Pulsar
TRANSPORT PLANNING

Client:

Liz & Allan Frost

Project:

High Street, Hampton Wick

Transport Statement

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1 INTRODUCTION

1.1 Mr & Mrs Frost have commissioned Pulsar to prepare a Transport Statement in support of a planning application for the conversion of an existing retail and workspace development and other dilapidated buildings to a mixed-use development including planning use class 'E' units likely to include retail, office space and workshops and residential class C3 development. The site is located at 29 and 31 High Street, Hampton Wick, KT1 4DA.

Background

1.2 The Local Planning Authority and Local Highway Authority are the London Borough of Richmond upon Thames.

1.3 The existing site houses approximately 235sqm of retail space, 296sqm of ad hoc workshop units and workspaces, one studio apartment and several dilapidated buildings, with 8 parking spaces provided. Access is provided to the parking area from High Street at a priority access, which also provides access to parking areas at the rear of 11-23 High Street.

Proposed Development

1.4 The Applicant seeks to submit a planning application for the conversion of the existing units to a mixed-use development providing retail, office, workshop and residential units. The exact breakdown of the 'E' use class units is not known, but for the purposes of this Transport Statement, it is assumed that the proposed development will have a broadly similar mix to the existing uses on site. The proposed development will include five car parking spaces (which equates to a reduction of 3 spaces) and 24 cycle parking spaces. The proposed layout is shown on the architect's plans in **Appendix A**.

1.5 Vehicular access is proposed to be maintained from High Street.

1.6 The Transport Statement is structured as follows:

- **Section 2: Existing Conditions** – A review of travel and transport conditions at the site and surrounding area.
- **Section 3: Policy Review** – A review of relevant national, regional and local transport and land use planning policy.
- **Section 4: The Proposed Development** – A description of the proposed development with an emphasis on proposed transport infrastructure.
- **Section 5: Trip Assessment** – A review of the likely number of trips to be generated by the proposed development.

- **Section 6: Summary & Conclusions** – A review of key issues and conclusions raised in the report.

2 EXISTING CONDITIONS

2.1 This section describes existing conditions at the site in relation to transport.

Site Location

2.2 The site is located at 29-31 High Street, Hampton Wick, KT1 4DA. It is currently surrounded by commercial units on either side. Access to a parking area at the rear forms part of the site, however this also provides access to the parking areas of neighbouring properties on the eastern side. This access is provided in the form of a priority junction from High Street and is located adjacent to the bus stop markings, opposite the Lower Teddington Road junction. The existing access is approximately 3.38m wide at its most narrow point.

2.3 There are currently eight marked out parking bays within the site, however, it is evident that manoeuvring into some of these bays is challenging.

2.4 **Figure 1** shows the site location plan.

Figure 1 Site Location Plan

Accessibility

2.5 This section provides information on access to and from the site by sustainable modes of transport.

Walking & Cycling

2.6 The topography in the area is generally flat which is good for walking and cycling activity.

2.7 High Street has footways on both sides of the main carriageway. Dropped kerbs are located outside the site to support accessible pedestrian movement by pushchair users and the mobility and sight impaired, along with tactile paving at crossing points in the vicinity of the site. There is a pedestrian controlled crossing on High Street, approximately 65m north of the site. This crossing is located just beyond Park Road. Additionally, a zebra crossing is provided to the south on High Street, approximately 100m from the site access. An informal crossing point with a central island is also provided approximately 20m to the south of the site access.

2.8 Footpaths are provided through Bushy Park and Hampton Court Park. These can be accessed from Park Road and Hampton Court Road respectively. The footpaths through Bushy Park can be used to access Hampton to the west.

2.9 There are also footpaths provided either side of the River Thames to the south of Kingston Bridge and on the eastern side to the north of it. To the north this provides a link to the northern areas of Kingston upon Thames, including many amenities such as Turks Pier. To the south this provides a connection to the southern areas of Kingston upon Thames and Surbiton.

2.10 According to the TfL Local Cycling Guide 9, there are multiple off road routes and quiet roads in the vicinity of the site that have been recommended by cyclists. Off road routes are provided on Barge Walk, along Hampton Court Road and through Bushy Park. Some sections of High Street (including the frontage of the site), Park Road, Vicarage Road, Seymour Road and Church Grove are included in those roads in the vicinity of the site recommended by cyclists. National Cycle Route 4 passes near to the site and can be connected to at Kingston Bridge. This route runs all the way from London to West Wales and offers a connection from the site to central London to the east and Weybridge, Egham and Windsor to the west.

Public Transport

2.11 A northbound bus stop is provided directly outside the site access, with the stop for the opposite direction located approximately 100m to the south. From here the 281 and 285 buses are accessible, offering connections to destinations including Hounslow, Surbiton, Feltham and Heathrow. Northbound services are accessible from a sheltered stop with seating with southbound services accessible from a stop marked by a bus flag. Further bus stops are available on Church Grove where the 481 bus can be accessed, and multiple additional services are available from Kingston upon Thames town centre on the other side of Kingston Bridge. Further information on the accessible bus services from High Street is provided in **Table 2.1**. The TfL bus map for Hampton Wick is attached to this report within **Appendix B**.

Table 2.1 Accessible Bus Services: Typical Frequencies (Mins)

No.	Route	Week	Sat	Sun
281	Hounslow Bus Station – Hounslow Station – Twickenham – Hampton Wick Station – Surbiton – Tolworth	8	10	12
285	Heathrow Central Bus Station – Hatton Cross Station – Feltham Station – Hampton – Teddington – Hampton Wick Station – Cromwell Road Bus Station	12	12	12

2.12 Hampton Wick Station is located approximately 250m to the north of the site access on High Street and is managed by South Western Railway. It is located on the London Waterloo to Shepperton branch line, which offers connections to additional direct destinations including Kempton Park, Teddington, Wimbledon, Clapham Junction, Vauxhall, Twickenham, and Richmond.

2.13 Kingston Station is located slightly further away but still within a comfortable 900m walking distance to the east. It is located on the same branch line offering the same services as Hampton Wick Station, but with a larger number of facilities and step free access.

PTAL

2.14 PTAL is a theoretical measure of the accessibility of a given point to the surrounding public transport network, taking into account walk access time and service availability. The method used is essentially a way of measuring the density of the public transport network at a particular point.

2.15 The PTAL measure, reflects:

- The walking distance from the point of interest to the public transport access points;
- The reliability of the service modes available;
- The number of services available within the catchment; and
- The level of service at the public transport access points – i.e. average waiting time.

2.16 According to TfL, the site has a public transport accessibility level (PTAL) rating of 4 (good) on a scale of 1 (very poor) to 6 (excellent). This accessibility rating is supported by local bus and National Rail services.

Local Highway Network

2.17 The A310 High Street is a single carriageway road accommodating traffic in both directions. The road operates a 30mph speed limit. Marked parking bays are provided in some areas of the carriageway with double yellow lines provided on the remaining stretches.

2.18 High Street connects to Horse Fair and the A308 Hampton Court Road to the south of the site by way of a roundabout. Hampton Court Road leads to a connection to the A309 Hampton Court Way and further to the M3. To the north the A310 High Street leads to Upper Teddington Road and on to Kingston Road. This connects to Teddington and further on to Twickenham.

Local Car Ownership

2.19 Census data (for the Richmond upon Thames 022 middle super output area) was referenced to understand local car ownership levels in flatted units with the results given below:

- Zero cars – 40.1%
- 1 car – 48.6%
- 2 or more cars – 11.2%

2.20 The above demonstrates that at present approximately 60% of flatted units own a car. However, in line with London Plan policy it is considered that this level will decrease.

