



London Road, Purbrook

Transport Statement

August 2015
McCarthy & Stone

PB paulbasham
ASSOCIATES
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**RETIREMENT DEVELOPMENT
LONDON ROAD, PURBROOK**

TRANSPORT STATEMENT

CONTROLLED DOCUMENT

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RETIREMENT DEVELOPMENT LONDON ROAD, PURBROOK

TRANSPORT STATEMENT

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1. INTRODUCTION

- 1.1 This Transport Statement (TS) has been prepared by Paul Basham Associates (PBA) on behalf of McCarthy and Stone Retirement Lifestyles Ltd to support a planning application for the redevelopment of land at London Road, Purbrook, Waterlooville. The proposed development comprises 42 retirement apartments and two small retail units, replacing a car retailer, a roofing supplier and a garage. The application site is demonstrated in **Figure 1**.



Figure 1: Site Location

- 1.2 The scope of this TS reflects the principles of the recently revoked DfT 'Guidance on Transport Assessments' (March 2007) and 'Travel Plans, Transport Assessments and Statements in Decision Making' (March 2015), reviewing site accessibility, Personal Injury Accident (PIA) data, the proposed accommodation schedule, car and cycle parking requirements, visibility and access arrangements, servicing arrangements, trip assessments and traffic impact on the local road network (LRN), explores design solutions and draws conclusions from the overall assessment.

2. EXISTING LOCAL CONDITIONS

Existing Site

- 2.1 The development site currently comprises a variety of commercial uses including a roofing supply merchants, a second hand car retailer and a car garage. The car garage and retailers are accessed from London Road via a vehicle crossover to the south west of the site. The roofing suppliers are accessed from Stakes Road via a bellmouth junction.

London Road

- 2.2 To the west of the site lies the A3 London Road which runs north/south connecting Purbrook and Waterloo to Portsmouth in the south. In the vicinity of the site London Road is approximately 6m in width and features double yellow line parking restrictions. To the south of the existing site access on the eastern side of London Road a dedicated loading bay is provided along with a row of on-street parking bays. London Road is subject to a 30mph speed limit, and footways with a width of 1.5 to 2m are available on both sides of the carriageway.

- 2.3 Approximately 200m to the south of the site London Road forms a roundabout junction with Ladybridge Road. From this point south a dedicated bus lane provides regular services along the A3 into Portsmouth.

Stakes Road

- 2.4 To the north of the site lies Stakes Road, a residential road subject to a 30mph speed limit which is stopped up at the north western corner of the site preventing a vehicular connection to the A3. Footways with a width of between 1.5 to 2m are available on both sides of the carriageway.

Personal Injury Accident Data

- 2.5 Personal Injury Accident (PIA) data has been assessed to consider the existing safety situation on the local road network. Patterns displayed in the data can be assessed with regards to the proximity, frequency and severity of incidents that have occurred that may require further in depth consideration. The PIA data has been collected for a period of 3 years from 2012 to 2014 and is summarised in **Figure 2**.

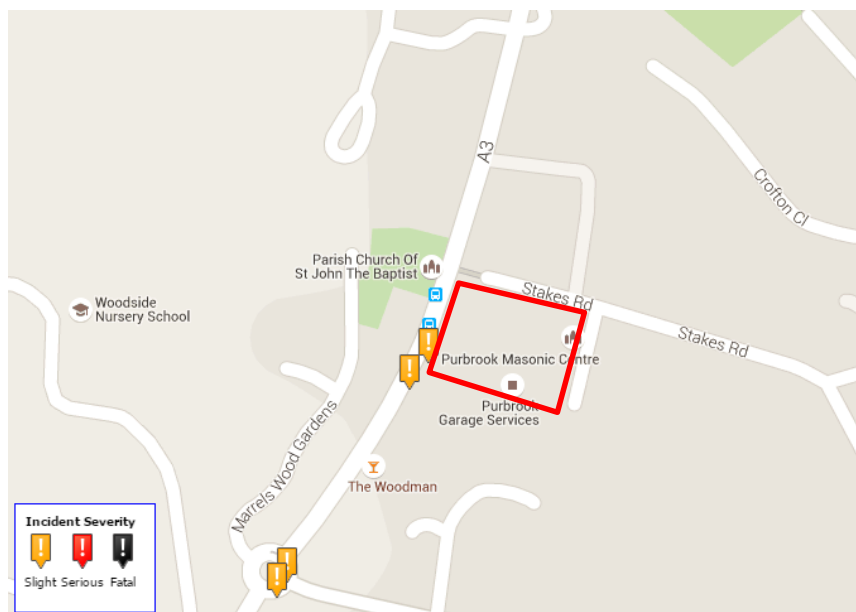


Figure 2: PIA events in the vicinity of the site

- 2.6 The PIA investigation identified that four slight accidents occurred in the vicinity of the site in the last three years. Two of these occurred at the London Road/Ladybridge Road/Marrel's Wood Gardens roundabout, whilst the remaining two occurred along London Road (A3) itself. Given the high level of traffic on the A3 it is not considered that the above accident record demonstrates any issues with the safety of the local highway network.

3. ACCESSIBILITY

- 3.1 The application site is located adjacent to a number of facilities and amenities on London Road, presenting an excellent opportunity to promote sustainable development. Facilities include a convenience store, a coffee shop, a post office, a pharmacy, a pub and a pair of bus stops. All of these facilities, along with a church and a second convenience store are within 200 metres of the site, comfortably within the 2km maximum distance identified as accessible on foot by The Chartered Institution of Highways and Transportation (CIHT).

Pedestrian Infrastructure

- 3.2 As discussed previously footways of 1.5 to 2m are available on both sides of London Road connecting the site to the local facilities. Although most local amenities are located on the same side of London Road as the site, a signalised pedestrian crossing is provided on its western boundary which provides a safe connection to shops and services to the north of the site, including a convenience store approximately 115m from the site.

Cycle Facilities

- 3.3 It is appreciated that, due to the nature of a majority of the proposed development, the end users of the site are unlikely to cycle to their destinations, although it is worth noting that London Road does incorporate advisory cycle lanes adjacent to the site which make the retail units more accessible by non-car modes for customers and staff.

Public Transport

- 3.4 The proposed development is well served by bus, with the nearest bus stop (southbound) located on the site boundary and the nearest northbound bus stop located opposite this (connected via the signalised pedestrian crossing). Both the southbound and northern bus stop consists of a shelter with seating and raised kerbs to assist with mobility-impaired passengers.
- 3.5 Both bus stops are served by First Bus route no. 8 which runs from Clanfield in the north to Portsmouth (city centre and Gunwharf Quays) in the south with a frequency of 15 minutes on weekdays. The site is therefore considered to have very good public transport provision.

Rail Services

- 3.6 Cosham Rail Station is located approximately 3km from the development site which is approximately a 25 minute walk.

- 3.7 Cosham Rail Station is part of the Southampton to Portsmouth Line and runs direct services to both cities as well as to other local centres such as Fareham. Portsmouth and Southsea station (approximately 15 minutes from Cosham by train) provides connections to London and other regional centres throughout the south.

4. PROPOSED DEVELOPMENT

Accommodation Schedule

- 4.1 The proposals are to redevelop the site for 42 Retirement Living units (23 one-bed and 19 two-bed units) and two small retail units of 72.2sqm and 89.9sqm respectively. The proposed development will be accessed via amendments to the existing access onto London Road. The site layout is demonstrated in **Appendix A**.

Access Arrangement

- 4.2 A majority of the parking for the Retirement Living units will be accessed via the existing access onto London Road. Four spaces will also be provided directly onto Stakes Road which will also incorporate a turning head for refuse and serving vehicles to use (the bin store is located adjacent to this turning head).
- 4.3 As detailed further in **Section 5**, given that the existing vehicular access onto London Road currently accommodates a car retailer and garage, the proposals will result in a net reduction in the use of this access. The access is therefore considered to be of an acceptable design to accommodate traffic associated with the proposed development.

