

Huyton Trade Park

21/10/2022

Reference number GB01T20E53.2PROJ.11020624

HUYTON TRADE PARK TRANSPORT STATEMENT



SYSTRA

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1. INTRODUCTION

1.1 Overview

- 1.1.1 SYSTRA has been commissioned by Derwent Development Management Ltd ('the Applicant') to prepare a Transport Statement (TS) and a Travel Plan (TP) to accompany a planning application to redevelop land at Huyton Trade Park, Wilson Road, Huyton.
- 1.1.2 The application will see the demolition of existing buildings which, combined, have a total floor area of 5,214sqm GIA, and the implementation of 24, B2/B8 units ranging from 115sqm to 1,048sqm in size, with an overall floorspace of 7,740sqm GIA. Hence, the development proposals essentially comprise of additional B2/B8 floorspace of 2,526sqm over and above the extant land use, inclusive of a mezzanine and racking allowance. The proposal drawing (RGP: 11049-PL-X-L03-E) is included in **Appendix A**.
- 1.1.3 It is proposed to retain the two access points to the existing site from Wilson Road. Further, there is no intention to provide an internal through route, albeit a gate will be provided adjacent to Units B5 and B9. Hence each of the two access locations will accommodate both access and egress.
- 1.1.4 Car and cycle parking will be provided in line with Knowsley Borough Council Parking Standards.

1.2 Planning History

- 1.2.1 The application site sits within the Huyton Business Park and is recognised, therefore, as having an employment allocation. Further, a previous planning application was consented in 2012 (planning ref. 12/00763/FUL); this would have seen the development of three additional B1/B2/B8 units (2,253qm GIA), however, the consent was never implemented. Taking into account the extant use (5,214sqm) and the lapsed application, this would have brought the total floor area up to 7,467sqm i.e., only marginally smaller than the current application (7,740sqm).

1.3 Purpose of Report

- 1.3.1 This TS will accompany a planning application to redevelop brown field land at Huyton Trade Park, Wilson Road, Huyton. It is an independent and comprehensive review of the anticipated transport impacts relating to the proposal and will outline any improvements required to ensure the safe and efficient operation of the local transport networks.

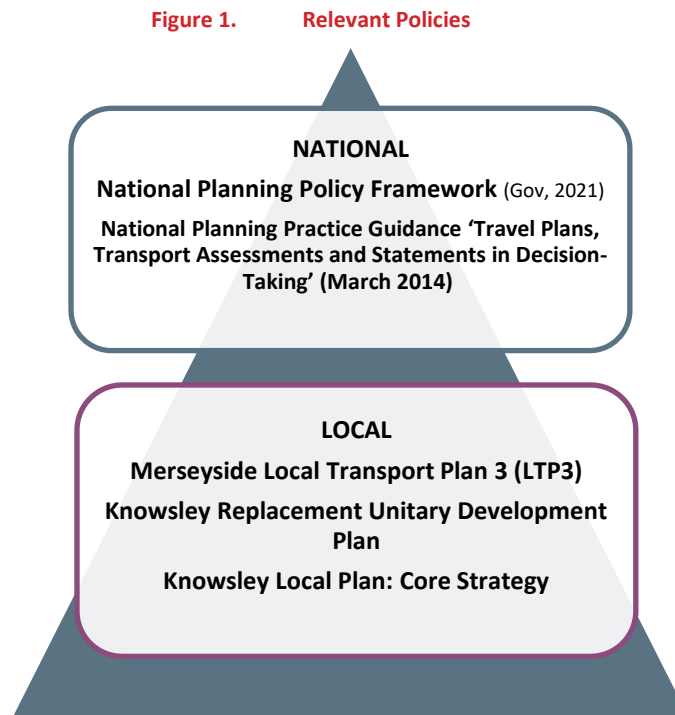
1.4 Structure of Report

- 1.4.1 The structure of this TS is based on the aims and objectives set out in the National Planning Policy Framework (NPPF). This report will consist of the following sections:
 - **Policy** - review relevant policies and guidance;
 - **Existing Conditions** - examine the existing highway conditions, including accessibility;
 - **Proposed Development** - describes the proposed development;
 - **Development Trip Generation and Distribution** – sets out the additional trips on the network as a result of the proposed development; and
 - **Summary and conclusion.**

2. POLICY

2.1 Introduction

- 2.1.1 The proposals have been developed in accordance with current policy at national and local levels. This section explores policies which are applicable to this development. A summary of these policies is shown in **Figure 1**.



2.2 National Planning Policy Framework (NPPF)

- 2.2.1 The revised National Planning Policy Framework (NPPF) (July 2021) outlines the Government's planning policies for England and how these are expected to be applied. It provides the framework for producing Local Plans for housing and other developments, which in turn provides local planning authorities with the guidance against which planning decisions are decided.
- 2.2.2 The NPPF (Section 9) seeks to promote sustainable transport, with consideration given to transport issues at the earliest stages of plan-making and development. Applications for development, therefore, should give priority to pedestrian and cycle movements and, so far as is possible, facilitate access to high quality public transport. In addition, they should address the needs of people with reduced mobility in relation to all transport modes, creating spaces that are safe, secure, and attractive to all users.
- 2.2.3 Therefore, it should be ensured that assessment of plans take account of:
- Whether appropriate opportunities to promote sustainable transport modes can be implemented, given the type of development and its location.
 - If safe and suitable access to the site can be achieved by all users.

- If any significant impacts from the development on the transport network in terms of capacity and congestion, or on highway safety, can be cost effectively mitigated to an acceptable degree.

2.2.4 Transport is key to supporting the core planning principles and the objective of sustainable development. The NPPF (para. 111) states that development should only be prevented or refused on transport grounds if *“there would be an unacceptable impact on highway safety or where the residual cumulative impacts of development are severe.”*

2.3 National Planning Practice Guidance ‘Travel Plans, Transport Assessments and Statements in Decision-Taking’ (March 2014)

2.3.1 The National Planning Practice Guidance (NPPG) sets out that all developments that generate significant amounts of transport movement should be supported by a Transport Statement or Transport Assessment.

2.3.2 It also states that local planning authorities must make a judgement as to whether a development proposal would generate significant amounts of movement on a case by case basis, and in determining whether a Transport Assessment is needed for a proposed development local planning authorities should take into account the following considerations:

- The Transport Assessment and Statement policies (if any) of the Local Plan;
- The scale of the proposed development and its potential for additional trip generation (smaller applications with limited impacts may not need a Transport Assessment or Statement);
- Existing intensity of transport use and the availability of public transport;
- Proximity to nearby environmental designations or sensitive areas;
- Impact on other priorities/ strategies (such as promoting walking and cycling);
- The cumulative impacts of multiple developments within a particular area; and
- Whether there are particular types of impacts around which to focus the Transport Assessment or Statement (e.g. assessing traffic generated at peak times).

2.4 Merseyside Local Transport Plan 3 (LTP3)

2.4.1 The Merseyside Local Transport Plan (LTP3) is a statutory plan prepared by the five Metropolitan Councils on Merseyside and MerseyTravel.

2.4.2 The LTP3 for Merseyside became active from 1st April 2011. The plan sets out the implementation plans in the short term to 2015 and looks to the longer term strategy for 2024 on how to improve transport in Merseyside. The LTP3 has the following vision;

'A city region committed to a low carbon future, which has a transport network and mobility culture that positively contributes to a thriving economy and the health and wellbeing of its citizens and where sustainable travel is the option of choice'.

2.4.3 The LTP3 has six goals:

- One - Help create the right conditions for sustainable economic growth by supporting the priorities of the Liverpool City Region, the Local Enterprise Partnership and the Local Strategic Partnerships
- Two - Provide and promote a clean, low emission transport system which is resilient to changes to climate and oil availability

- Three - Ensure the transport system promotes and enables improved health and wellbeing and road safety
- Four - Ensure equality of travel opportunity for all, through a transport system that allows people to connect easily with employment, education, healthcare, other essential services and leisure and recreational opportunities
- Five - Ensure the transport network supports the economic success of the city region by the efficient movement of people and goods.
- Six - Maintain our assets to a high standard. (Please note all goals have equal status).

2.4.4 This proposed development will have access to a high frequency public transport network within 200m of the site and safe walking routes to the surrounding area.

2.4.5 The site is easily accessible to both the local and strategic road networks, supporting the efficient movement of goods and people. It is therefore considered that the proposals conform with the goals set out in LTP3.

2.5 Knowsley Replacement Unitary Development Plan

2.5.1 Knowsley's Unitary Development Plan (UDP) is part of the council's long term plan to improve the choice of housing, jobs and services in Knowsley. The UDP is in the process of being replaced by the core strategy, however a number of its policies are saved.

2.5.2 The UDP details the key criteria for a new development:

- Provide a high quality of design and layout which reflects the status of the site;
- Not have a materially greater impact on the openness or purposes of the Green Belt than the existing approved development;
- Secure the long-term management and maintenance of any existing landscape features to be retained within the site.

2.5.3 The UDP Core Policy (CP3) aims to provide the efficient use of land, high design quality, protect and enhance the environment, avoid causing unacceptable levels of pollution and include the provision for safe and convenient accessibility to new development by a choice of transport, including walking, cycling and public transport. The CP3 lists the following transport policies that are relevant to the scheme:

- T5 The Location of Major Traffic Generating New Development – Major development should be / be capable of being within safe and convenient walking space from public transport facilities. This is 400m from the nearest bus stop and/or 800m from a railway station MerseyTram stop. Developments that are likely to generate a significant movement of freight should be located at sites which have good access to strategic roads;
- T6 Ensuring Choice and Travel to Service New Developments – New developments should provide/be served by a good choice of modes of travel which should be appropriate to the scale and nature of the development. Cycle parking should be in accordance with the council's minimum standards. Car parking should not exceed the council's maximum standards. Safe and convenient vehicular access to and from the highway to the site. Good provision of public transport to the site;
- T7 New Development & Walking and Cycling Routes – New development should preserve where possible and enhance the walking and cycling network, as it can help enhance access to green corridors and countryside;

- T8 - Transport Assessments – Major traffic generating proposals will require a Transport Assessment;
- T9 – Requirements for the submission of Travel Plan - Smaller development proposals in conjunction with the proposal and major traffic generating developments other than housing; and
- T10 Access for The Less Mobile – All proposals for new development or for the change of use of existing buildings will be required to have adequate access for the less mobile or those who have sensory impairments.

2.5.4 As noted above, the proposed development is situated in a sustainable location, with good access to public transport and infrastructure for walking and cycling. All parking will be provided in line with the Knowsley Borough Council parking standards and care will be taken to ensure that the development is accessible for those who are less mobile or have sensory impairments.

2.6 Knowsley Local Plan: Core Strategy

2.6.1 The Core Strategy is part of the Local Plan that will set the strategic framework for the growth and development of Knowsley up to 2028 and beyond. It sets out how and where new development and regeneration should take place and will therefore promote, guide and manage the future development of the Borough.

2.6.2 The relevant have been taken from the Core Strategy and are summarised below:

- Policy CS4 Economy and Employment: “A key requirement of the Core Strategy is to facilitate employment development of the right type and in the right location to support the Council’s employment priorities.”
- Policy CS7: Transport Networks “A key aspect of the Knowsley Local Plan will be to support a sustainable transport system and geographical pattern of development which minimises the need to travel and will help grow the Borough’s economy, ensuring that jobs, shops and services are accessible to all, leading to a lesser reliance on the car for travel.”

