

Appendix 11.1

Transport Assessment

An architectural rendering of modern buildings, featuring a mix of low-rise and high-rise structures with large windows and balconies. The entire image is overlaid with a semi-transparent blue filter. The sky is filled with soft, white clouds. In the foreground, there are silhouettes of trees and a few small figures of people, suggesting a public space or park area.

June 2023
Transport Assessment v1.1

Upper Brook Street Masterplan (McLaren / Kadans)

Job Title

Upper Brook Street Masterplan-
McLaren/ Kadans

Report Type

Transport Assessment v1.1

Prepared for

McLaren Property Ltd. and Kadans
Science Partner 8 UK Ltd.

Date

31 May 2023

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Appendix G: TRICS Output

Transport Assessment v1.1

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Civic Job No. 2584

Issued Version 1.1 issued 31 May 2023

Revised Version 1.0 issued 26 May 2023

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1. Introduction

This report has been prepared by Civic Engineers on behalf of McLaren Property Ltd. and Kadans Science Partner 8 UK Ltd., to support a full planning application for a Sci-Tech and purpose-built student accommodation scheme (PBSA) scheme (hereafter referred to as the 'Proposed Development') on Phase One of the Upper Brook Street Masterplan (hereafter referred to as the 'Site'). This scheme would bring forward development on a Previously Developed site which is earmarked for commercial and PBSA uses in the Oxford Road Corridor SRFG 2019. This application has been accompanied by a suite of technical documents, reports and plans, including this Transport Assessment. A Framework Travel Plan is submitted under separate cover.

The purpose of this report is to provide an assessment of the transportation impacts of the development proposals and to identify any mitigation that may be required. The intention is to provide the necessary information to assist Manchester City Council (MCC) as the Local Planning Authority and Local Highway Authority, in determining the planning application.

1.1 Report Content

This report includes a review of the existing transport networks around the site (Section 2) and a summary of the national and local transport planning policy (Section 3). It goes on to describe the proposed development in detail (Section 4) and assess the traffic impact compared to the extant uses on site (Section 5). Section 6 includes the multi-modal trip generation of the development.

This Transport Assessment is accompanied by a Framework Travel Plan, which is submitted as a separate document, and which will promote the use of sustainable forms of transport to residents and staff of the proposed development.

1.2 Liaison with Manchester City Council Highway Officers and TfGM

Civic Engineers had an introductory meeting with the MCC highway development control officers and TfGM officers on 6 December 2022 at which the emerging strategies for the site and the work in progress development proposals were discussed. Minutes from this meeting, and MCC highway officers' acceptance of the minutes as a true record of the meeting is included at Appendix B.

A Transport Assessment Scoping Note was then produced and submitted to MCC and TfGM on 20 February 2023. Feedback was received which is attached at Appendix C. All comments and requests for further studies/evidence have been addressed in Sections 4-6 of this Transport Assessment.

1.3 Liaison with Adjacent Development

Property Alliance Group (PAG) and Moda Living are developing the land immediately north of this development site, with their site extending north to Grosvenor Street, and also bound by Upper Brook Street to the west and Kincardine Road to the east. The project team for the proposed development are in discussion with the PAG/Moda Living project team to discuss interface with the schemes, and this is reflected in this Transport Assessment, particularly in Sections 2.4, 2.7 and 4.1.

2. Existing Site and Transport Context

2.1 Site Location and Existing Land Use

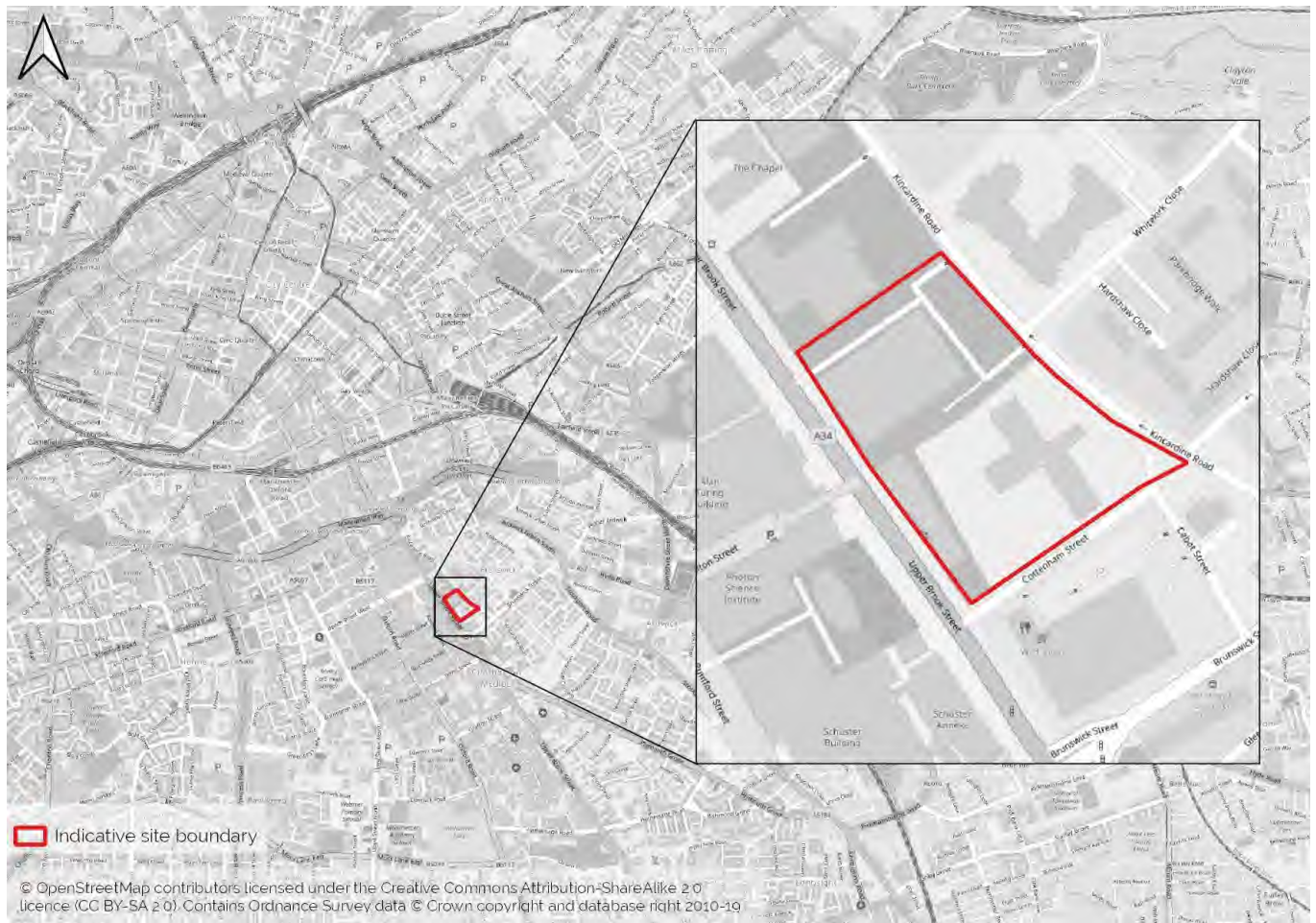
The site is located in Manchester, around 1km to the south of the city centre.

The Site extends to 1.084 hectares (ha) and is partially in use as a temporary paid car park with approximately 90 spaces. The paid car park is located on a section of the Site which was formerly (before 2017) in use as a Citroën car dealership. The remainder of the Site comprises the former Elizabeth Yarwood Court residential complex which closed in June 2021.

The existing land uses surrounding the site are as follows:

- To the north of the Site is a vacant single-storey commercial building (also identified for redevelopment within the Oxford Road Corridor SRF, referred to hereafter as the 'PAG/Moda Living development') and the Grade II* listed 'Former Unitarian Chapel' which now functions as student accommodation.
- To the east of the Site is Kincardine Road; beyond which is a 4 to 6-storey student accommodation building and 2-storey residential dwellings that form a part of the wider Brunswick Estate. The Brunswick Estate is an area currently undergoing extensive urban regeneration.
- To the south of the Site is Cottenham Street; beyond which is the Tai Wu restaurant and W.H. Lung Supermarket.
- To the west of the Site is Upper Brook Street, on the opposite side of which is the University of Manchester's Main Campus, which includes the National Graphene Institute, the Manchester Engineering Campus and the Sir Henry Royce Institute, with buildings ranging from 4-storeys to 10-storeys in height.. The site location is shown in Figure 1.

Figure 1: Site location



2.2 Pedestrian Access

Pedestrian access to the site can be made from the east, south, and west. Upper Brook Street has footways on both sides, adjacent to the site the footway is 2m wide. There is a staggered signal-controlled toucan crossing (pedestrians and cyclists) adjacent to the site on Upper Brook Street, this crossing has dropped kerbs and tactile paving to assist people with limited mobility or sight and people with pushchairs or wheelchairs in crossing the road.

There are dropped kerbs at the junction of Cottenham Street and Upper Brook Street. Cottenham Street has a 2m footway on the north side of the street that extends around 60m from the junction with Upper Brook Street at which point the footway narrows to around 1m and continues for a further 20m before terminating. The south side of Cottenham Street has a 2m footway with dropped kerbs at the vehicle entrance to the building to the south, there are no dropped kerb crossings at Cabot Street to the east.

Kinnaird Road has a 2m footway on the west side of the street south of Whitekirk Close, with an unpaved (grass verge) section around 20m to the north of the vehicle entrance to Elizabeth Yarwood Court. On the east side of the street the footway is separated by the carriageway by an area of landscaping. North of Whitekirk Close, Kinnaird Road has footways on both sides.

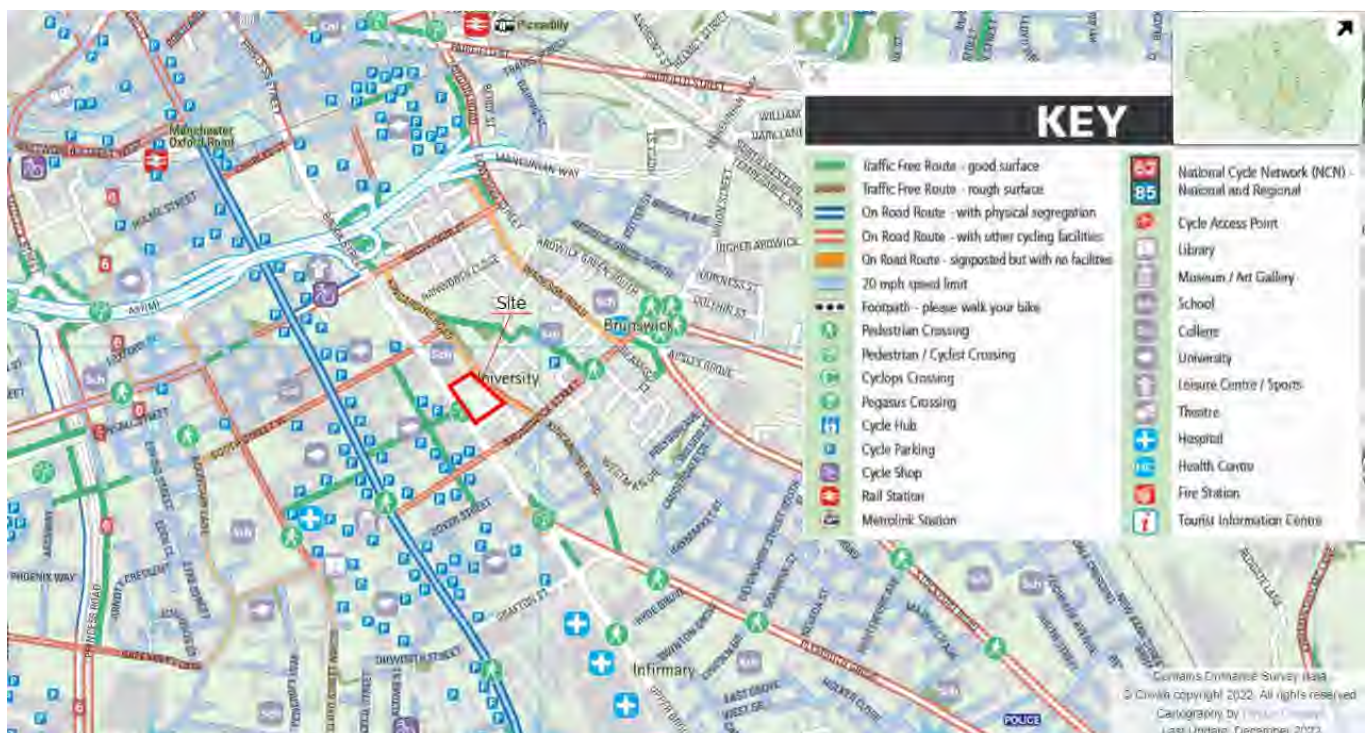
Within the wider area, there are signal controlled crossings on Upper Brook Street at key junctions. To the east of the site there are a network of footways and pedestrian paths through the residential

area. To the west there are a network of pedestrian paths providing connections through The University of Manchester.

2.3 Cycle Access

Cycle access to the site is from Upper Brook Street or Kincardine Road. An extract from the Manchester cycle map is shown in Figure 2, noting that, though this is the most up to date version, some elements have since been updated. For example Brunswick Street between Oxford Road and Upper Brook Street is no longer a carriageway with painted cycle lanes, but is now an off-road route, as detailed below.

Figure 2: Extract from Manchester cycle map (source: https://tfgm.pindarcreative.co.uk/tfgm_interactive_mapping_county_map/?lat=53.48967969477546&lng=-2.2145691001787786)



To the west of the site there are traffic free routes that connect with the on-road segregated route on Oxford Road which provides a route to the city centre to the north or to Rusholme and Withington to the south. Some other streets in the area have on-road routes that have other cycle facilities or are sign posted but with no facilities, like Kincardine Road. Although there are no dedicated cycle facilities on Upper Brook Street, other than crossing points, there are connections to the cycle network nearby.

Changes to Kincardine Road are proposed as part of the PAG/Moda Living development to the north of this development, which will retain cycle connectivity and routing in the area, but with some changes to infrastructure. This is discussed in at the end of Section 2.7 and in Section 4.1.

2.4 Public Transport

The site and surrounding area score an 8 on the Greater Manchester Accessibility Level (GMAL) scale, this is the highest score possible which indicates the area is highly accessible by public transport. What the GMAL score does not consider is the quality of the infrastructure present.

Specifically, the quality of the bus stops and shelters have been considered here. The initial assessment was carried out using google streetview.

The nearest bus stop is the southbound stop on Upper Brook Street north of the junction with Cottenham Street, this stop is served by the number 50 bus which operates five buses per hour to East Didsbury and Salford Quays. The stop has a bus stop flag, a shelter with seating, timetable information, and the kerb is raised to assist with boarding and alighting. The corresponding northbound stop is 150m to the south on Upper Brook Street, south of Brunswick Street. The northbound stop has a bus stop flag and a raised kerb to assist with boarding and alighting, there is no shelter and no seating at this stop.

350m west of the site there are bus stops on Oxford Road, these stops are served by the buses numbered 15, 18, 41, 42/A/B/C, 43, 44, 111, 142, 143, 147, 191, 197, V1, V2.

Manchester Piccadilly Station, Manchester Oxford Road Station and tram stops are all within 1.2km, approx. 15-20 minute walk of the site, and accessible by cycle and connecting bus services.

2.5 Existing Vehicle Access and Parking on Site

The existing vehicle access to the site is from Kincardine Road, via three priority junctions. These can be seen on the existing public highway boundary plan at Appendix D.

South of Whitekirk Close, Kincardine Road is one-way northbound so vehicle access to Elizabeth Yarwood Court needs to be from Brunswick Street. North of Whitekirk Close, Kincardine Road is two-way, meaning the car park currently on site can be accessed from the north or south.

2.6 Local Highway Network

The A34 Upper Brook Street, is a radial route to and from Manchester city centre. Adjacent to the site the carriageway is approximately 15.5m, consisting of two northbound and two southbound lanes and a central median. To the north of the site, the central median is used as a third northbound lane.

Further north the A34 provides a connection with the A57(M) the Manchester ring road and to the south connections can be made with the M56 and M60.

Cottenham Street is a local access road to the south of the site with a carriageway width of around 6m which accommodates two-way traffic and a line of parking on the south side which is for resident permit holders/3-hour free parking.

Kincardine Road is a local access road. South of Whitekirk Close, it has a carriageway width of approximately 7.5m and is for northbound traffic only with a 1.2m contraflow cycle lane that is controlled by a modal filter next. North of Whitekirk Close, the carriageway is approximately 7.5m wide and carries two-way traffic and has resident permit holders/3-hour max pay and display parking on the east side.

PAG/Moda Living Proposals for Kincardine Road and Inchley Road

Changes to Kincardine Road are proposed as part of the PAG/Moda Living development to the north of this development. As part of their proposals, the one-way northbound strategy which currently exists at the south end between Brunswick Street and Whitekirk Close will be continued north to Grosvenor Street, and a new off-road southbound cycleway will be created on the east side of the street. This will ensure that although motor vehicle movements will be restricted to

north-bound only, cycle connectivity will remain the same. This is an important part of complying with LTN 1/20¹. This development will tie into the PAG/Moda Living proposals, as discussed in Section 4.1 under 'Cycle Connectivity on Kincardine Road'.

2.7 On-street Parking and Traffic Regulations

Upper Brook Street has double yellow lines on both sides of the road between Brunswick Street and Inchley Road, the only exceptions being where there are bus stops. No loading is permitted between 7am-7pm.

Cottenham Street has parking on the south side of the street enforced Mon-Fri 8am-6pm for resident permit holders or for 3 hours, no return within 1 hour. For the remainder of the street and Cabot Street, the continuation of Cottenham Street at its eastern end, there are double yellow lines.

Between Brunswick Street and Inchley Road, Kincardine Road has double yellow lines along its western side. On its eastern side there are double yellow lines south of Whitekirk Close where there is a contraflow cycle lane. North of Whitekirk Close, there are parking bays enforced Mon-Fri 8am-6pm for resident permit holders or for 3 hours, no return within 1 hour.

Whitekirk Close has double yellow lines on both sides with the exception of a 17m long bay for parking on the north side near the junction with Kincardine Road, there are no restrictions posted in relation to this bay.

The following streets in the area have double yellow lines along their entire length:

- Hartfield Close
- Sefton Close
- Arkley Street
- Rudcroft Close

Other streets in the area have stretches of double yellow lines, and some areas where parking is permitted for resident permit holders or 3 hour max stay, Mon-Fri 8am-6pm, including:

- Mawson Road
- Skerry Close
- Hanworth Close
- Statham Road
- Stockland Close
- Wadeson Road

¹ Cycle Infrastructure Design, Local Transport Note 1/20, Department for Transport, July 2020. Available online at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/951074/cycle-infrastructure-design-ltn-1-20.pdf (accessed 04.04.2023).

2.8 Off-street Parking Supply

The locations of off-street parking within a 10-minute walk of the site are shown in Figure 3 and listed in Table 1.

Table 1: Nearby off-street car parks

Name	Operator	Capacity
Aquatics Centre Car Park	APCOA Parking (UK) Ltd	420
Circle Square Car Park	NCP	1,018
The University of Manchester – Car Park D	The University of Manchester	965
Total		2,403



Figure 3: Off-street car parking nearby

There are around 2,400 parking spaces distributed in three car parks within a 10-minute walk of the site. More car parking can be found further to the north in the city centre.

2.9 Electric Vehicle Charging Points in the Vicinity

The locations of electric vehicle charge points in the area are shown in Figure 4.

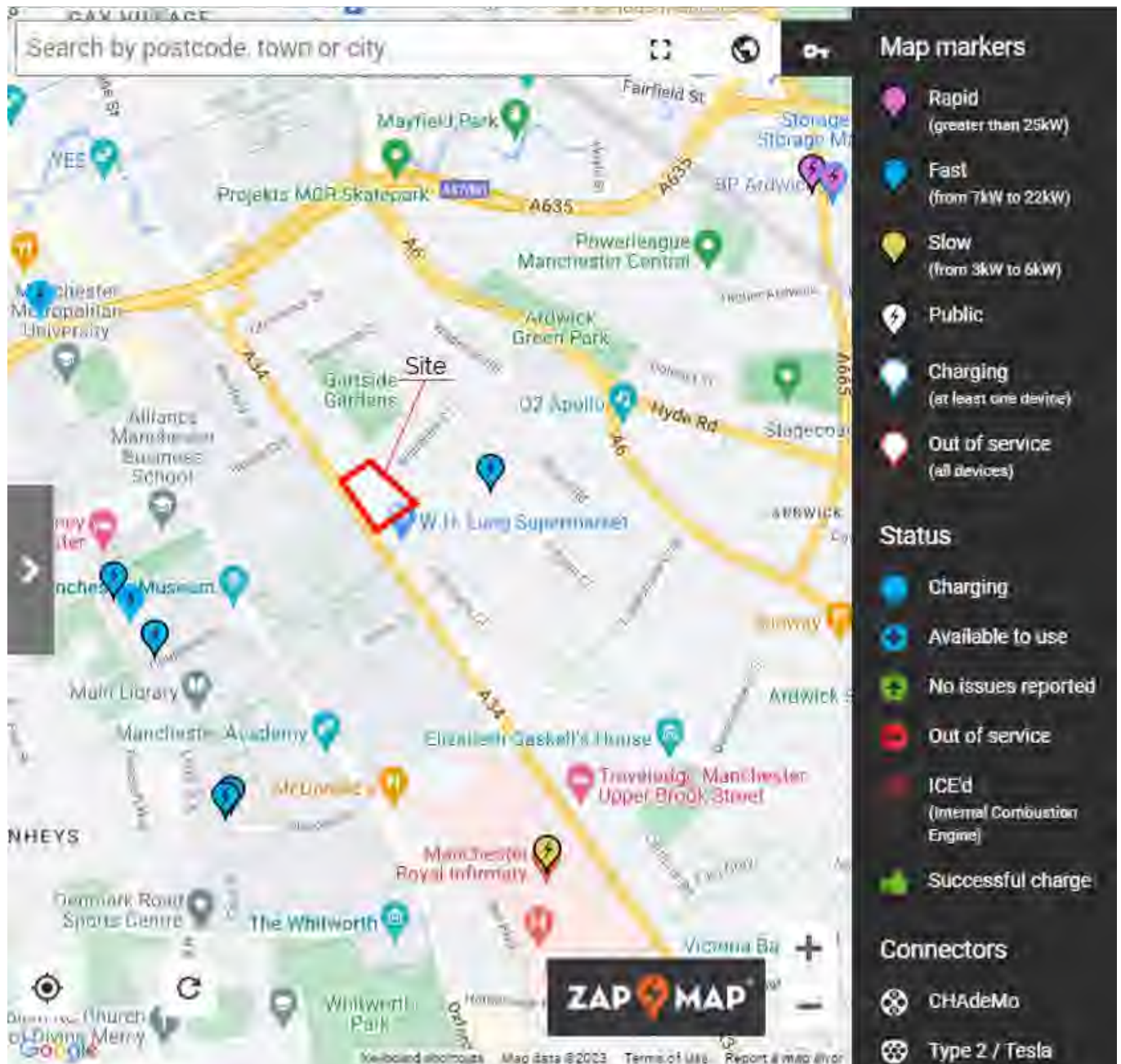


Figure 4: EV charging locations

2.10 Car Club

The nearest car club vehicle to the site is on Samuel Ogden Street in Manchester city centre, around a 950m walk north of the site, accessible on foot, by bus or by cycle.

There are eight other car club locations within a 1,500m walk from the site, these are listed in Table 2 and shown in Figure 5. These are all operated by Enterprise Car Club.

Table 2: Car club vehicles

Location	Vehicle (s)	Distance from site (m)
Samuel Ogden Street	2 cars	950
Harrington Building car park	1 car	1200
John Dalton Tower	1 car	1200
Cambridge Street	1 car, 1 van	1200
Bloom Street NCP	1 car	1200
Manchester Hospitals Q-Park	1 car	1300
Piccadilly Place Q-Park	2 cars	1300
Chepstow Street car park	1 car	1400
Phoenix Way	1 car	1500
Whitworth Street West	1 van	1500
First Street Q-Park	1 car	1500



Figure 5: Car club locations

2.11 Highway Safety

An analysis of collision data using the website www.crashmap.com has been undertaken. Data was examined for road traffic collisions in the vicinity of the site that took place in the 5-year period to 2021, the most recent year from which data is available. These are summarised in Table 3. The total number of incidents have been broken down by severity. In addition, the number of collisions involving pedestrians, cyclists or motorcyclists have been recorded.

Table 3: Road traffic accidents in vicinity of site

Location	Fatal	Serious	Slight	Pedestrian	Cycle	Motorcycle
UBS/Inchley Road junction	0	1	2	0	3	0
UBS between Inchley Road and Brunswick Street	0	0	2	1	0	0
UBS/Brunswick Street junction	0	1	3	1	1	1
Kincardine Road between Inchley Road and Brunswick Street	No accidents reported					

A plan illustrating the location of all the above collisions is shown in Figure 6.

