

YEOMANS PEUGEOT GARAGE, WORTHING

TRANSPORT STATEMENT

February 2018

Yeomans Ltd

COMMERCIAL DEVELOPMENT
YEOMANS PEUGEOT GARAGE
WORTHING

TRANSPORT STATEMENT

CONTROLLED DOCUMENT

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Revision Record

Rev.	Date	By	Summary of Changes	Chkd	Aprvd
2	23.02.18	SB	Client Comments	SBr	SBr
3	27.02.18	SB	Client Comments	SBr	SBr



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**COMMERCIAL DEVELOPMENT
YEOMANS PEUGEOT GARAGE
WORTHING**

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 Yeomans Ltd to support a full planning application for the expansion of the site to provide an additional car dealership, head office and associated facilities at the Yeomans Peugeot Garage, Worthing. The site location is demonstrated in **Figure 1**, with the proposed site layout included in **Appendix A**.



Figure 1: Site Location

Planning History

- 1.2 The site has been subject to a number of planning applications since 2013, when the first application to extend the forecourt was submitted for the *'Demolition of existing single storey dwelling, construction of paved display and parking forecourt, with associated landscaping and lighting'* (application reference: FG/134/13).
- 1.3 As part of the above application the access arrangements for the site were altered and now the site adopts an 'In' and 'Out' arrangement which provides a betterment to the former single access onto the A259.
- 1.4 It should also be noted that an application has been submitted, and subsequently approved, for widening works to Hangleton Lane to be implemented adjacent to the vehicle storage compound, located to the rear of the site, to improve access onto the site for transporter vehicles (*application reference: A/1114/17/PL*). It is therefore anticipated that the proposed development would be serviced by large vehicles to the rear of the site via this revised access, and not through the forecourt.

- 1.5 The remainder of this report will provide a review of the local area including local accessibility, assess Personal Injury Accident (PIA) data, detail the proposed development including parking provision and servicing arrangements, provide a net trip impact assessment in comparison to the former site use and assess the proposed development's anticipated impact on the local road network.

2. EXISTING CONDITIONS AND LOCAL ACCESSIBILITY

Site and Surroundings

- 2.1 The site, which is currently occupied by a Peugeot Garage and situated approximately 9km west of Worthing and 10km east of Littlehampton, is bordered by residential properties to the east, the A259 Littlehampton Road to the south, Hangleton Lane to the west and an equestrian centre to the north. The site and its surroundings are demonstrated in **Figure 2**.



Figure 2: Site Context (Source: Google)

- 2.2 The site is situated within a 15 minute walk (7 minute cycle) of Ferring High Street which provides a number of facilities including a convenience store, dental practice and post office. Additional facilities including bus stops, a supermarket and a chemist are situated opposite the site on the A259.

Local Road Network

A259

- 2.3 The Peugeot garage is situated approximately 3km north of Ferring on the north side of the A259 Littlehampton Road which forms part of the strategic road network. The A259 is a dual carriageway road connecting Hampshire to the west to Sussex to the east and is subject to a 50mph speed limit across the site frontage. The garage is located approximately 1km east of the A259/A280/B2140 roundabout and approximately 1.4km west of the A259/A2032/Goring Street roundabout which helps provide access to the site.

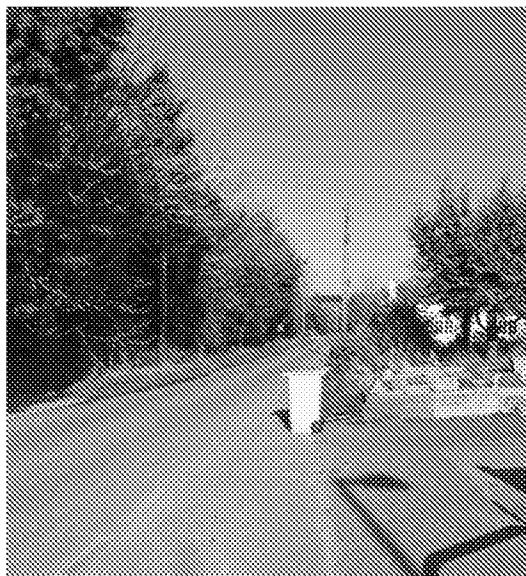
2.4 The existing conditions along the A259 outside the site frontage are demonstrated in **Photograph 1**.



Photograph 1: A259 Conditions

Hangerton Lane

2.5 The site currently provides an exit onto Hangerton Lane, which provides access to a small number of residential properties and storage type facilities and measures approximately 5m in width. A footway 1.8m in width flanks the eastern side of the carriageway for approximately 90m from the junction with the A259, connecting Hangerton Lane to the wider pedestrian network. The existing conditions along Hangerton Lane are demonstrated in **Photograph 2**.



Photograph 2: Hangerton Lane Existing Conditions

Wider Road Network

- 2.6 In addition to the A259, the site is strategically located in relation to the wider road network with the A280, which provides a direct route to the A27, is situated approximately 1km west of the site.

Pedestrian Network

- 2.7 The gentle topography of the area makes it conducive for walking. A footway approximately 2m in width flanks the northern side of the A259 outside the site frontage, before terminating at a signalised crossing point. The local pedestrian network then continues on the southern side of the A259, providing a safe and direct route to local facilities and residential areas. The signalised crossing, supported by dropped kerbs and tactile paving, is demonstrated in **Photograph 3**.



Photograph 3: Signalised Crossing on the A259

Bus Services

- 2.8 The nearest bus stops to the site are situated on the A259, with the eastbound stop located 750m west of the site and the westbound stop located opposite the site, accessible via the crossing demonstrated in **Photograph 3**. The westbound bus stop comprises a single pole, timetable and is demarcated on the carriageway. The eastbound bus stop comprises a sheltered seating area, single pole and timetable and is facilitated by a bus layby. The services available from these stops are summarised in **Table 1**.

Service Number	Route	Frequency		
		Monday – Friday	Saturday	Sundays
9	Arundel – Littlehampton – Worthing – Lancing – Shoreham by Sea	Hourly Between 7am – 7pm	Hourly Between 8am – 7pm	No Service
Coastliner 700	Wick – Littlehampton – Worthing – Shoreham - Brighton	Every 10 minutes Service between 7am – 11pm	Every 10 minutes Service between 7am – 11pm	Every 20 minutes Services between 7am– 9pm

Table 1: Local Bus Services

- 2.9 The Coastliner 700 bus service provides a frequent service 7 days a week between Wick and Brighton. A journey to Littlehampton takes approximately 30 minutes whilst a journey to Brighton takes approximately 90 minutes.