Car Club

2.21 An Enterprise Car Club space is available on street on School Road. This is approximately 150m from the site access. Car clubs allow users to rent a car by the hour or day to only use a car when they require it. The benefit is that users do not need to pay for the upkeep of a car all year round. Evidence shows that a car club space in the area can reduce car ownership levels at a development.

3 POLICY REVIEW

Introduction

3.1 This section of the report considers the current and emerging planning policy guidance at national, regional and local level.

National Policy

National Planning Policy Framework (NPPF)

3.2 The revised NPPF was published in July 2018 (and subsequently updated in February 2019) and sets out the Government's planning policies for England and how these are expected to be applied. It replaces the previous document published in March 2012.

3.3 The NPPF reiterates that "*the purpose of the planning system is to contribute to the achievement of sustainable development*" and "*at the heart of the Framework is a* ***presumption in favour of sustainable development***".

3.4 Section 9 deals with promoting sustainable transport. Paragraph 102 sets out the reasons transport issues should be considered from the earliest stages of plan-making and development proposals, i.e. 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 adverse 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.

3.5 Paragraph 103 states that the planning system should actively manage patterns of growth in support of the above objectives.

3.6 Paragraph 108 states that in assessing specific applications for development, the following should be ensured:

"appropriate opportunities to promote sustainable transport modes can be – or have been - taken up given the type of development and its location;

Safe and suitable access to the site can be achieved for all users; and

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.

3.7 Paragraph 109 goes on to state:

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."

3.8 NPPF states that 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.

National Planning Practice Guidance (NPPG), 2014

3.9 On 6 March 2014 the Department for Communities and Local Government (DCLG) launched the National Planning Practice Guidance web-based resource. One section relates specifically to Transport and is titled 'Travel Plans, Transport Assessments and Statements in decision-taking' and this provides the overarching principles of Travel Plans, Transport Assessments and Statements.

3.10 The guidance explains the role of Transport Assessments and Statements as:

"ways of assessing the potential transport impacts of developments (and they may propose mitigation measures to promote sustainable development. Where that mitigation relates to matters that can be addressed by management measures, the mitigation may inform the preparation of Travel Plans)".

3.11 The guidance demonstrates that Transport Assessments and Statements and Travel Plans can positively contribute in the following ways:

- *"encouraging sustainable travel;*
- *lessening traffic generation and its detrimental impacts;*
- *reducing carbon emissions and climate impacts;*
- *creating accessible, connected, inclusive communities;*
- *improving health outcomes and quality of life;*
- *improving road safety; and*
- *reducing the need for new development to increase existing road capacity or provide new roads."*

Regional Policy

London Plan (March 2016)

3.12 The London Plan sets out an integrated economic, environmental, transport and social framework for the development of London over the next 20-25 years.

3.13 One of the Mayor's six objectives for London is:

"A city where it is easy, safe and convenient for everyone to access jobs, opportunities and facilities with an efficient and effective transport system which actively encourages more walking and cycling, makes better use of the Thames and supports delivery of all the objectives of this Plan."

3.14 Policy 6.1 establishes the Mayor's strategic approach to transport. Of relevance it states that the Mayor will encourage the closer integration of transport and development by:

"a. encouraging patterns and nodes of development that reduce the need to travel, especially by car;

b. seeking to improve the capacity and accessibility of public transport, walking and cycling;

g. supporting measures that encourage shifts to more sustainable modes and appropriate demand management; and

i. promoting walking by ensuring an improved urban realm".

3.15 In March 2016, the Minor Alterations to the London Plan (MALP) document was published which provides updated guidance on parking standards. It states that "The Mayor wishes to see an appropriate balance being struck between promoting new development and preventing excessive car parking provision that can undermine cycling, walking and public transport use."

Draft New London Plan

3.16 The new London Plan is a broad plan to shape the way London develops over the next 20-25 years.

3.17 Following an Examination in Public (EIP), a "consolidated" version draft London Plan was published in July 2019 incorporating all of the Mayor's suggested changes. More recently, an "Intend to Publish" version of the London Plan (December 2019) has been released.

3.18 Once adopted, this London Plan will replace the current adopted London Plan.

3.19 A key objective of the new London Plan is to enable "Good Growth", i.e. delivering a more socially integrated and sustainable city.

3.20 Policy GG2 "Making Best Use of Land" supports use of brownfield land and sites that are well connected by public transport and promotes the utilisation of small sites.

where local amenities are within walking and cycling distance, and public transport options are available for longer distance trips, supporting good health, allowing strong communities to develop, and boosting the success of local businesses.

Making the best use of land means directing growth towards the most accessible and well-connected places, making the most efficient use of the existing and future public transport, walking and cycling networks.

All options for using the city's land more effectively will need to be explored as London's growth continues, including the redevelopment of brownfield sites and the intensification of existing places

3.21 Specific transport related policies are dealt with in Chapter 10 of the draft new London Plan. There is a focus on reducing car dependency and promoting a significant shift towards active modes of travel and public transport use.

3.22 Policy T1 "Strategic approach to transport" states:

A. Development Plans and development proposals should support and facilitate:

1. The delivery of the Mayor's strategic target of 80 per cent of all trips in London to be made by foot, cycle or public transport by 2041

2. The proposed transport schemes set out in Table 4.1

B. All development should make the most effective use of land, reflecting its connectivity and accessibility by existing and future public transport, walking and cycling routes, and ensure that any impacts on London's transport networks and supporting infrastructure are mitigated.

3.23 Policy T2 "Healthy Streets" is seeking a pattern of land use that facilitate shorter, regular trips by walking or cycling. This is in line with the Mayor's Transport Strategy to deliver infrastructure and public realm to increase levels of walking, cycling and public transport use.

3.24 Policy T4 "Assessing and mitigating transport impacts" notes that Transport Assessments should be submitted with development proposals to ensure that any impacts on the capacity of the transport network are fully assessed.

3.25 Policy T6 "Car Parking" notes that car parking "*should be restricted in line with existing and future public transport accessibility and connectivity*" and that car-free

development should be the starting point for all development proposals in places where there is (or will be) high levels of public transport.

3.26 The cycle parking standards set out in the Intend to Publish London Plan for the area and applicable land uses are outlined in **Table 3.1**.

Table 3.1 Intend to Publish London Plan Cycle Parking Standards

Land Use	Intend to Publish London Plan Standard	
	Short Stay	Long Stay
A1 Retail	1 space per 60sqm	1 space per 250sqm
B1 Office	1 space per 500sqm	1 space per 75sqm
B1 Light Industry	1 space per 1000sqm	1 space per 250sqm
C3-C4 Dwellings	5 to 40 dwellings: 2 spaces	1 space per studio or 1 person 1 bedroom dwelling 1.5 spaces per 2 person 1 bedroom dwelling 2 spaces per all other dwellings

3.27 The maximum car parking standards set out in the Intend to Publish London Plan for each potential land use are set out below:

- Residential: Outer London PTAL 4: Up to 0.5 spaces per dwelling;
- Office: Outer London: Up to 1 space per 100sqm;
- Retail: Outer London retail below 500sqm: Up to 1 space per 75sqm; and
- Light Industry: no prescribed parking standards.

Local Policy

London Borough of Richmond upon Thames Local Plan (July 2018)

3.28 The LBRuT Local Plan sets out policies and guidance for the development of the borough to guide decision making on planning applications.

