Hayes Park

Delivery and Servicing Plan

May 2023

Waterman

Hayes Park, Hayes End Road, Hayes, UB4 8FE

Delivery and Servicing Plan

June 2023

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This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

Issue	Date	Prepared by	Checked by	Approved by
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Comments

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1. Introduction

General

1.1. This report has been prepared in support of the detailed planning and listed building consent application being submitted by Shall Do Hayes Developments Ltd ('the Applicant') to the London Borough of Hillingdon ('the Council') for the proposed residential conversion of two listed buildings at Hayes Park, Hayes End Road, Hayes, UB4 8FE ('the site').

1.2. The proposed development has evolved through an extensive pre-application and wider stakeholder consultation process, which has included collaborative discussions with the Council, Greater London Authority ('GLA'), Historic England ('HE'), and a number of other key stakeholders.

1.3. The proposed development will bring two long-term vacant office buildings, which are unique heritage assets, back into active use through their conversion to residential. The proposed development provides the opportunity of a second life for the buildings and presents a long term sustainable use that will ensure the buildings are protected and celebrated for years to come.

What is a Delivery and Servicing Plan?

1.4. A DSP provides the framework to ensure that freight vehicle activity to and from a development site is working effectively for the organisation. DSPs are usually produced for new development sites (or when there is a change of use at a site).

1.5. The TfL document 'Delivery and Servicing Plan Guidance (December 2020)' states that DSPs should cover:

"-the physical design and layout of the site, and how it provides adequate provision for delivery and servicing activity from day one;

-the day-to-day policies and measures which will be implemented so that deliveries and servicing are appropriately managed, and how the disruption and environmental impact of that activity locally will be minimised over time. It should set appropriate targets for continuous improvement; and

-the forecast trip rates for the site."

1.6. The TfL guidance also states that DSPs can benefit any site that receives deliveries and servicing activity by:

''-Save time and money, for example a delivery booking system can free up space and employee's time;

-Contribute to Corporate Social Responsibility for example out-of-peak delivery hours can reduce local congestion, and cleaner and more efficient deliveries help to achieve carbon reduction targets; and

-Improve everyone's safety, for example by providing adequate off-street loading bays."

1.7. The implementation of measures set out within this DSP will assist in minimising the number of servicing and delivery trips, to mitigate the impacts on the local highway network.

1.8. The key aim of this DSP will be to reduce any impact of the development on the local highway and transport networks. The DSP will also aid in reducing CO^2 emissions, congestion, and road collisions by improving the relationship between building operators and their supply chain.

Report Structure

1.9. The DSP is structured as follows:

- Section 2: Policy Context;
- Section 3: Site Context;
- Section 4: DSP Objectives;
- Section 5: Delivery and Servicing Strategy;
- Section 6: Encouraging Sustainable Freight; and
- Section 7: DSP Management, Review and Monitoring.

2. Policy Context

Introduction

2.1. This section summarises the relevant national and local guidance from which the proposed delivery and servicing arrangements have evolved.

Planning Policy

National Planning Policy Framework (NPPF) (July 2021)

2.2. When considering development proposals, paragraph 110 of the NPPF states that in assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that safe and suitable access to the site can be achieved for all users.

2.3. Paragraph 112 states that within this context, applications for development should allow for the efficient delivery of goods, and access by service and emergency vehicles.

The London Plan (March 2021)

2.4. The London Plan was adopted in March 2021 and is the overall strategic plan for London, setting out an integrated economic, environmental, transport and social framework for the development of London over the next 20-25 years.

2.5. The London Plan sets out the need for DSPs. The key policies relating to deliveries and servicing are included below for reference.

2.6. Policy T4: Assessing and mitigating transport impacts:

"Transport assessments should focus on embedding the Healthy Streets Approach within, and in the vicinity of, new development. Travel Plans, Parking Design and Management Plans, Construction Logistics Plans and Delivery and Servicing Plans will be required having regard to Transport for London guidance."

2.7. Policy T7 Deliveries, servicing, and construction:

"Development plans and development proposals should facilitate sustainable freight movement by rail, waterways and road.

…G) Development proposals should facilitate safe, clean, and efficient deliveries and servicing. Provision of adequate space for servicing, storage and deliveries should be made off-street, with on-street loading bays only used where this is not possible. Construction Logistics Plans and Delivery and Servicing Plans will be required and should be developed in accordance with Transport for London guidance and in a way which reflects the scale and complexities of developments.

H) Developments should be designed and managed so that deliveries can be received outside of peak hours and in the evening or night-time. Appropriate facilities are required to minimise additional freight trips arising from missed deliveries and thus facilitate efficient online retailing.

I) At large developments, facilities to enable micro-consolidation should be provided, with management arrangements set out in Delivery and Servicing Plans."

2.8. Paragraph 10.7.4 states:

"When planning freight movements, development proposals should demonstrate through Construction Logistics Plans and Delivery and Servicing Plans that all reasonable endeavours have been taken towards the use of non-road vehicle modes."

2.9. Paragraphs 10.7.5 states:

"Delivery and Servicing Plans should demonstrate how the requirements of the site are met, including addressing missed deliveries. Appropriate measures include large letter or parcel boxes and concierges accepting deliveries. Car-free developments should consider facilitation of home deliveries in a way that does not compromise the benefits of creating low-car or car free environments."

2.10. Paragraph 10.7.6 states:

"Construction Logistics and Delivery and Servicing Plans should be developed in line with TfL guidance and adopt the latest standards around safety and environmental performance of vehicles to ensure freight is safe, clean and efficient. To make the plans effective they should be monitored and managed throughout the construction and operational phases of the development."

2.11. Policy T6 Car parking:

"I) Adequate provision should be made for efficient deliveries and servicing and emergency access."

Hillingdon Local Plan: Part One (2012)

2.12. The Hillingdon Local Plan (2012) set out the strategic policies, in the area around the proposed site.

2.13. One of its key policies of the Hillingdon Local Plan is policy 1T. This Policy states that:

"The Council will steer development to the most appropriate locations in order to reduce their impact on the transport network. All development should encourage access by sustainable modes and include good cycling and walking provision;

The Council will ensure access to local destinations which provide services and amenities; and

The Council will promote active travel through improvements to Hillingdon's public rights of way."

2.14. The Hillingdon local Plan (2012) also sets out standards for local destinations, its focus is ensuring:

"That local destinations are accessible by good quality, safe and convenient transport is essential to achieving sustainable development. 'Local destinations' are locations which provide services and amenities including health, education, employment and training, local shopping, community, culture, sport and leisure facilities. It is vital for people to be able to access these types of destinations through well planned routes and integrated public transport, especially for those without a car and for those in more remote parts of the borough."

Hillingdon Local Plan: Part Two (2020)

2.15. The Local Plan Part 2 comprises Development Management Policies, Site Allocations and Designations and Polices Map. It will deliver the detail of the strategic policies set out in the Local Plan Part 1: Strategic Polices (2012) and together they will form the comprehensive development approach for Hillingdon up to 2026. The Local Plan Part 2 was adopted as part of the borough's development plan at on 16 January 2020.

2.16. Policies DMT1 and DMT2 are the basis for transport policy for new developments. Policy DMT1: Managing Transport Impacts, states:

"Development proposals will be required to meet the transport needs of the development and address its transport impacts in a sustainable manner. In order for developments to be acceptable they are required to:

i. be accessible by public transport, walking and cycling either from the catchment area that it is likely to draw its employees, customers or visitors from and/or the services and facilities necessary to support the development;

ii. maximise safe, convenient and inclusive accessibility to, and from within developments for pedestrians, cyclists and public transport users;

iii. provide equal access for all people, including inclusive access for disabled people;

iv. adequately address delivery, servicing and drop-off requirements; and

v. have no significant adverse transport or associated air quality and noise impacts on the local and wider environment, particularly on the strategic road network.

Development proposals will be required to undertake a satisfactory Transport Assessment and Travel Plan if they meet or exceed the thresholds set out in Table 8.1 and any subsequent update to these thresholds. All major developments that fall below these thresholds will be required to produce a satisfactory Transport Statement and Local Level Travel Plan. All these plans should demonstrate how any potential impacts will be mitigated and how such measures will be implemented."

