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Prepared on behalf of

Avanton Richmond Development Limited

Proposed Development At
Manor Road, Richmond

Transport Assessment Addendum

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Acknowledgements:

www.crashmap.co.uk has been used to investigate accident history.

The TRICS database has been used in this report to calculate traffic generations.

http://commute.datashine.org.uk *has been used to illustrate 2011 Census data*

Google StreetView imagery has been used for illustration purposes only.

Disclaimer

The methodology adopted and the sources of information used by Sanderson Associates (Consulting Engineers) Ltd in providing its services are outlined within this Report.

Any information provided by third parties and referred to herein has not been checked or verified by Sanderson Associates (Consulting Engineers) Ltd, unless otherwise expressly stated within this report.

This report was checked and approved on the 24 May 2019 and the Report is therefore valid on this date, circumstances, regulations and professional standards do change which could subsequently affect the validity of this Report.

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Report Ref:	10596/005/05		May 2019
Author:	Brett Littlewood		
Checked & Approved:	Karen Smith MIHE	**Date:**	24 May 2019

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Proposed Development Pedestrian Movements

1 Introduction

1.1 Sanderson Associates (Consulting Engineers) Ltd. has prepared a Transport Assessment (ref: 10596-002-03) in relation to a proposed development at land off Manor Road, Richmond.

1.2 The development proposes the demolition of existing buildings and structures and comprehensive residential-led redevelopment of four buildings of between four and nine storeys to provide 385 residential units (Class C3), flexible retail / community / office uses (Classes A1, A2, A3, D2, B1), provision of car and cycle parking, landscaping, public and private open spaces and all other necessary enabling works with vehicular access from Manor Road.

1.3 The Transport Assessment (TA) was submitted to the London Borough of Richmond upon Thames Council (LBRuT) as part of the planning application on 14th February 2019 which was subsequently validated on 1st March 2019. Subsequent comments on the TA have been provided by LBRuT, Transport for London (TfL) and Network Rail, copies of which are included at **Appendix A**.

1.4 The imposition of conditions in relation to a Construction and Environmental Management Plan (CEMP) and Surface Materials Plan are acknowledged.

1.5 This report seeks to address the points raised and is submitted as an Addendum to the original Transport Assessment.

2 Parking and Parking Stress

LBRuT comment:

The applicant has not completed the required vehicular parking stress survey to the correct parameters, and has, therefore, acted contrary to the London Borough of Richmond's Local Plan, and has not demonstrated that "proper controls can be put in place to ensure that the proposal will not contribute to on-street parking stress in the locality", as per Policy LP45 3c of the above Local Plan.

To consider removing the objection, I would need to see a vehicular parking stress survey that has been carried out in line with the London Borough of Richmond's guidance (Appendix 3 of the same Local Plan, and technical guidance in the Borough's Supplementary Planning Document, which is based on the Lambeth Parking Beat Survey Methodology.) This is required before consideration can be given to CPZ review/implementation/restriction for future occupiers.

In addition, the applicant will need to submit and vehicular parking and servicing management plan which can be secured as a planning condition. In this, the applicant will need to show how they intend to stop unauthorised residents, visitors, and commercial users from parking vehicles within the development and who will be responsible for enforcing this.

TFL comment:

- *The development is car-free which is welcomed by TfL*
- *A Car Park Design and Management Plan is required which details the location of the additional 7% of disabled persons parking and how it will be monitored; this should be secured as a condition or through the s106.*
- *20% of the spaces are required to have Electric Vehicle Charging Points, with passive provision for the remaining spaces. This should be secured by condition.*

- *It is proposed to amend and extend the existing CPZ adjacent to the site. It is also proposed that owners and occupiers of the development will be restricted from obtaining parking permits for the CPZ. This is welcomed and should be secured through an appropriate legal mechanism.*
- *Two electric car club spaces are proposed on site. TfL would recommend that three years free car club membership is secured for all new residents.*
- *It is proposed to provide 720 cycle parking spaces within a basement storage area and a further 120 spaces within a ground floor storage area. Further short stay spaces will be provided within the public realm. The cycle parking provision proposed is in accordance with draft London Plan standards. However, the storage areas are required to be broken down into smaller areas for security.*
- *Cycle Parking should be designed and laid out in accordance with the guidance contained in the London Cycling Design Standards. All cycle parking spaces should also be easily accessible from adjacent cycle routes and appropriate signage, preferably using the Legible London system, should be provided.*
- *Shower and locker facilities should be provided for the non-residential uses on site.*

Sanderson's Response

2.1 The applicant welcomes TfL support for the proposed car-free development.

2.2 As part of the TA, a Lambeth-style Parking Stress Survey was commissioned to establish the current parking restrictions and controls in force and also to identify the level of on-street parking which takes place. The proposed study area was set out in Sketch 1 (Appendix D) of the submitted Scoping Study (ref: 10596-001-01). For reference, Sketch 1 is included to the rear of this document at **Appendix B**.

2.3 The surveys were undertaken by Alpha Parking Ltd between 01:00-05:30, 09:00-10:00 and 13:00-14:00 on Monday 12th and Tuesday 13th November 2018. A copy of the survey data was included within the TA Appendix D.

2.4 However, Alpha Parking Ltd have since confirmed that this survey was carried out in accordance with the Lambeth methodology. The amended report included at **Appendix B** reflects the specific assessment criteria required by LBRuT. The report indicates that parking stress in the area is moderate.

2.5 The requirement for a Parking and Servicing Management Plan (LBRuT) / Car Park Design and Management Plan (TfL) is acknowledged and will be secured as a planning condition.

2.6 TfL's comments in relation to Electric Vehicle Charging Points and free car club membership are also noted and the Applicant is willing to provide three year free car club membership. The drawings attached at **Appendix C**, which have been prepared by Assael and Gillespies denote the active EV charging points and those future proofed for later activation if deemed necessary. Also shown are the additional 7% of accessible parking bays.

2.7 With regards to cycle parking an amended basement cycle parking layout is attached at **Appendix C** which details the cycle parking being split into separate areas to improve security. The adjustments to this layout have enabled an additional 44 cycle parking spaces to be created thus a total of 764 cycle parking spaces would be provided. Further drawings are attached at **Appendix C** which detail the proposed combined accessible toilet and shower which are to be provided within the commercial units. However, it should be noted that these layouts are indicative and are subject to landlord/tenant fit-out agreements.

3 Trip Generation and Modal Split

3.1 LBRuT, TfL and Network Rail commented on inconsistencies between the trip rates described within the body of the TA, and the appended TRICS outputs.

3.2 The TRICS outputs appended to the TA used trip rates which did not include any of the filtering stages (i.e. PTAL ratings and parking provisions) described in the report and contained a number of sites considered to be 'unrepresentative' of the proposals.

3.3 The correct TRICS outputs which reflect the trip rates and generations described in the TA are included at **Appendix D**, to the rear of this report.

3.4 Further to the above, both LBRuT and TfL also state the following with regards to the use of vehicle trip rates:

"It is also unclear why this approach has been undertaken given Census mode share is always going to be far more representative than a vehicle trip rate taken from TRICS."

3.5 TfL go on to say:

"TfL would recommend that given the car free nature of the development, the Census car mode share should be adjusted down to account for the limited car parking provision and the remaining trips re-assigned pro-rata to the other modes. Also given the distance to the closest Underground station, all Underground trips should be combined with bus trips given that bus services are predominantly likely to be used to access Underground stations."

3.6 It is considered that given the deliberated approach taken to derive trip rates from the TRICS database, the results of the TRICS assessment are representative of how a car-free development is likely to operate in an area of high accessibility such as the proposed development site (PTAL rating = 5). The TRICS data (being based on surveys of similar sites) also accounts for the movements associated with all journey purposes. The use of representative Greater London sites within the

TRICS database was accepted by TfL in their pre-application advice letter dated 21st November 2018.

3.7 Meanwhile, the Census modal split is understood to provide an average figure for the overall local area (Richmond upon Thames 004) and refers to the existing modal share for specifically **'Travel to Work'** journeys.

3.8 The following image is an extract from DataShine.org which uses 2011 Census data to provide a visual representation of various different datasets. The image below illustrates 'car availability' in the area surrounding the site.

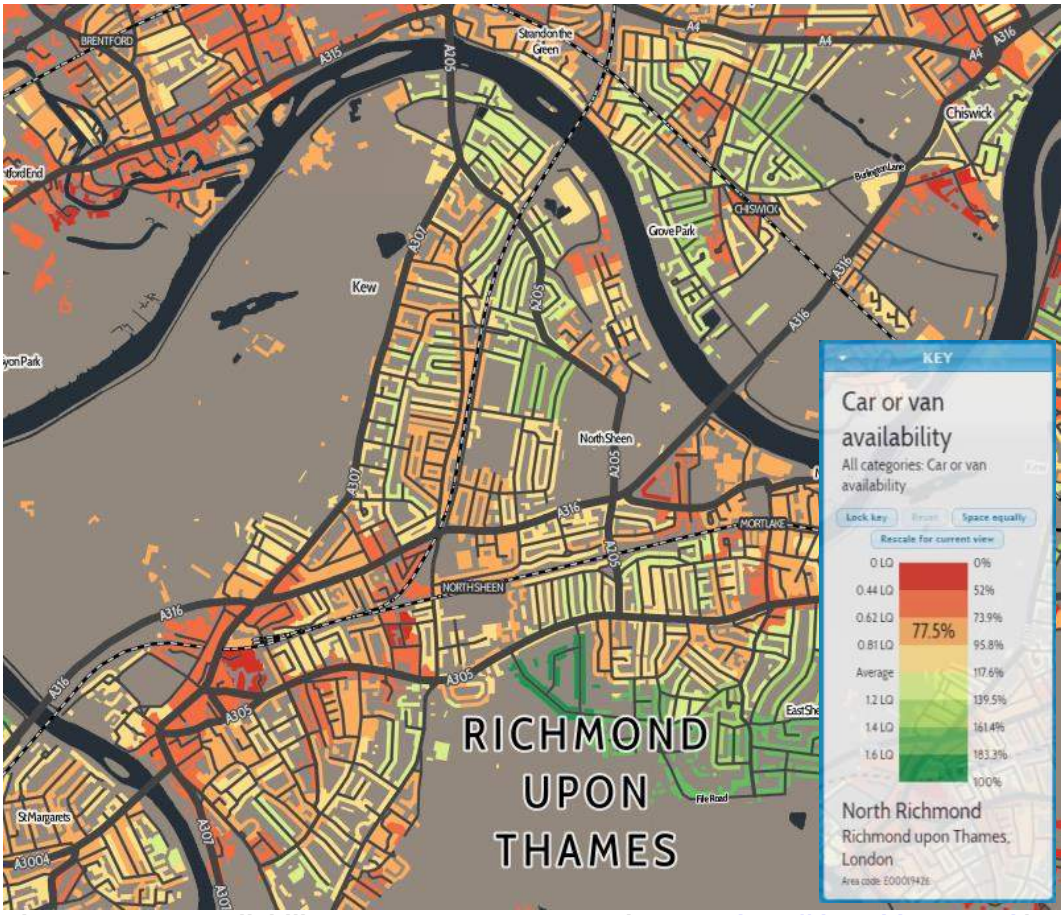


Figure 1 – Car Availability ***(Source: http://datashine.org.uk)***

3.9 Figure 1 shows that within the local area, car availability varies between 0 and approximately 1.5 vehicles per household with an average of 0.9 vehicles per household. On this basis it is considered that the average modal split for the area is unlikely to be representative of a development which is 'car-free'.

3.10 The issues of car availability and parking provisions are intrinsically linked and both have a notable influence on vehicle trip generations; as detailed in our EA Screening Technical Note (10596 – TN1).

3.11 Furthermore, the 2017 National Travel Survey (Table NTS0409) identifies that commuting (i.e. Travel to Work journeys) accounts for just 15% of all journey purposes. It is considered that the mode of travel associated with other common journey purposes such as education / escort education (12%), shopping (19%), personal business (10%) and leisure (26%) is likely to be different to how people choose to travel to work; especially given the proximity of the site to the adjacent supermarket and various primary schools.

3.12 Given the above, it is considered that the use of vehicle trip rates from the TRICS database is a valid approach and that the results of the assessment are representative.

3.13 However, we do acknowledge TfL's comments in relation to the distance to Richmond Underground station and the likelihood that people will travel to / from there by bus. It is therefore necessary to re-assess the multimodal generations set out in the TA.

3.14 The TA used 'Total People' trip rates, then applied a modal split in line with the 2011 Census: Method of Travel to Work data for 'Richmond 004'. For the reasons outlined earlier in this Chapter, it is considered that a more accurate modal split would actually be provided by the refined multimodal TRICS data rather than the Census data, as the TRICS data accounts for all journey purposes.

3.15 Using the multimodal TRICS data for the 'Privately Owned Flats' element of the development, the predicted modal split is detailed in Table 3/1, overleaf. It should be noted that the available TRICS data for the 'Affordable Flats' element of the development does not provide enough detail to determine a split between the various public transport modes. Nevertheless, the split identified by the 'Privately Owned Flats' data is considered representative.

		Modal Share			Two-way Trip Generation		
	Mode of Travel	AM	PM	Total	AM	PM	Total
Active Transport	Pedestrians	33%	43%	43%	44	44	602
	Cyclists	1%	1%	1%	1	2	12
Private Transport	Taxis	1%	3%	3%	5	2	40
	Cars	8%	5%	5%	4	11	67
	LGV	1%	1%	1%	2	1	20
	OGV	0%	0%	0%	0	0	2
	Motorcycles	0%	0%	0%	0	0	4
	Vehicle Passengers	2%	1%	1%	0	2	17
Public Transport	Underground	23%	21%	21%	36	30	288
	Overground	5%	4%	4%	7	4	46
	Bus	26%	21%	21%	31*	34*	298*
Total People		100%	100%	100%	129	133	1400

Table 3/1 – Predicted modal split based on multimodal TRICS data

3.16 As noted by TfL, those travelling on the Underground will likely travel to / from the station by bus. Therefore, the total number of people travelling by bus is estimated to be in the order of 67 people in the AM peak period, 64 people in the PM peak period and 586 people daily.

3.17 With regards to service vehicle trips (i.e. LGV / OGV); the data provided in Table 3/1 identifies that the residential element of the development could be expected to generate in the order of 2 vehicle movements in the AM peak, 1 vehicle movement in the PM peak and 22 vehicle movements daily.

3.18 For the commercial element of the development, multimodal trip rates have been obtained from the TRICS database. At this stage, the exact uses of the commercial space within the development have not yet been confirmed. However, it is understood that this could be a mix of A1/A2/A3 retail outlets, D2 and B1 office.

3.19 To provide an initial assessment the TRICS land use category '01 Retail – I Shopping Centre Local Shops' has been utilised. It is considered that whilst this category may not necessarily be exactly representative of the development proposals, it is the most appropriate land use category available within the TRICS database.

3.20 The table below shows the trip rates and associated traffic generations for 'Servicing Vehicles' based on the available sites with the full report included at **Appendix E**;

	Time Period	Trip Rates (per 100m² GFA)		Traffic Generations		
		Arrival	Departure	Arrival	Departure	Two-way
Commercial Space (480.1m²)	AM Peak	0.015	0.015	0	0	0
	PM Peak	0.000	0.000	0	0	0
	Daily	0.230	0.230	1	1	2

Table 3/2 - Trip rates and generations for proposed commercial use

3.21 The total number of servicing vehicle trips for the overall development is expected to be in the order of 24 vehicle movements (two-way) per day.

4 Impact of the Development on Local Bus Services

LBRuT comment:

Bus stops SA and SB Lower Mortlake Road / Manor Circus are approximately 400m walking distance from the site and are served by 10 different services. However, Transport for London are in the process of reviewing the services in this area with a view to re-allocating capacity from these stops.

The applicant should note that the services H22 and 493 will no longer serve the above bus stops. Services 110 and 419 will be merged and will both operate as service No. 110. Service 493 will operate from Manor Road / North Sheen Station. Service H37 will operate every 8 minutes instead of every 6 minutes per hour. The applicant should reassess the development's accessibility to bus services with the proposed changes in mind.

The applicant has estimated that the development will create an extra 14 two-way trips in the AM peak hour and 13 in the PM weekday peak hour. However, this only considers journeys to work, and not journeys to primary and secondary schools and to tertiary education establishments. The applicant is advised to use the Census of 2011 to examine household composition and dwelling with usable rooms to estimate how many children and further education students will need to travel to school or college by bus and what the likely impact on services will be. However, Holy Trinity Church of England Primary School is within 0.5 miles of the site and Christ's School and Sixth Form College is 1 miles' walking distance from the entrance to the development. Therefore, it may be possible for children to get to school without being dependant on bus services.

TfL comment:

Information on peak hour direction of travel for bus trips, based on Census data, is required so TfL can determine if a bus contribution is required.

Sanderson's Response:

4.1 The previous Chapter of this report identified (in Table 3/1) the additional demand for buses which could potentially be generated by the proposed development. The number identified (67 people in the AM peak period, 64 people in the PM peak period and 586 people daily) is considered to account for all journey purposes and also includes those using a bus to access Richmond Underground Station.

4.2 The above estimate is considered robust because (as noted by the Council) there are schools (primary and secondary) and higher education establishments within acceptable walking distance of the site. See section 5.7.4 for further analysis of numbers of pupils likely to be generated by the development. As such, pupils are unlikely to be dependent upon bus services to access education. Furthermore, the site is located immediately adjacent a supermarket (with Pharmacy); therefore journeys for the purposes of shopping are unlikely to require access to bus services.

4.3 TfL's proposed changes to bus services are noted. A summary of the anticipated impact of the changes is provided below:

Service Nº	Proposed Change	Approximate change in number of services per hour
H22	Service no longer available	-5
493	Service re-routed via the A305. Stops located approximately 550 - 600m from the site.	-6
419	To be re-numbered to 110. No change to frequency between Hammersmith and Richmond	0
H37	Every 8 minutes instead of every 6 minutes	-3
	Total:	-14

Table 4/1 – Summary of proposed TfL changes to bus services

4.4 As a result of the proposed changes to bus services, a total reduction of 14 buses per hour is expected; albeit the 493 service could still be accessed on foot approximately 600m south of the site. The residual number of services per hour

available within 400m of the site, based on Monday – Saturday daytime peak frequencies, is 41 (previously 55).

4.5 It should be noted that amongst the proposed changes to bus services given on the 'Proposed bus service changes in Richmond, Twickenham and Whitton' consultation information webpage TfL state that:

"Through routes 190, 391, 419 and R68, 17 buses per hour are provided which are sufficient to meet demand."

4.6 On this basis, it is understood that the existing demand for bus services in the local area is neither at, nor nearing, full capacity.

4.7 Given the anticipated increase in demand (67 people in the AM peak period, 64 people in the PM peak period and 586 people daily) and the number of available bus services per hour (41 after the proposed TfL changes). The number of additional people using each service would likely be modest; in the order of 1 or 2 people. This is considered unlikely to have a material adverse effect on existing bus capacity.

4.8 In response to peak hour direction of travel for bus trips, we have analysed 2011 Census: Origin / Destination statistics which identifies place of work by method of travel to work. Again, it is acknowledged that bus journeys will be undertaken for other journey purposes as well as 'travel to work'. However, for the purpose of distribution, this dataset is considered to be appropriate.

4.9 The figure overleaf depicts the Middle Super Output Area (MSOA) destination of journeys to work by bus from the MSOA of the site and the general direction of travel they would take based on Census data. As can be seen, there is a relatively even distribution between south-westbound and north-eastbound bus journeys to / from work. The split has been calculated as follows:

Direction of travel	Number of Travel to Work Journeys by Bus from 'Richmond 004'	% Split
South-westbound	124	53.7
North-eastbound	107	46.3

Table 4/2 - Direction of bus travel based on 2011 Census: Origin / Destination statistics

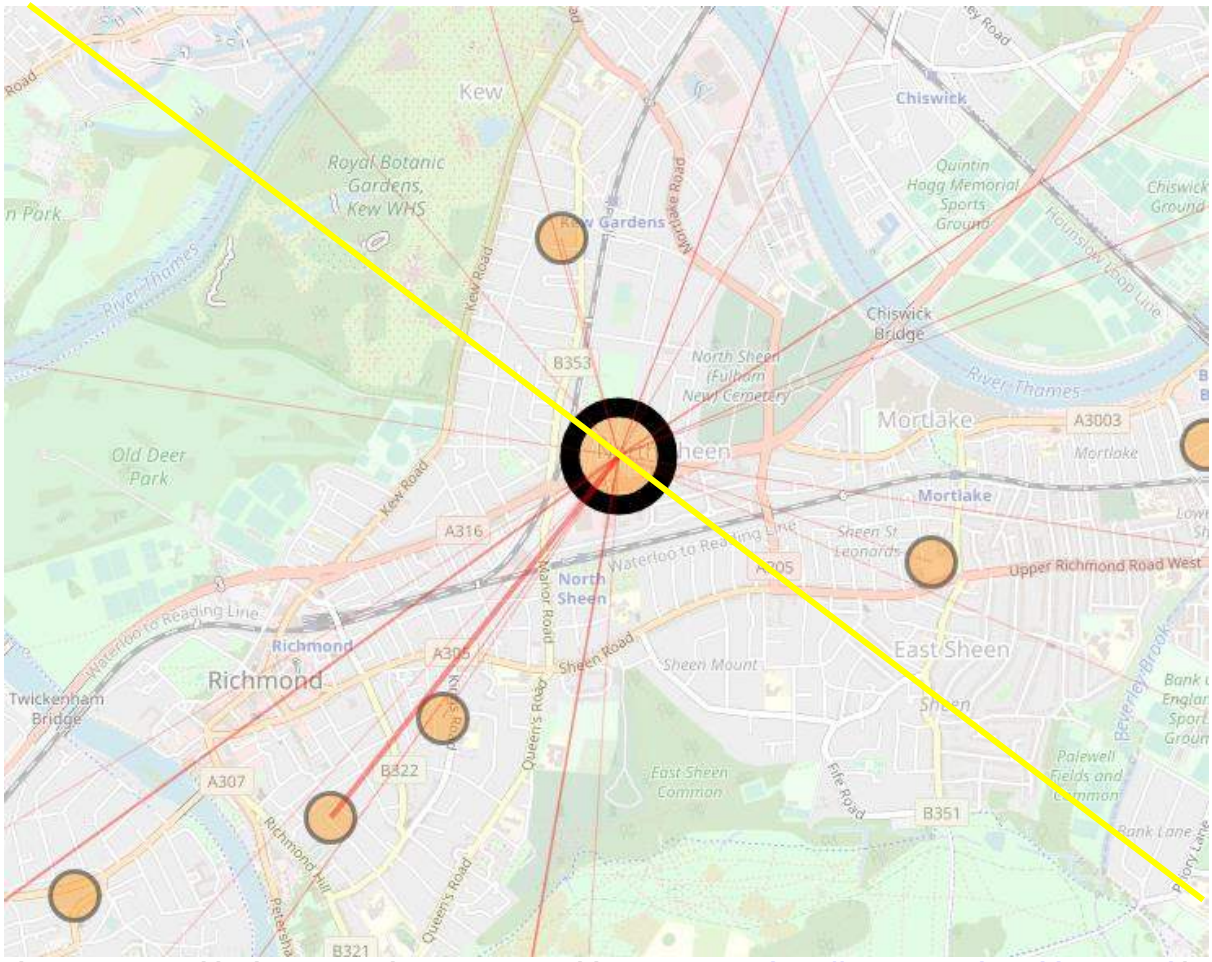


Figure 2 - Travel by bus (Source: DataShine Commute http://commute.datashine.org.uk)

4.10 It should be noted that for the purpose of this assessment; areas generating less than 6 bus trips have been omitted. This is considered to be appropriate as the impact of these low generating areas on distribution would be minimal. The dataset identifying the percentage draw to each area is included at **Appendix F**.

