

**PEMBURY PARISH COUNCIL**

**OBJECTION TO PLANNING APPLICATION REFERENCE: TW/19/00884/FULL**

**PROPOSED DEVELOPMENT OF A MOTOR VILLAGE CAR DEALERSHIP  
AND MINOR ALTERATIONS TO TESCO FOODSTORE CAR PARK**

**LAND ADJACENT TESCO CAR PARK, CORNFORD LANE, PEMBURY, KENT**

**Contents**

	<b>Page</b>
<b>1. Introduction</b>	<b>3</b>
<b>2. Site, Highway and Transport Characteristics</b>	<b>4</b>
<b>3. The Proposals</b>	<b>5</b>
<b>4. Planning Policy</b>	<b>7</b>
<b>5. Highways Implications</b>	<b>12</b>
<b>6. Conclusions</b>	<b>16</b>
<b>Appendix A Site Photographs</b>	<b>17</b>
<b>Appendix B Traffic Congestion</b>	<b>23</b>
<b>Appendix C TRICS Data</b>	<b>30</b>

## **1.0 Introduction**

- 1.1 Les Henry Associates Limited have been instructed by Pembury Parish Council to provide this Technical Appraisal of the proposed development of a Motor Village Car Dealership and Minor Alterations to Tesco Food store Car Park on land adjacent to Tesco Car Park, Cornford Lane, Pembury, Kent under planning reference: TW/19/00884/FULL.
- 1.2 My name is Leslie James Henry. I am an Incorporated Engineer, a Fellow of the Institute of Highway Engineers and a Member of the Chartered Institution of Highways and Transportation.
- 1.3 I have been involved in highway and traffic engineering issues for over 35 years in connection with new development and road safety schemes within both the private and public sector.
- 1.4 I have assisted numerous Parish Councils in Kent in respect many development proposals and highway improvement schemes since 2007.
- 1.5 This Technical Assessment identifies several problems associated with the proposals in terms of the proposed site layout, existing highways layout, and the impact of the proposals on the local and adjoining highway network.
- 1.6 The report is produced in support of the objections raised by Pembury Parish Council.

## 2.0 Site, Highway and Transport Characteristics

- 2.1 The proposal site lies to the north of the A21 Trunk Road, to the east of the A228, to the south of High Street, Pembury and to the west of Cornford Lane.
- 2.2 The Planning Authority is Tunbridge Wells Borough Council, the Highway Authority for A21 is Highways England and for all other publicly maintained highways, Kent County Council.



Figure 1: Site Location Plan

- 2.3 Pembury Village lies to the northeast of the application site.
- 2.4 Vehicular access to the site is via the roundabout junction of the A21 with A228 Pembury Road. Pedestrian and cycle access are also possible at the junction but there is a pedestrian and cycle access directly off High Street to the north.
- 2.5 High Brooms railway station lies approximately 4.1km away to the west and Tunbridge Wells railway station lies approximately 3.8km away to the southwest.
- 2.6 It is possible to board 9 local bus services in the locality of the site and there are 3 commuter bus services to and from Central London. Local bus services are generally infrequent with services running at hourly intervals throughout the day and some services run on school days only.

### **3.0 The Proposals**

- 3.1 The proposals are for the “Development of a Motor Village Car Dealership and Minor Alterations to Tesco Food store Car Park”.
- 3.2 The proposals would comprise seven car showrooms, a used car courtyard, a used car sales pavilion building, a parts storage warehouse (Class B8), an accident repair centre (Class B2), a valet area, a workshop (Class B2), ancillary offices (Class B1a), a rear service yard, car parking, landscaping access and alterations to the existing Tesco food store car park.
- 3.3 The proposals would have a total combined floor area of 7,493m<sup>2</sup> and would be likely to employ around 180 members of staff. The proposals include the provision of 489 car parking spaces which would be split between employee parking (33), customer parking (51), vehicle servicing and repair (151), vehicle display spaces (253 including 43 dual use staff/display and 8 commercial vehicle spaces).
- 3.4 In addition, 5% of all car parking spaces would be available for those with reduced mobility, 7 motorcycle parking spaces would be provided with 24 covered bicycle parking spaces.
- 3.5 The existing Tesco car park will undergo a reduction in the number of car parking spaces available from 296 to 224, a reduction of 72 spaces along with a reconfiguration of the car wash, click and collect, and recycling facilities.
- 3.6 Vehicular access to the site will be gained via the current access road which extends from the Tesco Superstore to the A228/Pembury Road roundabout.
- 3.7 The geometry of this road will be slightly amended to include lane widening at the junction with the roundabout, as well as reconstruction of the pedestrian island, to facilitate easier vehicle entrance to the site, particularly for larger vehicles.
- 3.8 The pedestrian footway will remain on the southern side of the road. The junction will have appropriate kerb radii and highway width to accommodate the typical vehicles utilising this access point.
- 3.9 The Transport Assessment submitted in support of the planning application includes vehicle tracking analyses to illustrate how vehicles will enter the site (a refuse vehicle, and two car transporters), demonstrating there would be enough space for the vehicles to satisfactorily access the site by turning left at the roundabout junction.
- 3.10 However, the vehicle tracking analyses do not demonstrate whether all vehicles especially the 15.5m and 20m long car transporters would be able to satisfactorily access and egress the site, by turning right and traversing

the roundabout when entering from the south and leaving via routes to the north.