2.17. Policy DMT2 focuses on highway impacts, it states:

"Development proposals must be compatible with the safe and efficient movement of the highway and therefore must ensure that:

i) Safe and efficient vehicular access to the highway network is provided to the Council's standards;

ii) They do not contribute to the deterioration of air quality, noise or local amenity or safety of all road users and residents;

iii) Safe, secure and convenient access and facilities for cyclists and pedestrian are satisfactorily accommodated in the design of highway and traffic management schemes;

iv) Impacts on local amenity and congestion are minimised by routing through traffic by the most direct means to the strategic road network, avoiding local distributor and access roads; and

v) There are suitable mitigation measures to address any traffic impacts in terms of capacity and functions of existing and committed roads, including along roads or through junctions which are at capacity."

Local and Regional Guidance

Mayor's Transport Strategy (MTS) for London (March 2018)

2.18. The new MTS was published in March 2018 after detailed consultation by TfL and includes amendments of the original draft published in 2017. The document sets out the policies and proposed to reshape transport in London over the next 25 years.

2.19. Proposal 15 of the MTS regards deliveries and servicing, and states the following:

"The Mayor, through TfL, will work with the Boroughs, businesses and the freight and servicing industry to reduce the adverse impacts of freight and service vehicles on the Street network. The Mayor aims to reduce the number of lorries and vans entering central London in the morning peak by 10 percent by 2026."

Delivery and Servicing Plan Guidance (December 2020)

2.20. The Transport for London (TfL) guidance recognises DSPs help to proactively manage deliveries to reduce the number of delivery and servicing trips, identify and promote areas where safe and legal loading can take place, and select delivery companies who can demonstrate their commitment to following best practice.

2.21. The guidance explains what DSPs are, why they are important, the relationship of DSPs with Transport Assessments, Construction Logistics Plans and Travel Plans, the benefits of a DSP, recommended DSP template, relevant policy context, suggestions on measures to include in the DSP and details on data collection, analysis, and monitoring.

2.22. The guidance states that the DSP should set out how the site will be designed and operated to ensure the safety of pedestrians and cyclists in the surrounding area, including showing how vehicles will enter and exit in forward gear (no reversing in or out of the site) and showing where vehicles will stop for loading and unloading, at what times this will be permitted and how they will be escorted in and out.

Fleet Operators Recognition Scheme (FORS)

2.23. The Fleet Operator Recognition Scheme (FORS) is a voluntary accreditation scheme that recognises operators who have adopted cleaner, safer, and more efficient practices. Procurement can be used to encourage operators to adopt the latest safety and environmental standards.

2.24. The FORS has three membership levels; Bronze, Silver and Gold. Bronze members must meet the following requirements:

- Drivers and vehicle management;
- Vehicle maintenance and fleet management;
- Transport operations; and
- Assessing the performance of company policies.

2.25. Silver and Gold level members meanwhile need to provide data to enable benchmarked values to be produced per million kilometres for each type of vehicle for:

- Fuel use;
- CO2 and emissions;
- Vehicle incidents; and
- Penalty charge notice and fines.

Summary

2.26. This chapter has outlined the policy context to which the proposed delivery and servicing strategy relates and the framework within which the proposal needs to comply.

2.27. It is clear the proposals should be sustainable and seek to minimise the impacts of servicing and deliveries on the local highway network.

3. Site and Surrounding Context

Site Context

3.1. The existing site currently comprises three office buildings, a basement and ground level car park, various areas of car parking around the site and roads connecting the buildings.

3.2. The development site is located just off the Hayes End Road. The site is bound to the east by the open parkland of Hayes Park, and to the north and west by the agricultural land and buildings of Home Farm, as shown in the site location plan below.

Figure 1: Site Location

Highway Network

3.3. Vehicular access to the site is currently provided through two vehicle points. One is located to the east in the form of a priority junction with Park Lane (onward direction to Parkway, principal road) and the second one to the south via Mead House Lane, which forms a mini-roundabout junction with Hayes Park Road (onward direction to Uxbridge Road, principal road). The site currently provides a total of 750 car parking spaces.

3.4. Mead House Lane is predominantly a private road that forms a mini-roundabout junction with Hayes End Road.

3.5. To the south of the site, Hayes End Road is a single carriageway running between Uxbridge Road (A4020) to the south and Mellow Lane East to the west of the site. Hayes End Road is subject to a 30-mph speed limit and provides access to the residential areas to the south of the site.

3.6. Uxbridge Road (A4020) is a dual carriageway which links with Hayes End Road via a signalised junction. The road is subject to a 40-mph speed limit and routes between Hillingdon Hill (A4020) to the west and Ealing to the east. Uxbridge Road (A4020) provides access to the M4 as well as numerous local facilities and amenities.

3.7. To the east of the site, Park Lane is a single carriageway running on a south / north alignment between Kingshill Avenue and Uxbridge Road (A4020). Park Lane is subject to a 30-mph speed limit with footways provided on both sides of the road.

3.8. Hayes End Road is provided with footways on both sides of the road between its junction with Mead House Lane and Uxbridge Road (A4020) while footways are provided only on the western side of the road between Mead House Lane and Mellow Lane East. The eastern site access road is provided with footways on both sides of the road.

The Proposed Development

3.9. The current proposals present a scheme of 124 dwellings within the Hayes Park Central and Hayes Park South blocks.

3.10. The Proposed Development comprises the following accommodation schedule for up to 124 residential units spread across 2 buildings (*Table 1* below).

Table 1: Proposed Residential Accommodation Schedule

Unit Type	'Central' Building	'South' Building	Site Wide
Studio Flat	12	13	25
1 Bed Flat	14	26	40
2 Bed Flat	20	21	41
3 Bed Flat	2	15	17
4 Bed Flat	1	0	1
Total	**49**	**75**	**124**

3.11. Site access is to be retained from the existing access points on Park Lane (eastern boundary) and Mead House Lane/Hayes End Road (southern boundary). Internal alignments are configured for low traffic, low speed environments, with segregated internal routes to site boundaries to be provided to encourage cyclists and pedestrians throughout the site.

3.12. Servicing and delivery will be undertaken from within the site via the existing access points, in line with existing arrangements, utilising the internal access roads to serve the proposed development. Onward highway connections provide ready access to the principal road network to facilitate movement of goods and services.

4. DSP Objectives

4.1. The objective of this DSP is to develop through the planning process a document that will seek to support a sustainable and well managed development with regards to deliveries and servicing. This report has been produced in accordance with the relevant policy / guidance.

4.2. This DSP will seek to achieve the following objectives:

- Demonstrate that goods and services can be delivered, and waste removed, in a safe, efficient, and environmentally friendly way;
- Identify deliveries that could be reduced, re-timed or even consolidated, particularly during busy periods;
- Improve the reliability of deliveries to the Site; and
- Reduce the impact of freight activity on the local highway network and the environment.

5. Delivery and Servicing Strategy

Introduction

5.1. This section sets out the delivery and servicing strategy for the Site to minimise highway impacts.

Service and Delivery Vehicle Requirements

5.2. Access to the Site for servicing and deliveries associated with the residential use will primarily comprise the following:

- Refuse vehicle access;
- Postal deliveries and collections;
- Deliveries of white goods, furniture and/or other bulky items;
- Deliveries of online groceries and shopping;
- Deliveries of take-away food; and
- Trade, servicing, and maintenance vehicles.

5.3. There will also be the occasional removals vehicle when occupiers move into / out of the properties. This will be most notable when the development is first occupied; after which these will be infrequent movements.

Refuse Collection

5.4. Refuse vehicles will access the Site through the main Mead House Lane access, via the internal routes. The Mead House Lane access has previously been designed to accommodate large articulated vehicles.

5.5. Sufficient waste storage facilities and accessible collection points for the residential units are provided on-site.

5.6. Details of the waste storage and collection locations, bulky waste storage provision and bin collection schedules for the residential units will be provided to residents within their Travel Information Packs upon occupation.

5.7. The refuse collection points will be all at ground level and within 10m of the nearest stopping point for refuse collection vehicles.

5.8. A swept path analysis drawing is included at Appendix A which demonstrates that a refuse vehicle can transverse through the internal highway network of the development in forward gear.

Deliveries

5.9. The internal road layout has been designed to accommodate the required refuse vehicle which is typically larger in size than a standard rigid delivery vehicle. The internal road network is therefore demonstrated to be equally sufficient to accommodate standard delivery vehicles.