Parking

- 4.4 The proposed development incorporates 35 parking bays. This provision has been compared with the suggested level of parking provision as determined by Havant Borough Council's parking standards for 'Sheltered Housing'. The required level of parking is compared to the proposals in **Table 1**.

Criteria	Parking Standard	Required no of bays	Proposed no of bays
Sheltered Housing	1 space per unit	44	35

Table 1: Parking provision and Parking Standards

- 4.5 HBC's parking standards do not differentiate between general needs and specialist accommodation such as that provided by McCarthy & Stone Retirement Living developments. The character of such developments is that there is lower car ownership and usage than general market apartments and different characteristic to 'sheltered housing'. Given the highly accessible location of the site, as discussed in **Section 3**, and the nature of the proposals as retirement living units it is considered that the proposed level of parking is sufficient for this site and will not result in overspill parking onto the local highway network.

- 4.6 Parking surveys have been undertaken at McCarthy & Stone sites over a number of years to understand the specific needs of their residents and inform their future

developments. The studies show an average car ownership across such developments of 0.24 per 1 bed unit and 0.57 cars per 2 bed unit (to include visitor and staff parking) which, for a site such as this would result in parking demand of 17 spaces. Therefore, whilst the proposed parking provision is below standard it is likely, ultimately, to be an over-provision in terms of parking at McCarthy & Stone developments.

- 4.7 All parking bays will be provided at standard geometries of 2.4m x 4.8m with at least a 6m aisle width to allow sufficient space for manoeuvring. A tracking investigation of the car park has been undertaken, which demonstrates that cars can successfully manoeuvre within the site. This is shown in **Appendix B**.
- 4.8 McCarthy & Stone run an annual permit system, whereby residents obtain a permit for a particular car parking space upon buying a property. This ensures that any resident needing an accessible space for a wheelchair, for example, are able to do this, and that spaces are only given to those with a car.
- 4.9 It is not proposed that the retail units would have on-site parking given the accessible nature of the site location and the existing public parking stock in the vicinity of the site. This includes existing on-street parking on London Road and the car park to the east of the site on Parkside Close.

Cycle Parking

- 4.10 HBC Parking standards specify that cycle parking for flats should be provided “*in appropriate, easily accessible locations, incorporating good design principles*”. Given the end users of the site, however, it is unlikely that many residents would own a bicycle and the proposals therefore include a combined mobility scooter and bicycle storage area on the basis that a resident who requires a mobility scooter is unlikely to have sufficient mobility to cycle.

Servicing

- 4.11 The proposals include stopping up the existing access on Stakes Road and using the hardstanding at this point to be used as a turning head for refuse vehicles, given that Stakes Road does not link through to London Road to the north-west of the site. The bin store is to be located at this point to ensure bin carry distances are within Manual for Streets standards.
- 4.12 For the retail units either side of the access deliveries are proposed to take place using the existing loading bay to the south of the site. Whilst the existing loading bay will be shortened to accommodate the access it will still be sufficient (approx. 15m) to service the two small units.

5. TRIP GENERATION

Existing Trips

- 5.1 In order to provide an accurate assessment of the trip generation of the site, the existing trips generated by the car retailer and garage has been investigated using TRICS (v7.1.3) survey results for Car Show Room and Vehicle Repair Garages (slow fit) respectively in England and Wales. Existing trips for the roofing suppliers were calculated using TRICS (v7.1.3) results for Builders Merchants in England and Wales.
- 5.2 The resulting existing trip generation is shown in **Tables 2, 3 and 4** and the full TRICS output is contained in **Appendix C**.

Car Show Room (450sqm)	Trip Rate (per 100sqm)	Trip Generation
AM	1.198	6
PM	0.754	4
12H	10.868	49

Table 2: Trip Generation for Car Retailer

Vehicle Repair Garage (550sqm)	Trip Rate (per 100sqm)	Trip Generation
AM	1.487	8
PM	2.027	11
12H	17.703	97

Table 3: Trip Generation for Car Garage

Builders Merchants (360sqm)	Trip Rate (per 100sqm)	Trip Generation
AM	1.653	6
PM	0.232	1
12H	15.912	57

Table 4: Trip Generation for Roofing Suppliers

Proposed Trips – Retirement Living Units

- 5.3 McCarthy & Stone retirement schemes generate unique trip rates that are not directly comparable to traditional nursing home / retirement developments, with the former designed to meet the needs of elderly residents who require only limited support to allow them to live a relatively independent life.
- 5.4 In order to provide an appropriate trip rate for the proposed development, traffic count surveys have been commissioned at comparable McCarthy & Stone sites, with the resulting data providing more representative trip rates than available TRICS data sets. McCarthy & Stone traffic counts and associated trip rates are summarised within **Table 5**. The relevant trip data extract from McCarthy & Stone independent research is attached within **Appendix D**.

Retirement Living (42 units)	Trip Rate	Trip Generation
AM	0.192	8
PM	0.207	9
12H	1.660	70

Table 5: Proposed trip generation (based on independent research completed by Dr Allan Burns)

- 5.5 The trip rate assessment indicates a peak period trip generation of 8 vehicle trips in the AM peak (0800-0900hrs) and 9 vehicle trips in the PM peak (1700-1800hrs).
- 5.6 To ensure the proposed trip rate is realistic the above trip rates have been sensitivity tested against established TRICS data. As previously discussed, it is challenging to align the proposed development with a land use classification in the TRICS database. However, the “Retirement Accommodation” land use is considered the most representative of the McCarthy & Stone Retirement developments. The summary of this TRICS investigation is summarised in **Table 6** and the full TRICS outputs are contained in **Appendix C**.

Retirement Homes (42 units)	Trip Rate	Trip Generation
AM	0.210	9
PM	0.120	5
12H	1.956	82

Table 6: TRICS trip rate sensitivity test

- 5.7 The TRICS investigation indicates that the McCarthy & Stone trip rates as detailed in **Table 5** are realistic and representative of the traffic generation of the proposed development.

Proposed Trips – Retail Units

- 5.8 For the anticipated trip generation for the retail units the TRICS database has been used to determine trip rates for ‘Shopping Centre – Local Shops’ uses in England and Wales, for sites up to 600sqm and in similar locations to the proposed development. These trip rates are summarised within **Table 7** and the outputs are attached within **Appendix C**.

Local Shops (162sqm)	Trip Rate (per 100sqm)	Trip Generation
AM	9.771	16
PM	14.302	23
12H	176.517	286

Table 7: Retail unit trip generation

- 5.9 Given the nature of the retail units a large number of trips generated by the these uses

will be pass-by trips and as such will be vehicles not making a specific journey to the retail units themselves. The latest TRICS guidance states that the level of pass-by trips should be determined on a site-by-site basis, however the previous guidance noted that, for a site feeding onto a major arterial road, pass-by trips would be the major component. Despite its alignment and speed limit, London Road is a major link road connecting Waterloooville and areas to the north with Portsmouth and the M27 to the south. In addition the TRICS report also states that, for retail land uses “*in most circumstances 10% or less of the total trips are completely new*” and that “*the proportion of trips generally accepted to be non-primary [linked trips] is 30%*”.

- 5.10 It should be noted, however, that the 30% figure covers weekends when the opportunity for pass-by trips is reduced when compared with AM and PM weekday peak periods, i.e. when commuting trips are at their highest. That said, in order to be robust a 30% discount has been applied for pass-by trips to the local centre for the AM and PM peaks and also across a 12 hour day. **Table 8** summarises the expected trip generation from the retail units with the 30% discount related to linked trips.