- 3.11 The applicant should therefore be requested to provide further vehicle tracking analyses to confirm these vehicle manoeuvres would be possible for these large vehicles.
- 3.12 Access to the Tesco store for both customers and servicing vehicles will remain unchanged.

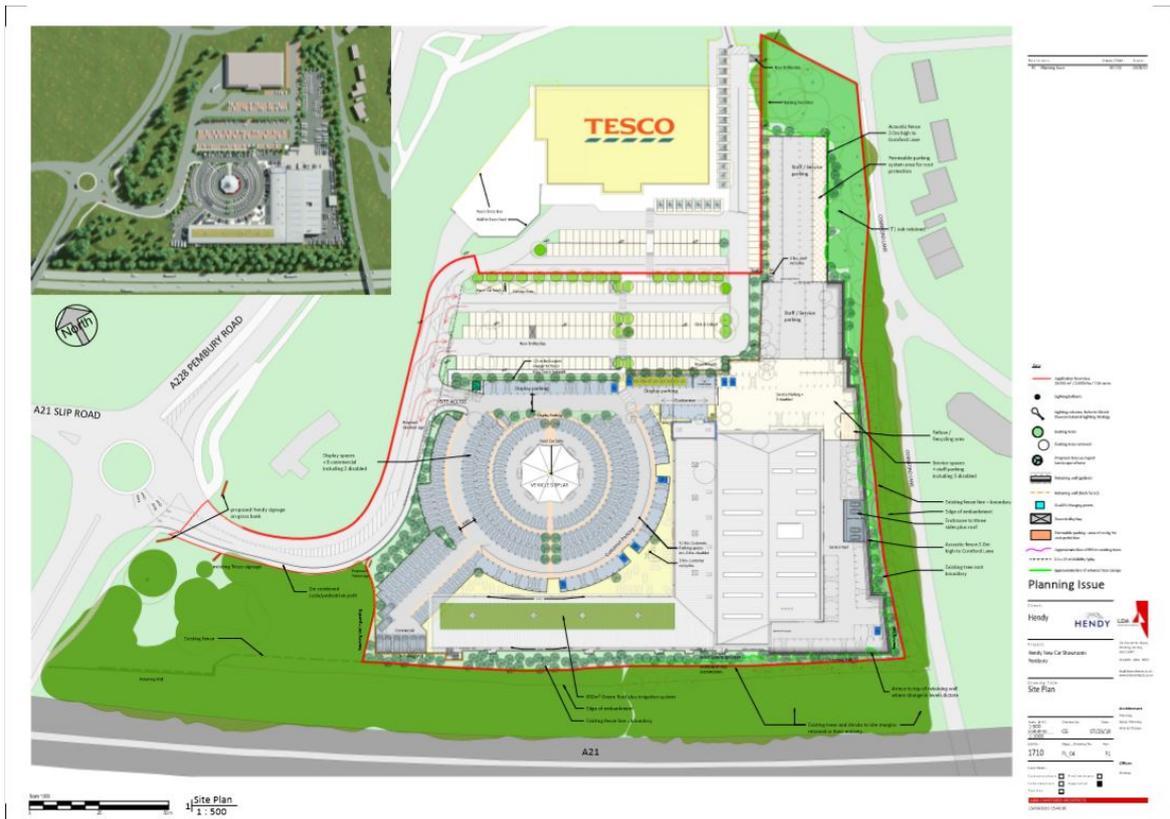


Figure 2: Proposed Site Layout Plan

## 4.0 Planning Policy

### National Policy

- 4.1 A revised National Planning Policy Framework was published by Ministry of Housing, Communities and Local Government in July 2018 and replaces the earlier document published in March 2012.
- 4.2 The NPPF presumes in favour of sustainable development and is a material consideration in planning decisions. Core land-use planning principles are put forward to underpin both plan making and decision-taking, one of which is to “actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable.”
- 4.3 Paragraphs 102 to 111 address the relationship between development and sustainable transport as follows: -

#### **Promoting sustainable transport**

102. Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

- a) the potential impacts of development on transport networks can be addressed;
- b) opportunities from existing or proposed transport, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;
- c) opportunities to promote walking, cycling and public transport use are identified and pursued;
- d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and
- e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places.

103. The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban

and rural areas, and this should be taken into account in both plan-making and decision-making.