5.10. The Proposed Development provides a loading area in front of Hayes Park South. Use of the loading area will be reviewed and monitored by site management. Whilst not necessary for a residential development of this nature, there is potential for a site-wide management regime if required through regular monitoring of activity.

5.11. Due to the nature of the proposed Development and its location, it is expected that most deliveries will be undertaken by small or medium sized cars/vans, with limited need for the use of larger goods vehicles. It is expected that most of the deliveries will be of short duration with dwell times generally less than 10 minutes due to the domestic nature of the Proposed Development.

Maintenance Vehicles

5.12. Trade and maintenance vehicles will be required to liaise with site management before arrival and will be directed to the most appropriate location for them to undertake the required service / maintenance activity and to minimise any impact on pedestrian, cycle, and vehicle movements within the Site.

Removal Vehicles

5.13. When residents move into and out of the properties, there will be a need to accommodate removal vehicles on-site. Removal companies typically assess the delivery location in advance of undertaking removals and allocate appropriately sized vehicles to undertake the removals, based on the given local highway constraints.

5.14. These movements are infrequent, although it is acknowledged that when first occupations start to occur, there will be a greater number of these movements than will be typical once occupation of the development is complete. Therefore, careful liaison with site management will be critical to ensure an efficient operation and minimal impacts on existing local businesses and residents in the area.

Swept Path Analysis

5.15. The tracking drawing provided at Appendix A illustrates the swept path of a refuse vehicle accessing the Site. The internal road network is equally sufficient to accommodate standard rigid delivery vehicles.

5.16. The promotion of Light Goods Vehicles (LGVs) will be encouraged where practicable. Clearly, provision is made for large refuse and rigid goods vehicles, however LGVs should be used where possible and are expected to represent the majority of servicing and delivery trips.

Safety of Pedestrians and Cyclists

5.17. This section sets out how the safety of pedestrians and cyclists has been considered within the delivery and servicing strategy.

- The proposed Development will provide opportunities to improve connections with Hayes Park, the wider area and the surrounding area;
- The street layout within the Site will be designed to encourage pedestrian movement and includes connecting the site to Mead House Lane. The site access road will be discontinuous between Mead House Lane and Park Lane, to deter rat running;
- The proposed Development will provide access to the greenbelt and excellent pedestrian connectivity with the surrounding area. New pedestrian access will be provided from Mead House Lane and Park Lane;
- The proposed Development will provide excellent cycle connectivity with the surrounding area;
- Travel Information Packs will set out the delivery and servicing arrangements, so residents and visitors are aware of delivery / loading bays, waste storage locations and collection schedules – this will help to contribute to the safety of pedestrians / cyclists by making them aware of the delivery and servicing arrangements; and

- Use of companies who are members of FORS – recognises operators who have adopted cleaner, safer, and more efficient practices.

Delivery / Servicing Trip Generation

5.18. Delivery and servicing vehicle trips have been calculated for the proposed Development based upon Light Goods Vehicle (LGV) and Other Goods Vehicle (OGV) trips rates obtained via interrogation of comparable sites on the TRICS database. The TRICS output is provided at Appendix B.

5.19. The expected levels of unmitigated servicing and delivery trips generated by the proposed Development during the morning and evening peak hours and over a 24-hour period of operation is detailed in Table 2 below.

Table 2: Proposed Delivery and Servicing Trips – Trips by Land Use

LGV			OGV			Total Vehicles		
AM Peak (two-way)			AM Peak (two-way)			AM Peak (two-way)		
Arr	Dep	2-way	Arr	Dep	2-way	Arr	Dep	2-way
0	1	1	0	0	0	0	1	1
PM Peak (two-way)			PM Peak (two-way)			PM Peak (two-way)		
Arr	Dep	2-way	Arr	Dep	2-way	Arr	Dep	2-way
2	1	3	0	0	0	2	1	3
AADT (two-way)			AADT (two-way)			AADT (two-way)		
Arr	Dep	2-way	Arr	Dep	2-way	Arr	Dep	2-way
10	10	19	3	3	5	12	12	25

5.20. The above table indicates that in unmitigated conditions, the Development would be expected to generate a total of 25 additional two-way delivery and servicing movements throughout the course of a typical day, comprising c.19 LGV trips and 5 OGV trips. Peak hour delivery and servicing trips are likely to comprise 4 LGV movements and 0 OGV movements in the AM / PM peak hours.

5.21. It is expected that the majority of servicing and delivery trips associated with the Proposed Development will be flexible, particularly in the evening, however the majority of trips are expected to be undertaken during traditional work-day hours between 08:00 and 18:00.

Summary

5.22. It is expected that servicing and delivery trips will mostly consist of small to medium sized cars/vans relating to deliveries, with a small number of larger vehicles collecting the general and recycling waste, which will minimise the impacts on the local road network.

5.23. The use of the loading area will be monitored and managed by Facilities Management. Measures to mitigate the impact of deliveries and servicing trips associated with the Site will be encouraged. Baseline delivery and servicing surveys will be undertaken, to establish the actual number and dwell times of delivery and servicing trips once the development is operational.

6. Encouraging Sustainable Freight

Measures for Reducing Freight Trips

6.1. Measures for reducing the number of trips required for servicing and deliveries will be implemented as part of the Scheme. These measures have been developed with regard to the TfL guidance "Delivery and Servicing Plan Guidance" (December 2020) and will ensure the development contributes towards sustainable freight deliveries, noting that:

"Less frequent visits by companies that deliver to and / or collect from your building means that fewer journeys and therefore less mileage and CO^2, will be associated with the site."

Dissemination of Information

6.2. Residents of the Proposed Development will be advised of the proposed servicing and delivery arrangements, including access and on-site circulation.

Consolidation

6.3. Residents of the Proposed Development will be advised of the potential of consolidating deliveries where possible, including using sustainable delivery slots offered by their respective suppliers (supermarkets etc.). All residents will be provided with information explain how they can consolidate deliveries (such as supermarket deliveries with their neighbours) and how this can develop cost savings. This can be coordinated in conjunction with site management.

6.4. Subject to ongoing monitoring of the DSP, future measures may include a central booking system that would help coordinate the types and number of delivery vehicles accessing the Site to minimise the number of vehicles on-site and impacts.

First Time Deliveries

6.5. Provision will be made for first time deliveries. To reduce dwell time of vehicles on-site when making deliveries, the use of smart lockers enable parcels to be safely stored on-site rather than returned to distribution depots or the post office. This also reduces the potential for return visits.

Hours of Delivery

6.6. There are no legal highway constraints or physical constraints within the Site limiting the hours of delivery. From a highway capacity perspective, it would therefore be best practice to allow deliveries throughout the day rather than compressing deliveries into a shortened timeframe to minimise the number of vehicles movements during any given hour.

6.7. Residents will be advised that overnight deliveries should not be necessary for reasons of residential amenity (and are unlikely to occur). Deliveries outside of the local peak traffic hours will be encouraged to minimise impacts.

DSP Targets

6.8. As the residents of the Site are not yet fixed it is difficult to develop specific Targets. Once the occupiers are known and servicing and delivery surveys have been undertaken, Targets can be developed in the full DSP, within 6 months of occupation.

6.9. Examples of targets that could be developed include:

- No, or a reviewable maximum percentage of, servicing and delivery trips to be undertaken during the weekday AM and PM peak hours;
- No servicing and deliveries to be undertaken during the night-time (midnight – 06:00);
- A reviewable target maximum number of delivery and servicing trips to encourage the consolidation of trips to the Site;
- All, or a reviewable minimum proportion, of servicing and delivery companies used to be a member of FORS; and
- Reviewable target minimum percentage of the proposed development servicing and delivery vehicles to be 'green' vehicles. This would also include a target for non-motorised transport (cycle freight).
- Use of incentive apps (similar to travel plan incentives) to assist roll out and review of the targets. Incentives may include reduced car club costs etc.

7. DSP Management, Review and Monitoring

Management of the DSP

7.1. The DSP will be implemented upon first occupation of the Site and will be developed into a full DSP within 7 months of occupation, after the TRICS compliant baseline surveys (within 6 months of occupation).