Rail Services

- 2.10 Goring-by-Sea Railway Station is located approximately 2km (20 minute walk/10 minute cycle) south east of the site. The station is equipped with 23 cycle storage spaces, a manned ticket office, customer help points and a ramp for train access.
- 2.11 Goring-by-Sea Railway Station provides direct access to destinations including Littlehampton, Brighton, London Victoria and Southampton. Trains typically operate at a frequency of 2 per hour for services to Littlehampton and London Victoria with journeys taking approximately 15 and 80 minutes respectively.
- 2.12 Services to Brighton and Southampton typically operate hourly, with journeys taking approximately 30 and 75 minutes respectively.
- 2.13 The location of the site in relation to both bus and rail services presents a good opportunity to encourage sustainable travel.

Personal Injury Accident (PIA) Data

- 2.14 An analysis of Personal Injury Accident (PIA) data has been undertaken between January 2015 and December 2017 which reveals a low recurrence of comparable types of incident in the vicinity of the site. A total of 3 PIAs, all of which were classified as 'slight' in nature, were recorded in the 3-year period. The PIA data is demonstrated in **Figure 3**.

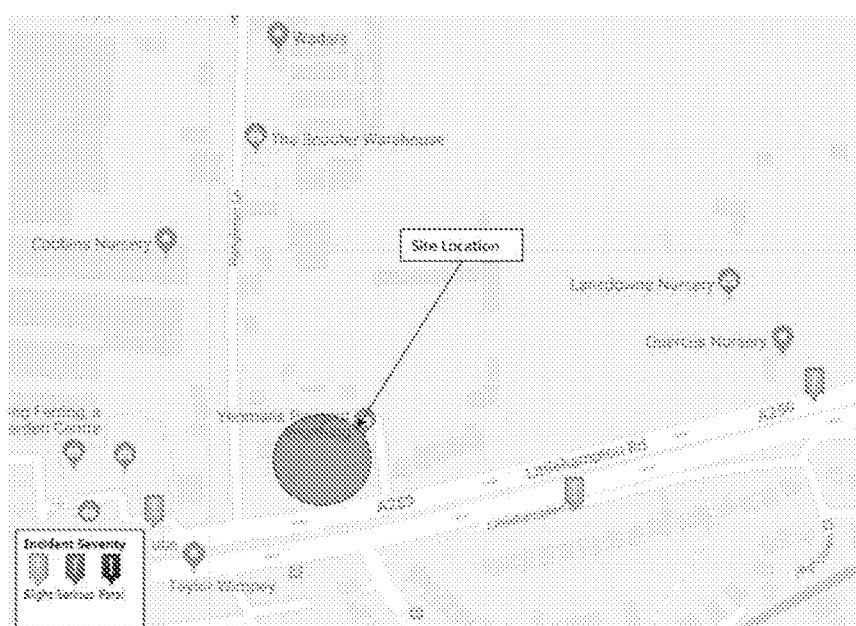


Figure 3: Local PIA Data 2015 – 2017 (Source: Crashmap.co.uk)

- 2.15 The PIA investigation does not indicate any specific highways concern that would worsen as a result of the development or pose a highways safety concern for future site users due to the proportion of incidents in comparison to the volume of traffic using the A259.

3. DEVELOPMENT PROPOSALS

- 3.1 The site is currently occupied by a Peugeot dealership (with a GIA of approximately 534m²), and associated facilities including a workshop (with a GIA of approximately 80m²), parking compound and parking bays.
- 3.2 The proposed site comprises the retention of the existing Peugeot dealership and associated facilities, with the expansion of the site to include a Honda dealership and facilities and the siting of a new headquarters. The development proposals are summarised in **Table 2**.

Facility	Gross Internal Area
Existing	
Peugeot Dealership	534m ²
Peugeot Workshop	80m ²
Proposed	
Honda Dealership	335m ²
Honda Workshop	462m ²
Head Office	480m ²

Table 2: Development Proposals

Car Parking Provision

- 3.3 The existing site currently provides approximately 112 formal car parking spaces for display vehicles, customer parking and parking for the workshop. The existing parking scenario for the site is demonstrated in **Figure 4**.

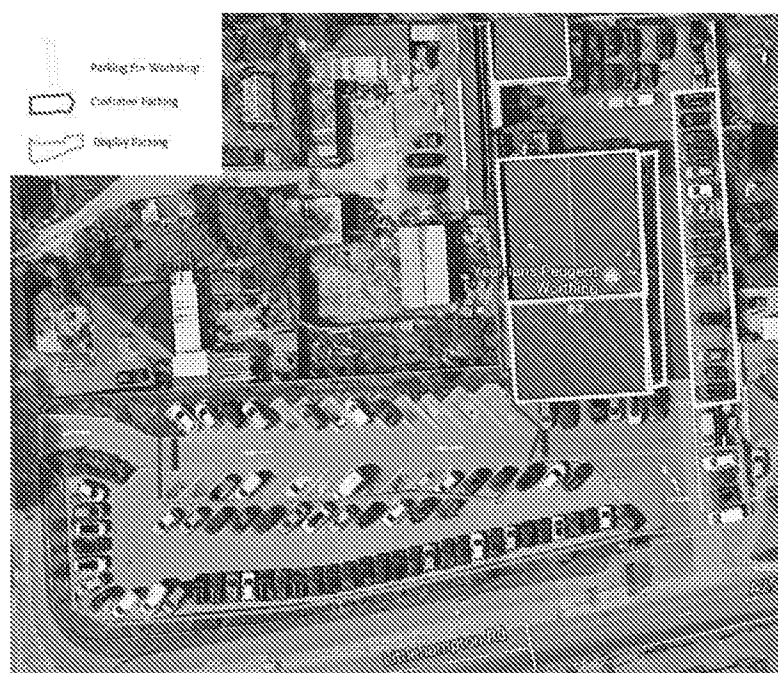


Figure 4: Existing Parking Arrangement (Source: Google Maps)

- 3.4 In order to calculate the existing parking provision for the site, the total floor area for the existing Peugeot dealership and workshop has been considered and totals approximately 614m². The existing parking provision is therefore provided at 1 space per 5m².
- 3.5 The proposed parking provision for the combined floor space associated with both dealerships (excluding the headquarters) would provide 157 car parking spaces, with 15 spaces provided for customer parking, 60 spaces for Honda display vehicles, 58 spaces for Peugeot display vehicles and 24 spaces for the workshop.
- 3.6 The combined GIA for the existing Peugeot dealership and workshop has been combined with the proposed Honda dealership and workshop, totalling 1,411m². The parking provision (157 spaces) for the proposed site is therefore provided at 1 space per 9m², ensuring that the increase in floor area also maintains a proportionate level of car parking.
- 3.7 At present, staff are required to park within the large compound situated to the rear of the site. This arrangement is to remain as existing with the car parking spaces provided within the forecourt retained for customer and display parking only. Therefore, when calculating the proposed parking provision for the site, the GIA for headquarters has been discounted as these vehicles will park to the rear of the site.
- 3.8 The proposed parking provision has also been assessed in relation to the West Sussex County Council (WSCC) Revised County Parking Standards SPD Guidance (2003), which provides the latest parking standards for 'Car Sales Establishments'. The parking standard is summarised in **Table 3**.