104. Planning policies should:
- a) support an appropriate mix of uses across an area, and within larger scale sites, to minimise the number and length of journeys needed for employment, shopping, leisure, education and other activities;
  - b) be prepared with the active involvement of local highways authorities, other transport infrastructure providers and operators and neighbouring councils, so that strategies and investments for supporting sustainable transport and development patterns are aligned;
  - c) identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice and realise opportunities for large scale development;
  - d) provide for high quality walking and cycling networks and supporting facilities such as cycle parking (drawing on Local Cycling and Walking Infrastructure Plans);
  - e) provide for any large-scale transport facilities that need to be located in the area, and the infrastructure and wider development required to support their operation, expansion and contribution to the wider economy. In doing so they should take into account whether such development is likely to be a nationally significant infrastructure project and any relevant national policy statements; and
  - f) recognise the importance of maintaining a national network of general aviation airfields, and their need to adapt and change over time – taking into account their economic value in serving business, leisure, training and emergency service needs, and the Government's General Aviation Strategy.
105. If setting local parking standards for residential and non-residential development, policies should take into account:
- a) the accessibility of the development;
  - b) the type, mix and use of development;
  - c) the availability of and opportunities for public transport;
  - d) local car ownership levels; and
  - e) the need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles.
106. Maximum parking standards for residential and non-residential development should only be set where there is a clear and compelling justification that they are necessary for managing the local road network, or for optimising the density of development in

city and town centres and other locations that are well served by public transport (in accordance with chapter 11 of this Framework).

In town centres, local authorities should seek to improve the quality of parking so that it is convenient, safe and secure, alongside measures to promote accessibility for pedestrians and cyclists.

107. Planning policies and decisions should recognise the importance of providing adequate overnight lorry parking facilities, taking into account any local shortages, to reduce the risk of parking in locations that lack proper facilities or could cause a nuisance. Proposals for new or expanded distribution centres should make provision for sufficient lorry parking to cater for their anticipated use.

### **Considering development proposals**

108. In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:
- a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
  - b) safe and suitable access to the site can be achieved for all users; and
  - c) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.
109. Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.
110. Within this context, applications for development should:
- a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;
  - b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
  - c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;

- d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and
- e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.

111. All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.

### **Regional Policy**

4.4 The primary ambition of Kent's Local Transport Plan is "to deliver safe and effective transport, ensuring that all Kent's communities and businesses benefit, the environment is enhanced, and economic growth is supported". This is to be realised via five overarching policies to target specific outcomes

Target 1: "Economic growth and minimised congestion"

Policy: "Deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time reliability to enable economic growth and appropriate development, meeting demand from a growing population."

Target 2: "Affordable and accessible door-to-door journeys"

Policy: "Promote affordable, accessible and connected transport to enable access for all to jobs, education, health and other services."

Target 3: "Safer travel"

Policy: "Provide a safer road, footway and cycleway network to reduce the likelihood of casualties and encourage other transport providers to improve safety on their networks."

Target 4: "Enhanced environment"

Policy: "Deliver schemes to reduce the environmental footprint of transport and enhance the historic and natural environment."

Target 5: "Better health and wellbeing"

Policy: "Provide and promote active travel choices for all members of the community to encourage good health and wellbeing and implement measures to improve local air quality."

### **Local Policy**

4.5 Tunbridge Wells Borough Council describes three angles to its transport vision, including solving transport challenges through a "network of higher quality, better integrated, sustainable transport solutions, and infrastructure" to enable a "prosperous economy and exclusive communities"; ensuring by 2026 to have a transport network which is "less

reliant on the private car, with a greater mode share towards walking, cycling and public transport, especially for shorter journeys” and ensuring a “safer environment for all road users...with more low emission vehicles and bicycles sharing road space”.

The borough aims to deliver their transport strategy via eight objectives:

1. “Provide transport infrastructure to support new development, facilitate growth in the local economy and improve rural accessibility”;
2. “Improve strategic road and rail links between the borough, London and the wider south east”;
3. “Reduce congestion on the highway network, particularly on key radial routes in Tunbridge Wells”;
4. “Improve travel safety across the borough especially for vulnerable road users, including cyclists, pedestrians and equestrians”;
5. “Improve air quality, particularly within the designated Air Quality Management Area”;
6. “Increase the use of sustainable transport modes including cycling, walking and public transport”;
7. “Provide suitable parking to support the borough’s town centres”;  
and
8. “Improve the quality of public spaces within Royal Tunbridge Wells to make the town centre more legible and attractive for pedestrians.”

## 5.0 Highways Implications

- 5.1 The Transport Assessment (TA) submitted with the application refers to a trip generation exercise carried out using the industry standard TRICS database.
- 5.2 The selection of sites used to establish the likely level of traffic that would be generated by the proposals includes 16 sites of varying sized car showrooms spread across England including the Southeast, Southwest, East Anglia, East Midlands, West Midlands, Yorkshire & North Lincolnshire, the Northwest and the North.
- 5.3 The sites selected have a range of sizes (floor area) ranging from 282m<sup>2</sup> to 6623m<sup>2</sup>.
- 5.4 The predicted traffic generation from the proposed development is summarised in Tables 5.1 to 5.3 in the TA with the TRICS output and calculation stated as being provided in Appendix D.
- 5.5 However, Tables 5.1 to 5.3, the TRICS output contained in Appendix B and the summary page are all inconsistent.
- 5.6 I have carried out a similar exercise using the TRICS database and have used the same regions and areas as the TA but have excluded sites below 5,000m<sup>2</sup> to compare sites with similar floor areas to the proposal.
- 5.7 The traffic generation for the 8000-0900hrs and the 1700-1800hrs highway network peak periods are summarised below in Table 1 with the full TRICS output data provided at Appendix B.