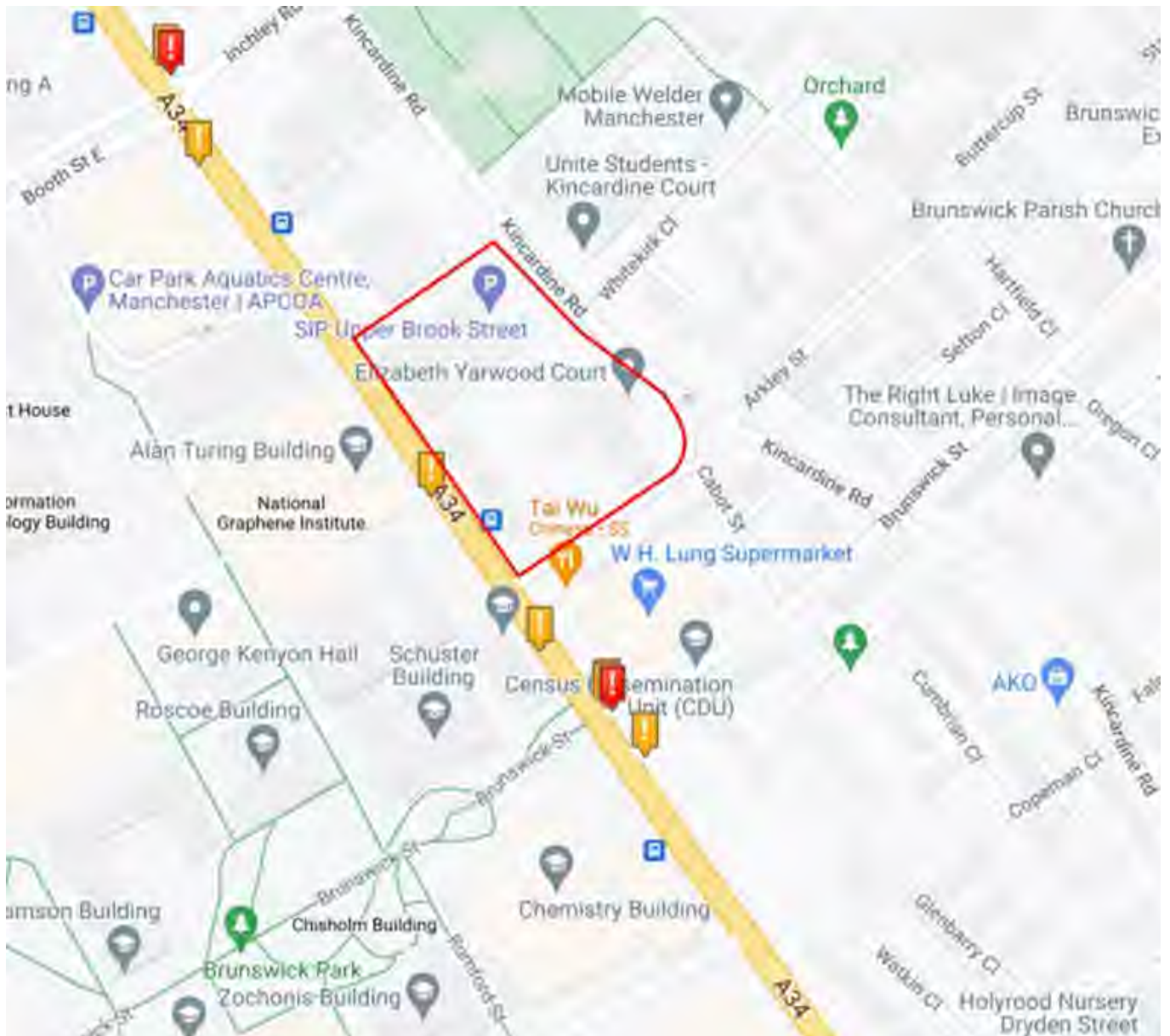


Figure 6: Accident Locations (Orange – Slight, Red – Serious)

There are no particular trends among the collision data that give rise to specific concerns regarding the safety of the highway layout on the roads or junctions directly adjacent to the site.

3. Policy Context

This section of the Transport Assessment will include a review of the following local and national transport policy, along with a review of how the development will accord with policy. The scope of documents reviewed was agreed with TfGM and MCC via the pre-application scoping process (see Section 1.2).

3.1 National Planning Policy Framework

NPPF² was originally published in 2012, consolidating a number of planning documents, setting out the government's planning policies for England and how these are expected to be applied. It provides a framework within which locally prepared plans for housing and other development can be produced. The most recent version was produced in July 2021, and places greater emphasis on beauty, place-making, the environment, sustainable development and underlines the importance of local design codes.

Chapter 9 is focused on promoting sustainable transport, and a summary of key paragraphs is provided below.

Paragraph 104 of the NPPF states that *"Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:*

- a. the potential impacts of development on transport networks can be addressed.*
- b. opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated.*
- c. opportunities to promote walking, cycling and public transport use are identified and pursued.*
- d. the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse¹ effects, and for net environmental gains; and*
- e. patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places."*

Paragraph 105: development should be focused that can be made sustainable, through limiting the need to travel and offering genuine choice of transport modes.

Paragraph 110 states that: *"In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:*

- a. appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location.*
- b. safe and suitable access to the site can be achieved for all users;*

² National Planning Policy Framework, July 2021.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf (Accessed 5 April 2023)

- c. *the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and*
- d. *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.*
- b. Paragraph 111 goes on to say 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.*"

Within this context, applications for development should:

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

All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed."

3.2 The Climate Emergency

The aspiration to reduce car use and car ownership over time is a common thread running through emerging national and local planning policies, with its links to improved local air quality, reduced impact on global climate change, increased activity levels among residents and reduction in conflict between vehicles and pedestrians/cyclists.

In July 2019 Manchester City Council announced a Climate Emergency, with the target for Manchester to become a zero carbon city by 2038. Manchester has a Climate Change Action Plan 2020-25 which sits alongside a citywide framework produced by Manchester Climate Change Partnership.

3.3 Manchester's Core Strategy 2012-2027

The policies within the Core Strategy which are of relevance to this Transport Assessment are set out below.

Policy T 1 Sustainable Transport

To deliver a sustainable, high quality, integrated transport system to encourage modal shift away from car travel to public transport, cycling and walking, to support the needs of residents and businesses and to prepare for carbon free modes of transport, the Council will support proposals that:

- *Improve choice by developing alternatives to the car.*
- *Promote regeneration and economic vitality by relieving traffic congestion and improving access to jobs and services, particularly for those most in need and for those without a car.*
- *Improve access to transport services and facilities in order to enable disabled people and people with mobility impairments to participate fully in public life.*
- *Improve pedestrian routes and the pedestrian environment. Improve and develop further Manchester's cycle network (for example the Manchester Cycleway and the Trans Pennine Trail).*
- *Contribute to improvements to the extent and reliability of the public transport network through safe and attractive waiting and interchange facilities, better priority, improved services and information provision.*
- *Improve and develop appropriate road, rail and water freight transport routes and associated intermodal freight transport facilities in order to assist in the sustainable and efficient movement of goods.*
- *Facilitate modes of transport that reduce carbon emissions e.g. by incorporating charging points for electric vehicles, subject to their appropriate design and location.*
- *Would reduce the negative impacts of road traffic, for example, congestion, air pollution and road accident casualties.*
- *Take account of the needs of road users according to a broad hierarchy consisting of, in order of priority:*
 1. *Pedestrians and disabled people*
 2. *Cyclists, public transport,*
 3. *Commercial access,*
 4. *General off-peak traffic,*
 5. *General peak time traffic.*

Policy T 2 Accessible areas of opportunity and need

The Council will actively manage the pattern of development to ensure that new development:

- *Is located to ensure good access to the City's main economic drivers, including the Regional Centre, the Oxford Road Universities and Hospitals and the Airport and to ensure good national and international connections*

- *Is easily accessible by walking, cycling and public transport; connecting residents to jobs, centres, health, leisure, open space and educational opportunities.*
- *Particular priority will be given to providing all residents access to strategic employment sites including:*
 - *Links between North Manchester residents and key employment locations, including the City Centre, Central Park, Salford Quays and Chadderton Industrial Estate and Trafford Park.*
 - *Links within East Manchester to employment locations, Central Park and Eastlands in particular.*
 - *Links within Central Area between residents and employment, the Corridor in particular and east/west connectivity for residents in Central Area to employment areas in Trafford and East Manchester.*
 - *Maintaining strong links between residential areas in the South and the Regional Centre and improving connectivity with the Airport.*
 - *Ensuring good links between Wythenshawe residents and the Airport and further employment opportunities in Stockport, Trafford and the Regional Centre.*
- *Within the City Centre, provides a level of car parking which reflects the highly accessible nature of the location, as well as the realistic requirements of the users of the development. Elsewhere, all new development should provide appropriate car parking facilities, taking account of the guidance in appendix B, which reflects policy in the Regional Strategy (RS). In all parts of the City proposals should have regard to the need for disabled and cycle parking, in line with appendix B. If the RS is revoked the Council will continue to use these standards when applying this policy. Standards are set for two different area types:*
 - *District Centres*
 - *Areas not within the City Centre or District Centres*
- *The car parking standards are maximums and the cycle and disabled car parking standards are minimums. However, the Council will take the circumstances of each proposal into account to establish what level of parking is appropriate.*
- *Includes proportionate Traffic Impact Assessments and Travel Plans for all major applications and for any proposals where there are likely to be access or transport issues.*

3.4 Greater Manchester Transport Strategy 2040

Adopted in 2017 and updated in 2021, the Greater Manchester Transport Strategy 2040 has the vision 'to make Greater Manchester one of the best places in the world to grow up, get on and grow old'. It sets out how Government funding will be allocated by this devolved authority to address long-term challenges such as a rapidly growing and ageing population, climate change and the need to improve productivity and reduce social inequality in the city region.

It sets the Right Mix vision for 50% of trips to be made by sustainable modes by 2040, with no net increase in motor vehicles.

It highlights the intention to make best use of powers included in the Bus Services Act (as well as GM existing powers) to give effect to the Vision for Bus, and provides an overview of plans to establish Greater Manchester as a modern, pedestrian and cycle-friendly city-region, including through the Bee Network for cycling. Oxford Road Corridor Strategic Regeneration Framework Guidance 2019

The site is within the Oxford Road Corridor Strategic Regeneration Framework area and is identified as having scope for increased density. The framework recognises the importance of Upper Brook Street as a movement corridor, Cottenham Street as an important east to west pedestrian connection, and Kincardine Road as a well-used cycle route.

4. Development Proposals

This section sets out the proposals for the development. It includes response to MCC and TfGM queries received during the pre-application scoping process (see Section 1.2).

The applicants for Phase One, McLaren Property Ltd. and Kadans Science Partner 8 UK Ltd., are applying for full planning permission for the demolition of existing buildings and erection of a single 6 to 9 storey block for Sci-Tech use (Use Class E (g)(iii) and 267sqm of a café/bar (Use Class E (b), and a single 9 to 23 storey block to be used for Purpose Built Student Accommodation (Use Sui Generis), comprising 737 bedrooms in total and 293sqm of community use (Use Class F2 (b) and 80sqm of commercial floorspace (Use Class E) on Phase one of the Upper Brook Street Masterplan.

Landscape proposals and ground floor architect proposals are included at Appendix A.

The Site is identified for redevelopment within the Oxford Road Corridor SRF with mixed commercial uses in-line with the SRF being a priority for the UBS site.

The Proposed Development forms one element of the wider Upper Brook Street Illustrative Masterplan which can be seen within the submitted Supporting Planning Statement.

The masterplan proposals are being brought forward by Kadans Science Partner 8 UK Ltd. and McLaren Property (this application), and Property Alliance Group and Moda Living who are developing on land between this site and Grosvenor Street to the north. The masterplan intends to transform the currently vacant sites, re-establishing their important role in the area by re-introducing permeability, public realm, and active community-facing uses at ground floor. The emerging masterplan includes over 2 acres of new public realm and green spaces, a new public square, as well as a series of high-quality new buildings of varying heights to provide for approximately 700,000ft² of sci-tech accommodation, 1,800 purpose-built student accommodation beds, and 25,000ft² of active ground floor uses.

4.1 Pedestrian and Cycle Access

The elements of pedestrian and cycle access at the development are discussed in the following sections and summarised on Figure 7.

Figure 7: Pedestrian and Cycle Access Strategy



Thorburn Walk

The building entrances, public realm and pedestrian routes will integrate the buildings with the surrounding areas, both towards the university campus to the west and towards Ardwick to the east.

The development will provide a new walking and cycling route through the middle of the site, between the student residential building and the Sci-tech building, provisionally referred to as Thorburn Walk, shown by point 2 on Figure 7. This will create a new connection for cycling and walking between Ardwick and Upper Brook Street, and will be 15m-wide with landscaping features and places to dwell.

Motor vehicles will not be able to enter this space, unless to maintain the building facades, on move-in/move-out days or in case of an emergency. More detail on this is given in Section 4.7.

As per discussion with MCC in December 2022 detailed in Section 1.2, Thorburn Walk will remain in private ownership and will not be segregated for cyclists, with low speeds encouraged through design. Long straight sections are not created, so cyclists will not be able to build up significant speed. Providing a segregated cycle route through the site could enforce the idea that cyclists have priority, encouraging higher speeds, and wouldn't lend itself to the proposed environment, where people spill across the space.

Upgrade of Existing Footways

Where retained, the existing footways on Upper Brook Street and Kincardine Road will be resurfaced, thus improving the pedestrian experience. It is proposed to remove the existing 4G

masts as shown by point 5 on Figure 7 on Upper Brook Street which will improve the circulation area around the bus stop, which will also be retained.

There is an offset of 3m required by the Oxford Road Corridor Strategic Regeneration Framework Guidance between the back of the existing footway on Upper Brook Street and the buildings, which provides more generous footways and landscaping opportunities.

Drawing 2584-01-CIV-XX-XX-S-H-40025 at Appendix F shows the adoption strategy proposals, this includes some changes to the highway boundary to allow for continuous adopted footways around the perimeter of the site, and to accommodate servicing areas/loading bays, as discussed in more detail in section 4.5-4.7.

Changes are proposed to the south east corner of the Kincardine Road/Whitekirk Close to provide an extended footway, dropped kerbs, tactile paving and a new crossing point to ensure that Thorburn Walk is accessible to people living to the east of the site. As shown on the public highway boundary plan at Appendix D and re-created at Appendix F, the land required for the extended footway is not in applicant ownership and is not public highway. The status of this land is not currently known and will be discussed with MCC highway officers during determination to understand if the proposed footway extension can be delivered.

Cycle Connectivity on Kincardine Road

During the scoping meeting on 6 December 2022 (see Section 1.1), it was requested that cycle connectivity on Kincardine Road was considered, especially in reference to the Oxford Road Corridor Strategic Regeneration Framework (see Section 3.5) and the proposals at the adjacent development site.

The project team for this development has been in consultation with the adjacent developer (PAG and Moda Living) who are progressing a planning application for student residential and Sci-tech development on land immediately north of this development.

In order to accommodate the servicing needs of the PAG/Moda Living development, the one-way northbound strategy which currently exists at the south end between Brunswick Street and Whitekirk Close will be continued north to Grosvenor Street, and a new off-street southbound cycleway will be created on the east side of the street, this will tie into the existing southbound contra-flow cycle lane on Kincardine Road which starts at Whitekirk Close and continues south to Brunswick Street. Note that the proposal to change the operation of the northern section of Kincardine Road to make it one-way is proposed by PAG/Moda Living, and is not required for the McLaren/Kadans application, and more information about this can be found in the planning documents for that development.

Upgrades to Existing Toucan Crossing on Upper Brook Street adjacent to the Site

Following the December 2022 scoping meeting, on 4 January 2023 Civic Engineers received by email a request from MCC highway officers to explore the upgrade of the existing staggered toucan crossing on Upper Brook Street, to remove the stagger, indicated by point 7 on Figure 7.

This would improve the pedestrian and cyclist experience, as they would not have to wait in the middle of a busy road, and their crossing time would be reduced. It would also address the fact that with an increase in pedestrian and cycle movements in the area the existing refuge could be over capacity, with not enough space for people to wait for the next stage of the crossing.

As pedestrians and cyclists would be crossing in one movement, the traffic would be stopped for longer, and therefore there would be an impact on motor vehicle traffic flow on Upper Brook Street. However, with a traffic signal-controlled junction 180m to the north and 150m to the south (a 1-minute drive in each direction) it is not considered that the changes to the stopping time at the toucan crossing would significantly impact the overall journey of a vehicle user, especially not in a perceptible way.

The developers are therefore willing to fund the removal of the stagger to provide a new toucan crossing that strengthens the link from the university, through the site via Thorburn Walk and onward into Ardwick.

It is understood that TfGM would want to model the impact of making these changes, and the developers can also fund this modelling exercise. It is also noted that in the scoping meeting on 6 December 2022, the TfGM representative noted that the existing staggered toucan crossing is currently in good condition, and therefore its upgrade may not be required, for example if increase in pedestrian/cycle movement will not significantly increase and the current provision can accommodate the pedestrian and cyclists volumes.

It is expected that this would be subject to the Section 106 Agreement.

This approach was accepted by MCC highway officers and TfGM during the pre-application scoping process, stating *'Accepted by both MCC Highways & TfGM. The UTC Unit can assess the effects of replacing the staggered crossing with a 'straight across' crossing. The modelling would also need to consider proposals associated with the northern PAG development which proposes to close Inchley Road with one-way operation of Kincardine Road.'* This is accepted by the applicants.

Upgrades to Upper Brook Street/Brunswick Street Junction

In the same email (4 January 2023) the MCC highway officer also requested upgrades to the pedestrian and cycle crossing infrastructure at the Upper Brook Street/Brunswick Street junction, 150m south of the development.

Civic Engineers has carried out a study of cycle connectivity in the area, and added to this the proposed pedestrian/cycle connection through the development site.

This is shown on Figure 8, demonstrating good permeability and onward options for cyclists through the heart of the development site using the toucan crossing on Upper Brook Street to the west of the proposed Thorburn Walk, whether the toucan crossing is upgraded or not (see above).

Having reviewed the cycle network in the area and available routes (see Figure 9), it is considered that there is good cycle connectivity between the site and the wider area, without the upgrade of the facilities at the Upper Brook Street/Brunswick Street junction. The only people who would benefit from upgrades here would be people travelling from Upper Brook Street south, as from all other directions there are more pleasant options. For people who do cycle from the south end of Upper Brook Street, they will be able to use the toucan crossing at Upper Brook Street adjacent to the development to enter the site, rather than needing to turn right at the Brunswick Street junction. Although cyclists will have to pass through the Upper Brook Street/Brunswick Street junction, they will have already passed through several other similar junctions, and therefore infrastructure at this junction is unlikely to impact whether they cycle or not. For people less confident, they can take a short diversion on to the segregated routes in the area shown on Figure 8 to access the site.

Pedestrian and cycle infrastructure upgrades at the Upper Brook Street/Brunswick Street junction are not required to make this development acceptable, as cycle connectivity to the wider network is available as per the plan in Figure 8 and routing options on Figure 9, through the heart of the site and the toucan crossing on Upper Brook Street. It is not considered to be of benefit to future users of the development to upgrade the pedestrian and cyclist crossing facilities at the Upper Brook Street/Brunswick Street and they are therefore not proposed.

Indeed, cycle connectivity was severed here when the section of Brunswick Street between Oxford Road and Upper Brook Street was recently downgraded to an active travel route (approximately 2018), as cyclists no longer have a green light to turn left or right onto Upper Brook Street, or to go straight on along Brunswick Street. It is likely this was considered acceptable because there are so many other options for cyclists to travel in this area, and because this route is not part of the Bee Network, and therefore there is not an immediate need to provide cycle infrastructure here.

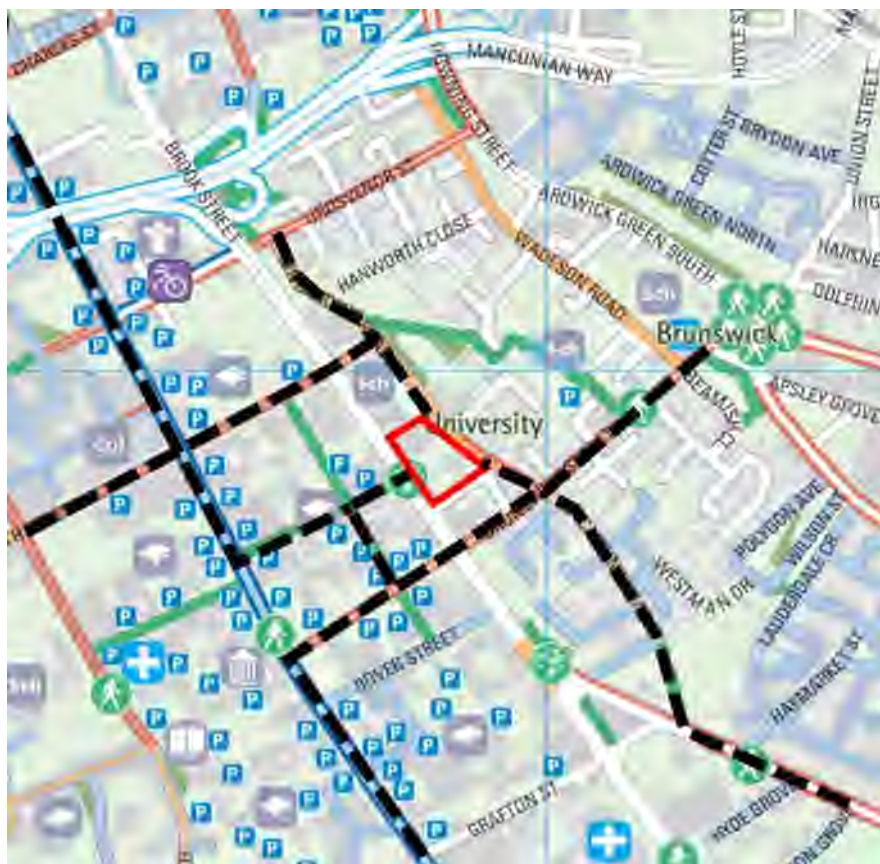
If there is an aspiration for cycle infrastructure provision at this junction, this could be funded using CIL, towards which the applicants will be making a payment.

Figure 8: Cycle Connectivity and the role of the existing toucan crossing



Imagery ©2023 Infoterra Ltd & Bluesky, Maxar Technologies, The GeoInformation Group, Map Data ©2023

Figure 9: Cycle Route Review – Black dotted lines added to Manchester Cycle Map



4.2 Cycle Parking

Student Accommodation

At the PBSA, 185 long-stay cycle parking spaces will be provided. With 737 students living at the development, this is a provision of 1 space for every 4 residents (25%).

There is no adopted policy for cycle parking at student residential development, and therefore this level of provision is proposed with regard to the proximity of the university and good access to the cycle network.

This is considered an appropriate provision and was agreed with MCC highway officers at the scoping meeting in December 2022.

Furthermore, other cities in the north of England that do have cycle parking standards for student accommodation provide less than 1:4, Leeds require 1 space per 5 residents and Newcastle, 1 space per 10 residents. The proximity to the university and city centre means that many residents may choose to walk rather than cycle.

A study was carried out on cycle parking at student residential schemes operated by a particular private operator, see Table 4.

Table 4: Study of Cycle Parking Demand at Relevant Sites

Development	Number of units	Cycle parking	Occupancy	Residents owning a cycle
Coppergate, Swansea	310	65	53	17%
Howard Gardens, Cardiff	391	98	27	7%
Stanhope House, Portsmouth	256	32	8	3%
Trinity View, Coventry	614	50	10	2%
Sycamore House, Leeds	117	10	2	2%

As can be seen the cycle ownership among residents is between 2-17%, with the average being 15% across all sites. A 25% provision at the development would meet this demand with significant spare capacity to accommodate future growth.

At least 10% of the cycle parking will be provided on single-tier cycle storage, and a further 5% will be wide-spaced to accommodate larger models such as tricycles, delivery bikes and modified and recumbent models, ensuring cycling is accessible to as many people as possible. A cycle maintenance stand will also be provided.

The cycle storage will be indoor in a secured room.

Through the implementation of the Travel Plan the development aims to increase the number of people cycling. The council's aim is for 12% of journeys by cycle by 2028³, it is therefore considered unlikely that a provision of 100% cycle parking would be suitable at this development.

Sci-tech

MCC policy requires one cycle parking space per 200sqm for offices, which is being used as a proxy for the Sci-tech building. This is based on the floor area of the write-up space and labs only, as there will be significant circulation and break-out space which will not in itself generate demand for long-stay cycle parking. The NIA of the building is 15,000sqm, and therefore the provision of 82 spaces is adequate.

100 lockers and 14 showers are also provided, including accessible lockers and showers.

14 of the cycle parking will be provided on single-tier cycle storage (17%), 4 of which (5%) will be wide-spaced for larger and adapted cycle models. 4 Brompton spaces are also provided (5%).

The cycle storage will be indoor in a secured room, and a cycle maintenance stand may be provided.

³ Council publishes road map for ambitious Active Travel plans, Feb 2023.

https://www.manchester.gov.uk/news/article/9209/council_publishes_road_map_for_ambitious_active_travel_plans

Visitor Cycle Parking

A total of 34 visitor/delivery cycle parking will be provided within the public realm close to the main entrances. 20 spaces are proposed for the Sci-tech building, including one wider more accessible space, and 14 for the PBSA (8 on Kincardine Road and 6 in Thorburn Walk – both locations have a space that is has adequate clearance to be used for large cycle models/cargo bikes), shown on the proposals at Appendix A.

Beryl Bikes

During the scoping meeting on 6 December 2022, MCC highway officers asked the development team to consider the inclusion of Beryl Bike hubs (the new docked cycle hire system in Greater Manchester) in the development.

The applicant is exploring the possibility to install third party cycle share spaces on the application site.

4.3 Public Transport

The existing bus stop on Upper Brook Street next to the proposed Sci-tech building will be retained. Circulation around this bus stop will improve with the increase in hardstanding width of 3m, proposals to resurface the footway and intention to remove the existing 4G masts.

4.4 Car Club

Although an important element of accommodating multi-modal and sustainable travel choice, a car club vehicle is not proposed at the development.

This ensures that disabled parking can be maximised. There is good existing access to car club vehicles within 1km, as set out in Section 2.11.

As stated in Section 4.5, student demand for car parking/use is extremely low, and it is therefore not necessary to accommodate car club on site. For people based at the Sci-tech building, they will have already made their mode decision by the time they are at the site, and are likely to be based out of the building with limited need to travel elsewhere.

The benefit of a car club vehicle being accommodated on site is therefore limited, whereas the opportunity to maximise disabled car parking is considered to be of greater benefit.

4.5 Car Parking

The development will be car free except for disabled parking.

Car Free Development

The development will be car free except for disabled parking. This reflects the highly accessible location of the development. It has been agreed with MCC highway officers that this is a sustainable location for a car-free development, as long as disabled parking is included.

It is considered that the proximity to the universities, excellent connectivity by bus, proximity to rail stations, ongoing enhancements to the cycle network and lack of car parking on site will encourage most people to travel by non-car modes. This is reflected in the multi-modal trip generation in Chapter 6

Section 2.9 sets out where people living and working at the development can park in existing on- and off-street car parks if they do choose to drive,

Section 2.7, reviews the on-street parking situation in the area, indicates that all streets close to the site are adequately covered either by short stay/resident permit only restrictions or double yellow lines, to protect these streets from people living and working at the proposed development.

Disabled Car Parking

7 disabled parking spaces are proposed on Kincardine Road in a lay-by arrangement.

3 disabled parking spaces is considered an adequate provision for the Sci-tech building. This equates to 1 space per 7,000sqm of GIA, which is the provision at Electric Park (planning reference 128191/FO/2020) approved in December 2020, and was agreed with MCC during scoping discussion, see the minutes at Appendix B.

The remaining 4 disabled parking spaces could be used by residents of the PBSA during the day, with all 7 likely to be available for PBSA residents at night.

As the disabled car parking spaces are proposed in the public highway, the spaces can also be used by people living in the area and visiting the community element of the PBSA building, and it is considered that, with the Sci-tech and PBSA likely to need the parking spaces at the opposite parts of the day, that the provision can be shared between the uses.

The disabled parking spaces will be 6.5m long and 2.7m wide.

