM in order to inform discussions with NCC with the aim of agreeing a scope of works for the TA's to support the planning application for the proposed Northumberland Line project.

10.2. The TA's will be prepared in line with this scoping note and in line with all local and national guidance on TA's. The emphasis on this approach is to maximise access by sustainable options and manage travel behaviour, whilst providing safe and adequate access proposals for all modes of transport.

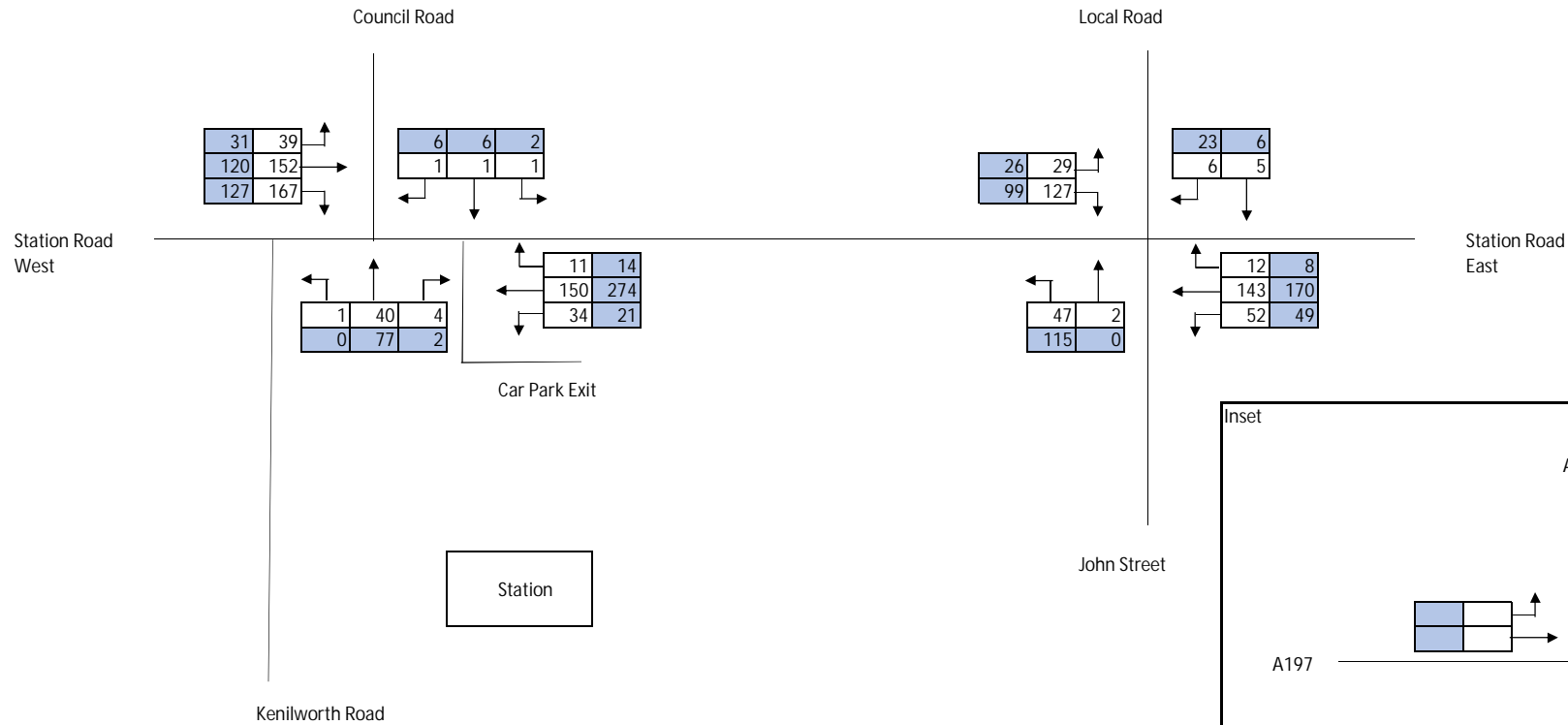
# Appendix B Traffic Flow Diagrams



Client:	Title:			Date	18/12/2020
NCC	Ashington Base Year			Design	PK
Project:	Drawing Number:			Checked	JS
Northumberland Line	<b>AECOM</b>	FIGURE 1	Revision: 1	Approved	JS

2039 Do Minimum - Tempro Growth Only

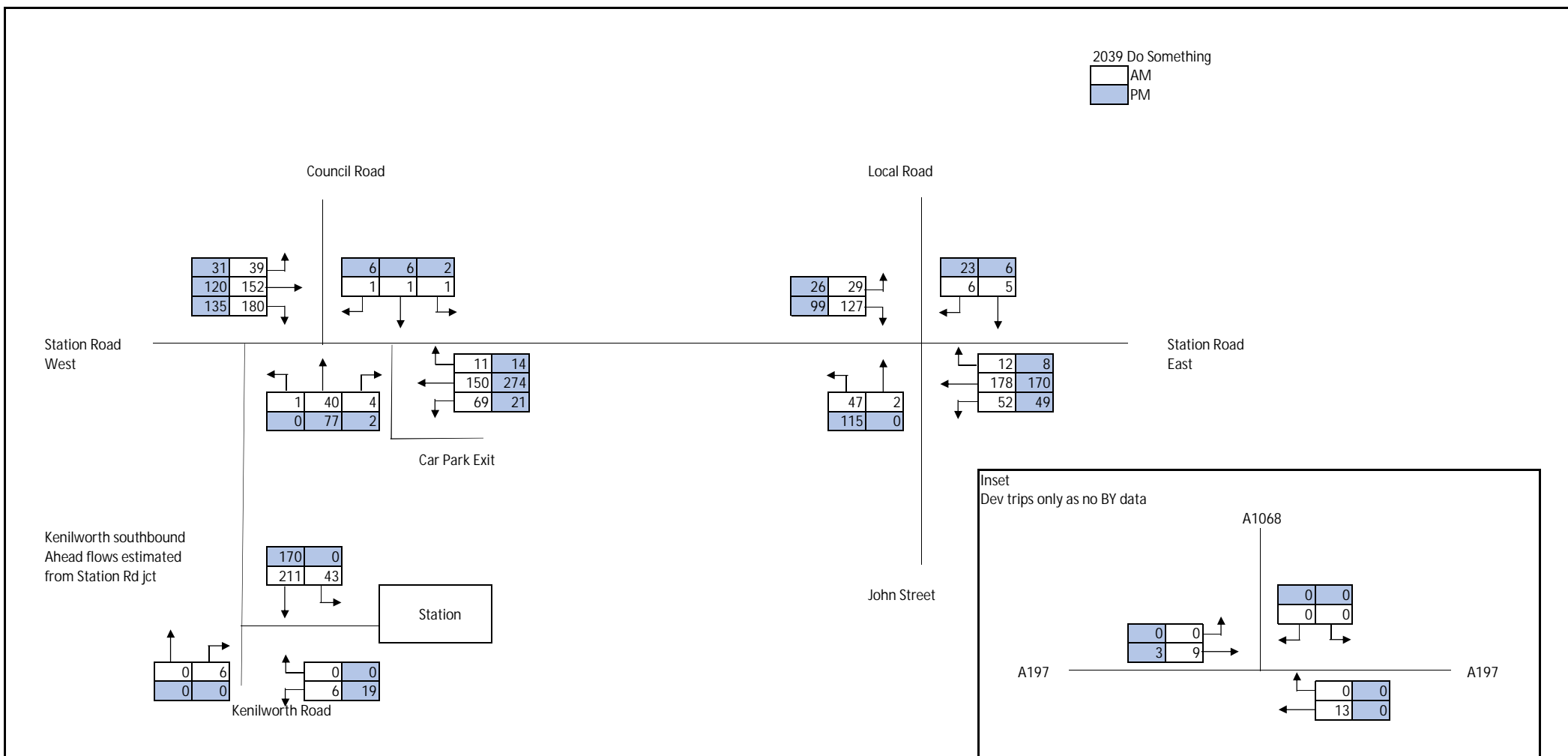
	AM
	PM



Client:	Title:			Date	18/12/2020
NCC	Ashington Do Minimum			Design	PK
Project:		Drawing Number:	Revision:	Checked	JS
Northumberland Line		FIGURE 2	1	Approved	JS

2039 Do Something

AM  
PM



Client:	Title:			Date	18/12/2020
NCC	Ashington Do Something			Design	PK
Project:		Drawing Number:	Revision:	Checked	JS
Northumberland Line		FIGURE 3	1	Approved	JS



# Appendix C JTC and Queue Data

Northumberland, Bexley  
Classified Junction Count

Site 10 of 11  
Local Road  
Station Road (East)  
John Street  
Station Road (West)

Lat/Long  
lat 55.183359° lon -1.572517°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 10.1: Southbound from Local Road to John Street								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	0	0	0	0	0	0	0	0.00
0715 - 0730	0	0	0	0	0	0	0	0	0	0.00
0730 - 0745	0	0	0	0	0	0	0	0	0	0.00
0745 - 0800	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	0	0	0	0	0	0	0	0.00
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0800 - 0815	0	0	0	0	0	0	0	0	0	0.00
0815 - 0830	0	0	1	0	0	0	0	0	1	1.00
0830 - 0845	0	0	0	0	0	0	0	0	0	0.00
0845 - 0900	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	1	0	0	0	0	0	1	1.00
Hourly Average	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.25
0900 - 0915	0	0	1	0	0	0	0	0	1	1.00
0915 - 0930	0	0	1	0	0	1	0	0	2	2.50
0930 - 0945	0	0	0	1	0	0	0	0	1	1.00
0945 - 1000	0	0	2	1	0	0	0	0	3	3.00
Hourly Total	0	0	4	2	0	1	0	0	7	7.50
Hourly Average	0.00	0.00	1.00	0.50	0.00	0.25	0.00	0.00	1.75	1.88
1000 - 1015	0	0	2	0	0	0	0	0	2	2.00
1015 - 1030	0	0	5	0	0	0	0	0	5	5.00
1030 - 1045	0	0	1	0	1	0	0	0	2	2.00
1045 - 1100	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	8	0	1	0	0	0	9	9.00
Hourly Average	0.00	0.00	2.00	0.00	0.25	0.00	0.00	0.00	2.25	2.25
1100 - 1115	0	0	2	0	0	1	0	0	3	3.50
1115 - 1130	0	0	0	0	0	0	0	0	0	0.00
1130 - 1145	0	0	3	0	2	0	0	0	5	5.00
1145 - 1200	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	5	0	2	1	0	0	8	8.50
Hourly Average	0.00	0.00	1.25	0.00	0.50	0.25	0.00	0.00	2.00	2.13
1200 - 1215	0	0	6	0	0	0	0	0	6	6.00
1215 - 1230	0	0	3	0	0	0	0	0	3	3.00
1230 - 1245	0	0	1	0	0	0	0	0	1	1.00
1245 - 1300	0	0	3	0	0	0	0	0	3	3.00
Hourly Total	0	0	13	0	0	0	0	0	13	13.00
Hourly Average	0.00	0.00	3.25	0.00	0.00	0.00	0.00	0.00	3.25	3.25
1300 - 1315	0	0	2	0	1	0	0	0	3	3.00
1315 - 1330	0	0	1	0	0	0	0	0	1	1.00
1330 - 1345	0	0	1	1	0	0	0	0	2	2.00
1345 - 1400	0	0	2	0	0	0	0	0	2	2.00
Hourly Total	0	0	6	1	1	0	0	0	8	8.00
Hourly Average	0.00	0.00	1.50	0.25	0.25	0.00	0.00	0.00	2.00	2.00
1400 - 1415	0	0	1	0	1	0	0	0	2	2.00
1415 - 1430	0	0	1	0	0	0	0	0	1	1.00
1430 - 1445	0	0	4	0	1	0	0	0	5	5.00
1445 - 1500	0	0	1	0	2	0	0	0	3	3.00
Hourly Total	0	0	7	0	4	0	0	0	11	11.00
Hourly Average	0.00	0.00	1.75	0.00	1.00	0.00	0.00	0.00	2.75	2.75
1500 - 1515	0	0	5	0	1	0	0	0	6	6.00
1515 - 1530	0	0	0	0	0	0	0	0	0	0.00
1530 - 1545	0	0	1	0	1	0	0	0	2	2.00
1545 - 1600	0	0	2	0	1	0	0	0	3	3.00
Hourly Total	0	0	8	0	3	0	0	0	11	11.00
Hourly Average	0.00	0.00	2.00	0.00	0.75	0.00	0.00	0.00	2.75	2.75
1600 - 1615	0	0	1	0	0	0	0	0	1	1.00
1615 - 1630	0	0	1	0	0	0	0	0	1	1.00
1630 - 1645	0	0	6	0	1	0	0	0	7	7.00
1645 - 1700	0	0	2	0	0	0	0	0	2	2.00
Hourly Total	0	0	10	0	1	0	0	0	11	11.00
Hourly Average	0.00	0.00	2.50	0.00	0.25	0.00	0.00	0.00	2.75	2.75
1700 - 1715	0	0	0	0	0	0	0	0	0	0.00
1715 - 1730	0	0	1	0	0	0	0	0	1	1.00
1730 - 1745	0	0	2	0	0	0	0	0	2	2.00
1745 - 1800	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	4	0	0	0	0	0	4	4.00
Hourly Average	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00
1800 - 1815	0	0	1	0	0	0	0	0	1	1.00
1815 - 1830	0	0	0	0	0	0	0	0	0	0.00
1830 - 1845	0	0	0	0	0	0	0	0	0	0.00
1845 - 1900	1	0	0	0	0	0	0	0	1	0.20
Hourly Total	1	0	1	0	0	0	0	0	2	1.20
Hourly Average	0.25	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.50	0.30
Session Total	1	0	67	3	12	2	0	0	85	85.20
Session Average	0.02	0.00	1.40	0.06	0.25	0.04	0.00	0.00	1.77	1.78

Northumberland, Bexley  
Classified Junction Count

Site 10 of 11  
Local Road  
Station Road (East)  
John Street  
Station Road (West)

Lat/Long  
lat 55.183359° lon -1.572517°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 10.2: Right from Local Road to Station Road (West)								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	0	0	0	0	0	0	0	0.00
0715 - 0730	0	0	1	0	0	0	0	0	1	1.00
0730 - 0745	0	0	2	0	0	0	0	0	2	2.00
0745 - 0800	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	3	0	0	0	0	0	3	3.00
Hourly Average	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.75	0.75
0800 - 0815	0	0	1	0	0	0	0	0	1	1.00
0815 - 0830	0	0	2	0	0	0	0	0	2	2.00
0830 - 0845	0	0	2	0	0	0	0	0	2	2.00
0845 - 0900	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	6	0	0	0	0	0	6	6.00
Hourly Average	0.00	0.00	1.50	0.00	0.00	0.00	0.00	0.00	1.50	1.50
0900 - 0915	0	0	1	0	0	0	0	0	1	1.00
0915 - 0930	0	0	1	0	0	0	0	0	1	1.00
0930 - 0945	0	0	2	0	0	1	0	0	3	3.50
0945 - 1000	0	0	2	0	0	0	0	0	2	2.00
Hourly Total	0	0	6	0	0	1	0	0	7	7.50
Hourly Average	0.00	0.00	1.50	0.00	0.00	0.25	0.00	0.00	1.75	1.88
1000 - 1015	0	0	2	0	0	0	0	0	2	2.00
1015 - 1030	0	0	2	0	1	0	0	0	3	3.00
1030 - 1045	0	0	4	0	0	0	0	0	4	4.00
1045 - 1100	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	9	0	1	0	0	0	10	10.00
Hourly Average	0.00	0.00	2.25	0.00	0.25	0.00	0.00	0.00	2.50	2.50
1100 - 1115	0	0	5	0	1	0	0	0	6	6.00
1115 - 1130	0	0	4	0	0	0	0	0	4	4.00
1130 - 1145	0	0	5	0	3	0	0	0	8	8.00
1145 - 1200	0	0	2	0	0	0	0	0	2	2.00
Hourly Total	0	0	16	0	4	0	0	0	20	20.00
Hourly Average	0.00	0.00	4.00	0.00	1.00	0.00	0.00	0.00	5.00	5.00
1200 - 1215	0	0	3	0	0	0	0	0	3	3.00
1215 - 1230	0	0	2	0	2	0	0	0	4	4.00
1230 - 1245	0	0	2	0	0	0	0	0	2	2.00
1245 - 1300	0	0	4	0	1	0	0	0	5	5.00
Hourly Total	0	0	11	0	3	0	0	0	14	14.00
Hourly Average	0.00	0.00	2.75	0.00	0.75	0.00	0.00	0.00	3.50	3.50
1300 - 1315	0	0	3	0	0	0	0	0	3	3.00
1315 - 1330	0	0	4	0	1	0	0	0	5	5.00
1330 - 1345	0	0	4	0	0	0	0	0	4	4.00
1345 - 1400	0	0	3	0	1	0	0	0	4	4.00
Hourly Total	0	0	14	0	2	0	0	0	16	16.00
Hourly Average	0.00	0.00	3.50	0.00	0.50	0.00	0.00	0.00	4.00	4.00
1400 - 1415	0	0	4	0	1	0	0	0	5	5.00
1415 - 1430	0	0	4	0	2	0	0	0	6	6.00
1430 - 1445	0	0	7	0	2	0	0	0	9	9.00
1445 - 1500	0	0	2	0	1	0	0	0	3	3.00
Hourly Total	0	0	17	0	6	0	0	0	23	23.00
Hourly Average	0.00	0.00	4.25	0.00	1.50	0.00	0.00	0.00	5.75	5.75
1500 - 1515	0	0	0	0	0	0	0	0	0	0.00
1515 - 1530	0	0	2	0	1	2	0	0	5	6.00
1530 - 1545	0	0	4	0	1	0	0	0	5	5.00
1545 - 1600	0	0	1	0	1	0	0	0	2	2.00
Hourly Total	0	0	7	0	3	2	0	0	12	13.00
Hourly Average	0.00	0.00	1.75	0.00	0.75	0.50	0.00	0.00	3.00	3.25
1600 - 1615	0	0	8	0	0	0	0	0	8	8.00
1615 - 1630	0	0	0	0	1	0	0	0	1	1.00
1630 - 1645	0	0	3	0	0	0	0	0	3	3.00
1645 - 1700	0	0	4	0	1	0	0	0	5	5.00
Hourly Total	0	0	15	0	2	0	0	0	17	17.00
Hourly Average	0.00	0.00	3.75	0.00	0.50	0.00	0.00	0.00	4.25	4.25
1700 - 1715	0	0	0	0	1	0	0	0	1	1.00
1715 - 1730	0	0	3	0	0	0	0	0	3	3.00
1730 - 1745	0	0	10	0	1	0	0	0	11	11.00
1745 - 1800	0	0	3	0	0	0	0	0	3	3.00
Hourly Total	0	0	16	0	2	0	0	0	18	18.00
Hourly Average	0.00	0.00	4.00	0.00	0.50	0.00	0.00	0.00	4.50	4.50
1800 - 1815	0	0	1	0	0	0	0	0	1	1.00
1815 - 1830	0	0	3	0	0	0	0	0	3	3.00
1830 - 1845	0	0	6	0	0	0	0	0	6	6.00
1845 - 1900	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	10	0	0	0	0	0	10	10.00
Hourly Average	0.00	0.00	2.50	0.00	0.00	0.00	0.00	0.00	2.50	2.50
Session Total	0	0	130	0	23	3	0	0	156	157.50
Session Average	0.00	0.00	2.71	0.00	0.48	0.06	0.00	0.00	3.25	3.28

Northumberland, Bexley  
Classified Junction Count

Site 10 of 11  
Local Road  
Station Road (East)  
John Street  
Station Road (West)

Lat/Long  
lat 55.183359° lon -1.572517°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 10.3: Left from Station Road (East) to John Street								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	1	0	1	0	0	0	2	2.00
0715 - 0730	0	0	2	0	0	0	0	0	2	2.00
0730 - 0745	0	0	2	0	3	0	0	0	5	5.00
0745 - 0800	0	0	4	0	1	0	0	0	5	5.00
Hourly Total	0	0	9	0	5	0	0	0	14	14.00
Hourly Average	0.00	0.00	2.25	0.00	1.25	0.00	0.00	0.00	3.50	3.50
0800 - 0815	0	0	7	0	3	0	0	0	10	10.00
0815 - 0830	0	0	6	0	1	0	0	0	7	7.00
0830 - 0845	0	0	13	0	3	0	0	0	16	16.00
0845 - 0900	0	0	9	0	1	0	0	0	10	10.00
Hourly Total	0	0	35	0	8	0	0	0	43	43.00
Hourly Average	0.00	0.00	8.75	0.00	2.00	0.00	0.00	0.00	10.75	10.75
0900 - 0915	0	0	9	0	0	0	0	0	9	9.00
0915 - 0930	0	1	8	0	0	0	0	0	9	8.40
0930 - 0945	0	0	9	0	2	0	0	0	11	11.00
0945 - 1000	0	0	10	2	1	0	0	0	13	13.00
Hourly Total	0	1	36	2	3	0	0	0	42	41.40
Hourly Average	0.00	0.25	9.00	0.50	0.75	0.00	0.00	0.00	10.50	10.35
1000 - 1015	0	0	18	1	0	0	0	0	19	19.00
1015 - 1030	0	0	8	2	0	0	0	0	10	10.00
1030 - 1045	0	0	10	0	0	0	0	0	10	10.00
1045 - 1100	0	0	7	2	0	0	0	0	9	9.00
Hourly Total	0	0	43	5	0	0	0	0	48	48.00
Hourly Average	0.00	0.00	10.75	1.25	0.00	0.00	0.00	0.00	12.00	12.00
1100 - 1115	0	0	11	0	0	0	0	0	11	11.00
1115 - 1130	0	0	15	0	0	0	0	0	15	15.00
1130 - 1145	0	0	21	0	1	0	0	0	22	22.00
1145 - 1200	0	0	8	0	0	0	0	0	8	8.00
Hourly Total	0	0	55	0	1	0	0	0	56	56.00
Hourly Average	0.00	0.00	13.75	0.00	0.25	0.00	0.00	0.00	14.00	14.00
1200 - 1215	0	0	15	1	0	0	0	0	16	16.00
1215 - 1230	0	0	17	1	1	0	0	0	19	19.00
1230 - 1245	0	0	12	2	0	0	0	0	14	14.00
1245 - 1300	0	0	10	0	1	0	0	0	11	11.00
Hourly Total	0	0	54	4	2	0	0	0	60	60.00
Hourly Average	0.00	0.00	13.50	1.00	0.50	0.00	0.00	0.00	15.00	15.00
1300 - 1315	0	0	14	1	2	0	0	0	17	17.00
1315 - 1330	0	0	16	0	0	0	0	0	16	16.00
1330 - 1345	0	0	15	1	1	0	0	0	17	17.00
1345 - 1400	0	0	10	0	1	0	0	0	11	11.00
Hourly Total	0	0	55	2	4	0	0	0	61	61.00
Hourly Average	0.00	0.00	13.75	0.50	1.00	0.00	0.00	0.00	15.25	15.25
1400 - 1415	0	0	17	1	0	0	0	0	18	18.00
1415 - 1430	0	0	11	1	0	0	0	0	12	12.00
1430 - 1445	0	0	8	1	1	0	0	0	10	10.00
1445 - 1500	0	0	15	0	2	0	0	0	17	17.00
Hourly Total	0	0	51	3	3	0	0	0	57	57.00
Hourly Average	0.00	0.00	12.75	0.75	0.75	0.00	0.00	0.00	14.25	14.25
1500 - 1515	0	0	4	0	0	0	0	0	4	4.00
1515 - 1530	0	0	1	0	1	0	0	0	2	2.00
1530 - 1545	0	0	0	0	2	0	0	0	2	2.00
1545 - 1600	0	0	0	0	1	0	0	0	1	1.00
Hourly Total	0	0	5	0	4	0	0	0	9	9.00
Hourly Average	0.00	0.00	1.25	0.00	1.00	0.00	0.00	0.00	2.25	2.25
1600 - 1615	0	0	1	0	1	0	0	0	2	2.00
1615 - 1630	0	0	0	0	1	0	0	0	1	1.00
1630 - 1645	0	0	5	0	0	0	0	0	5	5.00
1645 - 1700	0	0	13	0	1	0	0	0	14	14.00
Hourly Total	0	0	19	0	3	0	0	0	22	22.00
Hourly Average	0.00	0.00	4.75	0.00	0.75	0.00	0.00	0.00	5.50	5.50
1700 - 1715	0	0	6	0	0	0	0	0	6	6.00
1715 - 1730	0	0	8	2	1	0	0	0	11	11.00
1730 - 1745	0	0	11	0	0	0	0	0	11	11.00
1745 - 1800	0	1	6	0	1	0	0	0	8	7.40
Hourly Total	0	1	31	2	2	0	0	0	36	35.40
Hourly Average	0.00	0.25	7.75	0.50	0.50	0.00	0.00	0.00	9.00	8.85
1800 - 1815	0	0	7	0	0	0	0	0	7	7.00
1815 - 1830	0	0	3	0	0	0	0	0	3	3.00
1830 - 1845	0	0	7	0	0	0	0	0	7	7.00
1845 - 1900	0	0	6	0	0	0	0	0	6	6.00
Hourly Total	0	0	23	0	0	0	0	0	23	23.00
Hourly Average	0.00	0.00	5.75	0.00	0.00	0.00	0.00	0.00	5.75	5.75
Session Total	0	2	416	18	35	0	0	0	471	469.80
Session Average	0.00	0.04	8.67	0.38	0.73	0.00	0.00	0.00	9.81	9.79

Northumberland, Bexley  
Classified Junction Count

Site 10 of 11  
Local Road  
Station Road (East)  
John Street  
Station Road (West)

Lat/Long  
lat 55.183359° lon -1.572517°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 10.4: Westbound from Station Road (East) to Station Road (West)								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	7	0	1	0	0	0	8	8.00
0715 - 0730	0	0	8	1	4	0	0	0	13	13.00
0730 - 0745	0	0	14	0	4	0	0	0	18	18.00
0745 - 0800	0	0	18	1	5	0	0	0	24	24.00
Hourly Total	0	0	47	2	14	0	0	0	63	63.00
Hourly Average	0.00	0.00	11.75	0.50	3.50	0.00	0.00	0.00	15.75	15.75
0800 - 0815	1	0	20	0	3	1	0	0	25	24.70
0815 - 0830	0	0	20	1	2	0	0	0	23	23.00
0830 - 0845	1	0	24	0	1	0	0	1	27	27.20
0845 - 0900	0	0	22	1	5	0	0	0	28	28.00
Hourly Total	2	0	86	2	11	1	0	1	103	102.90
Hourly Average	0.50	0.00	21.50	0.50	2.75	0.25	0.00	0.25	25.75	25.73
0900 - 0915	0	1	37	1	5	1	0	0	45	44.90
0915 - 0930	0	0	18	0	2	0	0	0	20	20.00
0930 - 0945	0	0	24	0	2	0	0	0	26	26.00
0945 - 1000	0	0	29	0	1	1	0	0	31	31.50
Hourly Total	0	1	108	1	10	2	0	0	122	122.40
Hourly Average	0.00	0.25	27.00	0.25	2.50	0.50	0.00	0.00	30.50	30.60
1000 - 1015	0	0	16	1	1	0	0	0	18	18.00
1015 - 1030	0	0	26	1	3	0	0	0	30	30.00
1030 - 1045	0	0	26	5	4	0	0	0	35	35.00
1045 - 1100	1	0	27	3	3	0	0	0	34	33.20
Hourly Total	1	0	95	10	11	0	0	0	117	116.20
Hourly Average	0.25	0.00	23.75	2.50	2.75	0.00	0.00	0.00	29.25	29.05
1100 - 1115	1	1	18	2	3	0	0	0	25	23.60
1115 - 1130	0	0	23	0	2	0	0	0	25	25.00
1130 - 1145	1	0	20	1	1	0	0	0	23	22.20
1145 - 1200	0	0	36	3	1	0	0	0	40	40.00
Hourly Total	2	1	97	6	7	0	0	0	113	110.80
Hourly Average	0.50	0.25	24.25	1.50	1.75	0.00	0.00	0.00	28.25	27.70
1200 - 1215	0	0	24	5	2	0	0	0	31	31.00
1215 - 1230	0	0	18	1	0	0	0	0	19	19.00
1230 - 1245	0	0	26	0	2	0	0	0	28	28.00
1245 - 1300	2	0	22	0	4	0	0	0	28	26.40
Hourly Total	2	0	90	6	8	0	0	0	106	104.40
Hourly Average	0.50	0.00	22.50	1.50	2.00	0.00	0.00	0.00	26.50	26.10
1300 - 1315	0	0	19	0	2	0	0	0	21	21.00
1315 - 1330	0	0	20	2	7	0	0	0	29	29.00
1330 - 1345	0	0	22	0	5	0	0	0	27	27.00
1345 - 1400	0	0	20	3	1	0	0	0	24	24.00
Hourly Total	0	0	81	5	15	0	0	0	101	101.00
Hourly Average	0.00	0.00	20.25	1.25	3.75	0.00	0.00	0.00	25.25	25.25
1400 - 1415	0	0	28	1	5	0	0	0	34	34.00
1415 - 1430	1	0	21	1	1	1	0	0	25	24.70
1430 - 1445	0	0	26	1	1	0	0	0	28	28.00
1445 - 1500	1	0	39	1	2	0	0	0	43	42.20
Hourly Total	2	0	114	4	9	1	0	0	130	128.90
Hourly Average	0.50	0.00	28.50	1.00	2.25	0.25	0.00	0.00	32.50	32.23
1500 - 1515	1	0	7	0	0	1	0	0	9	8.70
1515 - 1530	0	0	6	0	1	0	0	0	7	7.00
1530 - 1545	0	0	1	0	2	0	0	0	3	3.00
1545 - 1600	1	0	0	0	4	0	0	0	5	4.20
Hourly Total	2	0	14	0	7	1	0	0	24	22.90
Hourly Average	0.50	0.00	3.50	0.00	1.75	0.25	0.00	0.00	6.00	5.73
1600 - 1615	0	0	1	0	0	0	0	0	1	1.00
1615 - 1630	0	0	1	0	0	0	0	0	1	1.00
1630 - 1645	1	0	26	0	6	0	0	0	33	32.20
1645 - 1700	0	0	25	0	1	0	0	0	26	26.00
Hourly Total	1	0	53	0	7	0	0	0	61	60.20
Hourly Average	0.25	0.00	13.25	0.00	1.75	0.00	0.00	0.00	15.25	15.05
1700 - 1715	1	1	37	0	6	0	0	0	45	43.60
1715 - 1730	0	0	38	1	2	0	0	0	41	41.00
1730 - 1745	0	0	32	1	2	0	0	0	35	35.00
1745 - 1800	0	0	36	2	3	0	0	0	41	41.00
Hourly Total	1	1	143	4	13	0	0	0	162	160.60
Hourly Average	0.25	0.25	35.75	1.00	3.25	0.00	0.00	0.00	40.50	40.15
1800 - 1815	0	1	33	0	1	0	0	0	35	34.40
1815 - 1830	0	0	26	0	3	0	0	0	29	29.00
1830 - 1845	0	2	25	0	3	0	0	0	30	28.80
1845 - 1900	0	0	33	0	1	0	0	0	34	34.00
Hourly Total	0	3	117	0	8	0	0	0	128	126.20
Hourly Average	0.00	0.75	29.25	0.00	2.00	0.00	0.00	0.00	32.00	31.55
Session Total	13	6	1045	40	120	5	0	1	1230	1219.50
Session Average	0.27	0.13	21.77	0.83	2.50	0.10	0.00	0.02	25.63	25.41

Northumberland, Bexley  
Classified Junction Count

Site 10 of 11  
Local Road  
Station Road (East)  
John Street  
Station Road (West)

Lat/Long  
lat 55.183359° lon -1.572517°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 10.5: Right from Station Road (East) to Local Road								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	0	0	0	0	0	0	0	0.00
0715 - 0730	0	0	0	0	0	0	0	0	0	0.00
0730 - 0745	0	0	0	0	0	0	0	0	0	0.00
0745 - 0800	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	0	0	0	0	0	0	0	0.00
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0800 - 0815	0	0	2	0	0	0	0	0	2	2.00
0815 - 0830	0	0	0	0	1	0	0	0	1	1.00
0830 - 0845	0	0	1	0	1	0	0	0	2	2.00
0845 - 0900	0	0	4	0	1	0	0	0	5	5.00
Hourly Total	0	0	7	0	3	0	0	0	10	10.00
Hourly Average	0.00	0.00	1.75	0.00	0.75	0.00	0.00	0.00	2.50	2.50
0900 - 0915	0	0	2	0	1	0	0	0	3	3.00
0915 - 0930	0	0	0	0	0	0	0	0	0	0.00
0930 - 0945	0	0	2	0	0	0	0	0	2	2.00
0945 - 1000	0	0	2	0	0	0	0	0	2	2.00
Hourly Total	0	0	6	0	1	0	0	0	7	7.00
Hourly Average	0.00	0.00	1.50	0.00	0.25	0.00	0.00	0.00	1.75	1.75
1000 - 1015	0	0	3	0	1	0	0	0	4	4.00
1015 - 1030	0	0	2	0	0	0	0	0	2	2.00
1030 - 1045	0	0	3	0	0	0	0	0	3	3.00
1045 - 1100	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	9	0	1	0	0	0	10	10.00
Hourly Average	0.00	0.00	2.25	0.00	0.25	0.00	0.00	0.00	2.50	2.50
1100 - 1115	0	0	3	0	0	0	0	0	3	3.00
1115 - 1130	0	0	1	0	0	0	0	0	1	1.00
1130 - 1145	0	0	1	0	0	0	0	0	1	1.00
1145 - 1200	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	6	0	0	0	0	0	6	6.00
Hourly Average	0.00	0.00	1.50	0.00	0.00	0.00	0.00	0.00	1.50	1.50
1200 - 1215	0	0	4	0	0	0	0	0	4	4.00
1215 - 1230	0	0	1	0	1	0	0	0	2	2.00
1230 - 1245	0	0	4	0	0	0	0	0	4	4.00
1245 - 1300	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	10	0	1	0	0	0	11	11.00
Hourly Average	0.00	0.00	2.50	0.00	0.25	0.00	0.00	0.00	2.75	2.75
1300 - 1315	0	0	2	0	0	0	0	0	2	2.00
1315 - 1330	0	0	4	0	0	0	0	0	4	4.00
1330 - 1345	0	0	2	0	1	0	0	0	3	3.00
1345 - 1400	0	0	1	0	1	0	0	0	2	2.00
Hourly Total	0	0	9	0	2	0	0	0	11	11.00
Hourly Average	0.00	0.00	2.25	0.00	0.50	0.00	0.00	0.00	2.75	2.75
1400 - 1415	0	0	5	0	1	0	0	0	6	6.00
1415 - 1430	0	0	3	0	1	0	0	0	4	4.00
1430 - 1445	0	0	0	0	0	0	0	0	0	0.00
1445 - 1500	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	9	0	2	0	0	0	11	11.00
Hourly Average	0.00	0.00	2.25	0.00	0.50	0.00	0.00	0.00	2.75	2.75
1500 - 1515	0	0	0	0	0	0	0	0	0	0.00
1515 - 1530	0	0	0	0	0	0	0	0	0	0.00
1530 - 1545	0	0	0	0	0	0	0	0	0	0.00
1545 - 1600	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	0	0	0	0	0	0	0	0.00
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1600 - 1615	0	0	0	0	0	0	0	0	0	0.00
1615 - 1630	0	0	0	0	0	0	0	0	0	0.00
1630 - 1645	0	0	0	0	0	0	0	0	0	0.00
1645 - 1700	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	0	0	0	0	0	0	0	0.00
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1700 - 1715	0	0	1	0	0	0	0	0	1	1.00
1715 - 1730	0	0	1	0	0	0	0	0	1	1.00
1730 - 1745	0	0	4	1	0	0	0	0	5	5.00
1745 - 1800	0	0	3	0	0	0	0	0	3	3.00
Hourly Total	0	0	9	1	0	0	0	0	10	10.00
Hourly Average	0.00	0.00	2.25	0.25	0.00	0.00	0.00	0.00	2.50	2.50
1800 - 1815	0	0	0	0	0	0	0	0	0	0.00
1815 - 1830	0	0	1	0	0	0	0	0	1	1.00
1830 - 1845	0	0	1	0	0	0	0	0	1	1.00
1845 - 1900	0	0	2	0	0	0	0	0	2	2.00
Hourly Total	0	0	4	0	0	0	0	0	4	4.00
Hourly Average	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00
Session Total	0	0	69	1	10	0	0	0	80	80.00
Session Average	0.00	0.00	1.44	0.02	0.21	0.00	0.00	0.00	1.67	1.67



Northumberland, Bexley  
Classified Junction Count

Site 10 of 11  
Local Road  
Station Road (East)  
John Street  
Station Road (West)

Lat/Long  
lat 55.183359° lon -1.572517°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 10.6: Left from John Sreet to Station Road (West)								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	1	0	1	0	0	0	0	0	2	1.20
0715 - 0730	0	0	3	0	1	0	0	0	4	4.00
0730 - 0745	0	0	1	0	1	0	0	0	2	2.00
0745 - 0800	0	0	6	0	0	0	0	0	6	6.00
Hourly Total	1	0	11	0	2	0	0	0	14	13.20
Hourly Average	0.25	0.00	2.75	0.00	0.50	0.00	0.00	0.00	3.50	3.30
0800 - 0815	0	0	12	0	0	0	0	0	12	12.00
0815 - 0830	0	0	13	0	2	0	0	0	15	15.00
0830 - 0845	0	0	10	0	0	0	0	0	10	10.00
0845 - 0900	0	0	7	1	2	0	1	0	11	12.30
Hourly Total	0	0	42	1	4	0	1	0	48	49.30
Hourly Average	0.00	0.00	10.50	0.25	1.00	0.00	0.25	0.00	12.00	12.33
0900 - 0915	0	0	7	1	0	1	0	0	9	9.50
0915 - 0930	0	0	6	0	1	0	0	0	7	7.00
0930 - 0945	0	0	11	3	0	0	0	0	14	14.00
0945 - 1000	0	0	14	1	2	0	0	0	17	17.00
Hourly Total	0	0	38	5	3	1	0	0	47	47.50
Hourly Average	0.00	0.00	9.50	1.25	0.75	0.25	0.00	0.00	11.75	11.88
1000 - 1015	0	0	13	0	1	0	0	0	14	14.00
1015 - 1030	0	0	13	1	2	0	0	0	16	16.00
1030 - 1045	0	0	15	2	4	2	0	0	23	24.00
1045 - 1100	0	0	12	1	2	1	0	0	16	16.50
Hourly Total	0	0	53	4	9	3	0	0	69	70.50
Hourly Average	0.00	0.00	13.25	1.00	2.25	0.75	0.00	0.00	17.25	17.63
1100 - 1115	0	0	6	2	2	0	0	0	10	10.00
1115 - 1130	0	0	9	0	3	0	0	0	12	12.00
1130 - 1145	0	0	15	0	2	0	0	0	17	17.00
1145 - 1200	0	0	12	4	1	0	0	0	17	17.00
Hourly Total	0	0	42	6	8	0	0	0	56	56.00
Hourly Average	0.00	0.00	10.50	1.50	2.00	0.00	0.00	0.00	14.00	14.00
1200 - 1215	0	0	7	0	1	0	0	0	8	8.00
1215 - 1230	0	0	8	0	0	0	0	0	8	8.00
1230 - 1245	0	0	12	1	1	0	0	0	14	14.00
1245 - 1300	0	0	9	0	0	0	0	0	9	9.00
Hourly Total	0	0	36	1	2	0	0	0	39	39.00
Hourly Average	0.00	0.00	9.00	0.25	0.50	0.00	0.00	0.00	9.75	9.75
1300 - 1315	0	0	14	2	1	1	0	0	18	18.50
1315 - 1330	0	0	16	3	1	0	0	0	20	20.00
1330 - 1345	0	0	8	2	1	0	0	0	11	11.00
1345 - 1400	0	0	12	0	4	1	0	0	17	17.50
Hourly Total	0	0	50	7	7	2	0	0	66	67.00
Hourly Average	0.00	0.00	12.50	1.75	1.75	0.50	0.00	0.00	16.50	16.75
1400 - 1415	0	0	26	2	2	0	0	0	30	30.00
1415 - 1430	0	0	22	0	1	0	0	0	23	23.00
1430 - 1445	0	0	15	0	2	1	0	0	18	18.50
1445 - 1500	0	0	14	1	0	0	0	0	15	15.00
Hourly Total	0	0	77	3	5	1	0	0	86	86.50
Hourly Average	0.00	0.00	19.25	0.75	1.25	0.25	0.00	0.00	21.50	21.63
1500 - 1515	0	0	10	1	0	0	0	0	11	11.00
1515 - 1530	1	0	26	0	2	0	0	0	29	28.20
1530 - 1545	0	0	22	1	3	0	0	0	26	26.00
1545 - 1600	1	0	17	1	1	0	0	0	20	19.20
Hourly Total	2	0	75	3	6	0	0	0	86	84.40
Hourly Average	0.50	0.00	18.75	0.75	1.50	0.00	0.00	0.00	21.50	21.10
1600 - 1615	0	0	21	3	1	0	0	0	25	25.00
1615 - 1630	0	0	10	2	7	0	0	0	19	19.00
1630 - 1645	0	0	14	0	0	0	0	0	14	14.00
1645 - 1700	0	0	25	3	0	0	0	0	28	28.00
Hourly Total	0	0	70	8	8	0	0	0	86	86.00
Hourly Average	0.00	0.00	17.50	2.00	2.00	0.00	0.00	0.00	21.50	21.50
1700 - 1715	0	0	22	1	0	0	0	0	23	23.00
1715 - 1730	0	0	24	1	1	0	0	0	26	26.00
1730 - 1745	0	0	19	1	2	0	0	0	22	22.00
1745 - 1800	0	0	12	0	1	0	0	0	13	13.00
Hourly Total	0	0	77	3	4	0	0	0	84	84.00
Hourly Average	0.00	0.00	19.25	0.75	1.00	0.00	0.00	0.00	21.00	21.00
1800 - 1815	0	0	11	0	0	0	0	0	11	11.00
1815 - 1830	0	0	13	0	3	0	0	0	16	16.00
1830 - 1845	0	0	9	0	1	0	0	0	10	10.00
1845 - 1900	0	0	5	0	1	0	0	0	6	6.00
Hourly Total	0	0	38	0	5	0	0	0	43	43.00
Hourly Average	0.00	0.00	9.50	0.00	1.25	0.00	0.00	0.00	10.75	10.75
Session Total	3	0	609	41	63	7	1	0	724	726.40
Session Average	0.06	0.00	12.69	0.85	1.31	0.15	0.02	0.00	15.08	15.13

Northumberland, Bexley  
Classified Junction Count

Site 10 of 11  
Local Road  
Station Road (East)  
John Street  
Station Road (West)

Lat/Long  
lat 55.183359° lon -1.572517°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 10.7: Northbound from John Street to Local Road								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	0	0	0	0	0	0	0	0.00
0715 - 0730	0	0	0	0	0	0	0	0	0	0.00
0730 - 0745	0	0	0	0	0	0	0	0	0	0.00
0745 - 0800	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	0	0	0	0	0	0	0	0.00
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0800 - 0815	0	0	0	0	0	0	0	0	0	0.00
0815 - 0830	0	0	0	0	0	0	0	0	0	0.00
0830 - 0845	0	0	1	0	0	0	0	0	1	1.00
0845 - 0900	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	2	0	0	0	0	0	2	2.00
Hourly Average	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.50	0.50
0900 - 0915	0	0	0	0	0	0	0	0	0	0.00
0915 - 0930	0	0	0	0	0	0	0	0	0	0.00
0930 - 0945	0	0	1	0	0	0	0	0	1	1.00
0945 - 1000	0	0	1	0	1	0	0	0	2	2.00
Hourly Total	0	0	2	0	1	0	0	0	3	3.00
Hourly Average	0.00	0.00	0.50	0.00	0.25	0.00	0.00	0.00	0.75	0.75
1000 - 1015	0	0	1	0	0	0	0	0	1	1.00
1015 - 1030	0	0	0	0	0	0	0	0	0	0.00
1030 - 1045	0	0	0	0	0	0	0	0	0	0.00
1045 - 1100	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	1	0	0	0	0	0	1	1.00
Hourly Average	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.25
1100 - 1115	0	0	0	0	0	0	0	0	0	0.00
1115 - 1130	0	0	1	0	1	0	0	0	2	2.00
1130 - 1145	0	0	1	0	0	0	0	0	1	1.00
1145 - 1200	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	2	0	1	0	0	0	3	3.00
Hourly Average	0.00	0.00	0.50	0.00	0.25	0.00	0.00	0.00	0.75	0.75
1200 - 1215	0	0	0	0	0	0	0	0	0	0.00
1215 - 1230	0	0	3	0	1	0	0	0	4	4.00
1230 - 1245	0	0	1	0	1	0	0	0	2	2.00
1245 - 1300	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	5	0	2	0	0	0	7	7.00
Hourly Average	0.00	0.00	1.25	0.00	0.50	0.00	0.00	0.00	1.75	1.75
1300 - 1315	0	0	1	0	0	0	0	0	1	1.00
1315 - 1330	0	0	0	0	0	0	0	0	0	0.00
1330 - 1345	0	0	0	0	0	0	0	0	0	0.00
1345 - 1400	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	2	0	0	0	0	0	2	2.00
Hourly Average	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.50	0.50
1400 - 1415	0	0	0	0	0	0	0	0	0	0.00
1415 - 1430	0	0	0	0	1	0	0	0	1	1.00
1430 - 1445	0	0	0	0	0	0	0	0	0	0.00
1445 - 1500	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	1	0	1	0	0	0	2	2.00
Hourly Average	0.00	0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.50	0.50
1500 - 1515	0	0	4	0	0	0	0	0	4	4.00
1515 - 1530	0	0	1	0	0	1	0	0	2	2.50
1530 - 1545	0	0	1	0	1	0	0	0	2	2.00
1545 - 1600	0	0	1	1	0	0	0	0	2	2.00
Hourly Total	0	0	7	1	1	1	0	0	10	10.50
Hourly Average	0.00	0.00	1.75	0.25	0.25	0.25	0.00	0.00	2.50	2.63
1600 - 1615	0	0	2	0	0	0	0	0	2	2.00
1615 - 1630	0	0	1	0	0	0	0	0	1	1.00
1630 - 1645	0	0	0	0	0	0	0	0	0	0.00
1645 - 1700	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	3	0	0	0	0	0	3	3.00
Hourly Average	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.75	0.75
1700 - 1715	0	0	0	0	0	0	0	0	0	0.00
1715 - 1730	0	0	0	0	0	0	0	0	0	0.00
1730 - 1745	0	0	0	0	0	0	0	0	0	0.00
1745 - 1800	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	0	0	0	0	0	0	0	0.00
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800 - 1815	0	0	0	0	0	0	0	0	0	0.00
1815 - 1830	0	0	0	0	0	0	0	0	0	0.00
1830 - 1845	0	0	0	0	0	0	0	0	0	0.00
1845 - 1900	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	0	0	0	0	0	0	0	0.00
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Session Total	0	0	25	1	6	1	0	0	33	33.50
Session Average	0.00	0.00	0.52	0.02	0.13	0.02	0.00	0.00	0.69	0.70

Northumberland, Bexley  
Classified Junction Count

Site 10 of 11  
Local Road  
Station Road (East)  
John Street  
Station Road (West)

Lat/Long  
lat 55.183359° lon -1.572517°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 10.8: Left from Station Road (West) to Local Road								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	1	0	0	0	0	0	1	1.00
0715 - 0730	2	0	0	0	0	0	0	0	2	0.40
0730 - 0745	0	0	8	0	0	0	1	0	9	10.30
0745 - 0800	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	2	0	9	0	0	0	1	0	12	11.70
Hourly Average	0.50	0.00	2.25	0.00	0.00	0.00	0.25	0.00	3.00	2.93
0800 - 0815	0	1	0	0	0	0	0	0	1	0.40
0815 - 0830	0	2	3	0	0	0	0	0	5	3.80
0830 - 0845	0	0	7	0	0	0	0	0	7	7.00
0845 - 0900	0	0	4	0	0	0	0	0	4	4.00
Hourly Total	0	3	14	0	0	0	0	0	17	15.20
Hourly Average	0.00	0.75	3.50	0.00	0.00	0.00	0.00	0.00	4.25	3.80
0900 - 0915	0	0	3	0	0	1	0	0	4	4.50
0915 - 0930	0	0	6	0	1	1	0	0	8	8.50
0930 - 0945	0	0	5	0	0	0	0	0	5	5.00
0945 - 1000	0	0	3	0	1	0	0	0	4	4.00
Hourly Total	0	0	17	0	2	2	0	0	21	22.00
Hourly Average	0.00	0.00	4.25	0.00	0.50	0.50	0.00	0.00	5.25	5.50
1000 - 1015	0	0	0	1	0	0	0	0	1	1.00
1015 - 1030	0	0	2	0	1	0	0	0	3	3.00
1030 - 1045	0	0	1	0	1	0	0	0	2	2.00
1045 - 1100	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	3	1	2	0	0	0	6	6.00
Hourly Average	0.00	0.00	0.75	0.25	0.50	0.00	0.00	0.00	1.50	1.50
1100 - 1115	0	0	0	0	0	1	0	0	1	1.50
1115 - 1130	0	0	1	0	1	0	0	0	2	2.00
1130 - 1145	0	0	1	0	1	0	0	0	2	2.00
1145 - 1200	0	0	3	0	0	0	0	0	3	3.00
Hourly Total	0	0	5	0	2	1	0	0	8	8.50
Hourly Average	0.00	0.00	1.25	0.00	0.50	0.25	0.00	0.00	2.00	2.13
1200 - 1215	0	0	5	0	2	0	0	0	7	7.00
1215 - 1230	0	0	3	0	0	0	0	0	3	3.00
1230 - 1245	0	0	1	1	0	0	0	0	2	2.00
1245 - 1300	0	0	4	0	0	1	0	0	5	5.50
Hourly Total	0	0	13	1	2	1	0	0	17	17.50
Hourly Average	0.00	0.00	3.25	0.25	0.50	0.25	0.00	0.00	4.25	4.38
1300 - 1315	0	0	1	0	1	0	0	0	2	2.00
1315 - 1330	0	0	0	0	0	0	0	0	0	0.00
1330 - 1345	0	0	3	0	1	0	0	0	4	4.00
1345 - 1400	0	0	2	0	1	0	0	0	3	3.00
Hourly Total	0	0	6	0	3	0	0	0	9	9.00
Hourly Average	0.00	0.00	1.50	0.00	0.75	0.00	0.00	0.00	2.25	2.25
1400 - 1415	0	0	1	0	0	0	0	0	1	1.00
1415 - 1430	0	0	3	0	2	0	0	0	5	5.00
1430 - 1445	0	0	1	0	1	0	0	0	2	2.00
1445 - 1500	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	6	0	3	0	0	0	9	9.00
Hourly Average	0.00	0.00	1.50	0.00	0.75	0.00	0.00	0.00	2.25	2.25
1500 - 1515	0	0	3	0	2	0	0	0	5	5.00
1515 - 1530	0	0	6	0	1	0	0	0	7	7.00
1530 - 1545	0	0	2	0	1	0	0	0	3	3.00
1545 - 1600	0	0	7	0	1	0	0	0	8	8.00
Hourly Total	0	0	18	0	5	0	0	0	23	23.00
Hourly Average	0.00	0.00	4.50	0.00	1.25	0.00	0.00	0.00	5.75	5.75
1600 - 1615	0	0	1	0	1	0	0	0	2	2.00
1615 - 1630	0	0	3	0	0	0	0	0	3	3.00
1630 - 1645	0	0	1	0	0	0	0	0	1	1.00
1645 - 1700	0	0	3	0	1	0	0	0	4	4.00
Hourly Total	0	0	8	0	2	0	0	0	10	10.00
Hourly Average	0.00	0.00	2.00	0.00	0.50	0.00	0.00	0.00	2.50	2.50
1700 - 1715	0	0	8	0	0	0	0	0	8	8.00
1715 - 1730	0	0	5	0	0	0	0	0	5	5.00
1730 - 1745	0	0	5	0	0	0	0	0	5	5.00
1745 - 1800	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	18	0	0	0	0	0	18	18.00
Hourly Average	0.00	0.00	4.50	0.00	0.00	0.00	0.00	0.00	4.50	4.50
1800 - 1815	2	0	0	0	0	0	0	0	2	0.40
1815 - 1830	1	0	0	0	0	0	0	0	1	0.20
1830 - 1845	0	0	0	0	0	0	0	0	0	0.00
1845 - 1900	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	3	0	0	0	0	0	0	0	3	0.60
Hourly Average	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.15
Session Total	5	3	117	2	21	4	1	0	153	150.50
Session Average	0.10	0.06	2.44	0.04	0.44	0.08	0.02	0.00	3.19	3.14