Land Use	Maximum Parking Standard
Car Sales Establishment	1 space per 30m ² of internal and outside gross car display area

Table 3: WSCC 'Car Sales Establishments' Parking Standards

- 3.9 The total internal and external floor area for both the existing and proposed sites are summarised in **Table 4** and assessed in relation to the parking standards provided in **Table 3**.

Land Use	Parking Provision
Existing Site (c.4,000m ²)	1 space per 36m ²
Proposed Site (c.6,000m ²)	1 space per 38m ²

Table 4: Existing vs Proposed Parking Provision

3.10 **Table 4** demonstrates that the proposed expansion of the site would provide a proportionate level of parking in comparison to both the WSCC standards and the existing parking provision.

Access Arrangements

3.11 The site is currently accessed via an 'In' and 'Out' arrangement approved as part of a prior application (*application reference: FG/134/13*). The 'In' access is provided in the form of a bellmouth junction with the access road measuring approximately 8m in width, as demonstrated in **Photograph 4**.



Photograph 4: Existing 'In' Access

3.12 The site will continue to use the existing 'Out' access onto Hangelton Lane. This access is provided in the form of a vehicle crossover, situated approximately 35m north of the junction with the A259. Whilst no alterations to the access are made to support the proposed development, the proposals include demolishing the property situated adjacent to the access. This therefore provides a betterment in relation to visibility from this junction. The existing 'Out' access arrangement is demonstrated in **Photograph 5**.



Photograph 5: Existing 'Out' Access

Servicing Arrangements

- 3.13 Refuse collection currently occurs off-site, with the refuse vehicle pulling up along the A259 Littlehampton Road to collect the bins. This arrangement is proposed to remain as existing to ensure that refuse collection can be undertaken swiftly. The site layout has however, been tracked to ensure that, if required, the refuse collection vehicle could enter on-site and exit onto Hangleton Lane. The tracking exercise is included in **Appendix B**.
- 3.14 Whilst on-site it was observed that the largest vehicle accessing the forecourt is a box van (as demonstrated in **Photograph 6**), which typically arrives on site 3 times a day.



Photograph 6: On-site Servicing Arrangement

- 3.15 The vans currently enter the site, reverse by the workshop and then exit the site onto Hangleton Lane. The site layout has been tracked to ensure that this arrangement can still occur on-site. This tracking is included in **Appendix C**.

4. TRAFFIC IMPACT ASSESSMENT

- 4.1 This section of the TS assesses the trip generation associated with the Peugeot dealership, using data provided by the company detailing the number of daily vehicle movements. This trip generation has then been used to establish the trip generation anticipated by the proposed development.

Existing Trip Generation

- 4.2 The site currently comprises a Peugeot dealership with a GIA of approximately 534sqm, a workshop with a GIA of approximately 80sqm and associated car parking bays. The company currently employs 25 members of staff, who, as a worst-case assumption, all travel to and from work by private car, thus generating 25 trips in both the AM and PM peak periods.
- 4.3 Information obtained from the company also indicates that approximately 15 – 20 vehicle movements are made per day by customers in order to have work done in the workshop. A total of 10 vehicle trips have therefore been estimated to occur during both the AM and PM peak periods. A further 8 – 10 customers per day arrive at the dealership for the purposes of purchasing a vehicle, therefore generating 5 trips in the AM and PM peak periods.
- 4.4 In reality, vehicle movements during the peak hours would be significantly less than those outlined, given that;
- It is unlikely that customers would need to wait all day in order to for their vehicle to be returned; and
 - If attending the dealership in order to purchase a vehicle, it would likely be in the hours between the AM and PM peak periods.
- 4.5 Therefore, the vehicle trips generated by customers attending the workshop and visiting the dealership have been spread across a 9 hour day in order to establish a robust assessment of vehicle movements in the peak periods.
- 4.6 In addition to customer and staff vehicle movements, an average of 3 delivery vans are suggested to service the site per day, therefore generating a further 6 vehicle movements. Information obtained from the dealership also identifies off-site vehicle collection, whereby vehicles are collected from residents and brought back on-site for work. This generates approximately 6 vehicle movements per day. The vehicle trips associated with both delivery vehicles and off-site collections are not anticipated to occur during the peak periods and therefore are not included in the existing trip generation assessment.

Vehicle Movements		AM Peak Period Trips (0800-0900)	PM Peak Period Trips (1700-1800)
Staff Trips	50	25	25
Customers Visiting Workshop	20	2	2
Off-site Vehicle Collections	6	N/A	N/A
Customers into Dealership	10	1	1
Servicing/Delivery Vehicles	6	N/A	N/A
Total Daily Movements	92	28	28
Percentage of Traffic Movements	100%	30%	30%

Table 5: Existing Trip Generation

4.7 **Table 5** demonstrates that the existing site is anticipated to generate 28 vehicle trips in both the AM and PM peak periods and 92 trips across a 12 hour day.

4.8 The site also includes one residential dwelling which will be demolished as part of the proposed development. In order to calculate the trip rates associated with the existing dwelling, a TRICS assessment has been undertaken using the parameters set out below;

- TRICS (v.7.4.4) Database
- 'Residential', 'Houses Privately Owned Use Class
- Sites in England and Wales (Excluding Greater London)
- 6 – 10 Dwellings
- Weekday Surveys only
- 'Suburban' and 'Edge of Town' Locations

4.9 The results of the TRICS assessment are demonstrated in **Table 6**, with the full outputs included in **Appendix D**.

TRICS (v.7.4.4)	AM Peak Period (0800-0900)		PM Peak Period (1700-1800)		Total Daily Trips
	Arrivals	Departures	Arrivals	Departures	
Trip Rate (per Dwelling)	0.154	0.404	0.423	0.635	5.309
Trip Generation (1 Dwelling)	1		1		5

Table 6: Existing Trip Generation (Residential Dwelling)

4.10 **Table 6** demonstrates that the existing dwelling would be anticipated to generate 1 trip in the AM and PM peak periods and 5 trips across a 12 hour day.

4.11 The existing site is therefore demonstrated to generate approximately 29 trips in both the AM and PM peak periods and 97 trips across a 12 hour day.