2.6.3 The overall transport strategy will utilise planning powers and other interventions to support a sustainable and integrated transport system that will ensure the following:

- 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.

2.6.4 The proposed development is situated within an already thriving employment area and within an employment allocation. The proposed development will enable the area to continue to thrive. The site is accessible by sustainable modes of transport as explained further below.

2.7 Summary

- 2.7.1 This chapter has outlined the policy context to which the proposed development relates and the frameworks with which the development proposal needs to comply. National policy is provided by NPPF and NPPG, which aims to promote sustainable travel to developments and states that developments should be located to maximise sustainable transport opportunities.
- 2.7.2 The local policies sets out a vision and strategy for the sustainable growth of the region.
- 2.7.3 National and local policy described above collectively seek to ensure that development is located in an environment whereby future occupiers and visitors are provided with a genuine choice of mode of transport. By ensuring that the development is located in a sustainable location, this means that users of the site can reduce the need to travel, reduce average journey lengths and benefit from the existing sustainable infrastructure.
- 2.7.4 This TS has been prepared in line with current best practise and guidance and it demonstrates that the proposed development is accessibly by a range of sustainable travel methods and that it will not impact the safe operation of the local nor strategic road network.

3. EXISTING CONDITIONS

3.1 Introduction

- 3.1.1 This chapter considers the location of the application site and the existing local highway, pedestrian, cycle and public transport infrastructure which will be used by employees and visitors.

3.2 Site Location

- 3.2.1 The application site is located on a 'brownfield' site to the south of Wilson Road, close to the town of Huyton. Huyton is located approximately 11km to the west of Birkenhead, and St Helens is located approximately 8km to the north east.
- 3.2.2 The site itself is bound by Wilson Road to the north, existing employment/trade centres (namely Clifton Trade Bathrooms Huyton) to the east, an open green space and residential dwellings to the south, and Manor Farm Road to the west.
- 3.2.3 Given the local allocation, the area within the immediate vicinity of the site is generally made up of industrial/employment uses. Slightly further afield, and to the south, there is a larger concentration of residential dwellings.
- 3.2.4 **Figure 2** indicates the location of the application site.

Figure 2. Application Site Location



3.3 Highway Network

- 3.3.1 Access to the application site is provided at two points off Wilson Road. One is located to the north of Block 1 and the other is located to the north of Block 2 and the Seedbed Unit. The southern access will continue to provide access to units A1 to A10 and B1 to B5 while access to units B6 to B9 and Howdens will be maintained via the northern access.
- 3.3.2 Wilson Road is a tree lined boulevard within a wider trading estate and runs on a north-west to south-east axis; it is subject to a 30mph speed limit, hence, the standard driver stopping sight distance (SSD) is 90m, and visibility splays at egress are 2.4m (minimum) x 90m.
- 3.3.3 The road surface appears to be in good condition and the route is subject to prohibition of a no waiting traffic regulation order (TRO).
- 3.3.4 At the northern extent, approximately 600m from the site, Wilson Road meets Huyton Hey Road which leads into Huyton town centre. At the southern extent, approximately 1km from the site, Wilson Road meets the A5080 Cronton Road. Wilson Road can be accessed via a newly signalised junction with the A5080.
- 3.3.5 The A5080 Cronton Road is approximately 12m wide, comprising of one lane in either direction. Its junction with Wilson Road appears to have been upgraded recently to include the provision of traffic signal control. This junction improvement appears to be related to and as a consequence of the Aldi store and other development.
- 3.3.6 The M62(J6) is located approximately 350m to the east of the Wilson Road/A5080 junction; it is a principal interchange between the M62 and M57. The M62 runs on an east to west axis and provides access to major cities such as Liverpool to the west and Manchester to the East. The M57 runs on a north to south axis and provides access to Widnes and Runcorn via the Knowsley Expressway.

3.4 Existing Parking Arrangements

- 3.4.1 The 2012 consented planning application referred to a traffic and car park survey that was undertaken by Sanderson Associates Ltd. which showed that approximately 116 car parking spaces existed, including three accessible spaces. This was only an approximate figure, however, as markings were, and remain, unclear or are intermittent. Nonetheless, in the interim, there has been no significant change to these circumstances, and a previous parking survey indicated that only 62 vehicles were parked at 09:30 and 59 vehicles were parked at 16:00.
- 3.4.2 Further spaces are available to the east of the application site, located to the rear of the units, and a small car park (approximately 6 spaces) which takes access from the northern access in to the site. However, this provision is not expected to be used by employees and visitors to the proposed units due to their location within the site.

3.5 Accessibility

CIHT and Knowsley Borough Council Guidance

- 3.5.1 The 'Guidelines for Providing for Journeys on Foot' produced by the Chartered Institution of Highways and Transportation (CIHT) document describes acceptable walking distances for pedestrians without mobility impairment. They suggest that, for commuting, up to 500 metres is the desirable walking distance, up to 1,000 metres is an acceptable walking distance and 2,000 metres is the preferred maximum walking distance. **Table 1** sets out the CIHT guidelines on acceptable walking distances.

Table 1. CIHT Guideline Acceptable Walking Distance

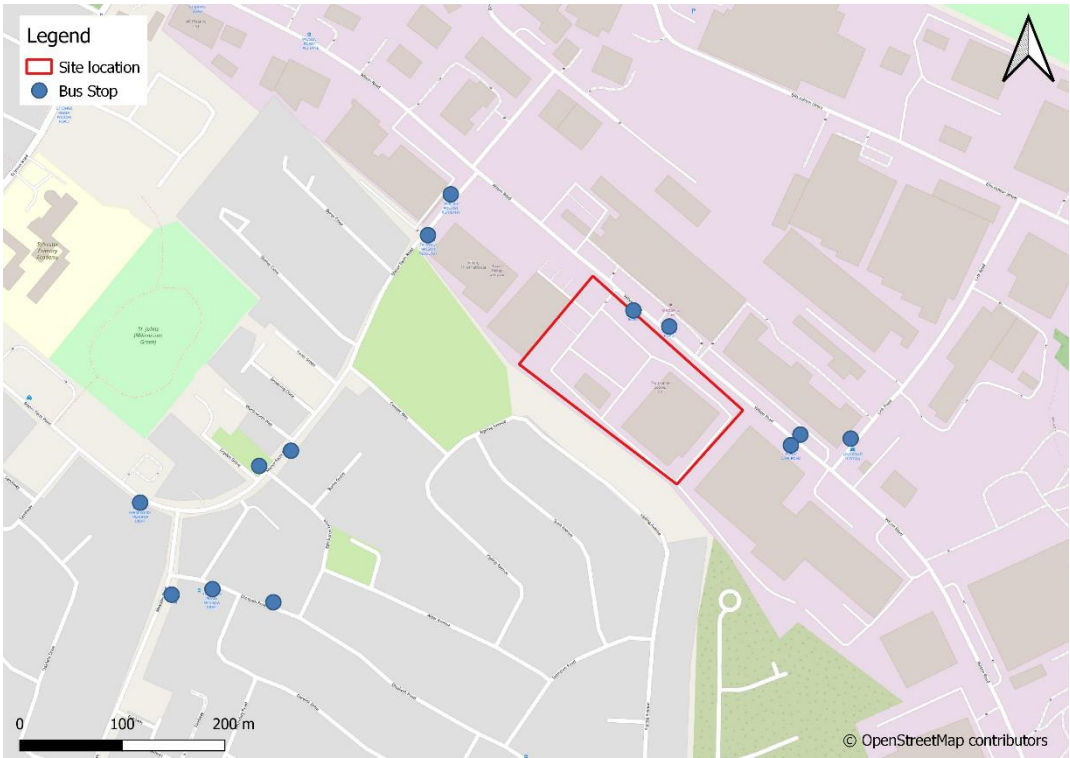
CRITERIA	TOWN CENTRE	COMMUTING / SIGHT SEEING	ELSEWHERE
Desirable	200m	500m	400m
Acceptable	400m	1,000m	800m
Preferred Maximum	800m	2,000m	1,200m

- 3.5.2 The Knowsley Borough Council UDP states that "major development should be / be capable of being within safe and convenient walking space from public transport facilities. This is 400m from the nearest bus stop and/or 800m from a railway station, MerseyTram stop. Developments that are likely to generate a significant movement of freight should be located at sites which have good access to strategic roads."
- 3.5.3 Both the CIHT guidance and the Knowsley Borough Council guidance has been considered further.

3.6 Walking and Cycling

- 3.6.1 The full extent of Wilson Road benefits from wide footways on both sides of the carriageway, as do the surrounding roads. The tree line boulevard provides a natural separation between pedestrians and vehicles and facilitates safe access for pedestrians who may wish to use the nearby facilities, and will be utilised by employees.
- 3.6.2 The closest pedestrian crossing point is located at the Wilson Road / Manor Farm Road / Brickfields signalised junction which is approximately 130m to the west of the application site. This provides a safe crossing for pedestrians. Other pedestrian crossing points are indicated in **Figure 3** which has been taken from the Knowsley County Council website.
- 3.6.3 Wilson Road and the surrounding local highway network is also street lit.
- 3.6.4 There are currently no designated, segregated facilities for cyclists along Wilson Road. However, on-road cycling would be suitable for experienced cyclists. As illustrated on **Figure 3**, Cycle Route 856, an off road cycle route, runs from Ellis Ashton Street (approximately 600m from the proposed site) to Prescott in the east. Route 856 provides access to Whiston Hospital, a school, and Prescott railway station slightly further afield. Route 856 could also be used for the majority of the route to Whiston railway station.

Figure 4. Bus Stop Locations



3.7.3 Bus service frequency has been obtained for the routes serving the bus stops. The table firstly outlines services that are within 400m walking distance of the proposed site and then outlines any additional services that are within 1000m of the proposed site. **Table 2** summarises the bus services and provides details of their route.

Table 2. Bus Services

SERVICE	ROUTE	WEEKDAY FREQ		SAT FREQ (DAYTIME AVG)	SUN FREQ (DAYTIME AVG)
		AM	PM		
Within 400m (Knowsley UDP Guidance)					
3	Huyton Industrial Estate – Halewood	60 mins	60 mins	60 mins	N/A
3A	Huyton Industrial Estate – Liverpool John Lennon Airport	60 mins	60 mins	60 mins	N/A

SERVICE	ROUTE	WEEKDAY FREQ		SAT FREQ (DAYTIME AVG)	SUN FREQ (DAYTIME AVG)
		AM	PM		
248	Huyton – Prescott circular via Whiston Hospital	30 mins	N/A no service until past 1815	Same as weekday	60 mins
897	Huyton Industrial Estate – Kirkby Admin	N/A early morning service only			
870	Old Swan – Huyton Industrial Estate	1 peak service only		N/A	
10B	Liverpool – Huyton	8 – 15 mins	10-13 mins	15 mins	20 mins
246	Huyton circular via Paramount Estate and Manor Farm	No service until after 0930. Hourly service until 1730			N/A
Over 400m, less than 1000m (CIHT)					
6	Liverpool – Huyton or Lunt’s Heath	N/A early morning service only			N/A
7	Liverpool – Huyton or Warrington	30 mins			
61	Liverpool – Halton Hospital	30 mins		40 mins	60 mins
247	Huyton Circular via Paramount Estate and Manor Farm	Off peak service only – 60 mins			N/A
C42	Serves Riverside College	1 peak service only	1 peak service only		N/A

SERVICE	ROUTE	WEEKDAY FREQ		SAT FREQ (DAYTIME AVG)	SUN FREQ (DAYTIME AVG)
		AM	PM		
C50	Serves Riverside College	1 peak service only	1 peak servic e only		N/A

Rail

- 3.7.4 The closest railway station to the application site is Huyton Station, located approximately 1.5km to the west, which is equivalent to a 19 minute walk or a five minute cycle ride. The station is operated by Northern and provides access services to Manchester Airport, Blackpool, Liverpool Lime Street and Wigan North Western at regular intervals throughout the day.

