

Proposed Residential Development

Bennett Street | Manchester

KELLEN HOMES LIMITED

Transport Assessment

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REPORT

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1 INTRODUCTION

1.1 Introduction

1.1.1 Eddisons have been instructed by Kellen Homes Limited to advise on the traffic and transportation issues relating to proposals to develop a site on land off Bennett Street in the West Gorton area of Manchester.

1.1.2 More specifically, the proposals seek:

"Full planning permission for demolition of existing buildings and structures on the site and erection of 272 homes (Use Class C3) and a new community building (Use Class F2(b)), with associated car parking, access, highways, landscaping and new public realm creation, and other associated works."

1.1.3 The Local Highway Authority (LHA) responsible for West Gorton is Manchester City Council (MCC), who are also the Local Planning Authority (LPA).

1.1.4 Due to the location of the site close to Gorton, Longsight and Ardwick and all their services and facilities, the proposed development will help deliver much needed housing in a sustainable location, which is well integrated and connected to local facilities and employment opportunities.

1.2 Scope of Report

1.2.1 This Transport Assessment (TA) has been prepared to consider the development in transport and highways terms in order to provide the local highway authority with the necessary reassurance that the proposals can be accommodated by the local transport network.

- 1.2.2 The scope of this Transport Assessment conforms to the guidance provided in the Department for Levelling Up, Housing & Communities Planning Practice Guidance 'Transport Evidence Bases in Plan Making and Decision Taking'.
- 1.2.3 The guidance covers the following issues;
- Reducing the need to travel, especially by car – ensure at the outset that thought is given to reducing the need to travel; consider the types of uses (or mix of uses) and the scale of development in order to promote multipurpose or linked trips;
 - Sustainable accessibility – promote accessibility by all modes of travel, in particular public transport, cycling and walking; assess the likely travel behaviour or travel pattern to and from the proposed site; and develop appropriate measures to influence travel behaviour;
 - Dealing with residual trips – provide accurate quantitative and qualitative analyses of the predicted impacts of residual trips from the proposed development and ensure that suitable measures are proposed to manage these impacts; and
 - Mitigation measures – ensure as much as possible that the proposed mitigation measures avoid unnecessary physical improvements to highways and promote innovative and sustainable transport solutions.
- 1.2.4 A Residential Travel Plan Framework has also been prepared as a stand-alone document within the application package.
- 1.2.5 As a Travel Plan has also been prepared, reference has also been made to guidance presented in the DfT documents entitled 'Making Residential Travel Plans Work' published in June 2007 and 'Good Practice Guidelines: Delivering Travel Plans through the Planning Process' published in August 2009.

1.3 Structure of Report

- 1.3.1 Following this introduction, Section 2 will provide a description of the existing site, local highway network and relevant planning history, while Section 3 will detail the development proposals.
- 1.3.2 Section 4 will consider the accessibility of the site by non-car modes, including walking, cycling and public transport.
- 1.3.3 Section 5 will consider the trip generation and the traffic impact of the proposals on the local highway network.
- 1.3.4 A review of road safety and personal injury accidents in the vicinity of the site over the last 3 years will be detailed in Section 6.
- 1.3.5 Section 7 will contain details of the Travel Plan Framework and Section 8 will draw together the Report's findings and conclusions.

2 EXISTING CONDITIONS

2.1 Introduction

- 2.1.1 This section will detail the existing site and surroundings and provide details about the existing highway network.

2.2 Site Location

- 2.2.1 The site is located approximately 2.5 kilometres to the southeast of Manchester City Centre, around 3 kilometres to the northeast of Gorton and around 1.8 kilometres to the south of Longsight. The location of the site in relation to the surrounding local area is presented in **Plan 1**, while the existing site and buildings are shown in **Figure 2.1** below.



Figure 2.1 – Existing Site and Buildings

- 2.2.2 The application site is bound by Ardwick train station and railway line to the north. Rear gardens of properties fronting Anthony Close to the east. Bennett Street fronts the site to the south, along with residential properties.
- 2.2.3 A railway line lies directly to the west and a number of commercial buildings directly beyond.

2.3 Existing Site

- 2.3.1 The existing floor space equates to approximately 5,759 square metres.
- 2.3.2 The Olympic Freight Terminal site comprises of a substantial single storey warehouse facility. The rest of the site is used to store freight containers and for the storage of inert waste materials.
- 2.3.3 Vehicular access is currently taken directly off Bennett Street.

2.4 Local Highway Network

- 2.4.1 In the vicinity of the site, Bennett Street has a carriageway width of approximately 6.5 metres, with footways of around 2.3 metres. It benefits from street lighting and is subject to a 30mph speed limit.
- 2.4.2 To the east of the site, Bennett Street forms a priority controlled junction with Wigley Street, which serves other residential estates in the area.
- 2.4.3 To the south of the site, Bennett Street forms a priority junction with the A57 Hyde Road. Hyde Road connects the site to the A6, Ardwick Green South and Higher Ardwick. Ardwick Green South, in turn, links the site to the A57 (M) (Manchester's ring road).

- 2.4.4 To the east, Bennett Street changes its name to Vaughan Street, which extends northwards for approximately 200 metres before forming a junction with Gorton Road.
- 2.4.5 To the east of the junction, Gorton Road provides access to A6010 and the A635, which in turn provides access to the M60 (to the south) and M62 (to the north) motorways.
- 2.4.6 It is therefore considered that the site is well connected to the local highway network, and also to the wider strategic road network.

2.5 Relevant Planning History

- 2.5.1 It is understood that the site has been subject to various planning applications, with the most recent one being App. ref. no. 126714/00/2020. The proposals related to the construction of up to 340 dwellings, comprising a mixture of houses, as well as apartments contained within two apartment blocks.
- 2.5.2 In regard to those proposals correspondence was received from Transport for Greater Manchester (TfGM) and MCC and is contained within **Appendix 1**.

3 DEVELOPMENT PROPOSALS

3.1 Introduction

- 3.1.1 The following paragraphs will describe the development proposals and report on proposed access arrangements and servicing.

3.2 Proposed Development

- 3.2.1 As previously stated, the application seeks:

"Full planning permission for demolition of existing buildings and structures on the site and erection of 272 homes (Use Class C3) and a new community building (Use Class F2(b)), with associated car parking, access, highways, landscaping and new public realm creation, and other associated works."

- 3.2.2 The proposed site layout is provided at **Plan 2**.

- 3.2.3 The proposed dwellings will each benefit from a parking space (100%), resulting in a total provision of 172 spaces.

- 3.2.4 The apartments will also have 100% parking provision, as follows:

- Apartments 173 to 204 - 32 units - 32 spaces
- Apartments 205 to 236 - 32 units - 32 spaces
- Apartments 237 to 272 - 36 units - 36 spaces

- 3.2.5 It is also proposed to provide 100% cycle storage, along with spaces for charging electric vehicles.

- 3.2.6 The introduction of a 20mph zone within the development will be considered to promote walking and cycling and create a pedestrian friendly environment. This will often negate the need for segregated cycle facilities within residential areas.

3.3 Vehicular Access

- 3.3.1 Vehicular access to the site is proposed via new priority controlled junction off Bennett Street, as shown in **Plan 3**.
- 3.3.2 The design and criteria of the proposed site access junction conforms with current guidance for priority-controlled junctions (TD42/95 - Geometric Design of Major/Minor Priority Junctions).
- 3.3.3 This arrangement will provide a suitable 5.5 metre access road and 2 metre wide footways, which will continue into and throughout the site and tie into existing provision on Bennett Street each side of the site access junction.
- 3.3.4 As can be seen on the plan, the access can achieve visibility splays of 2.4 metres by 43 metres, which are commensurate to roads subject to a 30mph speed limit, in line with the requirements of Manual for Streets guidance.
- 3.3.5 The access into the application site will be constructed to current adoptable standards to ensure that access to the site is suitable and appropriate to serve the proposed development.

3.4 Waste Collection & Servicing

- 3.4.1 The internal access road has been designed to accommodate waste and delivery vehicles so that they can enter the site, turn around and exit in a forward gear.



- 3.4.2 This will ensure there is no detrimental impact to the public highway and confirm that the site can be serviced without giving rise to any road safety issues.
- 3.4.3 To demonstrate this, a swept path analysis has been undertaken for a 4-axle 11.347 metre refuse vehicle, as shown in **Plan 4**.

4 ACCESSIBILITY BY NON-CAR MODES

4.1 Introduction

4.1.1 In order to accord with the aspirations of the NPPF, any new proposals should extend the choice in transport and secure mobility in a way that supports sustainable development.

4.1.2 New proposals should attempt to influence the mode of travel to the development in terms of gaining a shift in modal split towards non-car modes, thus assisting in meeting the aspirations of current national and local planning policy.

4.1.3 The accessibility of the proposed site has been considered by the following modes of transport:

- Accessibility on foot;
- Accessibility by cycle;
- Accessibility by bus; and
- Accessibility by rail.

4.2 Accessibility on Foot

4.2.1 It is important to create a choice of direct, safe and attractive routes between where people live and where they need to travel in their day-to-day life.

4.2.2 This philosophy clearly encourages the opportunity to walk whatever the journey purpose and helps to create more active streets and a more vibrant neighbourhood.

- 4.2.3 The nearest footways are located along Bennett Street south of the site and have a width of around 2.5 metres. These footways provide links to a comprehensive network of routes within the local area, supplemented by a number of controlled crossing points which facilitate access to the nearby day to day amenities within the area.
- 4.2.4 The CIHT document 'Planning for Walking' from 2015 states, in paragraph 2.1, that in 2012 that 79% of all journeys made in the UK of less than a mile (1.6 kilometres) are carried out on foot.
- 4.2.5 Within the Institution of Highways and Transportation (IHT) document, entitled "Guidelines for Providing for Journeys on Foot", Table 2.2 suggests distances for desirable, acceptable and preferred maximum walks to 'town centres', 'commuting/schools' and 'elsewhere'. The 'preferred maximum' distances are shown below in **Table 4.1**.

Suggested Preferred Maximum Walk		
Town Centre	Commuting/School	Elsewhere
800m	2,000m	1,200m

Table 4.1 – IHT 'Providing for Journeys on Foot' Walk Distances

- 4.2.6 Reference to the 2,000 metres walk distance is also made in the now superseded Planning Policy Guidance (PPG) Note 13 which advised that 'walking is the most important mode of travel at the local level and offers the greatest potential to replace short car trips, particularly under 2km'.

- 4.2.7 Manual for Streets (MfS) continues the theme of the acceptability of the 2,000-metre distance in paragraph 4.4.1. This states that 'walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800m) walking distance of residential areas which residents may access comfortably on foot. However, this is not an upper limit and PPS13 states that walking offers the greatest potential to replace short car trips, particularly those under 2 km'. **Table 4.2** below summarises this guidance in tabular form.

'Comfortable' Walk	'Preferred Maximum' Walk
800m	2,000m

Table 4.2 – Manual for Streets Walk Distances

- 4.2.8 More specific guidance on the distances that children will walk to school is found in the July 2014 document published by the Department for Education (DfE) entitled 'Home to School Travel and Transport' statutory guidance document. This suggests that the maximum walking distance to schools is 2 miles (3.2 kilometres) for children under 8 and 3 miles (4.8 kilometres) for children over the age of 8. This is summarised below in **Table 4.3**.

Children under 8 Walk Distance	Children over 8 Walk Distance
3,200m	4,800m

Table 4.3 – DfE Walk Distances to Schools

4.2.9 Further evidence that people will walk further than the suggested 'preferred maximum' distances in the IHT 'Providing for Journeys on Foot' is contained in a WYG Report entitled 'Accessibility – How Far do People Walk and Cycle'. This report refers to National Travel Survey (NTS) data for the UK as a whole, excluding London, and confirms that the 85th percentile walk distance for:

- All journey purposes – 1,930 metres;
- Commuting – 2, 400 metres;
- Shopping – 1,600 metres;
- Education – 3,200 or 4,800 metres; and
- Personal business – 1,600 metres.

4.2.10 Overall, in Table 5.1, the document states that 1,950 metres is the 85th percentile distance for walking as the main mode of travel. **Table 4.4** below summarises the various 85th percentile walk distances suggested as guidelines in the WYG Study.

85 th Percentile Walk Distances					Overall Recommended Preferred Max
All Journeys	Commuting	Shopping	Education	Personal	
1,950m	2,100m	1,600m	3,200/4,800m	1,600m	1,950m

Table 4.4 – WYG Report/NTS Data Walk Distances

4.2.11 In summary, it is considered that the distance of 1,950 metres, or around 2 kilometres, represents an acceptable maximum walking distance for the majority of land uses although clearly the DfE guidance for walking to school is up to 3.2 kilometres.

- 4.2.12 Section 3.1 of the CIHT guidance 'Planning for Walking' mentioned earlier in this report provides a useful reminder of the health benefits of walking. This states that:
- 'A brisk 20 minute walk each day could be enough to reduce an individual's risk of an early death'.*
- 4.2.13 A 20-minute walk equates to a walking distance of around 1,600 metres.
- 4.2.14 In light of the above review, a pedestrian catchment of 2 kilometres from the centre of the site, using all usable pedestrian routes, has been provided in **Plan 4** and provides an illustrative indication of the areas that can be reached based on a leisurely walk from the site.
- 4.2.15 In addition, to the pedestrian catchment plan, a review of the proximity of local facilities such as local shops/retail outlets and leisure facilities has been undertaken and the location of these is also shown in Plan 4.
- 4.2.16 The 2,000-metre pedestrian catchment illustrates that the majority of West Gorton, Ardwick and Longsight can be accessed, such as, Armitage CE Primary School, Parthian Climbing, West Gorton Community Park, West Gorton Medical Centre, Meds Pharmacy, Early Explores Day Nursery, McDonalds, The Manchester College, Nicholls Community Football Centre, and Stockport Road Post Office.
- 4.2.17 **Table 4.5** below, shows the walking distance from the centre of the site to the local amenities in the vicinity of the site. The table also confirms whether the amenity is within the 'preferred maximum' walk distances using the above guideline criteria.

Local Amenity	Distance	Guidance Criteria	Meets with Guidance?
Parthian Climbing	255m	3,200m	YES
Armitage CE Primary School	280m	1,600m	YES
West Gorton Community Park	335m	1,600m	YES
West Gorton Medical Centre	535m	1,600m	YES
Meds Pharmacy	825m	1,600m	YES
Early Explorers Day Nursery	1,270m	1,600m	YES
The Manchester College	1,505m	3,200m	YES
Nicholls Community Football Centre	1,515m	1,600m	YES
McDonalds	1,560m	1,600m	YES
Stockport Road Post Office	1,600m	1,600m	YES
Medlock Primary School	2,985m	3,200m	YES

Table 4.5 - Distance from Site to Local Facilities

- 4.2.18 As can be seen in the above table, the site is located within proximity to a number of local amenities including primary services as well as leisure facilities.
- 4.2.19 All of the day to day amenities are well within the 'preferred maximum' walk distances described earlier in this section and indeed many, including the nearest food store, pharmacy and nearest primary school, are within the 800 metres 'comfortable walk' from the site as contained within MfS guidance.

- 4.2.20 It is therefore considered that the existing and proposed pedestrian infrastructure will facilitate safe and direct pedestrian linkages between the site and local destinations.

4.3 Access by Cycle

- 4.3.1 An alternative mode of travel to the site could be achieved by bicycle. A distance of 5 kilometres is generally accepted as a distance where cycling has the potential to replace short car journeys. This distance equates to a journey of around 25 minutes based on a leisurely cycle speed of 12 kilometres per hour and would encompass parts of Manchester including Gorton, Trafford, Levenshulme, Newton Heath.
- 4.3.2 National cycle route 66 starts east of the site and runs south west into Manchester city centre via Newton Heath and Bradford. It is located 2.9km away from the site and consists of both on and off-road cycle routes. Route 66 of the National Cycle Network has sections from Manchester city centre to Spurn Head in Yorkshire via Bradford, Leeds, York, Beverley, and Kingston upon Hull.
- 4.3.3 National cycle route 60 starts north of the site in Harpurhey, running north via Beswick and Gorton. It is located 1.9km away from the centre of the site and consists of both on and off-road cycle routes. Route 60 of the National Cycle Network runs between North and East Manchester, with its furthest south stretch forming part of the fantastic Fallowfield Loopline.
- 4.3.4 National cycle route is situated north west of the site and runs south via Charlestown and into the city centre. It then runs further south via Hulme, Moss Side where it then turns east via Fallowfield and Levenshulme where it eventually meets cycle route 60. Route 6 resumes at Reddish and enters Manchester via the traffic-free Fallowfield Loop Line and then on residential streets through Whalley Range into the city centre. Heading towards Bury the route follows much of the Irwell Sculpture Trail.

- 4.3.5 Bury and Accrington are linked via on-road and traffic-free sections of the old East Lancashire railway path. It is located 3.7km away from the centre of the site and is an off-road cycle route.
- 4.3.6 Cycle route 55 starts west of the site in Salford Quays, from here it runs south via Whalley Range where it meets cycle route 6. It is located 5km away from the centre of the site and is both an on and off-road cycle route.
- 4.3.7 The site can therefore be considered as being accessible by cycle.

4.4 Access by Bus

- 4.4.1 The nearest bus stops to the site are located south of the site on Bennett Street. Additional bus stops are located further along Bennett Street and on Hyde Road. All the nearest bus stops to the site are shown on Plan 4.
- 4.4.2 A summary of the services available from the nearest bus stops from the development site is provided in **Table 4.6** below.

Servic No	Route	Monday – Friday (per hour)				Sat	Sun
		AM Peak	Midday	PM Peak	Eve		
205	Manchester - West Gorton - Dane Bank	1	3	3	1	2	2
201	Manchester - Hyde - Hattersley	5	5	5	2	5	2

Table 4.6 - Existing Bus Services

- 4.4.3 As can be seen from Table 4.6, the nearest bus stops to the site provides various services throughout the day to destinations such as Manchester City Centre, Hyde and Godley.
- 4.4.4 The above services operate from around 5:00am to around 00:00pm, making travel by public transport a real alternative to travelling by car for commuting trips.
- 4.4.5 In order to demonstrate the level of accessibility, some example journey times by bus are presented below **Table 4.7** below.

Destination	Duration
Hyde	12 minutes
Godley	27 minutes
Manchester City Centre	12 minutes

Table 4.7 - Example Bus Journey Times from the Site

- 4.4.6 The above table demonstrates that Manchester City Centre is an approximate 12-minute bus journey from the site and Hyde is a 12-minute bus journey.
- 4.4.7 It is therefore concluded that employment, health and retail centres are highly accessible by bus from the proposed development site.

4.5 Accessibility by Rail

- 4.5.1 Ashburys train station is the most accessible station to the site. It can be accessed via a short 15 minute walk as the station is 1km from the centre of the site. This train station is managed by Northern and has 2 platforms, offering 1 service a day to destinations including Manchester and Hyde Central.

4.6 Accessibility Summary

4.6.1 The proposals have been considered in terms of accessibility by non-car modes for the proposed residential development.

4.6.2 The following conclusions can be drawn from this section of the report:

- The site is accessible on foot and these provisions will be improved as part of the works on the development site.
- The services from the bus stops on Hyde Road which connect the site with retail, employment and leisure facilities in Manchester City Centre, Hyde and Godley. It can therefore be concluded that the proposed development can be accessed by bus.
- The site is accessible via rail with both Ardwick and Ashburys stations being located within 2 kilometres of the site.

4.6.3 In light of the above, it is considered the site is highly accessible by non-car modes and will cater for needs of the development's residents and assist in promoting a choice of travel modes other than the private car.

5 TRAFFIC IMPACT ANALYSIS

5.1 Introduction

5.1.1 Having established that the proposed development site is accessible by modes of travel other than the private car, the following section considers the traffic impact of the development proposals on the local highway network.

5.2 Assessment Criteria

5.2.1 Given the proposed residential land use, it is assumed reasonable to consider the AM and PM weekday peak hours, as being those with the greatest impact on the local highway network.

5.3 Traffic Survey Data

5.3.1 In order to assess the impact of the proposed development on the local highway network, the following traffic surveys were undertaken on Wednesday 29th June 2022:

- A57 Hyde Road/Devonshire Street
- A57 Hyde Road/Bennett Street
- A57 Hyde Road/A6010 Pottery Lane

5.3.2 The surveys were undertaken between 0730 and 0930 hours in the morning and between 1700 and 1800 hours in the evening. The full traffic survey data is contained within **Appendix 2**.

5.3.3 The peak hours were identified as 0745 to 0845 hours and 1700 to 1800 hours for the AM and PM peaks respectively. The 2022 surveyed flows for the peak hours converted into Passenger Car Units (PCU's) are shown in **Figures 1 and 2**.

5.4 Growthed Traffic Flows

- 5.4.1 For the purpose of this Report, assessments have been undertaken for a design horizon of 2027, representing five years after the application registration.
- 5.4.2 This can be considered to be a robust approach.
- 5.4.3 To derive the baseline 2027 flows, the 2022 surveyed flows have been growthed to 2027 using National Traffic Model (NTM) factors adjusted by using the Trip End Model Program (TEMPro) local growth factors.
- 5.4.4 The resultant 2027 growthed traffic flows are shown in **Figures 3 and 4** for the AM and PM peak periods.
- 5.4.5 The resultant growth factors are shown below:
- 2022 to 2027 AM Peak - 1.0540
 - 2022 to 2027 PM Peak - 1.0545

5.5 Committed Development

- 5.5.1 Eddisons are not aware of any committed developments in the area that would need to be considered in this report.

5.6 Trip Distribution

- 5.6.1 The directional distribution of the traffic associated with the proposals has been assigned to the local highway network in line with observed turning movements, which is considered to present a reasonable approach. The resulting traffic assignment for the AM peak period is shown in **Figure 5** whilst the traffic assignment for the PM peak traffic is shown in **Figure 6**.

5.7 Existing Development

- 5.7.1 Before considering the impact of the development on the local road network, consideration has first been given to the existing use on the site.
- 5.7.2 In order to establish the number of trips which the existing development could potentially generate the TRICS database has been used for the 'Employment – warehousing (Commercial)' range of sites.
- 5.7.3 A summary of these trip rates and the likely level of trips that could occur as a result of the existing warehouse use, comprising 5,759 square metres is included in **Table 5.1**, below, with the TRICS output being provided at **Appendix 3**.

Period	Trip Rate		Trips	
	Arr	Dep	Arr	Dep
AM Peak Hour	0.131	0.073	37	101
PM Peak Hour	0.074	0.118	94	44

Table 5.1 Proposed Development Trip Rates and Trips (5,759 square metres)

- 5.7.4 As can be seen, the existing development could potentially generate approximately 12 two-way trips in the Weekday AM and around 11 two-way trips in the PM peak hour.
- 5.7.5 The resulting traffic flows based on the distribution shown in Figures 5 and 6 are shown in **Figure 7** for the AM peak and **Figure 8** for the PM peak traffic.

5.8 Base Flows

- 5.8.1 To establish the 2027 'Without Development' flows, the potential existing traffic shown in Figures 7 and 8 for the AM and PM peak respectively have been added to the factored 2027 flows shown in Figures 3 and 4.
- 5.8.2 The resulting 2027 'Without Development' traffic flows are presented in **Figures 9 and 10**.

5.9 Proposed Development

- 5.9.1 The development proposals refer to the construction of up to 272 residential dwellings, as follows:
- Houses – 172 units
 - Apartments – 100 units
- 5.9.2 In order to establish the number of trips which the proposed residential development is forecast to generate the TRICS database has been used for the 'Residential – Houses Privately Owned' range of sites.
- 5.9.3 The parameters used to ascertain the vehicular trip rates for the proposed development are as follows:
- Range between 0 and 500 dwellings
 - Monday to Friday surveys
 - Sites in Greater London and Eire excluded.

- 5.9.4 A summary of these trip rates and the likely level of trips that would occur as a result of the proposed development comprising 1 dwellings and 100 apartments is included in **Tables 5.2 and 5.3**, below, with the TRICS output being provided at **Appendix 4**.

Period	Trip Rate		Trips	
	Arr	Dep	Arr	Dep
AM Peak Hour	0.136	0.372	23	64
PM Peak Hour	0.344	0.161	59	28

Table 5.2 Proposed Development Trip Rates and Trips (172 Dwellings)

- 5.9.5 As can be seen, the proposed houses are forecast to generate a total of 87 two-way trips in the Weekday AM and PM peak hours.

Period	Trip Rate		Trips	
	Arr	Dep	Arr	Dep
AM Peak Hour	0.057	0.178	6	18
PM Peak Hour	0.166	0.082	17	8

Table 5.3 Proposed Development Trip Rates and Trips (100 Apartments)

- 5.9.6 As can be seen, the proposed residential development is forecast to generate a total of 24 two-way trips in the Weekday AM and around 25 two-way trips in the PM peak hours.
- 5.9.7 The resulting traffic flows based on the distribution shown in Figures 5 and 6 are shown in **Figure 11** for the AM peak and **Figure 12** for the PM peak traffic.

- 5.9.8 For the purpose of this report, it has been assumed that the new community building will not generate any significant levels of vehicular traffic. As such, no consideration has been given to this proposed use.

5.10 With Development Flows

- 5.10.1 In order to calculate the 2027 'With Development' flows, the development flows contained within Figures 11 and 12 have been added to the 2027 'Without Development' flows contained within Figures 9 and 10.
- 5.10.2 The resulting 2027 'With Development' Flows are presented in **Figures 13 and 14** respectively for the AM and PM peak hours.

5.11 Capacity Assessments

- 5.11.1 In order to establish the potential traffic impact of the development on the surrounding highway network, capacity assessments have been undertaken at the following junctions;

- A57 Hyde Road/Devonshire Street
- A57 Hyde Road/Bennett Street
- A57 Hyde Road/A6010 Pottery Lane

A57 Hyde Road/Devonshire Street

- 5.11.2 The A57 Hyde Road/Devonshire Street junction is signal controlled and so has been assessed using LINSIG.
- 5.11.3 The results for the 2027 'With Development' flow scenario are summarised within **Table 5.4** with the full results contained within **Appendix 5**.

Arm	2027 'Without Development'				2027 'With Development'			
	Weekday AM		Weekday PM		Weekday AM		Weekday PM	
	DoS %	MMQ	DoS %	MMQ	DoS %	MMQ	DoS %	MMQ
Devonshire Street (sb) Left & Ahead	98.7	29	92.3	24	99.3	30	98.5	30
Devonshire Street (nb) Ahead	92.6	22	57.2	9	92.6	22	58.3	9
Devonshire Street (nb) Right	77.3	4	94.1	10	78.9	5	98.7	12
Hyde Road (wb) Left & Ahead	97.1	18	79.9	13	101.3	32	78.4	13
Hyde Road (wb) Right & Ahead	96.6	17	77.4	7	101.0	23	75.8	7
Hyde Road (eb) Ahead	45.2	7	96.2	25	46.2	7	96.6	26
Hyde Road (eb) Ahead	45.1	7	96.3	25	46.1	7	96.6	26

Table 5.4 - Summary of LINSIG Results for A57 Hyde Road/Devonshire Street

- 5.11.4 As can be seen above, the results show the junction will operate close to its theoretical capacity in the 2027 'Without Development' flow scenario in both the AM and PM peak hours.
- 5.11.5 The results for the 2027 'With Development' assessments show that the junction will operate in a similar manner to the 'Without Development' scenario and will not have a material impact on the overall operation of the junction.

A57 Hyde Road/Bennett Street

- 5.11.6 The A57 Hyde Road/Bennett Street junction is priority controlled junction and so has been assessed using Junctions 9 - PICADY 9 - Priority Intersection Module.

- 5.11.7 The results for the 2027 'Without Development' and 'With Development' flow scenarios are summarised within **Table 5.5** with the full results contained within **Appendix 6**.

Arm	2027 'Without Development'				2027 'With Development'			
	Weekday AM		Weekday PM		Weekday AM		Weekday PM	
	Max RFC	Q	Max RFC	Q	Max RFC	Q	Max RFC	Q
Bennett Street (left)	0.12	0	0.99	4	1.00	4	1.42	10
Bennett Street (right)	0.71	2	0.99	5	0.96	8	1.42	15
Hyde Road (e)	0.24	1	0.24	1	0.26	1	0.33	2

Table 5.5 - Summary of PICADY Results for A57 Hyde Road/Bennett Street

- 5.11.8 As can be seen above, the results show the junction will operate efficiently in the 2027 'Without Development' AM peak flow scenario, but exceeds its theoretical capacity in PM peak.
- 5.11.9 The results for the 2027 'With Development' assessments show that the junction will operate in a similar manner to the baseline scenario in both peak hours.

A57 Hyde Road/A6010 Pottery Lane

- 5.11.10 The A57 Hyde Road/A6010 Pottery Lane Street junction is signal controlled and so has been assessed using LINSIG.
- 5.11.11 The results for the 2027 'With Development' flow scenario are summarised within **Table 5.6** with the full results contained within **Appendix 7**.

Arm	2027 'Without Development'				2027 'With Development'			
	Weekday AM		Weekday PM		Weekday AM		Weekday PM	
	DoS %	MMQ	DoS %	MMQ	DoS %	MMQ	DoS %	MMQ
Pottery Lane (sb) Ahead & Left	87.3	8	75.7	14	87.3	18	75.7	14
Pottery Lane (sb) Ahead & Right	73.3	6	57.3	9	73.7	13	57.3	9
Hyde Road (wb) Left & Ahead	88.4	9	55.9	9	88.7	20	56.7	9
Hyde Road (wb) Right & Ahead	92.4	12	91.4	11	92.7	22	91.4	11
Pottery Lane (nb) Ahead & Left	63.0	4	60.7	10	63.0	10	60.7	10
Pottery Lane (nb) Ahead & Right	91.5	6	98.1	11	91.5	11	98.1	11
Hyde Road (eb) Left & Ahead	49.7	3	100.5	33	49.3	7	101.2	35
Hyde Road (eb) Right & Ahead	43.6	3	89.3	20	43.4	6	90.1	20

Table 5.6 - Summary of LINSIG Results for A57 Hyde Road/A6010 Pottery Lane

- 5.11.12 As can be seen above, the results show the junction will operate with reserve capacity in the 2027 'Without Development' flow scenario in both the AM and PM peak hours.
- 5.11.13 The results for the 2027 'With Development' assessments show that the junction will operate in a similar manner to the 'Without Development' scenario in the AM and PM peaks.

5.12 Capacity Assessments Summary

- 5.12.1 This section of the Report has considered the impact of the proposal in transport terms.



- 5.12.2 The results of the above assessments have demonstrated that the proposals will not have a material impact or give rise to any highway capacity issues.
- 5.12.3 It is therefore considered that the predicted level of traffic can be accommodated onto the local highway network.
- 5.12.4 On that basis, it can be assumed that the impact of the proposals on the local highway network would be minimal and, in any event, could not be considered to be severe, as is the test set out within the NPPF.

6 ACCIDENT ANALYSIS

- 6.1.1 In order to consider the potential impact of the development on road safety, a brief review of the Crashmap website (www.crashmap.co.uk) has been undertaken.
- 6.1.2 The information provided on the website covered the five-year period 2017 to 2021 in the vicinity of the development site.
- 6.1.3 According to the data provided there have been a total of 9 recorded accidents within the study area, which in this instance comprises Bennett Street, Hyde Road, Roston Avenue and other local residential roads in the area as shown in **Figure 6.1** below. The corresponding accident data is provided at **Appendix 8**.

