

Transport Assessment

35 Wilson Road, Huyton

29 April 2022

Prepared for

LINDEN HILL - CAPITAL ASSETS - ALX LIMITED



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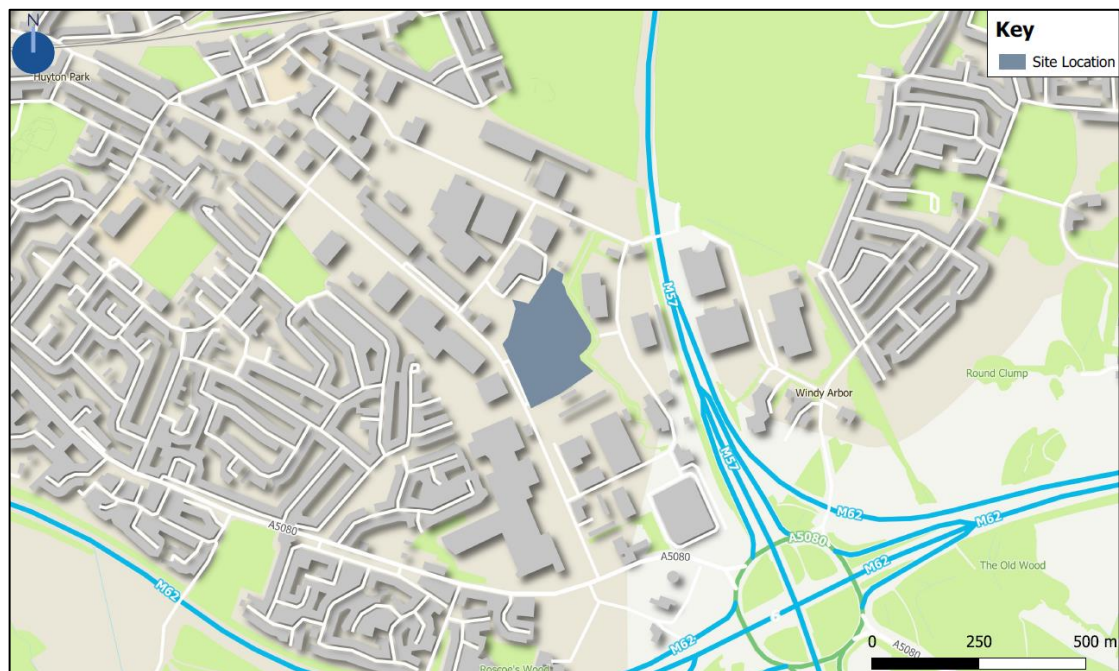
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1. Introduction

1.1 Preamble

- 1.1.1 Markides Associates (MA) have been instructed to prepare this Transport Statement (TS) by LINDEN HILL - CAPITAL ASSETS - ALX LIMITED in support of an application for the development of a commercial (Use Class B8) unit located at Land at John Mason International Site, Wilson Road, Huyton Business Park, L36 6AE ('the site').
- 1.1.2 The existing site occupies some 9,863sqm of B8 floorspace. The development proposals comprise the provision of 19,116sqm of B8 floor area which will also be accompanied by 190 car parking spaces, 45 trailer spaces and 32 cycle parking spaces.
- 1.1.3 The site falls within the planning and highway authority area of Knowsley Metropolitan Borough Council (KMBC). A site location plan has been included as an extract as **Figure 1.1** and at the end of the report at scale.

Figure 1.1 Site Location Plan



- 1.1.4 As shown in **Figure 1.1**, the site fronts onto Wilson Road and is bound to the north, south and east by other B8 commercial units. The site also lies within close proximity to both the M57 and the M62.

1.2 Report Structure

1.2.1 This report is structured as follows:

- **Section 2 – Policy Guidance** examines the relevant national, regional, and local planning policy with regards to the site.
- **Section 3 – Baseline Conditions** details the site and its location, and the surrounding areas in highways and transport terms, including analysis of the site's accessibility by walking, cycling and public transport.
- **Section 4 – Proposed Development** outlines the application proposals, site access, cycle provision and servicing arrangements.
- **Section 5 – Traffic Impact Assessment** examines the multi-modal trip generation, footfall to the site and the impact in transport and highways terms.
- **Section 6** – summarises and concludes this report.

2. Policy Consideration

2.1 Preamble

- 2.1.1 This section outlines the relevant national, regional, and local planning policy in relation to the site.

2.2 National Policy

The National Planning Policy Framework (2021)

- 2.2.1 The NPPF as of July 2021 sets out Government planning policy, provides a framework within which local planning policies should be produced, and is a material consideration in planning decisions.
- 2.2.2 With regards to transport, the NPPF states that:

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

Paragraph 112 continues those applications for development should:

- Give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second- so far as possible – to facilitate access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;
- Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
- Create places that are safe, secure, and attractive – which minimise the scope for conflicts between pedestrians, cyclists, and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;
- Allow for the efficient delivery of goods, and access by service and emergency vehicles; and
- Be designed to enable charging of plug-in and ultra-low emission vehicles in safe, accessible, and convenient locations.

- 2.2.3 Paragraph 113 states that:

“All developments that will generate significant amounts of movement should be required to provide a travel plan and should be supported by a transport statement or transport assessment.”

2.3 Regional Policy

Liverpool Local Plan (2013-2033)

- 2.3.1 The Liverpool Local Plan provides a long-term spatial vision, strategic priorities, and policies for future development in the City over the next 15-20 years specifically with regard to the number of new homes, employment provision, shops, facilities, transport, and other infrastructure.
- 2.3.2 In terms of sustainable transport, 'Policy TP2: Transport Assessments' states the following:
- Development proposals that generate significant amounts of movement should be supported by a Transport Statement/Transport Assessment.
 - In order to ensure that free and safe movement is not comprised consideration will be given to the effect on safety, congestion and the environment when dealing with development proposals that involve:
 - New or altered access to the transport network; or
 - Improvement work to the transport network; or
 - Creation of new transport infrastructure; or
 - The generation of additional trips on the transport network.
 - Development proposals will only be permitted where:
 - Accesses, junctions, and new road layouts would be safe and operate efficiently;
 - The development would not, individually, or cumulatively with other projects, have a severe impact on the functioning of the network;
 - The proposals would not be detrimental to the safety of all users of the transport network and in particular pedestrians and cyclists;
 - The proposal makes provision for walking, cycling and the use of public transport;
 - The proposal would not generate regular movement of heavy goods vehicles (HGVs) on unsuitable roads, or on roads without easy access to Liverpool City Region's Freight Route Network; and
 - Vehicle and cycle parking, turning, and servicing appropriate to the scale and nature of the development is provided.

2.4 Local Policy

Knowsley Local Plan Core Strategy (2016)

- 2.4.1 The Knowsley Local Plan comprises of several documents. The core strategy part of the local plan sets the strategic framework for growth and development of Knowsley up to 2028 and beyond.
- 2.4.2 Strategic Objective 6 'Sustainable Transport' of the core strategy states the following:

“To ensure new development in Knowsley encourages a reduction in the overall need to travel, and prioritises sustainable transport such as walking, cycling and public transport. This will help to ensure accessibility and linkage between housing areas and employment locations, shopping, leisure, culture, health care, education, community and sporting facilities, green spaces, and other services.”

- 2.4.3 Policy CS7 also explores ways in which the existing highway network can be used to aid sustainable development as well as outlining the overall transport strategy. Policy CS7 has been summarised below.

Overall Transport Strategy

Planning powers and other interventions will be used to support a sustainable and integrated transport system that will:

- Support the economy by facilitating efficient movement of people and goods within the borough and linking to Liverpool City Centre, the Port of Liverpool, Liverpool John Lennon Airport, and other destinations in the surrounding area;
- Help meet the development needs of the borough through to 2028;
- Ensure people can get to where they need to by a choice of walking, cycling and public transport;
- Enhance road safety;
- Seek to reduce carbon emissions; and
- Improve the health and wellbeing of local people.

Location, Design and Management of New Development

New development will be required to be:

- Located and designed to prioritise accessibility and sustainable modes of travel through a choice of walking, cycling, public transport, and incorporate access for private vehicles. Where deficiencies are identified, developer contributions will be required to improve the accessibility of the location;
- Located and designed to ensure that larger scale proposals (attracting a lot of visitors, customers and/or employees) are located in the most accessible locations;
- Where subject to a planning application, accompanied (except in the case of smaller scale proposals) by Transport Assessments and/or Travel Plans;
- In compliance with adopted cycle, car, disabled and service vehicle parking standards for different types and scales of new development;
- Inclusive of measures that will mitigate carbon emissions and improve air quality where appropriate; and
- Consistent with safeguarding arrangements that secure the operational integrity and safety of Liverpool John Lennon Airport.

Strategic Transport Schemes and Programmes

The Council will work with national, regional, and sub-regional partners to deliver schemes which support Local Transport Plan priorities including:

- Further transport infrastructure that is necessary to support the future expansion of Liverpool John Lennon Airport consistent with its Surface Access Strategy and national aviation policy;
- Improvements to the rail network including electrification of existing lines; enhancements to stations and passenger interchange facilities; provision of Park and Ride facilities; and expansion and/or improvement of the Knowsley Rail Freight Terminal;
- Enhanced provision for buses, including improved bus stations, bus stops and laybys, and the enhancement of the principal bus routes through Quality Bus Partnerships and Quality Bus Contracts;
- Maintenance of transport hubs such as bus termini and train stations to give improved safety;
- Enhanced provision of walking and cycling routes as part of the Green Infrastructure network (see Policy CS8: Green Infrastructure); and
- The roll out of infrastructure for low carbon emission vehicles.

Ensuring a Choice of Travel Supplementary Planning Document

- 2.4.4 This SPD provides the car and cycle parking standards for the area of Knowsley. The car and cycle parking standards for B8 use classes have been summarised in **Table 2.1**.

Table 2.1 Car and Cycle Parking Standards

	Town Centre (Maximum)	District and Local Centre (Maximum)	Other Areas (Maximum)	Disabled Parking (Minimum)		Cycle (Minimum)
				Up to 200 bays	Over 200 bays	
B8 Use Class	1 space per 100 sqm			Individual bays for each disabled employee plus 2 bays of 5 of total capacity whichever is greater	6 bays plus 2% of total capacity	1 space per 850 sqm (Minimum of 2 spaces)

3. Existing Conditions

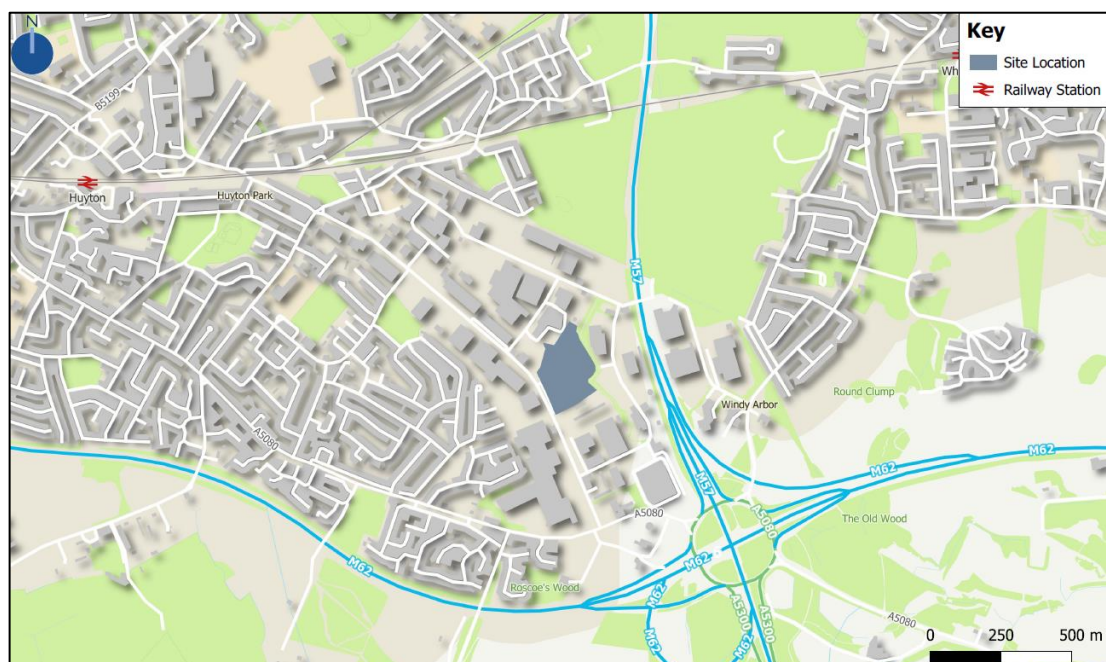
3.1 Preamble

- 3.1.1 This section of the report provides details of the site as existing, its permitted uses, access arrangements and accessibility by all modes.

3.2 Site Description

- 3.2.1 The site is located at Wilson Road, Huyton Business Park, L36 6AE ('the site') and occupied by John Mason International.
- 3.2.2 The site is currently operating under a B8 commercial floor space classification. Pedestrian access is taken from Wilson Road. Similarly, there are two existing vehicular accesses, also taken via Wilson Road. The site itself is situated to the west of the M57 and to the north of the M62 as shown in the site context plan included as **Figure 3.1** as an extract and included to scale at the end of this report.

Figure 3.1 Site Context Plan



3.3 Local Highway Network

- 3.3.1 The site fronts onto Wilson Road, which is a single-carriageway, two-way road with a speed restriction of 30mph. Wilson Road extends from the A5080 (Cronton Road) in the south towards the B5199 in the north and it also provides a direct route through Huyton Town Centre.

- 3.3.2 The A5080 provides the site with direct access to the junction for the M57/M62 meaning that the site benefits from being within proximity to the wider network and other major destinations, including Liverpool, Wigan, West Lancashire, and St Helens.
- 3.3.3 Whilst Wilson Road is not characterised by any form of road markings, there are no formal on-street parking spaces within the immediate vicinity of the site. The site does, however, benefit from a number of off-street car parking spaces which are currently located to the north, east and south of the existing building. Spaces include both car, trailer parking spaces and parking spaces for motorhomes.