3.29 One of the key strategic objectives of the Local Plan states that the plan will '*promote safe and sustainable transport choices, including public transport, cycling and walking, for all people, including those with disabilities*'.

3.30 The plan states *'developments should encourage the use of modes other than the car by making it as easy as possible through provision of good pedestrian facilities, clear layout and signage, provision of cycing facilities and improving access to public transport interchanges'*. It goes on to state *'all planning applications for major developments must be accompanied by a Transport Assessment, or for minor developments a Transport Statement. This may include Travel Plans, Delivery and Servicing Plans and Construction Logistic Plans'*.

London Borough of Richmond upon Thames Local Implementation Plan: Roads and Transport (June 2019)

3.31 This document sets out the long term goals and transport objectives for the LBRuT.

3.32 Several outcomes are identified of which some are applicable to transport at new developments. The boroughs *Support for Good Growth* seeks to ensure that new developments are accessible by walking, cycling and public transport which will encourage new residents to establish healthy habits.

3.33 Within Outcome 3, it is states that *'lower car ownership for new households can be achieved by focussing on car-free and car-lite developments in areas of the borough with higher levels of public transport accessibility and ensuring that the London Plan's car parking standards are applied at all new developments'*.

3.34 The document goes on to state that it seeks to mitigate the potential impact of residents parking in neighbouring streets by excluding residents of new developments from being able to apply for on street parking permits. It also states that in the long term concentrating new developments in areas with high levels of public transport accessibility would be encouraged.

3.35 It later states that *'LBRuT defers to the London Plan standards for car parking and cycle parking for new developments'*.

Summary

3.36 The focus of transport and land use planning policy is on the development of sustainable travel measures and the encouragement of development proposals which widen the accessibility of sustainable travel to site attendees and the wider community. The site is situated in an accessible location and further information is provided later in this report.

4 THE PROPOSED DEVELOPMENT

4.1 This section of the report provides a description of the proposed development with a focus on transport infrastructure. **Appendix A** contains the architect's layout and a detailed accommodation schedule.

4.2 The proposed development will comprise the following:

- Eight residential units made up of 5 one-bedroom two-person dwellings, 1 two-bedroom three-person dwelling, 1 two-bedroom four-person dwelling and 1 three-bedroom five-person dwelling;
- 534sqm GIA of class E development. Given that cycle parking standards have yet to be updated to reflect the recent changes to the Use Classes Order, we have assumed that the mix of development will be broadly similar to the existing development mix. This would equate to:
  - 211sqm GIA of retail units , including a basement storage area;
  - 233sqm GIA of office units; and
  - 90sqm GIA of workshop units.
- It should be noted, however, that all of the proposed commercial floorspace falls within Use Class E for the purposes of the planning application.

4.3 Five parking spaces will be provided with the development.

Pedestrian Access

4.4 Pedestrian access will be maintained from High Street via the shared vehicle and pedestrian access. The two retail units will have pedestrian access points from High Street.

4.5 This pedestrian access will be at grade to enable mobility by all users including those using pushchairs and the mobility impaired.

Vehicular Access

4.6 Vehicular access will be maintained from the existing shared vehicle and pedestrian access from High Street. Drivers would utilise a shared access that currently runs through the development site and is also used by vehicles of adjacent properties. The right of access for the adjacent properties would be maintained.

4.7 In pre-application correspondence, LBRuT highways officers have noted that the pedestrian visibility at the site access is limited. Given the relatively limited building footprint it has not been possible to widen the site access. However, the existing visibility splays have been maintained, whilst the number of parking spaces has also been reduced. Therefore, the level of conflict involving vehicles exiting the site should be lower resulting in an improved situation.

Servicing

4.8 It is expected that the proposed development will be typically serviced by refuse vehicles, home and office food and non-food deliveries and infrequent maintenance.

4.9 Waste / refuse collection will likely be combined across the development with neighbouring developments; and undertaken as per the existing arrangements at the site. It is understood that refuse vehicles currently reverse into the site, stopping outside the block 2 building. The vehicular access arrangements, including the access geometry has not been amended, therefore, refuse vehicles will still be able to undertake the same manoeuvres.

4.10 The refuse store will be located in the southern corner of block 2. Refuse vehicles will then be able to leave the site in a forward gear. It is likely that the refuse collections can be undertaken from the rear of the adjacent properties at the same time.

4.11 Delivery vans would be able to enter the site and turn round at the southern end, before leaving the site in a forward gear off the main carriageway. Vehicle tracking of a 4.6 tonne light van has been undertaken to show this manoeuvre is possible. This is attached to this report as **Appendix C**.

Vehicle Parking

4.12 The proposed development will provide five parking spaces in the existing parking courtyard to the south of block 2. The parking provision will be marked clearly. It is proposed that 3 of the 5 parking spaces will be allocated to residential units with the other 2 units reserved for the retail units.

4.13 Based on the anticipated uses on the site, this proposed parking provision does not exceed the total number of spaces permitted at the site for residential or retail uses, as per the car parking standards set out in the Intend to Publish London Plan.

4.14 Two of the residential parking spaces are proposed to include active electric vehicle charging (EVC) facilities, with the remaining residential parking space provided with passive provision to cater for any potential demand in the future. This exceeds the EVC provision requirements set out in the Intend to Publish London Plan.

4.15 Pre-application advice from LBRuT outlined that the applicant should consider the provision of an on-site car club bay given the nature of the area. However, as noted above, there is a car club space approximately 150m away. Furthermore, it is unclear whether a car club space within the site would be appropriate as it would be less visible to the general public.

Cycles

4.16 The development will have a total of 24 cycle parking spaces. The cycle parking provision is expected to be allocated and laid out as follows based on the current anticipated development mix:

- 16 spaces for the residential portion of the development – consisting of 12 two-tier rack spaces, 2 vertical spaces and 2 standard spaces. These would all be located within the building;
- 4 spaces for the office portion of the development – consisting of 2 Sheffield stands exterior to the building;
- 2 spaces for the workshop portion of the development – consisting of 2 vertical spaces; and
- 2 spaces for the retail portion of the development – consisting of 2 vertical spaces within the retail units (anticipated to be used by staff of the units).

4.17 This provision of cycle parking for the residential, office and workshop portions of the development is in line with the Intend to Publish London Plan Cycle Parking Standards. The provision for the retail portion of the development is considered appropriate given there is an anticipated reduction in retail floor area on the site and public cycle parking is provided on High Street for other neighbouring retail units.

4.18 The location of the cycle parking spaces is shown on the Architect's drawings in **Appendix A**.

5 TRIP ASSESSMENT

5.1 This section considers the likely number of trips that the development is forecast to generate.

Residential Trip Rates & Trip Generation

5.2 In order to understand the number of trips at the development anticipated to be associated with the residential portion of the development the TRICS database has been interrogated to give an estimated trip rate at the site. The following criteria was applied when selecting sites:

- Residential – Flats Privately Owned;
- Greater London areas;
- Sites between 4 and 25 dwellings;
- January 2012 to March 2020 (most recent);
- Monday to Friday; and
- Edge of Town Centre and Suburban areas.

5.3 The person and vehicle trip rates are set out in **Table 5.1** and the number of net trips associated with the residential units at the development are set out in **Table 5.2**. The TRICS output is attached to this report in **Appendix D**.