4.11 The relatively even distribution of bus journeys to / from work supports the assertion that an excessive demand on a particular bus service is unlikely to occur as a result of the development proposals.

5 Impact of the Development on the Pedestrian Network

LBRuT comment:

For me to be able to comment fully on whether the development provides safe and suitable access to the surrounding amenities for pedestrians the applicant should complete a full pedestrian (PERS) audit in accordance with standards set out in TfL's current guidance…

While completing this audit, the applicant needs to use the Census of 2011 to estimate the number of children of school age that will live in this development and need to be provided with a safe walking route to and from school.

Once they have an accurate estimate of the number of likely pedestrian trips, they should conduct an assessment as to whether pedestrian crossing facilities need improving using current guidance…

Sanderson's Response:

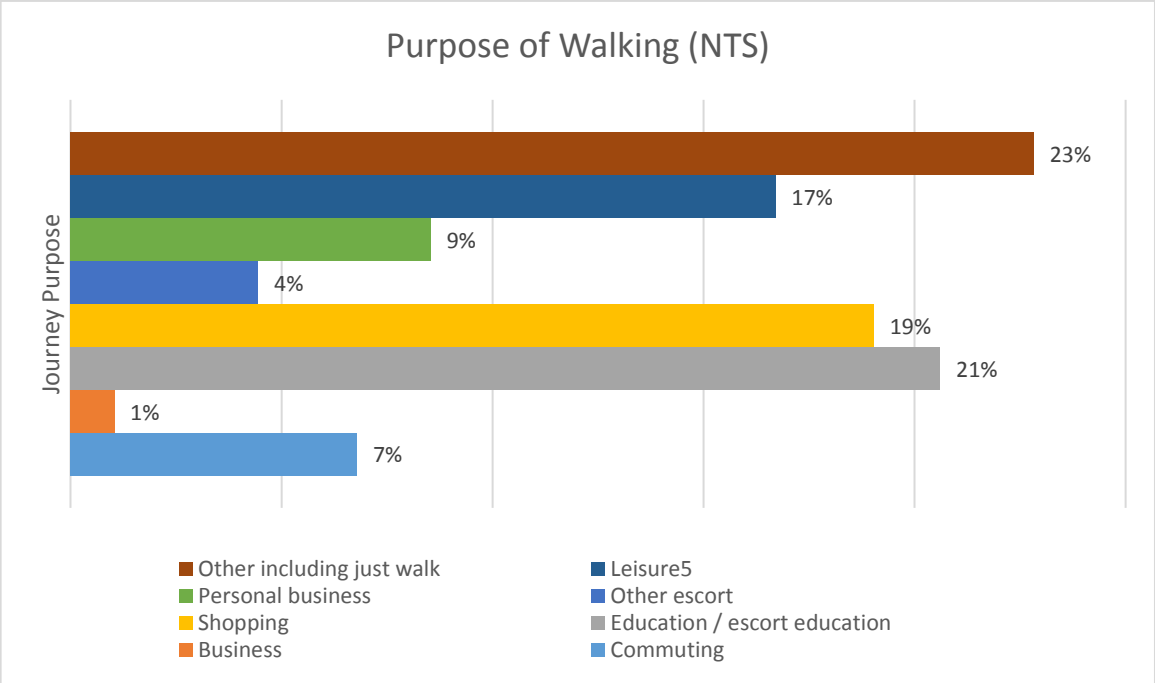
5.1 The multimodal assessment carried out in the TA used '2011 Census: Method of Travel to Work data' to form a modal split. However, as noted by the Council, and acknowledged in this Addendum, there are other journey purposes to consider as well as Travel to Work (e.g. education and shopping). Furthermore, those using public transport modes are likely to require a short journey on foot in order to be able to access those services.

5.2 The multimodal trip generations set out within Table 3/1 of this report estimates that the development is likely to generate in the order of 44 pedestrian trips (two-way) in both the AM and PM peak hours and 602 trips (two-way) daily.

5.3 Further to the above, those utilising public transport modes are expected to generate an additional pedestrian demand in the order of 74 trips (two-way) in the AM, 68 trips in the PM and 632 trips (two-way) daily. These journeys on foot would be limited to between the site and local bus stops / North Sheen Station.

5.4 The following assessment seeks to provide a realistic estimate of the distribution of pedestrian movement about the site and evaluate the suitability of existing crossing facilities.

5.5 The chart below shows the split between journey purposes as a % of all walking trips based on the results of the National Travel Survey (Table NTS0409 – Average number of trips by purpose and main mode).



5.6 For clarity the journey purposes are defined below;

- **Commuting:** Trips to / from home to usual place of work
- **Business:** Personal trips in course of work.
- **Education:** Trips to school or college.
- **Shopping:** Trips to the shops or from the shops to home.
- **Personal Business:** Visits to services, medical consultations etc.
- **Visit friends:** Trips to visit friends
- **Other leisure:** Mostly entertainment, sport, holidays and day trips.
- **Escort trips:** Accompanying someone else (e.g. taking a child to school)

5.7 Based on the above information, the most common reasons people walk are for education (including escorting others), shopping, leisure and for other reasons including 'Just Walking'.

Just Walking (23%)

5.7.1 This journey purpose would account for 138 trips (two-way) daily. This would include activities such as dog walking, walking / running for exercise etc. It is considered that these activities would predominantly occur outside of typical network peak periods.

5.7.2 With regards to distribution it is difficult to determine in what direction people would travel. As such a 50/50 split is to be assumed northbound / southbound along Manor Road (without the need to cross-over). The northbound proportion will then be evenly split between westbound and northbound movements at Manor Circus.

Education / Escort Education (21%)

5.7.3 This journey purpose would account for 126 trips (two-way) daily. The outbound journeys would likely occur on a morning during the typical AM peak period of 8am – 9am (with parents / guardians returning home after 9am), and in the afternoon between 3pm – 4pm, prior to the typical PM peak period 5pm – 6pm.

5.7.4 As part of the Health Impact Assessment undertaken for this scheme, the GLA's SPG Play Space Requirement Calculator was used to determine the child yield from the proposed development. The child yield from the proposed development is:

Age of children	Number of children
Under 5	48
5-11 years	30
12 years +	18
Total	96

Table 5/1 – Proposed Development Child Yield

5.7.5 It is considered that those children walking (including being escorted) to / from school will be mostly primary school children (30 total). Those at secondary level and above are likely to have to travel further and are therefore included within the public transport user element of trips; the impact of which is still to be considered. On this basis, the estimation of 126 trips (two-way) associated with education appears to be reasonable as it also includes for parent / guardian journeys without children. (i.e. after dropping off / before picking up).

5.7.6 With regards to distribution, schools within walking distance of the site include;

- Holy Trinity Primary School and Nursery (550m to the south)
- Marshgate Primary School (550m to the south)
- Darell Primary & Nursery School (550m to the north)
- Christ's School and Sixth Form (800m to the south)

5.7.7 It is estimated that 75% of journeys to / from school would be to the south of the site; of which 25% would cross Manor Road via the 0.8m wide pedestrian crossing refuge. The remaining 50% could continue along the western flank of Manor Road before utilising the controlled crossing facility at the junction with Sheen Rd (A305).

5.7.8 The 25% travelling northbound would utilise the zebra crossing facilities around the Manor Circus roundabout junction.

Shopping (19%)

5.7.9 This journey purpose would account for 114 trips (two-way) daily. It is considered that these activities would predominantly occur outside of typical network peak periods, with a small proportion coinciding with journeys home from work in the PM peak. Given the proximity a size of the adjacent supermarket, it is considered that most 'shopping' trips would be generated from there.

5.7.10 People travelling between the site and the supermarket would utilise the existing 2.0m wide pedestrian crossing refuge which is located immediately adjacent the access to the store.

Leisure (17%)

5.7.11 This journey purpose would account for 102 trips (two-way) daily. Again, it is considered that these trips would predominantly occur outside of typical network peak periods.

5.7.12 Local 'leisure' destinations are considered to include:

- Allotments to the south of North Sheen Station (200m south)
- North Sheen Recreation Ground (550m north)
- Old Deer Park / Kew Gardens (900m – 1.2km north/west)
- Richmond Park (within 1km)

5.7.13 With regards to distribution it is difficult to determine how popular each of the above locations will be. As such a 50 / 50 split is to be assumed northbound / southbound along Manor Road, with 10% crossing via the 0.8m wide pedestrian crossing refuge on Manor Road to access the allotments.

Personal Business (9%)

5.7.14 This journey purpose would account for 54 trips (two-way) daily. Again, it is considered that these trips would predominantly occur outside of typical network peak periods.

5.7.15 A number of things associated with 'Personal Business' are provided within the adjacent supermarket, including a pharmacy and banking facilities. The nearest Post Office is located approximately 800m to the south-west of the site along Sheen Road.

5.7.16 For the purpose of distribution for this assessment, and to be robust, all personal business trips are to be assigned to / from the supermarket via the 2.0m wide pedestrian crossing refuge adjacent the supermarket access.

Commuting (7%)

5.7.17 This journey purpose would account for 42 trips (two-way) daily; a material proportion of which would likely occur during network peak periods.

5.7.18 With regards to distribution, the surrounding area is predominantly residential, with the exception of the supermarket and various schools. The main employment areas are likely to be Richmond (west), Kew (north) and North Sheen (east). For the purpose of this assessment a split of 50/25/25 is to be applied, respectively.

Other including Business and Other Escort (4%)

5.7.19 These journey purposes would account for 30 trips (two-way) daily. There is unlikely to be a fixed or likely destination associated with these journeys as such the assignment of a distribution is difficult. However, it is considered that these trips would likely occur throughout the day (non-peak) or could be linked with a journey home in the PM peak.

Accessing Public Transport

5.7.20 As previously noted, those utilising public transport modes are expected to generate an additional pedestrian demand in the order of 74 trips (two-way) in the AM, 68 trips (two-way) in the PM and 632 trips (two-way) daily.

5.7.21 Pedestrian movements to / from North Sheen Station are expected to be in the order to 7 trips (two-way) in the AM, 4 trips (two-way) in the PM and 46 trips (two-way) daily. These movements would be required to cross Manor Road using the 0.8m wide pedestrian crossing refuge.

5.7.22 Pedestrian movements to / from Richmond Underground Station (via bus services along Lower Mortlake Road) are expected to be in the order to 36 trips (two-way) in the AM, 30 trips (two-way) in the PM and 288 trips (two-way) daily. Given the location of bus stop ‘SB’, outbound journeys (to Richmond Underground) would not require anybody to cross a road. Inbound journeys (arriving at bus stop ‘SA’) would require people to cross Lower Mortlake Road using the zebra crossing facilities at the manor Circus roundabout junction.

5.7.23 With regards to pedestrian movements to / from bus stops (specifically for bus journeys) are expected to be in the order of 31 trips (two-way) in the AM, 34 trips (two-way) in the PM and 298 trips (two-way) daily. As described in Chapter 4 of this report, the majority of bus services operate along Lower Mortlake Road via the aforementioned bus stops 'SA' and 'SB', with a relatively even split between north-eastbound and south-westbound journeys. It is also acknowledged however that a frequent service (371) is provided via stop 'SU' located within the adjacent supermarket car park. For the purpose of this assessment, 10% of bus journeys are to be assigned via bus stop 'SU' with the remaining 90% via stops 'SA' and 'SB'.

5.7.24 The total number and distribution of pedestrian movements in the AM and PM peak hours, as well as daily are illustrated within **Appendix G**, and summarised in the following table:

Links

A = Southbound on Manor Road

B = Crossing Manor Road at 0.8m pedestrian crossing refuge

C = Crossing Manor Road at 2.0m pedestrian crossing refuge

D = Westbound on Lower Mortlake Road

E = Crossing Manor Road via Manor Circus zebra crossing facility

F = Crossing Lower Mortlake Road via Manor Circus zebra crossing facility

LINK ID	A	B	C	D	E	F
AM	16	15	3	55	3	26
PM	0	4	15	31	8	54
Off-Peak	158	69	180	265	6	330
Daily	174	88	198	339	11	402

Table 5/2 – Summary of pedestrian movements

5.8 PERS Audit

5.8.1 With regards to LRBuT's request for a PERS audit to be undertaken; Sanderson Associates attended pre-application meetings with GLA on 10/10/2018 and with TfL on 21/11/2018, during which, it was requested that the TA should include a 'Healthy Streets' assessment. It is our understanding that the Healthy Streets approach is now the preferred method for assessing the quality of the pedestrian environment and that the PERS methodology is being phased out. It is therefore considered that the Healthy Streets assessment provided in Section 7.6 of the TA, combined with the additional information set out within this Addendum is sufficient. All cycle and pedestrian dropped kerbs will have tactile paving as necessary.

5.8.2 Notwithstanding the information provided in the TA it is acknowledged that the widening of the footway to the site frontage will require the applicant to enter into a S278 agreement as requested by LBRuT.

5.9 Review of Crossing Facilities

5.9.1 To determine the suitability of the existing crossing facilities, in particular those provided along Manor Road, guidance set out within Local Transport Note 1/95 'The Assessment of Pedestrian Crossings' has been reviewed.

5.9.2 The purpose of a crossing is to provide pedestrians with a passage across a carriageway. Each type of crossing has advantages and disadvantages; the type chosen should be appropriate to the circumstances of the site and the demand and behaviour of road users.

5.9.3 Details relating to the 'circumstances of the site' and 'behaviour of road users' are provided in the Site Assessment below;

Highway Description

5.9.4 The B353 Manor Road has one pedestrian crossing refuge approximately 20m south of the mid-point of the main pedestrian access to the site, which is approximately 1.6m wide (not 0.8m wide as stated by LBRuT), and one 12m north of the secondary pedestrian access to the site which is 2m wide. There are

chevrons to accommodate both of these established crossing points and maintain a carriageway width of 3m in both directions for vehicular traffic. There is a carriageway length of 92m between the two crossing refuges and 24m between the smaller refuge and the railway level crossing, which can act as a pedestrian crossing facility when the barriers are down, and the pedestrian footbridge across the railway line on the eastern side of Manor Road.

5.9.5 LBRuT commented that "Current highway design standards state that there should be a carriageway length of at least 90m between signalised pedestrian crossing facilities, and that these should be considered when there is a gap in vehicular traffic to enable able-bodies pedestrians to cross two lanes of traffic of less than 5 seconds and a gap of less than 12 seconds for other groups of pedestrians." Firstly, it should be noted that the pedestrian crossing facilities on Manor Road are not signal controlled. However, the distance between the two refuges is still greater than 90m.

5.9.6 The road is surfaced, providing adequate skid resistance for vehicles and street lighting is provided in accordance with standards for built-up areas.

5.9.7 Manor Road has a relatively straight alignment and Traffic Regulation Orders (TROs) in the form of double yellow lines are present on both sides of the carriageway preventing on-street parking. As such, adequate visibility is considered to be available between pedestrians and vehicles in relation to the 30mph speed limit of the road.

Existing Traffic Flows

5.9.8 Traffic surveys undertaken along Manor Road in October 2018 identified that two-way vehicle flows were in the order of 623 vehicles in the AM peak period and 741 vehicles in the PM. The recorded HGV percentages were 4.2% in the AM and 2.7% in the PM.

5.9.9 As the presence of the pedestrian crossing refuges allows pedestrians to cross the road in two stages, pedestrians must only give-way to one direction of vehicle traffic

at a time. Assuming free-flow conditions, the northbound vehicles equate to (358) approximately 1 vehicle every 10 seconds in the AM peak and (442) approximately 1 vehicle every 8 seconds in the PM peak. Meanwhile, southbound vehicles equate to (265) approximately 1 vehicle every 14 seconds in the AM peak and (299) approximately 1 vehicle every 12 seconds in the PM peak.

5.9.10 However, consideration must also be given to the presence of the railway level crossing and its impact on the flow of vehicle traffic.

5.9.11 As set out in Section 5.3 of the TA; surveys of the level crossing identified that in the AM peak hour, the level crossing was activated 9 times resulting in the barrier being down for 37m 28s. In the PM peak hour this was 30m 38s over 11 activations. The typical duration for which the barriers were down was observed to be in the order of 3 to 4 minutes per crossing.

5.9.12 Whilst the operation of the crossing often results in vehicles travelling in platoons (with minimal gaps to allow pedestrians to cross), it also creates extended periods of time whereby pedestrians can cross the road without having to give-way to moving vehicles.

5.9.13 As part of the TA, pedestrian surveys were undertaken identifying crossing movements along Manor Road. The study area and zones are illustrated below:

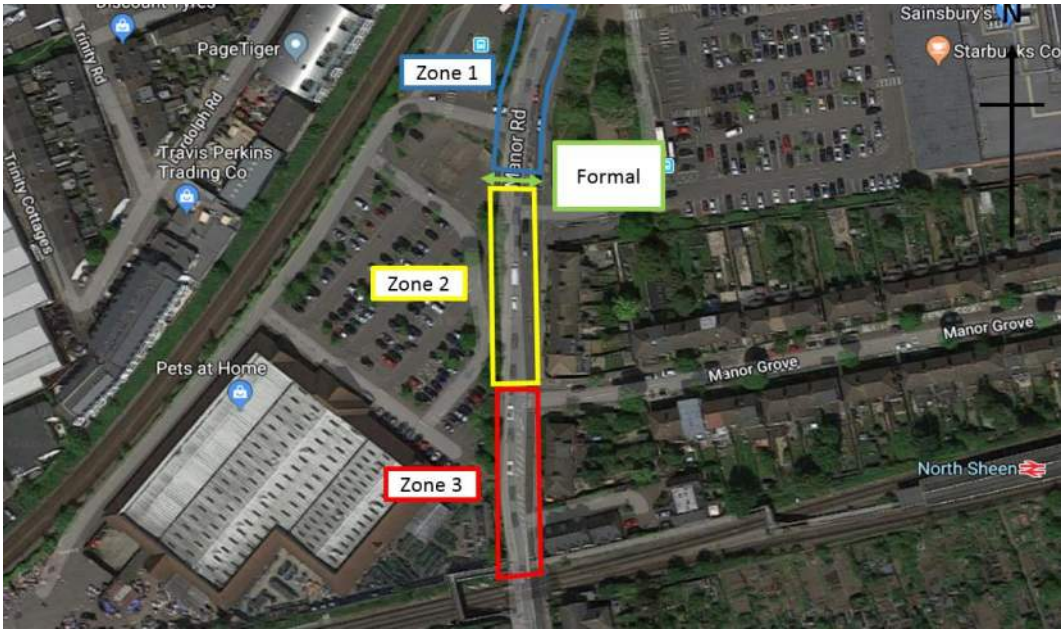


Figure 3 – Pedestrian survey study area

5.9.14 The results of the pedestrian survey are tabulated below:

TIME	Zone 1		Formal Crossing		Zone 2		Zone 3	
	EB	WB	EB	WB	EB	WB	EB	WB
07:30	5	1	1	5	0	4	16	9
07:45	5	1	3	2	1	5	29	30
08:00	0	1	1	2	1	14	17	34
08:15	0	2	0	6	3	1	19	27
08:30	3	2	4	4	2	8	14	61
08:45	2	1	3	1	4	3	20	19
09:00	2	2	3	3	3	3	39	6
09:15	3	3	2	0	2	5	10	1
P/TOT	**20**	**13**	**17**	**23**	**16**	**43**	**164**	**187**

Table 5/3 – AM Pedestrian survey results

TIME	Zone 1		Formal Crossing		Zone 2		Zone 3	
	EB	WB	EB	WB	EB	WB	EB	WB
15:00	5	4	1	4	5	4	17	17
15:15	3	4	17	6	1	3	22	9
15:30	2	2	9	4	5	6	25	2
15:45	1	0	5	2	4	9	21	11

16:00	6	6	5	1	6	2	11	12
16:15	2	3	8	6	1	2	19	9
16:30	6	3	15	5	1	1	16	10
16:45	2	4	5	1	4	4	19	13
17:00	3	1	3	0	4	2	9	5
17:15	2	1	4	3	1	2	12	7
17:30	1	5	1	3	1	3	7	16
17:45	8	2	2	2	5	8	15	10
P/TOT	**41**	**35**	**75**	**37**	**38**	**46**	**193**	**121**

Table 5/4 – PM Pedestrian survey results

5.9.15 The survey results identify that during both the AM and PM survey periods, there were significant levels of pedestrian activity. The pedestrian peak hours were 07:45 – 08:45 during which time a total of 302 crossings occurred, and 15:00 – 16:00 during which time a total of 230 crossings occurred. Over the course of the entire AM and PM survey periods, a total of 1,069 crossing movements were recorded.

5.9.16 What is also notable from the survey results is that more people were recorded crossing the road not at a crossing, than those recorded using a crossing. This would suggest that pedestrians typically have the opportunity to cross the full carriageway in one stage, rather than requiring refuge.

5.9.17 Based on the predicted level of pedestrian movements generated by the development set out earlier in this Chapter, the number of additional crossing movements along Manor Road equate to 21 movements in the AM peak, 27 movements in the PM peak and 297 movements daily. This represents a 7% increase on existing pedestrian movements in the AM and a 12% increase in the PM. A daily increase cannot be calculated as a full day of survey data is not available.

Accident History

5.9.18 The Crashmap database has been reviewed to investigate the accident history along Manor Road in proximity to the site, specifically relating to incidents involving

pedestrians. The following image shows all pedestrian related incidents that have been recorded in the 20 year period between 01/01/1999 and 31/12/2018.

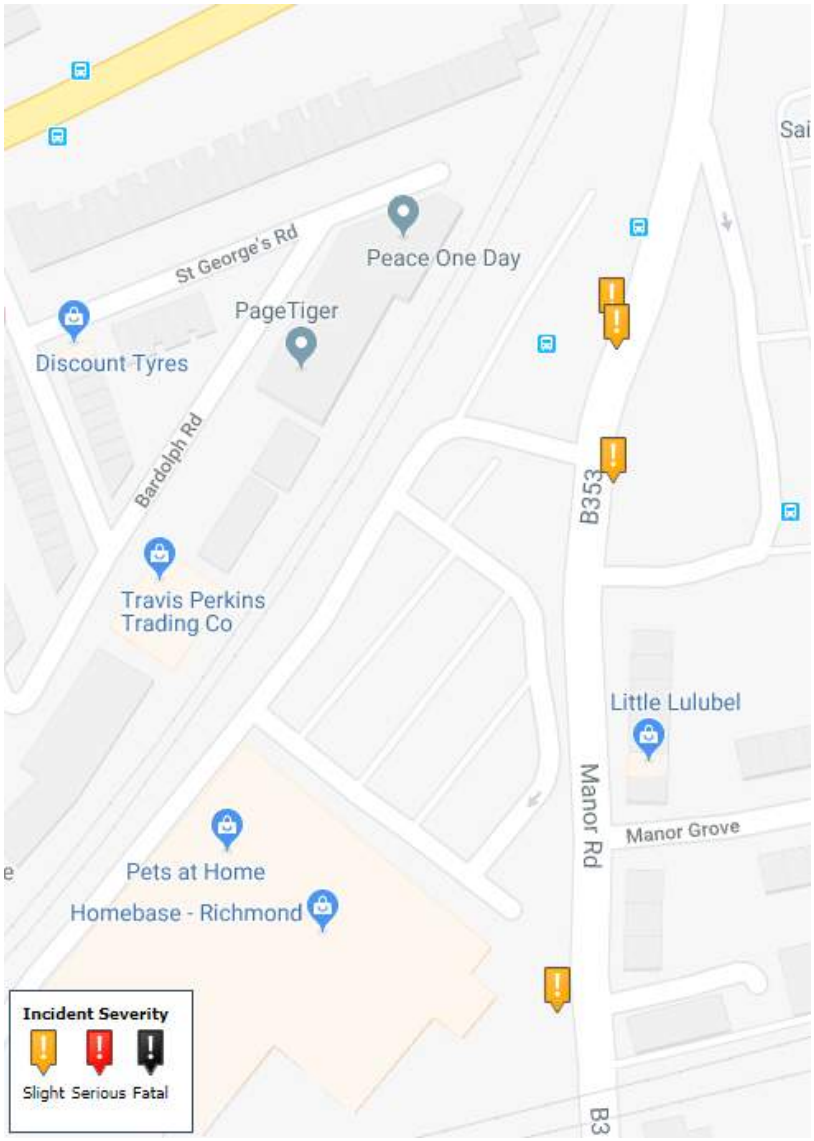


Figure 4 – Crashmap extract

5.9.19 Crashmap indicates that just 4 pedestrian related incidents (all slight in severity) have been recorded in the last 20 years. Two events occurred approximately 30m north of the existing site entrance, one event occurred at the 2.0m wide pedestrian crossing refuge and one occurred between the 0.8m wide pedestrian crossing refuge and the level crossing.