3.4 Local Facilities

- 3.4.1 The site is situated within proximity to a number of key facilities that may be useful or necessary for employees of the site. **Table 3.1** provides a summary of these local facilities and the approximate walking/cycling distances.

Table 3.1 Local Facilities

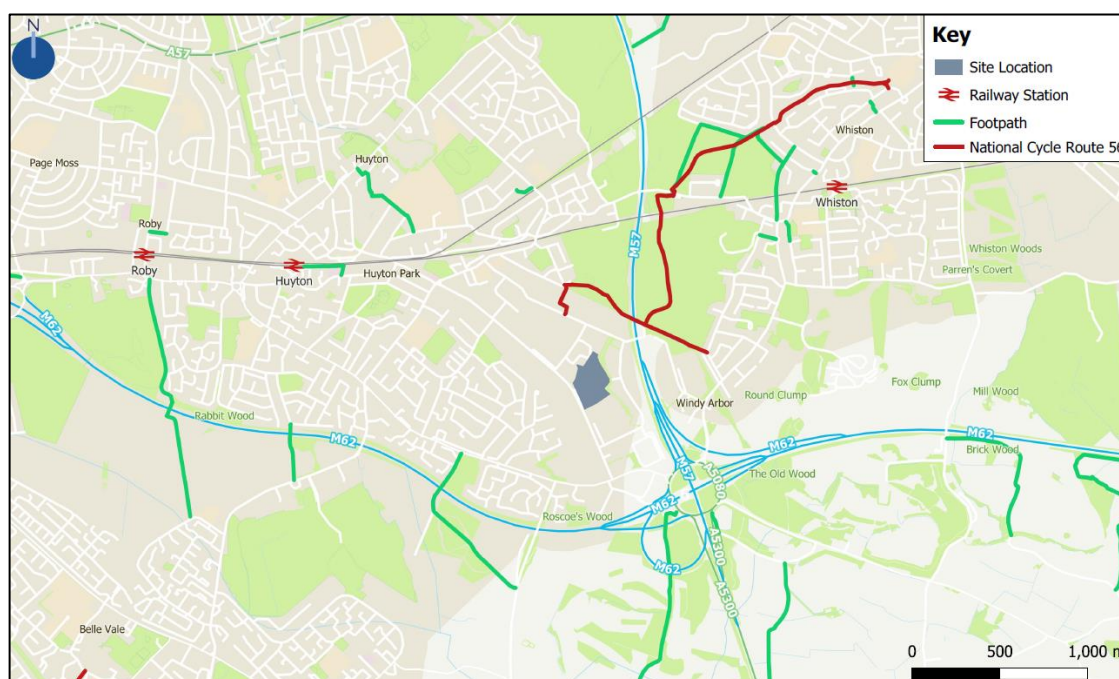
Facility		Distance	Travel Time (mins)	
			Walk	Cycle
Medical Facilities				
Doctors	Tarbock Medical Centre	1.2km	15	3
Dentist	EvoDental Liverpool Clinic	450m	6	1
Pharmacy	Davey’s Chemist	1.3km	16	4
Retail Facilities				
Food Retail	Aldi	650m	8	3
	Tesco Esso Express	700m	8	3
Community Facilities				
Post Office	Huyton Post Office	1.5km	19	5
ATM	Tesco Esso Express	700m	8	3
Petrol Garage	Tesco Esso Express	700m	8	3
Public House	Chapel Brook & Brewery Fayre	450m	5	1
Gym	Dedicated Super Gym	600m	7	2
	Village Gym Liverpool	1.6km	21	7

- 3.4.2 **Table 3.1** confirms that a range of facilities are located within close proximity to the site, ensuring that these trips attractors can be accessed by modes other than the private car and realistically on foot. Thereby, this reflects the fundamental requirements of national, regional, and local planning policy for creating sustainable communities. The Chartered Institute of Highways and Transportations (CIHT) March 2015 guidance document, 'Planning for Walking', states that 'walkable neighbourhoods' are those with a typical catchment of around 800m, with many of the identified land uses being within this walking distance threshold.

3.5 Pedestrian and Cycle Infrastructure Plan

- 3.5.1 In terms of pedestrian infrastructure, footways within proximity of the site are approximately 2m wide which according to MfS (Manual for Streets) are of an adequate width for accessible travel. There is also a zebra crossing located to the north of the site, along Wilson Road to aid safe crossing of the carriageway. Dropped kerbs and tactile paving are also present on the surrounding pedestrian footways to aid safe crossing. Lighting is also present within the vicinity of the site.
- 3.5.2 **Figure 3.2** shows the location of public rights of ways (PROW) in the form of footpaths which are within proximity of the site.

Figure 3.2 Pedestrian and Cycle Infrastructure Plan



- 3.5.3 In terms of cycle infrastructure, there are currently limited cycle facilities within proximity to the site. The site does however benefit from being situated approximately 650m south of part of National Cycle Route (NCR) 56 which provides an off-road route towards Whiston and subsequently Prescot. It is noted however that there will be an improvement to NCR56 with an extension being under construction which will extend the existing route towards Prescot Town Centre in the north and Widnes in the south.
- 3.5.4 A copy of the plan which shows the extent of the cycle route extension has been included at the end of this report as **Appendix A** whilst the existing cycle infrastructure has been illustrated in **Figure 3.2**.

3.6 Public Transport

Bus Services

- 3.6.1 The nearest bus stops to the site are located approximately 210m to the north, which equates to around a 3-minute walk. There is a bus stop on either side of the carriageway, of which both are characterised by a flag and post with some timetable information. The bus stops are served by routes 248, 870 and 897, with destinations included Prescott Bus Station and Huyton Bus Station.
- 3.6.2 There are also two bus stops located 600m to the south of the site, again one on either side of the carriageway. These bus stops are characterised by a flag and a post with timetable information as well as a layby. Bus routes provided at these stops include routes 7 and 61. Other routes also use these bus stops; however, they are school services and therefore have been omitted from this report.
- 3.6.3 The bus services, their routes and frequencies are summarised in **Table 3.2**, whilst the bus stop locations are shown on the public transport plan included to scale at the end of this report, and as an extract both being **Figure 3.3**.

Table 3.2 Bus Services

Bus Route Number	Route	Peak Hour Frequency			Weekday Services	
		Weekday	Saturday	Sunday	First	Last
Buses on Wilson Road						
248	Huyton Bus Station – Prescot Bus Station	3 per day	3 per day	None	06:34	07:38
870	Prescot Road/Orleads Road – Ellis Ashton Street/Brickfields	1 per day Tuesday-Friday	None	None	N/A	N/A
897	Stretton Way / Wilson Road - South Boundary Road / Admin Road	2 per day	2 per day	2 per day	05:59	06:49
Buses on Cronton Road						
7	Liverpool One Bus Station – Kensington – Knowsley Bus Station	2 per hour	2 per hour	2 per hour	05:48	23:00
61	Bowring Park Road – Halton Hospital	1-2 per hour	1-2 per hour	1 per hour	05:54	20:33

- 3.6.4 **Table 3.2** highlights that the site is served by a number of bus routes which provide the site with access to various destinations, including Prescott Bus Station and Halton Hospital.

Railway Services

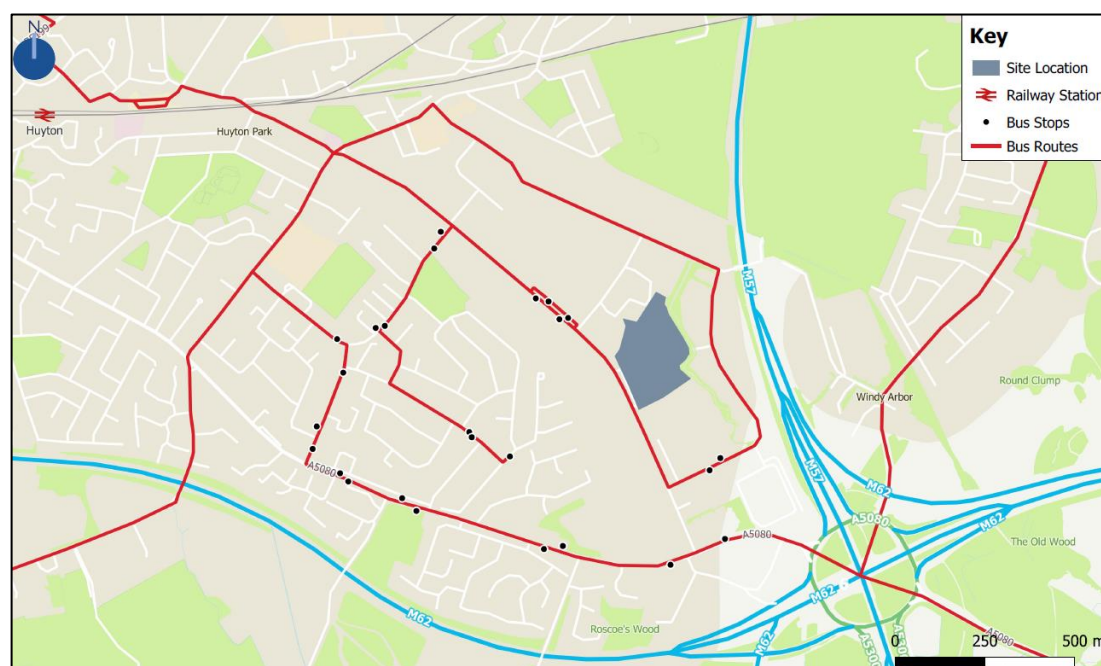
- 3.6.5 Huyton Railway Station is the closest station to the site, located some 2km to the north, equating to a 23-minute walk or a 5-minute cycle. The station is served by Northern Railway providing regular and direct services towards Liverpool Lime Street, Blackpool North, Crewe, and Wigan North. The location of the railway station is shown on **Figure 3.3**.
- 3.6.6 The local railway services by destination, frequency and journey time are summarised in **Table 3.3**.

Table 3.3 Rail Services

Direct Service Destination	Peak Hour Frequency			Approx. Time
	Weekday	Saturday	Sunday	
Liverpool Lime Street	2-3 per hour	2-3 per hour	2 per hour	11-18 minutes
Crewe	2 per day	2 per day	None	2 hours
Blackpool North	1 every 2 hours	1 every 2 hours	1 per hour	1 hour 15 minutes
Wigan North	1-2 per hour	1-2 per hour	1 per hour	20-31 minutes
Manchester Piccadilly	1 per hour	1 per hour	1 per hour	46 minutes

- 3.6.7 **Table 3.3** confirms that Huyton station is well served by rail, with frequent services to other major destinations including Liverpool and Wigan.

Figure 3.3 Public Transport Plan



- 3.6.8 **Figure 3.3** also highlights that the site benefits from bus services which travel towards Huyton Railway Station, making the railway services set out in **Table 3.3** accessible to any employees of the existing site.

3.7 Methods of Travel to Work

- 3.7.1 In order to establish local travel characteristics for the site, the 2011 Census has been queried for method of travel to work data for the Middle Super Output Area (MSOA) Knowsley 015, which includes this site. The results of this search are included as **Table 3.4**.

Table 3.4 Method of Travel to Work Census Information - Workplace

Method of Travel to Work	%
Underground, metro, light rail or tram	0%
Train	3%
Bus, minibus, or coach	12%
Taxi	2%
Motorcycle, scooter or moped	1%
Driving a car or van	62%
Passenger in a car or van	8%
Bicycle	2%
On foot	10%
Other method of travel to work	0%
Total	100%

- 3.7.2 **Table 3.4** demonstrates that in the locality of the site, some 62% of employees travel to work via the private car, 15% travel to work via public transport and a further 12% travel to work using active modes of transport. Active modes of transport include commuting via foot or bicycle.

3.8 Summary

- 3.8.1 In summary, it can be concluded that the development site benefits from access to frequent rail services into Liverpool, Crewe and Manchester Piccadilly from Huyton Railway Station which is around a 23-minute walk or 5-minute cycle from the development site.
- 3.8.2 In terms of bus services, as previously mentioned, there are several services which are accessible to the development site. The site also benefits from a number of local amenities within a reasonable walking distance, demonstrating that employees will be able to travel without relying on the use of the private car.
- 3.8.3 It can therefore be concluded that in terms of transport, the site is in a sustainable location whilst also being suitably located to the strategic road network.

4. Development Proposals

4.1 Scale of Development

- 4.1.1 The development will consist of the demolition of all of the existing buildings located on site and the construction of a single, two-storey, B8 Warehouse with ancillary office floor space and a separate gatehouse located to the south of the proposed building. The final occupier of the site has not yet been established and therefore a B8 classification provides a level of flexibility.
- 4.1.2 There will be a large servicing yard to the rear of the development, which will be accessed via the gatehouse and there will also be a number of trailer parking spaces located within this area.
- 4.1.3 A ground floor plan has been included at the end of this report as **Appendix A**.

4.2 Access

- 4.2.1 There will be a single vehicular access taken from Wilson Road, located on the southwestern boundary of the site. This singular access point will provide access to both car parking and the servicing area/trailer parking to the rear of the proposed building.
- 4.2.2 A footway will be provided alongside this access, fronting onto Wilson Road; however, an alternative access will be provided to the north of the secondary car park through a landscaped area. This access provides a more direct route from the site towards local bus stops and the railway station, it also falls on the most appropriate pedestrian desire line.
- 4.2.3 In addition to the proposed pedestrian accesses, there will be footways around the perimeter of the proposed building. Pedestrians will be able to use these footways to access the development site via a footway located on the eastbound carriageway of the site access. Although there will not be a formal footway on the westbound carriageway of the site entrance and subsequently throughout the entire car park, it is envisaged that appropriate road markings will be in place within the car park, separating vehicular traffic and pedestrian movements.

4.3 Car and Cycle Parking

- 4.3.1 Car parking will be provided to the south of the proposed development site, whereby there will be two separate car parking areas with access taken from Wilson Road. Car parking is to be provided in line with Knowsley car parking standards, as set out previously in **Table 2.1**. Therefore, a total of 190 spaces are to be provided which includes 10 accessible spaces. A total of 15 motorcycle parking spaces will also be provided adjacent to the accessible parking bays.
- 4.3.2 The standard car parking spaces provided will measure 2.4m wide and 4.8m long and the accessible spaces will be 3.6m wide and 4.8m long. In order to ensure that each of the car parking spaces is accessible, a review has been carried out using AutoCAD. These drawings

demonstrate that the car park works effectively, and they have been included at the end of this report as Drawing 22036-MA-XX-XX-DR-C-0120.