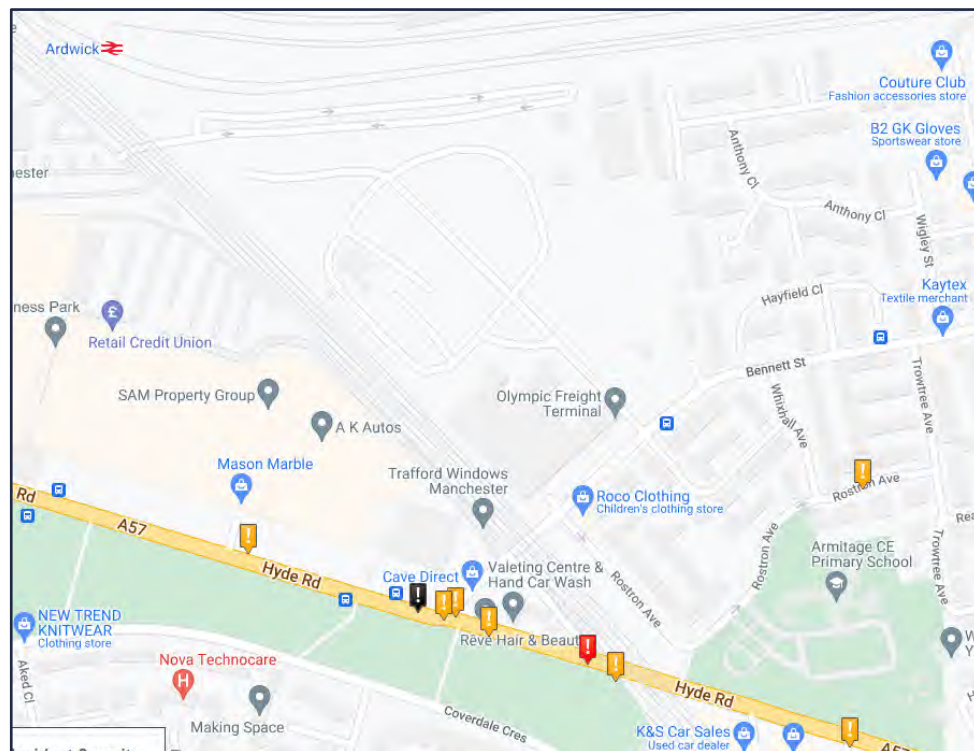


Figure 6.1 - CrashMap Accident Plot

6.1.4 All recorded accidents identified in the data are detailed below in **Table 6.1**.

Date	Severity	Light Conditions	Weather	Road Conditions	Manoeuvre
19/07/2018	Slight	Daylight	Fine	Dry	Car struck pedestrian
10/02/2018	Fatal	Darkness	Raining with high winds	Wet/damp	Collision
26/07/2017	Slight	Daylight	Fine	Dry	Car and motorcycle collision
03/07/2019	Slight	Daylight	Fine	Dry	Car and motorcycle collision
02/06/2020	Slight	Daylight	Fine	Dry	Collision
04/11/2018	Serious	Darkness	Fine	Dry	Car struck pedestrian
16/08/2017	Slight	Daylight	Fine	Dry	Car struck bridge
05/02/2019	Slight	Darkness	Fine	Dry	Collision
28/04/2018	Slight	Daylight	Fine	Dry	Car struck pedestrian

Table 6.1 - Accident Summary

- 6.1.5 The data reviewed has not identified any untypical accidents.
- 6.1.6 While no further detail is available, such incidents would suggest that the drivers (or pedestrians) were not paying sufficient attention to other road users or drivers were travelling in excess of the speed limit or road conditions and failed to react in time to the situation.
- 6.1.7 The evidence shows that there are no particular engineering issues or problems with the road network or junction layouts.
- 6.1.8 It is considered that the proposals for a residential development from an industrial use will have a positive impact on the characteristics and nature of the surrounding highway network and the number of heavy goods vehicles will be reduced.

7 PROMOTING SMARTER CHOICES VIA TRAVEL PLANS

7.1 Introduction

7.1.1 In order to manage the travel by residents at the new development, the applicant wishes to offer a Travel Plan to encourage travel to the site by non-car modes.

7.1.2 It includes a range of measures and incentives to reduce and mitigate impact and enhance the accessibility of the site by non-car modes.

7.2 Travel Planning Guidance

7.2.1 The preparation and adoption of a Travel Plan is an important element of managing the demand for travel to all modern developments. The Department for Transport (DfT) have produced guidance on the preparation of Travel Plans. The document, entitled '*Good Practice Guidelines: Delivering Travel Plans through the Planning Process*' was published in August 2009.

7.2.2 The guidance explains how *"we often need to meet the demands of population and economic growth whilst simultaneously reducing our impact on the environment"* and identifies that *"The benefits of increases in sustainable travel, in particular cycling and walking, can extend beyond reduction in CO₂ emissions and climate impacts, and include tackling congestion, tackling obesity and health issues, reducing social exclusion and improving quality of life"*.

7.2.3 The document sets out an overview of the process and delivery of Travel Plans and states that *"A Travel Plan is a long-term management strategy for an occupier or site that seeks to deliver sustainable transport objectives through positive action and is articulated in a document that is regularly reviewed."*

- 7.2.4 The Guidance states that *"Travel Plans should involve the development of agreed explicit outcomes linked to an appropriate package of measures aimed at encouraging more sustainable travel, with an emphasis on reducing single occupancy car use..."* and;
- "A Travel Plan should seek to establish clear outcomes to be achieved in relation to access and set out all the measures to be implemented in detail, including an action plan, timescales, targets and responsibilities for implementation, monitoring and review".*
- 7.2.5 It is made clear in the document that Travel Plans should focus on achieving the lowest practical level of single occupancy vehicle trips to or from a site and widening the use of other travel modes and assist in the wider aims of encouraging sustainable travel, improving health, reducing congestion, energy consumption and pollution. The Travel Plan, it advises *"needs to address all the journeys that may be made to and from a site"*.
- 7.2.6 The guidance also specifies that *"It is important to note that Travel Planning should be developed as one of the means of delivering an area's sustainable transport strategy. Travel Planning should feature in the policy framework and implementation programmes of Regional Spatial Strategies and Local Development Frameworks"*.
- 7.2.7 Further guidance relating specifically to residential Travel Plans is presented in the DfT document entitled *"Making Residential Travel Plans Work"* published in June 2007.
- 7.2.8 The document states that:
- "Travel Planning is one of a range of measures known as smarter choices which have been found to be effective on reducing traffic and improving accessibility in residential areas"*.
- 7.2.9 A Residential Travel Plan is a package of measures designed to reduce car use originating from new housing by supporting alternative forms of transport and reducing the need to travel in the first place.



- 7.2.10 As already stated, a Residential Travel Plan Framework has also been prepared as a stand-alone document within the application package.

8 CONCLUSIONS

8.1.1 Eddisons have been instructed by Kellen Homes Limited to advise on the traffic and transportation issues relating to proposals to develop a site on land off Bennett Street in the West Gorton area of Manchester.

8.1.2 The following conclusions have been drawn with regard to the proposed development:

- The existing and proposed pedestrian infrastructure located in the vicinity of the site will enable safe pedestrian movement between the site and the local area.
- The site is located close to numerous day to day amenities and facilities within the area to reduce reliance on the private car.
- The area surrounding the site is relatively flat and is therefore highly conducive to cycling as an alternative mode of travel.
- The site benefits from being located within close proximity of bus stops which provide regular services to various local destinations including Manchester City Centre, Hyde and Godley.
- The proposed development can be adequately accessed and serviced in a safe and efficient manner.
- The proposed development will have a minimal impact on the operation of the local highway network.
- There is no evidence to suggest that the proposals would have an adverse effect on road safety or the number of accidents in the vicinity,

8.1.3 Based on the above it is the conclusion of this Report that there are no material reasons why the proposed development should not be granted planning consent on highways or transportation grounds.

FIGURES

FIGURE	DESCRIPTION	SCENARIO	CALC
FIGURE 1	2022 SURVEYED FLOWS	AM PEAK	See TA
FIGURE 2	2022 SURVEYED FLOWS	PM PEAK	See TA
FIGURE 3	2027 GROWTHED FLOWS	AM PEAK	FIG1xNTM
FIGURE 4	2027 GROWTHED FLOWS	PM PEAK	FIG2xNTM
FIGURE 5	TRIP DISTRIBUTION	AM PEAK	See TA
FIGURE 6	TRIP DISTRIBUTION	PM PEAK	See TA
FIGURE 7	POTENTIAL EXISTING (B8) TRAFFIC	AM PEAK	See TA
FIGURE 8	POTENTIAL EXISTING (B8) TRAFFIC	PM PEAK	See TA
FIGURE 9	2027 BASE FLOWS	AM PEAK	FIG1xNTM
FIGURE 10	2027 BASE FLOWS	PM PEAK	FIG2xNTM
FIGURE 11	DEVELOPMENT FLOWS	AM PEAK	See TA
FIGURE 12	DEVELOPMENT FLOWS	PM PEAK	See TA
FIGURE 13	2027 ASSESSMENT FLOWS	AM PEAK	FIG3+FIG11-FIG7
FIGURE 14	2027 ASSESSMENT FLOWS	PM PEAK	FIG4+FIG12FIG8

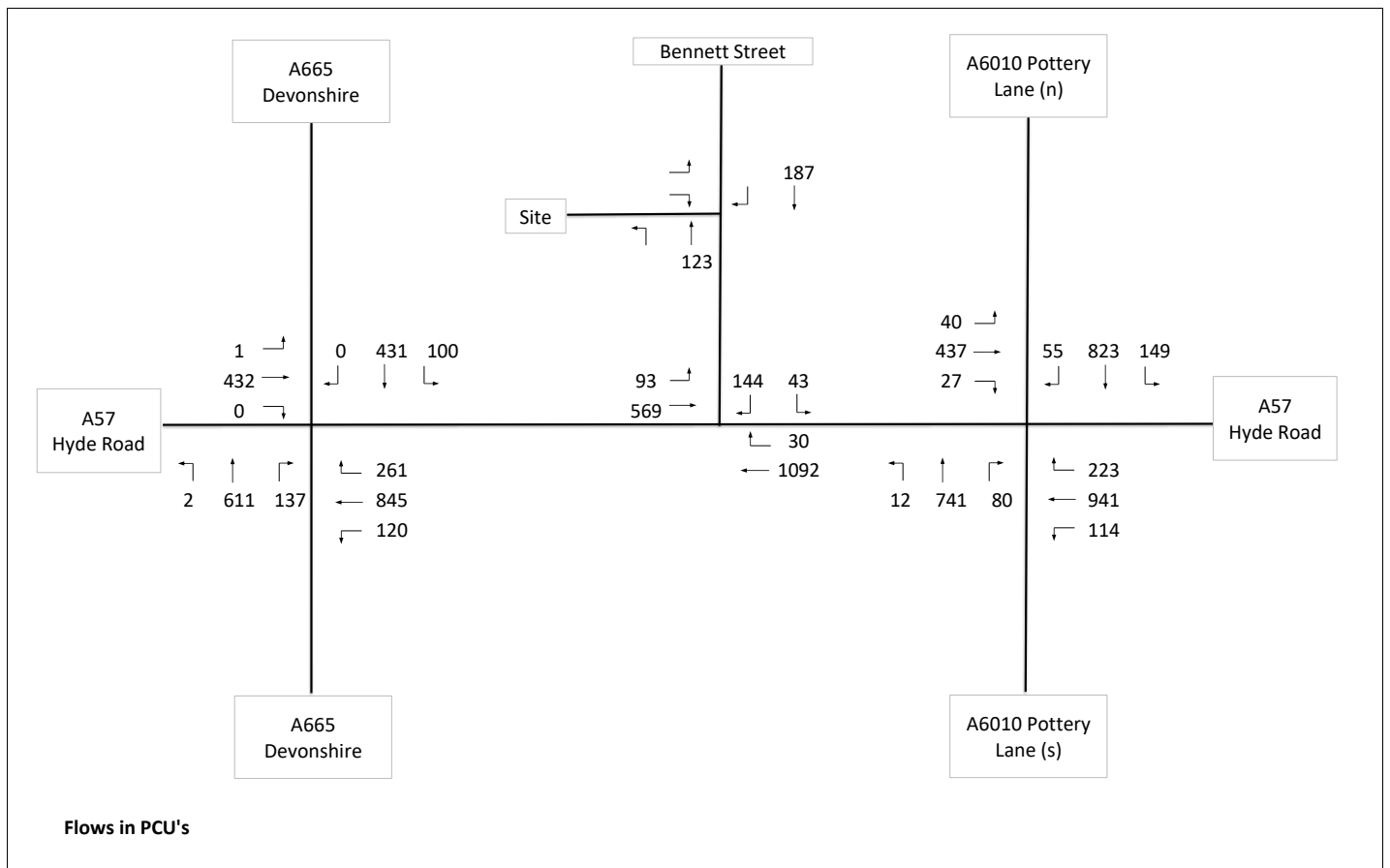


Figure 1 2022 Surveyed Flows - AM Peak (0745-0845 hours)

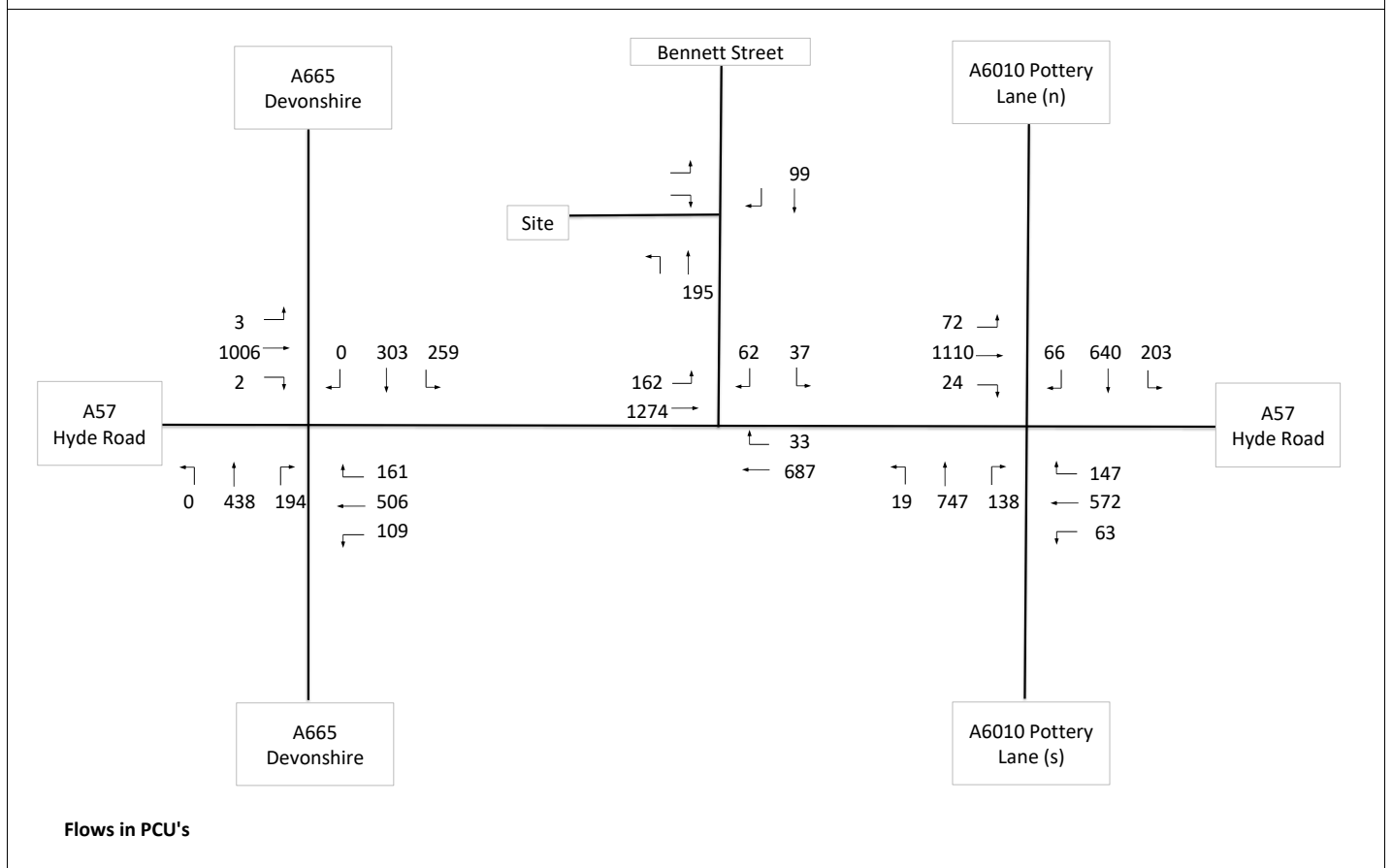


Figure 2 2022 Surveyed Flows - PM Peak (1700-1800 hours)

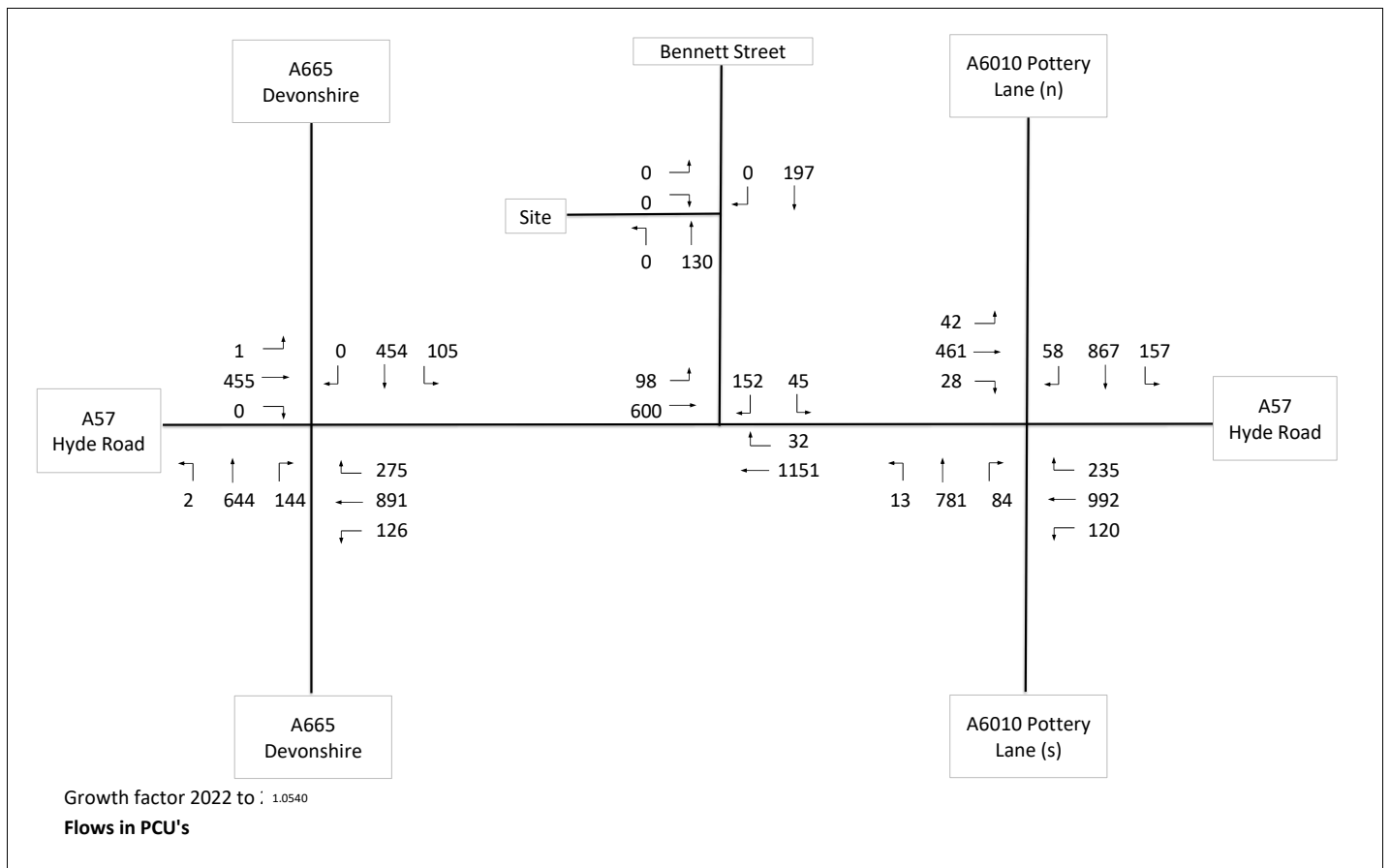


Figure 3 2027 Grownthed Flows - AM Peak (0745-0845 hours)

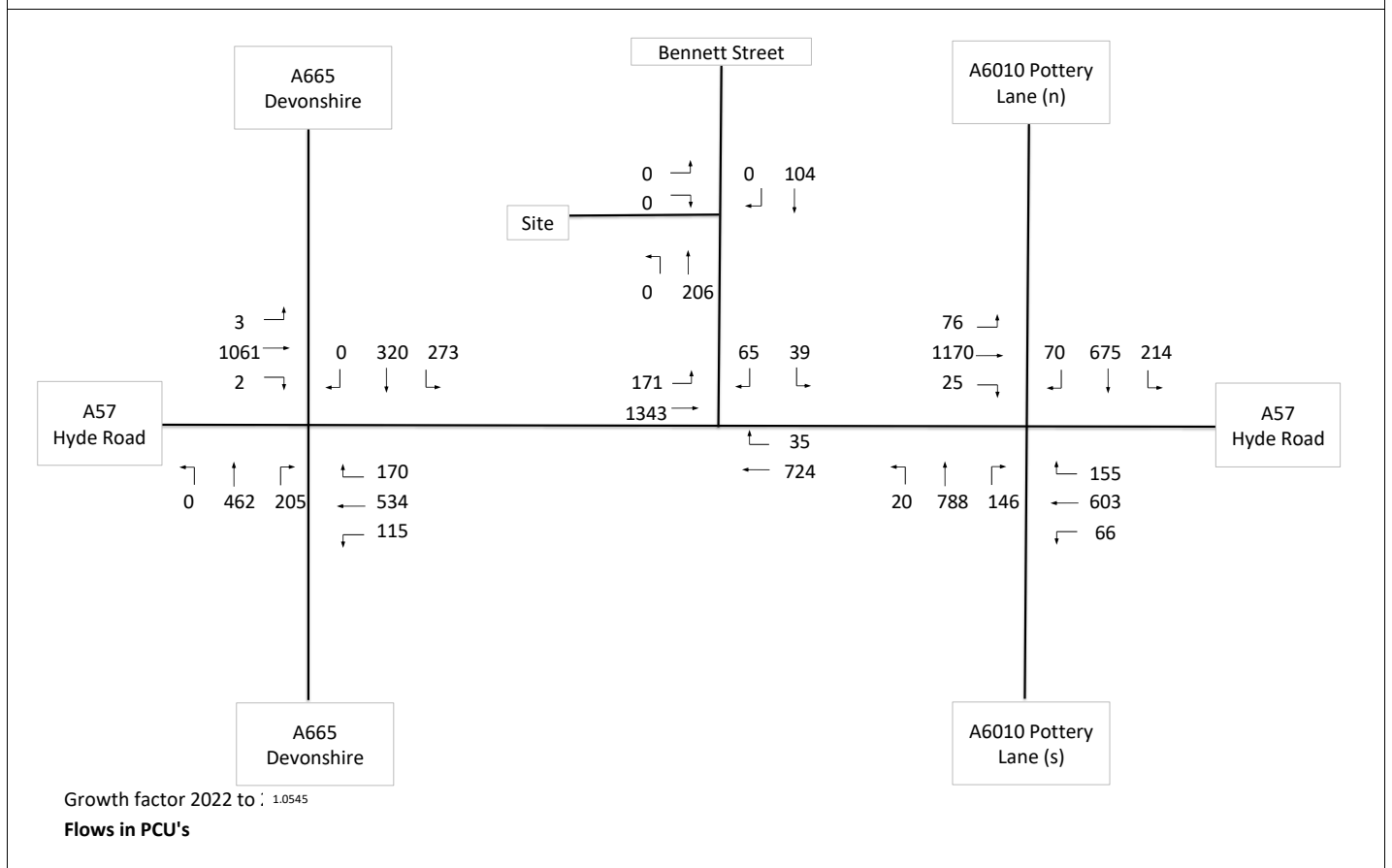


Figure 4 2027 Grownthed Flows - PM Peak (1700-1800 hours)



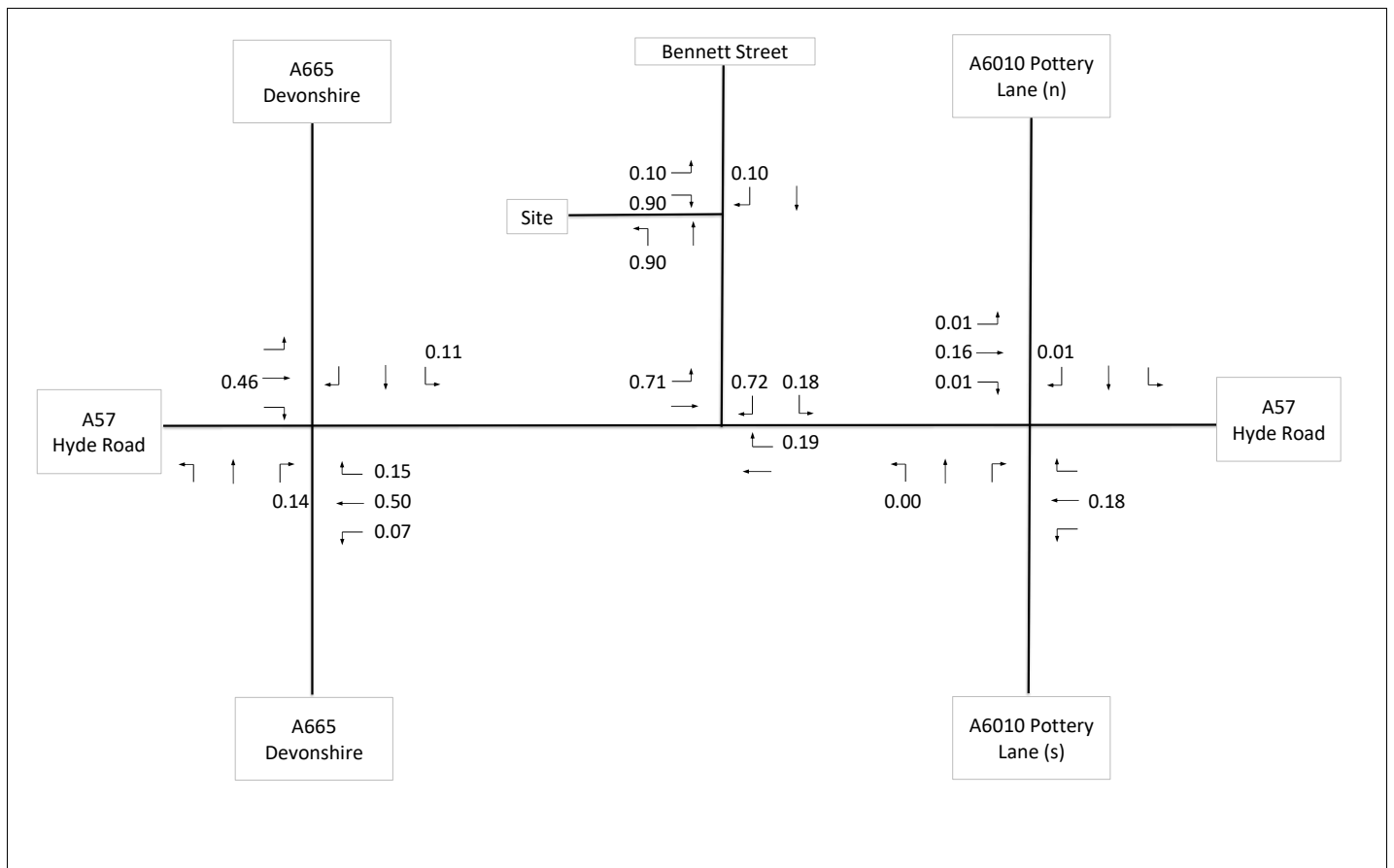


Figure 5 Trip Distribution - AM Peak (0745-0845 hours)

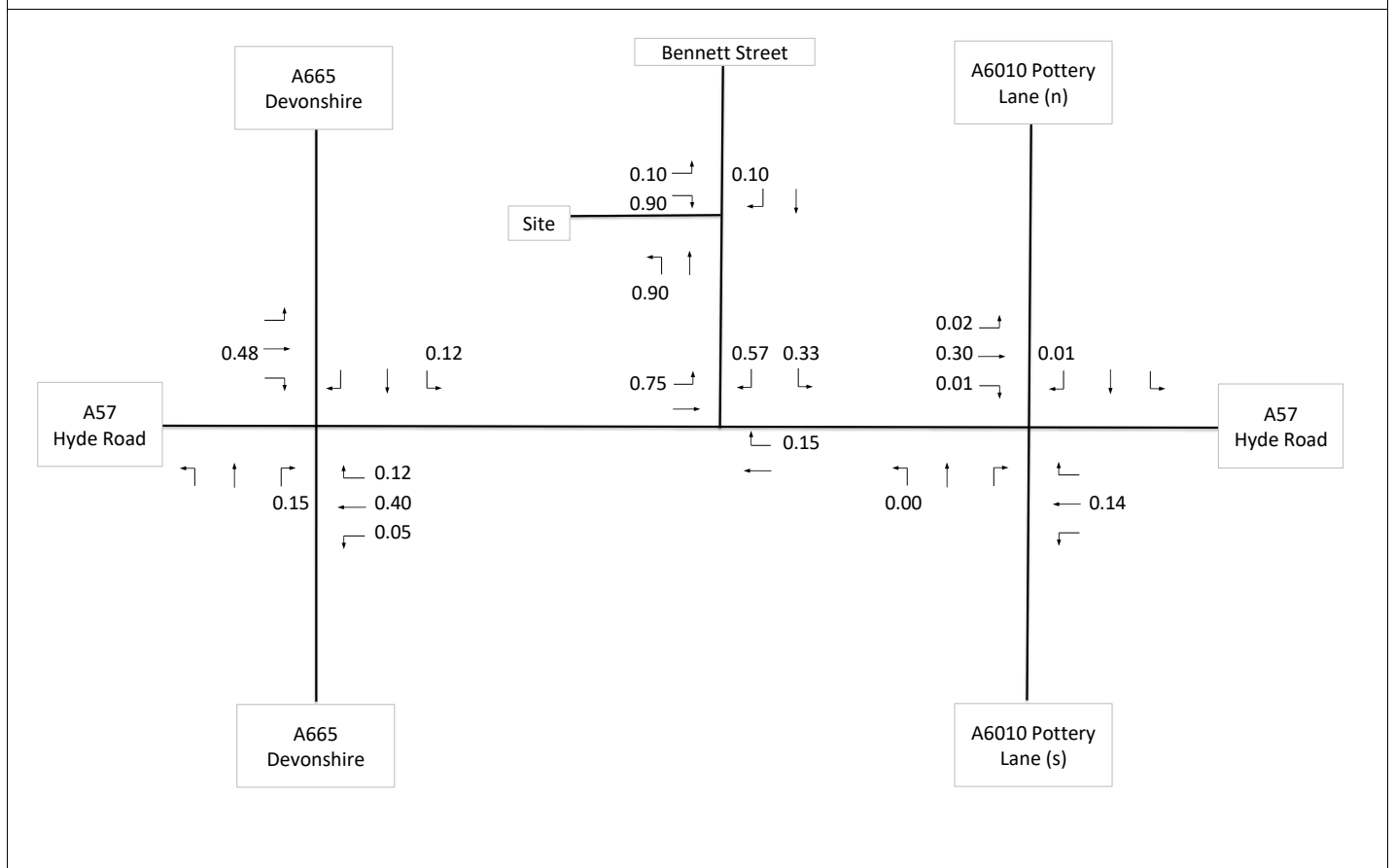


Figure 6 Trip Distribution - PM Peak (1700-1800 hours)