Table 5.1 Residential Trip Rates (per unit)

Period	Person Trip Rates			Vehicle Trip Rates		
	In	Out	Total	In	Out	Total
08:00 – 09:00	0.209	0.919	1.128	0.081	0.151	0.232
17:00 – 18:00	0.500	0.221	0.721	0.151	0.058	0.209
07:00 – 19:00	3.522	4.059	7.581	1.068	1.057	2.125

Table 5.2 Residential Net Trip Generation (+7 Units)

Period	Person Net Trip Generation			Vehicle Net Trip Generation		
	In	Out	Total	In	Out	Total
08:00 – 09:00	1	6	8	1	1	2
17:00 – 18:00	4	2	5	1	0	1
07:00 – 19:00	25	28	53	7	7	15

5.4 The increase of 7 residential units at the site is expected to generate an additional 8 two-way person trips between 08:00 and 09:00 and an additional 5 two-way person trips between 17:00 and 18:00.

Office Trip Rates & Trip Generation

5.5 In order to understand the number of trips at the development anticipated to be associated with the office portion of the development the TRICS database has been

interrogated to give an estimated trip rate at the site. The following criteria was applied when selecting sites:

- Employment – Office;
- Greater London areas;
- Sites between 100sqm and 2000sqm;
- January 2012 to June 2015 (most recent);
- Monday to Friday; and
- Town Centre and Suburban areas.

5.6 The person and vehicle trip rates are set out in **Table 5.3** and number of proposed trips associated with the offices at the development are set out in **Table 5.4**. The TRICS output is attached to this report in **Appendix D**.

Table 5.3 Office Trip Rates (per 100sqm)

Period	Person Trip Rates			Vehicle Trip Rates		
	In	Out	Total	In	Out	Total
08:00 – 09:00	3.133	0.098	3.231	0.195	0.049	0.244
17:00 – 18:00	0.416	2.961	3.377	0.122	0.269	0.391
07:00 – 19:00	14.440	14.074	28.514	1.341	1.267	2.608

Table 5.4 Office Trip Generation (233sqm)

Period	Person Trip Generation			Vehicle Trip Generation		
	In	Out	Total	In	Out	Total
08:00 – 09:00	7	0	8	0	0	1
17:00 – 18:00	1	7	8	0	1	1
07:00 – 19:00	34	33	66	3	3	6

5.7 It is anticipated that the office portion of the development will generate 8 two-way person trips in each of the AM (08:00-09:00) and PM (17:00-18:00) peaks.

Retail and Workshop Trip Generation

5.8 There is little change in the floor areas proposed for the retail and workspace portions of the development. Retail space is proposed to be reduced by approximately 82sqm and workspaces are proposed to be reduced by approximately 210sqm. Therefore, it is anticipated that there will be little change in the number of trips associated with these portions of the development. It should be noted that, the overall employment (use class 'E') floorspace will remain the same as the existing development.

Net Trip Generation

5.9 **Table 5.5** below sets out the total net trip generation for the proposed development.

Table 5.5 Net Trip Generation (Residential and Office)

Period	Person Net Trip Generation			Vehicle Net Trip Generation		
	In	Out	Total	In	Out	Total
08:00 – 09:00	8	6	16	1	1	3
17:00 – 18:00	5	9	13	1	1	2
07:00 – 19:00	59	61	119	10	10	21

5.10 **Table 5.5** above shows that there will be a small increase in trips associated with the proposed development. It is anticipated that an additional 16 two-way person trips are expected between 08:00 and 09:00 and an additional 13 two-way person trips are expected between 17:00 and 18:00. Although, the trip rates suggest a net increase in vehicle trips, this is probably unlikely given the slight reduction in car parking provision.

6 SUMMARY & CONCLUSIONS

6.1 Mr & Mrs Frost have commissioned Pulsar to prepare a Transport Statement in support of a planning application for the conversion of an existing retail and workspace development and other dilapidated buildings to a mixed-use development including class E units likely to include retail, office space and workshops, as well as residential development. The site is located at 29-31 High Street, Hampton Wick, KT1 4DA.

6.2 The proposals involve the conversion of existing retail, workspace and dilapidated buildings to a mixed-use development comprising eight residential units, and 613sqm of employment floorspace, as well as 5 car parking spaces. In addition, 24 secure cycle parking spaces are proposed for residents, employees and visitors to encourage active travel patterns. Access to the site is proposed to be maintained for vehicles and pedestrians, from an existing access off High Street.

6.3 The level of car parking is compliant with the Intend to Publish London Plan car parking standards. It is considered that the level of parking is appropriate given the high PTAL of 4 for the site, i.e. considering the numerous opportunities to travel to/from the site by non-car modes.

6.4 Servicing of the development is proposed within the site. Furthermore, the current refuse collection arrangements will be maintained. It is understood that this involves refuse vehicles reversing into the existing site access directly from High Street.

6.5 The site seeks to maximise the sustainable characteristics of the site by encouraging active travel. Residents and visitors will be able to maximise the benefits of close proximity to bus and rail services which, in combination, provides access to destinations such as Central London, Hounslow and Twickenham.

6.6 A trip generation assessment was undertaken, which shows that the net impact of the proposed development is expected to be minimal. A total of 16 additional two-way person trips are anticipated between 08:00 and 09:00 and a total of an additional 13 are anticipated between 17:00 and 18:00.

6.7 The site is expected to have a minimal impact on the public highway network and from a transport perspective meets the tests of the NPPF namely to ensure:

- opportunities for sustainable transport modes have been taken up;
- safe and suitable access to the site can be achieved by all people;
- that where necessary, improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. The impact of the development is <u>not</u> severe.

6.8 In conclusion, and on the basis of the above, the proposed development should not be refused on transport grounds. The cumulative residual transport impacts of the proposal would not be severe. The proposal would comply with national and local policy.

APPENDIX A – ARCHITECT'S LAYOUT

FFL +8.100
FFL +8.100
±0.000
+8.100
FFL +8.100
FFL +8.390
FFL +8.390
FFL +8.390
FFL +8.710
FFL +8.100
T1
T2
T3
T4
T5
T6
T7
T8
T9
T10
T-
m
0 0.5 1 2 3 4 5
N

Fletcher Crane Architects Ltd
3-4 Home Park Parade, Hampton Wick, Kingston upon Thames, Surrey, KT1 4BY