Local Shops (162sqm)	Trip Generation
AM	11
PM	16
12H	200

Table 8: Pass-by trip discount

Highway Impact

- 5.11 In order to inform the highway impacts of the proposed development, the net change in trips generated by the site has been considered and is shown in **Table 9**.

	Existing Trips	Proposed Trips	Net Change in Trips
AM	20	19	-1
PM	16	25	+9
12H	203	270	+67

Table 9: Net trip generation

- 5.12 The trip generation investigation has identified that the proposed development would result in no net increase of trips on the local highway network in the AM peak hour and an increase of 9 trips in the PM peak hour (one trip every 6-7 minutes).
- 5.13 The proposed trip generation does not take into account the highly sustainable location of the development and proposed provision of a high quality pedestrian links and short distances to local amenities. Consequently, the traffic generation of the proposed development represents a worst-case scenario.

London Road Access

- 5.14 In order to assess the net change in trips at the London Road access **Table 10** shows the existing trips from the Car Show Room and Vehicle Repair Change alone as these are the areas of the site facilitated by this access (the Builders Merchants is accessed exclusively from Stakes Road). In addition, in terms of proposed trips, this only includes trips generated by the Retirement Living units as this access is for those residents only and not for users of the retail units. As can be seen the proposed development will result in a reduction of 76 vehicle trips at this access across a 12 hour day, as well as a reduction in 6 trips in the AM and PM peaks.

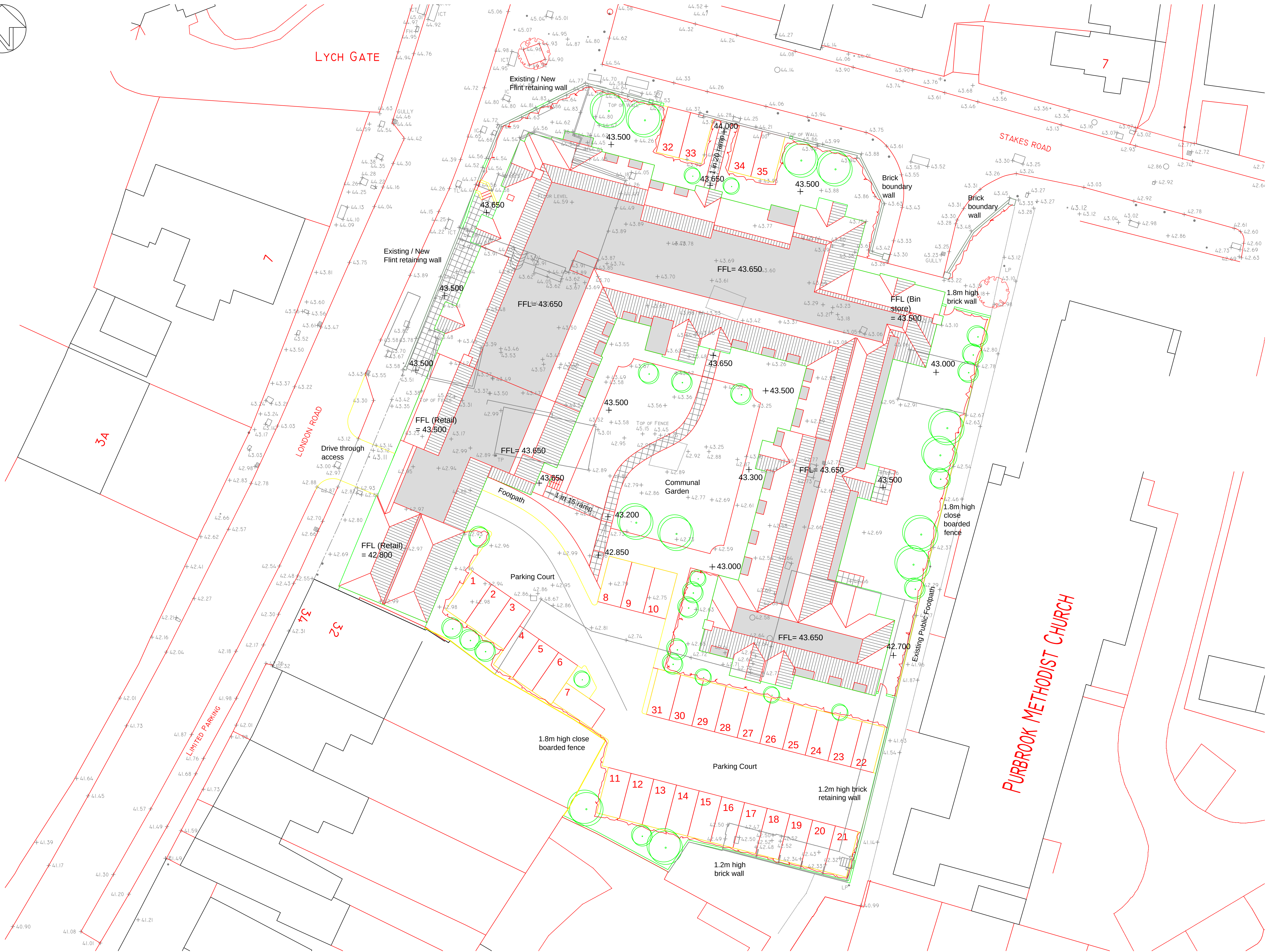
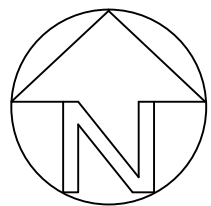
	Existing Trips	Proposed Trips	Net Change in Trips
AM	14	8	-6
PM	15	9	-6
12H	146	70	-76

Table 10: Net Reduction in trips at the London Road access

- 5.15 In addition to this the change of use of the site will result in a change in the type of vehicle using the London Road access. Whereas the existing uses will involve the use of more light and heavy goods vehicles, with the proposed development the access will be used almost exclusively by cars which, along with the above reduction will result in a reduction in the risk of conflict at this access.

6. SUMMARY

- 6.1 This Transport Statement has been prepared by Paul Basham Associates on behalf of McCarthy and Stone to support a planning application for a development of 42 Retirement Living units and 2no. retail units at London Road, Purbrook.
- 6.2 The site is currently used by several commercial properties and is ideally located to maximise opportunities to travel by sustainable modes being well within the 2km CIHT recommended distance from local amenities.
- 6.3 The proposed development will be accessed via the existing access on London Road with the access onto Stakes Road being stopped up. The proposals will result in a reduction in use of the London Road access across a 12 hour day and therefore it is proposed to retain the access as currently provided.
- 6.4 The proposed development will be serviced from the stopped up Stakes Road access which will be converted into a turning head for refuse vehicles to turn.
- 6.5 35 parking spaces are to be provided which, whilst below Havant Borough Council's standards, is significantly more than typically required at similar McCarthy & Stone developments. Cycle parking is to be provided in tandem with mobility scooter storage as it is unlikely that any one resident will require both a cycle and a mobility scooter.
- 6.6 The proposed trip generation investigation identified that the proposed development would result in no net increase of trips on the local highway network in the AM peak hour and an increase of 9 trips in the PM peak hour (one trip every 6-7 minutes).
- 6.7 This Transport Statement has demonstrated that the proposed development will not have a significant impact on the operation or safety of the local road network. We would therefore encourage Hampshire County Council to look favourably upon the highway considerations of this application.



Notes:

Please report all discrepancies, errors and omissions.

Verify all dimensions on site before commencing any work on site or preparing shop drawings.

All materials, components and workmanship are to comply with the relevant British Standards, Codes of Practice, and appropriate manufacturers recommendations that from time to time shall apply.

For all specialist work, see relevant drawings.