The travel distances from the disabled parking bays to the main entrances of both buildings exceed the recommended 50m. Mitigation measures will be proposed within the access routes such as inclusive seating. Options for making the spaces closer to the entrances were considered but were not possible:

- The option for the Sci-tech building to have disabled car parking on Cottenham Street was explored, however, because of existing car parking being located on the south side of the street, some of the short-stay parking which is already in high demand would be taken out of use to be re-allocated as disabled parking, and disabled people would have to cross Cottenham Street, close to the junction with Upper Brook Street, further from the main entrance, on a road used by heavy vehicles going to the supermarket and the Sci-tech building.
- Options were explored to provide the disabled parking for the PBSA on the site, however this would be further from the building entrances and would also have drivers negotiating over the public realm. In the proposed scenario, vehicles do not have to cross the footway.

To demonstrate that the provision of disabled car parking spaces for the student accommodation is acceptable, and in lieu of local policy on disabled parking for student residential development, a study has been carried out of disabled parking at student residential developments in Manchester, along with industry experience from CRM who operate McLaren's student residential offer.

See Table 5 and the bullets below, respectively.

Table 5: Disabled Parking at Student Residential Development in Manchester: Study

Name/Address	Planning Ref	Status	No. Beds	No. Disabled Spaces	Where?
Kincardine Court, Kincardine Road	124472/FO/2019	Approved	329	1	In existing car park
St Gabriels	135278/FO/2022	Approved March 2023	319	4	In off-road service area
Land At Deansgate South Manchester	129406/FO/2021	Allowed on appeal	534	0	
1-5 New Wakefield Street	119380/FO/2018	Approved	603	2	On-street
Proposed development	-	-	737	4 (+3 extra at night)	TBC
Canvas Manchester, River Street Tower	100000/FO/2012/C1	Approved	791	2	
Great Marlborough Street Car Park Great Marlborough Street Manchester M1 5NJ	121252/FO/2018	Approved July 2021	853	0	
One Medlock Street	135419/FO/2022	In determination	1014	2	On Edge Street within site

Table 5 positions the proposed development among the other developments in order of number of beds. Regardless of the number of beds, the proposed development is proposing more spaces per bed than any of the existing developments, other than St Gabriel's. The provision is therefore considered appropriate and acceptable.

McLaren, the developer of the student accommodation element, has a significant portfolio of student accommodation. As the developer of the St Gabriel's development mentioned above, which received planning approval in March 2023, their usual operator (CRM) carried out a review of disabled parking across McLaren's student accommodation in February 2023.

This information can be read in full on the planning file for the St Gabriel's development, and the key items are summarised here:

- CRM operate 89 student accommodation developments for McLaren, 40 of which have no car parking.

- Most with no parking are purpose-built student accommodation, and parking is omitted because industry experience shows that there is no or very little demand for car parking.
- The 49 sites with parking offer very little, most being for disabled people.
- Across these 49 sites there are 153 disabled car parking spaces, an average of 3 spaces per development.
- CRM currently has 20 disabled students across the 89 sites, with 6 requiring a disabled car parking space.

The evidence above suggests that disabled car parking is not in high demand for student accommodation. To avoid lack of disabled parking being a barrier which prevents disabled people moving to student accommodation and accessing university education, the developer is proposing 4 new disabled parking spaces on Kincardine Road (plus 3 at the Sci-tech building which are likely to be available for students overnight), which, in the context of other sites in Manchester, and industry experience of operating student accommodation nationwide, is considered an appropriate provision.

Electric Vehicle Charging

The disabled parking bays on Kincardine Road will be cable-enabled so that they can accommodate electric vehicle charging infrastructure.

It is understood that, at present, MCC will not accept electric vehicle charging infrastructure on public highway, because of potential issues associated with street-clutter, operations and maintenance, which is where the proposed disabled parking bays will be located.

Therefore by providing ducting to the spaces, chargers can be readily installed at a later date when this issue is resolved.

4.6 Changes to Adopted Public Highway Boundary

The current public highway boundary was obtained on a PDF plan from MCC on 20 December 2023. This is provided at Appendix D.

The proposed adoption strategy, indicating which parts of the public realm will be maintained by the applicant and which by MCC, is marked up on drawing 2584-01-CIV-XX-XX-S-H-40025 at Appendix F and described below:

- **Kincardine Road:** in order to serve the site with a new loading bay and disabled parking bays on Kincardine Road as described in Sections 4.5 and 4.7, the public highway boundary will be extended into land currently owned by the applicant, to ensure that a footway in public ownership is provided behind the loading bays and disabled parking bays. This is 2m at its narrowest and 3m at its widest.
- **Cottenham Street:** A piece of land on Cottenham Street currently in the applicant's ownership will be offered for adoption to provide a 2m footway on the development side (north) of the street, where there is currently a pinchpoint which accommodated the wall at Elizabeth Yarwood Court. To note, in order to meet biodiversity gain targets, trees are proposed on Cottenham Street near to Upper Brook Street. Because of the overhang of the building and the required minimum width of the tree planting area, the adopted highway

boundary will be amended slightly at the south west end of Cottenham Street to ensure the whole of the planting bed is in the applicant's control. The residual adopted highway width will be 1.7m. Also to note, there is uncertainty about the status of Cottenham Street, as the existing turning head between Cabot Street and Cottenham Street, and Cabot Street itself, are subject to a 'legal closure'. Further information on this is requested from MCC.

- On Upper Brook Street, the existing 2m adopted footway will be retained.

Materials in the public highway will be chosen from MCC accepted palette of materials, and studs or other delineation will be used to indicate the transition from public highway to land which will be maintained by the applicant.

4.7 Vehicle Access

An independent Stage 1 Road Safety Audit has been commissioned to assess the safety of the proposed changes to the public highway on Upper Brook Street and Kincardine Road. This will be submitted along with a designer's response during the determination period.

The sections below set out how the development will be accessed by vehicles to the PBSA and Sci-tech buildings, noting they have separate strategies, for refuse & delivery, fire, taxi and student drop off.

Note that bollards or other movable obstructions will be provided at the access to Thorburn Walk from Kincardine Road and Upper Brook Street to ensure that only emergency and authorised vehicles are able to enter this space. These are shown on Figure 7.

a) Refuse and Delivery

Refuse collection and deliveries for the student accommodation building will be from a new proposed full loading bay on Kincardine Road. This will be on public highway, see above regarding adoption. Tracking of the loading bay is shown on drawing 2584-01-CIV-XX-XX-S-H-40012 at Appendix E.

Emergency access to the plant room will be via the route north of the PBSA, arriving and leaving via Kincardine Road. This is shown on drawing 2584-01-CIV-XX-XX-S-H-40018 at Appendix E.

Refuse collection and deliveries for the Sci-tech building will take place in the off-street service yard, accessed from Cottenham Street. This was agreed in principle with MCC highway officers during the pre-application scoping period. Tracking of the service yard is shown on drawing 2584-01-CIV-XX-XX-S-H-40013 at Appendix E. Note that it is also possible to serve the service yard from Cabot Street, however, according to the adopted highway boundary plan at Appendix D, this is subject to a legal closure, and therefore it is not known whether access from Cabot Street will be available in the future.

It was agreed with MCC highway officers during the scoping meeting that this was preferable to servicing from Kincardine Road, which would require heavy goods vehicles to cross pedestrian and cycle desire lines. This also allows planting to be introduced to provide an acoustic and visual barrier for existing residents, rather than needing to create/retain a vehicle access from Kincardine Road.

The vehicle access from Cottenham Street will be via a vehicle crossover. The footway will be continuous, enforcing pedestrian permeability, with the kerb dropped at the carriageway side to

allow for vehicles to overrun the footway to drive into the service yard. The footway will be strengthened in this location to withstand loading from heavy vehicles.

Figure 10: Refuse Collection and Delivery Strategy



b) Fire Tender

The buildings will be served by a pumping appliance along the following routes, shown on Figure 11:

- Student accommodation – from Thorburn Walk and the access route to the north of the building. This is shown on drawings 2584-01-CIV-XX-XX-S-H-40008 (Thorburn Walk) and 2584-01-CIV-XX-XX-S-H-40017 (north of PBSA) at Appendix E.
- Sci-tech – from Upper Brook Street and Cottenham Street. The tracking from Cottenham Street is shown on drawing 2584-01-CIV-XX-XX-S-H-40016 at Appendix E.

Figure 11: Fire Vehicle Access Strategy



Dropped kerbs will therefore be required to accommodate the fire tender accessing the site from Upper Brook Street and leaving onto Kincardine Road.

Access from Upper Brook Street in order to reduce fire tender journey times was discussed in the December 2022 scoping meeting and agreed by MCC highway officers. In response to the Transport Assessment Scoping Note, MCC highway officers/TfGM asked that appropriate measures be introduced to discourage/prohibit access for other vehicles from accessing the site from Upper Brook Street. Bollards or other movable instructions will be provided. These will also be in place at the Kincardine Road end of Thorburn Walk. See below under 'd) Student Drop-off'.

c) Taxi Drop Off

Taxis can pick up and drop off in the two proposed loading bays on Kincardine Road, one next to the PBSA (which is also long enough for refuse and large deliveries, see above) and a shorter one next to the Sci-tech building.

d) Student Drop-off

It is understood that a management strategy for term-time pick-up/drop-off will be required as a planning condition, and during the pre-application scoping process MCC and TfGM asked for an overview of the strategy, and that, if using Thorburn Walk, cars must be able to turn around in forward gear within the development and access and egress using Kincardine Road, not Upper Brook Street. This is shown on drawing 2584-01-CIV-XX-XX-S-H-40024 at Appendix E.

The busiest days in terms of transport impact are likely to be when people are moving in. This is a once-a-year event that is not representative of the day-to-day activity at the site and will therefore be well planned to avoid disruption as much as possible. Students will generally arrive at their accommodation during the first week of the rental period at the start of the academic year, with the weekends being the busiest. To facilitate these movements, the management will organise a schedule of time slots for occupants to unload their belongings from Thorburn Walk.

The procedure could be as follows:

- Occupants book a time slot in advance and are provided with details of where to unload, and where to park afterwards if needed.
- On arrival, they will be met by a member of the management team who will check they have arrived at the correct time before allowing them to park and unload.
- Unloading then takes place for the allocated time, it may be appropriate to have a 'holding area' for belongings being unloaded to speed up the process, this could be one of the common areas on the ground floor.
- Drivers leave to park in one of the nearby car parks and then belongings can be moved from the holding area to rooms.

A few slots at the end of the day should be kept open for anyone who misses their time slot and is not able to book one for another day.

At the end of term the process can be reversed, although it may work to be more flexible as occupants may leave as soon as they have finished with their exams. Typically, this is spread out over several weeks.

5. Vehicle Trip Generation

This section sets out the trip generation of the development. The methodology was agreed with TfGM and MCC during the pre-application scoping process (see Section 1.2).

It was agreed that trips from the existing land uses can be netted off. The existing uses on site are sheltered accommodation on the south portion of the site and a car showroom on the north portion.

A Note on Trip Type, Pass-by Trips and Distribution

Trip generation for the AM (08:00-09:00) and PM (17:00-18:00) peak hours have been calculated, looking at taxis, cars, vans and heavy goods vehicles separately.

As the development will be car free, the **car trips** to the development will be to off-site parking locations. The existing land uses on site both have dedicated car parks, and therefore those trips are assumed to travel directly to site.

The **operational trips** comprise of taxis, deliveries and waste collection and as such the majority of the trips are likely to already be on the city centre network with the vehicles making an additional stop on their route as they pass the development, and should not be considered new trips.

All **taxi trips** are assumed to be new trips as they could divert from anywhere in the city, however this is a robust assessment, as taxis usually pick up whoever is closest to them.

80% of **LGVs** and 80% of **HGVs** are assumed to be already passing by the site on Upper Brook Street and therefore not new trips to the area. This is considered a reasonable estimate, as network management by the delivery/waste collection company will seek to reduce extra mileage and will plan routes accordingly. This has been applied to the trip rates of the extant and proposed land uses in the tables in the following sections.

Multi-modal trip generation is discussed in Section 6.

5.1 Vehicle Trip Generation of Existing Use

Car Showroom

The northern portion of the site is occupied by a car showroom with GFA 2,286 sqm, this is 549 sqm larger than the estimate used in the scoping note, and is based on updated information. From a review using Google Street View it appears that since the showroom closed in 2017 the site has been used as a car park with around 90 spaces, which would have a high impact during the AM and PM peak hours, however the extant land use permission has been used to calculate the permitted trip rate of the site.

Locations at the edge of town centres and suburban areas were included in the TRICS search. No London sites were included.

Trip rates and trip generation of the consented car showroom are set out in Table 6. The full TRICS output is included at Appendix G. These trip rates have been updated since the Transport Assessment Scoping Note was approved. The reason being that on closer inspection, the TRICS surveys used included a site that had a floor area of 45sqm. This size of site is not considered representative of the existing conditions at Upper Brook Street. Therefore, the site selection on TRICS has been adjusted to include sites larger than 1,000sqm. Using only edge of town centre only one survey was available. Suburban area was added as a location type in addition to edge of town

centre to increase the number of surveys available while still being representative of the site. The inclusion of more locations and exclusion of smaller sites is deemed to make the trip generation more robust.

Table 6: Car Showroom Vehicle Trip Generation

Car Showroom	AM Peak Hour (0800-0900)			PM Peak Hour (1700-1800)		
	Arr	Dep	Total	Arr	Dep	Total
Trip rates per 100sqm						
Cars	0.901	0.354	1.255	0.340	0.708	1.048
Taxi	0.038	0.038	0.076	0.000	0.000	0.000
LGV	0.071	0.038	0.109	0.009	0.019	0.028
HGV	0.014	0.005	0.019	0.009	0.009	0.018
Vehicle Trips for 2,286 sqm GFA						
Cars	21	8	29	8	16	24
Taxi	1	1	2	0	0	0
LGV	2	1	2	0	0	1
HGV	0	0	0	0	0	0
Total	23	10	33	8	17	25

Sheltered Accommodation

The southern portion of the site is occupied by Elizabeth Yarwood Court which it is understood has 60 apartments. The TRICS category '03 - RESIDENTIAL/F - SHELTERED ACCOMMODATION' has been used to estimate the number of trips generated.

Locations at the edge of town centres were included in the search. No London sites were included.

Trip rates and trip generation of the consented sheltered accommodation are set out in Table 7. The full TRICS output is included at Appendix G.

Table 7: Sheltered Accommodation Vehicle Trip Generation.

Sheltered Accommodation	AM Peak Hour (0800-0900)			PM Peak Hour (1700-1800)		
	Arr	Dep	Total	Arr	Dep	Total
Trip rates per bedroom						
Cars	0.050	0.042	0.092	0.067	0.050	0.117
Taxi	0.000	0.000	0.000	0.008	0.008	0.016
LGV	0.008	0.000	0.008	0.000	0.008	0.008
HGV	0.000	0.000	0.000	0.000	0.000	0.000
Vehicle Trips for 60 apartments						
Cars	3	3	6	4	3	7
Taxi	0	0	0	0	0	1
LGV	0	0	0	0	0	0
HGV	0	0	0	0	0	0
Total	3	3	6	5	4	8

5.2 Vehicle Trip Generation of Proposed Use

This section sets out the trip rates for each of the proposed land uses.

Student Residential

Although it is understood that TfGM HFAS prefer that London sites are removed from TRICS analysis, it is not possible to do this in this instance. In order to obtain relevant surveys outside London, the data range had to be extended to a point at which it was not possible to disaggregate cars, LGVs and OGVs whilst also providing multi-modal data by non-motorised vehicles. This is important for student residential as the scheme is car free, so cars need to be distributed off site; delivery vehicles need to be considered; and, as requested by MCC highway officers at the scoping meeting, an analysis of sustainable transport users is required.

It is also considered that in the context of a student residential building right next to the campus, with no parking, and in a highly accessible location, there was no reason to remove London sites, and this is supported by TRICS itself which states in the Good Practice Guide that sites should be chosen based on accessibility and site characteristics, rather than simply removing a region.

The TRICS category '03 - RESIDENTIAL/G - STUDENT ACCOMMODATION' was used. Town centre and edge of town centre locations were used, and sites with on-site parking were filtered out.

The default date range (2014-present) was used, as mentioned above this ensured trip types could be disaggregated properly, and it was also important to use more recent surveys which were more likely to capture the uptake of food delivery, uber and online shopping.

Vehicle trip rates are set out in Table 8. The full TRICS output is included at Appendix G.

737 bedrooms are proposed.

Table 8: Student Residential Vehicle Trip Generation

Student Residential	AM Peak Hour (0800-0900)			PM Peak Hour (1700-1800)		
	Arr	Dep	Total	Arr	Dep	Total
Trip rates per bedroom						
Cars	0.001	0.001	0.002	0.000	0.000	0.000
Taxi	0.000	0.000	0.000	0.001	0.001	0.002
LGV	0.000	0.000	0.000	0.000	0.000	0.000
HGV	0.000	0.000	0.000	0.000	0.000	0.000
Vehicle Trips for 737 bedrooms						
Cars	1	1	1	0	0	0
Taxi	0	0	0	1	1	1
LGV	0	0	0	0	0	0
HGV	0	0	0	0	0	0
Total	1	1	1	1	1	1

Sci-tech

The nature of the Sci-tech plot on the southern portion of the site is not easily replicated in TRICS. The following approach has been taken:

- The research & development write-up space has been treated as office, category '02 - EMPLOYMENT/A – OFFICE'
- Write-up space forms 40% of the lab/write-up space split. Therefore 40% of the total GFA has been treated as office.
- The GIA of the Sci-tech development has been calculated as per the TRICS guidelines and is 15,376sqm

- There is no land use category in TRICS for laboratories, and therefore the employee population of the write-up space and labs has been used to produce a ratio of the activity in the write-up spaces compared to the labs. The occupancy of the write-up spaces is 1 person for every 10sqm. The occupancy of the labs is 1 person for every 15sqm. Therefore for every 1sqm of lab space there is 0.66 of the 'activity' of the write-up space. This has been used as a proxy for the trip generation, by multiplying the trip rate of the offices by 0.66 to obtain a trip rate for the lab space.
- In reality, there will be significant break-out and circulation space on the ground floor of the building, and therefore applying the trip generation of office to the full GFA as set out above is likely to be an overstatement and therefore this is a very robust assessment. The default recommended TRICS date range of 2014-present has been used, for sites in town centres and edge of town centres, and sites with on-site car parks have been removed. Sites in Greater London were scrutinised in particular to ensure they were appropriate, with all 'town centre' locations removed.

Weekday peak hour trip rates are set out in Table 9. The full TRICS output is included at Appendix G.

Table 9: Sci-tech Vehicle Trip Rates

	AM Peak Hour (0800-0900)			PM Peak Hour (1700-1800)		
	Arr	Dep	Total	Arr	Dep	Total
Research and Development Write-up Space						
Trip rates per 100sqm for research & development write-up space, taken from TRICS 02 - EMPLOYMENT/A – OFFICE' category						
Cars	0.250	0.070	0.320	0.103	0.250	0.353
Taxi	0.013	0.013	0.026	0.007	0.007	0.014
LGV	0.030	0.017	0.047	0.000	0.000	0.000
HGV	0.007	0.007	0.014	0.000	0.000	0.000
Vehicle Trips for 40% of the development being formed of write-up space (6,150sqm)						
Cars	15	4	20	6	15	22
Taxi	1	1	2	0	0	1
LGV	2	1	3	0	0	0
HGV	0	0	1	0	0	0
Total	18	7	25	7	16	23

	AM Peak Hour (0800-0900)			PM Peak Hour (1700-1800)		
	Arr	Dep	Total	Arr	Dep	Total
Lab Space						
Trip rates per 100sqm for lab space, using 0.66 times the activity as for R&D write-up space						
Cars	0.133	0.037	0.171	0.055	0.133	0.188
Taxi	0.007	0.007	0.014	0.004	0.004	0.007
LGV	0.016	0.009	0.025	0.000	0.000	0.000
HGV	0.004	0.004	0.007	0.000	0.000	0.000
Vehicle Trips for 60% of the development being formed of lab space (9,226sqm)						
Cars	15	4	20	6	15	22
Taxi	1	1	2	0	0	1
LGV	2	1	3	0	0	0
HGV	0	0	1	0	0	0
Total	18	7	25	7	16	23
Total Trip Generation at Sci-tech Development						
Cars	31	9	39	13	31	43
Taxi	2	2	3	1	1	2
LGV	4	2	6	0	0	0
HGV	1	1	2	0	0	0
Total	37	13	50	14	32	45

5.3 Net Vehicle Trip Generation

Weekday AM and PM peak hour flows from the extant car showroom and sheltered accommodation (Section 5.1) have been subtracted from the proposed development of student residential and to give the net development flows, set out in Table 10.

Note this is the total net trip generation, to the site and to nearby car parks. It includes trips that are already on the network, making a short diversion to serve the site, as well as those which will never reach the site as they will be dispersed to off-site car parks.

A deeper look at the destination of trips is covered in Section 5.4.

Table 10: Net Vehicle Trip Generation

Trips – all types	AM Peak Hour (0800-0900)			PM Peak Hour (1700-1800)		
	Arr	Dep	Total	Arr	Dep	Total
Car showroom	23	10	33	8	17	25
Sheltered accommodation	3	3	6	5	4	8
Total extant	27	12	39	12	21	33
Student accommodation	1	1	1	1	1	1
Sci-tech	37	13	50	14	32	45
Total proposed	38	14	52	14	32	47
Net trip generation	9	0	9	2	13	14

The total net impact of the proposed development on the highway network is 9 additional trips in the AM peak hour and 14 in the PM peak hour.

Vehicle trip generation methodology was accepted by both MCC Highways & TfGM as part of the pre-application scoping process (see Section 1.2).

5.4 Impact on the Highway Network

The maximum net impact of the proposed development is 9 two-way vehicle trips in the weekday AM peak hour and 14 in the PM peak hour.

Because the site is car free, the car trips generated by the proposed development will not reach the site, and will be dispersed to car parks within a 10-minute walk. In the existing situation, both existing land uses have on-site car parks, and therefore car trips were to the site.

In addition, as set out in the introduction, LGV and HGV trips will mostly be an additional stop on an existing delivery/servicing route. 80% of the operational trips are assumed to already exist on the network, diverting off Upper Brook Street to serve the site.

Table 11 below sets out the net trip generation of vehicles to site.

Table 11: Net Trips Travelling to Development Site

	AM Peak Hour (0800-0900)			PM Peak Hour (1700-1800)		
	Arr	Dep	Total	Arr	Dep	Total
Extant cars	24	11	34	12	19	31
Extant HGV + LGV*	0	0	1	0	0	0
Extant taxis	1	1	2	0	0	1
Total extant to site	25	12	37	12	20	32
Proposed HGV + LGV*	1	1	2	0	0	0
Proposed taxis	2	2	3	2	2	3
Total proposed to site	3	2	5	2	2	3
Net trips to site	-22	-9	-32	-11	-18	-29

**(assuming 80% passby)*

As indicated in Table 11 there will be a reduction in vehicle trips travelling to the site in the AM and PM peak hours. Therefore additional analysis of the highway network around the development site is not proposed.

There will be 41 two-way trips to local car parks in the AM peak hour, and 43 in the PM peak hour (see Table 8 and Table 9). Because the site will be car free with no general parking spaces on-site these car trips will be dispersed to nearby car parks within a 10-minute walk of the development, which include The Aquatics Centre, The University of Manchester Car Park D and Circle Square.

Which car park the drivers choose to park in will be down to several factors including the cost of parking, distance from the site, and the location of the car park on the driver's route to the development.

The impact at each car park, and the junctions surrounding them, is not sufficient to require detailed junction models, especially as each of the car parks has already been assessed as a trip generator, and therefore a repeat of this exercise is not required.

A Framework Travel Plan will be produced to accompany the planning application and will set out how people working and living at the development will be encouraged and enabled to travel by sustainable modes.

This analysis was accepted by TfGM and MCC highway officers during the pre-application scoping process (see Section 1.2).

6. Transport Impact by Mode

This section looks at the possible impacts on each available mode during the peak hour for the estimated trip generation in Section 5.

Non-operational trips in the peak hours are assumed to be people travelling to and from work at the Sci-tech building, or to university/elsewhere from the student accommodation. Operational trips (LGV, OGV, Taxi) are presented in Section 5.

Sci-Tech

The mode share of trips estimated at the proposed development has been adjusted from the data provided in the Transport Statistics Manchester 2020-2021 Key Centre Monitoring Section⁴. Adjustments have been made to meet MCC aspirations to 'double cycling' from 6% to 12% by 2028⁵, with other modes being reduced slightly. The mode share for car trips has been reduced to 5% because the development is car free. Public transport and walking mode shares have been increased accordingly. The estimated mode share is presented in Table 12.

Table 12: Estimated mode share for travel to work

Mode	Mode share (Manchester statistics)	Estimated mode share	AM two-way	PM two-way
Car	21%	5%	39	43
Bus	21%	23%	178	196
Rail	26%	28%	220	243
Metro	17%	18%	142	156
Cycle	2%	12%	94	104
Walk	13%	14%	110	122
Taxi*	0%	0.41%	3	2
Total	100%	100%	787	868

*Calculated from TRICS comparing car and taxi trips

PBSA – Trips to University and Trips Elsewhere

It is assumed that 30% of students living at the PBSA walk across the road to university in the peak hours (leaving the building in the AM peak and arriving back in the PM peak). It is assumed that in

⁴ Transport Statistics Manchester 2020-2021 Key Centre Monitoring Section. Published 20th September 2022. <https://gmtu.gov.uk/reports/>

⁵ Manchester Active Travel Strategy, Manchester City Council, February 2023. Available at <https://democracy.manchester.gov.uk/documents/s38131/Appendix%201%20draft%20Manchester%20Active%20Travel%20Strategy%20and%20Investment%20Plan-compressed.pdf> (accessed 02/05/2023)

the peak hour, 10% of students are travelling in and out of the building go elsewhere (i.e. not to study).

All university-bound trips are on foot.

For non-university trips the following mode share has been applied:

- 50% walking
- 12.5% cycling
- 12.5% bus
- 12.5% rail
- 12.5% metro

Table 13: PBSA Mode Share and Multi-modal Trip Generation

Mode	Mode Share	AM two-way	PM two-way
Trips to university (30% departing in peak hour, 30% arriving in peak hour)			
Walk	100%	221	221
Trips elsewhere (10% in and 10% out in both peak hours)			
Walk	50.0%	37	37
Cycle	12.5%	9	9
Bus	12.5%	9	9
Rail	12.5%	9	9
Metro	12.5%	9	9
Total		295	295

Total Multi-modal Trip Generation

Multi-modal trip generation from Table 12 and Table 13 have been combined to obtain the total multi-modal trip generation for the proposed development, as presented in Table 14

Table 14: Total Multi-modal Trip Generation

Mode	AM two-way	PM two-way
Cars	41	43
Bus	187	205
Rail	230	252
Metro	151	166
Cycle	104	113
Walk	368	380
Taxi	3	3
Total	861	942

Walking

Walking trips are likely to be distributed on the many pedestrian paths surrounding the site meaning that over the course of the peak hour no one route will become crowded. Generous public realm is proposed within the development and on Upper Brook Street and Kincardine Road.