Time Range	ARRIVALS		DEPARTURES		TOTALS	
	Trip	Estimated	Trip	Estimated	Trip	Estimated
	Rate	Trip Rate	Rate	Trip Rate	Rate	Trip Rate
08:00-09:00	1	71	0	28	1	99
17:00-18:00	0	27	1	51	1	78
Daily Trip Rates:	7	491	7	513	13	1003

**Table 1: Traffic Generation Car Dealership**

- 5.8 The difference in the predicted trip rates is substantial with the larger units generating approximately 30% higher flows for the 0800-0900hrs peak and 40% higher for the 1700-1800hrs peak period.
- 5.9 The TA also relies upon a single day traffic survey that was undertaken on Thursday 12<sup>th</sup> July 2018. It is my general experience that peak hour traffic, particularly surrounding large food stores, occurs during the Friday 1700-1800hrs highway network peak and around Saturday and Sunday midday periods.
- 5.10 The survey and TA are therefore deficient in the fact that the highest generation of traffic associated with the existing Tesco food store has not been identified.

- 5.11 The traffic survey data from the July 2018 survey has been increased by approximately 6% to predict the expected opening date of the proposed car showroom in 2025. I have checked the localised TEMPro growth rates for this timeframe and agree the growth figure as being reasonable.
- 5.12 The predicted 2025 development traffic has then been added to the proposed development traffic and the roundabout junctions at A264 Pembury Road/A21 Slip Road (Southwest) and A228/A21 Slip Road/ Site Access junctions have been assessed using the industry standard ARCADY software and the traffic signal controlled junction at A228/High Street/ Tonbridge Road has been assessed using the industry standard LINSIG software for the following three scenarios: -
1. 2018 Baseline;
  2. 2025 Baseline; and
  3. 2025 plus development.
- 5.13 The results for the ARCADY analyses are expressed as RFC which is an abbreviation for "Ratio of Flow to Capacity" and generally arms are deemed to operate at theoretical capacity when the RFC reaches 0.850 or 85%, above this figure junctions operate inefficiently, and vehicle queues will develop quickly and increase delays exponentially.
- 5.14 Traffic signal results are expressed as Degree of Saturation (DoS), Practical Capacity and Practical Reserve Capacity (PRC), where practical capacity is the level of capacity above which the junction is assumed to work inefficiently and is usually taken as 90% saturated. Practical reserve capacity is the amount by which traffic demand can grow before practical capacity is reached.
- 5.15 The predicted queue of traffic is also quoted in the tables below and this is expressed in passenger car units (pcu). The length of a pcu for the purposes of the analyses is 5.75m and therefore a queue of 10 vehicles would measure 57.5m back from the roundabout give way line.
- 5.16 The analyses within the TA show the two roundabout junctions as operating with a maximum RFC of 0.48 or 45% with minimal vehicle queuing in both the am and pm peak periods for the 2018 baseline scenario.
- 5.17 Similarly, the traffic signal-controlled junction at High Street is shown to operate with a 12% and 2.2% PRC at the 2018 baseline scenario for the Am and Pm peaks respectively. However, at the 2025 plus development scenario the PRC's have reduced to 5.7% and -3.4%.
- 5.18 All 3 junctions are already operating inefficiently with substantial queues developing and this worsens in the future scenarios. However, the TA suggests a different viewpoint.
- 5.19 Existing traffic congestion in the local area causes drivers to attempt to find alternative routes through the area. There is considerable local knowledge