Northumberland, Bexley  
Classified Junction Count

Site 10 of 11  
Local Road  
Station Road (East)  
John Street  
Station Road (West)

Lat/Long  
lat 55.183359° lon -1.572517°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 10.9: Right from Station Road (West) to John Street								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	1	0	0	0	0	0	1	1.00
0715 - 0730	0	0	7	0	0	0	0	0	7	7.00
0730 - 0745	0	0	1	0	0	0	0	0	1	1.00
0745 - 0800	0	1	5	0	1	0	0	0	7	6.40
Hourly Total	0	1	14	0	1	0	0	0	16	15.40
Hourly Average	0.00	0.25	3.50	0.00	0.25	0.00	0.00	0.00	4.00	3.85
0800 - 0815	0	0	10	0	0	0	0	0	10	10.00
0815 - 0830	0	0	17	0	1	0	0	0	18	18.00
0830 - 0845	0	0	20	0	2	0	0	0	22	22.00
0845 - 0900	0	1	25	1	1	0	1	0	29	29.70
Hourly Total	0	1	72	1	4	0	1	0	79	79.70
Hourly Average	0.00	0.25	18.00	0.25	1.00	0.00	0.25	0.00	19.75	19.93
0900 - 0915	0	0	21	1	2	2	0	0	26	27.00
0915 - 0930	0	0	24	0	2	1	0	0	27	27.50
0930 - 0945	0	0	13	1	2	1	0	0	17	17.50
0945 - 1000	0	0	17	0	3	0	0	0	20	20.00
Hourly Total	0	0	75	2	9	4	0	0	90	92.00
Hourly Average	0.00	0.00	18.75	0.50	2.25	1.00	0.00	0.00	22.50	23.00
1000 - 1015	0	0	16	1	2	2	0	0	21	22.00
1015 - 1030	0	0	14	0	0	0	0	0	14	14.00
1030 - 1045	1	0	20	3	5	1	0	0	30	29.70
1045 - 1100	1	0	9	2	0	1	0	0	13	12.70
Hourly Total	2	0	59	6	7	4	0	0	78	78.40
Hourly Average	0.50	0.00	14.75	1.50	1.75	1.00	0.00	0.00	19.50	19.60
1100 - 1115	0	0	19	5	7	0	0	0	31	31.00
1115 - 1130	1	0	15	2	5	1	0	0	24	23.70
1130 - 1145	0	0	22	2	6	0	0	0	30	30.00
1145 - 1200	0	0	13	3	0	0	0	0	16	16.00
Hourly Total	1	0	69	12	18	1	0	0	101	100.70
Hourly Average	0.25	0.00	17.25	3.00	4.50	0.25	0.00	0.00	25.25	25.18
1200 - 1215	0	0	16	5	1	0	0	0	22	22.00
1215 - 1230	0	0	17	5	4	0	0	0	26	26.00
1230 - 1245	0	0	12	0	2	0	0	0	14	14.00
1245 - 1300	0	0	27	3	5	1	0	0	36	36.50
Hourly Total	0	0	72	13	12	1	0	0	98	98.50
Hourly Average	0.00	0.00	18.00	3.25	3.00	0.25	0.00	0.00	24.50	24.63
1300 - 1315	0	0	21	1	2	0	0	0	24	24.00
1315 - 1330	0	0	15	2	2	0	0	0	19	19.00
1330 - 1345	1	0	13	0	3	0	0	0	17	16.20
1345 - 1400	0	0	20	1	2	1	0	0	24	24.50
Hourly Total	1	0	69	4	9	1	0	0	84	83.70
Hourly Average	0.25	0.00	17.25	1.00	2.25	0.25	0.00	0.00	21.00	20.93
1400 - 1415	2	0	17	2	4	0	0	0	25	23.40
1415 - 1430	0	0	20	1	3	1	0	0	25	25.50
1430 - 1445	1	0	16	2	3	1	0	0	23	22.70
1445 - 1500	1	1	16	1	1	0	0	0	20	18.60
Hourly Total	4	1	69	6	11	2	0	0	93	90.20
Hourly Average	1.00	0.25	17.25	1.50	2.75	0.50	0.00	0.00	23.25	22.55
1500 - 1515	0	0	22	0	2	1	0	0	25	25.50
1515 - 1530	0	0	29	1	2	0	0	0	32	32.00
1530 - 1545	0	0	29	0	6	0	0	0	35	35.00
1545 - 1600	0	0	22	1	2	0	0	0	25	25.00
Hourly Total	0	0	102	2	12	1	0	0	117	117.50
Hourly Average	0.00	0.00	25.50	0.50	3.00	0.25	0.00	0.00	29.25	29.38
1600 - 1615	0	0	18	1	4	0	0	0	23	23.00
1615 - 1630	0	0	23	2	4	0	0	0	29	29.00
1630 - 1645	0	0	22	0	1	0	0	0	23	23.00
1645 - 1700	0	0	19	0	1	1	0	0	21	21.50
Hourly Total	0	0	82	3	10	1	0	0	96	96.50
Hourly Average	0.00	0.00	20.50	0.75	2.50	0.25	0.00	0.00	24.00	24.13
1700 - 1715	0	0	23	0	1	0	0	0	24	24.00
1715 - 1730	0	1	21	0	2	0	0	0	24	23.40
1730 - 1745	0	0	15	0	0	0	0	0	15	15.00
1745 - 1800	0	0	22	1	0	0	0	0	23	23.00
Hourly Total	0	1	81	1	3	0	0	0	86	85.40
Hourly Average	0.00	0.25	20.25	0.25	0.75	0.00	0.00	0.00	21.50	21.35
1800 - 1815	0	0	15	0	1	0	0	0	16	16.00
1815 - 1830	0	0	9	0	1	0	0	0	10	10.00
1830 - 1845	0	0	20	0	0	0	0	0	20	20.00
1845 - 1900	0	0	17	0	0	0	0	0	17	17.00
Hourly Total	0	0	61	0	2	0	0	0	63	63.00
Hourly Average	0.00	0.00	15.25	0.00	0.50	0.00	0.00	0.00	15.75	15.75
Session Total	8	4	825	50	98	15	1	0	1001	1001.00
Session Average	0.17	0.08	17.19	1.04	2.04	0.31	0.02	0.00	20.85	20.85

Northumberland, Bexley  
Classified Junction Count

Site 11 of 11  
Council Road  
Station Road (East)  
Kenicworth Road  
Station Road (West)

Lat/Long  
lat 55.183415° lon -1.574437°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 11.1: Left from Council Road to Station Road (East)								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	0	0	0	0	0	0	0	0.00
0715 - 0730	0	0	1	0	0	0	0	0	1	1.00
0730 - 0745	0	0	0	0	0	0	0	0	0	0.00
0745 - 0800	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	2	0	0	0	0	0	2	2.00
Hourly Average	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.50	0.50
0800 - 0815	0	0	0	0	0	0	0	0	0	0.00
0815 - 0830	0	0	0	0	0	0	0	0	0	0.00
0830 - 0845	0	0	0	0	0	0	0	0	0	0.00
0845 - 0900	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	0	0	0	0	0	0	0	0.00
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0900 - 0915	0	0	0	0	0	0	0	0	0	0.00
0915 - 0930	0	0	1	0	0	0	0	0	1	1.00
0930 - 0945	0	0	0	0	0	0	0	0	0	0.00
0945 - 1000	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	2	0	0	0	0	0	2	2.00
Hourly Average	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.50	0.50
1000 - 1015	0	0	0	0	0	0	0	0	0	0.00
1015 - 1030	0	0	0	0	0	0	0	0	0	0.00
1030 - 1045	0	0	0	0	0	0	0	0	0	0.00
1045 - 1100	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	0	0	0	0	0	0	0	0.00
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1100 - 1115	0	0	1	0	0	1	0	0	2	2.50
1115 - 1130	1	0	1	0	0	0	0	0	2	1.20
1130 - 1145	0	0	0	0	0	0	0	0	0	0.00
1145 - 1200	0	0	1	1	0	0	0	0	2	2.00
Hourly Total	1	0	3	1	0	1	0	0	6	5.70
Hourly Average	0.25	0.00	0.75	0.25	0.00	0.25	0.00	0.00	1.50	1.43
1200 - 1215	0	0	1	0	0	0	0	0	1	1.00
1215 - 1230	0	0	0	0	0	0	0	0	0	0.00
1230 - 1245	0	0	0	0	0	0	0	0	0	0.00
1245 - 1300	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	1	0	0	0	0	0	1	1.00
Hourly Average	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.25
1300 - 1315	0	0	0	0	0	0	0	0	0	0.00
1315 - 1330	0	0	1	0	0	0	0	0	1	1.00
1330 - 1345	1	0	0	0	0	0	0	0	1	0.20
1345 - 1400	0	0	2	0	0	0	0	0	2	2.00
Hourly Total	1	0	3	0	0	0	0	0	4	3.20
Hourly Average	0.25	0.00	0.75	0.00	0.00	0.00	0.00	0.00	1.00	0.80
1400 - 1415	0	0	2	0	0	0	0	0	2	2.00
1415 - 1430	0	0	2	0	0	0	0	0	2	2.00
1430 - 1445	1	0	0	0	0	0	0	0	1	0.20
1445 - 1500	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	1	0	4	0	0	0	0	0	5	4.20
Hourly Average	0.25	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.25	1.05
1500 - 1515	0	0	0	0	0	0	0	0	0	0.00
1515 - 1530	0	0	0	0	0	0	0	0	0	0.00
1530 - 1545	0	0	0	0	0	0	0	0	0	0.00
1545 - 1600	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	0	0	0	0	0	0	0	0.00
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1600 - 1615	0	0	0	1	0	0	0	0	1	1.00
1615 - 1630	0	0	0	0	0	0	0	0	0	0.00
1630 - 1645	0	0	0	0	0	0	0	0	0	0.00
1645 - 1700	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	1	1	0	0	0	0	2	2.00
Hourly Average	0.00	0.00	0.25	0.25	0.00	0.00	0.00	0.00	0.50	0.50
1700 - 1715	0	0	0	0	0	0	0	0	0	0.00
1715 - 1730	0	0	0	0	0	0	0	0	0	0.00
1730 - 1745	0	0	1	0	0	0	0	0	1	1.00
1745 - 1800	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	1	0	0	0	0	0	1	1.00
Hourly Average	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.25
1800 - 1815	0	0	0	0	1	0	0	0	1	1.00
1815 - 1830	1	0	1	0	0	0	0	0	2	1.20
1830 - 1845	0	0	0	0	0	0	0	0	0	0.00
1845 - 1900	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	1	0	1	0	1	0	0	0	3	2.20
Hourly Average	0.25	0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.75	0.55
Session Total	4	0	18	2	1	1	0	0	26	23.30
Session Average	0.08	0.00	0.38	0.04	0.02	0.02	0.00	0.00	0.54	0.49

Northumberland, Bexley  
Classified Junction Count

Site 11 of 11  
Council Road  
Station Road (East)  
Kenicworth Road  
Station Road (West)

Lat/Long  
lat 55.183415° lon -1.574437°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 11.2: Southbound from Council Road to Kenicworth Road								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	1	0	0	0	0	0	1	1.00
0715 - 0730	0	0	0	0	0	0	0	0	0	0.00
0730 - 0745	0	0	0	0	0	0	0	0	0	0.00
0745 - 0800	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	1	0	0	0	0	0	1	1.00
Hourly Average	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.25
0800 - 0815	0	0	0	0	0	0	0	0	0	0.00
0815 - 0830	0	0	2	0	0	0	0	0	2	2.00
0830 - 0845	0	0	1	0	0	0	0	0	1	1.00
0845 - 0900	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	3	0	0	0	0	0	3	3.00
Hourly Average	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.75	0.75
0900 - 0915	0	0	0	0	0	0	0	0	0	0.00
0915 - 0930	0	0	0	0	0	0	0	0	0	0.00
0930 - 0945	0	0	0	0	0	0	0	0	0	0.00
0945 - 1000	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	1	0	0	0	0	0	1	1.00
Hourly Average	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.25
1000 - 1015	0	0	0	0	0	0	0	0	0	0.00
1015 - 1030	0	0	1	0	0	0	0	0	1	1.00
1030 - 1045	0	0	1	0	0	0	0	0	1	1.00
1045 - 1100	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	2	0	0	0	0	0	2	2.00
Hourly Average	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.50	0.50
1100 - 1115	0	0	0	0	0	0	0	0	0	0.00
1115 - 1130	0	0	0	0	0	0	0	0	0	0.00
1130 - 1145	0	0	1	0	0	0	0	0	1	1.00
1145 - 1200	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	2	0	0	0	0	0	2	2.00
Hourly Average	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.50	0.50
1200 - 1215	0	0	2	0	0	0	0	0	2	2.00
1215 - 1230	0	0	0	0	0	0	0	0	0	0.00
1230 - 1245	0	0	1	0	0	0	0	0	1	1.00
1245 - 1300	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	4	0	0	0	0	0	4	4.00
Hourly Average	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00
1300 - 1315	0	0	0	0	0	0	0	0	0	0.00
1315 - 1330	0	0	0	0	0	0	0	0	0	0.00
1330 - 1345	0	0	0	0	0	0	0	0	0	0.00
1345 - 1400	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	0	0	0	0	0	0	0	0.00
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1400 - 1415	0	0	1	0	0	0	0	0	1	1.00
1415 - 1430	0	0	1	0	0	0	0	0	1	1.00
1430 - 1445	0	0	0	0	0	0	0	0	0	0.00
1445 - 1500	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	3	0	0	0	0	0	3	3.00
Hourly Average	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.75	0.75
1500 - 1515	0	0	0	0	0	0	0	0	0	0.00
1515 - 1530	0	0	2	0	0	0	0	0	2	2.00
1530 - 1545	0	0	0	0	0	0	0	0	0	0.00
1545 - 1600	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	2	0	0	0	0	0	2	2.00
Hourly Average	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.50	0.50
1600 - 1615	0	0	0	0	0	0	0	0	0	0.00
1615 - 1630	0	0	0	0	0	0	0	0	0	0.00
1630 - 1645	0	0	0	0	0	0	0	0	0	0.00
1645 - 1700	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	1	0	0	0	0	0	1	1.00
Hourly Average	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.25
1700 - 1715	0	0	1	0	0	0	0	0	1	1.00
1715 - 1730	0	0	1	0	1	0	0	0	2	2.00
1730 - 1745	0	0	1	0	0	0	0	0	1	1.00
1745 - 1800	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	4	0	1	0	0	0	5	5.00
Hourly Average	0.00	0.00	1.00	0.00	0.25	0.00	0.00	0.00	1.25	1.25
1800 - 1815	0	0	0	0	0	0	0	0	0	0.00
1815 - 1830	0	0	0	0	0	0	0	0	0	0.00
1830 - 1845	0	0	0	0	0	0	0	0	0	0.00
1845 - 1900	1	0	0	0	0	0	0	0	1	0.20
Hourly Total	1	0	0	0	0	0	0	0	1	0.20
Hourly Average	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.05
Session Total	1	0	23	0	1	0	0	0	25	24.20
Session Average	0.02	0.00	0.48	0.00	0.02	0.00	0.00	0.00	0.52	0.50

Northumberland, Bexley  
Classified Junction Count

Site 11 of 11  
Council Road  
Station Road (East)  
Kenicworth Road  
Station Road (West)

Lat/Long  
lat 55.183415° lon -1.574437°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 11.3: Right from Council Road to Station Road (West)								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	0	0	0	0	0	0	0	0.00
0715 - 0730	0	0	0	0	0	0	0	0	0	0.00
0730 - 0745	0	0	0	0	0	0	0	0	0	0.00
0745 - 0800	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	0	0	0	0	0	0	0	0.00
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0800 - 0815	0	0	0	0	0	0	0	0	0	0.00
0815 - 0830	0	0	0	0	0	0	0	0	0	0.00
0830 - 0845	0	0	1	0	0	0	0	0	1	1.00
0845 - 0900	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	1	0	0	0	0	0	1	1.00
Hourly Average	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.25
0900 - 0915	0	0	0	0	0	0	0	0	0	0.00
0915 - 0930	0	0	0	0	0	0	0	0	0	0.00
0930 - 0945	0	0	1	0	0	0	0	0	1	1.00
0945 - 1000	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	1	0	0	0	0	0	1	1.00
Hourly Average	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.25
1000 - 1015	0	0	3	0	0	0	0	0	3	3.00
1015 - 1030	0	0	1	0	0	0	0	0	1	1.00
1030 - 1045	0	0	0	0	0	0	0	0	0	0.00
1045 - 1100	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	4	0	0	0	0	0	4	4.00
Hourly Average	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00
1100 - 1115	0	0	3	0	1	0	0	0	4	4.00
1115 - 1130	0	0	0	0	0	0	0	0	0	0.00
1130 - 1145	0	0	1	0	0	0	0	0	1	1.00
1145 - 1200	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	5	0	1	0	0	0	6	6.00
Hourly Average	0.00	0.00	1.25	0.00	0.25	0.00	0.00	0.00	1.50	1.50
1200 - 1215	0	0	0	0	0	0	0	0	0	0.00
1215 - 1230	0	0	1	0	0	0	0	0	1	1.00
1230 - 1245	0	0	0	0	0	0	0	0	0	0.00
1245 - 1300	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	2	0	0	0	0	0	2	2.00
Hourly Average	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.50	0.50
1300 - 1315	0	0	0	0	0	0	0	0	0	0.00
1315 - 1330	0	0	1	0	0	0	0	0	1	1.00
1330 - 1345	0	0	0	0	0	0	0	0	0	0.00
1345 - 1400	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	1	0	0	0	0	0	1	1.00
Hourly Average	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.25
1400 - 1415	0	0	0	0	0	0	0	0	0	0.00
1415 - 1430	0	0	0	0	0	0	0	0	0	0.00
1430 - 1445	0	0	1	0	0	0	0	0	1	1.00
1445 - 1500	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	1	0	0	0	0	0	1	1.00
Hourly Average	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.25
1500 - 1515	0	0	1	0	0	0	0	0	1	1.00
1515 - 1530	0	0	3	0	0	0	0	0	3	3.00
1530 - 1545	0	0	0	0	1	0	0	0	1	1.00
1545 - 1600	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	5	0	1	0	0	0	6	6.00
Hourly Average	0.00	0.00	1.25	0.00	0.25	0.00	0.00	0.00	1.50	1.50
1600 - 1615	0	0	0	0	0	0	0	0	0	0.00
1615 - 1630	0	0	1	0	0	0	0	0	1	1.00
1630 - 1645	0	0	1	0	0	0	0	0	1	1.00
1645 - 1700	0	0	2	0	0	0	0	0	2	2.00
Hourly Total	0	0	4	0	0	0	0	0	4	4.00
Hourly Average	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00
1700 - 1715	0	0	0	0	0	0	0	0	0	0.00
1715 - 1730	0	0	1	0	0	0	0	0	1	1.00
1730 - 1745	0	0	2	0	0	0	0	0	2	2.00
1745 - 1800	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	3	0	0	0	0	0	3	3.00
Hourly Average	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.75	0.75
1800 - 1815	0	0	1	0	0	0	0	0	1	1.00
1815 - 1830	0	0	0	0	0	0	0	0	0	0.00
1830 - 1845	0	0	0	0	0	0	0	0	0	0.00
1845 - 1900	0	0	0	0	1	0	0	0	1	1.00
Hourly Total	0	0	1	0	1	0	0	0	2	2.00
Hourly Average	0.00	0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.50	0.50
Session Total	0	0	28	0	3	0	0	0	31	31.00
Session Average	0.00	0.00	0.58	0.00	0.06	0.00	0.00	0.00	0.65	0.65



Northumberland, Bexley  
Classified Junction Count

Site 11 of 11  
Council Road  
Station Road (East)  
Kenicworth Road  
Station Road (West)

Lat/Long  
lat 55.183415° lon -1.574437°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 11.4: Left from Station Road (East) to Kenicworth Road								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	1	0	0	0	0	0	1	1.00
0715 - 0730	0	0	2	0	2	0	0	0	4	4.00
0730 - 0745	0	0	1	0	0	0	0	0	1	1.00
0745 - 0800	0	0	1	0	2	0	0	0	3	3.00
Hourly Total	0	0	5	0	4	0	0	0	9	9.00
Hourly Average	0.00	0.00	1.25	0.00	1.00	0.00	0.00	0.00	2.25	2.25
0800 - 0815	0	0	5	0	1	0	0	0	6	6.00
0815 - 0830	0	0	4	0	1	0	0	0	5	5.00
0830 - 0845	0	0	4	0	1	0	0	0	5	5.00
0845 - 0900	0	0	6	0	0	0	0	0	6	6.00
Hourly Total	0	0	19	0	3	0	0	0	22	22.00
Hourly Average	0.00	0.00	4.75	0.00	0.75	0.00	0.00	0.00	5.50	5.50
0900 - 0915	0	0	13	0	1	0	0	0	14	14.00
0915 - 0930	0	0	4	0	0	0	0	0	4	4.00
0930 - 0945	0	0	7	0	1	0	0	0	8	8.00
0945 - 1000	0	0	13	0	0	0	0	0	13	13.00
Hourly Total	0	0	37	0	2	0	0	0	39	39.00
Hourly Average	0.00	0.00	9.25	0.00	0.50	0.00	0.00	0.00	9.75	9.75
1000 - 1015	0	0	7	0	0	0	0	0	7	7.00
1015 - 1030	0	0	5	0	0	0	0	0	5	5.00
1030 - 1045	0	0	6	0	2	0	0	0	8	8.00
1045 - 1100	0	0	8	1	0	0	0	0	9	9.00
Hourly Total	0	0	26	1	2	0	0	0	29	29.00
Hourly Average	0.00	0.00	6.50	0.25	0.50	0.00	0.00	0.00	7.25	7.25
1100 - 1115	0	0	5	0	0	0	0	0	5	5.00
1115 - 1130	0	0	10	0	2	0	0	0	12	12.00
1130 - 1145	0	0	8	0	1	0	0	0	9	9.00
1145 - 1200	0	0	5	1	1	0	0	0	7	7.00
Hourly Total	0	0	28	1	4	0	0	0	33	33.00
Hourly Average	0.00	0.00	7.00	0.25	1.00	0.00	0.00	0.00	8.25	8.25
1200 - 1215	0	0	7	0	1	0	0	0	8	8.00
1215 - 1230	0	0	5	0	0	0	0	0	5	5.00
1230 - 1245	0	0	13	0	0	0	0	0	13	13.00
1245 - 1300	0	0	8	0	2	0	0	0	10	10.00
Hourly Total	0	0	33	0	3	0	0	0	36	36.00
Hourly Average	0.00	0.00	8.25	0.00	0.75	0.00	0.00	0.00	9.00	9.00
1300 - 1315	0	0	4	0	1	0	0	0	5	5.00
1315 - 1330	0	0	5	0	2	0	0	0	7	7.00
1330 - 1345	0	0	5	0	0	0	0	0	5	5.00
1345 - 1400	0	0	4	0	1	0	0	0	5	5.00
Hourly Total	0	0	18	0	4	0	0	0	22	22.00
Hourly Average	0.00	0.00	4.50	0.00	1.00	0.00	0.00	0.00	5.50	5.50
1400 - 1415	0	0	11	0	2	0	0	0	13	13.00
1415 - 1430	0	0	7	0	1	0	0	0	8	8.00
1430 - 1445	0	0	3	0	0	0	0	0	3	3.00
1445 - 1500	0	0	6	0	0	0	0	0	6	6.00
Hourly Total	0	0	27	0	3	0	0	0	30	30.00
Hourly Average	0.00	0.00	6.75	0.00	0.75	0.00	0.00	0.00	7.50	7.50
1500 - 1515	0	0	3	0	0	0	0	0	3	3.00
1515 - 1530	0	0	5	0	1	0	0	0	6	6.00
1530 - 1545	0	0	1	1	1	0	0	0	3	3.00
1545 - 1600	0	0	2	0	0	0	0	0	2	2.00
Hourly Total	0	0	11	1	2	0	0	0	14	14.00
Hourly Average	0.00	0.00	2.75	0.25	0.50	0.00	0.00	0.00	3.50	3.50
1600 - 1615	0	0	1	1	0	0	0	0	2	2.00
1615 - 1630	0	0	4	0	0	0	0	0	4	4.00
1630 - 1645	1	0	2	0	1	0	0	0	4	3.20
1645 - 1700	0	0	6	0	0	0	0	0	6	6.00
Hourly Total	1	0	13	1	1	0	0	0	16	15.20
Hourly Average	0.25	0.00	3.25	0.25	0.25	0.00	0.00	0.00	4.00	3.80
1700 - 1715	0	0	3	0	2	0	0	0	5	5.00
1715 - 1730	0	0	2	0	0	0	0	0	2	2.00
1730 - 1745	0	0	5	0	0	0	0	0	5	5.00
1745 - 1800	0	0	4	0	0	0	0	0	4	4.00
Hourly Total	0	0	14	0	2	0	0	0	16	16.00
Hourly Average	0.00	0.00	3.50	0.00	0.50	0.00	0.00	0.00	4.00	4.00
1800 - 1815	0	0	6	0	0	0	0	0	6	6.00
1815 - 1830	0	0	7	0	1	0	0	0	8	8.00
1830 - 1845	0	0	8	0	0	0	0	0	8	8.00
1845 - 1900	0	0	6	0	0	0	0	0	6	6.00
Hourly Total	0	0	27	0	1	0	0	0	28	28.00
Hourly Average	0.00	0.00	6.75	0.00	0.25	0.00	0.00	0.00	7.00	7.00
Session Total	1	0	258	4	31	0	0	0	294	293.20
Session Average	0.02	0.00	5.38	0.08	0.65	0.00	0.00	0.00	6.13	6.11

Northumberland, Bexley  
Classified Junction Count

Site 11 of 11  
Council Road  
Station Road (East)  
Kenicworth Road  
Station Road (West)

Lat/Long  
lat 55.183415° lon -1.574437°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 11.5: Westbound from Station Road (East) to Station Road (West)								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	7	0	1	0	0	0	8	8.00
0715 - 0730	0	0	9	1	3	0	0	0	13	13.00
0730 - 0745	0	0	15	0	4	0	0	0	19	19.00
0745 - 0800	0	0	23	1	3	0	0	0	27	27.00
Hourly Total	0	0	54	2	11	0	0	0	67	67.00
Hourly Average	0.00	0.00	13.50	0.50	2.75	0.00	0.00	0.00	16.75	16.75
0800 - 0815	1	0	27	0	2	1	0	0	31	30.70
0815 - 0830	0	0	29	1	3	0	0	0	33	33.00
0830 - 0845	1	0	30	0	0	0	0	1	32	32.20
0845 - 0900	0	0	22	2	5	0	1	0	30	31.30
Hourly Total	2	0	108	3	10	1	1	1	126	127.20
Hourly Average	0.50	0.00	27.00	0.75	2.50	0.25	0.25	0.25	31.50	31.80
0900 - 0915	0	1	30	2	4	2	0	0	39	39.40
0915 - 0930	0	0	20	0	3	0	0	0	23	23.00
0930 - 0945	0	0	29	3	0	1	0	0	33	33.50
0945 - 1000	0	0	30	1	3	1	0	0	35	35.50
Hourly Total	0	1	109	6	10	4	0	0	130	131.40
Hourly Average	0.00	0.25	27.25	1.50	2.50	1.00	0.00	0.00	32.50	32.85
1000 - 1015	0	0	22	1	2	0	0	0	25	25.00
1015 - 1030	0	0	36	2	6	0	0	0	44	44.00
1030 - 1045	0	0	39	7	5	2	0	0	53	54.00
1045 - 1100	1	0	31	3	3	1	0	0	39	38.70
Hourly Total	1	0	128	13	16	3	0	0	161	161.70
Hourly Average	0.25	0.00	32.00	3.25	4.00	0.75	0.00	0.00	40.25	40.43
1100 - 1115	1	1	23	4	5	0	0	0	34	32.60
1115 - 1130	0	0	23	0	2	0	0	0	25	25.00
1130 - 1145	1	0	29	1	5	0	0	0	36	35.20
1145 - 1200	0	0	43	5	0	0	0	0	48	48.00
Hourly Total	2	1	118	10	12	0	0	0	143	140.80
Hourly Average	0.50	0.25	29.50	2.50	3.00	0.00	0.00	0.00	35.75	35.20
1200 - 1215	0	0	26	5	2	0	0	0	33	33.00
1215 - 1230	0	0	23	1	2	0	0	0	26	26.00
1230 - 1245	0	0	26	1	3	0	0	0	30	30.00
1245 - 1300	2	0	26	0	3	0	0	0	31	29.40
Hourly Total	2	0	101	7	10	0	0	0	120	118.40
Hourly Average	0.50	0.00	25.25	1.75	2.50	0.00	0.00	0.00	30.00	29.60
1300 - 1315	0	0	32	2	2	1	0	0	37	37.50
1315 - 1330	0	0	30	5	7	0	0	0	42	42.00
1330 - 1345	0	0	27	2	4	0	0	0	33	33.00
1345 - 1400	0	0	29	3	5	1	0	0	38	38.50
Hourly Total	0	0	118	12	18	2	0	0	150	151.00
Hourly Average	0.00	0.00	29.50	3.00	4.50	0.50	0.00	0.00	37.50	37.75
1400 - 1415	0	0	46	3	5	0	0	0	54	54.00
1415 - 1430	1	0	34	1	3	1	0	0	40	39.70
1430 - 1445	0	0	42	1	5	1	0	0	49	49.50
1445 - 1500	1	0	46	1	3	0	0	0	51	50.20
Hourly Total	2	0	168	6	16	2	0	0	194	193.40
Hourly Average	0.50	0.00	42.00	1.50	4.00	0.50	0.00	0.00	48.50	48.35
1500 - 1515	1	0	14	1	0	1	0	0	17	16.70
1515 - 1530	1	0	28	0	2	2	0	0	33	33.20
1530 - 1545	0	0	25	0	5	0	0	0	30	30.00
1545 - 1600	2	0	16	1	6	0	0	0	25	23.40
Hourly Total	4	0	83	2	13	3	0	0	105	103.30
Hourly Average	1.00	0.00	20.75	0.50	3.25	0.75	0.00	0.00	26.25	25.83
1600 - 1615	0	0	29	1	1	0	0	0	31	31.00
1615 - 1630	0	0	7	2	7	0	0	0	16	16.00
1630 - 1645	0	0	38	0	4	0	0	0	42	42.00
1645 - 1700	0	0	45	3	2	0	0	0	50	50.00
Hourly Total	0	0	119	6	14	0	0	0	139	139.00
Hourly Average	0.00	0.00	29.75	1.50	3.50	0.00	0.00	0.00	34.75	34.75
1700 - 1715	1	1	54	1	5	0	0	0	62	60.60
1715 - 1730	0	0	61	2	3	0	0	0	66	66.00
1730 - 1745	0	0	52	2	4	0	0	0	58	58.00
1745 - 1800	0	0	43	2	4	0	0	0	49	49.00
Hourly Total	1	1	210	7	16	0	0	0	235	233.60
Hourly Average	0.25	0.25	52.50	1.75	4.00	0.00	0.00	0.00	58.75	58.40
1800 - 1815	0	1	37	0	1	0	0	0	39	38.40
1815 - 1830	0	0	32	0	5	0	0	0	37	37.00
1830 - 1845	0	2	31	0	3	0	0	0	36	34.80
1845 - 1900	0	0	32	0	2	0	0	0	34	34.00
Hourly Total	0	3	132	0	11	0	0	0	146	144.20
Hourly Average	0.00	0.75	33.00	0.00	2.75	0.00	0.00	0.00	36.50	36.05
Session Total	14	6	1448	74	157	15	1	1	1716	1711.00
Session Average	0.29	0.13	30.17	1.54	3.27	0.31	0.02	0.02	35.75	35.65

Northumberland, Bexley  
Classified Junction Count

Site 11 of 11  
Council Road  
Station Road (East)  
Kenicworth Road  
Station Road (West)

Lat/Long  
lat 55.183415° lon -1.574437°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 11.6: Right from Station Road (East) to Council Road								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	1	0	0	0	0	0	0	0	1	0.20
0715 - 0730	0	0	1	0	0	0	0	0	1	1.00
0730 - 0745	0	0	1	0	1	0	0	0	2	2.00
0745 - 0800	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	1	0	2	0	1	0	0	0	4	3.20
Hourly Average	0.25	0.00	0.50	0.00	0.25	0.00	0.00	0.00	1.00	0.80
0800 - 0815	0	0	1	0	0	0	0	0	1	1.00
0815 - 0830	0	0	2	0	0	0	0	0	2	2.00
0830 - 0845	0	0	2	0	0	0	0	0	2	2.00
0845 - 0900	0	0	2	0	2	0	0	0	4	4.00
Hourly Total	0	0	7	0	2	0	0	0	9	9.00
Hourly Average	0.00	0.00	1.75	0.00	0.50	0.00	0.00	0.00	2.25	2.25
0900 - 0915	0	0	2	0	0	0	0	0	2	2.00
0915 - 0930	0	0	1	0	0	0	0	0	1	1.00
0930 - 0945	0	0	1	0	1	0	0	0	2	2.00
0945 - 1000	0	0	2	0	0	0	0	0	2	2.00
Hourly Total	0	0	6	0	1	0	0	0	7	7.00
Hourly Average	0.00	0.00	1.50	0.00	0.25	0.00	0.00	0.00	1.75	1.75
1000 - 1015	0	0	2	0	0	0	0	0	2	2.00
1015 - 1030	0	0	0	0	0	0	0	0	0	0.00
1030 - 1045	0	0	0	0	1	0	0	0	1	1.00
1045 - 1100	0	0	1	0	2	0	0	0	3	3.00
Hourly Total	0	0	3	0	3	0	0	0	6	6.00
Hourly Average	0.00	0.00	0.75	0.00	0.75	0.00	0.00	0.00	1.50	1.50
1100 - 1115	0	0	1	0	1	0	0	0	2	2.00
1115 - 1130	0	0	3	0	1	0	0	0	4	4.00
1130 - 1145	0	0	3	0	0	0	0	0	3	3.00
1145 - 1200	0	0	2	1	1	0	0	0	4	4.00
Hourly Total	0	0	9	1	3	0	0	0	13	13.00
Hourly Average	0.00	0.00	2.25	0.25	0.75	0.00	0.00	0.00	3.25	3.25
1200 - 1215	0	0	1	0	0	0	0	0	1	1.00
1215 - 1230	0	0	0	0	0	0	0	0	0	0.00
1230 - 1245	0	0	1	0	0	0	0	0	1	1.00
1245 - 1300	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	3	0	0	0	0	0	3	3.00
Hourly Average	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.75	0.75
1300 - 1315	0	0	0	0	0	0	0	0	0	0.00
1315 - 1330	0	0	5	0	0	0	0	0	5	5.00
1330 - 1345	0	0	2	0	2	0	0	0	4	4.00
1345 - 1400	0	0	2	0	0	0	0	0	2	2.00
Hourly Total	0	0	9	0	2	0	0	0	11	11.00
Hourly Average	0.00	0.00	2.25	0.00	0.50	0.00	0.00	0.00	2.75	2.75
1400 - 1415	0	0	1	0	1	0	0	0	2	2.00
1415 - 1430	0	0	6	0	0	0	0	0	6	6.00
1430 - 1445	0	0	3	0	0	0	0	0	3	3.00
1445 - 1500	0	0	3	1	0	0	0	0	4	4.00
Hourly Total	0	0	13	1	1	0	0	0	15	15.00
Hourly Average	0.00	0.00	3.25	0.25	0.25	0.00	0.00	0.00	3.75	3.75
1500 - 1515	0	0	0	0	0	0	0	0	0	0.00
1515 - 1530	0	0	1	0	1	0	0	0	2	2.00
1530 - 1545	0	0	1	0	0	0	0	0	1	1.00
1545 - 1600	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	2	0	1	0	0	0	3	3.00
Hourly Average	0.00	0.00	0.50	0.00	0.25	0.00	0.00	0.00	0.75	0.75
1600 - 1615	0	0	0	1	0	0	0	0	1	1.00
1615 - 1630	0	0	0	0	1	0	0	0	1	1.00
1630 - 1645	0	0	3	0	1	0	0	0	4	4.00
1645 - 1700	0	0	3	0	0	0	0	0	3	3.00
Hourly Total	0	0	6	1	2	0	0	0	9	9.00
Hourly Average	0.00	0.00	1.50	0.25	0.50	0.00	0.00	0.00	2.25	2.25
1700 - 1715	0	0	2	0	0	0	0	0	2	2.00
1715 - 1730	0	0	2	0	0	0	0	0	2	2.00
1730 - 1745	0	0	4	0	1	0	0	0	5	5.00
1745 - 1800	0	0	4	0	0	0	0	0	4	4.00
Hourly Total	0	0	12	0	1	0	0	0	13	13.00
Hourly Average	0.00	0.00	3.00	0.00	0.25	0.00	0.00	0.00	3.25	3.25
1800 - 1815	0	0	2	0	0	0	0	0	2	2.00
1815 - 1830	0	0	3	0	0	0	0	0	3	3.00
1830 - 1845	0	0	1	0	1	0	0	0	2	2.00
1845 - 1900	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	6	0	1	0	0	0	7	7.00
Hourly Average	0.00	0.00	1.50	0.00	0.25	0.00	0.00	0.00	1.75	1.75
Session Total	1	0	78	3	18	0	0	0	100	99.20
Session Average	0.02	0.00	1.63	0.06	0.38	0.00	0.00	0.00	2.08	2.07

Northumberland, Bexley  
Classified Junction Count

Site 11 of 11  
Council Road  
Station Road (East)  
Kenicworth Road  
Station Road (West)

Lat/Long  
lat 55.183415° lon -1.574437°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 11.7: Left from Kenicworth Road to Station Road (West)								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	0	0	0	0	0	0	0	0.00
0715 - 0730	0	0	0	0	0	0	0	0	0	0.00
0730 - 0745	0	0	0	0	0	0	0	0	0	0.00
0745 - 0800	0	0	0	0	1	0	0	0	1	1.00
Hourly Total	0	0	0	0	1	0	0	0	1	1.00
Hourly Average	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.25	0.25
0800 - 0815	0	0	0	0	0	0	0	0	0	0.00
0815 - 0830	0	0	0	0	0	0	0	0	0	0.00
0830 - 0845	0	0	0	0	0	0	0	0	0	0.00
0845 - 0900	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	0	0	0	0	0	0	0	0.00
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0900 - 0915	0	0	1	0	0	0	0	0	1	1.00
0915 - 0930	0	0	0	0	0	0	0	0	0	0.00
0930 - 0945	0	0	1	0	0	0	0	0	1	1.00
0945 - 1000	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	3	0	0	0	0	0	3	3.00
Hourly Average	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.75	0.75
1000 - 1015	0	0	1	0	1	0	0	0	2	2.00
1015 - 1030	0	0	0	0	0	0	0	0	0	0.00
1030 - 1045	0	0	0	0	0	0	0	0	0	0.00
1045 - 1100	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	1	0	1	0	0	0	2	2.00
Hourly Average	0.00	0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.50	0.50
1100 - 1115	0	0	0	0	0	0	0	0	0	0.00
1115 - 1130	0	0	2	0	0	0	0	0	2	2.00
1130 - 1145	0	0	0	0	0	0	0	0	0	0.00
1145 - 1200	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	2	0	0	0	0	0	2	2.00
Hourly Average	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.50	0.50
1200 - 1215	0	0	0	0	0	0	0	0	0	0.00
1215 - 1230	0	0	1	0	0	0	0	0	1	1.00
1230 - 1245	0	0	3	0	0	0	0	0	3	3.00
1245 - 1300	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	4	0	0	0	0	0	4	4.00
Hourly Average	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00
1300 - 1315	0	0	0	0	0	0	0	0	0	0.00
1315 - 1330	0	0	0	0	0	0	0	0	0	0.00
1330 - 1345	0	0	0	0	0	0	0	0	0	0.00
1345 - 1400	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	1	0	0	0	0	0	1	1.00
Hourly Average	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.25
1400 - 1415	0	0	2	0	0	0	0	0	2	2.00
1415 - 1430	0	0	0	0	0	0	0	0	0	0.00
1430 - 1445	0	0	1	0	0	0	0	0	1	1.00
1445 - 1500	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	3	0	0	0	0	0	3	3.00
Hourly Average	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.75	0.75
1500 - 1515	0	0	0	0	0	0	0	0	0	0.00
1515 - 1530	0	0	0	0	0	0	0	0	0	0.00
1530 - 1545	0	0	0	0	0	0	0	0	0	0.00
1545 - 1600	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	0	0	0	0	0	0	0	0.00
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1600 - 1615	0	0	0	0	0	0	0	0	0	0.00
1615 - 1630	0	0	0	0	0	0	0	0	0	0.00
1630 - 1645	0	0	1	0	0	0	0	0	1	1.00
1645 - 1700	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	1	0	0	0	0	0	1	1.00
Hourly Average	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.25
1700 - 1715	0	0	0	0	0	0	0	0	0	0.00
1715 - 1730	0	0	0	0	0	0	0	0	0	0.00
1730 - 1745	0	0	0	0	0	0	0	0	0	0.00
1745 - 1800	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	0	0	0	0	0	0	0	0.00
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800 - 1815	0	0	0	0	0	0	0	0	0	0.00
1815 - 1830	0	0	0	0	0	0	0	0	0	0.00
1830 - 1845	0	0	0	0	0	0	0	0	0	0.00
1845 - 1900	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	0	0	0	0	0	0	0	0.00
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Session Total	0	0	15	0	2	0	0	0	17	17.00
Session Average	0.00	0.00	0.31	0.00	0.04	0.00	0.00	0.00	0.35	0.35

Northumberland, Bexley  
Classified Junction Count

Site 11 of 11  
Council Road  
Station Road (East)  
Kenicworth Road  
Station Road (West)

Lat/Long  
lat 55.183415° lon -1.574437°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 11.8: Northbound from Kenicworth Road to Council Road								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	2	1	0	0	0	0	3	3.00
0715 - 0730	0	0	2	0	0	0	0	0	2	2.00
0730 - 0745	0	0	2	0	0	0	0	0	2	2.00
0745 - 0800	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	7	1	0	0	0	0	8	8.00
Hourly Average	0.00	0.00	1.75	0.25	0.00	0.00	0.00	0.00	2.00	2.00
0800 - 0815	0	0	2	0	0	0	0	0	2	2.00
0815 - 0830	0	0	11	0	1	0	0	0	12	12.00
0830 - 0845	0	0	6	0	0	0	0	0	6	6.00
0845 - 0900	0	0	3	0	0	0	0	0	3	3.00
Hourly Total	0	0	22	0	1	0	0	0	23	23.00
Hourly Average	0.00	0.00	5.50	0.00	0.25	0.00	0.00	0.00	5.75	5.75
0900 - 0915	0	0	11	0	0	0	0	0	11	11.00
0915 - 0930	0	0	13	0	1	0	0	0	14	14.00
0930 - 0945	0	0	14	1	0	0	0	0	15	15.00
0945 - 1000	0	0	15	0	0	0	0	0	15	15.00
Hourly Total	0	0	53	1	1	0	0	0	55	55.00
Hourly Average	0.00	0.00	13.25	0.25	0.25	0.00	0.00	0.00	13.75	13.75
1000 - 1015	0	0	7	0	0	0	0	0	7	7.00
1015 - 1030	0	0	11	0	0	0	0	0	11	11.00
1030 - 1045	0	0	20	0	1	0	0	0	21	21.00
1045 - 1100	0	0	15	0	0	0	0	0	15	15.00
Hourly Total	0	0	53	0	1	0	0	0	54	54.00
Hourly Average	0.00	0.00	13.25	0.00	0.25	0.00	0.00	0.00	13.50	13.50
1100 - 1115	0	0	13	0	0	0	0	0	13	13.00
1115 - 1130	0	0	16	0	1	0	0	0	17	17.00
1130 - 1145	0	0	11	0	2	0	0	0	13	13.00
1145 - 1200	0	0	22	0	1	0	0	0	23	23.00
Hourly Total	0	0	62	0	4	0	0	0	66	66.00
Hourly Average	0.00	0.00	15.50	0.00	1.00	0.00	0.00	0.00	16.50	16.50
1200 - 1215	0	1	8	0	0	0	0	0	9	8.40
1215 - 1230	0	0	12	0	1	0	0	0	13	13.00
1230 - 1245	0	0	22	0	1	0	0	0	23	23.00
1245 - 1300	0	0	13	0	0	0	0	0	13	13.00
Hourly Total	0	1	55	0	2	0	0	0	58	57.40
Hourly Average	0.00	0.25	13.75	0.00	0.50	0.00	0.00	0.00	14.50	14.35
1300 - 1315	0	0	22	0	0	0	0	0	22	22.00
1315 - 1330	0	0	9	0	0	0	0	0	9	9.00
1330 - 1345	0	0	19	0	0	0	0	0	19	19.00
1345 - 1400	0	0	21	1	0	0	0	0	22	22.00
Hourly Total	0	0	71	1	0	0	0	0	72	72.00
Hourly Average	0.00	0.00	17.75	0.25	0.00	0.00	0.00	0.00	18.00	18.00
1400 - 1415	0	0	14	0	0	0	0	0	14	14.00
1415 - 1430	0	0	22	0	0	0	0	0	22	22.00
1430 - 1445	0	0	17	0	2	0	0	0	19	19.00
1445 - 1500	0	0	15	0	1	0	0	0	16	16.00
Hourly Total	0	0	68	0	3	0	0	0	71	71.00
Hourly Average	0.00	0.00	17.00	0.00	0.75	0.00	0.00	0.00	17.75	17.75
1500 - 1515	0	0	8	0	0	0	0	0	8	8.00
1515 - 1530	0	0	9	1	0	0	0	0	10	10.00
1530 - 1545	0	0	13	0	0	0	0	0	13	13.00
1545 - 1600	0	0	17	0	1	0	0	0	18	18.00
Hourly Total	0	0	47	1	1	0	0	0	49	49.00
Hourly Average	0.00	0.00	11.75	0.25	0.25	0.00	0.00	0.00	12.25	12.25
1600 - 1615	0	0	9	0	0	0	0	0	9	9.00
1615 - 1630	0	0	18	0	1	0	0	0	19	19.00
1630 - 1645	0	0	14	0	1	0	0	0	15	15.00
1645 - 1700	0	0	8	0	1	0	0	0	9	9.00
Hourly Total	0	0	49	0	3	0	0	0	52	52.00
Hourly Average	0.00	0.00	12.25	0.00	0.75	0.00	0.00	0.00	13.00	13.00
1700 - 1715	0	0	25	0	1	0	0	0	26	26.00
1715 - 1730	0	0	16	0	1	0	0	0	17	17.00
1730 - 1745	0	0	14	0	0	0	0	0	14	14.00
1745 - 1800	0	0	9	0	0	0	0	0	9	9.00
Hourly Total	0	0	64	0	2	0	0	0	66	66.00
Hourly Average	0.00	0.00	16.00	0.00	0.50	0.00	0.00	0.00	16.50	16.50
1800 - 1815	0	0	8	0	1	0	0	0	9	9.00
1815 - 1830	0	0	5	0	0	0	0	0	5	5.00
1830 - 1845	0	0	5	0	0	0	0	0	5	5.00
1845 - 1900	0	0	4	0	0	0	0	0	4	4.00
Hourly Total	0	0	22	0	1	0	0	0	23	23.00
Hourly Average	0.00	0.00	5.50	0.00	0.25	0.00	0.00	0.00	5.75	5.75
Session Total	0	1	573	4	19	0	0	0	597	596.40
Session Average	0.00	0.02	11.94	0.08	0.40	0.00	0.00	0.00	12.44	12.43

Northumberland, Bexley  
Classified Junction Count

Site 11 of 11  
Council Road  
Station Road (East)  
Kenicworth Road  
Station Road (West)