T +44 (0)20 8977 4693

www.fletchercranearchitects.com

Rev	Description	Drawn	Checked	Date

Client's name
Liz & Allan Frost

Scale:
1:100 @ A1 1:200 @ A3
Note: To print at A3, set print scale to 50%

Drawn Checked Date
12/01/2021

Job title
Hampton Wick High Street

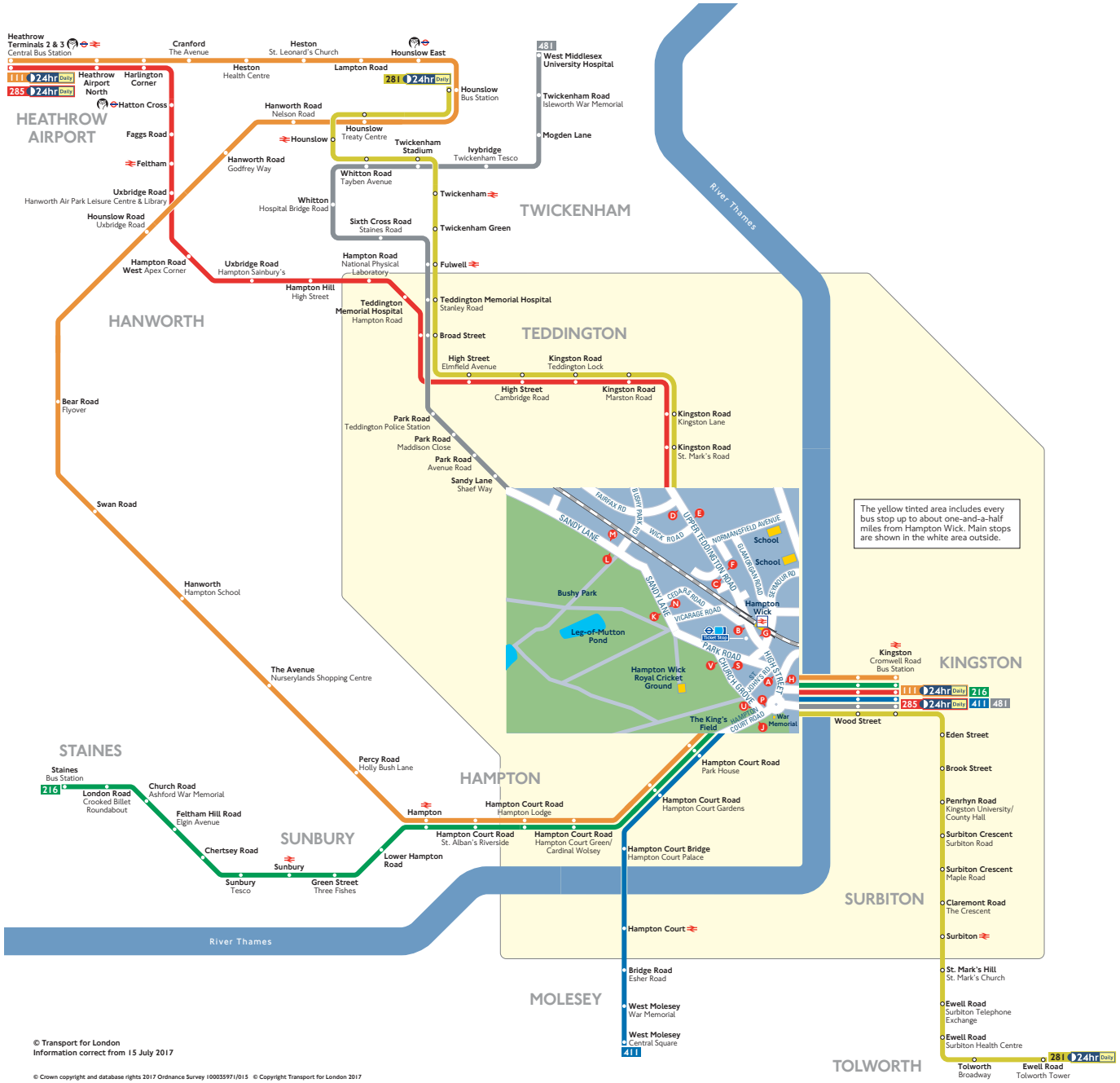
Drawing title
Proposed Ground Floor Plan

Job No	Drawing No	Status:	Rev
1911	TP(10)21	PLANNING	

FLETCHER CRANE ARCHITECTS

APPENDIX B – TfL BUS MAP

Buses from Hampton Wick



Route finder

Bus route	Towards	Bus stops
111 24hr Daily	Heathrow Terminals 2 & 3	J
	Kingston	P
216	Kingston	P
	Staines	J
281 24hr Daily	Hounslow	A B C D
	Tolworth	E F G H
285 24hr Daily	Heathrow Terminals 2 & 3	A B C D
	Kingston	E F G H
411	Kingston	P
	West Molesey	J
481	Kingston ✚	M N P S
	West Middlesex University Hospital ✚	K L U V

Other buses

Bus route	Towards	Bus stops
461	Addlestone	J
	Kingston	P
513	Downside ●	J
	Kingston ●	P
641 Sch	Teddington School	A B C D P
	West Molesey	F G H J
681 Sch	Hounslow	D

Key

	Connections with London Underground
	Connections with National Rail
	Tube station with 24-hour service Friday and Saturday nights
✚	Mondays to Saturdays except evenings
●	Monday to Friday daytime off-peak
Sch	School journeys

Ways to pay

Use your contactless debit or credit card. It's the same fare as Oyster and there is no need to top up.

Top up your Oyster pay as you go credit or buy Travelcards and bus & tram passes at around 4,000 shops across London.

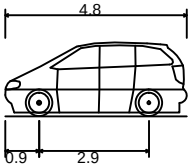
TFL33213.06.17 (P)

APPENDIX C – VEHICLE TRACKING

NOTES:

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only, and not for construction.

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

FORWARD MOVEMENTS *(design speed - 5kph)*

REVERSE MOVEMENTS *(design speed - 2.5kph)*

REV	DETAILS	DRAWN	CHECKED	DATE
A	Layout updated	DW	KH	12.01.2021

CLIENT: Mr & Mrs Frost

PROJECT: 29-31 High Street, Hampton Wick

DRAWING TITLE: Vehicular Swept Paths Analysis using Standard Design Vehicle (Sheet 1 of 10)

Pulsar TRANSPORT PLANNING
4 Underwood Row, London, N1 7LQ
Tel: 020 7324 2677
www.pulsartransport.co.uk

DRAWN BY	CHECKED BY	DATE	SCALE	SIZE	PROJECT REF	DWG NO	REV
DW	KH	09.11.2020	1:200	A4	20085	TR03(1)	A

NOTES:

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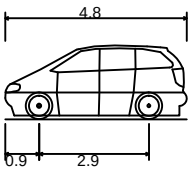
STANDARD DESIGN VEHICLE (SDV)



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

FORWARD MOVEMENTS *(design speed - 5kph)*

REVERSE MOVEMENTS *(design speed - 2.5kph)*

REV	DETAILS	DRAWN	CHECKED	DATE
A	Layout updated	DW	KH	12.01.2021

CLIENT: Mr & Mrs Frost

PROJECT: 29-31 High Street, Hampton Wick

DRAWING TITLE: Vehicular Swept Paths Analysis using Standard Design Vehicle (Sheet 2 of 10)

Pulsar TRANSPORT PLANNING
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DW	KH	09.11.2020	1:200	A4	20085	TR03(2)	A

NOTES:

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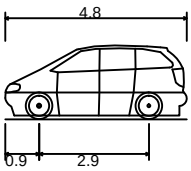
STANDARD DESIGN VEHICLE (SDV)



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

FORWARD MOVEMENTS *(design speed - 5kph)*

REVERSE MOVEMENTS *(design speed - 2.5kph)*

REV	DETAILS	DRAWN	CHECKED	DATE
A	Layout updated	DW	KH	12.01.2021

CLIENT: Mr & Mrs Frost

PROJECT: 29-31 High Street, Hampton Wick

DRAWING TITLE: Vehicular Swept Paths Analysis using Standard Design Vehicle (Sheet 3 of 10)

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DRAWN BY	CHECKED BY	DATE	SCALE	SIZE	PROJECT REF	DWG NO	REV
DW	KH	09.11.2020	1:200	A4	20085	TR03(3)	A

NOTES:

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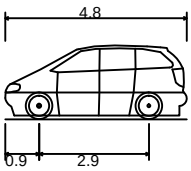
STANDARD DESIGN VEHICLE (SDV)