7.2. The Framework Travel Plan and DSP documents are interlinked, and it is proposed that the management of the DSP will be linked to the responsibility of the Travel Plan Co-ordinator.

7.3. The DSP will then be managed by the TPC (or appointed equivalent). This will help ensure that the DSP is taken forward effectively and will feed back to site management to ensure continued support and resources for the DSP.

Raising Awareness

7.4. It will be important to inform the occupiers about this DSP including:

- What is a DSP?;
- The importance of DSPs and freight movements and their impacts; and
- What the occupiers can do to help encourage the use of sustainable freight to and from the Site.

7.5. This will help to bring the occupiers on board and supportive of the DSP.

7.6. To increase awareness of the DSP, relevant staff and most importantly suppliers will be given information on the DSP and encouraged to use sustainable freight to and from the Site.

7.7. It is essential that residents working at the Site are involved in the implementation and development of the DSP. The servicing/delivery surveys will contribute to raising awareness at the outset.

Review and Monitoring

7.8. It is proposed that the Review and Monitoring of the DSP is like that of the Framework Travel Plan.

7.9. The first stage of the monitoring and review programme will be to undertake comprehensive servicing / delivery surveys. The surveys are expected to be undertaken within 6 months of initial occupation of the Site.

7.10. The document will be regularly monitored and reviewed to ensure that the document reflects the changing requirements of the development and is up to date with servicing / delivery options available. It will be important to establish a regular feedback channel between the TPC and site management for them to update the TPC on any servicing and delivery issues, and for these to be addressed as early as possible.

7.11. Feedback meetings are likely to more regular prior to and shortly after occupation, to address any issues that may arise early on. The meetings may then become less frequent over time as the Site and delivery and servicing requirements are established.

7.12. The DSP development will be the responsibility of the Travel Plan Co-ordinator, who will be identified prior to occupation.

7.13. Funds will be made available for the development of the full DSP and the ongoing monitoring and review.

Mitigation Measures

7.14. Following the servicing and delivery surveys, if the headline targets are not being achieved then additional actions will be taken to help attain them. Explanations and information about what actions will be taken over the subsequent period to meet the target would be submitted to the Council for agreement.

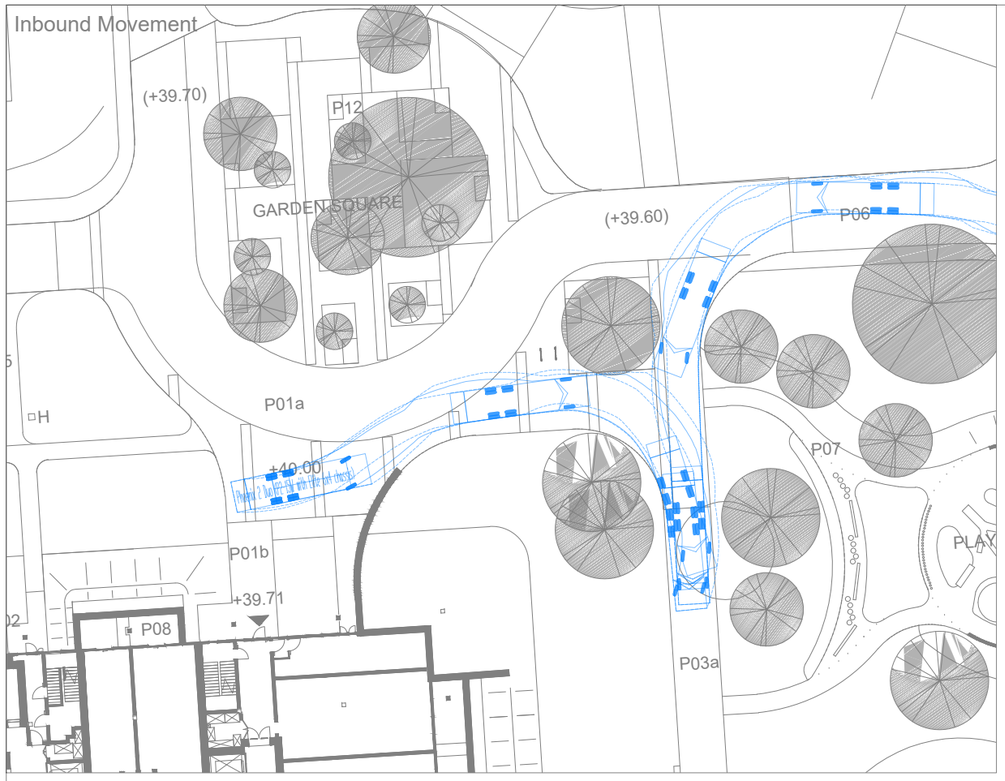
7.15. An example of possible mitigation measures that could be included are stated as follows:

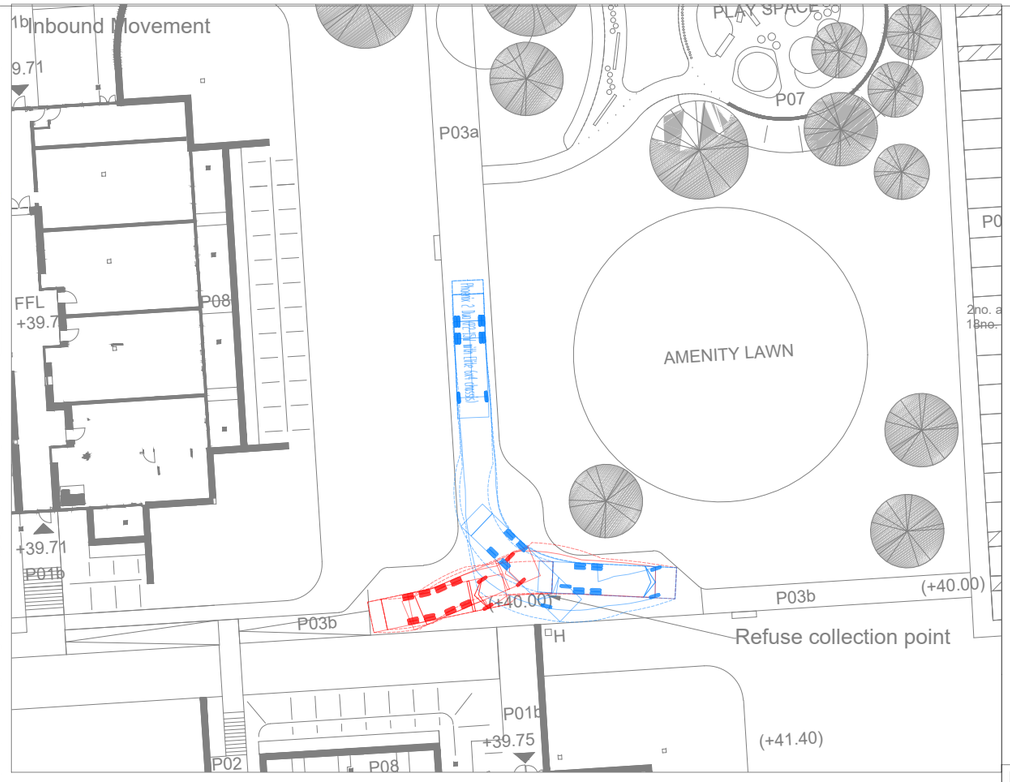
- Increase the marketing and promotion of the DSP to residents;
- Consider incentivisation linked to Travel Plan measures to maximise improvements; and
- Review and promote on-site facilities.