Cycle

The site is located close to existing cycle routes, and proposals are being developed to improve the cycle connectivity of the development. The cycle infrastructure near the site is likely to be able to accept this additional traffic without becoming overcrowded.

Bus, Rail and Metro

During the peak hour there are 10 buses per hour on Upper Brook Street (five northbound and five southbound).

The nearest tram stop is at Piccadilly where there are 20 trams per hour in the peak.

Many trains arrive or depart from Manchester Piccadilly during the peak hour.

The additional trips on public transport will support investment in the sector in the city which will benefit all.

Car

Because the site will be car free with no general parking spaces on-site car trips will be dispersed to nearby car parks.

Which car park the drivers choose to park in will be down to several factors including the cost of parking, distance from the site, and the location of the car park on the driver's route to the development. Figure 3 (see section 2.8) indicates there are around 2,400 parking spaces within a 10-minute walk of the development at three car parks, with more to the north in the city centre.

The impact at each car park, and the junctions surrounding it, is not sufficient to require detailed junction models, especially as each of the car parks has already been assessed as a trip generator, and therefore a repeat of this exercise is not required, as agreed with TfGM and MCC highway officers (see Section 1.2 and 5.4).

The Framework Travel Plan, which accompanies this Transport Assessment, sets out how people working at the development will be encouraged and enabled to travel by sustainable modes. The development's location and excellent bus and cycle connections suggests that the car driver mode share for people working at this development will be lower than the city centre mode share used for the assessment.

7. Summary

This Transport Assessment has been produced by Civic Engineers for Phase One of the Upper Brook Street Masterplan, with this development comprising a new sci-tech development with lab, write-up and break-out space, and a new 737-bed student accommodation building.

The development is in a highly accessible location – with pedestrian and cycle access created through the site making new connections from the universities to Ardwick to the east. High-frequency bus services are available on Upper Brook Street and Oxford Road, and rail and tram services are a short bus or cycle journey, or around 15-20 minutes on foot.

The development complies with local and national transport planning policy. It will improve the accessibility of the area, by providing 7 new disabled parking bays, and new cycle parking, including for larger cycles and cargo models. The development is car free, except for the disabled parking, which reflects the highly accessible nature of the development. A Framework Travel Plan has been prepared which sets out how people living and working at the development will be further encouraged to travel by sustainable modes.

Any car trips generated by the development will be dispersed to a range of car parks within the vicinity, noting that which car park the drivers choose to park in will be down to several factors including the cost of parking, distance from the site, and the location of the car park on the driver's route to the development. As these trips will be dispersed, it is considered the impact will not be significant, and as discussed with MCC highway officers and TfGM's urban traffic control team, vehicle impact has not been assessed. As well as this, car travel to the development will be less convenient than other modes, which is intended to encourage mode shift and reduce the impact of the development, supported by the actions set out in the Framework Travel Plan submitted with this application.

Therefore, the only vehicle trips to the development will be servicing, deliveries, and emergency vehicles, and strategies for vehicle access are set out in this document.

Servicing to the sci-tech building will be from Cottenham Street to the south, with a new service yard created at the east of the development, screened from nearby residences with the use of new planting areas.

Servicing to the student accommodation will be via a new loading bay on Kincardine Road to the east, and part of the applicant's site will be offered for adoption by MCC so that an adopted footway can be provided behind the new loading bay and disabled car parking bays.

The development is unlikely to have a significant detrimental impact on the operation or safety of the local highway network.

Taking into account the impact on the highway, the creation of new and improved public realm around existing public transport infrastructure, the car-free development, the proliferation of cycle parking and the management of movement and servicing, this development should be supported from a transport perspective.

Civic Engineers has been in discussions with the transport planners and development team working on the adjacent Property Alliance Group/Moda Living development to the north, who are proposing that the northbound one-way operation of Kincardine Road extends from where it currently ends at Whitekirk Close, north to Grosvenor Street. Note that Phase One does not require this change to Kincardine Road, but the design development has incorporated the PAG/Moda Living proposal

Appendix A: Development Proposals

Appendix B: Meeting Minutes from 6 Dec 2022 and confirmation they are approved by MCC

Project Name: Upper Brook Street Student
Residential and Life Sciences
development

Subject: Meeting with MCC Highway Officers and TfGM Urban Traffic Control Team

Job number: 2548 and 2584/01

Location: Microsoft Teams Held on: 6 December 2022

Attendees: (see below) Cc:

Leading the meeting, [REDACTED] Civic Engineers (transport planner)

From Manchester City Council highway development control/highway engineers: [REDACTED]

From Transport for Greater Manchester (TfGM) urban traffic control team: [REDACTED]

From Avison Young (planning consultant): [REDACTED]

From Sheppard Robson (architect): [REDACTED]

From Re-form (landscape architect): [REDACTED]

From McLaren (developer of student residential building): [REDACTED]

Apologies: [REDACTED]

A draft version of these meeting minutes was issued to attendees on 6th December 2022. Feedback was received by [REDACTED] highway officer, and these have been incorporated into this final version in highlighted text. These meeting minutes will now be issued to attendees, apologies and the wider design teams.

Ref	Item	Action
1.0	Introduction and cycle/pedestrian access	
1.1	El explained the location of the site and the pedestrian access points. The development is between Upper Brook Street and Kincardine Road (north of Cottenham Street), and will comprise a circa 700-bed student residential development at the north of the development, and a life-sciences building at the south end, with labs and write-up space.	
1.2	JC confirmed there will be no ground floor retail at the student resi building.	
1.3	MS asked if Thorburn Walk, the pedestrian/cycle route and public realm between student resi and life sciences building needs to have a segregated cycle route. NBR – no, as this will remain	Re-form

Ref	Item	Action
	private.	
2.0	Cycle parking	
2.1	El set out proposal to follow BREEAM guidance for cycle parking provision for student resi in such an accessible location – 1 for every 4 bed spaces. NBR and RH confirmed this is acceptable. There is no adopted MCC policy on cycle parking provision at student resi.	JA to confirm this is acceptable
2.2	El set out that BREEAM requirement for cycle parking at the life sciences building (1 per 10 staff) and MCC cycle parking policy for office (the closest proxy) (1 per 200sqm) is currently the same result of around 100 cycle parking spaces. NBR and RH confirmed this is acceptable.	
3.0	Refuse and Deliveries	
3.1	For student resi a new layby will be created within current McLaren ownership on Kincardine Road, which will be offered for adoption. This will accommodate deliveries, refuse and taxi drop-off.	
3.2	NBR and RH – use TRICS and other comparable sites to propose acceptable provision.	El to inform design team
3.3	NBR and RH – design of layby needs to consider interaction with improved cycle accessibility on Kincardine Road (see section 9)	Design team (Civic, Sheppard Robson and Re-form) to action
3.4	PC asked whether a left-only exit from the site onto Upper Brook Street would be acceptable. NBR reiterated that vehicle access to/from UBS should be avoided other than for fire access (see section 5).	
3.5	For life sciences building, access for deliveries/servicing will either be from Cottenham Street or from Kincardine Road into a new dedicated service yard on the east side. It is intended that vehicles will be able to turn around within the service yard.	
3.6	NBR would like to see access to the service yard from Cottenham Street, not Kincardine Road, thus avoiding conflict with cyclists and pedestrians.	Sheppard Robson to update proposals
4.0	Disabled parking	
4.1	The student resi building will be car-free, except for disabled parking which will be along the route to the north, accessed from Kincardine Road, either with a small turning head to allow exit back	

Ref	Item	Action
	via Kincardine Road, or with fobbed bollard entry from Upper Brook Street, leaving via Kincardine Road.	
4.2	NBR does not want to see any access from Upper Brook Street, and therefore the option to provide disabled parking accessed from Kincardine Road with a turnaround facility on site is preferred.	
4.3	The life sciences development is also car-free, with disabled parking provided on site. Post-meeting note. EI asked MCC highway officers to confirm if the 3 disabled bays proposed is an acceptable provision. Email received by RH on 8/12/22 confirms this is an acceptable provision. Note: it is intended that some/all will have EV chargers. The provision of 3 spaces is based on the same ratio as approved at Electric Park, New Islington, which equates to 1 disabled parking space per 7,000sqm. Please confirm this provision is acceptable.	NBR or RH to comment
5.0	Fire tender access	
5.1	Fire strategy is a work in progress. There may be the need for fire tenders to drive along the pedestrian/cycle route Thorburn Walk between the two plots. EI explained that entering/exiting via Upper Brook Street then exiting/entering from Kincardine Road would avoid a large area of the new public realm being sterilised by a turning head. PC stated that with existing one-way route at the south end of Kincardine Road and closure of Inchley Road (see section 9), need to avoid the fire tender route being convoluted, and get them on to site as quickly as possible, which may be directly from Upper Brook Street. NBR/RH this is acceptable.	
6.0	Student move-in/move-out day	
6.1	Post-meeting query: can Thorburn Walk (the route between the two plots) be used for drop-off/collection on student moving in and out days? This would be highly managed and marshalled. This could reduce impact on residents living to east of the development? RH confirmed by email that this is acceptable as long as the route remains private (i.e. not adopted highway). A term-time pick-up/drop-off strategy will be required as a planning condition.	NBR or RH to comment
7.0	Bus Stop	
7.1	Proposal to retain southbound bus stop and shelter in current location. NBR, this is likely acceptable. The development site to the north may be moving a bus stop close to their site.	NBR to provide update if relocation of bus stops to north impact this development.

Ref	Item	Action
8.0	Pedestrian Crossing on Upper Brook Street	
8.1	EC stated that the existing staggered, controlled toucan crossing on Upper Brook Street was in good condition, however, if the development will attract many more pedestrians and cyclists to use this the following upgrade(s) may be required, funded by the developer: a) Additional signal units may be required so that the ped/cycle signals can be viewed over the head of a crowd. b) The stagger could be removed, as the refuge in the middle could become over capacity. However, this doubles the length of the crossing, and therefore delays vehicles on Upper Brook Street for longer. c) Introduction of segregation of pedestrians and cyclists, i.e. a 'sparrow' crossing. EI asked about the threshold for necessitating these upgrades. EC stated they can be modelled, with EI providing pedestrian/cycle numbers from the development to be used in a TfGM model. However, this is more likely to be a strategic decision, as particularly option b) would impact vehicle flow but improve the situation for pedestrians and cyclists. NBR to review with his department lead on this point.	NBR to discuss with department lead about upgrades to pedestrian crossing and question of balancing vehicle flow and pedestrian/cycle flow.
9.0	Interaction with Development site to North, and Cycle improvements on Kincardine Road	
9.1	NBR has been in discussion with developer to north. Their proposals include stopping up of Inchley Road to the north. This is as per the SRF for the area. There will also be changes to the Mancunian Way off-slip to accommodate right-turns currently taken by Inchley Road. Post-meeting clarification received by RH by email on 8/12/22 - changes are proposed at the Upper Brook Street / Booth Street E / Inchley Road junction to accommodate the right turn and stop up Inchley Road to traffic as part of the scheme to the north. The Mancunian Way on-slip is where there are changes proposed potentially, with the removal of the on-slip heading out of the city near to Grosvenor Street.	NBR to discuss with strategy team about this.
9.2	NBR has asked developer to north to consider improved cycle route along Kincardine Road, and this development should do the same, working with that developer.	Design team
9.3	NL expressed shared desire for developers to work together.	
10.0	Car Club and Beryl Bikes	
10.1	NBR would like to see car club incorporated in the proposals.	Design team to include in proposals

Ref	Item	Action
10.2	If car club vehicle is to be located on-street, justification required in Transport Assessment document for planning as to why this is not residents' parking.	EI to include in Transport Assessment
10.3	NBR requested that design team explore provision of Beryl Bike hire station on Thorburn Walk/elsewhere at development.	EI to contact team at TfGM.
11.0	Scope of Transport Assessment	
11.1	MCC/TfGM not sure without seeing trip generation calcs what level of assessment is required. Therefore, recommend a step-by-step approach: 1. EI to produce Transport Assessment scoping note setting out taxi, delivery and servicing trips to each plot. Also calculate car trips to life sciences building and likely places they will park (EC suggested car park at Aquatic Centre is most likely). Submit to MCC and TfGM. Trips from existing land uses can be netted off. 2. MCC and TfGM will then advise on further assessment/modelling requirement.	EI
11.2	Discussion about whether to assess existing situation or with SRF/development to the north, i.e. Inchley Road closed.	NBR to discuss with JA
11.3	RH request to include multi-modal trips in the scoping note.	EI

[REDACTED]

From: [REDACTED]@manchester.gov.uk>
Sent: 08 December 2022 09:47
To: [REDACTED]
Subject: RE: UBS student resi/life sciences MCC highway meeting minutes

Categories: Filed by Newforma

Hi Emily

Thanks for sending through the draft minutes. In response to your queries:

4.3: Yes, this level of disabled parking provision is acceptable.

6.1: Happy for Thorburn Walk to be used for student moving in/out days subject to this remaining unadopted. A term-time pick-up/drop-off strategy will be required as a planning condition.

Just an update needed to 9.1 - changes are proposed at the Upper Brook Street / Booth Street E / Inchley Road junction to accommodate the right turn and stop up Inchley Road to traffic as part of the scheme to the north. The Mancunian Way on-slip is where there are changes proposed potentially, with the removal of the on-slip heading out of the city near to Grosvenor Street .

Many thanks,

[REDACTED]
Engineer - Highways Development Control
Growth and Neighbourhoods Directorate
Manchester City Council

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



From: [REDACTED]@civicingineers.com>
Sent: 06 December 2022 18:35
To: [REDACTED]@manchester.gov.uk>; [REDACTED]@tfgm.com>; [REDACTED]@manchester.gov.uk>
Subject: UBS student resi/life sciences MCC highway meeting minutes

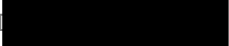
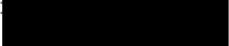
Dear Neil, Rebecca, Laura and Ellis,

Thank you for your time earlier. As mentioned, please can you review the DRAFT minutes and let me know if you require any amendments by Thursday morning, after which I will send to our wider design team and Jen Atkinson.

There are also a couple of post-meeting queries that I've highlighted in there if you could take a look and let me know.

Neil, you agreed to take a couple of actions, so I have included those in the 'action' column, e.g. discussions with Jen and your department lead about ped crossing changes and whether to assess existing situation or SRF/northern redevelopment situation.
Thanks,


Senior Transport Engineer

Direct Line: 
Mobile: 
Office: 
Monday, Tuesday, Thursday and Friday only



Manchester / London / Leeds / Glasgow



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Land East of Upper Brook Street - Proposed Transport Assessment Scope – MCC Highways Response

17th March, 2023

Context:

The applicant is proposing to seek planning permission for the redevelopment of land on the east of the A34 Upper Brook Street (UBS), Manchester. The proposed development comprises two blocks:

- A 5 to 22-storey block to be used for student accommodation (comprising approximately 740 units in total: and
- A 6 to 9-storey block for Life Sciences use (21,000sqm).

The following provides MCC Highways and TfGM HFAS and UTC comments on the Transport Scoping note issued by Civic Engineers, dated 20th February, 2023 along with responses to the queries raised in the subsequent table.

Adjacent Development

It is positive to hear that development team are liaising with PAG regarding development of the adjacent site to the north with regard to interface between the schemes.

It should be noted that a good level of coordination/management will be required during the construction phase (also taking into consideration nearby development construction) which should be detailed in the (conditioned) Construction Management Plan and agreed with MCC Highways Events and Network Management team.

The proposals associated with the adjacent development which include the closure of Inchley Road and one-way operation of Kincardine Road would also need to be assessed within the TA and considered further with regard to the site layout and external highway works. It is therefore recommended that the applicant/Civic Engineers continue to liaise with PAG.

Oxford Road Corridor Strategic Regeneration Framework

It is noted that the Oxford Road Corridor Strategic Regeneration Framework requires that new development should have a 3m set back of footway along UBS to provide a better pedestrian environment and facilitate an improved relationship between the new buildings and street level, thereby encouraging reduced vehicle speeds.

The TA should identify whether the applicant proposes that MCC adopt the 3m clearance or whether the section of new footway would be maintained by the applicant.

The design team should be made aware that any new sections of adopted footway would need to comply with MCCs standard palette of materials. Should the section of new footway be maintained by the applicant, delineation is also required as part of the proposals to define the extent of the adopted highway (e.g. brass studs). This should also be clearly shown on submitted plans.

Cycle Parking

TfGM: 100% cycle parking should be provided for the development. The cycle store(s) should be suitable for overnight accommodation, (i.e. lockable and covered) with appropriate measures in place to ensure the security of the cycles such as CCTV and lighting.

Car Club

It is recommended that Car Club provision is still included as part of the development proposals, or a review of existing provision is provided within the TA to demonstrate that all users would have access to such provision within a reasonable walking journey.

Car Parking

See comment in below table re. quantum of disabled parking provision.

Highways note that the proposals include on-street disabled parking on Kincardine Road in a lay-by arrangement rather than within the curtilage of the site. Whilst MCC Highways prefer on-site provision, external provision may be accepted should the TA evidence that the proposed bays would be located in close proximity to the building entrance points and would have no adverse highways impacts.

EV charging points for the disabled bays are welcomed, however, given that such provision is now proposed on-street, Highways Development Control would need to liaise with the wider Highways Service due to impacts associated with provision of such infrastructure if placed on the adopted highway. Highways Development Control will therefore provide further feedback on this matter.

Additional Assessment/Documents Required:

- Stage 1 Road Safety Audit required for any S278 works at submission/prior to determination. A Stage 2 & Stage 3 RSA will also be conditioned to any approval.
- Framework Travel Plan will be required at submission/prior to determination. A Full Travel Plan will be conditioned to any approval.
- Construction Management Plan will be conditioned to any approval. However, Highways Events and Traffic Management team will require outline details on proposed electricity/utility connections at submission stage. This should be summarised in the TA.
- Servicing Management Plan will be conditioned to any approval to ensure coordination of servicing/deliveries for both blocks and to ensure such trips take place outside of general highways peak-hour periods.
- Student Resident Move-In/Out Management Plan will be conditioned to any approval.

MCC Response to Queries:

(See table below).

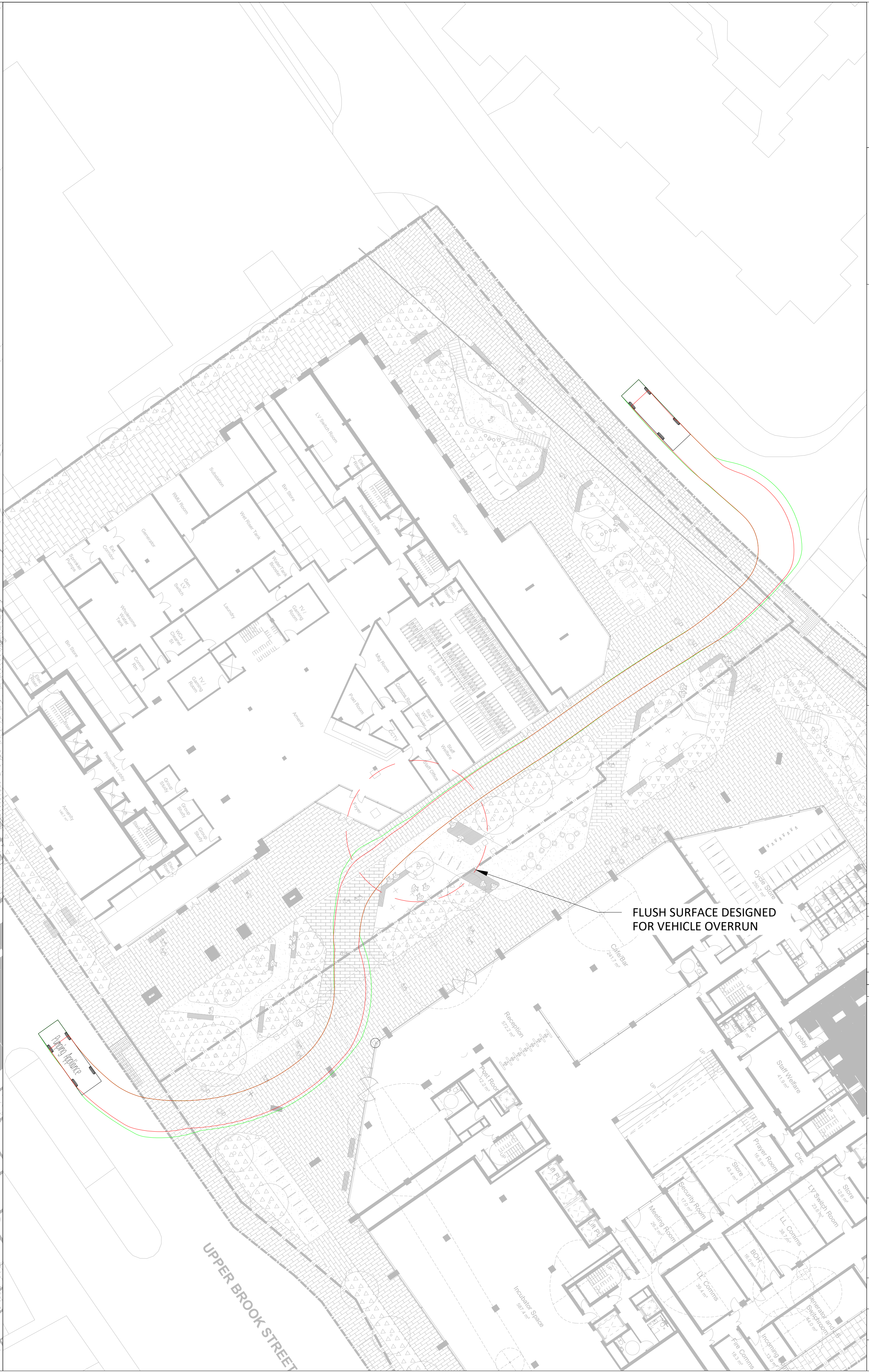
Section	Civic Engineers' Question	LHA Response
2	Is the proposed scope of the 'Existing Site and Transport Context' Section of the Transport Assessment acceptable? Is there anything else to include?	TfGM: A review of the existing traffic regulation orders should be undertaken in the surrounding area, with a view to introducing additional / further restrictions as appropriate. This is to discourage on road / pavement parking which provides a poor pedestrian environment. This review should also consider potential drop off and pick-ups and how this will be managed – particularly at the start and end of the academic year. TfGM: Ensure the surrounding pedestrian / cyclist environment is fit for purpose and include measures for improvements (it is noted certain improvements are discussed within the scoping note). This could also include a review of the existing bus stops and whether any upgrades are necessary and could be funded.
3	Is the proposed list of local and national transport policies sufficient, are there other documents which can be signposted which are used to make decisions relating to transport development control?	Accepted by both MCC Highways & TfGM.
4.1	Please provide feedback on the intention to promote Kincardine Road as a quiet-way for cyclists	Pre-application discussions with PAG have outlined the potential for external works to comprise one-way (northbound) operation of Kincardine Road with off-road contra-flow cycle provision towards the northern portion of the carriageway. Although the principal of such operations is still under review by MCC/TfGM, at this stage, this is viewed as a preferred measure along Kincardine Road. It is therefore recommended that the applicant liaises with PAG in order to provide proposals which would integrate with/complement these proposals for the southern portion of Kincardine Road within the vicinity of the application site.

Section	Civic Engineers' Question	LHA Response
4.1	Confirm that the approach to offering funding for TfGM to model the toucan crossing on Upper Brook Street, and funding to remove the stagger if deemed beneficial, is acceptable.	Accepted by both MCC Highways & TfGM. The UTC Unit can assess the effects of replacing the staggered crossing with a 'straight across' crossing. The modelling would also need to consider proposals associated with the northern PAG development which proposes to close Inchley Road with one-way operation of Kincardine Road.
4.1	Confirm that upgrades to the pedestrian and cycle infrastructure at Upper Brook Street/Brunswick Street is not required as set out.	This should be evidenced through multi-modal (cycle) trip generation with an overview of likely routes/distribution to evidence that the junction would not be used at a level to warrant such upgrades.
4.5	Confirm provision of 2 disabled parking bays for student residential is acceptable as per precedent examples	Whilst there are no Core Strategy standards for disabled parking within 'car free' developments, due to recent concerns raised at Planning Committee regarding provision at other student accommodation developments, it is recommended that additional disabled parking may need to be considered and should be based on disabled parking demand rather than existing provision at other sites. Strong evidence should be provided within the TA to justify the finalised level of provision.

Section	Civic Engineers' Question	LHA Response
4.6	Please provide comment on the vehicle access strategy	Please confirm the location of the proposed student accommodation loading bay as the scoping note refers to the location being on UBS however Figure 3 implies that this will be provided at Kincardine Road. Due to the nature of UBS, Highways would accept (in principle) provision of a (full) servicing lay-by on Kincardine Road. Life Sciences service yard accessed from Cottenham Street considered acceptable in principle. Dropped kerbs are proposed to accommodate fire tender vehicles access from Upper Brook Street and leaving onto Kincardine Road. Appropriate measures are therefore required to discourage/prohibit access for other vehicles.
4.6	Confirm that further information on student pick-up/drop-off at start and end of term is not required prior to planning approval.	Full Student Resident Move-In/Out Management Plan will be conditioned to any approval, however an overview of this should be provided within the TA.
5.1-5.3	Please confirm the trip generation methodology is acceptable.	Vehicle trip generation accepted by both MCC Highways & TfGM, however multi-modal trip generation should be presented within the TA as identified in scoping note.
5.4	Please confirm that further trip distribution and highway impact assessment is not required.	Accepted by both MCC Highways & TfGM.

Appendix D: Public Highway Boundary Plan obtained from MCC

Appendix E: Vehicle Tracking



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CHASSIS ENVELOPE	RED
BODY ENVELOPE	GREEN
CHASSIS ENVELOPE (REVERSING)	RED
BODY ENVELOPE (REVERSING)	GREEN

A side-view diagram of a truck. The total length is indicated as 7.9. The front overhang (from the front bumper to the front axle) is 1.5. The wheelbase (distance between the front and rear axles) is 4.4. The truck has a cab with windows and two large rectangular cargo boxes on the chassis.