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

FORWARD MOVEMENTS *(design speed - 5kph)*

REVERSE MOVEMENTS *(design speed - 2.5kph)*

REV	DETAILS	DRAWN	CHECKED	DATE
A	Layout updated	DW	KH	12.01.2021

CLIENT: Mr & Mrs Frost

PROJECT: 29-31 High Street, Hampton Wick

DRAWING TITLE: Vehicular Swept Paths Analysis using Standard Design Vehicle (Sheet 4 of 10)

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DRAWN BY	CHECKED BY	DATE	SCALE	SIZE	PROJECT REF	DWG NO	REV
DW	KH	09.11.2020	1:200	A4	20085	TR03(4)	A

NOTES:

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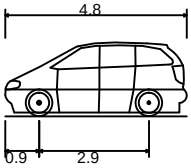
STANDARD DESIGN VEHICLE (SDV)



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

FORWARD MOVEMENTS *(design speed - 5kph)*

REVERSE MOVEMENTS *(design speed - 2.5kph)*

REV	DETAILS	DRAWN	CHECKED	DATE
A	Layout updated	DW	KH	12.01.2021

CLIENT: Mr & Mrs Frost

PROJECT: 29-31 High Street, Hampton Wick

DRAWING TITLE: Vehicular Swept Paths Analysis using Standard Design Vehicle (Sheet 5 of 10)

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DRAWN BY	CHECKED BY	DATE	SCALE	SIZE	PROJECT REF	DWG NO	REV
DW	KH	09.11.2020	1:200	A4	20085	TR03(5)	A

NOTES:

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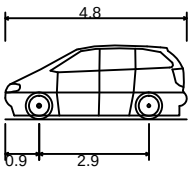
STANDARD DESIGN VEHICLE (SDV)



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

FORWARD MOVEMENTS *(design speed - 5kph)*

REVERSE MOVEMENTS *(design speed - 2.5kph)*

REV	DETAILS	DRAWN	CHECKED	DATE
A	Layout updated	DW	KH	12.01.2021

CLIENT: Mr & Mrs Frost

PROJECT: 29-31 High Street, Hampton Wick

DRAWING TITLE: Vehicular Swept Paths Analysis using Standard Design Vehicle (Sheet 6 of 10)

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DW	KH	09.11.2020	1:200	A4	20085	TR03(6)	A

NOTES:

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2. This drawing to be read & printed in colour.
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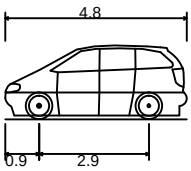
STANDARD DESIGN VEHICLE (SDV)



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

FORWARD MOVEMENTS *(design speed - 5kph)*

REVERSE MOVEMENTS *(design speed - 2.5kph)*

REV	DETAILS	DRAWN	CHECKED	DATE
A	Layout updated	DW	KH	12.01.2021

CLIENT: Mr & Mrs Frost

PROJECT: 29-31 High Street, Hampton Wick

DRAWING TITLE: Vehicular Swept Paths Analysis using Standard Design Vehicle (Sheet 7 of 10)

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DW	KH	09.11.2020	1:200	A4	20085	TR03(7)	A

NOTES:

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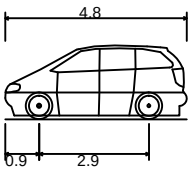
STANDARD DESIGN VEHICLE (SDV)



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

FORWARD MOVEMENTS *(design speed - 5kph)*

REVERSE MOVEMENTS *(design speed - 2.5kph)*

REV	DETAILS	DRAWN	CHECKED	DATE
A	Layout updated	DW	KH	12.01.2021

CLIENT: Mr & Mrs Frost

PROJECT: 29-31 High Street, Hampton Wick

DRAWING TITLE: Vehicular Swept Paths Analysis using Standard Design Vehicle (Sheet 8 of 10)

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DW	KH	09.11.2020	1:200	A4	20085	TR03(8)	A

NOTES:

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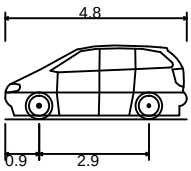
STANDARD DESIGN VEHICLE (SDV)



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

FORWARD MOVEMENTS *(design speed - 5kph)*

REVERSE MOVEMENTS *(design speed - 2.5kph)*

REV	DETAILS	DRAWN	CHECKED	DATE
A	Layout updated	DW	KH	12.01.2021

CLIENT: Mr & Mrs Frost

PROJECT: 29-31 High Street, Hampton Wick

DRAWING TITLE: Vehicular Swept Paths Analysis using Standard Design Vehicle (Sheet 9 of 10)

Pulsar TRANSPORT PLANNING
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DW	KH	09.11.2020	1:200	A4	20085	TR03(9)	A

NOTES:

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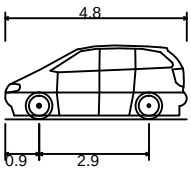
STANDARD DESIGN VEHICLE (SDV)



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

FORWARD MOVEMENTS *(design speed - 5kph)*

REVERSE MOVEMENTS *(design speed - 2.5kph)*

REV	DETAILS	DRAWN	CHECKED	DATE
A	Layout updated	DW	KH	12.01.2021

CLIENT: Mr & Mrs Frost

PROJECT: 29-31 High Street, Hampton Wick

DRAWING TITLE: Vehicular Swept Paths Analysis using Standard Design Vehicle (Sheet 10 of 10)

Pulsar TRANSPORT PLANNING
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DW	KH	09.11.2020	1:200	A4	20085	TR03(10)	A

NOTES:

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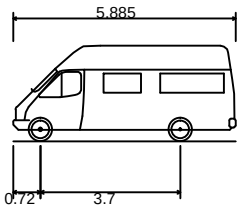
4.6T LIGHT VAN



Overall Length	5.885m
Overall Width	2.000m
Overall Body Height	2.526m
Min Body Ground Clearance	0.299m
Track Width	1.765m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	6.000m

FORWARD MOVEMENTS *(design speed - 5kph)*

REVERSE MOVEMENTS *(design speed - 2.5kph)*

REV	DETAILS	DRAWN	CHECKED	DATE
A	Layout updated	DW	KH	12.01.2021

CLIENT: Mr & Mrs Frost

PROJECT: 29-31 High Street, Hampton Wick

DRAWING TITLE: Vehicular Swept Paths Analysis using 4.6T Light Van (Sheet 1 of 2)

Pulsar TRANSPORT PLANNING
4 Underwood Row, London, N1 7LQ
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DRAWN BY	CHECKED BY	DATE	SCALE	SIZE	PROJECT REF	DWG NO	REV
DW	KH	09.11.2020	1:200	A4	20085	TR04(1)	A

NOTES:

1. Do not scale from this drawing.
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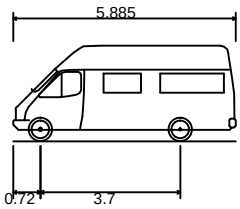
4.6T LIGHT VAN



Overall Length	5.885m
Overall Width	2.000m
Overall Body Height	2.526m
Min Body Ground Clearance	0.299m
Track Width	1.765m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	6.000m

FORWARD MOVEMENTS *(design speed - 5kph)*

REVERSE MOVEMENTS *(design speed - 2.5kph)*

REV	DETAILS	DRAWN	CHECKED	DATE
A	Layout updated	DW	KH	12.01.2021

CLIENT: Mr & Mrs Frost

PROJECT: 29-31 High Street, Hampton Wick

DRAWING TITLE: Vehicular Swept Paths Analysis using 4.6T Light Van (Sheet 2 of 2)

Pulsar TRANSPORT PLANNING
4 Underwood Row, London, N1 7LQ
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DRAWN BY	CHECKED BY	DATE	SCALE	SIZE	PROJECT REF	DWG NO	REV
DW	KH	09.11.2020	1:200	A4	20085	TR04(2)	A