Proposed Trip Generation

- 4.12 The development proposals comprise the demolition of the existing dwelling and the expansion of the site to provide an additional 1,288m² of floorspace. In order to assess the proposed trip generation for the site, information obtained from the existing site has been used and recalculated to accord with the increase in floor area.
- 4.13 The GIA would result in an approximate 68% increase in relation to the existing site. As aforementioned, the company currently employs 25 members of staff and this is anticipated to increase to approximately 60 members of staff with the development proposals. This staff increase is therefore not too dissimilar to the increase in floor area and is therefore considered to be a robust estimate. The net increase of 35 vehicle trips in both the AM and PM peak periods has therefore been included within the proposed trip generation assessment, summarised in **Table 7**.
- 4.14 Information obtained from the company indicates that approximately 15 – 20 vehicle movements are made for the workshop. The development proposals would provide a workshop for Honda that is 6 times the size of that currently provided for Peugeot. Therefore, the vehicle movements for the workshop have been proportionately increased and this is summarised in **Table 7**.
- 4.15 A further 8 – 10 customers per day were suggested to arrive at the dealership for the purposes of purchasing a vehicle for the existing Peugeot dealership which has a GIA of 534m². The proposed Honda dealership, which has a GIA of 335m², is therefore anticipated to generate 5 – 6 customers per day.
- 4.16 As with the methodology for calculating the existing trip generation, the vehicle trips generated by customers attending the workshop and visiting the dealership have been spread across a 9 hour day in order to establish a robust assessment of vehicle movements in the peak periods.
- 4.17 A proportionate increase of delivery vehicles has also been provided for the site, with a 68% increase added to the 6 vehicle movements already identified for the Peugeot dealership. As the proposed workshop is anticipated to be 6 times the size of the Peugeot workshop, the identified off-site collection movements have been proportionately increased. As with the previous methodology, the vehicle trips associated with both delivery vehicles and off-site collections are not anticipated to occur during the peak periods and therefore are not included in the trip generation assessment.

Additional Vehicle Movements		AM Peak Period Trips (0800-0900)	PM Peak Period Trips (1700-1800)
Staff Trips	70	35	35
Customers Visiting Workshop	120	13	13
Off-site Vehicle Collections	36	N/A	N/A
Customers into Dealership	6	1	1
Servicing/Delivery Vehicles	10	N/A	N/A
Total Daily Movements	242	49	49
Percentage of Traffic Movements	100%	20%	20%

Table 7: Proposed Trip Generation

- 4.18 **Table 7** demonstrates that the development proposals would likely generate an additional 49 trips in both the AM and PM peak periods and 242 trips across a 12 hour day, resulting in an additional trip every 75 seconds in the peak periods and every 3 minutes across a 12 hour day.

Net Impact Assessment

- 4.19 In order to calculate the net impact of the expansion of the site in comparison to the existing site use, a net impact assessment has been undertaken, with the results demonstrated in **Table 8**.

	AM Peak Period (0800-0900)	PM Peak Period (1700-1800)	Total Additional Daily Trips
Proposed	+49	+49	+242
Removed from Network	-1	-1	-5
Total Additional Site Vehicle Movements	+48	+48	+237

Table 8: Net Impact Assessment

- 4.20 **Table 8** demonstrates that the proposed expansion of the site would result in a net increase of 48 trips in both the AM and PM peak periods and 237 trips across a 12 hour day. This equates to an additional trip onto the local road network approximately every 75 seconds in the peak periods and every 3 minutes across a 12 hour day.

Impact on the Hangleton Lane/A259 Junction

- 4.21 The results of the net impact assessment indicate that a total of 35 vehicle trips associated with the increase in staff numbers, will turn left into Hangleton Lane in the AM peak period and left out in the PM peak period, equating to an additional trip every 2 minutes through this junction in the peak periods.
- 4.22 This increase in traffic is not considered to have a 'severe' impact on the operation of this junction, especially as Hangleton Lane currently only serves a small number of residential properties and storage type facilities.
- 4.23 In addition, there have been no incidents recorded in the vicinity of this junction that would suggest a highways concern that would be made worse by the development, or pose a safety concern for future site users.

5. SUMMARY AND CONCLUSIONS

- 5.1 This Transport Statement has been prepared by Paul Basham Associates on behalf of Yeomans Ltd to support a full planning application for the expansion of the site to provide an additional car dealership, head office and associated facilities at the Yeomans Peugeot Garage, Worthing.
- 5.2 The site is situated within walking distance of Ferring High Street which provides a range of facilities including a convenience store and post office. In addition, the site is well located in relation to public transport provision, thus presenting a good opportunity to promote travel by non-car modes and create a sustainable development.
- 5.3 The proposed site comprises the retention of the existing Peugeot dealership and associated facilities, with the expansion of the site to include a Honda dealership and facilities and the siting of headquarters therefore generating a net increase in GIA of approximately 1,288m².
- 5.4 The site will be served via the existing access points onto both the A259 and Hangleton Lane. All large vehicle movements are to occur to the rear of the site, via the previously consented improved access on Hangleton Lane (application reference: *A/1114/17/PL*). The internal site layout has been tracked to ensure that all delivery vehicles and car parking spaces are accessible.
- 5.5 Customer and display parking has been demonstrated to increase with the development proposals and maintain a similar proportion of parking provision to the existing site use. Staff parking is to the rear of the site in the existing compound, as per the existing scenario. The proposed parking arrangements therefore ensure that all parking would be contained on-site and not spill onto the local road network.
- 5.6 In order to assess the traffic impact of the proposed development, information obtained from Yeomans has been appropriately used to determine the increase in traffic related to the expansion. The existing site is demonstrated to generate 29 trips in both the AM and PM peak periods and a total of 97 trips across a 12 hour day. The proposed expansion of the site is demonstrated to generate a net increase of 48 trips in the peak periods and 237 trips across a 12 hour day, equating to an additional trip on the local road network every 75 seconds in the peak periods and every 3 minutes across a 12 hour day.
- 5.7 This TS has therefore demonstrated that the proposed expansion of the Peugeot garage would not have a severe impact on the operation of the local road network. We therefore encourage WSCC to look favourably upon this proposal in relation to highways.