5.9.20 It is considered that the number of recorded pedestrian related incidents (4) over a period of 20 years is particularly low, especially given the surveyed volume of pedestrian crossing movements. This would indicate that the existing relationship between pedestrian and vehicle movements is a manageable one and that the existing crossing facilities do not require upgrading. Furthermore, the forecast increase in pedestrian movements as a result of the proposed development (around 10% increase in peak periods) is unlikely to have a material adverse effect on road safety.

5.9.21 The pedestrian refuge island widths provided on Manor Road (2.0m and 1.6m with hatching to either side) comply with current design standards and are considered satisfactory to accommodate the proposed level of pedestrian activity.

6 Pedestrian and Cycle Access

TfL comment:

The TA should identify if there are any measures that could be implemented which would prevent any of the recorded accidents along Manor Road (excluding Manor Circus) and contribute towards the Vision Zero approach. Furthermore, are the existing pedestrian refuges on Manor Road still on the pedestrian desire line given the layout of the development site?

6.1 London has committed to the Vision Zero approach and in the Mayor's Transport Strategy sets the goal that all deaths and serious injuries will be eliminated from London's transport network by 2041.

6.2 Within the 60 month period up to 31st December 2017 (as assessed in the TA), 6 incidents were recorded along Manor Road (excluding Manor Circus), all of which were slight in severity. These incidents have been reviewed in order to determine whether any measures would be appropriate to prevent further incidents of the same nature in future.

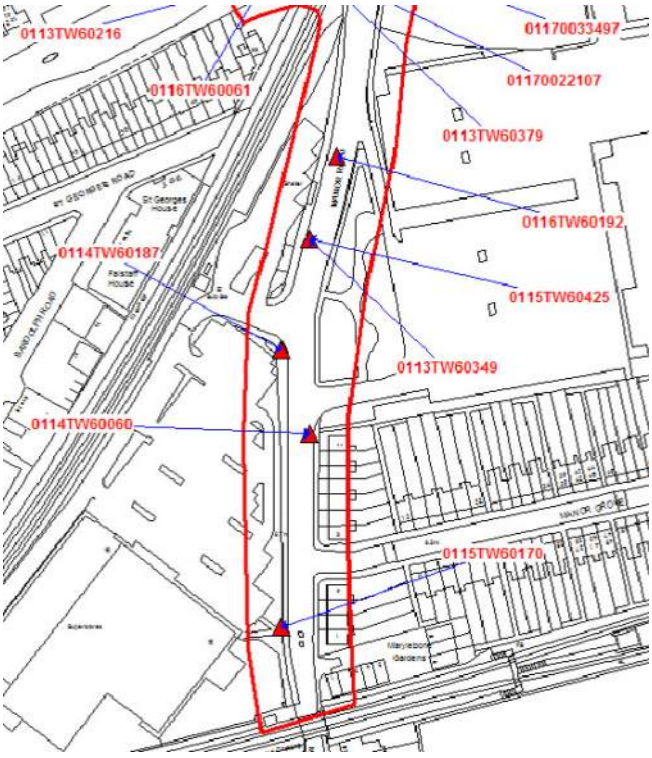


Figure 5 - Extract of plot of incident locations from TfL

- Incident ref: 0116TW60192 involved a passenger falling over when the bus they were travelling on stopped. It is, therefore, not considered that any measures would aid in preventing this type of incident.

- Incident refs: 0114TW60060 & 0115TW60170 both involved vehicles (motorcycle and car respectively) losing control in separate locations with no reason stated. The contributing factors given are loss of control, failed to look properly and fatigue therefore it is not considered that any measures would aid in preventing this type of incident.

- Incident ref: 0114TW60187 appears to be incorrectly located on the diagram as the description suggests that a car was turning right out of the Sainsbury's site and a pedal cycle was travelling south on Manor Road. The car did not see the pedal cycle and in turning right collided with the cycle. As the contributing factor given is that the driver of the car failed to look properly, it is not considered that any measures would aid in preventing this type of incident.

- Incident refs: 0115TW60425 & 0113TW60349 both involved a pedestrian crossing Manor Road, in the same location which is not at a crossing, being hit by a car. The contribution factors given are the vehicle travelling too fast for conditions, failing to look properly and failing to judge the other person's path or speed and the pedestrian failing to look properly, being careless/reckless/in a hurry and crossing the road masked by a vehicle.

6.3 It appears that the location of these incidents coincides with a path through landscaping that has been worn by pedestrians to/from the Sainsbury's site, as can be seen in the image below. It is not considered that this route would be a desire line for pedestrians to/from the development site due to the location of destinations, including bus stops, and the site accesses. However, it may be appropriate for the Council to consider extending the barriers along Manor Road and/or liaising with Sainsbury's with regard to replanting their landscaping if these incidents are to be prevented in future.

Figure 6 - Pedestrian worn path through Sainsbury's landscaping (©2019 Google)

6.4 The southern pedestrian refuge on the site frontage is considered to be on the desire line of pedestrians from either access point of the development travelling to / from North Sheen Station which is the primary destination in this direction.

6.5 The northern pedestrian refuge is located as close to the northern development access as constraints allow and, although might not lie directly on the desire line, provides a safe route to/from Sainsbury's and the bus stop within Sainsbury's site.

7 Manor Circus

TfL comment:

TfL are currently developing a scheme to address road safety and improve pedestrian and cycle facilities at Manor Circus. Given that the proposed development will increase pedestrian and cycle movements at Manor Circus, TfL request a financial contribution of £420,000 towards the implementation of this scheme. The financial contribution equates to 15% of the final scheme cost, and therefore TfL believes this is a justified level of contribution.

Sanderson's Response:

7.1 Whilst it is acknowledged that TfL advised, during the pre-application meeting of 21 November 2018, that such a contribution would be sought, TfL also advised the Applicant that the Manor Circus scheme was already a fully funded scheme. Further information, accessible on the TfL website, advises the following:-

A316 London Road roundabout

Construction on safety improvements at the A316 London Road roundabout is expected to begin in winter 2019.

Improving the roundabout would bring wider benefits for users of the A316 and A310 corridors. These benefits could include:

- *Reducing traffic congestion at the junction and improving journey time reliability*
- *Improving the cycling and pedestrian environment, providing a continuous corridor for cyclists along the A316, making it easier to get to Twickenham town centre*
- *Signalising the roundabout and introducing signalised pedestrian crossings*

We committed to review safety at the London Road roundabout after improvements were made there in April 2013.

7.2 It is clear from the above that for the works to commence in the winter of this year (2019) funding must already be allocated for the works.

7.3 In respect of planning obligations, the National Planning Policy Framework (2019) states:

Paragraph 56. Planning obligations must only be sought where they meet all of the following tests:*

(a) necessary to make the development acceptable in planning terms;

(b) directly related to the development; and

(c) fairly and reasonably related in scale and kind to the development.

** As set out in Regulation 122(2) of the Community Infrastructure Levy Regulations 2010.*

7.4 Having regard to the above it is considered that the request for a financial contribution to an already funded scheme does not meet the requirements of Section 56 of the NPPF as follows:-

(a) it is not necessary to make the development acceptable in planning terms as it is likely that the highway works will be completed in advance of any material occupation of the development if approved;

(b) it cannot, therefore, be directly related to the development, and

(c) it is not, therefore, fairly and reasonably related in kind to the development.

7.5 Therefore, the Applicant does not consider this financial contribution to be a reasonable request.

8 Impact of the Development on Rail Services

LBRuT comment:

When the TRICS analysis is adjusted as recommended and the travel to work data in the Census of 2011 is applied to residents, it shows that the development will create an additional 27 mainline rail trips in the AM weekday peak hour and 31 trips in the PM weekday peak. However, again, this does not include school children or students in tertiary education who might also use the trains at that time. That said, it is likely that the number of trips could be accommodated by existing services.

Both of the platforms at North Sheen Railway Station are accessed via a pedestrian footbridge and a footway that is hard-surfaced and lit. There is currently no disabled access to the station, and the above mentioned steps to the footbridge a very steep. There are also only six seats on the platform and no seating that is fully sheltered from the elements. The applicant needs to liaise with Network Rail and the train operator (South-West Trains) to investigate the possibility of a financial contribution for the improvement of access to the station for people with disabilities and the provision of more sheltered seats on the platform.

Sanderson's Response:

8.1 As detailed in the previous Chapters of this report, travel to work journeys form only a small proportion of the variety of trips people make on a daily basis. As such, the application of 'travel to work' modal splits is unlikely to provide an accurate representation of how the development will operate.

8.2 The TRICS data used, which accounts for all journey purposes, estimates that the development will generate in the order of 7 rail passengers in the AM peak and 4 rail passengers in the PM peak. Nevertheless, as noted by LBRuT, there are no material concerns that the additional demand for rail travel could not be accommodated by existing services.

Nonetheless, the applicant will liaise with Network Rail and South Western Rail with regards to any required improvements in station facilities which would be funded through the Community Infrastructure Levy contribution.

APPENDIX A

LBRuT Highways Consultation Response

TfL Highways Consultation Response

Network Rail Consultation Response

Brett Littlewood

Subject: FW: Homebase Manor Road - consultation comments from TfL - 10596

Hi Karen,

Further to Rachel's email, we have now received highways comments from LBRUT. Could you also review and respond to the queries below please?

Kind regards,
Becky

Transport

- Object to application on the following grounds:

  (1) the applicant has not completed the required vehicular parking stress survey to the correct parameters, and has, therefore, acted contrary to the London Borough of Richmond's current guidance on the conduct of vehicular parking stress surveys, the policy set out in Appendix 3 of the London Borough of Richmond's *Local Plan*, and has not demonstrated that "proper controls can be put in place to ensure that the proposal will not contribute to on-street parking stress in the locality," as per Policy LP45 3c of the above Local Plan. Consequently, I am unable to confirm that safe and suitable access to the development can be achieved for all road users in accordance with Para. 108b of the National Planning Policy Framework (NPPF), that any significant impacts of the development can be cost-effectively mitigated to an acceptable degree in accordance with Para. 108c of the same document, and that the impact of the development on highway safety and would not be severe in accordance with Para. 109 of the NPPF.

  (2) Objection because the number of person trips generated is too low, and the vehicular trip generation conclusions do not correspond with the TRICS outputs. Therefore, it is not possible to estimate the overall traffic impact of this development on all modes of travel and, therefore, not possible to decide whether the transport impacts of the development are significant and have been cost-effectively mitigated to an acceptable degree in accordance with Para. 108c of the NPPF.

  To consider removing the objection, I would need to see a vehicular parking stress survey that has been carried out in line with the London Borough of Richmond's guidance (Appendix 3 of the same Local Plan, and technical guidance in the Borough's Supplementary Planning Document, which is based on the Lambeth Parking Beat Survey Methodology.) This is required before consideration can be given to CPZ review/implementation/restriction for future occupiers.

- In addition, the applicant will need to submit a vehicular parking and servicing management plan which can be secured as a planning condition. In this, the applicant will need to show how they intend to stop unauthorised residents, visitors, and commercial users from parking vehicles within the development and who will be responsible for enforcing this.

Trip Generation

- The TRICS database has been used to determine the trip generation for the residential element of the development. The total person trip rates for the private residential element of the development detailed in Table 8.3.2 are too low and do not correspond with the TRICS outputs. The trip rate should be 0.542 in the AM peak hour and 0.449 in the PM peak hour.

As a result, the total person trips have been underestimated in both peak periods. These should be revised accordingly.

- The TA then goes onto state that the TRICS database has been used to predict vehicle trip generation. The vehicle trip rates detailed in tables 9.2.1a and 9.2.1b do not correspond with the TRICS outputs. It is also unclear why this approach has been undertaken given Census mode share is always going to be far more representative than a vehicle trip rate taken form TRICS. Furthermore the car parking ratios for the TRICS survey sites used are not comparative to the development site.
- The TRICS analysis (and therefore the baseline traffic count), distribution, and mode share needs to be adjusted as advised above before an assessment can be made of the impact on the current access junction which serves the site and the current bus terminal from the B353 Manor Road, and the junction that serves the car park of a nearby Sainsburys Supermarket and Lloyds Pharmacy from the B353 Manor Road.
- Peak hour service vehicle trips for both the residential and non-residential elements of the development should also be detailed in the TA.

Impact of the Development on Local Bus Services

- Bus Stops SA and SB Lower Mortlake Road/Manor Circus are approximately 400m walking distance from the site and are served by 10 different services. However, Transport for London are in the process of reviewing the services in this area with a view to reallocating capacity from these stops. Please see the link below for details of the proposed changes: https://consultations.tfl.gov.uk/buses/bus-changes-richmond.

- The applicant should note that services H22 and 493 will no longer serve the above bus stops. Services 110 and 419 will be merged and will both operate as service No. 110. Service 493 will operate from Manor Road/North Shen Station. Service H37 will operate every 8 minutes instead of every 6 minutes per hour. The applicant should reassess the development's accessibility to bus services with the proposed changes in mind.

- The applicant has estimated that the development will create an extra 14 two-way trips by bus in the AM peak hour and 13 in the PM weekday peak hour. However, this only considers journeys to work, and not journeys to primary and secondary schools and to tertiary education establishments. The applicant is advised to use the Census of 2011 to examine household composition and dwelling with usable rooms to estimate how many children and further education students will need to travel to school or college by bus and what the likely impact on services will be. However, Holy Trinity Church of England Primary School is within 0.5 miles of the site and Christ's School and Sixth Form College is 1 miles' walking distance from the entrance to the development. Therefore, it may be possible for children to get to school without being dependant on bus services.

Impact of this Development on the Pedestrian Network

- As above, the applicant has used travel to work data form the Census of 2011 and TRICS data to calculate that the development will create an additional 16 pedestrian trips in the AM weekday peak hour and 15 trips in the PM weekday peak hour.

- The B353 Manor Road has one pedestrian crossing refuge approximately 20m south of the mid-point of the main pedestrian access to this site, which is only 0.8m wide, and one 12m north of the secondary pedestrian access to the site which is 2m wide. There are chevrons to accommodate both of these established crossing points and maintain a carriageway passing width of 3m in both directions for vehicular traffic. There is a carriageway length of 92m between the two crossing refuges and 24m between the smaller southern pedestrian refuge and the railway level crossing, which can act as a pedestrian crossing facility from

west to east when the barriers are down, and the pedestrian footbridge across the railway line on the eastern side of Manor Road.

- The applicant proposes a pedestrian and cycle shared use facility of 6m width along the frontage of the site, and there is a footway of 2m in width on the eastern side of the B353 Manor Road.

- Current highway design standards state that there should be a carriageway length of at least 90m between signalised pedestrian crossing facilities, and that these should be considered when there is a gap in vehicular traffic to enable able-bodied pedestrians to cross two lanes of traffic of less than 5 seconds and a gap of less than 12 seconds for other groups of pedestrians.

- I have looked at the applicant's PICARDY forecasts for 2023 and 2028 and conclude that although there will be a sufficiently long gap between vehicles to enable any pedestrian to cross one lane of vehicular traffic on Manor Road to get to or from one of the refuges, I am unable to comment on whether either of the refuge islands will be wide enough to accommodate increased pedestrian movements because the applicant has only forecast the number of pedestrians travelling to work but not those who might walk to school.

- Assuming that those who use sustainable modes of transport to get to work will need to cross Manor Road to get to North Sheen railway station, the south-bound bus stop located in the service layby at Sainsburys, or to walk to Richmond town centre, the development will create an additional 110 pedestrian trips in the AM weekday peak hour and 96 in the PM weekday peak hour, not including children who need to cross the road to walk between the development and their school.

- For me to be able to comment fully on whether the development provides safe and suitable access to the surrounding amenities for pedestrians the applicant should complete a full pedestrian (PERS) audit in accordance with standards set out in TfL's current guidance which can be accessed at: https://tfl.gov.uk/corporate/about-tfl/what-we-do/walking

- While completing this audit, the applicant needs to use the census of 2011 to estimate the number of children of school age that will live in this development and need to be provided with a safe walking route to and from school.

- Once they have an accurate estimate of the number of likely pedestrian trips, they should conduct an assessment as to whether pedestrian crossing facilities need improving using current guidance which can be found at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/330269/ltn-1-95_Assessment-Crossings.pdf

- The applicant will provide a 6m wide shared use facility for pedestrians and cyclists along the frontage of the site. They will need to enter into an agreement to do this under S38 and S278 of the Highways Act 1980. Any detailed design will be subject to technical approval by Richmond Borough Council's Highways team. For more information please contact Will Marshall in the first instance at: will.marshall@richmondandwandsworth.gov.uk. Please note that any trees planted in the highway will attract a commuted sum.

- Although the applicant may not be intending to offer the internal footways and public open spaces within the development for adoption as highway maintainable at public expense, they will need to submit a full surfacing and materials plan to the Local Planning Authority to ensure that all of these areas are built to adoptable standards in accordance with the

London Borough of Richmond's Standard Construction Details. Because of his, a surfacing and materials plan needs to be secured as a planning condition.

- In addition to this, the cycle area and the pedestrian area on the shared use facility needs to be defined by the addition of a white line at the centre and a hard-standing area with a dropped kerb and tactile paving needs to be inserted immediately south of the main vehicular access to the site. The applicant will also need to confirm whether the existing pedestrian crossings are within the anticipated pedestrian desire lines bearing in mind the newly created pedestrian access to the site.

Cycling and Cycle Parking

- The cycle parking provision proposed is in accordance with draft London Plan standards. However, the storage areas are required to be broken down into smaller areas for security.
- Cycle Parking should be designed and laid out in accordance with the guidance contained in the London Cycling Design Standards. All cycle parking spaces should also be easily accessible from adjacent cycle routes and appropriate signage, preferably using the Legible London system, should be provided. Shower and locker facilities should be provided for the non-residential uses on site.

Impact of the Development on Rail Services

- When the TRICS analysis is adjusted as recommended and the travel to work data in the Census of 2011 applied to residents, it shows that the development will create an additional 27 mainline rail trips in the AM weekday peak hour and 31 trips in the PM weekday peak. However, again, this does not include school children or students in tertiary education who might also use the trains at that time. That said, it is likely that the number of trips could be accommodated by existing services.

- Both of the platforms at North Sheen Railway Station are accessed via a pedestrian footbridge and a footway that is hard-surfaced and lit. There is currently no disabled access to the station, and the above-mentioned steps to the footbridge are very steep. There are also only six seats on the platform and no seating that is fully sheltered from the elements. The applicant needs to liaise with Network Rail and the train operator (South-West Trains) to investigate the possibility of a financial contribution for the improvement of access to the station for people with disabilities and the provision of more sheltered seats on the platform.

Rebecca Doull
Principal Planner

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avisonyoung.co.uk

Brett Littlewood

Subject: FW: Homebase Manor Road - consultation comments from TfL

From: Doull, Rebecca (Avison Young - UK) [mailto:Rebecca.Doull@avisonyoung.com]
Sent: 02 April 2019 16:16
To: Karen Smith <Karen.Smith@sandersonassociates.co.uk>
Cc: Crick, Rachel (Avison Young - UK) <Rachel.Crick@avisonyoung.com>
Subject: Homebase Manor Road - consultation comments from TfL

Hi Karen,

We have received the below consultation response from TfL. Could you review and respond to each of the queries/comments please?

Kind regards,
Becky

TfL response

- The development is car-free which is welcomed by TfL.
- A Car Park Design and Management Plan is required which details the location of the additional 7% of disabled persons parking and how it will be monitored; this should be secured as a condition or through the s106.
- 20% of the spaces are required to have Electric Vehicle Charging Points, with passive provision for the remaining spaces. This should be secured by condition.
- It is proposed to amend and extend the existing Controlled Parking Zone (CPZ) adjacent to the site. It is also proposed that owners and occupiers of the development will be restricted from obtaining parking permits for the CPZ. This is welcomed and should be secured through an appropriate legal mechanism.
- Two electric car club spaces are proposed on site. TfL would recommend that three years free car club membership is secured for all new residents

Trip generation and modal split

- The TRICS database has been used to determine the trip generation for the residential element of the development. The total person trip rates for the private residential element of the development detailed in Table 8.3.2 are too low and do not correspond with the TRICS outputs. The trip rate should be 0.542 in the AM peak hour and 0.449 in the PM peak hour. As a result the total person trips have been underestimated in both peak periods. These should be revised accordingly.
- The TA then goes onto state that the TRICS database has been used to predict vehicle trip generation. The vehicle trip rates detailed in tables 9.2.1a and 9.2.1b do not correspond with the TRICS outputs. It is also unclear why this approach has been undertaken given Census mode share is always going to be far more representative than a vehicle trip rate taken form TRICS. Furthermore the car parking ratio's for the TRICS survey sites used are not comparative to the development site.
- TfL would recommend that given the car free nature of the development, the Census car mode share should be adjusted down to account for the limited car parking provision and the remaining trips reassigned pro-rata to the other modes. Also given the distance to the closest Underground station, all Underground trips should be combined with bus trips given that buses services are predominantly likely to be used to access Underground stations.
- Peak hour service vehicle trips for both the residential and non-residential elements of the development should also be detailed in the TA.
- Once this trip generation assessment is updated, TfL will be able to assess the impact on the highway and public transport networks.

Buses

- Information on peak hour direction of travel for bus trips, based on Census data, is required so TfL can determine if a bus contribution is required.

Cycle Parking

- It is proposed to provide 720 cycle parking spaces within a basement storage area and a further 120 spaces within a ground floor storage area. Further short stay spaces will be provided within the public realm. The cycle parking provision proposed is in accordance with draft London Plan standards. However, the storage areas are required to be broken down into smaller areas for security.
- Cycle Parking should be designed and laid out in accordance with the guidance contained in the London Cycling Design Standards. All cycle parking spaces should also be easily accessible from adjacent cycle routes and appropriate signage, preferably using the Legible London system, should be provided.
- Shower and locker facilities should be provided for the non-residential uses on site.

Pedestrian and Cycle Access

- the TA should identify if there any measures that could be implemented which would prevent any of the recorded accidents along Manor Road (excluding Manor Circus) and contribute towards the Vision Zero approach. Furthermore, are the existing pedestrian refuges on Manor Road still on the pedestrian desire line given the layout of the development site?

Manor Circus

- TfL are currently developing a scheme to address road safety and improve pedestrian and cycle facilities at Manor Circus. Given that the proposed development will increase pedestrian and cycle movements at Manor Circus, TfL request a financial contribution of £420,000 towards the implementation of his scheme. The financial contribution equates to 15% of the final scheme cost, and therefore TfL believes this is a justified level of contribution.

Travel Plan, Servicing and Construction

- Travel Plan, Delivery and Servicing Plan and Construction Environmental Management Plan (CEMP) to be secured through conditions/S106

Summary

In summary, TfL requests that further information is provided before we can fully assess and be supportive of the proposed development. Specific mitigation measures and further work is summarised below:

• Vehicle access to TfL's existing bus terminus must be maintained at all times.
• Car Park Design and Management Plan to be secured.
• Electric Vehicle Charging Points to be provided in accordance with draft London Plan standards.
• A mechanism whereby future residents are prevented from applying for parking permits within the existing CPZ's.
• Three year's free car club membership for all new residents.
• Further work required on the trip generation assessment before it is considered to be acceptable.
• Information on peak hour direction of travel for bus trips is required so TfL can determine if a contribution is required.
• Cycle parking should be designed and laid out in accordance with the guidance contained in the London Cycling Design Standards
• Cycle parking storage areas should be broken down into smaller areas for security.
• Shower and locker facilities should be provided on site.
• The TA should identify if there any measures that could be implemented which would prevent any to the recorded accidents along Manor Road.
• Are the existing pedestrian refuges on Manor Road still on the pedestrian desire line?