Pumping Appliance	
Overall Length	7.900m
Overall Width	2.500m
Overall Body Height	3.300m
Min Body Ground Clearance	0.140m
Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	7.750m

26.05.23	P06	UPDATED TO LATEST SITE LAYOUT	ZH	EI
03.04.23	P05	UPDATED TO RE-FORMS LAYOUT	BW	EI
30.03.23	P04	UPDATED BASE PLAN AND TRACKING	MC	EI
10.02.23	P03	UPDATED TO SUIT LATEST SITE LAYOUT	CW	EI
29.11.22	P02	UPDATED TO SUIT TOPOGRAPHICAL INFORMATION	CW	EI
28.11.22	P01	ISSUED FOR INFORMATION	CW	EI
DATE	REV	DESCRIPTION	DRAWN	CHKD

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PROJECT

UPPER BROOK STREET

TITLE

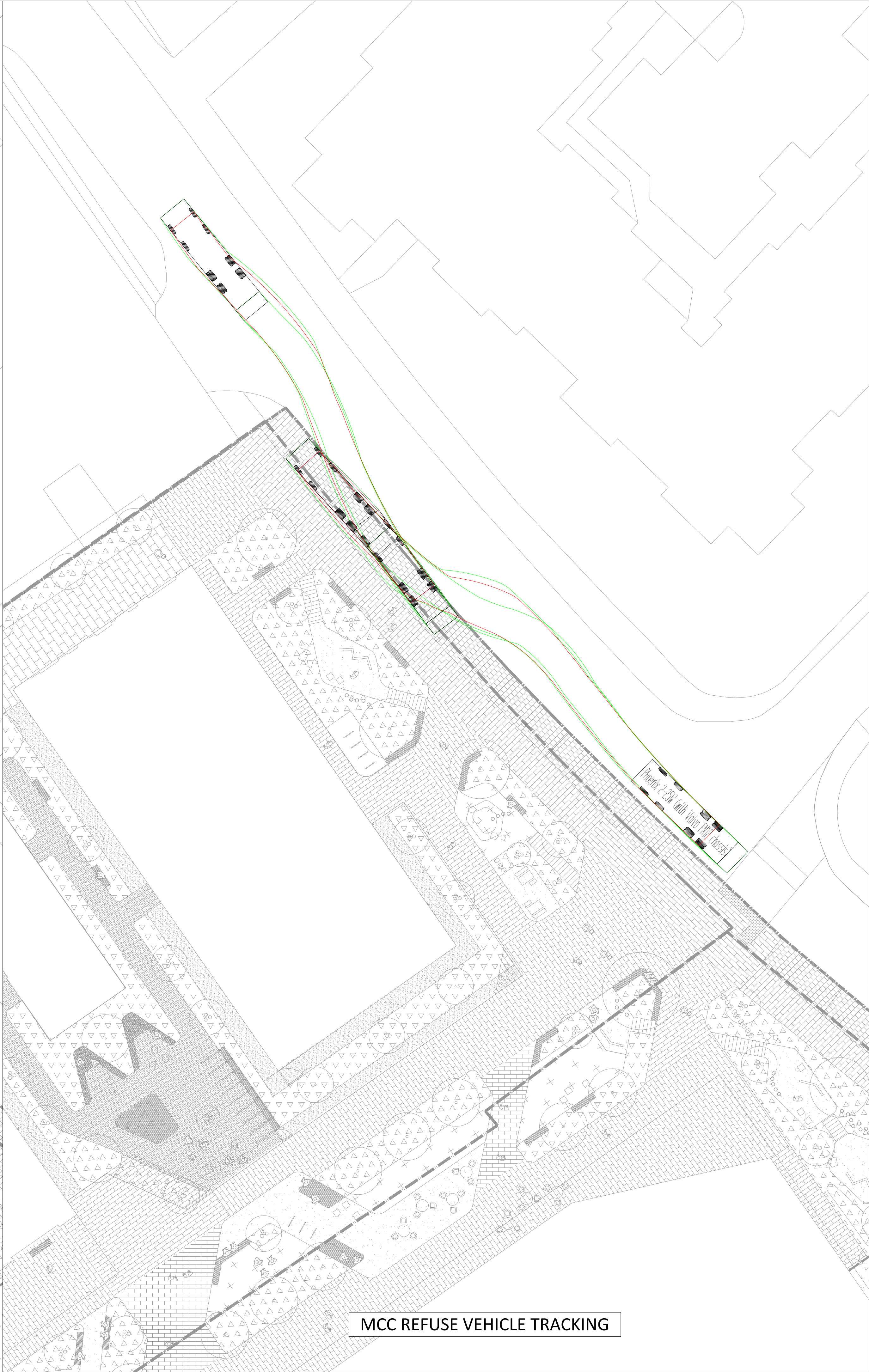
VEHICLE TRACKING

7.9m FIRE TENDER BETWEEN STUDENT
RESIDENTIALS AND LIFE SCIENCES BLOCK

DRAWING STATUS				STATUS CODE	
FOR INFORMATION				-	
CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN	CHECKED	
2584	1:250	28.11.22	CW	EI	
DRAWING No.				REV	
2584-CIV-XX-XX-S-H-40008				P06	



RIGID VEHICLE (10m) TRACKING



MCC REFUSE VEHICLE TRACKING

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KEY

CHASSIS ENVELOPE

BODY ENVELOPE

CHASSIS ENVELOPE (REVERSING)

BODY ENVELOPE (REVERSING)

VEHICLE DIMENSIONS

FTA Design Rigid Vehicle (1983)

Overall Length

Overall Width

Overall Body Height

Min Body Ground Clearance

Track Width

Lock to lock time

Kerb to Kerb Turning Radius

10.000m

2.500m

2.530m

0.427m

2.500m

4.00s

12.000m

Phoenix 2-25W (with Volvo FM12 chassis)

Overall Length

Overall Width

Overall Body Height

Min Body Ground Clearance

Track Width

Lock to lock time

Kerb to Kerb Turning Radius

11.125m

2.530m

3.205m

0.410m

2.500m

4.00s

9.250m

26.05.23	P03	UPDATED TO LATEST SITE LAYOUT	ZH	EI
03.04.23	P02	UPDATED TO RE-FORMS LAYOUT	BW	EI
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PROJECT

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TITLE

VEHICLE TRACKING
MCC REFUSE/ LARGE RIGID (10m)
VEHICLE TRACKING TO PROPOSED
LOADING BAY ON KINCARDINE ROAD

DRAWING STATUS

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16.12.22

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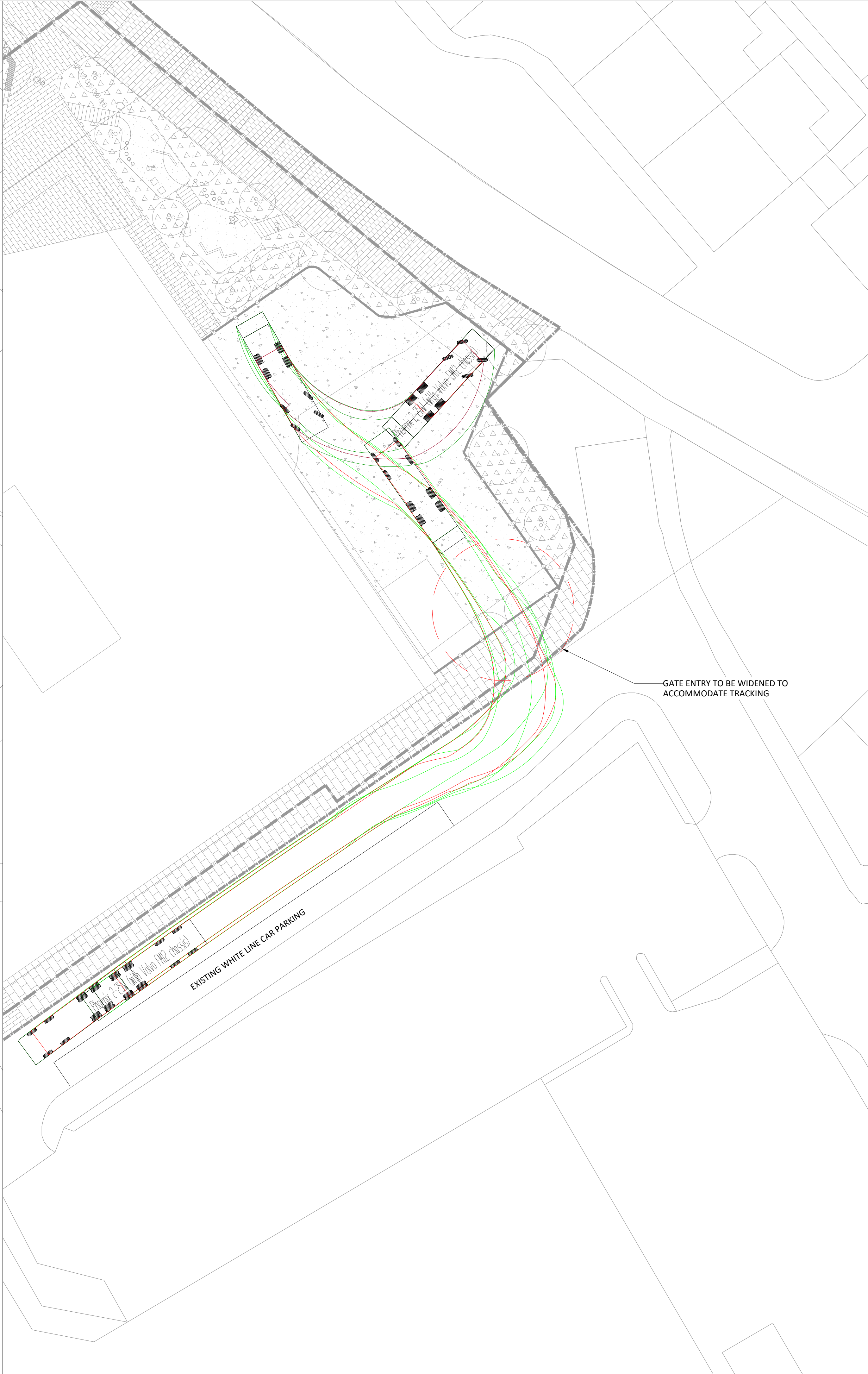
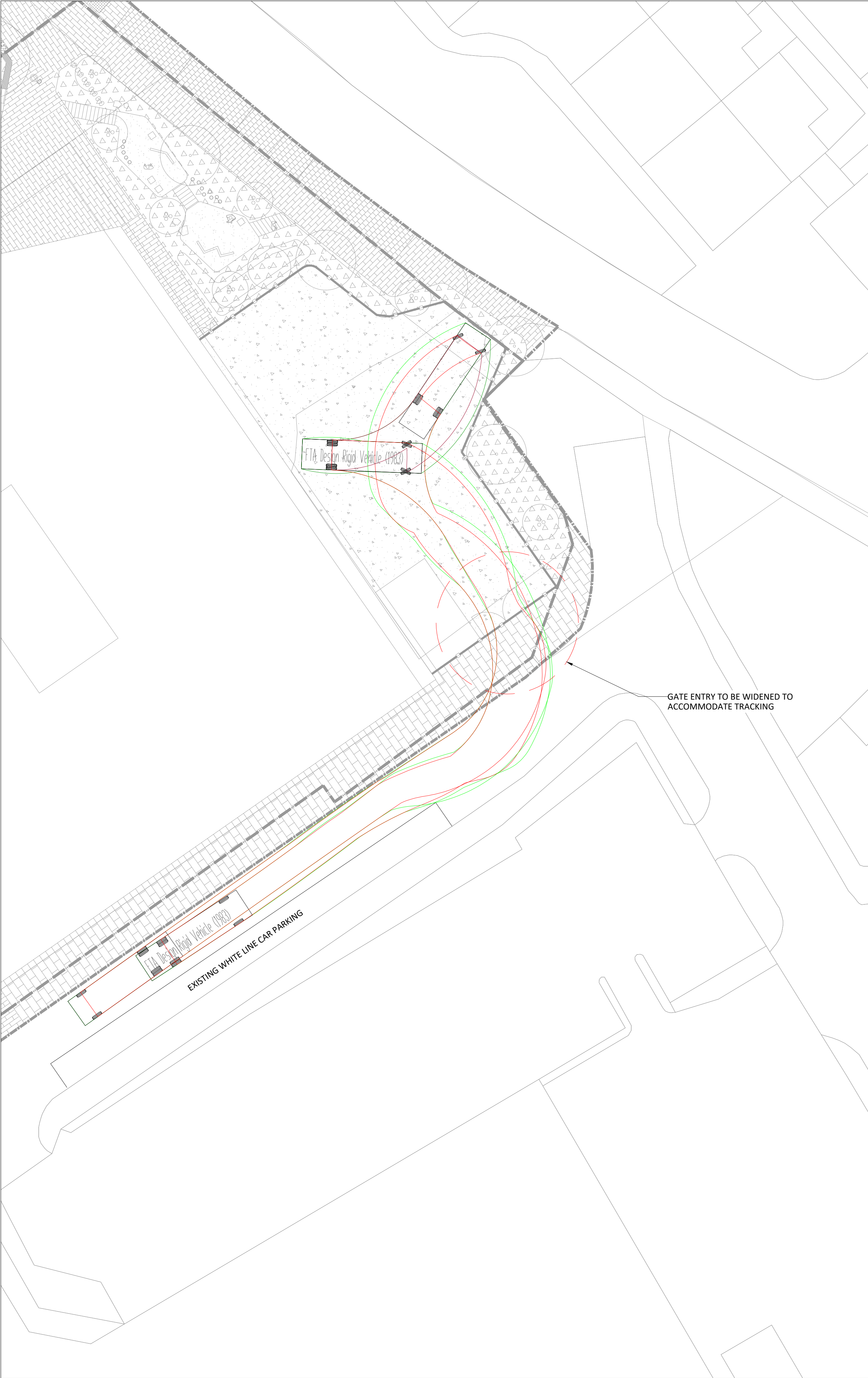
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KEY

CHASSIS ENVELOPE

BODY ENVELOPE

CHASSIS ENVELOPE (REVERSING)

BODY ENVELOPE (REVERSING)

VEHICLE DIMENSIONS

FTA Design Rigid Vehicle (1983)
Overall Length 10.000m
Overall Width 2.500m
Overall Body Height 3.632m
Min Body Ground Clearance 0.427m
Track Width 2.500m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 12.000m

Phoenix 2-25W (with Volvo FM12 chassis)
Overall Length 11.125m
Overall Width 2.530m
Overall Body Height 3.205m
Min Body Ground Clearance 0.410m
Track Width 2.500m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 9.250m

23.05.23	P03	UPDATED TO LATEST SITE LAYOUT	ZH	EI
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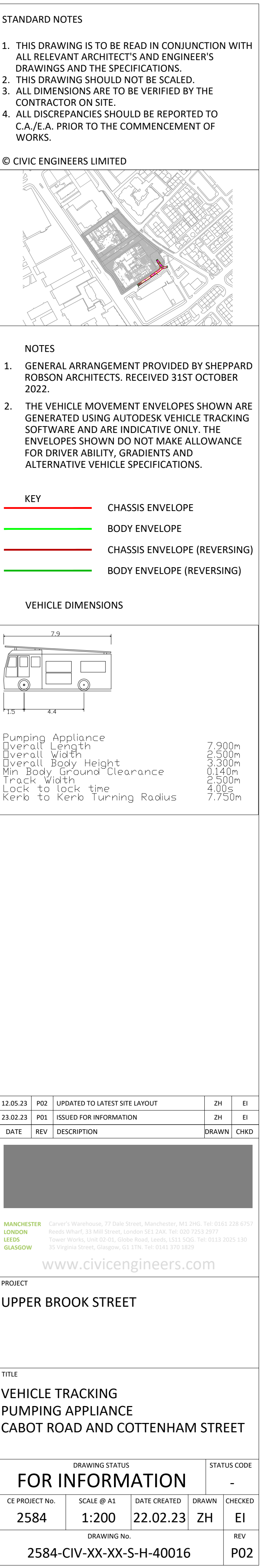
PROJECT

UPPER BROOK STREET

TITLE

VEHICLE TRACKING
MCC REFUSE/ LARGE RIGID (10m)
VEHICLE TRACKING TO LIFE SCIENCES
SERVICE YARD

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FOR INFORMATION					-	
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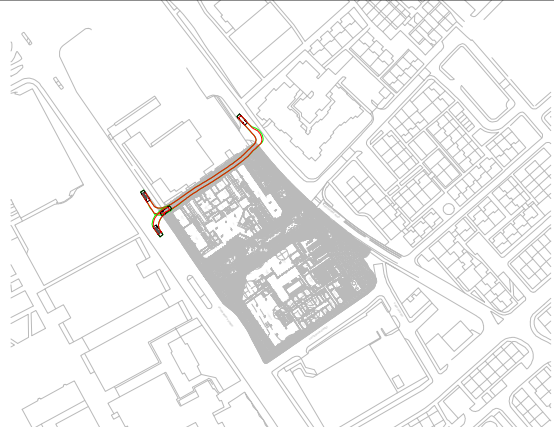




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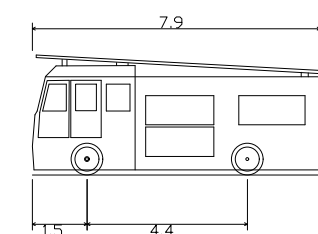
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KEY

- CHASSIS ENVELOPE
- BODY ENVELOPE
- CHASSIS ENVELOPE (REVERSING)
- BODY ENVELOPE (REVERSING)

VEHICLE DIMENSIONS



Pumping Appliance
Overall Length 7.900m
Overall Width 2.500m
Overall Body Height 3.300m
Min Body Ground Clearance 0.140m
Track Width 2.500m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 7.750m

26.05.23	P02	UPDATED TO LATEST SITE LAYOUT	ZH	EI
03.04.23	P01	ISSUED FOR INFORMATION	BW	EI
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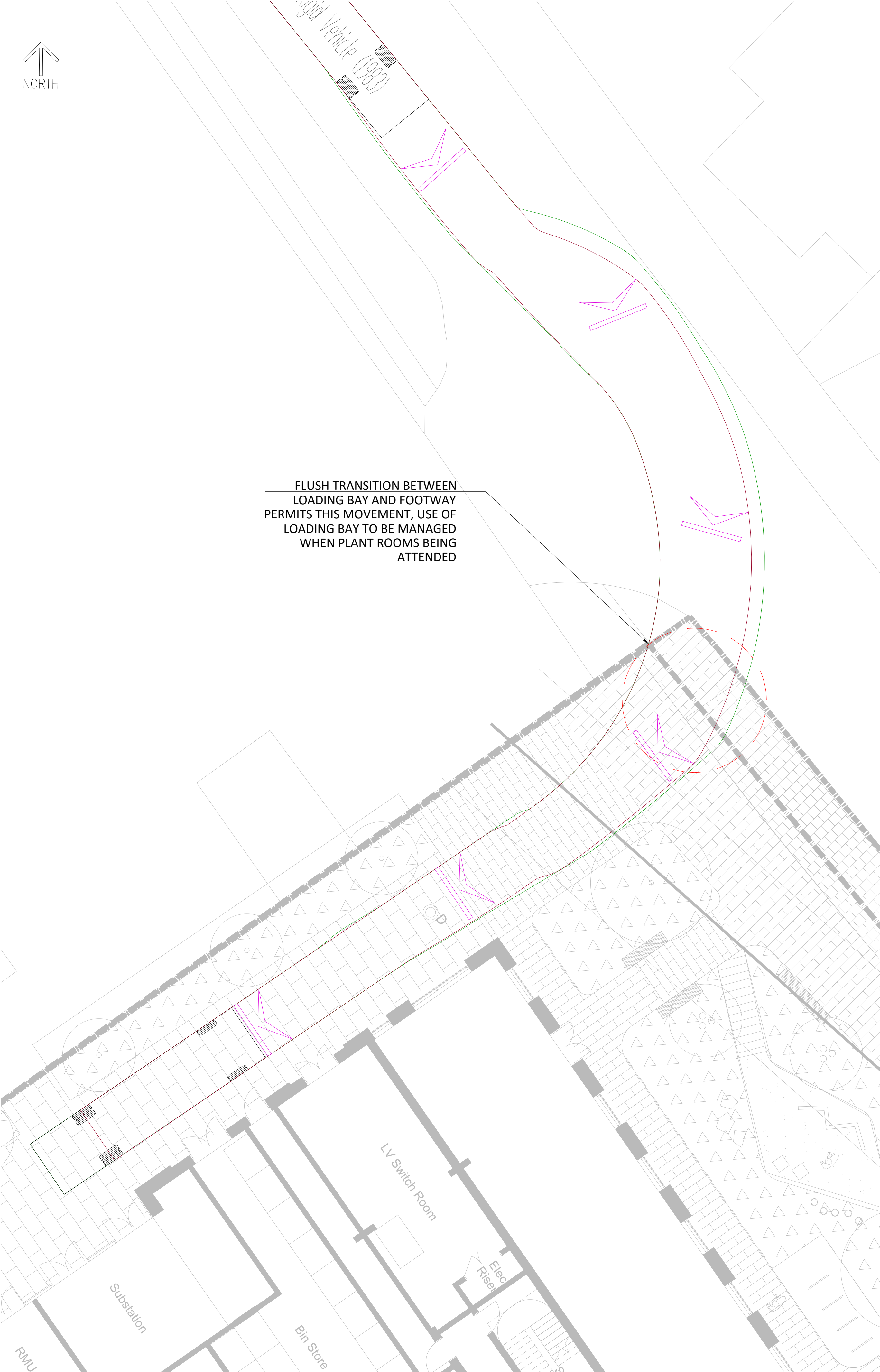
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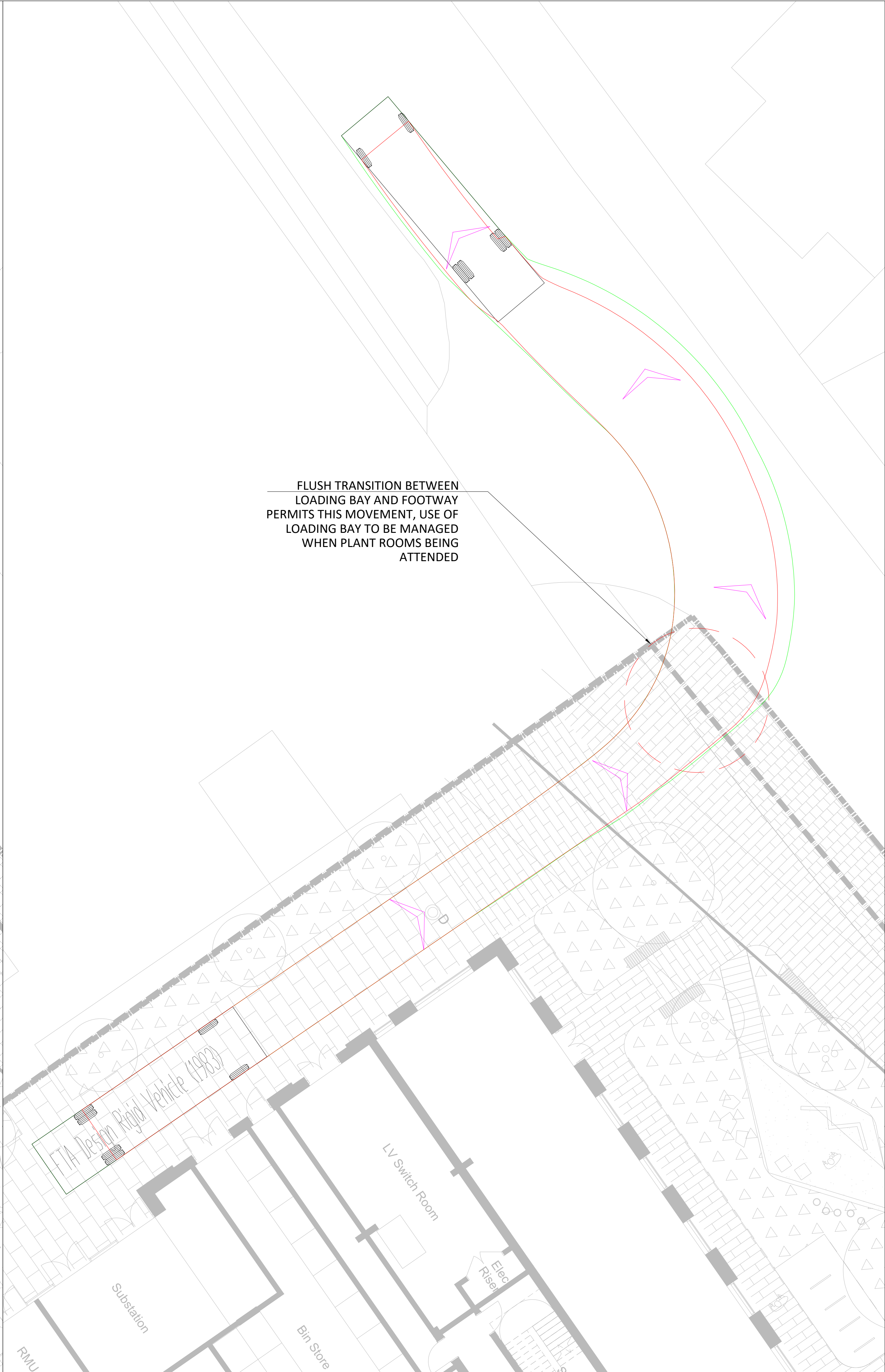
PROJECT
UPPER BROOK STREET

TITLE
VEHICLE TRACKING
7.9m FIRE TENDER NORTH OF
STUDENT RESIDENTIAL BLOCK

DRAWING STATUS					STATUS CODE	
FOR INFORMATION					-	
CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN	CHECKED	BW EI	
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REVERSING IN FROM KINCARDINE ROAD TO ACCESS PLANT ROOM



DRIVING OUT

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KEY

CHASSIS ENVELOPE

BODY ENVELOPE

CHASSIS ENVELOPE (REVERSING)

BODY ENVELOPE (REVERSING)

VEHICLE DIMENSIONS

FTA Design Rigid Vehicle (1983)
Overall Length 10.000m
Overall Width 2.500m
Overall Body Height 2.632m
Min Body Ground Clearance 0.427m
Track Width 2.500m
Lock to lock time 4.00s
Kerb to kerb Turning Radius 12.000m

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PROJECT

UPPER BROOK STREET

TITLE

VEHICLE TRACKING
PLANT ROOM ACCESS NORTH OF
STUDENT RESIDENTIAL BUILDING
(10m RIGID VEHICLE)