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Revisions :
rev date revision

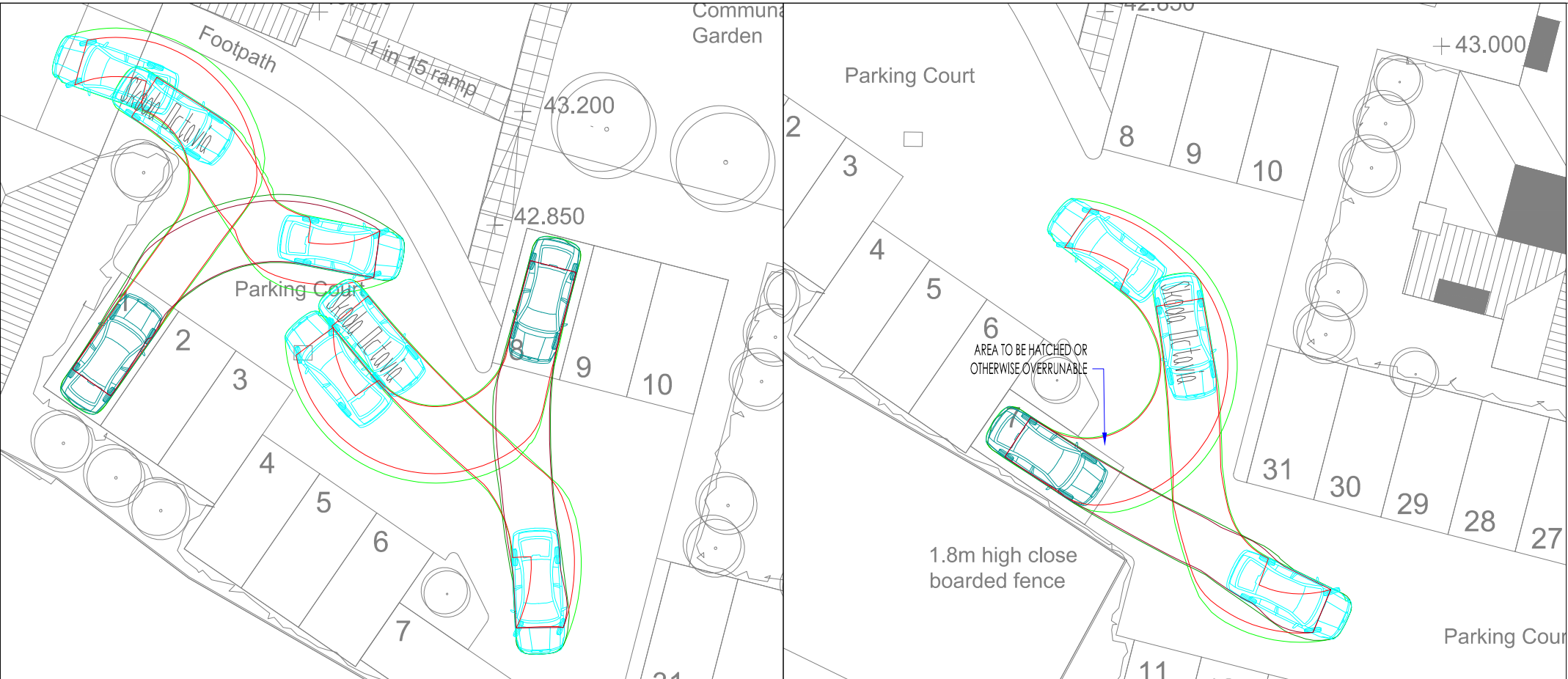


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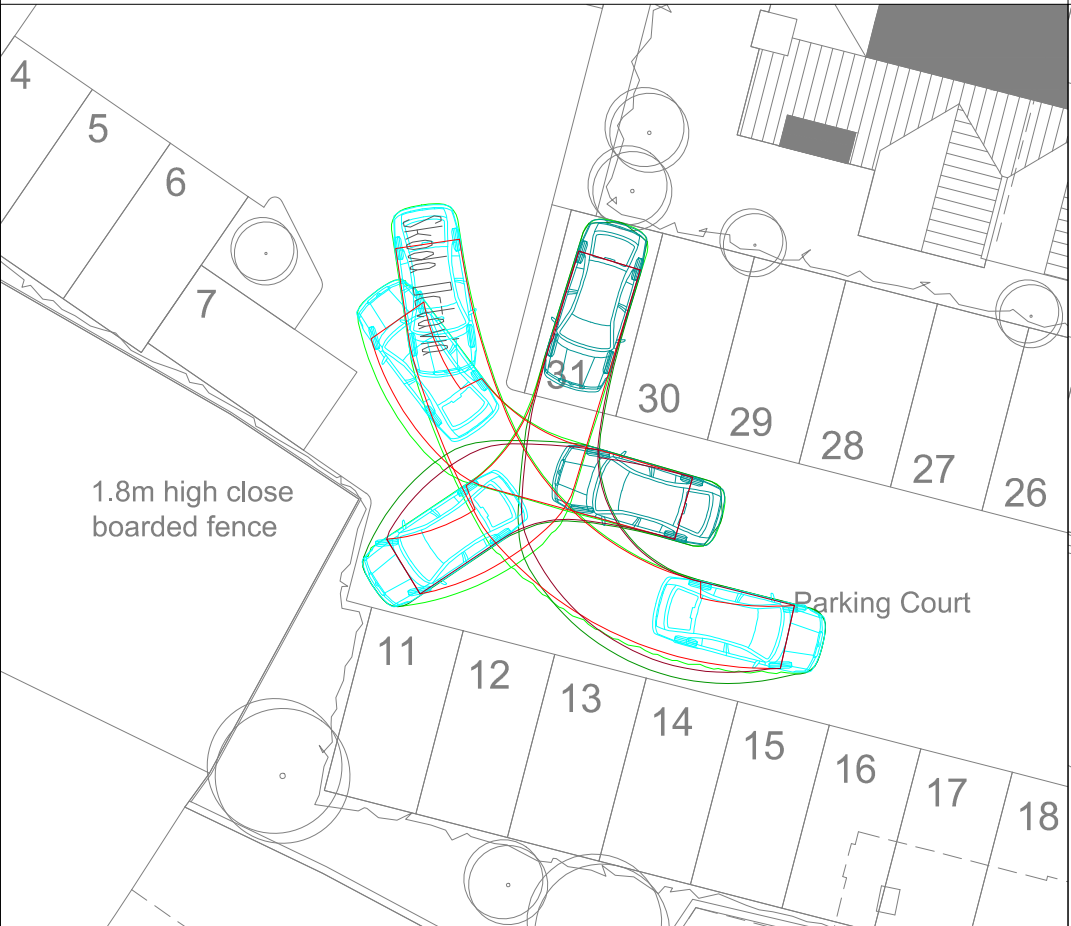
Drawing title:
Proposed Site Plan