- A financial contribution of £420,000 towards the implementation of a TfL

scheme at Manor Circus which will improve safety and pedestrian and cycle facilities.
• Travel Plan to be secured, monitored, reviewed, and enforced through the s106.
• A Delivery and Servicing Plan to be secured by condition.
• A Construction Logistics Plan (CLP) to be secured by condition and discharged in consultation with TfL.

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Network Rail Consultation Response

Extract from Rachel Crick, Avison Young, email dated 9th May 2019

"We have heard back from Network Rail who object to the scheme until further information and assessment work is provided.

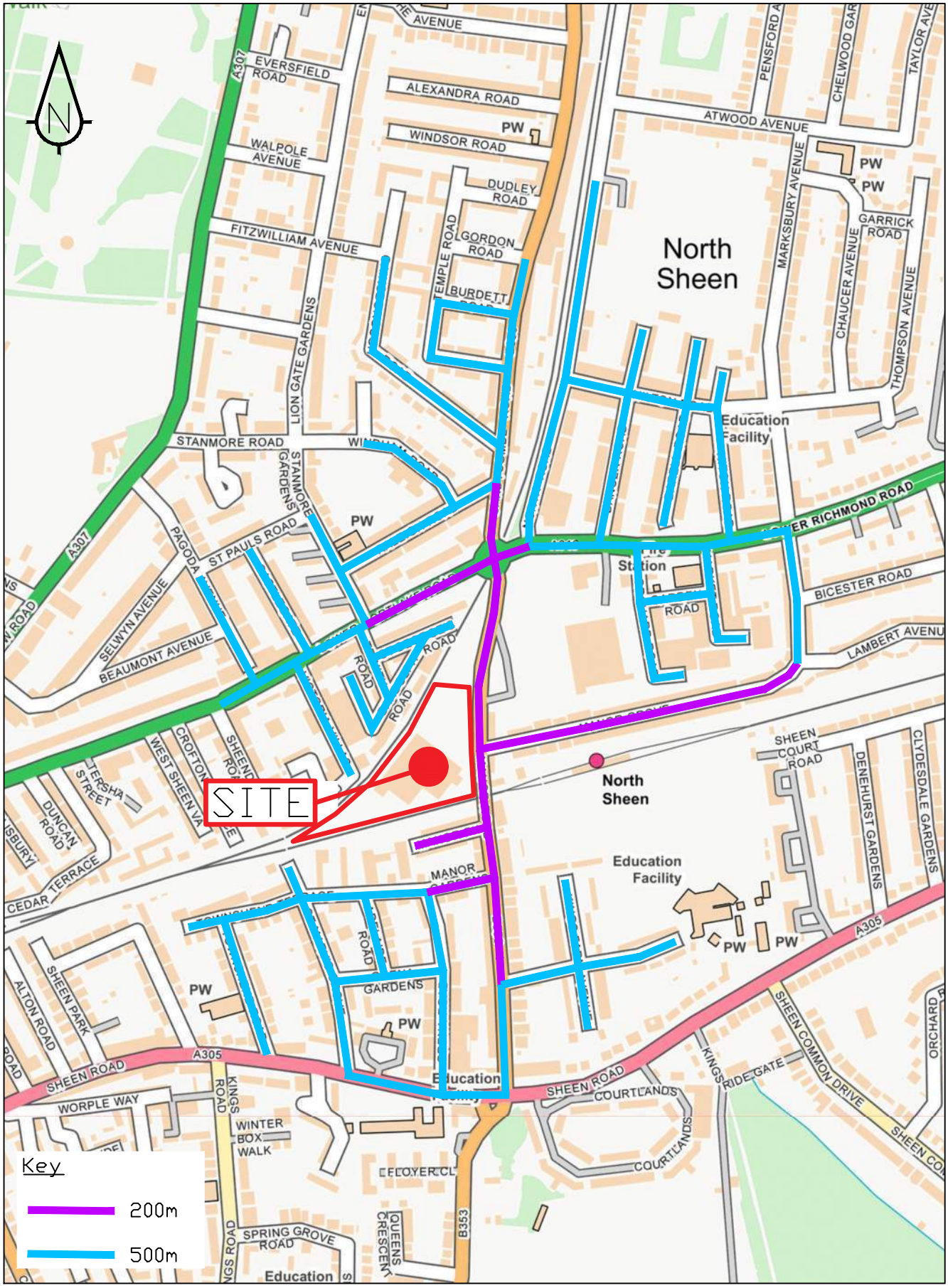
- *Explanation on the trip generation, modal split and TRICS – the figures are extremely low and therefore underestimated*
- *Further details are required on the assessment of the pedestrian and cycle use on the safety of the level crossing*
- *Further details are required on the proposed mitigation measures of the impact of the proposals on the safety of the level crossing and North Sheen station*

They are generally in support of comments given by TfL and LBR. I am intending to contact Network Rail and discuss these points further but I thought I would send them on in the meantime."

APPENDIX B

Sketch 1 – Parking Survey Area Plan

Alpha Parking Ltd Parking Stress Survey Report



sanderson associates (consulting engineers) ltd Highways | Traffic | Transportation | Water T 01924 844080 mail@sandersonassociates.co.uk F 01924 844081 www.sandersonassociates.co.uk	Approximate 200m & 500m Distances from Site	Drawn: CH	Scale: NTS
		Checked: KS	Date: July 2018
	Proposed Change of Use Development off Manor Road, Richmond	Approved: KS	Drawing Number: Sketch 1
			Size: A4

Manor Road, Richmond

Parking Stress Survey Report

PARKING STRESS SURVEY REPORT

Development: Manor Road, Richmond

Location: London Borough of Richmond

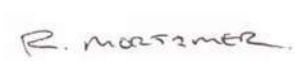
Client: Avanton Richmond Developments Limited

Project Manager: Roger Mortimer

Version No: V01

Date: 26/11/2018

Approvals:

Name	Signature	Title
Roger Mortimer		Project Manager
Penny Winder		Director

Contents PAGE

1 INTRODUCTION

Avanton Richmond Developments Limited has commissioned Alpha Parking Ltd to undertake a parking stress survey around the development site known as Manor Road in Richmond.

The purpose of the survey is to examine the roads within 500 metres' walking distance of the site and establish the existing levels of "parking stress", meaning the percentage of the kerbside parking space occupied at peak periods. This information can be used to assess whether there would be sufficient spare capacity on the streets for any additional parking generated by the development or whether special measures would be needed to manage the pressure for parking space.

Further details of the survey project are given in the inception document shown in Appendix A and a plan of the development site and survey area is shown in Figure 1.

The idea of parking stress surveys arose following changes in government policy in the 1990s to address concerns about growth in car use. In order to limit the available parking spaces the previous requirements to provide parking within housing developments were dropped and, instead, planning authorities were given new powers to cap the number of spaces that developers might choose to provide. However, reducing the levels of parking space did not necessarily stop the new residents from wanting cars. This tended to put pressure on the parking facilities in surrounding roads and, in some cases, for parking demand to exceed the available capacity.

In response to this a number of local authorities, such as the The London Borough of Lambeth, realised the need to assess such problems at the planning stage and the concept of "planning/parking stress surveys" came into being. These allowed early identification of likely problems and meant that protective measures (often in the form of parking restrictions on the streets) could be brought in with, and funded by, the development. The London Borough of Lambeth produced what are recognised as the standard guidelines on how to approach these surveys the “Lambeth Methodology”. This approach is used as the basis for this survey.

2 PROJECT APPROACH

Alpha Parking Ltd recognises that the parking stress survey method developed by Lambeth Council has become an unofficial standard for this type of work and we use this as a basis for our surveys. This standard approach has an added benefit in allowing the results to be readily understood by anyone familiar with previous surveys.

However, we recommend that survey times and technical standards (such as the nominal length of road occupied by a parked vehicle) are tailored to reflect the preferences of the particular local authority involved and we plan the surveys to reflect these requirements.

Every Planning Department will decide on the parking situation on a case by case basis. This means that it is not possible to predict the planning decision, therefore the surveys are providing an independent and professional set of results to facilitate the decision rather than a conclusion. As an indication of the message from the results we would suggest that 85% is an indicative level at which parking stress becomes a cause for concern after allowance has been made for parking generated by the development. At this point, residents will begin to have difficulty parking close to their homes. Anything over 95% represents a situation where full capacity has effectively been reached. The use of a 500 metre walking distance to define the roads affected by the development is accepted as standard practice.

3 METHODOLOGY

Background Assessment

An initial assessment was made taking into account the following factors:-

- The size and nature of the development
- Setting of development – residential/industrial etc, proximity to shopping centres, schools, railway stations etc
- Parking provisions within the development
- Other transport improvements linked to the development.

Surveys

The survey area and the times and days of the surveys were defined taking into account the results of the background assessment. Within each road, the lengths of each section of restricted or unrestricted parking were measured and recorded, together with the number of vehicles parked upon that section and the lengths of any dropped kerbs.The position of skips was also noted, as well as any other unexpected items on the roads.

Analysis

The lengths of restricted and unrestricted parking recorded on site were converted into equivalent numbers of parking spaces, assuming a 5.5 metre length for each space. Any sections with dropped kerbs were excluded from the calculation, as were any lengths of less than 5.5 metres.

4 RESULTS

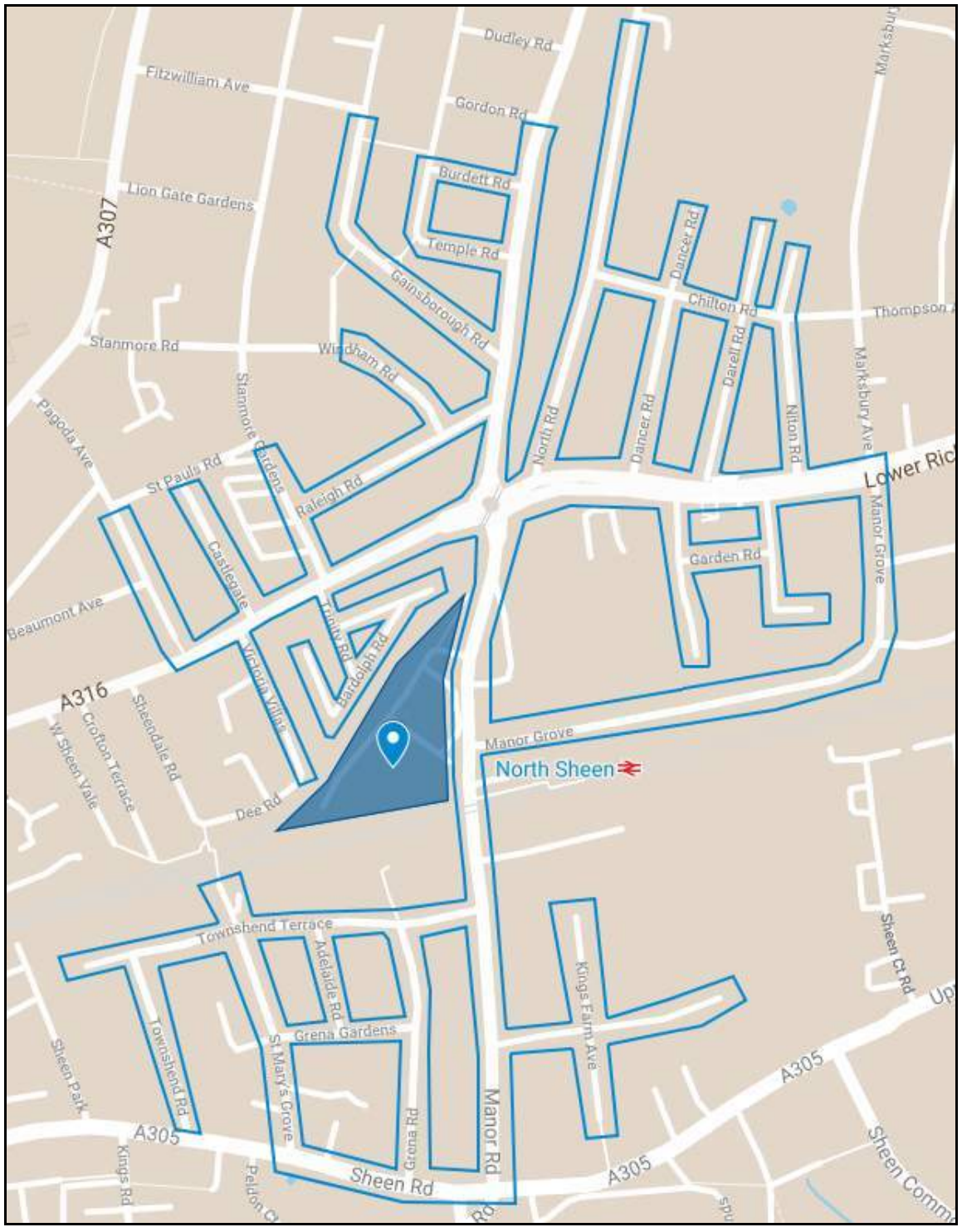
Surveys

The area surveyed is shown on the plan in Figure 1 and the roads surveyed together with any additional comments are listed underneath each table.

The surveys took place between 01:00 – 05:30, 09:00 – 10:00 and 13:00 – 14:00 on Monday 12th and Tuesday 13th November 2018.

The tables show a detailed breakdown of the results for both days and beats and what restrictions are in place on the streets within the survey area.

Figure 1 – Survey Area



- *The shaded area/pin drop shows the site location*

Adelaide Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Disabled	0	0	1	0.00%	1	0.00%	1	0.00%	1	0.00%	1	0.00%	1	0.00%
Resident Permit Holder	10	10	8	80.00%	9	90.00%	8	80.00%	8	80.00%	8	80.00%	8	80.00%
Resident Permit Holder & Limited Waiting	4	4	3	75.00%	3	75.00%	4	100.00%	4	100.00%	4	100.00%	4	100.00%
Single Yellow/Red Lines	0	15	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Total	**14**	**29**	**12**	**85.71%**	**13**	**92.86%**	**13**	**44.83%**	**13**	**92.86%**	**13**	**92.86%**	**13**	**44.83%**

Bardolph Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Pay & Display	2	3	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Resident Permit Holders	13	17	10	76.92%	10	76.92%	12	70.59%	10	76.92%	10	76.92%	12	70.59%
Single Yellow/Red Lines	0	2	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Total	**15**	**22**	**10**	**66.67%**	**10**	**66.67%**	**12**	**54.55%**	**10**	**66.67%**	**10**	**66.67%**	**12**	**54.55%**

Burdett Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Disabled	1	1	1	100.00%	0	0.00%	1	100.00%	1	100.00%	0	0.00%	1	100.00%
Limited Waiting	2	2	2	100.00%	1	50.00%	0	0.00%	2	100.00%	2	100.00%	0	0.00%
Resident Permit Holder	18	18	13	72.22%	14	77.78%	17	94.44%	12	66.67%	14	77.78%	17	94.44%
Total	**21**	**21**	**16**	**76.19%**	**15**	**71.43%**	**18**	**85.71%**	**15**	**71.43%**	**16**	**76.19%**	**18**	**85.71%**

Carrington Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Disabled	2	2	1	50.00%	1	50.00%	2	100.00%	2	100.00%	2	100.00%	2	100.00%
Unrestricted	48	48	32	66.67%	30	62.50%	40	83.33%	28	58.33%	28	58.33%	41	85.42%
Total	**50**	**50**	**33**	**66.00%**	**31**	**62.00%**	**42**	**84.00%**	**30**	**60.00%**	**30**	**60.00%**	**43**	**86.00%**

Castlegate

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Disabled	1	1	0	0.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Resident Permit Holder	27	27	23	85.19%	22	81.48%	26	96.30%	20	74.07%	21	77.78%	24	88.89%
Resident Permit Holder & Limited Waiting	4	4	4	100.00%	4	100.00%	3	75.00%	4	100.00%	4	100.00%	3	75.00%
Single Yellow/Red Lines	0	13	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Total	**32**	**45**	**27**	**84.38%**	**27**	**84.38%**	**29**	**64.44%**	**24**	**75.00%**	**25**	**78.13%**	**27**	**60.00%**

Chilton Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %

Resident Permit Holder	19	19	14	73.68%	14	73.68%	17	89.47%	14	73.68%	13	68.42%	17	89.47%		
Unrestricted	25	25	20	80.00%	19	76.00%	22	88.00%	20	80.00%	20	80.00%	21	84.00%		
Total	**44**	**44**	**34**	**77.27%**	**33**	**75.00%**	**39**	**88.64%**	**34**	**77.27%**	**33**	**75.00%**	**38**	**86.36%**		

Dancer Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Disabled	1	1	1	100.00%	1	100.00%	1	100.00%	1	100.00%	1	100.00%	1	100.00%
Resident Permit Holder	79	79	53	67.09%	51	64.56%	67	84.81%	50	63.29%	51	64.56%	67	84.81%
Total	**80**	**87**	**54**	**67.50%**	**52**	**65.00%**	**68**	**78.16%**	**51**	**63.75%**	**52**	**65.00%**	**68**	**78.16%**

Darrel Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Disabled	1	1	0	0.00%	0	0.00%	1	100.00%	0	0.00%	0	0.00%	1	100.00%
School Keep Clear	6	6	1	16.67%	0	0.00%	0	0.00%	2	33.33%	0	0.00%	0	0.00%
Unrestricted	65	65	47	72.31%	49	75.38%	52	80.00%	48	73.85%	48	73.85%	53	81.54%
Total	**72**	**81**	**48**	**66.67%**	**49**	**68.06%**	**53**	**65.43%**	**50**	**69.44%**	**48**	**66.67%**	**54**	**66.67%**

* School Keep Clear restriction applies Monday - Friday between 08.00 to 09.30 and 14.30-16.30

Gainsborough Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Car Club	1	1	1	100.00%	1	100.00%	1	100.00%	1	100.00%	1	100.00%	1	100.00%
Limited Waiting	2	2	1	50.00%	1	50.00%	0	0.00%	0	0.00%	0	0.00%	1	50.00%
Resident Permit Holder	82	82	55	67.07%	59	71.95%	76	92.68%	51	62.20%	56	68.29%	76	92.68%
Single Yellow/Red Lines	0	4	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Total	**85**	**89**	**57**	**67.06%**	**61**	**71.76%**	**77**	**86.52%**	**52**	**61.18%**	**57**	**67.06%**	**78**	**87.64%**

Garden Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Unrestricted	19	19	17	89.47%	17	89.47%	14	73.68%	18	94.74%	17	89.47%	14	73.68%
Total	**19**	**19**	**17**	**89.47%**	**17**	**89.47%**	**14**	**73.68%**	**18**	**94.74%**	**17**	**89.47%**	**14**	**73.68%**

Grena Gardens

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Disabled	2	2	1	50.00%	1	50.00%	2	100.00%	2	100.00%	1	50.00%	2	100.00%
Resident Permit Holder	16	16	12	75.00%	12	75.00%	13	81.25%	11	68.75%	12	75.00%	13	81.25%
Resident Permit Holder & Limited Waiting	2	2	2	100.00%	2	100.00%	2	100.00%	2	100.00%	2	100.00%	2	100.00%
Single Yellow/Red Line	0	14	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Total	**20**	**34**	**15**	**75.00%**	**15**	**75.00%**	**17**	**50.00%**	**15**	**75.00%**	**15**	**75.00%**	**17**	**50.00%**

Grena Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	25	25	23	92.00%	22	88.00%	24	96.00%	22	88.00%	21	84.00%	24	96.00%
Resident Permit Holder & Limited Waiting	5	5	2	40.00%	2	40.00%	4	80.00%	3	60.00%	3	60.00%	4	80.00%
Total	**30**	**31**	**25**	**83.33%**	**24**	**80.00%**	**28**	**93.33%**	**25**	**83.33%**	**24**	**80.00%**	**28**	**93.33%**

Kings Farm Avenue

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Disabled	3	3	4	133.33%	3	100.00%	4	133.33%	3	100.00%	3	100.00%	4	133.33%
Unrestricted	52	52	38	73.08%	37	71.15%	44	84.62%	38	73.08%	37	71.15%	45	86.54%
Total	**55**	**55**	**42**	**76.36%**	**40**	**72.73%**	**48**	**87.27%**	**41**	**74.55%**	**40**	**72.73%**	**49**	**89.09%**

Lower Mortlake Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Loading & Disabled	4	4	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Resident Permit Holder	6	6	5	83.33%	5	83.33%	5	83.33%	5	83.33%	5	83.33%	5	83.33%
Resident Permit Holder & Limited Waiting	2	2	4	200.00%	4	200.00%	4	200.00%	4	200.00%	4	200.00%	4	200.00%
Total	**12**	**12**	**9**	**75.00%**	**9**	**75.00%**	**9**	**75.00%**	**9**	**75.00%**	**9**	**75.00%**	**9**	**75.00%**

Lower Richmond Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Loading	2	2	0	0.00%	0	0.00%	0	0.00%	1	50.00%	0	0.00%	0	0.00%
Limited Waiting	4	4	2	50.00%	1	25.00%	0	0.00%	0	0.00%	1	25.00%	0	0.00%
Single Yellow/Red Lines	0	40	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Total	**6**	**46**	**2**	**33.33%**	**1**	**16.67%**	**0**	**0.00%**	**1**	**16.67%**	**1**	**16.67%**	**0**	**0.00%**

Manor Gardnes

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	10	10	8	80.00%	8	80.00%	8	80.00%	8	80.00%	8	80.00%	8	80.00%
Resident Permit Holder & Limited Waiting	10	10	9	90.00%	9	90.00%	9	90.00%	8	80.00%	9	90.00%	8	80.00%
Total	**20**	**23**	**17**	**85.00%**	**17**	**85.00%**	**17**	**85.00%**	**16**	**80.00%**	**17**	**85.00%**	**16**	**80.00%**

Manor Grove

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Disabled	2	2	2	100.00%	2	100.00%	2	100.00%	1	50.00%	1	50.00%	2	100.00%
Unrestricted	190	190	116	61.05%	112	58.95%	127	66.84%	113	59.47%	107	56.32%	130	68.42%
Total	**192**	**192**	**118**	**61.46%**	**114**	**59.38%**	**129**	**67.19%**	**114**	**59.38%**	**108**	**56.25%**	**132**	**68.75%**

Manor Park

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Disabled	2	2	1	50.00%	1	50.00%	2	100.00%	2	100.00%	2	100.00%	2	100.00%
Unrestricted	22	22	20	90.91%	19	86.36%	21	95.45%	20	90.91%	20	90.91%	21	95.45%
Total	**24**	**24**	**21**	**87.50%**	**20**	**83.33%**	**23**	**95.83%**	**22**	**91.67%**	**22**	**91.67%**	**23**	**95.83%**

Manor Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Single Yellow/Red Lines	0	15	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Unrestricted	39	39	30	76.92%	29	74.36%	34	87.18%	27	69.23%	27	69.23%	34	87.18%
Total	**39**	**54**	**30**	**76.92%**	**29**	**74.36%**	**34**	**62.96%**	**27**	**69.23%**	**27**	**69.23%**	**34**	**62.96%**

Market Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Loading & Disabled	2	2	1	50.00%	1	50.00%	0	0.00%	1	50.00%	1	50.00%	0	0.00%
Single Yellow/Red Lines	0	2	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Unrestricted	8	8	6	75.00%	6	75.00%	3	37.50%	8	100.00%	7	87.50%	3	37.50%
Total	**10**	**12**	**7**	**70.00%**	**7**	**70.00%**	**3**	**25.00%**	**9**	**0.00%**	**8**	**80.00%**	**3**	**25.00%**