Yeomans Peugeot Garage, Worthing
Transport Statement

Appendix A

Paul Basham Associates Ltd
Report No. 020.0347/TS/3

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Rev	Description	By	C. No.	Date
01	Amended parking layout/footprint	CM	SD	06/12/17
02	Amended site boundary & building footprint	CM	SD	21/12/17

HANGLETON LANE

WHITE COTTAGE

Overlapping boundary
existing with White Cottage

HONDA WORKSHOP

WORKSHOP

TO
SERVICE/ STORAGE
COMPOUND

HONDA SHOWROOM

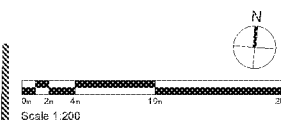
HEAD OFFICE

PEUGEOT SHOWROOM

KEY: Parking Schedule

- 15x Customers (2 acc. bays)
- 80x Honda
- 58x Peugeot
- Service (excludes Compound)

EV Bays - tbc



NOTES:

- Site information based on OS map data & Topographical survey from Yeomans ref. "1943". Extent of Red Line sbs "B.C."
- Preliminary layout for client discussion.
- Assumes existing power/services sufficient for new building footprint.
- All subject to full below ground services/utilities searches.

hnw
architects

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Project
YEOMANS LIMITED
WORTHING
HONDA / OFFICE / PEUGEOT

Drawing Title
SITE PLAN
AS PROPOSED

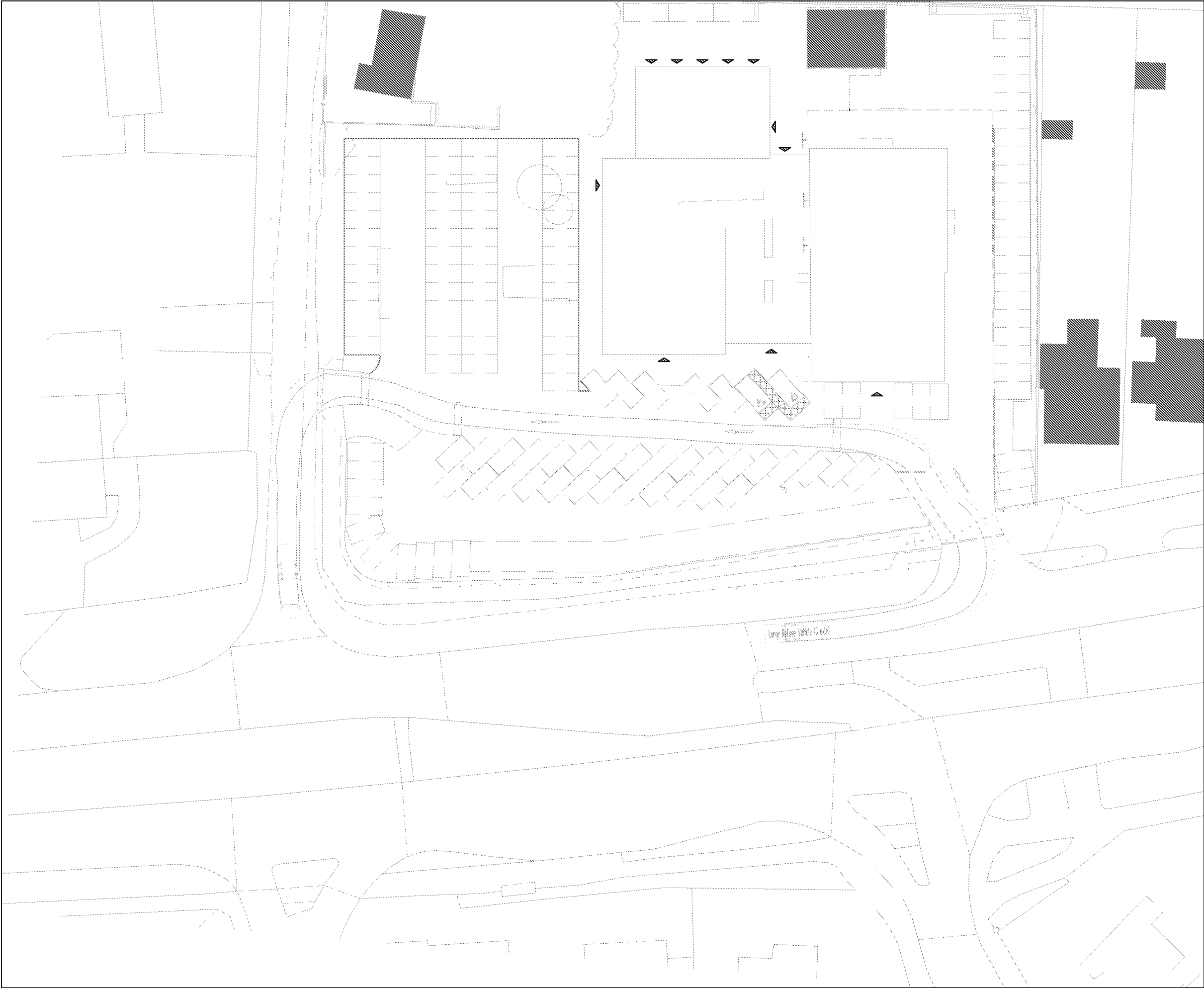
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PRELIMINARY	17036	
Scale	Revision	
A1 - 1:200	P2	
		
Drawn By	Checked By	Date
RW	SD	NOV 2017

Drawing Name:
P150
HNW Architects Ltd - Registered No. 3320534 Y1017

Yeomans Peugeot Garage, Worthing
Transport Statement

Appendix B

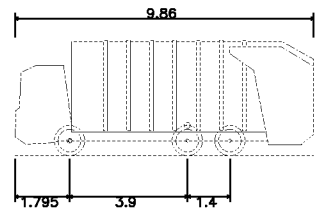
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REFUSE VEHICLE PROFILE



Large Refuse Vehicle (3 axle)	
Overall Length	9.860m
Overall Width	2.450m
Overall Body Height	3.814m
Min Body Ground Clearance	0.366m
Track Width	2.450m
Lock to Lock Time	4.00s
Curb to Curb Turning Radius	9.500m