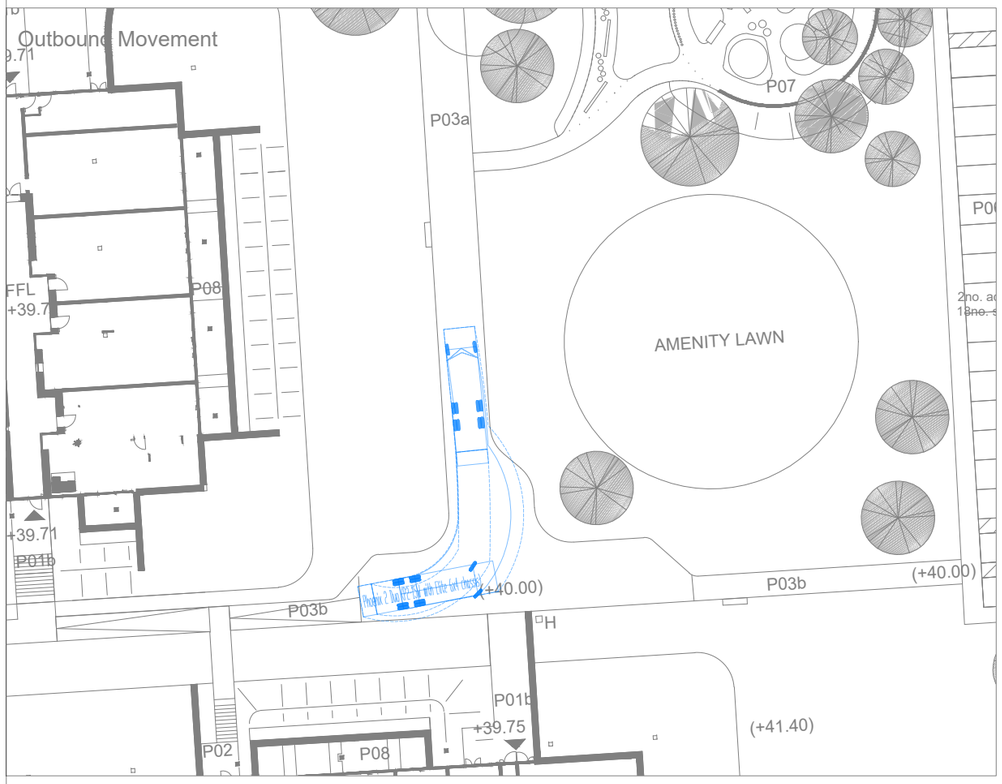
7.16. It should be noted that the above list is an indication of potential future measures and is by no means considered exhaustive or prescriptive of what would be implemented. The precise form and scale of the mitigation measures will be reviewed - the appropriate interventions will be determined following a review of the performance against the headline target and the secondary targets for the site's operation.

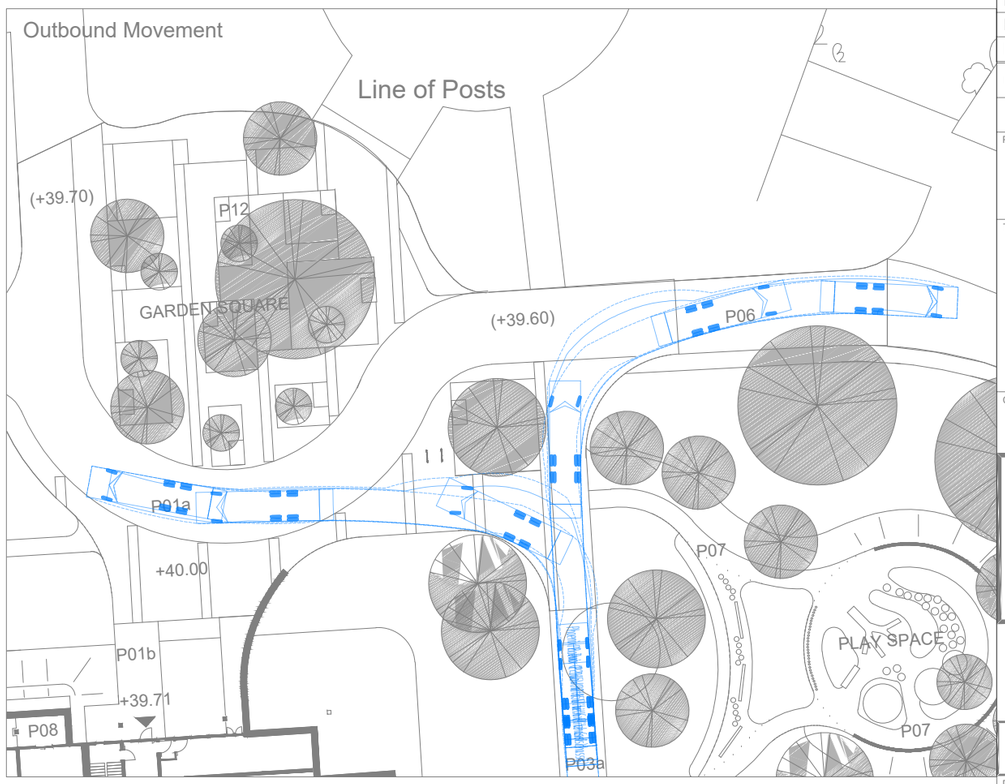
APPENDICES

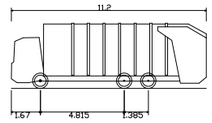
A. Swept Path











Phoenix 2 Duo (P2-15W with Elite 6x4 chassis)

Overall Length	11.200m
Overall Width	2.530m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.500m

Note: Vehicle body overhangs edge of carriageway - wheels remain on carriageway

1:500 0 10m 20m 30m 40m 50m

1:1 0 10 20 30 40 50 60 70 80 90 100

Rev	Date	Description	By	Chk
P03	20.04.23	LANDSCAPE PLAN UPDATED	AM	MP
P02	18.04.23	LANDSCAPE PLAN UPDATED	JH	MP
P01	16.03.23	ISSUED	DM	MP

Amendments

Project

Hayes Park

Title

Refuse Collection Access Swept Path Analysis

Client

Marson Property

waterman

Pickfords Wharf Clink Street London SE1 9DG

t 020 7928 7888

mail@watermangroup.com www.watermangroup.com

WIP S0

Designed By	Director	Waterman Ref
JH	MP	WIE19060
Drawn By	**Date**	**Scales @ A3**
GF	May 2023	1:500

Project - Originator - Volume - Level - Type - Role - Number

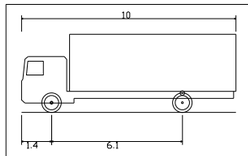
WIE19060-SA-95-0001-P05

Revision

P05

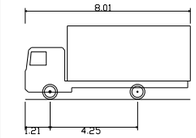
File Path N:\Projects\WIE19060\1007_CAD\95_Transport\

0419-SEW-ZZ-00-DR-L-001000



FTA Design 13/18 Tonne Rigid Vehicle (2016)

Overall Length	10.000m
Overall Width	2.550m
Overall Body Height	3.645m
Min Body Ground Clearance	0.440m
Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	11.000m



7.5t Box Van

Overall Length	8.010m
Overall Width	2.100m
Overall Body Height	3.556m
Min Body Ground Clearance	0.351m
Track Width	2.064m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	7.400m

Rev	Date	Description	By	Chk
P01	23.03.23	ISSUED	DA	DM

Amendments

Project

Hayes Park

Title

10m Rigid & Box Van Swept Path Analysis

Client

Shall Do Hayes Developments Ltd

waterman

Pickfords Wharf Clink Street London SE1 9DG
t 020 7928 7888
mail@watermangroup.com www.watermangroup.com

WIP S0

Designed By: DA	Director: MP	Waterman Ref: WIE19060
Drawn By: DA	Date: 23.03.2023	Scales @ A3: Scale

Project - Originator - Volume - Level - Type - Role - Number: WIE19060-SA-95-0003-P01

Revision: P01

File Path: N:\Projects\WIE19060\10\7_CAD\95_Transport\

A3-Wat-ISO-S

Inbound Movement

Outbound Movement

Line of Posts

GARDEN SQUARE

(+39.70)

(+39.60)

P12

P06

P03a

P05

P01a

P01b

P02

P08

P04

P07

P03b

+40.00

+39.71

Refuse collection point

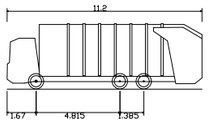
FFL +39.7

REFER TO DRAWING 0419-SEW-ZZ-00-DR-L-001001 FOR COURTYARD DESIGN

(+41.65)

1:500 0 10m 20m 30m 40m 50m

1:1 0 10 20 30 40 50 60 70 80 90 100



Phoenix 2 Duo (P2-15W with Elite 6x4 chassis)

Overall Length	11.200m
Overall Width	2.530m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.500m

Note: Vehicle body overhangs edge of carriageway - wheels remain on carriageway

Rev	Date	Description	By	Chk
P02	20.04.23	NEW LANDSCAPE	AM	MP
P01	18.04.23	ISSUED	JH	MP