3.8 Local Amenities

- 3.8.1 With regards to facilities for employees, Dedicated Supergym is located approximately 650m walking distance from the site (approximately 8 minute walk) and Sylvester Primary Academy is located approximately 900m walking distance from the site (approximately 11 minute walk). Aston Medical Centre and Davey's Chemist are also located approximately 900m walking distance from the site (approximately 11 minute walk) and there are numerous green spaces located within walking distance. A newly built Aldi supermarket, Starbucks, KFC, Cinnabon, Greggs, Sbarro pizza restaurant and Shell garage are also located approximately 1km walking distance to the southeast (approximately 10 minutes' walk from the application site).

3.9 Summary

- 3.9.1 Taking into account the above, it is reasonable to conclude that the brown field, application site is well placed to benefit from and encourage movement by sustainable and active modes and, as such, meets the criteria set out in the NPPF and local planning policy for the promotion of sustainable development.

3.10 Visibility Splays

- 3.10.1 The development will utilise existing access/egress points, these should already be appropriate and acceptable to the Council.

3.11 Collision Analysis

- 3.11.1 A desktop review of Crashmap has been undertaken to understand whether there are any significant safety issues in the vicinity of the application site. **Figure 5** shows the study area, with **Figures 6 and 7** showing the location of collisions. The Crashmap data covers the most recent five year period (2017 – 2021) and the results have been summarised in **Table 4**.

Figure 5. Crashmap Study Area

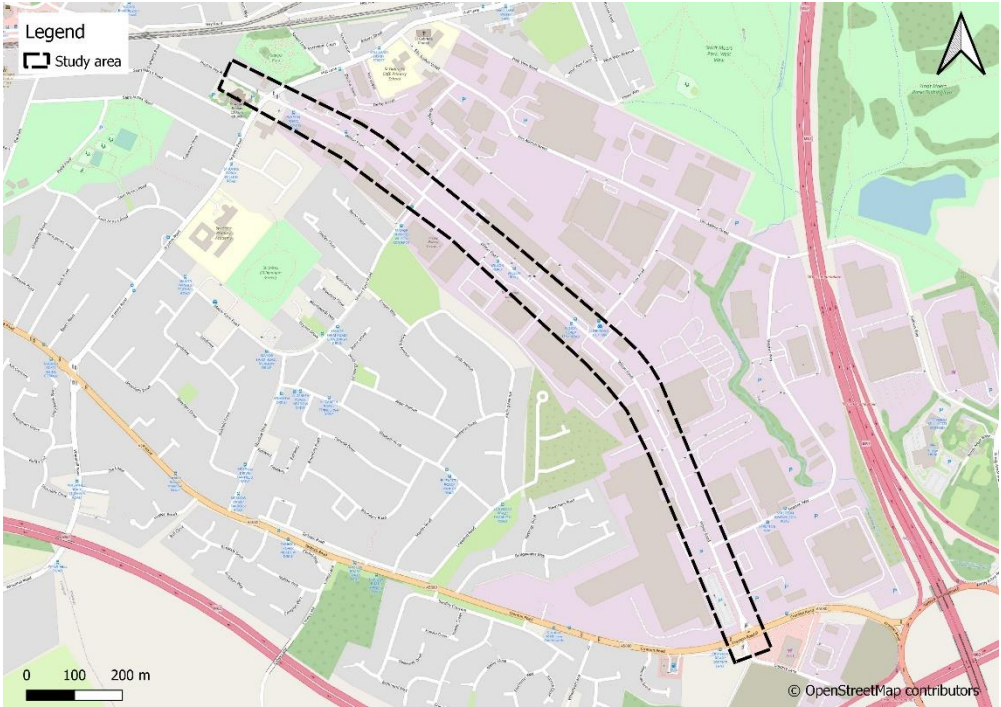


Figure 6. Collisions

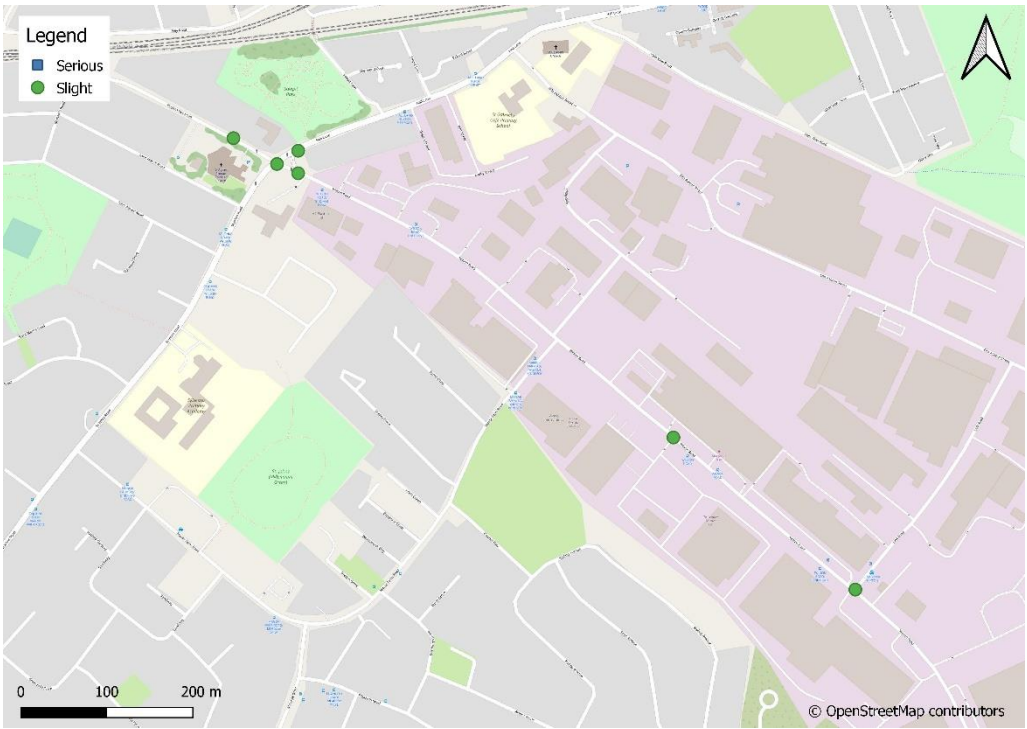


Figure 7. Collisions



Table 3. Crashmap Collision Analysis

LOCATION	SLIGHT	SERIOUS	FATAL	TOTAL
Wilson Road	1	0	0	1
Link Road	1	0	0	1
Manor Farm Road	1	0	0	1
Huyton Hey Road / Wilson Road/ Hall Lane / St Johns Road junction	4	0	0	4
Wilson Road / A5080 Cronton Road junction	4	1	0	5
TOTAL	11	1	0	12

3.11.2 As can be seen from **Table 3**, 12 collisions occurred within the vicinity of the application site, within the five year study period; of these, 11 have been classified as slight and one has been classified as serious. The serious incident occurred in 2018, prior to the implementation of junction improvements, at the Wilson Road / A5080 Cronton Road junction where there is a very small cluster of collisions.

- 3.11.3 In addition to the above Crashmap analysis, further information is included in the Transport Assessment submitted to accompany an application for mixed-use development on land off Coppice Lane at Huyton. The Personal Injury Collision (PIC) data was obtained from Knowsley Borough Council for a recent three year period (20/02/2014 – 14/08/2016) and the following junctions were included as part of the applicants analysis:
- M57 Junction 1 / M62 Junction 2 (including all slip roads);
 - Wilson Road / Cronton Road;
 - Whitefield Lane / Cronton Road;
 - Cronton Road (from M57 / M62 to Wilson Road);
 - Cronton Road (from Wilson Road to Whitefield Lane); and
 - Wilson Road (from Cronton Road to Stretton Way).
- 3.11.4 There was a total of 15 collisions in the study area within the search period; however, no collisions were found to have occurred on Wilson Road.
- 3.11.5 Four of the collisions occurred at the Coppice Lane / Cronton Road staggered crossroad junctions, three collisions occurred at the M62 / M57 Grade separated roundabout, Cronton Road (NW) and the M62 East on slip (W) and four collisions occurred on the M62 / M57 Grade separated roundabout, Cronton Road exit slip (SE).
- 3.11.6 Given the collision data obtained from Knowsley Borough Council, considered alongside the Crashmap data, it can be reasonably concluded that there are no obvious road safety issues on Wilson Road that would be exacerbated by the proposed development.

4. PROPOSED DEVELOPMENT

4.1 Introduction

- 4.1.1 As discussed, the application seeks approval for the demolition of the existing buildings within the redline which total 5,214sqm GIA. These are to be replaced with 24 B2/B8 units ranging from 115sqm to 1,048sqm with an overall floorspace of 7,740sqm; hence the development proposals comprise of an additional floorspace of 2,526sqm (GIA) over and above existing, inclusive of a mezzanine and racking allowance.
- 4.1.2 Car parking and cycle parking will be provided in line with Knowsley Borough Council Parking Standards, this is detailed in **Section 4.3**.
- 4.1.3 Access to the application site is provided via two existing junctions with Wilson Road. Minor improvements to kerb lines will be implemented to accommodate the proposed car parking arrangement; otherwise, the junctions will be retained as existing. The access arrangements are detailed in **Section 4.2**.
- 4.1.4 A planning application was consented in 2012 (planning ref. 12/00763/FUL) for the construction of three additional industrial units of B1/B2/B8 land use (2,253sqm); however this consent was never implemented. Consequently, taking into account the established use of 5,214sqm and the now lapsed consent, this would have brought the total floor area up to 7,467sqm. Ultimately, therefore, the 2022 development proposes a similar quantum of employment space as was consented in 2012 (a difference of just 273sqm).
- 4.1.5 A masterplan for the proposed scheme is included in **Appendix A**.