APPENDIX D – TRICS OUTPUT

Pulsar Transport Planning Underwood Row London Licence No: 805401

Filtering Summary

Land Use	03/C	RESIDENTIAL/FLATS PRIVATELY OWNED
Selected Trip Rate Calculation Parameter Range	4-25 DWELLS	
Actual Trip Rate Calculation Parameter Range	9-20 DWELLS	
Date Range	Minimum: 01/01/12	Maximum: 06/03/20
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	
Days of the week selected	Monday	2
	Wednesday	3
	Thursday	1
Main Location Types selected	Edge of Town Centre	3
	Suburban Area (PPS6 Out of Centre)	3
Population within 500m	All Surveys Included	
Population <1 Mile ranges selected	25,001 to 50,000	1
	50,001 to 100,000	3
	100,001 or More	2
Population <5 Mile ranges selected	500,001 or More	6
Car Ownership <5 Mile ranges selected	0.5 or Less	3
	0.6 to 1.0	2
	1.1 to 1.5	1
PTAL Rating	No PTAL Present	1
	2 Poor	1
	6a Excellent	4

Calculation Reference: AUDIT-805401-201123-1114

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		
	EN	ENFIELD	1 days
	HK	HACKNEY	1 days
	IS	ISLINGTON	3 days
	KI	KINGSTON	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
Actual Range: 9 to 20 (units:)
Range Selected by User: 4 to 25 (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: 01/01/12 to 06/03/20

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	2 days
Wednesday	3 days
Thursday	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 undertaking using machines.

Selected Locations:

Edge of Town Centre	3
Suburban Area (PPS6 Out of 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	5
Built-Up Zone	1

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

Secondary Filtering selection:

Use Class:

C3	6 days

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

Population within 500m Range:

All Surveys Included

Population within 1 mile:

25,001 to 50,000	1 days
50,001 to 100,000	3 days
100,001 or More	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	6 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	3 days
0.6 to 1.0	2 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:

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	1 days
2 Poor	1 days
6a Excellent	4 days

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

LIST OF SITES relevant to selection parameters

Site(1):	EN-03-C-03	Site area:	0.25 hect
Development Name:	BLOCKS OF FLATS	No of Dwellings:	18
Location:	PALMERS GREEN	Housing density:	129
Postcode:	N13 6BW	Total Bedrooms:	36
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	08/11/17
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	18
Site(2):	HK-03-C-03	Site area:	0.10 hect
Development Name:	BLOCK OF FLATS	No of Dwellings:	10
Location:	FINSBURY PARK	Housing density:	333
Postcode:	N4 2EU	Total Bedrooms:	20
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	24/09/14
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	6a Excellent	Parking Spaces:	12
Site(3):	IS-03-C-03	Site area:	0.05 hect
Development Name:	BLOCK OF FLATS	No of Dwellings:	9
Location:	ISLINGTON	Housing density:	180
Postcode:	N1 2EA	Total Bedrooms:	22
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	21/11/13
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	6a Excellent	Parking Spaces:	8
Site(4):	IS-03-C-05	Site area:	0.03 hect
Development Name:	BLOCK OF FLATS	No of Dwellings:	15
Location:	FINSBURY	Housing density:	500
Postcode:	EC1V 3QY	Total Bedrooms:	27
Main Location Type:	Edge of Town Centre	Survey Date:	29/06/16
Sub-Location Type:	Built-Up Zone	Survey Day:	Wednesday
PTAL:	6a Excellent	Parking Spaces:	
Site(5):	IS-03-C-06	Site area:	0.06 hect
Development Name:	BLOCK OF FLATS	No of Dwellings:	14
Location:	HOLLOWAY	Housing density:	467
Postcode:	N7 9RB	Total Bedrooms:	21
Main Location Type:	Edge of Town Centre	Survey Date:	27/06/16
Sub-Location Type:	Residential Zone	Survey Day:	Monday
PTAL:	6a Excellent	Parking Spaces:	
Site(6):	KI-03-C-03	Site area:	0.14 hect
Development Name:	BLOCK OF FLATS	No of Dwellings:	20
Location:	SURBITON	Housing density:	333
Postcode:	KT6 4DJ	Total Bedrooms:	45
Main Location Type:	Edge of Town Centre	Survey Date:	11/07/16
Sub-Location Type:	Residential Zone	Survey Day:	Monday
PTAL:	2 Poor	Parking Spaces:	25

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

	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	6	14	0.081	6	14	0.128	6	14	0.209
08:00 - 09:00	6	14	0.081	6	14	0.151	6	14	0.232
09:00 - 10:00	6	14	0.081	6	14	0.070	6	14	0.151
10:00 - 11:00	6	14	0.070	6	14	0.081	6	14	0.151
11:00 - 12:00	6	14	0.070	6	14	0.058	6	14	0.128
12:00 - 13:00	6	14	0.081	6	14	0.058	6	14	0.139
13:00 - 14:00	6	14	0.081	6	14	0.081	6	14	0.162
14:00 - 15:00	6	14	0.081	6	14	0.128	6	14	0.209
15:00 - 16:00	6	14	0.070	6	14	0.058	6	14	0.128
16:00 - 17:00	6	14	0.093	6	14	0.093	6	14	0.186
17:00 - 18:00	6	14	0.151	6	14	0.058	6	14	0.209
18:00 - 19:00	6	14	0.128	6	14	0.093	6	14	0.221
19:00 - 20:00	4	17	0.164	4	17	0.149	4	17	0.313
20:00 - 21:00	4	17	0.119	4	17	0.104	4	17	0.223
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.351			1.310			2.661

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.*

Parameter summary

Trip rate parameter range selected:	9 - 20 (units:)
Survey date date range:	01/01/12 - 06/03/20
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 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 TOTAL PEOPLE
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	6	14	0.128	6	14	0.488	6	14	0.616
08:00 - 09:00	6	14	0.209	6	14	0.919	6	14	1.128
09:00 - 10:00	6	14	0.221	6	14	0.430	6	14	0.651
10:00 - 11:00	6	14	0.198	6	14	0.349	6	14	0.547
11:00 - 12:00	6	14	0.209	6	14	0.128	6	14	0.337
12:00 - 13:00	6	14	0.267	6	14	0.198	6	14	0.465
13:00 - 14:00	6	14	0.174	6	14	0.233	6	14	0.407
14:00 - 15:00	6	14	0.267	6	14	0.326	6	14	0.593
15:00 - 16:00	6	14	0.314	6	14	0.198	6	14	0.512
16:00 - 17:00	6	14	0.512	6	14	0.267	6	14	0.779
17:00 - 18:00	6	14	0.500	6	14	0.221	6	14	0.721
18:00 - 19:00	6	14	0.523	6	14	0.302	6	14	0.825
19:00 - 20:00	4	17	0.627	4	17	0.313	4	17	0.940
20:00 - 21:00	4	17	0.448	4	17	0.164	4	17	0.612
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.597			4.536			9.133

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.*

Pulsar Transport Planning Underwood Row London Licence No: 805401

Filtering Summary

Land Use	02/A	EMPLOYMENT/OFFICE
Selected Trip Rate Calculation Parameter Range	100-2000 sqm GFA	
Actual Trip Rate Calculation Parameter Range	920-1951 sqm GFA	
Date Range	Minimum: 01/01/12	Maximum: 03/06/15
Parking Spaces Range	All Surveys Included	
Days of the week selected	Wednesday	1
	Thursday	1
	Friday	1
Main Location Types selected	Town Centre	2
	Suburban Area (PPS6 Out of Centre)	1
Population within 500m	All Surveys Included	
Population <1 Mile ranges selected	10,001 to 15,000	1
	50,001 to 100,000	2
Population <5 Mile ranges selected	250,001 to 500,000	1
	500,001 or More	2
Car Ownership <5 Mile ranges selected	0.5 or Less	1
	0.6 to 1.0	2
PTAL Rating	4 Good	1
	5 Very Good	1
	6a Excellent	1
Filter by Use Class Breakdown	All Surveys Included	

Calculation Reference: AUDIT-805401-201123-1121

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : A - OFFICE
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	BT	BRENT	1 days
	CI	CITY OF LONDON	1 days
	WH	WANDSWORTH	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: 920 to 1951 (units: sqm)
Range Selected by User: 100 to 2000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/12 to 03/06/15

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

Selected survey days:

Wednesday	1 days
Thursday	1 days
Friday	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 undertaking using machines.