4.4 Cycle Parking

- 4.4.1 In terms of cycle parking, this will be also provided in line with the Knowsley Cycle Parking Standards, which state that 1 space should be provided for every 850sqm of B8 floorspace meaning that 23 spaces should be provided. However, 16 Sheffield stands will be provided allowing up to 32 bikes to be parked at any one time. The cycle parking will be located to the south of the development site.

4.5 Delivery and Servicing

- 4.5.1 Delivery and servicing will take place onsite via the dedicated delivery and servicing area located to the rear of the proposed development. Vehicles will be able to enter and exit the site in forwards gear, as shown in drawing 22036-MA-XX-XX-DR-C-0122.

5. Trip Generation and Distribution

5.1 Preamble

5.1.1 This section of the report details the existing traffic flows related to the site and the estimated multi-modal trip generation for the proposed uses.

5.2 Existing Trip Generation

5.2.1 For the purposes of calculating the likely trip generation of the proposed use, the TRICS database has been searched for comparable proxy sites, two proxy sites were identified. The trip calculation selection parameters included:

- Land Use: 02-Employment
- Category: G-Parcel Distribution Centres
- Use Class: B8
- Location: Suburban, Edge of Town, Commercial Zone, Development Zone

5.2.2 A trip generation exercise was previously undertaken to inform pre application relating to the emerging development proposals. The proposed trip rates were reviewed by WSP on behalf of National Highways and a response was issued as set out in WSP's document dated 16th December 2021. The trip rates extracted for the pre application submission were deemed to be too low and not comparable. Therefore, the proxy sites have been carefully selected for this TS in order to ensure that they are comparable and produce higher trip rates in comparison to those previously selected. The document referenced has been included at the end of this report as **Appendix C**.

5.2.3 The total vehicle, LGV, Servicing Vehicles and PSV trip rates derived from this search are summarised in **Table 5.1**, with the full TRICS output included **Appendix D** at the end of this report.

Table 5.1 Existing Trip Rates – per 100sqm

Mode	AM Peak			PM Peak		
	In	Out	Total	In	Out	Total
Total Vehicle Trips	0.51	0.48	0.99	0.44	0.65	1.09
Servicing Vehicle Trips	0.17	0.40	0.57	0.29	0.16	0.45
LGV Trips	0.08	0.23	0.31	0.25	0.08	0.33
PSV Trips	0.02	0.02	0.04	0.02	0.01	0.03
HGV Trips	0.09	0.17	0.26	0.04	0.08	0.12

5.2.4 The trip rates in **Table 5.1** have been applied to the existing floor area, totally some 9,863sqm and have been summarised in **Table 5.2**.

Table 5.2 Existing Trip Generation – 9,863sqm

Mode	AM Peak			PM Peak		
	In	Out	Total	In	Out	Total
Total Vehicle Trips	50	47	97	43	64	108
Servicing Vehicle Trips	17	40	56	28	16	44
LGV Trips	8	23	30	25	8	32
PSV Trips	2	1	4	1	1	2
HGV Trips	9	17	26	4	8	12

- 5.2.5 **Table 5.3** demonstrates that the existing site is likely to generate some 97 two way vehicular movements in the AM peak and 108 movements in the PM peak.

5.3 Proposed Trip Generation

- 5.3.1 For consistency, the same trip rates were taken from the TRICS search used for the existing situation and have been applied to the total sqm of the proposed development. The result of this calculation is summarised in **Table 5.3**.

Table 5.3 Trip Generation – B8 Commercial Warehouse (19,116sqm)

Mode	AM Peak			PM Peak		
	In	Out	Total	In	Out	Total
Total Vehicle Trips	97	91	189	84	125	208
Servicing Vehicle Trips	32	77	109	55	30	85
LGV Trips	15	44	59	48	15	63
PSV Trips	4	3	7	3	2	5
HGV Trips	18	32	50	7	16	23

- 5.3.2 **Table 5.3** demonstrates that the site would generate an estimated 189 two-way vehicle trip in the AM peak and 208 in the PM peak.

5.4 Net Impact

- 5.4.1 In order to understand the net impact of the site on the existing highway network the difference in total vehicles trips has been summarised in **Table 5.4**.

Table 5.4 Net Impact

Mode	AM Peak			PM Peak		
	In	Out	Total	In	Out	Total
Total Vehicle Trips	49	46	95	42	63	105

- 5.4.2** Table 5.4 demonstrates that there will be an increase of 95 two-way vehicular trips in the AM peak and 105 in the PM peak. This gives an uplift of 24 HGV movements in the AM peak and 11 in the PM peak.

5.5 Trip Distribution

- 5.5.1** To demonstrate the likely traffic impact, a high-level assessment of the estimated trip distribution has been undertaken using a Trip Distribution Model and Census 2011 Data Table 'WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)' with the place of usual residence identified as E02001341 Knowsley 015.
- 5.5.2** The trip distribution has been demonstrated using the existing highway network. The results are summarized in **Table 5.5** and are shown diagrammatically in **Figure 5.1**.

Table 5.5 Trip Distribution

Road	% Distribution of Existing Highway Network
Wilson Road South	85%
Cronton Road East	76%
M62 West	31%
M57 North	18%
M62 East	17%
Wilson Road North	15%
Lathoma Road/Blue Bell Lane	10%
Cronton Road West	9%
M57 South	7%
Whitefield Lane	6%
Link Road	4%
Hall Lane East	4%
Windy Arbor Road	4%
Huyton Lane East	1%

Key

- Site Location

Routes

- Wilson Road South
- Wilson Road North
- Cronton Road West
- Cronton Road East
- Blue Bell Lane
- Hall Lane East
- Huyton Lane East
- Link Road/Ellis Ashton Street
- M57 North
- M57 South
- M62 East
- M62 West
- Whitefield Road
- Windy Arbor Road
- Cronton Road West (After Whitefield Road)
- Wilson Road North (After Link Road)

The map shows the proposed site location (grey rectangle) in the center. Surrounding areas include Huyton, Huyton Park, Roscoe's Wood, Windy Arbor, Round Clump, Fox Clump, Mill Wood, Brick Wood, The Old Wood, and Blundell's Hill Wood. Major roads shown include A5080, A5300, A5300, and M62. Percentages are marked along various routes, such as 100%, 11%, 4%, 18%, 15%, 85%, 9%, 31%, 6%, 76%, 17%, 7%, 1%, and 3%.

- 5.5.3 As shown in **Figure 5.1**, 85% of traffic to the site will be travelling in a northbound direction and the remaining 15% will be travelling southbound towards the site. It is also noted that the highest number of people travelling to the site for work come from Liverpool with the main route being via the M62.
- 5.5.4 It should also be noted that it is assumed that all HGV movements to and from the site will go via the junction for the M57/M62. Therefore, a total of 50 movements in the morning peak and 16 in the PM peak will travel south along Wilson Road onto Cronton Road (east) and then towards the Motorway Junction. It is considered that this can be accommodated on the highway network without material impact.
- 5.5.5 **Table 5.6** demonstrates the level of trips along each link for the proposed 19,116sqm of B8 floorspace at the site. This assumes little to no modal shift as the result of either third-party transport interventions or other improvements associated with the site.

Table 5.6 Distributed Trips Per Link – 19,116sqm B8 Floorspace

Link	%	19,116sqm B8 Floorspace								
		AM Peak (08:00-09:00)			PM Peak (17:00-18:00)			Daily Flows		
		In	Out	Total	In	Out	Total	In	Out	Total
Wilson Road South	85%	85	80	165	73	109	182	1374	1378	2752
Cronton Road East	76%	76	71	147	65	97	162	1225	1228	2453
M62 West	31%	30	29	59	26	39	65	491	493	984
M57 North	18%	18	16	34	15	23	38	284	285	569
M62 East	17%	17	16	33	15	22	37	278	279	557
Wilson Road North (before Link Road)	15%	14	14	28	12	19	31	234	235	469
Wilson Road North (after Link Road)	11%	11	10	21	9	14	23	177	177	355
Lathoma Road/Blue Bell Lane	10%	10	9	19	8	12	21	156	156	312
Cronton Road West (before Whitefield Lane)	9%	9	9	18	8	12	20	149	150	299
M57 South	7%	6	6	13	6	8	14	105	105	209
Whitefield Lane	6%	6	6	12	5	8	13	98	98	196
Windy Arbor Road	4%	4	4	8	4	5	9	67	67	134
Link Road	4%	4	3	7	3	5	8	57	57	114
Hall Lane East	4%	4	3	7	3	5	8	57	57	114
Huyton Lane East	1%	1	1	3	1	2	3	21	21	42

5.6 Junction Modelling

- 5.6.1 The proposed access to the site has been assessed using PICADY in order to understand whether the proposed junction has the capacity to accommodate the potential trip generation, as set out in **Table 5.3**. The Geometrical inputs of the proposed access have

been measured from Ordnance Survey (OS) mapping and have been input into the PICADY model.

- 5.6.2 The results of the junction capacity modelling have been summarised in **Table 5.7** and the full outputs are included as **Appendix E**.

Table 5.7 Proposed Site Access T-Junction

Proposed Site Access	Baseline + Development			
	AM Peak		PM Peak	
	RFC	Queue	RFC	Queue
Access – Wilson Road North and South	0.18	0.2	0.25	0.3
Wilson Road South - Access	0.18	0.2	0.15	0.2

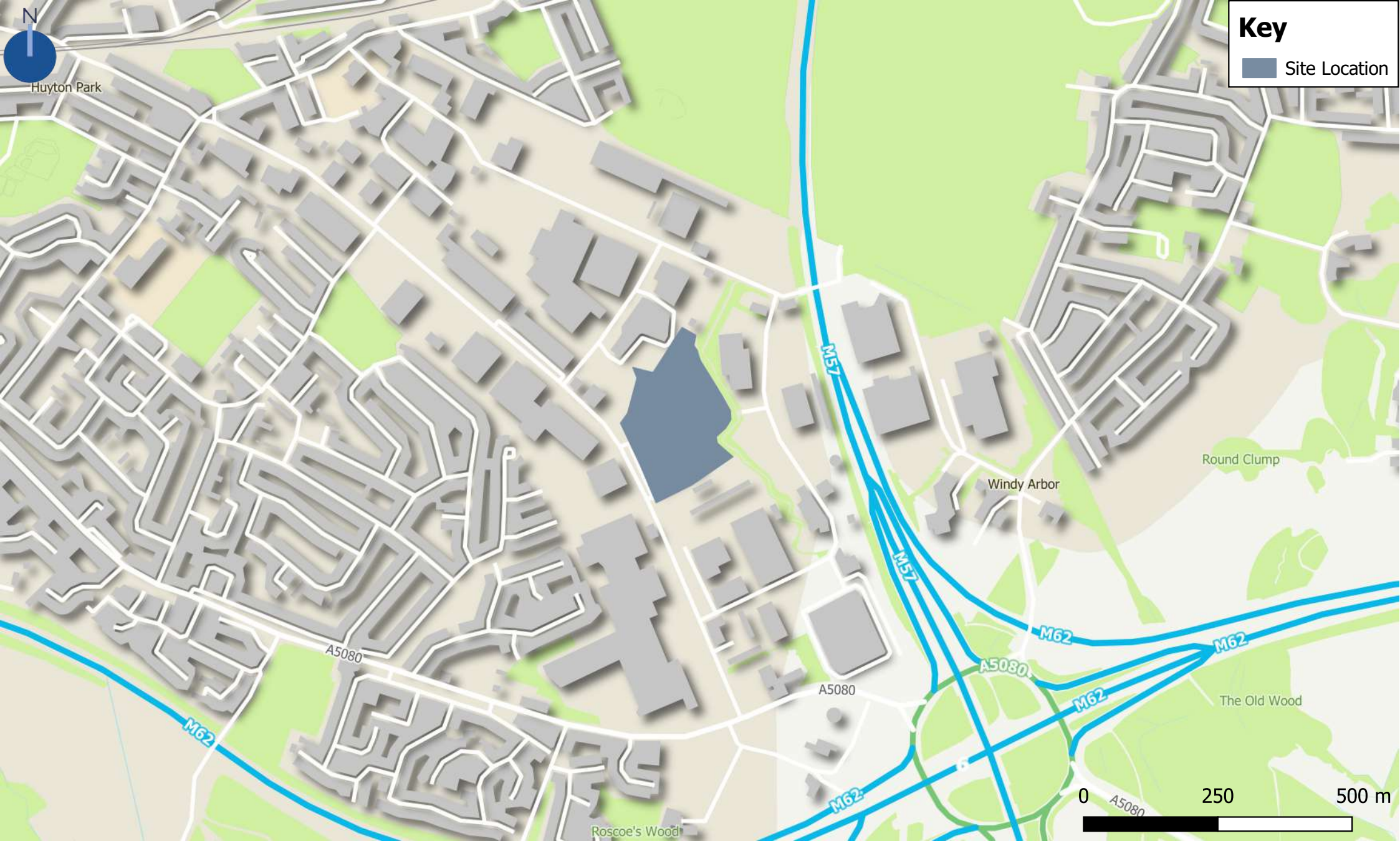
- 5.6.3 It is evident from this appraisal, that the proposed access to the development site has the potential to accommodate the traffic generated by the proposed development.