4.2 Site Access

- 4.2.1 One of these access/egress points previously mentioned is located to the north of Block 1, and the other access/egress point is located to the north of Block 2 and the Seedbed Unit. It is proposed to retain these two access points, whereby access to units A1-A15 and B1-5 will be via the southern access and units B6-B9 will be via the northern access; there is no intention to provide a through route, albeit a gate is to be provided adjacent to units B5 and B9.
- 4.2.2 Minor modifications to the kerb lines will be made so as to accommodate the revised car parking arrangement; however, a vehicle swept path analysis demonstrates that the modifications do not alter or hinder the existing HGVs access/egress arrangements (**Appendix B**).
- 4.2.3 As can be seen from **Appendix B**, the swept path analysis also demonstrates that a 16.5m articulated vehicle can manoeuvre around the site and egress in a forward gear. Various HGV movements are illustrated relative to each other; however, given the anticipated use of the new units, it is unlikely and not intended that a large number of maximum legal HGVs would access the development at the same time. Rather, it is anticipated that most deliveries be made via rigid vehicles.

- 4.2.4 On the basis of the swept path analysis, it is evident that the proposed development will not impede the operation of the existing retained units. Further, it is expected that HGV access and movement will be managed on site; e.g., deliveries via articulated vehicle would need to load and unload alongside the buildings as per the existing arrangement. To this end and so as to ensure uninhibited movement throughout the development, an Operational Management Plan (OMP) will be drawn up and implemented.

4.3 Existing Parking and Parking Standards

- 4.3.1 As discussed, the traffic and car park survey undertaken in 2012 showed that approximately 116 car parking spaces exist, including three accessible spaces. The 2012 consented scheme proposed 122 parking spaces, including 14 accessible spaces.
- 4.3.2 Notwithstanding the extant and previous consents, it is necessary for the site to provide sufficient levels of parking commensurate with the Knowsley Borough Council parking standards and to apply the standards set out in 'Ensuring a Choice of Travel Supplementary Planning Document.'
- 4.3.3 The Applicant is seeking to maintain flexibility in terms of end use, i.e., the mix of B2 and B8 floor space; assuming, therefore, that the proposed development falls within the worst-case B2 land use category the relevant parking standards can be summarised as follows:

B2:

- District and Local Centre (Maximum): 1 space per 48sqm;
 - Disabled Parking: Individual bays for each disabled employee plus 2 bays or 5% of total capacity whichever is greater;
 - Bicycles (Minimum): 1 space per 450sqm (minimum of 2 spaces); and
 - Motorcycles (Minimum): 1 space per 1000sqm (minimum of 2 spaces).
- 4.3.4 The above parking standards have been applied to the quantum of development and the results of this calculation are set out in **Table 4** which also sets out the proposed parking allocations for each user category. The parking spaces listed below exclude designated van bays and sub-station parking.

Table 4. Parking Standards and Proposed Parking

	SPACES IN LINE WITH PARKING STANDARDS	PROPOSED PARKING
Car	161 (maximum)	144
Disabled	8 (minimum)	19
Bicycle	17 (minimum)	22
Motorcycles	2 (minimum)	8

- 4.3.5 As can be seen, the proposed parking allocation (163 including disabled bays) is in line with Knowsley Borough Council parking standards.

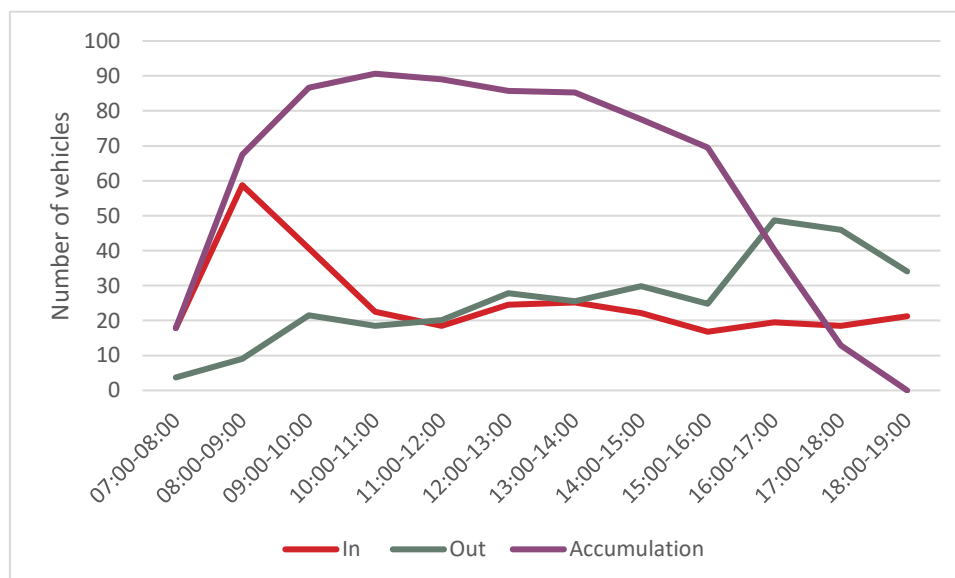
4.4 Parking accumulation analysis

- 4.4.1 It is important to ensure that the parking provision of the proposed development is adequate to cover the demand generated by the proposed development and any reasonable use from the wider site. SYSTRA has undertaken a parking accumulation exercise to determine the maximum forecast number of vehicles that could be expected to be parked during any one hour period; the analysis is explored in further detail in this section.
- 4.4.2 Given the nature of the development, it is anticipated the units will likely follow traditional working patterns, however, the application seeks consent for 24 hour use of the units. This notwithstanding, the typical arrival and departure profile of the land use has been derived from the TRICS database, which will likely overestimate the daytime trips; due to the 24 hour use there will be an element of peak spreading not accounted for in the TRICS analysis. As a result, this analysis represents a robust assessment of the parking demand.
- 4.4.3 The TRICS methodology is consistent with that presented in **Section 5** for the trip generation analysis.

Car

- 4.4.4 **Figure 8** shows the car arrival and departure profile across a weekday. As can be seen, the majority of trips are in the AM and PM peak periods; however, the maximum forecast accumulation of cars in the car park is shown not to exceed 91. This is comfortably below the 144 standard car parking spaces that will be provided, hence no issues associated with parking hesitation are anticipated.

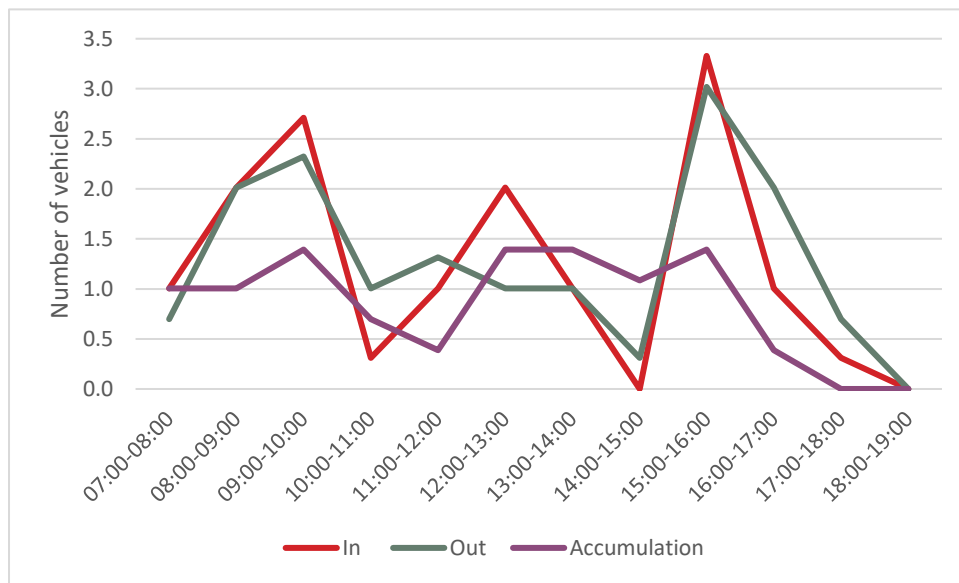
Figure 8. Car Arrival and Departure Profile



Other Goods Vehicle (OGV)

- 4.4.5 **Figure 9** shows the OGV arrival and departure profile across a typical weekday. As can be seen, there are fewer than 7 two-way trips in any given hour and the maximum accumulation is between 1 and 2 across the day. Each of the 24 units has an area directly outside for loading and unloading to take place. For units A1-10 loading / unloading is expected to be completed by parking parallel to the units so access to the remainder of the site is not impeded, as shown in **Appendix B**; this limits the number of units that can be serviced at any one time. This notwithstanding, the predicted number of HGVs is forecast to be low. Further, OGVs are defined by TRICS as all heavy goods vehicles (HGVs), therefore, the nature and axle weight of vehicles will vary and are not necessarily all legal maximum 16.5m articulated vehicles; rather, the number of maximum legal vehicles is anticipated to be low.

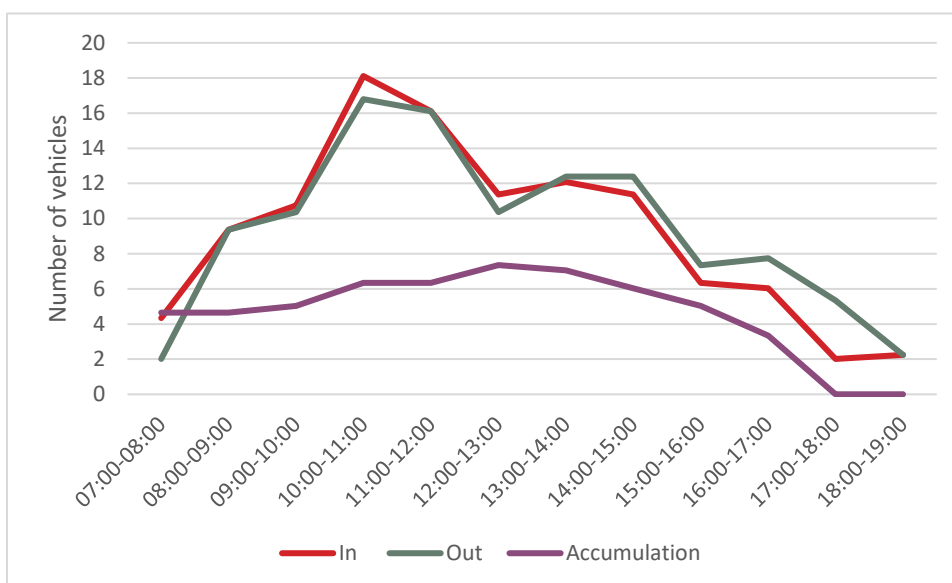
Figure 9. OGV Arrival and Departure Profile



Light Goods Vehicle (LGV)

- 4.4.6 LGVs are defined as vehicles weighing less than 3.5t; the arrival and departure profile for these vehicles is shown in **Figure 10**. As shown, the maximum accumulation of LGVs in the site is fewer than 8 throughout the day. This equates to less than half of the 24 units having LGVs servicing them at any one time.
- 4.4.7 With regards to good vehicles, therefore, the maximum accumulation across the day is forecast to be in the order of 9, albeit it is recognised that the period 10:00 – 11:00 sees 18 goods vehicle arrivals and 17 departures; suggesting the requirement for 18 goods vehicle parking spaces. There is provision for 13 van parking spaces on the site, however, it is appreciated some vehicles will be loading and unloading adjacent to roller shutter doors of each unit (of which there are 24) rather than using the van bays.