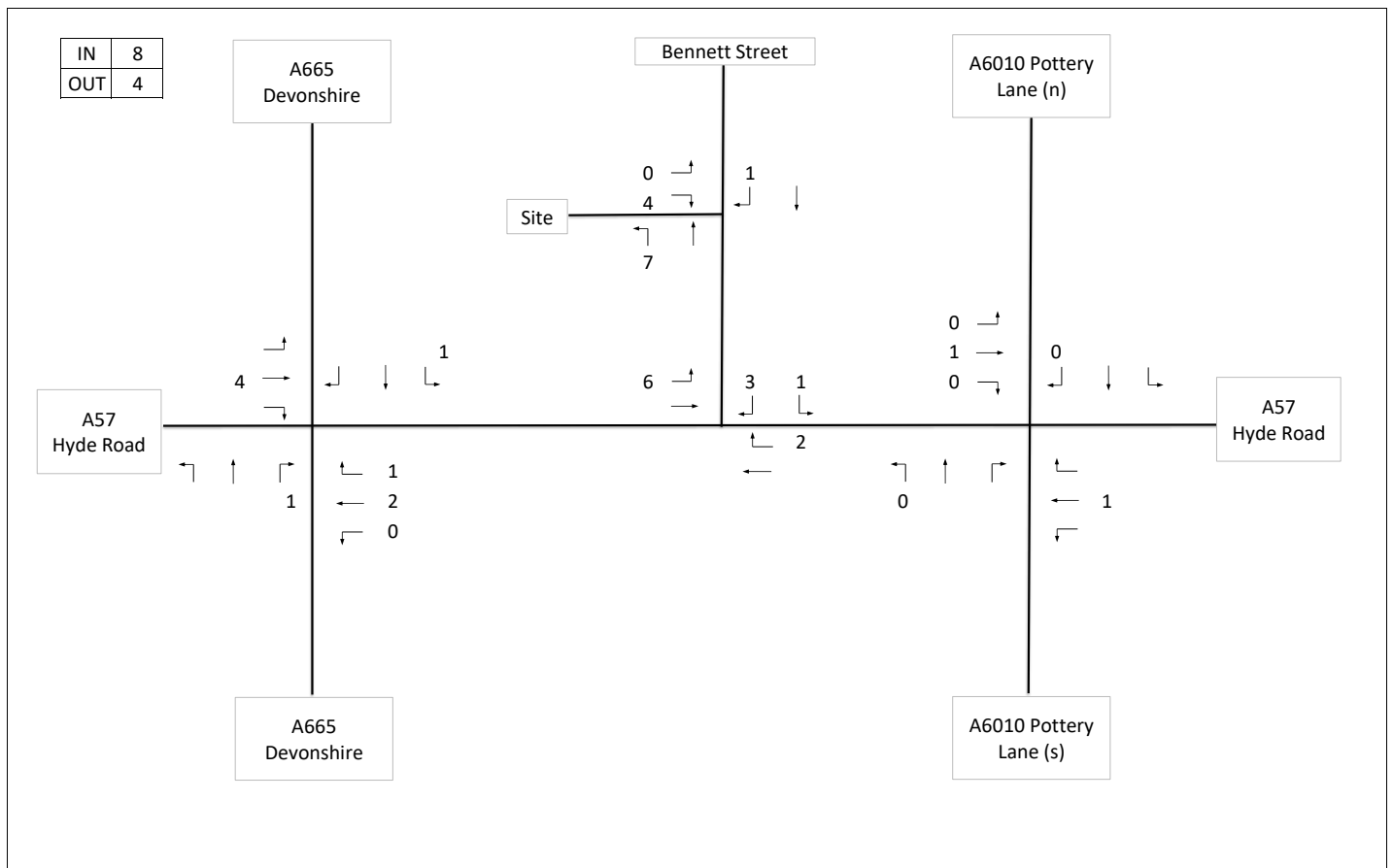


Figure 7 Potential Existing Flows - AM Peak (0745-0845 hours)

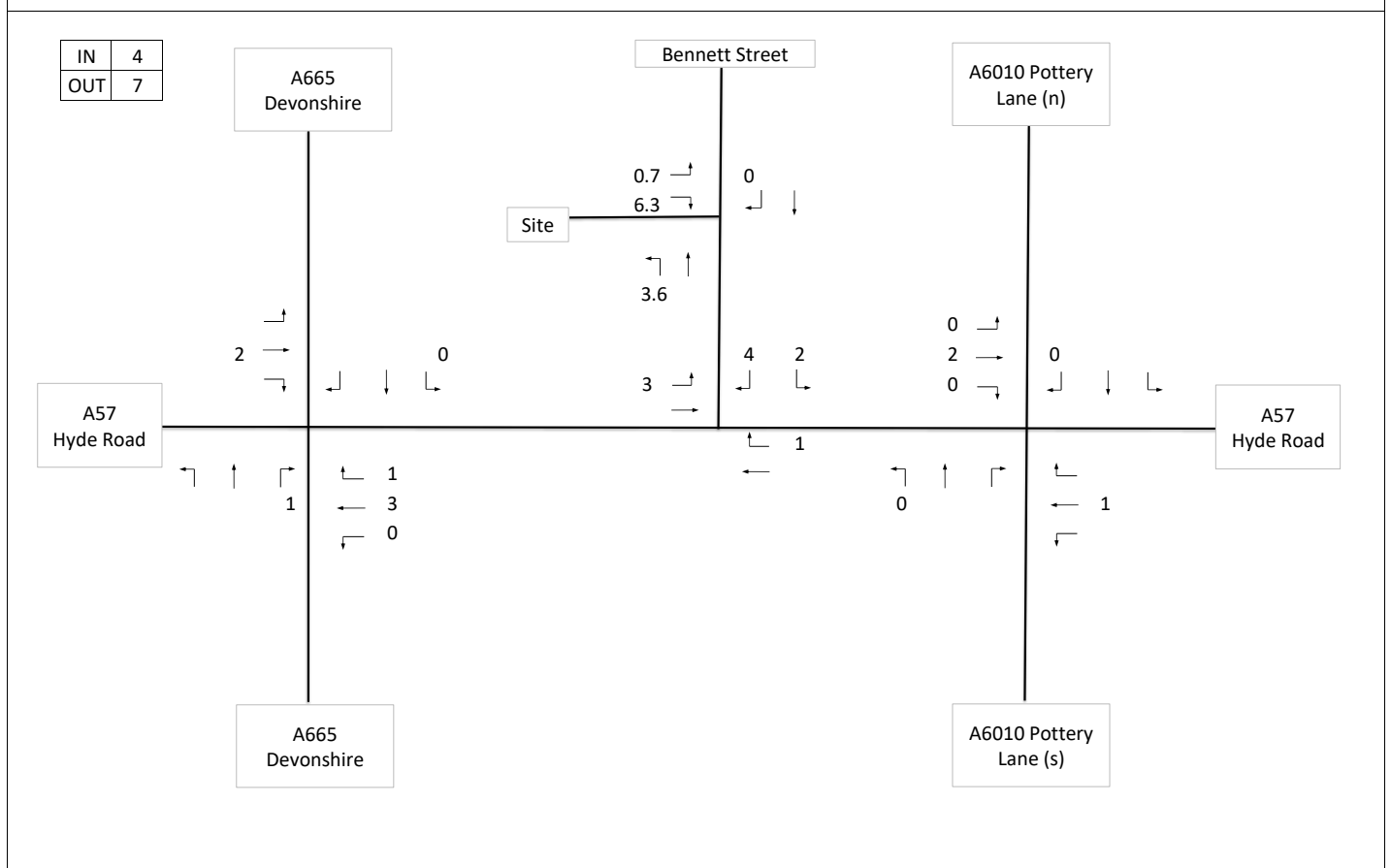


Figure 8 Potential Existing Flows - PM Peak (1700-1800 hours)



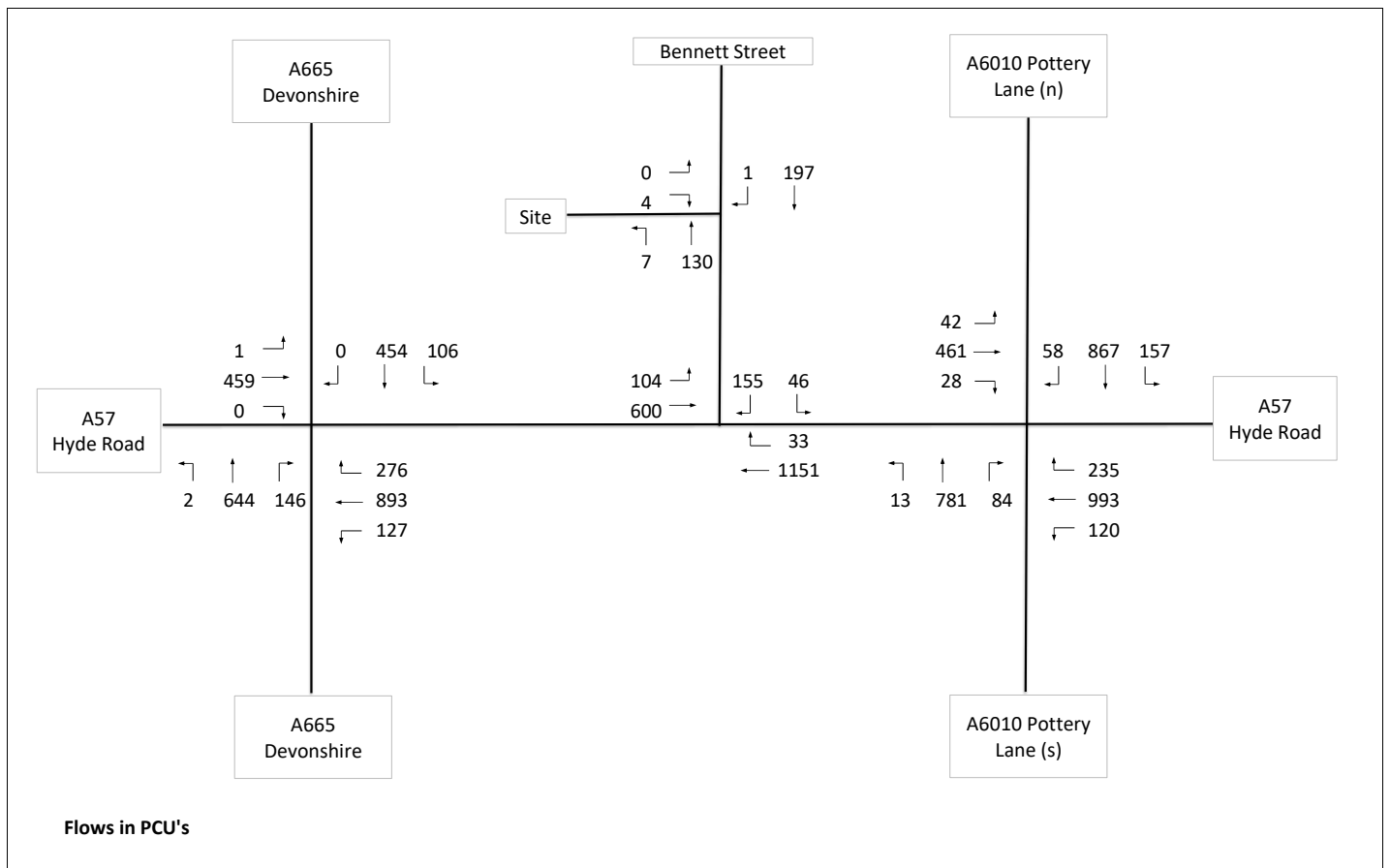


Figure 9 2027 Base Flows - AM Peak (0745-0845 hours)

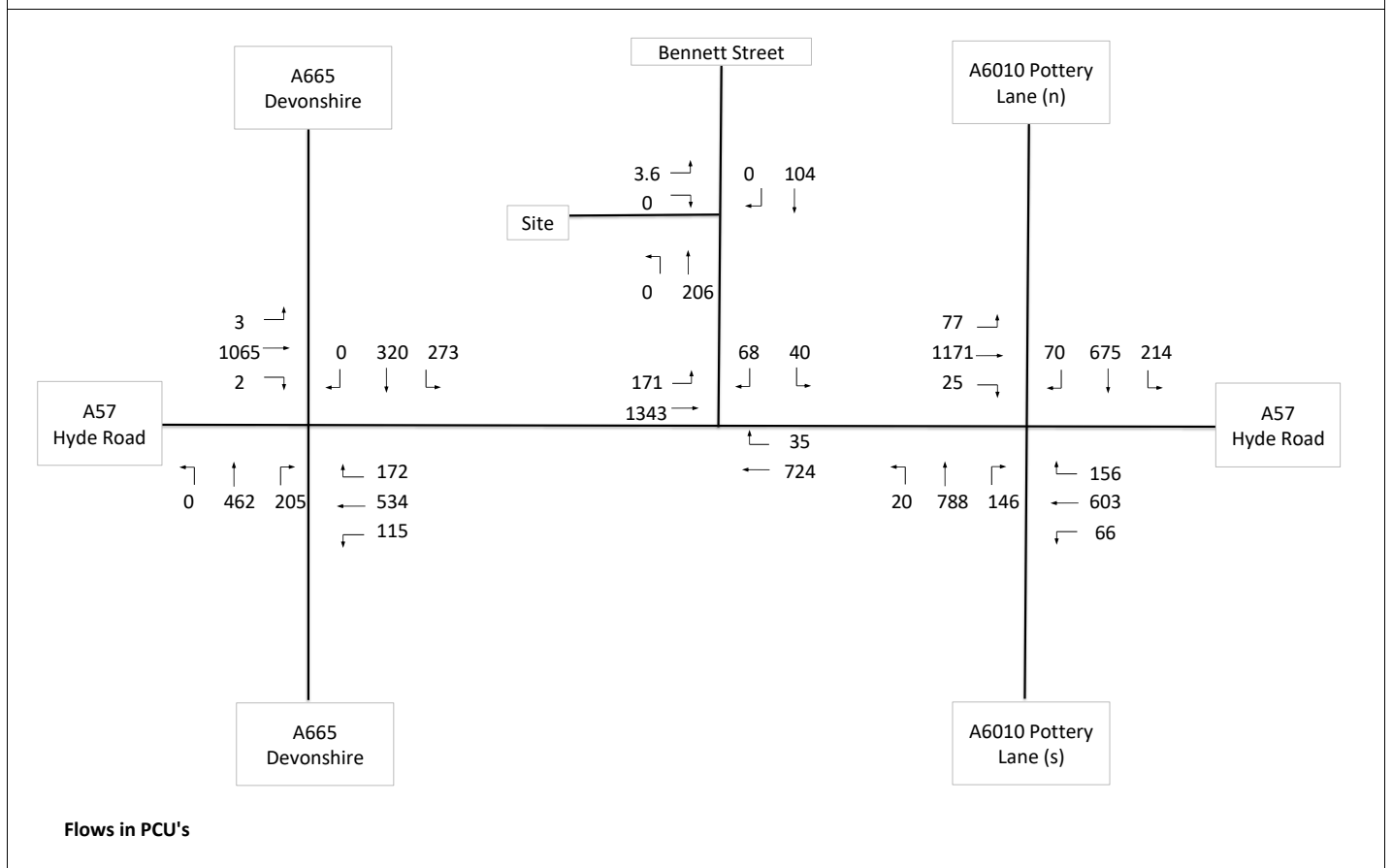


Figure 10 2027 Base Flows - PM Peak (1700-1800 hours)



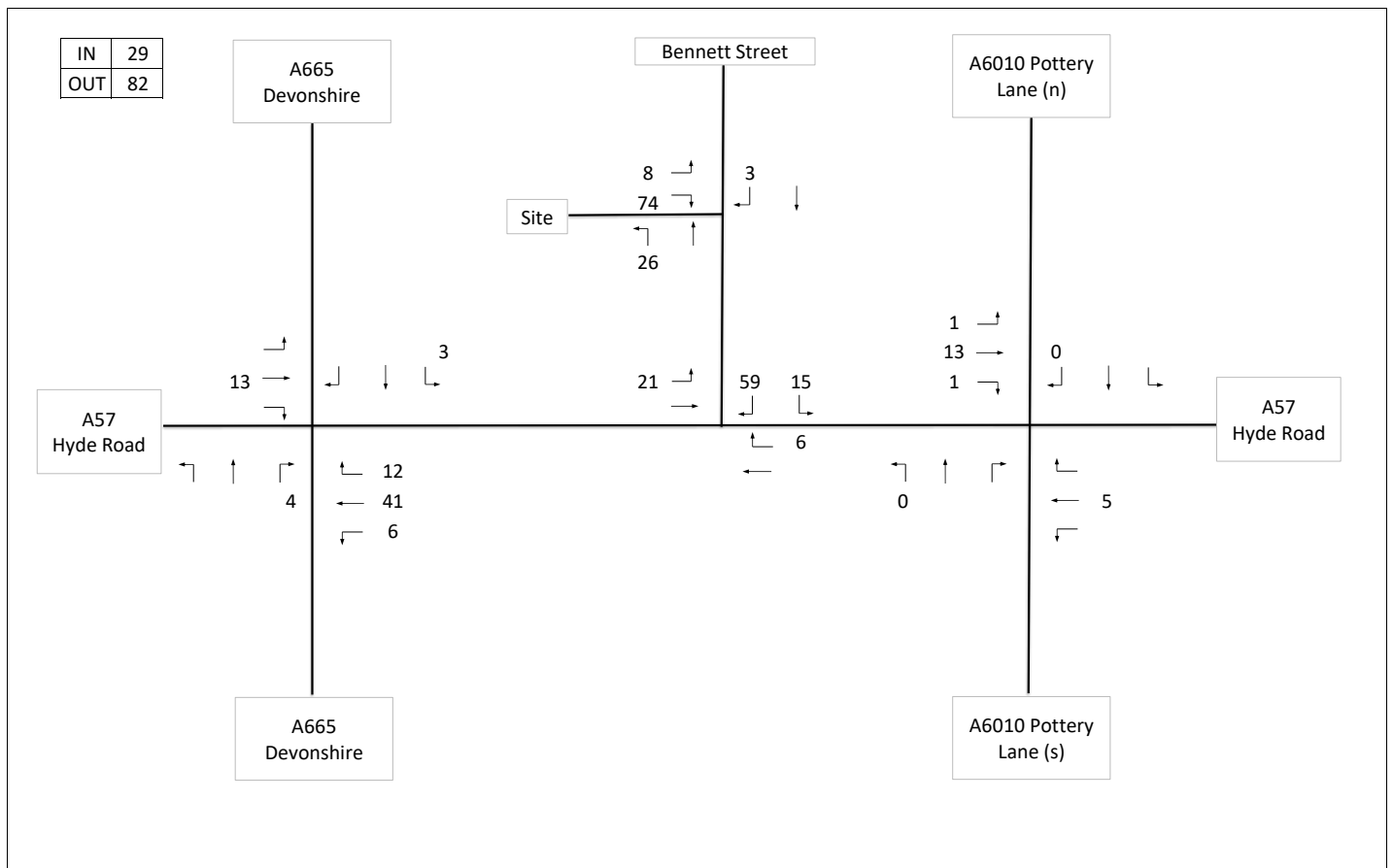


Figure 11 Development Flows - AM Peak (0745-0845 hours)

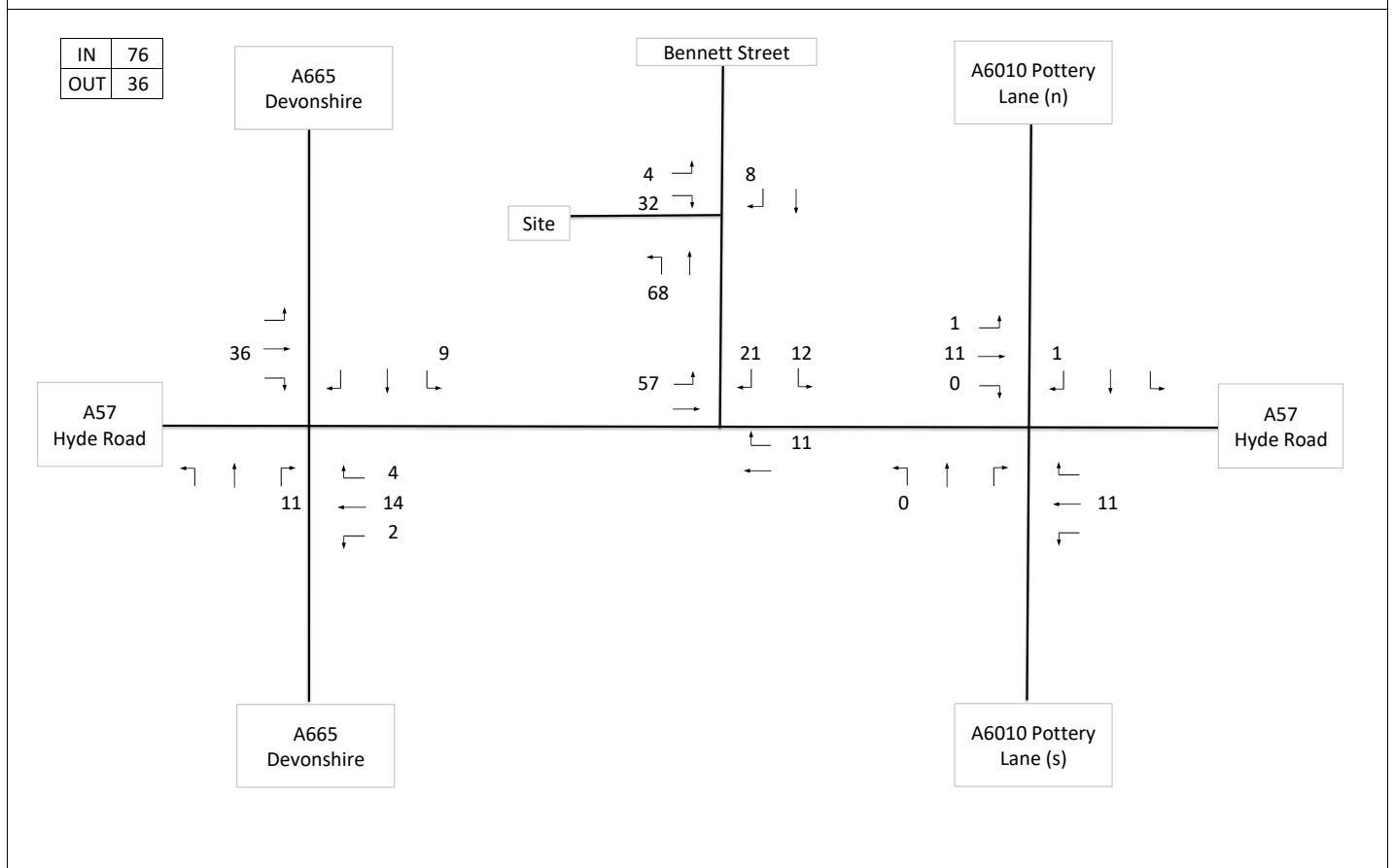


Figure 12 Development Flows - PM Peak (1700-1800 hours)



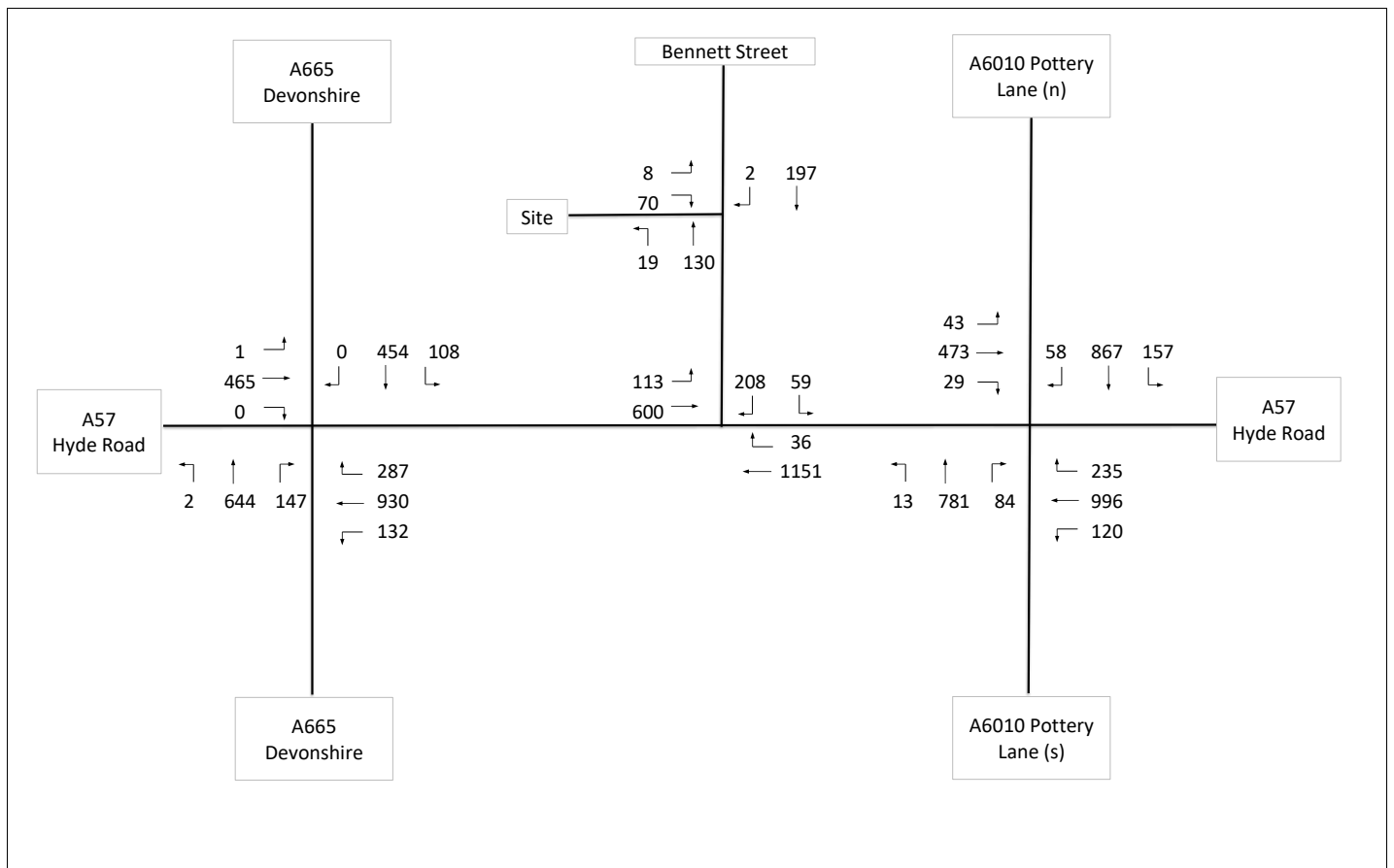


Figure 13 2027 Assessment Flows - AM Peak (0745-0845 hours)

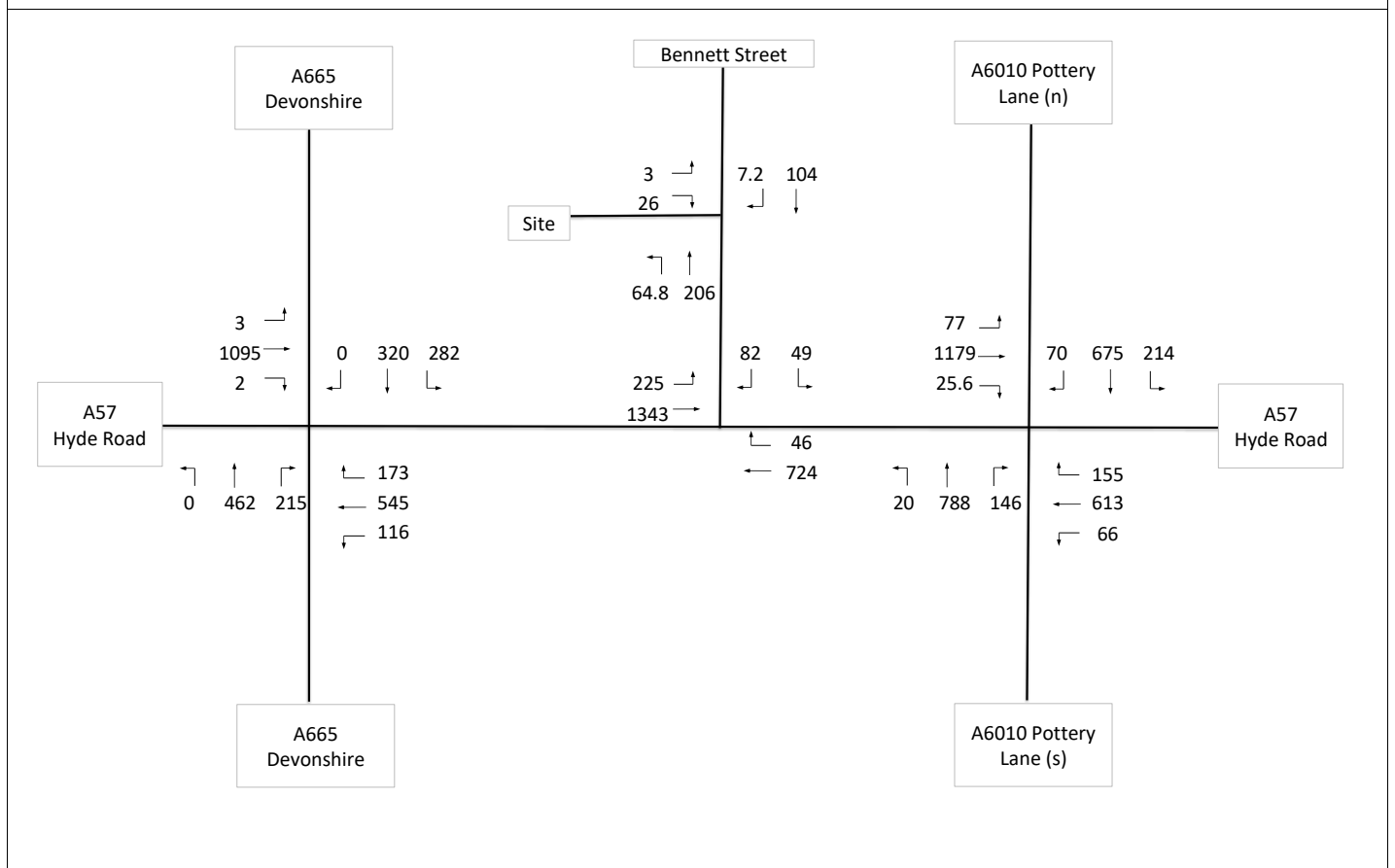
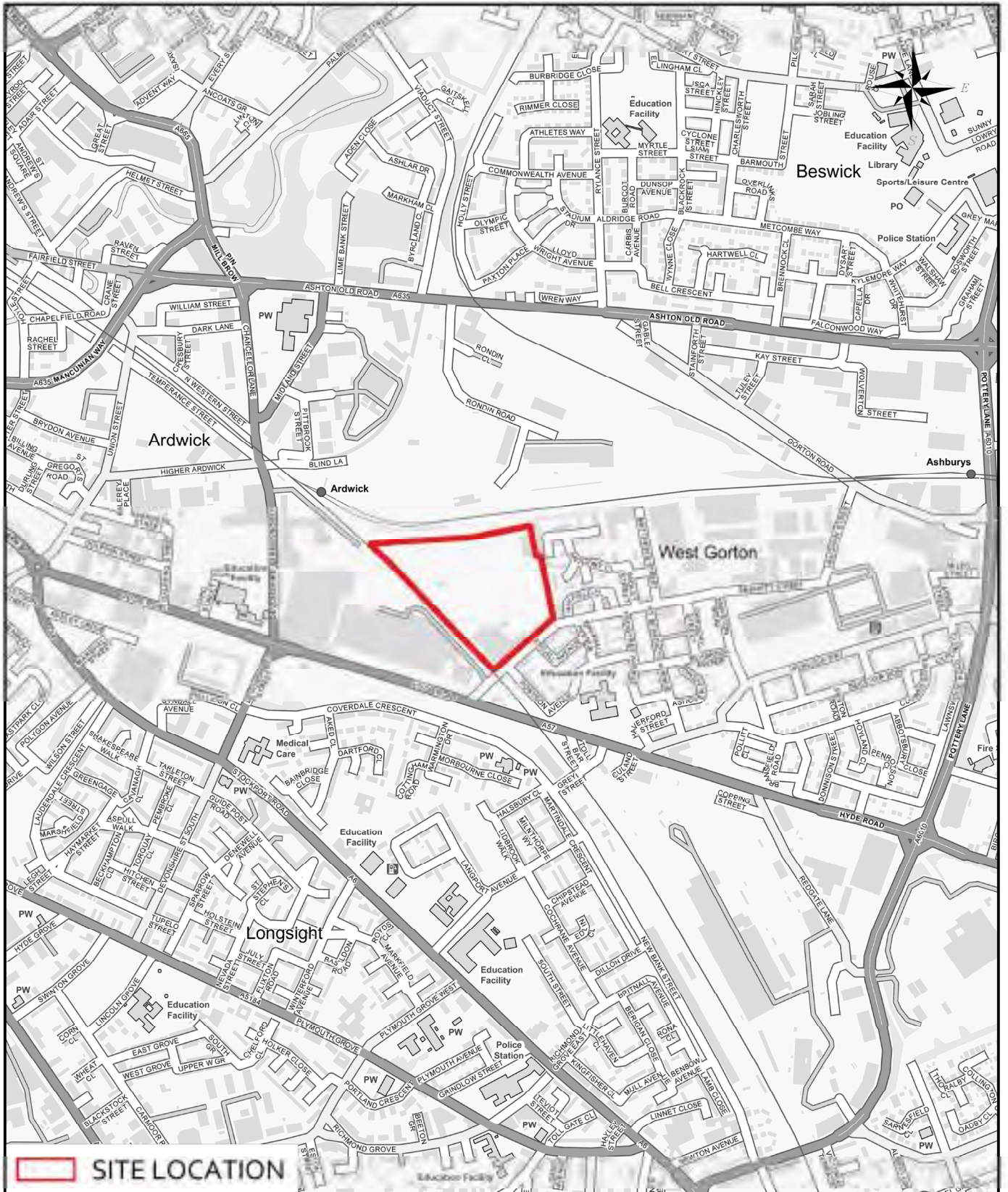


Figure 14 2027 Assessment Flows - PM Peak (1700-1800 hours)

PLANS



 SITE LOCATION

CLIENT:

KELLEN HOMES

DRAWING TITLE:

**BENNETT STREET, GORTON
SITE LOCATION**

Croft Transport Planning & Design
340 Deansgate
Manchester
M3 4LY

Email: info@crofts.co.uk
Tel: 0161 837 7380
Web: www.eddisons.com/services/transport-planning

DRAWING NUMBER:

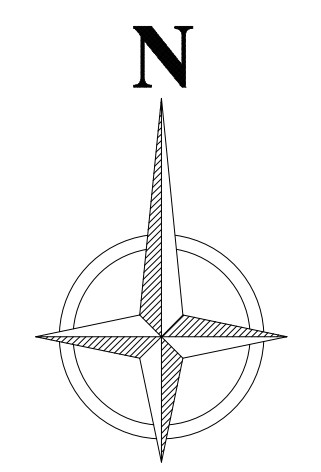
3683-01

REVISION:

-

DRAWN	DATE	CHECKED	DATE	SCALE
LG	23.06.22	MR	23.06.22	NTS @ A4

Eddisons Incorporating
Croft



Accommodation Schedule						
Olympic Storage, Manchester						
KH KELLEN HOMES						
Kellen Homes	House Type	Bed No.	Type	No.	Sqft	Total Sqft
	2 Bed Apts (Apartment B)	2	4 Storey	100	754	75400
	Larch	3	2.5 Storey	18	1118	20124
	Hickory	2	2 storey	40	766	30640
	Olive	2	2 storey	1	768	768
	Acacia	3	2 storey	10	958	9580
	Cedar	3	2 storey	71	958	68018
	Palm	4	3 Storey	32	1262	40384
			Total	272		244914
			Total	272		244914
Gross Site Area: 12.68 Acres 5.13 Hectares						
POS 0.822 0.33 Hectares						
Undevelopable 1.05 Acres 0.42 Hectares						
Nett Site Area: 10.808 Acres 4.37 Hectares						
Gross Density: 21.45 Units/Acre 53.01 Units/Hectare						
Nett Density: 25.17 Units/Acre 62.19 Units/Hectare						
Gross Footage: 19314.98 SQFT/Acre 4434.07 SQM/Hectare						
Nett Footage: 22660.44 SQFT/Acre 5202.07 SQM/Hectare						

Revision

Date

Amendment

Initials

Development

BENNETT STREET

Location

MANCHESTER

Marketing Name

-

Drawing Title

SITE LAYOUT

Job No.