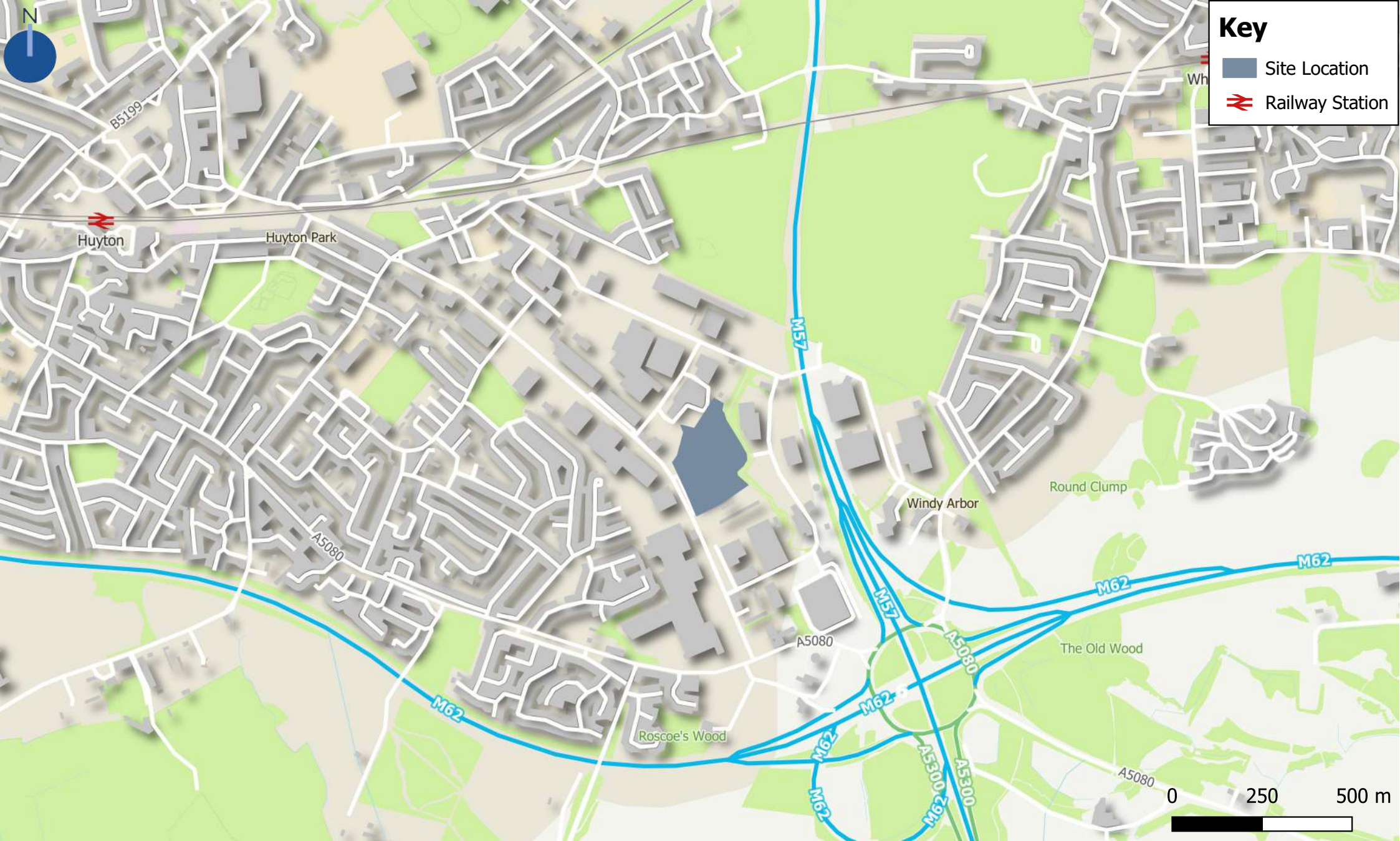
6. Summary and Conclusion

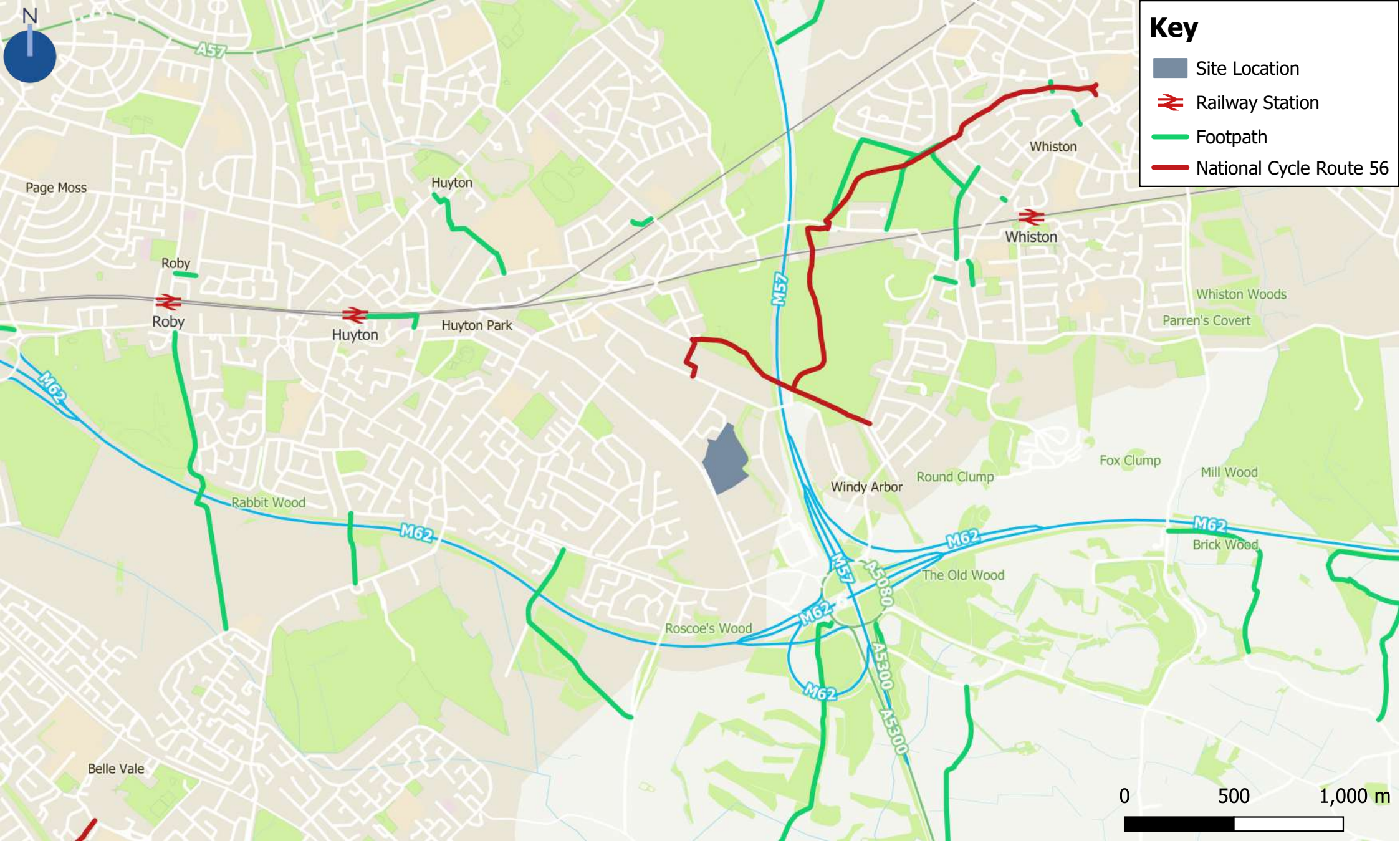
- 6.1.1 Markides Associates (MA) have been instructed to prepare this Transport Statement (TS) by Linden Hill – Capital Assets – ALX Limited in support of an application for the development of a commercial (Use Class B8) unit located at Land at John Mason International Site, Wilson Road, Huyton Business Park, L36 6AE ('the site').
- 6.1.2 This TS demonstrates that the site is located close to public transport and local facilities. Train and bus services are provided into towards Liverpool Lime Street, Blackpool North, Crewe, and Wigan North. Amenities around the site include educational, employment and leisure facilities which will not require the use of single occupancy vehicle trips.
- 6.1.3 With regards to delivery and servicing, it has been demonstrated that a suitable strategy can be provided that ensures vehicles can serve the site appropriately.
- 6.1.4 The trip generation assessment demonstrates that whilst there will be an increase in the number of vehicle trips to and from the site, the number of these trips will have a nominal impact on the local highway network with an uplift of only 24 HGVs in the morning peak hour and 11 HGVs in the evening peak hour, respectively.
- 6.1.5 For the reasons identified above, it is considered that the development should be supported in respect of transport matters.

FIGURES

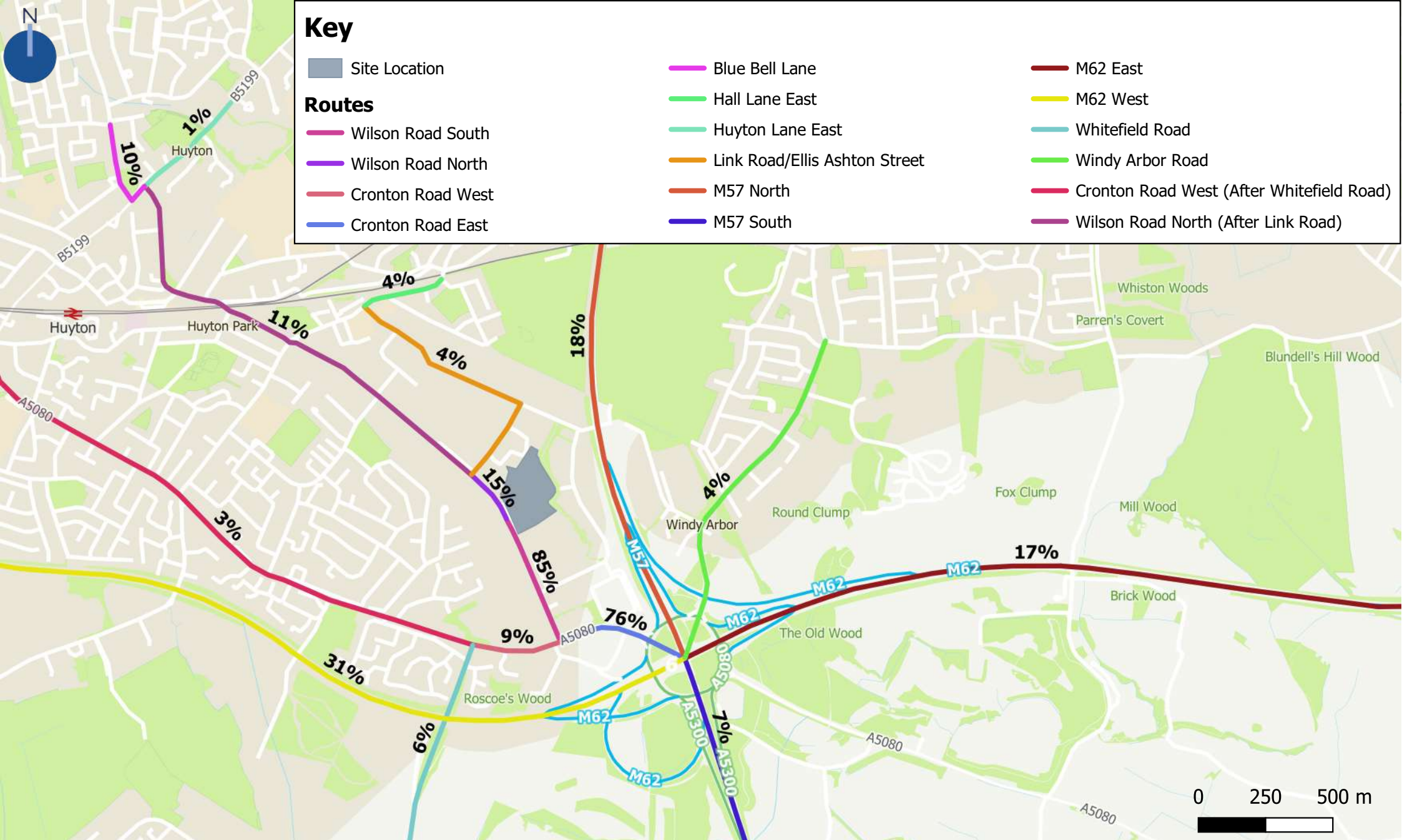
Figure 1.1	Site Location Plan
Figure 3.1	Site Context Plan
Figure 3.2	Pedestrian and Cycle Infrastructure Plan
Figure 3.3	Public Transport Plan
Figure 5.1	Trip Distribution











DRAWINGS

22036-MA-XX-XX-DR-C-0120 – Vehicle Swept Path (Large Car)

22036-MA-XX-XX-DR-C-0122 – Arctic and Rigid Swept Path Analysis



DO NOT SCALE OFF THIS DRAWING

Large Car (2016)
Overall Length 5.116m
Overall Width 1.899m
Overall Body Height 1.536m
Min Body Ground Clearance 0.311m
Track Width 1.834m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 6.150m

Revision History

Rev	Comment	By	Chkd	Appr	Date
P02	UPDATED LAYOUT	CDT	EG	EG	19.04.22
P01	FOR INFORMATION	CDT	EG	EG	01.04.22