Niton Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
School Keep Clear	4	4	0	0.00%	0	0.00%	1	25.00%	0	0.00%	0	0.00%	1	25.00%
Unrestricted	31	31	21	67.74%	21	67.74%	22	70.97%	21	67.74%	19	61.29%	25	80.65%
Total	**35**	**35**	**21**	**60.00%**	**21**	**60.00%**	**23**	**65.71%**	**21**	**60.00%**	**19**	**54.29%**	**26**	**74.29%**

* School Keep Clear restriction applies Monday - Friday between 08.00 to 09.30 and 14.30-16.30

North Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Limited Waiting	3	3	2	66.67%	2	66.67%	3	100.00%	1	33.33%	3	100.00%	2	66.67%
Resident Permit Holder	108	108	67	62.04%	74	68.52%	95	87.96%	66	61.11%	71	65.74%	89	82.41%
Single Yellow/Red Lines	0	3	1	33.33%	0	0.00%	0	0.00%	0	0.00%	1	33.33%	0	0.00%
Total	**111**	**114**	**70**	**63.06%**	**76**	**68.47%**	**98**	**85.96%**	**67**	**60.36%**	**75**	**67.57%**	**91**	**79.82%**

Orchard Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Limited Waiting & Disabled	4	4	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Unrestricted	26	26	23	88.46%	23	88.46%	9	34.62%	25	96.15%	23	88.46%	8	30.77%

Total	**30**	**30**	**23**	**76.67%**	**23**	**76.67%**	**9**	**30.00%**	**25**	**83.33%**	**23**	**76.67%**	**8**	**26.67%**

Pagoda Avenue

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	28	28	24	85.71%	23	82.14%	25	89.29%	22	78.57%	22	78.57%	26	92.86%
Resident Permit Holder & Limited Waiting	4	4	5	125.00%	5	125.00%	7	175.00%	5	125.00%	6	150.00%	7	175.00%
Total	**32**	**32**	**29**	**90.63%**	**28**	**87.50%**	**32**	**100.00%**	**27**	**84.38%**	**28**	**87.50%**	**33**	**103.13%**

Raleigh Road

			Day 1						Day 2					
Restriction Type	No. Spaces	No. Spaces	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	64	64	63	98.44%	60	93.75%	68	106.25%	61	95.31%	61	95.31%	68	106.25%
Total	**64**	**64**	**63**	**98.44%**	**60**	**93.75%**	**68**	**106.25%**	**61**	**95.31%**	**61**	**95.31%**	**68**	**106.25%**

Sandycombe Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Single Yellow/Red Lines	0	13	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Unrestricted	41	41	36	87.80%	33	80.49%	39	95.12%	36	87.80%	36	87.80%	39	95.12%
Total	**41**	**54**	**36**	**87.80%**	**33**	**80.49%**	**39**	**72.22%**	**36**	**87.80%**	**36**	**87.80%**	**39**	**72.22%**

Sheen Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	19	19	15	78.95%	14	73.68%	15	78.95%	15	78.95%	14	73.68%	15	78.95%
Resident Permit Holder & Limited Waiting	10	10	7	70.00%	7	70.00%	7	70.00%	8	80.00%	6	60.00%	7	70.00%
Single Yellow/Red Lines	0	12	0	0.00%	1	>100.00%	0	0.00%	0	0.00%	2	>100.00%	0	0.00%
Total	**29**	**41**	**22**	**75.86%**	**22**	**75.86%**	**22**	**53.66%**	**23**	**79.31%**	**22**	**75.86%**	**22**	**53.66%**

St George's Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	26	26	15	57.69%	14	53.85%	14	53.85%	16	61.54%	14	53.85%	14	53.85%
Total	**26**	**26**	**15**	**57.69%**	**14**	**53.85%**	**14**	**53.85%**	**16**	**61.54%**	**14**	**53.85%**	**14**	**53.85%**

St Mary's Grove

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	25	25	17	68.00%	17	68.00%	19	76.00%	17	68.00%	16	64.00%	18	72.00%
Resident Permit Holder & Limited Waiting	9	9	5	55.56%	4	44.44%	6	66.67%	6	66.67%	5	55.56%	5	55.56%
Total	**34**	**34**	**22**	**64.71%**	**21**	**61.76%**	**25**	**73.53%**	**23**	**67.65%**	**21**	**61.76%**	**23**	**67.65%**

Stanmore Grove

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	15	15	12	80.00%	13	86.67%	16	106.67%	12	80.00%	12	80.00%	15	100.00%
Resident Permit Holder & Pay at Machine	13	13	11	84.62%	11	84.62%	11	84.62%	10	76.92%	10	76.92%	11	84.62%
Single Yellow/Red Lines	0	1	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Total	**28**	**29**	**23**	**82.14%**	**24**	**85.71%**	**27**	**93.10%**	**22**	**0.00%**	**22**	**78.57%**	**26**	**89.66%**

Temple Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Disabled	1	1	1	100.00%	1	100.00%	1	100.00%	1	100.00%	1	100.00%	1	100.00%
Limited Waiting	2	2	2	100.00%	2	100.00%	1	50.00%	0	0.00%	0	0.00%	1	50.00%
Resident Permit Holder	36	36	19	52.78%	19	52.78%	32	88.89%	21	58.33%	22	61.11%	31	86.11%
Total	**39**	**39**	**22**	**56.41%**	**22**	**56.41%**	**34**	**87.18%**	**22**	**56.41%**	**23**	**58.97%**	**33**	**84.62%**

Townshed Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night])	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	31	31	23	74.19%	23	74.19%	29	93.55%	25	80.65%	26	83.87%	28	90.32%
Single Yellow/Red Lines	0	14	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Total	**31**	**45**	**23**	**74.19%**	**23**	**74.19%**	**29**	**64.44%**	**25**	**80.65%**	**26**	**83.87%**	**28**	**62.22%**

Townshed Terrace

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Disabled	1	1	1	100.00%	1	100.00%	1	100.00%	1	100.00%	1	100.00%	1	100.00%
Resident Permit Holder	40	40	30	75.00%	29	72.50%	28	70.00%	30	75.00%	28	70.00%	31	77.50%
Single Yellow/Red Lines	0	41	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	2.44%
Total	**41**	**82**	**31**	**75.61%**	**30**	**73.17%**	**29**	**35.37%**	**31**	**0.00%**	**29**	**70.73%**	**33**	**40.24%**

Trinity Cottages

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	1	1	0	0.00%	0	0.00%	1	100.00%	1	100.00%	1	100.00%	1	100.00%
Total	**1**	**1**	**0**	**0.00%**	**0**	**0.00%**	**1**	**100.00%**	**1**	**100.00%**	**1**	**100.00%**	**1**	**100.00%**

Trinity Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	19	19	8	42.11%	9	47.37%	14	73.68%	9	47.37%	7	36.84%	15	78.95%
Total	**19**	**19**	**8**	**42.11%**	**9**	**47.37%**	**14**	**73.68%**	**9**	**47.37%**	**7**	**36.84%**	**15**	**78.95%**

Victoria Villas

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Loading & Disabled	2	2	1	50.00%	1	50.00%	0	0.00%	0	0.00%	1	50.00%	0	0.00%
Resident Permit Holder	11	11	3	27.27%	3	27.27%	2	18.18%	3	27.27%	4	36.36%	2	18.18%
Resident Permit Holder & Pay at Machine	12	12	5	41.67%	4	33.33%	2	16.67%	3	25.00%	3	25.00%	2	16.67%
Single Yellow/Red Lines	0	3	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Total	**25**	**28**	**9**	**36.00%**	**8**	**32.00%**	**4**	**14.29%**	**6**	**24.00%**	**8**	**32.00%**	**4**	**14.29%**

Windham Road

			Day 1						Day 2					
Restriction Type	No. Spaces (day)	No. Spaces (night)	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %	0900-1000	Stress %	1300-1400	Stress %	Overnight	Stress %
Resident Permit Holder	11	11	7	63.64%	9	81.82%	9	81.82%	10	90.91%	9	81.82%	9	81.82%
Resident Permit Holder & Limited Waiting	13	13	10	76.92%	10	76.92%	11	84.62%	9	69.23%	11	84.62%	10	76.92%
School Keep Clear	3	3	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Single Yellow/Red Lines	0	4	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Total	**27**	**31**	**17**	**62.96%**	**19**	**70.37%**	**20**	**64.52%**	**19**	**70.37%**	**20**	**74.07%**	**19**	**61.29%**

* School Keep Clear restriction applies Monday - Friday between 08.00 to 09.30 and 14.30-16.30

Overall Results

Overall Results	Spaces	Usage	Average Stress	Average Stress per beat/day	Overall Average Stress
Day 1 - 0900-1000	1453	1028	70.75%	70.13%	67.45%
Day 2 - 0900-1000		1010	69.51%		
Day 1 - 1300-1400	1628	1017	62.47%	62.93%	
Day 2 - 1300-1400		1032	63.39%		
Day 1 - overnight	1674	1161	69.35%	69.30%	
Day 2 - overnight		1159	69.24%		

CONCLUSION

The overall stress percentage covering the survey area is 67.45%. While the parking decisions for developments remains with the Council the results here are moderate for a busy London Borough.

Appendix A

A. CONTACT DETAILS

1. Client Contact Name	Avanton Richmond Developments Limited
2. Client Contact Email address	chris@avanton.co.uk

B. DEVELOPMENT DETAILS

3. Development Name	Manor Road, Richmond
4. Development address (please include post code)	84 Manor Road, Richmond, TW9 1YB
5. Can development plans be provided?	n/a

PLANNING REQUIREMENTS

6. Which Local Authority is requiring the Parking Stress Survey?	London Borough of Richmond
7. Local Authority Planning contact:	n/a

ALPHA PARKING

Manor Road, Richmond: PSS Day 1 AM

SCALE	1 : 1250 @ A0 size
DATE	26/11/2018
DRAWING No.	
DRAWN BY	

ALPHA PARKING

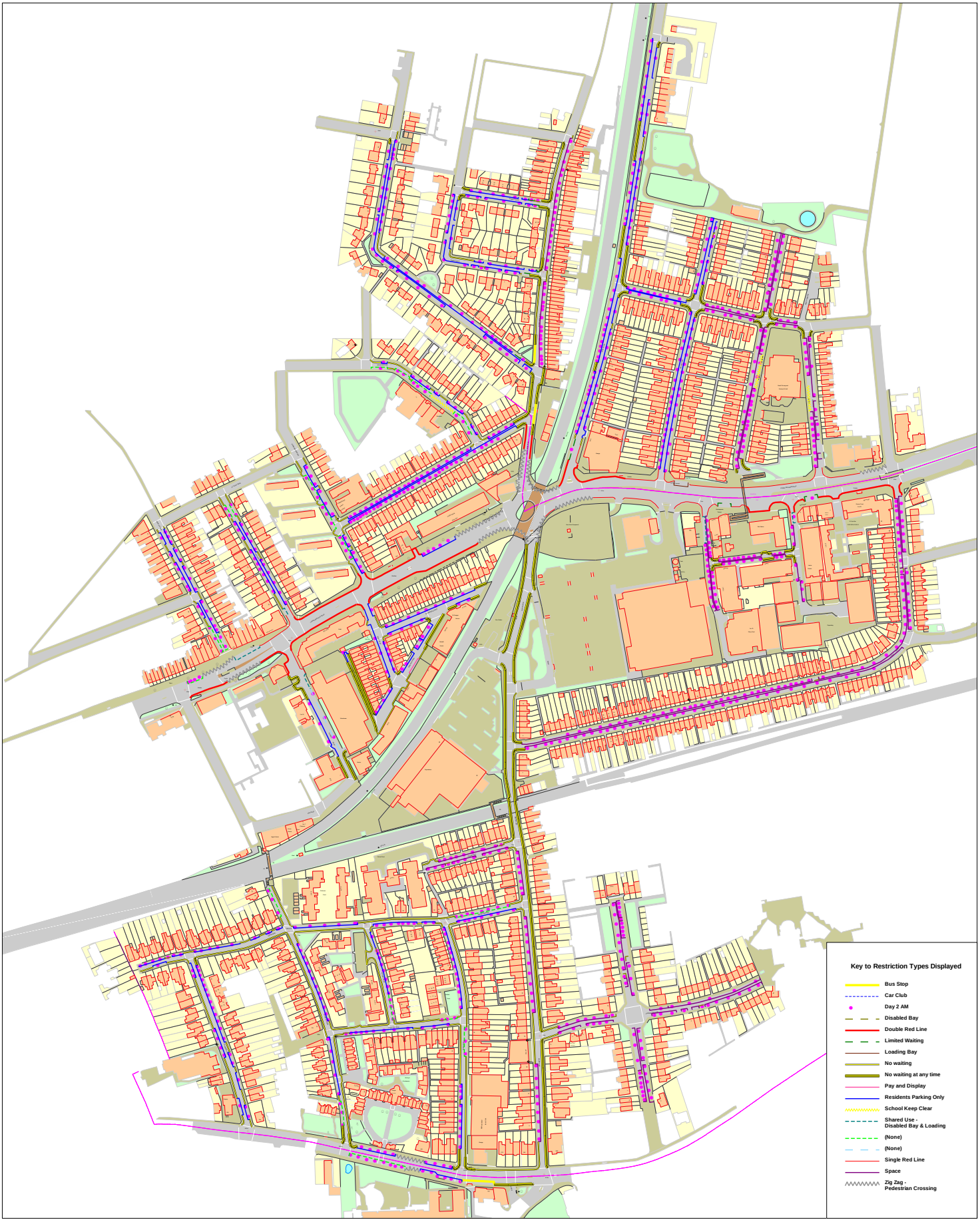
Manor Road, Richmond: PSS Day 1 Night

SCALE	1 : 1250 at A0 size
DATE	26/11/2018
DRAWING No.	
DRAWN BY	

ALPHA PARKING

Manor Road, Richmond: PSS Day 1 PM

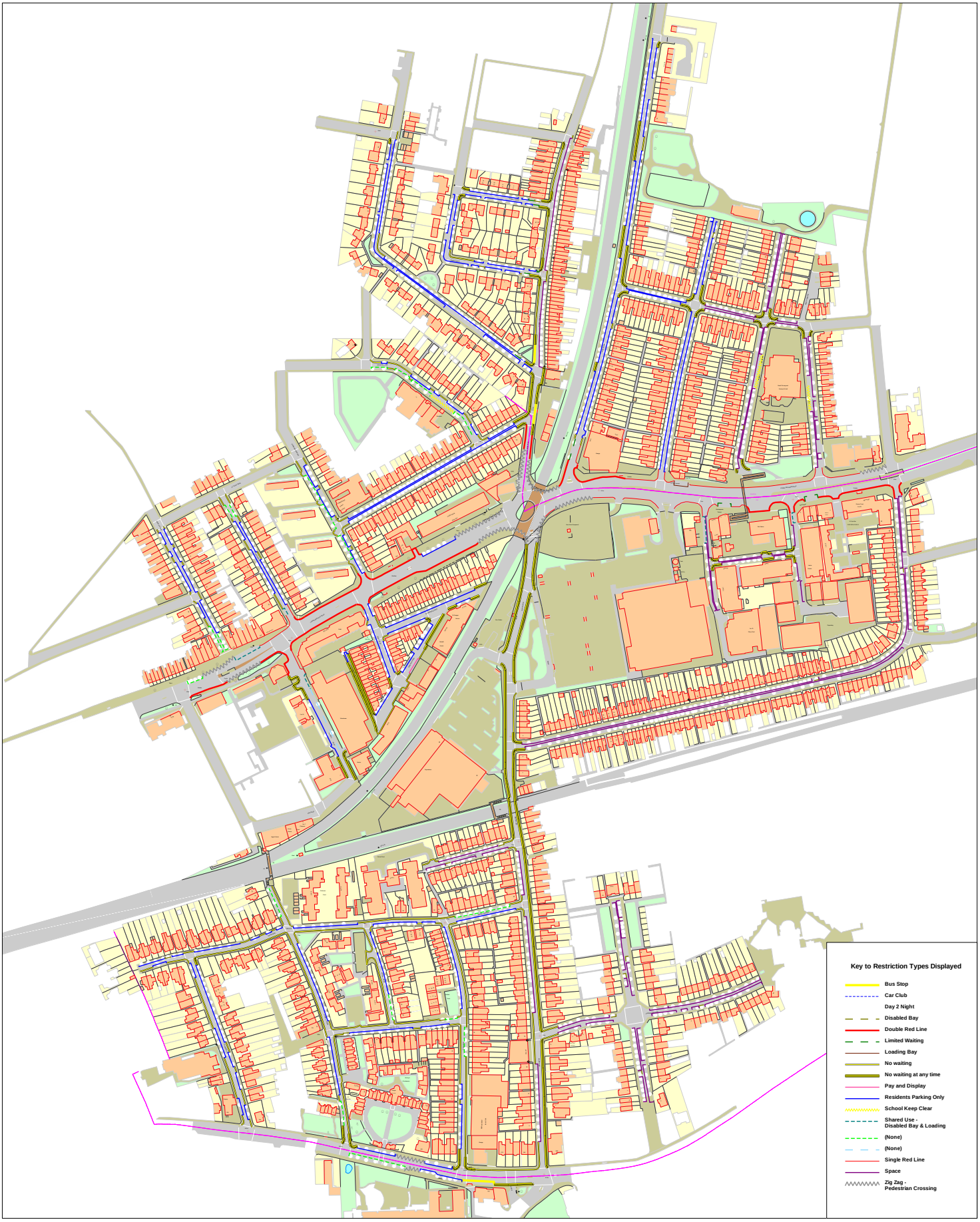
SCALE	1 : 1250 @ A0 size
DATE	26/11/2018
DRAWING No.	
DRAWN BY	



ALPHA PARKING

Manor Road, Richmond: PSS Day 2 AM

SCALE	1 : 1250 @ A0 size
DATE	26/11/2018
DRAWING No.	
DRAWN BY	



ALPHA PARKING

Manor Road, Richmond: PSS Day 2 Night

SCALE	1 : 1250 @ A0 size
DATE	26/11/2018
DRAWING No.	
DRAWN BY	

ALPHA PARKING

Manor Road, Richmond: PSS Day 2 PM

SCALE	1 : 1250 @ A0 size
DATE	26/11/2018
DRAWING No.	
DRAWN BY	

APPENDIX C

Assael Drawing - MNR-AA-ALL-B1-DR-A-1999-R3

Assael Drawing - MNR-AA-BA1-GF-DR-A-2100-R2

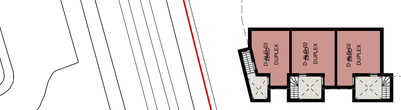
Assael Drawing - MNR-AA-BA2-B-DR-A-2199-R3

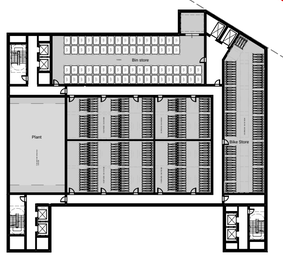
Assael Drawing - MNR-AA-BA2-GF-DR-A-2200-R3

Assael Drawing - MNR-AA-BB1-GF-DR-A-2300-R3

Assael Drawing - MNR-AA-BD1-GF-DR-A-2500-R3

Extract from Landscape Chapter showing additional accessible parking provision





0m 5m 10m 25m 50m

N

General notes

All setting out must be checked on site
All levels must be checked on site and refer to Ordnance Datum Newlyn unless alternative Datum given
All fixings and weatherings must be checked on site
All dimensions must be checked on site
This drawing must not be scaled
This drawing must be read in conjunction with all other relevant drawings, specification clauses and current design risk register
This drawing must not be used for land transfer purposes
Calculated areas in accordance with Assael Architecture's Definition of Areas for Schedule of Areas
This drawing must not be used on site unless issued for construction
Subject to survey, consultation and approval from all statutory Authorities

Revision Status:
P=Preliminary
C=Contract

Drawing notes

Electronic file reference

Enter Source Filename ' Eg AA Title Block'

Status R:	Revision	Date	DRN	CHK	CDM
1	Planning Draft	19/12/18	HB	JL	
2	For Planning	08/02/19	AS	HB	
3	For Planning	16/04/19	LP	JL	

Key

	1 Bed	2 Bed	3 Bed
Shared Ownership			
Market			
Affordable			
Commercial			
Plant/Refuse/Bike Store			

Purpose of information

The purpose of the information on this drawing is for:

- Planning ☒
- Information ☐
- Comment ☐
- Client approval ☐
- Construction ☐

All information on this drawing is not for construction unless it is marked for construction.

Key

Client

Avanton

Project title

A3004
Manor Road Richmond

Drawing title

GA Plans Proposed Basement

Scale @ A1 size: **1:500**

Date: **April '19**

Drawing N°

MNR-AA-ALL-B1-DR-A-1999

Status & Revision

R3

Assael

Assael Architecture Limited
123 Upper Richmond Road
London SW15 2TL

+44 (0)20 7736 7744
info@assael.co.uk
www.assael.co.uk

General notes

All setting out must be checked on site
All levels must be checked on site and refer to Ordnance Datum Newlyn unless alternative Datum given
All fixings and weatherings must be checked on site
All dimensions must be checked on site
This drawing must not be scaled
This drawing must be read in conjunction with all other relevant drawings, specification clauses and current design risk register
This drawing must not be used for land transfer purposes
Calculated areas in accordance with Assael Architecture's Definition of Areas for Schedule of Areas
This drawing must not be used on site unless issued for construction
Subject to survey, consultation and approval from all statutory Authorities

Revision Status:
P=Preliminary
C=Contract

Drawing notes

Electronic file reference

Enter Source Filename ' Eg AA Title Block'

Status R:	Revision	Date	DRN	CHK	CDM
1	Planning Draft	19/12/18	HB	JL	
2	For Planning	08/02/19	AS	HB	

Key

Electric Vehicle Charging Point

Passive Provision

Purpose of information

The purpose of the information on this drawing is for:

- Planning ☒
- Information ☐
- Comment ☐
- Client approval ☐
- Construction ☐

All information on this drawing is not for construction unless it is marked for construction.