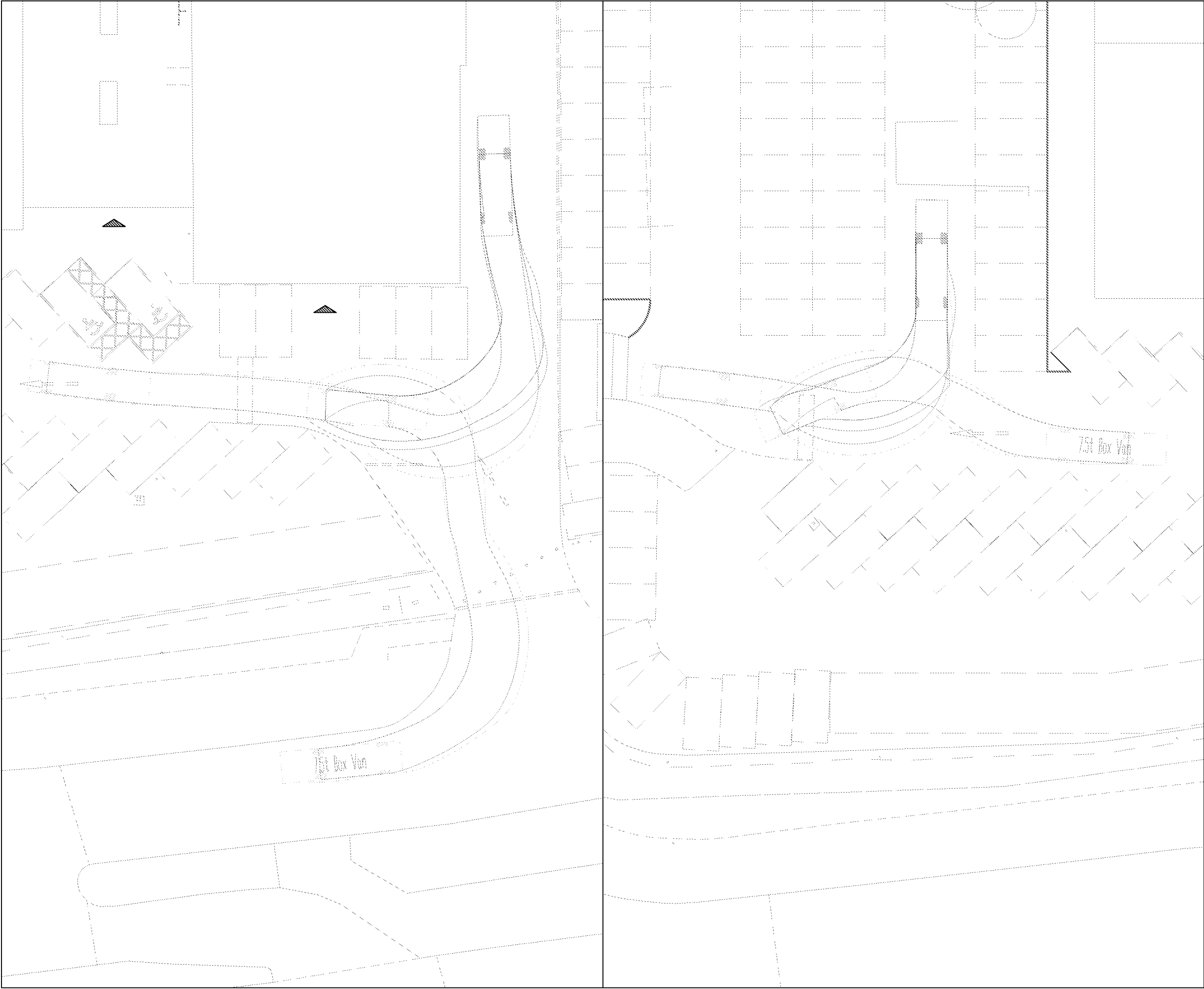


Project Name YEOMANS PEUGEOT GARAGE, WORTHING		Title REFUSE VEHICLE TRACKING	 Paul Basham, Associate Director Lancaster Court, 8 Barnes Wallis Road, Fareham, PO15 6TU 01494 408134 info@paulbashamassociates.com www.paulbashamassociates.com	Client YEOMANS LTD	Checked By GBr	Checked Date 23.02.18	Scale 1:500 (AT A3 SIZE)		
Project Phase PRELIMINARY					Drawn By GB	Drawn Date 22.02.18	Client Drawing No. -	PBA Drawing No. 020.0347.003	Revision -

Yeomans Peugeot Garage, Worthing
Transport Statement

Appendix C

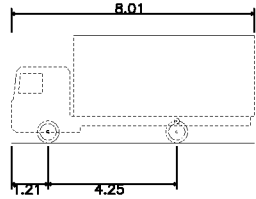
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4. ALL DIMENSIONS AND LEVELS ARE IN METRES. DO NOT SCALE THIS DRAWING, PRINT, PLOT OR DISK.
5. THIS DRAWING SHOULD ONLY BE USED FOR CONSTRUCTION IF THE PROJECT PHASE IN THE TITLE FRAME BELOW IS SHOWN AS "CONSTRUCTION". PAUL BASHAM ASSOCIATES TAKE NO RESPONSIBILITY FOR CONSTRUCTION WORKS UNDERTAKEN TO DRAWINGS WHICH ARE NOT MARKED UNDER THIS PHASE.

BOX VAN VEHICLE PROFILE



7.5t Box Van	8.010m
Overall Length	8.010m
Overall Width	2.100m
Overall Body Height	3.556m
Min Body Ground Clearance	0.351m
Track Width	2.064m
Lock to Lock Time	4.00s
Curb to Curb Turning Radius	7.400m



Project Name YEOMANS PEUGEOT GARAGE, WORTHING	Title SERVICING TRACKING	 paulbasham associates Paul Basham Associates Ltd Lancaster Court, 8 Barnes Walls Road, Fareham, PO15 6TU 01489 388134 info@paulbashamassociates.com www.paulbashamassociates.com	Client YEOMANS LTD	Checked By GBr	Checked Date 23.02.18	Scale 1:250	(AT A3 SIZE)		
Project Phase PRELIMINARY				Drawn By GB	Drawn Date 22.02.18	Client Drawing No. -	PBA Drawing No. 020.0347.002	Revision -	ARUN DISTRICT COUNCIL

Appendix D

Calculation Reference: AUDIT-247601-180223-0226

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : A - HOUSES PRIVATELY OWNED

VEHICLESSelected regions and areas:

04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	1 days
	SF SUFFOLK	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	1 days
	WK WARWICKSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	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: 6 to 10 (units:)
 Range Selected by User: 6 to 10 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/09 to 10/05/17

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

Selected survey days:

Tuesday	2 days
Wednesday	2 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 undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	4
Edge of Town	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	5
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:

C3 5 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:

1,001 to 5,000	1 days
5,001 to 10,000	1 days
10,001 to 15,000	1 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	1 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
50,001 to 75,000	1 days
75,001 to 100,000	2 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	4 days
1.1 to 1.5	2 days

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

Travel Plan:

No	6 days
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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.