Current Revision

Rev	Comment	By	Chkd	Appr	Date
P02	UPDATED LAYOUT	CDT	EG	EG	19.04.22

S2 - FOR INFORMATION

TYTHORN INVESTMENTS

MARKIDES ASSOCIATES
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2nd floor
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71-81 Southwark Bridge Road
London SE1 1LQ
Telephone: 0207 442 2225
E: enquiries@markidesassociates.co.uk
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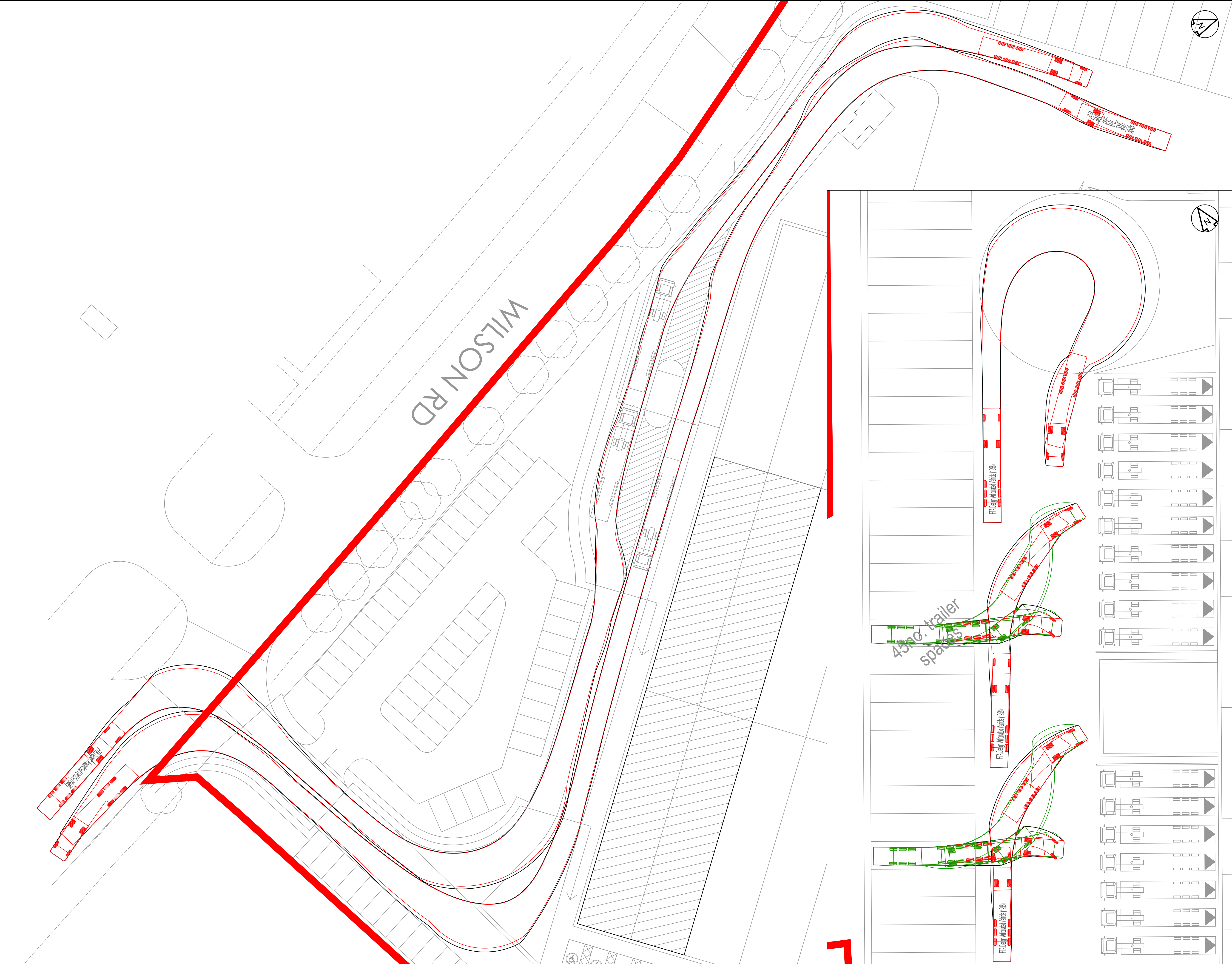
Project
**LAND AT JOHN MASON INTERNATIONAL
SITE HUYTON BUSINESS PARK**

Drawing Title
VEHICLE SWEEP PATH (LARGE CAR)

Markides Associates reference: 22036/01 1:200 @ A1
22036-MA-XX-XX-DR-C-0120 - P02

© Markides Associates 2021. All rights reserved

Scale 1:200 @ A1 - 1:400 @ A3
4m 0 4m 8m 12m 16m 20m



DO NOT SCALE OFF THIS DRAWING

FTA Design Articulated Vehicle (1998)

Overall Length	16.480m
Overall Width	2.550m
Overall Body Height	3.870m
Min Body Ground Clearance	0.515m
Max Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	6.550m

Revision History						
P02	UPDATED LAYOUT	CDT	EG	EG		19.04.22
P01	FOR INFORMATION	CDT	EG	EG		01.04.22
Rev	Comment	By	Chkd	Appr		Date
Current Revision						
P02	UPDATED LAYOUT	CDT	EG	EG		19.04.22
Rev	Comment	By	Chkd	Appr		Date

S2 - FOR INFORMATION

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Project
LAND AT JOHN MASON INTERNATIONAL SITE HUYTON BUSINESS PARK

Drawing Title
VEHICLE SWEEP PATH (ARTIC)

Markides Associates reference: 22036/01

1:250 @ A1

22036-MA-XX-XX-DR-C-0122 - P02

APPENDIX A – PROPOSED CYCLE EXTENSION



KIRKBY

RAINF

PRESCOT

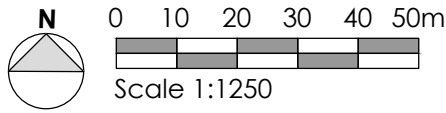
Huyton with Roby



-  Traffic-free
-  Segregated cycle lane
-  Cycle lane
-  Bus lane
-  Signed route
-  Shared use path
-  Under construction



APPENDIX B - GROUND FLOOR LAYOUT



- NOTES
- AEWTP029C
- All dimensions and levels are to be checked on site.
 - Any discrepancies are to be reported to the architect before any work commences
 - This drawing shall not be scaled to ascertain any dimensions. Work to figured dimensions only.
 - This drawing shall not be reproduced without express written permission from AEW.
 - Title overlay drawings and ownership boundaries are produced using all reasonable endeavors. AEW cannot be responsible for the accuracy or scale discrepancy of base plans supplied to them.
 - All works are to be undertaken in accordance with Building Regulations and the latest British Standards.
 - All proprietary materials and products are to be used strictly in accordance with the manufacturers recommendations.

CDM 2015

Client notified of duties:

Principal Designer:

Unless noted below, all known hazards have been highlighted on the drawing.

- DESIGN HAZARD IDENTIFICATION
- No significant Hazards have been identified in this drawing

- NOTES
- HGV circulation subject to tracking analysis

P2	11/04/22	CM	AL
Revised issue indicating pedestrian route			
P1	24/03/22	CM	AL
Initial Issue			
REV	Date	Drawn by: -	Checked by: -
Status	Purpose of Issue		
S2	For Comment		
drawing stage	Feasibility		
client	Linden Hill Capital Management		
project	35 Wilson Road Huyton		
drawing title	Feasibility Site Plan Option 5 Alternative Single Unit		
date	24/03/22	drawn	CM
scale@A3	1:1250	checked	AL

APPENDIX C – WSP REPORT



Review of TA Scoping Note

DATE:	16 December 2021	CONFIDENTIALITY:	Confidential
SUBJECT:	NW 095 TA Scoping Review – John Mason International Site		
PROJECT:	National Highways NW Spatial Planning	AUTHOR:	AD
CHECKED:	ML	APPROVED:	NM

Introduction

Hydrock have been appointed as the developer's transport consultation to assess the transport impacts of a proposed B2 / B8 development of 26,000m² GFA on the John Mason International site on Wilson Road in Huyton.

Hydrock have recently sent a scoping note to National Highways seeking to agree the methodology of the TA to assess the impacts of the proposed employment development. National Highways have subsequently commissioned WSP to review the scoping note to comment on the appropriateness of the proposed methodology.

BACKGROUND / PREVIOUS APPLICATIONS

WSP have reviewed a number of planning applications in and around Halsnead Garden Village on behalf of National Highways, the most recent of which is Symmetry Park application (planning ref: 20/00494/HYB). WSP are aware that there is a Grampian-style condition in place for this consent which ensures that none of the development approved in outline is occupied until the improvements at Tarbock Island are complete.

Without prejudice to developer's proposed planning application and any subsequent work produced by Hydrock, given the type, and location of the proposals, a similar condition may also apply.

Development Proposals

A speculative B2 / B8 is being proposed, but the note states that the current proposals are still being developed - the intention is to submit an outline application that provides maximum flexibility to respond to commercial demand / requirements once the lease-break on the existing occupier is enacted.

As such, it is stated that an outline application will be relatively high level to establish the principle of employment development (comprising Class E (g) (iii) light industrial (used to be B1c). Class B2 general industrial and Class B8 storage / distribution. The current building size is 10,000m² GFA, while the proposed development would be around 26,000m² GFA, therefore representing an uplift of around 16,000m².

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Figure 1 - Site Location (extracted from Scoping Note)



Trip Generation

The scoping note presents the proposed trip generation methodology, which is underpinned by trip rates extracted from the TRICS database. These theoretical trip rates were used to estimate the traffic generated by the existing site, the traffic generated by the proposed development, and the subsequent net traffic impact.

The tables below show the trip generation on the existing site GFA and the trip generation proposed on the new site GFA, which could be 26,000m². The third table shows the difference in trip generation between the existing and proposed.

Table 1 - Extant Use Trip Rates / Trips

Table 1.1: B8 Extant Land Use Trip Rates/Trips					Extant Circa 10,000sqm			
Trip Rate per 100sqm	Weekday AM Peak		Weekday PM Peak		Weekday AM Peak		Weekday PM Peak	
	(08:00-09:00)		(17:00-18:00)		(08:00-09:00)		(17:00-18:00)	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Total Vehicle Trips	0.147	0.082	0.071	0.159	15	8	7	16
HGV Trips	0.029	0.043	0.047	0.027	3	4	5	3

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Table 2 - Proposed Use Trip Rates / Trips

Table 1.2: B8 Land Use Trip Rates/Trips					Proposed Circa 26,000sqm			
Trip Rate per 100sqm	Weekday AM Peak		Weekday PM Peak		Weekday AM Peak		Weekday PM Peak	
	(08:00-09:00)		(17:00-18:00)		(08:00-09:00)		(17:00-18:00)	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Total Vehicle Trips	0.147	0.082	0.071	0.159	38	21	18	41
HGV Trips	0.029	0.043	0.047	0.027	8	11	12	7

Table 3 - Difference in Trips - Extant v Proposed

	Weekday AM Peak		Weekday PM Peak	
	(08:00-09:00)		(17:00-18:00)	
	IN	OUT	IN	OUT
Total Vehicle Trips	24	13	11	25
HGV Trips	5	7	8	4

On review of Hydrock’s B8 TRICS extracts, only six sites were included, which is considered to be low. It also appears that Hydrock’s TRICS exercise only used sites from the following regions:

- South East
- East Anglia
- West Midlands
- Yorkshire and North Lincolnshire
- North

WSP have reviewed the TRICS Good Practice Guide 2021, which states the following concerning the practice of removing sites based solely on region:

“It is not considered good practice to exclude survey sites within the TRICS® database on the sole basis of such sites being located within any particular region. We consider that a more robust use of the TRICS® filtering process takes place on a case-by-case basis, taking into account the numerous factors that can influence trip generation, with the TRICS® location type being at the forefront of these.”

As such, WSP have undertaken independent check on TRICS, using broadly the same parameters but including more regions. This resulted in trip rates higher than the ones presented by Hydrock. It is therefore

Review of TA Scoping Note

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PROJECT:	National Highways NW Spatial Planning	AUTHOR:	AD
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recommended that Hydrock present further information to provide trip rates which are derived from a larger group of sites which reflect the proposed uses.

Furthermore, the scoping note states the following:

“While the floor areas for the proposed development may fluctuate a little, we would be grateful if you could confirm the above principals are reasonable, subject to the proposed floor area not increasing significantly nor becoming a more intensive land use”.

Given the current uncertainty on the floorspace and uses of the proposed development, Hydrock should ensure that their proposed development assessment traffic flows reflect the uses that could come forward, potentially presenting flows for alternative development scenarios if appropriate.

Traffic Distribution

The scoping note is light on detail regarding trip distribution methodology, but states that light vehicles will be distributed by a gravity model, and HGV’s will all be routed via M62 Junction 6.

This approach is acceptable in principle, but the TA should include the supporting information for the light vehicle gravity model, and any assumptions for the routing of HGVs on the SRN should also be evidenced.

Committed Development & Background Growth

The scoping note does not provide any details on committed developments or background traffic growth. Regardless of whether an operational capacity assessment is undertaken at M62 J6, the TA should account for local committed developments and background traffic growth. This will enable an understanding of the impact of the proposals on the network, accounting for the traffic that is forecast to be using the network in the opening year of the proposed development.

The TA should present assessment traffic flows which accord with the assessment requirements set out in National Highways’ Planning for the Future, and the DfT Circular 02/2013, Hydrock may seek to apply background traffic growth to reflect the likely network flows in the assessment years.

In terms of committed developments, Hydrock should contact Knowsley Council as the local planning authority to establish the appropriate committed developments to include, and provide evidence of this correspondence.

Proposed Assessment Methodology

Based on Hydrock’s calculation of the net traffic impact of the development proposals (set out in table 1.3) Hydrock have proposed only to assess the proposed site access onto Wilson Road and not undertake operational assessments of the M62 Junction 6.

Short of undertaking a full operational assessment, Hydrock propose that the TA will present the proposed development traffic flows travelling through the M62 J6 for review, and also present the site 12-hour trip

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generation profile for completeness. WSP suggest this exercise should include the full build-up of forecast traffic flows which accord with the assessment requirements set out in National Highways’ Planning for the Future, and the DfT Circular 02/2013.

Given WSP’s comments on the presented trip rates, WSP will wait until these elements are resolved before commenting on potential requirements for an operational assessment of the M62 J6.

Summary & Conclusion

Hydrock have been appointed as the developer’s transport consultation to assess the transport impacts of a proposed B8 development of 26,000m² on the John Mason International site on Wilson Road in Huyton.

Hydrock have recently sent a scoping note to National Highways seeking to agree the methodology of the TA to assess the impacts of the proposed employment development. National Highways have subsequently commissioned WSP to review the scoping note to comment on the appropriateness of the proposed methodology.

WSP have reviewed a number of planning applications in and around Halsnead Garden Village on behalf of National Highways, the most recent of which is Symmetry Park application (planning ref: 20/00494/HYB). WSP are aware that there is a Grampian-style condition in place for this consent which ensures that none of the development approved in outline is occupied until the improvements at Tarbock Island are complete.

Without prejudice to developer’s proposed planning application and any subsequent work produced by Hydrock, given the type, and location of the proposals, a similar condition may also apply.