Amendments

Project

Hayes Park

Title

Refuse Collection Access Swept Path Analysis

Client

Marson Property

waterman

Pickfords Wharf Clink Street London SE1 9DG

t 020 7928 7888

mail@watermangroup.com www.watermangroup.com

WIP S0

Designed By	Director	Waterman Ref
JH	MP	WIE19060
Drawn By	**Date**	**Scales @ A3**
GF	March 2023	1:500

Project - Originator - Volume - Level - Type - Role - Number	Revision
WIE19060-SA-95-0004-P04	P04

File Path N:\Projects\WIE19060\100\7_CAD\95_Transport\

0419-SEW-ZZ-00-DR-L-001000

B. TRICS

Calculation Reference: AUDIT-701701-230310-0323

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

01	GREATER LONDON		
	BT	BRENT	1 days
	HO	HOUNSLOW	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: 15111 to 185000 (units: sqm)
Range Selected by User: 1200 to 185000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/14 to 08/11/18

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

Selected survey days:

Thursday	2 days

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

Selected survey types:

Manual count	2 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2

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

Selected Location Sub Categories:

Commercial Zone	1
Development Zone	1

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

Inclusion of Servicing Vehicles Counts:

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

Secondary Filtering selection:

Use Class:
Not Known 2 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:
25,001 to 50,000 2 days

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

Population within 5 miles:
500,001 or More 2 days

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

Car ownership within 5 miles:
0.6 to 1.0 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:
Yes 1 days
No 1 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:
2 Poor 2 days

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

LIST OF SITES relevant to selection parameters

1 BT-02-B-01 BUSINESS PARK BRENT
CENTRAL WAY
PARK ROYAL

Suburban Area (PPS6 Out of Centre)
Commercial Zone
Total Gross floor area: 15111 sqm
Survey date: THURSDAY *21/04/16* *Survey Type: MANUAL*

2 HO-02-B-04 BUSINESS PARK HOUNSLOW
CHISWICK HIGH ROAD
CHISWICK
GUNNERSBURY
Suburban Area (PPS6 Out of Centre)
Development Zone
Total Gross floor area: 185000 sqm
Survey date: THURSDAY *08/11/18* *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.

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK
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): 4.54

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	2	100056	0.059	2	100056	0.018	2	100056	0.077
07:30 - 08:00	2	100056	0.086	2	100056	0.026	2	100056	0.112
08:00 - 08:30	2	100056	0.092	2	100056	0.028	2	100056	0.120
08:30 - 09:00	2	100056	0.102	2	100056	0.024	2	100056	0.126
09:00 - 09:30	2	100056	0.082	2	100056	0.030	2	100056	0.112
09:30 - 10:00	2	100056	0.079	2	100056	0.027	2	100056	0.106
10:00 - 10:30	2	100056	0.052	2	100056	0.038	2	100056	0.090
10:30 - 11:00	2	100056	0.047	2	100056	0.025	2	100056	0.072
11:00 - 11:30	2	100056	0.043	2	100056	0.026	2	100056	0.069
11:30 - 12:00	2	100056	0.043	2	100056	0.034	2	100056	0.077
12:00 - 12:30	2	100056	0.043	2	100056	0.029	2	100056	0.072
12:30 - 13:00	2	100056	0.032	2	100056	0.051	2	100056	0.083
13:00 - 13:30	2	100056	0.051	2	100056	0.029	2	100056	0.080
13:30 - 14:00	2	100056	0.048	2	100056	0.035	2	100056	0.083
14:00 - 14:30	2	100056	0.035	2	100056	0.042	2	100056	0.077
14:30 - 15:00	2	100056	0.041	2	100056	0.049	2	100056	0.090
15:00 - 15:30	2	100056	0.024	2	100056	0.039	2	100056	0.063
15:30 - 16:00	2	100056	0.019	2	100056	0.039	2	100056	0.058
16:00 - 16:30	2	100056	0.034	2	100056	0.070	2	100056	0.104
16:30 - 17:00	2	100056	0.028	2	100056	0.098	2	100056	0.126
17:00 - 17:30	2	100056	0.032	2	100056	0.072	2	100056	0.104
17:30 - 18:00	2	100056	0.029	2	100056	0.094	2	100056	0.123
18:00 - 18:30	2	100056	0.024	2	100056	0.091	2	100056	0.115
18:30 - 19:00	2	100056	0.031	2	100056	0.066	2	100056	0.097
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			1.156			1.080			2.236

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:	15111 - 185000 (units: sqm)
Survey date date range:	01/01/14 - 08/11/18
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK
MULTI-MODAL OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	2	100056	0.002	2	100056	0.000	2	100056	0.002
07:30 - 08:00	2	100056	0.002	2	100056	0.001	2	100056	0.003
08:00 - 08:30	2	100056	0.002	2	100056	0.001	2	100056	0.003
08:30 - 09:00	2	100056	0.000	2	100056	0.000	2	100056	0.000
09:00 - 09:30	2	100056	0.002	2	100056	0.000	2	100056	0.002
09:30 - 10:00	2	100056	0.002	2	100056	0.002	2	100056	0.004
10:00 - 10:30	2	100056	0.002	2	100056	0.000	2	100056	0.002
10:30 - 11:00	2	100056	0.001	2	100056	0.004	2	100056	0.005
11:00 - 11:30	2	100056	0.002	2	100056	0.002	2	100056	0.004
11:30 - 12:00	2	100056	0.001	2	100056	0.004	2	100056	0.005
12:00 - 12:30	2	100056	0.002	2	100056	0.002	2	100056	0.004
12:30 - 13:00	2	100056	0.003	2	100056	0.004	2	100056	0.007
13:00 - 13:30	2	100056	0.002	2	100056	0.000	2	100056	0.002
13:30 - 14:00	2	100056	0.001	2	100056	0.003	2	100056	0.004
14:00 - 14:30	2	100056	0.001	2	100056	0.000	2	100056	0.001
14:30 - 15:00	2	100056	0.001	2	100056	0.001	2	100056	0.002
15:00 - 15:30	2	100056	0.002	2	100056	0.002	2	100056	0.004
15:30 - 16:00	2	100056	0.000	2	100056	0.001	2	100056	0.001
16:00 - 16:30	2	100056	0.001	2	100056	0.001	2	100056	0.002
16:30 - 17:00	2	100056	0.000	2	100056	0.001	2	100056	0.001
17:00 - 17:30	2	100056	0.001	2	100056	0.000	2	100056	0.001
17:30 - 18:00	2	100056	0.000	2	100056	0.000	2	100056	0.000
18:00 - 18:30	2	100056	0.001	2	100056	0.001	2	100056	0.002
18:30 - 19:00	2	100056	0.000	2	100056	0.000	2	100056	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.031			0.030			0.061

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 02 - EMPLOYMENT/B - BUSINESS PARK
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): 4.54

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	2	100056	0.166	2	100056	0.035	2	100056	0.201
07:30 - 08:00	2	100056	0.377	2	100056	0.062	2	100056	0.439
08:00 - 08:30	2	100056	0.484	2	100056	0.078	2	100056	0.562
08:30 - 09:00	2	100056	0.615	2	100056	0.108	2	100056	0.723
09:00 - 09:30	2	100056	0.566	2	100056	0.087	2	100056	0.653
09:30 - 10:00	2	100056	0.339	2	100056	0.109	2	100056	0.448
10:00 - 10:30	2	100056	0.200	2	100056	0.113	2	100056	0.313
10:30 - 11:00	2	100056	0.188	2	100056	0.086	2	100056	0.274
11:00 - 11:30	2	100056	0.121	2	100056	0.061	2	100056	0.182
11:30 - 12:00	2	100056	0.124	2	100056	0.127	2	100056	0.251
12:00 - 12:30	2	100056	0.243	2	100056	0.224	2	100056	0.467
12:30 - 13:00	2	100056	0.207	2	100056	0.231	2	100056	0.438
13:00 - 13:30	2	100056	0.245	2	100056	0.193	2	100056	0.438
13:30 - 14:00	2	100056	0.214	2	100056	0.148	2	100056	0.362
14:00 - 14:30	2	100056	0.167	2	100056	0.162	2	100056	0.329
14:30 - 15:00	2	100056	0.142	2	100056	0.155	2	100056	0.297
15:00 - 15:30	2	100056	0.088	2	100056	0.130	2	100056	0.218
15:30 - 16:00	2	100056	0.075	2	100056	0.134	2	100056	0.209
16:00 - 16:30	2	100056	0.100	2	100056	0.257	2	100056	0.357
16:30 - 17:00	2	100056	0.099	2	100056	0.393	2	100056	0.492
17:00 - 17:30	2	100056	0.100	2	100056	0.538	2	100056	0.638
17:30 - 18:00	2	100056	0.105	2	100056	0.758	2	100056	0.863
18:00 - 18:30	2	100056	0.075	2	100056	0.602	2	100056	0.677
18:30 - 19:00	2	100056	0.076	2	100056	0.286	2	100056	0.362
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			5.116			5.077			10.193