Selected Locations:

Town Centre	2
Suburban Area (PPS6 Out of 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:

Commercial Zone	1
Development Zone	1
Built-Up Zone	1

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

Secondary Filtering selection:

Use Class:

B1	3 days

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

Filter by Use Class Breakdown:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 500m Range:
All Surveys Included
Population within 1 mile:

10,001 to 15,000	1 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	1 days
500,001 or More	2 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
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	2 days

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

PTAL Rating:

4 Good	1 days
5 Very Good	1 days
6a Excellent	1 days

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

LIST OF SITES relevant to selection parameters

Site(1):	BT-02-A-03	Gross floor area:	920 sqm
Development Name:	OFFICES		
Location:	WEMBLEY		
Postcode:	HA9 0AB	No of Employees:	39
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	03/06/15
Sub-Location Type:	Development Zone	Survey Day:	Wednesday
PTAL:	6a Excellent	Parking Spaces:	
Site(2):	CI-02-A-03	Gross floor area:	1951 sqm
Development Name:	OFFICES		
Location:	CITY OF LONDON		
Postcode:	EC3R 8AJ	No of Employees:	236
Main Location Type:	Town Centre	Survey Date:	29/11/13
Sub-Location Type:	Commercial Zone	Survey Day:	Friday
PTAL:	4 Good	Parking Spaces:	0
Site(3):	WH-02-A-02	Gross floor area:	1215 sqm
Development Name:	OFFICES		
Location:	BATTERSEA		
Postcode:	SW11 3BY	No of Employees:	115
Main Location Type:	Town Centre	Survey Date:	10/05/12
Sub-Location Type:	Built-Up Zone	Survey Day:	Thursday
PTAL:	5 Very Good	Parking Spaces:	0

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL TOTAL VEHICLES
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	3	1362	0.024	3	1362	0.000	3	1362	0.024
07:30 - 08:00	3	1362	0.098	3	1362	0.049	3	1362	0.147
08:00 - 08:30	3	1362	0.073	3	1362	0.049	3	1362	0.122
08:30 - 09:00	3	1362	0.122	3	1362	0.000	3	1362	0.122
09:00 - 09:30	3	1362	0.122	3	1362	0.000	3	1362	0.122
09:30 - 10:00	3	1362	0.073	3	1362	0.024	3	1362	0.097
10:00 - 10:30	3	1362	0.049	3	1362	0.024	3	1362	0.073
10:30 - 11:00	3	1362	0.000	3	1362	0.049	3	1362	0.049
11:00 - 11:30	3	1362	0.024	3	1362	0.024	3	1362	0.048
11:30 - 12:00	3	1362	0.073	3	1362	0.098	3	1362	0.171
12:00 - 12:30	3	1362	0.147	3	1362	0.049	3	1362	0.196
12:30 - 13:00	3	1362	0.024	3	1362	0.073	3	1362	0.097
13:00 - 13:30	3	1362	0.073	3	1362	0.073	3	1362	0.146
13:30 - 14:00	3	1362	0.000	3	1362	0.024	3	1362	0.024
14:00 - 14:30	3	1362	0.073	3	1362	0.073	3	1362	0.146
14:30 - 15:00	3	1362	0.049	3	1362	0.073	3	1362	0.122
15:00 - 15:30	3	1362	0.049	3	1362	0.073	3	1362	0.122
15:30 - 16:00	3	1362	0.000	3	1362	0.024	3	1362	0.024
16:00 - 16:30	3	1362	0.024	3	1362	0.024	3	1362	0.048
16:30 - 17:00	3	1362	0.049	3	1362	0.049	3	1362	0.098
17:00 - 17:30	3	1362	0.024	3	1362	0.098	3	1362	0.122
17:30 - 18:00	3	1362	0.098	3	1362	0.171	3	1362	0.269
18:00 - 18:30	3	1362	0.073	3	1362	0.122	3	1362	0.195
18:30 - 19:00	3	1362	0.000	3	1362	0.024	3	1362	0.024
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:			1.341			1.267			2.608

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:	920 - 1951 (units: sqm)
Survey date date range:	01/01/12 - 03/06/15
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 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/A - OFFICE
MULTI-MODAL TOTAL PEOPLE
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	3	1362	0.367	3	1362	0.000	3	1362	0.367
07:30 - 08:00	3	1362	0.685	3	1362	0.049	3	1362	0.734
08:00 - 08:30	3	1362	1.444	3	1362	0.049	3	1362	1.493
08:30 - 09:00	3	1362	1.689	3	1362	0.049	3	1362	1.738
09:00 - 09:30	3	1362	1.052	3	1362	0.024	3	1362	1.076
09:30 - 10:00	3	1362	0.881	3	1362	0.073	3	1362	0.954
10:00 - 10:30	3	1362	0.563	3	1362	0.367	3	1362	0.930
10:30 - 11:00	3	1362	0.367	3	1362	0.196	3	1362	0.563
11:00 - 11:30	3	1362	0.318	3	1362	0.049	3	1362	0.367
11:30 - 12:00	3	1362	0.343	3	1362	0.294	3	1362	0.637
12:00 - 12:30	3	1362	0.881	3	1362	1.028	3	1362	1.909
12:30 - 13:00	3	1362	0.979	3	1362	1.371	3	1362	2.350
13:00 - 13:30	3	1362	0.857	3	1362	0.857	3	1362	1.714
13:30 - 14:00	3	1362	0.759	3	1362	0.367	3	1362	1.126
14:00 - 14:30	3	1362	0.857	3	1362	0.661	3	1362	1.518
14:30 - 15:00	3	1362	0.514	3	1362	0.563	3	1362	1.077
15:00 - 15:30	3	1362	0.416	3	1362	0.441	3	1362	0.857
15:30 - 16:00	3	1362	0.416	3	1362	1.248	3	1362	1.664
16:00 - 16:30	3	1362	0.220	3	1362	1.444	3	1362	1.664
16:30 - 17:00	3	1362	0.269	3	1362	0.759	3	1362	1.028
17:00 - 17:30	3	1362	0.147	3	1362	1.297	3	1362	1.444
17:30 - 18:00	3	1362	0.269	3	1362	1.664	3	1362	1.933
18:00 - 18:30	3	1362	0.147	3	1362	0.783	3	1362	0.930
18:30 - 19:00	3	1362	0.000	3	1362	0.441	3	1362	0.441
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:			14.440			14.074			28.514

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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Pulsar
TRANSPORT PLANNING

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