Lat/Long  
lat 55.183415° lon -1.574437°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 11.9: Right from Kenicworth Road to Station Road (East)								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	0	0	0	0	0	0	0	0.00
0715 - 0730	0	0	2	0	0	0	0	0	2	2.00
0730 - 0745	0	0	0	0	0	0	0	0	0	0.00
0745 - 0800	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	2	0	0	0	0	0	2	2.00
Hourly Average	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.50	0.50
0800 - 0815	0	0	0	0	0	0	0	0	0	0.00
0815 - 0830	0	0	0	0	0	0	0	0	0	0.00
0830 - 0845	0	0	1	0	0	0	0	0	1	1.00
0845 - 0900	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	2	0	0	0	0	0	2	2.00
Hourly Average	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.50	0.50
0900 - 0915	0	0	1	0	0	0	0	0	1	1.00
0915 - 0930	0	0	0	0	0	0	0	0	0	0.00
0930 - 0945	0	0	0	0	0	0	0	0	0	0.00
0945 - 1000	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	1	0	0	0	0	0	1	1.00
Hourly Average	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.25
1000 - 1015	0	0	0	0	0	0	0	0	0	0.00
1015 - 1030	0	0	0	0	1	0	0	0	1	1.00
1030 - 1045	0	0	1	0	0	0	0	0	1	1.00
1045 - 1100	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	1	0	1	0	0	0	2	2.00
Hourly Average	0.00	0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.50	0.50
1100 - 1115	0	0	1	0	0	0	0	0	1	1.00
1115 - 1130	0	0	0	0	0	0	0	0	0	0.00
1130 - 1145	0	0	0	0	0	0	0	0	0	0.00
1145 - 1200	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	1	0	0	0	0	0	1	1.00
Hourly Average	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.25
1200 - 1215	0	0	0	0	0	0	0	0	0	0.00
1215 - 1230	0	0	2	0	0	0	0	0	2	2.00
1230 - 1245	0	0	0	0	0	0	0	0	0	0.00
1245 - 1300	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	3	0	0	0	0	0	3	3.00
Hourly Average	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.75	0.75
1300 - 1315	0	0	0	0	0	0	0	0	0	0.00
1315 - 1330	0	0	0	0	0	0	0	0	0	0.00
1330 - 1345	0	0	0	0	0	0	0	0	0	0.00
1345 - 1400	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	1	0	0	0	0	0	1	1.00
Hourly Average	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.25
1400 - 1415	0	0	1	0	0	0	0	0	1	1.00
1415 - 1430	0	0	0	0	0	0	0	0	0	0.00
1430 - 1445	0	0	0	0	0	0	0	0	0	0.00
1445 - 1500	0	1	1	0	0	0	0	0	2	1.40
Hourly Total	0	1	2	0	0	0	0	0	3	2.40
Hourly Average	0.00	0.25	0.50	0.00	0.00	0.00	0.00	0.00	0.75	0.60
1500 - 1515	0	0	0	0	0	0	0	0	0	0.00
1515 - 1530	0	0	1	0	0	0	0	0	1	1.00
1530 - 1545	0	0	0	0	0	0	0	0	0	0.00
1545 - 1600	0	0	2	0	0	0	0	0	2	2.00
Hourly Total	0	0	3	0	0	0	0	0	3	3.00
Hourly Average	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.75	0.75
1600 - 1615	0	0	1	0	0	0	0	0	1	1.00
1615 - 1630	0	0	0	0	0	0	0	0	0	0.00
1630 - 1645	0	0	1	0	1	0	0	0	2	2.00
1645 - 1700	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	2	0	1	0	0	0	3	3.00
Hourly Average	0.00	0.00	0.50	0.00	0.25	0.00	0.00	0.00	0.75	0.75
1700 - 1715	0	0	0	0	0	0	0	0	0	0.00
1715 - 1730	0	0	0	0	1	0	0	0	1	1.00
1730 - 1745	0	0	1	0	0	0	0	0	1	1.00
1745 - 1800	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	1	0	1	0	0	0	2	2.00
Hourly Average	0.00	0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.50	0.50
1800 - 1815	0	0	0	0	0	0	0	0	0	0.00
1815 - 1830	0	0	1	0	0	0	0	0	1	1.00
1830 - 1845	0	0	0	0	0	0	0	0	0	0.00
1845 - 1900	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	1	0	0	0	0	0	1	1.00
Hourly Average	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.25
Session Total	0	1	20	0	3	0	0	0	24	23.40
Session Average	0.00	0.02	0.42	0.00	0.06	0.00	0.00	0.00	0.50	0.49

Northumberland, Bexley  
Classified Junction Count

Site 11 of 11  
Council Road  
Station Road (East)  
Kenicworth Road  
Station Road (West)

Lat/Long  
lat 55.183415° lon -1.574437°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 11.10: U-Turn on Kenicworth Road								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	0	0	0	0	0	0	0	0.00
0715 - 0730	0	0	0	0	0	0	0	0	0	0.00
0730 - 0745	0	0	1	0	0	0	0	0	1	1.00
0745 - 0800	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	1	0	0	0	0	0	1	1.00
Hourly Average	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.25
0800 - 0815	0	0	0	0	0	0	0	0	0	0.00
0815 - 0830	0	0	1	0	0	0	0	0	1	1.00
0830 - 0845	0	0	0	0	0	0	0	0	0	0.00
0845 - 0900	0	0	2	0	0	0	0	0	2	2.00
Hourly Total	0	0	3	0	0	0	0	0	3	3.00
Hourly Average	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.75	0.75
0900 - 0915	0	0	0	0	0	0	0	0	0	0.00
0915 - 0930	0	0	3	0	1	0	0	0	4	4.00
0930 - 0945	0	0	1	0	0	0	0	0	1	1.00
0945 - 1000	0	0	3	0	1	0	0	0	4	4.00
Hourly Total	0	0	7	0	2	0	0	0	9	9.00
Hourly Average	0.00	0.00	1.75	0.00	0.50	0.00	0.00	0.00	2.25	2.25
1000 - 1015	0	0	3	0	0	0	0	0	3	3.00
1015 - 1030	0	0	2	0	1	0	0	0	3	3.00
1030 - 1045	0	0	4	0	1	0	0	0	5	5.00
1045 - 1100	0	0	3	0	0	0	0	0	3	3.00
Hourly Total	0	0	12	0	2	0	0	0	14	14.00
Hourly Average	0.00	0.00	3.00	0.00	0.50	0.00	0.00	0.00	3.50	3.50
1100 - 1115	0	0	2	0	0	0	0	0	2	2.00
1115 - 1130	0	0	3	0	0	0	0	0	3	3.00
1130 - 1145	0	0	2	0	1	0	0	0	3	3.00
1145 - 1200	0	0	2	0	0	0	0	0	2	2.00
Hourly Total	0	0	9	0	1	0	0	0	10	10.00
Hourly Average	0.00	0.00	2.25	0.00	0.25	0.00	0.00	0.00	2.50	2.50
1200 - 1215	0	0	5	0	0	0	0	0	5	5.00
1215 - 1230	0	0	3	0	0	0	0	0	3	3.00
1230 - 1245	0	0	2	0	0	0	0	0	2	2.00
1245 - 1300	0	0	2	0	0	0	0	0	2	2.00
Hourly Total	0	0	12	0	0	0	0	0	12	12.00
Hourly Average	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	3.00	3.00
1300 - 1315	0	0	1	0	0	0	0	0	1	1.00
1315 - 1330	0	0	1	0	0	0	0	0	1	1.00
1330 - 1345	0	0	2	0	0	0	0	0	2	2.00
1345 - 1400	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	5	0	0	0	0	0	5	5.00
Hourly Average	0.00	0.00	1.25	0.00	0.00	0.00	0.00	0.00	1.25	1.25
1400 - 1415	0	0	1	0	0	0	0	0	1	1.00
1415 - 1430	0	0	3	0	1	0	0	0	4	4.00
1430 - 1445	0	0	1	0	0	0	0	0	1	1.00
1445 - 1500	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	6	0	1	0	0	0	7	7.00
Hourly Average	0.00	0.00	1.50	0.00	0.25	0.00	0.00	0.00	1.75	1.75
1500 - 1515	0	0	3	0	0	0	0	0	3	3.00
1515 - 1530	0	0	2	1	0	0	0	0	3	3.00
1530 - 1545	0	0	1	0	1	0	0	0	2	2.00
1545 - 1600	1	0	3	0	0	0	0	0	4	3.20
Hourly Total	1	0	9	1	1	0	0	0	12	11.20
Hourly Average	0.25	0.00	2.25	0.25	0.25	0.00	0.00	0.00	3.00	2.80
1600 - 1615	0	0	0	0	1	0	0	0	1	1.00
1615 - 1630	0	0	0	0	0	0	0	0	0	0.00
1630 - 1645	0	0	1	0	0	0	0	0	1	1.00
1645 - 1700	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	1	0	1	0	0	0	2	2.00
Hourly Average	0.00	0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.50	0.50
1700 - 1715	0	0	1	0	0	0	0	0	1	1.00
1715 - 1730	0	0	0	1	0	0	0	0	1	1.00
1730 - 1745	0	0	0	0	0	0	0	0	0	0.00
1745 - 1800	0	0	2	0	0	0	0	0	2	2.00
Hourly Total	0	0	3	1	0	0	0	0	4	4.00
Hourly Average	0.00	0.00	0.75	0.25	0.00	0.00	0.00	0.00	1.00	1.00
1800 - 1815	0	0	1	0	0	0	0	0	1	1.00
1815 - 1830	0	0	0	0	0	0	0	0	0	0.00
1830 - 1845	0	0	2	0	0	0	0	0	2	2.00
1845 - 1900	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	4	0	0	0	0	0	4	4.00
Hourly Average	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00
Session Total	1	0	72	2	8	0	0	0	83	82.20
Session Average	0.02	0.00	1.50	0.04	0.17	0.00	0.00	0.00	1.73	1.71



Northumberland, Bexley  
Classified Junction Count

Site 11 of 11  
Council Road  
Station Road (East)  
Kenicworth Road  
Station Road (West)

Lat/Long  
lat 55.183415° lon -1.574437°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 11.11: Left from Station Road (West) to Council Road								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	0	0	1	0	0	0	1	1.00
0715 - 0730	0	0	4	0	0	0	0	0	4	4.00
0730 - 0745	0	0	1	0	0	0	0	0	1	1.00
0745 - 0800	0	0	2	0	0	1	0	0	3	3.50
Hourly Total	0	0	7	0	1	1	0	0	9	9.50
Hourly Average	0.00	0.00	1.75	0.00	0.25	0.25	0.00	0.00	2.25	2.38
0800 - 0815	0	0	0	0	0	0	0	0	0	0.00
0815 - 0830	0	0	2	0	1	0	0	0	3	3.00
0830 - 0845	0	0	1	0	0	0	0	0	1	1.00
0845 - 0900	0	0	10	2	0	0	0	0	12	12.00
Hourly Total	0	0	13	2	1	0	0	0	16	16.00
Hourly Average	0.00	0.00	3.25	0.50	0.25	0.00	0.00	0.00	4.00	4.00
0900 - 0915	0	0	8	0	2	0	0	0	10	10.00
0915 - 0930	0	0	7	1	0	1	0	0	9	9.50
0930 - 0945	0	0	6	1	0	0	0	0	7	7.00
0945 - 1000	0	0	5	0	0	0	0	0	5	5.00
Hourly Total	0	0	26	2	2	1	0	0	31	31.50
Hourly Average	0.00	0.00	6.50	0.50	0.50	0.25	0.00	0.00	7.75	7.88
1000 - 1015	0	0	2	0	1	0	0	0	3	3.00
1015 - 1030	0	0	7	0	0	0	0	0	7	7.00
1030 - 1045	0	0	2	0	0	0	0	0	2	2.00
1045 - 1100	0	0	3	0	4	0	0	0	7	7.00
Hourly Total	0	0	14	0	5	0	0	0	19	19.00
Hourly Average	0.00	0.00	3.50	0.00	1.25	0.00	0.00	0.00	4.75	4.75
1100 - 1115	0	0	7	0	0	0	0	0	7	7.00
1115 - 1130	0	0	3	0	1	0	0	0	4	4.00
1130 - 1145	0	0	7	0	1	0	0	0	8	8.00
1145 - 1200	0	0	4	0	0	0	0	0	4	4.00
Hourly Total	0	0	21	0	2	0	0	0	23	23.00
Hourly Average	0.00	0.00	5.25	0.00	0.50	0.00	0.00	0.00	5.75	5.75
1200 - 1215	0	0	1	1	0	0	0	0	2	2.00
1215 - 1230	0	0	4	0	0	0	0	0	4	4.00
1230 - 1245	0	0	6	0	0	0	0	0	6	6.00
1245 - 1300	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	12	1	0	0	0	0	13	13.00
Hourly Average	0.00	0.00	3.00	0.25	0.00	0.00	0.00	0.00	3.25	3.25
1300 - 1315	0	0	4	0	0	0	0	0	4	4.00
1315 - 1330	0	0	4	0	0	0	0	0	4	4.00
1330 - 1345	0	0	2	0	1	0	0	0	3	3.00
1345 - 1400	0	0	5	1	2	0	0	0	8	8.00
Hourly Total	0	0	15	1	3	0	0	0	19	19.00
Hourly Average	0.00	0.00	3.75	0.25	0.75	0.00	0.00	0.00	4.75	4.75
1400 - 1415	0	0	6	0	0	0	0	0	6	6.00
1415 - 1430	0	0	8	3	1	0	0	0	12	12.00
1430 - 1445	0	0	7	0	0	0	0	0	7	7.00
1445 - 1500	0	0	2	0	1	0	0	0	3	3.00
Hourly Total	0	0	23	3	2	0	0	0	28	28.00
Hourly Average	0.00	0.00	5.75	0.75	0.50	0.00	0.00	0.00	7.00	7.00
1500 - 1515	0	0	4	1	1	0	0	0	6	6.00
1515 - 1530	0	0	7	0	0	0	0	0	7	7.00
1530 - 1545	0	0	6	0	1	0	0	0	7	7.00
1545 - 1600	0	0	6	0	0	0	0	0	6	6.00
Hourly Total	0	0	23	1	2	0	0	0	26	26.00
Hourly Average	0.00	0.00	5.75	0.25	0.50	0.00	0.00	0.00	6.50	6.50
1600 - 1615	0	0	5	0	0	0	0	0	5	5.00
1615 - 1630	0	0	6	0	1	0	0	0	7	7.00
1630 - 1645	0	0	5	0	2	1	0	0	8	8.50
1645 - 1700	0	0	4	0	0	0	0	0	4	4.00
Hourly Total	0	0	20	0	3	1	0	0	24	24.50
Hourly Average	0.00	0.00	5.00	0.00	0.75	0.25	0.00	0.00	6.00	6.13
1700 - 1715	0	0	7	0	0	0	0	0	7	7.00
1715 - 1730	0	0	7	0	3	0	0	0	10	10.00
1730 - 1745	0	0	4	0	2	0	0	0	6	6.00
1745 - 1800	0	0	3	0	0	0	0	0	3	3.00
Hourly Total	0	0	21	0	5	0	0	0	26	26.00
Hourly Average	0.00	0.00	5.25	0.00	1.25	0.00	0.00	0.00	6.50	6.50
1800 - 1815	0	0	6	0	2	0	0	0	8	8.00
1815 - 1830	0	0	3	0	0	0	0	0	3	3.00
1830 - 1845	0	0	4	0	1	0	0	0	5	5.00
1845 - 1900	0	0	3	0	0	0	0	0	3	3.00
Hourly Total	0	0	16	0	3	0	0	0	19	19.00
Hourly Average	0.00	0.00	4.00	0.00	0.75	0.00	0.00	0.00	4.75	4.75
Session Total	0	0	211	10	29	3	0	0	253	254.50
Session Average	0.00	0.00	4.40	0.21	0.60	0.06	0.00	0.00	5.27	5.30

Northumberland, Bexley  
Classified Junction Count

Site 11 of 11  
Council Road  
Station Road (East)  
Kenicworth Road  
Station Road (West)

Lat/Long  
lat 55.183415° lon -1.574437°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 11.12: Eastbound from Station Road (West) to Station Road (East)								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	2	0	0	0	0	0	2	2.00
0715 - 0730	2	0	4	0	0	0	0	0	6	4.40
0730 - 0745	0	0	9	0	0	0	1	0	10	11.30
0745 - 0800	0	1	4	0	1	0	0	0	6	5.40
Hourly Total	2	1	19	0	1	0	1	0	24	23.10
Hourly Average	0.50	0.25	4.75	0.00	0.25	0.00	0.25	0.00	6.00	5.78
0800 - 0815	0	1	10	0	0	0	0	0	11	10.40
0815 - 0830	0	2	20	0	1	0	0	0	23	21.80
0830 - 0845	0	0	26	0	2	0	0	0	28	28.00
0845 - 0900	0	1	28	1	1	0	1	0	32	32.70
Hourly Total	0	4	84	1	4	0	1	0	94	92.90
Hourly Average	0.00	1.00	21.00	0.25	1.00	0.00	0.25	0.00	23.50	23.23
0900 - 0915	0	0	23	1	2	3	0	0	29	30.50
0915 - 0930	0	0	29	0	3	2	0	0	34	35.00
0930 - 0945	0	0	18	1	2	1	0	0	22	22.50
0945 - 1000	0	0	19	0	4	0	0	0	23	23.00
Hourly Total	0	0	89	2	11	6	0	0	108	111.00
Hourly Average	0.00	0.00	22.25	0.50	2.75	1.50	0.00	0.00	27.00	27.75
1000 - 1015	0	0	16	2	2	2	0	0	22	23.00
1015 - 1030	0	0	16	0	0	0	0	0	16	16.00
1030 - 1045	1	0	20	3	6	1	0	0	31	30.70
1045 - 1100	1	0	9	2	0	1	0	0	13	12.70
Hourly Total	2	0	61	7	8	4	0	0	82	82.40
Hourly Average	0.50	0.00	15.25	1.75	2.00	1.00	0.00	0.00	20.50	20.60
1100 - 1115	0	0	17	5	7	0	0	0	29	29.00
1115 - 1130	0	0	15	2	6	1	0	0	24	24.50
1130 - 1145	0	0	23	2	7	0	0	0	32	32.00
1145 - 1200	0	0	15	2	0	0	0	0	17	17.00
Hourly Total	0	0	70	11	20	1	0	0	102	102.50
Hourly Average	0.00	0.00	17.50	2.75	5.00	0.25	0.00	0.00	25.50	25.63
1200 - 1215	0	0	20	5	3	0	0	0	28	28.00
1215 - 1230	0	0	18	5	4	0	0	0	27	27.00
1230 - 1245	0	0	13	1	2	0	0	0	16	16.00
1245 - 1300	0	0	30	3	5	2	0	0	40	41.00
Hourly Total	0	0	81	14	14	2	0	0	111	112.00
Hourly Average	0.00	0.00	20.25	3.50	3.50	0.50	0.00	0.00	27.75	28.00
1300 - 1315	0	0	22	1	3	0	0	0	26	26.00
1315 - 1330	0	0	14	2	2	0	0	0	18	18.00
1330 - 1345	0	0	16	0	4	0	0	0	20	20.00
1345 - 1400	0	0	19	1	3	1	0	0	24	24.50
Hourly Total	0	0	71	4	12	1	0	0	88	88.50
Hourly Average	0.00	0.00	17.75	1.00	3.00	0.25	0.00	0.00	22.00	22.13
1400 - 1415	2	0	15	2	4	0	0	0	23	21.40
1415 - 1430	0	0	21	1	5	1	0	0	28	28.50
1430 - 1445	0	0	17	2	4	1	0	0	24	24.50
1445 - 1500	1	0	16	1	1	0	0	0	19	18.20
Hourly Total	3	0	69	6	14	2	0	0	94	92.60
Hourly Average	0.75	0.00	17.25	1.50	3.50	0.50	0.00	0.00	23.50	23.15
1500 - 1515	0	0	25	0	4	1	0	0	30	30.50
1515 - 1530	0	0	34	1	3	0	0	0	38	38.00
1530 - 1545	0	0	31	0	7	0	0	0	38	38.00
1545 - 1600	0	0	27	1	3	0	0	0	31	31.00
Hourly Total	0	0	117	2	17	1	0	0	137	137.50
Hourly Average	0.00	0.00	29.25	0.50	4.25	0.25	0.00	0.00	34.25	34.38
1600 - 1615	0	0	18	0	5	0	0	0	23	23.00
1615 - 1630	0	0	26	2	4	0	0	0	32	32.00
1630 - 1645	0	0	22	0	0	0	0	0	22	22.00
1645 - 1700	0	0	21	0	2	1	0	0	24	24.50
Hourly Total	0	0	87	2	11	1	0	0	101	101.50
Hourly Average	0.00	0.00	21.75	0.50	2.75	0.25	0.00	0.00	25.25	25.38
1700 - 1715	0	0	31	0	1	0	0	0	32	32.00
1715 - 1730	0	1	26	0	1	0	0	0	28	27.40
1730 - 1745	0	0	18	0	0	0	0	0	18	18.00
1745 - 1800	0	0	22	1	0	0	0	0	23	23.00
Hourly Total	0	1	97	1	2	0	0	0	101	100.40
Hourly Average	0.00	0.25	24.25	0.25	0.50	0.00	0.00	0.00	25.25	25.10
1800 - 1815	2	0	15	0	0	0	0	0	17	15.40
1815 - 1830	0	0	7	0	1	0	0	0	8	8.00
1830 - 1845	0	0	20	0	0	0	0	0	20	20.00
1845 - 1900	0	0	17	0	0	0	0	0	17	17.00
Hourly Total	2	0	59	0	1	0	0	0	62	60.40
Hourly Average	0.50	0.00	14.75	0.00	0.25	0.00	0.00	0.00	15.50	15.10
Session Total	9	6	904	50	115	18	2	0	1104	1104.80
Session Average	0.19	0.13	18.83	1.04	2.40	0.38	0.04	0.00	23.00	23.02

Northumberland, Bexley  
Classified Junction Count

Site 11 of 11  
Council Road  
Station Road (East)  
Kenicworth Road  
Station Road (West)

Lat/Long  
lat 55.183415° lon -1.574437°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)

	Movement 11.13: Right from Station Road (West) to Kenicworth Road								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0700 - 0715	0	0	8	0	0	0	0	0	8	8.00
0715 - 0730	0	0	4	0	0	0	0	0	4	4.00
0730 - 0745	0	0	13	0	0	0	0	0	13	13.00
0745 - 0800	0	0	13	0	3	0	0	0	16	16.00
Hourly Total	0	0	38	0	3	0	0	0	41	41.00
Hourly Average	0.00	0.00	9.50	0.00	0.75	0.00	0.00	0.00	10.25	10.25
0800 - 0815	0	0	13	0	0	1	0	0	14	14.50
0815 - 0830	0	0	24	0	2	0	0	0	26	26.00
0830 - 0845	0	0	40	0	1	0	0	0	41	41.00
0845 - 0900	0	0	39	0	1	0	0	0	40	40.00
Hourly Total	0	0	116	0	4	1	0	0	121	121.50
Hourly Average	0.00	0.00	29.00	0.00	1.00	0.25	0.00	0.00	30.25	30.38
0900 - 0915	0	0	32	0	3	0	0	0	35	35.00
0915 - 0930	0	0	24	0	2	0	0	0	26	26.00
0930 - 0945	0	1	20	0	1	0	0	0	22	21.40
0945 - 1000	0	0	26	0	1	0	0	0	27	27.00
Hourly Total	0	1	102	0	7	0	0	0	110	109.40
Hourly Average	0.00	0.25	25.50	0.00	1.75	0.00	0.00	0.00	27.50	27.35
1000 - 1015	0	0	22	0	4	0	0	0	26	26.00
1015 - 1030	0	0	24	0	4	0	0	0	28	28.00
1030 - 1045	0	0	23	0	1	0	0	0	24	24.00
1045 - 1100	0	0	24	0	3	0	0	0	27	27.00
Hourly Total	0	0	93	0	12	0	0	0	105	105.00
Hourly Average	0.00	0.00	23.25	0.00	3.00	0.00	0.00	0.00	26.25	26.25
1100 - 1115	0	0	26	0	1	0	0	0	27	27.00
1115 - 1130	0	0	21	1	3	1	0	0	26	26.50
1130 - 1145	0	1	18	0	2	1	0	0	22	21.90
1145 - 1200	0	0	21	0	0	1	0	0	22	22.50
Hourly Total	0	1	86	1	6	3	0	0	97	97.90
Hourly Average	0.00	0.25	21.50	0.25	1.50	0.75	0.00	0.00	24.25	24.48
1200 - 1215	0	0	19	1	1	0	0	0	21	21.00
1215 - 1230	0	0	13	0	4	1	0	0	18	18.50
1230 - 1245	0	0	23	1	2	0	0	0	26	26.00
1245 - 1300	0	0	22	1	1	0	0	0	24	24.00
Hourly Total	0	0	77	3	8	1	0	0	89	89.50
Hourly Average	0.00	0.00	19.25	0.75	2.00	0.25	0.00	0.00	22.25	22.38
1300 - 1315	0	0	20	0	1	0	0	0	21	21.00
1315 - 1330	0	0	28	0	0	0	0	0	28	28.00
1330 - 1345	0	0	28	0	1	0	0	0	29	29.00
1345 - 1400	0	0	25	0	2	0	0	0	27	27.00
Hourly Total	0	0	101	0	4	0	0	0	105	105.00
Hourly Average	0.00	0.00	25.25	0.00	1.00	0.00	0.00	0.00	26.25	26.25
1400 - 1415	0	0	18	0	2	0	0	0	20	20.00
1415 - 1430	0	0	14	1	0	0	0	0	15	15.00
1430 - 1445	0	0	16	0	1	0	0	0	17	17.00
1445 - 1500	0	0	15	0	0	0	0	0	15	15.00
Hourly Total	0	0	63	1	3	0	0	0	67	67.00
Hourly Average	0.00	0.00	15.75	0.25	0.75	0.00	0.00	0.00	16.75	16.75
1500 - 1515	0	0	29	0	1	0	0	0	30	30.00
1515 - 1530	0	0	28	0	0	0	0	1	29	30.00
1530 - 1545	0	0	35	0	1	0	0	0	36	36.00
1545 - 1600	0	0	25	1	1	0	0	0	27	27.00
Hourly Total	0	0	117	1	3	0	0	1	122	123.00
Hourly Average	0.00	0.00	29.25	0.25	0.75	0.00	0.00	0.25	30.50	30.75
1600 - 1615	1	0	19	1	4	0	0	0	25	24.20
1615 - 1630	0	0	19	0	0	0	0	0	19	19.00
1630 - 1645	0	0	28	0	2	0	0	0	30	30.00
1645 - 1700	0	0	22	0	4	0	0	0	26	26.00
Hourly Total	1	0	88	1	10	0	0	0	100	99.20
Hourly Average	0.25	0.00	22.00	0.25	2.50	0.00	0.00	0.00	25.00	24.80
1700 - 1715	0	0	42	0	1	0	0	0	43	43.00
1715 - 1730	0	0	23	0	2	0	0	0	25	25.00
1730 - 1745	0	0	15	0	0	0	0	0	15	15.00
1745 - 1800	0	0	12	0	0	0	0	0	12	12.00
Hourly Total	0	0	92	0	3	0	0	0	95	95.00
Hourly Average	0.00	0.00	23.00	0.00	0.75	0.00	0.00	0.00	23.75	23.75
1800 - 1815	0	0	16	0	0	0	0	0	16	16.00
1815 - 1830	1	0	13	0	1	0	0	0	15	14.20
1830 - 1845	0	0	20	0	1	0	0	0	21	21.00
1845 - 1900	0	0	12	0	1	0	0	0	13	13.00
Hourly Total	1	0	61	0	3	0	0	0	65	64.20
Hourly Average	0.25	0.00	15.25	0.00	0.75	0.00	0.00	0.00	16.25	16.05
Session Total	2	2	1034	7	66	5	0	1	1117	1117.70
Session Average	0.04	0.04	21.54	0.15	1.38	0.10	0.00	0.02	23.27	23.29

Northumberland, Bexley  
Queue Length Survey

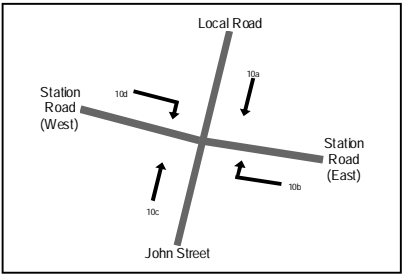
Site 10 of 11  
Local Road  
Station Road (East)  
John Street  
Station Road (West)

Lat/Long  
lat 55.183359° lon -1.572517°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)



TIME	10a		10b		10c		10d	
	PCU	Metres	PCU	Metres	PCU	Metres	PCU	Metres
0700 - 0705	0	0	0	0	0	0	0	0
0705 - 0710	0	0	0	0	0	0	0	0
0710 - 0715	0	0	1	6	0	0	0	0
0715 - 0720	0	0	1	7	0	0	0	0
0720 - 0725	0	0	2	10	0	0	0	0
0725 - 0730	0	0	2	10	0	0	0	0
0730 - 0735	0	0	2	10	0	0	0	0
0735 - 0740	1	5	1	5	0	0	0	0
0740 - 0745	0	0	3	18	0	0	0	0
0745 - 0750	0	0	2	10	1	6	0	0
0750 - 0755	0	0	2	12	0	0	0	0
0755 - 0800	0	0	2	10	0	0	0	0
Hourly Average	0.08	0.42	1.50	6.17	0.08	0.50	0.09	0.00
0800 - 0805	0	0	2	14	0	0	0	0
0805 - 0810	0	0	1	7	0	0	0	0
0810 - 0815	0	0	2	14	0	0	3	15
0815 - 0820	1	6	1	5	0	0	0	0
0820 - 0825	0	0	2	14	1	6	2	12
0825 - 0830	0	0	1	6	1	6	0	0
0830 - 0835	0	0	2	14	1	5	0	0
0835 - 0840	1	7	1	6	0	0	0	0
0840 - 0845	1	7	1	5	0	0	0	0
0845 - 0850	0	0	2	14	0	0	1	5
0850 - 0855	0	0	2	10	0	0	0	0
0855 - 0900	0	0	3	18	0	0	0	0
Hourly Average	0.25	1.67	1.67	10.58	0.25	1.42	0.50	2.67
0900 - 0905	0	0	2	10	0	0	1	6
0905 - 0910	0	0	2	14	1	6	1	5
0910 - 0915	0	0	3	18	1	6	1	7
0915 - 0920	1	5	1	6	1	6	1	6
0920 - 0925	0	0	2	14	1	5	2	10
0925 - 0930	0	0	2	14	0	0	3	13
0930 - 0935	0	0	2	12	1	7	0	1
0935 - 0940	1	7	2	10	1	6	2	14
0940 - 0945	1	5	2	12	0	0	0	0
0945 - 0950	1	7	2	14	1	5	1	7
0950 - 0955	1	7	2	12	1	6	1	7
0955 - 1000	1	7	3	21	1	5	1	6
Hourly Average	0.50	3.17	2.08	13.08	0.75	4.33	1.25	7.33
1000 - 1005	1	5	2	12	0	0	1	5
1005 - 1010	1	7	2	14	2	12	1	7
1010 - 1015	0	0	2	12	2	10	1	7
1015 - 1020	1	6	5	10	1	5	1	7
1020 - 1025	0	0	2	10	1	5	1	7
1025 - 1030	2	12	3	21	2	12	2	12
1030 - 1035	1	6	6	30	2	12	2	12
1035 - 1040	0	0	1	7	1	6	1	6
1040 - 1045	1	7	5	35	1	5	1	5
1045 - 1050	0	0	2	12	1	5	1	5
1050 - 1055	0	0	2	12	1	5	4	20
1055 - 1100	0	0	2	14	1	5	0	0
Hourly Average	0.58	3.58	2.50	15.33	1.25	6.83	1.33	7.75
1100 - 1105	0	0	4	28	1	7	2	8
1105 - 1110	1	7	2	10	1	6	1	6
1110 - 1115	0	0	3	18	2	10	2	12
1115 - 1120	0	0	1	6	1	5	0	0
1120 - 1125	1	7	2	10	0	0	2	10
1125 - 1130	2	14	4	24	1	5	1	6
1130 - 1135	0	0	3	18	0	0	2	14
1135 - 1140	1	6	2	12	0	0	1	5
1140 - 1145	3	15	5	30	1	7	1	5
1145 - 1150	0	0	1	7	1	6	1	6
1150 - 1155	0	0	2	12	1	6	1	5
1155 - 1200	1	7	3	15	2	14	1	5
Hourly Average	0.75	4.67	2.67	15.83	0.92	5.58	1.25	6.83
1200 - 1205	0	0	5	25	1	5	3	18
1205 - 1210	1	6	3	15	0	0	1	7
1210 - 1215	0	0	3	15	1	5	2	12
1215 - 1220	1	6	2	12	1	7	1	5
1220 - 1225	1	5	2	12	1	5	3	21
1225 - 1230	1	6	2	10	1	6	2	10
1230 - 1235	0	0	3	18	1	7	1	6
1235 - 1240	0	0	3	21	1	7	1	6
1240 - 1245	1	6	6	36	1	6	2	12
1245 - 1250	1	7	3	21	0	0	1	5
1250 - 1255	2	14	2	14	1	7	2	14
1255 - 1300	0	0	1	5	1	7	1	7
Hourly Average	0.67	4.17	2.92	17.00	0.83	5.17	1.67	10.25
1300 - 1305	0	0	2	10	1	7	0	0
1305 - 1310	0	0	5	35	2	10	2	14
1310 - 1315	1	7	2	14	1	6	1	5
1315 - 1320	1	6	3	21	1	7	1	6
1320 - 1325	0	0	4	20	1	6	1	6
1325 - 1330	0	0	2	10	1	6	0	0
1330 - 1335	1	5	3	18	0	0	1	5
1335 - 1340	0	0	3	15	1	7	0	0
1340 - 1345	1	7	4	28	0	0	2	10
1345 - 1350	0	0	1	7	0	0	2	10
1350 - 1355	1	5	2	10	1	6	0	0
1355 - 1400	0	0	2	14	1	5	2	14
Hourly Average	0.42	2.50	2.75	16.83	0.83	5.00	0.92	5.33
1400 - 1405	0	0	4	24	1	5	1	7
1405 - 1410	0	0	4	28	1	7	1	5
1410 - 1415	0	0	3	15	1	7	2	10
1415 - 1420	1	7	2	14	1	7	1	7
1420 - 1425	0	0	1	5	1	5	1	5
1425 - 1430	0	0	4	22	1	5	2	10
1430 - 1435	1	6	2	14	1	7	1	7
1435 - 1440	1	5	2	12	1	5	3	15
1440 - 1445	0	0	2	12	2	10	2	14
1445 - 1450	0	0	3	15	2	10	1	5
1450 - 1455	1	5	3	21	1	6	0	0
1455 - 1500	1	5	3	30	1	6	1	5
Hourly Average	0.42	2.33	3.00	17.67	1.17	6.67	1.33	7.50
1500 - 1505	0	0	1	6	1	5	0	0
1505 - 1510	0	0	1	5	2	14	1	5
1510 - 1515	1	5	0	0	1	5	0	0
1515 - 1520	0	0	0	0	2	9	0	0
1520 - 1525	2	9	1	6	2	10	1	5
1525 - 1530	0	0	1	6	1	7	1	7
1530 - 1535	1	7	1	7	1	6	2	10
1535 - 1540	1	5	0	0	1	7	0	0
1540 - 1545	1	6	0	0	1	7	0	0
1545 - 1550	1	5	1	7	0	0	2	14
1550 - 1555	1	7	1	7	1	6	2	10
1555 - 1600	0	0	0	0	1	6	0	0
Hourly Average	0.67	3.67	0.58	3.67	1.17	6.83	0.75	4.25
1600 - 1605	1	5	0	0	0	0	1	5
1605 - 1610	1	5	0	0	2	12	3	21
1610 - 1615	0	0	1	6	1	6	0	0
1615 - 1620	0	0	0	0	1	5	0	0
1620 - 1625	1	7	0	0	2	14	5	35
1625 - 1630	0	0	2	10	1	5	1	5
1630 - 1635	0	0	2	10	0	0	0	0
1635 - 1640	0	0	2	10	0	0	2	14
1640 - 1645	2	14	2	14	1	7	0	0
1645 - 1650	1	5	2	10	0	0	0	0
1650 - 1655	1	6	2	10	1	7	0	0
1655 - 1700	1	5	0	0	0	0	0	0
Hourly Average	0.67	3.92	0.92	5.00	0.75	4.67	1.00	6.67
1700 - 1705	0	0	9	54	0	0	1	5
1705 - 1710	0	0	1	6	1	7	0	0
1710 - 1715	0	0	2	10	1	6	0	0
1715 - 1720	0	0	2	12	1	7	0	0
1720 - 1725	0	0	1	6	1	5	0	0
1725 - 1730	1	6	2	10	1	7	0	0
1730 - 1735	1	5	2	12	1	5	0	0
1735 - 1740	2	12	2	12	1	7	0	0
1740 - 1745	1	6	2	14	0	0	0	0
1745 - 1750	1	6	2	14	0	0	0	0
1750 - 1755	1	7	2	10	0	0	0	0
1755 - 1800	0	0	2	10	0	0	0	0
Hourly Average	0.58	3.50	2.42	14.17	0.58	3.67	0.08	0.42
1800 - 1805	0	0	1	7	2	10	0	0
1805 - 1810	0	0	1	7	2	10	0	0
1810 - 1815	0	0	2	12	0	0	0	0
1815 - 1820	0	0	0	0	1	7	0	0
1820 - 1825	0	0	0	0	0	0	0	0
1825 - 1830	0	0	2	14	0	0	0	0
1830 - 1835	1	7	2	12	0	0	0	0
1835 - 1840	2	14	3	18	0	0	0	0
1840 - 1845	0	0	2	10	0	0	0	0
1845 - 1850	0	0	1	15	0	0	0	0
1850 - 1855	0	0	1	6	0	0	0	0
1855 - 1900	0	0	2	14	0	0	0	0
Hourly Average	0.33	2.33	1.58	9.58	0.25	1.42	0.00	0.00
Session Total	0.49	2.99	2.05	12.24	0.74	4.34	0.84	4.92

Avg Max	A/M			
	Arm			
	A	B	C	D
	lane 1	lane 2	lane 1	lane 2
	0	2	0	1
	1	3	1	2

Avg Max	P/M			
	Arm			
	A	B	C	D
	lane 1	lane 2	lane 1	lane 2
	1	2	1	0
	2	9	1	1

Northumberland, Bexley  
Queue Length Survey

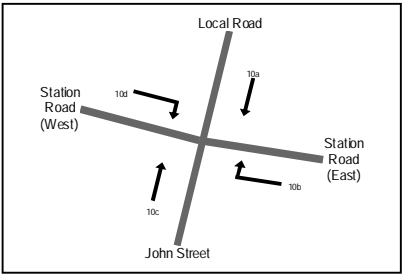
Site 10 of 11  
Local Road  
Station Road (East)  
John Street  
Station Road (West)

Lat/Long  
lat 55.183359° lon -1.572517°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)



TIME	10a		10b		10c		10d	
	PCU	Metres	PCU	Metres	PCU	Metres	PCU	Metres
0700	0	0	0	0	0	0	0	0
0705	0	0	0	0	0	0	0	0
0710	0	0	0	0	0	0	0	0
0715	0	0	0	0	0	0	0	0
0720	0	0	0	0	0	0	0	0
0725	0	0	0	0	0	0	0	0
0730	0	0	0	0	0	0	0	0
0735	0	0	0	0	0	0	0	0
0740	0	0	0	0	0	0	0	0
0745	0	0	0	0	0	0	0	0
0750	0	0	1	7	0	0	0	0
0755	0	0	0	0	0	0	0	0
Hourly Average	0.00	0.00	0.08	0.58	0.00	0.00	0.00	0.00
0800	0	0	0	0	0	0	0	0
0805	0	0	0	0	0	0	0	0
0810	0	0	0	0	0	0	0	0
0815	0	0	0	0	0	0	0	0
0820	0	0	0	0	0	0	0	0
0825	0	0	0	0	0	0	0	0
0830	0	0	0	0	0	0	0	0
0835	0	0	0	0	0	0	0	0
0840	0	0	0	0	0	0	0	0
0845	0	0	0	0	0	0	0	0
0850	0	0	0	0	0	0	0	0
0855	0	0	0	0	0	0	0	0
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0900	0	0	0	0	0	0	0	0
0905	0	0	0	0	0	0	0	0
0910	0	0	3	18	1	7	1	7
0915	0	0	0	0	0	0	0	0
0920	0	0	0	0	0	0	0	0
0925	0	0	0	0	0	0	0	0
0930	0	0	1	0	0	0	1	7
0935	0	0	1	6	0	0	0	0
0940	2	8	0	0	0	0	0	0
0945	0	0	0	0	0	0	0	0
0950	0	0	0	0	0	0	0	0
0955	0	0	0	0	0	0	0	0
Hourly Average	0.17	0.67	0.33	2.00	0.08	0.58	0.17	1.17
1000	0	0	0	0	0	0	0	0
1005	0	0	0	0	0	0	0	0
1010	0	0	0	0	0	0	1	6
1015	0	0	0	0	0	0	0	0
1020	0	0	0	0	0	0	0	0
1025	0	0	0	0	0	0	0	0
1030	0	0	0	0	0	0	1	5
1035	0	0	0	0	1	5	0	0
1040	0	0	0	0	0	0	0	0
1045	0	0	0	0	0	0	0	0
1050	0	0	0	0	0	0	0	0
1055	0	0	0	0	0	0	0	0
Hourly Average	0.00	0.00	0.00	0.00	0.08	0.42	0.17	0.92
1100	0	0	1	6	1	0	0	0
1105	0	0	0	1	0	7	0	0
1110	0	0	0	0	1	5	0	0
1115	0	0	0	0	0	0	0	0
1120	0	0	0	0	0	0	0	0
1125	0	0	0	0	0	0	0	0
1130	0	0	0	0	0	0	0	0
1135	0	0	0	0	0	0	0	0
1140	0	0	0	0	0	0	0	0
1145	0	0	2	14	0	0	0	0
1150	0	0	0	0	0	0	0	0
1155	0	0	0	0	0	0	0	0
Hourly Average	0.00	0.00	0.25	1.67	0.17	1.00	0.00	0.00
1200	0	0	1	5	0	0	0	0
1205	0	0	1	7	0	0	0	0
1210	0	0	0	0	0	0	1	7
1215	0	0	0	0	0	0	0	0
1220	0	0	0	0	0	0	0	0
1225	0	0	0	0	0	0	0	0
1230	0	0	0	0	0	0	0	0
1235	0	0	0	0	0	0	0	0
1240	0	0	0	0	0	0	0	0
1245	0	0	0	0	0	0	0	0
1250	0	0	0	0	0	0	0	0
1255	0	0	0	0	1	6	0	0
Hourly Average	0.00	0.00	0.17	1.00	0.08	0.50	0.08	0.58
1300	0	0	0	0	0	0	0	0
1305	0	0	0	0	0	0	0	0
1310	0	0	0	0	0	0	0	0
1315	0	0	0	0	0	0	0	0
1320	0	0	0	0	0	0	0	0
1325	0	0	0	0	0	0	0	0
1330	0	0	0	0	0	0	0	0
1335	0	0	0	0	0	0	0	0
1340	0	0	0	0	0	0	0	0
1345	0	0	0	0	0	0	0	0
1350	0	0	0	0	0	0	0	0
1355	0	0	0	0	0	0	0	0
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1400	0	0	0	0	0	0	0	0
1405	0	0	0	0	0	0	0	0
1410	0	0	3	15	0	0	0	0
1415	0	0	3	0	0	0	0	0
1420	0	0	0	0	0	0	0	0
1425	0	0	0	0	0	0	0	0
1430	0	0	1	6	0	0	0	0
1435	0	0	0	0	0	0	0	0
1440	0	0	0	0	0	0	0	0
1445	0	0	1	6	0	0	0	0
1450	0	0	0	0	0	0	0	0
1455	0	0	0	0	0	0	0	0
Hourly Average	0.00	0.00	0.42	2.25	0.00	0.00	0.00	0.00
1500	0	0	0	0	0	0	0	0
1505	0	0	0	0	0	0	0	0
1510	0	0	0	0	0	0	0	0
1515	0	0	0	0	0	0	0	0
1520	0	0	0	0	0	0	0	0
1525	0	0	0	0	0	0	0	0
1530	0	0	0	0	0	7	1	6
1535	0	0	0	0	1	7	0	0
1540	0	0	0	0	0	0	0	0
1545	0	0	0	0	0	0	0	0
1550	0	0	0	0	0	0	0	0
1555	0	0	0	0	0	0	0	0
Hourly Average	0.00	0.00	0.00	0.00	0.08	0.58	0.08	0.50
1600	0	0	0	0	0	0	0	0
1605	0	0	0	0	0	0	0	0
1610	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0
1620	0	0	0	0	0	0	0	0
1625	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0
1635	0	0	0	0	0	0	0	0
1640	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0
1650	0	0	0	0	0	0	0	0
1655	0	0	0	0	0	0	0	0
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1700	0	0	0	0	0	0	0	0
1705	0	0	0	0	0	0	0	0
1710	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0
1720	0	0	0	0	0	0	0	0
1725	0	0	0	0	0	0	0	0
1730	0	0	0	0	0	0	0	0
1735	0	0	0	0	0	0	0	0
1740	0	0	0	0	0	0	0	0
1745	0	0	0	0	0	0	0	0
1750	0	0	0	0	0	0	0	0
1755	0	0	0	0	0	0	0	0
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	0	0	0	0	0	0	0	0
1805	0	0	0	0	0	0	0	0
1810	0	0	0	0	0	0	0	0
1815	0	0	0	0	0	0	0	0
1820	0	0	0	0	0	0	0	0
1825	0	0	0	0	0	0	0	0
1830	0	0	0	0	0	0	0	0
1835	0	0	0	0	0	0	0	0
1840	0	0	0	0	0	0	0	0
1845	0	0	0	0	0	0	0	0
1850	0	0	0	0	0	0	0	0
1855	0	0	0	0	0	0	0	0
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Session Total	0.01	0.06	0.10	0.63	0.04	0.26	0.04	0.26

Northumberland, Bexley  
Queue Length Survey

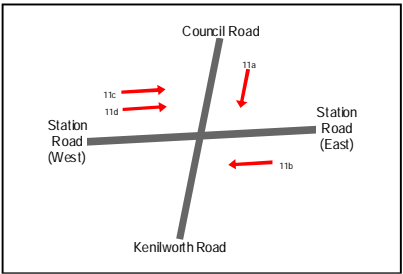
Site 11 of 11  
Council Road  
Station Road (East)  
Kenilworth Road  
Station Road (West)

Lat/Long  
lat 55.183415° lon -1.574437°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)



TIME	11a		11b		11c		11d		11e	
	PCU	Metres	PCU	Metres	PCU	Metres	PCU	Metres	PCU	Metres
0700 - 0705	0	0	0	0	0	0	0	0	0	0
0705 - 0710	1	5	0	0	0	0	0	0	1	5
0710 - 0715	0	0	2	12	1	6	0	0	0	0
0715 - 0720	0	0	3	21	1	5	0	0	0	0
0720 - 0725	0	0	2	12	0	0	0	0	0	1
0725 - 0730	0	0	0	0	1	6	1	6	1	5
0730 - 0735	0	0	2	14	0	0	3	18	1	7
0735 - 0740	0	0	0	0	1	5	1	7	0	0
0740 - 0745	0	0	3	18	0	0	3	21	0	0
0745 - 0750	0	0	0	0	0	0	1	5	0	0
0750 - 0755	0	0	1	5	1	5	2	12	1	7
0755 - 0800	0	0	1	5	1	5	2	12	1	6
Hourly Average	0.08	0.42	1.17	7.25	0.50	2.67	1.08	6.75	0.58	3.58
0800 - 0805	0	0	2	12	0	0	3	15	0	0
0805 - 0810	0	0	2	10	0	0	1	5	0	0
0810 - 0815	0	0	3	18	1	6	1	7	1	7
0815 - 0820	1	5	2	14	2	10	1	6	2	10
0820 - 0825	0	0	1	5	1	7	2	10	1	5
0825 - 0830	0	0	2	14	3	18	1	7	0	0
0830 - 0835	0	0	2	14	2	10	2	12	0	0
0835 - 0840	0	0	2	10	2	10	5	25	2	14
0840 - 0845	1	5	0	0	4	28	3	15	1	5
0845 - 0850	0	0	1	7	1	7	2	14	1	5
0850 - 0855	0	0	2	10	2	12	2	14	1	5
0855 - 0900	0	0	2	14	3	15	3	21	2	14
Hourly Average	0.17	0.83	1.75	10.67	1.75	10.25	2.17	12.58	1.00	5.83
0900 - 0905	0	0	4	28	2	12	4	20	2	14
0905 - 0910	0	0	2	12	1	7	5	28	2	14
0910 - 0915	0	0	3	15	2	9	3	18	2	14
0915 - 0920	0	0	1	5	3	15	2	10	2	12
0920 - 0925	0	0	2	12	2	12	2	12	2	10
0925 - 0930	0	0	2	14	2	12	3	15	3	15
0930 - 0935	0	0	2	14	1	7	1	5	3	18
0935 - 0940	0	0	2	10	2	10	2	5	2	14
0940 - 0945	0	0	3	18	1	6	2	14	1	7
0945 - 0950	1	6	2	10	1	6	3	15	1	7
0950 - 0955	0	0	2	14	3	18	2	14	2	14
0955 - 1000	0	0	2	14	2	14	2	14	2	14
Hourly Average	0.08	0.50	2.25	13.83	1.83	10.67	2.50	14.17	2.00	12.75
1000 - 1005	0	0	1	6	1	5	4	24	2	12
1005 - 1010	1	6	3	15	0	0	2	10	1	7
1010 - 1015	0	0	2	12	2	9	2	14	0	0
1015 - 1020	0	0	1	7	2	10	4	20	1	7
1020 - 1025	0	0	1	6	2	8	5	25	1	7
1025 - 1030	0	0	4	28	2	9	3	21	2	12
1030 - 1035	0	0	7	39	2	10	6	30	3	21
1035 - 1040	0	0	5	30	1	6	1	7	2	14
1040 - 1045	0	0	2	12	1	5	2	14	3	18
1045 - 1050	0	0	3	21	1	6	2	12	4	28
1050 - 1055	0	0	6	30	3	14	2	14	3	18
1055 - 1100	0	0	3	15	2	12	2	12	3	15
Hourly Average	0.08	0.50	3.17	18.42	1.58	7.83	2.92	16.92	2.08	13.25
1100 - 1105	1	5	2	12	2	14	2	10	2	14
1105 - 1110	0	0	3	21	1	7	4	20	0	4
1110 - 1115	1	7	2	14	3	18	2	14	1	6
1115 - 1120	0	0	2	14	1	5	1	5	3	18
1120 - 1125	0	0	1	5	1	6	2	14	2	14
1125 - 1130	0	0	2	14	1	7	3	18	5	35
1130 - 1135	0	0	3	15	5	25	2	12	2	10
1135 - 1140	0	0	2	14	1	7	2	10	3	21
1140 - 1145	1	7	4	20	2	10	3	15	1	6
1145 - 1150	0	0	2	12	1	6	2	10	2	10
1150 - 1155	0	0	2	14	1	6	3	15	1	5
1155 - 1200	0	0	4	28	1	7	2	14	4	20
Hourly Average	0.25	1.58	2.42	15.25	1.67	9.83	2.33	13.08	2.50	15.58
1200 - 1205	1	6	2	12	1	7	3	1	6	3
1205 - 1210	0	0	3	21	2	14	1	6	2	10
1210 - 1215	1	7	4	24	2	12	2	14	2	14
1215 - 1220	0	0	1	5	3	14	2	12	2	14
1220 - 1225	0	0	1	6	0	0	2	12	3	18
1225 - 1230	0	0	2	10	2	14	1	7	1	5
1230 - 1235	1	6	6	36	5	35	2	14	5	25
1235 - 1240	1	6	2	10	1	7	2	12	2	10
1240 - 1245	0	0	1	5	2	10	2	10	6	36
1245 - 1250	0	0	3	21	1	7	2	10	2	10
1250 - 1255	0	0	2	14	2	12	2	14	3	15
1255 - 1300	0	0	2	12	1	7	1	7	2	10
Hourly Average	0.33	2.08	2.42	14.67	1.83	11.58	1.67	10.33	2.75	15.67
1300 - 1305	0	0	0	0	2	12	1	5	2	12
1305 - 1310	0	0	0	0	1	5	1	5	3	21
1310 - 1315	0	0	3	21	1	5	3	18	3	15
1315 - 1320	0	0	3	18	3	21	3	18	2	10
1320 - 1325	0	0	3	21	1	5	2	14	0	0
1325 - 1330	0	0	2	14	1	5	3	15	1	7
1330 - 1335	0	0	5	30	4	20	6	36	3	15
1335 - 1340	0	0	3	18	1	5	4	20	5	30
1340 - 1345	0	0	2	10	2	14	6	42	2	12
1345 - 1350	0	0	3	15	2	12	2	10	3	21
1350 - 1355	0	0	2	10	2	14	2	12	4	24
1355 - 1400	0	0	2	14	1	5	2	14	4	20
Hourly Average	0.00	0.00	2.33	14.25	1.75	10.25	2.92	17.42	2.67	15.58
1400 - 1405	1	5	2	12	2	12	1	5	4	20
1405 - 1410	0	0	4	24	1	6	2	10	2	12
1410 - 1415	0	0	4	28	1	5	4	24	1	5
1415 - 1420	1	7	2	12	3	18	3	21	2	10
1420 - 1425	0	0	4	28	2	12	1	6	3	21
1425 - 1430	0	0	4	22	4	20	1	5	4	20
1430 - 1435	0	0	2	14	3	18	2	14	2	10
1435 - 1440	0	0	3	18	2	14	1	6	2	10
1440 - 1445	0	0	7	42	0	0	4	28	2	14
1445 - 1450	0	0	3	18	0	0	2	14	3	15
1450 - 1455	0	0	3	18	1	7	1	7	1	7
1455 - 1500	0	0	2	14	2	7	1	7	2	10
Hourly Average	0.17	1.00	3.17	20.00	1.75	10.33	1.92	12.25	2.33	12.83
1500 - 1505	0	0	1	5	3	15	4	21	0	0
1505 - 1510	0	5	1	5	2	14	3	18	1	5
1510 - 1515	0	0	1	5	0	0	3	18	2	14
1515 - 1520	0	0	2	10	1	6	7	35	2	10
1520 - 1525	0	0	3	15	2	14	2	10	1	7
1525 - 1530	0	0	3	21	2	12	4	20	1	6
1530 - 1535	0	0	1	6	2	10	2	12	1	6
1535 - 1540	0	0	2	12	1	7	4	20	2	10
1540 - 1545	0	0	1	7	2	12	2	10	2	10
1545 - 1550	0	0	3	18	1	7	3	18	2	12
1550 - 1555	0	0	2	12	3	21	5	25	3	21
1555 - 1600	0	0	2	12	2	10	1	6	2	14
Hourly Average	0.08	0.42	1.83	10.67	1.75	10.67	3.33	17.75	1.58	9.58
1600 - 1605	0	0	1	5	1	6	1	7	1	5
1605 - 1610	0	0	5	25	2	14	1	7	2	12
1610 - 1615	1	5	3	15	3	18	5	25	2	14
1615 - 1620	0	0	1	5	5	35	1	6	3	15
1620 - 1625	0	0	2	10	1	7	1	7	2	10
1625 - 1630	0	0	2	14	1	6	3	18	3	15
1630 - 1635	0	0	1	7	2	10	2	10	1	5