- and evidence that shows rat-running traffic in substantial quantities uses Cornford Lane and Halls Hole Road to bypass the High Street traffic signals and join A264 to the west which are unacceptable routes for the type, speed and amount of traffic that uses the route.
- 5.20 Appendix B provides evidence of the congestion that takes place on the local highway network at peak times. The photographs and charts included have been provided courtesy of Tony Nicholls from the Pembury Society.
- 5.21 Furthermore, a study of the A264 corridor route study was published in February 2016 by WSP consultants. It was recognised the A264 corridor between Pembury and Tunbridge Wells suffers from traffic congestion at several locations, particularly during peak highway periods.
- 5.22 The key locations where traffic congestion occurs were identified as follows:
- a. A264/Tonbridge Road/High St junction;
  - b. A264/A21(Northbound) On/Off Slip Roundabout – A264 (West) exit bottleneck;
  - c. A264/Blackhurst Lane/Halls Hole Road Junction; and
  - d. Interaction with A26 at A26 London Road/A264 Church Road.
- 5.23 The A264/Tonbridge Road/High St junction was seen as representing a form of gateway to Tunbridge Wells to/from the east in addition to providing key access routes to Pembury village and Tunbridge Wells Hospital. Peak hour congestion is regularly observed at the junction and the junction closely interacts with the adjacent A264/A21 (Southbound) On/Off Slip/Tesco Access Roundabout which is in very close proximity to the west.
- 5.24 The report goes on to state “The fact that the A264/Tonbridge Road/High St junction is traffic signal controlled whereas the A264/A21 (Southbound) On/Off Slip/Tesco Access Roundabout is a priority junction is considered to be important in terms of how the junctions interact.”
- 5.25 The existing travel patterns of motorists using the corridor, as derived from the ANPR survey analysis, indicates that a large proportion (86%) of trips entering the corridor across the day are destined for locations within the town and are not passing straight through. This makes up of traffic provides a steer as to potential strategies going forward to tackle the issues identified along the corridor.
- 5.26 The fact that traffic is generally not passing through Tunbridge Wells precludes measures such as a bypass of the town as this would not cater for the traffic demand entering the town itself.
- 5.27 The vehicle junction analyses have not therefore been correctly assessed, as the surveyed traffic flows used, the predicted traffic generation for the proposed car showroom has been underestimated and the highest traffic flows from the existing food store have not been correctly identified.

- 5.28 The ARCADY program is a useful tool but cannot simply be relied upon to provide infallible results and some engineering judgements need to be made including on site investigation and calibration before the model can be fully representative of the on-site operation and any predicted mitigation being purposeful.
- 5.29 Similarly, the LINSIG base model needs to be calibrated with existing vehicle queuing data and a thorough examination of saturation flows for each arm of the junction
- 5.30 Much more work and attention are needed in order to validate the existing traffic modelling before the predicted effects of the proposed development can be given any credence.
- 5.31 The empirical evidence of substantial and current daily queues signifies that the roundabouts are operating at over-capacity in 2019 and this has not been acknowledged in the TA.
- 5.32 It is further considered that the proposed development will lead to a very strong need for junction mitigation to significantly improve the current performance of the junctions and the highway network in the locality of the site access to the development proposals.
- 5.33 It is not acceptable to simply state the predicted traffic from a previously unimplemented proposal to extend the existing Tesco food store that was granted planning consent in January 2012 and where there is no desire from either Kent County Council or Tunbridge Wells Borough Council to commit to the Park and Ride proposals.
- 5.34 The proposals under consideration in this application alone will create serious harm to highway network in terms of capacity, delay, pollution and safety and must be considered on their own merits alone.
- 5.35 It is widely acknowledged that stationary traffic increases pollution as the lack of vehicular movement reduces the rate that pollutants are dispersed. The increased quantity of airborne particulates such as PM2.5 and PM10 as well as life threatening carcinogenic substances such as Sulphur Dioxide (SO<sub>2</sub>) and Nitrogen Dioxide (NO<sub>2</sub>) will subject people to the risk of respiratory diseases and related health problems.

## **6.0 Conclusions**

- 6.1 The additional vehicular traffic generated by the proposals for will have a significant impact on the local highway network.
- 6.2 The Transport Assessment (TA) has not correctly identified the existing traffic conditions within the local area and subsequently have not accurately assessed the implications of the proposals on the local highway network or identified any appropriate mitigation.
- 6.3 The TA relies on very sparse data much of which is not detailed in the document (i.e. a single day traffic count and lack of data to back up trip assignment diagrams)
- 6.3 The TA has not identified any clear initiatives or improved public transport and highway improvements that would provide a modal shift away from the private motor car as a form of transport.
- 6.4 The transport issues associated with the proposals have not been correctly considered and therefore the impacts of the proposed development have not been addressed.
- 6.5 The environmental impacts of traffic and transport infrastructure have not been identified, assessed and considered.
- 6.6 The significant impact from the proposed development in terms of capacity, congestion, highway safety, pollution and the possible effects on public health have not been fully identified and therefore no mitigation is proposed.
- 6.7 The proposals have therefore been prepared by a strategy that fails to meet the infrastructure requirements and cannot therefore satisfy the NPPF requirement for soundness.