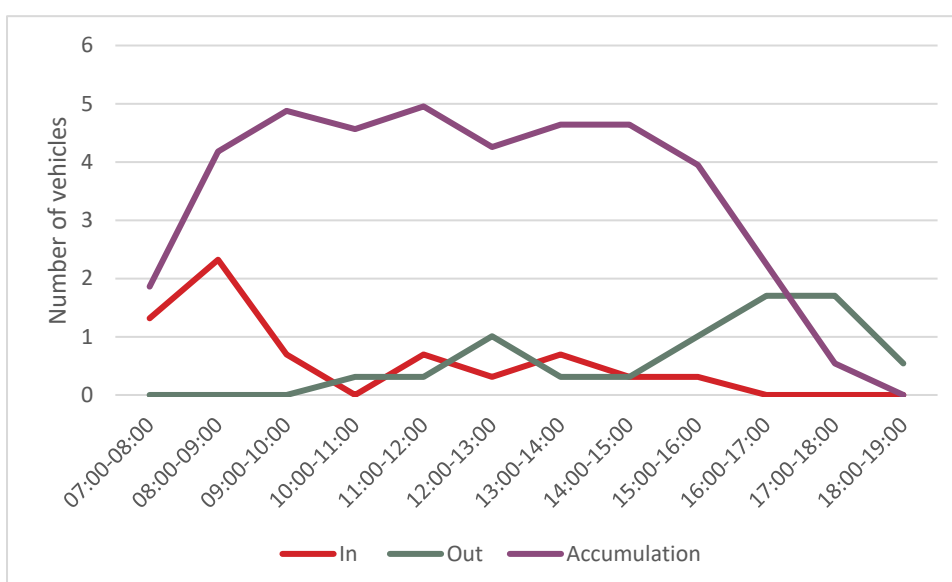
Figure 10. LGV Arrival and Departure Profile



Bicycle

- 4.4.8 **Figure 11** shows the arrival and departure profiles for bicycles, there are forecast to be few cycle trips in each hourly period; however, the implementation of travel planning measures will seek to encourage and increase travel by active modes. The maximum accumulation of bicycles is 5, comfortably below the total parking provision of 22 spaces. With the Travel Plan initiatives this is expected to treble, bringing the maximum accumulation to 15 which is still below the total parking provision. Parking usage and capacity will be monitored at regular intervals and more will be provided if necessary.

Figure 11. Bicycle Arrival and Departure Profile



Motorcycle

- 4.4.9 The data derived from the TRICS database and applied to the quantum of development only forecasts motorcycle trips between 12:00 and 14:00, in these periods less than one trip is forecast. Therefore, it can be concluded that the quantum of motorcycle parking is appropriate for the proposed development.

4.5 Wider site

- 4.5.1 The proposed development will share access points with existing units which are to be retained; therefore, it is important to assess parking provision across the wider site area to ensure adequacy. For this analysis the site has been split into the 4 areas shown in **Figure 12**. The floorspaces and parking for each area are presented in **Table 5**, for clarity the table refers to standard bays only; van, disabled and sub-station parking bays are excluded from the figures. Floorspaces for the existing units to be retained have been estimated using Google Earth, an assumption has been made that none of these units have mezzanine space; the number of spaces for these units has been estimated from a previous site plan.

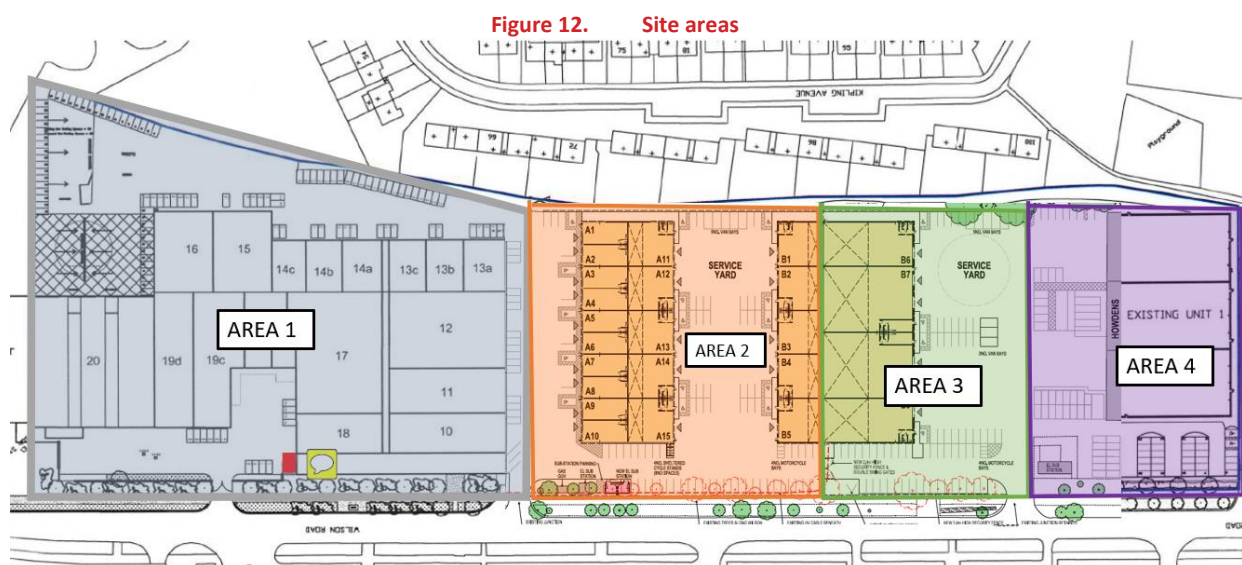


Table 5. Floorspace and parking

	AREA	FLOORSPACE	PARKING STANDARDS (MAXIMUM)	EXISTING PARKING	PROPOSED PARKING
Retained	Area 1	11,500	240	123	
Proposed	Area 2	4,250	89		75
Proposed	Area 3	3,490	73		69
Retained	Area 4	3,500	73	68	
Total		22,740	474	191	144
Total			474	335	
*Numbers may not add due to rounding					

- 4.5.1 As can be seen, the overall parking allocations, when considered across the site, are significantly below the Knowsley Borough Council maximum parking standards.

Maximum accumulation

- 4.5.2 As detailed, to evaluate if the proposed parking spaces are sufficient for the land use SYSTRA has undertaken a car parking accumulation exercise to determine the maximum forecast number of vehicles that could be expected to be parked during any one hour period.
- 4.5.3 In line with the earlier analysis, **Table 6** refers to standard bays only; van, disabled and sub-station parking bays are excluded.

Table 6. Car park accumulation exercise

ACCESS POINT	AREA	EXISTING AND PROPOSED PARKING	MAXIMUM ACCUMULATION	VARIANCE
South	Area 1	123	135	-12
	Area 2	75	50	+25
	Total	198	185	+13
North	Area 3	69	41	+28
	Area 4	68	41	+27
	Total	137	82	+55
Total		335	266	+69
<i>*Numbers may not add due to rounding</i>				

- 4.5.4 As can be seen from the analysis, Area 1 has a greater demand than has capacity, however the excess demand can be readily accommodated by the parking provision in Area 2. As such, when considered in its entirety the site has sufficient parking provision to cater for demand and there will be no requirements for external, on-street parking.
- 4.5.5 As detailed earlier, the application seeks consent for 24 hour use of the units, therefore, an element of peak spreading would be expected that cannot be accounted for in the TRICS analysis. As a result, this analysis is considered a robust approach.
- 4.5.6 It is important to note that this application does not seek to remove any parking from the existing units that are to be retained, and that the proposed development would not impede the operation of the existing retained units, the proposed development would not require parking outside of that being provided as part of this application.

5. TRIP GENERATION

5.1 Introduction

- 5.1.1 This section of the report outlines the forecast trip generation of the proposed development in respect of vehicular trips as well as those by other modes of travel. The appraisal focuses on the weekday morning and evening peak hours which represent the peak traffic generating periods of the proposals as well as the busiest periods on the local highway network.

5.2 Trip Generation

Existing

- 5.2.1 The industry standard TRICS 7.9.1 database has been interrogated to estimate the number of vehicular trips likely to be generated by the extant development at full operation.
- 5.2.2 Following the same methodology as previously applied for the consented 2012 application, a worst-case scenario of the highest of the B use class vehicle trip rates, (Employment – Business Park), have been used.
- 5.2.3 The following selection parameters have been applied:
- 02 B Employment Business Park;
 - Excluding sites in London, Scotland, Wales and Ireland;
 - Between 4,000 and 10,000m² GFA;
 - Monday to Friday surveys;
 - 'Edge of Town' locations; and
 - Gross Floor Area parameter.
- 5.2.4 The resulting output of trip rates have been applied to the extant floor area GIA (5,214sqm) and the results of this calculation are summarised in **Table 7** and the full output report from the TRICS database is included within **Appendix C**. The trips rates have also been applied to the proposed additional development; for clarity, the existing buildings in the red line boundary are to be demolished (5,214sqm) and replaced with 7,740sqm of new development. This equates to a difference of 2,526sqm when compared to the extant.

Table 7. Existing Vehicle Trip Rates

TRIP RATES (PER 100SQM)	AM PEAK HOUR (0800 – 0900)			PM PEAK HOUR (1700 – 1800)		
	In	Out	Two-way	In	Out	Two-Way
B1 Business Park	0.911	0.269	1.180	0.269	0.672	0.941
Existing 5,214sqm	47	14	62	14	35	49
Proposed 7,740sqm	71	21	91	21	52	73
Net increase 2,526sqm	23	7	30	7	17	24
<i>*Numbers may not add due to rounding</i>						

- 5.2.5 **Table 7** suggests that the existing units i.e., those to be redeveloped (5,214sqm), generate approximately 62 two-way vehicle trips in the AM peak period and 49 two-way vehicle trips in the PM peak. The proposed development (7,740sqm) generates approximately 91 two-way trips in the AM peak period and 73 trips in the PM peak period. Therefore, the proposed development, compared with the existing, would generate up to 30 additional two-way trips in the morning peak and an additional 24 two-way trips in the evening peak.

Consented Trip Generation 2012

- 5.2.6 It is considered that the small number of additional trips identified in **Table 5** will be safely accommodated onto the local highway network, particularly when assigned to Wilson Road. Nonetheless, as previously noted, consent was granted in 2012 for the construction of three additional employment units of B1/B2/B8 space (2,253sqm) but was not implemented. The previously consented and proposed development forecast traffic generation are summarised for reference in **Table 8**.

Table 8. Consented Additional Vehicle Trips

	AM PEAK HOUR (0800 – 0900)			PM PEAK HOUR (1700 – 1800)		
	In	Out	Two-way	In	Out	Two-Way
Existing trips	47	14	62	14	35	49
Consented Additional Trips	40	7	47	5	33	38
Total	87	21	109	19	68	87
Proposed 7,740sqm	71	21	91	21	52	73
Variance	-17	0	-17	+2	-16	-14
<i>*Numbers may not add due to rounding</i>						

5.2.7 As can be seen from **Table 8**, it is forecast that there would be fewer additional trips associated with the proposed 2022 development compared with that previously consented in 2012.

5.3 Trip Distribution

5.3.1 Notwithstanding **Table 8**, for completeness, the additional trips associated with the proposed development has been distributed and assigned onto the local highway network as follows.

5.3.2 The 2012 application referred to Journey to Work data, from the 2011 Census, to determine a reasonable trip distribution; hence the same methodology is employed for the purposes of the Transport Statement.