Northumberland, Bexley  
Queue Length Survey

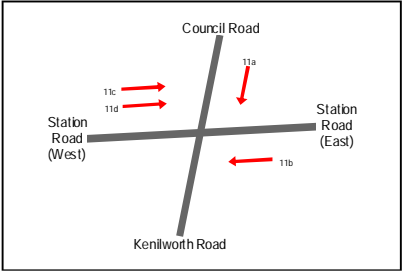
Site 11 of 11  
Council Road  
Station Road (East)  
Kenilworth Road  
Station Road (West)

Lat/Long  
lat 55.183415° lon -1.574437°

Date  
Tuesday 21 May 2019

Weather  
Sunny Intervals  
Temp: 16°C

0700 - 1900 (Weekday 12H Session)



TIME	11a		11b		11c		11d		11e	
	PCU	Metres	PCU	Metres	PCU	Metres	PCU	Metres	PCU	Metres
0700	0	0	0	0	0	0	0	0	0	0
0705	0	0	0	0	0	0	0	0	0	0
0710	0	0	0	0	0	0	0	0	0	0
0715	0	0	0	0	0	0	0	0	0	0
0720	0	0	0	0	0	0	0	0	0	0
0725	0	0	0	0	0	0	0	0	0	0
0730	0	0	0	0	0	0	0	0	0	0
0735	0	0	0	0	0	0	1	5	0	0
0740	0	0	0	0	0	0	0	0	0	0
0745	0	0	0	0	0	0	0	0	0	0
0750	0	0	0	0	0	0	0	0	0	0
0755	0	0	0	0	0	0	1	5	0	0
Hourly Average	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.83	0.00	0.00
0800	0	0	0	0	0	0	0	0	0	0
0805	0	0	0	0	0	0	0	0	0	0
0810	0	0	0	0	0	0	0	0	0	0
0815	0	0	0	0	0	0	0	0	1	5
0820	0	0	0	0	0	0	0	0	0	0
0825	0	0	0	0	0	0	0	0	0	0
0830	0	0	0	0	0	0	0	0	0	0
0835	0	0	1	6	0	0	1	6	0	0
0840	0	0	0	0	2	9	0	0	0	0
0845	0	0	0	0	0	0	0	0	0	0
0850	0	0	0	0	0	0	1	7	0	0
0855	0	0	2	10	2	10	1	5	0	0
Hourly Average	0.00	0.00	0.25	1.33	0.33	1.58	0.25	1.50	0.08	0.42
0900	0	0	0	0	0	0	1	6	2	14
0905	0	0	0	0	0	0	0	0	0	0
0910	0	0	0	0	0	0	0	0	0	0
0915	0	0	0	0	0	0	0	0	0	0
0920	0	0	0	0	0	0	0	0	0	0
0925	0	0	0	0	2	12	2	12	0	0
0930	0	0	0	0	0	0	0	0	0	0
0935	0	0	1	7	1	5	0	0	1	7
0940	0	0	0	0	0	0	0	0	0	0
0945	0	0	0	0	0	0	0	0	1	7
0950	0	0	0	0	0	0	0	0	0	0
0955	0	0	0	0	0	0	0	0	0	0
Hourly Average	0.00	0.00	0.08	0.58	0.25	1.42	0.33	2.00	0.33	2.33
1000	0	0	0	0	0	0	0	0	0	0
1005	0	0	0	0	0	0	0	0	0	0
1010	0	0	0	0	0	0	0	0	0	0
1015	0	0	0	0	2	10	1	7	0	0
1020	0	0	0	0	2	10	0	0	0	0
1025	0	0	0	0	2	10	0	0	1	5
1030	0	0	0	0	1	6	0	0	2	12
1035	0	0	4	20	2	12	0	0	0	0
1040	0	0	0	0	0	0	0	0	1	6
1045	0	0	0	0	0	0	0	0	2	10
1050	0	0	2	10	0	0	0	0	1	5
1055	0	0	3	21	0	0	0	0	0	0
Hourly Average	0.00	0.00	0.75	4.25	0.75	4.00	0.08	0.58	0.58	3.17
1100	0	0	0	0	0	0	0	0	0	0
1105	0	0	2	12	0	0	1	5	1	7
1110	0	0	0	0	1	5	0	0	0	0
1115	0	0	0	0	0	0	1	5	0	0
1120	0	0	0	0	0	0	0	0	1	5
1125	0	0	0	0	0	0	0	0	1	5
1130	0	0	0	0	0	0	0	0	0	0
1135	0	0	0	0	0	0	0	0	0	0
1140	1	7	0	0	0	0	0	0	0	0
1145	0	0	0	0	0	0	0	0	1	5
1150	0	0	0	0	0	0	0	0	0	0
1155	0	0	0	0	0	0	0	0	0	0
Hourly Average	0.08	0.58	0.17	1.00	0.08	0.42	0.17	0.83	0.33	1.83
1200	0	0	0	0	0	0	0	0	0	0
1205	0	0	0	0	0	0	1	7	0	0
1210	0	0	0	0	0	0	0	0	1	7
1215	0	0	0	0	0	0	0	0	2	14
1220	0	0	0	0	0	0	0	0	0	0
1225	0	0	0	0	0	0	0	0	0	0
1230	0	0	1	5	2	10	0	0	0	0
1235	0	0	2	12	1	5	2	12	0	0
1240	0	0	0	0	0	0	0	0	1	6
1245	0	0	0	0	0	0	0	0	0	0
1250	0	0	0	0	0	0	7	1	7	7
1255	0	0	1	5	0	0	1	6	0	0
Hourly Average	0.00	0.00	0.33	1.83	0.25	1.25	0.42	2.67	0.42	2.83
1300	0	0	0	0	0	0	0	0	0	0
1305	0	0	0	0	0	0	0	0	0	0
1310	0	0	0	0	0	0	0	0	0	0
1315	0	0	0	0	0	0	0	0	1	6
1320	0	0	0	0	0	0	2	12	0	0
1325	0	0	0	0	0	0	7	0	0	0
1330	0	0	2	10	0	0	0	0	0	0
1335	0	0	0	0	0	0	3	18	0	0
1340	0	0	0	0	0	0	0	0	0	0
1345	0	0	0	0	0	0	0	0	2	14
1350	0	0	0	0	0	0	0	0	0	0
1355	0	0	0	0	0	0	1	6	1	5
Hourly Average	0.00	0.00	0.17	0.83	0.00	0.00	0.58	3.58	0.33	2.08
1400	0	0	0	0	0	0	0	0	3	18
1405	0	0	0	0	0	0	0	0	0	0
1410	0	0	1	7	0	0	0	0	0	0
1415	0	0	0	0	0	0	0	0	0	0
1420	0	0	0	0	0	0	0	0	2	14
1425	0	0	0	0	0	0	0	0	0	0
1430	0	0	0	0	0	0	1	6	1	5
1435	0	0	0	0	0	0	0	0	0	0
1440	0	0	0	0	0	0	0	0	1	6
1445	0	0	0	0	0	0	0	0	0	0
1450	0	0	0	0	0	0	0	0	0	0
1455	0	0	0	0	0	0	0	0	1	5
1455	0	0	0	0	0	0	0	0	0	0
Hourly Average	0.00	0.00	0.08	0.58	0.00	0.00	0.08	0.50	0.67	4.00
1500	0	0	0	0	2	12	0	0	0	0
1505	0	0	0	0	0	0	0	0	0	0
1510	0	0	0	0	0	0	0	0	1	5
1515	0	0	0	0	0	0	0	0	0	0
1520	0	0	0	0	0	0	1	7	0	0
1525	0	0	1	6	0	0	2	10	1	7
1530	0	0	0	0	0	0	0	0	0	0
1535	0	0	0	0	0	0	0	0	0	0
1540	0	0	0	0	0	0	0	0	0	0
1545	0	0	0	0	0	0	0	0	1	7
1550	0	0	0	0	0	0	2	14	1	6
1550	0	0	0	0	0	0	1	5	0	0
1555	0	0	0	0	0	0	0	0	2	10
Hourly Average	0.00	0.00	0.08	0.50	0.17	1.00	0.50	3.00	0.50	2.92
1600	0	0	0	0	0	0	0	0	1	5
1605	0	0	1	5	0	0	0	0	1	5
1610	0	0	0	0	0	0	0	0	0	0
1615	0	0	1	6	0	0	0	0	0	0
1620	0	0	0	0	0	0	0	0	0	0
1625	0	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0	0
1635	0	0	0	0	0	0	0	0	0	0
1640	0	0	2	12	0	0	3	18	0	0
1645	0	0	0	0	0	0	0	0	1	5
1650	0	0	0	0	0	0	0	0	1	5
1655	0	0	0	0	0	0	0	0	0	0
Hourly Average	0.00	0.00	0.33	1.92	0.00	0.00	0.25	1.50	0.33	1.67
1700	0	0	0	0	0	0	0	0	0	0
1705	0	0	0	0	0	0	0	0	0	0
1710	0	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	1	6
1720	0	0	0	0	0	0	0	0	0	0
1725										



# Appendix D Proposed Station Layout





SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION BOX

IT IS ASSUMED THAT WORKS ON THIS DRAWING WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROPRIATE METHOD STATEMENT

THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

Notes

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DOCUMENTATION.

2. ALL DIMENSIONS IN MILLIMETERS, UNLESS STATED OTHERWISE. ALL CHAINAGES, LEVELS AND COORDINATES ARE IN METERS, UNLESS STATED OTHERWISE.

3. ALL ROAD WORKS TO BE IN ACCORDANCE WITH MCHW VOLUME 1 SPECIFICATION FOR HIGHWAY WORKS

4. REFER TO CIVILS DRAWINGS REFER TO 60601435-ACM-07-ZZ-DRG-ECV-000002 FOR DETAILS OF STATION PLATFORM

5. FOR TYPICAL CROSS SECTIONS REFER TO DRAWINGS 6060145-ACM-07-ZZ-DRG-EHW-070002 & 6060145-ACM-07-ZZ-DRG-EHW-070003.

6. FOR PROPOSED DRAINAGE LAYOUT REFER TO DRAWING 6060145-ACM-07-ZZ-DRG-EHW-070006

7. FOR TRAFFIC SIGNS AND ROAD MARKINGS REFER TO DRAWING 6060145-ACM-07-ZZ-DRG-EHW-070004

8. FOR STREET LIGHTING LAYOUT REFER TO DRAWING 6060145-ACM-07-ZZ-DRG-EPT-000067

9. FOR LANDSCAPING LAYOUT REFER TO DRAWING 6060145-ACM-XX-ZZ-DRG-EEN-000502

10. NO. OF CAR PARKING SPACES PROVIDED:  
- 244 No. STANDARD  
- 17 No. DISABLED (6%)  
- 18 No. ELECTRIC VEHICLE (6%)

11. ASSETS EAST OF (AND INCLUDING) THE NETWORK RAIL SECURE FENCING ARE TO BE OWNED AND MAINTAINED BY NETWORK RAIL.

For Stage 1 RSA	CH	DB	JOB	07/08/20	P01
Revision Details	By	Chkd	Appd	Checked/Date	Suffix
Purpose of Issue	SUITABLE FOR INFORMATION				
GRIP Stage	GRIP 4				
Client	Northumberland County Council				
Project Title	NORTHUMBERLAND LINE				
Drawing Title	ASHINGTON CAR PARK HIGHWAYS GENERAL ARRANGEMENT				
Designed	Drawn	Checked	Approved	Date	
Signed	Signed	Signed	Signed	11/11/20	
Subsidiary	AECOM Internal Project No.		Engineering Manager		
S2	60601435		Alexdair Bathie		
Scale @ 594 x 841	Zone / ELR / Mileage		0141 354 5868		
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www.aecom.com					
Drawing Number					Rev
60601435-ACM-07-ZZ-DRG-EHW-070001					P01





# Appendix E 'Northumberland Line Car Parking Requirements' Technical Note

<b>Subject:</b>	Northumberland Line Car Parking Requirements		
<b>Prepared by:</b>	Gemma Paget	<b>Date:</b>	02/06/2020
<b>Checked by:</b>	Andy Coates	<b>Date:</b>	17/07/2020

## 1. Introduction

AECOM is currently working with Northumberland County Council to reintroduce passenger services on the railway line between Ashington and Newcastle. As part of the scheme, five new railway stations will be delivered, with a sixth station in North Tyneside upgraded to serve both heavy rail and the Tyne and Wear metro. The six stations are as follows:

- Ashington (Northumberland);
- Bedlington (Northumberland);
- Blyth Bebside (Northumberland);
- Newsham (Northumberland);
- Seaton Delaval (Northumberland);
- Northumberland Park (North Tyneside).

The route of the railway line and the proposed stations is shown in Figure 1 overleaf. The scheme is hereinafter known as the Northumberland Line.

One of the key objectives of the Northumberland Line scheme is to improve connectivity within, and beyond, South East Northumberland using sustainable modes of transport. However, to achieve this objective, the railway stations serving the line need to be accessible from a wide catchment area. It is acknowledged that, for many people wanting to use the train service, there will be a reliance on the car to access the station. A decision therefore needs to be taken as to the level of car parking provision at each station.

AECOM has undertaken demand and revenue forecasting to inform the reopening of the railway line to passenger services. A key element of this work is forecasting the passengers that will use each station and how these passengers will access the station. This work, therefore, gives a good indication as to the level of car parking provision that is needed at each station. However, when making a decision around the size of car parks, other factors should be taken into consideration, including local factors at each station, policy objectives and development aspirations. The purpose of this technical note therefore is to discuss the requirements for car parking at each new station and draw some conclusions as to the number of spaces that should be provided.

## 2. Structure

The key objective of this technical note is to agree the car parking sizes to be provided at each new station on the Northumberland Line; given Northumberland Park is an existing station, it is outside the scope of this assessment. To achieve this objective, the technical note has been structured as follows:

- Transport policy: A summary of key national and local transport policy relevant to the provision of car parking spaces;
- Demand forecasting: A summary of the demand forecasting process and the projected car parking spaces needed at each station;
- Stations: A summary of the proposals for each railway station and the local factors that impact on the size of the car park at each station;
- Summary and conclusions: Summary of the technical note and recommendations for car parking sizes to be taken forward for the design of the scheme.

Figure 1: Northumberland Line Scheme



### **3. Transport Policy**

The government is committed to delivering transport infrastructure that delivers economic growth, whilst contributing to a reduction in carbon emissions. This is outlined in the Transport White Paper: The future of Transport – A Network for 2030, which recognises that travel is needed if economic growth is to be promoted.

This is never more true of South East Northumberland, which has struggled to regenerate since the closure of the mining industries in the late 1980s and 1990s. It is acknowledged that, to generate economic growth in the South East Northumberland area, better transport connections need to be provided to connect people to jobs.

The Transport White Paper provides little guidance on the provision of car parking spaces. The document states that local authorities are free to set their own parking policy and charges for the local area. However, as part of any car parking provision, local authorities are encouraged to provide electric charging points within the development.

The National Planning Policy Framework (NPPF) is a material consideration in the determination of planning applications. It was published in February 2019 by the Ministry of Housing, Communities and Local Government.

One of the key elements retained in the NPPF is the presumption in favour of sustainable development. The NPPF states that development should be focused on locations which are, or can be made, sustainable, through limiting the need to travel and offering a genuine choice of transport modes. Recognition is given to the role this can play in reducing congestion and emissions and improving air quality and public health. In the case of the Northumberland Line, providing car parks at each station means that for many people, using the railway to access their place of work or leisure, becomes a real alternative to the car.

Paragraph 106 of the NPPF refers to parking standards and states that:

*“Maximum parking standards for residential and non-residential development should only be set where there is clear and compelling justification that they are necessary for managing the local road network, or for optimising the density of development in city and town centres and other locations that are well served by public transport (in accordance with chapter 11 of the Framework). In town centres, local authorities should seek to improve the quality of parking so that it is convenient, safe and secure, alongside measures to promote accessibility for pedestrians and cyclists.”*

In this respect, there should be no limit on the number of spaces provided at each of the stations unless the increased traffic around the station would impact on the performance of the highway network.

The Local Plan for Northumberland sets out policies to provide the needs for Northumberland for a 20 year period through to 2036. One of the key strategic objectives of this plan is to improve connectivity and movement in order to meet the changing needs of people and places. This will be achieved by utilising existing infrastructure and securing the delivery of new and necessary infrastructure upgrades. The Northumberland Line scheme will make a big contribution to delivering this objective.

Given the nature of the Northumberland Line scheme, no minimum or maximum parking standards are provided by NCC in the Local Plan. However, the Plan states that the following should be taken into consideration:

- The road safety and environmental problems as a result of increased parking demand in the area; and
- The impact on any parking restrictions, or lack of, in force on highways in the area.

These elements are discussed in greater detail in section 5 of this technical note.



#### 4. Demand Forecasting

The rail demand generated by the Northumberland Line has been forecast using a spreadsheet-based mode-choice model. The structure of the model is documented in the Northumberland Line Economic Appraisal Report, included as an appendix to the Outline Business Case. The estimation of car park sizes at each station depends directly on outputs from this model. These include the forecast modelled demand (average per hour) for a given year and the 'zone to station' allocation for the 'car available' demand.

The average daily number of passengers accessing a rail station by car has been estimated based on the average hourly-demand from the model. Induced and long-distance demand have also been factored in. There are a number of inherent assumptions around the demand that feeds this calculation, which are summarised below. Italics denote whether this presents an upside risk (i.e. more car park spaces might be required) or a downside risk (less car park spaces might be required).

- There is always a certain level of 'forecasting risk' associated with any demand forecasts *<upside or downside risk>*;
- It is assumed that all demand from within the immediate walk-in catchment zone around each station will walk to the station. In practice, some of this demand could use other modes, including car *<upside risk>*;
- The assumption has been made that all 'car available' demand that originates beyond the immediate walk-in catchment zone will use car to access a station<sup>1</sup>. In practice, some of this demand could use other modes to access the station (e.g. bus, walk, cycle, taxi) *<downside risk>*;
- Zones are allocated to specific stations in the demand model. In practice, there could be some alternative stations used (e.g. south Ashington zones using Blyth Bebside station) *<upside or downside risk>*.

#### Converting Demand into Estimates of the Number of Car Park Spaces Required

Two scenarios have been defined for the estimation of the number of vehicles parking at a station's car park, based on assumptions using National Rail Passenger Survey (NRPS) data and assumptions on average car occupancies. These scenarios provide the low and high end of a range that the demand for car park spaces (i.e. size of the car park) is likely to fall within.

The low scenario assumes that 42% of rail demand that uses a car to access the station uses the station's car park, based on the average across all stations in the North East<sup>2</sup>. An average car occupancy rate of 1.49 people per car (average weekday car occupancy as stated by the TAG Databook, Table A1.3.3) has then been used to calculate the actual number of cars that want to park at the station.

The high scenario assumes that 64% of rail demand that uses a car to access the station uses the station's car park, based on Morpeth station data<sup>3</sup>. An average car occupancy rate of 1.43 people per car (average 7am to 10am weekday car occupancy as stated by the TAG Databook, Table A1.3.3) has then been used to calculate the actual number of cars that want to park at the station.

It needs to be acknowledged that these conversion factors used to convert 'rail demand using car to access a station' to 'actual demand for car park spaces' could vary on a station-by-station basis and are themselves based on observed data elsewhere and existing guidance.

The number of car parking spaces required at each station have been estimated based on a target occupancy rate of 85%, in line with the *Guidelines on the Preparation of Parking Strategies and Management* by the Institute of Highways and Transportation. This is not a risk, per se, but an application of guidance that adds further car parking spaces as an allowance for being able to find a space.

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<sup>1</sup> With an associated assumption that all 'no car available' demand will use bus to access the station

<sup>2</sup> Which would therefore mean that 58% of rail demand that uses a car to access the station have been dropped-off ('kiss-and-ride')

<sup>3</sup> Which would therefore mean that 36% of rail demand that uses a car to access the station have been dropped-off ('kiss-and-ride')



Based on regional station studies, two assumptions have been made for car park space re-occupancy rates, representing the number of times a car park space is used per day (1.25 in the low scenario and 1.10 in the high scenario). This range has been defined to cover considered risk around this assumption.

### Results

Figure 2 presents the estimated car park sizes required to accommodate rail demand accessing each station by car in 2039, for each modelled scenario. This shows that the potential size of car park varies at each station site depending on whether it is Phase 1 or the Full Scheme (Phase 2), and also whether the operation of the service is Franchise or Concession based.

Ashington station is estimated to require a car park with between 80 and 180 spaces.

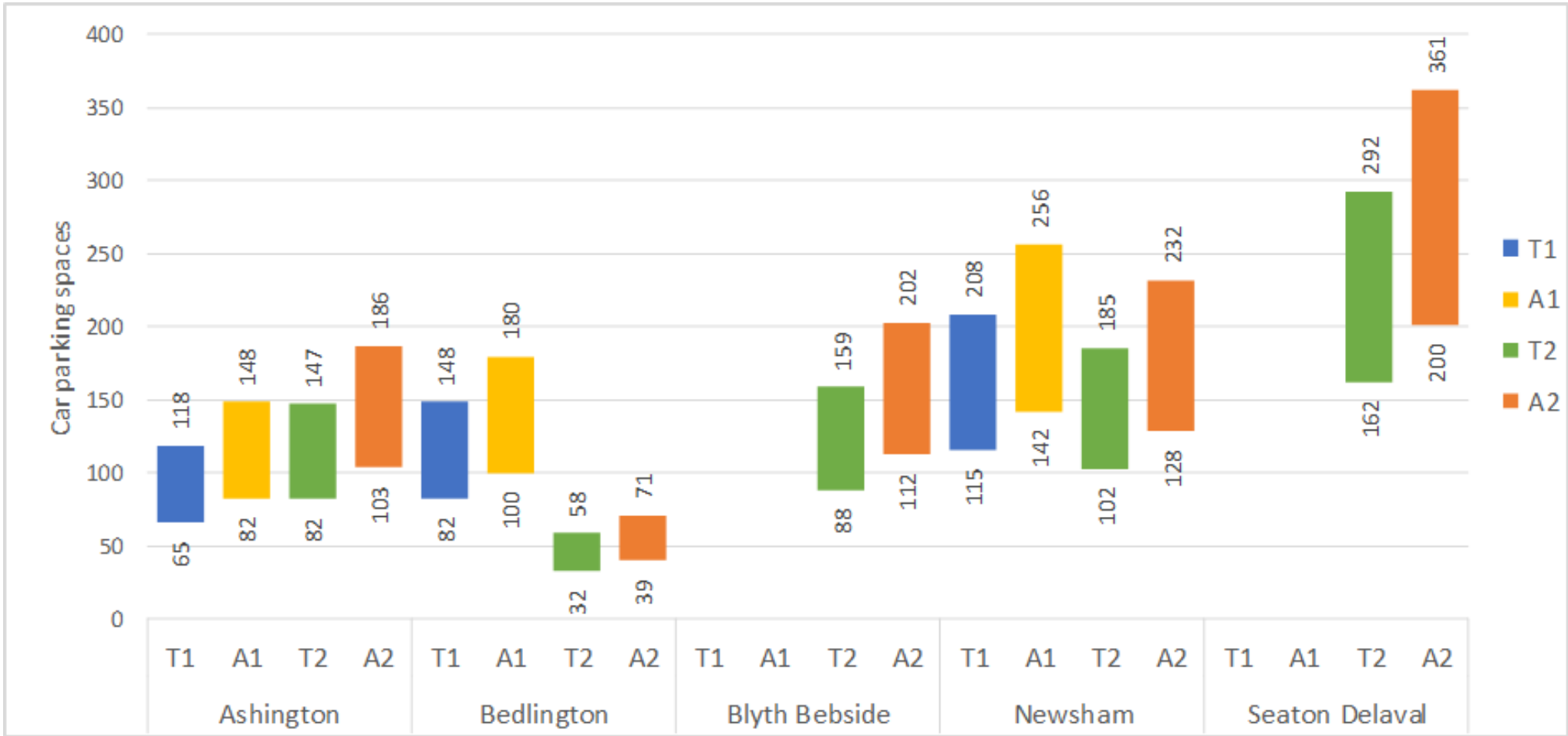
Bedlington station car park might require a similar level of spaces to Ashington if Blyth Bebside station is not built. However, in a scenario where Blyth Bebside station exists, then the demand for car park spaces at Bedlington drops considerably to between 30 and 70 spaces.

Blyth Bebside station car park is estimated to require between 100 and 200 spaces. However, the location of this station just off the A189 means that it might be attractive for longer distance journeys from origins further north, such as Ashington or Newbiggin-by-the-Sea. The inability to model these trips in this way is a constraint of the modelling tool, as highlighted in the previous section. The estimates for this station therefore, might be considered on the low side.

Newsham station car park is estimated to require between 100 and 250 spaces. The demand for spaces reduces slightly once stations at Blyth Bebside and Seaton Delaval are opened.

Seaton Delaval station car park is estimated to require between 160 and 360 spaces. This reflects the catchment area that this station has beyond the immediate walk-in catchment, which includes eastern parts of Cramlington, Seghill, Hartley, New Hartley, Old Hartley and Holywell.

Figure 2: Estimated Car Park Sizes, 2039



## Identifying a Single Car Park Size Value

To inform the design of the station car parks, there is a need to identify a single value for the number of car park spaces required at each station. To identify this value, Option A2 has been used. This is the full scheme under a concession operation. It is considered the 'worst case' scenario for design purposes as it generates the greatest demand. Given the aspiration to deliver the full scheme, this seems the most appropriate scenario to consider.

A number of factors are used to convert the demand from the A2 scenario into a car park size requirement. An option to consider alongside the low and high range presented above, is to use an average value that sits in the middle of the low and high range. This is summarised in the table below.

**Table 1: Demand Conversion Factors**

Assumption/Factor	Low	Average	High
% of people who use a car to access station that park at the station car park	42%	53%	64%
Average car occupancy rate	1.49	1.46	1.43
Car park space re-occupancy rate	1.25	1.175	1.10

Taking each of these in turn, a decision needs to be made as to the most appropriate value to use to determine a single value for the required car park spaces at each station.

In terms of the percentage of people who use car to access the station, that park at the station car park, the low value of 42% is based on data from a number of stations across the North East, whereas the high value comes from data at Morpeth station specifically. There is a case for using either of these values; a sample across stations in the North East might be considered more appropriate, but what happens at Morpeth station could be considered representative of what might occur on the Northumberland Line. Therefore, the average value of 53% might present the most appropriate solution.

In terms of average car occupancy rates, these values have been sourced from TAG guidance and not local data. In the absence of local data, the use of TAG guidance remains the most suitable source. The high value of 1.43 is based on the morning peak period and, given that most car parks fill up during the morning peak, it is considered appropriate to use this value to determine a single value of car park spaces.

The rate of use of a car park space is a function of whether a station is predominantly used by commuters or not. A low turnover rate (eg: 1.10) means that a car park space is only really used by a commuter parked there all day. The demand profile on the Northumberland Line suggests a more balanced demand over the whole day and therefore, if choosing a single value, the value of 1.25 is more appropriate.

On the basis of the above, a number of possible 'single values' have been identified as follows:

- Based on the 'worst case' (high end of range for Option A2);
- Based on an average (for Option A2); or
- Taking the selected factor values as discussed above (for Option A2).

**Table 2: Estimates of Car Park Sizes (single values – all based on Option A2) - 2039**

Station	Worst Case	Average	Selected Values
Ashington	186	142	136
Bedlington	71	54	52
Blyth Bebside	202	154	147
Newsham	232	176	169
Seaton Delaval	361	274	263

There is little difference in the table above between the ‘average’ and ‘selected values’ car park sizes. In each case, they represent a circa 25% reduction on the worst case values. However, it must be recognised that the worst case scenario could materialise and therefore, if the size of the car park under a worst case scenario can be accommodated within the available land and budget for the scheme, the design of the car park should be progressed to achieve this number.

As the scheme is further refined and more information becomes available, the size of the car parks can be revisited, with the number of spaces reduced if required.

## 5. Stations

The previous section of this note identified the required size of the car park based on the outputs from the demand forecasting work for the Northumberland Line. It is also important that local characteristics at each site are taken into consideration, to ensure that the proposed car parking size is realistic, achievable and aligns with local policy for that area. Each of the stations are therefore considered in turn, in the remaining sections of this technical note.

### Ashington

The proposed station at Ashington is located on the site of the former Ashington Station. Based on the outputs from the demand forecasting work, the maximum number of car park spaces required at this station is 186.

It is proposed that the car park for Ashington Station is located on the site of an existing car park, which serves the town centre area of Ashington. The existing car park has 113 spaces and is well used. To ensure that this car park demand is not displaced, which could have implications on the performance of the highway network, the number of car park spaces at the proposed station should include existing availability. The maximum number of car park spaces required at Ashington Station, therefore, is 299.

It is not possible to accommodate 299 car park spaces within the existing available land with a surface level car park. A decked solution is not desirable due to the cost and the visual intrusion that it might create. A design for the car park has therefore been produced assuming that additional land to the south of the existing car park can be purchased; this land is currently owned by Malhotra Land. The design is for 275 spaces and therefore does not fully accommodate the existing car park spaces and the worst case demand for the Northumberland Line.

The proposed Ashington Station is in the centre of Ashington and should be accessible by sustainable modes of transport. It is recognised however, that public transport links to the station could be improved to complement the benefits of the Northumberland Line. Given that 299 car park spaces cannot be accommodated within the available land, even with the purchase of the Malhotra Land, it is recommended that focus is given to improving public transport links to the station. Improved public transport links should help address any shortfall in supply of car park spaces, regardless of the status of the Malhotra Land.

Development aspirations for Ashington also need to be taken into consideration when determining the car parking provision at Ashington Station. Ashington town centre is a focal point for regeneration and

the improved transport links provided by the Northumberland Line should help ensure it becomes a destination in its own right. It is important that these development aspirations are not negatively impacted by traffic congestion caused by vehicles accessing and egressing the Ashington Station car park. The impact of the car park demand on highway congestion also needs to be taken into consideration before agreeing the final car park sizes.

Following a discussion between the Northumberland Line design team and Northumberland County Council, it was agreed that the Malhotra land should be purchased, subject to agreeing a suitable price. A design for a surface access car park with 275 spaces should therefore be progressed. This is subject to the outputs from traffic assessment work, which will demonstrate whether the highway network can accommodate this increase in demand.

Alongside the design of the Northumberland Line scheme, Northumberland County Council will work with public transport providers to improve bus links to the proposed Ashington Station. This will help address the shortfall in car park supply to accommodate the worst case parking demand. Should it not be possible to purchase the Malhotra Land, further work will be undertaken to improve access to Ashington Station through sustainable modes of transport. However, at this point, the decked solution for a car park may need to be revisited.

**Recommendation: Progress car park design based on a surface car park solution with 275 spaces and the purchase of the Malhotra land.**

## Bedlington

The proposed station at Bedlington is located on the site of the former Bedlington Station. Based on the outputs from the demand forecasting work, the maximum number of car park spaces required at this station is 71.

The preferred location for a car park at Bedlington Station is still to be agreed. This is due to the limited number of sites available, which could accommodate the forecast demand. A design for the car park has been produced, which has 75 car park spaces. The site of this car park is to the north of Barrington Road and west of the railway line. However, a number of safety concerns have been raised as to the location of this site. Whilst other sites have been identified, it will prove difficult to accommodate 71 car park spaces when taking account of existing demand.

The location of the proposed Bedlington Station means that it is easily accessible by sustainable modes of transport. Bus stops are located on Ravensworth Street, only a short walking distance from the station entrance, with a frequent bus service connecting the station to the wider Bedlington area. Residential areas are also only a short walking distance from the station.

Given the good transport links to the station by sustainable modes of transport, it is reasonable to restrict car park supply at the station, whilst promoting sustainable modes of access. However, the risks of this approach need to be understood, as anecdotal evidence provided during the public consultation for the scheme suggests that car parking supply in the immediate vicinity of the proposed station is an issue. To ensure the Northumberland Line scheme does not produce an issue of on-street parking in the Bedlington Station area, Northumberland County Council may need to consider parking restrictions in the streets immediately surrounding the station.

Following a discussion between the Northumberland Line design team and Northumberland County Council, it was agreed that the car park for Bedlington Station should be progress based on the most accessible site, which may mean a shortfall in car park supply compared to the forecast worst case scenario for demand. Work will be undertaken to promote sustainable access to the site whilst considering whether parking restrictions in the immediate vicinity of the station are necessary.

**Recommendation: Progress car park design based on most accessible site and the maximum number of spaces the available land permits**

## Blyth Bebside

The proposed station at Blyth Bebside is located on the south side of the A193 and will be accessed from a priority junction on Errington Street. Based on the outputs from the demand forecasting work, the maximum number of car park spaces required at this station is 202.

A number of car park designs for the Blyth Bebside station have been considered, taking account of the forecast demand for car park spaces and the availability of land. Car park design drawings are currently available showing 205 car park spaces, 293 car park spaces and 500 car park spaces.

Given its proximity to the A189, the Blyth Bebside station is being promoted as a strategic park and ride site. It is expected that vehicles travelling from further afield and using the A189 to access Tyne and Wear will park at the Blyth Bebside station and use the Northumberland Line to complete their journey.

The structure of the mode-choice model used to forecast demand for the Northumberland Line scheme means that it is not possible to fully reflect the demand that will likely use the Blyth Bebside station. In the mode-choice model, demand is allocated to the nearest station and does not take account of how accessible each station is. Based on this limitation within the modelling approach, it is reasonable to assume that demand for parking at the Blyth Bebside station will be higher than that forecast.

The Blyth Beside site is segregated from the main urban centre of Blyth by the busy A189 dual carriageway. Pedestrian and cycling facilities between Blyth and the proposed Bebside Station are considered poor, and public transport services to the proposed station are infrequent. This means that there is likely to be a greater reliance on the car to access this station. It is however noted that work is ongoing to look at how pedestrian access to the station could be improved.

The A189/A193 grade separated junction to the east of the proposed station is known to be congested in the AM and PM peak periods. Vehicles are often observed to queue back down the slip roads onto the A189. Blyth has been identified in the Local Plan as an area for employment growth, which will only serve to increase this congestion. Whilst the Northumberland Line scheme is seen as key for removing vehicles from the highway network, the location of the Blyth Bebside station is likely to put increased pressure on an existing congestion hotspot. The size of the car park for the Blyth Bebside station therefore will be dependent on the ability of the A189/A193 grade separated junction to accommodate this increase in traffic.

Following a discussion between the design team and Northumberland County Council, it was agreed that a car park of 293 spaces would be progressed for Blyth Bebside station. This will accommodate the worst case scenario from the demand forecasting work, but also takes into account the likely underestimation of demand from people travelling from further afield. The size of the car park will be reviewed following traffic assessment work to assess the highway impact on the A189/A193 junction.

**Recommendation: Progress car park design based on a 293 space car park**

## Newsham

The proposed station at Newsham is located on the south side of the A1061 and will be accessed from a fourth arm at the A1061/B1523 roundabout. Based on the outputs from the demand forecasting work, the maximum number of car park spaces required at this station is 232.

The Newsham Station is located on the fringes of Blyth in greenbelt land. Although development in the greenbelt is against Northumberland County Council policy objectives, a car park in this location will encourage a modal shift to sustainable modes of transport and is therefore expected to be accepted. The location of the station on the fringes of the town means that there is likely to be a dependency on travelling to the station by car from residential areas of Blyth further afield.

A design for Newsham station has been prepared which can accommodate the 232 spaces required, based on the outputs from the demand forecasting work; given the land, the proposed design has 233 spaces. Should the location of the station need to change, to complement designs being carried out for the dualling of the A1061, it will still be possible to have 232 spaces within the available land parcel.

Whilst there are no obvious issues at Newsham in designing a car park to accommodate the worst case demand for car parking from the demand forecasting work, it is acknowledged that sustainable access

to the station could be improved and promoted as an alternative to the car. The station is within walking/cycling distance of a large residential area and the station is served by key bus routes into Blyth.

Following a discussion between the design team and Northumberland County Council, it was agreed to progress the design for Newsham Station based on 233 car park spaces, but with a recognition that work should be done to promote the use of sustainable modes of transport to access the station.

It is noted that the project team is still in discussions with the residents of Railway Cottages on how to provide private car parking and the requirements for private parking have not been assessed and considered within this note.

**Recommendation: Progress car park design based on a 233 space car park**

## Seaton Delaval

The proposed station at Seaton Delaval is located south of the A192, east of the railway line and west of the main village. Based on the outputs from the demand forecasting work, the maximum number of car park spaces required at this station is 361. This larger car park at Seaton Delaval reflects the catchment area of the station, which extends to eastern parts of Cramlington, Seghill, Hartley, New Hartley, Old Hartley and Holywell.

A car park design has been prepared for Seaton Delaval, with provision for 274 spaces; this is the 'average' number of spaces that might be required and does not provide sufficient spaces for the worst case scenario. However, it is acknowledged that the car park can be phased to 361 spaces, as and when demand requires it. Given the size of the car park in a semi-rural location, it is felt that this approach will minimise the impact of the car park on the landscape of the area, whilst future proofing the station for an increase in demand in the future.

Due to the large catchment area for Seaton Delaval Station, a large proportion of people using the Northumberland Line scheme will be reliant on their car to access the station. However, a review of transport connections to the proposed Seaton Delaval Station has shown that there are opportunities to improve connections to nearby villages. This is particularly true of Seghill, which is located to the south of the station site and is accessible by a footpath. This footpath would need to be upgraded to promote this route as a means of accessing Seaton Delaval station.

There are known highway capacity issues within the vicinity of the proposed Seaton Delaval station. Whilst the car park size needs to accommodate the forecast demand for the station, highway capacity improvement measures may need to be delivered alongside this car park to ensure that highway network performance is not unduly impacted.

Following a discussion between the design team and Northumberland County Council, it was agreed to progress with the current design for 274 spaces, provided that the size of the car park can be increased in the future if required. Final agreement on the car park size at Seaton Delaval Station will be dependent on the outcome of transport assessment works to determine any necessary highway mitigation measures. Work should be undertaken to improve the pedestrian and cycling links to the station from nearby villages.

**Recommendation: Progress car park design based on a 274 space car park**

## 6. Summary and Conclusions

AECOM is currently working with Northumberland County Council to reintroduce passenger services on the railway line between Ashington and Newcastle. As part of the scheme, five new railway stations will be delivered, with a six station in North Tyneside upgraded to serve both heavy rail and the Tyne and Wear metro.

To progress the design of the Northumberland Line scheme, a decision needs to be taken on the size of the car park to be provided at each of the new stations. This should be informed by demand forecasting work undertaken for the scheme, but also taking account of local conditions, transport policy objectives and development aspirations.

This technical note has summarised the outputs from the demand forecasting work, which give a number of required spaces at each station based on the worst case scenario; i.e. the scenario which generates the most demand for car parking at the station. A review of each station has been undertaken to determine whether it is possible to accommodate this number of spaces within the available land, and to identify whether any other measures are needed to promote alternative modes of transport for accessing the stations.

The final recommendations for progressing the design of each station are summarised in the table below.