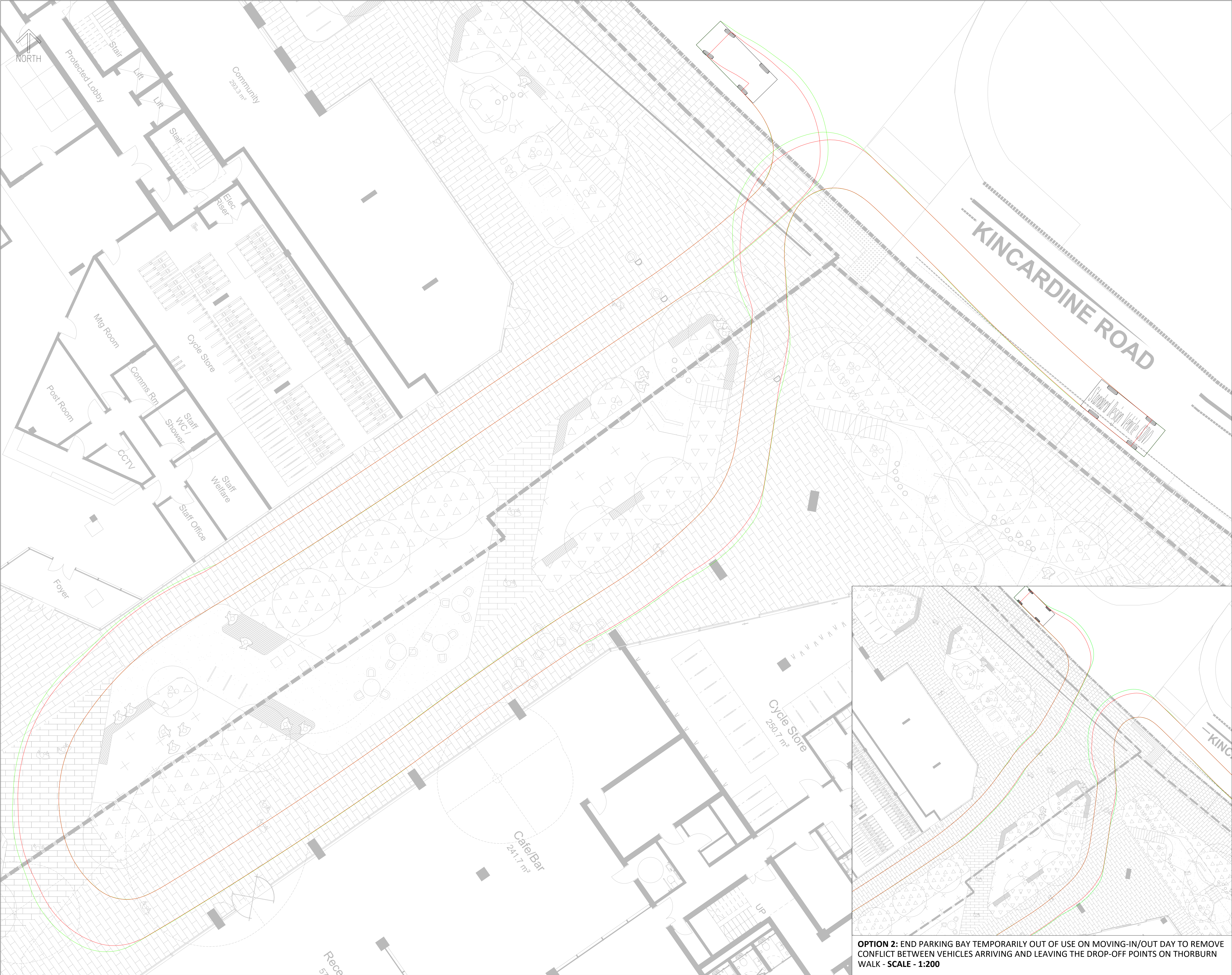
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FOR INFORMATION

STATUS CODE

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DRAWING No.				REV
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KEY

CHASSIS ENVELOPE

BODY ENVELOPE

CHASSIS ENVELOPE (REVERSING)

BODY ENVELOPE (REVERSING)

VEHICLE DIMENSIONS

Standard Design Vehicle (SDV)	
Overall Length	4.800m
Overall Width	2.000m
Overall Body Height	1.950m
Min Body Ground Clearance	0.100m
Track Width	2.000m
Lock to lock time	4.00s
Wall to Wall Turning Radius	6.000m

23.05.23	P02	UPDATED TO LATEST SITE LAYOUT	ZH	EI
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LEEDS
GLASGOW

Carver's Warehouse, 77 Dale Street, Manchester, M1 3HD. Tel: 0161 228 6703
Rivers Wharf, 23 Mill Street, London SE1 2AA. Tel: 020 7253 2977
Tower Works, Unit 02-03, Glaze Road, Leeds, LS1 5GB. Tel: 0113 2025 130
20 Virginia Street, Glasgow, G2 1TH. Tel: 0141 870 6899

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PROJECT

UPPER BROOK STREET

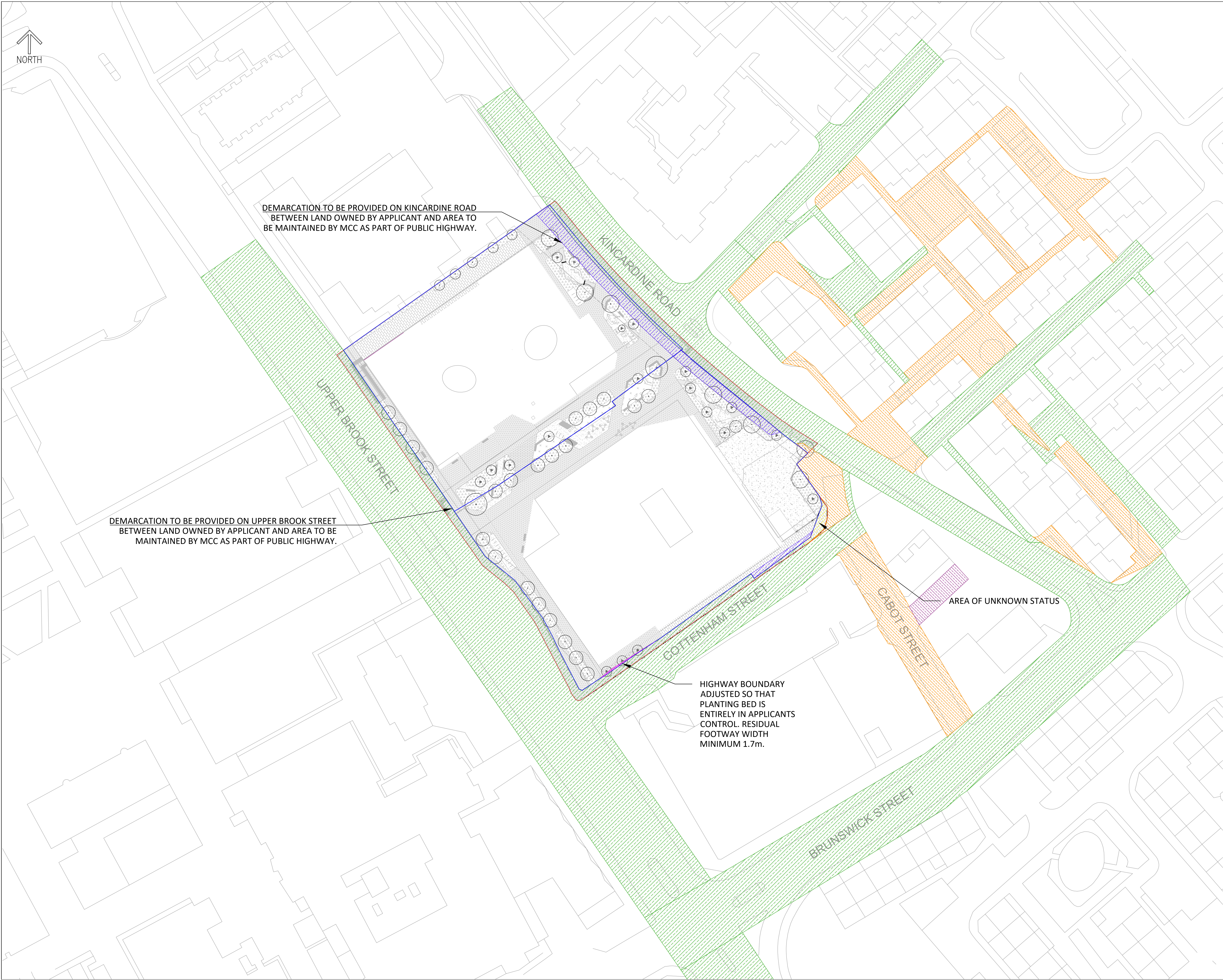
TITLE

VEHICLE TRACKING
STANDARD DESIGN VEHICLE
USING THORBURN WALK ON MOVING-IN DAY

DRAWING STATUS					STATUS CODE	
FOR INFORMATION					-	
CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN	CHECKED		
2584	1:100	11.04.23	MC	EI		
DRAWING No.					REV	
2584-CIV-XX-XX-S-H-40024					P02	

OPTION 2: END PARKING BAY TEMPORARILY OUT OF USE ON MOVING-IN/OUT DAY TO REMOVE CONFLICT BETWEEN VEHICLES ARRIVING AND LEAVING THE DROP-OFF POINTS ON THORBURN WALK - SCALE - 1:200

Appendix F: Adoption Strategy



STANDARD NOTES

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
- THIS DRAWING SHOULD NOT BE SCALED.
- ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
- ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

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NOTES

- GENERAL ARRANGEMENT PROVIDED BY REFORM LANDSCAPE ARCHITECTS. RECEIVED 22ND MAY 2023.
- INDICATIVE ADOPTION PLAN BASED ON A PDF PLAN PROVIDED BY MCC ON 20 DECEMBER 2022.

KEY

- ADOPTED HIGHWAY
- UNADOPTED HIGHWAY
- LEGAL HIGHWAY CLOSURE
- AREA OFFERED FOR ADOPTION
- UNKNOWN STATUS
- PROPOSED STOPPING UP
- PLANNING APPLICATION BOUNDARY
- SITE OWNERSHIP BOUNDARY

26.05.23	P03	REVISION TO PROPOSALS ON COTTENHAM STREET	KL	EI
11.05.23	P02	UPDATED BASE PLAN	MC	EI
11.04.23	P01	ISSUED FOR INFORMATION	MC	EI
DATE	REV	DESCRIPTION	DRAWN	CHKD

MANCHESTER Carver's Warehouse, 77 Dale Street, Manchester, M1 2HG. Tel: 0161 228 6757
LONDON Reeds Wharf, 33 Mill Street, London SE1 2AX. Tel: 020 7253 2977
LEEDS Tower Works, Unit 02-01, Globe Road, Leeds, LS1 5QG. Tel: 0113 2025 130
GLASGOW 35 Virginia Street, Glasgow, G1 1TN. Tel: 0141 370 1839

www.civicingengineers.com

PROJECT

UPPER BROOK STREET

TITLE

PUBLIC HIGHWAY ADOPTION STRATEGY

DRAWING STATUS					STATUS CODE
FOR INFORMATION					-
CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN	CHECKED	
2584	1:500	11.04.23	MC	EI	
DRAWING No.				REV	
2584-CIV-XX-XX-S-H-40025					P03

Appendix G: TRICS Output

Calculation Reference: AUDIT-758701-230424-0413

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 14 - CAR SHOW ROOMS

Category : A - CAR SHOW ROOMS

TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	SO SLOUGH	1 days
03	SOUTH WEST	
	DV DEVON	1 days
	SD SWINDON	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days
09	NORTH	
	TW TYNE & WEAR	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 2028 to 6623 (units: sqm)
 Range Selected by User: 1000 to 9800 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 25/11/19

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

Monday	1 days
Tuesday	1 days
Wednesday	2 days
Thursday	1 days
Friday	1 days

*This data displays the number of selected surveys by day of the week.*Selected survey types:

Manual count	6 days
Directional ATC Count	0 days

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

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	5

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

Industrial Zone	3
Retail Zone	2
Built-Up Zone	1

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

Secondary Filtering selection:

Use Class:

Sui Generis 6 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

5,001 to 10,000 1 days

25,001 to 50,000 5 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 1 days

250,001 to 500,000 3 days

500,001 or More 1 days

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

Car ownership within 5 miles:

0.6 to 1.0 4 days

1.1 to 1.5 2 days

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

Travel Plan:

No 6 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 6 days

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

LIST OF SITES relevant to selection parameters

1	DV-14-A-02	VAUXHALL	DEVON
	MARSH BARTON ROAD		
	EXETER		
	Suburban Area (PPS6 Out of Centre)		
	Retail Zone		
	Total Gross floor area:	6623 sqm	
	Survey date: THURSDAY	28/11/13	Survey Type: MANUAL
2	SD-14-A-01	MERCEDES BENZ	SWINDON
	GREAT WESTERN WAY		
	SWINDON		
	Suburban Area (PPS6 Out of Centre)		
	Retail Zone		
	Total Gross floor area:	3250 sqm	
	Survey date: WEDNESDAY	21/09/16	Survey Type: MANUAL
3	SO-14-A-01	JAGUAR LAND ROVER	SLOUGH
	LEIGH ROAD		
	SLOUGH		
	SLOUGH TRADING ESTATE		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	3772 sqm	
	Survey date: MONDAY	09/07/18	Survey Type: MANUAL
4	TW-14-A-02	RENAULT	TYNE & WEAR
	STONEYGATE CLOSE		
	GATESHEAD		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	2200 sqm	
	Survey date: FRIDAY	04/10/13	Survey Type: MANUAL
5	WM-14-A-05	EVANS HALSHAW	WEST MIDLANDS
	HAGLEY ROAD		
	STOURBRIDGE		
	Edge of Town Centre		
	Built-Up Zone		
	Total Gross floor area:	2028 sqm	
	Survey date: WEDNESDAY	29/11/17	Survey Type: MANUAL
6	WY-14-A-03	VOLKSWAGEN	WEST YORKSHIRE
	ELLAND ROAD		
	LEEDS		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	3324 sqm	
	Survey date: TUESDAY	24/09/13	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 14 - CAR SHOW ROOMS/A - CAR SHOW ROOMS
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	5	2915	0.741	5	2915	0.089	5	2915	0.830
08:00 - 09:00	6	3533	1.028	6	3533	0.434	6	3533	1.462
09:00 - 10:00	6	3533	0.679	6	3533	0.528	6	3533	1.207
10:00 - 11:00	6	3533	0.481	6	3533	0.396	6	3533	0.877
11:00 - 12:00	6	3533	0.406	6	3533	0.420	6	3533	0.826
12:00 - 13:00	6	3533	0.576	6	3533	0.543	6	3533	1.119
13:00 - 14:00	6	3533	0.495	6	3533	0.448	6	3533	0.943
14:00 - 15:00	6	3533	0.382	6	3533	0.425	6	3533	0.807
15:00 - 16:00	6	3533	0.302	6	3533	0.434	6	3533	0.736
16:00 - 17:00	6	3533	0.377	6	3533	0.632	6	3533	1.009
17:00 - 18:00	6	3533	0.359	6	3533	0.736	6	3533	1.095
18:00 - 19:00	6	3533	0.090	6	3533	0.552	6	3533	0.642
19:00 - 20:00	4	3544	0.014	4	3544	0.212	4	3544	0.226
20:00 - 21:00	1	6623	0.045	1	6623	0.075	1	6623	0.120
21:00 - 22:00	1	6623	0.000	1	6623	0.211	1	6623	0.211
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.975			6.135			12.110

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:	2028 - 6623 (units: sqm)
Survey date range:	01/01/13 - 25/11/19
Number of weekdays (Monday-Friday):	6
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 14 - CAR SHOW ROOMS/A - CAR SHOW ROOMS
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	5	2915	0.000	5	2915	0.000	5	2915	0.000
08:00 - 09:00	6	3533	0.038	6	3533	0.038	6	3533	0.076
09:00 - 10:00	6	3533	0.005	6	3533	0.005	6	3533	0.010
10:00 - 11:00	6	3533	0.019	6	3533	0.019	6	3533	0.038
11:00 - 12:00	6	3533	0.005	6	3533	0.005	6	3533	0.010
12:00 - 13:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
13:00 - 14:00	6	3533	0.009	6	3533	0.009	6	3533	0.018
14:00 - 15:00	6	3533	0.005	6	3533	0.005	6	3533	0.010
15:00 - 16:00	6	3533	0.005	6	3533	0.005	6	3533	0.010
16:00 - 17:00	6	3533	0.009	6	3533	0.009	6	3533	0.018
17:00 - 18:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
18:00 - 19:00	6	3533	0.009	6	3533	0.009	6	3533	0.018
19:00 - 20:00	4	3544	0.000	4	3544	0.000	4	3544	0.000
20:00 - 21:00	1	6623	0.000	1	6623	0.000	1	6623	0.000
21:00 - 22:00	1	6623	0.000	1	6623	0.000	1	6623	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.104			0.104			0.208

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 14 - CAR SHOW ROOMS/A - CAR SHOW ROOMS
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	5	2915	0.027	5	2915	0.021	5	2915	0.048
08:00 - 09:00	6	3533	0.014	6	3533	0.005	6	3533	0.019
09:00 - 10:00	6	3533	0.009	6	3533	0.019	6	3533	0.028
10:00 - 11:00	6	3533	0.009	6	3533	0.005	6	3533	0.014
11:00 - 12:00	6	3533	0.009	6	3533	0.009	6	3533	0.018
12:00 - 13:00	6	3533	0.000	6	3533	0.009	6	3533	0.009
13:00 - 14:00	6	3533	0.005	6	3533	0.005	6	3533	0.010
14:00 - 15:00	6	3533	0.005	6	3533	0.005	6	3533	0.010
15:00 - 16:00	6	3533	0.005	6	3533	0.005	6	3533	0.010
16:00 - 17:00	6	3533	0.009	6	3533	0.000	6	3533	0.009
17:00 - 18:00	6	3533	0.009	6	3533	0.009	6	3533	0.018
18:00 - 19:00	6	3533	0.000	6	3533	0.009	6	3533	0.009
19:00 - 20:00	4	3544	0.000	4	3544	0.000	4	3544	0.000
20:00 - 21:00	1	6623	0.000	1	6623	0.000	1	6623	0.000
21:00 - 22:00	1	6623	0.000	1	6623	0.000	1	6623	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.101			0.101			0.202

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 14 - CAR SHOW ROOMS/A - CAR SHOW ROOMS
 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	5	2915	0.000	5	2915	0.000	5	2915	0.000
08:00 - 09:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
09:00 - 10:00	6	3533	0.009	6	3533	0.005	6	3533	0.014
10:00 - 11:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
11:00 - 12:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
12:00 - 13:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
13:00 - 14:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
14:00 - 15:00	6	3533	0.000	6	3533	0.005	6	3533	0.005
15:00 - 16:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
16:00 - 17:00	6	3533	0.005	6	3533	0.009	6	3533	0.014
17:00 - 18:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
18:00 - 19:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
19:00 - 20:00	4	3544	0.000	4	3544	0.000	4	3544	0.000
20:00 - 21:00	1	6623	0.000	1	6623	0.000	1	6623	0.000
21:00 - 22:00	1	6623	0.000	1	6623	0.000	1	6623	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.014			0.019			0.033

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 14 - CAR SHOW ROOMS/A - CAR SHOW ROOMS
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	5	2915	0.062	5	2915	0.007	5	2915	0.069
08:00 - 09:00	6	3533	0.033	6	3533	0.000	6	3533	0.033
09:00 - 10:00	6	3533	0.000	6	3533	0.009	6	3533	0.009
10:00 - 11:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
11:00 - 12:00	6	3533	0.005	6	3533	0.000	6	3533	0.005
12:00 - 13:00	6	3533	0.005	6	3533	0.009	6	3533	0.014
13:00 - 14:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
14:00 - 15:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
15:00 - 16:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
16:00 - 17:00	6	3533	0.000	6	3533	0.014	6	3533	0.014
17:00 - 18:00	6	3533	0.000	6	3533	0.042	6	3533	0.042
18:00 - 19:00	6	3533	0.000	6	3533	0.014	6	3533	0.014
19:00 - 20:00	4	3544	0.000	4	3544	0.000	4	3544	0.000
20:00 - 21:00	1	6623	0.000	1	6623	0.000	1	6623	0.000
21:00 - 22:00	1	6623	0.000	1	6623	0.000	1	6623	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.105			0.095			0.200

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 14 - CAR SHOW ROOMS/A - CAR SHOW ROOMS
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	5	2915	0.686	5	2915	0.062	5	2915	0.748
08:00 - 09:00	6	3533	0.901	6	3533	0.354	6	3533	1.255
09:00 - 10:00	6	3533	0.599	6	3533	0.429	6	3533	1.028
10:00 - 11:00	6	3533	0.406	6	3533	0.326	6	3533	0.732
11:00 - 12:00	6	3533	0.340	6	3533	0.363	6	3533	0.703
12:00 - 13:00	6	3533	0.528	6	3533	0.467	6	3533	0.995
13:00 - 14:00	6	3533	0.425	6	3533	0.382	6	3533	0.807
14:00 - 15:00	6	3533	0.321	6	3533	0.373	6	3533	0.694
15:00 - 16:00	6	3533	0.259	6	3533	0.377	6	3533	0.636
16:00 - 17:00	6	3533	0.302	6	3533	0.557	6	3533	0.859
17:00 - 18:00	6	3533	0.340	6	3533	0.708	6	3533	1.048
18:00 - 19:00	6	3533	0.080	6	3533	0.528	6	3533	0.608
19:00 - 20:00	4	3544	0.014	4	3544	0.212	4	3544	0.226
20:00 - 21:00	1	6623	0.045	1	6623	0.075	1	6623	0.120
21:00 - 22:00	1	6623	0.000	1	6623	0.211	1	6623	0.211
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.246			5.424			10.670

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 14 - CAR SHOW ROOMS/A - CAR SHOW ROOMS
 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	5	2915	0.027	5	2915	0.007	5	2915	0.034
08:00 - 09:00	6	3533	0.071	6	3533	0.038	6	3533	0.109
09:00 - 10:00	6	3533	0.057	6	3533	0.071	6	3533	0.128
10:00 - 11:00	6	3533	0.047	6	3533	0.047	6	3533	0.094
11:00 - 12:00	6	3533	0.047	6	3533	0.038	6	3533	0.085
12:00 - 13:00	6	3533	0.047	6	3533	0.066	6	3533	0.113
13:00 - 14:00	6	3533	0.057	6	3533	0.052	6	3533	0.109
14:00 - 15:00	6	3533	0.047	6	3533	0.038	6	3533	0.085
15:00 - 16:00	6	3533	0.033	6	3533	0.042	6	3533	0.075
16:00 - 17:00	6	3533	0.047	6	3533	0.047	6	3533	0.094
17:00 - 18:00	6	3533	0.009	6	3533	0.019	6	3533	0.028
18:00 - 19:00	6	3533	0.000	6	3533	0.005	6	3533	0.005
19:00 - 20:00	4	3544	0.000	4	3544	0.000	4	3544	0.000
20:00 - 21:00	1	6623	0.000	1	6623	0.000	1	6623	0.000
21:00 - 22:00	1	6623	0.000	1	6623	0.000	1	6623	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.489			0.470			0.959

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 14 - CAR SHOW ROOMS/A - CAR SHOW ROOMS
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	5	2915	0.000	5	2915	0.000	5	2915	0.000
08:00 - 09:00	6	3533	0.005	6	3533	0.000	6	3533	0.005
09:00 - 10:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
10:00 - 11:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
11:00 - 12:00	6	3533	0.005	6	3533	0.005	6	3533	0.010
12:00 - 13:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
13:00 - 14:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
14:00 - 15:00	6	3533	0.005	6	3533	0.000	6	3533	0.005
15:00 - 16:00	6	3533	0.000	6	3533	0.005	6	3533	0.005
16:00 - 17:00	6	3533	0.005	6	3533	0.009	6	3533	0.014
17:00 - 18:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
18:00 - 19:00	6	3533	0.000	6	3533	0.000	6	3533	0.000
19:00 - 20:00	4	3544	0.000	4	3544	0.000	4	3544	0.000
20:00 - 21:00	1	6623	0.000	1	6623	0.000	1	6623	0.000
21:00 - 22:00	1	6623	0.000	1	6623	0.000	1	6623	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.020			0.019			0.039

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.*

Calculation Reference: AUDIT-758701-230207-0206

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : F - SHELTERED ACCOMMODATION
 MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

10	WALES	
	DB DENBIGHSHIRE	1 days
11	SCOTLAND	
	EL EAST LOTHIAN	1 days
17	ULSTER (NORTHERN IRELAND)	
	DE DERRY	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
 Actual Range: 5 to 59 (units:)
 Range Selected by User: 5 to 114 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 20/05/22

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

Selected survey days:

Monday	1 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	3 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	3
---------------------	---

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

Selected Location Sub Categories:

Residential Zone	2
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.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	2 days - Selected
Servicing vehicles Excluded	1 days - Selected

Secondary Filtering selection:

Use Class:

C3 3 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

20,001 to 25,000 3 days

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

Population within 5 miles:

5,001 to 25,000 1 days

50,001 to 75,000 1 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 2 days

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

Travel Plan:

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 3 days

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

LIST OF SITES relevant to selection parameters

1	DB-03-F-02 HIGHFIELD PARK RHYL	SHELTERED HOUSING	DENBIGHSHIRE
	Edge of Town Centre Residential Zone Total No of Dwellings: 59 Survey date: TUESDAY 11/11/14		Survey Type: MANUAL
2	DE-03-F-01 WILLOWBROOK LANE COLERAINE	SHELTERED ACCOMMODATION	DERRY
	Edge of Town Centre No Sub Category Total No of Dwellings: 5 Survey date: FRIDAY 20/05/22		Survey Type: MANUAL
3	EL-03-F-01 INVERESK ROAD MUSSELBURGH	SHELTERED HOUSING	EAST LOTHIAN
	Edge of Town Centre Residential Zone Total No of Dwellings: 56 Survey date: MONDAY 23/04/18		Survey Type: MANUAL

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

TRIP RATE for Land Use 03 - RESIDENTIAL/F - SHELTERED ACCOMMODATION

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 2.91

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	40	0.042	3	40	0.058	3	40	0.100
08:00 - 09:00	3	40	0.067	3	40	0.050	3	40	0.117
09:00 - 10:00	3	40	0.117	3	40	0.125	3	40	0.242
10:00 - 11:00	3	40	0.117	3	40	0.142	3	40	0.259
11:00 - 12:00	3	40	0.125	3	40	0.108	3	40	0.233
12:00 - 13:00	3	40	0.100	3	40	0.100	3	40	0.200
13:00 - 14:00	3	40	0.083	3	40	0.075	3	40	0.158
14:00 - 15:00	3	40	0.133	3	40	0.125	3	40	0.258
15:00 - 16:00	3	40	0.125	3	40	0.117	3	40	0.242
16:00 - 17:00	3	40	0.108	3	40	0.100	3	40	0.208
17:00 - 18:00	3	40	0.075	3	40	0.067	3	40	0.142
18:00 - 19:00	3	40	0.050	3	40	0.033	3	40	0.083
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.142			1.100			2.242

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:	5 - 59 (units:)
Survey date range:	01/01/14 - 20/05/22
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 03 - RESIDENTIAL/F - SHELTERED ACCOMMODATION

MULTI-MODAL TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	40	0.008	3	40	0.008	3	40	0.016
08:00 - 09:00	3	40	0.000	3	40	0.000	3	40	0.000
09:00 - 10:00	3	40	0.017	3	40	0.017	3	40	0.034
10:00 - 11:00	3	40	0.017	3	40	0.017	3	40	0.034
11:00 - 12:00	3	40	0.050	3	40	0.050	3	40	0.100
12:00 - 13:00	3	40	0.017	3	40	0.017	3	40	0.034
13:00 - 14:00	3	40	0.017	3	40	0.017	3	40	0.034
14:00 - 15:00	3	40	0.050	3	40	0.050	3	40	0.100
15:00 - 16:00	3	40	0.017	3	40	0.017	3	40	0.034
16:00 - 17:00	3	40	0.000	3	40	0.000	3	40	0.000
17:00 - 18:00	3	40	0.008	3	40	0.008	3	40	0.016
18:00 - 19:00	3	40	0.017	3	40	0.017	3	40	0.034
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.218			0.218			0.436

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.