5.3.3 The Knowsley 015 MSOA has been selected as the place of work and all MSOA's in England and Wales were selected as the place of origin. Based upon this methodology, traffic has been assigned to the most direct routes based on the Google maps routing software.

5.3.4 Within the immediate vicinity of the site, it is estimated that 64% of traffic would route from the north and that 36% of traffic would route from the south. It is assumed that this distribution would be replicated for outbound trips.

5.3.5 However, reference has also been made to the 2016 traffic survey data utilised in the Transport Assessment for the consented scheme at Cronton Road, the construction of a discount supermarket.

5.3.6 The survey data includes Wilson Road and suggests that there is a bias for traffic travelling north in the morning peak (61.5%), whilst flows are more balanced in the evening peak (43.5%/56.5% northbound/southbound respectively).

5.3.7 Clearly, the 2011 Census Journey to Work data reflects only commuter trips and, consequently, is not wholly representative of the operational element of the site traffic generation. For the purposes of this report, therefore, a distribution based upon the observed tidal flows on Wilson Road has been applied.

5.3.8 The resulting trip distribution is set out in **Table 9**.

Table 9. Proposed Trip Distribution

	AM	PM
Northbound (towards Huyton)	61.5%	43.5%
Southbound (towards Wilson Road / A5080 Cronton Road junction)	38.5%	56.5%

5.4 Trip Assignment

5.4.1 The trip distribution has been applied to the additional vehicle trips and the results are shown in **Table 10**. As can be seen, the proposed development will result in 14 trips arriving from the north and 9 trips arriving from the south in the AM peak hour. In the PM peak hour 10 departures are forecast to the south, with 7 departing to the north. It is considered that this small number of trips will be safely accommodated on the local highway network, in particular because the majority of these trips are currently on the network as a result of the existing site.

Table 10. Proposed Additional Trip Assignment

	AM PEAK HOUR (0800 – 0900)		PM PEAK HOUR (1700 – 1800)	
	Arrival	Departure	Arrival	Departure
North (from / towards Huyton)	14	4	3	7
South (from / towards Wilson Road / A5080 Cronton Road junction)	9	3	4	10

6. NEARBY DEVELOPMENT

6.1 35 Wilson Road (22/00284/OUT)

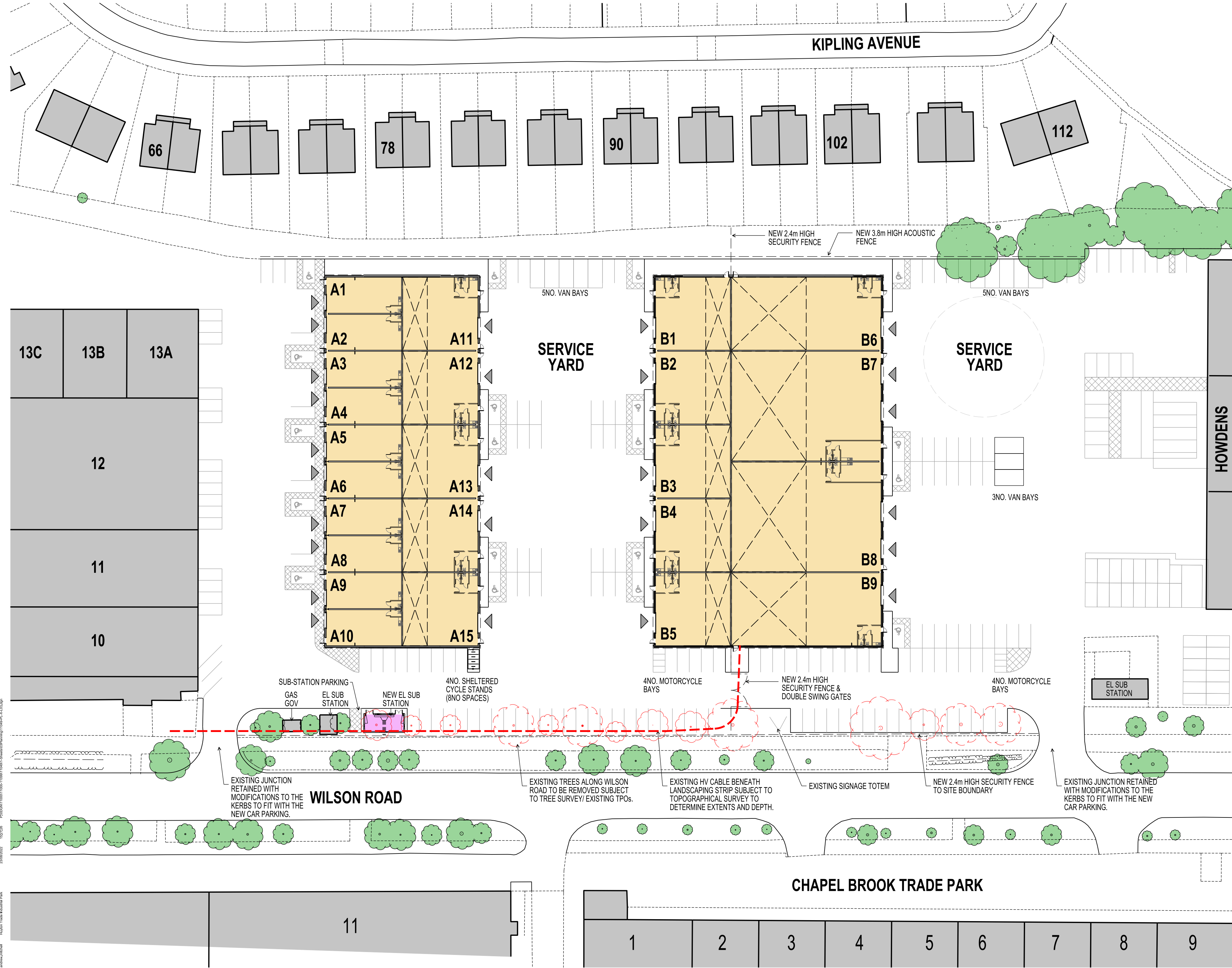
- 6.1.1 SYSTRA is aware of the planning application at 35 Wilson Road, Huyton which is awaiting decision and seeks outline consent for:
“Demolition of existing buildings and outline application for the erection of a logistics warehouse (use class b8) - approval sought for access (appearance, layout, landscaping and scale reserved for future approval)”
- 6.1.2 The development proposals comprise of 19,116sqm of B8 floor area with access taken from Wilson Road. The Transport Assessment for this application concludes that the number of trips generated by the proposed development will have a nominal impact on the operation of the local highway network.
- 6.1.3 SYSTRA would note that the associated operational assessment is limited to a review of the site access only; it can be reasonably concluded, therefore, that the need for further assessment was not identified at the Scoping Stage and therefore that the Council is content with the extents of the assessment, acknowledging the scale of development. It is also reasonable to conclude therefore that the additional 30 two-way trips identified here, associated with the DDML application, can be readily accommodated. Hence, it is evident that there are no significant cumulative issues arising as a result of the proposed development and the nearby application (22/00284/OUT).

7. SUMMARY

- 7.1.1 The planning application seeks consent for the demolition of existing buildings which total 5,214sqm GIA, and the construction of 24 B2/B8 units ranging from 115 sqm to 1,048 sqm with an overall floorspace of 7,740sqm; hence the development proposals comprise of an additional 2,526sqm floorspace when considered relative to the extant land use, inclusive of a mezzanine and racking allowance. The application site is currently a brownfield site to the south of Wilson Road.
- 7.1.2 Access to the site will be maintained via two points off Wilson Road. Access to units A1-A15 and B1-5 will be via the southern access and units B6-B9 will be via the northern access and there is no intention to provide a through route. Importantly, access to the retained units will be maintained.
- 7.1.3 The layout of the junctions to will be retained albeit with modifications to the kerb line to accommodate a revised car parking arrangements. In this regard, a swept path analysis has been undertaken to ensure that a 16.5m articulated vehicle can safely manoeuvre around the site in a forward gear, albeit it is envisaged that the majority of deliveries will be via smaller rigid vehicles. Nonetheless, in order to facilitate unencumbered access, an Operational Management Plan will be drawn up and implemented. Importantly, the proposed development will not impede the operation of the existing units.
- 7.1.4 With regards to road safety, as the development will utilise existing access points, these should already be appropriate and acceptable to the Council. Also an assessment of Crashmap, alongside the investigation of the collision analysis undertaken for the Coppice Lane application, has identified that there is no obvious road safety issue on Wilson Road that would be exacerbated by the limited additional development.
- 7.1.5 The application site also benefits from being in a sustainable location on an allocated employment site. There are numerous opportunities for employees to utilise public transport, namely frequent bus services, or to utilise active modes of travel such as walking and cycling. The brown field site is therefore considered to be sustainable in the context of NPPF and local policies.
- 7.1.6 Further, planning consent was granted in 2012 for the development of an additional three industrial units of B1/B2/B8 space (2,253qm), albeit this was never implemented and the consent has lapsed. Nonetheless, taking into account the extant use and the previously consented application, a total area 7,467sqm would have been approved. Ultimately, therefore, the current application seeks to provide similar quantum of floor space as that previously consented, a difference of just 273sqm.
- 7.1.7 The parking accumulation analysis forecasts that there is sufficient parking across the wider site to accommodate the parking demand from the proposed development and the existing units which are to be retained.
- 7.1.8 SYSTRA is aware of the nearby planning application for B8 uses at 35 Wilson Road, Huyton, and does not anticipate any significant cumulative issues arising as a result of this proposed development and the nearby application (22/00284/OUT).
- 7.1.9 As presented in **Table 7**, it is forecast that there would be fewer additional trips associated with the proposed development when compared to the previously consented additional trips associated with the 2012 development; 17 fewer two-way vehicle trips in the morning peak and 14 fewer two-way vehicle trips in the evening peak.

- 7.1.10 Considering the 2022 application in isolation, there is forecast to be 30 additional two-way vehicle trips in the morning peak and 24 two-way additional two-way vehicle trips in the evening peak, when compared with the extant use. Given this, the impact of the proposed development is not considered to be material or severe and, therefore, it is reasonable to conclude that that the application is consistent with the central tenets of NPPF and there are no substantive highway reasons why it should not be granted planning consent.