**The design for car parks at each new station on the Northumberland Line should be progressed based on the following number of spaces:**

- Ashington: 275 spaces
- Bedlington: The number of spaces possible within the available land (not to exceed 71 spaces)
- Blyth Bebside: 293 spaces
- Newsham: 233 spaces
- Seaton Delaval: 274 spaces



# Appendix F TEMPro

Dataset Version:	72
Result Type:	Trip ends by time period
Base Year:	2019
Future Year:	2039
Trip Purpose Group:	All purposes
Time Period:	Weekday AM peak period (0700 - 0959)
Trip End Type:	Origin/Destination
Alternative Assumptions Applied:	No

## Growth Factor

Area Description		All purposes	
Level	Name	Origin	Destination
E02005735	Northumberland 010	1.1896	1.1678

## Future Year - Base Year

Area Description		All purposes	
Level	Name	Origin	Destination
E02005735	Northumberland 010	300	372

## Base Year

Area Description		All purposes	
Level	Name	Origin	Destination
E02005735	Northumberland 010	1,585	2,216

## Future Year

Area Description		All purposes	
Level	Name	Origin	Destination
E02005735	Northumberland 010	1,886	2,588

## Growth Factor

Area Description		All purposes	
Level	Name	Origin	Destination
E02005735	Northumberland 010	1.1896	1.1678

## Future Year - Base Year

Area Description		All purposes	
Level	Name	Origin	Destination
E02005735	Northumberland 010	300	372

## Base Year

Area Description		All purposes	
Level	Name	Origin	Destination
E02005735	Northumberland 010	1,585	2,216

## Future Year

Area Description		All purposes	
Level	Name	Origin	Destination
E02005735	Northumberland 010	1,886	2,588

Dataset Version:	72
Result Type:	Trip ends by time period
Base Year:	2019
Future Year:	2039
Trip Purpose Group:	All purposes
Time Period:	Weekday PM peak period (1600 - 1859)
Trip End Type:	Origin/Destination
Alternative Assumptions Applied:	No

## Growth Factor

Area Description		All purposes	
Level	Name	Origin	Destination
E02005735	Northumberland 010	1.1594	1.1694

## Future Year - Base Year

Area Description		All purposes	
Level	Name	Origin	Destination
E02005735	Northumberland 010	378	333

## Base Year

Area Description		All purposes	
Level	Name	Origin	Destination
E02005735	Northumberland 010	2,374	1,968

## Future Year

Area Description		All purposes	
Level	Name	Origin	Destination
E02005735	Northumberland 010	2,752	2,301

## Growth Factor

Area Description		All purposes	
Level	Name	Origin	Destination
E02005735	Northumberland 010	1.1594	1.1694

## Future Year - Base Year

Area Description		All purposes	
Level	Name	Origin	Destination
E02005735	Northumberland 010	378	333

## Base Year

Area Description		All purposes	
Level	Name	Origin	Destination
E02005735	Northumberland 010	2,374	1,968

## Future Year

Area Description		All purposes	
Level	Name	Origin	Destination
E02005735	Northumberland 010	2,752	2,301

# Appendix G Modelling Outputs



Junctions 9							
PICADY 9 - Priority Intersection Module							
Version: 9.5.0.6896 © Copyright TRL Limited, 2018							
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk							
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution							

**Filename:** Ashington CP two-way Access.j9

**Path:** P:\UKNCL2-TP\PROJECTS\Development - Northumberland Line\Transport\01\_Base Models & GF\02\_JUNCTIONS 9\01 September 2020 Modelling\02 Ashington

**Report generation date:** 13/10/2020 13:12:24

»2039 DS, AM

»2039 DS, PM

»2039 DS Sensitivity Test, AM

»2039 DS Sensitivity Test, PM

### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2039 DS								
Stream B-C	0.0	5.70	0.01	A	0.0	5.68	0.03	A
Stream B-A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.0	6.35	0.01	A	0.0	0.00	0.00	A
2039 DS Sensitivity Test								
Stream B-C	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream B-A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.0	6.35	0.01	A	0.0	0.00	0.00	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

### File summary

#### File Description

Title	
Location	
Site number	
Date	29/09/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	NA\paul.kirk
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

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		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)
D1	2039 DS	AM	All Development Traffic entering and exiting at this junction, not using exit only jct	ONE HOUR	00:00	01:30	15
D2	2039 DS	PM	All Development Traffic entering and exiting at this junction, not using exit only jct	ONE HOUR	00:00	01:30	15
D3	2039 DS Sensitivity Test	AM	All Development Traffic entering and exiting at this junction, not using exit only jct	ONE HOUR	00:00	01:30	15
D4	2039 DS Sensitivity Test	PM	All Development Traffic entering and exiting at this junction, not using exit only jct	ONE HOUR	00:00	01:30	15

## Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

# 2039 DS, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Station Car Park - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Major arm width	C - Kenilworth Rd Northbound - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.27	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	Kenilworth Rd Southbound		Major
B	Station Car Park		Minor
C	Kenilworth Rd Northbound		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 - Kenilworth Rd Northbound	5.71			120.0	✓	0.00

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

### Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Station Car Park	One lane plus flare	7.69	3.60	3.60	3.60	3.60	✓	1.00	100	40

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	513	0.095	0.239	0.151	0.342
1	B-C	706	0.110	0.277	-	-
1	C-B	643	0.252	0.252	-	-

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)
D1	2039 DS	AM	All Development Traffic entering and exiting at this junction, not using exit only jct	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Kenilworth Rd Southbound		✓	251	100.000
B - Station Car Park		✓	6	100.000
C - Kenilworth Rd Northbound		✓	6	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Kenilworth Rd Southbound	B - Station Car Park	C - Kenilworth Rd Northbound
From	A - Kenilworth Rd Southbound	0	43	208
	B - Station Car Park	0	0	6
	C - Kenilworth Rd Northbound	0	6	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
		A - Kenilworth Rd Southbound	B - Station Car Park	C - Kenilworth Rd Northbound
From	A - Kenilworth Rd Southbound	0	0	0
	B - Station Car Park	0	0	0
	C - Kenilworth Rd Northbound	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.70	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.01	6.35	0.0	A
C-A				
A-B				
A-C				

## Main Results for each time segment

### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	5	659	0.007	4	0.0	5.496	A
B-A	0	471	0.000	0	0.0	0.000	A
C-AB	5	596	0.008	4	0.0	6.088	A
C-A	0			0			
A-B	32			32			
A-C	157			157			

### 00:15 - 00:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	5	650	0.008	5	0.0	5.582	A
B-A	0	463	0.000	0	0.0	0.000	A
C-AB	5	586	0.009	5	0.0	6.194	A
C-A	0			0			
A-B	39			39			
A-C	187			187			

### 00:30 - 00:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	7	638	0.010	7	0.0	5.704	A
B-A	0	452	0.000	0	0.0	0.000	A
C-AB	7	574	0.012	7	0.0	6.347	A
C-A	0			0			
A-B	47			47			
A-C	229			229			

### 00:45 - 01:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	7	638	0.010	7	0.0	5.704	A
B-A	0	452	0.000	0	0.0	0.000	A
C-AB	7	574	0.012	7	0.0	6.347	A
C-A	0			0			
A-B	47			47			
A-C	229			229			

### 01:00 - 01:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	5	650	0.008	5	0.0	5.584	A
B-A	0	463	0.000	0	0.0	0.000	A
C-AB	5	586	0.009	5	0.0	6.194	A
C-A	0			0			
A-B	39			39			
A-C	187			187			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	5	659	0.007	5	0.0	5.496	A
B-A	0	471	0.000	0	0.0	0.000	A
C-AB	5	596	0.008	5	0.0	6.090	A
C-A	0			0			
A-B	32			32			
A-C	157			157			

# 2039 DS, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Station Car Park - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Major arm width	C - Kenilworth Rd Northbound - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.58	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2039 DS	PM	All Development Traffic entering and exiting at this junction, not using exit only jct	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Kenilworth Rd Southbound		✓	168	100.000
B - Station Car Park		✓	19	100.000
C - Kenilworth Rd Northbound		✓	0	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Kenilworth Rd Southbound	B - Station Car Park	C - Kenilworth Rd Northbound
From	A - Kenilworth Rd Southbound	0	0	168
	B - Station Car Park	0	0	19
	C - Kenilworth Rd Northbound	0	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To			
		A - Kenilworth Rd Southbound	B - Station Car Park	C - Kenilworth Rd Northbound
	A - Kenilworth Rd Southbound	0	0	0
	B - Station Car Park	0	0	0
	C - Kenilworth Rd Northbound	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.03	5.68	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	14	671	0.021	14	0.0	5.479	A
B-A	0	483	0.000	0	0.0	0.000	A
C-AB	0	612	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	126			126			

#### 00:15 - 00:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	17	664	0.026	17	0.0	5.560	A
B-A	0	477	0.000	0	0.0	0.000	A
C-AB	0	605	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	151			151			

#### 00:30 - 00:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	21	655	0.032	21	0.0	5.676	A
B-A	0	469	0.000	0	0.0	0.000	A
C-AB	0	597	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	185			185			



**00:45 - 01:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	21	655	0.032	21	0.0	5.676	A
B-A	0	469	0.000	0	0.0	0.000	A
C-AB	0	597	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	185			185			

**01:00 - 01:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	17	664	0.026	17	0.0	5.560	A
B-A	0	477	0.000	0	0.0	0.000	A
C-AB	0	605	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	151			151			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	14	671	0.021	14	0.0	5.479	A
B-A	0	483	0.000	0	0.0	0.000	A
C-AB	0	612	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	126			126			

# 2039 DS Sensitivity Test, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Station Car Park - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Major arm width	C - Kenilworth Rd Northbound - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.15	A

### 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)
D3	2039 DS Sensitivity Test	AM	All Development Traffic entering and exiting at this junction, not using exit only jct	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Kenilworth Rd Southbound		✓	251	100.000
B - Station Car Park		✓	0	100.000
C - Kenilworth Rd Northbound		✓	6	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Kenilworth Rd Southbound	B - Station Car Park	C - Kenilworth Rd Northbound
From	A - Kenilworth Rd Southbound	0	43	208
	B - Station Car Park	0	0	0
	C - Kenilworth Rd Northbound	0	6	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To			
		A - Kenilworth Rd Southbound	B - Station Car Park	C - Kenilworth Rd Northbound
	A - Kenilworth Rd Southbound	0	0	0
	B - Station Car Park	0	0	0
	C - Kenilworth Rd Northbound	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.01	6.35	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	657	0.000	0	0.0	0.000	A
B-A	0	518	0.000	0	0.0	0.000	A
C-AB	5	596	0.008	4	0.0	6.088	A
C-A	0			0			
A-B	32			32			
A-C	157			157			

#### 00:15 - 00:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	648	0.000	0	0.0	0.000	A
B-A	0	509	0.000	0	0.0	0.000	A
C-AB	5	586	0.009	5	0.0	6.194	A
C-A	0			0			
A-B	39			39			
A-C	187			187			

#### 00:30 - 00:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	636	0.000	0	0.0	0.000	A
B-A	0	497	0.000	0	0.0	0.000	A
C-AB	7	574	0.012	7	0.0	6.347	A
C-A	0			0			
A-B	47			47			
A-C	229			229			

**00:45 - 01:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	636	0.000	0	0.0	0.000	A
B-A	0	497	0.000	0	0.0	0.000	A
C-AB	7	574	0.012	7	0.0	6.347	A
C-A	0			0			
A-B	47			47			
A-C	229			229			

**01:00 - 01:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	648	0.000	0	0.0	0.000	A
B-A	0	509	0.000	0	0.0	0.000	A
C-AB	5	586	0.009	5	0.0	6.194	A
C-A	0			0			
A-B	39			39			
A-C	187			187			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	657	0.000	0	0.0	0.000	A
B-A	0	518	0.000	0	0.0	0.000	A
C-AB	5	596	0.008	5	0.0	6.090	A
C-A	0			0			
A-B	32			32			
A-C	157			157			

# 2039 DS Sensitivity Test, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Station Car Park - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Major arm width	C - Kenilworth Rd Northbound - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.00	A

### 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)
D4	2039 DS Sensitivity Test	PM	All Development Traffic entering and exiting at this junction, not using exit only jct	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Kenilworth Rd Southbound		✓	168	100.000
B - Station Car Park		✓	0	100.000
C - Kenilworth Rd Northbound		✓	0	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Kenilworth Rd Southbound	B - Station Car Park	C - Kenilworth Rd Northbound
From	A - Kenilworth Rd Southbound	0	0	168
	B - Station Car Park	0	0	0
	C - Kenilworth Rd Northbound	0	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To			
		A - Kenilworth Rd Southbound	B - Station Car Park	C - Kenilworth Rd Northbound
	A - Kenilworth Rd Southbound	0	0	0
	B - Station Car Park	0	0	0
	C - Kenilworth Rd Northbound	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	669	0.000	0	0.0	0.000	A
B-A	0	531	0.000	0	0.0	0.000	A
C-AB	0	612	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	126			126			

#### 00:15 - 00:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	662	0.000	0	0.0	0.000	A
B-A	0	525	0.000	0	0.0	0.000	A
C-AB	0	605	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	151			151			

#### 00:30 - 00:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	653	0.000	0	0.0	0.000	A
B-A	0	516	0.000	0	0.0	0.000	A
C-AB	0	597	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	185			185			

**00:45 - 01:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	653	0.000	0	0.0	0.000	A
B-A	0	516	0.000	0	0.0	0.000	A
C-AB	0	597	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	185			185			

**01:00 - 01:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	662	0.000	0	0.0	0.000	A
B-A	0	525	0.000	0	0.0	0.000	A
C-AB	0	605	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	151			151			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	669	0.000	0	0.0	0.000	A
B-A	0	531	0.000	0	0.0	0.000	A
C-AB	0	612	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	126			126			

# Basic Results Summary

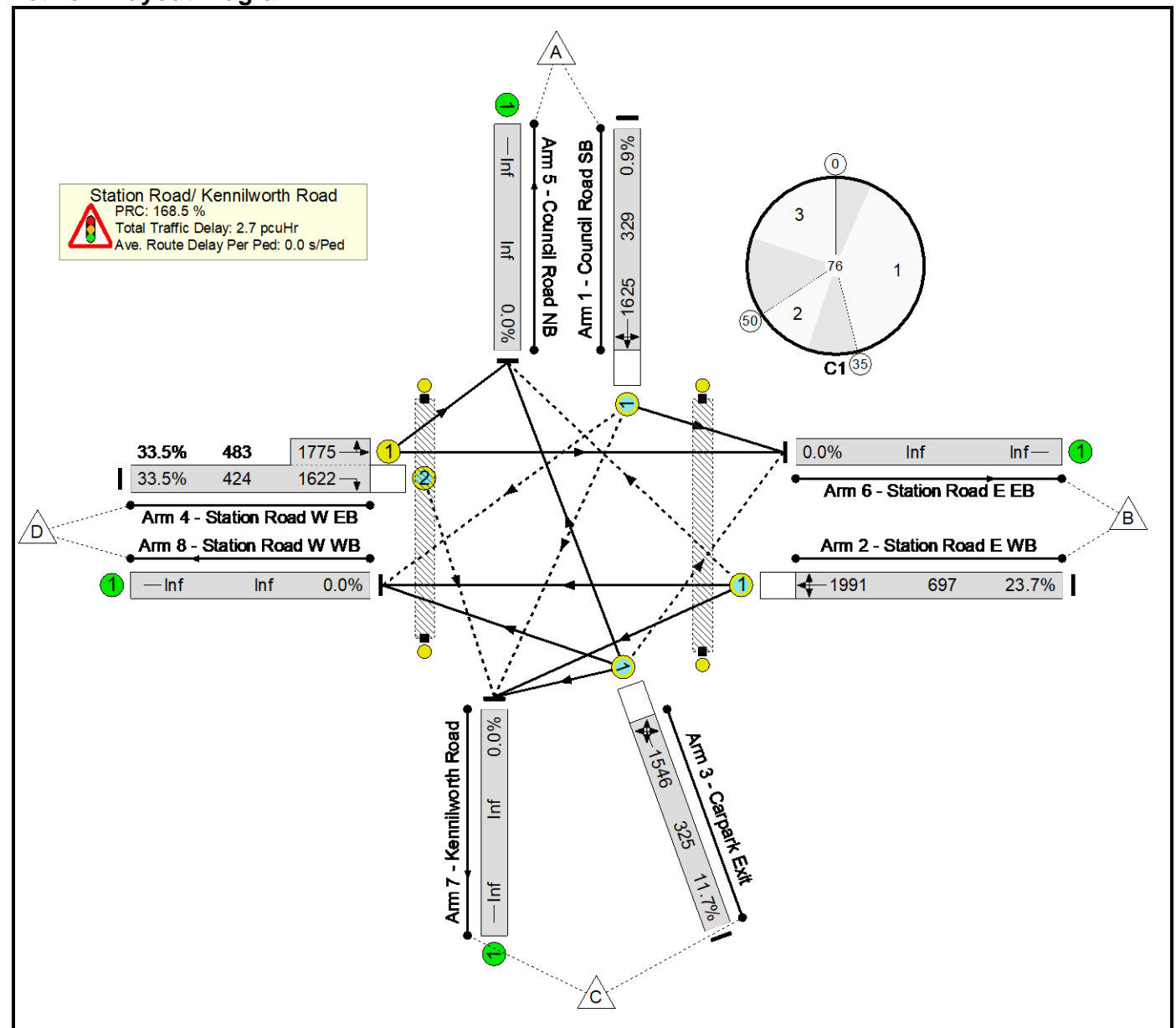
## Basic Results Summary

### User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	Recovered From AutoSave.lsg3x
Author:	
Company:	
Address:	

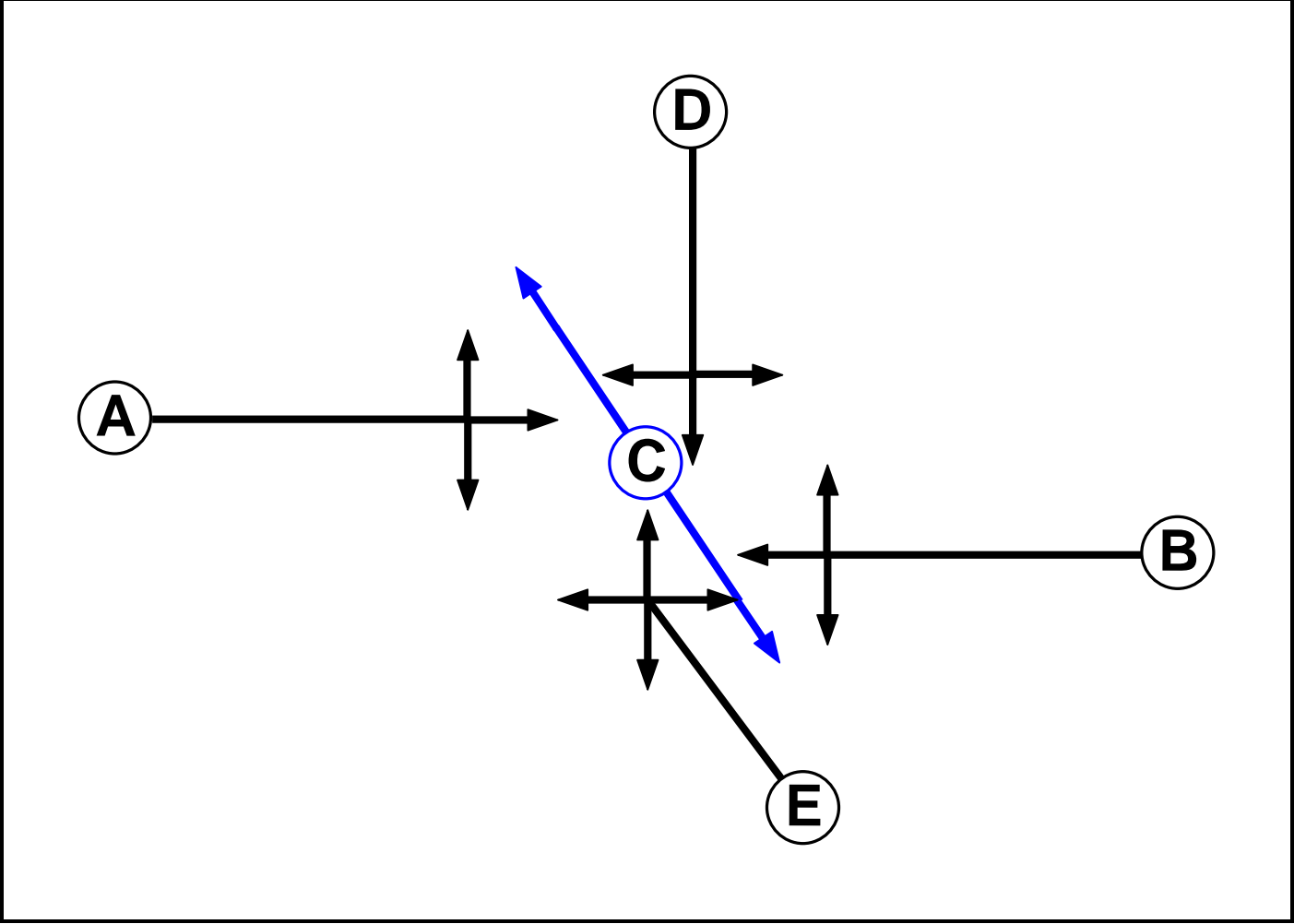
Scenario 1: '2019 Base AM' (FG1: '2019 Base AM', Plan 1: 'Network Control Plan 1')

### Network Layout Diagram





Phase Diagram



Traffic Flows, Actual  
Actual Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	1	1	1	3
	B	9	0	29	127	165
	C	34	3	0	1	38
	D	33	129	142	0	304
	Tot.	76	133	172	129	510

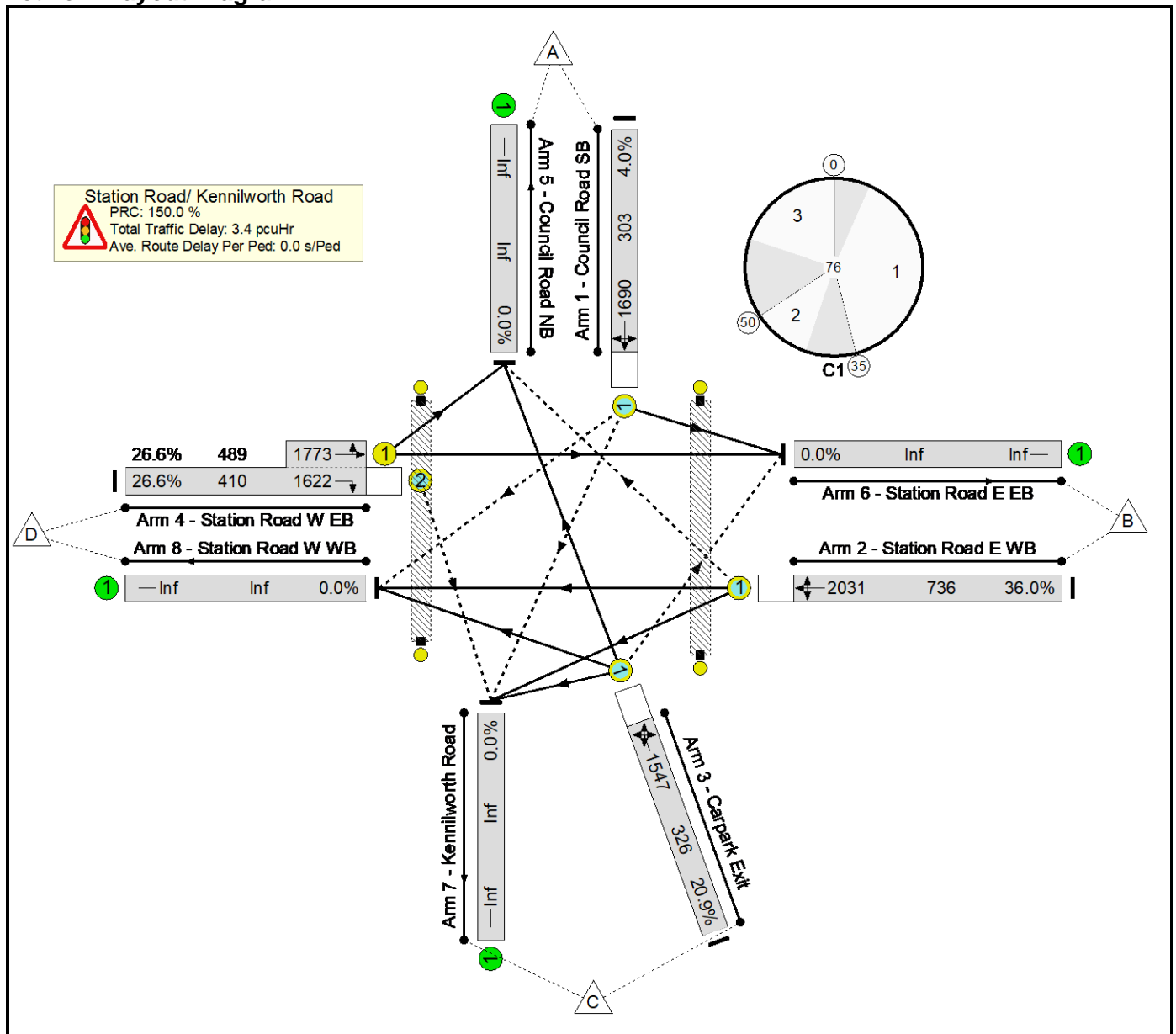
## Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	33.5%	156	0	0	2.7	-	-
Station Road/ Kennilworth Road	-	-	-		-	-	-	-	-	-	33.5%	156	0	0	2.7	-	-
1/1	Council Road SB Left Ahead Right	O	D		1	15	-	3	1625	329	0.9%	2	0	0	0.0	29.6	0.1
2/1	Station Road E WB Right Left Ahead	O	B		1	30	-	165	1991	697	23.7%	9	0	0	0.8	18.5	2.6
3/1	Carpark Exit Ahead Right U-Turn Left	O	E		1	15	-	38	1546	325	11.7%	3	0	0	0.3	30.6	0.7
4/2+4/1	Station Road W EB Left Ahead Right	O+U	A		1	30	-	304	1622:1775	424+483	33.5 : 33.5%	142	0	0	1.5	17.8	2.5
Ped Link: P1	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		168.5		168.5		Total Delay for Signalled Lanes (pcuHr):		2.70		Cycle Time (s):		76		
			PRC Over All Lanes (%):						Total Delay Over All Lanes(pcuHr):		2.70						

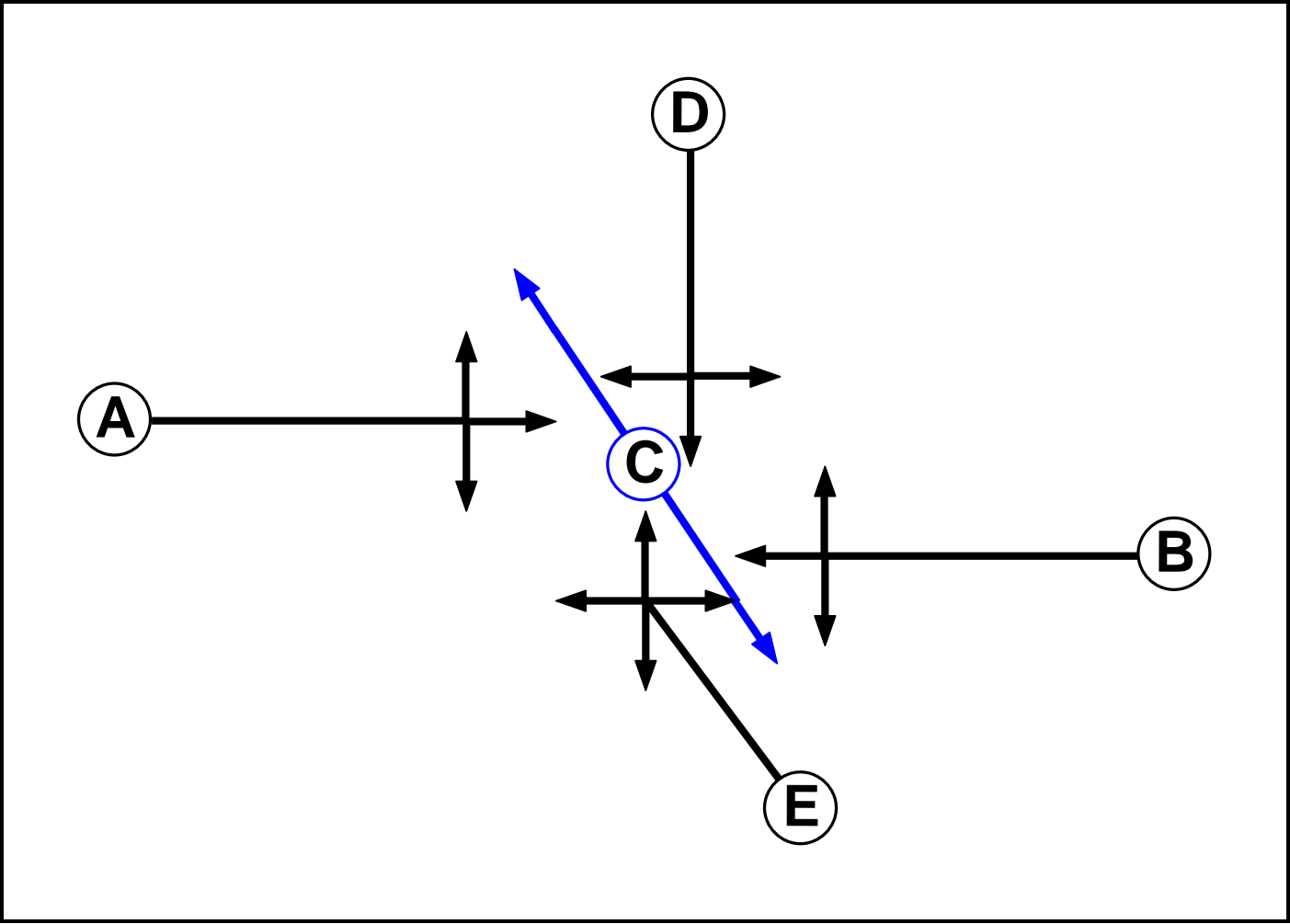
# Basic Results Summary

**Scenario 2: '2019 Base PM'** (FG2: '2019 Base PM', Plan 1: 'Network Control Plan 1')

## Network Layout Diagram



Phase Diagram



Traffic Flows, Actual  
Actual Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	2	5	5	12
	B	12	0	18	235	265
	C	66	2	0	0	68
	D	27	103	109	0	239
	Tot.	105	107	132	240	584

## Basic Results Summary

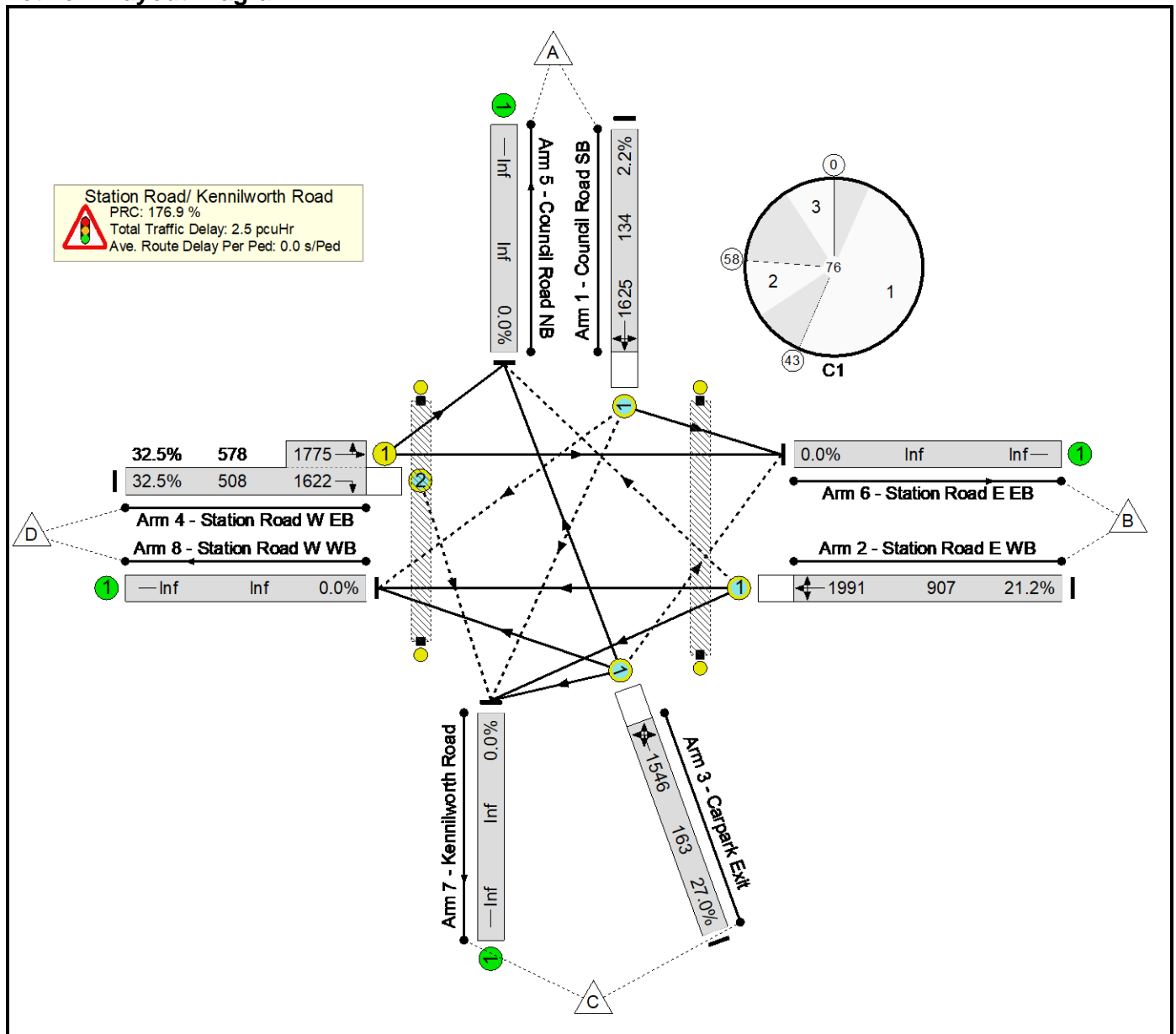
## Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	36.0%	132	0	1	3.4	-	-
Station Road/ Kennilworth Road	-	-	-		-	-	-	-	-	-	36.0%	132	0	1	3.4	-	-
1/1	Council Road SB Left Ahead Right	O	D		1	15	-	12	1690	303	4.0%	10	0	0	0.1	30.3	0.2
2/1	Station Road E WB Right Left Ahead	O	B		1	30	-	265	2031	736	36.0%	12	0	0	1.5	20.4	4.3
3/1	Carpark Exit Ahead Right U-Turn Left	O	E		1	15	-	68	1547	326	20.9%	2	0	0	0.6	31.8	1.3
4/2+4/1	Station Road W EB Left Ahead Right	O+U	A		1	30	-	239	1622:1773	410+489	26.6 : 26.6%	109	0	0	1.2	17.4	1.9
Ped Link: P1	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		150.0		Total Delay for Signalled Lanes (pcuHr):		3.36		Cycle Time (s):		76				
			PRC Over All Lanes (%):		150.0		Total Delay Over All Lanes(pcuHr):		3.36								

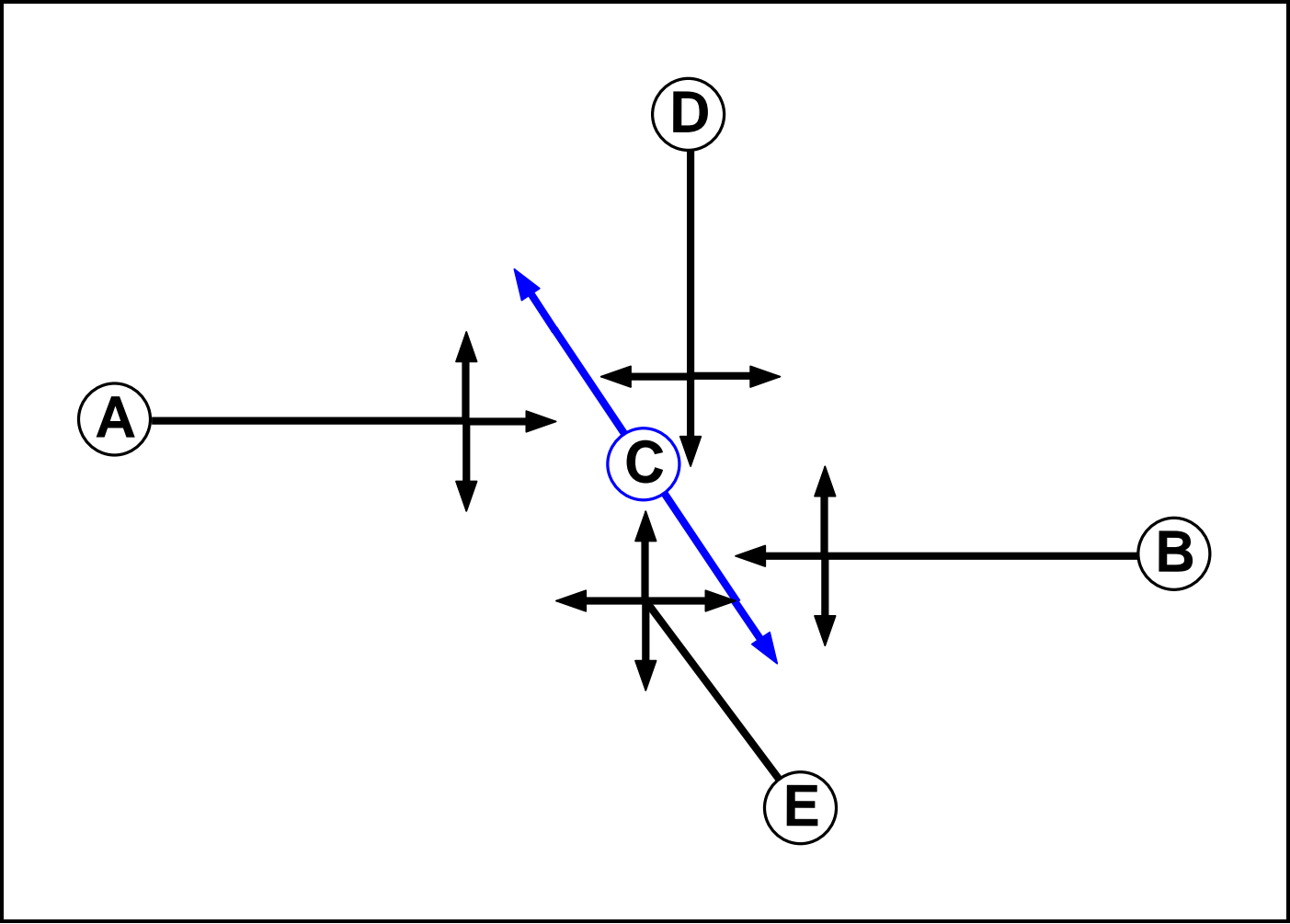
# Basic Results Summary

**Scenario 3: '2039 DM AM'** (FG3: '2039 DM AM', Plan 1: 'Network Control Plan 1')

## Network Layout Diagram



Phase Diagram



Traffic Flows, Actual  
Actual Flow :

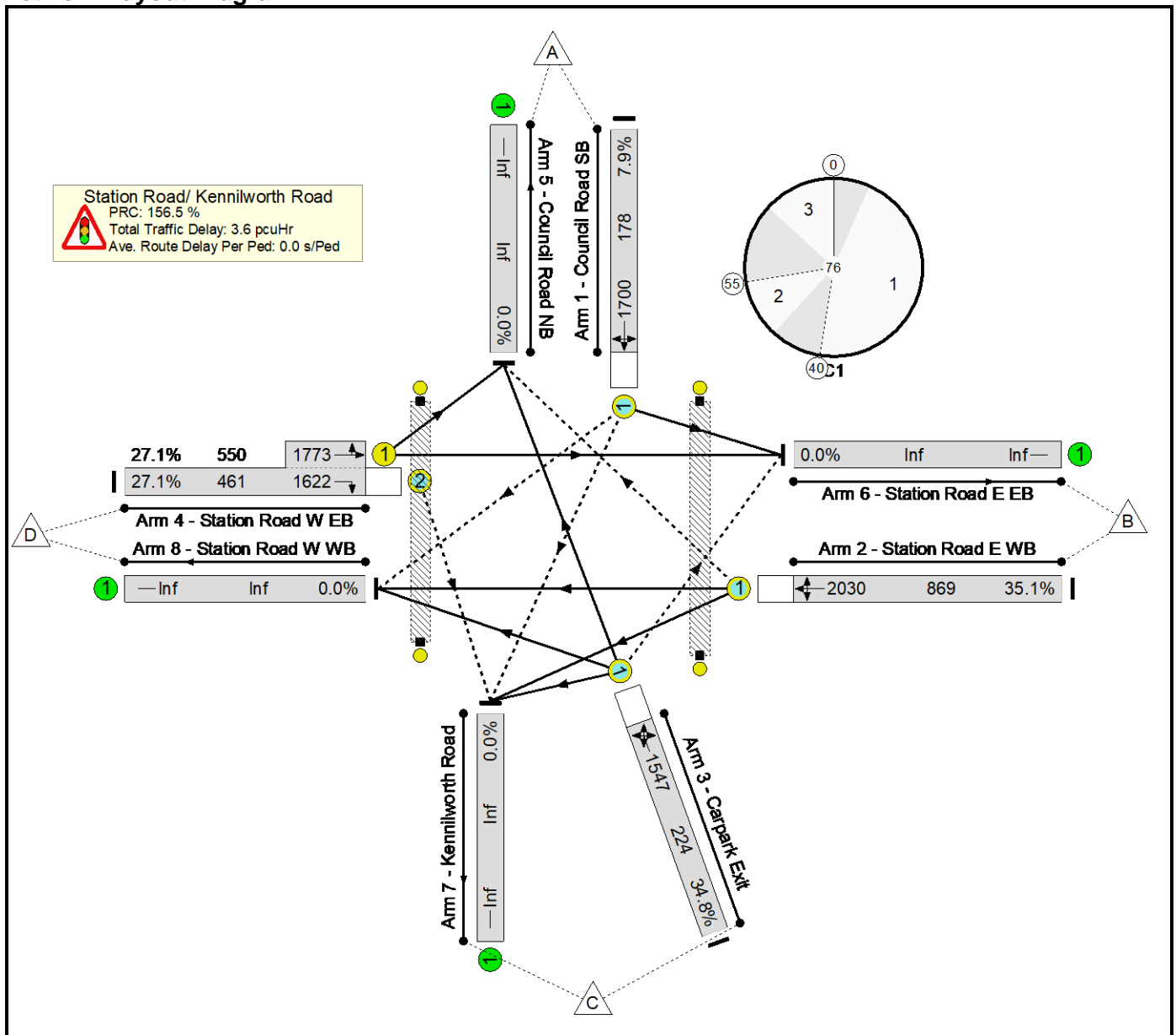
Origin	Destination					
		A	B	C	D	Tot.
	A	0	1	1	1	3
	B	10	0	34	148	192
	C	40	3	0	1	44
	D	38	150	165	0	353
	Tot.	88	154	200	150	592

## Network Results

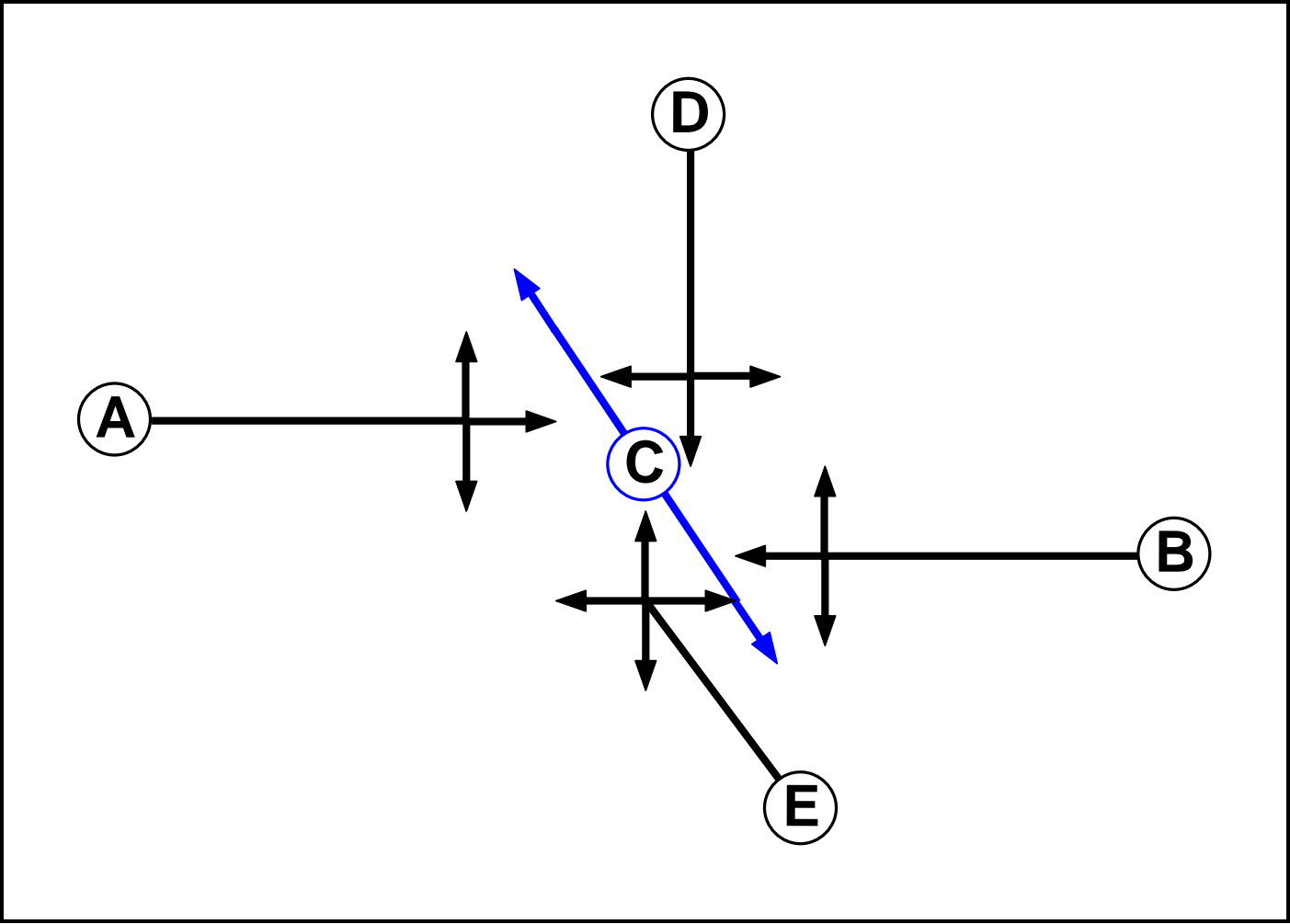
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	32.5%	180	0	0	2.5	-	-
Station Road/ Kennilworth Road	-	-	-		-	-	-	-	-	-	32.5%	180	0	0	2.5	-	-
1/1	Council Road SB Left Ahead Right	O	D		1	7	-	3	1625	134	2.2%	2	0	0	0.0	44.6	0.1
2/1	Station Road E WB Right Left Ahead	O	B		1	38	-	192	1991	907	21.2%	10	0	0	0.7	13.0	2.5
3/1	Carpark Exit Ahead Right U-Turn Left	O	E		1	7	-	44	1546	163	27.0%	3	0	0	0.6	46.4	1.0
4/2+4/1	Station Road W EB Left Ahead Right	O+U	A		1	38	-	353	1622:1775	508+578	32.5 : 32.5%	165	0	0	1.2	12.7	2.4
Ped Link: P1	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		176.9		176.9		Total Delay for Signalled Lanes (pcuHr):		2.54	Cycle Time (s):		76			
			PRC Over All Lanes (%):				176.9		Total Delay Over All Lanes(pcuHr):		2.54						



### Network Layout Diagram



Phase Diagram



Traffic Flows, Actual  
Actual Flow :

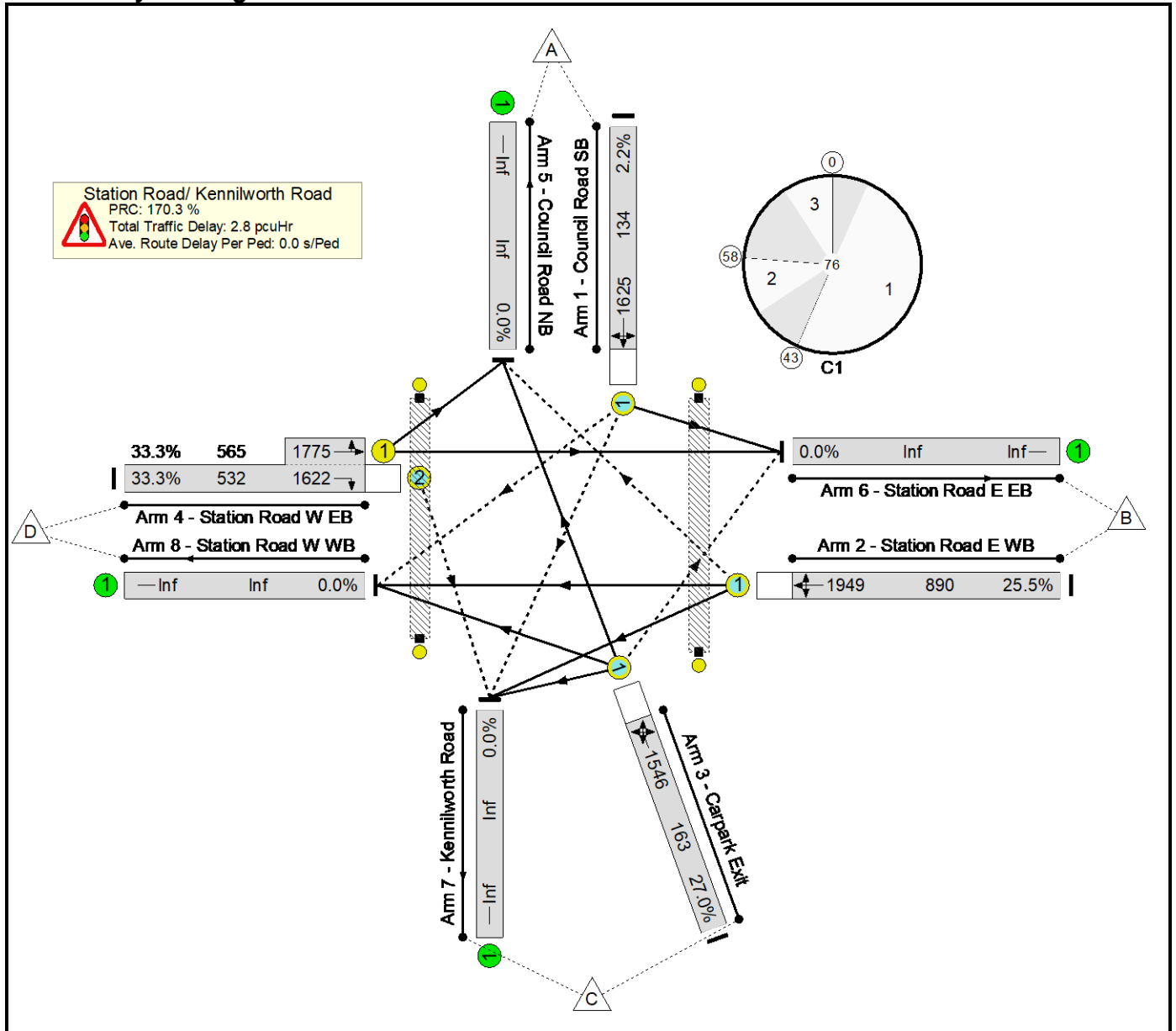
Origin	Destination					
		A	B	C	D	Tot.
	A	0	2	6	6	14
	B	14	0	21	270	305
	C	76	2	0	0	78
	D	31	118	125	0	274
	Tot.	121	122	152	276	671

## Network Results

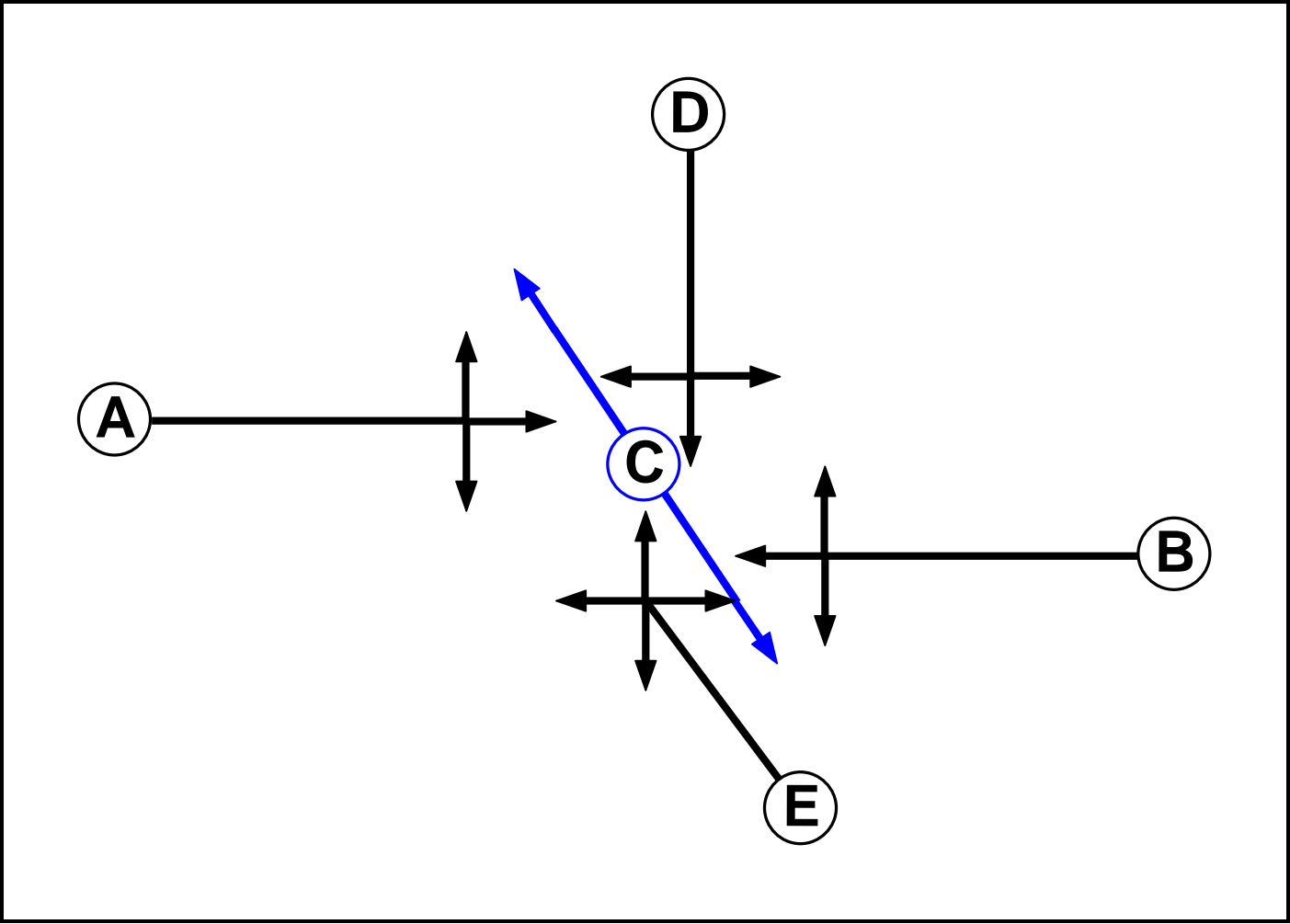
# Basic Results Summary

**Scenario 5: '2039 DS AM'** (FG5: '2039 DS AM', Plan 1: 'Network Control Plan 1')

## Network Layout Diagram



Phase Diagram

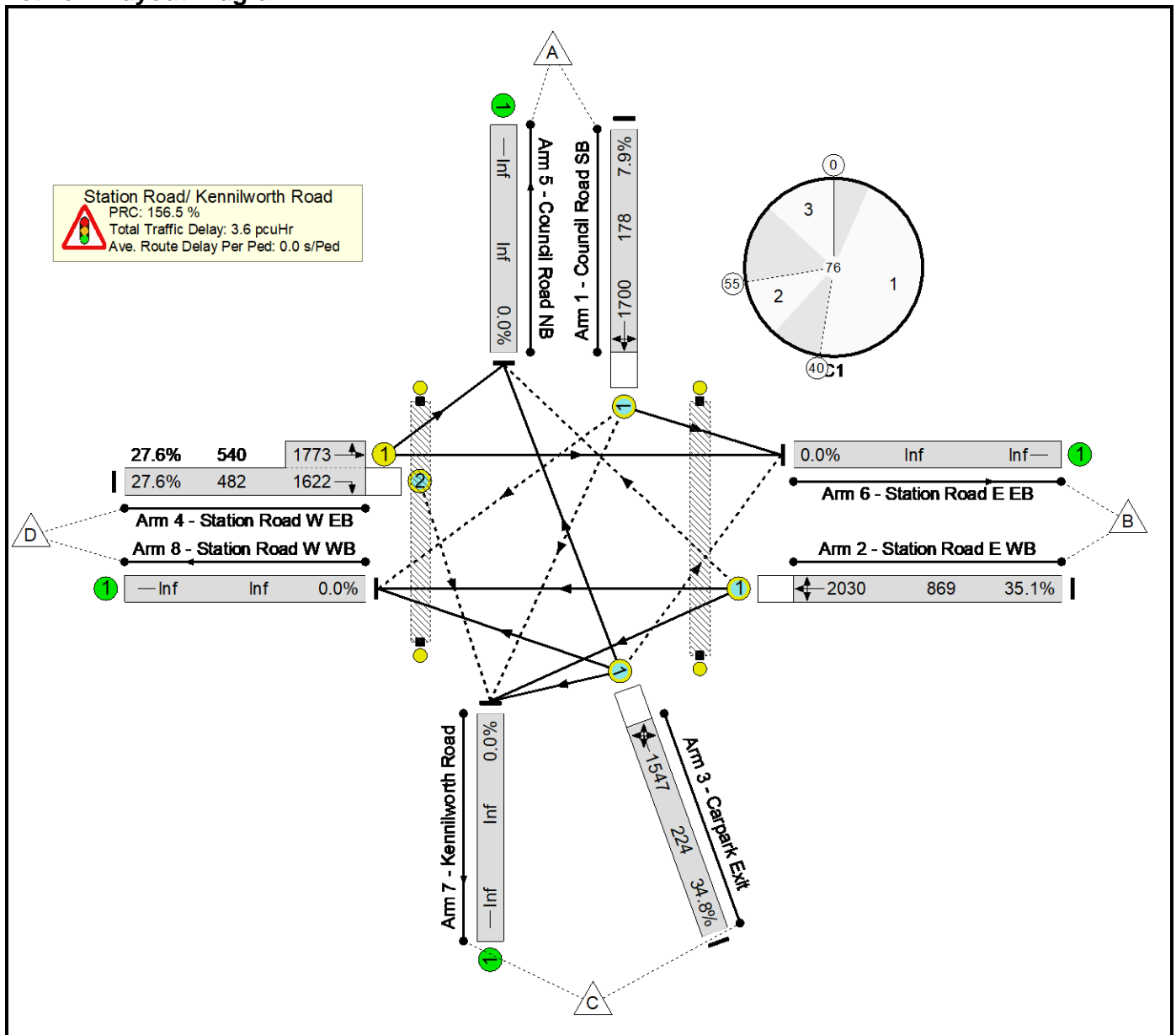


Traffic Flows, Actual  
Actual Flow :