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK
MULTI-MODAL CARS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	2	100056	0.042	2	100056	0.010	2	100056	0.052
07:30 - 08:00	2	100056	0.060	2	100056	0.011	2	100056	0.071
08:00 - 08:30	2	100056	0.071	2	100056	0.014	2	100056	0.085
08:30 - 09:00	2	100056	0.076	2	100056	0.010	2	100056	0.086
09:00 - 09:30	2	100056	0.062	2	100056	0.012	2	100056	0.074
09:30 - 10:00	2	100056	0.051	2	100056	0.009	2	100056	0.060
10:00 - 10:30	2	100056	0.033	2	100056	0.017	2	100056	0.050
10:30 - 11:00	2	100056	0.029	2	100056	0.010	2	100056	0.039
11:00 - 11:30	2	100056	0.025	2	100056	0.013	2	100056	0.038
11:30 - 12:00	2	100056	0.029	2	100056	0.016	2	100056	0.045
12:00 - 12:30	2	100056	0.022	2	100056	0.015	2	100056	0.037
12:30 - 13:00	2	100056	0.016	2	100056	0.026	2	100056	0.042
13:00 - 13:30	2	100056	0.036	2	100056	0.015	2	100056	0.051
13:30 - 14:00	2	100056	0.036	2	100056	0.022	2	100056	0.058
14:00 - 14:30	2	100056	0.023	2	100056	0.025	2	100056	0.048
14:30 - 15:00	2	100056	0.024	2	100056	0.025	2	100056	0.049
15:00 - 15:30	2	100056	0.008	2	100056	0.024	2	100056	0.032
15:30 - 16:00	2	100056	0.010	2	100056	0.027	2	100056	0.037
16:00 - 16:30	2	100056	0.020	2	100056	0.049	2	100056	0.069
16:30 - 17:00	2	100056	0.013	2	100056	0.078	2	100056	0.091
17:00 - 17:30	2	100056	0.018	2	100056	0.053	2	100056	0.071
17:30 - 18:00	2	100056	0.017	2	100056	0.075	2	100056	0.092
18:00 - 18:30	2	100056	0.012	2	100056	0.072	2	100056	0.084
18:30 - 19:00	2	100056	0.017	2	100056	0.052	2	100056	0.069
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.750			0.680			1.430

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK
MULTI-MODAL LGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	2	100056	0.005	2	100056	0.000	2	100056	0.005
07:30 - 08:00	2	100056	0.005	2	100056	0.004	2	100056	0.009
08:00 - 08:30	2	100056	0.007	2	100056	0.005	2	100056	0.012
08:30 - 09:00	2	100056	0.008	2	100056	0.005	2	100056	0.013
09:00 - 09:30	2	100056	0.008	2	100056	0.008	2	100056	0.016
09:30 - 10:00	2	100056	0.008	2	100056	0.007	2	100056	0.015
10:00 - 10:30	2	100056	0.010	2	100056	0.011	2	100056	0.021
10:30 - 11:00	2	100056	0.006	2	100056	0.003	2	100056	0.009
11:00 - 11:30	2	100056	0.007	2	100056	0.004	2	100056	0.011
11:30 - 12:00	2	100056	0.004	2	100056	0.005	2	100056	0.009
12:00 - 12:30	2	100056	0.011	2	100056	0.005	2	100056	0.016
12:30 - 13:00	2	100056	0.004	2	100056	0.010	2	100056	0.014
13:00 - 13:30	2	100056	0.005	2	100056	0.003	2	100056	0.008
13:30 - 14:00	2	100056	0.005	2	100056	0.004	2	100056	0.009
14:00 - 14:30	2	100056	0.001	2	100056	0.009	2	100056	0.010
14:30 - 15:00	2	100056	0.004	2	100056	0.010	2	100056	0.014
15:00 - 15:30	2	100056	0.004	2	100056	0.004	2	100056	0.008
15:30 - 16:00	2	100056	0.003	2	100056	0.004	2	100056	0.007
16:00 - 16:30	2	100056	0.004	2	100056	0.006	2	100056	0.010
16:30 - 17:00	2	100056	0.004	2	100056	0.007	2	100056	0.011
17:00 - 17:30	2	100056	0.004	2	100056	0.005	2	100056	0.009
17:30 - 18:00	2	100056	0.000	2	100056	0.002	2	100056	0.002
18:00 - 18:30	2	100056	0.001	2	100056	0.002	2	100056	0.003
18:30 - 19:00	2	100056	0.001	2	100056	0.000	2	100056	0.001
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.119			0.123			0.242

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.*

Calculation Reference: AUDIT-701701-230310-0308

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

01	GREATER LONDON		
	BE	BEXLEY	1 days
	HO	HOUNSLOW	2 days
	HV	HAVERING	1 days
	KI	KINGSTON	1 days
	RD	RICHMOND	1 days
	TH	TOWER HAMLETS	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: 14 to 493 (units:)
Range Selected by User: 100 to 400 (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 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	1 days
Tuesday	2 days
Wednesday	1 days
Friday	3 days

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

Selected survey types:

Manual count	7 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 undertaking using machines.

Selected Locations:

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	2
Edge of Town	2
Neighbourhood Centre (PPS6 Local Centre)	1

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

Selected Location Sub Categories:

Industrial Zone	1
Development Zone	1
Residential Zone	3
Built-Up Zone	1
No Sub Category	1

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	28 days - Selected
Servicing vehicles Excluded	5 days - Selected

Secondary Filtering selection:

Use Class:

C3	7 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:

10,001 to 15,000	1 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	3 days
50,001 to 100,000	1 days

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

Population within 5 miles:

125,001 to 250,000	2 days
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:

0.6 to 1.0	5 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:

Yes	4 days
No	3 days

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

PTAL Rating:

1a (Low) Very poor	1 days
1b Very poor	1 days
2 Poor	5 days

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

LIST OF SITES relevant to selection parameters

1 BE-03-C-02 BLOCKS OF FLATS BEXLEY
CLYDESDALE WAY
BELVEDERE

Edge of Town
Industrial Zone
Total No of Dwellings: 402
Survey date: WEDNESDAY *19/09/18* *Survey Type: MANUAL*

2 HO-03-C-03 BLOCKS OF FLATS HOUNSLOW
COMMERCE ROAD
BRENTFORD

Edge of Town Centre
Development Zone
Total No of Dwellings: 150
Survey date: FRIDAY *18/11/16* *Survey Type: MANUAL*

3 HO-03-C-05 BLOCK OF FLATS HOUNSLOW
PARK LANE
HOUNSLOW
CRANFORD
Edge of Town
Residential Zone
Total No of Dwellings: 14
Survey date: FRIDAY *06/03/20* *Survey Type: MANUAL*

4 HV-03-C-02 BLOCKS OF FLATS HAVERING
WATERLOO ROAD
ROMFORD

Suburban Area (PPS6 Out of Centre)
Built-Up Zone
Total No of Dwellings: 493
Survey date: TUESDAY *22/11/16* *Survey Type: MANUAL*

5 KI-03-C-03 BLOCK OF FLATS KINGSTON
PORTSMOUTH ROAD
SURBITON

Edge of Town Centre
Residential Zone
Total No of Dwellings: 20
Survey date: MONDAY *11/07/16* *Survey Type: MANUAL*

6 RD-03-C-06 BLOCKS OF FLATS RICHMOND
BESSANT DRIVE
KEW

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 170
Survey date: TUESDAY *28/06/22* *Survey Type: MANUAL*

7 TH-03-C-04 BLOCK OF FLATS TOWER HAMLETS
LEVEN ROAD
POPLAR
ABERFELDY VILLAGE
Neighbourhood Centre (PPS6 Local Centre)
No Sub Category
Total No of Dwellings: 83
Survey date: FRIDAY *21/06/19* *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
BE-03-C-01	high PTAL
BN-03-C-01	high PTAL
BT-03-C-01	high PTAL
BT-03-C-02	high PTAL
EN-03-C-03	high PTAL
HG-03-C-01	high PTAL
HG-03-C-02	high PTAL

MANUALLY DESELECTED SITES (Cont.)