Other key comments regarding the proposed assessment methodology are presented below:

- The scoping note presents the proposed trip generation methodology, which is underpinned by trip rates extracted from the TRICS database. These theoretical trip rates were used to estimate the traffic generated by the existing site, the traffic generated by the proposed development, and the subsequent net traffic impact.
- On review of Hydrock’s B8 TRICS extracts, only six sites were included, which is considered to be low. It also appears that Hydrock’s TRICS exercise only used sites from five regions. WSP reviewed the TRICS Good Practice Guide 2021, which discourages the practice of removing sites based solely on region. As such WSP have undertaken independent check on TRICS, using broadly the same parameters but including more regions. This resulted in trip rates higher than the ones presented by Hydrock. It is therefore recommended that Hydrock present further information to provide trip rates which are derived from a larger group of sites which reflect the proposed uses.
- Given the current uncertainty on the floorspace and uses of the proposed development, Hydrock should ensure that their proposed development assessment traffic flows reflect the

Review of TA Scoping Note

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uses that could come forward, potentially presenting flows for alternative development scenarios if appropriate.

- The scoping note is light on detail regarding trip distribution methodology, but states that light vehicles will be distributed by a gravity model, and HGV's will all be routed via M62 Junction 6. This approach is acceptable in principle, but the TA should include the supporting information for the light vehicle gravity model, and any assumptions for the routing of HGVs on the SRN should also be evidenced.
- The scoping note does not provide any details on committed developments or background traffic growth. Regardless of whether an operational capacity assessment is undertaken at M62 J6, the TA should account for local committed developments and background traffic growth. This will enable an understanding of the impact of the proposals on the network, accounting for the totality of traffic that is forecast to be using the network in the opening year of the proposed development.
- The TA should present assessment traffic flows which accord with the assessment requirements set out in National Highways' Planning for the Future, and the DfT Circular 02/2013, Hydrock may seek to apply background traffic growth to reflect the likely network flows in the assessment years.
- In terms of committed developments, Hydrock should contact Knowsley Council as the local planning authority to establish the appropriate committed developments to include, and provide evidence of this correspondence.
- Based on Hydrock's calculation of the net traffic impact of the development proposals (set out in table 1.3) Hydrock have proposed only to assess the proposed site access onto Wilson Road and not undertake operational assessments of the M62 Junction 6.
- Short of undertaking a full operational assessment, Hydrock propose that the TA will present the proposed development traffic flows travelling through the M62 J6 for review, and also present the site 12-hour trip generation profile for completeness. WSP suggest this exercise should include the full build-up of forecast traffic flows which accord with the assessment requirements set out in National Highways' Planning for the Future, and the DfT Circular 02/2013.
- Given WSP's comments on the presented trip rates, WSP will wait until these elements are resolved before commenting on potential requirements for an operational assessment of the M62 J6.



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APPENDIX D - B8 TRICS OUTPUT

Calculation Reference: AUDIT-860401-220324-0311

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : G - PARCEL DISTRIBUTION CENTRES
 MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	HO HOUNSLOW	1 days
02	SOUTH EAST	
	SO SLOUGH	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: 3862 to 15583 (units: sqm)
 Range Selected by User: 1600 to 22679 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 11/05/21

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:

Tuesday	1 days
Friday	1 days

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

Selected survey types:

Manual count	2 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:

Suburban Area (PPS6 Out of Centre)	1
Edge 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:

Commercial Zone	1
Development 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:

B8 2 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 1 days

25,001 to 50,000 1 days

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

Population within 5 miles:

250,001 to 500,000 2 days

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

Car ownership within 5 miles:

0.6 to 1.0 1 days

1.1 to 1.5 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 2 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 1 days

1b Very 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
-----------------------	-----	--

LIST OF SITES relevant to selection parameters

1	HO-02-G-06 FOREST ROAD FELTHAM	DPD & DPD LOCAL		HOUNSLOW
	Suburban Area (PPS6 Out of Centre)			
	Commercial Zone			
	Total Gross floor area:		3862 sqm	
	Survey date: FRIDAY		26/04/19	Survey Type: MANUAL
2	SO-02-G-02 HORTON ROAD SLOUGH COLNBROOK Edge of Town Development Zone	DHL		SLOUGH
	Total Gross floor area:		15583 sqm	
	Survey date: TUESDAY		11/05/21	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 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 1.12

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 - 01:00	1	15583	0.039	1	15583	0.032	1	15583	0.071
01:00 - 02:00	1	15583	0.096	1	15583	0.071	1	15583	0.167
02:00 - 03:00	1	15583	0.141	1	15583	0.135	1	15583	0.276
03:00 - 04:00	1	15583	0.205	1	15583	0.193	1	15583	0.398
04:00 - 05:00	1	15583	0.308	1	15583	0.225	1	15583	0.533
05:00 - 06:00	2	9723	0.489	2	9723	0.154	2	9723	0.643
06:00 - 07:00	2	9723	0.766	2	9723	0.324	2	9723	1.090
07:00 - 08:00	2	9723	0.597	2	9723	0.741	2	9723	1.338
08:00 - 09:00	2	9723	0.509	2	9723	0.478	2	9723	0.987
09:00 - 10:00	2	9723	0.339	2	9723	0.478	2	9723	0.817
10:00 - 11:00	2	9723	0.221	2	9723	0.406	2	9723	0.627
11:00 - 12:00	2	9723	0.206	2	9723	0.339	2	9723	0.545
12:00 - 13:00	2	9723	0.314	2	9723	0.298	2	9723	0.612
13:00 - 14:00	2	9723	0.375	2	9723	0.406	2	9723	0.781
14:00 - 15:00	2	9723	0.293	2	9723	0.334	2	9723	0.627
15:00 - 16:00	2	9723	0.324	2	9723	0.437	2	9723	0.761
16:00 - 17:00	2	9723	0.627	2	9723	0.494	2	9723	1.121
17:00 - 18:00	2	9723	0.437	2	9723	0.653	2	9723	1.090
18:00 - 19:00	2	9723	0.350	2	9723	0.365	2	9723	0.715
19:00 - 20:00	1	15583	0.629	1	15583	0.462	1	15583	1.091
20:00 - 21:00	1	15583	0.302	1	15583	0.244	1	15583	0.546
21:00 - 22:00	1	15583	0.218	1	15583	0.520	1	15583	0.738
22:00 - 23:00	1	15583	0.340	1	15583	0.314	1	15583	0.654
23:00 - 24:00	1	15583	0.116	1	15583	0.160	1	15583	0.276
Total Rates:			8.241			8.263			16.504

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

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

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Parameter summary

Trip rate parameter range selected:	3862 - 15583 (units: sqm)
Survey date range:	01/01/13 - 11/05/21
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	3
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.

TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES

MULTI-MODAL OGVS

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 - 01:00	1	15583	0.032	1	15583	0.032	1	15583	0.064
01:00 - 02:00	1	15583	0.019	1	15583	0.019	1	15583	0.038
02:00 - 03:00	1	15583	0.064	1	15583	0.083	1	15583	0.147
03:00 - 04:00	1	15583	0.116	1	15583	0.103	1	15583	0.219
04:00 - 05:00	1	15583	0.109	1	15583	0.122	1	15583	0.231
05:00 - 06:00	2	9723	0.118	2	9723	0.087	2	9723	0.205
06:00 - 07:00	2	9723	0.077	2	9723	0.082	2	9723	0.159
07:00 - 08:00	2	9723	0.082	2	9723	0.129	2	9723	0.211
08:00 - 09:00	2	9723	0.093	2	9723	0.159	2	9723	0.252
09:00 - 10:00	2	9723	0.093	2	9723	0.062	2	9723	0.155
10:00 - 11:00	2	9723	0.098	2	9723	0.134	2	9723	0.232
11:00 - 12:00	2	9723	0.046	2	9723	0.046	2	9723	0.092
12:00 - 13:00	2	9723	0.072	2	9723	0.051	2	9723	0.123
13:00 - 14:00	2	9723	0.041	2	9723	0.036	2	9723	0.077
14:00 - 15:00	2	9723	0.041	2	9723	0.093	2	9723	0.134
15:00 - 16:00	2	9723	0.036	2	9723	0.057	2	9723	0.093
16:00 - 17:00	2	9723	0.175	2	9723	0.129	2	9723	0.304
17:00 - 18:00	2	9723	0.036	2	9723	0.082	2	9723	0.118
18:00 - 19:00	2	9723	0.062	2	9723	0.087	2	9723	0.149
19:00 - 20:00	1	15583	0.058	1	15583	0.135	1	15583	0.193
20:00 - 21:00	1	15583	0.116	1	15583	0.051	1	15583	0.167
21:00 - 22:00	1	15583	0.090	1	15583	0.122	1	15583	0.212
22:00 - 23:00	1	15583	0.212	1	15583	0.083	1	15583	0.295
23:00 - 24:00	1	15583	0.083	1	15583	0.051	1	15583	0.134
Total Rates:			1.969			2.035			4.004

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES

MULTI-MODAL PSVS

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 - 01:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
01:00 - 02:00	1	15583	0.013	1	15583	0.000	1	15583	0.013
02:00 - 03:00	1	15583	0.006	1	15583	0.006	1	15583	0.012
03:00 - 04:00	1	15583	0.000	1	15583	0.006	1	15583	0.006
04:00 - 05:00	1	15583	0.019	1	15583	0.019	1	15583	0.038
05:00 - 06:00	2	9723	0.010	2	9723	0.015	2	9723	0.025
06:00 - 07:00	2	9723	0.021	2	9723	0.010	2	9723	0.031
07:00 - 08:00	2	9723	0.021	2	9723	0.031	2	9723	0.052
08:00 - 09:00	2	9723	0.021	2	9723	0.015	2	9723	0.036
09:00 - 10:00	2	9723	0.010	2	9723	0.005	2	9723	0.015
10:00 - 11:00	2	9723	0.005	2	9723	0.010	2	9723	0.015
11:00 - 12:00	2	9723	0.015	2	9723	0.015	2	9723	0.030
12:00 - 13:00	2	9723	0.005	2	9723	0.021	2	9723	0.026
13:00 - 14:00	2	9723	0.026	2	9723	0.015	2	9723	0.041
14:00 - 15:00	2	9723	0.010	2	9723	0.026	2	9723	0.036
15:00 - 16:00	2	9723	0.031	2	9723	0.021	2	9723	0.052
16:00 - 17:00	2	9723	0.015	2	9723	0.015	2	9723	0.030
17:00 - 18:00	2	9723	0.015	2	9723	0.010	2	9723	0.025
18:00 - 19:00	2	9723	0.010	2	9723	0.021	2	9723	0.031
19:00 - 20:00	1	15583	0.039	1	15583	0.019	1	15583	0.058
20:00 - 21:00	1	15583	0.006	1	15583	0.006	1	15583	0.012
21:00 - 22:00	1	15583	0.039	1	15583	0.039	1	15583	0.078
22:00 - 23:00	1	15583	0.032	1	15583	0.032	1	15583	0.064
23:00 - 24:00	1	15583	0.019	1	15583	0.019	1	15583	0.038
Total Rates:			0.388						0.764

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES

MULTI-MODAL CYCLISTS

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 - 01:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
01:00 - 02:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
02:00 - 03:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
03:00 - 04:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
04:00 - 05:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
05:00 - 06:00	2	9723	0.000	2	9723	0.010	2	9723	0.010
06:00 - 07:00	2	9723	0.005	2	9723	0.005	2	9723	0.010
07:00 - 08:00	2	9723	0.005	2	9723	0.010	2	9723	0.015
08:00 - 09:00	2	9723	0.000	2	9723	0.005	2	9723	0.005
09:00 - 10:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
10:00 - 11:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
11:00 - 12:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
12:00 - 13:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
13:00 - 14:00	2	9723	0.000	2	9723	0.005	2	9723	0.005
14:00 - 15:00	2	9723	0.010	2	9723	0.005	2	9723	0.015
15:00 - 16:00	2	9723	0.000	2	9723	0.005	2	9723	0.005
16:00 - 17:00	2	9723	0.005	2	9723	0.000	2	9723	0.005
17:00 - 18:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
18:00 - 19:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
19:00 - 20:00	1	15583	0.013	1	15583	0.000	1	15583	0.013
20:00 - 21:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
21:00 - 22:00	1	15583	0.000	1	15583	0.006	1	15583	0.006
22:00 - 23:00	1	15583	0.006	1	15583	0.013	1	15583	0.019
23:00 - 24:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
Total Rates:			0.044						0.108

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES

MULTI-MODAL VEHICLE OCCUPANTS

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 - 01:00	1	15583	0.039	1	15583	0.032	1	15583	0.071
01:00 - 02:00	1	15583	0.083	1	15583	0.071	1	15583	0.154
02:00 - 03:00	1	15583	0.135	1	15583	0.128	1	15583	0.263
03:00 - 04:00	1	15583	0.205	1	15583	0.186	1	15583	0.391
04:00 - 05:00	1	15583	0.289	1	15583	0.205	1	15583	0.494
05:00 - 06:00	2	9723	0.483	2	9723	0.139	2	9723	0.622
06:00 - 07:00	2	9723	0.787	2	9723	0.319	2	9723	1.106
07:00 - 08:00	2	9723	0.612	2	9723	0.885	2	9723	1.497
08:00 - 09:00	2	9723	0.525	2	9723	0.468	2	9723	0.993
09:00 - 10:00	2	9723	0.334	2	9723	0.478	2	9723	0.812
10:00 - 11:00	2	9723	0.237	2	9723	0.442	2	9723	0.679
11:00 - 12:00	2	9723	0.206	2	9723	0.339	2	9723	0.545
12:00 - 13:00	2	9723	0.329	2	9723	0.283	2	9723	0.612
13:00 - 14:00	2	9723	0.370	2	9723	0.442	2	9723	0.812
14:00 - 15:00	2	9723	0.298	2	9723	0.329	2	9723	0.627
15:00 - 16:00	2	9723	0.329	2	9723	0.473	2	9723	0.802
16:00 - 17:00	2	9723	0.633	2	9723	0.525	2	9723	1.158
17:00 - 18:00	2	9723	0.458	2	9723	0.674	2	9723	1.132
18:00 - 19:00	2	9723	0.355	2	9723	0.360	2	9723	0.715
19:00 - 20:00	1	15583	0.655	1	15583	0.456	1	15583	1.111
20:00 - 21:00	1	15583	0.302	1	15583	0.244	1	15583	0.546
21:00 - 22:00	1	15583	0.186	1	15583	0.545	1	15583	0.731
22:00 - 23:00	1	15583	0.308	1	15583	0.295	1	15583	0.603
23:00 - 24:00	1	15583	0.096	1	15583	0.141	1	15583	0.237
Total Rates:			8.254			8.459			16.713