APPENDIX A - SITE DRAWINGS



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SITE SPECIFIC HAZARDS

IN ACCORDANCE WITH THE REQUIREMENTS OF THE CDM REGULATIONS 2015 THE FOLLOWING SIGNIFICANT RESIDUAL HAZARDS HAVE NOT BEEN DESIGNED OUT OF THIS PROJECT AND MUST BE TAKEN INTO CONSIDERATION BY CONTRACTORS PLANNING TO UNDERTAKE THE WORKS SHOWN ON THIS DRAWING:

SCALE 1:500

0m 5 10 15 20 25 30

GROSS INTERNAL AREA SCHEDULE (sq.ft/sq.m)			
UNIT	GROUND	MEZZANINE	TOTAL
A1	1,237.5 / 115	N/A	1,237.5 / 115
A2	1,237.5 / 115	N/A	1,237.5 / 115
A3	1,237.5 / 115	N/A	1,237.5 / 115
A4	1,237.5 / 115	N/A	1,237.5 / 115
A5	1,237.5 / 115	N/A	1,237.5 / 115
A6	1,237.5 / 115	N/A	1,237.5 / 115
A7	1,237.5 / 115	N/A	1,237.5 / 115
A8	1,237.5 / 115	N/A	1,237.5 / 115
A9	1,237.5 / 115	N/A	1,237.5 / 115
A10	1,237.5 / 115	N/A	1,237.5 / 115
A11	2,525 / 234	828 / 77	3,353 / 311
A12	2,525 / 234	828 / 77	3,353 / 311
A13	2,525 / 234	828 / 77	3,353 / 311
A14	2,525 / 234	828 / 77	3,353 / 311
A15	2,525 / 234	828 / 77	3,353 / 311
B1	2,500 / 232	828 / 77	3,328 / 309
B2	2,500 / 232	828 / 77	3,328 / 309
B3	2,500 / 232	828 / 77	3,328 / 309
B4	2,500 / 232	828 / 77	3,328 / 309
B5	2,500 / 232	828 / 77	3,328 / 309
B6	5,000 / 465	2,500 / 232	7,500 / 697
B7	7,500 / 697	3,778 / 351	11,278 / 1,048
B8	7,500 / 697	3,778 / 351	11,278 / 1,048
B9	5,000 / 465	2,500 / 232	7,500 / 697
TOTAL	62,500 / 5,804	20,836 / 1,936	83,336 / 7,740

PARKING SCHEDULE	
STANDARD BAYS	144
ACCESSIBLE BAYS	19
VAN BAYS	13
SP NETWORKS PARKING SPACE	1
TOTAL	177
CYCLE SPACES (INTERNAL)	14
CYCLE SPACES (EXTERNAL)	8
TOTAL	22
MOTORCYCLE SPACES	8

E 23.07.22 BLOCK A UPDATED AM
D 08.07.22 EXISTING CAR PARKING AMENDED. CMP
C 07.07.22 HIGHWAYS ACCESS AMENDED. CMP
B 22.06.22 SUB-STATION ADDED AM
A 14.06.22 PROPOSED PLANS & ACOUSTIC FENCE AJP
UPDATED

REV.	DATE	NOTES	INIT.

CLIENT / PROJECT

DERWENT ESTATES

HUYTON INDUSTRIAL ESTATE, LIVERPOOL

DRAWING TITLE

PROPOSED SITE PLAN

STATUS

PLANNING

DATE	DRAWN	SCALE @ A2
24.05.22	DB	1:500

PROJECT NUMBER	STAGE	UNIT / BLOCK	TYPE & NUMBER	REVISION LETTER
11049	PL	X	L03	E

DRAWING NO.

Site Location Plans	L	GA Plans	P	Elevations	E
Sections	S	Details	D	Prefix Colour	C

THE RATCLIFFE GROVES PARTNERSHIP

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105 MANCHESTER ROAD

BURY LANCASHIRE BL9 0TD

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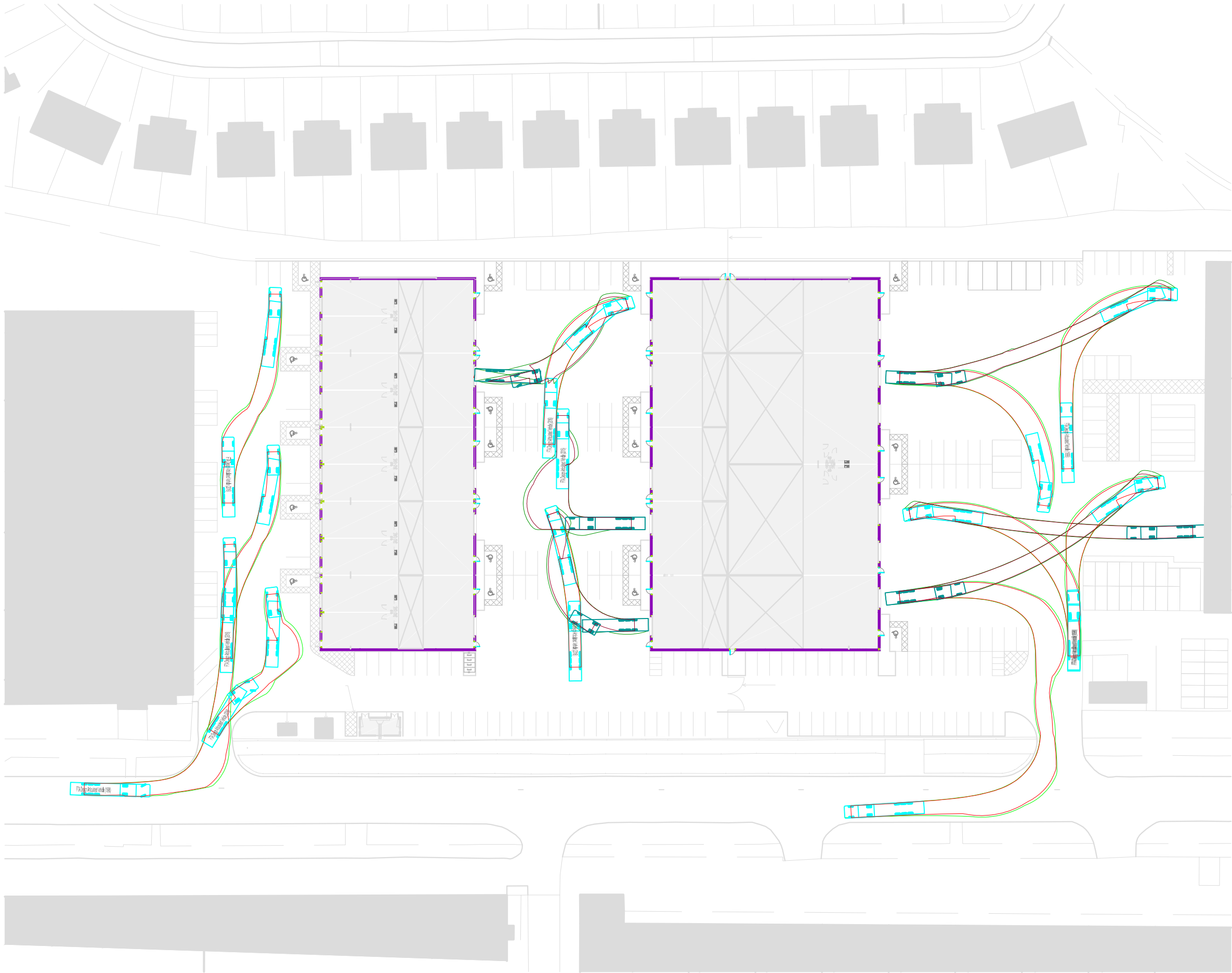
LONDON

19 BEDFORD ROW

LONDON WC1R 4EB

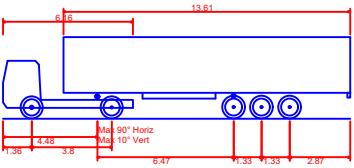
T. 020 7600 6666 E. london@rgp.co.uk

APPENDIX B – SWEPT PATH ANALYSIS



NOTES

- 1. Do not scale from this drawing.
- 2. All dimensions are in metres unless otherwise stated.



FTA Design Articulated Vehicle (2016)
Overall Length 13.51m
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 6.600m

Rev.	Date	Revision details	Drawn	Checked	Approved

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Milburn House,
Dean Street,
Newcastle upon Tyne,
NE1 1LE

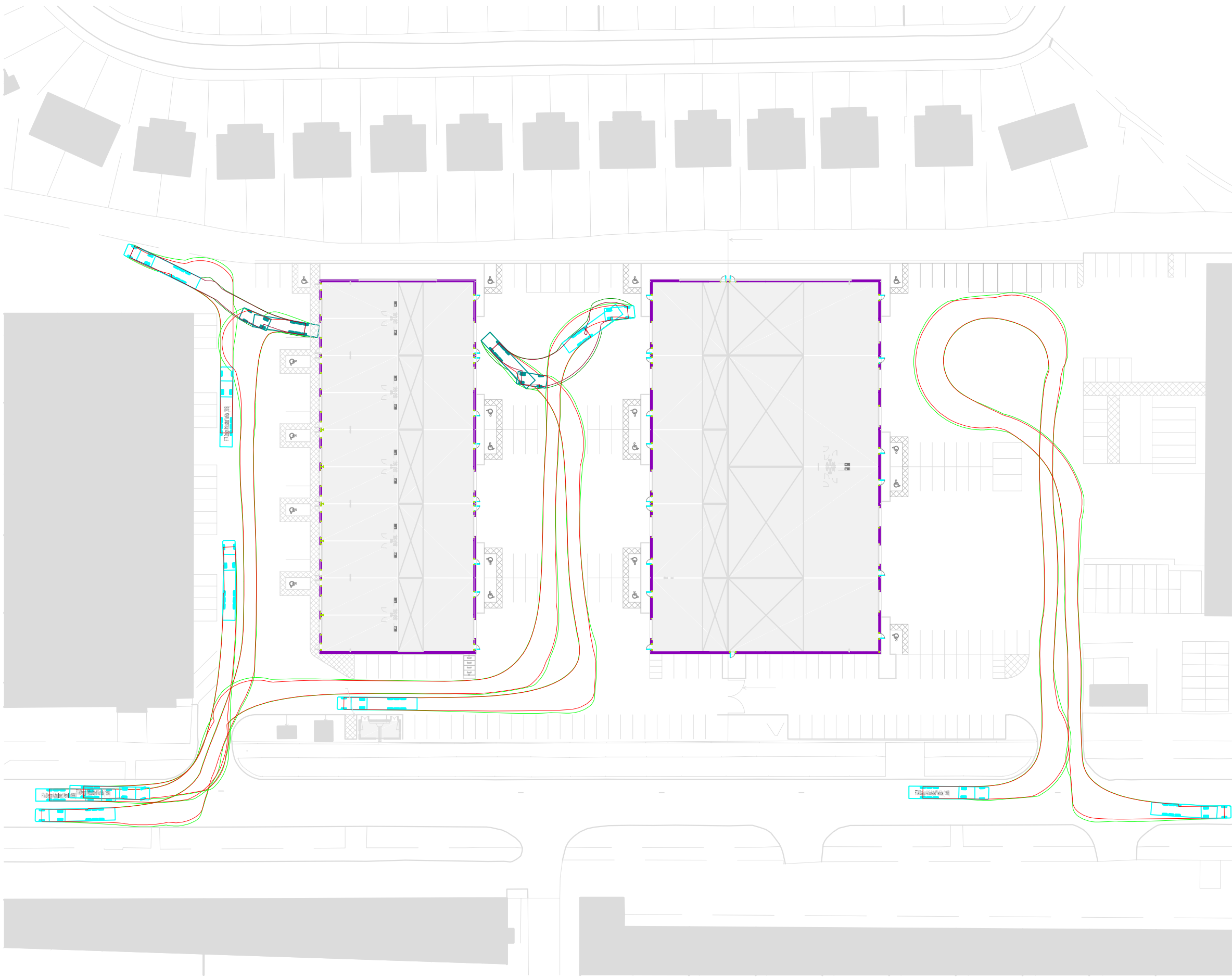
T 0191 249 3816
E uk_newcastle@systra.com

Client
DERWENT ESTATES

Project
HUYTON INDUSTRIAL ESTATE
LIVERPOOL

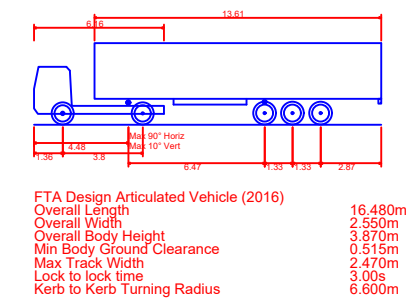
Title
SWEEP PATH ANALYSIS
OPTION 2
SHEET 1 OF 3

Drawn MB	Checked JB	Approved TD
Original dtp. size A3	Date 26.08.22	Scale NTS
Drawing Status INFORMATION	Drawing Number 20E53-SK-SPA-01	Rev. P01



NOTES

- 1. Do not scale from this drawing.
- 2. All dimensions are in metres unless otherwise stated.