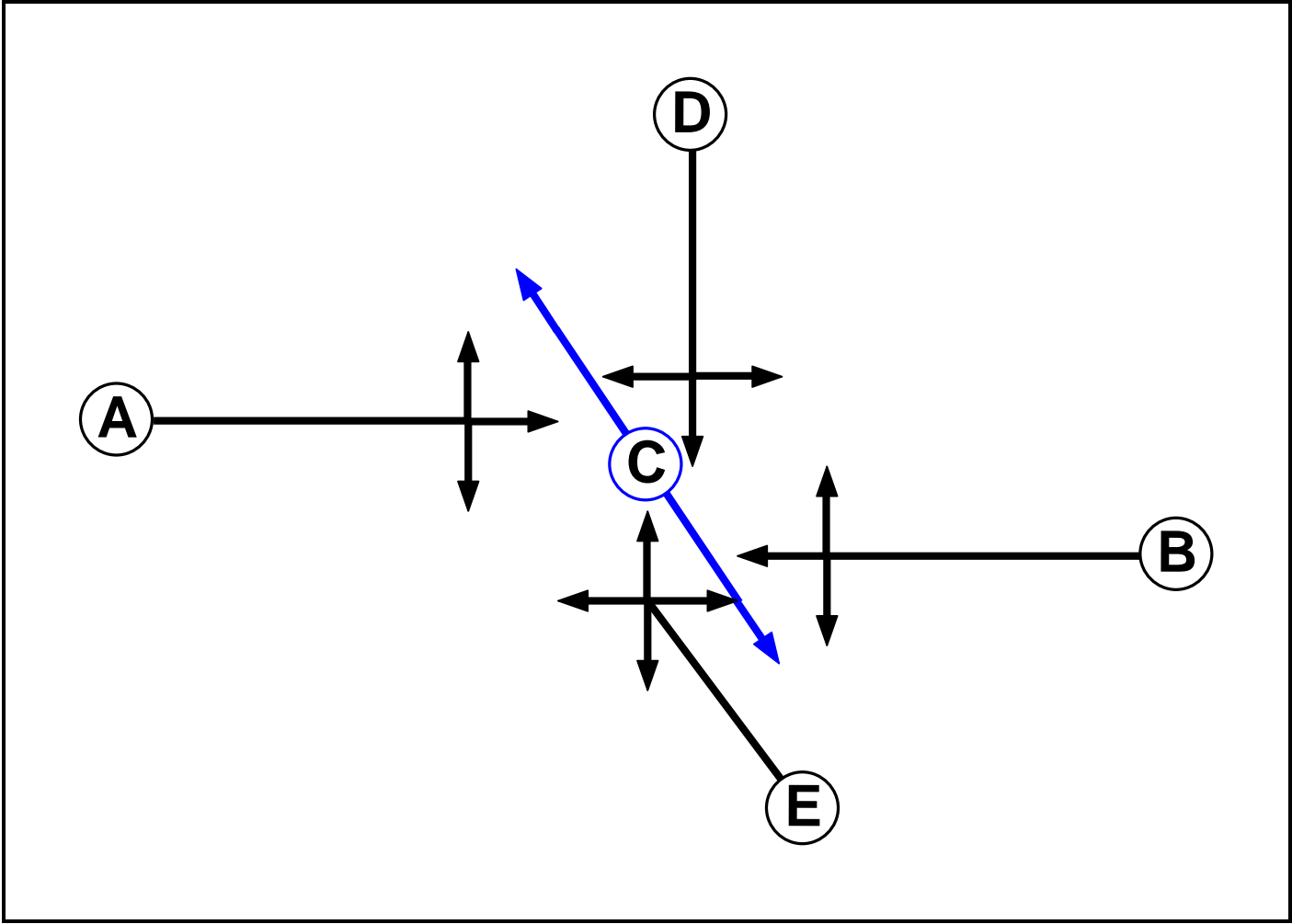
Origin	Destination					
		A	B	C	D	Tot.
	A	0	1	1	1	3
	B	10	0	69	148	227
	C	40	3	0	1	44
	D	38	150	177	0	365
	Tot.	88	154	247	150	639

## Network Results

### Network Layout Diagram



Phase Diagram



Traffic Flows, Actual  
Actual Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	2	6	6	14
	B	14	0	21	270	305
	C	76	2	0	0	78
	D	31	118	133	0	282
	Tot.	121	122	160	276	679



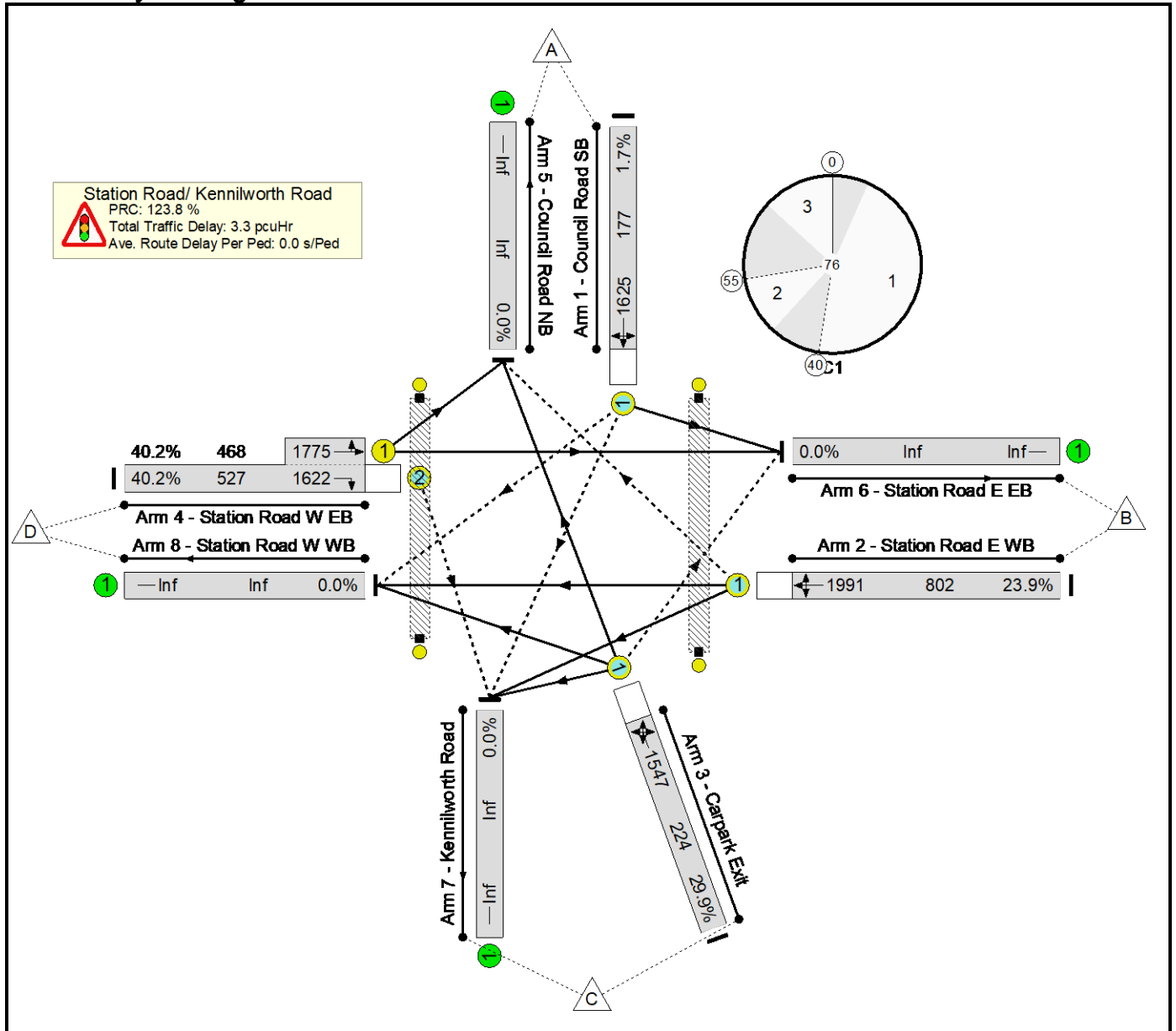
## Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	35.1%	160	0	1	3.6	-	-
Station Road/ Kennilworth Road	-	-	-		-	-	-	-	-	-	35.1%	160	0	1	3.6	-	-
1/1	Council Road SB Left Ahead Right	O	D		1	10	-	14	1700	178	7.9%	12	0	0	0.2	39.3	0.3
2/1	Station Road E WB Right Left Ahead	O	B		1	35	-	305	2030	869	35.1%	14	0	0	1.4	16.8	4.6
3/1	Carpark Exit Ahead Right U-Turn Left	O	E		1	10	-	78	1547	224	34.8%	2	0	0	0.9	41.6	1.7
4/2+4/1	Station Road W EB Left Ahead Right	O+U	A		1	35	-	282	1622:1773	482+540	27.6 : 27.6%	133	0	0	1.1	14.2	2.0
Ped Link: P1	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		156.5		Total Delay for Signalled Lanes (pcuHr):		3.59		Cycle Time (s):		76				
			PRC Over All Lanes (%):		156.5		Total Delay Over All Lanes(pcuHr):		3.59								

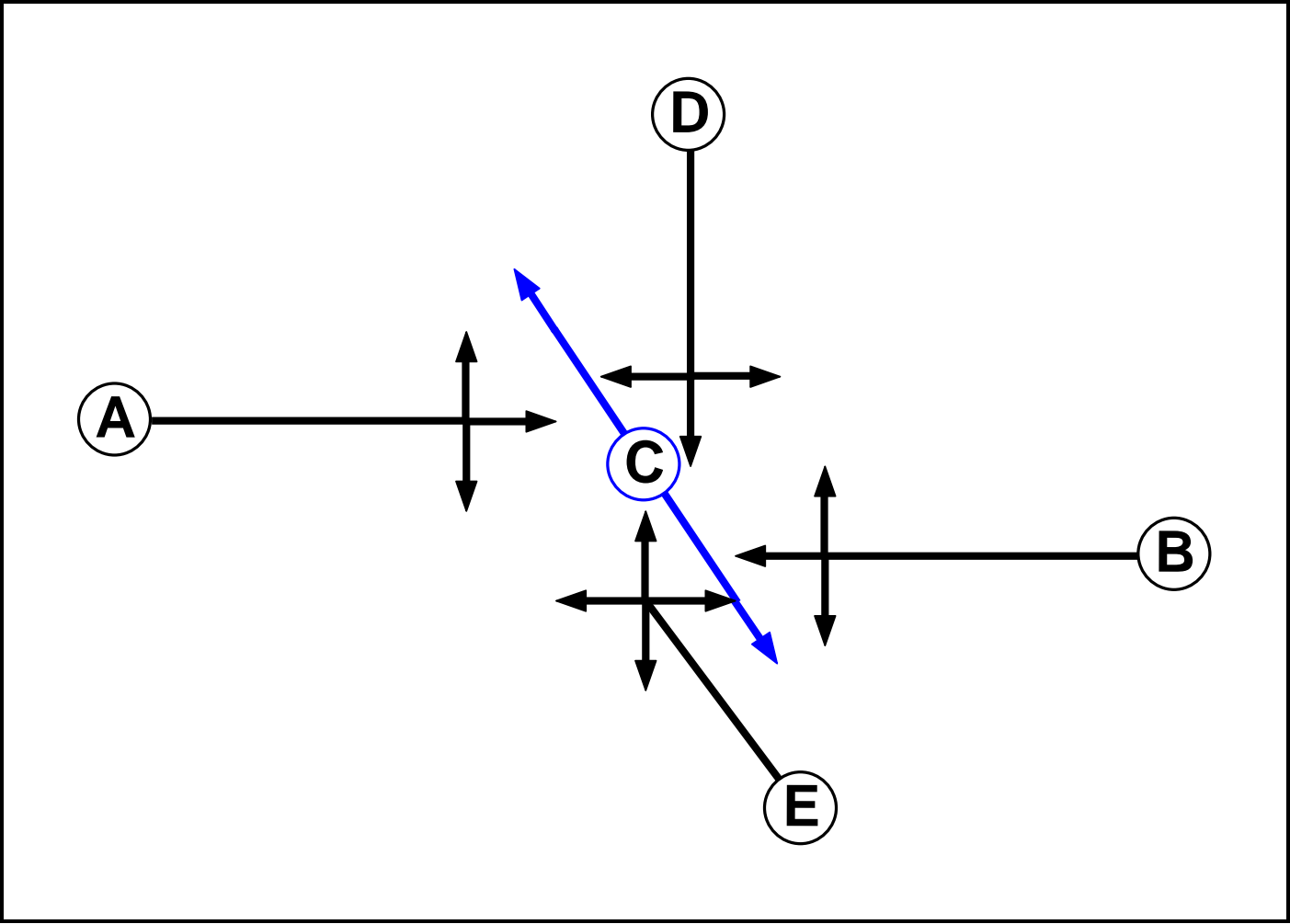
# Basic Results Summary

**Scenario 7: '2039 DS AM ST'** (FG7: '2039 DS AM ST', Plan 1: 'Network Control Plan 1')

## Network Layout Diagram



Phase Diagram



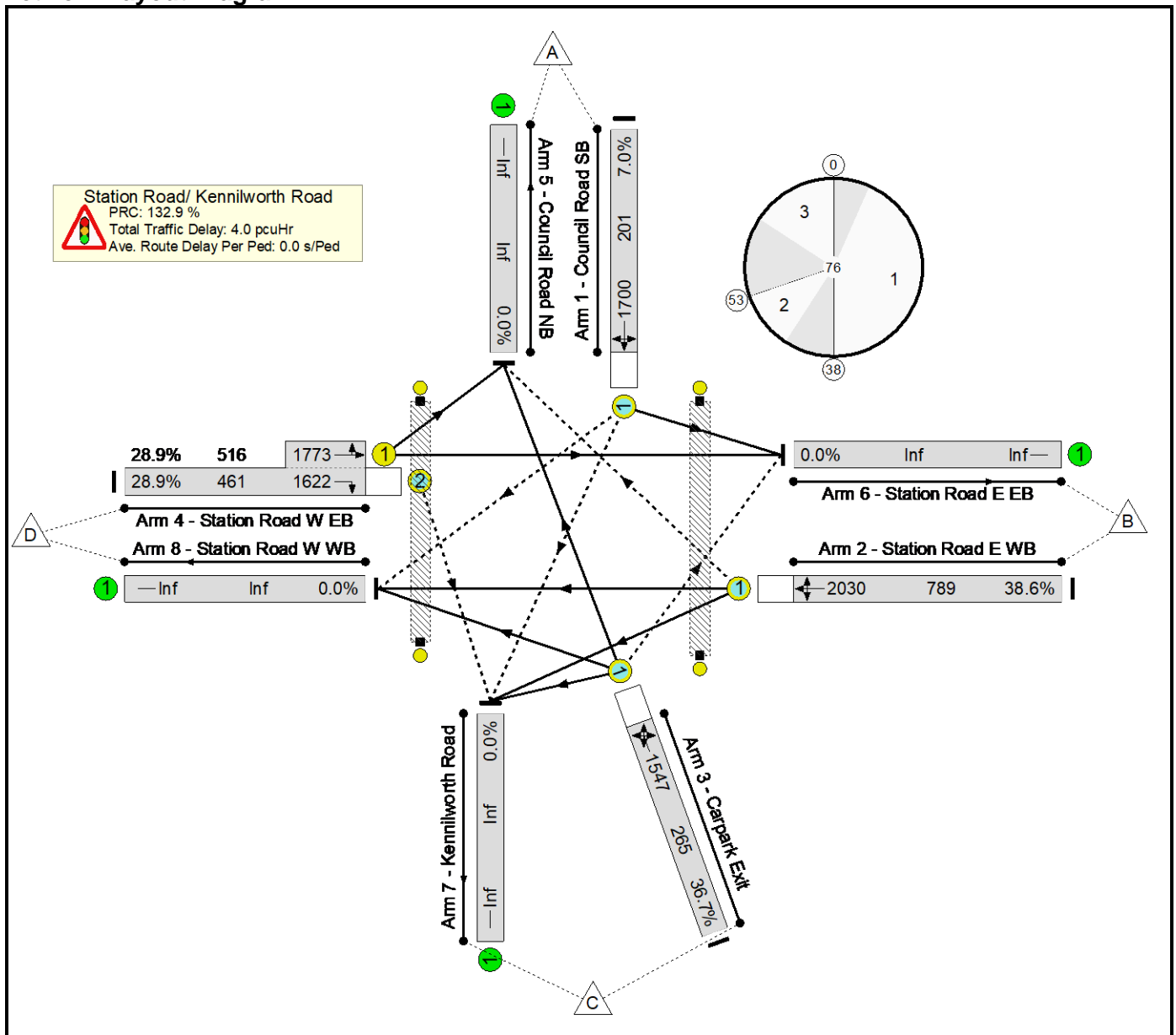
Traffic Flows, Actual  
Actual Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	1	1	1	3
	B	10	0	34	148	192
	C	63	3	0	1	67
	D	38	150	212	0	400
	Tot.	111	154	247	150	662

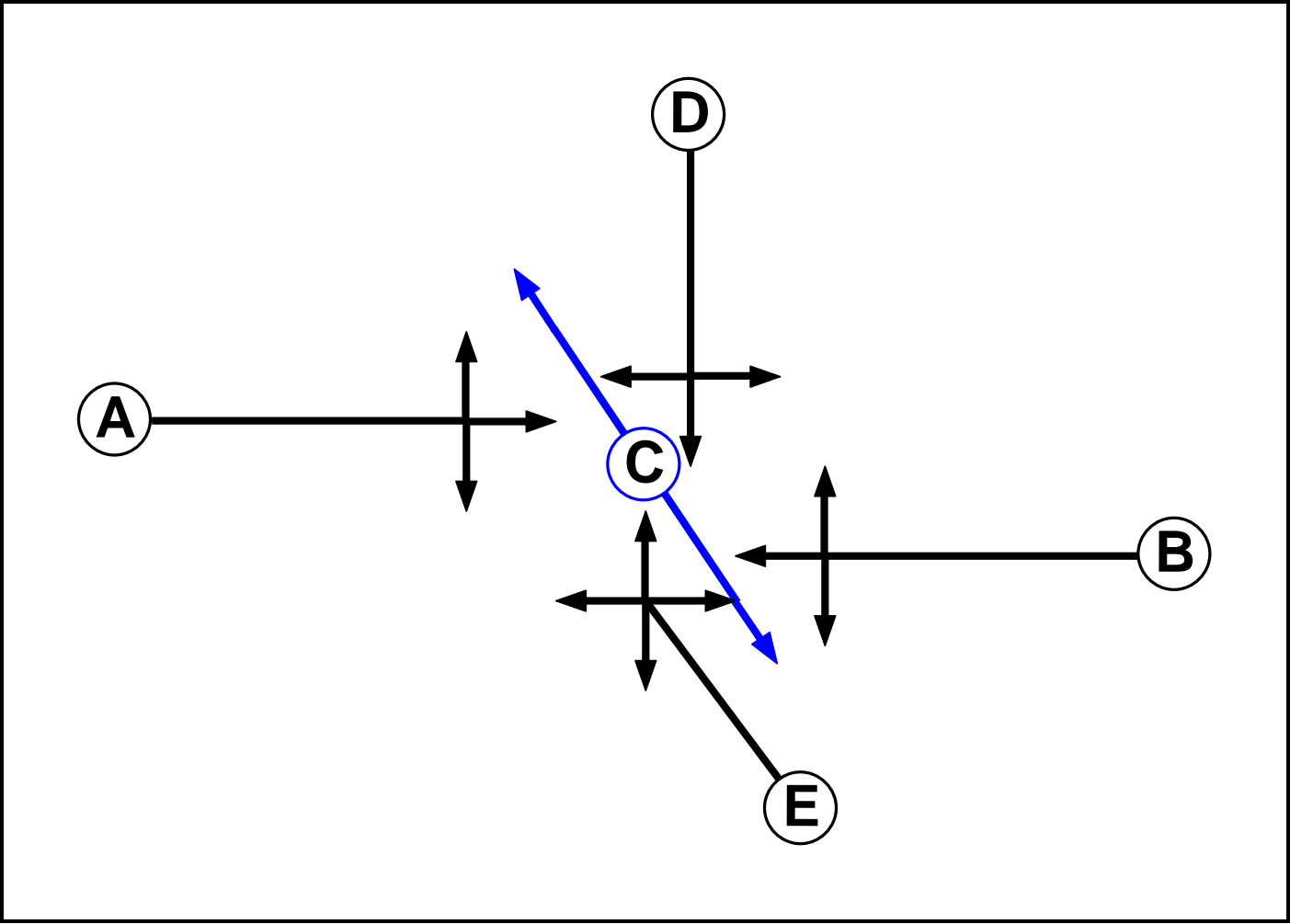
## Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	40.2%	227	0	0	3.3	-	-
Station Road/ Kennilworth Road	-	-	-		-	-	-	-	-	-	40.2%	227	0	0	3.3	-	-
1/1	Council Road SB Left Ahead Right	O	D		1	10	-	3	1625	177	1.7%	2	0	0	0.0	38.6	0.1
2/1	Station Road E WB Right Left Ahead	O	B		1	35	-	192	1991	802	23.9%	10	0	0	0.8	15.4	2.8
3/1	Carpark Exit Ahead Right U-Turn Left	O	E		1	10	-	67	1547	224	29.9%	3	0	0	0.8	40.5	1.5
4/2+4/1	Station Road W EB Left Ahead Right	O+U	A		1	35	-	400	1622:1775	527+468	40.2 : 40.2%	212	0	0	1.7	15.2	3.0
Ped Link: P1	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		123.8		123.8		Total Delay for Signalled Lanes (pcuHr):			3.30	Cycle Time (s):		76		
			PRC Over All Lanes (%):						Total Delay Over All Lanes(pcuHr):			3.30					

### Network Layout Diagram



Phase Diagram



Traffic Flows, Actual  
Actual Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	2	6	6	14
	B	14	0	21	270	305
	C	95	2	0	0	97
	D	31	118	133	0	282
	Tot.	140	122	160	276	698

## Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	38.6%	160	0	1	4.0	-	-
Station Road/ Kennilworth Road	-	-	-		-	-	-	-	-	-	38.6%	160	0	1	4.0	-	-
1/1	Council Road SB Left Ahead Right	O	D		1	12	-	14	1700	201	7.0%	12	0	0	0.1	36.3	0.3
2/1	Station Road E WB Right Left Ahead	O	B		1	33	-	305	2030	789	38.6%	14	0	0	1.6	19.1	4.9
3/1	Carpark Exit Ahead Right U-Turn Left	O	E		1	12	-	97	1547	265	36.7%	2	0	0	1.0	38.6	2.1
4/2+4/1	Station Road W EB Left Ahead Right	O+U	A		1	33	-	282	1622:1773	461+516	28.9 : 28.9%	133	0	0	1.2	15.6	2.1
Ped Link: P1	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		132.9		132.9		Total Delay for Signalled Lanes (pcuHr):		4.02		Cycle Time (s):		76		
			PRC Over All Lanes (%):						Total Delay Over All Lanes(pcuHr):		4.02						

# Basic Results Summary

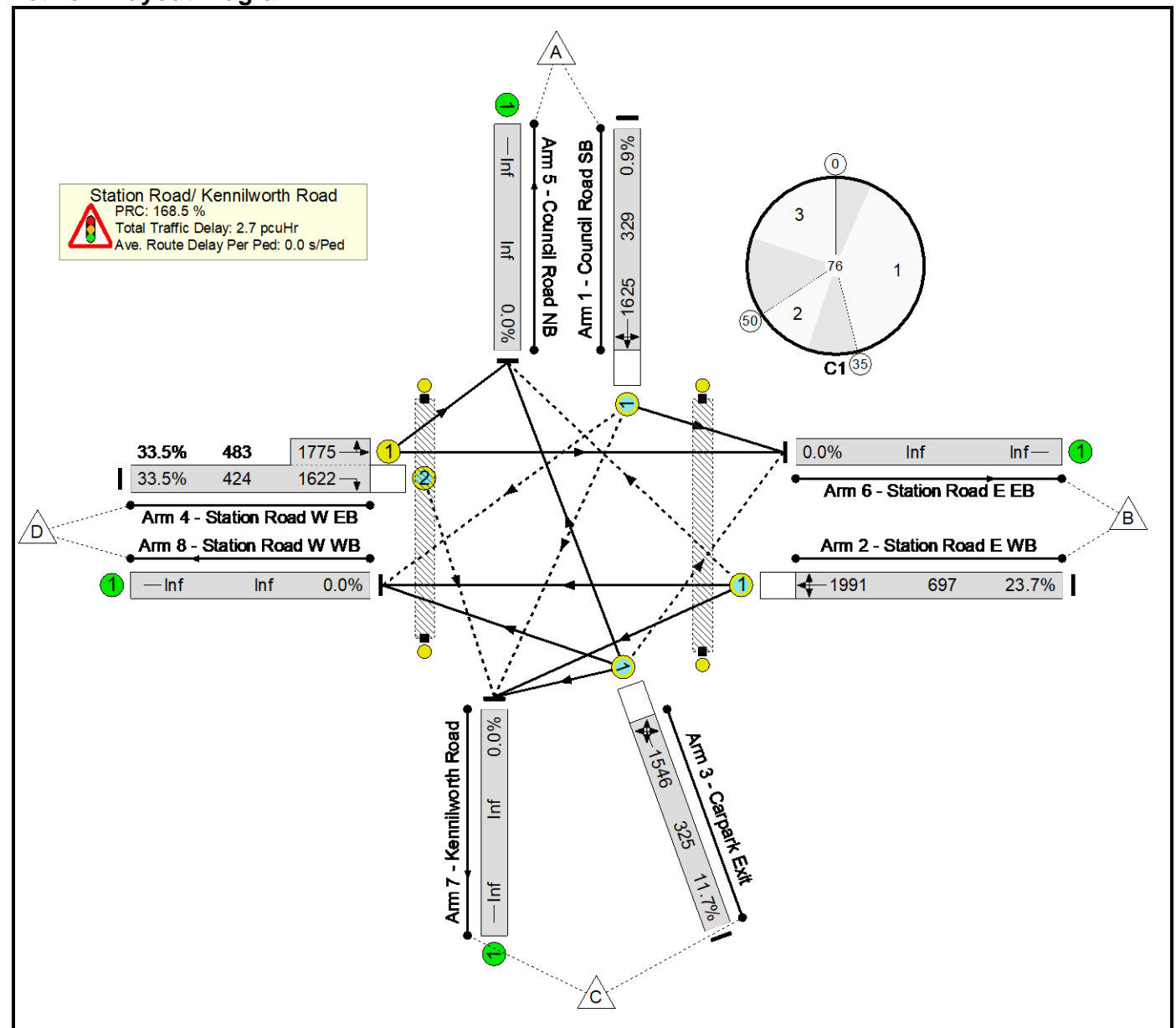
## Basic Results Summary

### User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	Recovered From AutoSave.lsg3x
Author:	
Company:	
Address:	

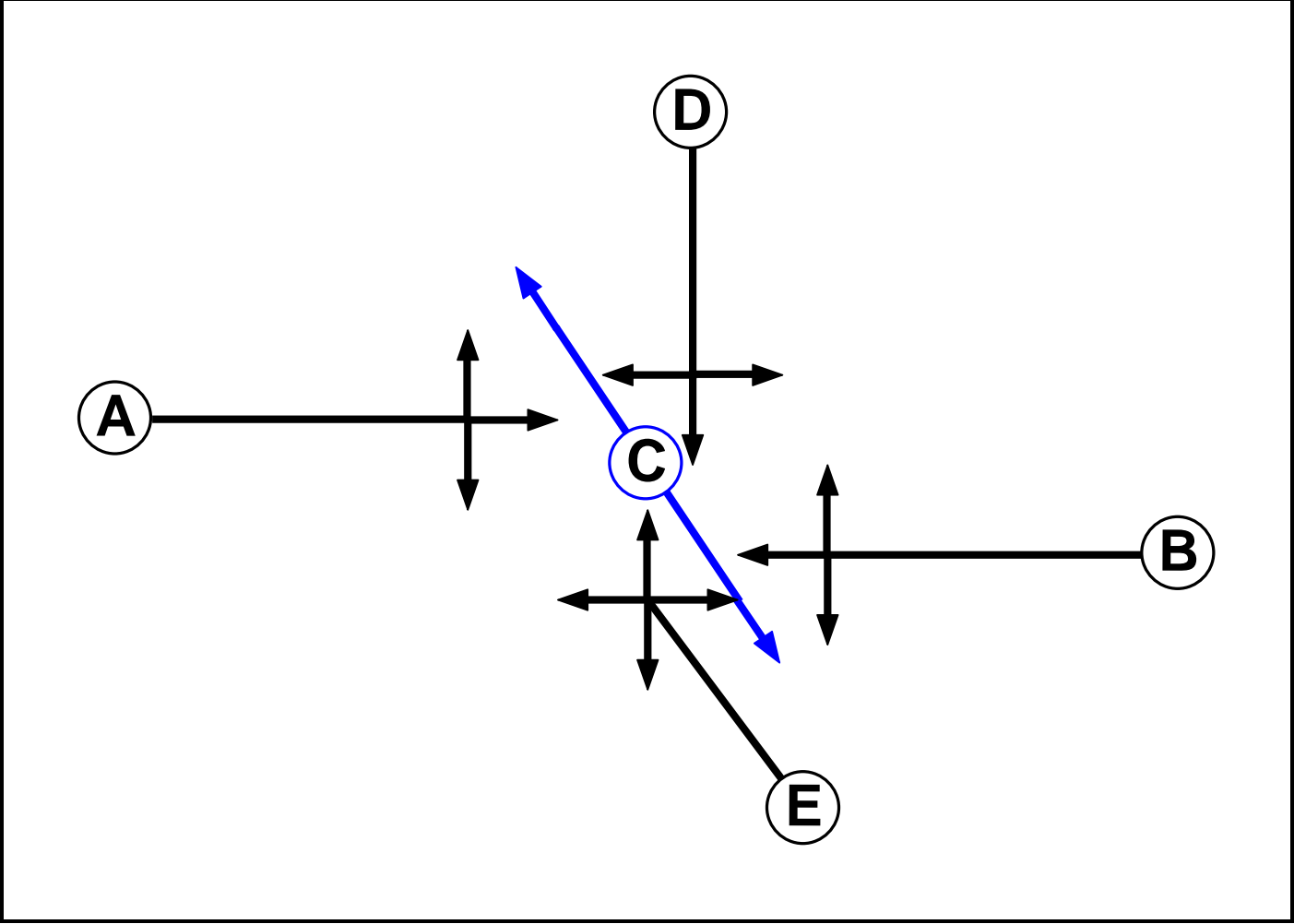
Scenario 1: '2019 Base AM' (FG1: '2019 Base AM', Plan 1: 'Network Control Plan 1')

### Network Layout Diagram





Phase Diagram



Traffic Flows, Actual  
Actual Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	1	1	1	3
	B	9	0	29	127	165
	C	34	3	0	1	38
	D	33	129	142	0	304
	Tot.	76	133	172	129	510

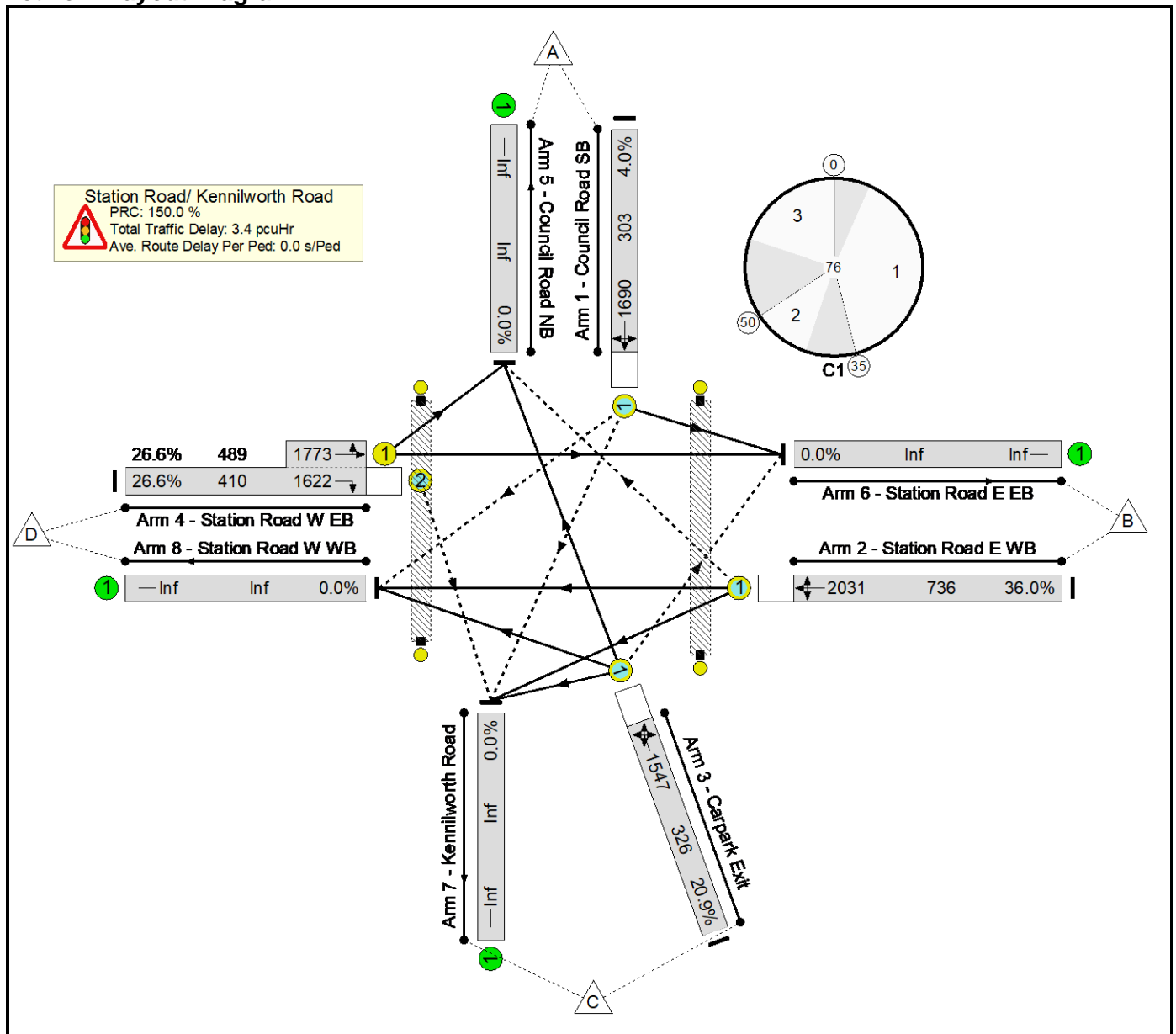
## Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	33.5%	156	0	0	2.7	-	-
Station Road/ Kennilworth Road	-	-	-		-	-	-	-	-	-	33.5%	156	0	0	2.7	-	-
1/1	Council Road SB Left Ahead Right	O	D		1	15	-	3	1625	329	0.9%	2	0	0	0.0	29.6	0.1
2/1	Station Road E WB Right Left Ahead	O	B		1	30	-	165	1991	697	23.7%	9	0	0	0.8	18.5	2.6
3/1	Carpark Exit Ahead Right U-Turn Left	O	E		1	15	-	38	1546	325	11.7%	3	0	0	0.3	30.6	0.7
4/2+4/1	Station Road W EB Left Ahead Right	O+U	A		1	30	-	304	1622:1775	424+483	33.5 : 33.5%	142	0	0	1.5	17.8	2.5
Ped Link: P1	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		168.5		Total Delay for Signalled Lanes (pcuHr):		2.70		Cycle Time (s):		76				
			PRC Over All Lanes (%):		168.5		Total Delay Over All Lanes(pcuHr):		2.70								

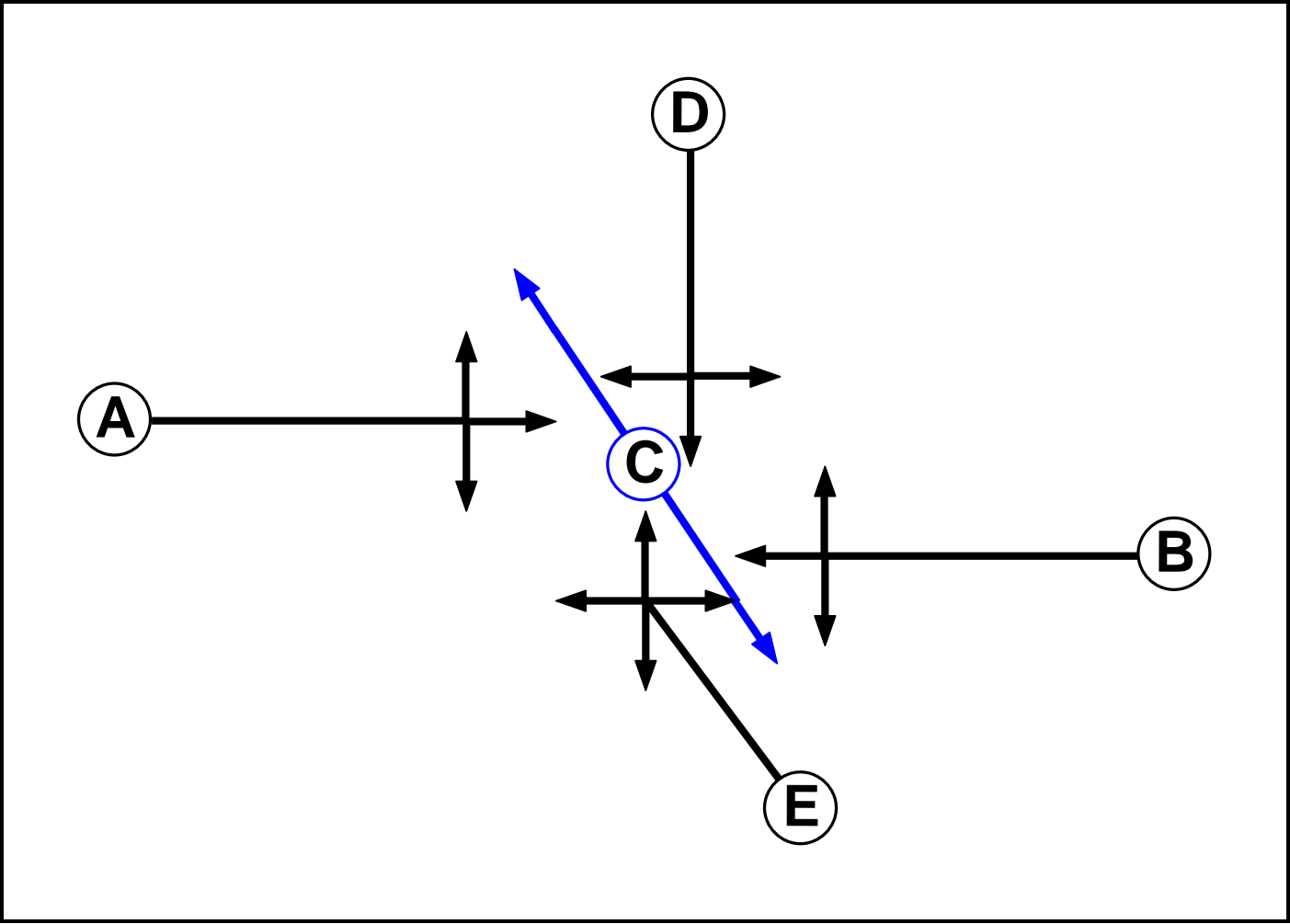
# Basic Results Summary

**Scenario 2: '2019 Base PM'** (FG2: '2019 Base PM', Plan 1: 'Network Control Plan 1')

## Network Layout Diagram



Phase Diagram



Traffic Flows, Actual  
Actual Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	2	5	5	12
	B	12	0	18	235	265
	C	66	2	0	0	68
	D	27	103	109	0	239
	Tot.	105	107	132	240	584

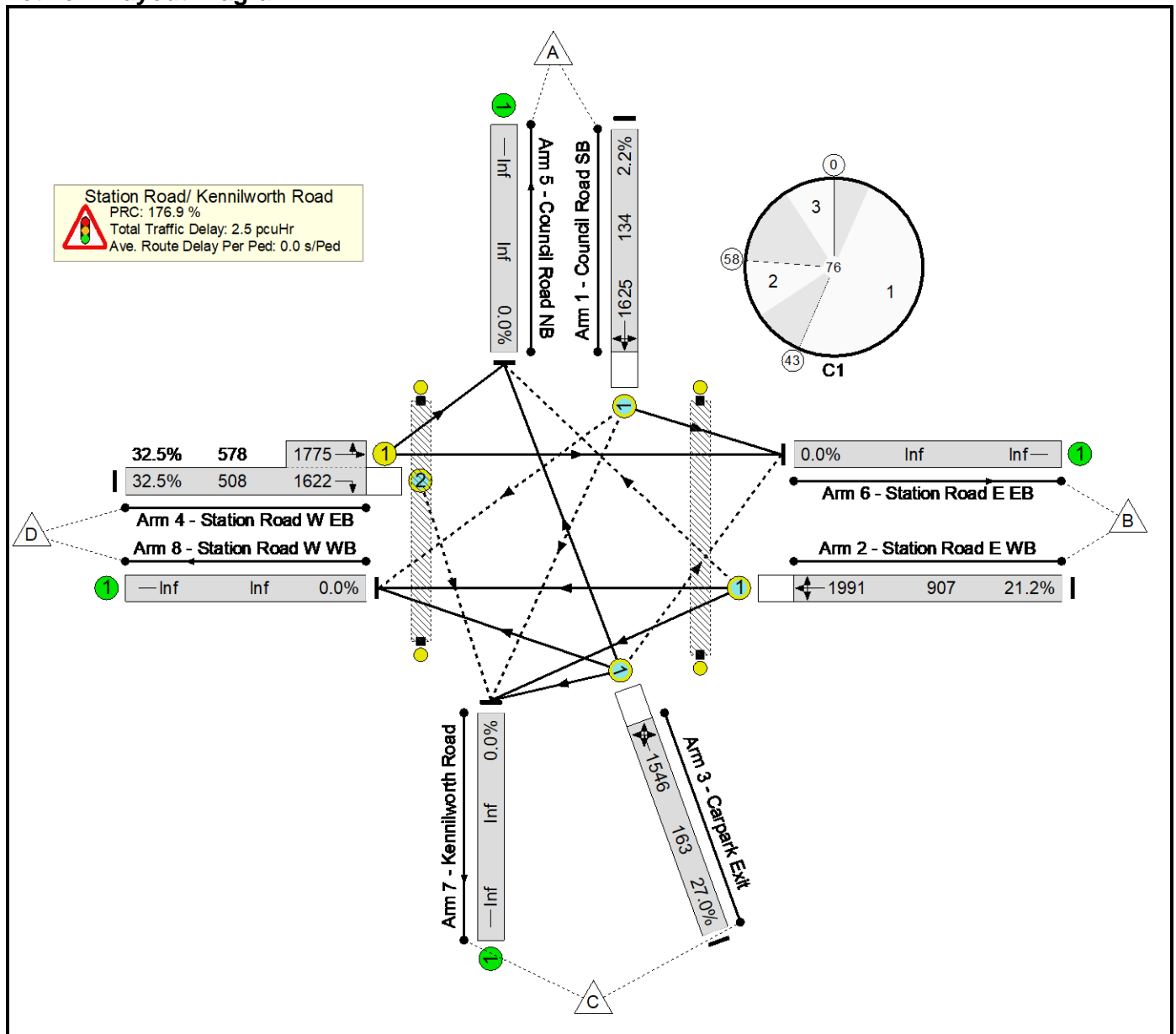
## Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	36.0%	132	0	1	3.4	-	-
Station Road/ Kennilworth Road	-	-	-		-	-	-	-	-	-	36.0%	132	0	1	3.4	-	-
1/1	Council Road SB Left Ahead Right	O	D		1	15	-	12	1690	303	4.0%	10	0	0	0.1	30.3	0.2
2/1	Station Road E WB Right Left Ahead	O	B		1	30	-	265	2031	736	36.0%	12	0	0	1.5	20.4	4.3
3/1	Carpark Exit Ahead Right U-Turn Left	O	E		1	15	-	68	1547	326	20.9%	2	0	0	0.6	31.8	1.3
4/2+4/1	Station Road W EB Left Ahead Right	O+U	A		1	30	-	239	1622:1773	410+489	26.6 : 26.6%	109	0	0	1.2	17.4	1.9
Ped Link: P1	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		150.0		150.0		Total Delay for Signalled Lanes (pcuHr):			3.36	Cycle Time (s):		76		
			PRC Over All Lanes (%):						Total Delay Over All Lanes(pcuHr):			3.36					

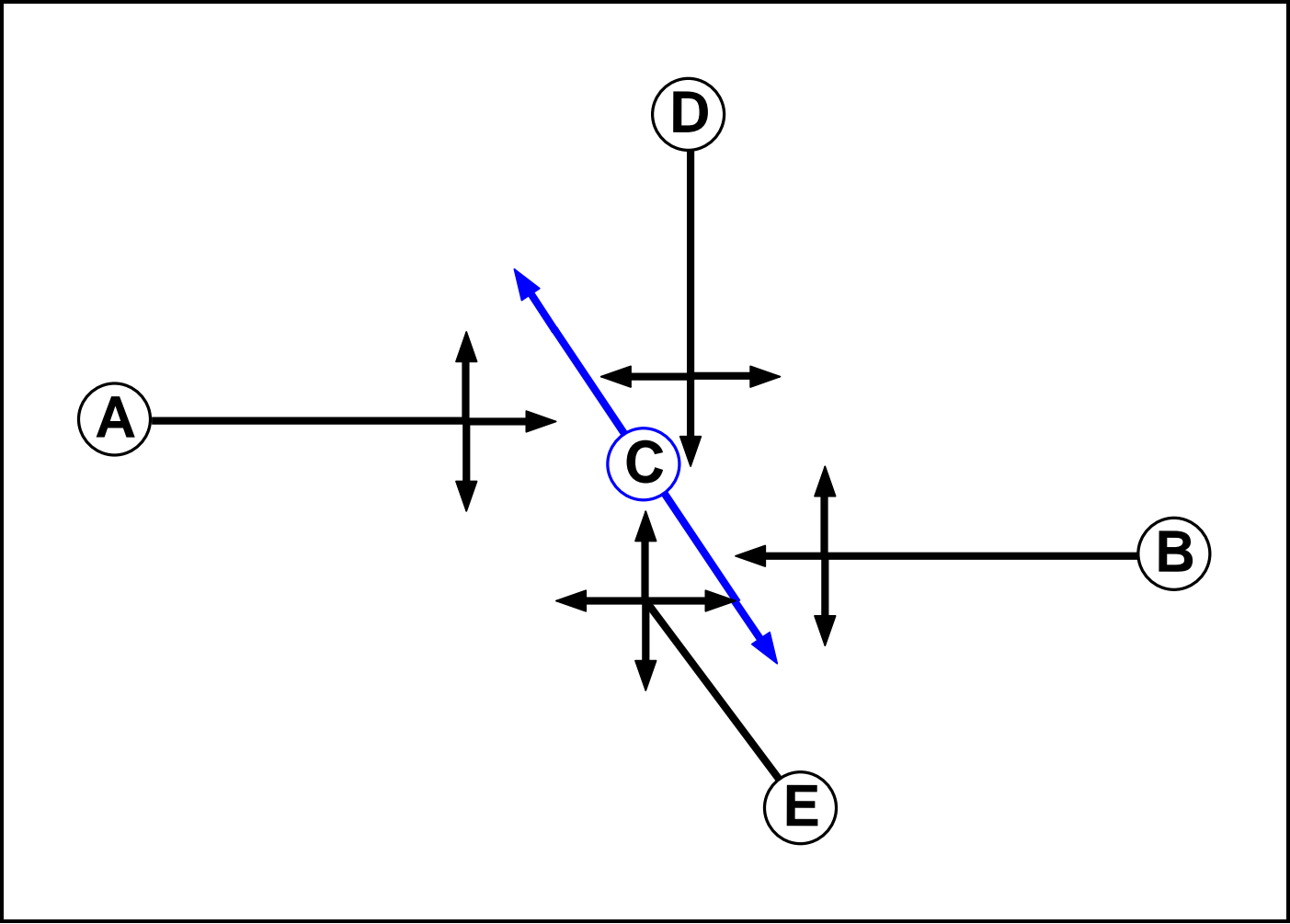
# Basic Results Summary

**Scenario 3: '2039 DM AM'** (FG3: '2039 DM AM', Plan 1: 'Network Control Plan 1')

## Network Layout Diagram



Phase Diagram



Traffic Flows, Actual  
Actual Flow :