Scale: 1:200 @ A1	Drawing number: SE-2168-03-AC-002	Revision: A
Date: July 2015		

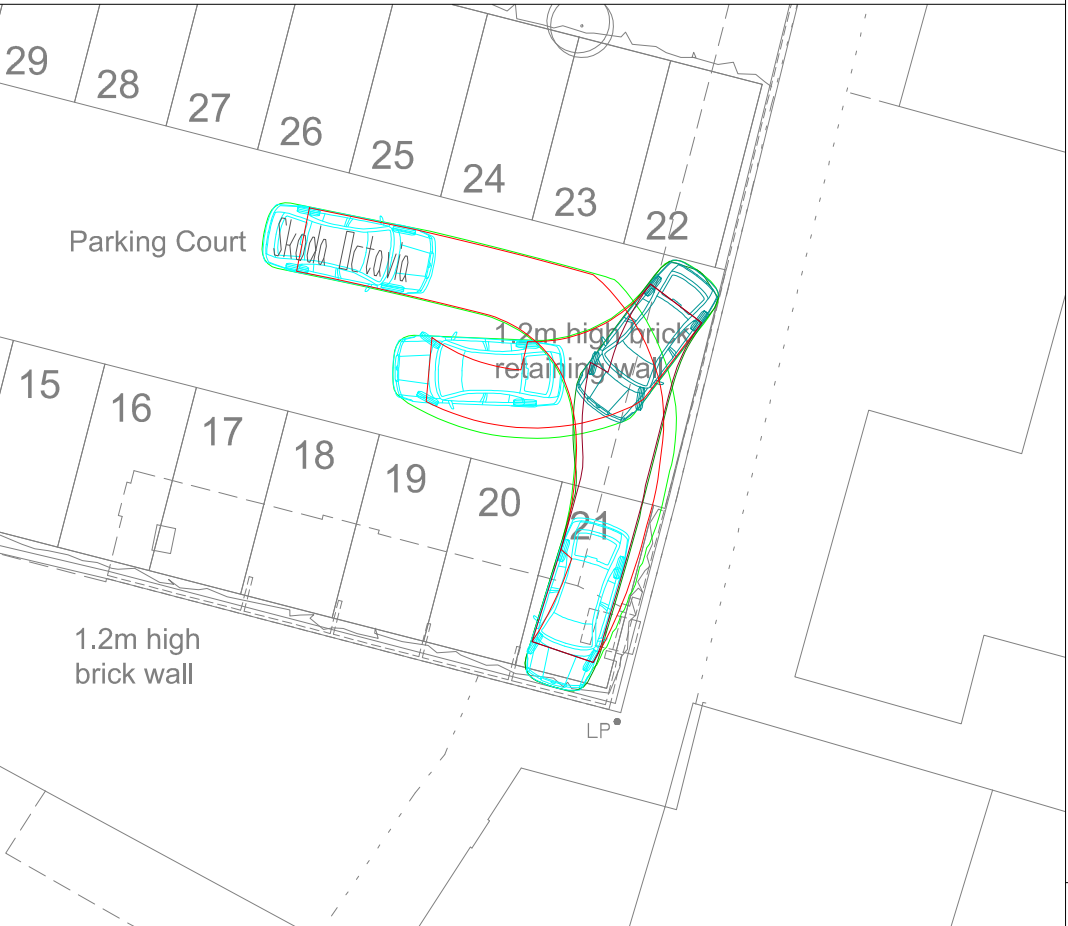


PARKING BAYS 1 AND 8

PARKING BAY 7



PARKING BAY 31

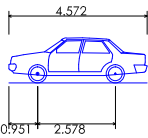


PARKING BAY 21

NOTES

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VEHICLE SPECIFICATION



Skoda Octavia	
Overall Length	4.572m
Overall Width	1.769m
Overall Body Height	1.488m
Min Body Ground Clearance	0.249m
Max Track Width	1.713m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	5.100m



Project Name LONDON ROAD PURBROOK		Title CAR PARK TRACKING	 Paul Basham Associates Ltd Lancaster Court 8 Barnes Wallis Road Fareham Hampshire PO15 5TU T +44 (0) 1489 668134 E info@paulbashamassociates.com W www.paulbashamassociates.com	Checked By JH	Checked Date 05.08.15	Scale 1:200 (AT A3 SIZE)		
Project Phase PRELIMINARY				Drawn By SR	Drawn Date 05.08.15	Client Drawing No.	PBA Drawing No. 047.0046.001	Revision P2

Calculation Reference: AUDIT-247601-150519-0519

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
 Category : L - BUILDER'S MERCHANTS
 VEHICLES

Selected regions and areas:

05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days
06	WEST MIDLANDS	
	WO WORCESTERSHIRE	1 days

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

Filtering Stage 2 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: 1051 to 5000 (units: sqm)
 Range Selected by User: 600 to 5000 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/07 to 11/06/13

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

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

Selected survey types:

Manual count	2 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	1
Edge of Town	1

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

Selected Location Sub Categories:

Industrial Zone	1
Commercial 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.

Filtering Stage 3 selection:

Use Class:

A1

2 days

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

Population within 1 mile:

15,001 to 20,000

2 days

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

Population within 5 miles:

50,001 to 75,000

1 days

100,001 to 125,000

1 days

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

Car ownership within 5 miles:

1.1 to 1.5

2 days

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

Petrol filling station:

Included in the survey count

0 days

Excluded from count or no filling station

2 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

2 days

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

LIST OF SITES relevant to selection parameters

1	LN-01-L-02	JACKSON BUILDING CENTRE	LINCOLNSHIRE
	SOUTH PARADE		
	GRANTHAM		
	Edge of Town Centre		
	Commercial Zone		
	Total Gross floor area:	1051 sqm	
	Survey date: TUESDAY	11/06/13	Survey Type: MANUAL
2	WO-01-L-02	JEWSON	WORCESTERSHIRE
	NAVIGATION ROAD		
	WORCESTER		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	5000 sqm	
	Survey date: MONDAY	15/06/09	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/L - BUILDER'S MERCHANTS
VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	1051	0.856	1	1051	0.000	1	1051	0.856
07:00 - 08:00	2	3026	0.694	2	3026	0.512	2	3026	1.206
08:00 - 09:00	2	3026	0.942	2	3026	0.711	2	3026	1.653
09:00 - 10:00	2	3026	0.694	2	3026	0.694	2	3026	1.388
10:00 - 11:00	2	3026	0.992	2	3026	0.793	2	3026	1.785
11:00 - 12:00	2	3026	0.975	2	3026	0.892	2	3026	1.867
12:00 - 13:00	2	3026	0.760	2	3026	0.925	2	3026	1.685
13:00 - 14:00	2	3026	0.645	2	3026	0.727	2	3026	1.372
14:00 - 15:00	2	3026	0.711	2	3026	0.744	2	3026	1.455
15:00 - 16:00	2	3026	0.595	2	3026	0.661	2	3026	1.256
16:00 - 17:00	2	3026	0.430	2	3026	0.727	2	3026	1.157
17:00 - 18:00	2	3026	0.017	2	3026	0.215	2	3026	0.232
18:00 - 19:00	1	5000	0.000	1	5000	0.000	1	5000	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		8.311			7.601			15.912	

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:	1051 - 5000 (units: sqm)
Survey date range:	01/01/07 - 11/06/13
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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

Calculation Reference: AUDIT-247601-150519-0544

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 15 - VEHICLE SERVICES
 Category : A - VEHICLE REPAIR GARAGE (SLOW FIT)
VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	WN WINDSOR & MAIDENHEAD	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days

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

Filtering Stage 2 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: 580 to 900 (units: sqm)
 Range Selected by User: 333 to 2000 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/07 to 23/11/12

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

Selected survey days:

Tuesday	1 days
Friday	1 days

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

Selected survey types:

Manual count	2 days
Directional ATC Count	0 days

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

Selected Locations:

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

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

Selected Location Sub Categories:

Industrial Zone	2
-----------------	---

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.