KH006

Revision

-

Drawn By

BP

Checked by

RG

Drawing No.

A-100

Scale @ A1

1:500

Date

18.02.22

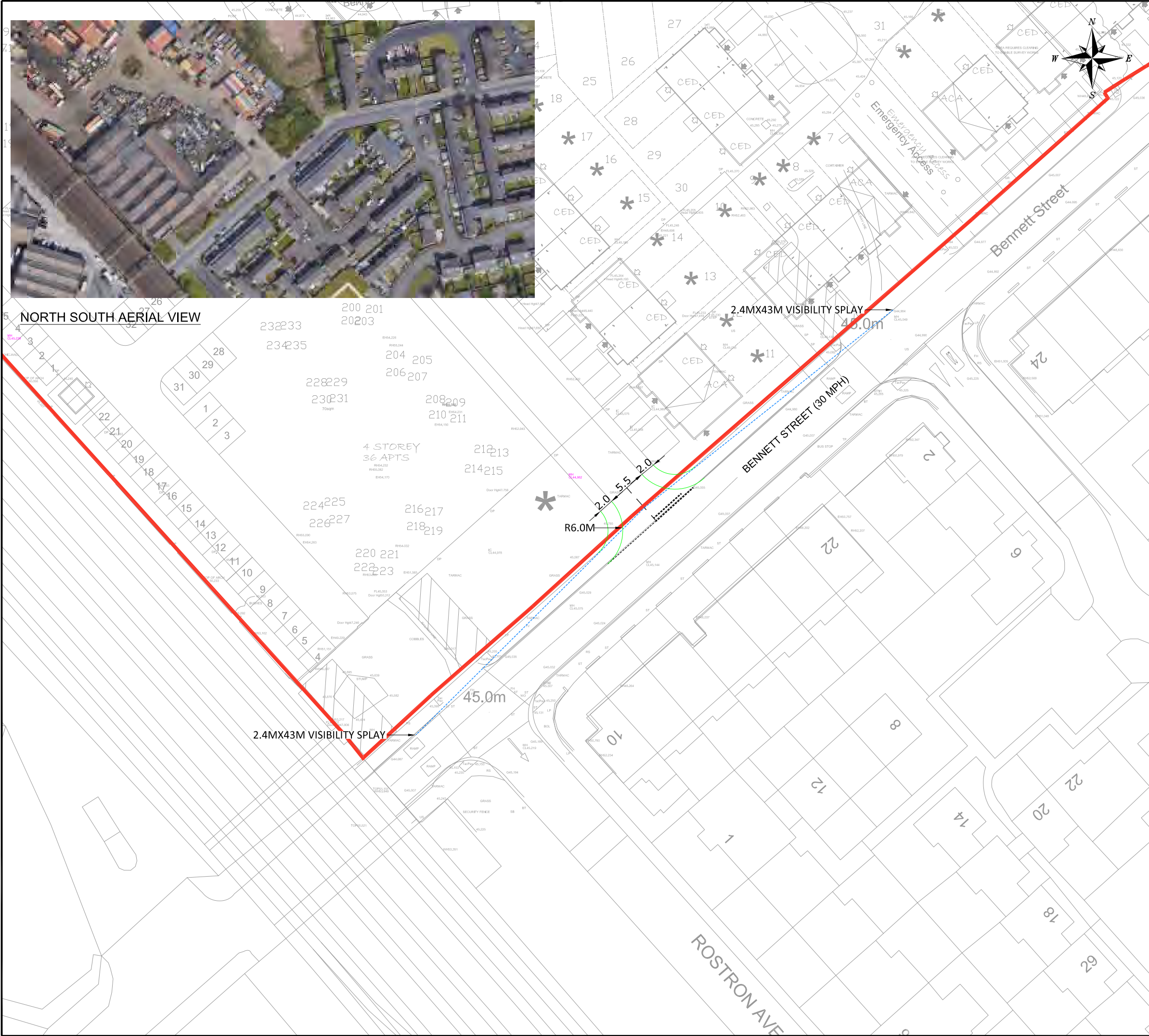
Date Checked

-

1st Floor, 103 Dalton Avenue, Birchwood Park,
Warrington WA3 6YE
T: 01925 363108 W: www.kellenhomes.com

KH

KELLEN
HOMES



NORTH SOUTH AERIAL VIEW



NOTES

PLAN 3

THIS IS NOT A CONSTRUCTION DRAWING AND IS FOR INDICATIVE PURPOSES ONLY.
THE DRAWING WILL BE SUBJECT TO CHANGE FOLLOWING LOCAL AUTHORITY REVIEW AND CONFIRMATION OF PUBLIC HIGHWAY AND THIRD PARTY LAND BOUNDARIES.

INDICATIVE SITE BOUNDARY

DENOTES NEW KERBS

LOCAL AUTHORITY: MANCHESTER CITY COUNCIL

TOTAL AREA OF SITE: 5.25 Ha

SITE LAYOUT NTS

REV	DETAILS	DRAWN	CHECKED	DATE

CLIENT:

KELLEN HOMES

PROJECT:

BENNETT STREET,
MANCHESTER

DRAWING TITLE:

PROPOSED SITE ACCESS PLAN

SCALES:

1:500 @ A3

DRAWN:	GM	CHECKED:	MR	DATE:	JUL 22
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Croft Transport Planning & Design
340 Deansgate
Manchester
M3 4LY

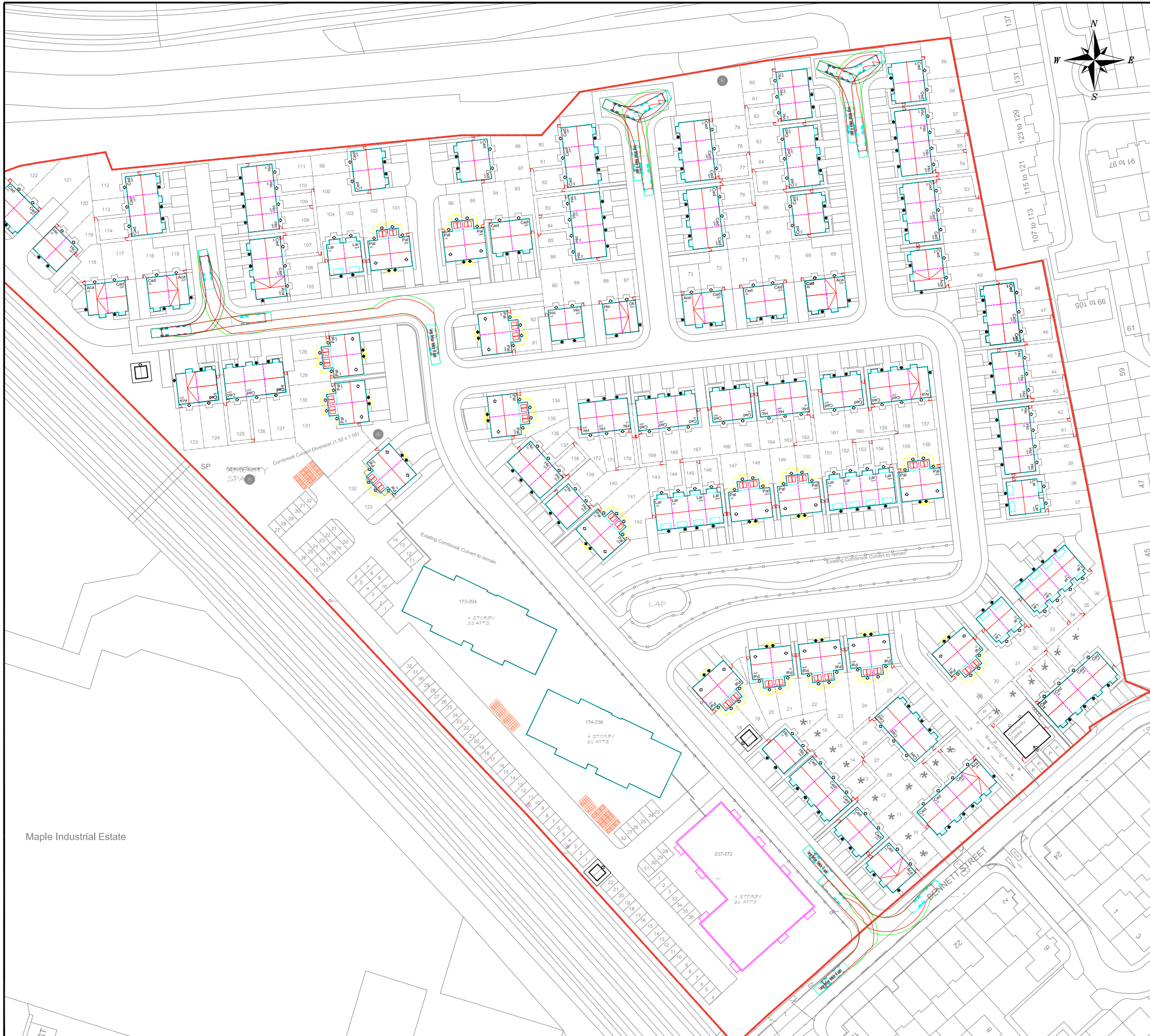
Email: info@crofts.co.uk
Tel: 0161 837 7380
Web: www.eddisons.com/services/transport-planning

DRAWING NUMBER:	3683-F02	REVISION:	-
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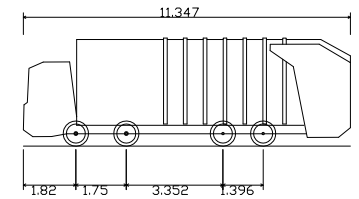
Eddisons

Incorporating
Croft

Z:\projects\3683 Bennett Street, Manchester (Kellen)\CAD\Croft Drawings\3683-SP01.dwg



NOTES



Large Refuse Vehicle (4 axle)
Overall Length 11.347m
Overall Width 2.500m
Overall Body Height 3.751m
Min Body Ground Clearance 0.304m
Track Width 2.500m
Lock to lock time 6.00s
Wall to Wall Turning Radius 11.330m

Large Refuse Vehicle (4 axle)

CLIENT:

ONWARD HOMES

PROJECT:

BENNETT STREET, MANCHESTER

DRAWING TITLE:

SWEPT PATH ANALYSIS

SCALES:

1:500 @ A3

DRAWN:

LG

CHECKED:

MR

DATE:

JUL 22

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Web: www.eddisons.com/services/transport-planning

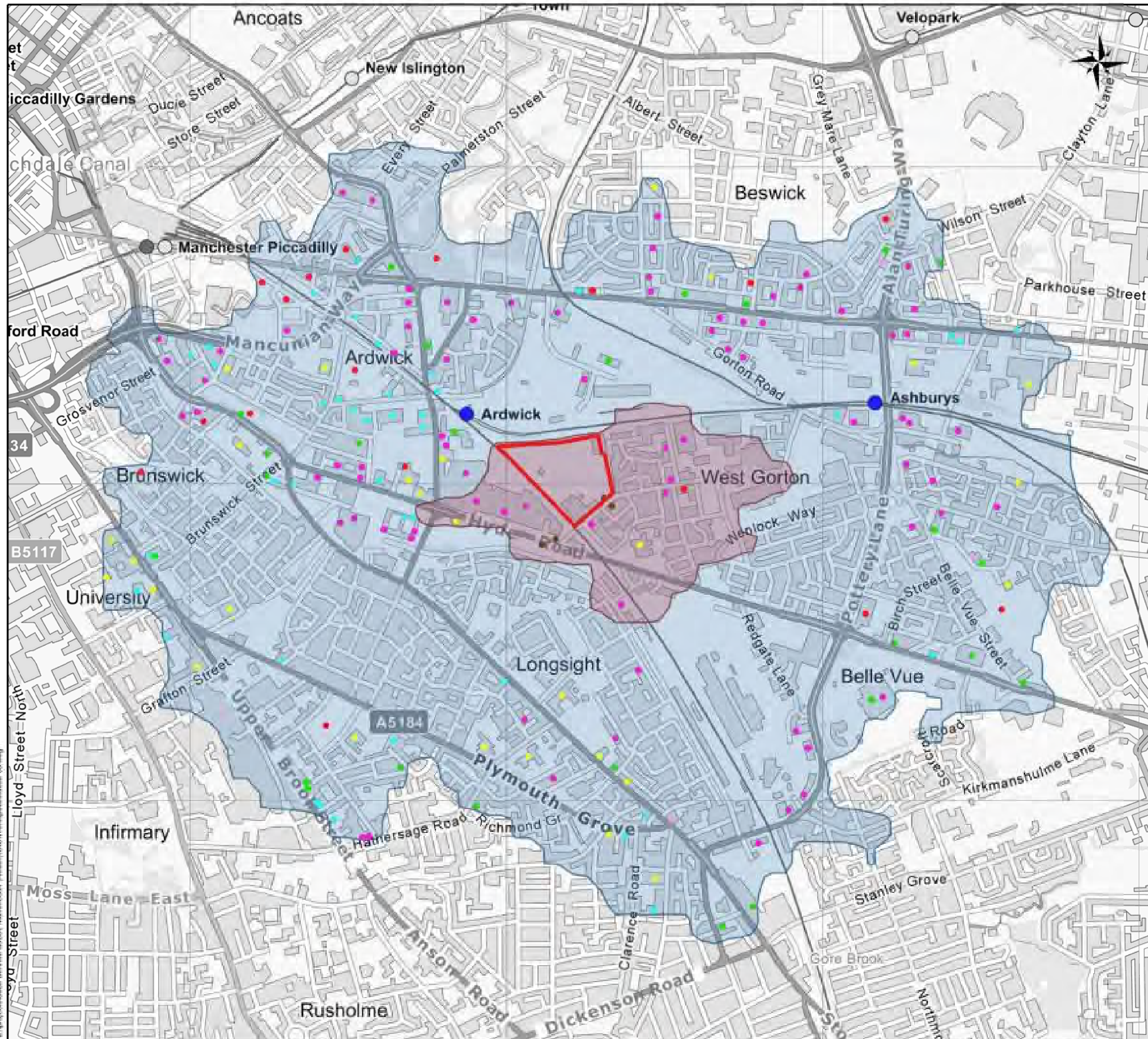
DRAWING NUMBER:

3683-SP01

REVISION:

-

Eddisons Incorporating
Croft



NOTES

- Site Location
- 800m Pedestrian Catchment
- 2km Pedestrian Catchment
- Train Station
- Nearest Bus Stops
- Cafe/Takeaway/Public House
- Business/Employment
- Medical/Healthcare
- Education
- Sport/Leisure
- Retail

REV	DETAILS	DRAWN	CHECKED	DATE

CLIENT:

KELLEN HOMES

PROJECT:

BENNETT STREET, GORTON

DRAWING TITLE:

800M & 2KM PEDESTRIAN CATCHMENT WITH AMENITIES

SCALE:

NTS @ A3

DRAWN	CHECKED	DATE
LG	MR	JUN 22

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Manchester
M3 4LY

Email: info@crofts.co.uk
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Web: www.eddisons.com/services/transport-planning

DRAWING NUMBER	REVISION
3683-03	-

Eddisons

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APPENDICES

APPENDIX 1

TfGM & MCC Correspondence

From: Sue Wills <sue.wills@manchester.gov.uk>
Sent: 30 November 2021 12:11
To: Andrew Bradshaw <Andrew.Bradshaw@rapleys.com>
Subject: 126714 - Bennett Street

Dear Andrew ,

please see attached updated comments dated 11th November 2021 for Highway Services.

FURTHER HIGHWAY RESPONSE 11/11/2021: - The following additional comments have been received from TfGM which are supported by MCC Highways: The revised modelling shows that the junctions of Hyde Road/Devonshire Street and Hyde Road/Pottery Lane will exceed capacity in the base scenario. With the addition of development traffic, the junctions will operate at worse levels. TfGM would therefore recommend that the developer provides a contribution towards the upgrade and revalidation of SCOOT at the junction of Hyde Road/Pottery Lane. Highway Services would also recommend that the developer improves the pedestrian environment and lighting along Bennett Street especially under the railway bridges along Bennett Street and Hyde Road to encourage travel on foot. In addition to the above, their previous comments remain applicable, and specifically the increasing use of the junction of Hyde Road/Bennett Street by motor vehicles coupled with an anticipated increase in pedestrian movements at the junction would lead us to the conclusion that it should be signalised as part of this development.

I trust the above information will be of assistance to you,

Kind regards,

Sue Wills
Principal Planner
Development Management North
Planning
Growth and Development Directorate.
Manchester City Council
Floor 6 Town Hall Extension
Albert Square
P.O.BOX 532
M60 2LA
External Tel: 0161 234 4524
Internal extension 34524
Mobile 07788978633
Email: sue.wills@manchester.gov.uk
<http://www.manchester.gov.uk>

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This footnote also confirms that this email message has been swept for the presence of computer viruses.

Kryshkevych, Kateryna (Capita)

From: GMUTC <GMUTC@tfgm.com>
Sent: 09 August 2019 16:22
To: Kryshkevych, Kateryna (Capita)
Cc: GMUTC; n.bayliss-rowe@manchester.gov.uk
Subject: RE: TA Scoping - Bennett Street

Hi Kateryna,

We are able to provide the signal timing information for the two junctions; Hyde Lane/Devonshire Street/Devonshire Street North and Hyde Road/Pottery Lane.

The cost for this will be £700 +VAT.

If you are happy to proceed please supply us with a purchase order and we will compile the report.

Kind regards

Hayley Merrick
UTC Engineer
Transport for Greater Manchester

2 Piccadilly Place, Manchester M1 3BG
Tel: 0161 244 1488, Extension 701488
www.tfgm.com

From: Richard Dolphin
Sent: 09 August 2019 11:21
To: GMUTC <GMUTC@tfgm.com>
Subject: FW: TA Scoping - Bennett Street

Can you provide the costs to the consultants?

Yours,

Richard

UTC Unit
Transport for Greater Manchester
2 Piccadilly Place,
Manchester
M1 3BG
Direct Line: 0161 244 1800
Mobile: 07946 547 167
www.tfgm.com

From: Claire Smallman
Sent: 09 August 2019 11:17
To: Richard Dolphin <Richard.Dolphin@tfgm.com>
Subject: FW: TA Scoping - Bennett Street

Are you ok responding to Neil on this?

Kryshkevych, Kateryna (Capita)

From: Kryshkevych, Kateryna (Capita)
Sent: 06 August 2019 13:39
To: Neil Bayliss-Rowe
Cc: d.smith4@manchester.gov.uk
Subject: RE: TA Scoping - Bennett Street

Hi Neil,

Thank you for your response on our proposed scope. Would you be able to share with me the signal specification of the Hyde Rd/Devonshire St N/Devonshire St and Hyde Rd/Pottery Ln signalised junctions?

Regards,
Kat

Kateryna Kryshkevych MSc MCIHT

Senior Transport Planner

Real Estate & Infrastructure

DD : 0161 274 7849 | **Capita** | 5th Floor, Churchgate House, Oxford Street, Manchester, M1 6EU

capitaproperty.co.uk



From: Neil Bayliss-Rowe [mailto:n.bayliss-rowe@manchester.gov.uk]
Sent: 07 June 2019 15:52
To: Kryshkevych, Kateryna (Capita) <Kateryna.K@capita.co.uk>
Cc: d.smith4@manchester.gov.uk
Subject: Re: TA Scoping - Bennett Street

Hi Kat,

TfGM UTC have reviewed the proposals below and note the following:

The junctions to be surveyed appear acceptable.

The Transport Assessment will need to consider the actual traffic demand at the junctions that will be assessed. It is not acceptable to simply use counted traffic flows. The actual traffic demand will need to be established using queue length surveys.

The modelling for the priority junction of Hyde Road/ Bennett Street will need to take account of the adjacent puffin crossing to ensure any interaction is captured.

It is likely that the quantum of development will result in the requirement for the junction of Hyde Road/Bennett Street to be signalised. If that is the case then the consultants should contact TfGM UTC to discuss proposed layout options prior to submitting the TA.

Thanks,

Neil

Neil Bayliss-Rowe

Highways Development Control Manager

Internal Tel: 801 31171

External Tel: 0161 234 1171

Mobile: 07971384537

Email: n.bayliss-rowe@manchester.gov.uk

Highways Service, Growth and Neighbourhoods Directorate

Manchester City Council

PO Box 532 Town Hall

Manchester

M60 2LA

Web: <http://www.manchester.gov.uk>

Please note new mobile number.

On Mon, 3 Jun 2019 at 09:24, Kryshkevych, Kateryna (Capita) <Kateryna.K@capita.co.uk> wrote:

Hi Neil,

Hope you had a good weekend! Did you have any luck of getting comments back from TfGM?

Regards,

Kat

Kateryna Kryshkevych MSc MCIHT

Senior Transport Planner

Real Estate & Infrastructure

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From: Neil Bayliss-Rowe [mailto:n.bayliss-rowe@manchester.gov.uk]
Sent: 28 May 2019 11:30
To: Kryshkevych, Kateryna (Capita) <Kateryna.K@capita.co.uk>
Cc: d.smith4@manchester.gov.uk
Subject: Re: TA Scoping - Bennett Street

Hi Kat,

I have forwarded your email to TfGM to advise on the locations for required junction assessments.

I will chase them now and will provide you with comments once I receive them.

Thanks,

Neil

Neil Bayliss-Rowe

Highways Development Control Manager

Internal Tel: 801 31171

External Tel: 0161 234 1171

Mobile: 07971384537

Email: n.bayliss-rowe@manchester.gov.uk

Highways Service, Growth and Neighbourhoods Directorate

Manchester City Council

PO Box 532 Town Hall

Manchester

M60 2LA

Web: <http://www.manchester.gov.uk>

Please note new mobile number.

On Tue, 28 May 2019 at 09:49, Kryshkevych, Kateryna (Capita) <Kateryna.K@capita.co.uk> wrote:

Hi Neil and David,

Hope both of you are well.

Did you have a chance to look into my email below? I would appreciate if you could confirm that the study area proposed would be sufficient for a Transport Assessment.

Regards,

Kat

Kateryna Kryshkevych MSc MCIHT

Senior Transport Planner

Real Estate & Infrastructure

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From: Kryshkevych, Kateryna (Capita)

Sent: 23 May 2019 15:05

To: n.bayliss-rowe@manchester.gov.uk; d.smith4@manchester.gov.uk

Subject: TA Scoping - Bennett Street

Hi Neil and David,

My colleague Calum Brown has been recently in touch with you regarding the proposed development off Bennett Street in West Gorton (see below).

I am aware that there have been ongoing discussions regarding the scale of the proposed development between our client and Manchester City Council. My understanding is that now the proposal is up for 500 dwellings, comprising some proportion of apartments along the railway line and houses within the rest of the site. The development would provide one parking space per unit.

In view of the fast approaching summer holidays, I would like to agree with you, which junctions we would need to survey to ensure the Transport Assessment covers the junction capacity assessments. As a starting point, I suggest to include the following junctions into the assessment:

- Hyde Rd/Bennet St
- Hyde Rd/Devonshire St N/Devonshire St
- Hyde Rd/Pottery Ln

The location of each junction in relation to the site are shown in plan below.



The surveys would be carried out on a neutral weekday, between 7am and 10am to cover the morning peak hour and between 4pm and 7pm to cover the evening peak hour.

If the Council has any traffic survey data available, it would be appreciated if this could be shared with us.

Could you please also confirm, if there are any committed developments you would like us to consider in the assessment?

I hope that the extent of the proposed study area for junction assessments is acceptable and I am looking forward to your confirmation on this.

Regards,

Kat

Kateryna Kryshkevych MSc MCIHT

Senior Transport Planner

Real Estate & Infrastructure

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From: Brown, Calum (Capita)
Sent: 22 May 2019 15:59
To: Kryshkevych, Kateryna (Capita) <Kateryna.K@capita.co.uk>
Subject: FW: TA Scoping - Bennett Street

From: Brown, Calum (Capita)
Sent: 16 April 2019 09:12
To: Neil Bayliss-Rowe <n.bayliss-rowe@manchester.gov.uk>
Cc: Aspinall, Walter (Capita) <Walter.Aspinall@capita.co.uk>; David E Smith (Highways) <d.smith4@manchester.gov.uk>; s.wills@manchester.gov.uk
Subject: RE: TA Scoping - Bennett Street

Hi Neil,

I was wondering if you have had a chance to review the proposed planning application and scoping note detailed below in relation to the site off Bennett Street?

We are keen to hear the thoughts of the local authority and progress the planning application.

Kind regards,

Calum

Calum Brown BSc (Hons), MSc

Transport Planner – Infrastructure Projects

Real Estate & Infrastructure

0161 274 8085 | calum.brown@capita.co.uk | **Capita** 5th Floor, Churchgate House, Oxford Street, Manchester, M1 6EU

capitaproperty.co.uk



From: David E Smith (Highways) [<mailto:d.smith4@manchester.gov.uk>]

Sent: 08 April 2019 13:56

To: Brown, Calum (Capita) <Calum.Brown@capita.co.uk>; Neil Bayliss-Rowe <n.bayliss-rowe@manchester.gov.uk>

Cc: Aspinall, Walter (Capita) <Walter.Aspinall@capita.co.uk>

Subject: Re: TA Scoping - Bennett Street

Hi Calum

I have passed this to the Development Control Team Leader Neil Bayliss-Rowe for comment.

We will get back to you asap.

Best regards,

David Smith

City Wide Highways Manager

(Lead for Development Control, Traffic, Highway Structures, Flood Risk Management and Road Safety)

Manchester City Council

Highway Services

Corporate Core

5th Floor Bridgewater House
Whitworth Street
Manchester
M1 6LT

Mob: 07983430588

Email: d.smith4@manchester.gov.uk

Web: <http://www.manchester.gov.uk>

I♥MCR

POSTAL ADDRESS: Manchester City Council, The Highways Service, PO Box 532, Town Hall,
Manchester, M60 2LA

On Fri, 5 Apr 2019, 16:51 Brown, Calum (Capita), <Calum.Brown@capita.co.uk> wrote:

Hi David,

I was wondering if you have had a chance to review my email below in relation to a potential planning application along Bennett Street, West Gorton?

We have been advised that the number of dwellings proposed for the site has been reduced to approximately 500. The TA Scoping Note (attached) reflects these changes.

We are keen to hear your thoughts relating to the proposed development, as well as any comments you may have regarding the potential scope of the Transport Assessment required for the development.

I look forward to your response.

Kind Regards,

Calum

From: Brown, Calum (Capita)
Sent: 01 April 2019 13:02

To: 'd.smith4@manchester.gov.uk' <d.smith4@manchester.gov.uk>
Cc: Aspinall, Walter (Capita) <Walter.Aspinal@capita.co.uk>
Subject: TA Scoping - Bennett Street

Hi David,

We have been commissioned to produce a Transport Assessment in support of a potential planning application at a freight container storage site, currently accessed from Bennett Street, West Gorton. The planning application is for a high density high rise development circa 1,000 dwellings with ancillary uses.

In relation to this, we would like to begin scoping discussions with Manchester City Council as the local highway and planning authority for the proposed development site. The attached scoping note details our initial expectations for the extent of the TA related to the development, including:

- Details of the nature and scale of the proposed development;
- A proposed traffic impact assessment area; and
- Proposed peak hour trip generation values.

We would be interested to hear your comments in relation to the proposed scope, as well as your thoughts on any traffic and transport issues on the local highway network that would need to be considered by a Transport Assessment for the proposed development.

Kind Regards,

Calum

Calum Brown BSc (Hons), MSc

Transport Planner – Infrastructure Projects

Real Estate & Infrastructure

0161 274 8085 | calum.brown@capita.co.uk | **Capita** 5th Floor, Churchgate House, Oxford Street, Manchester, M1 6EU

capitaproperty.co.uk

The site is considered to be suitably accessible by sustainable modes and is in close proximity to a range of public transport facilities including bus and train.

With regard to the trip generation information and modelling provided, they agreed with the comments made by TfGM and require a review and resubmission of traffic information before they can support this application. Can you review and send me the updated information based on the increased unit numbers of 340 dwellings?

An increasing use of the junction of Hyde Road/Bennett Street by motor vehicles coupled with an anticipated increase in pedestrian movements at the junction would lead them to the conclusion that it should be signalised as part of this development. Noted and agreed to.

In relation to the two proposed priority junctions providing access to the estate, they are satisfied that these can operate as priority intersections although they require that tactile paving is provided at each. Each access point provides suitable junction visibility. Noted and agreed to.

In terms of highway geometry, for MCC to adopt the estate roads they require a minimum carriageway width of 5.5m with 2m minimum directly adjacent footways on each side and suitable junction radii to allow for required vehicle turning movements. In addition, any cul-de-sac provided which exceeds 20m is required to have a turning head to allow a large refuse vehicle (circa 11.5m) to enter and exit in forward gear. To verify the above, respective carriageway, footway and kerb radii dimensions should be provided in addition to vehicle swept path submissions. Parking controls would also be needed at the main estate access points for which a traffic regulation order would be required. To be provided by the architect.

The developer should also note that the parking areas would not be adopted by the highway authority and the developer may need to provide private access arrangements to avoid any misuse. For communal landscaped areas, details should be provided as to how these are to be privately maintained. Noted and agreed to.