Rev.	Date	Revision details	Drawn	Checked	Approved

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Client
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HUYTON INDUSTRIAL ESTATE
LIVERPOOL

Title
SWEEP PATH ANALYSIS
OPTION 2
SHEET 2 OF 3

Drawn MB	Checked JB	Approved TD
Original dtp. size A3	Date 26.08.22	Scale NTS
Drawing Status INFORMATION	Drawing Number 20E53-SK-SPA-02	Rev. P01

APPENDIX C – TRICS OUTPUTS

Huyton Trade Park	
Huyton Trade Park Transport Statement	GB01T20E53.2PROJ.11020624
Transport Statement	21/10/2022

Calculation Reference: AUDIT-700703-220706-0708

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : B - BUSINESS PARK
 TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	1 days
	WG WOKINGHAM	1 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	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: 4083 to 9200 (units: sqm)
 Range Selected by User: 4000 to 10000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 26/06/18

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

Selected survey days:

Wednesday	1 days
Thursday	1 days
Friday	2 days

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

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town	4
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This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	2
Development Zone	1
No Sub Category	1

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

Secondary Filtering selection:

Use Class:

Not Known 4 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:

5,001 to 10,000	1 days
10,001 to 15,000	1 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days

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

Population within 5 miles:

25,001 to 50,000	1 days
125,001 to 250,000	2 days
250,001 to 500,000	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	3 days

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

Travel Plan:

Yes	1 days
No	3 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	4 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	EX-02-B-02 WYNCOLLS ROAD COLCHESTER SEVERALLS INDUSTRIAL PK Edge of Town Industrial Zone Total Gross floor area: 4083 sqm Survey date: FRIDAY 18/05/18	BUSINESS PARK	ESSEX	Survey Type: MANUAL
2	LN-02-B-02 CARDINAL CLOSE LINCOLN Edge of Town Industrial Zone Total Gross floor area: 5000 sqm Survey date: THURSDAY 25/06/15	BUSINESS PARK	LINCOLNSHIRE	Survey Type: MANUAL
3	WG-02-B-02 WHARFEDALE ROAD READING WINNERSH Edge of Town Development Zone Total Gross floor area: 4775 sqm Survey date: FRIDAY 20/11/15	BUSINESS PARK	WOKINGHAM	Survey Type: MANUAL
4	WY-02-B-02 ARMITAGE BRIDGE HUDDERSFIELD Edge of Town No Sub Category Total Gross floor area: 9200 sqm Survey date: WEDNESDAY 23/04/14	BUSINESS PARK	WEST YORKSHIRE	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/B - BUSINESS PARK
TOTAL VEHICLES
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	5765	0.299	4	5765	0.082	4	5765	0.381
08:00 - 09:00	4	5765	0.911	4	5765	0.269	4	5765	1.180
09:00 - 10:00	4	5765	0.724	4	5765	0.460	4	5765	1.184
10:00 - 11:00	4	5765	0.542	4	5765	0.486	4	5765	1.028
11:00 - 12:00	4	5765	0.464	4	5765	0.486	4	5765	0.950
12:00 - 13:00	4	5765	0.494	4	5765	0.512	4	5765	1.006
13:00 - 14:00	4	5765	0.494	4	5765	0.512	4	5765	1.006
14:00 - 15:00	4	5765	0.434	4	5765	0.551	4	5765	0.985
15:00 - 16:00	4	5765	0.356	4	5765	0.468	4	5765	0.824
16:00 - 17:00	4	5765	0.343	4	5765	0.755	4	5765	1.098
17:00 - 18:00	4	5765	0.269	4	5765	0.672	4	5765	0.941
18:00 - 19:00	3	4619	0.303	3	4619	0.469	3	4619	0.772
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.633			5.722			11.355

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:	4083 - 9200 (units: sqm)
Survey date date range:	01/01/13 - 26/06/18
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. 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/B - BUSINESS PARK
TAXIS
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									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
08:00 - 09:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
09:00 - 10:00	4	5765	0.017	4	5765	0.017	4	5765	0.034
10:00 - 11:00	4	5765	0.013	4	5765	0.013	4	5765	0.026
11:00 - 12:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
12:00 - 13:00	4	5765	0.000	4	5765	0.004	4	5765	0.004
13:00 - 14:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
14:00 - 15:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
15:00 - 16:00	4	5765	0.009	4	5765	0.009	4	5765	0.018
16:00 - 17:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
17:00 - 18:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
18:00 - 19:00	3	4619	0.000	3	4619	0.000	3	4619	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.039			0.043			0.082

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/B - BUSINESS PARK
 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									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	5765	0.013	4	5765	0.009	4	5765	0.022
08:00 - 09:00	4	5765	0.026	4	5765	0.026	4	5765	0.052
09:00 - 10:00	4	5765	0.035	4	5765	0.030	4	5765	0.065
10:00 - 11:00	4	5765	0.004	4	5765	0.013	4	5765	0.017
11:00 - 12:00	4	5765	0.013	4	5765	0.017	4	5765	0.030
12:00 - 13:00	4	5765	0.026	4	5765	0.013	4	5765	0.039
13:00 - 14:00	4	5765	0.013	4	5765	0.013	4	5765	0.026
14:00 - 15:00	4	5765	0.000	4	5765	0.004	4	5765	0.004
15:00 - 16:00	4	5765	0.043	4	5765	0.039	4	5765	0.082
16:00 - 17:00	4	5765	0.013	4	5765	0.026	4	5765	0.039
17:00 - 18:00	4	5765	0.004	4	5765	0.009	4	5765	0.013
18:00 - 19:00	3	4619	0.000	3	4619	0.000	3	4619	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.190			0.199			0.389

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/B - BUSINESS PARK
 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									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
08:00 - 09:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
09:00 - 10:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
10:00 - 11:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
11:00 - 12:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
12:00 - 13:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
13:00 - 14:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
14:00 - 15:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
15:00 - 16:00	4	5765	0.004	4	5765	0.004	4	5765	0.008
16:00 - 17:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
17:00 - 18:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
18:00 - 19:00	3	4619	0.000	3	4619	0.000	3	4619	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.004			0.004			0.008

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/B - BUSINESS PARK
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									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	5765	0.017	4	5765	0.000	4	5765	0.017
08:00 - 09:00	4	5765	0.030	4	5765	0.000	4	5765	0.030
09:00 - 10:00	4	5765	0.009	4	5765	0.000	4	5765	0.009
10:00 - 11:00	4	5765	0.000	4	5765	0.004	4	5765	0.004
11:00 - 12:00	4	5765	0.009	4	5765	0.004	4	5765	0.013
12:00 - 13:00	4	5765	0.004	4	5765	0.013	4	5765	0.017
13:00 - 14:00	4	5765	0.009	4	5765	0.004	4	5765	0.013
14:00 - 15:00	4	5765	0.004	4	5765	0.004	4	5765	0.008
15:00 - 16:00	4	5765	0.004	4	5765	0.013	4	5765	0.017
16:00 - 17:00	4	5765	0.000	4	5765	0.022	4	5765	0.022
17:00 - 18:00	4	5765	0.000	4	5765	0.022	4	5765	0.022
18:00 - 19:00	3	4619	0.000	3	4619	0.007	3	4619	0.007
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.086			0.093			0.179

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/B - BUSINESS PARK
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									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	5765	0.230	4	5765	0.048	4	5765	0.278
08:00 - 09:00	4	5765	0.759	4	5765	0.117	4	5765	0.876
09:00 - 10:00	4	5765	0.525	4	5765	0.278	4	5765	0.803
10:00 - 11:00	4	5765	0.291	4	5765	0.239	4	5765	0.530
11:00 - 12:00	4	5765	0.239	4	5765	0.260	4	5765	0.499
12:00 - 13:00	4	5765	0.317	4	5765	0.360	4	5765	0.677
13:00 - 14:00	4	5765	0.325	4	5765	0.330	4	5765	0.655
14:00 - 15:00	4	5765	0.286	4	5765	0.386	4	5765	0.672
15:00 - 16:00	4	5765	0.217	4	5765	0.321	4	5765	0.538
16:00 - 17:00	4	5765	0.252	4	5765	0.629	4	5765	0.881
17:00 - 18:00	4	5765	0.239	4	5765	0.594	4	5765	0.833
18:00 - 19:00	3	4619	0.274	3	4619	0.440	3	4619	0.714
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.954			4.002			7.956

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/B - BUSINESS PARK
 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									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	5765	0.056	4	5765	0.026	4	5765	0.082
08:00 - 09:00	4	5765	0.121	4	5765	0.121	4	5765	0.242
09:00 - 10:00	4	5765	0.139	4	5765	0.134	4	5765	0.273
10:00 - 11:00	4	5765	0.234	4	5765	0.217	4	5765	0.451
11:00 - 12:00	4	5765	0.208	4	5765	0.208	4	5765	0.416
12:00 - 13:00	4	5765	0.147	4	5765	0.134	4	5765	0.281
13:00 - 14:00	4	5765	0.156	4	5765	0.160	4	5765	0.316
14:00 - 15:00	4	5765	0.147	4	5765	0.160	4	5765	0.307
15:00 - 16:00	4	5765	0.082	4	5765	0.095	4	5765	0.177
16:00 - 17:00	4	5765	0.078	4	5765	0.100	4	5765	0.178
17:00 - 18:00	4	5765	0.026	4	5765	0.069	4	5765	0.095
18:00 - 19:00	3	4619	0.029	3	4619	0.029	3	4619	0.058
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.423			1.453			2.876

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/B - BUSINESS PARK
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									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
08:00 - 09:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
09:00 - 10:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
10:00 - 11:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
11:00 - 12:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
12:00 - 13:00	4	5765	0.004	4	5765	0.000	4	5765	0.004
13:00 - 14:00	4	5765	0.000	4	5765	0.004	4	5765	0.004
14:00 - 15:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
15:00 - 16:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
16:00 - 17:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
17:00 - 18:00	4	5765	0.000	4	5765	0.000	4	5765	0.000
18:00 - 19:00	3	4619	0.000	3	4619	0.000	3	4619	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.004			0.004			0.008

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.

SYSTRA provides advice on transport, to central, regional and local government, agencies, developers, operators and financiers.

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