**APPENDIX A**

**Site Photographs**











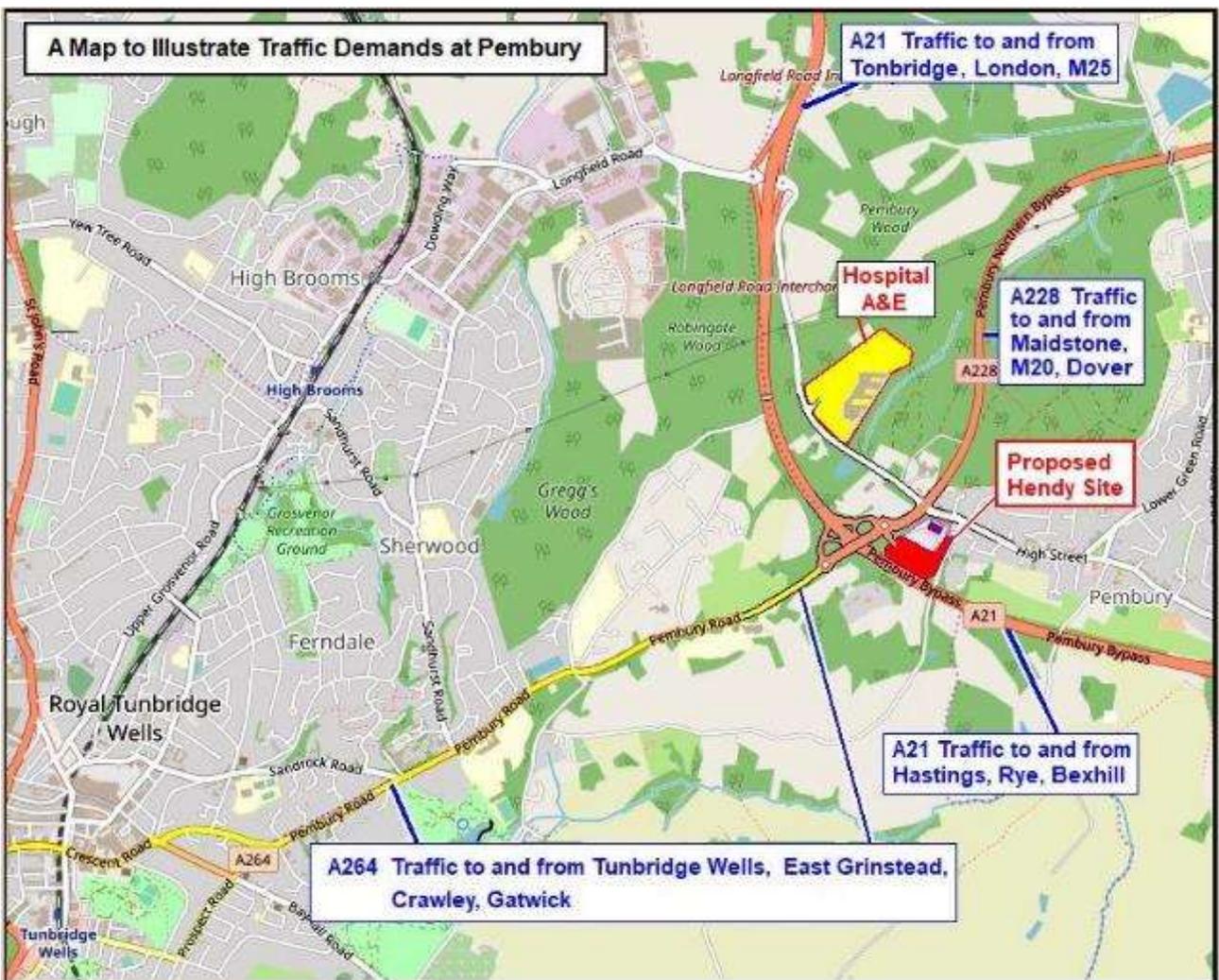
**APPENDIX B**

**Traffic Congestion  
(Courtesy of Tony Nicholls, Pembury Society)**



**Traffic Congestion** (Courtesy of Tony Nicholls)

Below: A map indicating the road structure around Pembury with the location of the Hendy site and the Hospital



Below: A map of Pembury showing the Monday-Friday traffic congestion areas. Congested roads shown in Red.