With regard to highway paving, commuted sums will be applied for higher specification (non-standard) materials. In addition it is expected that all modifications / improvements to the public highway are achieved via a zero carbon footprint. Materials used during this process must also be 100% recycled and fully recyclable. Developers will be expected to demonstrate that these standards can be met prior to any planning conditions being discharged. The developer is to agree the above with MCC's Statutory Approvals and Network Resilience Teams post planning approval and prior to construction taking place. Noted and agreed to.

In general terms the proposed traffic calming shown within the estate and on Bennett Street is supported although any horizontal measures such as road narrowings (build-outs) would need to take consideration of Bennett Street as a bus route (requiring 6m minimum road width) with a minimum retained width of 5.5m on estate roads. A 20mph speed limit will need to be applied to the estate through the promotion of a traffic regulation order. Noted and agreed to.

In addition to the new estate roads, amendments to the existing highway on Bennett Street are required and this should include for resurfacing of the existing footway adjacent to the estate. Therefore, should the planning application be approved then alterations to the highway will be required and are to be undertaken through S278 agreement between the developer and MCC which would include any required technical approval. The following link can be used

[:https://www.manchester.gov.uk/directory_record/287709/permission to work on the highways - section 278 agreements/category/355/highways and pavements](https://www.manchester.gov.uk/directory_record/287709/permission_to_work_on_the_highways_-_section_278_agreements/category/355/highways_and_pavements)

Noted and agreed to.

*In relation to on-site parking, each house has a minimum of one space whilst 58% of apartments have an allocated parking space. A further six allocated spaces are provided for the commercial units and there are an additional 56 unallocated spaces which provides a total of 350 spaces across an estate comprising of 337 residential units. Whilst this number is acceptable to them in principle, the developer should verify the size of each type of bay which should be a minimum 2.4 x 4.8m for a standard bay, 3.6 x 6m for a disabled bay and 3 x 6m for a driveway. **To be provided by the architect.***

It is understood that all allocated parking spaces are to have electric vehicle charging capability and in addition ten accessible bays are being provided for the apartments which is acceptable from a highway perspective.

It is understood that 532 cycle parking spaces are being provided across the site and in this regard further details are sought as to their position and form.

*In relation to the commercial units, further details on servicing arrangements are required. **To be provided by the architect.***

*With regard to waste it is understood that a waste management strategy will be submitted for consideration at the reserved matters stage and this should include arrangements for the transportation and collection of waste to and from the apartments and commercial units. For clarification it should be noted that as referred to above, refuse vehicle tracking information is required at outline planning stage to verify that the proposed road layout is suitable with particular reference to the cul-de-sacs. **Noted.***

*The submitted framework travel plan is acceptable and it is anticipated that the requirement for a full travel plan will be submitted via planning condition. A pre-commencement Construction management plan condition was also recommended. **Noted.***

*The applicant is advised that any requirements for licensing, hoarding / scaffolding, building maintenance and any associated temporary traffic management arrangements will need discussion and agreement with the council's Highways Applications and Network Resilience teams via Contact Manchester (Tel. 0161 234 5004). **Noted.***

I cannot find a response from you addressing the matters raised above , in particular the requirement for a review and resubmission of traffic information; the need for a signalised junction at Hyde Road/Bennett Street due to an increase in numbers motor vehicles coupled with an anticipated increase in pedestrian movements at the junction, and confirmation that the proposed estate roads and parking space meet the minimum dimensions as set out in the comments.

I apologise if I have missed your reply , and if this is the case please forward to me at your earliest convenience.

As the proposed estate road layout , and mix of accommodation has changed during the planning process , I have sought further comments from Highway Services to see if the matters raised back in June 2020 are still relevant to the scheme.

The Highway Services comments received recently are detailed below:-

Whilst the amount of parking is acceptable to them in principle, their original comments remain applicable with regard to the requirement for trip generation information and modelling to be provided. In addition they require that parking bay, driveway and aisle dimensions are verified in addition to the amount of disabled bay parking and electric vehicle (EV) charging bays being provided.

With regard to EV charging bay provision it should be noted that their requirements have been revised since their original comments were made. It is now required that for allocated parking one charge point is provided for each dwelling whilst for unallocated or commercial parking a minimum of 25% of bays should have EV charging with cable routes provided for all other spaces.

As per their previous comments an increasing use of the junction of Hyde Road/Bennett Street by motor vehicles coupled with an anticipated increase in pedestrian movements at the junction would lead them to the conclusion that it should be signalised as part of this development.

Their initial detailed comments remain applicable in relation to estate access, highway geometry, parking control measures, extent of adoption, commuted sums, traffic calming, highway alterations, cycle parking, servicing requirements, waste management, Travel Plan and Construction Management Plan requirements.

In relation to the revised estate road layout, in addition to our specific requirements in terms of footway and carriageway widths, junction radii's and cul-de-sac configurations detailed previously, they would not support the proposal for mini-roundabouts to be installed at internal road intersections as per the revised road layout.

To be provided by the architect.

RECOMMENDED HIGHWAY CONDITIONS: -

- 1) Off-site highway works;
- 2) Full Travel Plan;
- 3) Waste Management Strategy;
- 4) Servicing strategy;
- 5) Construction Management Plan.

I would be grateful if you could respond and address the matters which have been raised. I have also received further comments in regard to the re-routed culvert which I will send under separate cover.

Kind regards

Sue Wills
Principal Planner
Development Management North
Planning
Growth and Development Directorate.
Manchester City Council
Floor 6 Town Hall Extension

Albert Square
P.O.BOX 532
M60 2LA
External Tel: 0161 234 4524
Internal extension 34524
Mobile 07788978633
Email: sue.wills@manchester.gov.uk
<http://www.manchester.gov.uk>

From: Kryshkevych, Kateryna (Capita) <Kateryna.K@capita.com>
Sent: 01 February 2021 15:58
To: Bradshaw, Andrew (GL Hearn) <Andrew.Bradshaw@glhearn.com>
Subject: RE: Bennett Street layout

Hi Andrew,

Please find attached.

Regards,
Kat

Kateryna Kryshkevych MSc MCIHT
Senior Transport Planner
Real Estate & Infrastructure
DD : 07512286408 | **Capita** | Churchgate House, Oxford Street, Manchester, M1 6EU
capitaproperty.co.uk



Manchester City Council
P O Box 532
Town Hall
Manchester
M60 2LA

Our ref TRA/20/178

Your ref:

9th June 2020

Dear Sir / Madam

Application Number: **126714/00/2020**

Location: **Olympic Freight Terminal, Storage Land, Bennett Street, Manchester, M12 5NL**

Proposal: **Outline Planning Application with all matters reserved except for access, to allow for residential-led development comprising up to 337 dwelling houses (Class C3) up to 317 sqm of flexible use Community Hub floorspace (A1/A3/D1, with two altered access points off Bennett Street; and associated open space and landscaping**

Thank you for consulting Transport for Greater Manchester (TfGM) on the above planning application. The following comments are offered as advice on transport issues for you to balance against other factors in determining the application and are made in the context of TfGM's role in the planning process, as set out in the footnote below.¹

Background

The application seeks Outline Approval for a residential development for a total of 337 dwelling houses, comprising a mixture of houses as well as apartments contained within two apartment blocks.

¹TfGM does not have any planning powers and is not a statutory consultee in the planning process. The purpose of the advice offered is to suggest the best way to improve land use / transport integration through the development proposals. Advice is based on the information provided by the applicant, and it is not TfGM's role to undertake detailed verification unless specifically commissioned to do so.

²TfGM control and manage the traffic signals in Greater Manchester, as such any schemes that alter signalised junctions need to be agreed with TfGM. Additionally, where developments impact on signalised junctions, TfGM have a duty of care to ensure that these impacts are satisfactorily mitigated as part of the planning process.

Highways Overview

Colleagues from within TfGM HFAS (Highways Analytical Forecasting Service) and TfGM UTC (Urban Traffic Control) have reviewed the Transport Assessment (TA) submitted in support of the proposed residential development.

I. Trip Generation and Distribution

The TA states that for the purpose of this trip generation exercise, a split of 191 houses and 146 apartments has been used.

It should be noted that if this proportion changes, a revised trip generation exercise would be required.

The TA states that the resultant number of persons driving a car, or a van have been converted to percentages, with all wards with less than 1% excluded to narrow down the number of wards further. TfGM HFAS would query the number of trips that have been discarded from the distribution exercise as a result of this approach, noting that ideally these trips should have remained.

The TA states that, *“the quickest route was determined by using Google Maps taking into account possible traffic delays during the morning and evening peak hour. The resultant trip distribution is shown in Figure 4 of Appendix E. Manchester 018 ward has been excluded from calculations as it has been assumed that people living and working within this ward would walk to/from work.”*

TfGM HFAS would query the supporting evidence for excluding Manchester 18 from the trip distribution calculations. Additionally, HFAS would question what results were shown in the Census data.

The peak hours selected are acceptable, however the turning movements shown in Figure 1 do not appear to match the totals shown in the raw data diagram. For example, the straight-ahead movement from Hyde Road East to Hyde Road West at its junction with the A6010.

II. Modelling

The junctions of Hyde Road / Devonshire Street North and Hyde Road / Pottery Lane have been modelled using LINSIG.

The modelling is not representative of existing highway conditions. Due to major errors in the modelling, UTC have not provided a detailed analysis of the results and instead, have provided general comments on the modelling.

- The phasing, staging and intergreens used in both models are incorrect.
- Left turn give-way parameters used for the junction of Hyde Road / Pottery Lane are incorrect.
- Signal cycle times used in the modelling are incorrect.

The correct signal timing information can be purchased by contacting gmutc@tfgm.com.

With regard to the traffic flows used, HFAS will be able to provide advice on how to derive demand flows from the traffic and queue surveys. The flows used in the TA are not acceptable.

Additionally, the modelling needs to be amended in line with the above comments and corrected demand flows.

III. Proposed Access Arrangements

It is proposed that a vehicular access into the site will be provided off Bennett Street via two priority junctions. The northern access will be provided via the existing access point located between Ercall Avenue and Whixhall Avenue, whilst the southern access will also be provided via an existing point of access opposite Rostron Avenue. Additionally, 13 dwellings will be accessed directly off Bennett Street.

Pedestrian and cycle access will also be provided via the two proposed access points.

All of the access points should be designed to ensure the provision of dropped kerbs and tactile paving.

Additionally, it is important to ensure that the internal layout of the site will be designed to accommodate the turning manoeuvres of refuse and delivery vehicles, to ensure they can enter and exit the site safely and appropriately.

IV. Traffic Regulation Orders

TfGM would suggest that a review of the Traffic Regulation Orders in the vicinity of the development is undertaken. This should confirm whether additional

parking restrictions are required, as well as ensuring adequate parking restrictions remain in place, and are refreshed accordingly. This will help to discourage pavement parking associated with the development and therefore assist in improving the quality of the surrounding public realm.

V. Other

A robust Construction Traffic Management Plan should be employed as part of the development.

Bee Network

From an appraisal of the Bee Network Map, there is an opportunity for this development to connect into the proposed Bee Network. The Bee Network will be the largest joined-up system of walking and cycling routes in the UK and has been developed with all 10 Greater Manchester local authorities. More information on this is available on <https://www.tfgm.com>.

Site Accessibility

I. Public Transport

The nearest bus stops to the site are located on Bennett Street around a 1-minute walk away, providing services to Manchester City Centre, Denton, Gee Cross and Dane Bank. Further, more regular services are available from the bus stops along the A57 Hyde Road, around a 3-minute walk from the site. These stops provide services to Mottram, Manchester City Centre and Stockport at 10-minute intervals and Hyde at hourly intervals.

Ardwick Train Station is located around a 5-minute walk from the site; however, it appears to provide limited services. Ashburys Train Station is located around a 15-minute walk from the site and provides services to Manchester Piccadilly, Rose Hill Marple, New Mills Central and Glossop.

It is therefore considered that there are opportunities for residents to travel via public transport instead of relying upon the use of the private car.

II. Active Travel

In order to maximise the benefits of the site's location, it should be ensured that the pedestrian and cycling environment, within and around the site, is designed to be as safe, attractive and convenient as possible, including natural surveillance where possible. This should provide sufficient links to the surrounding pedestrian

and cycle networks. This is especially important, when given the likely increase in footfall which will be generated by the proposed residential use.

The TA does not comment on the condition of walking and cycling infrastructure in the vicinity of the site nor how the site will connect to existing cycle routes.

To promote active travel and link in with the surrounding environment, the applicant should ensure provision of the following:

- The condition of the footways and lighting along surrounding routes should be reviewed and improved where appropriate.
- It is recommended that dropping crossings and tactile paving are installed at junctions in the vicinity of the site (where not already in place). This is to help encourage walking to the site.
- Any redundant vehicle access points which served the former site should be reinstated as continuous footway to adoptable standards.
- Tactile paving and dropped crossings should be installed across either side of the site access points.
- Footway resurfacing and renewal undertaken on the surrounding network (as appropriate).
- Provision of continuous 2 metre wide footways throughout and surrounding the development.
- Implementation of additional cycle infrastructure and cycle route signing from the site.

III. Cycle parking

It is also important to ensure that adequate infrastructure and facilities are provided to encourage future residents to travel by sustainable modes. The TA does not reference the number of cycle parking spaces proposed for the apartments. TfGM recommend that a 1:1 provision is provided. The cycle facilities should be covered and lockable, located in a central accessible area, and made secure through the use of measures such as CCTV.

Additionally, each dwelling house should have provision for cycle storage within the site curtilage of the properties.

IV. Travel Plan

The development will need to be supported by a robust Residential Travel Plan which should feature a range of measures promoting a choice of transport mode, and a clear monitoring regime with agreed targets.

The success of Travel Plan measures will depend on their effective delivery and commitment from the occupiers and therefore robust arrangements for the implementation and running of the Travel Plans need to be included in the Framework Travel Plan from the outset. These include:

- A travel plan budget and resources for the implementation and day to day management of travel plan measures;
- Appropriate management structures;
- Detailed time frames for the delivery;
- Handover arrangements for the travel plan or its components when the developer's responsibility ceases; and
- Targets and monitoring arrangements.

Ideally the full Travel Plan should include tailored measures to overcome specific barriers, or take advantage of opportunities, presented by the site.

In order to encourage sustainable journeys to mitigate the traffic impact of the development, through the Travel Plan, incentives should be offered to residents such as concessionary bus fares, discounted cycles, journey planning etc.

Should Manchester City Council be minded to approve this application it is suggested that the development, submission, implementation and monitoring of a Full Travel Plan within 6 months of occupation be attached as a condition of any planning consent.

I hope you find these comments useful in the determination of this planning application. Should you wish to discuss any matter further please do not hesitate to contact me.

Yours faithfully

Claire Smallman
Infrastructure Development Officer
Direct Line 0161 244 1733
Email claire.smallman@tfgm.com

APPENDIX 2

Traffic Survey Data

SURVEY CONTROL

Client: Eddisons

Client Contact: Phil Wooliscroft

Survey Location: Hyde Road, Gorton

Date(s) of Survey: Wednesday 29th June 2022

Notes:

On Site Supervisor: David Cheng/Rachel Wong

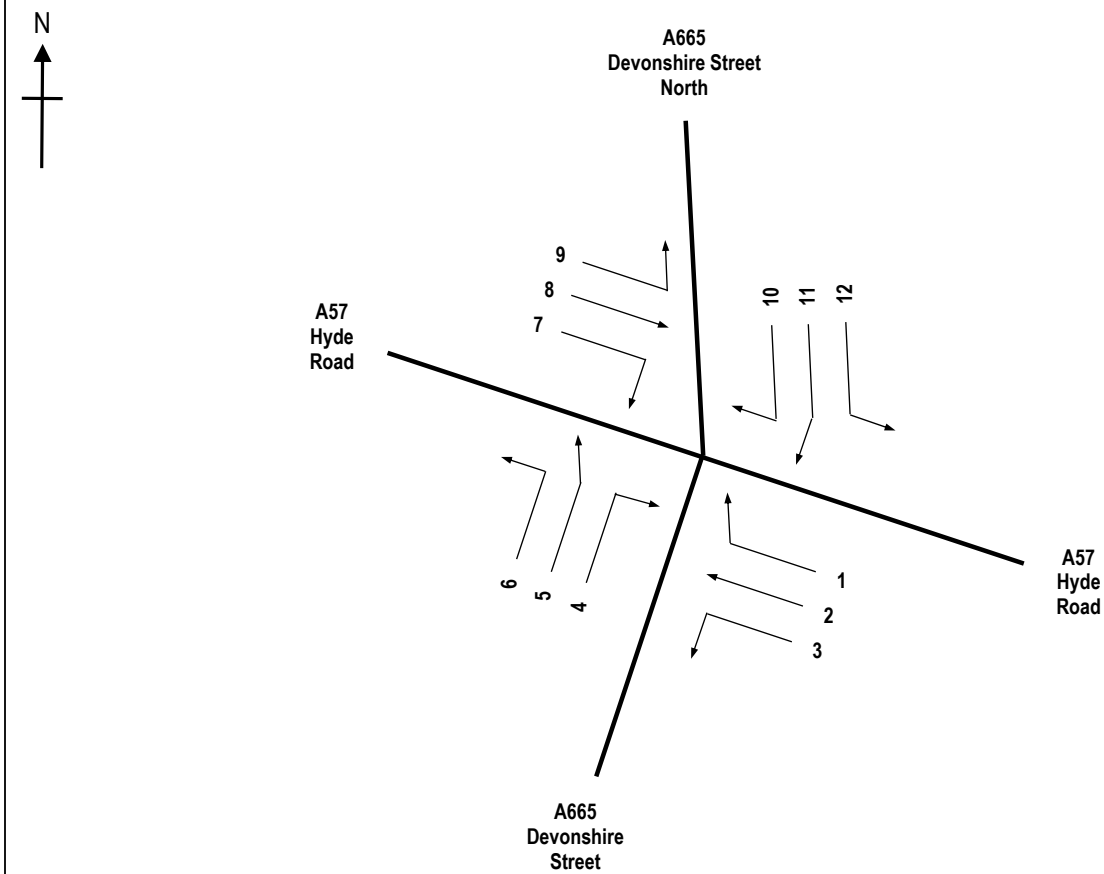
Data Checking: David Cheng

Survey Reference: 22.049 Hyde Road, Gorton

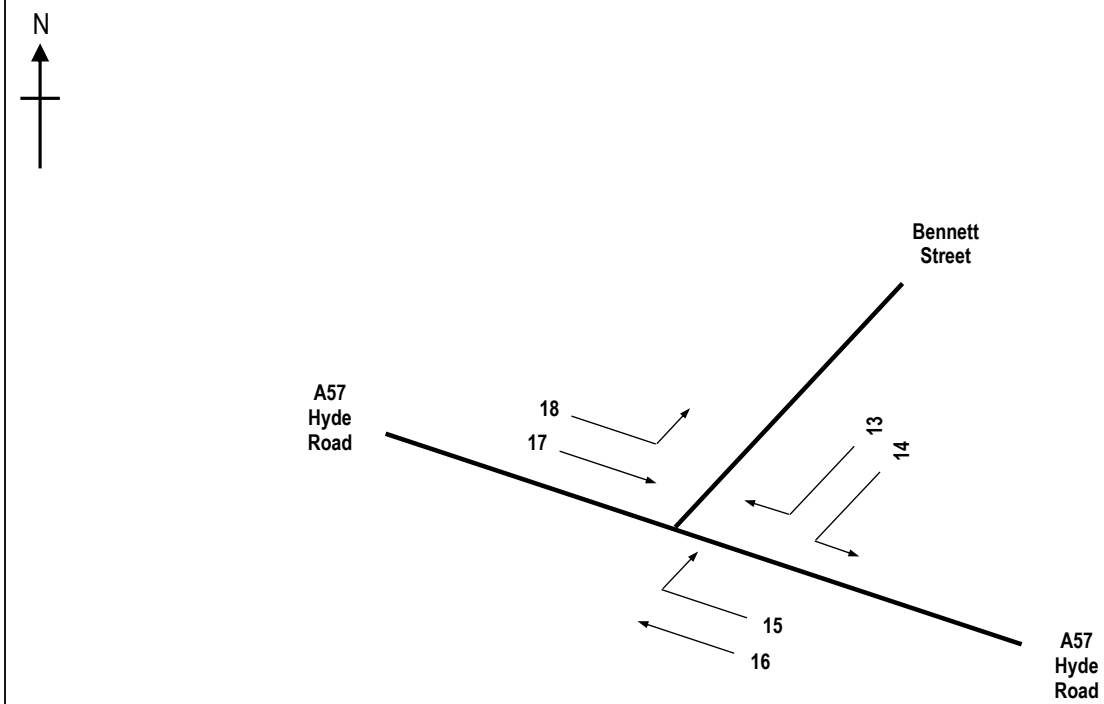
Status: Final

Date of Issue: 6th July 2022

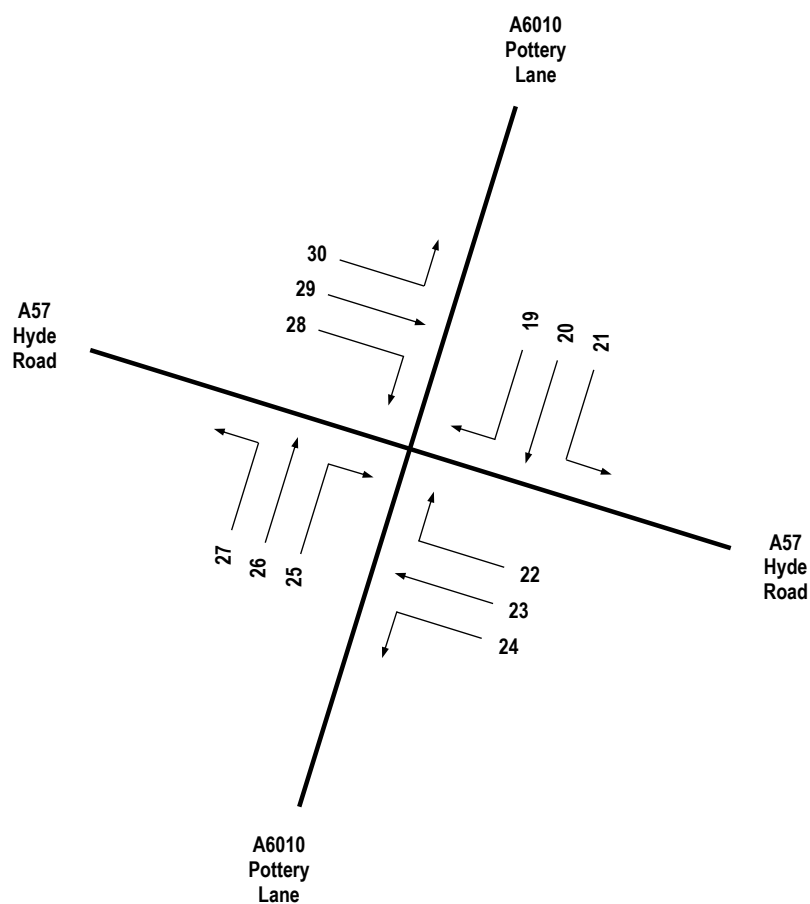
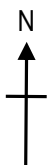
JUNCTION 1



JUNCTION 2



DRAWING TITLE				signal surveys Traffic Counts and Car Park Surveys Parkway House, Palatine Road, Northenden, Manchester, M22 4DB Tel 0161 998 4226
TRAFFIC MOVEMENT REFERENCE				
JOB TITLE				
22.049 HYDE ROAD, GORTON				
DRAWN BY	DATE	SCALE	REF	
DC	JUN 2022	NTS	FIGURE 1	



DRAWING TITLE

TRAFFIC MOVEMENT REFERENCE

JOB TITLE

22.049 HYDE ROAD, GORTON

DRAWN BY

DC

DATE

JUN 2022

SCALE

NTS

REF

FIGURE 2

signal surveys

Traffic Counts and Car Park Surveys
 Parkway House, Palatine Road, Northenden,
 Manchester, M22 4DB
 Tel 0161 998 4226

Time Beginning	A57 Hyde Road/A665 Devonshire Street North/A665 Devonshire Street - Wednesday 29th June 2022																							
	1		2		3		4		5		6		7		8		9		10		11		12	
	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
0730	55	0	199	12	33	1	14	3	104	3	1	0	0	0	59	9	0	0	0	0	106	3	21	5
0745	66	4	192	13	22	4	21	3	126	4	0	0	0	0	88	14	0	0	0	0	92	5	17	4
0800	58	5	170	16	26	0	28	5	136	1	0	0	0	0	87	10	0	0	0	0	103	6	24	0
0815	48	3	165	10	25	0	31	4	139	5	0	0	0	0	80	9	1	0	0	0	123	3	21	2
0830	65	0	200	20	33	3	31	1	180	5	2	0	0	0	85	13	0	0	0	0	71	7	22	2
0845	61	2	174	10	29	0	30	0	161	2	3	0	0	0	85	16	2	0	0	0	66	6	33	2
0900	59	0	183	20	27	1	27	0	116	1	0	0	0	0	89	22	0	0	0	0	79	4	30	3
0915	49	1	151	17	14	4	20	5	132	1	4	0	0	0	80	21	1	0	1	0	68	2	23	5
Time Beginning	A57 Hyde Road/A665 Devonshire Street North/A665 Devonshire Street - Wednesday 29th June 2022																							
	1		2		3		4		5		6		7		8		9		10		11		12	
	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
1630	22	1	137	16	25	1	62	1	136	1	1	0	0	0	233	18	0	0	0	0	92	0	53	2
1645	39	2	99	9	24	0	53	0	101	1	1	0	0	0	213	17	0	0	1	0	82	1	49	1
1700	36	1	118	8	32	0	49	1	102	3	0	0	1	0	257	11	1	0	0	0	71	0	51	4
1715	35	0	101	12	24	1	60	2	114	1	0	0	0	0	237	11	1	0	0	0	58	1	66	0
1730	33	2	112	9	40	0	34	1	97	1	0	0	0	0	232	10	1	0	0	0	77	0	64	0
1745	49	1	99	9	11	0	43	0	115	0	0	0	1	0	196	10	0	0	0	0	95	0	68	1
1800	33	2	116	11	27	1	56	1	109	2	0	0	0	0	197	16	0	0	0	0	93	0	56	2
1815	42	0	113	10	30	0	41	0	88	0	1	0	0	0	162	10	1	0	0	0	94	1	62	0

signal surveys

Time Beginning	A57 Hyde Road/Bennett Street - Wednesday 29th June 2022											
	13		14		15		16		17		18	
	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
0730	10	2	4	4	4	0	293	9	89	14	9	2
0745	19	4	6	0	7	0	253	17	107	23	11	1
0800	26	4	10	0	6	1	238	19	120	9	26	1
0815	34	2	9	1	6	0	245	10	99	9	23	3
0830	31	7	12	2	9	0	242	11	133	14	15	4
0845	30	0	13	1	8	1	245	10	109	10	30	0
0900	25	3	17	0	7	2	239	16	125	18	20	2
0915	12	5	9	2	3	3	216	18	108	20	13	1
Time Beginning	A57 Hyde Road/Bennett Street - Wednesday 29th June 2022											
	13		14		15		16		17		18	
	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
1630	14	1	13	1	6	0	171	9	315	11	47	2
1645	22	0	17	0	12	0	142	5	262	14	47	3
1700	16	0	8	0	8	1	160	6	300	10	35	1
1715	17	1	5	0	8	0	140	9	309	5	50	2
1730	13	1	13	1	10	0	168	7	299	5	35	4
1745	10	1	9	0	5	0	159	8	312	7	26	1
1800	7	1	15	0	7	0	166	7	271	9	30	1
1815	8	0	4	0	4	0	182	11	250	5	25	0

Time Beginning	A57 Hyde Road/A6010 Pottery Lane - Wednesday 29th June 2022																							
	19		20		21		22		23		24		25		26		27		28		29		30	
	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
0730	23	1	225	6	18	6	38	1	277	7	21	1	4	3	112	3	2	0	3	1	76	11	3	2
0745	11	0	213	4	19	3	57	2	188	12	11	0	18	4	166	10	4	0	4	2	82	14	2	4
0800	15	1	195	8	26	2	34	2	253	16	15	3	12	4	176	7	1	0	3	0	88	10	5	2
0815	7	3	188	7	33	1	49	2	206	14	34	0	14	1	150	6	2	0	4	0	92	8	11	2
0830	12	1	159	15	51	4	53	9	198	6	46	1	14	2	181	11	3	1	6	3	93	9	6	0
0845	7	2	159	8	20	9	47	6	148	10	19	2	16	2	150	5	3	0	5	1	85	13	10	0
0900	6	2	136	7	16	2	41	6	180	14	20	3	24	1	140	11	5	0	9	3	113	13	6	3
0915	8	2	129	8	27	4	26	3	179	18	14	2	12	4	141	6	2	0	4	4	88	18	8	2
Time Beginning	A57 Hyde Road/A6010 Pottery Lane - Wednesday 29th June 2022																							
	19		20		21		22		23		24		25		26		27		28		29		30	
	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
1630	15	1	142	3	26	3	37	1	109	9	8	1	34	2	225	2	4	0	11	0	244	7	16	1
1645	8	2	125	1	53	0	30	0	133	5	8	0	28	3	188	1	1	0	6	0	249	11	9	1
1700	26	0	169	1	45	1	30	0	115	5	20	1	29	1	176	0	4	0	3	0	241	9	25	0
1715	16	1	134	0	41	0	45	2	125	11	18	0	32	0	189	4	7	0	8	0	252	4	12	0
1730	14	0	137	2	36	0	31	0	132	5	8	0	37	1	182	3	1	1	7	0	293	6	19	1
1745	6	1	194	0	73	3	33	2	140	9	15	0	32	2	180	3	5	0	6	0	270	8	12	1
1800	7	0	165	3	64	2	37	1	140	5	17	0	35	0	162	3	1	0	6	0	232	6	14	1
1815	9	0	149	2	56	1	26	0	141	5	13	1	24	0	128	2	4	3	6	0	229	4	17	0

APPENDIX 3

TRICS Output for Existing Use

Calculation Reference: AUDIT-851401-220722-0703

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : F - WAREHOUSING (COMMERCIAL)
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	BD BEDFORDSHIRE	1 days
	EX ESSEX	1 days
	HC HAMPSHIRE	2 days
	KC KENT	1 days
03	SOUTH WEST	
	DV DEVON	2 days
04	EAST ANGLIA	
	SF SUFFOLK	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	SY SOUTH YORKSHIRE	1 days
	WY WEST YORKSHIRE	2 days
09	NORTH	
	TW TYNE & WEAR	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 190 to 80100 (units: sqm)
Range Selected by User: 190 to 80100 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 22/11/21

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

Selected survey days:

Monday	4 days
Tuesday	1 days
Thursday	3 days
Friday	5 days

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

Selected survey types:

Manual count	13 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	2
Edge of Town	9
Free Standing (PPS6 Out of Town)	1

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

Selected Location Sub Categories:

Industrial Zone	9
Commercial Zone	2
Built-Up Zone	1

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

Secondary Filtering selection:

Use Class:

n/a	2 days
B8	11 days

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

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	2 days
5,001 to 10,000	4 days
10,001 to 15,000	2 days
15,001 to 20,000	2 days
20,001 to 25,000	1 days
25,001 to 50,000	2 days

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	7 days
250,001 to 500,000	2 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	4 days
1.1 to 1.5	9 days

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

Travel Plan:

No	13 days
----	---------

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

PTAL Rating:

No PTAL Present	13 days
-----------------	---------

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

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
-----------------------	-----	--