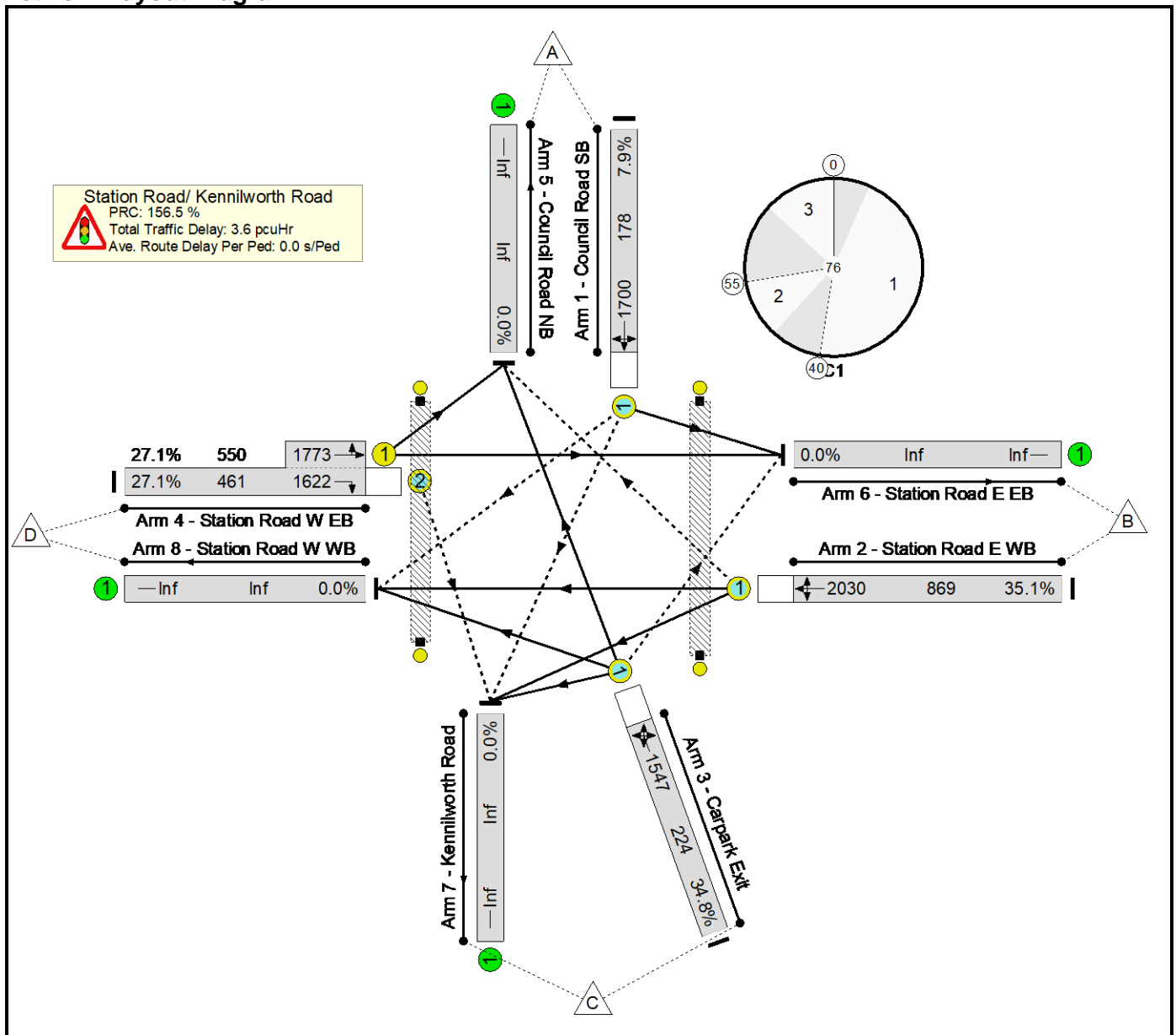
Origin	Destination					
		A	B	C	D	Tot.
	A	0	1	1	1	3
	B	10	0	34	148	192
	C	40	3	0	1	44
	D	38	150	165	0	353
	Tot.	88	154	200	150	592

## Network Results

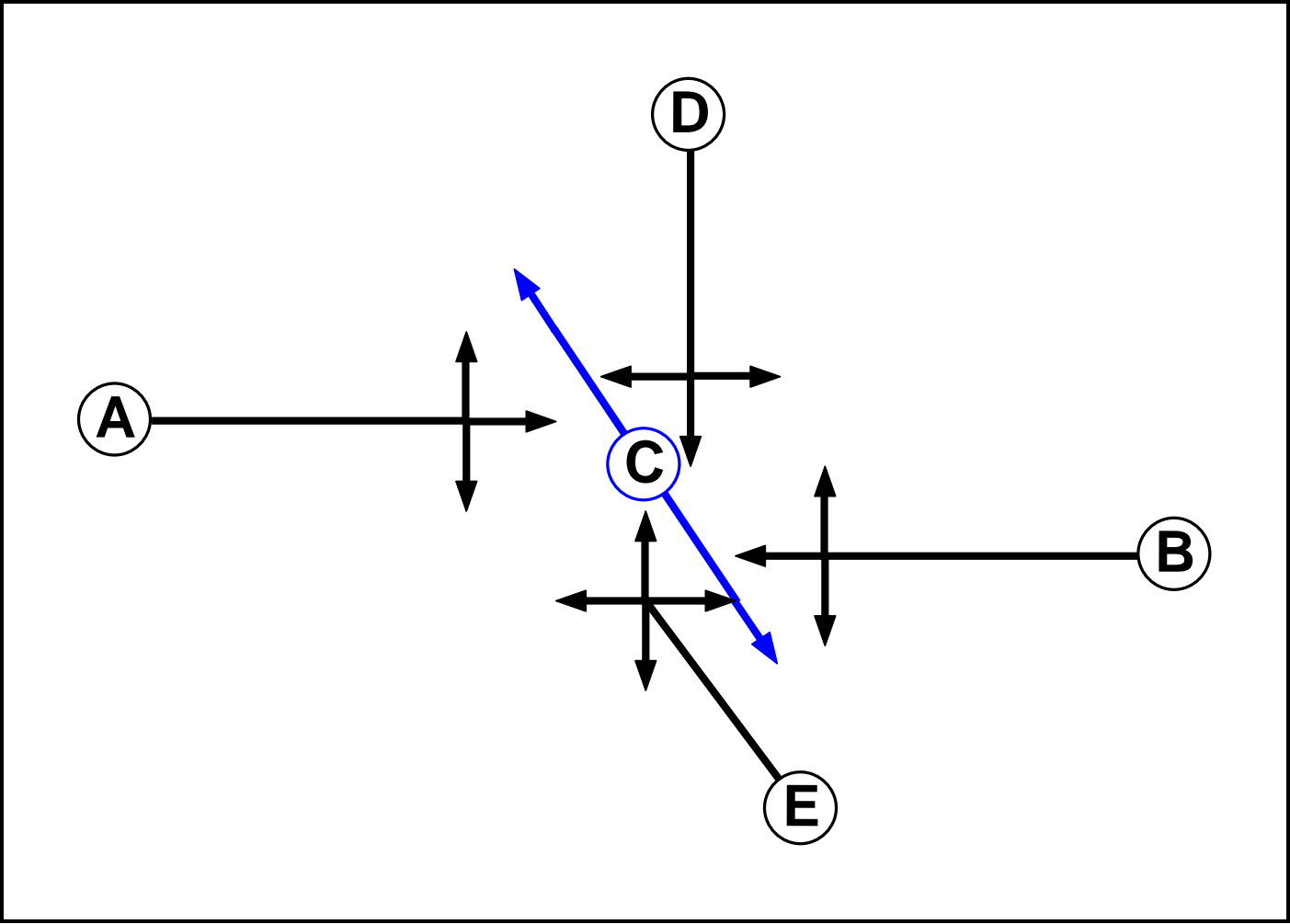
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	32.5%	180	0	0	2.5	-	-
Station Road/ Kennilworth Road	-	-	-		-	-	-	-	-	-	32.5%	180	0	0	2.5	-	-
1/1	Council Road SB Left Ahead Right	O	D		1	7	-	3	1625	134	2.2%	2	0	0	0.0	44.6	0.1
2/1	Station Road E WB Right Left Ahead	O	B		1	38	-	192	1991	907	21.2%	10	0	0	0.7	13.0	2.5
3/1	Carpark Exit Ahead Right U-Turn Left	O	E		1	7	-	44	1546	163	27.0%	3	0	0	0.6	46.4	1.0
4/2+4/1	Station Road W EB Left Ahead Right	O+U	A		1	38	-	353	1622:1775	508+578	32.5 : 32.5%	165	0	0	1.2	12.7	2.4
Ped Link: P1	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		176.9		176.9		Total Delay for Signalled Lanes (pcuHr):		2.54		Cycle Time (s):		76		
			PRC Over All Lanes (%):				176.9		Total Delay Over All Lanes(pcuHr):		2.54						



### Network Layout Diagram



Phase Diagram



Traffic Flows, Actual  
Actual Flow :

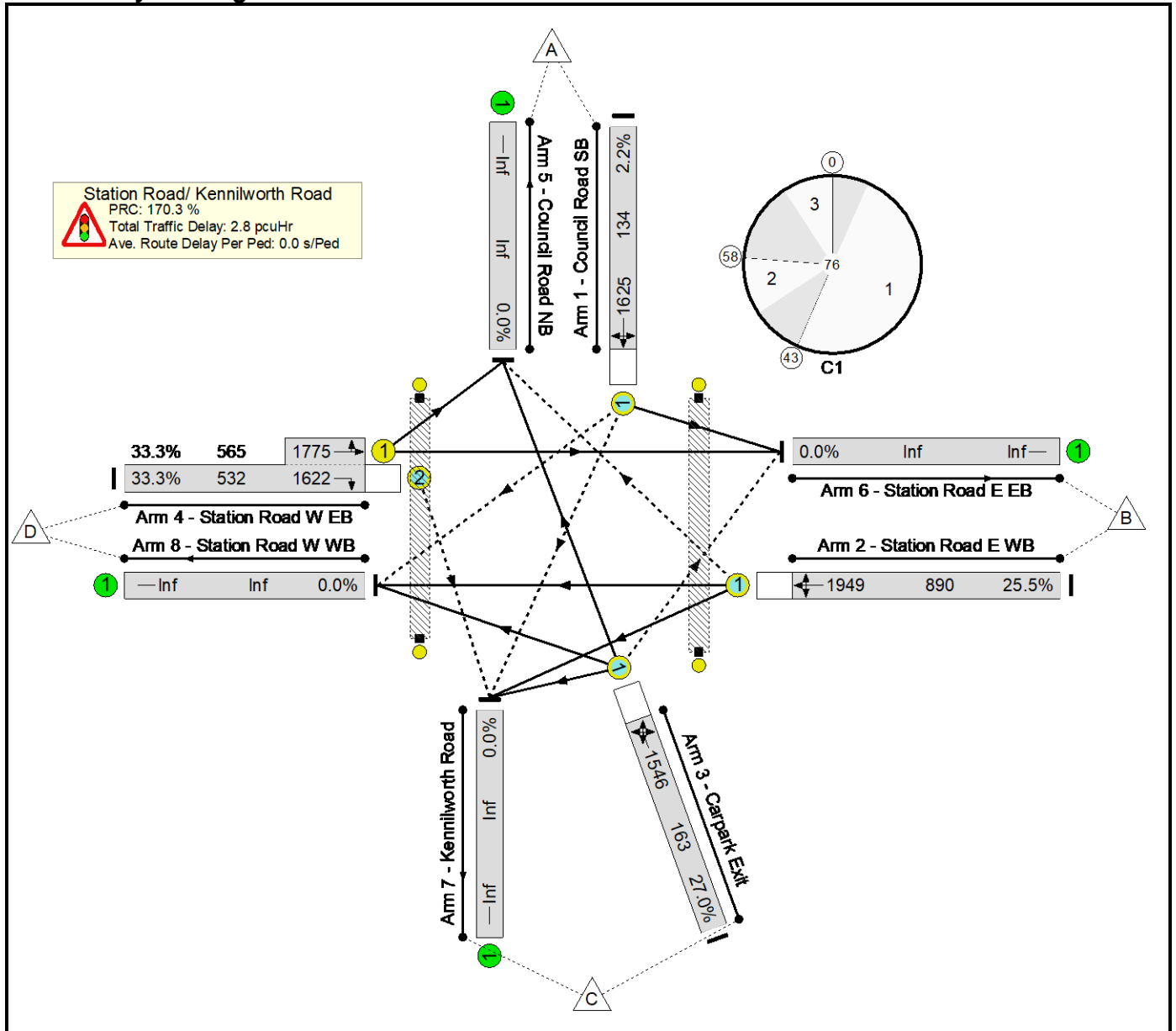
Origin	Destination					
		A	B	C	D	Tot.
	A	0	2	6	6	14
	B	14	0	21	270	305
	C	76	2	0	0	78
	D	31	118	125	0	274
	Tot.	121	122	152	276	671

## Network Results

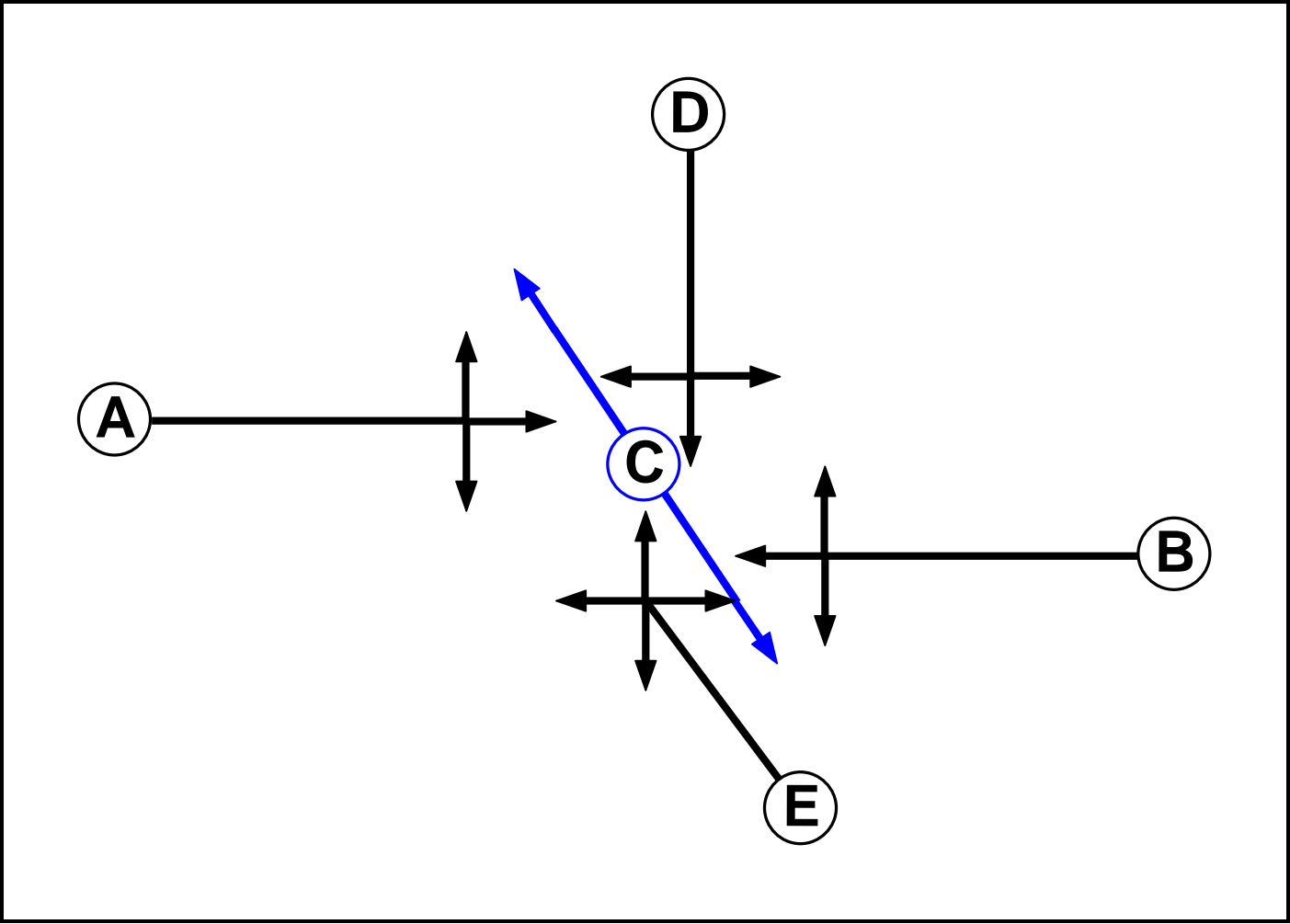
# Basic Results Summary

**Scenario 5: '2039 DS AM'** (FG5: '2039 DS AM', Plan 1: 'Network Control Plan 1')

## Network Layout Diagram



Phase Diagram



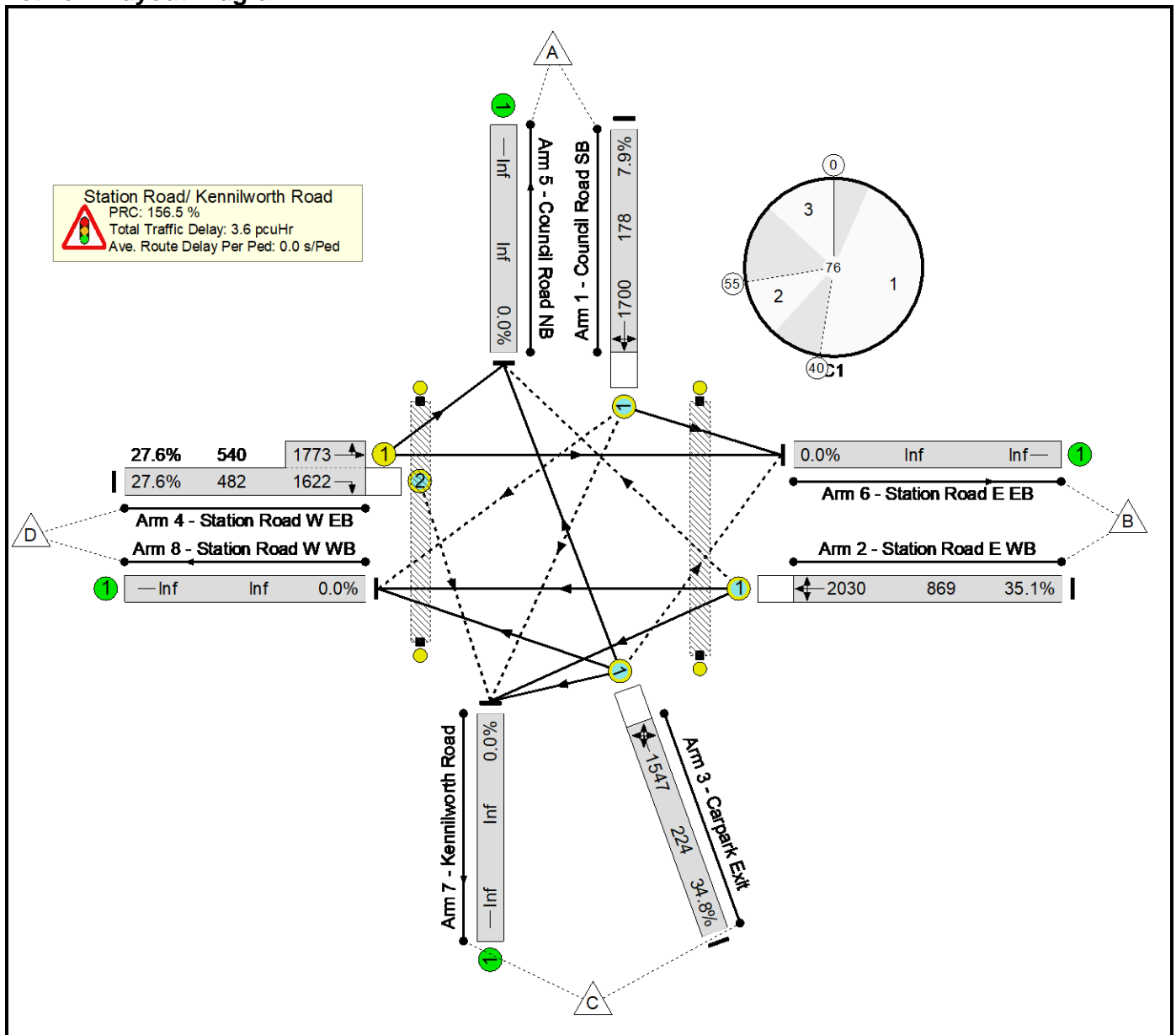
Traffic Flows, Actual  
Actual Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	1	1	1	3
	B	10	0	69	148	227
	C	40	3	0	1	44
	D	38	150	177	0	365
	Tot.	88	154	247	150	639

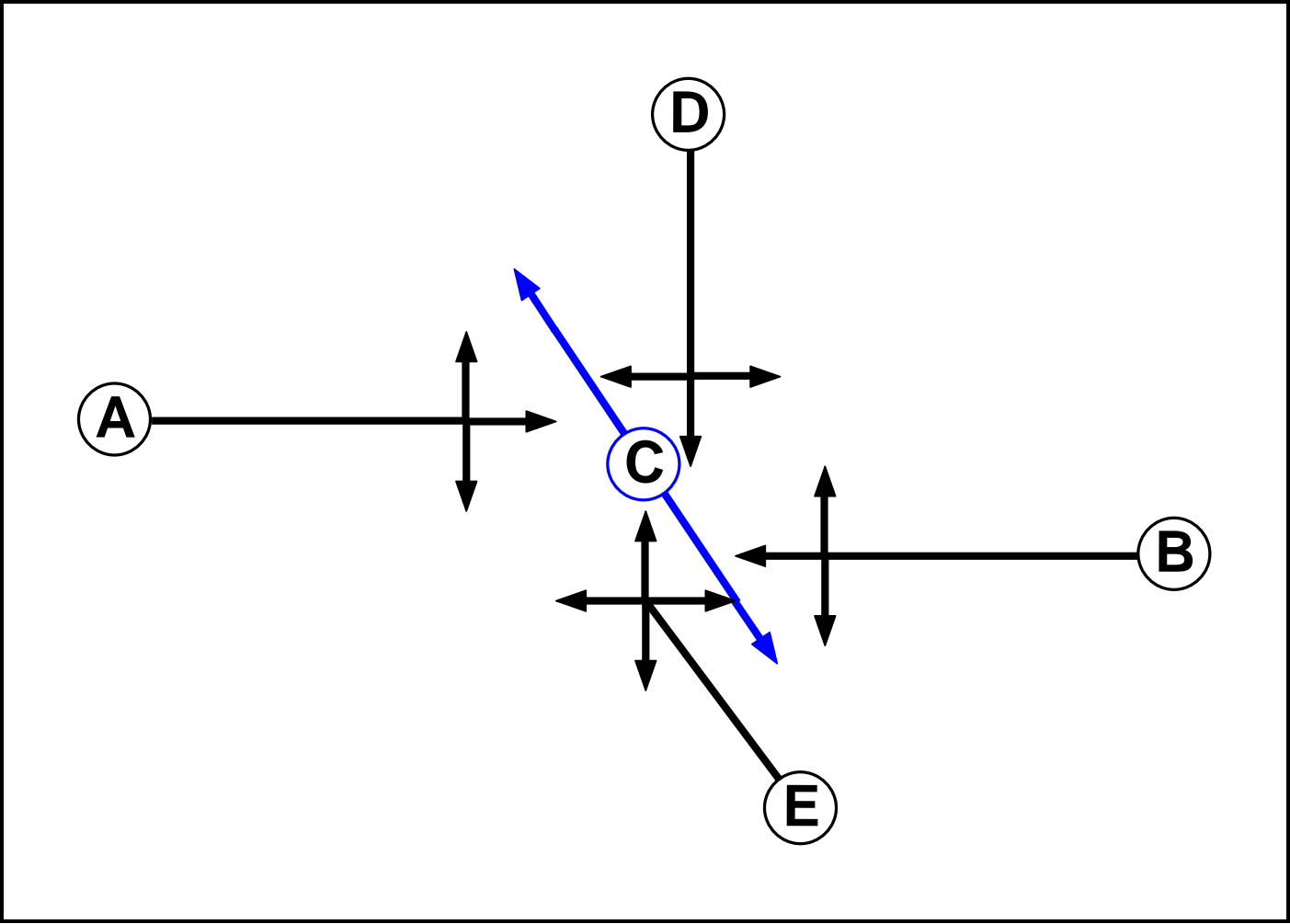
## Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	33.3%	192	0	0	2.8	-	-
Station Road/ Kennilworth Road	-	-	-		-	-	-	-	-	-	33.3%	192	0	0	2.8	-	-
1/1	Council Road SB Left Ahead Right	O	D		1	7	-	3	1625	134	2.2%	2	0	0	0.0	44.6	0.1
2/1	Station Road E WB Right Left Ahead	O	B		1	38	-	227	1949	890	25.5%	10	0	0	0.9	13.7	3.1
3/1	Carpark Exit Ahead Right U-Turn Left	O	E		1	7	-	44	1546	163	27.0%	3	0	0	0.6	46.4	1.0
4/2+4/1	Station Road W EB Left Ahead Right	O+U	A		1	38	-	365	1622:1775	532+565	33.3 : 33.3%	177	0	0	1.3	12.8	2.4
Ped Link: P1	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
C1				PRC for Signalled Lanes (%):			170.3	Total Delay for Signalled Lanes (pcuHr):				2.77	Cycle Time (s):		76		
				PRC Over All Lanes (%):			170.3	Total Delay Over All Lanes(pcuHr):				2.77					

### Network Layout Diagram



Phase Diagram



Traffic Flows, Actual  
Actual Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	2	6	6	14
	B	14	0	21	270	305
	C	76	2	0	0	78
	D	31	118	133	0	282
	Tot.	121	122	160	276	679



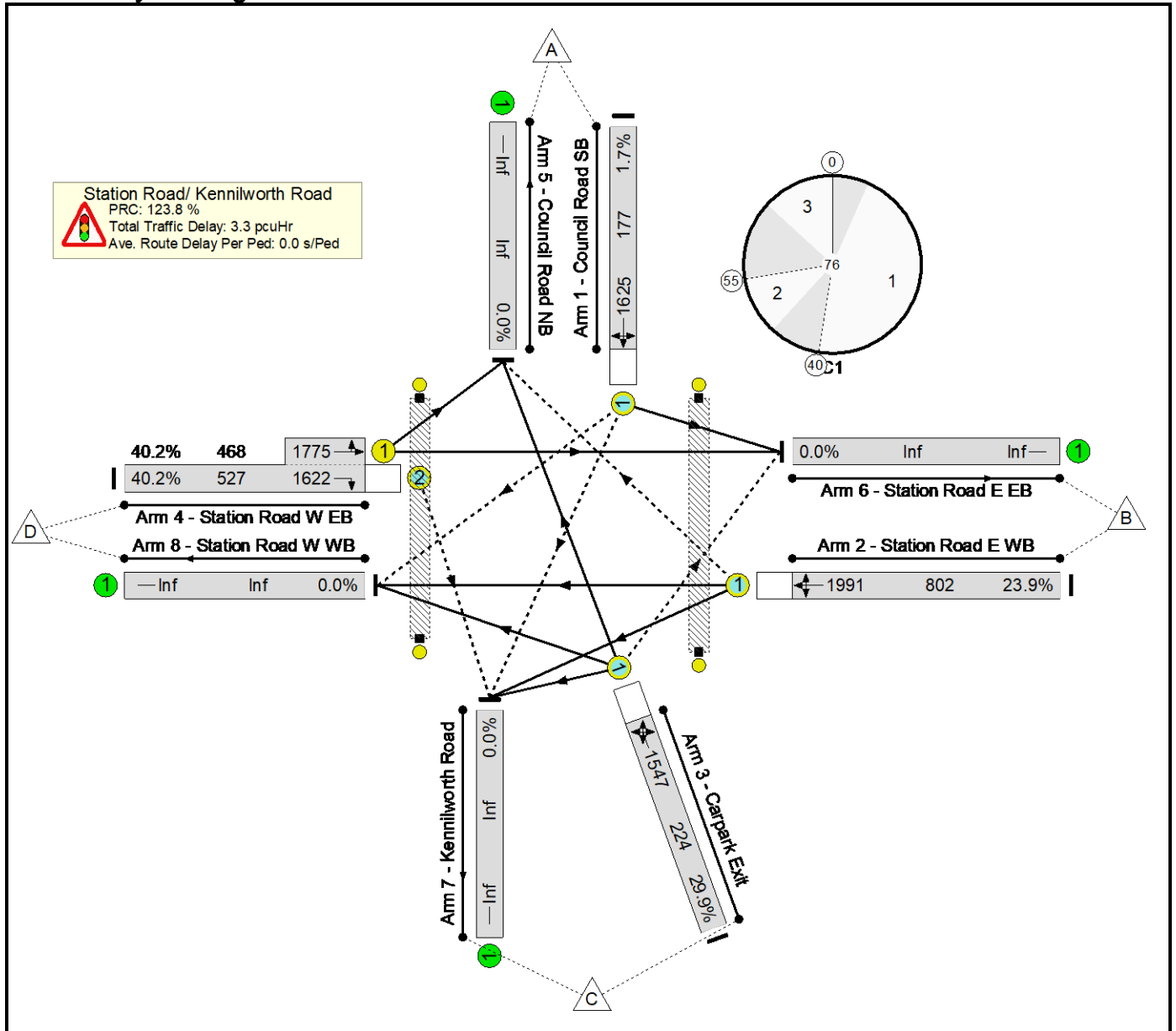
## Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network	-	-	-		-	-	-	-	-	-	35.1%	160	0	1	3.6	-	-	
Station Road/ Kennilworth Road	-	-	-		-	-	-	-	-	-	35.1%	160	0	1	3.6	-	-	
1/1	Council Road SB Left Ahead Right	O	D		1	10	-	14	1700	178	7.9%	12	0	0	0.2	39.3	0.3	
2/1	Station Road E WB Right Left Ahead	O	B		1	35	-	305	2030	869	35.1%	14	0	0	1.4	16.8	4.6	
3/1	Carpark Exit Ahead Right U-Turn Left	O	E		1	10	-	78	1547	224	34.8%	2	0	0	0.9	41.6	1.7	
4/2+4/1	Station Road W EB Left Ahead Right	O+U	A		1	35	-	282	1622:1773	482+540	27.6 : 27.6%	133	0	0	1.1	14.2	2.0	
Ped Link: P1	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-	
Ped Link: P2	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-	
C1				PRC for Signalled Lanes (%):		156.5		Total Delay for Signalled Lanes (pcuHr):				3.59		Cycle Time (s):		76		
				PRC Over All Lanes (%):		156.5		Total Delay Over All Lanes(pcuHr):				3.59						

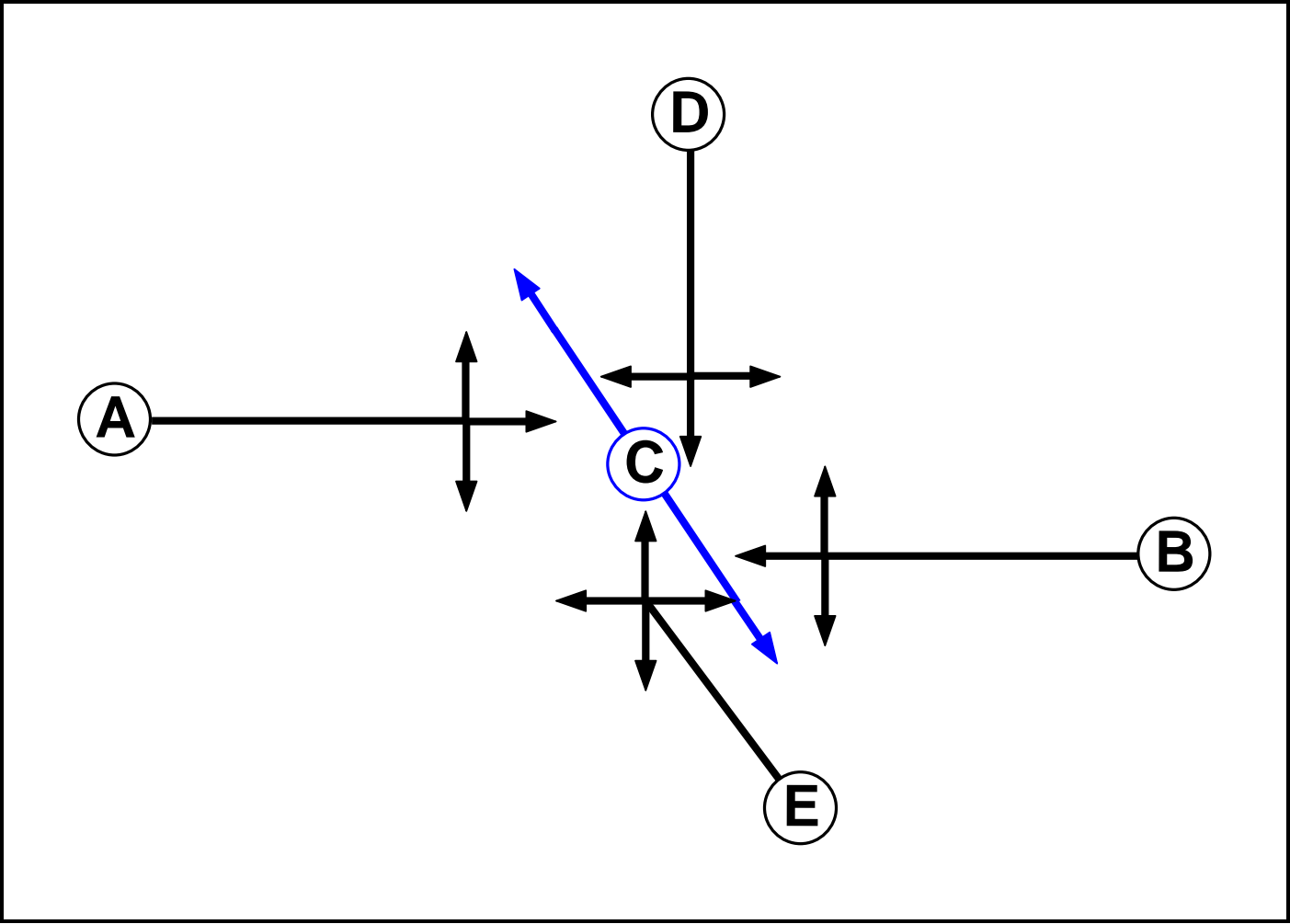
# Basic Results Summary

**Scenario 7: '2039 DS AM ST'** (FG7: '2039 DS AM ST', Plan 1: 'Network Control Plan 1')

## Network Layout Diagram



Phase Diagram



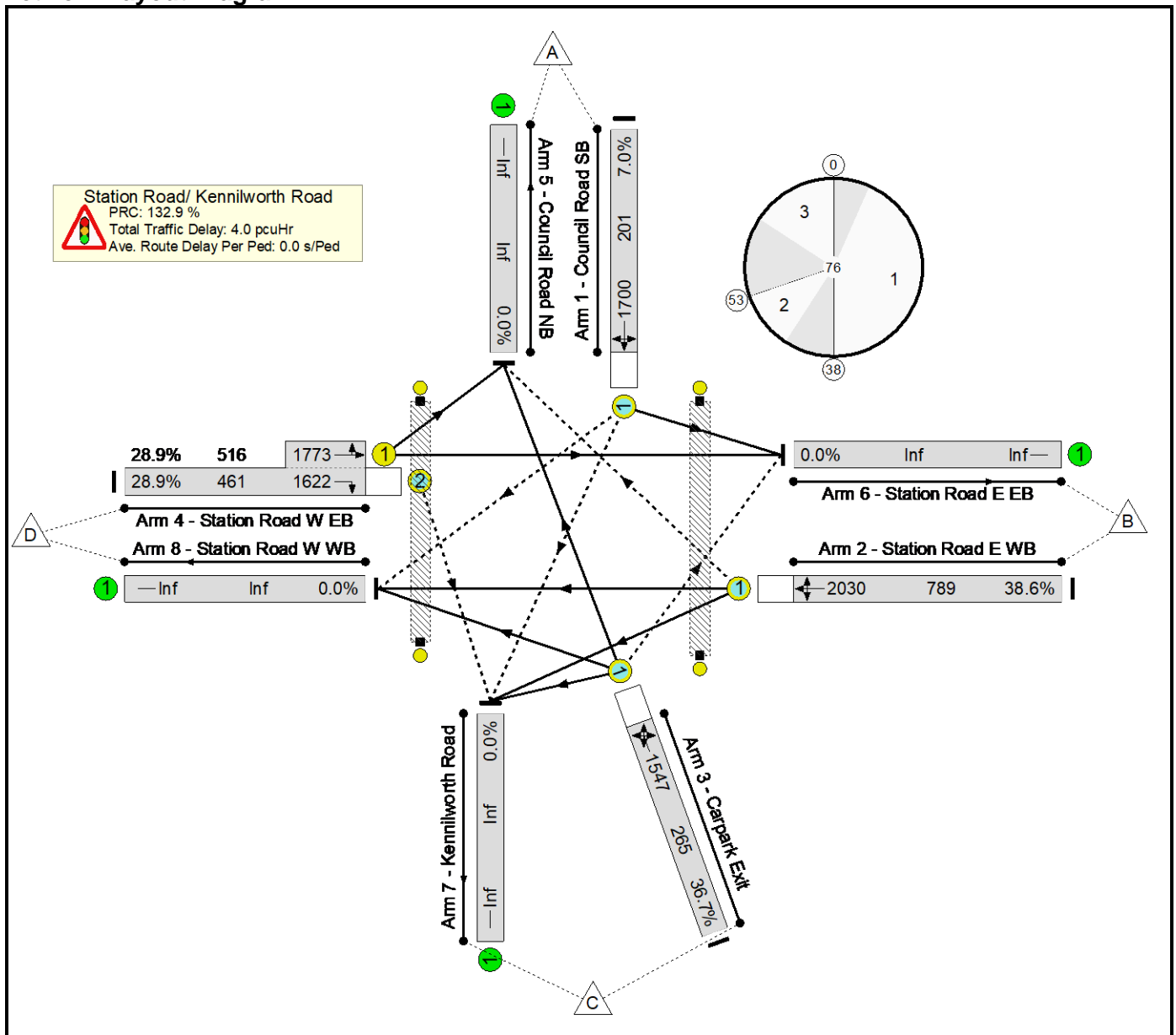
Traffic Flows, Actual  
Actual Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	1	1	1	3
	B	10	0	34	148	192
	C	63	3	0	1	67
	D	38	150	212	0	400
	Tot.	111	154	247	150	662

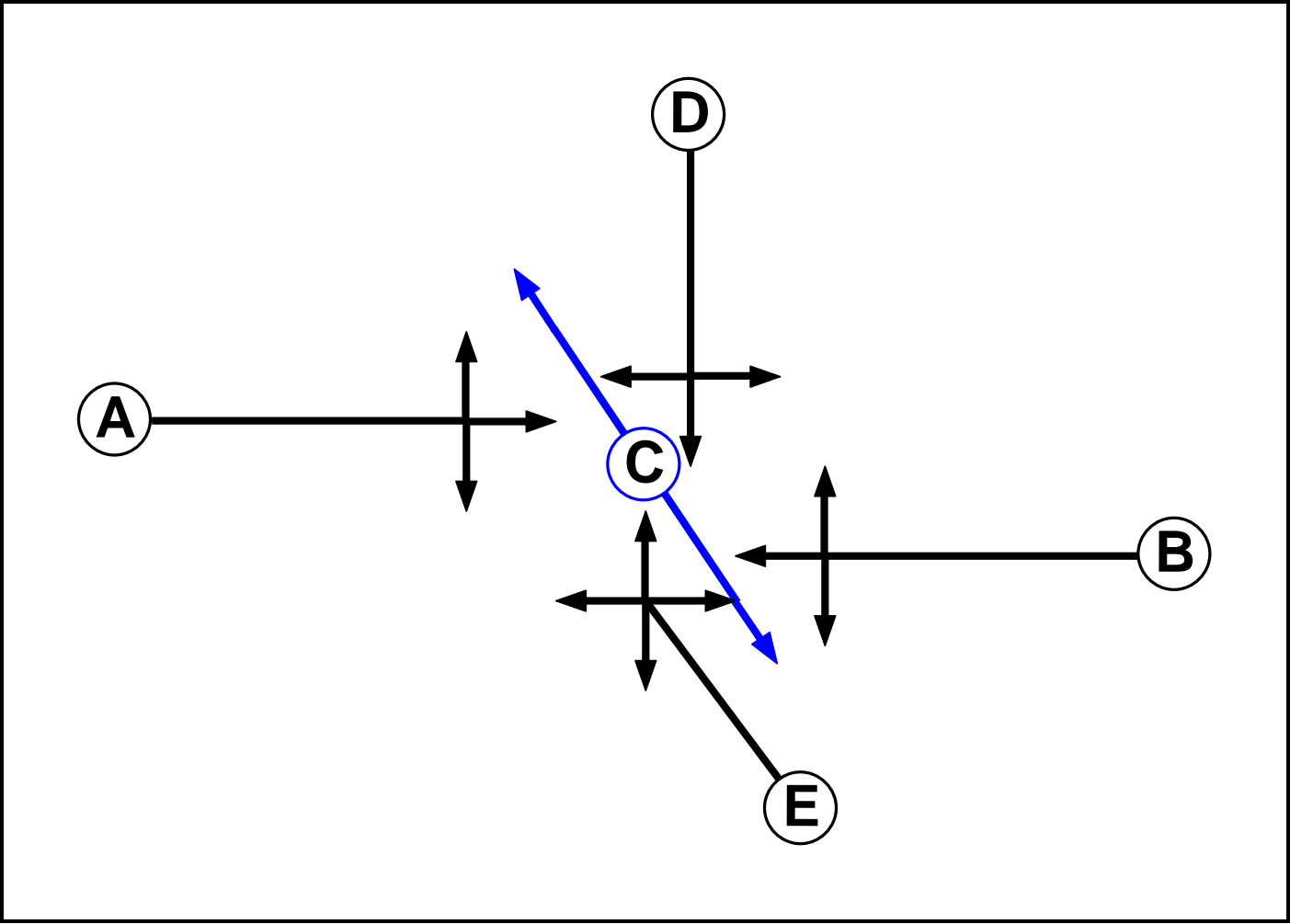
## Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	40.2%	227	0	0	3.3	-	-
Station Road/ Kennilworth Road	-	-	-		-	-	-	-	-	-	40.2%	227	0	0	3.3	-	-
1/1	Council Road SB Left Ahead Right	O	D		1	10	-	3	1625	177	1.7%	2	0	0	0.0	38.6	0.1
2/1	Station Road E WB Right Left Ahead	O	B		1	35	-	192	1991	802	23.9%	10	0	0	0.8	15.4	2.8
3/1	Carpark Exit Ahead Right U-Turn Left	O	E		1	10	-	67	1547	224	29.9%	3	0	0	0.8	40.5	1.5
4/2+4/1	Station Road W EB Left Ahead Right	O+U	A		1	35	-	400	1622:1775	527+468	40.2 : 40.2%	212	0	0	1.7	15.2	3.0
Ped Link: P1	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
C1				PRC for Signalled Lanes (%):				123.8	Total Delay for Signalled Lanes (pcuHr):				3.30	Cycle Time (s): 76			
				PRC Over All Lanes (%):				123.8	Total Delay Over All Lanes(pcuHr):				3.30				

### Network Layout Diagram



Phase Diagram



Traffic Flows, Actual  
Actual Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	2	6	6	14
	B	14	0	21	270	305
	C	95	2	0	0	97
	D	31	118	133	0	282
	Tot.	140	122	160	276	698

## Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	38.6%	160	0	1	4.0	-	-
Station Road/ Kennilworth Road	-	-	-		-	-	-	-	-	-	38.6%	160	0	1	4.0	-	-
1/1	Council Road SB Left Ahead Right	O	D		1	12	-	14	1700	201	7.0%	12	0	0	0.1	36.3	0.3
2/1	Station Road E WB Right Left Ahead	O	B		1	33	-	305	2030	789	38.6%	14	0	0	1.6	19.1	4.9
3/1	Carpark Exit Ahead Right U-Turn Left	O	E		1	12	-	97	1547	265	36.7%	2	0	0	1.0	38.6	2.1
4/2+4/1	Station Road W EB Left Ahead Right	O+U	A		1	33	-	282	1622:1773	461+516	28.9 : 28.9%	133	0	0	1.2	15.6	2.1
Ped Link: P1	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		132.9		132.9		Total Delay for Signalled Lanes (pcuHr):		4.02		Cycle Time (s):		76		
			PRC Over All Lanes (%):						Total Delay Over All Lanes(pcuHr):		4.02						

Junctions 9			
PICADY 9 - Priority Intersection Module			
Version: 9.5.0.6896 © Copyright TRL Limited, 2018			
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**Filename:** Station Road-John Street.j9

**Path:** P:\UKNCL2-TP\PROJECTS\Development - Northumberland Line\Transport\01\_Base Models & GF\02\_JUNCTIONS 9\01 September 2020 Modelling\02 Ashington

**Report generation date:** 13/10/2020 13:58:44

»2019 BY, AM  
 »2019 BY, PM  
 »2039 DM, AM  
 »2039 DM, PM  
 »2039 DS, AM  
 »2039 DS, PM  
 »2039 DS Sensitivity, AM  
 »2039 DS Sensitivity, PM

### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2019 BY								
Stream B-AC	0.6	11.53	0.38	B	0.7	12.50	0.43	B
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A
2039 DM								
Stream B-AC	0.8	13.02	0.44	B	1.0	14.36	0.50	B
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A
2039 DS								
Stream B-AC	1.1	15.40	0.52	C	1.0	14.36	0.50	B
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A
2039 DS Sensitivity								
Stream B-AC	0.8	13.02	0.44	B	1.0	14.36	0.50	B
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A

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



## File summary

### File Description

<b>Title</b>	
<b>Location</b>	
<b>Site number</b>	
<b>Date</b>	28/09/2020
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	NA\paul.kirk
<b>Description</b>	

## Units

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

## Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		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)
D1	2019 BY	AM	ONE HOUR	00:00	01:30	15
D2	2019 BY	PM	ONE HOUR	00:00	01:30	15
D3	2039 DM	AM	ONE HOUR	00:00	01:30	15
D4	2039 DM	PM	ONE HOUR	00:00	01:30	15
D5	2039 DS	AM	ONE HOUR	00:00	01:30	15
D6	2039 DS	PM	ONE HOUR	00:00	01:30	15
D7	2039 DS Sensitivity	AM	ONE HOUR	00:00	01:30	15
D8	2039 DS Sensitivity	PM	ONE HOUR	00:00	01:30	15

## Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

# 2019 BY, 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	untitled	T-Junction	Two-way		6.13	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	Station Road (eastbound)		Major
B	Station Road (westbound)		Minor
C	John Street		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 - John Street	7.00			65.0	✓	0.00

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

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Station Road (westbound)	One lane	2.73	17	90

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	513	0.089	0.226	0.142	0.323
1	B-C	662	0.097	0.245	-	-
1	C-B	612	0.227	0.227	-	-

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)
D1	2019 BY	AM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Station Road (eastbound)		✓	112	100.000
B - Station Road (westbound)		✓	175	100.000
C - John Street		✓	42	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Station Road (eastbound)	B - Station Road (westbound)	C - John Street
From	A - Station Road (eastbound)	0	0	112
	B - Station Road (westbound)	131	0	44
	C - John Street	42	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
		A - Station Road (eastbound)	B - Station Road (westbound)	C - John Street
From	A - Station Road (eastbound)	0	0	29
	B - Station Road (westbound)	2	0	0
	C - John Street	5	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.38	11.53	0.6	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	132	520	0.253	130	0.3	9.337	A
C-AB	0	592	0.000	0	0.0	0.000	A
C-A	32			32			
A-B	0			0			
A-C	84			84			

**00:15 - 00:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	157	516	0.305	157	0.4	10.169	B
C-AB	0	589	0.000	0	0.0	0.000	A
C-A	38			38			
A-B	0			0			
A-C	101			101			

**00:30 - 00:45**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	193	510	0.378	192	0.6	11.480	B
C-AB	0	584	0.000	0	0.0	0.000	A
C-A	46			46			
A-B	0			0			
A-C	123			123			

**00:45 - 01:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	193	510	0.378	193	0.6	11.527	B
C-AB	0	584	0.000	0	0.0	0.000	A
C-A	46			46			
A-B	0			0			
A-C	123			123			

**01:00 - 01:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	157	516	0.305	158	0.5	10.229	B
C-AB	0	589	0.000	0	0.0	0.000	A
C-A	38			38			
A-B	0			0			
A-C	101			101			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	132	520	0.253	132	0.3	9.422	A
C-AB	0	592	0.000	0	0.0	0.000	A
C-A	32			32			
A-B	0			0			
A-C	84			84			

# 2019 BY, 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	untitled	T-Junction	Two-way		6.35	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2019 BY	PM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Station Road (eastbound)		✓	90	100.000
B - Station Road (westbound)		✓	195	100.000
C - John Street		✓	99	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Station Road (eastbound)	B - Station Road (westbound)	C - John Street
From	A - Station Road (eastbound)	0	0	90
	B - Station Road (westbound)	153	0	42
	C - John Street	99	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
		A - Station Road (eastbound)	B - Station Road (westbound)	C - John Street
From	A - Station Road (eastbound)	0	0	1
	B - Station Road (westbound)	0	0	0
	C - John Street	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.43	12.50	0.7	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	147	514	0.286	145	0.4	9.719	A
C-AB	0	596	0.000	0	0.0	0.000	A
C-A	75			75			
A-B	0			0			
A-C	68			68			

#### 00:15 - 00:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	175	509	0.344	175	0.5	10.745	B
C-AB	0	593	0.000	0	0.0	0.000	A
C-A	89			89			
A-B	0			0			
A-C	81			81			

#### 00:30 - 00:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	215	503	0.427	214	0.7	12.429	B
C-AB	0	589	0.000	0	0.0	0.000	A
C-A	109			109			
A-B	0			0			
A-C	99			99			

#### 00:45 - 01:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	215	503	0.427	215	0.7	12.497	B
C-AB	0	589	0.000	0	0.0	0.000	A
C-A	109			109			
A-B	0			0			
A-C	99			99			

**01:00 - 01:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	175	509	0.344	176	0.5	10.830	B
C-AB	0	593	0.000	0	0.0	0.000	A
C-A	89			89			
A-B	0			0			
A-C	81			81			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	147	514	0.286	147	0.4	9.829	A
C-AB	0	596	0.000	0	0.0	0.000	A
C-A	75			75			
A-B	0			0			
A-C	68			68			