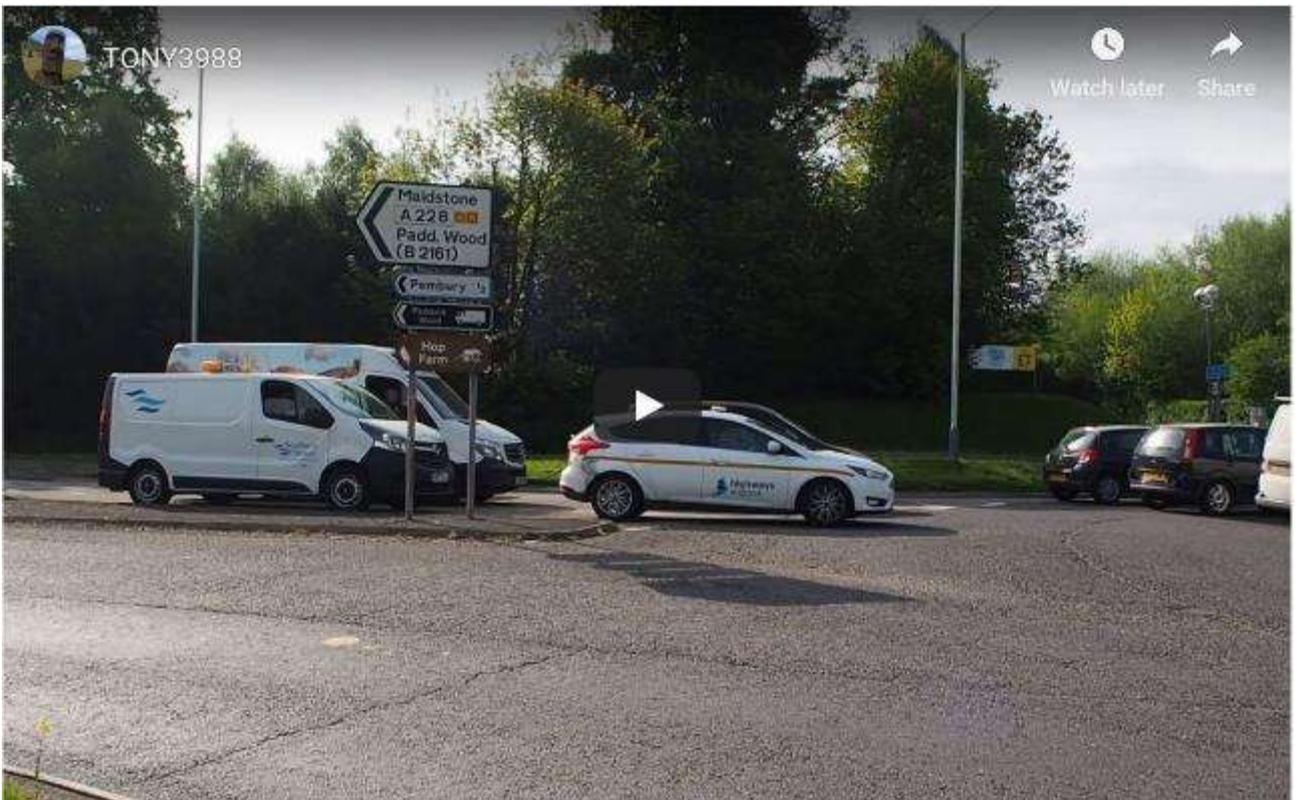
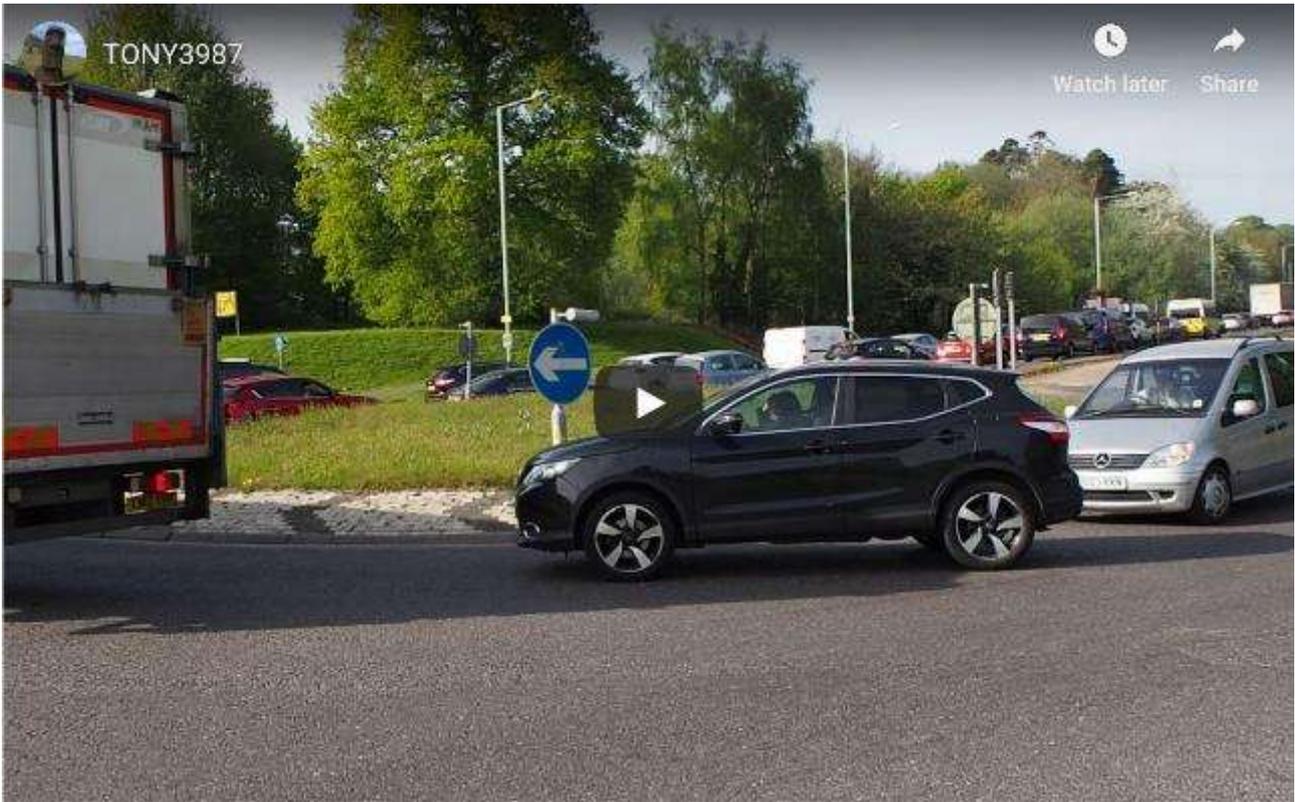