Key

Client

Avanton

Project title

A3004
Manor Road Richmond

Drawing title

Block A Plans (North) Proposed Ground Floor

Scale @ A1 size	Date
1:100	**Feb '19**

Drawing N°

MNR-AA-BA1-GF-DR-A-2100

Status & Revision

R2

Assael

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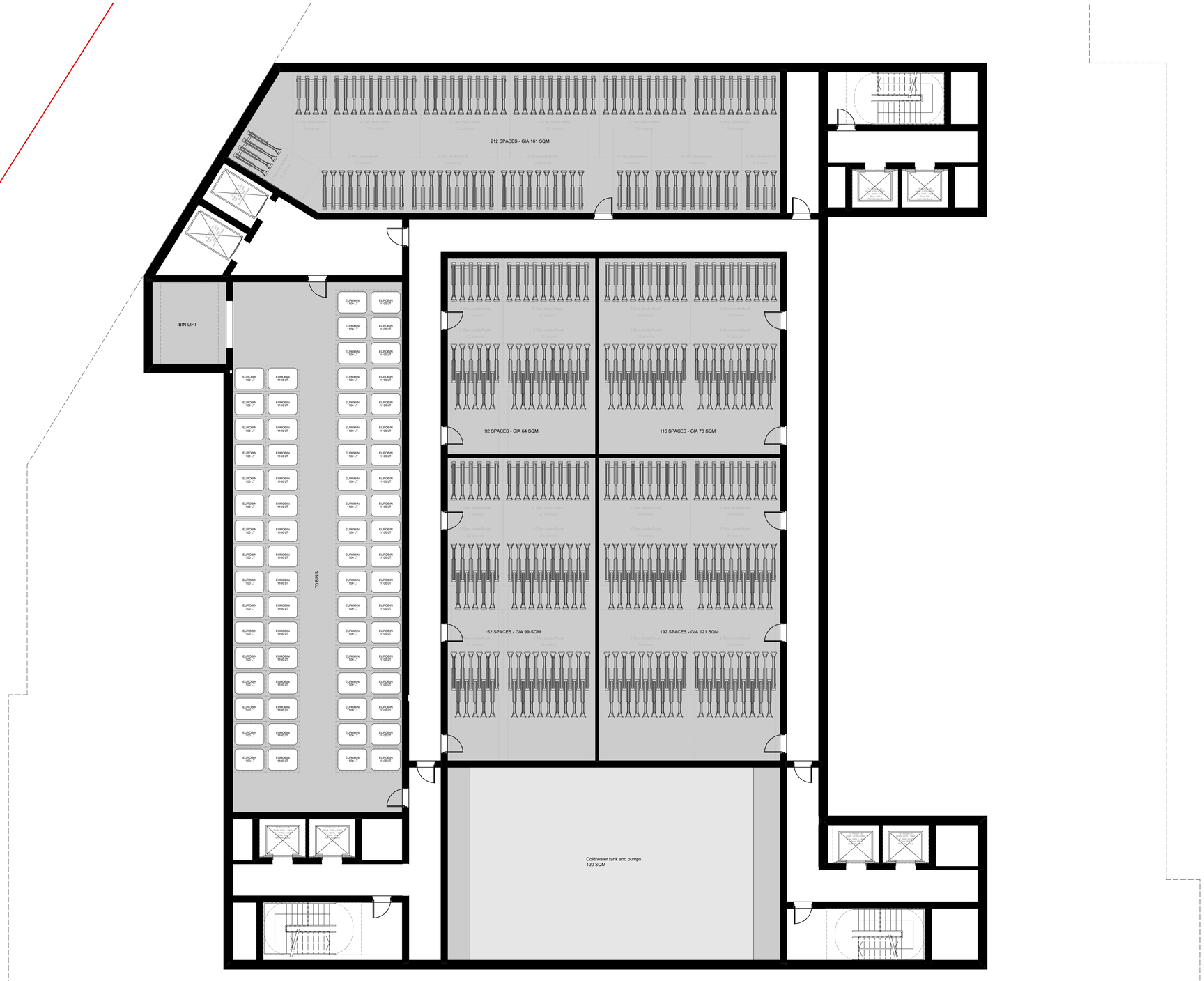

0m 1m 3m 5m 10m

N

General notes

All setting out must be checked on site
All levels must be checked on site and refer to Ordnance Datum Newlyn unless alternative Datum given
All fixings and weatherings must be checked on site
All dimensions must be checked on site
This drawing must not be scaled
This drawing must be read in conjunction with all other relevant drawings, specification clauses and current design risk register
This drawing must not be used for land transfer purposes
Calculated areas in accordance with Assael Architecture's Definition of Areas for Schedule of Areas
This drawing must not be used on site unless issued for construction
Subject to survey, consultation and approval from all statutory Authorities

Revision Status:
P=Preliminary
C=Contract

Drawing notes

Electronic file reference

Enter Source Filename ' Eg AA Title Block'

Status R:	Revision	Date	DRN	CHK	CDM
1	Planning Draft	19/12/18	HB	JL	
2	For Planning	08/02/19	AS	HB	
3	For Planning	15/04/19	LP	JL	

Purpose of information

The purpose of the information on this drawing is for:

- Planning ☒
- Information ☐
- Comment ☐
- Client approval ☐
- Construction ☐

All information on this drawing is not for construction unless it is marked for construction.

Key

Client

Avanton

Project title

A3004
Manor Road Richmond

Drawing title

Block A Plans (South) Proposed Basement

Scale @ A1 size: **1:100**

Date: **April '19**

Drawing N°

MNR-AA-BA2-B-DR-A-2199

Status & Revision

R3

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General notes

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Drawing notes

Electronic file reference

Enter Source Filename ' Eg AA Title Block'

Status R:	Revision	Date	DRN	CHK	CDM
1	Planning Draft	19/12/18	HB	JL	
2	For Planning	08/02/19	AS	HB	
3	For Planning	16/04/19	LP	JL	

Purpose of information

The purpose of the information on this drawing is for:

Planning	☒
Information	☐
Comment	☐
Client approval	☐
Construction	☐

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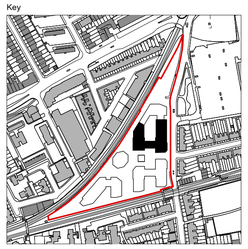
Key



Client

Avanton

Project title

A3004
Manor Road Richmond

Drawing title

Block A Plans (South) Proposed Ground Floor

Scale @ A1 size: **1:100**

Date: **April '19**

Drawing N°

MNR-AA-BA2-GF-DR-A-2200

Status & Revision

R3

Assael

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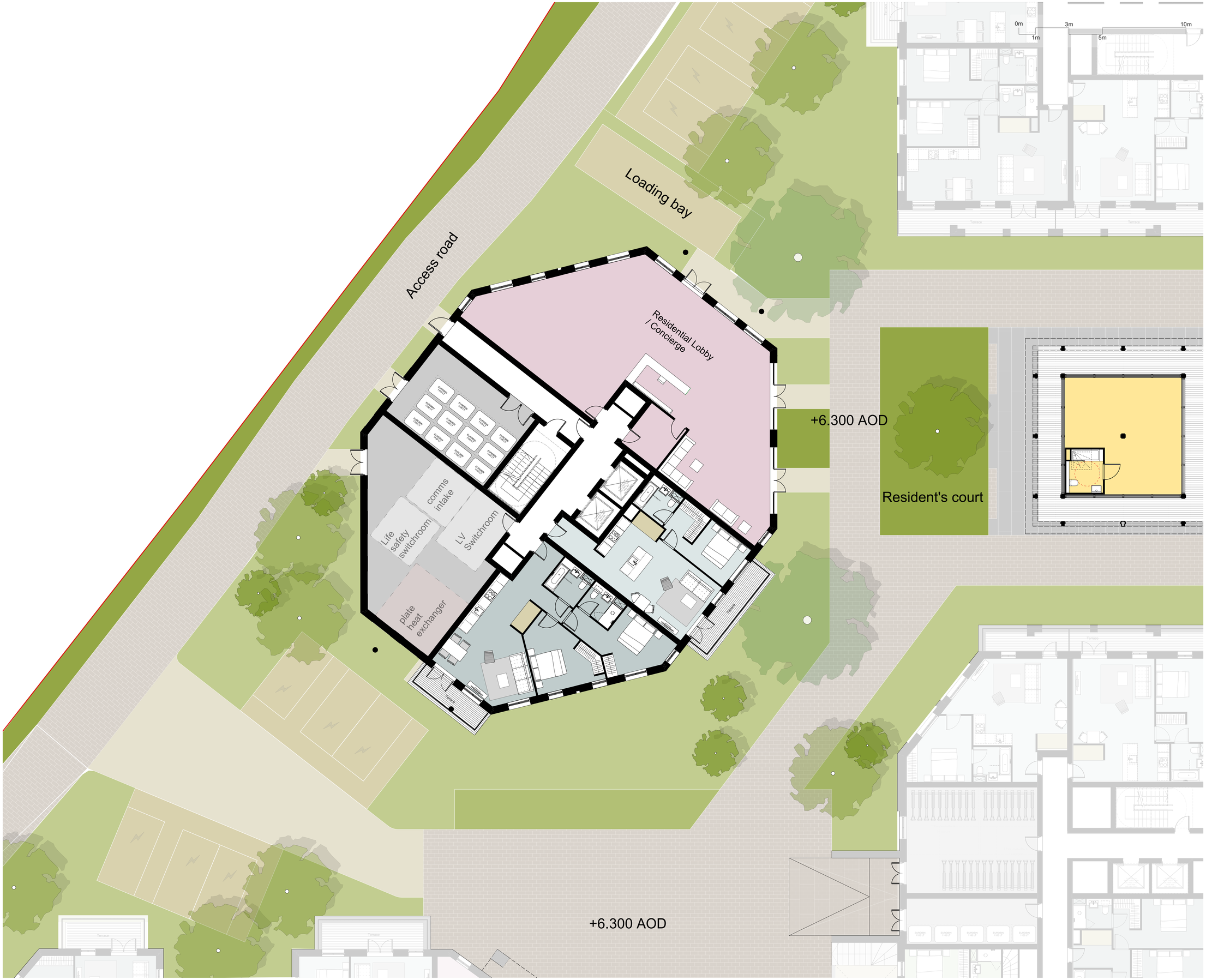

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C=Contract

Drawing notes

Electronic file reference

Enter Source Filename ' Eg AA Title Block'

Status R:	Revision	Date	DRN	CHK	CDM
1	Planning Draft	19/12/18	HB	JL	
2	For Planning	08/02/19	AS	HB	
3	For Planning	16/04/19	LP	JL	

Key

Electric Vehicle Charging Point

Passive Provision

Purpose of information

The purpose of the information on this drawing is for:

- Planning ☒
- Information ☐
- Comment ☐
- Client approval ☐
- Construction ☐

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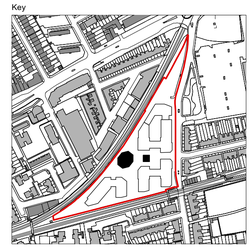
Key



Client

Avanton

Project title

A3004
Manor Road Richmond

Drawing title

Block B Plans Proposed Ground Floor

Scale @ A1 size: **1:100**

Date: **April '19**

Drawing N°

MNR-AA-BB1-GF-DR-A-2300

Status & Revision

R3

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+6.300 AOD

Resident's court

+6.300 AOD

Public Square

0m 1m 3m 5m 10m

N

COMMERCIAL

200.5 sq m

EUROBIN 1100 LT

plate heat exchanger

comms intake

Terrace

Residential Lobby

Residential Lobby

LV Switchroom

Life safety switchroom

substation

+6.300 AOD

+6.975 AOD

Communal courtyard

General notes

All setting out must be checked on site
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Revision Status:
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Drawing notes

Electronic file reference

Enter Source Filename ' Eg AA Title Block'

Status R:	Revision	Date	DRN	CHK	CDM
1	Planning Draft	19/12/18	HB	JL	
2	For Planning	08/02/19	AS	HB	
3	For Planning	16/04/19	LP	JL	

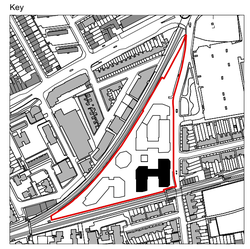
Purpose of information

The purpose of the information on this drawing is for:

- Planning [x]
- Information [ ]
- Comment [ ]
- Client approval [ ]
- Construction [ ]

All information on this drawing is not for construction unless it is marked for construction.

Key



Client

Avanton

Project title

A3004
Manor Road Richmond

Drawing title

Block D Plans Proposed Ground Floor

Scale @ A1 size: **1:500**

Date: **April '19**

Drawing N°

MNR-AA-BD1-GF-DR-A-2500

Status & Revision

R3

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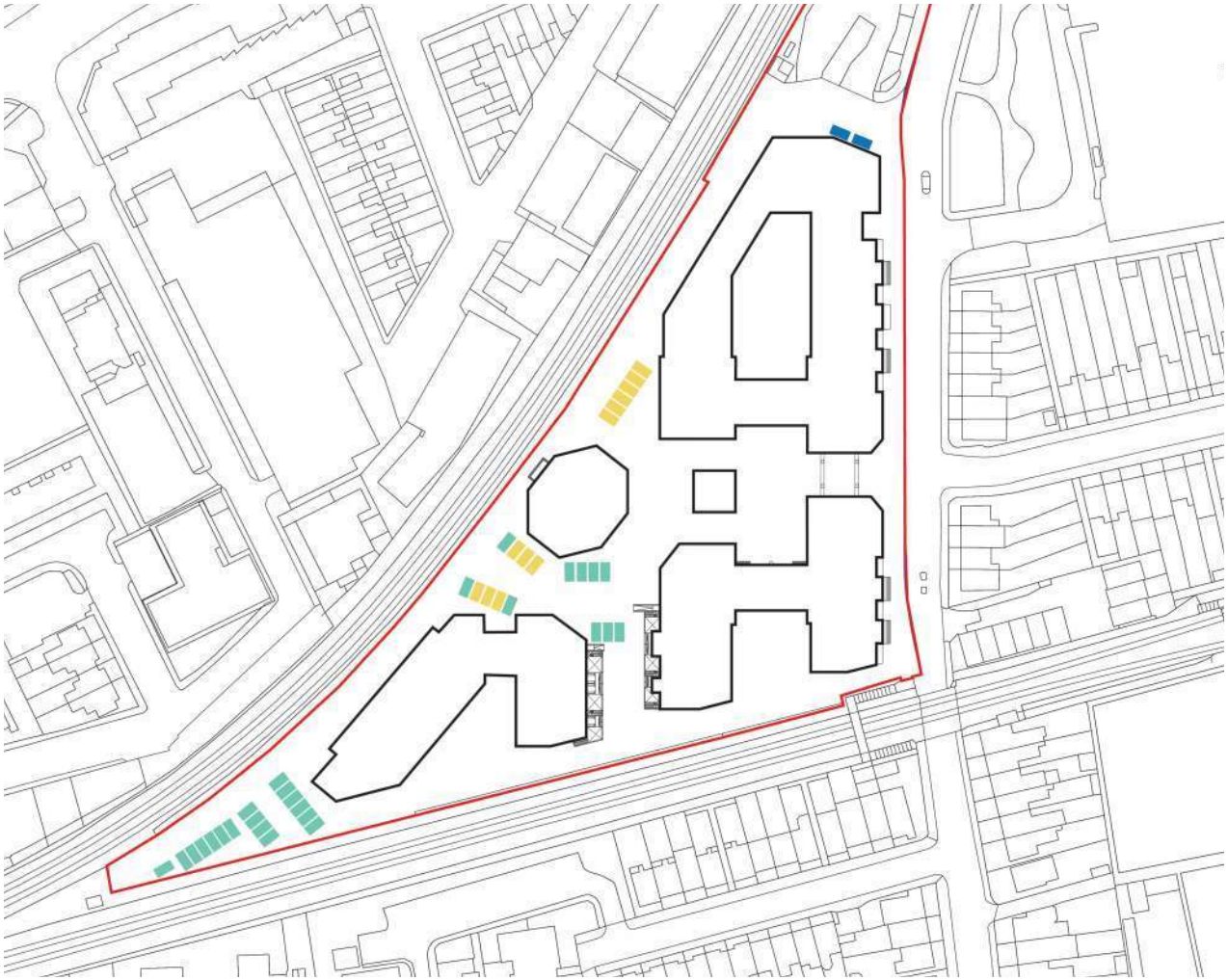
1.28 Carparking Strategy - 10% Provision

The Local Authority recommendations provide for allowance to expand the parking provision to accommodate 10% of units with an accessible parking space (39 No.). This has been considered in the site layout and can be accommodated if required in the future.

The additional parking spaces can be accommodated as indicated, with some loss of landscaped areas (lawn) in the southern corner of the site and some paved circulation space in the secondary public space between Buildings B, C and D.



CARPARKING LAYOUT (10% PROVISION)

KEY

	Accessible Parking Spaces (12no)
	Car club spaces (2no)
	Additional Accessible Parking spaces (27)*

APPENDIX D

Multimodal TRICS Data

Calculation Reference: AUDIT-109307-180802-0824

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

01	GREATER LONDON		
	BT	BRENT	1 days
	IS	ISLINGTON	1 days
	SK	SOUTHWARK	1 days

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

Secondary Filtering selection:

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

Parameter:	Number of dwellings
Actual Range:	29 to 472 (units:)
Range Selected by User:	25 to 493 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 30/11/16

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	2 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:

Edge of 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:

Development Zone	2
Built-Up Zone	1

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

Secondary Filtering selection:

Use Class:

C3	3 days

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

Secondary Filtering selection (Cont.):

Population within 1 mile:

25,001 to 50,000	1 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	3 days

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

Car ownership within 5 miles:

0.5 or Less	2 days
0.6 to 1.0	1 days

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

Travel Plan:

Yes	2 days
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:

5 Very Good	1 days
6a Excellent	1 days
6b (High) Excellent	1 days

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

LIST OF SITES relevant to selection parameters

1 BT-03-C-02 BLOCKS OF FLATS BRENT
ENGINEERS WAY
WEMBLEY

Suburban Area (PPS6 Out of Centre)
Development Zone
Total Number of dwellings: 472
Survey date: WEDNESDAY *30/11/16* *Survey Type: MANUAL*

2 IS-03-C-04 BLOCK OF FLATS ISLINGTON
CITY ROAD
ISLINGTON

Edge of Town Centre
Development Zone
Total Number of dwellings: 157
Survey date: THURSDAY *14/07/16* *Survey Type: MANUAL*

3 SK-03-C-02 BLOCK OF FLATS SOUTHWARK
LAMB WALK
BERMONDSEY

Edge of Town Centre
Built-Up Zone
Total Number of dwellings: 29
Survey date: THURSDAY *23/04/15* *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
HG-03-C-02	Parking ratio
KI-03-C-02	Parking ratio
KN-03-C-02	Parking ratio
KN-03-C-03	Parking ratio
SK-03-C-01	Parking ratio
WH-03-C-01	Parking ratio

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL 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	3	219	0.005	3	219	0.011	3	219	0.016
08:00 - 09:00	3	219	0.011	3	219	0.015	3	219	0.026
09:00 - 10:00	3	219	0.009	3	219	0.014	3	219	0.023
10:00 - 11:00	3	219	0.011	3	219	0.014	3	219	0.025
11:00 - 12:00	3	219	0.012	3	219	0.009	3	219	0.021
12:00 - 13:00	3	219	0.006	3	219	0.011	3	219	0.017
13:00 - 14:00	3	219	0.021	3	219	0.021	3	219	0.042
14:00 - 15:00	3	219	0.012	3	219	0.009	3	219	0.021
15:00 - 16:00	3	219	0.003	3	219	0.005	3	219	0.008
16:00 - 17:00	3	219	0.018	3	219	0.020	3	219	0.038
17:00 - 18:00	3	219	0.023	3	219	0.011	3	219	0.034
18:00 - 19:00	3	219	0.014	3	219	0.006	3	219	0.020
19:00 - 20:00	3	219	0.005	3	219	0.009	3	219	0.014
20:00 - 21:00	3	219	0.009	3	219	0.014	3	219	0.023
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.159			0.169			0.328

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:	29 - 472 (units:)
Survey date date range:	01/01/10 - 30/11/16
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:	6

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 TAXIS
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	3	219	0.005	3	219	0.005	3	219	0.010
08:00 - 09:00	3	219	0.006	3	219	0.006	3	219	0.012
09:00 - 10:00	3	219	0.002	3	219	0.002	3	219	0.004
10:00 - 11:00	3	219	0.003	3	219	0.003	3	219	0.006
11:00 - 12:00	3	219	0.005	3	219	0.005	3	219	0.010
12:00 - 13:00	3	219	0.002	3	219	0.002	3	219	0.004
13:00 - 14:00	3	219	0.006	3	219	0.006	3	219	0.012
14:00 - 15:00	3	219	0.003	3	219	0.003	3	219	0.006
15:00 - 16:00	3	219	0.000	3	219	0.000	3	219	0.000
16:00 - 17:00	3	219	0.005	3	219	0.005	3	219	0.010
17:00 - 18:00	3	219	0.002	3	219	0.002	3	219	0.004
18:00 - 19:00	3	219	0.005	3	219	0.005	3	219	0.010
19:00 - 20:00	3	219	0.002	3	219	0.002	3	219	0.004
20:00 - 21:00	3	219	0.006	3	219	0.006	3	219	0.012
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.052			0.052			0.104

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

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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	3	219	0.000	3	219	0.000	3	219	0.000
08:00 - 09:00	3	219	0.000	3	219	0.000	3	219	0.000
09:00 - 10:00	3	219	0.000	3	219	0.000	3	219	0.000
10:00 - 11:00	3	219	0.000	3	219	0.000	3	219	0.000
11:00 - 12:00	3	219	0.000	3	219	0.000	3	219	0.000
12:00 - 13:00	3	219	0.000	3	219	0.000	3	219	0.000
13:00 - 14:00	3	219	0.000	3	219	0.000	3	219	0.000
14:00 - 15:00	3	219	0.002	3	219	0.002	3	219	0.004
15:00 - 16:00	3	219	0.000	3	219	0.000	3	219	0.000
16:00 - 17:00	3	219	0.000	3	219	0.000	3	219	0.000
17:00 - 18:00	3	219	0.000	3	219	0.000	3	219	0.000
18:00 - 19:00	3	219	0.000	3	219	0.000	3	219	0.000
19:00 - 20:00	3	219	0.000	3	219	0.000	3	219	0.000
20:00 - 21:00	3	219	0.000	3	219	0.000	3	219	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.002			0.002			0.004

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

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TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL CYCLISTS
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	3	219	0.002	3	219	0.006	3	219	0.008
08:00 - 09:00	3	219	0.000	3	219	0.003	3	219	0.003
09:00 - 10:00	3	219	0.000	3	219	0.000	3	219	0.000
10:00 - 11:00	3	219	0.000	3	219	0.000	3	219	0.000
11:00 - 12:00	3	219	0.000	3	219	0.000	3	219	0.000
12:00 - 13:00	3	219	0.002	3	219	0.003	3	219	0.005
13:00 - 14:00	3	219	0.000	3	219	0.000	3	219	0.000
14:00 - 15:00	3	219	0.000	3	219	0.000	3	219	0.000
15:00 - 16:00	3	219	0.000	3	219	0.000	3	219	0.000
16:00 - 17:00	3	219	0.000	3	219	0.000	3	219	0.000
17:00 - 18:00	3	219	0.005	3	219	0.000	3	219	0.005
18:00 - 19:00	3	219	0.002	3	219	0.000	3	219	0.002
19:00 - 20:00	3	219	0.002	3	219	0.003	3	219	0.005
20:00 - 21:00	3	219	0.003	3	219	0.000	3	219	0.003
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.016			0.015			0.031

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 VEHICLE OCCUPANTS
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	3	219	0.002	3	219	0.012	3	219	0.014
08:00 - 09:00	3	219	0.009	3	219	0.017	3	219	0.026
09:00 - 10:00	3	219	0.011	3	219	0.018	3	219	0.029
10:00 - 11:00	3	219	0.012	3	219	0.018	3	219	0.030
11:00 - 12:00	3	219	0.011	3	219	0.012	3	219	0.023
12:00 - 13:00	3	219	0.008	3	219	0.012	3	219	0.020
13:00 - 14:00	3	219	0.026	3	219	0.023	3	219	0.049
14:00 - 15:00	3	219	0.015	3	219	0.009	3	219	0.024
15:00 - 16:00	3	219	0.003	3	219	0.006	3	219	0.009
16:00 - 17:00	3	219	0.023	3	219	0.018	3	219	0.041
17:00 - 18:00	3	219	0.029	3	219	0.012	3	219	0.041
18:00 - 19:00	3	219	0.014	3	219	0.008	3	219	0.022
19:00 - 20:00	3	219	0.003	3	219	0.015	3	219	0.018
20:00 - 21:00	3	219	0.012	3	219	0.023	3	219	0.035
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.178			0.203			0.381

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 PEDESTRIANS
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	3	219	0.035	3	219	0.070	3	219	0.105
08:00 - 09:00	3	219	0.023	3	219	0.090	3	219	0.113
09:00 - 10:00	3	219	0.015	3	219	0.041	3	219	0.056
10:00 - 11:00	3	219	0.044	3	219	0.046	3	219	0.090
11:00 - 12:00	3	219	0.099	3	219	0.059	3	219	0.158
12:00 - 13:00	3	219	0.058	3	219	0.065	3	219	0.123
13:00 - 14:00	3	219	0.036	3	219	0.088	3	219	0.124
14:00 - 15:00	3	219	0.055	3	219	0.073	3	219	0.128
15:00 - 16:00	3	219	0.058	3	219	0.061	3	219	0.119
16:00 - 17:00	3	219	0.105	3	219	0.078	3	219	0.183
17:00 - 18:00	3	219	0.067	3	219	0.047	3	219	0.114
18:00 - 19:00	3	219	0.046	3	219	0.033	3	219	0.079
19:00 - 20:00	3	219	0.062	3	219	0.033	3	219	0.095
20:00 - 21:00	3	219	0.050	3	219	0.027	3	219	0.077
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.753			0.811			1.564