PTAL Rating:

No PTAL Present	6 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CA-03-A-04	DETACHED	CAMBRIDGESHIRE
	THORPE PARK ROAD		
	PETERBOROUGH		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	9	
	Survey date: TUESDAY	18/10/11	Survey Type: MANUAL
2	NF-03-A-03	DETACHED HOUSES	NORFOLK
	HALING WAY		
	THETFORD		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	10	
	Survey date: WEDNESDAY	16/09/15	Survey Type: MANUAL
3	NY-03-A-13	TERRACED HOUSES	NORTH YORKSHIRE
	CATTERICK ROAD		
	OLD HOSPITAL COMPOUND		
	CATTERICK GARRISON		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	10	
	Survey date: WEDNESDAY	10/05/17	Survey Type: MANUAL
4	SF-03-A-04	DETACHED & BUNGALOWS	SUFFOLK
	NORMANSTON DRIVE		
	LOWESTOFT		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	7	
	Survey date: TUESDAY	23/10/12	Survey Type: MANUAL
5	SH-03-A-03	DETACHED	SHROPSHIRE
	SOMERBY DRIVE		
	BICTON HEATH		
	SHREWSBURY		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:	10	
	Survey date: FRIDAY	26/06/09	Survey Type: MANUAL
6	WK-03-A-01	TERRACED/ SEMI / DET.	WARWICKSHIRE
	ARLINGTON AVENUE		
	LEAMINGTON SPA		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	6	
	Survey date: FRIDAY	21/10/11	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/A - HOUSES PRIVATELY OWNED

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	6	9	0.173	6	9	0.346	6	9	0.519
08:00 - 09:00	6	9	0.154	6	9	0.404	6	9	0.558
09:00 - 10:00	6	9	0.096	6	9	0.250	6	9	0.346
10:00 - 11:00	6	9	0.212	6	9	0.135	6	9	0.347
11:00 - 12:00	6	9	0.115	6	9	0.231	6	9	0.346
12:00 - 13:00	6	9	0.231	6	9	0.192	6	9	0.423
13:00 - 14:00	6	9	0.231	6	9	0.231	6	9	0.462
14:00 - 15:00	6	9	0.250	6	9	0.192	6	9	0.442
15:00 - 16:00	6	9	0.250	6	9	0.192	6	9	0.442
16:00 - 17:00	6	9	0.308	6	9	0.231	6	9	0.539
17:00 - 18:00	6	9	0.423	6	9	0.212	6	9	0.635
18:00 - 19:00	6	9	0.135	6	9	0.115	6	9	0.250
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.578			2.731			5.309

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

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

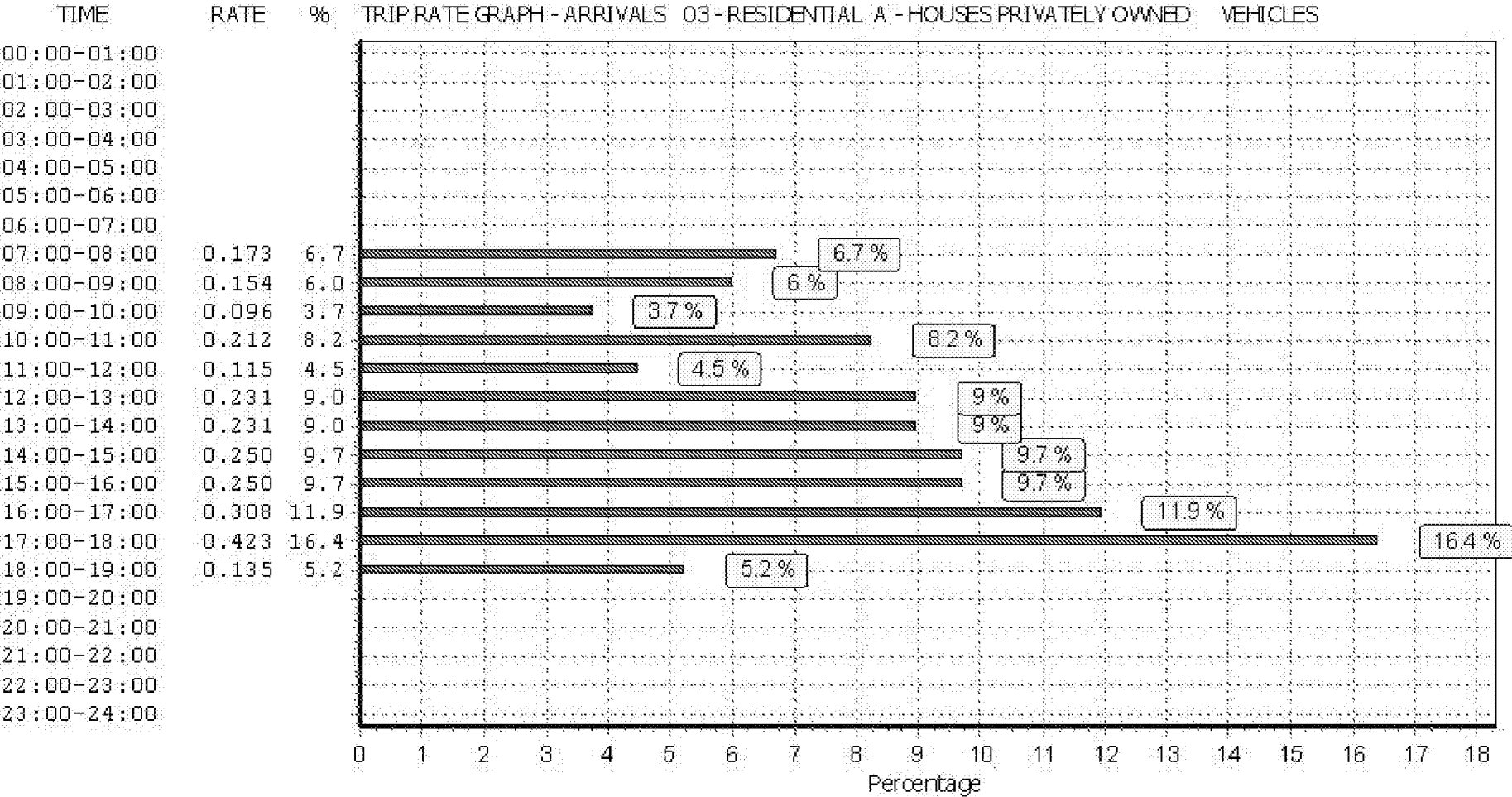
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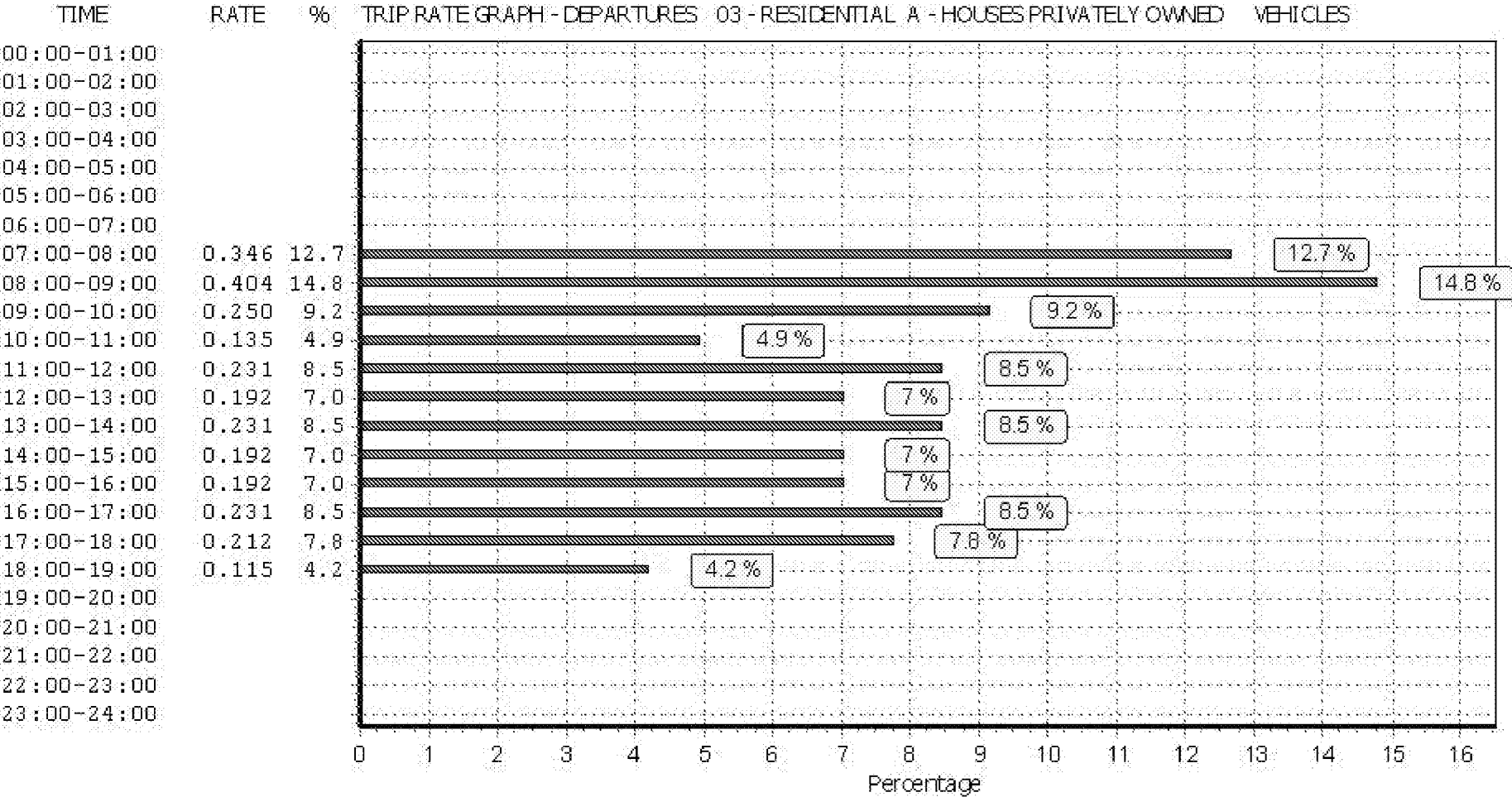
Parameter summary