LIST OF SITES relevant to selection parameters

1	BD-02-F-02 CAMBRIDGE ROAD BEDFORD	DRINKS WHOLESALER	BEDFORDSHIRE
	Edge of Town Industrial Zone Total Gross floor area: 3500 sqm Survey date: THURSDAY 15/10/20		Survey Type: MANUAL
2	DV-02-F-01 ALDERS WAY PAIGNTON	OPTICS WAREHOUSE	DEVON
	Edge of Town Industrial Zone Total Gross floor area: 190 sqm Survey date: FRIDAY 29/03/19		Survey Type: MANUAL
3	DV-02-F-03 CHILLPARK BRAKE NEAR EXETER CLYST HONITON	LIDL DISTRIBUTION CENTRE	DEVON
	Free Standing (PPS6 Out of Town) Out of Town Total Gross floor area: 49081 sqm Survey date: MONDAY 22/11/21		Survey Type: MANUAL
4	EX-02-F-01 BRUNEL WAY COLCHESTER SEVERALLS INDUSTRIAL PK	SPORTS SUPPLEMENTS	ESSEX
	Edge of Town Industrial Zone Total Gross floor area: 6560 sqm Survey date: FRIDAY 18/05/18		Survey Type: MANUAL
5	HC-02-F-02 RUTHERFORD ROAD BASINGSTOKE	LOGISTICS	HAMPSHIRE
	Suburban Area (PPS6 Out of Centre) Commercial Zone Total Gross floor area: 13200 sqm Survey date: THURSDAY 16/06/16		Survey Type: MANUAL
6	HC-02-F-03 WARSASH ROAD PARK GATE	PPE DISTRIBUTION	HAMPSHIRE
	Edge of Town Industrial Zone Total Gross floor area: 3665 sqm Survey date: MONDAY 27/09/21		Survey Type: MANUAL
7	KC-02-F-02 MILLS ROAD AYLESFORD QUARRY WOOD	COMMERCIAL WAREHOUSING	KENT
	Edge of Town Industrial Zone Total Gross floor area: 11200 sqm Survey date: FRIDAY 22/09/17		Survey Type: MANUAL
8	SF-02-F-03 CENTRAL AVENUE IPSWICH WARREN HEATH	ROAD HAULAGE	SUFFOLK
	Edge of Town Industrial Zone Total Gross floor area: 4700 sqm Survey date: FRIDAY 18/09/15		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9	SY-02-F-01 MIDDLE BANK DONCASTER	TESCO DISTRIBUTION CENTRE	SOUTH YORKSHIRE
	Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: 80100 sqm <i>Survey date: TUESDAY 21/09/21</i>		
10	TW-02-F-01 MANDARIN WAY WASHINGTON PATTISON IND. ESTATE	ASDA DISTRIBUTION CENTRE	TYNE & WEAR
	Edge of Town Industrial Zone Total Gross floor area: 31000 sqm <i>Survey date: FRIDAY 13/11/15</i>		
11	WM-02-F-02 SOVEREIGN ROAD BIRMINGHAM KINGS NORTON	LOGISTICS FIRM	WEST MIDLANDS
	Edge of Town Commercial Zone Total Gross floor area: 3625 sqm <i>Survey date: MONDAY 09/11/15</i>		
12	WY-02-F-01 MORTIMER STREET CLECKHEATON	ELECTRONICS DISTRIBUTION	WEST YORKSHIRE
	Edge of Town Centre Built-Up Zone Total Gross floor area: 1507 sqm <i>Survey date: MONDAY 19/09/16</i>		
13	WY-02-F-02 STAITHGATE LANE BRADFORD NEWHALL	DISTRIBUTION COMPANY	WEST YORKSHIRE
	Edge of Town Industrial Zone Total Gross floor area: 10446 sqm <i>Survey date: THURSDAY 14/03/19</i>		

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

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
 TOTAL VEHICLES
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	5	28663	0.062	5	28663	0.022	5	28663	0.084
05:30 - 06:00	5	28663	0.098	5	28663	0.027	5	28663	0.125
06:00 - 06:30	5	28663	0.034	5	28663	0.053	5	28663	0.087
06:30 - 07:00	5	28663	0.060	5	28663	0.057	5	28663	0.117
07:00 - 07:30	13	16829	0.052	13	16829	0.033	13	16829	0.085
07:30 - 08:00	13	16829	0.064	13	16829	0.032	13	16829	0.096
08:00 - 08:30	13	16829	0.060	13	16829	0.039	13	16829	0.099
08:30 - 09:00	13	16829	0.071	13	16829	0.034	13	16829	0.105
09:00 - 09:30	13	16829	0.054	13	16829	0.029	13	16829	0.083
09:30 - 10:00	13	16829	0.054	13	16829	0.044	13	16829	0.098
10:00 - 10:30	13	16829	0.054	13	16829	0.050	13	16829	0.104
10:30 - 11:00	13	16829	0.048	13	16829	0.045	13	16829	0.093
11:00 - 11:30	13	16829	0.043	13	16829	0.038	13	16829	0.081
11:30 - 12:00	13	16829	0.053	13	16829	0.056	13	16829	0.109
12:00 - 12:30	13	16829	0.045	13	16829	0.054	13	16829	0.099
12:30 - 13:00	13	16829	0.055	13	16829	0.057	13	16829	0.112
13:00 - 13:30	13	16829	0.053	13	16829	0.049	13	16829	0.102
13:30 - 14:00	13	16829	0.059	13	16829	0.063	13	16829	0.122
14:00 - 14:30	13	16829	0.040	13	16829	0.088	13	16829	0.128
14:30 - 15:00	13	16829	0.048	13	16829	0.057	13	16829	0.105
15:00 - 15:30	13	16829	0.043	13	16829	0.060	13	16829	0.103
15:30 - 16:00	13	16829	0.037	13	16829	0.048	13	16829	0.085
16:00 - 16:30	13	16829	0.035	13	16829	0.056	13	16829	0.091
16:30 - 17:00	13	16829	0.031	13	16829	0.042	13	16829	0.073
17:00 - 17:30	13	16829	0.041	13	16829	0.066	13	16829	0.107
17:30 - 18:00	13	16829	0.033	13	16829	0.052	13	16829	0.085
18:00 - 18:30	12	18106	0.022	12	18106	0.051	12	18106	0.073
18:30 - 19:00	12	18106	0.017	12	18106	0.032	12	18106	0.049
19:00 - 19:30	5	28663	0.018	5	28663	0.029	5	28663	0.047
19:30 - 20:00	5	28663	0.017	5	28663	0.024	5	28663	0.041
20:00 - 20:30	5	28663	0.017	5	28663	0.020	5	28663	0.037
20:30 - 21:00	5	28663	0.024	5	28663	0.022	5	28663	0.046
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			1.442			1.429			2.871

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

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

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Parameter summary

Trip rate parameter range selected:	190 - 80100 (units: sqm)
Survey date range:	01/01/14 - 22/11/21
Number of weekdays (Monday-Friday):	13
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

APPENDIX 4

TRICS Output for Proposed Use

Calculation Reference: AUDIT-851401-220714-0734

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL

Category : A - HOUSES PRIVATELY OWNED

TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	BD BEDFORDSHIRE	1 days
	ES EAST SUSSEX	4 days
	EX ESSEX	2 days
	HC HAMPSHIRE	6 days
	HF HERTFORDSHIRE	2 days
	KC KENT	5 days
	SC SURREY	2 days
	WS WEST SUSSEX	5 days
03	SOUTH WEST	
	DC DORSET	1 days
	DV DEVON	3 days
	SM SOMERSET	1 days
	WL WILTSHIRE	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	10 days
	SF SUFFOLK	3 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
	LN LINCOLNSHIRE	1 days
	NT NOTTINGHAMSHIRE	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	1 days
	ST STAFFORDSHIRE	2 days
	WK WARWICKSHIRE	2 days
	WM WEST MIDLANDS	1 days
	WO WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NE NORTH EAST LINCOLNSHIRE	1 days
	NY NORTH YORKSHIRE	2 days
08	NORTH WEST	
	CH CHESHIRE	3 days
	LC LANCASHIRE	1 days
09	NORTH	
	CB CUMBRIA	1 days
	DH DURHAM	2 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
Actual Range: 8 to 984 (units:)
Range Selected by User: 6 to 4334 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 23/11/21

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

Selected survey days:

Monday	13 days
Tuesday	15 days
Wednesday	20 days
Thursday	13 days
Friday	6 days

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

Selected survey types:

Manual count	60 days
Directional ATC Count	7 days

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

Selected Locations:

Edge of Town Centre	5
Suburban Area (PPS6 Out of Centre)	13
Edge of Town	49

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

Selected Location Sub Categories:

Residential Zone	67
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This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C3	67 days
----	---------

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

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	6 days
5,001 to 10,000	13 days
10,001 to 15,000	21 days
15,001 to 20,000	9 days
20,001 to 25,000	10 days
25,001 to 50,000	7 days

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

Population within 5 miles:

5,001 to 25,000	11 days
25,001 to 50,000	5 days
50,001 to 75,000	9 days
75,001 to 100,000	12 days
100,001 to 125,000	1 days
125,001 to 250,000	22 days
250,001 to 500,000	7 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	18 days
1.1 to 1.5	45 days
1.6 to 2.0	3 days

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

Travel Plan:

Yes	26 days
No	41 days

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

PTAL Rating:

No PTAL Present	66 days
2 Poor	1 days

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

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
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LIST OF SITES relevant to selection parameters

1	BD-03-A-03 CARNOUSTIE DRIVE BEDFORD GREAT DENHAM Edge of Town Residential Zone Total No of Dwellings: 30 Survey date: THURSDAY 15/10/20	BEDFORDSHIRE	Survey Type: MANUAL
2	CA-03-A-05 DETACHED HOUSES EASTFIELD ROAD PETERBOROUGH Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 28 Survey date: MONDAY 17/10/16	CAMBRIDGESHIRE	Survey Type: MANUAL
3	CB-03-A-05 DETACHED / TERRACED HOUSING MACADAM WAY PENRITH Edge of Town Centre Residential Zone Total No of Dwellings: 50 Survey date: TUESDAY 21/06/16	CUMBRIA	Survey Type: MANUAL
4	CH-03-A-09 TERRACED HOUSES GREYSTOKE ROAD MACCLESFIELD HURDSFIELD Edge of Town Residential Zone Total No of Dwellings: 24 Survey date: MONDAY 24/11/14	CHESHIRE	Survey Type: MANUAL
5	CH-03-A-10 SEMI-DETACHED & TERRACED MEADOW DRIVE NORTHWICH BARNTON Edge of Town Residential Zone Total No of Dwellings: 40 Survey date: TUESDAY 04/06/19	CHESHIRE	Survey Type: MANUAL
6	CH-03-A-11 TOWN HOUSES LONDON ROAD NORTHWICH LEFTWICH Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 24 Survey date: THURSDAY 06/06/19	CHESHIRE	Survey Type: MANUAL
7	DC-03-A-08 BUNGALOWS HURSTDENE ROAD BOURNEMOUTH CASTLE LANE WEST Edge of Town Residential Zone Total No of Dwellings: 28 Survey date: MONDAY 24/03/14	DORSET	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8	DH-03-A-01	SEMI DETACHED	DURHAM
	GREENFIELDS ROAD		
	BISHOP AUCLAND		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	50	
	Survey date: TUESDAY	28/03/17	Survey Type: MANUAL
9	DH-03-A-03	SEMI-DETACHED & TERRACED	DURHAM
	PILGRIMS WAY		
	DURHAM		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	57	
	Survey date: FRIDAY	19/10/18	Survey Type: MANUAL
10	DS-03-A-02	MIXED HOUSES	DERBYSHIRE
	RADBOURNE LANE		
	DERBY		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	371	
	Survey date: TUESDAY	10/07/18	Survey Type: MANUAL
11	DV-03-A-01	TERRACED HOUSES	DEVON
	BRONSHILL ROAD		
	TORQUAY		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	37	
	Survey date: WEDNESDAY	30/09/15	Survey Type: MANUAL
12	DV-03-A-02	HOUSES & BUNGALOWS	DEVON
	MILLHEAD ROAD		
	HONITON		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	116	
	Survey date: FRIDAY	25/09/15	Survey Type: MANUAL
13	DV-03-A-03	TERRACED & SEMI DETACHED	DEVON
	LOWER BRAND LANE		
	HONITON		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	70	
	Survey date: MONDAY	28/09/15	Survey Type: MANUAL
14	ES-03-A-03	MIXED HOUSES & FLATS	EAST SUSSEX
	SHEPHAM LANE		
	POLEGATE		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	212	
	Survey date: MONDAY	11/07/16	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

15	ES-03-A-04 NEW LYDD ROAD CAMBER	MIXED HOUSES & FLATS	EAST SUSSEX
	Edge of Town Residential Zone Total No of Dwellings: 134 Survey date: FRIDAY 15/07/16		Survey Type: MANUAL
16	ES-03-A-05 RATTLE ROAD NEAR EASTBOURNE STONE CROSS	MIXED HOUSES & FLATS	EAST SUSSEX
	Edge of Town Residential Zone Total No of Dwellings: 99 Survey date: WEDNESDAY 05/06/19		Survey Type: MANUAL
17	ES-03-A-07 NEW ROAD HAILSHAM HELLINGLY	MIXED HOUSES & FLATS	EAST SUSSEX
	Edge of Town Residential Zone Total No of Dwellings: 91 Survey date: THURSDAY 07/11/19		Survey Type: MANUAL
18	EX-03-A-02 MANOR ROAD CHIGWELL GRANGE HILL	DETACHED & SEMI-DETACHED	ESSEX
	Edge of Town Residential Zone Total No of Dwellings: 97 Survey date: MONDAY 27/11/17		Survey Type: MANUAL
19	EX-03-A-03 KESTREL GROVE RAYLEIGH	MIXED HOUSES	ESSEX
	Edge of Town Residential Zone Total No of Dwellings: 123 Survey date: MONDAY 27/09/21		Survey Type: MANUAL
20	HC-03-A-21 PRIESTLEY ROAD BASINGSTOKE HOUNDMILLS	TERRACED & SEMI-DETACHED	HAMPSHIRE
	Edge of Town Residential Zone Total No of Dwellings: 39 Survey date: TUESDAY 13/11/18		Survey Type: MANUAL
21	HC-03-A-22 BOW LAKE GARDENS NEAR EASTLEIGH BISHOPSTOKE	MIXED HOUSES	HAMPSHIRE
	Edge of Town Residential Zone Total No of Dwellings: 40 Survey date: WEDNESDAY 31/10/18		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

22	HC-03-A-23 CANADA WAY LIPHOOK	HOUSES & FLATS		HAMPSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 62 Survey date: TUESDAY 19/11/19 Survey Type: MANUAL			
23	HC-03-A-24 STONEHAM LANE EASTLEIGH	MIXED HOUSES & FLATS		HAMPSHIRE
	Edge of Town Residential Zone Total No of Dwellings: 243 Survey date: WEDNESDAY 10/11/21 Survey Type: MANUAL			
24	HC-03-A-27 DAIRY ROAD ANDOVER	MIXED HOUSES		HAMPSHIRE
	Edge of Town Residential Zone Total No of Dwellings: 73 Survey date: TUESDAY 16/11/21 Survey Type: MANUAL			
25	HC-03-A-28 EAGLE AVENUE WATERLOOVILLE LOVEDEAN	MIXED HOUSES & FLATS		HAMPSHIRE
	Edge of Town Residential Zone Total No of Dwellings: 125 Survey date: MONDAY 08/11/21 Survey Type: MANUAL			
26	HF-03-A-03 HARE STREET ROAD BUNTINGFORD	MIXED HOUSES		HERTFORDSHIRE
	Edge of Town Residential Zone Total No of Dwellings: 160 Survey date: MONDAY 08/07/19 Survey Type: MANUAL			
27	HF-03-A-04 HOLMSIDE RISE WATFORD SOUTH OXHEY	TERRACED HOUSES		HERTFORDSHIRE
	Edge of Town Residential Zone Total No of Dwellings: 8 Survey date: TUESDAY 08/06/21 Survey Type: MANUAL			
28	KC-03-A-03 HYTHE ROAD ASHFORD WILLESBOROUGH	MIXED HOUSES & FLATS		KENT
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 51 Survey date: THURSDAY 14/07/16 Survey Type: MANUAL			

LIST OF SITES relevant to selection parameters (Cont.)

29	KC-03-A-04 KILN BARN ROAD AYLESFORD DITTON Edge of Town Residential Zone Total No of Dwellings: 110 Survey date: FRIDAY 22/09/17	SEMI-DETACHED & TERRACED	KENT	Survey Type: MANUAL
30	KC-03-A-06 MARGATE ROAD HERNE BAY Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 363 Survey date: WEDNESDAY 27/09/17	MIXED HOUSES & FLATS	KENT	Survey Type: MANUAL
31	KC-03-A-07 RECULVER ROAD HERNE BAY Edge of Town Residential Zone Total No of Dwellings: 288 Survey date: WEDNESDAY 27/09/17	MIXED HOUSES	KENT	Survey Type: MANUAL
32	KC-03-A-09 WESTERN LINK FAVERSHAM DAVINGTON Edge of Town Residential Zone Total No of Dwellings: 14 Survey date: WEDNESDAY 09/06/21	MIXED HOUSES & FLATS	KENT	Survey Type: MANUAL
33	LC-03-A-31 GREENSIDE PRESTON COTTAM Edge of Town Residential Zone Total No of Dwellings: 32 Survey date: FRIDAY 17/11/17	DETACHED HOUSES	LANCASHIRE	Survey Type: MANUAL
34	LN-03-A-04 EGERTON ROAD LINCOLN Edge of Town Centre Residential Zone Total No of Dwellings: 30 Survey date: MONDAY 29/06/15	DETACHED & SEMI-DETACHED	LINCOLNSHIRE	Survey Type: MANUAL
35	NE-03-A-03 STATION ROAD SCUNTHORPE Edge of Town Centre Residential Zone Total No of Dwellings: 180 Survey date: TUESDAY 20/05/14	PRIVATE HOUSES	NORTH EAST LINCOLNSHIRE	Survey Type: MANUAL
36	NF-03-A-03 HALING WAY THETFORD Edge of Town Residential Zone Total No of Dwellings: 10 Survey date: WEDNESDAY 16/09/15	DETACHED HOUSES	NORFOLK	Survey Type: MANUAL
37	NF-03-A-10 HUNSTANTON ROAD HUNSTANTON Edge of Town Residential Zone Total No of Dwellings: 17 Survey date: WEDNESDAY 12/09/18	MIXED HOUSES & FLATS	NORFOLK	Survey Type: DIRECTIONAL ATC COUNT

LIST OF SITES relevant to selection parameters (Cont.)

38	NF-03-A-16	MIXED HOUSES & FLATS	NORFOLK
	NORWICH COMMON		
	WYMONDHAM		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	138	
	Survey date: TUESDAY	20/10/15	Survey Type: DIRECTIONAL ATC COUNT
39	NF-03-A-22	MIXED HOUSES & FLATS	NORFOLK
	ROUND HOUSE WAY		
	NORWICH		
	CRINGLEFORD		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	984	
	Survey date: TUESDAY	13/10/20	Survey Type: DIRECTIONAL ATC COUNT
40	NF-03-A-24	MIXED HOUSES & FLATS	NORFOLK
	HUNSTANTON ROAD		
	HUNSTANTON		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	127	
	Survey date: WEDNESDAY	22/09/21	Survey Type: DIRECTIONAL ATC COUNT
41	NF-03-A-25	MIXED HOUSES & FLATS	NORFOLK
	WOODFARM LANE		
	GORLESTON-ON-SEA		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	55	
	Survey date: TUESDAY	21/09/21	Survey Type: MANUAL
42	NF-03-A-26	MIXED HOUSES	NORFOLK
	HEATH DRIVE		
	HOLT		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	91	
	Survey date: WEDNESDAY	22/09/21	Survey Type: DIRECTIONAL ATC COUNT
43	NF-03-A-28	MIXED HOUSES	NORFOLK
	NORTH WALSHAM ROAD		
	NORTH WALSHAM		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	100	
	Survey date: WEDNESDAY	22/09/21	Survey Type: DIRECTIONAL ATC COUNT
44	NF-03-A-29	MIXED HOUSES	NORFOLK
	BEAUFORT WAY		
	GREAT YARMOUTH		
	BRADWELL		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	486	
	Survey date: WEDNESDAY	22/09/21	Survey Type: DIRECTIONAL ATC COUNT

LIST OF SITES relevant to selection parameters (Cont.)

45	NF-03-A-30 BRANDON ROAD SWAFFHAM	MIXED HOUSES		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:		266	
	Survey date: THURSDAY		23/09/21	Survey Type: MANUAL
46	NT-03-A-08 WIGHAY ROAD HUCKNALL	DETACHED HOUSES		NOTTINGHAMSHIRE
	Edge of Town Residential Zone Total No of Dwellings:		36	
	Survey date: MONDAY		18/10/21	Survey Type: MANUAL
47	NY-03-A-12 RACECOURSE LANE NORTHALLERTON	TOWN HOUSES		NORTH YORKSHIRE
	Edge of Town Centre Residential Zone Total No of Dwellings:		47	
	Survey date: TUESDAY		27/09/16	Survey Type: MANUAL
48	NY-03-A-13 CATTERICK ROAD CATTERICK GARRISON OLD HOSPITAL COMPOUND Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:	TERRACED HOUSES		NORTH YORKSHIRE
	Survey date: WEDNESDAY		10/05/17	Survey Type: MANUAL
49	SC-03-A-04 HIGH ROAD BYFLEET	DETACHED & TERRACED		SURREY
	Edge of Town Residential Zone Total No of Dwellings:		71	
	Survey date: THURSDAY		23/01/14	Survey Type: MANUAL
50	SC-03-A-05 REIGATE ROAD HORLEY	MIXED HOUSES		SURREY
	Edge of Town Residential Zone Total No of Dwellings:		207	
	Survey date: MONDAY		01/04/19	Survey Type: MANUAL
51	SF-03-A-05 VALE LANE BURY ST EDMUNDS	DETACHED HOUSES		SUFFOLK
	Edge of Town Residential Zone Total No of Dwellings:		18	
	Survey date: WEDNESDAY		09/09/15	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

52	SF-03-A-09 FOXHALL ROAD IPSWICH	MIXED HOUSES & FLATS	SUFFOLK
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 179 Survey date: THURSDAY 24/06/21		Survey Type: MANUAL
53	SF-03-A-10 LOVETOFTS DRIVE IPSWICH WHITEHOUSE Edge of Town Residential Zone Total No of Dwellings: 149 Survey date: TUESDAY 22/06/21	TERRACED & SEMI-DETACHED	SUFFOLK
54	SH-03-A-06 ELLESMERE ROAD SHREWSBURY	BUNGALOWS	SHROPSHIRE
	Edge of Town Residential Zone Total No of Dwellings: 16 Survey date: THURSDAY 22/05/14		Survey Type: MANUAL
55	SM-03-A-01 WEMBDON ROAD BRIDGWATER NORTHFIELD Edge of Town Residential Zone Total No of Dwellings: 33 Survey date: THURSDAY 24/09/15	DETACHED & SEMI	SOMERSET
56	ST-03-A-07 BEACONSIDE STAFFORD MARSTON GATE Edge of Town Residential Zone Total No of Dwellings: 248 Survey date: WEDNESDAY 22/11/17	DETACHED & SEMI-DETACHED	STAFFORDSHIRE
57	ST-03-A-08 SILKMORE CRESCENT STAFFORD MEADOWCROFT PARK Edge of Town Residential Zone Total No of Dwellings: 26 Survey date: WEDNESDAY 22/11/17	DETACHED HOUSES	STAFFORDSHIRE
58	WK-03-A-03 BRESE AVENUE WARWICK GUYS CLIFFE Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 23 Survey date: WEDNESDAY 25/09/19	DETACHED HOUSES	WARWICKSHIRE
59	WK-03-A-04 DALEHOUSE LANE KENILWORTH	DETACHED HOUSES	WARWICKSHIRE
	Edge of Town Residential Zone Total No of Dwellings: 49 Survey date: FRIDAY 27/09/19		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

60	WL-03-A-02 HEADLANDS GROVE SWINDON	SEMI DETACHED		WILTSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 27 Survey date: THURSDAY 22/09/16 Survey Type: MANUAL			
61	WM-03-A-05 COUNDON ROAD COVENTRY	TERRACED & DETACHED		WEST MIDLANDS
	Edge of Town Centre Residential Zone Total No of Dwellings: 89 Survey date: MONDAY 21/11/16 Survey Type: MANUAL			
62	WO-03-A-07 RYE GRASS LANE REDDITCH	MIXED HOUSES & FLATS		WORCESTERSHIRE
	Edge of Town Residential Zone Total No of Dwellings: 47 Survey date: THURSDAY 01/10/20 Survey Type: MANUAL			
63	WS-03-A-04 HILLS FARM LANE HORSHAM BROADBRIDGE HEATH	MIXED HOUSES		WEST SUSSEX
	Edge of Town Residential Zone Total No of Dwellings: 151 Survey date: THURSDAY 11/12/14 Survey Type: MANUAL			
64	WS-03-A-08 ROUNDSTONE LANE ANGMERING	MIXED HOUSES		WEST SUSSEX
	Edge of Town Residential Zone Total No of Dwellings: 180 Survey date: THURSDAY 19/04/18 Survey Type: MANUAL			
65	WS-03-A-11 ELLIS ROAD WEST HORSHAM S BROADBRIDGE HEATH	MIXED HOUSES		WEST SUSSEX
	Edge of Town Residential Zone Total No of Dwellings: 918 Survey date: TUESDAY 02/04/19 Survey Type: MANUAL			
66	WS-03-A-13 LITTLEHAMPTON ROAD WORTHING WEST DURRINGTON	MIXED HOUSES & FLATS		WEST SUSSEX
	Edge of Town Residential Zone Total No of Dwellings: 197 Survey date: WEDNESDAY 23/06/21 Survey Type: MANUAL			
67	WS-03-A-14 TODDINGTON LANE LITTLEHAMPTON WICK	MIXED HOUSES		WEST SUSSEX
	Edge of Town Residential Zone Total No of Dwellings: 117 Survey date: WEDNESDAY 20/10/21 Survey Type: MANUAL			

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

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	66	116	0.072	66	116	0.292	66	116	0.364
08:00 - 09:00	66	116	0.136	66	116	0.372	66	116	0.508
09:00 - 10:00	66	116	0.132	66	116	0.165	66	116	0.297
10:00 - 11:00	66	116	0.123	66	116	0.151	66	116	0.274
11:00 - 12:00	66	116	0.134	66	116	0.142	66	116	0.276
12:00 - 13:00	66	116	0.149	66	116	0.145	66	116	0.294
13:00 - 14:00	66	116	0.156	66	116	0.149	66	116	0.305
14:00 - 15:00	66	116	0.162	66	116	0.185	66	116	0.347
15:00 - 16:00	66	116	0.253	66	116	0.167	66	116	0.420
16:00 - 17:00	66	116	0.267	66	116	0.160	66	116	0.427
17:00 - 18:00	66	116	0.344	66	116	0.161	66	116	0.505
18:00 - 19:00	66	116	0.276	66	116	0.153	66	116	0.429
19:00 - 20:00	1	97	0.062	1	97	0.052	1	97	0.114
20:00 - 21:00	1	97	0.031	1	97	0.021	1	97	0.052
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.297			2.315			4.612

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

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

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Parameter summary

Trip rate parameter range selected:	8 - 984 (units:)
Survey date range:	01/01/14 - 23/11/21
Number of weekdays (Monday-Friday):	67
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	17
Surveys manually removed from selection:	0

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

Calculation Reference: AUDIT-851401-220714-0721

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	BD BEDFORDSHIRE	3 days
	ES EAST SUSSEX	1 days
	HC HAMPSHIRE	1 days
	HF HERTFORDSHIRE	3 days
03	SOUTH WEST	
	DC DORSET	1 days
	DV DEVON	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	2 days
	SF SUFFOLK	4 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
	NT NOTTINGHAMSHIRE	2 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	RI EAST RIDING OF YORKSHIRE	1 days
	SY SOUTH YORKSHIRE	1 days
08	NORTH WEST	
	MS MERSEYSIDE	3 days
09	NORTH	
	CB CUMBRIA	2 days
	TW TYNE & WEAR	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
Actual Range: 9 to 184 (units:)
Range Selected by User: 6 to 215 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 15/10/21

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

Selected survey days:

Monday	6 days
Tuesday	10 days
Wednesday	7 days
Thursday	3 days
Friday	3 days

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

Selected survey types:

Manual count	29 days
Directional ATC Count	0 days

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

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

Selected Location Sub Categories:

Development Zone	3
Residential Zone	16
Built-Up Zone	5
No Sub Category	5

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

Secondary Filtering selection:

Use Class:

C3	29 days
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This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	2 days
10,001 to 15,000	5 days
15,001 to 20,000	1 days
20,001 to 25,000	8 days
25,001 to 50,000	11 days
50,001 to 100,000	2 days

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
50,001 to 75,000	7 days
125,001 to 250,000	11 days
250,001 to 500,000	7 days
500,001 or More	2 days

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

Car ownership within 5 miles:

0.6 to 1.0	13 days
1.1 to 1.5	15 days
1.6 to 2.0	1 days

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

Travel Plan:

Yes	4 days
No	25 days

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

PTAL Rating:

No PTAL Present	29 days
-----------------	---------

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

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
-----------------------	-----	--

LIST OF SITES relevant to selection parameters

1	BD-03-C-01	BLOCKS OF FLATS	BEDFORDSHIRE
	WING ROAD		
	LEIGHTON BUZZARD		
	LINSLADE		
	Edge of Town Centre		
	Residential Zone		
	Total No of Dwellings:	175	
	Survey date: TUESDAY	15/05/18	Survey Type: MANUAL
2	BD-03-C-02	BLOCKS OF FLATS	BEDFORDSHIRE
	STANBRIDGE ROAD		
	LEIGHTON BUZZARD		
	Edge of Town Centre		
	Residential Zone		
	Total No of Dwellings:	62	
	Survey date: TUESDAY	15/05/18	Survey Type: MANUAL
3	BD-03-C-03	BLOCKS OF FLATS	BEDFORDSHIRE
	COURT DRIVE		
	DUNSTABLE		
	Edge of Town Centre		
	No Sub Category		
	Total No of Dwellings:	146	
	Survey date: TUESDAY	15/05/18	Survey Type: MANUAL
4	CA-03-C-03	BLOCKS OF FLATS	CAMBRIDGESHIRE
	CROMWELL ROAD		
	CAMBRIDGE		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total No of Dwellings:	82	
	Survey date: MONDAY	18/09/17	Survey Type: MANUAL
5	CB-03-C-02	BLOCK OF FLATS	CUMBRIA
	BRIDGE LANE		
	PENRITH		
	Edge of Town		
	No Sub Category		
	Total No of Dwellings:	35	
	Survey date: WEDNESDAY	11/06/14	Survey Type: MANUAL
6	CB-03-C-03	FLATS & BUNGALOWS	CUMBRIA
	LOUND STREET		
	KENDAL		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	33	
	Survey date: MONDAY	09/06/14	Survey Type: MANUAL
7	DC-03-C-02	FLATS IN BLOCKS	DORSET
	PALM COURT		
	WEYMOUTH		
	SPA ROAD		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	14	
	Survey date: FRIDAY	28/03/14	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8	DS-03-C-03 CAESAR STREET DERBY	BLOCKS OF FLATS	DERBYSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:	30	
	Survey date: WEDNESDAY	25/09/19	Survey Type: MANUAL
9	DV-03-C-01 BONHAY ROAD EXETER	BLOCK OF FLATS	DEVON
	Edge of Town Centre Residential Zone Total No of Dwellings:	27	
	Survey date: MONDAY	10/07/17	Survey Type: MANUAL
10	ES-03-C-01 OLD SHOREHAM RD BRIGHTON HOVE	BLOCK OF FLATS	EAST SUSSEX
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:	71	
	Survey date: TUESDAY	26/09/17	Survey Type: MANUAL
11	HC-03-C-01 CROSS STREET PORTSMOUTH	BLOCKS OF FLATS	HAMPSHIRE
	Edge of Town Centre Built-Up Zone Total No of Dwellings:	90	
	Survey date: TUESDAY	05/06/18	Survey Type: MANUAL
12	HF-03-C-01 HAYLING ROAD WATFORD SOUTH OXHEY	BLOCKS OF FLATS	HERTFORDSHIRE
	Edge of Town Residential Zone Total No of Dwellings:	22	
	Survey date: WEDNESDAY	09/06/21	Survey Type: MANUAL
13	HF-03-C-03 SHENLEY ROAD BOREHAMWOOD	BLOCK OF FLATS	HERTFORDSHIRE
	Edge of Town Centre Built-Up Zone Total No of Dwellings:	91	
	Survey date: THURSDAY	14/11/19	Survey Type: MANUAL
14	HF-03-C-05 FERNDOWN ROAD WATFORD SOUTH OXHEY	BLOCKS OF FLATS	HERTFORDSHIRE
	Edge of Town Residential Zone Total No of Dwellings:	26	
	Survey date: MONDAY	07/06/21	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