Site Ref	Reason for Deselection
HK-03-C-03	high PTAL
HO-03-C-04	high PTAL
IS-03-C-05	high PTAL
IS-03-C-06	high PTAL
IS-03-C-07	high PTAL
SK-03-C-01	high PTAL
SK-03-C-02	high PTAL
SK-03-C-03	high PTAL
WF-03-C-01	high PTAL
WF-03-C-02	Survey undertaken during Covid
WF-03-C-03	Survey undertaken during Covid
WF-03-C-04	Survey undertaken during Covid
WF-03-C-05	Survey undertaken during Covid
WF-03-C-06	Survey undertaken during Covid

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
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): 2.74

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	7	190	0.029	7	190	0.112	7	190	0.141
08:00 - 09:00	7	190	0.035	7	190	0.132	7	190	0.167
09:00 - 10:00	7	190	0.055	7	190	0.060	7	190	0.115
10:00 - 11:00	7	190	0.037	7	190	0.050	7	190	0.087
11:00 - 12:00	7	190	0.041	7	190	0.059	7	190	0.100
12:00 - 13:00	7	190	0.058	7	190	0.050	7	190	0.108
13:00 - 14:00	7	190	0.055	7	190	0.060	7	190	0.115
14:00 - 15:00	7	190	0.053	7	190	0.060	7	190	0.113
15:00 - 16:00	7	190	0.084	7	190	0.062	7	190	0.146
16:00 - 17:00	7	190	0.106	7	190	0.060	7	190	0.166
17:00 - 18:00	7	190	0.115	7	190	0.063	7	190	0.178
18:00 - 19:00	7	190	0.128	7	190	0.059	7	190	0.187
19:00 - 20:00	6	140	0.091	6	140	0.058	6	140	0.149
20:00 - 21:00	6	140	0.080	6	140	0.044	6	140	0.124
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.967			0.929			1.896

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:	14 - 493 (units:)
Survey date date range:	01/01/14 - 28/06/22
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	5
Surveys manually removed from selection:	21

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL OGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	7	190	0.003	7	190	0.004	7	190	0.007
08:00 - 09:00	7	190	0.002	7	190	0.001	7	190	0.003
09:00 - 10:00	7	190	0.003	7	190	0.003	7	190	0.006
10:00 - 11:00	7	190	0.000	7	190	0.000	7	190	0.000
11:00 - 12:00	7	190	0.003	7	190	0.001	7	190	0.004
12:00 - 13:00	7	190	0.001	7	190	0.002	7	190	0.003
13:00 - 14:00	7	190	0.002	7	190	0.005	7	190	0.007
14:00 - 15:00	7	190	0.002	7	190	0.002	7	190	0.004
15:00 - 16:00	7	190	0.001	7	190	0.002	7	190	0.003
16:00 - 17:00	7	190	0.000	7	190	0.000	7	190	0.000
17:00 - 18:00	7	190	0.002	7	190	0.001	7	190	0.003
18:00 - 19:00	7	190	0.001	7	190	0.001	7	190	0.002
19:00 - 20:00	6	140	0.001	6	140	0.001	6	140	0.002
20:00 - 21:00	6	140	0.000	6	140	0.000	6	140	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.021			0.023			0.044

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/C - FLATS PRIVATELY OWNED
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): 2.74

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	7	190	0.056	7	190	0.324	7	190	0.380
08:00 - 09:00	7	190	0.089	7	190	0.462	7	190	0.551
09:00 - 10:00	7	190	0.143	7	190	0.177	7	190	0.320
10:00 - 11:00	7	190	0.087	7	190	0.134	7	190	0.221
11:00 - 12:00	7	190	0.111	7	190	0.153	7	190	0.264
12:00 - 13:00	7	190	0.157	7	190	0.145	7	190	0.302
13:00 - 14:00	7	190	0.139	7	190	0.154	7	190	0.293
14:00 - 15:00	7	190	0.137	7	190	0.160	7	190	0.297
15:00 - 16:00	7	190	0.227	7	190	0.164	7	190	0.391
16:00 - 17:00	7	190	0.270	7	190	0.138	7	190	0.408
17:00 - 18:00	7	190	0.316	7	190	0.145	7	190	0.461
18:00 - 19:00	7	190	0.352	7	190	0.134	7	190	0.486
19:00 - 20:00	6	140	0.322	6	140	0.159	6	140	0.481
20:00 - 21:00	6	140	0.247	6	140	0.135	6	140	0.382
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.653			2.584			5.237

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/C - FLATS PRIVATELY OWNED
MULTI-MODAL CARS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	7	190	0.020	7	190	0.095	7	190	0.115
08:00 - 09:00	7	190	0.025	7	190	0.114	7	190	0.139
09:00 - 10:00	7	190	0.044	7	190	0.047	7	190	0.091
10:00 - 11:00	7	190	0.029	7	190	0.044	7	190	0.073
11:00 - 12:00	7	190	0.029	7	190	0.050	7	190	0.079
12:00 - 13:00	7	190	0.045	7	190	0.040	7	190	0.085
13:00 - 14:00	7	190	0.042	7	190	0.044	7	190	0.086
14:00 - 15:00	7	190	0.040	7	190	0.047	7	190	0.087
15:00 - 16:00	7	190	0.071	7	190	0.047	7	190	0.118
16:00 - 17:00	7	190	0.094	7	190	0.052	7	190	0.146
17:00 - 18:00	7	190	0.088	7	190	0.045	7	190	0.133
18:00 - 19:00	7	190	0.110	7	190	0.045	7	190	0.155
19:00 - 20:00	6	140	0.082	6	140	0.048	6	140	0.130
20:00 - 21:00	6	140	0.073	6	140	0.042	6	140	0.115
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.792			0.760			1.552

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/C - FLATS PRIVATELY OWNED
MULTI-MODAL LGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	7	190	0.002	7	190	0.006	7	190	0.008
08:00 - 09:00	7	190	0.002	7	190	0.005	7	190	0.007
09:00 - 10:00	7	190	0.005	7	190	0.005	7	190	0.010
10:00 - 11:00	7	190	0.007	7	190	0.005	7	190	0.012
11:00 - 12:00	7	190	0.005	7	190	0.006	7	190	0.011
12:00 - 13:00	7	190	0.008	7	190	0.006	7	190	0.014
13:00 - 14:00	7	190	0.007	7	190	0.006	7	190	0.013
14:00 - 15:00	7	190	0.008	7	190	0.008	7	190	0.016
15:00 - 16:00	7	190	0.007	7	190	0.010	7	190	0.017
16:00 - 17:00	7	190	0.008	7	190	0.005	7	190	0.013
17:00 - 18:00	7	190	0.013	7	190	0.008	7	190	0.021
18:00 - 19:00	7	190	0.003	7	190	0.004	7	190	0.007
19:00 - 20:00	6	140	0.000	6	140	0.002	6	140	0.002
20:00 - 21:00	6	140	0.002	6	140	0.001	6	140	0.003
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.077			0.077			0.154

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.*

waterman

Our vision

"Engineering a better environment for people and the planet"

Our mission

"To solve complex problems for the benefit of clients, communities and the climate"

Our values

People orientated

Individually and collectively, people are our business.
We strive to create environments for everyone to flourish and thrive.

Flexible

Pragmatic by nature and dedicated to getting the job done to the highest possible standard.

Professional

Operating at pace with integrity to deliver technical and robust solutions.

Environmentally aware

We understand our responsibility to the environment, it shapes our decision making and informs our practice.

Innovative

Our forensic questioning provides the ability to deliver appropriate innovations at every stage on every project.

Relationship focused

We value individuality and the benefits of working collaboratively to achieve positive outcomes for all.