Filtering Stage 3 selection:

Use Class:

B2

2 days

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

Population within 1 mile:

5,001 to 10,000

1 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:

125,001 to 250,000

2 days

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

Car ownership within 5 miles:

0.6 to 1.0

1 days

1.1 to 1.5

1 days

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

Travel Plan:

No

2 days

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

LIST OF SITES relevant to selection parameters

1	CA-15-A-01	GARAGE		CAMBRIDGESHIRE
	FENGATE			
	PETERBOROUGH			
	Edge of Town			
	Industrial Zone			
	Total Gross floor area:	900 sqm		
	Survey date: TUESDAY	16/10/12		Survey Type: MANUAL
2	WN-15-A-01	GARAGE		WINDSOR & MAIDENHEAD
	CORDWALLIS STREET			
	MAIDENHEAD			
	Suburban Area (PPS6 Out of Centre)			
	Industrial Zone			
	Total Gross floor area:	580 sqm		
	Survey date: FRIDAY	23/11/12		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 15 - VEHICLE SERVICES/A - VEHICLE REPAIR GARAGE (SLOW FIT)
VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	740	0.473	2	740	0.068	2	740	0.541
08:00 - 09:00	2	740	1.149	2	740	0.338	2	740	1.487
09:00 - 10:00	2	740	1.081	2	740	1.081	2	740	2.162
10:00 - 11:00	2	740	0.946	2	740	0.743	2	740	1.689
11:00 - 12:00	2	740	0.946	2	740	0.608	2	740	1.554
12:00 - 13:00	2	740	0.743	2	740	0.878	2	740	1.621
13:00 - 14:00	2	740	1.081	2	740	1.149	2	740	2.230
14:00 - 15:00	2	740	0.473	2	740	0.811	2	740	1.284
15:00 - 16:00	2	740	0.405	2	740	0.473	2	740	0.878
16:00 - 17:00	2	740	0.811	2	740	1.081	2	740	1.892
17:00 - 18:00	2	740	0.676	2	740	1.351	2	740	2.027
18:00 - 19:00	2	740	0.068	2	740	0.270	2	740	0.338
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			8.852			8.851			17.703

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: 580 - 900 (units: sqm)
 Survey date range: 01/01/07 - 23/11/12
 Number of weekdays (Monday-Friday): 2
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

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

Calculation Reference: AUDIT-247601-150806-0816

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	SC SURREY	1 days
03	SOUTH WEST	
	DV DEVON	1 days
	GS GLOUCESTERSHIRE	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days

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

Filtering Stage 2 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: 359 to 525 (units: sqm)
 Range Selected by User: 210 to 600 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/07 to 07/10/13

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

Selected survey days:

Monday	2 days
Tuesday	1 days
Friday	1 days

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

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	3

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

Selected Location Sub Categories:

Residential Zone	4
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This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Filtering Stage 3 selection:

Use Class:

A1	4 days
----	--------

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

Population within 1 mile:

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

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

Car ownership within 5 miles:

1.1 to 1.5	4 days
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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	4 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	4 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.

LIST OF SITES relevant to selection parameters

1	CA-01-I-01	LOCAL SHOPS		CAMBRIDGESHIRE
	WARWICK ROAD			
	PETERBOROUGH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:	478 sqm		
	Survey date: MONDAY	17/10/11	Survey Type: MANUAL	
2	DV-01-I-01	LOCAL SHOPS		DEVON
	TORRIDGE WAY			
	EFFORD			
	PLYMOUTH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:	470 sqm		
	Survey date: TUESDAY	17/07/12	Survey Type: MANUAL	
3	GS-01-I-01	LOCAL SHOPS		GLOUCESTERSHIRE
	SALISBURY AVENUE			
	WARDEN HILL			
	CHELTENHAM			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:	525 sqm		
	Survey date: MONDAY	26/04/10	Survey Type: MANUAL	
4	SC-01-I-01	LOCAL SHOPS		SURREY
	CHURCH ROAD			
	MILFORD			
	Edge of Town Centre			
	Residential Zone			
	Total Gross floor area:	359 sqm		
	Survey date: FRIDAY	24/09/10	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

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	359	1.671	1	359	0.836	1	359	2.507
07:00 - 08:00	4	458	5.186	4	458	5.186	4	458	10.372
08:00 - 09:00	4	458	4.913	4	458	4.858	4	458	9.771
09:00 - 10:00	4	458	6.987	4	458	6.223	4	458	13.210
10:00 - 11:00	4	458	5.513	4	458	5.513	4	458	11.026
11:00 - 12:00	4	458	6.441	4	458	5.786	4	458	12.227
12:00 - 13:00	4	458	6.987	4	458	7.260	4	458	14.247
13:00 - 14:00	4	458	7.915	4	458	7.642	4	458	15.557
14:00 - 15:00	4	458	5.295	4	458	5.349	4	458	10.644
15:00 - 16:00	4	458	5.786	4	458	5.786	4	458	11.572
16:00 - 17:00	4	458	6.823	4	458	5.895	4	458	12.718
17:00 - 18:00	4	458	6.878	4	458	7.424	4	458	14.302
18:00 - 19:00	4	458	6.168	4	458	6.550	4	458	12.718
19:00 - 20:00	4	458	5.022	4	458	5.404	4	458	10.426
20:00 - 21:00	4	458	2.729	4	458	3.002	4	458	5.731
21:00 - 22:00	3	451	2.954	3	451	3.471	3	451	6.425
22:00 - 23:00	1	359	0.557	1	359	2.507	1	359	3.064
23:00 - 24:00									
Total Rates:			87.825			88.692			176.517

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: 359 - 525 (units: sqm)
 Survey date range: 01/01/07 - 07/10/13
 Number of weekdays (Monday-Friday): 4
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

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

Calculation Reference: AUDIT-247601-150805-0846

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : N - RETIREMENT FLATS
 VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	KC KENT	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	SY SOUTH YORKSHIRE	1 days
10	WALES	
	PS POWYS	1 days
	VG VALE OF GLAMORGAN	1 days

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

Filtering Stage 2 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:	28 to 52 (units:)
Range Selected by User:	28 to 76 (units:)

Public Transport Provision:

Selection by:	Include all surveys
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Date Range:	01/01/07 to 19/12/12
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This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	2 days
Wednesday	1 days
Friday	1 days

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

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	2

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

Selected Location Sub Categories:

Residential Zone	2
No Sub Category	2

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.

Filtering Stage 3 selection:

Use Class:

C3

4 days

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

Population within 1 mile:

5,001 to 10,000

1 days

15,001 to 20,000

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:

5,001 to 25,000

1 days

100,001 to 125,000

1 days

125,001 to 250,000

2 days

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

Car ownership within 5 miles:

0.6 to 1.0

1 days

1.1 to 1.5

3 days

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

Travel Plan:

No

4 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.

LIST OF SITES relevant to selection parameters

1	KC-03-N-05	RETIREMENT FLATS	KENT
	HARDRES STREET		
	RAMSGATE		
	Edge of Town Centre		
	No Sub Category		
	Total Number of dwellings:	41	
	Survey date: MONDAY	07/12/09	Survey Type: MANUAL
2	PS-03-N-01	RETIREMENT FLATS	POWYS
	HEOL GOUESNOU		
	BRECON		
	Edge of Town Centre		
	No Sub Category		
	Total Number of dwellings:	52	
	Survey date: FRIDAY	05/09/08	Survey Type: MANUAL
3	SY-03-N-01	RETIREMENT FLATS	SOUTH YORKSHIRE
	MOSS CLOSE		
	WICKERSLEY		
	NEAR ROTHERHAM		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	28	
	Survey date: WEDNESDAY	19/12/12	Survey Type: MANUAL
4	VG-03-N-01	RETIREMENT FLATS	VALE OF GLAMORGAN
	BRADFORD PLACE		
	PENARTH		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	46	
	Survey date: MONDAY	16/07/12	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/N - RETIREMENT FLATS
VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	42	0.054	4	42	0.066	4	42	0.120
08:00 - 09:00	4	42	0.114	4	42	0.096	4	42	0.210
09:00 - 10:00	4	42	0.060	4	42	0.060	4	42	0.120
10:00 - 11:00	4	42	0.072	4	42	0.096	4	42	0.168
11:00 - 12:00	4	42	0.108	4	42	0.132	4	42	0.240
12:00 - 13:00	4	42	0.102	4	42	0.108	4	42	0.210
13:00 - 14:00	4	42	0.054	4	42	0.072	4	42	0.126
14:00 - 15:00	4	42	0.084	4	42	0.066	4	42	0.150
15:00 - 16:00	4	42	0.066	4	42	0.066	4	42	0.132
16:00 - 17:00	4	42	0.132	4	42	0.102	4	42	0.234
17:00 - 18:00	4	42	0.054	4	42	0.066	4	42	0.120
18:00 - 19:00	4	42	0.078	4	42	0.048	4	42	0.126
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.978			0.978			1.956