Civic Engineers Dale Street Manchester

Licence No: 758701

TRIP RATE for Land Use 03 - RESIDENTIAL/F - SHELTERED ACCOMMODATION

MULTI-MODAL OGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	40	0.000	3	40	0.000	3	40	0.000
08:00 - 09:00	3	40	0.000	3	40	0.000	3	40	0.000
09:00 - 10:00	3	40	0.000	3	40	0.000	3	40	0.000
10:00 - 11:00	3	40	0.000	3	40	0.000	3	40	0.000
11:00 - 12:00	3	40	0.000	3	40	0.000	3	40	0.000
12:00 - 13:00	3	40	0.000	3	40	0.000	3	40	0.000
13:00 - 14:00	3	40	0.008	3	40	0.000	3	40	0.008
14:00 - 15:00	3	40	0.000	3	40	0.008	3	40	0.008
15:00 - 16:00	3	40	0.000	3	40	0.000	3	40	0.000
16:00 - 17:00	3	40	0.000	3	40	0.000	3	40	0.000
17:00 - 18:00	3	40	0.000	3	40	0.000	3	40	0.000
18:00 - 19:00	3	40	0.000	3	40	0.000	3	40	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.008			0.008			0.016

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.

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TRIP RATE for Land Use 03 - RESIDENTIAL/F - SHELTERED ACCOMMODATION

MULTI-MODAL PSVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	40	0.000	3	40	0.000	3	40	0.000
08:00 - 09:00	3	40	0.008	3	40	0.008	3	40	0.016
09:00 - 10:00	3	40	0.000	3	40	0.000	3	40	0.000
10:00 - 11:00	3	40	0.000	3	40	0.000	3	40	0.000
11:00 - 12:00	3	40	0.000	3	40	0.000	3	40	0.000
12:00 - 13:00	3	40	0.000	3	40	0.000	3	40	0.000
13:00 - 14:00	3	40	0.000	3	40	0.000	3	40	0.000
14:00 - 15:00	3	40	0.000	3	40	0.000	3	40	0.000
15:00 - 16:00	3	40	0.000	3	40	0.000	3	40	0.000
16:00 - 17:00	3	40	0.008	3	40	0.008	3	40	0.016
17:00 - 18:00	3	40	0.000	3	40	0.000	3	40	0.000
18:00 - 19:00	3	40	0.000	3	40	0.000	3	40	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.016			0.016			0.032

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 03 - RESIDENTIAL/F - SHELTERED ACCOMMODATION
 MULTI-MODAL CYCLISTS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	40	0.000	3	40	0.008	3	40	0.008
08:00 - 09:00	3	40	0.008	3	40	0.008	3	40	0.016
09:00 - 10:00	3	40	0.000	3	40	0.017	3	40	0.017
10:00 - 11:00	3	40	0.008	3	40	0.000	3	40	0.008
11:00 - 12:00	3	40	0.000	3	40	0.000	3	40	0.000
12:00 - 13:00	3	40	0.008	3	40	0.000	3	40	0.008
13:00 - 14:00	3	40	0.008	3	40	0.017	3	40	0.025
14:00 - 15:00	3	40	0.008	3	40	0.008	3	40	0.016
15:00 - 16:00	3	40	0.000	3	40	0.000	3	40	0.000
16:00 - 17:00	3	40	0.008	3	40	0.008	3	40	0.016
17:00 - 18:00	3	40	0.000	3	40	0.000	3	40	0.000
18:00 - 19:00	3	40	0.000	3	40	0.000	3	40	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.048			0.066			0.114

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 03 - RESIDENTIAL/F - SHELTERED ACCOMMODATION

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	40	0.033	3	40	0.075	3	40	0.108
08:00 - 09:00	3	40	0.058	3	40	0.050	3	40	0.108
09:00 - 10:00	3	40	0.108	3	40	0.167	3	40	0.275
10:00 - 11:00	3	40	0.167	3	40	0.175	3	40	0.342
11:00 - 12:00	3	40	0.125	3	40	0.133	3	40	0.258
12:00 - 13:00	3	40	0.117	3	40	0.108	3	40	0.225
13:00 - 14:00	3	40	0.083	3	40	0.100	3	40	0.183
14:00 - 15:00	3	40	0.133	3	40	0.108	3	40	0.241
15:00 - 16:00	3	40	0.158	3	40	0.150	3	40	0.308
16:00 - 17:00	3	40	0.158	3	40	0.108	3	40	0.266
17:00 - 18:00	3	40	0.100	3	40	0.075	3	40	0.175
18:00 - 19:00	3	40	0.058	3	40	0.033	3	40	0.091
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.298			1.282			2.580

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 03 - RESIDENTIAL/F - SHELTERED ACCOMMODATION
 MULTI-MODAL PEDESTRIANS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	40	0.025	3	40	0.033	3	40	0.058
08:00 - 09:00	3	40	0.033	3	40	0.092	3	40	0.125
09:00 - 10:00	3	40	0.067	3	40	0.108	3	40	0.175
10:00 - 11:00	3	40	0.108	3	40	0.150	3	40	0.258
11:00 - 12:00	3	40	0.125	3	40	0.192	3	40	0.317
12:00 - 13:00	3	40	0.175	3	40	0.200	3	40	0.375
13:00 - 14:00	3	40	0.125	3	40	0.133	3	40	0.258
14:00 - 15:00	3	40	0.175	3	40	0.150	3	40	0.325
15:00 - 16:00	3	40	0.117	3	40	0.108	3	40	0.225
16:00 - 17:00	3	40	0.092	3	40	0.117	3	40	0.209
17:00 - 18:00	3	40	0.125	3	40	0.100	3	40	0.225
18:00 - 19:00	3	40	0.192	3	40	0.108	3	40	0.300
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.359			1.491			2.850

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 03 - RESIDENTIAL/F - SHELTERED ACCOMMODATION

MULTI-MODAL BUS/TRAM PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	40	0.000	3	40	0.000	3	40	0.000
08:00 - 09:00	3	40	0.000	3	40	0.017	3	40	0.017
09:00 - 10:00	3	40	0.008	3	40	0.033	3	40	0.041
10:00 - 11:00	3	40	0.017	3	40	0.058	3	40	0.075
11:00 - 12:00	3	40	0.025	3	40	0.025	3	40	0.050
12:00 - 13:00	3	40	0.058	3	40	0.100	3	40	0.158
13:00 - 14:00	3	40	0.075	3	40	0.058	3	40	0.133
14:00 - 15:00	3	40	0.067	3	40	0.042	3	40	0.109
15:00 - 16:00	3	40	0.042	3	40	0.025	3	40	0.067
16:00 - 17:00	3	40	0.075	3	40	0.042	3	40	0.117
17:00 - 18:00	3	40	0.017	3	40	0.008	3	40	0.025
18:00 - 19:00	3	40	0.025	3	40	0.008	3	40	0.033
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.409			0.416			0.825

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 03 - RESIDENTIAL/F - SHELTERED ACCOMMODATION

MULTI-MODAL TOTAL RAIL PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	40	0.000	3	40	0.000	3	40	0.000
08:00 - 09:00	3	40	0.017	3	40	0.008	3	40	0.025
09:00 - 10:00	3	40	0.008	3	40	0.000	3	40	0.008
10:00 - 11:00	3	40	0.000	3	40	0.000	3	40	0.000
11:00 - 12:00	3	40	0.000	3	40	0.000	3	40	0.000
12:00 - 13:00	3	40	0.008	3	40	0.000	3	40	0.008
13:00 - 14:00	3	40	0.008	3	40	0.017	3	40	0.025
14:00 - 15:00	3	40	0.000	3	40	0.017	3	40	0.017
15:00 - 16:00	3	40	0.000	3	40	0.000	3	40	0.000
16:00 - 17:00	3	40	0.008	3	40	0.000	3	40	0.008
17:00 - 18:00	3	40	0.000	3	40	0.000	3	40	0.000
18:00 - 19:00	3	40	0.000	3	40	0.000	3	40	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.049			0.042			0.091

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 03 - RESIDENTIAL/F - SHELTERED ACCOMMODATION

MULTI-MODAL COACH PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	40	0.000	3	40	0.000	3	40	0.000
08:00 - 09:00	3	40	0.008	3	40	0.017	3	40	0.025
09:00 - 10:00	3	40	0.000	3	40	0.000	3	40	0.000
10:00 - 11:00	3	40	0.000	3	40	0.000	3	40	0.000
11:00 - 12:00	3	40	0.000	3	40	0.000	3	40	0.000
12:00 - 13:00	3	40	0.000	3	40	0.000	3	40	0.000
13:00 - 14:00	3	40	0.000	3	40	0.000	3	40	0.000
14:00 - 15:00	3	40	0.000	3	40	0.000	3	40	0.000
15:00 - 16:00	3	40	0.000	3	40	0.000	3	40	0.000
16:00 - 17:00	3	40	0.017	3	40	0.008	3	40	0.025
17:00 - 18:00	3	40	0.000	3	40	0.000	3	40	0.000
18:00 - 19:00	3	40	0.000	3	40	0.000	3	40	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.025			0.025			0.050

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 03 - RESIDENTIAL/F - SHELTERED ACCOMMODATION
 MULTI-MODAL PUBLIC TRANSPORT USERS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	40	0.000	3	40	0.000	3	40	0.000
08:00 - 09:00	3	40	0.025	3	40	0.042	3	40	0.067
09:00 - 10:00	3	40	0.017	3	40	0.033	3	40	0.050
10:00 - 11:00	3	40	0.017	3	40	0.058	3	40	0.075
11:00 - 12:00	3	40	0.025	3	40	0.025	3	40	0.050
12:00 - 13:00	3	40	0.067	3	40	0.100	3	40	0.167
13:00 - 14:00	3	40	0.083	3	40	0.075	3	40	0.158
14:00 - 15:00	3	40	0.067	3	40	0.058	3	40	0.125
15:00 - 16:00	3	40	0.042	3	40	0.025	3	40	0.067
16:00 - 17:00	3	40	0.100	3	40	0.050	3	40	0.150
17:00 - 18:00	3	40	0.017	3	40	0.008	3	40	0.025
18:00 - 19:00	3	40	0.025	3	40	0.008	3	40	0.033
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.485			0.482			0.967

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 03 - RESIDENTIAL/F - SHELTERED ACCOMMODATION

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 2.91

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	40	0.058	3	40	0.117	3	40	0.175
08:00 - 09:00	3	40	0.125	3	40	0.192	3	40	0.317
09:00 - 10:00	3	40	0.192	3	40	0.325	3	40	0.517
10:00 - 11:00	3	40	0.300	3	40	0.383	3	40	0.683
11:00 - 12:00	3	40	0.275	3	40	0.350	3	40	0.625
12:00 - 13:00	3	40	0.367	3	40	0.408	3	40	0.775
13:00 - 14:00	3	40	0.300	3	40	0.325	3	40	0.625
14:00 - 15:00	3	40	0.383	3	40	0.325	3	40	0.708
15:00 - 16:00	3	40	0.317	3	40	0.283	3	40	0.600
16:00 - 17:00	3	40	0.358	3	40	0.283	3	40	0.641
17:00 - 18:00	3	40	0.242	3	40	0.183	3	40	0.425
18:00 - 19:00	3	40	0.275	3	40	0.150	3	40	0.425
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.192			3.324			6.516

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 03 - RESIDENTIAL/F - SHELTERED ACCOMMODATION

MULTI-MODAL CARS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	40	0.025	3	40	0.042	3	40	0.067
08:00 - 09:00	3	40	0.050	3	40	0.042	3	40	0.092
09:00 - 10:00	3	40	0.083	3	40	0.108	3	40	0.191
10:00 - 11:00	3	40	0.075	3	40	0.092	3	40	0.167
11:00 - 12:00	3	40	0.050	3	40	0.050	3	40	0.100
12:00 - 13:00	3	40	0.042	3	40	0.058	3	40	0.100
13:00 - 14:00	3	40	0.042	3	40	0.025	3	40	0.067
14:00 - 15:00	3	40	0.067	3	40	0.042	3	40	0.109
15:00 - 16:00	3	40	0.092	3	40	0.075	3	40	0.167
16:00 - 17:00	3	40	0.092	3	40	0.083	3	40	0.175
17:00 - 18:00	3	40	0.067	3	40	0.050	3	40	0.117
18:00 - 19:00	3	40	0.033	3	40	0.017	3	40	0.050
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.718			0.684			1.402

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 03 - RESIDENTIAL/F - SHELTERED ACCOMMODATION

MULTI-MODAL LGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	40	0.008	3	40	0.008	3	40	0.016
08:00 - 09:00	3	40	0.008	3	40	0.000	3	40	0.008
09:00 - 10:00	3	40	0.017	3	40	0.000	3	40	0.017
10:00 - 11:00	3	40	0.025	3	40	0.033	3	40	0.058
11:00 - 12:00	3	40	0.025	3	40	0.008	3	40	0.033
12:00 - 13:00	3	40	0.033	3	40	0.025	3	40	0.058
13:00 - 14:00	3	40	0.017	3	40	0.033	3	40	0.050
14:00 - 15:00	3	40	0.017	3	40	0.017	3	40	0.034
15:00 - 16:00	3	40	0.017	3	40	0.025	3	40	0.042
16:00 - 17:00	3	40	0.008	3	40	0.008	3	40	0.016
17:00 - 18:00	3	40	0.000	3	40	0.008	3	40	0.008
18:00 - 19:00	3	40	0.000	3	40	0.000	3	40	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.175			0.165			0.340

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 03 - RESIDENTIAL/F - SHELTERED ACCOMMODATION
 MULTI-MODAL MOTOR CYCLES
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	40	0.000	3	40	0.000	3	40	0.000
08:00 - 09:00	3	40	0.000	3	40	0.000	3	40	0.000
09:00 - 10:00	3	40	0.000	3	40	0.000	3	40	0.000
10:00 - 11:00	3	40	0.000	3	40	0.000	3	40	0.000
11:00 - 12:00	3	40	0.000	3	40	0.000	3	40	0.000
12:00 - 13:00	3	40	0.008	3	40	0.000	3	40	0.008
13:00 - 14:00	3	40	0.000	3	40	0.000	3	40	0.000
14:00 - 15:00	3	40	0.000	3	40	0.008	3	40	0.008
15:00 - 16:00	3	40	0.000	3	40	0.000	3	40	0.000
16:00 - 17:00	3	40	0.000	3	40	0.000	3	40	0.000
17:00 - 18:00	3	40	0.000	3	40	0.000	3	40	0.000
18:00 - 19:00	3	40	0.000	3	40	0.000	3	40	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.008			0.008			0.016

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.

Calculation Reference: AUDIT-758701-230207-0215

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : G - STUDENT ACCOMMODATION
 MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	CN CAMDEN	1 days
	HM HAMMERSMITH AND FULHAM	1 days
	KI KINGSTON	2 days
	LB LAMBETH	1 days
05	EAST MIDLANDS	
	DY DERBY	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: Number of residents
 Actual Range: 200 to 1100 (units:)
 Range Selected by User: 15 to 1100 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 25/06/21

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	2 days
Wednesday	3 days
Friday	1 days

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

Selected survey types:

Manual count	6 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:

Town Centre	2
Edge of Town Centre	4

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

Selected Location Sub Categories:

Residential Zone	2
Built-Up Zone	4

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.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	7 days - Selected
Servicing vehicles Excluded	X days - Selected

Secondary Filtering selection:

Use Class:

C3 6 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

25,001 to 50,000 4 days
50,001 to 100,000 2 days

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

Population within 5 miles:

250,001 to 500,000 3 days
500,001 or More 3 days

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

Car ownership within 5 miles:

0.5 or Less 1 days
0.6 to 1.0 4 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 1 days
No 5 days

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

PTAL Rating:

No PTAL Present 1 days
4 Good 2 days
6a Excellent 2 days
6b (High) Excellent 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	CN-03-G-01	STUDENT FLATS	CAMDEN
	SAINT PANCRAS WAY KING'S CROSS		
	Edge of Town Centre Built-Up Zone		
	Total Number of residents:	571	
	Survey date: TUESDAY	14/11/17	Survey Type: MANUAL
2	DY-03-G-02	STUDENT ACCOMMODATION	DERBY
	CATHEDRAL ROAD DERBY		
	Town Centre Built-Up Zone		
	Total Number of residents:	350	
	Survey date: WEDNESDAY	25/09/19	Survey Type: MANUAL
3	HM-03-G-02	STUDENT FLATS	HAMMERSMITH AND FULHAM
	PADDENSWICK ROAD HAMMERSMITH		
	Edge of Town Centre Residential Zone		
	Total Number of residents:	217	
	Survey date: FRIDAY	25/06/21	Survey Type: MANUAL
4	KI-03-G-01	STUDENT FLATS	KINGSTON
	PENRHYN ROAD KINGSTON UPON THAMES		
	Edge of Town Centre Built-Up Zone		
	Total Number of residents:	200	
	Survey date: WEDNESDAY	12/06/19	Survey Type: MANUAL
5	KI-03-G-02	STUDENT FLATS	KINGSTON
	CAMBRIDGE ROAD KINGSTON UPON THAMES NORBITON		
	Edge of Town Centre Residential Zone		
	Total Number of residents:	300	
	Survey date: WEDNESDAY	26/06/19	Survey Type: MANUAL
6	LB-03-G-02	STUDENT FLATS	LAMBETH
	WESTMINSTER BRIDGE RD LAMBETH		
	Town Centre Built-Up Zone		
	Total Number of residents:	1100	
	Survey date: TUESDAY	27/11/18	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.

Civic Engineers Dale Street Manchester

Licence No: 758701

TRIP RATE for Land Use 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 17.04

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	488	0.002	5	488	0.002	5	488	0.004
08:00 - 09:00	5	488	0.002	5	488	0.002	5	488	0.004
09:00 - 10:00	5	488	0.003	5	488	0.002	5	488	0.005
10:00 - 11:00	5	488	0.004	5	488	0.004	5	488	0.008
11:00 - 12:00	5	488	0.006	5	488	0.007	5	488	0.013
12:00 - 13:00	5	488	0.002	5	488	0.003	5	488	0.005
13:00 - 14:00	5	488	0.006	5	488	0.005	5	488	0.011
14:00 - 15:00	5	488	0.005	5	488	0.006	5	488	0.011
15:00 - 16:00	5	488	0.004	5	488	0.004	5	488	0.008
16:00 - 17:00	5	488	0.004	5	488	0.004	5	488	0.008
17:00 - 18:00	5	488	0.002	5	488	0.002	5	488	0.004
18:00 - 19:00	5	488	0.003	5	488	0.003	5	488	0.006
19:00 - 20:00	5	488	0.003	5	488	0.003	5	488	0.006
20:00 - 21:00	5	488	0.004	5	488	0.005	5	488	0.009
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.050			0.052			0.102

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.

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Parameter summary

Trip rate parameter range selected: 200 - 1100 (units:)
 Survey date range: 01/01/14 - 25/06/21
 Number of weekdays (Monday-Friday): 6
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 1
 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 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION

MULTI-MODAL TAXIS

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	488	0.000	5	488	0.000	5	488	0.000
08:00 - 09:00	5	488	0.000	5	488	0.000	5	488	0.000
09:00 - 10:00	5	488	0.000	5	488	0.000	5	488	0.000
10:00 - 11:00	5	488	0.001	5	488	0.001	5	488	0.002
11:00 - 12:00	5	488	0.002	5	488	0.002	5	488	0.004
12:00 - 13:00	5	488	0.002	5	488	0.002	5	488	0.004
13:00 - 14:00	5	488	0.001	5	488	0.001	5	488	0.002
14:00 - 15:00	5	488	0.000	5	488	0.000	5	488	0.000
15:00 - 16:00	5	488	0.002	5	488	0.002	5	488	0.004
16:00 - 17:00	5	488	0.001	5	488	0.001	5	488	0.002
17:00 - 18:00	5	488	0.001	5	488	0.001	5	488	0.002
18:00 - 19:00	5	488	0.002	5	488	0.002	5	488	0.004
19:00 - 20:00	5	488	0.002	5	488	0.002	5	488	0.004
20:00 - 21:00	5	488	0.004	5	488	0.004	5	488	0.008
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.018			0.018			0.036

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 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION

MULTI-MODAL OGVS

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	488	0.001	5	488	0.001	5	488	0.002
08:00 - 09:00	5	488	0.000	5	488	0.000	5	488	0.000
09:00 - 10:00	5	488	0.000	5	488	0.000	5	488	0.000
10:00 - 11:00	5	488	0.000	5	488	0.000	5	488	0.000
11:00 - 12:00	5	488	0.000	5	488	0.000	5	488	0.000
12:00 - 13:00	5	488	0.000	5	488	0.000	5	488	0.000
13:00 - 14:00	5	488	0.000	5	488	0.000	5	488	0.000
14:00 - 15:00	5	488	0.000	5	488	0.000	5	488	0.000
15:00 - 16:00	5	488	0.000	5	488	0.000	5	488	0.000
16:00 - 17:00	5	488	0.000	5	488	0.000	5	488	0.000
17:00 - 18:00	5	488	0.000	5	488	0.000	5	488	0.000
18:00 - 19:00	5	488	0.000	5	488	0.000	5	488	0.000
19:00 - 20:00	5	488	0.000	5	488	0.000	5	488	0.000
20:00 - 21:00	5	488	0.000	5	488	0.000	5	488	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.001			0.001			0.002

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 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION

MULTI-MODAL CYCLISTS

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	6	456	0.000	6	456	0.000	6	456	0.000
08:00 - 09:00	6	456	0.001	6	456	0.002	6	456	0.003
09:00 - 10:00	6	456	0.001	6	456	0.003	6	456	0.004
10:00 - 11:00	6	456	0.000	6	456	0.002	6	456	0.002
11:00 - 12:00	6	456	0.001	6	456	0.003	6	456	0.004
12:00 - 13:00	6	456	0.001	6	456	0.001	6	456	0.002
13:00 - 14:00	6	456	0.003	6	456	0.002	6	456	0.005
14:00 - 15:00	6	456	0.002	6	456	0.001	6	456	0.003
15:00 - 16:00	6	456	0.003	6	456	0.001	6	456	0.004
16:00 - 17:00	6	456	0.001	6	456	0.000	6	456	0.001
17:00 - 18:00	6	456	0.003	6	456	0.001	6	456	0.004
18:00 - 19:00	6	456	0.004	6	456	0.003	6	456	0.007
19:00 - 20:00	6	456	0.001	6	456	0.000	6	456	0.001
20:00 - 21:00	6	456	0.001	6	456	0.001	6	456	0.002
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.022			0.020			0.042

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 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION
 MULTI-MODAL VEHICLE OCCUPANTS
 Calculation factor: 1 RESIDE
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	488	0.002	5	488	0.002	5	488	0.004
08:00 - 09:00	5	488	0.001	5	488	0.002	5	488	0.003
09:00 - 10:00	5	488	0.003	5	488	0.002	5	488	0.005
10:00 - 11:00	5	488	0.003	5	488	0.004	5	488	0.007
11:00 - 12:00	5	488	0.006	5	488	0.007	5	488	0.013
12:00 - 13:00	5	488	0.002	5	488	0.002	5	488	0.004
13:00 - 14:00	5	488	0.006	5	488	0.005	5	488	0.011
14:00 - 15:00	5	488	0.005	5	488	0.006	5	488	0.011
15:00 - 16:00	5	488	0.005	5	488	0.004	5	488	0.009
16:00 - 17:00	5	488	0.003	5	488	0.004	5	488	0.007
17:00 - 18:00	5	488	0.002	5	488	0.001	5	488	0.003
18:00 - 19:00	5	488	0.003	5	488	0.002	5	488	0.005
19:00 - 20:00	5	488	0.003	5	488	0.001	5	488	0.004
20:00 - 21:00	5	488	0.004	5	488	0.002	5	488	0.006
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.048			0.044			0.092

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.