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES

MULTI-MODAL PEDESTRIANS

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 - 01:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
01:00 - 02:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
02:00 - 03:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
03:00 - 04:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
04:00 - 05:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
05:00 - 06:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
06:00 - 07:00	2	9723	0.041	2	9723	0.000	2	9723	0.041
07:00 - 08:00	2	9723	0.026	2	9723	0.015	2	9723	0.041
08:00 - 09:00	2	9723	0.005	2	9723	0.010	2	9723	0.015
09:00 - 10:00	2	9723	0.010	2	9723	0.015	2	9723	0.025
10:00 - 11:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
11:00 - 12:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
12:00 - 13:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
13:00 - 14:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
14:00 - 15:00	2	9723	0.005	2	9723	0.021	2	9723	0.026
15:00 - 16:00	2	9723	0.015	2	9723	0.031	2	9723	0.046
16:00 - 17:00	2	9723	0.021	2	9723	0.036	2	9723	0.057
17:00 - 18:00	2	9723	0.000	2	9723	0.021	2	9723	0.021
18:00 - 19:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
19:00 - 20:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
20:00 - 21:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
21:00 - 22:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
22:00 - 23:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
23:00 - 24:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
Total Rates:			0.123			0.149			0.272

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES

MULTI-MODAL BUS/TRAM PASSENGERS

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 - 01:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
01:00 - 02:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
02:00 - 03:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
03:00 - 04:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
04:00 - 05:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
05:00 - 06:00	2	9723	0.005	2	9723	0.000	2	9723	0.005
06:00 - 07:00	2	9723	0.067	2	9723	0.000	2	9723	0.067
07:00 - 08:00	2	9723	0.021	2	9723	0.129	2	9723	0.150
08:00 - 09:00	2	9723	0.021	2	9723	0.005	2	9723	0.026
09:00 - 10:00	2	9723	0.000	2	9723	0.021	2	9723	0.021
10:00 - 11:00	2	9723	0.005	2	9723	0.000	2	9723	0.005
11:00 - 12:00	2	9723	0.015	2	9723	0.000	2	9723	0.015
12:00 - 13:00	2	9723	0.015	2	9723	0.005	2	9723	0.020
13:00 - 14:00	2	9723	0.051	2	9723	0.026	2	9723	0.077
14:00 - 15:00	2	9723	0.026	2	9723	0.000	2	9723	0.026
15:00 - 16:00	2	9723	0.129	2	9723	0.067	2	9723	0.196
16:00 - 17:00	2	9723	0.005	2	9723	0.015	2	9723	0.020
17:00 - 18:00	2	9723	0.005	2	9723	0.021	2	9723	0.026
18:00 - 19:00	2	9723	0.031	2	9723	0.000	2	9723	0.031
19:00 - 20:00	1	15583	0.045	1	15583	0.000	1	15583	0.045
20:00 - 21:00	1	15583	0.013	1	15583	0.000	1	15583	0.013
21:00 - 22:00	1	15583	0.051	1	15583	0.013	1	15583	0.064
22:00 - 23:00	1	15583	0.013	1	15583	0.148	1	15583	0.161
23:00 - 24:00	1	15583	0.000	1	15583	0.006	1	15583	0.006
Total Rates:			0.518						0.974

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES

MULTI-MODAL TOTAL RAIL PASSENGERS

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 - 01:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
01:00 - 02:00	1	15583	0.006	1	15583	0.000	1	15583	0.006
02:00 - 03:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
03:00 - 04:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
04:00 - 05:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
05:00 - 06:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
06:00 - 07:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
07:00 - 08:00	2	9723	0.000	2	9723	0.005	2	9723	0.005
08:00 - 09:00	2	9723	0.005	2	9723	0.005	2	9723	0.010
09:00 - 10:00	2	9723	0.005	2	9723	0.010	2	9723	0.015
10:00 - 11:00	2	9723	0.005	2	9723	0.000	2	9723	0.005
11:00 - 12:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
12:00 - 13:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
13:00 - 14:00	2	9723	0.021	2	9723	0.000	2	9723	0.021
14:00 - 15:00	2	9723	0.010	2	9723	0.005	2	9723	0.015
15:00 - 16:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
16:00 - 17:00	2	9723	0.000	2	9723	0.021	2	9723	0.021
17:00 - 18:00	2	9723	0.010	2	9723	0.000	2	9723	0.010
18:00 - 19:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
19:00 - 20:00	1	15583	0.026	1	15583	0.000	1	15583	0.026
20:00 - 21:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
21:00 - 22:00	1	15583	0.006	1	15583	0.006	1	15583	0.012
22:00 - 23:00	1	15583	0.000	1	15583	0.006	1	15583	0.006
23:00 - 24:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
Total Rates:			0.094			0.058			0.152

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES

MULTI-MODAL COACH PASSENGERS

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 - 01:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
01:00 - 02:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
02:00 - 03:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
03:00 - 04:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
04:00 - 05:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
05:00 - 06:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
06:00 - 07:00	2	9723	0.005	2	9723	0.000	2	9723	0.005
07:00 - 08:00	2	9723	0.005	2	9723	0.051	2	9723	0.056
08:00 - 09:00	2	9723	0.010	2	9723	0.000	2	9723	0.010
09:00 - 10:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
10:00 - 11:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
11:00 - 12:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
12:00 - 13:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
13:00 - 14:00	2	9723	0.010	2	9723	0.010	2	9723	0.020
14:00 - 15:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
15:00 - 16:00	2	9723	0.010	2	9723	0.026	2	9723	0.036
16:00 - 17:00	2	9723	0.000	2	9723	0.005	2	9723	0.005
17:00 - 18:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
18:00 - 19:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
19:00 - 20:00	1	15583	0.045	1	15583	0.000	1	15583	0.045
20:00 - 21:00	1	15583	0.013	1	15583	0.006	1	15583	0.019
21:00 - 22:00	1	15583	0.026	1	15583	0.045	1	15583	0.071
22:00 - 23:00	1	15583	0.006	1	15583	0.006	1	15583	0.012
23:00 - 24:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
Total Rates:			0.130			0.149			0.279

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES

MULTI-MODAL PUBLIC TRANSPORT USERS

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 - 01:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
01:00 - 02:00	1	15583	0.006	1	15583	0.000	1	15583	0.006
02:00 - 03:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
03:00 - 04:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
04:00 - 05:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
05:00 - 06:00	2	9723	0.005	2	9723	0.000	2	9723	0.005
06:00 - 07:00	2	9723	0.072	2	9723	0.000	2	9723	0.072
07:00 - 08:00	2	9723	0.026	2	9723	0.185	2	9723	0.211
08:00 - 09:00	2	9723	0.036	2	9723	0.010	2	9723	0.046
09:00 - 10:00	2	9723	0.005	2	9723	0.031	2	9723	0.036
10:00 - 11:00	2	9723	0.010	2	9723	0.000	2	9723	0.010
11:00 - 12:00	2	9723	0.015	2	9723	0.000	2	9723	0.015
12:00 - 13:00	2	9723	0.015	2	9723	0.005	2	9723	0.020
13:00 - 14:00	2	9723	0.082	2	9723	0.036	2	9723	0.118
14:00 - 15:00	2	9723	0.036	2	9723	0.005	2	9723	0.041
15:00 - 16:00	2	9723	0.139	2	9723	0.093	2	9723	0.232
16:00 - 17:00	2	9723	0.005	2	9723	0.041	2	9723	0.046
17:00 - 18:00	2	9723	0.015	2	9723	0.021	2	9723	0.036
18:00 - 19:00	2	9723	0.031	2	9723	0.000	2	9723	0.031
19:00 - 20:00	1	15583	0.116	1	15583	0.000	1	15583	0.116
20:00 - 21:00	1	15583	0.026	1	15583	0.006	1	15583	0.032
21:00 - 22:00	1	15583	0.083	1	15583	0.064	1	15583	0.147
22:00 - 23:00	1	15583	0.019	1	15583	0.160	1	15583	0.179
23:00 - 24:00	1	15583	0.000	1	15583	0.006	1	15583	0.006
Total Rates:			0.742						1.405

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 1.12

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 - 01:00	1	15583	0.039	1	15583	0.032	1	15583	0.071
01:00 - 02:00	1	15583	0.090	1	15583	0.071	1	15583	0.161
02:00 - 03:00	1	15583	0.135	1	15583	0.128	1	15583	0.263
03:00 - 04:00	1	15583	0.205	1	15583	0.186	1	15583	0.391
04:00 - 05:00	1	15583	0.289	1	15583	0.205	1	15583	0.494
05:00 - 06:00	2	9723	0.489	2	9723	0.149	2	9723	0.638
06:00 - 07:00	2	9723	0.905	2	9723	0.324	2	9723	1.229
07:00 - 08:00	2	9723	0.669	2	9723	1.095	2	9723	1.764
08:00 - 09:00	2	9723	0.566	2	9723	0.494	2	9723	1.060
09:00 - 10:00	2	9723	0.350	2	9723	0.525	2	9723	0.875
10:00 - 11:00	2	9723	0.247	2	9723	0.442	2	9723	0.689
11:00 - 12:00	2	9723	0.221	2	9723	0.339	2	9723	0.560
12:00 - 13:00	2	9723	0.345	2	9723	0.288	2	9723	0.633
13:00 - 14:00	2	9723	0.453	2	9723	0.483	2	9723	0.936
14:00 - 15:00	2	9723	0.350	2	9723	0.360	2	9723	0.710
15:00 - 16:00	2	9723	0.483	2	9723	0.602	2	9723	1.085
16:00 - 17:00	2	9723	0.663	2	9723	0.602	2	9723	1.265
17:00 - 18:00	2	9723	0.473	2	9723	0.715	2	9723	1.188
18:00 - 19:00	2	9723	0.386	2	9723	0.360	2	9723	0.746
19:00 - 20:00	1	15583	0.783	1	15583	0.456	1	15583	1.239
20:00 - 21:00	1	15583	0.327	1	15583	0.250	1	15583	0.577
21:00 - 22:00	1	15583	0.270	1	15583	0.616	1	15583	0.886
22:00 - 23:00	1	15583	0.334	1	15583	0.468	1	15583	0.802
23:00 - 24:00	1	15583	0.096	1	15583	0.148	1	15583	0.244
Total Rates:			9.168			9.338			18.506

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES

MULTI-MODAL CARS

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 - 01:00	1	15583	0.006	1	15583	0.000	1	15583	0.006
01:00 - 02:00	1	15583	0.058	1	15583	0.051	1	15583	0.109
02:00 - 03:00	1	15583	0.058	1	15583	0.039	1	15583	0.097
03:00 - 04:00	1	15583	0.077	1	15583	0.083	1	15583	0.160
04:00 - 05:00	1	15583	0.128	1	15583	0.071	1	15583	0.199
05:00 - 06:00	2	9723	0.273	2	9723	0.051	2	9723	0.324
06:00 - 07:00	2	9723	0.355	2	9723	0.093	2	9723	0.448
07:00 - 08:00	2	9723	0.355	2	9723	0.365	2	9723	0.720
08:00 - 09:00	2	9723	0.319	2	9723	0.072	2	9723	0.391
09:00 - 10:00	2	9723	0.103	2	9723	0.082	2	9723	0.185
10:00 - 11:00	2	9723	0.062	2	9723	0.051	2	9723	0.113
11:00 - 12:00	2	9723	0.087	2	9723	0.108	2	9723	0.195
12:00 - 13:00	2	9723	0.144	2	9723	0.118	2	9723	0.262
13:00 - 14:00	2	9723	0.180	2	9723	0.226	2	9723	0.406
14:00 - 15:00	2	9723	0.103	2	9723	0.113	2	9723	0.216
15:00 - 16:00	2	9723	0.139	2	9723	0.257	2	9723	0.396
16:00 - 17:00	2	9723	0.159	2	9723	0.231	2	9723	0.390
17:00 - 18:00	2	9723	0.123	2	9723	0.468	2	9723	0.591
18:00 - 19:00	2	9723	0.159	2	9723	0.185	2	9723	0.344
19:00 - 20:00	1	15583	0.391	1	15583	0.160	1	15583	0.551
20:00 - 21:00	1	15583	0.064	1	15583	0.096	1	15583	0.160
21:00 - 22:00	1	15583	0.058	1	15583	0.308	1	15583	0.366
22:00 - 23:00	1	15583	0.096	1	15583	0.193	1	15583	0.289
23:00 - 24:00	1	15583	0.013	1	15583	0.083	1	15583	0.096
Total Rates:			3.510			3.504			7.014

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES

MULTI-MODAL LGVS

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 - 01:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
01:00 - 02:00	1	15583	0.006	1	15583	0.000	1	15583	0.006
02:00 - 03:00	1	15583	0.006	1	15583	0.006	1	15583	0.012
03:00 - 04:00	1	15583	0.013	1	15583	0.000	1	15583	0.013
04:00 - 05:00	1	15583	0.051	1	15583	0.006	1	15583	0.057
05:00 - 06:00	2	9723	0.082	2	9723	0.000	2	9723	0.082
06:00 - 07:00	2	9723	0.309	2	9723	0.129	2	9723	0.438
07:00 - 08:00	2	9723	0.118	2	9723	0.201	2	9723	0.319
08:00 - 09:00	2	9723	0.077	2	9723	0.231	2	9723	0.308
09:00 - 10:00	2	9723	0.134	2	9723	0.329	2	9723	0.463
10:00 - 11:00	2	9723	0.051	2	9723	0.206	2	9723	0.257
11:00 - 12:00	2	9723	0.057	2	9723	0.170	2	9723	0.227
12:00 - 13:00	2	9723	0.093	2	9723	0.108	2	9723	0.201
13:00 - 14:00	2	9723	0.118	2	9723	0.118	2	9723	0.236
14:00 - 15:00	2	9723	0.139	2	9723	0.103	2	9723	0.242
15:00 - 16:00	2	9723	0.118	2	9723	0.103	2	9723	0.221
16:00 - 17:00	2	9723	0.278	2	9723	0.113	2	9723	0.391
17:00 - 18:00	2	9723	0.252	2	9723	0.077	2	9723	0.329
18:00 - 19:00	2	9723	0.118	2	9723	0.072	2	9723	0.190
19:00 - 20:00	1	15583	0.135	1	15583	0.148	1	15583	0.283
20:00 - 21:00	1	15583	0.116	1	15583	0.083	1	15583	0.199
21:00 - 22:00	1	15583	0.026	1	15583	0.051	1	15583	0.077
22:00 - 23:00	1	15583	0.000	1	15583	0.006	1	15583	0.006
23:00 - 24:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
Total Rates:			2.297			2.260			4.557