15	MS-03-C-02	BLOCKS OF FLATS	MERSEYSIDE
	SOUTH FERRY QUAY		
	LIVERPOOL		
	BRUNSWICK DOCK		
	Suburban Area (PPS6 Out of Centre)		
	Development Zone		
	Total No of Dwellings:	184	
	Survey date: TUESDAY	13/11/18	Survey Type: MANUAL
16	MS-03-C-03	BLOCK OF FLATS	MERSEYSIDE
	MARINERS WHARF		
	LIVERPOOL		
	QUEENS DOCK		
	Suburban Area (PPS6 Out of Centre)		
	Development Zone		
	Total No of Dwellings:	9	
	Survey date: TUESDAY	13/11/18	Survey Type: MANUAL
17	MS-03-C-04	BLOCK OF FLATS	MERSEYSIDE
	HOY DRIVE		
	NEWTON-LE-WILLOWS		
	EARLESTOWN		
	Edge of Town Centre		
	Residential Zone		
	Total No of Dwellings:	24	
	Survey date: MONDAY	12/04/21	Survey Type: MANUAL
18	NF-03-C-01	BLOCKS OF FLATS	NORFOLK
	PAGE STAIR LANE		
	KING'S LYNN		
	Edge of Town Centre		
	Built-Up Zone		
	Total No of Dwellings:	51	
	Survey date: THURSDAY	11/12/14	Survey Type: MANUAL
19	NF-03-C-02	MIXED FLATS & HOUSES	NORFOLK
	HALL ROAD		
	NORWICH		
	LAKENHAM		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	82	
	Survey date: MONDAY	18/11/19	Survey Type: MANUAL
20	NT-03-C-01	HOUSES (SPLIT INTO FLATS)	NOTTINGHAMSHIRE
	LAWRENCE WAY		
	NOTTINGHAM		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total No of Dwellings:	56	
	Survey date: TUESDAY	08/11/16	Survey Type: MANUAL
21	NT-03-C-02	HOUSES (SPLIT INTO FLATS)	NOTTINGHAMSHIRE
	CASTLE MARINA ROAD		
	NOTTINGHAM		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total No of Dwellings:	135	
	Survey date: WEDNESDAY	09/11/16	Survey Type: MANUAL
22	RI-03-C-01	FLATS	EAST RIDING OF YORKSHIRE
	465 PRIORY ROAD		
	HULL		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	20	
	Survey date: TUESDAY	13/05/14	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

23	SF-03-C-01 STATION HILL BURY ST EDMUNDS	BLOCKS OF FLATS		SUFFOLK
	Edge of Town Centre Built-Up Zone Total No of Dwellings:		85	
	Survey date: THURSDAY		18/12/14	Survey Type: MANUAL
24	SF-03-C-03 TOLLGATE LANE BURY ST EDMUNDS	BLOCKS OF FLATS		SUFFOLK
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:		30	
	Survey date: WEDNESDAY		03/12/14	Survey Type: MANUAL
25	SF-03-C-04 SAINT MARY'S ROAD IPSWICH	BLOCKS OF FLATS		SUFFOLK
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:		56	
	Survey date: WEDNESDAY		16/09/20	Survey Type: MANUAL
26	SF-03-C-05 FORE STREET IPSWICH IPSWICH WATERFRONT	BLOCKS OF FLATS		SUFFOLK
	Edge of Town Centre Development Zone Total No of Dwellings:		69	
	Survey date: WEDNESDAY		23/06/21	Survey Type: MANUAL
27	SY-03-C-01 HEELIS STREET BARNSELY	BLOCKS OF FLATS		SOUTH YORKSHIRE
	Edge of Town Centre Built-Up Zone Total No of Dwellings:		112	
	Survey date: TUESDAY		08/09/20	Survey Type: MANUAL
28	TW-03-C-01 CAULDWELL AVENUE WHITLEY BAY MONKESEATON	BLOCKS OF FLATS		TYNE & WEAR
	Edge of Town Residential Zone Total No of Dwellings:		45	
	Survey date: FRIDAY		15/10/21	Survey Type: MANUAL
29	WM-03-C-04 GILLQUART WAY COVENTRY PARKSIDE	BLOCKS OF FLATS		WEST MIDLANDS
	Edge of Town Centre Residential Zone Total No of Dwellings:		55	
	Survey date: FRIDAY		11/11/16	Survey Type: MANUAL

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	29	66	0.044	29	66	0.149	29	66	0.193
08:00 - 09:00	29	66	0.057	29	66	0.178	29	66	0.235
09:00 - 10:00	29	66	0.070	29	66	0.088	29	66	0.158
10:00 - 11:00	29	66	0.063	29	66	0.083	29	66	0.146
11:00 - 12:00	29	66	0.069	29	66	0.075	29	66	0.144
12:00 - 13:00	29	66	0.080	29	66	0.080	29	66	0.160
13:00 - 14:00	29	66	0.062	29	66	0.077	29	66	0.139
14:00 - 15:00	29	66	0.066	29	66	0.070	29	66	0.136
15:00 - 16:00	29	66	0.093	29	66	0.063	29	66	0.156
16:00 - 17:00	29	66	0.117	29	66	0.073	29	66	0.190
17:00 - 18:00	29	66	0.166	29	66	0.082	29	66	0.248
18:00 - 19:00	29	66	0.164	29	66	0.094	29	66	0.258
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.051			1.112			2.163

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

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

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Parameter summary

Trip rate parameter range selected: 9 - 184 (units:)
Survey date range: 01/01/14 - 15/10/21
Number of weekdays (Monday-Friday): 29
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

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

APPENDIX 5

LINSIG Output for A57 Hyde Road/Devonshire Street

Basic Results Summary

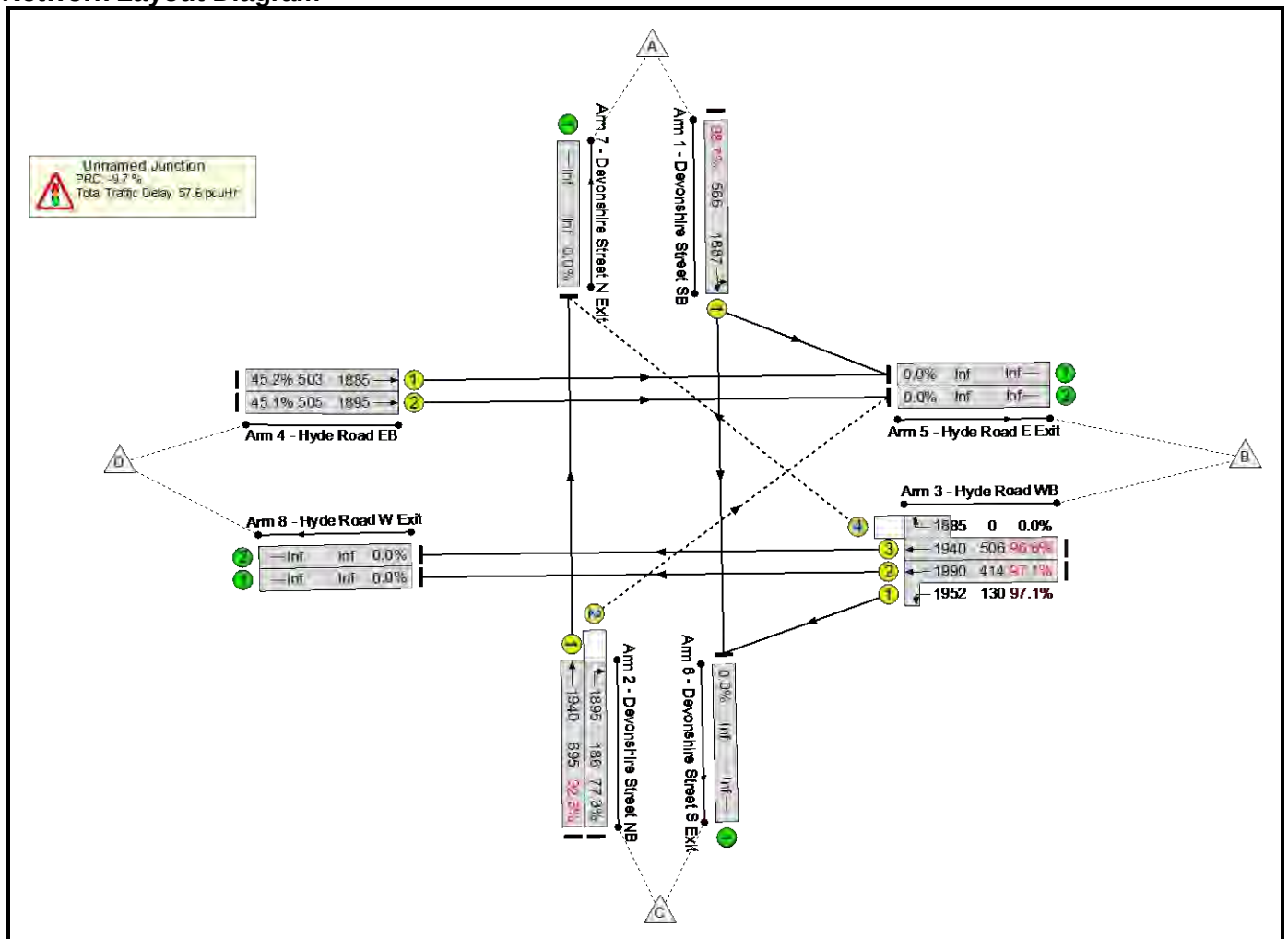
Basic Results Summary

User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	Hyde Road_Devonshire Street Signalised Junction.lsg3x
Author:	
Company:	
Address:	

Scenario 1: '2027 Base Flows - AM Peak' (FG1: '2027 Base Flows - AM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



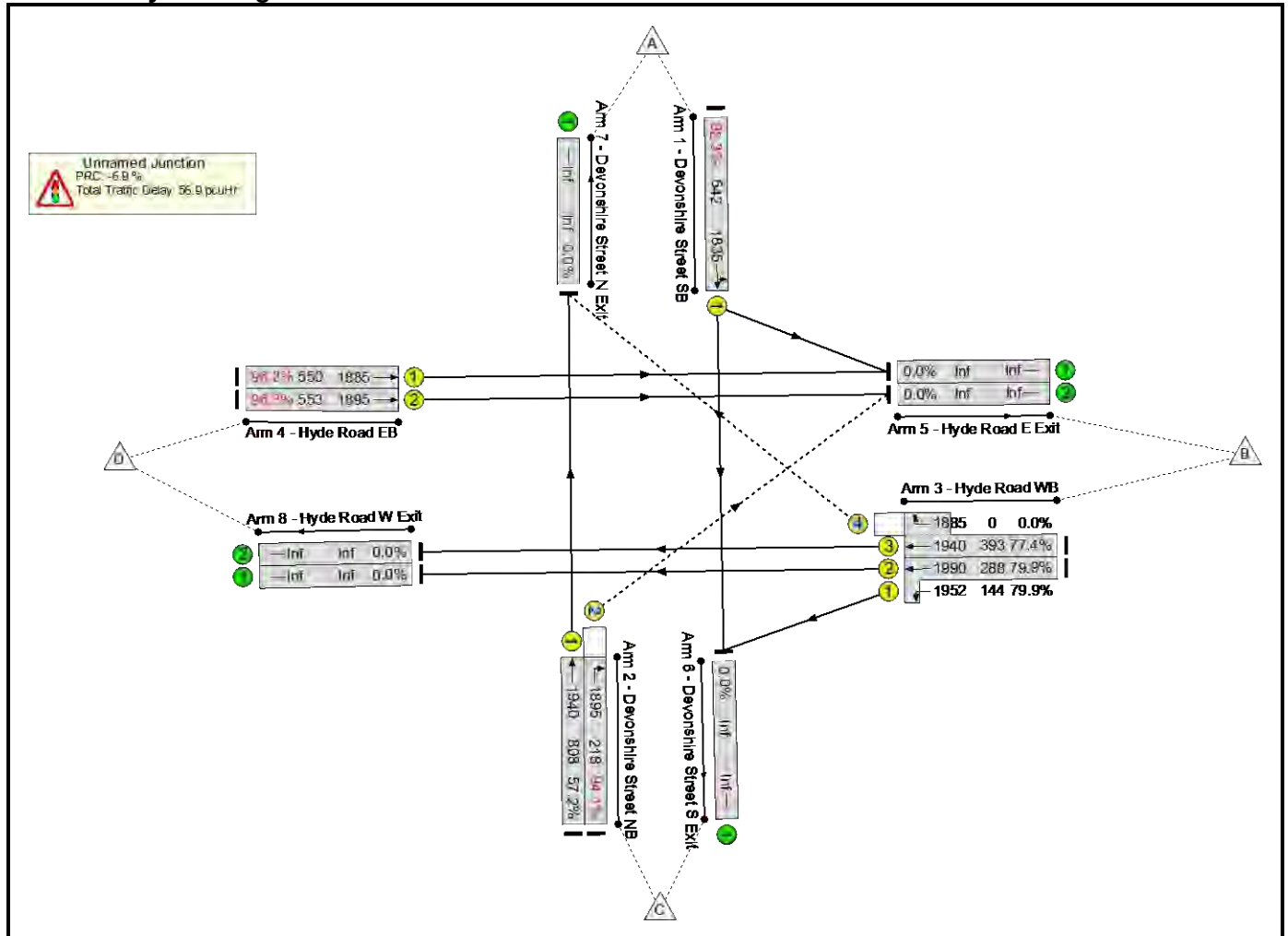
Network Results

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	-	-	-		-	-	-	-	-	-	98.7%	3	82	60	57.6	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	98.7%	3	82	60	57.6	-	-
1/1	Devonshire Street SB Left Ahead	U	A		1	35	-	559	1887	566	98.7%	-	-	-	16.7	107.3	28.7
2/1	Devonshire Street NB Ahead	U	B		2	41	-	644	1940	695	92.6%	-	-	-	10.3	57.4	21.5
2/2	Devonshire Street NB Right	O	B		2	41	-	144	1895	186	77.3%	3	82	60	3.2	80.1	4.3
3/2+3/1	Hyde Road WB Left Ahead	U	C E		2:1	30:69	-	528	1990:1952	414+130	97.1 : 97.1%	-	-	-	11.4	77.7	17.9
3/3+3/4	Hyde Road WB Right Ahead	U+O	C		2	30	-	489	1940:1885	506+0	96.6 : 0.0%	0	0	0	10.6	78.0	16.7
4/1	Hyde Road EB Ahead	U	D		1	31	-	227	1885	503	45.2%	-	-	-	2.7	43.2	6.7
4/2	Hyde Road EB Ahead	U	D		1	31	-	228	1895	505	45.1%	-	-	-	2.7	43.2	6.7
C1 PRC for Signalled Lanes (%): -9.7 PRC Over All Lanes (%): -9.7 Total Delay for Signalled Lanes (pcuHr): 57.58 Total Delay Over All Lanes(pcuHr): 57.58 Cycle Time (s): 120																	

Basic Results Summary

Scenario 2: '2027 Base Flows - PM Peak' (FG2: '2027 Base Flows - PM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

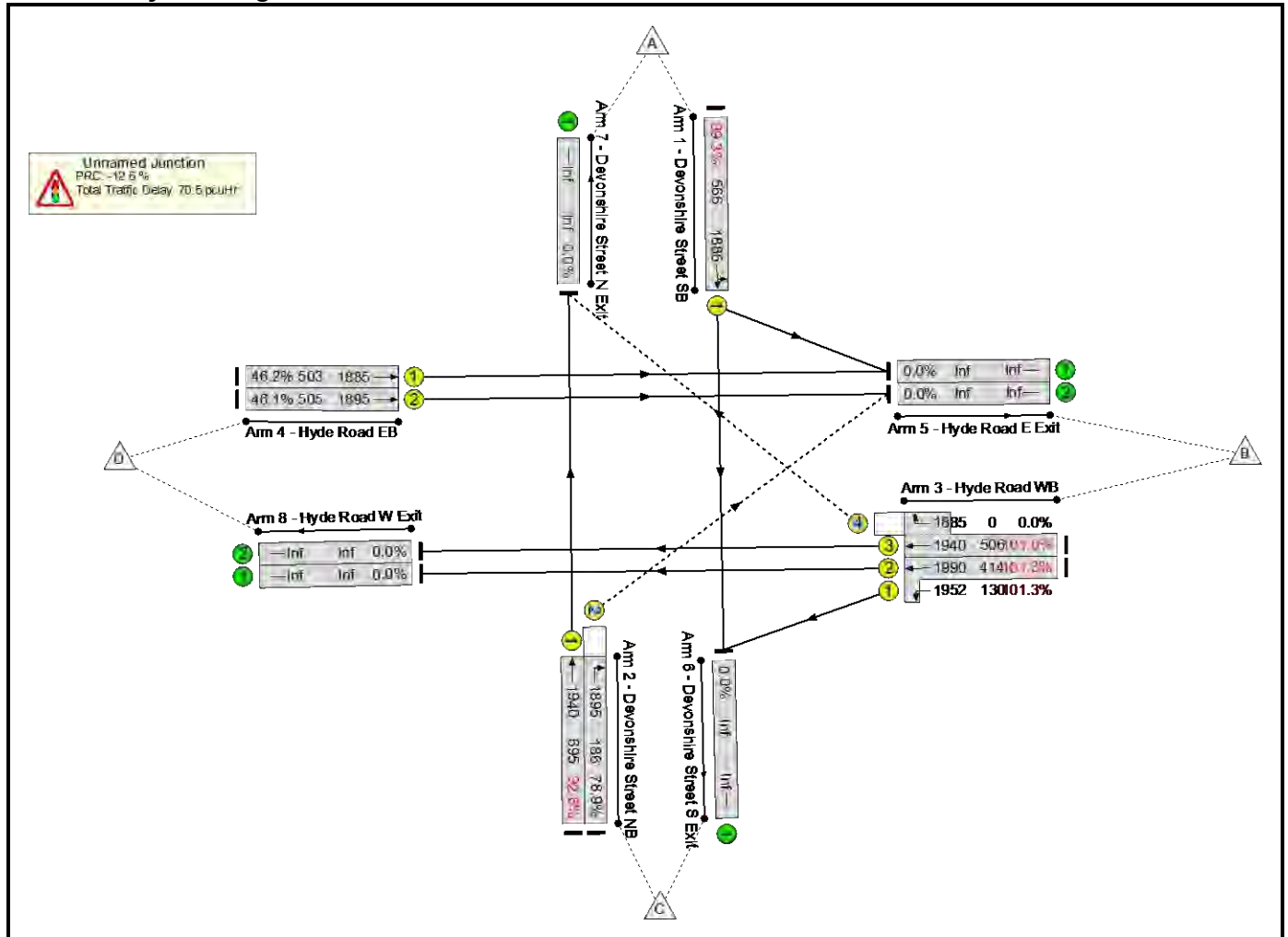
Network Results

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	-	-	-		-	-	-	-	-	-	96.3%	30	111	64	56.9	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	96.3%	30	111	64	56.9	-	-
1/1	Devonshire Street SB Left Ahead	U	A		1	41	-	593	1835	642	92.3%	-	-	-	11.2	67.8	23.9
2/1	Devonshire Street NB Ahead	U	B		2	48	-	462	1940	808	57.2%	-	-	-	2.6	20.2	8.5
2/2	Devonshire Street NB Right	O	B		2	48	-	205	1895	218	94.1%	30	111	64	7.2	126.3	9.6
3/2+3/1	Hyde Road WB Left Ahead	U	C E		2:1	23:63	-	345	1990:1952	288+144	79.9 : 79.9%	-	-	-	4.6	48.1	12.6
3/3+3/4	Hyde Road WB Right Ahead	U+O	C		2	23	-	304	1940:1885	393+0	77.4 : 0.0%	0	0	0	4.1	48.5	7.2
4/1	Hyde Road EB Ahead	U	D		1	34	-	529	1885	550	96.2%	-	-	-	13.6	92.4	24.8
4/2	Hyde Road EB Ahead	U	D		1	34	-	532	1895	553	96.3%	-	-	-	13.6	92.4	24.9
C1					PRC for Signalised Lanes (%):		-6.9	Total Delay for Signalised Lanes (pcuHr):				56.88	Cycle Time (s): 120				
					PRC Over All Lanes (%):		-6.9	Total Delay Over All Lanes(pcuHr):				56.88					

Basic Results Summary

Scenario 3: '2027 Assessment Flows - AM Peak' (FG3: '2027 Assessment Flows - AM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram

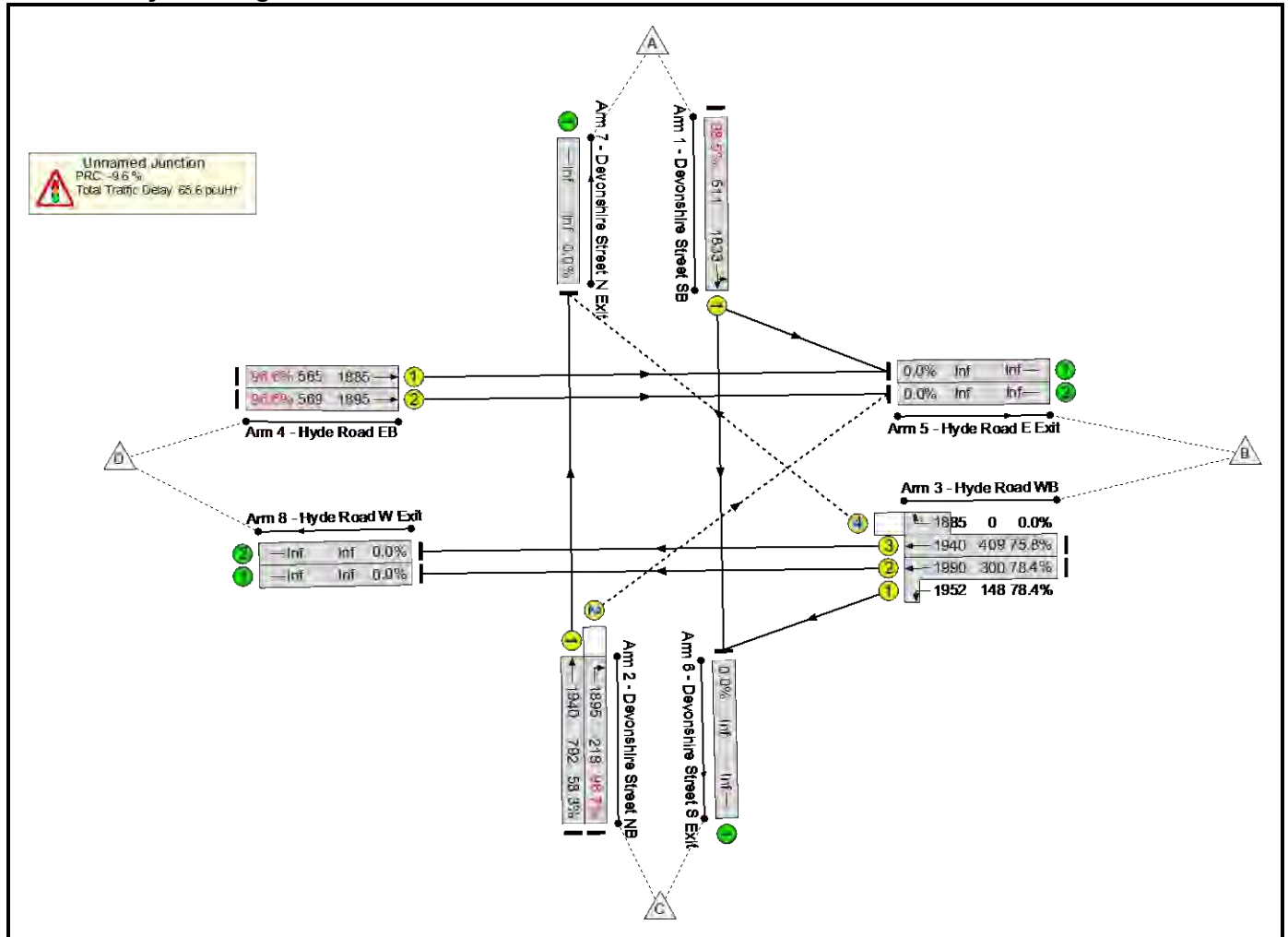


Network Results

Basic Results Summary

Scenario 4: '2027 Assessment Flows - PM Peak' (FG4: '2027 Assessment Flows - PM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



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	-	-	-		-	-	-	-	-	-	98.7%	5	126	84	65.6	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	98.7%	5	126	84	65.6	-	-
1/1	Devonshire Street SB Left Ahead	U	A		1	39	-	602	1833	611	98.5%	-	-	-	16.9	100.8	30.1
2/1	Devonshire Street NB Ahead	U	B		2	47	-	462	1940	792	58.3%	-	-	-	2.7	20.9	8.8
2/2	Devonshire Street NB Right	O	B		2	47	-	215	1895	218	98.7%	5	126	84	9.5	158.7	11.8
3/2+3/1	Hyde Road WB Left Ahead	U	C E		2:1	24:65	-	351	1990:1952	300+148	78.4 : 78.4%	-	-	-	4.4	45.2	12.5
3/3+3/4	Hyde Road WB Right Ahead	U+O	C		2	24	-	310	1940:1885	409+0	75.8 : 0.0%	0	0	0	3.9	45.8	7.0
4/1	Hyde Road EB Ahead	U	D		1	35	-	546	1885	565	96.6%	-	-	-	14.1	92.7	25.7
4/2	Hyde Road EB Ahead	U	D		1	35	-	549	1895	569	96.6%	-	-	-	14.1	92.6	25.8
C1				PRC for Signalled Lanes (%):		-9.6	-9.6		Total Delay for Signalled Lanes (pcuHr):			65.57	Cycle Time (s): 120				
				PRC Over All Lanes (%):		-9.6			Total Delay Over All Lanes(pcuHr):			65.57					

APPENDIX 6

PICADY Output for A57 Hyde Road/Bennett Street

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.2.1013

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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: A57 Hyde Road_Bennett Street priority junction.j9
Path: Z:\projects\3583 Bennett Street Manchester (Kellen)\Picady
Report generation date: 26/07/2022 08:55:32

2027 Base Flows AM
2027 Base Flows PM
2027 Assessment Flows AM
2027 Assessment Flows PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2027 Base Flows								
Stream B+C	5.1	3.73	0.02	A	3.8	2.61	0.08	A
Stream B+L	2.2	4.02	0.71	E	5.4	28.52	0.08	F
Stream C+RB	1.0	3.08	0.24	A	1.0	4.33	0.24	A
2027 Assessment Flows								
Stream B+C	8.8	1.11.62	0.03	F	9.8	1.03.68	0.02	F
Stream B+L	5.3	1.15.4	0.28	F	15.4	5.15.82	0.02	F
Stream C+RB	1.2	2.45	0.26	A	1.5	5.75	0.33	A

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

File summary

File Description

Title	A57 Hyde Road/Bennett Street priority junction
Location	Donson
Site number	3583
Date	04/07/2022
Version	
Status	(New File)
Identifier	George Hocks
Client	Kellen Homes
Job number	3583
Enumerator	EDD/George Monks
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	mph	PCU	PCU	per hour	s	h/min	per min

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	35.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2027 Base Flows	AM	ONE HOUR	06:00	07:00	15	☒
D2	2027 Base Flows	PM	ONE HOUR	06:00	07:30	15	☒
D3	2027 Assessment Flows	AM	ONE HOUR	06:00	07:00	15	☒
D4	2027 Assessment Flows	PM	ONE HOUR	06:00	07:30	15	☒

Analysis Set Details

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

2027 Base Flows, AM

Data Errors and Warnings

16 errors/warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	united	T-Junction	Two-way		4.28	A

Junction Network Options

Driving side	Lighting
Left	Not specified/known

Arms

Arms

Arm	Name	Description	Arm type
A	Hyde Road (W)		Major
B	Bennett Street		Minor
C	Hyde Road (E)		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	10.00			280.0	✓	0.00

Geometry for Arm C is based opposite Arm C. Geometry for Arm A is based on measured second Arm C.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	6.60	4.60	2.80	2.75		6.00	110	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/m)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	660	0.176	0.282	0.129	0.413
B-C	141	0.105	0.254	-	-
C-B	716	0.254	0.254	-	-

The above intersection priority slopes will be used to calculate the intersection geometry.

Capacity may be estimated in the capacity model and be updated.