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

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

Parameter summary

Trip rate parameter range selected: 28 - 52 (units:)
 Survey date range: 01/01/07 - 19/12/12
 Number of weekdays (Monday-Friday): 4
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

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

Calculation Reference: AUDIT-247601-150519-0516

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 14 - CAR SHOW ROOMS
 Category : A - CAR SHOW ROOMS
 VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	1 days
	KC KENT	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	2 days
05	EAST MIDLANDS	
	LE LEICESTERSHIRE	1 days
	LN LINCOLNSHIRE	1 days
	NR NORTHAMPTONSHIRE	1 days

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

Filtering Stage 2 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: 825 to 9800 (units: sqm)
 Range Selected by User: 480 to 4000 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/07 to 23/05/14

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

Selected survey days:

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

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

Selected survey types:

Manual count	7 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	2
Edge of Town	4

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

Selected Location Sub Categories:

Commercial Zone	5
Residential Zone	2

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.

Filtering Stage 3 selection:

Use Class:

Sui Generis	6 days
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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:

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

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

Population within 5 miles:

25,001 to 50,000	1 days
75,001 to 100,000	1 days
125,001 to 250,000	3 days
250,001 to 500,000	1 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	5 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	7 days
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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.

LIST OF SITES relevant to selection parameters

1	CA-14-A-03	FORD		CAMBRIDGESHIRE
	STUKELEY MEADOWS			
	HUNTINGDON			
	Suburban Area (PPS6 Out of Centre)			
	Commercial Zone			
	Total Gross floor area:	1608 sqm		
	Survey date: FRIDAY	21/10/11	Survey Type: MANUAL	
2	CA-14-A-04	MERCEDES BENZ		CAMBRIDGESHIRE
	BARNWELL ROAD			
	CAMBRIDGE			
	Edge of Town			
	Commercial Zone			
	Total Gross floor area:	3400 sqm		
	Survey date: THURSDAY	11/10/12	Survey Type: MANUAL	
3	EX-14-A-01	FORD		ESSEX
	109 RAINSFORD ROAD			
	CHELMSFORD			
	Edge of Town Centre			
	Residential Zone			
	Total Gross floor area:	825 sqm		
	Survey date: TUESDAY	15/10/13	Survey Type: MANUAL	
4	KC-14-A-02	CAR SHOW ROOM		KENT
	UPPER ELMERS END ROAD			
	EDEN PARK			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:	1290 sqm		
	Survey date: FRIDAY	09/03/07	Survey Type: MANUAL	
5	LE-14-A-04	BMW & MINI		LEICESTERSHIRE
	MERIDIAN EAST			
	BRAUNSTONE			
	LEICESTER			
	Edge of Town			
	Commercial Zone			
	Total Gross floor area:	9800 sqm		
	Survey date: THURSDAY	25/06/09	Survey Type: MANUAL	
6	LN-14-A-01	HONDA		LINCOLNSHIRE
	TOLLEMACHE ROAD			
	GRANTHAM			
	Edge of Town			
	Commercial Zone			
	Total Gross floor area:	1350 sqm		
	Survey date: MONDAY	15/11/10	Survey Type: MANUAL	
7	NR-14-A-01	TOYOTA		NORTHAMPTONSHIRE
	FERRIS ROW			
	RIVERSIDE BUSINESS PARK			
	NORTHAMPTON			
	Edge of Town			
	Commercial Zone			
	Total Gross floor area:	1100 sqm		
	Survey date: TUESDAY	22/05/07	Survey Type: MANUAL	

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

TRIP RATE for Land Use 14 - CAR SHOW ROOMS/A - CAR SHOW ROOMS
VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	1350	0.000	1	1350	0.000	1	1350	0.000
07:00 - 08:00	5	3388	0.272	5	3388	0.077	5	3388	0.349
08:00 - 09:00	7	2768	0.821	7	2768	0.377	7	2768	1.198
09:00 - 10:00	7	2768	0.496	7	2768	0.408	7	2768	0.904
10:00 - 11:00	7	2768	0.511	7	2768	0.506	7	2768	1.017
11:00 - 12:00	7	2768	0.480	7	2768	0.480	7	2768	0.960
12:00 - 13:00	7	2768	0.397	7	2768	0.372	7	2768	0.769
13:00 - 14:00	7	2768	0.485	7	2768	0.465	7	2768	0.950
14:00 - 15:00	7	2768	0.527	7	2768	0.583	7	2768	1.110
15:00 - 16:00	7	2768	0.537	7	2768	0.521	7	2768	1.058
16:00 - 17:00	7	2768	0.397	7	2768	0.516	7	2768	0.913
17:00 - 18:00	7	2768	0.258	7	2768	0.496	7	2768	0.754
18:00 - 19:00	7	2768	0.072	7	2768	0.346	7	2768	0.418
19:00 - 20:00	2	963	0.104	2	963	0.364	2	963	0.468
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.357			5.511			10.868

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:	825 - 9800 (units: sqm)
Survey date range:	01/01/07 - 23/05/14
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 14 - CAR SHOW ROOMS/A - CAR SHOW ROOMS
OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	1350	0.000	1	1350	0.000	1	1350	0.000
07:00 - 08:00	5	3388	0.024	5	3388	0.006	5	3388	0.030
08:00 - 09:00	7	2768	0.005	7	2768	0.031	7	2768	0.036
09:00 - 10:00	7	2768	0.021	7	2768	0.010	7	2768	0.031
10:00 - 11:00	7	2768	0.015	7	2768	0.015	7	2768	0.030
11:00 - 12:00	7	2768	0.015	7	2768	0.021	7	2768	0.036
12:00 - 13:00	7	2768	0.000	7	2768	0.005	7	2768	0.005
13:00 - 14:00	7	2768	0.031	7	2768	0.010	7	2768	0.041
14:00 - 15:00	7	2768	0.015	7	2768	0.021	7	2768	0.036
15:00 - 16:00	7	2768	0.005	7	2768	0.000	7	2768	0.005
16:00 - 17:00	7	2768	0.000	7	2768	0.005	7	2768	0.005
17:00 - 18:00	7	2768	0.000	7	2768	0.000	7	2768	0.000
18:00 - 19:00	7	2768	0.005	7	2768	0.000	7	2768	0.005
19:00 - 20:00	2	963	0.000	2	963	0.000	2	963	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.136			0.124			0.260	

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: 825 - 9800 (units: sqm)
 Survey date range: 01/01/07 - 23/05/14
 Number of weekdays (Monday-Friday): 7
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

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

MCCARTHY AND STONE CATEGORY II FACT FILE (2008-2011) No. 15

Trip Generation

Surveys have been undertaken in April 2008 and May, June and July 2011 at several CATEGORY II developments that are well established or where the initially sales period is fully complete. It should be noted that survey staff were instructed to include in the traffic data any vehicle parked in the road outside the development, where the person(s) leaving the car entered the development.