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 BUS/TRAM PASSENGERS
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	3	219	0.003	3	219	0.046	3	219	0.049
08:00 - 09:00	3	219	0.006	3	219	0.074	3	219	0.080
09:00 - 10:00	3	219	0.009	3	219	0.032	3	219	0.041
10:00 - 11:00	3	219	0.015	3	219	0.030	3	219	0.045
11:00 - 12:00	3	219	0.014	3	219	0.026	3	219	0.040
12:00 - 13:00	3	219	0.018	3	219	0.029	3	219	0.047
13:00 - 14:00	3	219	0.027	3	219	0.024	3	219	0.051
14:00 - 15:00	3	219	0.026	3	219	0.021	3	219	0.047
15:00 - 16:00	3	219	0.030	3	219	0.020	3	219	0.050
16:00 - 17:00	3	219	0.038	3	219	0.023	3	219	0.061
17:00 - 18:00	3	219	0.058	3	219	0.030	3	219	0.088
18:00 - 19:00	3	219	0.068	3	219	0.027	3	219	0.095
19:00 - 20:00	3	219	0.027	3	219	0.018	3	219	0.045
20:00 - 21:00	3	219	0.018	3	219	0.017	3	219	0.035
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.357			0.417			0.774

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 TOTAL RAIL PASSENGERS
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	3	219	0.006	3	219	0.067	3	219	0.073
08:00 - 09:00	3	219	0.009	3	219	0.103	3	219	0.112
09:00 - 10:00	3	219	0.015	3	219	0.046	3	219	0.061
10:00 - 11:00	3	219	0.017	3	219	0.038	3	219	0.055
11:00 - 12:00	3	219	0.021	3	219	0.035	3	219	0.056
12:00 - 13:00	3	219	0.015	3	219	0.033	3	219	0.048
13:00 - 14:00	3	219	0.024	3	219	0.024	3	219	0.048
14:00 - 15:00	3	219	0.036	3	219	0.024	3	219	0.060
15:00 - 16:00	3	219	0.023	3	219	0.023	3	219	0.046
16:00 - 17:00	3	219	0.026	3	219	0.026	3	219	0.052
17:00 - 18:00	3	219	0.064	3	219	0.033	3	219	0.097
18:00 - 19:00	3	219	0.040	3	219	0.027	3	219	0.067
19:00 - 20:00	3	219	0.052	3	219	0.017	3	219	0.069
20:00 - 21:00	3	219	0.029	3	219	0.015	3	219	0.044
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.377			0.511			0.888

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 PUBLIC TRANSPORT USERS
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	3	219	0.009	3	219	0.112	3	219	0.121
08:00 - 09:00	3	219	0.015	3	219	0.178	3	219	0.193
09:00 - 10:00	3	219	0.024	3	219	0.078	3	219	0.102
10:00 - 11:00	3	219	0.032	3	219	0.068	3	219	0.100
11:00 - 12:00	3	219	0.035	3	219	0.061	3	219	0.096
12:00 - 13:00	3	219	0.033	3	219	0.062	3	219	0.095
13:00 - 14:00	3	219	0.052	3	219	0.049	3	219	0.101
14:00 - 15:00	3	219	0.062	3	219	0.046	3	219	0.108
15:00 - 16:00	3	219	0.053	3	219	0.043	3	219	0.096
16:00 - 17:00	3	219	0.064	3	219	0.049	3	219	0.113
17:00 - 18:00	3	219	0.122	3	219	0.064	3	219	0.186
18:00 - 19:00	3	219	0.108	3	219	0.055	3	219	0.163
19:00 - 20:00	3	219	0.079	3	219	0.035	3	219	0.114
20:00 - 21:00	3	219	0.047	3	219	0.032	3	219	0.079
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.735			0.932			1.667

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 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	3	219	0.047	3	219	0.201	3	219	0.248
08:00 - 09:00	3	219	0.047	3	219	0.287	3	219	0.334
09:00 - 10:00	3	219	0.050	3	219	0.137	3	219	0.187
10:00 - 11:00	3	219	0.088	3	219	0.132	3	219	0.220
11:00 - 12:00	3	219	0.144	3	219	0.132	3	219	0.276
12:00 - 13:00	3	219	0.100	3	219	0.143	3	219	0.243
13:00 - 14:00	3	219	0.114	3	219	0.160	3	219	0.274
14:00 - 15:00	3	219	0.132	3	219	0.128	3	219	0.260
15:00 - 16:00	3	219	0.114	3	219	0.109	3	219	0.223
16:00 - 17:00	3	219	0.191	3	219	0.144	3	219	0.335
17:00 - 18:00	3	219	0.222	3	219	0.123	3	219	0.345
18:00 - 19:00	3	219	0.169	3	219	0.096	3	219	0.265
19:00 - 20:00	3	219	0.146	3	219	0.087	3	219	0.233
20:00 - 21:00	3	219	0.112	3	219	0.082	3	219	0.194
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.676			1.961			3.637

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	3	219	0.000	3	219	0.006	3	219	0.006
08:00 - 09:00	3	219	0.003	3	219	0.008	3	219	0.011
09:00 - 10:00	3	219	0.005	3	219	0.009	3	219	0.014
10:00 - 11:00	3	219	0.008	3	219	0.011	3	219	0.019
11:00 - 12:00	3	219	0.003	3	219	0.003	3	219	0.006
12:00 - 13:00	3	219	0.003	3	219	0.006	3	219	0.009
13:00 - 14:00	3	219	0.012	3	219	0.009	3	219	0.021
14:00 - 15:00	3	219	0.005	3	219	0.003	3	219	0.008
15:00 - 16:00	3	219	0.002	3	219	0.003	3	219	0.005
16:00 - 17:00	3	219	0.006	3	219	0.008	3	219	0.014
17:00 - 18:00	3	219	0.021	3	219	0.008	3	219	0.029
18:00 - 19:00	3	219	0.009	3	219	0.002	3	219	0.011
19:00 - 20:00	3	219	0.003	3	219	0.006	3	219	0.009
20:00 - 21:00	3	219	0.003	3	219	0.008	3	219	0.011
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.083			0.090			0.173

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	3	219	0.000	3	219	0.000	3	219	0.000
08:00 - 09:00	3	219	0.002	3	219	0.002	3	219	0.004
09:00 - 10:00	3	219	0.003	3	219	0.003	3	219	0.006
10:00 - 11:00	3	219	0.000	3	219	0.000	3	219	0.000
11:00 - 12:00	3	219	0.005	3	219	0.002	3	219	0.007
12:00 - 13:00	3	219	0.002	3	219	0.003	3	219	0.005
13:00 - 14:00	3	219	0.003	3	219	0.006	3	219	0.009
14:00 - 15:00	3	219	0.002	3	219	0.000	3	219	0.002
15:00 - 16:00	3	219	0.002	3	219	0.002	3	219	0.004
16:00 - 17:00	3	219	0.006	3	219	0.006	3	219	0.012
17:00 - 18:00	3	219	0.000	3	219	0.002	3	219	0.002
18:00 - 19:00	3	219	0.000	3	219	0.000	3	219	0.000
19:00 - 20:00	3	219	0.000	3	219	0.000	3	219	0.000
20:00 - 21:00	3	219	0.000	3	219	0.000	3	219	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.025			0.026			0.051

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL MOTOR CYCLES
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	3	219	0.000	3	219	0.000	3	219	0.000
08:00 - 09:00	3	219	0.000	3	219	0.000	3	219	0.000
09:00 - 10:00	3	219	0.000	3	219	0.000	3	219	0.000
10:00 - 11:00	3	219	0.000	3	219	0.000	3	219	0.000
11:00 - 12:00	3	219	0.000	3	219	0.000	3	219	0.000
12:00 - 13:00	3	219	0.000	3	219	0.000	3	219	0.000
13:00 - 14:00	3	219	0.000	3	219	0.000	3	219	0.000
14:00 - 15:00	3	219	0.002	3	219	0.002	3	219	0.004
15:00 - 16:00	3	219	0.000	3	219	0.000	3	219	0.000
16:00 - 17:00	3	219	0.002	3	219	0.002	3	219	0.004
17:00 - 18:00	3	219	0.000	3	219	0.000	3	219	0.000
18:00 - 19:00	3	219	0.000	3	219	0.000	3	219	0.000
19:00 - 20:00	3	219	0.000	3	219	0.002	3	219	0.002
20:00 - 21:00	3	219	0.000	3	219	0.000	3	219	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.004			0.006			0.010

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL Underground Passengers
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	3	219	0.006	3	219	0.052	3	219	0.058
08:00 - 09:00	3	219	0.009	3	219	0.084	3	219	0.093
09:00 - 10:00	3	219	0.012	3	219	0.033	3	219	0.045
10:00 - 11:00	3	219	0.011	3	219	0.033	3	219	0.044
11:00 - 12:00	3	219	0.017	3	219	0.032	3	219	0.049
12:00 - 13:00	3	219	0.014	3	219	0.024	3	219	0.038
13:00 - 14:00	3	219	0.021	3	219	0.021	3	219	0.042
14:00 - 15:00	3	219	0.026	3	219	0.024	3	219	0.050
15:00 - 16:00	3	219	0.020	3	219	0.023	3	219	0.043
16:00 - 17:00	3	219	0.026	3	219	0.026	3	219	0.052
17:00 - 18:00	3	219	0.049	3	219	0.030	3	219	0.079
18:00 - 19:00	3	219	0.035	3	219	0.024	3	219	0.059
19:00 - 20:00	3	219	0.043	3	219	0.011	3	219	0.054
20:00 - 21:00	3	219	0.027	3	219	0.015	3	219	0.042
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.316			0.432			0.748

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 DLR Passengers
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	3	219	0.000	3	219	0.000	3	219	0.000
08:00 - 09:00	3	219	0.000	3	219	0.002	3	219	0.002
09:00 - 10:00	3	219	0.000	3	219	0.003	3	219	0.003
10:00 - 11:00	3	219	0.000	3	219	0.000	3	219	0.000
11:00 - 12:00	3	219	0.000	3	219	0.000	3	219	0.000
12:00 - 13:00	3	219	0.000	3	219	0.000	3	219	0.000
13:00 - 14:00	3	219	0.000	3	219	0.002	3	219	0.002
14:00 - 15:00	3	219	0.000	3	219	0.000	3	219	0.000
15:00 - 16:00	3	219	0.000	3	219	0.000	3	219	0.000
16:00 - 17:00	3	219	0.000	3	219	0.000	3	219	0.000
17:00 - 18:00	3	219	0.006	3	219	0.000	3	219	0.006
18:00 - 19:00	3	219	0.000	3	219	0.000	3	219	0.000
19:00 - 20:00	3	219	0.000	3	219	0.000	3	219	0.000
20:00 - 21:00	3	219	0.000	3	219	0.000	3	219	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.006			0.007			0.013

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 Overground Passengers
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	3	219	0.000	3	219	0.014	3	219	0.014
08:00 - 09:00	3	219	0.000	3	219	0.018	3	219	0.018
09:00 - 10:00	3	219	0.003	3	219	0.008	3	219	0.011
10:00 - 11:00	3	219	0.005	3	219	0.002	3	219	0.007
11:00 - 12:00	3	219	0.003	3	219	0.003	3	219	0.006
12:00 - 13:00	3	219	0.002	3	219	0.009	3	219	0.011
13:00 - 14:00	3	219	0.003	3	219	0.002	3	219	0.005
14:00 - 15:00	3	219	0.011	3	219	0.000	3	219	0.011
15:00 - 16:00	3	219	0.003	3	219	0.000	3	219	0.003
16:00 - 17:00	3	219	0.000	3	219	0.000	3	219	0.000
17:00 - 18:00	3	219	0.008	3	219	0.003	3	219	0.011
18:00 - 19:00	3	219	0.005	3	219	0.003	3	219	0.008
19:00 - 20:00	3	219	0.008	3	219	0.006	3	219	0.014
20:00 - 21:00	3	219	0.000	3	219	0.000	3	219	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.051			0.068			0.119

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 National Rail Passengers
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	3	219	0.000	3	219	0.002	3	219	0.002
08:00 - 09:00	3	219	0.000	3	219	0.000	3	219	0.000
09:00 - 10:00	3	219	0.000	3	219	0.002	3	219	0.002
10:00 - 11:00	3	219	0.002	3	219	0.003	3	219	0.005
11:00 - 12:00	3	219	0.002	3	219	0.000	3	219	0.002
12:00 - 13:00	3	219	0.000	3	219	0.000	3	219	0.000
13:00 - 14:00	3	219	0.000	3	219	0.000	3	219	0.000
14:00 - 15:00	3	219	0.000	3	219	0.000	3	219	0.000
15:00 - 16:00	3	219	0.000	3	219	0.000	3	219	0.000
16:00 - 17:00	3	219	0.000	3	219	0.000	3	219	0.000
17:00 - 18:00	3	219	0.002	3	219	0.000	3	219	0.002
18:00 - 19:00	3	219	0.000	3	219	0.000	3	219	0.000
19:00 - 20:00	3	219	0.002	3	219	0.000	3	219	0.002
20:00 - 21:00	3	219	0.002	3	219	0.000	3	219	0.002
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.010			0.007			0.017

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 Bus Passengers
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	3	219	0.003	3	219	0.046	3	219	0.049
08:00 - 09:00	3	219	0.006	3	219	0.074	3	219	0.080
09:00 - 10:00	3	219	0.009	3	219	0.032	3	219	0.041
10:00 - 11:00	3	219	0.015	3	219	0.030	3	219	0.045
11:00 - 12:00	3	219	0.014	3	219	0.026	3	219	0.040
12:00 - 13:00	3	219	0.018	3	219	0.029	3	219	0.047
13:00 - 14:00	3	219	0.027	3	219	0.024	3	219	0.051
14:00 - 15:00	3	219	0.026	3	219	0.021	3	219	0.047
15:00 - 16:00	3	219	0.030	3	219	0.020	3	219	0.050
16:00 - 17:00	3	219	0.038	3	219	0.023	3	219	0.061
17:00 - 18:00	3	219	0.058	3	219	0.030	3	219	0.088
18:00 - 19:00	3	219	0.068	3	219	0.027	3	219	0.095
19:00 - 20:00	3	219	0.027	3	219	0.018	3	219	0.045
20:00 - 21:00	3	219	0.018	3	219	0.017	3	219	0.035
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.357			0.417			0.774

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-109307-180802-0807

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	HG	HARINGEY	1 days
	IS	ISLINGTON	2 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
Actual Range: 36 to 250 (units:)
Range Selected by User: 15 to 339 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 27/06/16

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
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:

Suburban Area (PPS6 Out of Centre)	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:

Residential Zone	3

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	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®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

50,001 to 100,000	1 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	3 days

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

Car ownership within 5 miles:

0.5 or Less	2 days
0.6 to 1.0	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	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:

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

1 HG-03-D-03 BLOCKS OF FLATS HARINGEY
COMMERCE ROAD
WOOD GREEN
WOODSIDE PARK
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 90
Survey date: FRIDAY *26/09/14* *Survey Type: MANUAL*

2 IS-03-D-02 BLOCKS OF FLATS ISLINGTON
COPENHAGEN STREET
ISLINGTON
BARNARD PARK
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Number of dwellings: 250
Survey date: THURSDAY *28/11/13* *Survey Type: MANUAL*

3 IS-03-D-03 BLOCK OF FLATS ISLINGTON
HAWES STREET
ISLINGTON

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 36
Survey date: THURSDAY *21/11/13* *Survey Type: MANUAL*

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

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL 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	3	125	0.032	3	125	0.029	3	125	0.061
08:00 - 09:00	3	125	0.029	3	125	0.096	3	125	0.125
09:00 - 10:00	3	125	0.027	3	125	0.051	3	125	0.078
10:00 - 11:00	3	125	0.029	3	125	0.021	3	125	0.050
11:00 - 12:00	3	125	0.021	3	125	0.040	3	125	0.061
12:00 - 13:00	3	125	0.029	3	125	0.029	3	125	0.058
13:00 - 14:00	3	125	0.035	3	125	0.027	3	125	0.062
14:00 - 15:00	3	125	0.021	3	125	0.016	3	125	0.037
15:00 - 16:00	3	125	0.048	3	125	0.021	3	125	0.069
16:00 - 17:00	3	125	0.053	3	125	0.048	3	125	0.101
17:00 - 18:00	3	125	0.043	3	125	0.040	3	125	0.083
18:00 - 19:00	3	125	0.045	3	125	0.040	3	125	0.085
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.412			0.458			0.870

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:	36 - 250 (units:)
Survey date date range:	01/01/10 - 27/06/16
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 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL TAXIS
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	3	125	0.005	3	125	0.005	3	125	0.010
08:00 - 09:00	3	125	0.003	3	125	0.003	3	125	0.006
09:00 - 10:00	3	125	0.005	3	125	0.005	3	125	0.010
10:00 - 11:00	3	125	0.000	3	125	0.000	3	125	0.000
11:00 - 12:00	3	125	0.000	3	125	0.000	3	125	0.000
12:00 - 13:00	3	125	0.000	3	125	0.000	3	125	0.000
13:00 - 14:00	3	125	0.000	3	125	0.000	3	125	0.000
14:00 - 15:00	3	125	0.000	3	125	0.000	3	125	0.000
15:00 - 16:00	3	125	0.000	3	125	0.000	3	125	0.000
16:00 - 17:00	3	125	0.005	3	125	0.005	3	125	0.010
17:00 - 18:00	3	125	0.000	3	125	0.000	3	125	0.000
18:00 - 19:00	3	125	0.000	3	125	0.000	3	125	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.018			0.018			0.036

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
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	3	125	0.000	3	125	0.000	3	125	0.000
08:00 - 09:00	3	125	0.000	3	125	0.000	3	125	0.000
09:00 - 10:00	3	125	0.003	3	125	0.003	3	125	0.006
10:00 - 11:00	3	125	0.005	3	125	0.005	3	125	0.010
11:00 - 12:00	3	125	0.000	3	125	0.000	3	125	0.000
12:00 - 13:00	3	125	0.000	3	125	0.000	3	125	0.000
13:00 - 14:00	3	125	0.000	3	125	0.000	3	125	0.000
14:00 - 15:00	3	125	0.000	3	125	0.000	3	125	0.000
15:00 - 16:00	3	125	0.000	3	125	0.000	3	125	0.000
16:00 - 17:00	3	125	0.000	3	125	0.000	3	125	0.000
17:00 - 18:00	3	125	0.000	3	125	0.000	3	125	0.000
18:00 - 19:00	3	125	0.000	3	125	0.000	3	125	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.008			0.008			0.016

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL CYCLISTS
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	3	125	0.005	3	125	0.005	3	125	0.010
08:00 - 09:00	3	125	0.003	3	125	0.011	3	125	0.014
09:00 - 10:00	3	125	0.005	3	125	0.005	3	125	0.010
10:00 - 11:00	3	125	0.003	3	125	0.005	3	125	0.008
11:00 - 12:00	3	125	0.000	3	125	0.005	3	125	0.005
12:00 - 13:00	3	125	0.000	3	125	0.003	3	125	0.003
13:00 - 14:00	3	125	0.000	3	125	0.000	3	125	0.000
14:00 - 15:00	3	125	0.008	3	125	0.005	3	125	0.013
15:00 - 16:00	3	125	0.019	3	125	0.013	3	125	0.032
16:00 - 17:00	3	125	0.019	3	125	0.005	3	125	0.024
17:00 - 18:00	3	125	0.013	3	125	0.021	3	125	0.034
18:00 - 19:00	3	125	0.005	3	125	0.011	3	125	0.016
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.080			0.089			0.169

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/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL VEHICLE OCCUPANTS
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	3	125	0.032	3	125	0.032	3	125	0.064
08:00 - 09:00	3	125	0.029	3	125	0.125	3	125	0.154
09:00 - 10:00	3	125	0.035	3	125	0.080	3	125	0.115
10:00 - 11:00	3	125	0.043	3	125	0.035	3	125	0.078
11:00 - 12:00	3	125	0.024	3	125	0.040	3	125	0.064
12:00 - 13:00	3	125	0.037	3	125	0.035	3	125	0.072
13:00 - 14:00	3	125	0.040	3	125	0.029	3	125	0.069
14:00 - 15:00	3	125	0.029	3	125	0.021	3	125	0.050
15:00 - 16:00	3	125	0.077	3	125	0.027	3	125	0.104
16:00 - 17:00	3	125	0.082	3	125	0.061	3	125	0.143
17:00 - 18:00	3	125	0.064	3	125	0.061	3	125	0.125
18:00 - 19:00	3	125	0.061	3	125	0.051	3	125	0.112
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.553			0.597			1.150

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/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL PEDESTRIANS
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	3	125	0.032	3	125	0.082	3	125	0.114
08:00 - 09:00	3	125	0.096	3	125	0.266	3	125	0.362
09:00 - 10:00	3	125	0.120	3	125	0.101	3	125	0.221
10:00 - 11:00	3	125	0.059	3	125	0.096	3	125	0.155
11:00 - 12:00	3	125	0.072	3	125	0.085	3	125	0.157
12:00 - 13:00	3	125	0.112	3	125	0.114	3	125	0.226
13:00 - 14:00	3	125	0.096	3	125	0.104	3	125	0.200
14:00 - 15:00	3	125	0.130	3	125	0.104	3	125	0.234
15:00 - 16:00	3	125	0.234	3	125	0.199	3	125	0.433
16:00 - 17:00	3	125	0.237	3	125	0.141	3	125	0.378
17:00 - 18:00	3	125	0.207	3	125	0.141	3	125	0.348
18:00 - 19:00	3	125	0.152	3	125	0.104	3	125	0.256
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.547			1.537			3.084

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/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL BUS/TRAM PASSENGERS
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	3	125	0.005	3	125	0.043	3	125	0.048
08:00 - 09:00	3	125	0.008	3	125	0.141	3	125	0.149
09:00 - 10:00	3	125	0.016	3	125	0.037	3	125	0.053
10:00 - 11:00	3	125	0.013	3	125	0.011	3	125	0.024
11:00 - 12:00	3	125	0.021	3	125	0.035	3	125	0.056
12:00 - 13:00	3	125	0.032	3	125	0.037	3	125	0.069
13:00 - 14:00	3	125	0.032	3	125	0.021	3	125	0.053
14:00 - 15:00	3	125	0.043	3	125	0.032	3	125	0.075
15:00 - 16:00	3	125	0.109	3	125	0.040	3	125	0.149
16:00 - 17:00	3	125	0.064	3	125	0.024	3	125	0.088
17:00 - 18:00	3	125	0.061	3	125	0.019	3	125	0.080
18:00 - 19:00	3	125	0.045	3	125	0.024	3	125	0.069
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.449			0.464			0.913

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/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL TOTAL RAIL PASSENGERS
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	3	125	0.000	3	125	0.056	3	125	0.056
08:00 - 09:00	3	125	0.003	3	125	0.053	3	125	0.056
09:00 - 10:00	3	125	0.000	3	125	0.021	3	125	0.021
10:00 - 11:00	3	125	0.005	3	125	0.016	3	125	0.021
11:00 - 12:00	3	125	0.013	3	125	0.008	3	125	0.021
12:00 - 13:00	3	125	0.013	3	125	0.011	3	125	0.024
13:00 - 14:00	3	125	0.013	3	125	0.008	3	125	0.021
14:00 - 15:00	3	125	0.005	3	125	0.003	3	125	0.008
15:00 - 16:00	3	125	0.027	3	125	0.005	3	125	0.032
16:00 - 17:00	3	125	0.019	3	125	0.005	3	125	0.024
17:00 - 18:00	3	125	0.032	3	125	0.013	3	125	0.045
18:00 - 19:00	3	125	0.051	3	125	0.005	3	125	0.056
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.181			0.204			0.385