Trip rate parameter range selected:	6 - 10 (units:)
Survey date range:	01/01/09 - 10/05/17
Number of weekdays (Monday-Friday):	6
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

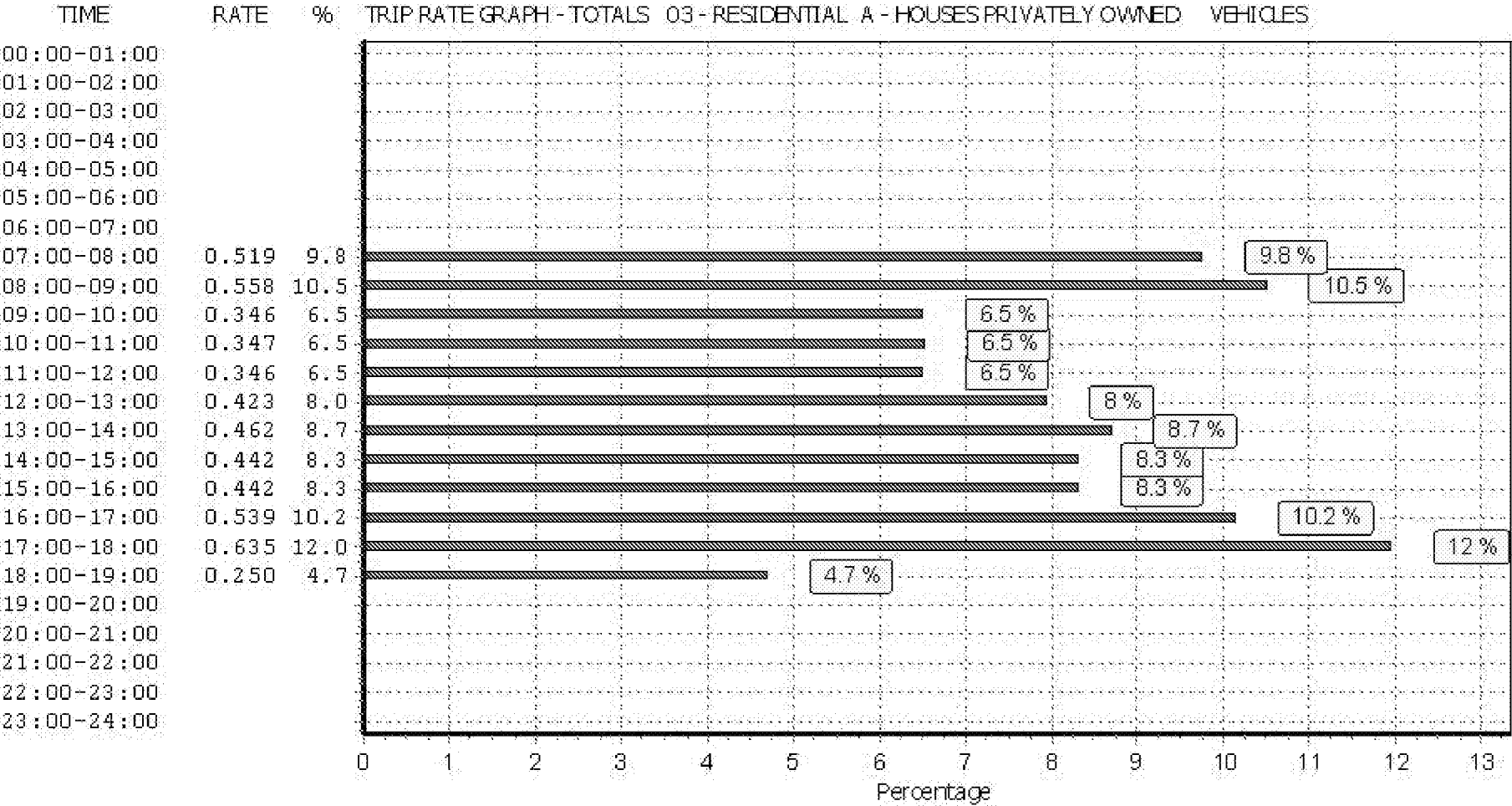
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



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