Table 15.1 below shows the resulting traffic generation data:-

Table 15.1 Traffic Generation (Vehicle Movements per 12 hour day – 0700-1900)

Development	Date of Survey	No of Apartments	Vehicle Movements (12 Hr)	Generation per apartment
Faregrove Court, Fareham	Fri 4 April 2008	48	50 (0)	1.04
Charlwood Court, Torquay	Thurs 3 April 2008	39	78 (0)	2.0
Stevens Court, Winnersh	Wed 2 April 2008	34	67 (0)	1.97
Homelawn House, Bexhill on Sea	Tues 1 April 2008	81	159 (0)	1.96
Devereux Court, Woodford Green	Tues 1 March 2011	21	37 (2)	1.76
Chancellor Court, Chelmsford	Tues 1 March 2011	34	73 (0)	2.14
Hornbeam Crt, Guisely *	Tues 24 May 2011	39	46 (0)	1.18
Camsell Court, Framwellgate Moor, Durham	Mon 23 May 2011	48	67 (2)	1.4
Fairweather Crt, Darlington *	Mon 23 May 2011	45	63 (0)	1.4
Browning Court, Fenham, Newcastle	Tues 24 May 2011	36	52 (0)	1.44
Cwrt Beaufort, Swansea	Wed 6 July 2011	33	47 (0)	1.42
Jarvis Court, Brackley	Wed 29 June 2011	47	95 (4)	2.02
Atkinson Court , Cosham, Portsmouth	Tues 28 June 2011	46	69 (0)	1.5
Jubilee Court, Worthing	Tues 5 July 2011	60	113 (0)	1.88
Aiden's View, Clarkston, Glasgow	Mon 1 August 2011	45	76	1.69
Totals		656	1092 (6)	1.66

The bracketed figure is the number of heavy goods vehicles recorded as visiting the development.

** Parking permits issued*

This indicates that the average traffic generation for this form of development is 1.66 vehicle movements per apartment per 12 hour day. The range of these generation rates is significant, with the lowest being at Guiseley (1.18) and the highest at Chelmsford (2.14).

It may be of note that the lowest trip rate was at one of the developments where parking on the site was controlled by parking permits. The other development where permits have been issued also had a lower than average car ownership. However, at present the number of such developments that have been surveyed is too small to draw any significant conclusions from this.

Surveys at two developments (Atkinson Court, Cosham, Portsmouth and Jubilee Court, Worthing) were undertaken by video recorder over a full 24 hour period. At the Portsmouth site there were 10 vehicle movements between 7 p.m. and 7 a.m. At the Worthing development there were 4 such vehicle movements. These developments included a total of 106 apartments, giving a night (7 p.m. to 7 a.m.) trip rate of 0.13 vehicle movements per apartment.

The surveys allow the hourly distribution of trips to and from the development to be calculated. The results of the daily distribution are shown in Table 15.2, below.

Table 15.2 Hourly Distribution of Vehicle Movements (0700-1900)

Time Period	Arrivals%	Departures%
0700-0800	2.6	3.1
0800-0900	6.1	5.5
0900-1000	9.8	12.0
1000-1100	8.7	11.9
1100-1200	10.0	8.6
1200-1300	10.2	10.8
1300-1400	10.2	10.0
1400-1500	10.4	8.9
1500-1600	8.5	8.0
1600-1700	10.4	9.9
1700-1800	7.6	4.9
1800-1900	5.4	6.4
Totals	99.9	100

The hourly split for the “overnight” traffic movements, based on the video data for 2 developments, shows the following split.

Table 15.3 Hourly Distribution of Vehicle Movements (1900-0700)

Time Period	Arrivals%	Departures%
1900-2000	42.8	14.3
2000-2100	28.6	28.6
2100-2200	28.6	57.1
2200-0700	0	0
Totals	100	100

This shows that there is highly unlikely to be any significant level of vehicle movements at unsocial hours, such as between 10 p.m. and 7 a.m. and that the level of movements during the evening period is likely to be very low.

Table 15.4 below shows the resulting traffic generation data for residents, where it is possible to identify them. Vehicles that are present in the car park at the start of the survey are assumed to be residents. It should be noted that not all the surveys allowed this data to be obtained.

Table 15.4 Residents' Generation (Vehicle Movements per 12 hour day – 0700-1900)

Development	Date of Survey	No of Apartments	Vehicle Movements (12 Hr)	Generation per apartment
Charlwood Court, Torquay	Thurs 3 April 2008	39	11	0.28
Stevens Court, Winnersh	Wed 2 April 2008	34	18	0.53
Homelawn House, Bexhill on Sea	Tues 1 April 2008	81	49	0.62
Devereux Court, Woodford Green	Tues 1 March 2011	21	7	0.33
Chancellor Court, Chelmsford	Tues 1 March 2011	34	17	0.5
Hornbeam Crt, Guisely *	Tues 24 May 2011	39	23	0.59
Camsell Court, Framwellgate Moor, Durham	Mon 23 May 2011	48	21	0.44
Fairweather Crt, Darlington *	Mon 23 May 2011	45	10	0.21
Browning Court, Fenham, Newcastle	Tues 24 May 2011	36	19	0.53
Cwrt Beaufort, Swansea	Wed 6 July 2011	33	9	0.29
Jarvis Court, Brackley	Wed 29 June 2011	47	31	0.67
Aiden's View, Clarkston, Glasgow	Mon 1 August 2011	45	11	0.24
Totals		502	226	0.45

The resident trip rate at these developments has been found to be 0.45 vehicle movements per apartment per day. The corresponding visitor/staff generation is some 1.26 vehicle movements per day. This gives a total generation for these developments of 1.71. This is slightly higher than the average derived above for a larger number of developments.

However, if we assume the same proportions of residents' and other trips, and apply these to the overall average trip rate, we would get 26.3% resident trips and 73.7% visitor and other trips. The resulting trip rates would then become:-

Resident trip rate:- 0.44 vehicle movements per 12 hour day

Visitor/staff/other trip rate:- 1.22 vehicle movements per 12 hour day

The surveys also noted the number of pedestrian, cycle, motorcycle, buggy and wheelchair trips generated. It should be noted, of course, that some of the pedestrian could please going to or from bus trips.

Table 15.4 Non Vehicle Mode Generation (Movements)

Development	Aps	Walk	Rate	Motor cycle	Rate	Cycle	Rate	Buggy	Rate	Wheel Chair	Rate
Faregrove Court, Fareham	48	106	2.2	0	0	0	0	0	0	0	0
Charlwood Court, Torquay	39	138	3.53	1	0.026	1	0.026	0	0	0	0
Stevens Court, Winnersh	34	22	0.65	0	0	2	0.059	0	0	0	0
Homelawn House, Bexhill on Sea	81	115	1.42	0	0	0	0	0	0	10	0.123
Hornbeam Crt, Guisely *	39	63	1.62	0	0	0	0	0	0	0	0
Camsell Court, Framwellgate	48	34	0.71	0	0	0	0	0	0	0	0
Moor, Durham											
Fairweather Crt, Darlington *	45	71	1.58	0	0	2	0.044	0	0	0	0
Browning Court, Fenham, Newcastle	36	51	1.42	0	0	4	0.11	0	0	0	0
Cwrt Beaufort, Swansea	33	4	0.12	0	0	0	0	0	0	0	0
Jarvis Court, Brackley	47	25	0.53	0	0	4	0.09	0	0	0	0
Atkinson Court , Cosham, Portsmouth	46	65	1.41	0	0	9	0.2	2	0.04	0	0
Jubilee Court, Worthing	60	104	1.73	0	0	3	0.05	0	0	0	0
Aiden's View, Clarkston, Glasgow	45	43	0.96	0	0	0	0	0	0	0	0
Totals/Average rates	601	841	1.4	1	0.0017	21	0.035	2	0.003	10	0.017

The average rate of walking movements per apartment are only slightly lower than that of the motor vehicle, at 1.4 pedestrian movements per apartment per day. It is emphasised that this is an average, and varies between developments. In addition, the weather of the day of the survey would be likely to influence these movements. The same comment would apply to trips made by bicycle, by buggy or in a wheelchair.