# 2039 DM, 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	untitled	T-Junction	Two-way		6.92	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2039 DM	AM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Station Road (eastbound)		✓	130	100.000
B - Station Road (westbound)		✓	203	100.000
C - John Street		✓	49	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Station Road (eastbound)	B - Station Road (westbound)	C - John Street
From	A - Station Road (eastbound)	0	0	130
	B - Station Road (westbound)	152	0	51
	C - John Street	49	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
		A - Station Road (eastbound)	B - Station Road (westbound)	C - John Street
From	A - Station Road (eastbound)	0	0	29
	B - Station Road (westbound)	2	0	0
	C - John Street	5	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.44	13.02	0.8	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	153	517	0.296	151	0.4	9.954	A
C-AB	0	589	0.000	0	0.0	0.000	A
C-A	37			37			
A-B	0			0			
A-C	98			98			

#### 00:15 - 00:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	182	511	0.357	182	0.6	11.075	B
C-AB	0	585	0.000	0	0.0	0.000	A
C-A	44			44			
A-B	0			0			
A-C	117			117			

#### 00:30 - 00:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	224	504	0.443	223	0.8	12.936	B
C-AB	0	579	0.000	0	0.0	0.000	A
C-A	54			54			
A-B	0			0			
A-C	143			143			

#### 00:45 - 01:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	224	504	0.443	223	0.8	13.020	B
C-AB	0	579	0.000	0	0.0	0.000	A
C-A	54			54			
A-B	0			0			
A-C	143			143			

**01:00 - 01:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	182	511	0.357	183	0.6	11.173	B
C-AB	0	585	0.000	0	0.0	0.000	A
C-A	44			44			
A-B	0			0			
A-C	117			117			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	153	517	0.296	153	0.4	10.078	B
C-AB	0	589	0.000	0	0.0	0.000	A
C-A	37			37			
A-B	0			0			
A-C	98			98			

# 2039 DM, 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	untitled	T-Junction	Two-way		7.29	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)
D4	2039 DM	PM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Station Road (eastbound)		✓	103	100.000
B - Station Road (westbound)		✓	224	100.000
C - John Street		✓	114	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Station Road (eastbound)	B - Station Road (westbound)	C - John Street
From	A - Station Road (eastbound)	0	0	103
	B - Station Road (westbound)	176	0	48
	C - John Street	114	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
		A - Station Road (eastbound)	B - Station Road (westbound)	C - John Street
From	A - Station Road (eastbound)	0	0	1
	B - Station Road (westbound)	0	0	0
	C - John Street	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.50	14.36	1.0	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	169	510	0.330	167	0.5	10.419	B
C-AB	0	594	0.000	0	0.0	0.000	A
C-A	86			86			
A-B	0			0			
A-C	78			78			

#### 00:15 - 00:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	201	505	0.399	201	0.7	11.813	B
C-AB	0	591	0.000	0	0.0	0.000	A
C-A	102			102			
A-B	0			0			
A-C	93			93			

#### 00:30 - 00:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	247	497	0.496	245	1.0	14.231	B
C-AB	0	586	0.000	0	0.0	0.000	A
C-A	126			126			
A-B	0			0			
A-C	113			113			

#### 00:45 - 01:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	247	497	0.496	247	1.0	14.360	B
C-AB	0	586	0.000	0	0.0	0.000	A
C-A	126			126			
A-B	0			0			
A-C	113			113			

**01:00 - 01:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	201	505	0.399	203	0.7	11.958	B
C-AB	0	591	0.000	0	0.0	0.000	A
C-A	102			102			
A-B	0			0			
A-C	93			93			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	169	510	0.330	169	0.5	10.580	B
C-AB	0	594	0.000	0	0.0	0.000	A
C-A	86			86			
A-B	0			0			
A-C	78			78			

# 2039 DS, 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	untitled	T-Junction	Two-way		8.79	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2039 DS	AM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Station Road (eastbound)		✓	130	100.000
B - Station Road (westbound)		✓	238	100.000
C - John Street		✓	49	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Station Road (eastbound)	B - Station Road (westbound)	C - John Street
From	A - Station Road (eastbound)	0	0	130
	B - Station Road (westbound)	187	0	51
	C - John Street	49	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
		A - Station Road (eastbound)	B - Station Road (westbound)	C - John Street
From	A - Station Road (eastbound)	0	0	29
	B - Station Road (westbound)	2	0	0
	C - John Street	5	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.52	15.40	1.1	C
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	179	512	0.350	177	0.5	10.856	B
C-AB	0	589	0.000	0	0.0	0.000	A
C-A	37			37			
A-B	0			0			
A-C	98			98			

#### 00:15 - 00:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	214	506	0.422	213	0.7	12.433	B
C-AB	0	585	0.000	0	0.0	0.000	A
C-A	44			44			
A-B	0			0			
A-C	117			117			

#### 00:30 - 00:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	262	499	0.525	261	1.1	15.230	C
C-AB	0	579	0.000	0	0.0	0.000	A
C-A	54			54			
A-B	0			0			
A-C	143			143			

#### 00:45 - 01:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	262	499	0.525	262	1.1	15.403	C
C-AB	0	579	0.000	0	0.0	0.000	A
C-A	54			54			
A-B	0			0			
A-C	143			143			

**01:00 - 01:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	214	506	0.422	215	0.8	12.620	B
C-AB	0	585	0.000	0	0.0	0.000	A
C-A	44			44			
A-B	0			0			
A-C	117			117			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	179	512	0.350	180	0.6	11.048	B
C-AB	0	589	0.000	0	0.0	0.000	A
C-A	37			37			
A-B	0			0			
A-C	98			98			



# 2039 DS, 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	untitled	T-Junction	Two-way		7.29	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)
D6	2039 DS	PM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Station Road (eastbound)		✓	103	100.000
B - Station Road (westbound)		✓	224	100.000
C - John Street		✓	114	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Station Road (eastbound)	B - Station Road (westbound)	C - John Street
From	A - Station Road (eastbound)	0	0	103
	B - Station Road (westbound)	176	0	48
	C - John Street	114	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
		A - Station Road (eastbound)	B - Station Road (westbound)	C - John Street
From	A - Station Road (eastbound)	0	0	1
	B - Station Road (westbound)	0	0	0
	C - John Street	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.50	14.36	1.0	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	169	510	0.330	167	0.5	10.419	B
C-AB	0	594	0.000	0	0.0	0.000	A
C-A	86			86			
A-B	0			0			
A-C	78			78			

#### 00:15 - 00:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	201	505	0.399	201	0.7	11.813	B
C-AB	0	591	0.000	0	0.0	0.000	A
C-A	102			102			
A-B	0			0			
A-C	93			93			

#### 00:30 - 00:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	247	497	0.496	245	1.0	14.231	B
C-AB	0	586	0.000	0	0.0	0.000	A
C-A	126			126			
A-B	0			0			
A-C	113			113			

#### 00:45 - 01:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	247	497	0.496	247	1.0	14.360	B
C-AB	0	586	0.000	0	0.0	0.000	A
C-A	126			126			
A-B	0			0			
A-C	113			113			

**01:00 - 01:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	201	505	0.399	203	0.7	11.958	B
C-AB	0	591	0.000	0	0.0	0.000	A
C-A	102			102			
A-B	0			0			
A-C	93			93			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	169	510	0.330	169	0.5	10.580	B
C-AB	0	594	0.000	0	0.0	0.000	A
C-A	86			86			
A-B	0			0			
A-C	78			78			

# 2039 DS Sensitivity, 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	untitled	T-Junction	Two-way		6.92	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2039 DS Sensitivity	AM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Station Road (eastbound)		✓	130	100.000
B - Station Road (westbound)		✓	203	100.000
C - John Street		✓	49	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Station Road (eastbound)	B - Station Road (westbound)	C - John Street
From	A - Station Road (eastbound)	0	0	130
	B - Station Road (westbound)	152	0	51
	C - John Street	49	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
		A - Station Road (eastbound)	B - Station Road (westbound)	C - John Street
From	A - Station Road (eastbound)	0	0	29
	B - Station Road (westbound)	2	0	0
	C - John Street	5	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.44	13.02	0.8	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	153	517	0.296	151	0.4	9.954	A
C-AB	0	589	0.000	0	0.0	0.000	A
C-A	37			37			
A-B	0			0			
A-C	98			98			

#### 00:15 - 00:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	182	511	0.357	182	0.6	11.075	B
C-AB	0	585	0.000	0	0.0	0.000	A
C-A	44			44			
A-B	0			0			
A-C	117			117			

#### 00:30 - 00:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	224	504	0.443	223	0.8	12.936	B
C-AB	0	579	0.000	0	0.0	0.000	A
C-A	54			54			
A-B	0			0			
A-C	143			143			

#### 00:45 - 01:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	224	504	0.443	223	0.8	13.020	B
C-AB	0	579	0.000	0	0.0	0.000	A
C-A	54			54			
A-B	0			0			
A-C	143			143			

**01:00 - 01:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	182	511	0.357	183	0.6	11.173	B
C-AB	0	585	0.000	0	0.0	0.000	A
C-A	44			44			
A-B	0			0			
A-C	117			117			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	153	517	0.296	153	0.4	10.078	B
C-AB	0	589	0.000	0	0.0	0.000	A
C-A	37			37			
A-B	0			0			
A-C	98			98			

# 2039 DS Sensitivity, 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	untitled	T-Junction	Two-way		7.29	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)
D8	2039 DS Sensitivity	PM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Station Road (eastbound)		✓	103	100.000
B - Station Road (westbound)		✓	224	100.000
C - John Street		✓	114	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Station Road (eastbound)	B - Station Road (westbound)	C - John Street
From	A - Station Road (eastbound)	0	0	103
	B - Station Road (westbound)	176	0	48
	C - John Street	114	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
		A - Station Road (eastbound)	B - Station Road (westbound)	C - John Street
From	A - Station Road (eastbound)	0	0	1
	B - Station Road (westbound)	0	0	0
	C - John Street	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.50	14.36	1.0	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	169	510	0.330	167	0.5	10.419	B
C-AB	0	594	0.000	0	0.0	0.000	A
C-A	86			86			
A-B	0			0			
A-C	78			78			

#### 00:15 - 00:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	201	505	0.399	201	0.7	11.813	B
C-AB	0	591	0.000	0	0.0	0.000	A
C-A	102			102			
A-B	0			0			
A-C	93			93			

#### 00:30 - 00:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	247	497	0.496	245	1.0	14.231	B
C-AB	0	586	0.000	0	0.0	0.000	A
C-A	126			126			
A-B	0			0			
A-C	113			113			

#### 00:45 - 01:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	247	497	0.496	247	1.0	14.360	B
C-AB	0	586	0.000	0	0.0	0.000	A
C-A	126			126			
A-B	0			0			
A-C	113			113			



**01:00 - 01:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	201	505	0.399	203	0.7	11.958	B
C-AB	0	591	0.000	0	0.0	0.000	A
C-A	102			102			
A-B	0			0			
A-C	93			93			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	169	510	0.330	169	0.5	10.580	B
C-AB	0	594	0.000	0	0.0	0.000	A
C-A	86			86			
A-B	0			0			
A-C	78			78			

Junctions 9			
PICADY 9 - Priority Intersection Module			
Version: 9.5.0.6896 © Copyright TRL Limited, 2018			
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**Filename:** Station Road-John Street-Local Road.j9

**Path:** P:\UKNCL2-TP\PROJECTS\Development - Northumberland Line\Transport\01\_Base Models & GF\02\_JUNCTIONS 9\01

September 2020 Modelling\02 Ashington

**Report generation date:** 13/10/2020 14:10:58

- »2019 BY, AM
- »2019 BY, PM
- »2039 DM, AM
- »2039 DM, PM
- »2039 DS, AM
- »2039 DS, PM
- »2039 DS Sensitivity, AM
- »2039 DS Sensitivity, PM

#### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2019 BY								
Stream B-AC	0.0	8.11	0.02	A	0.1	8.32	0.06	A
Stream C-AB	0.0	5.53	0.03	A	0.0	5.07	0.02	A
2039 DM								
Stream B-AC	0.0	8.28	0.02	A	0.1	8.56	0.07	A
Stream C-AB	0.0	5.48	0.03	A	0.0	4.97	0.02	A
2039 DS								
Stream B-AC	0.0	8.34	0.02	A	0.1	8.56	0.07	A
Stream C-AB	0.0	5.36	0.03	A	0.0	4.97	0.02	A
2039 DS Sensitivity								
Stream B-AC	0.0	8.28	0.02	A	0.1	8.56	0.07	A
Stream C-AB	0.0	5.48	0.03	A	0.0	4.97	0.02	A

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

## File summary

### File Description

<b>Title</b>	
<b>Location</b>	
<b>Site number</b>	
<b>Date</b>	28/09/2020
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	NA\paul.kirk
<b>Description</b>	

## Units

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

## Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		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)
D1	2019 BY	AM	ONE HOUR	00:00	01:30	15
D2	2019 BY	PM	ONE HOUR	00:00	01:30	15
D3	2039 DM	AM	ONE HOUR	00:00	01:30	15
D4	2039 DM	PM	ONE HOUR	00:00	01:30	15
D5	2039 DS	AM	ONE HOUR	00:00	01:30	15
D6	2039 DS	PM	ONE HOUR	00:00	01:30	15
D7	2039 DS Sensitivity	AM	ONE HOUR	00:00	01:30	15
D8	2039 DS Sensitivity	PM	ONE HOUR	00:00	01:30	15

## Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

# 2019 BY, 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	untitled	T-Junction	Two-way		0.50	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	Station Road		Major
B	Local Road		Minor
C	John Street		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 - John Street	7.00			65.0	✓	0.00

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

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Local Road	One lane	2.80	67	17

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	497	0.087	0.219	0.138	0.313
1	B-C	622	0.091	0.230	-	-
1	C-B	612	0.227	0.227	-	-

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)
D1	2019 BY	AM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Station Road		✓	133	100.000
B - Local Road		✓	9	100.000
C - John Street		✓	173	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Station Road	B - Local Road	C - John Street
From	A - Station Road	0	25	108
	B - Local Road	5	0	4
	C - John Street	161	12	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
		A - Station Road	B - Local Road	C - John Street
From	A - Station Road	0	8	4
	B - Local Road	0	0	25
	C - John Street	7	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.02	8.11	0.0	A
C-AB	0.03	5.53	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	7	513	0.013	7	0.0	7.809	A
C-AB	11	670	0.016	11	0.0	5.523	A
C-A	119			119			
A-B	19			19			
A-C	81			81			

**00:15 - 00:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	506	0.016	8	0.0	7.934	A
C-AB	14	682	0.020	14	0.0	5.455	A
C-A	142			142			
A-B	22			22			
A-C	97			97			

**00:30 - 00:45**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	497	0.020	10	0.0	8.112	A
C-AB	18	699	0.025	18	0.0	5.368	A
C-A	173			173			
A-B	28			28			
A-C	119			119			

**00:45 - 01:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	497	0.020	10	0.0	8.112	A
C-AB	18	699	0.025	18	0.0	5.377	A
C-A	173			173			
A-B	28			28			
A-C	119			119			

**01:00 - 01:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	506	0.016	8	0.0	7.935	A
C-AB	14	682	0.020	14	0.0	5.472	A
C-A	142			142			
A-B	22			22			
A-C	97			97			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	7	513	0.013	7	0.0	7.812	A
C-AB	11	670	0.016	11	0.0	5.533	A
C-A	119			119			
A-B	19			19			
A-C	81			81			

# 2019 BY, 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	untitled	T-Junction	Two-way		0.68	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)
D2	2019 BY	PM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Station Road		✓	107	100.000
B - Local Road		✓	25	100.000
C - John Street		✓	252	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Station Road	B - Local Road	C - John Street
From	A - Station Road	0	22	85
	B - Local Road	20	0	5
	C - John Street	245	7	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
		A - Station Road	B - Local Road	C - John Street
From	A - Station Road	0	0	1
	B - Local Road	0	0	0
	C - John Street	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.06	8.32	0.1	A
C-AB	0.02	5.07	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	479	0.039	19	0.0	7.823	A
C-AB	7	717	0.010	7	0.0	5.070	A
C-A	183			183			
A-B	17			17			
A-C	64			64			

#### 00:15 - 00:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	471	0.048	22	0.0	8.026	A
C-AB	9	738	0.012	9	0.0	4.938	A
C-A	218			218			
A-B	20			20			
A-C	76			76			

#### 00:30 - 00:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	460	0.060	27	0.1	8.317	A
C-AB	12	767	0.016	12	0.0	4.767	A
C-A	266			266			
A-B	24			24			
A-C	94			94			

#### 00:45 - 01:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	460	0.060	28	0.1	8.319	A
C-AB	12	767	0.016	12	0.0	4.769	A
C-A	266			266			
A-B	24			24			
A-C	94			94			



**01:00 - 01:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	471	0.048	23	0.1	8.028	A
C-AB	9	738	0.012	9	0.0	4.938	A
C-A	218			218			
A-B	20			20			
A-C	76			76			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	479	0.039	19	0.0	7.831	A
C-AB	7	717	0.010	7	0.0	5.072	A
C-A	183			183			
A-B	17			17			
A-C	64			64			

# 2039 DM, 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	untitled	T-Junction	Two-way		0.53	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2039 DM	AM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Station Road		✓	154	100.000
B - Local Road		✓	11	100.000
C - John Street		✓	201	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Station Road	B - Local Road	C - John Street
From	A - Station Road	0	29	125
	B - Local Road	6	0	5
	C - John Street	187	14	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
		A - Station Road	B - Local Road	C - John Street
From	A - Station Road	0	8	4
	B - Local Road	0	0	25
	C - John Street	7	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.02	8.28	0.0	A
C-AB	0.03	5.48	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	509	0.016	8	0.0	7.912	A
C-AB	13	680	0.020	13	0.0	5.470	A
C-A	138			138			
A-B	22			22			
A-C	94			94			

#### 00:15 - 00:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	501	0.020	10	0.0	8.062	A
C-AB	17	694	0.024	17	0.0	5.392	A
C-A	164			164			
A-B	26			26			
A-C	112			112			

#### 00:30 - 00:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	490	0.025	12	0.0	8.277	A
C-AB	22	714	0.030	22	0.0	5.296	A
C-A	200			200			
A-B	32			32			
A-C	138			138			

#### 00:45 - 01:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	490	0.025	12	0.0	8.278	A
C-AB	22	714	0.030	22	0.0	5.304	A
C-A	200			200			
A-B	32			32			
A-C	138			138			

**01:00 - 01:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	501	0.020	10	0.0	8.065	A
C-AB	17	694	0.024	17	0.0	5.409	A
C-A	164			164			
A-B	26			26			
A-C	112			112			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	509	0.016	8	0.0	7.915	A
C-AB	13	680	0.020	13	0.0	5.481	A
C-A	138			138			
A-B	22			22			
A-C	94			94			

# 2039 DM, 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	untitled	T-Junction	Two-way		0.70	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2039 DM	PM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Station Road		✓	123	100.000
B - Local Road		✓	29	100.000
C - John Street		✓	290	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Station Road	B - Local Road	C - John Street
From	A - Station Road	0	25	98
	B - Local Road	23	0	6
	C - John Street	282	8	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
		A - Station Road	B - Local Road	C - John Street
From	A - Station Road	0	0	1
	B - Local Road	0	0	0
	C - John Street	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.07	8.56	0.1	A
C-AB	0.02	4.97	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	474	0.046	22	0.0	7.962	A
C-AB	8	733	0.012	8	0.0	4.966	A
C-A	210			210			
A-B	19			19			
A-C	74			74			

#### 00:15 - 00:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	465	0.056	26	0.1	8.205	A
C-AB	11	757	0.014	11	0.0	4.821	A
C-A	250			250			
A-B	22			22			
A-C	88			88			

#### 00:30 - 00:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	452	0.071	32	0.1	8.560	A
C-AB	15	791	0.018	15	0.0	4.634	A
C-A	305			305			
A-B	28			28			
A-C	108			108			

#### 00:45 - 01:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	452	0.071	32	0.1	8.562	A
C-AB	15	791	0.018	15	0.0	4.634	A
C-A	305			305			
A-B	28			28			
A-C	108			108			

**01:00 - 01:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	465	0.056	26	0.1	8.211	A
C-AB	11	757	0.014	11	0.0	4.821	A
C-A	250			250			
A-B	22			22			
A-C	88			88			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	474	0.046	22	0.0	7.970	A
C-AB	8	733	0.012	9	0.0	4.968	A
C-A	210			210			
A-B	19			19			
A-C	74			74			

# 2039 DS, 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	untitled	T-Junction	Two-way		0.49	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2039 DS	AM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Station Road		✓	154	100.000
B - Local Road		✓	11	100.000
C - John Street		✓	236	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Station Road	B - Local Road	C - John Street
From	A - Station Road	0	29	125
	B - Local Road	6	0	5
	C - John Street	222	14	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
		A - Station Road	B - Local Road	C - John Street
From	A - Station Road	0	8	4
	B - Local Road	0	0	25
	C - John Street	7	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.02	8.34	0.0	A
C-AB	0.03	5.36	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	506	0.016	8	0.0	7.952	A
C-AB	14	698	0.020	14	0.0	5.344	A
C-A	164			164			
A-B	22			22			
A-C	94			94			

#### 00:15 - 00:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	498	0.020	10	0.0	8.112	A
C-AB	17	715	0.024	17	0.0	5.246	A
C-A	195			195			
A-B	26			26			
A-C	112			112			

#### 00:30 - 00:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	487	0.025	12	0.0	8.343	A
C-AB	23	740	0.031	23	0.0	5.125	A
C-A	237			237			
A-B	32			32			
A-C	138			138			

#### 00:45 - 01:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	487	0.025	12	0.0	8.343	A
C-AB	23	740	0.031	23	0.0	5.136	A
C-A	237			237			
A-B	32			32			
A-C	138			138			

**01:00 - 01:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	498	0.020	10	0.0	8.115	A
C-AB	17	716	0.024	18	0.0	5.264	A
C-A	195			195			
A-B	26			26			
A-C	112			112			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	506	0.016	8	0.0	7.955	A
C-AB	14	698	0.020	14	0.0	5.355	A
C-A	164			164			
A-B	22			22			
A-C	94			94			

# 2039 DS, 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	untitled	T-Junction	Two-way		0.70	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2039 DS	PM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Station Road		✓	123	100.000
B - Local Road		✓	29	100.000
C - John Street		✓	290	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Station Road	B - Local Road	C - John Street
From	A - Station Road	0	25	98
	B - Local Road	23	0	6
	C - John Street	282	8	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
		A - Station Road	B - Local Road	C - John Street
From	A - Station Road	0	0	1
	B - Local Road	0	0	0
	C - John Street	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.07	8.56	0.1	A
C-AB	0.02	4.97	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	474	0.046	22	0.0	7.962	A
C-AB	8	733	0.012	8	0.0	4.966	A
C-A	210			210			
A-B	19			19			
A-C	74			74			

#### 00:15 - 00:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	465	0.056	26	0.1	8.205	A
C-AB	11	757	0.014	11	0.0	4.821	A
C-A	250			250			
A-B	22			22			
A-C	88			88			

#### 00:30 - 00:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	452	0.071	32	0.1	8.560	A
C-AB	15	791	0.018	15	0.0	4.634	A
C-A	305			305			
A-B	28			28			
A-C	108			108			

#### 00:45 - 01:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	452	0.071	32	0.1	8.562	A
C-AB	15	791	0.018	15	0.0	4.634	A
C-A	305			305			
A-B	28			28			
A-C	108			108			

**01:00 - 01:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	465	0.056	26	0.1	8.211	A
C-AB	11	757	0.014	11	0.0	4.821	A
C-A	250			250			
A-B	22			22			
A-C	88			88			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	474	0.046	22	0.0	7.970	A
C-AB	8	733	0.012	9	0.0	4.968	A
C-A	210			210			
A-B	19			19			
A-C	74			74			

# 2039 DS Sensitivity, 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	untitled	T-Junction	Two-way		0.53	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2039 DS Sensitivity	AM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Station Road		✓	154	100.000
B - Local Road		✓	11	100.000
C - John Street		✓	201	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Station Road	B - Local Road	C - John Street
From	A - Station Road	0	29	125
	B - Local Road	6	0	5
	C - John Street	187	14	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
		A - Station Road	B - Local Road	C - John Street
From	A - Station Road	0	8	4
	B - Local Road	0	0	25
	C - John Street	7	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.02	8.28	0.0	A
C-AB	0.03	5.48	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	509	0.016	8	0.0	7.912	A
C-AB	13	680	0.020	13	0.0	5.470	A
C-A	138			138			
A-B	22			22			
A-C	94			94			

#### 00:15 - 00:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	501	0.020	10	0.0	8.062	A
C-AB	17	694	0.024	17	0.0	5.392	A
C-A	164			164			
A-B	26			26			
A-C	112			112			

#### 00:30 - 00:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	490	0.025	12	0.0	8.277	A
C-AB	22	714	0.030	22	0.0	5.296	A
C-A	200			200			
A-B	32			32			
A-C	138			138			

#### 00:45 - 01:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	490	0.025	12	0.0	8.278	A
C-AB	22	714	0.030	22	0.0	5.304	A
C-A	200			200			
A-B	32			32			
A-C	138			138			

**01:00 - 01:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	501	0.020	10	0.0	8.065	A
C-AB	17	694	0.024	17	0.0	5.409	A
C-A	164			164			
A-B	26			26			
A-C	112			112			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	509	0.016	8	0.0	7.915	A
C-AB	13	680	0.020	13	0.0	5.481	A
C-A	138			138			
A-B	22			22			
A-C	94			94			



# 2039 DS Sensitivity, 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	untitled	T-Junction	Two-way		0.70	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2039 DS Sensitivity	PM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Station Road		✓	123	100.000
B - Local Road		✓	29	100.000
C - John Street		✓	290	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
		A - Station Road	B - Local Road	C - John Street
From	A - Station Road	0	25	98
	B - Local Road	23	0	6
	C - John Street	282	8	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
		A - Station Road	B - Local Road	C - John Street
From	A - Station Road	0	0	1
	B - Local Road	0	0	0
	C - John Street	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.07	8.56	0.1	A
C-AB	0.02	4.97	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 00:00 - 00:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	474	0.046	22	0.0	7.962	A
C-AB	8	733	0.012	8	0.0	4.966	A
C-A	210			210			
A-B	19			19			
A-C	74			74			

#### 00:15 - 00:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	465	0.056	26	0.1	8.205	A
C-AB	11	757	0.014	11	0.0	4.821	A
C-A	250			250			
A-B	22			22			
A-C	88			88			

#### 00:30 - 00:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	452	0.071	32	0.1	8.560	A
C-AB	15	791	0.018	15	0.0	4.634	A
C-A	305			305			
A-B	28			28			
A-C	108			108			

#### 00:45 - 01:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	452	0.071	32	0.1	8.562	A
C-AB	15	791	0.018	15	0.0	4.634	A
C-A	305			305			
A-B	28			28			
A-C	108			108			

**01:00 - 01:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	465	0.056	26	0.1	8.211	A
C-AB	11	757	0.014	11	0.0	4.821	A
C-A	250			250			
A-B	22			22			
A-C	88			88			

**01:15 - 01:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	474	0.046	22	0.0	7.970	A
C-AB	8	733	0.012	9	0.0	4.968	A
C-A	210			210			
A-B	19			19			
A-C	74			74			

# Appendix H PIC Data

# Slight Accident

*Involving 2 Vehicle, 2 Casualties*

**P459715**

<b>Location</b>	Wansbeck U 6510 427217E, 587471N	<b>Date/Time</b>	Saturday 08 August 2015 14:40
<b>Road</b>	Single Carriageway 30	<b>Junction</b>	Crossroads Give way or uncontrolled U 6510
<b>Conditions</b>	Daylight - Street Lights Present Fine without high winds Dry None None  None within 50 metres No physical crossing facility within 50 metres	<b>Contributory</b>	Failed to look properly (B)

## Vehicle 1

<b>Driver</b>	Female, 35 Not provided (medical reasons) Postcode: NE63 8EJ Not known	<b>Vehicle</b>	Car No tow or articulation
<b>Collisions</b>	Hit vehicle 2  Front None None	<b>Location</b>	On main carriageway - not in restricted lane  Cleared junction or waiting/parked at junction exit
		<b>Movement</b>	Vehicle moving from North to South Going ahead other Overturned Did not leave carriageway

## Casualty 1 - Slight

Driver or rider		Not a car passenger
Female	35	Not a bus or coach passenger
NE63 8EJ		

## Casualty 2 - Slight

Pedestrian		On footway or verge
Female	81	Walking along in carriageway - facing traffic
NE63 8AS		North

## Vehicle 2

<b>Driver</b>	Male, 27 Not requested Postcode: NE63 8AS Other	<b>Vehicle</b>	Car No tow or articulation
<b>Collisions</b>	Hit vehicle 1  Front None None	<b>Location</b>	On main carriageway - not in restricted lane  Approaching junction or waiting/parked at junction exit
		<b>Movement</b>	Vehicle was Parked Parked No skidding, jack-knifing or overturning Left carriageway offside

***Description  
of Location***

KENILWORTH ROAD J/W ASHBOURNE CRESCENT ASHINGTON

***Description  
of Accident***

V2 PARKED FACING N ON EAST SIDE OF KENILWORTH RD, V1 TRAV. S ON KENILWORTH RD, FOR REASONS TO BE ESTABLISHED THE F/N/S OF V1 COLLIDES WITH F/N/S OF V2 PUSHING V2 BACKWARDS ONTO FOOTHPATH CAUSING PED. WALKING N ON FOOTPATH TO FALL TO THE GROUND

# Slight Accident

## Involving 2 Vehicle, 1 Casualty

**P476015**

<b>Location</b>	Wansbeck C 399 427298E, 587761N	<b>Date/Time</b>	Monday 10 August 2015 20:20
<b>Road</b>	Single Carriageway 30	<b>Junction</b>	Not at or within 20 metres of junction
<b>Conditions</b>	Daylight - Street Lights Present Fine without high winds Dry None None  None within 50 metres No physical crossing facility within 50 metres	<b>Contributory</b>	Careless, reckless or in a hurry (A)

## Vehicle 1

<b>Driver</b>	Male, Driver not contacted at time of accident Postcode: NE63 8PY Journey as part of work	<b>Vehicle</b>	Car No tow or articulation
<b>Collisions</b>	Hit vehicle 2  Back None None	<b>Location</b>	On main carriageway - not in restricted lane  Not at, or within 20 metres of junction
		<b>Movement</b>	Vehicle moving from West to East Reversing No skidding, jack-knifing or overturning Did not leave carriageway

## Vehicle 2

<b>Driver</b>	Female, 53 Driver not contacted at time of accident Postcode: NE63 0QQ Other	<b>Vehicle</b>	Car No tow or articulation
<b>Collisions</b>	Hit vehicle 1  Back None None	<b>Location</b>	On main carriageway - not in restricted lane  Not at, or within 20 metres of junction
		<b>Movement</b>	Vehicle was Parked Parked No skidding, jack-knifing or overturning Did not leave carriageway

## Casualty 1 - Slight

Driver or rider		Not a car passenger
Female	53	Not a bus or coach passenger
NE63 0QQ		

***Description  
of Location***

STATION ROAD O/S WANSBECK SQ, ASHINGTON

***Description  
of Accident***

V2 PARKED ON STATION RD, FACING W, V1 PARKED BEHIND V2, FACING E, V1 REVERSE AT SPEED, COLLIDING WITH REAR OF V2 CAUSING V2 TO MOVE FORWARD



# Slight Accident

*Involving 1 Vehicle, 1 Casualty*

**P000316**

<b>Location</b>	Wansbeck U 399 427308E, 587757N	<b>Date/Time</b>	Saturday 02 January 2016 02:46
<b>Road</b>	Single Carriageway 30	<b>Junction</b>	T or staggered junction Give way or uncontrolled U 6510
<b>Conditions</b>	Darkness - Street Lights present and lit Raining without high winds Wet/Damp None None  None within 50 metres No physical crossing facility within 50 metres	<b>Contributory</b>	Failed to look properly (A)

## Vehicle 1

<b>Driver</b>	Male, Negative Postcode: NE65 9YA Journey as part of work	<b>Vehicle</b>	Car No tow or articulation
<b>Collisions</b>	Nearside None None	<b>Location</b>	On main carriageway - not in restricted lane Cleared junction or waiting/parked at junction exit
		<b>Movement</b>	Vehicle moving from East to West Going ahead other No skidding, jack-knifing or overturning Did not leave carriageway

## Casualty 1 - Slight

Pedestrian		In carriageway, crossing elsewhere
Male	32	Crossing from driver's nearside
		North

**Description of Location** STATION ROAD J/W JOHN STREET ASHINGTON

**Description of Accident** V1 TRAV. W ON STATION RD, PED. CROSSING FROM STATION RD FROM N/S, COLLIDING WITH F/N/S OF V1

# Slight Accident

## Involving 2 Vehicle, 1 Casualty

**P072616**

<b>Location</b>	Wansbeck C 399 427170E, 587762N	<b>Date/Time</b>	Saturday 30 January 2016 15:33
<b>Road</b>	Single Carriageway 30	<b>Junction</b>	Crossroads Automatic traffic signal U 6510
<b>Conditions</b>	Daylight - Street Lights Present Fine without high winds Dry None None  None within 50 metres No physical crossing facility within 50 metres	<b>Contributory</b>	Failed to look properly (A)

## Vehicle 1

<b>Driver</b>	Male, 59 Not requested Postcode: NE61 1DY Other	<b>Vehicle</b>	Car No tow or articulation
<b>Collisions</b>	Hit vehicle 2  Offside None None	<b>Location</b>	On main carriageway - not in restricted lane  Approaching junction or waiting/parked at junction exit
		<b>Movement</b>	Vehicle moving from West to East Moving off No skidding, jack-knifing or overturning Did not leave carriageway

## Vehicle 2

<b>Driver</b>	Female, 62 Not requested Postcode: NE64 6RF Other	<b>Vehicle</b>	Car No tow or articulation
<b>Collisions</b>	Hit vehicle 1  Nearside None None	<b>Location</b>	On main carriageway - not in restricted lane  Approaching junction or waiting/parked at junction exit
		<b>Movement</b>	Vehicle moving from West to East Slowing or stopping No skidding, jack-knifing or overturning Did not leave carriageway

## Casualty 1 - Slight

Driver or rider		Not a car passenger
Female	62	Not a bus or coach passenger
NE64 6RF		

***Description  
of Location***

STATION ROAD J/W KENILWORTH ROAD ASHINGTON

***Description  
of Accident***

V1 PARKED IN PARKING BAY, FACING E ON STATION RD, V2 TRAV. E ON STATION RD, V1 INDICATES AND BEGINS TO DRIVE OUT OF PARKING BAY, DRIVER OF V2 SEES RED TRAFFIC LIGHT AHEAD, SLOWS DOWN, F/O/S OF V1 COLLIDING WITH F/N/S OF V2

# Serious Accident

## Involving 3 Vehicle, 2 Casualties

0143887

<b>Location</b>	Northumberland  427100E, 587754N	<b>Date/Time</b>	Tuesday 10 January 2017 15:34
<b>Road</b>	Single Carriageway 30	<b>Junction</b>	T or staggered junction Give way or uncontrolled
<b>Conditions</b>	Daylight - Street Lights Present Fine without high winds Wet/Damp None None  None within 50 metres Central refuge - no other controls	<b>Contributory</b>	Distraction outside vehicle (A) Careless, reckless or in a hurry (A)

### Vehicle 1

<b>Driver</b>	Male, 26 Not provided (medical reasons) Postcode: NE61 5TH Other	<b>Vehicle</b>	Motorcycle over 500cc No tow or articulation
<b>Collisions</b>	Hit no other vehicle  Front None None	<b>Location</b>	On main carriageway - not in restricted lane  Approaching junction or waiting/parked at junction exit
		<b>Movement</b>	Vehicle moving from West to East Overtaking on nearside No skidding, jack-knifing or overturning Did not leave carriageway

### Casualty 2 - Serious

Driver or rider	Not a car passenger
Male 26	Not a bus or coach passenger
NE61 5TH	

### Vehicle 2

<b>Driver</b>	Male, 72 Negative Postcode: NE63 8HF Other	<b>Vehicle</b>	Car No tow or articulation
<b>Collisions</b>	Hit no other vehicle  Offside None None	<b>Location</b>	On main carriageway - not in restricted lane  Approaching junction or waiting/parked at junction exit
		<b>Movement</b>	Vehicle moving from West to East Going ahead other No skidding, jack-knifing or overturning Did not leave carriageway

## Vehicle 3

**Driver** Female, 69  
Negative  
Postcode: NE63 9US  
Other

**Vehicle** Car  
No tow or articulation  
**Location** On main carriageway - not in restricted lane  
Approaching junction or waiting/parked at junction exit

**Collisions** Hit no other vehicle  
Front  
None  
None

**Movement** Vehicle moving from East to West  
Going ahead other  
No skidding, jack-knifing or overturning  
Did not leave carriageway

## Casualty 1 - Slight

Driver or rider  
Female 69  
NE63 9US  
Not a car passenger  
Not a bus or coach passenger

**Description of Location** STATION ROAD NEAR JN WITH LANGWELL CRESCENT

**Description of Accident** APPARENTLY V1 IS TRAVELLING NORTH ON STATION ROAD, ASHINGTON BEHIND V2. AS V2 PASSES APPROACHES THE BRIDGE IN A CENTRAL ROAD POSITION THE RIDER APPEARS DISTRACTED BY SOMETHING TO HIS REAR NEARSIDE. V1 THEN PERFORMS A RAPID OVERTAKE COLLIDING WITH V2'S OFF SIDE DRIVERS DOOR THEN REBOUNDED INTO THE ONCOMING CARRIAGEWAY AND COLLIDING HEAD ON WITH V3.

# Slight Accident

Involving 1 Vehicle, 1 Casualty

0173478

<b>Location</b>	Northumberland C 399 427115E, 587752N	<b>Date/Time</b>	Tuesday 20 December 2016 12:22
<b>Road</b>	Single Carriageway 30	<b>Junction</b>	Not at or within 20 metres of junction
<b>Conditions</b>	Daylight - Street Lights Present Fine without high winds Dry None None  None within 50 metres No physical crossing facility within 50 metres	<b>Contributory</b>	Failed to look properly (B)

## Vehicle 1

<b>Driver</b>	Male, 50 Not requested Postcode: NE22 7BR Not known	<b>Vehicle</b>	Car No tow or articulation
<b>Collisions</b>	Hit no other vehicle Back None None	<b>Location</b>	On main carriageway - not in restricted lane Not at, or within 20 metres of junction
		<b>Movement</b>	Vehicle moving from East to West Reversing No skidding, jack-knifing or overturning Did not leave carriageway

## Casualty 1 - Slight

Pedestrian	In carriageway, crossing elsewhere
Female                      57	Crossing from driver's nearside
NE61 5TX	South

<b>Description of Location</b>	STATION ROAD C399
<b>Description of Accident</b>	MINOR INJURY INVOLVING A MOTORCAR AND PEDESTRIAN. VEHICLE 1 WAS REVERSING (FACING EAST, HEADING WEST) ON STATION ROAD, ASHINGTON AS THEY WERE MANEUVERING FROM A PARKING SPACE PRIOR TO JOINING THE MAIN CARRIAGEWAY. THE PEDESTRIAN HAS STEPPED OUT BEHIND THE VEHICLE WHICH HAS COLLIDED WITH HER. THE PEDESTRIAN SUFFERED SORENESS TO HER LEG BUT WAS OTHERWISE OK.

# Serious Accident

## Involving 2 Vehicle, 1 Casualty

0185456

<b>Location</b>	Northumberland  427322E, 587756N	<b>Date/Time</b>	Tuesday 23 May 2017 18:22
<b>Road</b>	Single Carriageway 30	<b>Junction</b>	T or staggered junction Give way or uncontrolled
<b>Conditions</b>	Daylight - Street Lights Present Fine without high winds Dry None None  None within 50 metres No physical crossing facility within 50 metres	<b>Contributory</b>	

### Vehicle 1

<b>Driver</b>	Male, 17 Driver not contacted at time of accident Postcode: Not known	<b>Vehicle</b>	Car No tow or articulation
<b>Collisions</b>	Hit no other vehicle  Front None None	<b>Location</b>	On main carriageway - not in restricted lane  Cleared junction or waiting/parked at junction exit
		<b>Movement</b>	Vehicle moving from East to North Turning right No skidding, jack-knifing or overturning Did not leave carriageway

### Vehicle 2

<b>Driver</b>	Male, 39 Not applicable Postcode: NE63 0SN Not known	<b>Vehicle</b>	Pedal Cycle No tow or articulation
<b>Collisions</b>	Hit no other vehicle  Offside None None	<b>Location</b>	On main carriageway - not in restricted lane  Leaving main road
		<b>Movement</b>	Vehicle moving from North to East Turning right No skidding, jack-knifing or overturning Did not leave carriageway

### Casualty 1 - Serious

Driver or rider		Not a car passenger
Male	39	Not a bus or coach passenger
NE63 0SN		

***Description  
of Location***

STATION ROAD AT JN WITH DUKE STREET

***Description  
of Accident***

VEHICLE 2 IS A PEDAL CYCLE RIDDEN BY THE IP. HE WAS ON STATION ROAD TRAVELLING NORTH AND WAS TURNING RIGHT INTO DUKE STREET ASHINGTON. VEHICLE 1 HAS BEEN ON DUKE STREET TURNING RIGHT ONTO STATION ROAD WHEN HE HAS COLLIDED WITH VEHICLE 2.. THE DRIVER HAS STOPPED AND APOLOGISED TO THE CYCLIST BUT HAS NOT GIVEN HIM ANY DETAILS. HE HAS ASKED THE CYCLIST IF HE IS OK AND HAS THEN DRIVEN OFF. ONLY DESCRIPTION CYCLIST COULD GIVE WAS BLACK CAR DRIVER WAS WHITE MALE ABOUT 17 YEARS OLD WITH DARK HAIR.



# Slight Accident

Involving 1 Vehicle, 1 Casualty

0196346

<b>Location</b>	Northumberland C 399 427255E, 587765N	<b>Date/Time</b>	Saturday 01 July 2017 23:30
<b>Road</b>	Single Carriageway 30	<b>Junction</b>	Other junction Give way or uncontrolled
<b>Conditions</b>	Darkness - Street Lights present and lit Fine without high winds Dry None None  None within 50 metres Zebra Crossing	<b>Contributory</b>	Failed to look properly (B)

## Vehicle 1

<b>Driver</b>	Male, 25 Negative Postcode: NE63 9EP Other	<b>Vehicle</b>	Car No tow or articulation
<b>Collisions</b>	Hit no other vehicle  Nearside None None	<b>Location</b>	On main carriageway - not in restricted lane  Cleared junction or waiting/parked at junction exit
		<b>Movement</b>	Vehicle moving from East to West Waiting to go ahead but held up No skidding, jack-knifing or overturning Did not leave carriageway

## Casualty 1 - Slight

Pedestrian	In carriageway, crossing elsewhere
Male                      52	Crossing from driver's offside
NE61 5XW	South

<b>Description of Location</b>	STATION ROAD C399 NEAR JN WITH JOHN STREET, ,ASHINGTON
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<b>Description of Accident</b>	V2 WAS PARKED STATIONARY OUTSIDE OF A LOCAL TAKEAWAY, AS THE DRIVER WAS PLACING A PIZZA INTO THE REAR OF THE VEHICLE V1 APPROACHED THE VEHICLE TRAVELLING IN A WESTERLY DIRECTION. AS HE BEGAN TO OVERTAKE THE VEHICLE ANOTHER VEHICLE CAME FROM THE EAST CAUSING V1 TO HIT THE DRIVER OF V2 (PEDESTRIAN) WITH THE N/S WING MIRROR OF HIS VEHICLE. THIS CAUSED THE WING MIRROR TO BECOME DETACHED AND ALSO AN INJURY TO THE HIP AREA OF THE PEDESTRIAN. BOTH VEHICLE AND PARTIES INVOLVED REMAINED AT SCENE AND T
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# Slight Accident

*Involving 1 Vehicle, 1 Casualty*

**0271269**

<b>Location</b>	Northumberland  427315E, 587738N	<b>Date/Time</b>	Sunday 25 February 2018 02:10
<b>Road</b>	Single Carriageway 30	<b>Junction</b>	Not at or within 20 metres of junction
<b>Conditions</b>	Darkness - Street Lights present and lit Fine without high winds Dry None None  None within 50 metres No physical crossing facility within 50 metres	<b>Contributory</b>	

## *Vehicle 1*

<b>Driver</b>	Not traced, Driver not contacted at time of accident Postcode: Not known	<b>Vehicle</b>	Car No tow or articulation
<b>Collisions</b>	Hit no other vehicle  Front None None	<b>Location</b>	On main carriageway - not in restricted lane  Not at, or within 20 metres of junction
		<b>Movement</b>	Vehicle moving from South to North Moving off No skidding, jack-knifing or overturning Did not leave carriageway

## *Casualty 1 - Slight*

Pedestrian	Unknown or other
Male	18
NE63 9JA	Crossing from driver's nearside West

**Description  
of Location** JOHN STREET

**Description  
of Accident** REPORT FROM MEMBER OF THE PUBLIC THAT A MALE HAD WALKED OUT INTO THE PATH OF A VEHICLE WHICH THEN COLLIDED WITH THE MALE (PEDESTRIAN)

# Slight Accident

## Involving 2 Vehicle, 1 Casualty

0288575

<b>Location</b>	Northumberland C 399 427345E, 587749N	<b>Date/Time</b>	Saturday 28 April 2018 21:51
<b>Road</b>	Single Carriageway 30	<b>Junction</b>	Not at or within 20 metres of junction
<b>Conditions</b>	Darkness - Street Lights present and lit Fine without high winds Dry None None  None within 50 metres No physical crossing facility within 50 metres	<b>Contributory</b>	

## Vehicle 1

<b>Driver</b>	Female, 38 Driver not contacted at time of accident Postcode: NE63 9JS Not known	<b>Vehicle</b>	Car No tow or articulation
<b>Collisions</b>	Hit no other vehicle  Back None None	<b>Location</b>	On main carriageway - not in restricted lane  Not at, or within 20 metres of junction
		<b>Movement</b>	Vehicle moving from West to East Reversing No skidding, jack-knifing or overturning Did not leave carriageway

## Vehicle 2

<b>Driver</b>	Male, 43 Driver not contacted at time of accident Postcode: NE63 8DA Other	<b>Vehicle</b>	Car No tow or articulation
<b>Collisions</b>	Hit no other vehicle  Front None None	<b>Location</b>	On main carriageway - not in restricted lane  Not at, or within 20 metres of junction
		<b>Movement</b>	Vehicle moving from East to West Parked No skidding, jack-knifing or overturning Did not leave carriageway

## Casualty 1 - Slight

Driver or rider		Not a car passenger
Male	43	Not a bus or coach passenger
NE63 8DA		

***Description  
of Location***

NEAR TO PREMIER SHOP STATION ROAD C399 NEAR JN WITH WANSBECK ROAD

***Description  
of Accident***

DRIVER VEH 2 HAS BEEN GETING IN TO VEHICLE WHEN VEH 1 HAS REVERSED INTO VEH 2 CAUSING IT TO MOVE AND DRIVER VEH 2 TO FALL HITTING BACK ON VEHICLE. VEH 1 HAS DRIVEN OFF FOLLOWED BY VEH 2 TO INFORM DRIVER VEH 1 OF COLLISION.

# Serious Accident

## Involving 4 Vehicle, 1 Casualty

0330864

<b>Location</b>	Northumberland A 1068 425824E, 587901N	<b>Date/Time</b>	Friday 28 September 2018 04:13
<b>Road</b>	Single Carriageway 30	<b>Junction</b>	Not at or within 20 metres of junction
<b>Conditions</b>	Darkness - Street Lights present and lit Fine with high winds Dry None None  None within 50 metres No physical crossing facility within 50 metres	<b>Contributory</b>	Exceeding speed limit (A) Poor turn or manoeuvre (A)

### Vehicle 1

<b>Driver</b>	Male, 19 Driver not contacted at time of accident Postcode: Not known	<b>Vehicle</b>	Car No tow or articulation
<b>Collisions</b>	Hit no other vehicle  Front None Lamp Post	<b>Location</b>	On main carriageway - not in restricted lane  Not at, or within 20 metres of junction
		<b>Movement</b>	Vehicle moving from North to South Going ahead left hand bend Skidded Left carriageway offside

### Casualty 1 - Serious

Vehicle or pillion passenger	Rear seat passenger
Male                      34	Not a bus or coach passenger
NE24 2SH	

### Vehicle 2

<b>Driver</b>	Male, 36 Negative Postcode: NE63 9JX Other	<b>Vehicle</b>	Car No tow or articulation
<b>Collisions</b>	Hit no other vehicle  Did not impact None None	<b>Location</b>	On main carriageway - not in restricted lane  Not at, or within 20 metres of junction
		<b>Movement</b>	Vehicle moving from North to South Going ahead other No skidding, jack-knifing or overturning Did not leave carriageway

## Vehicle 3

**Driver** Not traced,  
Not applicable  
Postcode:  
Not known

**Collisions** Hit no other vehicle  
  
Front  
None  
None

**Vehicle** Car  
No tow or articulation

**Location** On lay-by or hard shoulder  
  
Not at, or within 20 metres of junction

**Movement** Vehicle was Parked  
Parked  
No skidding, jack-knifing or overturning  
Did not leave carriageway

## Vehicle 4

**Driver** Not traced,  
Not applicable  
Postcode:  
Not known

**Collisions** Hit no other vehicle  
  
Front  
None  
None

**Vehicle** Car  
No tow or articulation

**Location** On lay-by or hard shoulder  
  
Not at, or within 20 metres of junction

**Movement** Vehicle was Parked  
Parked  
No skidding, jack-knifing or overturning  
Did not leave carriageway

**Description of Location** WOODHORN MOTORS, ASHINGTON ASHINGTON A1068 NEAR JN WITH MORPETH ROAD A197

**Description of Accident** VEHICLE ONE HAS MADE OFF FROM POLICE AND WAS BEING PURSUED. VEHICLE ONE HAS LOST CONTROL ON A NEARSIDE BEND, CROSSING INTO THE OFFSIDE CARRIAGEWAY BEFORE HITTING A METAL POLE AND RAILING AND HAS THEN CAME TO REST. DRIVER AND FRONT SEAT PASSENGER HAVE MADE OFF FROM VEHICLE ONE. PASSENGER TRAPPED IN REAR OFFSIDE SEAT. NO DAMAGE TO POLICE VEHICLE. SLIGHT DAMAGE TO VEHICLE THREE AND FOUR FROM DEBRIS. BOTH VEHICLES STATIONARY ON GARAGE FORECOURT.