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES

MULTI-MODAL MOTOR CYCLES

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 - 01:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
01:00 - 02:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
02:00 - 03:00	1	15583	0.006	1	15583	0.000	1	15583	0.006
03:00 - 04:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
04:00 - 05:00	1	15583	0.000	1	15583	0.006	1	15583	0.006
05:00 - 06:00	2	9723	0.005	2	9723	0.000	2	9723	0.005
06:00 - 07:00	2	9723	0.005	2	9723	0.010	2	9723	0.015
07:00 - 08:00	2	9723	0.015	2	9723	0.010	2	9723	0.025
08:00 - 09:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
09:00 - 10:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
10:00 - 11:00	2	9723	0.005	2	9723	0.005	2	9723	0.010
11:00 - 12:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
12:00 - 13:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
13:00 - 14:00	2	9723	0.010	2	9723	0.010	2	9723	0.020
14:00 - 15:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
15:00 - 16:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
16:00 - 17:00	2	9723	0.000	2	9723	0.005	2	9723	0.005
17:00 - 18:00	2	9723	0.010	2	9723	0.015	2	9723	0.025
18:00 - 19:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
19:00 - 20:00	1	15583	0.006	1	15583	0.000	1	15583	0.006
20:00 - 21:00	1	15583	0.000	1	15583	0.006	1	15583	0.006
21:00 - 22:00	1	15583	0.006	1	15583	0.000	1	15583	0.006
22:00 - 23:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
23:00 - 24:00	1	15583	0.000	1	15583	0.006	1	15583	0.006
Total Rates:			0.068						0.141

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES
 MULTI-MODAL Underground Passengers
 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 - 01:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
01:00 - 02:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
02:00 - 03:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
03:00 - 04:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
04:00 - 05:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
05:00 - 06:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
06:00 - 07:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
07:00 - 08:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
08:00 - 09:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
09:00 - 10:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
10:00 - 11:00	2	9723	0.005	2	9723	0.000	2	9723	0.005
11:00 - 12:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
12:00 - 13:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
13:00 - 14:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
14:00 - 15:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
15:00 - 16:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
16:00 - 17:00	2	9723	0.000	2	9723	0.005	2	9723	0.005
17:00 - 18:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
18:00 - 19:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
19:00 - 20:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
20:00 - 21:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
21:00 - 22:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
22:00 - 23:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
23:00 - 24:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
Total Rates:			0.005			0.005			0.010

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES
 MULTI-MODAL National Rail Passengers
 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 - 01:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
01:00 - 02:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
02:00 - 03:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
03:00 - 04:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
04:00 - 05:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
05:00 - 06:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
06:00 - 07:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
07:00 - 08:00	2	9723	0.000	2	9723	0.005	2	9723	0.005
08:00 - 09:00	2	9723	0.005	2	9723	0.005	2	9723	0.010
09:00 - 10:00	2	9723	0.000	2	9723	0.010	2	9723	0.010
10:00 - 11:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
11:00 - 12:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
12:00 - 13:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
13:00 - 14:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
14:00 - 15:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
15:00 - 16:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
16:00 - 17:00	2	9723	0.000	2	9723	0.010	2	9723	0.010
17:00 - 18:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
18:00 - 19:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
19:00 - 20:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
20:00 - 21:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
21:00 - 22:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
22:00 - 23:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
23:00 - 24:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
Total Rates:			0.005						0.035

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES

MULTI-MODAL Bus Passengers

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 - 01:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
01:00 - 02:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
02:00 - 03:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
03:00 - 04:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
04:00 - 05:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
05:00 - 06:00	2	9723	0.005	2	9723	0.000	2	9723	0.005
06:00 - 07:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
07:00 - 08:00	2	9723	0.010	2	9723	0.000	2	9723	0.010
08:00 - 09:00	2	9723	0.005	2	9723	0.005	2	9723	0.010
09:00 - 10:00	2	9723	0.000	2	9723	0.021	2	9723	0.021
10:00 - 11:00	2	9723	0.005	2	9723	0.000	2	9723	0.005
11:00 - 12:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
12:00 - 13:00	2	9723	0.005	2	9723	0.000	2	9723	0.005
13:00 - 14:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
14:00 - 15:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
15:00 - 16:00	2	9723	0.005	2	9723	0.000	2	9723	0.005
16:00 - 17:00	2	9723	0.000	2	9723	0.010	2	9723	0.010
17:00 - 18:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
18:00 - 19:00	2	9723	0.000	2	9723	0.000	2	9723	0.000
19:00 - 20:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
20:00 - 21:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
21:00 - 22:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
22:00 - 23:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
23:00 - 24:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
Total Rates:			0.035						0.071

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES

MULTI-MODAL Servicing 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 - 01:00	1	15583	0.032	1	15583	0.032	1	15583	0.064
01:00 - 02:00	1	15583	0.026	1	15583	0.019	1	15583	0.045
02:00 - 03:00	1	15583	0.071	1	15583	0.090	1	15583	0.161
03:00 - 04:00	1	15583	0.128	1	15583	0.103	1	15583	0.231
04:00 - 05:00	1	15583	0.160	1	15583	0.128	1	15583	0.288
05:00 - 06:00	2	9723	0.195	2	9723	0.087	2	9723	0.282
06:00 - 07:00	2	9723	0.391	2	9723	0.211	2	9723	0.602
07:00 - 08:00	2	9723	0.201	2	9723	0.329	2	9723	0.530
08:00 - 09:00	2	9723	0.170	2	9723	0.401	2	9723	0.571
09:00 - 10:00	2	9723	0.226	2	9723	0.401	2	9723	0.627
10:00 - 11:00	2	9723	0.149	2	9723	0.339	2	9723	0.488
11:00 - 12:00	2	9723	0.103	2	9723	0.216	2	9723	0.319
12:00 - 13:00	2	9723	0.159	2	9723	0.154	2	9723	0.313
13:00 - 14:00	2	9723	0.165	2	9723	0.159	2	9723	0.324
14:00 - 15:00	2	9723	0.175	2	9723	0.185	2	9723	0.360
15:00 - 16:00	2	9723	0.154	2	9723	0.154	2	9723	0.308
16:00 - 17:00	2	9723	0.447	2	9723	0.242	2	9723	0.689
17:00 - 18:00	2	9723	0.288	2	9723	0.159	2	9723	0.447
18:00 - 19:00	2	9723	0.180	2	9723	0.159	2	9723	0.339
19:00 - 20:00	1	15583	0.193	1	15583	0.282	1	15583	0.475
20:00 - 21:00	1	15583	0.231	1	15583	0.135	1	15583	0.366
21:00 - 22:00	1	15583	0.116	1	15583	0.173	1	15583	0.289
22:00 - 23:00	1	15583	0.212	1	15583	0.090	1	15583	0.302
23:00 - 24:00	1	15583	0.083	1	15583	0.051	1	15583	0.134
Total Rates:			4.255			4.299			8.554

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

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

APPENDIX E – MODEL OUTPUT

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

Filename: Access.j9

Path: M:\Projects\2022\22036 - Land at John Mason International Site\07. Technical\07.02 Modelling\PICADY

Report generation date: 19/04/2022 14:57:58

«2022, AM

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

	AM					PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
2022										
Stream B-AC	D1	0.2	7.80	0.18	A	D2	0.3	8.58	0.25	A
Stream C-B		0.2	8.29	0.18	A		0.2	8.13	0.15	A

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

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

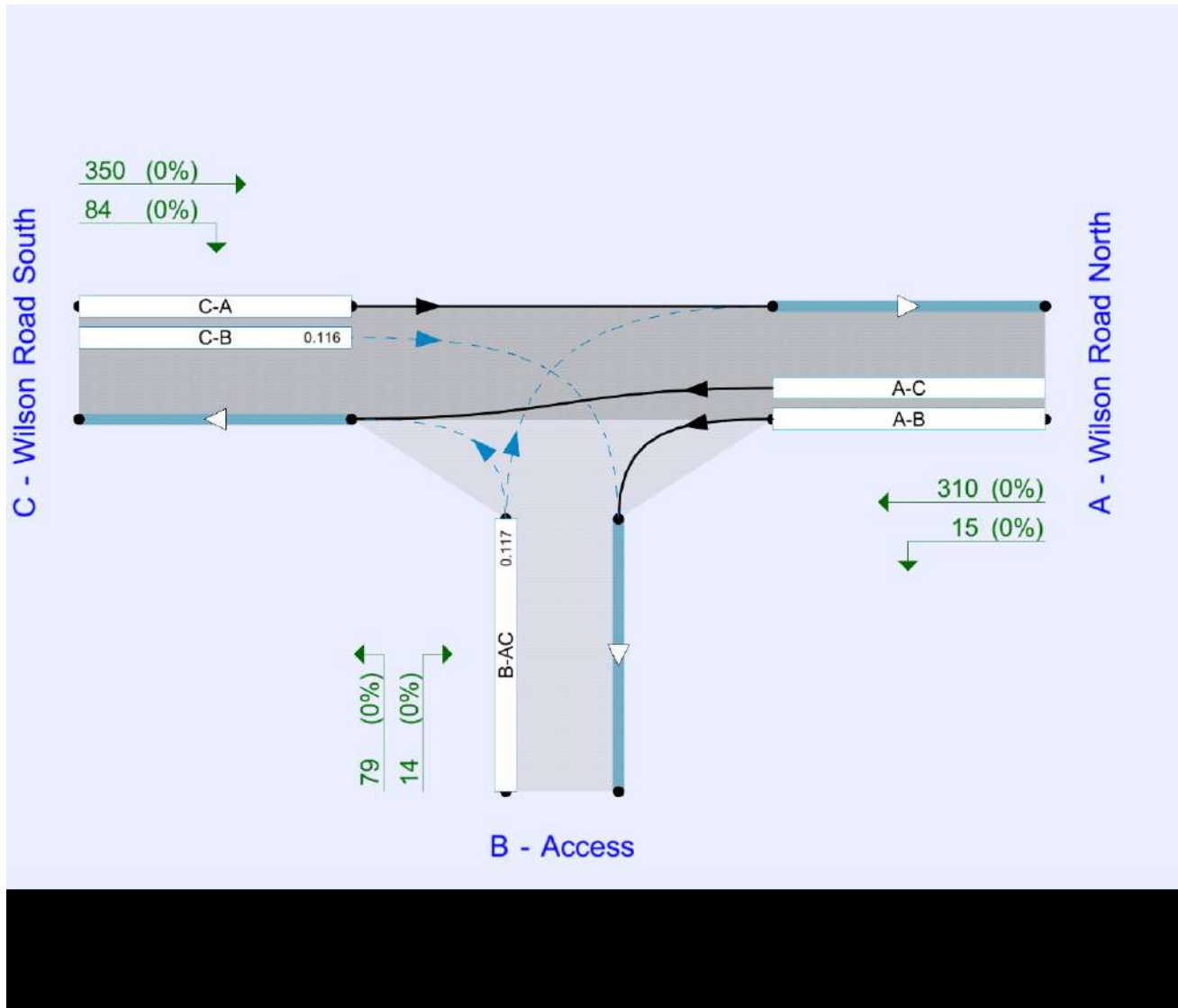
File summary

File Description

Title	Access Model
Location	
Site number	
Date	19/04/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MARKIDES\Markides Associates
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

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

Analysis Set Details

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

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022	AM	ONE HOUR	07:45	09:15	15	✓

2022, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Base+Dev	T-Junction	Two-way		1.67	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Wilson Road North		Major
B	Access		Minor
C	Wilson Road South		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 - Wilson Road South	9.20			43.0		-

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Access	One lane	3.65	43	43

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	546	0.086	0.216	0.136	0.309
B-C	693	0.091	0.231	-	-
C-B	599	0.200	0.200	-	-

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

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

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

Traffic Demand

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Wilson Road North		ONE HOUR	✓	325	100.000
B - Access		ONE HOUR	✓	93	100.000
C - Wilson Road South		ONE HOUR	✓	435	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Wilson Road North	B - Access	C - Wilson Road South
From	A - Wilson Road North	0	15	310
	B - Access	14	0	79
	C - Wilson Road South	350	84	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Wilson Road North	B - Access	C - Wilson Road South
From	A - Wilson Road North	0	0	0
	B - Access	0	0	0
	C - Wilson Road South	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.18	7.80	0.2	A	86	128
C-A					321	482
C-B	0.18	8.29	0.2	A	77	116
A-B					14	21
A-C					285	427

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	70	18	598	0.117	70	0.0	0.1	6.811	A
C-A	264	66			264				
C-B	64	16	550	0.116	63	0.0	0.1	7.385	A
A-B	11	3			11				
A-C	234	58			234				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	84	21	584	0.144	84	0.1	0.2	7.197	A
C-A	315	79			315				
C-B	76	19	540	0.140	76	0.1	0.2	7.745	A
A-B	13	3			13				
A-C	279	70			279				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	103	26	564	0.182	102	0.2	0.2	7.793	A
C-A	386	96			386				
C-B	93	23	527	0.176	93	0.2	0.2	8.280	A
A-B	16	4			16				
A-C	342	85			342				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	103	26	564	0.182	103	0.2	0.2	7.799	A
C-A	386	96			386				
C-B	93	23	527	0.176	93	0.2	0.2	8.286	A
A-B	16	4			16				
A-C	342	85			342				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	84	21	584	0.144	84	0.2	0.2	7.209	A
C-A	315	79			315				
C-B	76	19	540	0.140	76	0.2	0.2	7.755	A
A-B	13	3			13				
A-C	279	70			279				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	70	18	598	0.118	70	0.2	0.1	6.829	A
C-A	264	66			264				
C-B	64	16	550	0.116	64	0.2	0.1	7.404	A
A-B	11	3			11				
A-C	234	58			234				