Civic Engineers Dale Street Manchester

Licence No: 758701

TRIP RATE for Land Use 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION
 MULTI-MODAL PEDESTRIANS
 Calculation factor: 1 RESIDE
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	6	456	0.004	6	456	0.011	6	456	0.015
08:00 - 09:00	6	456	0.005	6	456	0.043	6	456	0.048
09:00 - 10:00	6	456	0.006	6	456	0.033	6	456	0.039
10:00 - 11:00	6	456	0.009	6	456	0.033	6	456	0.042
11:00 - 12:00	6	456	0.016	6	456	0.028	6	456	0.044
12:00 - 13:00	6	456	0.023	6	456	0.031	6	456	0.054
13:00 - 14:00	6	456	0.028	6	456	0.033	6	456	0.061
14:00 - 15:00	6	456	0.024	6	456	0.028	6	456	0.052
15:00 - 16:00	6	456	0.037	6	456	0.025	6	456	0.062
16:00 - 17:00	6	456	0.036	6	456	0.021	6	456	0.057
17:00 - 18:00	6	456	0.038	6	456	0.027	6	456	0.065
18:00 - 19:00	6	456	0.038	6	456	0.022	6	456	0.060
19:00 - 20:00	6	456	0.028	6	456	0.016	6	456	0.044
20:00 - 21:00	6	456	0.034	6	456	0.016	6	456	0.050
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.326			0.367			0.693

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 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION

MULTI-MODAL BUS/TRAM PASSENGERS

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	6	456	0.001	6	456	0.007	6	456	0.008
08:00 - 09:00	6	456	0.004	6	456	0.036	6	456	0.040
09:00 - 10:00	6	456	0.005	6	456	0.024	6	456	0.029
10:00 - 11:00	6	456	0.006	6	456	0.023	6	456	0.029
11:00 - 12:00	6	456	0.012	6	456	0.018	6	456	0.030
12:00 - 13:00	6	456	0.014	6	456	0.025	6	456	0.039
13:00 - 14:00	6	456	0.015	6	456	0.020	6	456	0.035
14:00 - 15:00	6	456	0.015	6	456	0.015	6	456	0.030
15:00 - 16:00	6	456	0.024	6	456	0.012	6	456	0.036
16:00 - 17:00	6	456	0.021	6	456	0.009	6	456	0.030
17:00 - 18:00	6	456	0.031	6	456	0.012	6	456	0.043
18:00 - 19:00	6	456	0.022	6	456	0.014	6	456	0.036
19:00 - 20:00	6	456	0.023	6	456	0.009	6	456	0.032
20:00 - 21:00	6	456	0.020	6	456	0.007	6	456	0.027
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.213			0.231			0.444

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 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION

MULTI-MODAL TOTAL RAIL PASSENGERS

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	6	456	0.003	6	456	0.008	6	456	0.011
08:00 - 09:00	6	456	0.001	6	456	0.019	6	456	0.020
09:00 - 10:00	6	456	0.005	6	456	0.016	6	456	0.021
10:00 - 11:00	6	456	0.007	6	456	0.017	6	456	0.024
11:00 - 12:00	6	456	0.006	6	456	0.009	6	456	0.015
12:00 - 13:00	6	456	0.010	6	456	0.010	6	456	0.020
13:00 - 14:00	6	456	0.011	6	456	0.010	6	456	0.021
14:00 - 15:00	6	456	0.008	6	456	0.010	6	456	0.018
15:00 - 16:00	6	456	0.010	6	456	0.008	6	456	0.018
16:00 - 17:00	6	456	0.014	6	456	0.007	6	456	0.021
17:00 - 18:00	6	456	0.018	6	456	0.008	6	456	0.026
18:00 - 19:00	6	456	0.014	6	456	0.006	6	456	0.020
19:00 - 20:00	6	456	0.009	6	456	0.003	6	456	0.012
20:00 - 21:00	6	456	0.016	6	456	0.004	6	456	0.020
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.132			0.135			0.267

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 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION
 MULTI-MODAL PUBLIC TRANSPORT USERS
 Calculation factor: 1 RESIDE
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	6	456	0.005	6	456	0.015	6	456	0.020
08:00 - 09:00	6	456	0.005	6	456	0.055	6	456	0.060
09:00 - 10:00	6	456	0.010	6	456	0.040	6	456	0.050
10:00 - 11:00	6	456	0.013	6	456	0.040	6	456	0.053
11:00 - 12:00	6	456	0.018	6	456	0.026	6	456	0.044
12:00 - 13:00	6	456	0.024	6	456	0.035	6	456	0.059
13:00 - 14:00	6	456	0.026	6	456	0.030	6	456	0.056
14:00 - 15:00	6	456	0.024	6	456	0.025	6	456	0.049
15:00 - 16:00	6	456	0.034	6	456	0.020	6	456	0.054
16:00 - 17:00	6	456	0.035	6	456	0.016	6	456	0.051
17:00 - 18:00	6	456	0.049	6	456	0.020	6	456	0.069
18:00 - 19:00	6	456	0.035	6	456	0.020	6	456	0.055
19:00 - 20:00	6	456	0.032	6	456	0.012	6	456	0.044
20:00 - 21:00	6	456	0.037	6	456	0.012	6	456	0.049
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.347			0.366			0.713

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 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 17.04

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	6	456	0.010	6	456	0.027	6	456	0.037
08:00 - 09:00	6	456	0.012	6	456	0.101	6	456	0.113
09:00 - 10:00	6	456	0.019	6	456	0.079	6	456	0.098
10:00 - 11:00	6	456	0.025	6	456	0.078	6	456	0.103
11:00 - 12:00	6	456	0.041	6	456	0.064	6	456	0.105
12:00 - 13:00	6	456	0.050	6	456	0.069	6	456	0.119
13:00 - 14:00	6	456	0.062	6	456	0.070	6	456	0.132
14:00 - 15:00	6	456	0.054	6	456	0.061	6	456	0.115
15:00 - 16:00	6	456	0.079	6	456	0.050	6	456	0.129
16:00 - 17:00	6	456	0.076	6	456	0.040	6	456	0.116
17:00 - 18:00	6	456	0.092	6	456	0.050	6	456	0.142
18:00 - 19:00	6	456	0.080	6	456	0.047	6	456	0.127
19:00 - 20:00	6	456	0.064	6	456	0.030	6	456	0.094
20:00 - 21:00	6	456	0.075	6	456	0.030	6	456	0.105
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.739			0.796			1.535

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 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION

MULTI-MODAL CARS

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	488	0.000	5	488	0.000	5	488	0.000
08:00 - 09:00	5	488	0.001	5	488	0.001	5	488	0.002
09:00 - 10:00	5	488	0.001	5	488	0.000	5	488	0.001
10:00 - 11:00	5	488	0.000	5	488	0.001	5	488	0.001
11:00 - 12:00	5	488	0.000	5	488	0.001	5	488	0.001
12:00 - 13:00	5	488	0.000	5	488	0.001	5	488	0.001
13:00 - 14:00	5	488	0.001	5	488	0.000	5	488	0.001
14:00 - 15:00	5	488	0.000	5	488	0.001	5	488	0.001
15:00 - 16:00	5	488	0.000	5	488	0.000	5	488	0.000
16:00 - 17:00	5	488	0.001	5	488	0.001	5	488	0.002
17:00 - 18:00	5	488	0.000	5	488	0.000	5	488	0.000
18:00 - 19:00	5	488	0.000	5	488	0.000	5	488	0.000
19:00 - 20:00	5	488	0.000	5	488	0.000	5	488	0.000
20:00 - 21:00	5	488	0.000	5	488	0.000	5	488	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.004			0.006			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 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION

MULTI-MODAL LGVS

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	488	0.000	5	488	0.000	5	488	0.000
08:00 - 09:00	5	488	0.000	5	488	0.000	5	488	0.000
09:00 - 10:00	5	488	0.001	5	488	0.001	5	488	0.002
10:00 - 11:00	5	488	0.002	5	488	0.002	5	488	0.004
11:00 - 12:00	5	488	0.002	5	488	0.002	5	488	0.004
12:00 - 13:00	5	488	0.000	5	488	0.001	5	488	0.001
13:00 - 14:00	5	488	0.002	5	488	0.001	5	488	0.003
14:00 - 15:00	5	488	0.002	5	488	0.003	5	488	0.005
15:00 - 16:00	5	488	0.002	5	488	0.002	5	488	0.004
16:00 - 17:00	5	488	0.001	5	488	0.001	5	488	0.002
17:00 - 18:00	5	488	0.000	5	488	0.000	5	488	0.000
18:00 - 19:00	5	488	0.000	5	488	0.000	5	488	0.000
19:00 - 20:00	5	488	0.001	5	488	0.000	5	488	0.001
20:00 - 21:00	5	488	0.000	5	488	0.001	5	488	0.001
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.013			0.014			0.027

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 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION

MULTI-MODAL MOTOR CYCLES

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	488	0.000	5	488	0.000	5	488	0.000
08:00 - 09:00	5	488	0.000	5	488	0.000	5	488	0.000
09:00 - 10:00	5	488	0.001	5	488	0.001	5	488	0.002
10:00 - 11:00	5	488	0.000	5	488	0.000	5	488	0.000
11:00 - 12:00	5	488	0.002	5	488	0.002	5	488	0.004
12:00 - 13:00	5	488	0.000	5	488	0.000	5	488	0.000
13:00 - 14:00	5	488	0.002	5	488	0.002	5	488	0.004
14:00 - 15:00	5	488	0.002	5	488	0.002	5	488	0.004
15:00 - 16:00	5	488	0.000	5	488	0.000	5	488	0.000
16:00 - 17:00	5	488	0.001	5	488	0.001	5	488	0.002
17:00 - 18:00	5	488	0.000	5	488	0.000	5	488	0.000
18:00 - 19:00	5	488	0.000	5	488	0.000	5	488	0.000
19:00 - 20:00	5	488	0.001	5	488	0.001	5	488	0.002
20:00 - 21:00	5	488	0.000	5	488	0.000	5	488	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.009			0.009			0.018

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 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION

MULTI-MODAL Servicing Vehicles

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	488	0.002	5	488	0.002	5	488	0.004
08:00 - 09:00	5	488	0.001	5	488	0.000	5	488	0.001
09:00 - 10:00	5	488	0.002	5	488	0.002	5	488	0.004
10:00 - 11:00	5	488	0.002	5	488	0.002	5	488	0.004
11:00 - 12:00	5	488	0.004	5	488	0.004	5	488	0.008
12:00 - 13:00	5	488	0.000	5	488	0.002	5	488	0.002
13:00 - 14:00	5	488	0.003	5	488	0.002	5	488	0.005
14:00 - 15:00	5	488	0.003	5	488	0.004	5	488	0.007
15:00 - 16:00	5	488	0.002	5	488	0.002	5	488	0.004
16:00 - 17:00	5	488	0.003	5	488	0.003	5	488	0.006
17:00 - 18:00	5	488	0.001	5	488	0.001	5	488	0.002
18:00 - 19:00	5	488	0.000	5	488	0.000	5	488	0.000
19:00 - 20:00	5	488	0.002	5	488	0.001	5	488	0.003
20:00 - 21:00	5	488	0.000	5	488	0.001	5	488	0.001
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.025			0.026			0.051

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.

Calculation Reference: AUDIT-758701-230210-0229

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT

Category : A - OFFICE

MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	LB LAMBETH	1 days
08	NORTH WEST	
	GM GREATER MANCHESTER	2 days
	MS MERSEYSIDE	1 days
09	NORTH	
	TW TYNE & WEAR	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 2090 to 11250 (units: sqm)
 Range Selected by User: 178 to 120000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 28/06/22

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

Monday	4 days
Tuesday	1 days

*This data displays the number of selected surveys by day of the week.*Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

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

Town Centre	2
Edge of Town Centre	3

*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:

Built-Up Zone	5
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*This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.*Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	19 days - Selected
Servicing vehicles Excluded	17 days - Selected

Secondary Filtering selection:

Use Class:

Not Known 5 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 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:

20,001 to 25,000	1 days
25,001 to 50,000	3 days
100,001 or More	1 days

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

Population within 5 miles:

500,001 or More 5 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	4 days

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

Travel Plan:

No 5 days

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

PTAL Rating:

No PTAL Present	4 days
6b (High) Excellent	1 days

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

LIST OF SITES relevant to selection parameters

1	GM-02-A-08 FOUNTAIN STREET MANCHESTER	REGUS	GREATER MANCHESTER
	Town Centre Built-Up Zone Total Gross floor area:	3960 sqm	
	Survey date: MONDAY	26/09/16	Survey Type: MANUAL
2	GM-02-A-09 NEW MOUNT STREET MANCHESTER	LEASED OFFICES	GREATER MANCHESTER
	Edge of Town Centre Built-Up Zone Total Gross floor area:	2500 sqm	
	Survey date: MONDAY	26/09/16	Survey Type: MANUAL
3	LB-02-A-01 DURHAM STREET VAUXHALL	START UP OFFICES & STUDIOS	LAMBETH
	Edge of Town Centre Built-Up Zone Total Gross floor area:	10200 sqm	
	Survey date: MONDAY	19/11/18	Survey Type: MANUAL
4	MS-02-A-02 MOUNT PLEASANT LIVERPOOL	SCIENCE PARK OFFICES	MERSEYSIDE
	Edge of Town Centre Built-Up Zone Total Gross floor area:	11250 sqm	
	Survey date: TUESDAY	13/11/18	Survey Type: MANUAL
5	TW-02-A-07 MULGRAVE TERRACE GATESHEAD	OFFICES	TYNE & WEAR
	Town Centre Built-Up Zone Total Gross floor area:	2090 sqm	
	Survey date: MONDAY	13/06/16	Survey Type: MANUAL

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
BH-02-A-05	on-site parking
BN-02-A-01	on-site parking
CB-02-A-02	on-site parking
CN-02-A-03	london town centre
CN-02-A-04	london town centre
DU-02-A-01	on-site parking
DY-02-A-02	on-site parking
EB-02-A-06	on-site parking
EN-02-A-01	london town centre
ES-02-A-12	on-site parking
GM-02-A-11	on-site parking
HD-02-A-10	on-site parking
HF-02-A-04	on-site parking
HM-02-A-01	london town centre
LB-02-A-02	london town centre
MS-02-A-04	on-site parking
NF-02-A-02	on-site parking
NF-02-A-03	on-site parking
NY-02-A-01	on-site parking
NY-02-A-03	on-site parking
PB-02-A-03	on-site parking
PS-02-A-01	on-site parking
RO-02-A-02	on-site parking

MANUALLY DESELECTED SITES (Cont.)

Site Ref	Reason for Deselection
SO-02-A-01	on-site parking
SO-02-A-02	on-site parking
WS-02-A-05	on-site parking

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

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): 5.16

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	5	6000	0.103	5	6000	0.037	5	6000	0.140
08:00 - 09:00	5	6000	0.313	5	6000	0.107	5	6000	0.420
09:00 - 10:00	5	6000	0.330	5	6000	0.147	5	6000	0.477
10:00 - 11:00	5	6000	0.210	5	6000	0.117	5	6000	0.327
11:00 - 12:00	5	6000	0.107	5	6000	0.107	5	6000	0.214
12:00 - 13:00	5	6000	0.163	5	6000	0.140	5	6000	0.303
13:00 - 14:00	5	6000	0.197	5	6000	0.203	5	6000	0.400
14:00 - 15:00	5	6000	0.170	5	6000	0.177	5	6000	0.347
15:00 - 16:00	5	6000	0.123	5	6000	0.153	5	6000	0.276
16:00 - 17:00	5	6000	0.147	5	6000	0.280	5	6000	0.427
17:00 - 18:00	5	6000	0.110	5	6000	0.260	5	6000	0.370
18:00 - 19:00	5	6000	0.043	5	6000	0.240	5	6000	0.283
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.016			1.968			3.984

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:	2090 - 11250 (units: sqm)
Survey date range:	01/01/14 - 28/06/22
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	5
Surveys manually removed from selection:	26

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/A - OFFICE

MULTI-MODAL 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	5	6000	0.000	5	6000	0.000	5	6000	0.000
08:00 - 09:00	5	6000	0.013	5	6000	0.013	5	6000	0.026
09:00 - 10:00	5	6000	0.007	5	6000	0.007	5	6000	0.014
10:00 - 11:00	5	6000	0.017	5	6000	0.017	5	6000	0.034
11:00 - 12:00	5	6000	0.003	5	6000	0.003	5	6000	0.006
12:00 - 13:00	5	6000	0.010	5	6000	0.010	5	6000	0.020
13:00 - 14:00	5	6000	0.003	5	6000	0.003	5	6000	0.006
14:00 - 15:00	5	6000	0.003	5	6000	0.003	5	6000	0.006
15:00 - 16:00	5	6000	0.007	5	6000	0.007	5	6000	0.014
16:00 - 17:00	5	6000	0.003	5	6000	0.003	5	6000	0.006
17:00 - 18:00	5	6000	0.007	5	6000	0.007	5	6000	0.014
18:00 - 19:00	5	6000	0.003	5	6000	0.003	5	6000	0.006
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.076			0.076			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/A - OFFICE

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									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	6000	0.000	5	6000	0.000	5	6000	0.000
08:00 - 09:00	5	6000	0.007	5	6000	0.007	5	6000	0.014
09:00 - 10:00	5	6000	0.000	5	6000	0.000	5	6000	0.000
10:00 - 11:00	5	6000	0.007	5	6000	0.007	5	6000	0.014
11:00 - 12:00	5	6000	0.003	5	6000	0.003	5	6000	0.006
12:00 - 13:00	5	6000	0.000	5	6000	0.000	5	6000	0.000
13:00 - 14:00	5	6000	0.000	5	6000	0.000	5	6000	0.000
14:00 - 15:00	5	6000	0.000	5	6000	0.000	5	6000	0.000
15:00 - 16:00	5	6000	0.000	5	6000	0.000	5	6000	0.000
16:00 - 17:00	5	6000	0.000	5	6000	0.000	5	6000	0.000
17:00 - 18:00	5	6000	0.000	5	6000	0.000	5	6000	0.000
18:00 - 19:00	5	6000	0.000	5	6000	0.000	5	6000	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.017			0.017			0.034

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/A - OFFICE

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									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	6000	0.023	5	6000	0.000	5	6000	0.023
08:00 - 09:00	5	6000	0.120	5	6000	0.000	5	6000	0.120
09:00 - 10:00	5	6000	0.043	5	6000	0.000	5	6000	0.043
10:00 - 11:00	5	6000	0.027	5	6000	0.013	5	6000	0.040
11:00 - 12:00	5	6000	0.013	5	6000	0.017	5	6000	0.030
12:00 - 13:00	5	6000	0.013	5	6000	0.010	5	6000	0.023
13:00 - 14:00	5	6000	0.010	5	6000	0.017	5	6000	0.027
14:00 - 15:00	5	6000	0.007	5	6000	0.007	5	6000	0.014
15:00 - 16:00	5	6000	0.007	5	6000	0.013	5	6000	0.020
16:00 - 17:00	5	6000	0.003	5	6000	0.023	5	6000	0.026
17:00 - 18:00	5	6000	0.000	5	6000	0.090	5	6000	0.090
18:00 - 19:00	5	6000	0.000	5	6000	0.083	5	6000	0.083
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.266			0.273			0.539

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/A - OFFICE

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									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	6000	0.120	5	6000	0.043	5	6000	0.163
08:00 - 09:00	5	6000	0.373	5	6000	0.127	5	6000	0.500
09:00 - 10:00	5	6000	0.480	5	6000	0.160	5	6000	0.640
10:00 - 11:00	5	6000	0.247	5	6000	0.113	5	6000	0.360
11:00 - 12:00	5	6000	0.137	5	6000	0.123	5	6000	0.260
12:00 - 13:00	5	6000	0.193	5	6000	0.160	5	6000	0.353
13:00 - 14:00	5	6000	0.273	5	6000	0.263	5	6000	0.536
14:00 - 15:00	5	6000	0.210	5	6000	0.220	5	6000	0.430
15:00 - 16:00	5	6000	0.147	5	6000	0.220	5	6000	0.367
16:00 - 17:00	5	6000	0.190	5	6000	0.383	5	6000	0.573
17:00 - 18:00	5	6000	0.130	5	6000	0.363	5	6000	0.493
18:00 - 19:00	5	6000	0.040	5	6000	0.323	5	6000	0.363
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.540			2.498			5.038

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/A - OFFICE

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									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	6000	0.047	5	6000	0.007	5	6000	0.054
08:00 - 09:00	5	6000	0.220	5	6000	0.043	5	6000	0.263
09:00 - 10:00	5	6000	0.350	5	6000	0.123	5	6000	0.473
10:00 - 11:00	5	6000	0.217	5	6000	0.167	5	6000	0.384
11:00 - 12:00	5	6000	0.170	5	6000	0.233	5	6000	0.403
12:00 - 13:00	5	6000	0.513	5	6000	0.777	5	6000	1.290
13:00 - 14:00	5	6000	0.880	5	6000	0.933	5	6000	1.813
14:00 - 15:00	5	6000	0.747	5	6000	0.430	5	6000	1.177
15:00 - 16:00	5	6000	0.210	5	6000	0.130	5	6000	0.340
16:00 - 17:00	5	6000	0.097	5	6000	0.123	5	6000	0.220
17:00 - 18:00	5	6000	0.043	5	6000	0.253	5	6000	0.296
18:00 - 19:00	5	6000	0.003	5	6000	0.220	5	6000	0.223
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.497			3.439			6.936

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/A - OFFICE
 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									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	6000	0.053	5	6000	0.003	5	6000	0.056
08:00 - 09:00	5	6000	0.320	5	6000	0.010	5	6000	0.330
09:00 - 10:00	5	6000	0.373	5	6000	0.020	5	6000	0.393
10:00 - 11:00	5	6000	0.133	5	6000	0.013	5	6000	0.146
11:00 - 12:00	5	6000	0.047	5	6000	0.023	5	6000	0.070
12:00 - 13:00	5	6000	0.113	5	6000	0.207	5	6000	0.320
13:00 - 14:00	5	6000	0.147	5	6000	0.157	5	6000	0.304
14:00 - 15:00	5	6000	0.053	5	6000	0.083	5	6000	0.136
15:00 - 16:00	5	6000	0.050	5	6000	0.113	5	6000	0.163
16:00 - 17:00	5	6000	0.067	5	6000	0.183	5	6000	0.250
17:00 - 18:00	5	6000	0.010	5	6000	0.347	5	6000	0.357
18:00 - 19:00	5	6000	0.010	5	6000	0.130	5	6000	0.140
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.376			1.289			2.665

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/A - OFFICE
 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									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	6000	0.127	5	6000	0.000	5	6000	0.127
08:00 - 09:00	5	6000	0.820	5	6000	0.007	5	6000	0.827
09:00 - 10:00	5	6000	0.877	5	6000	0.037	5	6000	0.914
10:00 - 11:00	5	6000	0.203	5	6000	0.047	5	6000	0.250
11:00 - 12:00	5	6000	0.143	5	6000	0.063	5	6000	0.206
12:00 - 13:00	5	6000	0.127	5	6000	0.130	5	6000	0.257
13:00 - 14:00	5	6000	0.140	5	6000	0.137	5	6000	0.277
14:00 - 15:00	5	6000	0.097	5	6000	0.100	5	6000	0.197
15:00 - 16:00	5	6000	0.103	5	6000	0.140	5	6000	0.243
16:00 - 17:00	5	6000	0.043	5	6000	0.317	5	6000	0.360
17:00 - 18:00	5	6000	0.057	5	6000	0.927	5	6000	0.984
18:00 - 19:00	5	6000	0.013	5	6000	0.707	5	6000	0.720
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.750			2.612			5.362

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/A - OFFICE
 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									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	6000	0.180	5	6000	0.003	5	6000	0.183
08:00 - 09:00	5	6000	1.140	5	6000	0.017	5	6000	1.157
09:00 - 10:00	5	6000	1.250	5	6000	0.057	5	6000	1.307
10:00 - 11:00	5	6000	0.337	5	6000	0.060	5	6000	0.397
11:00 - 12:00	5	6000	0.190	5	6000	0.087	5	6000	0.277
12:00 - 13:00	5	6000	0.240	5	6000	0.337	5	6000	0.577
13:00 - 14:00	5	6000	0.287	5	6000	0.293	5	6000	0.580
14:00 - 15:00	5	6000	0.150	5	6000	0.183	5	6000	0.333
15:00 - 16:00	5	6000	0.153	5	6000	0.253	5	6000	0.406
16:00 - 17:00	5	6000	0.110	5	6000	0.500	5	6000	0.610
17:00 - 18:00	5	6000	0.067	5	6000	1.273	5	6000	1.340
18:00 - 19:00	5	6000	0.023	5	6000	0.837	5	6000	0.860
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.127			3.900			8.027

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.

Civic Engineers Dale Street Manchester

Licence No: 758701

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

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): 5.16

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	5	6000	0.370	5	6000	0.053	5	6000	0.423
08:00 - 09:00	5	6000	1.853	5	6000	0.187	5	6000	2.040
09:00 - 10:00	5	6000	2.123	5	6000	0.340	5	6000	2.463
10:00 - 11:00	5	6000	0.827	5	6000	0.353	5	6000	1.180
11:00 - 12:00	5	6000	0.510	5	6000	0.460	5	6000	0.970
12:00 - 13:00	5	6000	0.960	5	6000	1.283	5	6000	2.243
13:00 - 14:00	5	6000	1.450	5	6000	1.507	5	6000	2.957
14:00 - 15:00	5	6000	1.113	5	6000	0.840	5	6000	1.953
15:00 - 16:00	5	6000	0.517	5	6000	0.617	5	6000	1.134
16:00 - 17:00	5	6000	0.400	5	6000	1.030	5	6000	1.430
17:00 - 18:00	5	6000	0.240	5	6000	1.980	5	6000	2.220
18:00 - 19:00	5	6000	0.067	5	6000	1.463	5	6000	1.530
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			10.430			10.113			20.543

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/A - OFFICE

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									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	6000	0.080	5	6000	0.023	5	6000	0.103
08:00 - 09:00	5	6000	0.250	5	6000	0.070	5	6000	0.320
09:00 - 10:00	5	6000	0.293	5	6000	0.113	5	6000	0.406
10:00 - 11:00	5	6000	0.140	5	6000	0.053	5	6000	0.193
11:00 - 12:00	5	6000	0.063	5	6000	0.067	5	6000	0.130
12:00 - 13:00	5	6000	0.107	5	6000	0.093	5	6000	0.200
13:00 - 14:00	5	6000	0.170	5	6000	0.157	5	6000	0.327
14:00 - 15:00	5	6000	0.120	5	6000	0.127	5	6000	0.247
15:00 - 16:00	5	6000	0.100	5	6000	0.113	5	6000	0.213
16:00 - 17:00	5	6000	0.120	5	6000	0.230	5	6000	0.350
17:00 - 18:00	5	6000	0.103	5	6000	0.250	5	6000	0.353
18:00 - 19:00	5	6000	0.037	5	6000	0.220	5	6000	0.257
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.583			1.516			3.099

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/A - OFFICE

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									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	6000	0.023	5	6000	0.013	5	6000	0.036
08:00 - 09:00	5	6000	0.030	5	6000	0.017	5	6000	0.047
09:00 - 10:00	5	6000	0.020	5	6000	0.023	5	6000	0.043
10:00 - 11:00	5	6000	0.037	5	6000	0.037	5	6000	0.074
11:00 - 12:00	5	6000	0.033	5	6000	0.033	5	6000	0.066
12:00 - 13:00	5	6000	0.037	5	6000	0.027	5	6000	0.064
13:00 - 14:00	5	6000	0.020	5	6000	0.037	5	6000	0.057
14:00 - 15:00	5	6000	0.047	5	6000	0.043	5	6000	0.090
15:00 - 16:00	5	6000	0.013	5	6000	0.030	5	6000	0.043
16:00 - 17:00	5	6000	0.023	5	6000	0.040	5	6000	0.063
17:00 - 18:00	5	6000	0.000	5	6000	0.000	5	6000	0.000
18:00 - 19:00	5	6000	0.003	5	6000	0.003	5	6000	0.006
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.286			0.303			0.589

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/A - OFFICE

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									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	6000	0.000	5	6000	0.000	5	6000	0.000
08:00 - 09:00	5	6000	0.013	5	6000	0.000	5	6000	0.013
09:00 - 10:00	5	6000	0.010	5	6000	0.003	5	6000	0.013
10:00 - 11:00	5	6000	0.010	5	6000	0.003	5	6000	0.013
11:00 - 12:00	5	6000	0.003	5	6000	0.000	5	6000	0.003
12:00 - 13:00	5	6000	0.010	5	6000	0.010	5	6000	0.020
13:00 - 14:00	5	6000	0.003	5	6000	0.007	5	6000	0.010
14:00 - 15:00	5	6000	0.000	5	6000	0.003	5	6000	0.003
15:00 - 16:00	5	6000	0.003	5	6000	0.003	5	6000	0.006
16:00 - 17:00	5	6000	0.000	5	6000	0.007	5	6000	0.007
17:00 - 18:00	5	6000	0.000	5	6000	0.003	5	6000	0.003
18:00 - 19:00	5	6000	0.000	5	6000	0.013	5	6000	0.013
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.052			0.052			0.104

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 C: Feedback received from MCC/TfGM regarding the Transport Assessment Scoping
Note

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