Intersection flow capacity equations will be used to estimate the capacity.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
01	2027 Base Flow	AM	ONE HOUR	08:00	09:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	☒	704	100.00%
B		ONE HOUR	☒	201	100.00%
C		ONE HOUR	☒	7124	100.00%

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	104	389
	B	188	0	48
	C	1161	33	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.12	9.73	0.1	E	42	63
B-A	0.71	19.73	2.2	E	142	213
C-AB	0.24	2.36	0.0	A	138	299
C-A					888	1322
A-B					35	143
A-C					581	825

Main Results for each time segment

06:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	38	8	573	0.080	34	0.0	0.1	8.882	A
B-A	147	29	368	0.382	135	0.0	0.4	13.218	B
C-AB	98	24	1189	0.382	92	0.0	0.0	2.882	A
C-A	788	199			780				
A-B	78	30			73				
A-C	482	112			482				

06:15 – 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	41	13	430	0.078	41	0.1	0.5	7.385	A
B-A	179	35	325	0.438	135	0.4	0.7	19.117	-
C-AB	180	40	1272	0.128	180	0.2	0.3	3.238	A
C-A	305	226			305				
A-B	93	23			93				
A-C	539	135			539				

06:00 – 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	51	13	432	0.117	51	0.1	0.3	5.427	A
B-A	171	43	241	0.707	165	0.7	2.1	44.517	E
C-AB	337	54	1422	0.237	334	0.3	1.0	3.245	A
C-A	567	342			567				
A-B	115	25			115				
A-C	661	165			661				

06:45 – 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	51	13	420	0.120	51	0.1	0.1	9.734	A
B-A	171	43	241	0.708	170	2.1	2.2	43.731	E
C-AB	340	55	1424	0.235	340	1.0	1.0	3.235	A
C-A	564	341			564				
A-B	115	25			115				
A-C	661	165			661				

08:00 – 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	41	13	525	0.075	42	0.1	0.1	7.440	A
B-A	135	35	325	0.428	145	2.2	0.5	25.624	-
C-AB	180	40	1274	0.127	184	1.0	0.3	3.252	A
C-A	305	220			305				
A-B	93	23			93				
A-C	535	135			535				

08:15 – 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	571	0.081	35	0.1	0.1	6.739	A
B-A	167	29	358	0.303	165	0.5	0.4	13.515	E
C-AB	89	24	1178	0.082	97	0.3	0.2	3.558	A
C-A	755	185			755				
A-B	75	20			75				
A-C	452	113			452				

2027 Base Flows, PM

Data Errors and Warnings

15 errors/warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Function Delay (s)	Junction LOS
A	untitled	T-Junction	Two-way		12.73	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
00	2027 Base Flows	PM	ONE HOUR	08:00	09:00	15	

Vehicle mix varies over time	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
☒	☒	HOV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	☒	1514	100.000
B		ONE HOUR	☒	106	100.000
C		ONE HOUR	☒	755	100.000

Origin-Destination Data

Demand (PCU/hr)

	To		
	A	B	C
From A	0	171	1243
B	66	0	40
C	724	35	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.88	284.51	3.8	F	37	85
B-A	0.88	281.58	5.4	F	62	94
C-AB	0.24	4.88	0.0	A	141	211
C-A					588	834
A-B					157	235
A-C					1232	1845

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	38	8	488	0.084	38	0.0	0.1	8.214	A
B-A	51	13	267	0.152	50	0.0	0.2	18.546	B
C-AB	74	13	344	0.285	74	0.0	0.2	4.872	A
C-A	487	124			487				
A-B	128	32			128				
A-C	1011	261			1011				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	38	9	488	0.080	38	0.1	0.1	9.945	A
B-A	61	15	267	0.327	60	0.2	0.5	28.178	B
C-AB	116	20	383	0.132	116	0.2	0.3	4.872	A
C-A	584	144			584				
A-B	154	35			154				
A-C	1207	302			1207				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	44	11	44	0.888	38	0.1	2.8	210.678	F
B-A	75	19	77	0.878	62	0.5	3.7	170.143	F
C-AB	227	37	383	0.238	225	0.3	0.9	4.889	A
C-A	688	182			608				
A-B	188	47			188				
A-C	1478	370			1478				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	44	11	44	0.842	40	2.6	3.8	234.210	F
B-A	75	19	76	0.885	68	3.7	5.4	281.823	F
C-AB	228	37	384	0.238	225	0.5	0.2	4.881	A
C-A	607	182			607				
A-B	188	47			188				
A-C	1478	370			1478				

08:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	38	8	387	0.082	38	3.2	0.1	11.179	E
B-A	6	15	385	0.028	38	5.4	0.5	40.185	E
C-AB	120	20	381	0.134	120	1.0	0.2	4.704	A
C-A	322	14			322				
A-B	154	32			154				
A-C	1287	362			1287				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	38	8	468	0.088	38	0.1	0.1	6.266	F
B-A	5	12	267	0.132	32	0.6	0.2	18.822	F
C-AB	15	15	345	0.038	15	2.3	0.2	4.828	A
C-A	486	124			486				
A-B	129	32			129				
A-C	1011	252			1011				

2027 Assessment Flows, AM

Data Errors and Warnings

14 errors/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		13.64	

Junction Network Options

Driving side	Lighting
Left	Normal/underpass

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
01	2027 Assessment Flows	AM	ONE HOUR	06:00	09:00	15	☒

Vehicle mix varies over time	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
☒	☒	HOV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	☒	113	100.000
B		ONE HOUR	☒	267	100.000
C		ONE HOUR	☒	107	100.000

Origin-Destination Data

Demand2 (PCU/hr)

	To			
	A	B	C	
From	A	0	113	800
	B	267	0	55
	C	1161	38	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.90	15.400	3.8	F	54	81
B-A	0.88	108.174	8.3	F	191	388
C-AB	0.28	3.45	1.2	A	218	328
C-A					872	1308
A-B					104	188
A-C					581	128

Main Results for each time segment

06:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	44	11	568	0.880	44	0.0	0.1	7.842	A
B-A	157	35	384	0.407	154	0.0	0.7	15.445	C
C-AB	185	25	1160	0.880	184	0.0	0.2	3.883	A
C-A	789	197			789				
A-B	88	21			88				
A-C	482	112			482				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	52	13	600	0.108	52	0.1	0.1	6.042	A
B-A	187	47	323	0.578	188	0.7	1.3	25.489	C
C-AB	175	44	1271	0.138	174	0.2	0.4	3.283	A
C-A	880	225			880				
A-B	180	25			180				
A-C	539	135			539				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	89	16	701	0.838	89	0.1	0.0	57.790	F
B-A	229	57	235	0.858	216	1.3	6.2	10.485	F
C-AB	288	62	1482	0.289	288	0.4	1.1	3.422	A
C-A	837	234			837				
A-B	124	31			124				
A-C	661	185			661				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	66	18	86	1.081	54	1.0	0.8	19.025	F
B-A	229	57	235	0.880	228	6.0	8.3	102.888	F
C-AB	373	93	1424	0.282	373	1.1	1.2	3.448	A
C-A	394	233			394				
A-B	124	31			124				
A-C	661	165			661				

09:15 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	59	13	475	0.112	59	0.0	0.1	9.185	A
B-A	157	47	322	0.881	214	0.3	1.5	40.141	E
C-AB	177	44	1274	0.133	180	1.2	0.4	3.305	A
C-A	390	223			390				
A-B	102	25			102				
A-C	539	135			539				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	49	11	452	0.080	45	0.1	0.1	7.099	A
B-A	157	39	354	0.408	189	1.5	0.7	16.245	-
C-AB	186	25	1185	0.080	188	0.4	0.2	3.330	A
C-A	735	157			735				
A-B	95	21			95				
A-C	452	111			452				

2027 Assessment Flows, PM

Data Errors and Warnings

0 errors/warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
W	untitled	T-Junction	Two-way		27.66	

Junction Network Options

Driving side	Lighting
Left	Normal/uniform

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
DM	2027 Assessment Flows	PM	ONE HOUR	08:00	09:00	15	☒

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	RCU Factor for a HV (PCU)
☒	☒	HV Percentages	0.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	☒	1588	100.000
B		ONE HOUR	☒	131	100.000
C		ONE HOUR	☒	170	100.000

Origin-Destination Data

Demand2 (PCU/hr)

		To		
		A	B	C
From	A	0	228	1243
	B	82	0	49
	C	734	46	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.40	47.148	9.8	F	35	87
B-A	1.40	59.888	13.4	F	25	113
C-AB	0.33	5.70	1.8	A	132	288
C-A					515	772
A-B					205	215
A-C					1232	1545

Main Results for each time segment

06:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	37	8	463	0.080	37	0.0	0.0	0.884	A
B-A	62	15	365	0.235	61	0.0	0.0	8.655	B
C-AB	89	25	337	0.115	89	0.0	0.3	4.674	A
C-A	480	120			480				
A-B	185	42			185				
A-C	701	253			701				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	44	11	363	0.115	44	0.1	0.1	10.893	B
B-A	74	18	177	0.415	72	0.2	3.7	23.846	C
C-AB	155	40	381	0.131	155	0.3	0.8	4.990	A
C-A	533	133			533				
A-B	200	51			200				
A-C	1207	362			1207				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	54	13	36	1.425	30	0.1	8.8	40.138	F
B-A	90	23	65	1.387	58	0.7	8.8	39.888	F
C-AB	313	78	354	0.325	309	0.6	1.7	5.817	B
C-A	535	134			535				
A-B	248	62			248				
A-C	1475	370			1475				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	54	13	39	1.335	30	5.5	9.6	47.165	F
B-A	92	23	64	1.431	62	8.5	15.4	39.823	F
C-AB	317	75	358	0.331	317	1.7	3.8	5.702	B
C-A	531	133			531				
A-B	248	62			248				
A-C	1475	370			1475				

08:00 – 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	54	51	318	0.138	52	9.6	0.2	17.865	C
B-A	74	18	178	0.418	132	15.4	0.8	19.238	B
C-AB	132	41	385	0.132	187	1.6	0.6	5.081	A
C-A	300	132			530				
A-B	282	51			232				
A-C	1287	382			1287				

09:15 – 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	37	9	488	0.081	37	0.3	0.1	8.611	A
B-A	62	15	283	0.239	64	0.8	0.3	13.687	B
C-AB	101	25	338	0.120	122	0.6	0.3	4.984	A
C-A	479	120			479				
A-B	189	42			189				
A-C	1011	252			1011				

APPENDIX 7

LINSIG Output for A57 Hyde Road/A6010 Pottery Lane

Basic Results Summary

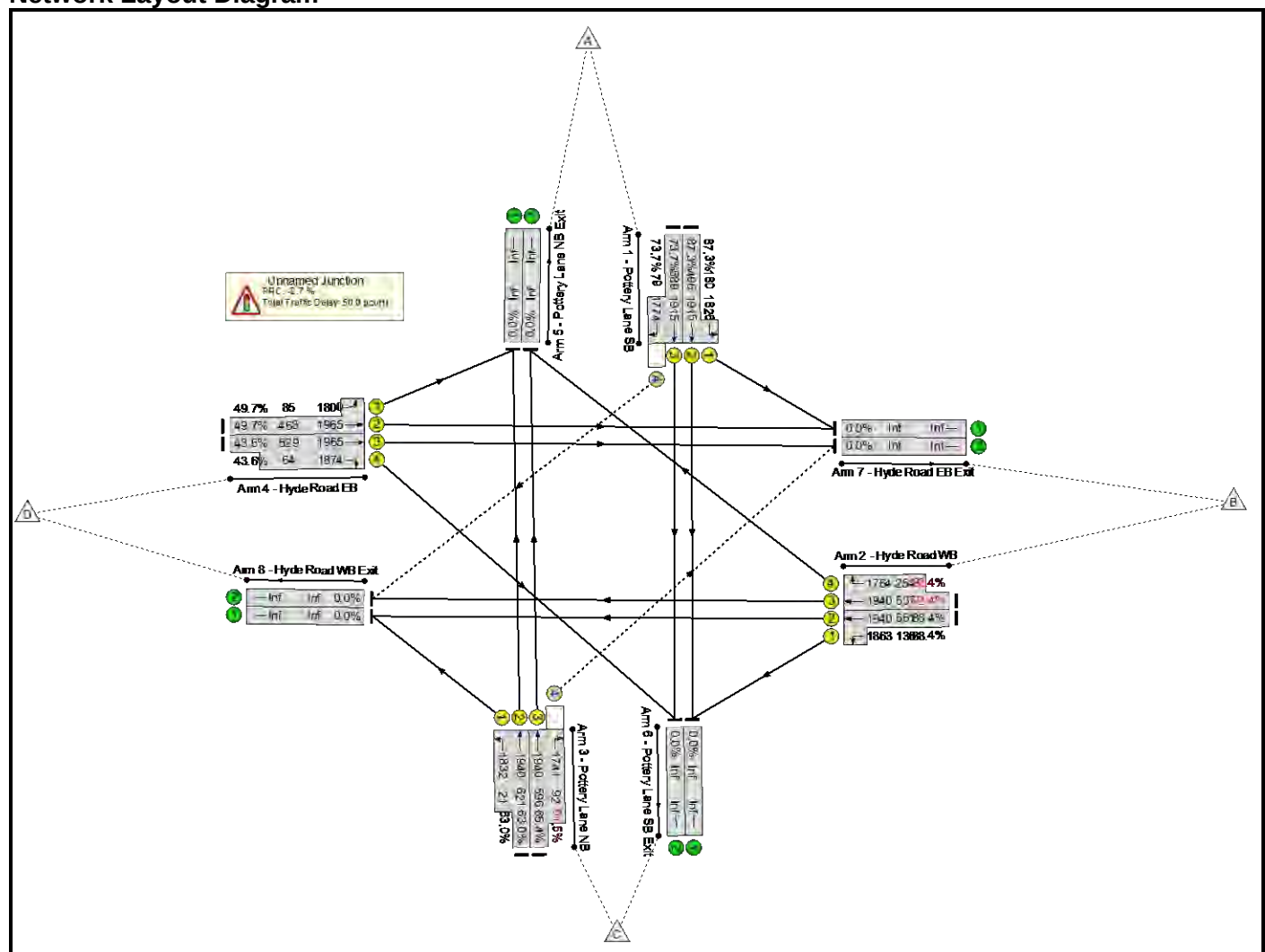
Basic Results Summary

User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	Hyde Road_Pottery Lane Signalised Junction.lsg3x
Author:	
Company:	
Address:	

Scenario 1: '2027 Base Flows - AM Peak' (FG1: '2027 Base Flows - AM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



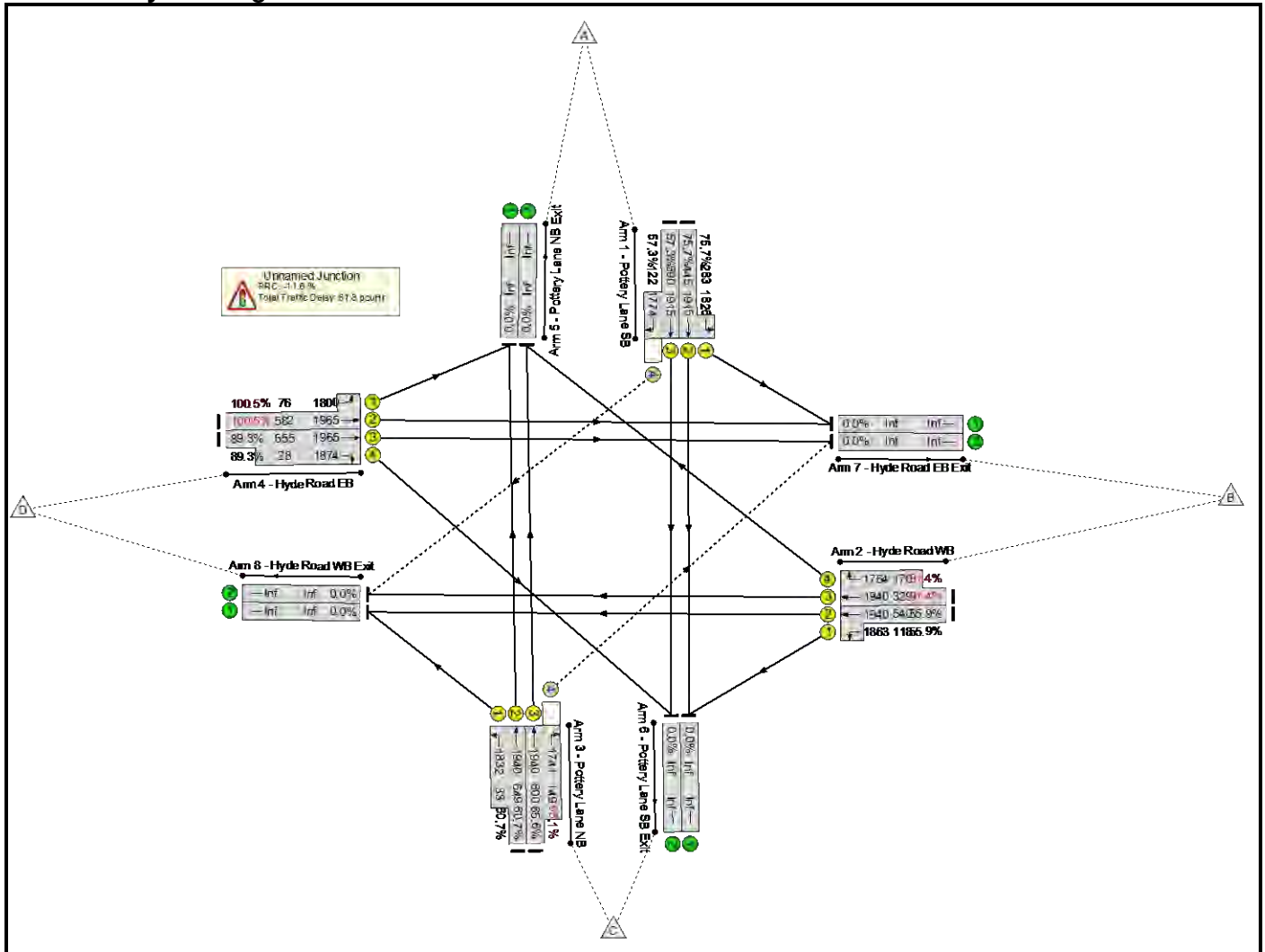
Network Results

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	-	-	-		-	-	-	-	-	-	92.4%	90	0	52	50.0	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	92.4%	90	0	52	50.0	-	-
1/2+1/1	Pottery Lane SB Ahead Left	U	E		1	35	-	590	1915:1826	496+180	87.3 : 87.3%	-	-	-	8.3	50.7	18.4
1/3+1/4	Pottery Lane SB Ahead Right	U+O	E		1	35	-	492	1915:1774	589+79	73.7 : 73.7%	58	0	0	5.6	41.0	13.1
2/2+2/1	Hyde Road WB Left Ahead	U	B		1	36	-	616	1940:1863	561+136	88.4 : 88.4%	-	-	-	8.8	51.7	19.6
2/3+2/4	Hyde Road WB Right Ahead	U	B D		1	36:17	-	731	1940:1764	537+254	92.4 : 92.4%	-	-	-	12.0	59.3	21.8
3/2+3/1	Pottery Lane NB Ahead Left	U	F		1	33	-	404	1940:1832	621+21	63.0 : 63.0%	-	-	-	4.1	36.9	10.4
3/3+3/4	Pottery Lane NB Ahead Right	U+O	F		1	33	-	474	1940:1741	596+92	65.4 : 91.5%	32	0	52	5.5	41.8	10.5
4/2+4/1	Hyde Road EB Left Ahead	U	A		1	28	-	272	1965:1800	463+85	49.7 : 49.7%	-	-	-	2.8	37.6	6.6
4/3+4/4	Hyde Road EB Right Ahead	U	A C		1	28:10	-	259	1965:1874	529+64	43.6 : 43.6%	-	-	-	2.7	37.3	5.8
C1 PRC for Signalised Lanes (%): -2.7 PRC Over All Lanes (%): -2.7 Total Delay for Signalised Lanes (pcuHr): 49.96 Total Delay Over All Lanes(pcuHr): 49.96 Cycle Time (s): 104																	

Basic Results Summary

Scenario 2: '2027 Base Flows - PM Peak' (FG2: '2027 Base Flows - PM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram

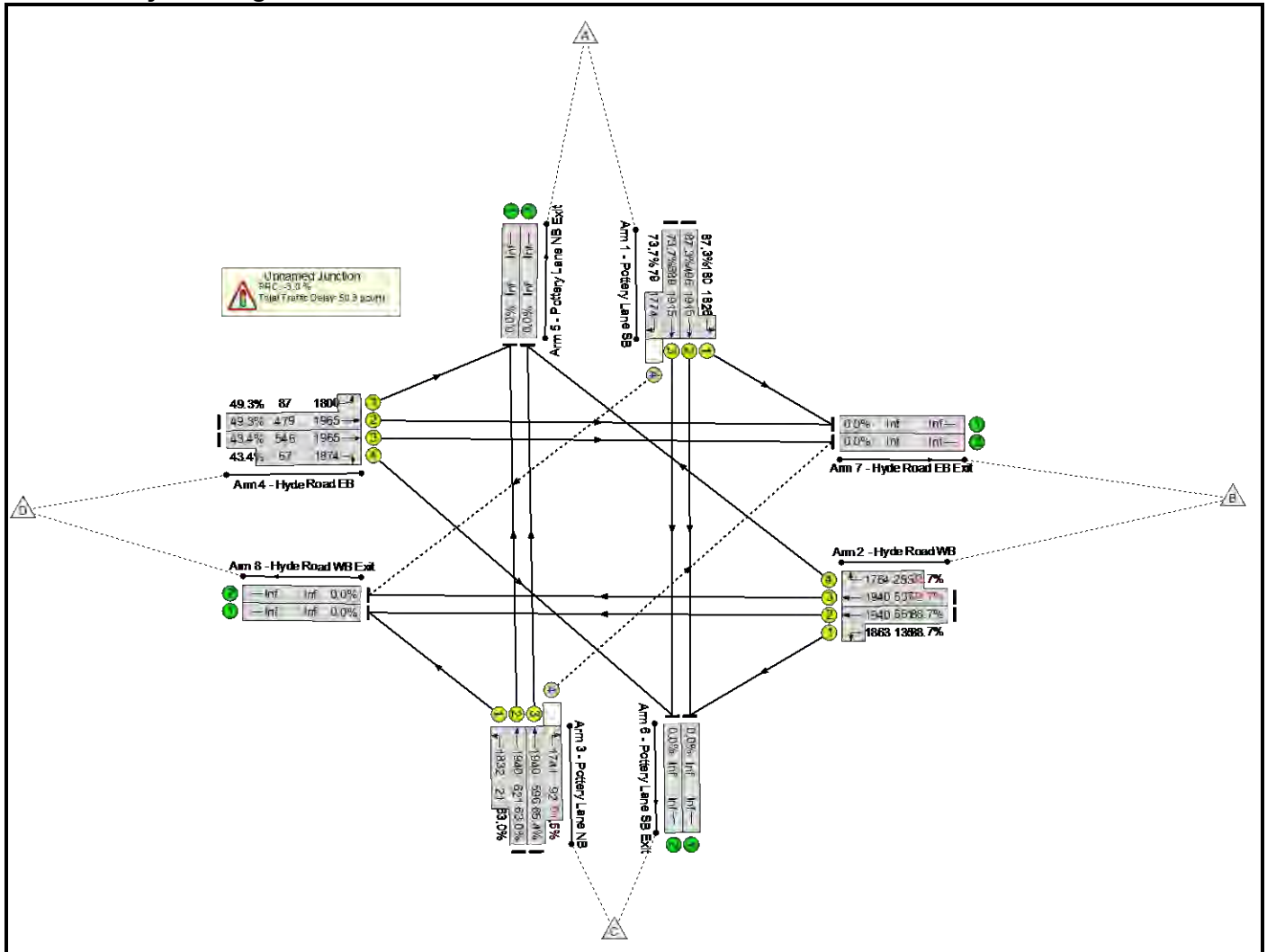


Network Results

Basic Results Summary

Scenario 3: '2027 Assessment Flows - AM Peak' (FG3: '2027 Assessment Flows - AM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



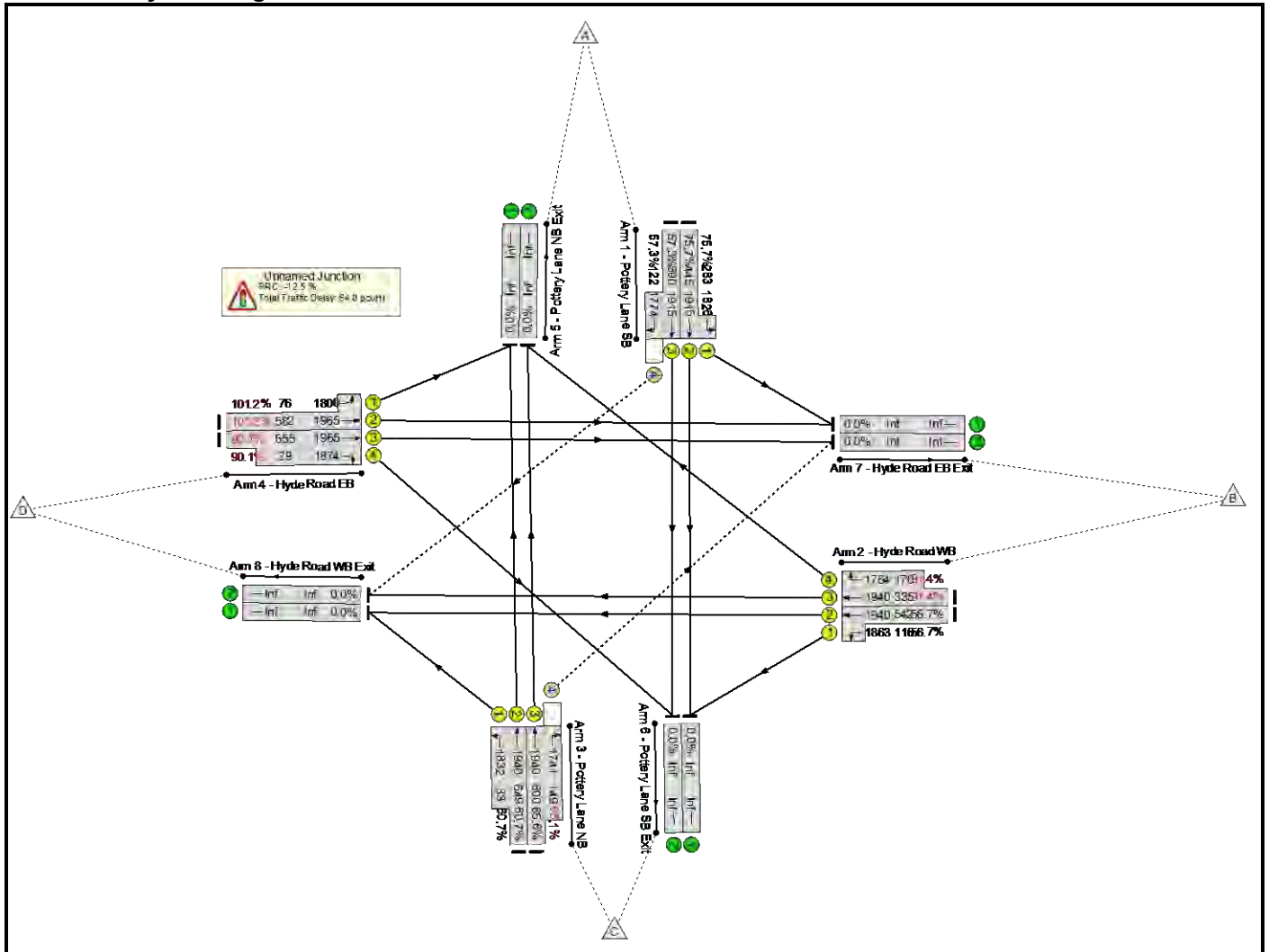
Network Results

[illegible]

Basic Results Summary

Scenario 4: '2027 Assessment Flows - PM Peak' (FG4: '2027 Assessment Flows - PM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Network Results

APPENDIX 8

Personal Injury Accident Data



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Validated Data

Crash Date: Wednesday, July 26, 2017 **Time of Crash:** 6:10:00 PM **Crash Reference:** 201706E033198

Highest Injury Severity: Slight
Highway Authority: Manchester
Local Authority: Manchester City
Weather Description: Fine without high winds
Road Surface Description: Dry
Speed Limit: 30
Light Conditions: Daylight: regardless of presence of streetlights
Carriageway Hazards: None
Junction Detail: T or staggered junction
Junction Pedestrian Crossing: No physical crossing facility within 50 metres
Road Type: Dual carriageway
Junction Control: Give way or uncontrolled

Road Number: A57

Number of Casualties: 1

Number of Vehicles: 2

OS Grid Reference: 386168 396802



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	-1	Male	36 - 45	Vehicle is in the act of turning right	Front	Unknown	None	None
2	Motorcycle over 125cc and up to 500cc	6	Male	26 - 35	Vehicle is passing a stationary vehicle on its offside	Front	Unknown	None	None

Casualties

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

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Validated Data

Crash Date: Wednesday, August 16, 2017 **Time of Crash:** 2:40:00 PM **Crash Reference:** 201706E034012

Highest Injury Severity:	Slight	Road Number:	A57	Number of Casualties:	2
Highway Authority:	Manchester	Number of Vehicles:	1	OS Grid Reference:	386282 396761
Local Authority:	Manchester City				
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	30				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Not Applicable				



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Validated Data

Vehicles involved

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

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	16 - 20	Unknown or other	Unknown or other
1	2	Slight	Vehicle or pillion passenger	Female	26 - 35	Unknown or other	Unknown or other

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Validated Data

Crash Date: Saturday, February 10, 2018 **Time of Crash:** 8:08:00 PM **Crash Reference:** 201806E140381

Highest Injury Severity: Fatal
Highway Authority: Manchester
Local Authority: Manchester City
Weather Description: Raining with high winds
Road Surface Description: Wet or Damp
Speed Limit: 30
Light Conditions: Darkness: street lights present and lit
Carriageway Hazards: None
Junction Detail: T or staggered junction
Junction Pedestrian Crossing: No physical crossing facility within 50 metres
Road Type: Single carriageway
Junction Control: Give way or uncontrolled

Road Number: A57

Number of Casualties: 3

Number of Vehicles: 2

OS Grid Reference: 386151 396807



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	9	Male	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Offside	Unknown	None	None
2	Car (excluding private hire)	10	Male	Over 75	Vehicle proceeding normally along the carriageway, not on a bend	Front	Unknown	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other
2	2	Serious	Driver or rider	Male	Over 75	Unknown or other	Unknown or other
2	3	Fatal	Vehicle or pillion passenger	Female	66 - 75	Unknown or other	Unknown or other

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

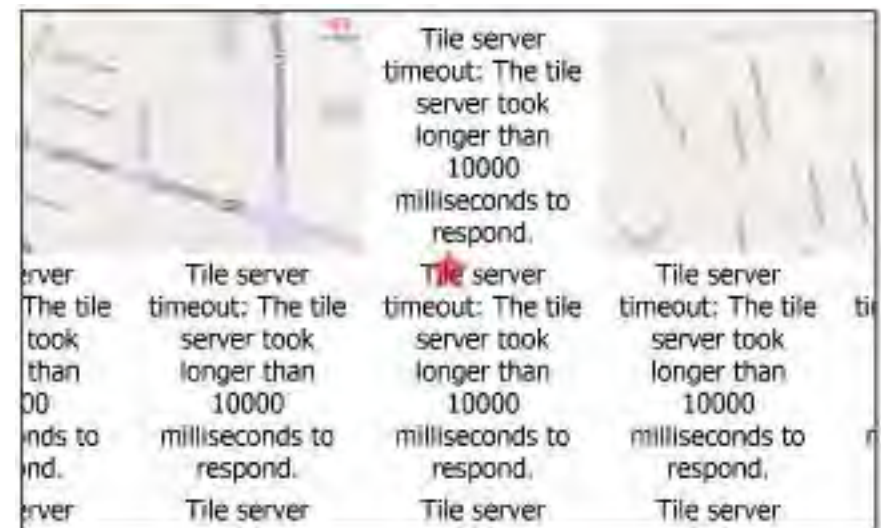
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Validated Data

Crash Date: Thursday, July 19, 2018 **Time of Crash:** 9:38:00 AM **Crash Reference:** 201806E146605

Highest Injury Severity:	Slight	Road Number:	A57	Number of Casualties:	1
Highway Authority:	Manchester	Number of Vehicles:	2	OS Grid Reference:	386038 396846
Local Authority:	Manchester City				
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	30				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	T or staggered junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	7	Male	26 - 35	Vehicle is passing another moving vehicle on its offside	Front	Unknown	None	None
2	Pedal cycle	-1	Male	46 - 55	Vehicle proceeding normally along the carriageway, not on a bend	Back	Journey as part of work	None	None

Casualties

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

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Validated Data

Crash Date: Sunday, November 04, 2018 **Time of Crash:** 1:45:00 AM **Crash Reference:** 201806E149933

Highest Injury Severity: Serious
Highway Authority: Manchester
Local Authority: Manchester City
Weather Description: Fine without high winds
Road Surface Description: Dry
Speed Limit: 30
Light Conditions: Darkness: street lighting unknown
Carriageway Hazards: None
Junction Detail: Not at or within 20 metres of junction
Junction Pedestrian Crossing: No physical crossing facility within 50 metres
Road Type: Single carriageway
Junction Control: Not Applicable

Road Number: A57

Number of Casualties: 1

Number of Vehicles: 1

OS Grid Reference: 386263 396772



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Taxi/Private hire car	7	Male	36 - 45	Vehicle proceeding normally along the carriageway, not on a bend	Front	Journey as part of work	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Serious	Pedestrian	Male	16 - 20	In carriageway, crossing elsewhere	Crossing from driver's nearside

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Validated Data

Crash Date: Tuesday, February 05, 2019 **Time of Crash:** 6:48:00 AM **Crash Reference:** 201906E153249

Highest Injury Severity: Slight
Highway Authority: Manchester
Local Authority: Manchester City
Weather Description: Fine without high winds
Road Surface Description: Dry
Speed Limit: 30
Light Conditions: Darkness: street lights present and lit
Carriageway Hazards: None
Junction Detail: T or staggered junction
Junction Pedestrian Crossing: No physical crossing facility within 50 metres
Road Type: Single carriageway
Junction Control: Give way or uncontrolled

Road Number: A57

Number of Casualties: 1

Number of Vehicles: 2

OS Grid Reference: 386437 396717



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	8	Male	36 - 45	Vehicle is in the act of turning left	Nearside	Journey as part of work	None	None
2	Pedal cycle	-1	Male	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Offside	Journey as part of work	None	None

Casualties

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

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Validated Data

Crash Date: Tuesday, June 02, 2020 **Time of Crash:** 6:40:00 AM **Crash Reference:** 202006A271918

Highest Injury Severity:	Slight	Road Number:	A57	Number of Casualties:	1
Highway Authority:	Manchester	Number of Vehicles:	2	OS Grid Reference:	386198 396791
Local Authority:	Manchester City				
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	30				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Not Applicable				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	9	Male	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Front	Journey as part of work	None	None
2	Car (excluding private hire)	10	Female	36 - 45	Vehicle proceeding normally along the carriageway, not on a bend	Back	Journey as part of work	None	None

Casualties

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

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Validated Data

Crash Date: Saturday, April 28, 2018 **Time of Crash:** 5:43:00 PM **Crash Reference:** 201806E150936

Highest Injury Severity: Slight
Highway Authority: Manchester
Local Authority: Manchester City
Weather Description: Fine without high winds
Road Surface Description: Dry
Speed Limit: 20
Light Conditions: Daylight: regardless of presence of streetlights
Carriageway Hazards: None
Junction Detail: Using private drive or entrance
Junction Pedestrian Crossing: No physical crossing facility within 50 metres
Road Type: Single carriageway
Junction Control: Give way or uncontrolled

Road Number: U0

Number of Casualties: 1

Number of Vehicles: 1

OS Grid Reference: 386446 396888



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	1	Female	36 - 45	Vehicle is moving off	Front	Unknown	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Pedestrian	Male	0 - 5	In carriageway, crossing elsewhere	Crossing from driver's nearside - masked by parked or stationary vehicle

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