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/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL PUBLIC TRANSPORT USERS
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	3	125	0.005	3	125	0.098	3	125	0.103
08:00 - 09:00	3	125	0.011	3	125	0.194	3	125	0.205
09:00 - 10:00	3	125	0.016	3	125	0.059	3	125	0.075
10:00 - 11:00	3	125	0.019	3	125	0.027	3	125	0.046
11:00 - 12:00	3	125	0.035	3	125	0.043	3	125	0.078
12:00 - 13:00	3	125	0.045	3	125	0.048	3	125	0.093
13:00 - 14:00	3	125	0.045	3	125	0.029	3	125	0.074
14:00 - 15:00	3	125	0.048	3	125	0.035	3	125	0.083
15:00 - 16:00	3	125	0.136	3	125	0.045	3	125	0.181
16:00 - 17:00	3	125	0.082	3	125	0.029	3	125	0.111
17:00 - 18:00	3	125	0.093	3	125	0.032	3	125	0.125
18:00 - 19:00	3	125	0.096	3	125	0.029	3	125	0.125
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.631			0.668			1.299

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/D - AFFORDABLE/LOCAL AUTHORITY FLATS
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	3	125	0.074	3	125	0.218	3	125	0.292
08:00 - 09:00	3	125	0.138	3	125	0.596	3	125	0.734
09:00 - 10:00	3	125	0.176	3	125	0.245	3	125	0.421
10:00 - 11:00	3	125	0.122	3	125	0.162	3	125	0.284
11:00 - 12:00	3	125	0.130	3	125	0.173	3	125	0.303
12:00 - 13:00	3	125	0.194	3	125	0.199	3	125	0.393
13:00 - 14:00	3	125	0.181	3	125	0.162	3	125	0.343
14:00 - 15:00	3	125	0.215	3	125	0.165	3	125	0.380
15:00 - 16:00	3	125	0.465	3	125	0.285	3	125	0.750
16:00 - 17:00	3	125	0.420	3	125	0.237	3	125	0.657
17:00 - 18:00	3	125	0.378	3	125	0.255	3	125	0.633
18:00 - 19:00	3	125	0.314	3	125	0.194	3	125	0.508
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.807			2.891			5.698

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/D - AFFORDABLE/LOCAL AUTHORITY FLATS
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	3	125	0.008	3	125	0.008	3	125	0.016
08:00 - 09:00	3	125	0.003	3	125	0.024	3	125	0.027
09:00 - 10:00	3	125	0.000	3	125	0.005	3	125	0.005
10:00 - 11:00	3	125	0.003	3	125	0.003	3	125	0.006
11:00 - 12:00	3	125	0.005	3	125	0.008	3	125	0.013
12:00 - 13:00	3	125	0.008	3	125	0.011	3	125	0.019
13:00 - 14:00	3	125	0.011	3	125	0.005	3	125	0.016
14:00 - 15:00	3	125	0.008	3	125	0.003	3	125	0.011
15:00 - 16:00	3	125	0.016	3	125	0.008	3	125	0.024
16:00 - 17:00	3	125	0.013	3	125	0.008	3	125	0.021
17:00 - 18:00	3	125	0.011	3	125	0.003	3	125	0.014
18:00 - 19:00	3	125	0.005	3	125	0.011	3	125	0.016
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.091			0.097			0.188

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/D - AFFORDABLE/LOCAL AUTHORITY FLATS
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	3	125	0.011	3	125	0.003	3	125	0.014
08:00 - 09:00	3	125	0.008	3	125	0.013	3	125	0.021
09:00 - 10:00	3	125	0.008	3	125	0.016	3	125	0.024
10:00 - 11:00	3	125	0.013	3	125	0.005	3	125	0.018
11:00 - 12:00	3	125	0.013	3	125	0.021	3	125	0.034
12:00 - 13:00	3	125	0.013	3	125	0.008	3	125	0.021
13:00 - 14:00	3	125	0.011	3	125	0.008	3	125	0.019
14:00 - 15:00	3	125	0.003	3	125	0.005	3	125	0.008
15:00 - 16:00	3	125	0.000	3	125	0.000	3	125	0.000
16:00 - 17:00	3	125	0.005	3	125	0.008	3	125	0.013
17:00 - 18:00	3	125	0.008	3	125	0.003	3	125	0.011
18:00 - 19:00	3	125	0.008	3	125	0.005	3	125	0.013
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.101			0.095			0.196

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/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL MOTOR CYCLES
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	3	125	0.000	3	125	0.000	3	125	0.000
08:00 - 09:00	3	125	0.000	3	125	0.003	3	125	0.003
09:00 - 10:00	3	125	0.003	3	125	0.003	3	125	0.006
10:00 - 11:00	3	125	0.000	3	125	0.003	3	125	0.003
11:00 - 12:00	3	125	0.000	3	125	0.000	3	125	0.000
12:00 - 13:00	3	125	0.000	3	125	0.000	3	125	0.000
13:00 - 14:00	3	125	0.000	3	125	0.000	3	125	0.000
14:00 - 15:00	3	125	0.003	3	125	0.000	3	125	0.003
15:00 - 16:00	3	125	0.000	3	125	0.000	3	125	0.000
16:00 - 17:00	3	125	0.003	3	125	0.000	3	125	0.003
17:00 - 18:00	3	125	0.000	3	125	0.005	3	125	0.005
18:00 - 19:00	3	125	0.005	3	125	0.003	3	125	0.008
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.014			0.017			0.031

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

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

APPENDIX E

TRICS Data for Servicing Vehicles

Calculation Reference: AUDIT-109307-190410-0401

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL VEHICLES

Selected regions and areas:

05	EAST MIDLANDS		
	LE	LEICESTERSHIRE	1 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
09	NORTH		
	TV	TEES VALLEY	2 days
13	MUNSTER		
	CR	CORK	1 days
15	GREATER DUBLIN		
	DL	DUBLIN	1 days

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

Secondary 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: 260 to 1840 (units: sqm)
Range Selected by User: 240 to 4000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 23/03/18

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:

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

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

Selected survey types:

Manual count	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:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	2
Neighbourhood Centre (PPS6 Local 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	4
Retail Zone	1
No Sub Category	1

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

Secondary Filtering selection:

Use Class:

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 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	2 days
20,001 to 25,000	2 days
25,001 to 50,000	1 days

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

Population within 5 miles:

100,001 to 125,000	1 days
125,001 to 250,000	2 days
250,001 to 500,000	3 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
1.1 to 1.5	4 days

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

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	6 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:

No	6 days

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

PTAL Rating:

No PTAL Present	6 days

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

LIST OF SITES relevant to selection parameters

1	CR-01-I-01	LOCAL SHOPS		CORK
	BISHOPSTOWN ROAD			
	CORK			
	WILTON			
	Neighbourhood Centre (PPS6 Local Centre)			
	Retail Zone			
	Total Gross floor area:		1575 sqm	
	Survey date: FRIDAY		*23/03/18*	*Survey Type: MANUAL*
2	DL-01-I-07	LOCAL SHOPS		DUBLIN
	DUNDRUM ROAD			
	DUBLIN			
	WINDY ARBOUR			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Gross floor area:		1034 sqm	
	Survey date: WEDNESDAY		*01/10/14*	*Survey Type: MANUAL*
3	LE-01-I-02	LOCAL SHOPS		LEICESTERSHIRE
	RYDER ROAD			
	LEICESTER			
	Edge of Town			
	Residential Zone			
	Total Gross floor area:		550 sqm	
	Survey date: TUESDAY		*28/10/14*	*Survey Type: MANUAL*
4	SH-01-I-02	LOCAL SHOPS		SHROPSHIRE
	WREKIN DRIVE			
	TELFORD			
	DONNINGTON			
	Edge of Town			
	Residential Zone			
	Total Gross floor area:		900 sqm	
	Survey date: THURSDAY		*24/10/13*	*Survey Type: MANUAL*
5	TV-01-I-03	LOCAL SHOPS		TEES VALLEY
	ACKLAM ROAD			
	MIDDLESBROUGH			
	ACKLAM			
	Neighbourhood Centre (PPS6 Local Centre)			
	Residential Zone			
	Total Gross floor area:		1840 sqm	
	Survey date: FRIDAY		*04/10/13*	*Survey Type: MANUAL*
6	TV-01-I-04	LOCAL SHOPS		TEES VALLEY
	CARGO FLEET LANE			
	MIDDLESBROUGH			
	ORMESBY			
	Neighbourhood Centre (PPS6 Local Centre)			
	Residential Zone			
	Total Gross floor area:		585 sqm	
	Survey date: MONDAY		*07/10/13*	*Survey Type: MANUAL*

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

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL Servicing 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 - 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	1081	0.000	6	1081	0.000	6	1081	0.000
08:00 - 09:00	6	1081	0.015	6	1081	0.015	6	1081	0.030
09:00 - 10:00	6	1081	0.015	6	1081	0.000	6	1081	0.015
10:00 - 11:00	6	1081	0.031	6	1081	0.046	6	1081	0.077
11:00 - 12:00	6	1081	0.031	6	1081	0.031	6	1081	0.062
12:00 - 13:00	6	1081	0.046	6	1081	0.031	6	1081	0.077
13:00 - 14:00	6	1081	0.015	6	1081	0.031	6	1081	0.046
14:00 - 15:00	6	1081	0.031	6	1081	0.015	6	1081	0.046
15:00 - 16:00	6	1081	0.031	6	1081	0.046	6	1081	0.077
16:00 - 17:00	6	1081	0.015	6	1081	0.015	6	1081	0.030
17:00 - 18:00	6	1081	0.000	6	1081	0.000	6	1081	0.000
18:00 - 19:00	6	1081	0.000	6	1081	0.000	6	1081	0.000
19:00 - 20:00	6	1081	0.000	6	1081	0.000	6	1081	0.000
20:00 - 21:00	6	1081	0.000	6	1081	0.000	6	1081	0.000
21:00 - 22:00	6	1081	0.000	6	1081	0.000	6	1081	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.230			0.230			0.460

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

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

APPENDIX F

Bus Travel Distribution based on 2011 Census: Origin / Destination statistics

WU03EW - Location of usual residence and place of work by method of travel to work (MSOA lev

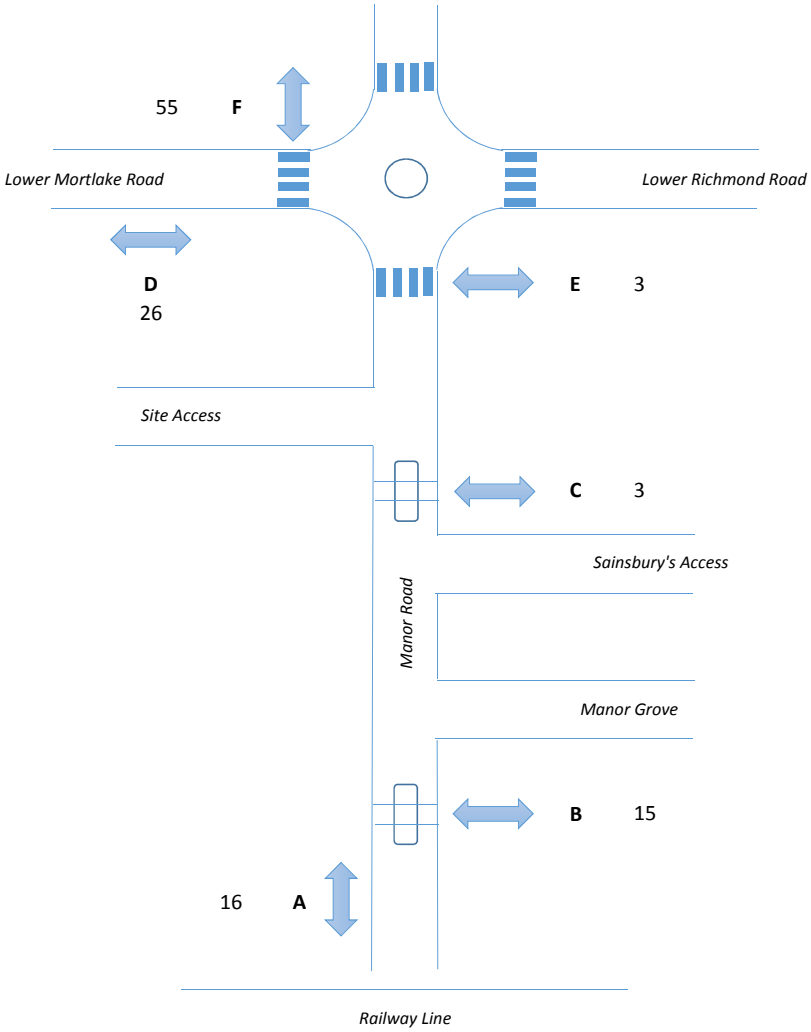
population	All usual residents aged 16 and over in employment the week before the ce
units	Persons
date	2011
method of travel to work	Bus, minibus or coach

place of work : 2011 super output area - middle layer	**usual residence E02000787 : Richmond upon Thames 004**	%
E02000791 : Richmond upon Thames 008	41	18%
E02000797 : Richmond upon Thames 014	22	10%
E02000606 : Kingston upon Thames 009	19	8%
E02000384 : Hammersmith and Fulham 013	16	7%
E02006792 : Hounslow 029	14	6%
E02000784 : Richmond upon Thames 001	10	4%
E02000787 : Richmond upon Thames 004	10	4%
E02000804 : Richmond upon Thames 021	10	4%
E02000372 : Hammersmith and Fulham 001	8	3%
E02000932 : Wandsworth 010	8	3%
E02000268 : Ealing 031	8	3%
E02000387 : Hammersmith and Fulham 016	7	3%
E02000531 : Hounslow 006	7	3%
E02000539 : Hounslow 014	7	3%
E02000785 : Richmond upon Thames 002	7	3%
E02000789 : Richmond upon Thames 006	7	3%
E02000938 : Wandsworth 016	6	3%
E02000602 : Kingston upon Thames 005	6	3%
E02000788 : Richmond upon Thames 005	6	3%
E02000798 : Richmond upon Thames 015	6	3%
E02000801 : Richmond upon Thames 018	6	3%
Total	231	100%

APPENDIX G

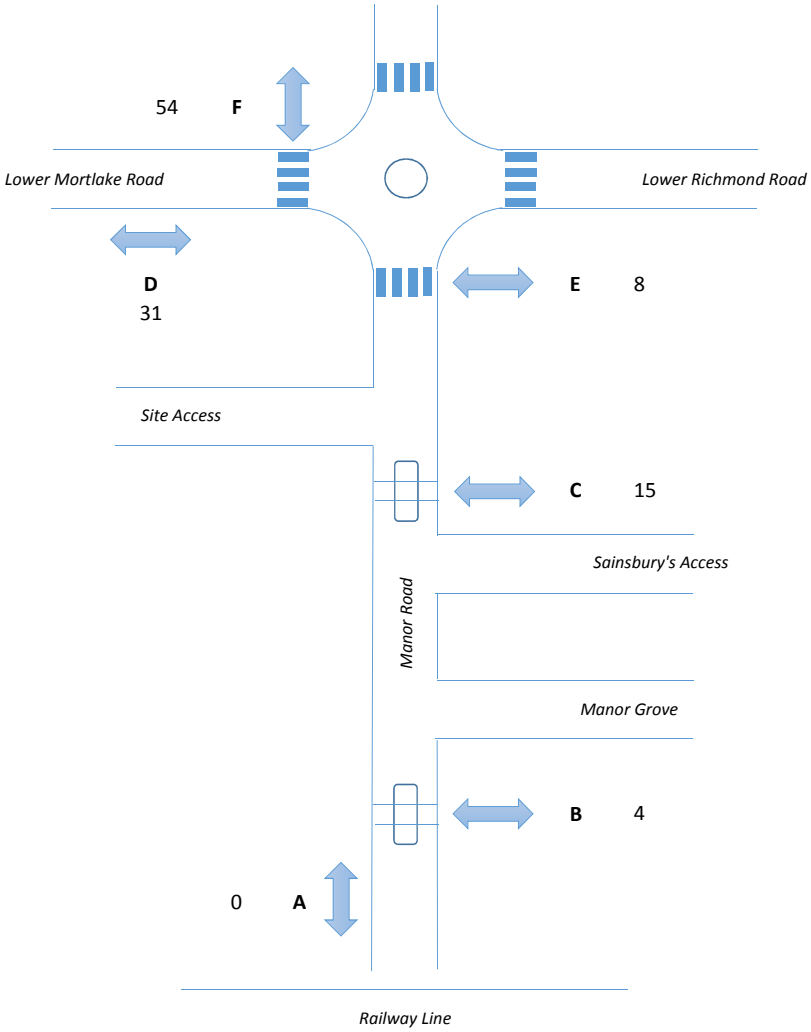
Proposed Development Pedestrian Movements

AM Peak Hour Pedestrian Movements



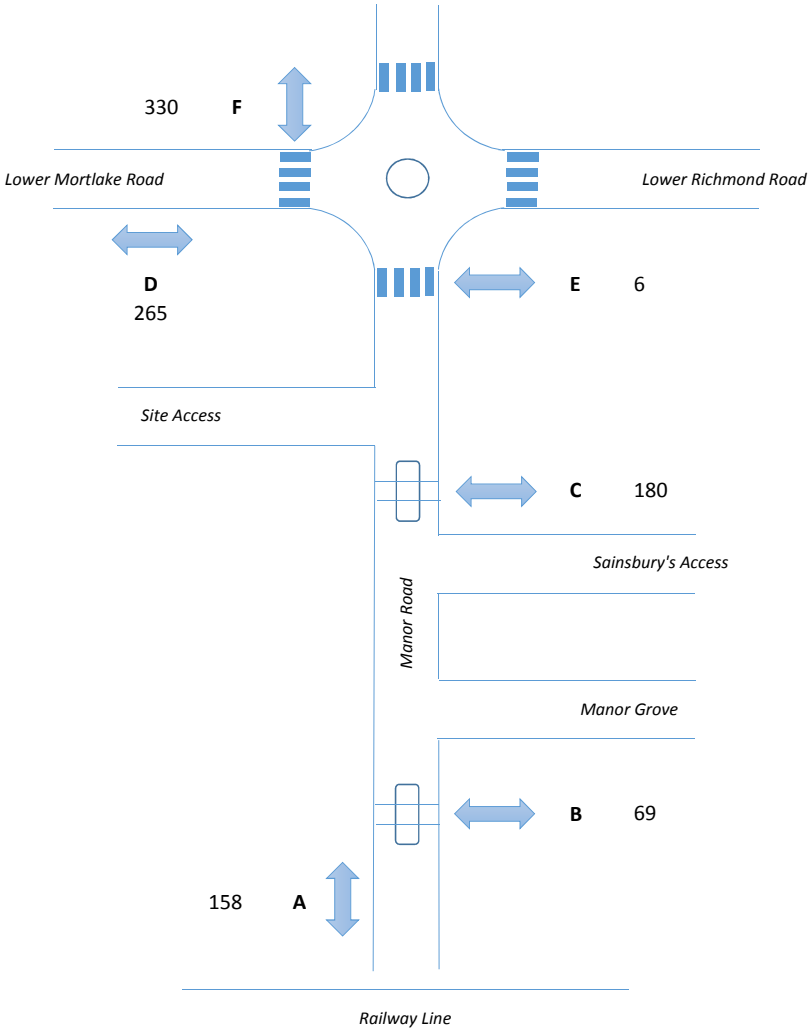
	Link					
Trip Purpose	**A**	**B**	**C**	**D**	**E**	**F**
Education	16	8				9
Commuting				5	3	3
Richmond Underground Station				36		
Bus			3	14		14
North Sheen Station		7				
Shopping						
Walking						
Leisure						
Personal Business						
Other						
Total	16	15	3	55	3	26

PM Peak Hour Pedestrian Movements



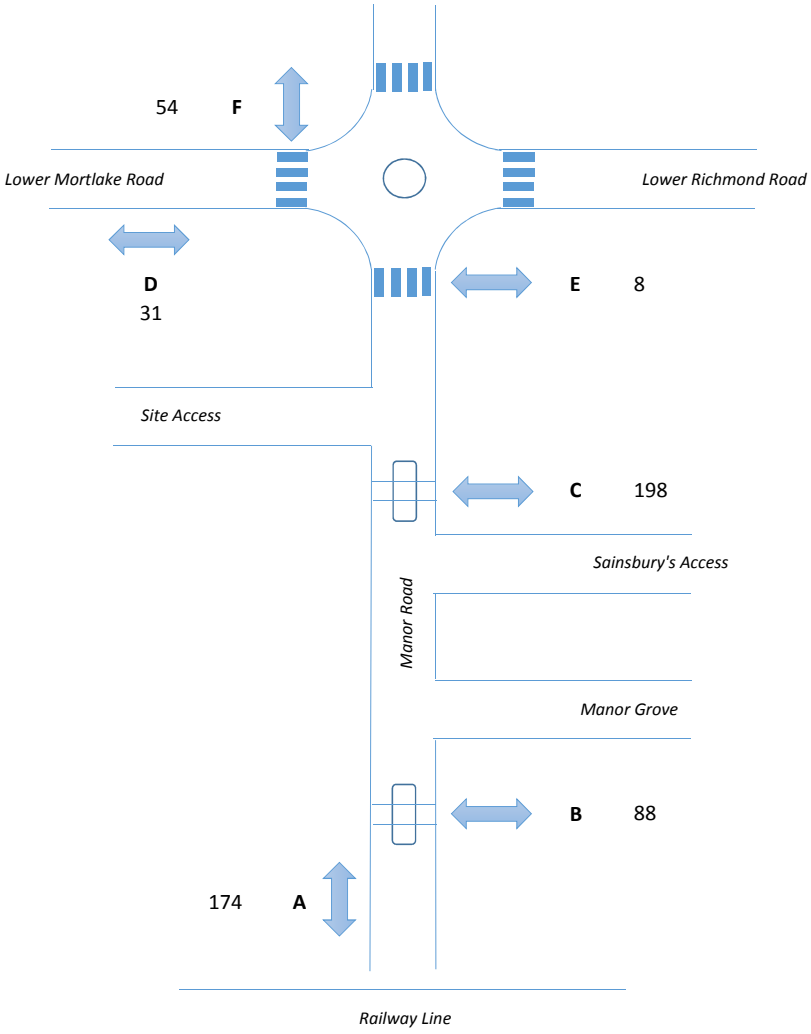
	Link					
Trip Purpose	**A**	**B**	**C**	**D**	**E**	**F**
Education						
Commuting				8	4	4
Richmond Underground Station						30
Bus			3	15		16
North Sheen Station		4				
Shopping			12			
Walking						
Leisure						
Personal Business						
Other				8	4	4
Total	0	4	15	31	8	54

Off-Peak Pedestrian Movements



	Link					
Trip Purpose	**A**	**B**	**C**	**D**	**E**	**F**
Education	48	24				21
Commuting				7	3	5
Richmond Underground Station				111		111
Bus			24	105		104
North Sheen Station		35				
Shopping			102			
Walking	69			35		34
Leisure	41	10				51
Personal Business			54			
Other				7	3	4
Total	158	69	180	265	6	330

Daily Pedestrian Movements



	Link					
Trip Purpose	**A**	**B**	**C**	**D**	**E**	**F**
Education	64	32				30
Commuting				8	4	4
Richmond Underground Station				147		141
Bus			30	134		134
North Sheen Station		46				
Shopping			114			
Walking	69			35		34
Leisure	41	10				51
Personal Business			54			
Other				15	7	8
Total	174	88	198	339	11	402