Below: Current Traffic on Pembury Road near Tesco









**APPENDIX C**

**TRICS Data**

## 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	2 days
	SO SLOUGH	1 days
	WS WEST SUSSEX	1 days
03	SOUTH WEST	
	DV DEVON	1 days
	WL WILTSHIRE	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	2 days
05	EAST MIDLANDS	
	LE LEICESTERSHIRE	1 days
	LN LINCOLNSHIRE	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	2 days
	WO WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
	SY SOUTH YORKSHIRE	1 days
	WY WEST YORKSHIRE	2 days
08	NORTH WEST	
	CH CHESHIRE	1 days
09	NORTH	
	CB CUMBRIA	1 days
	TW TYNE & WEAR	2 days

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

## Secondary Filtering selection:

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

Parameter: Gross floor area  
 Actual Range: 45 to 6623 (units: sqm)  
 Range Selected by User: 5000 to 9800 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/11 to 09/07/18

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

Selected survey days:

Monday	2 days
Tuesday	3 days
Wednesday	6 days
Thursday	4 days
Friday	6 days

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

Selected survey types:

Manual count	21 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	3
Suburban Area (PPS6 Out of Centre)	9
Edge of Town	7
Neighbourhood Centre (PPS6 Local 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.*

*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:

A1 21 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	5 days
10,001 to 15,000	2 days
15,001 to 20,000	3 days
20,001 to 25,000	4 days
25,001 to 50,000	7 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
25,001 to 50,000	1 days
50,001 to 75,000	1 days
75,001 to 100,000	4 days
100,001 to 125,000	1 days
125,001 to 250,000	9 days
250,001 to 500,000	3 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:

0.5 or Less	1 days
0.6 to 1.0	7 days
1.1 to 1.5	13 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 21 days

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

PTAL Rating:

No PTAL Present 21 days

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

LIST OF SITES relevant to selection parameters

1	CA-14-A-03 STUKELEY MEADOWS HUNTINGDON	FORD	CAMBRI D G E S H I R E
	Suburban Area (PPS6 Out of Centre) Commercial Zone Total Gross floor area: 1608 sqm <i>Survey date: FRIDAY 21/10/11</i>		
2	CA-14-A-04 BARNWELL ROAD CAMBRIDGE	MERCEDES BENZ	CAMBRI D G E S H I R E
	Edge of Town Commercial Zone Total Gross floor area: 3400 sqm <i>Survey date: THURSDAY 11/10/12</i>		
3	CB-14-A-03 GILWILLY ROAD PENRITH GILWILLY IND. ESTATE	PEUGEOT	CUMBRI A
	Edge of Town Industrial Zone Total Gross floor area: 500 sqm <i>Survey date: WEDNESDAY 11/06/14</i>		
4	CH-14-A-01 STADIUM WAY CHESTER SEALAND IND. ESTATE	EVANS HALSHAW FORD	C H E S H I R E
	Edge of Town Industrial Zone Total Gross floor area: 1050 sqm <i>Survey date: WEDNESDAY 12/11/14</i>		
5	DV-14-A-02 MARSH BARTON ROAD EXETER	VAUXHALL	D E V O N
	Suburban Area (PPS6 Out of Centre) Retail Zone Total Gross floor area: 6623 sqm <i>Survey date: THURSDAY 28/11/13</i>		
6	EX-14-A-01 109 RAINSFORD ROAD CHELMSFORD	FORD	E S S E X
	Edge of Town Centre Residential Zone Total Gross floor area: 825 sqm <i>Survey date: TUESDAY 15/10/13</i>		
7	EX-14-A-02 BRAINTREE ROAD BRAINTREE	KIA	E S S E X
	Edge of Town Development Zone Total Gross floor area: 1275 sqm <i>Survey date: FRIDAY 08/07/16</i>		
8	LE-14-A-05 45-49 COVENTRY ROAD LEICESTER NARBOROUGH	HONDA	L E I C E S T E R S H I R E
	Edge of Town Industrial Zone Total Gross floor area: 1300 sqm <i>Survey date: TUESDAY 04/11/14</i>		
9	LN-14-A-02 GT NORTHERN TERRACE LINCOLN	CAR SHOWROOM	L I N C O L N S H I R E
	Edge of Town Centre Industrial Zone Total Gross floor area: 45 sqm <i>Survey date: WEDNESDAY 04/10/17</i>		

LIST OF SITES relevant to selection parameters (Cont.)

10	NY-14-A-04 HUTTON BANK RIPON	LAND ROVER		NORTH YORKSHIRE
	Edge of Town Industrial Zone Total Gross floor area:		2160 sqm	
	<i>Survey date: MONDAY</i>		<i>23/09/13</i>	<i>Survey Type: MANUAL</i>
11	SO-14-A-01 LEIGH ROAD SLOUGH	JAGUAR LAND ROVER		SLOUGH
	SLOUGH TRADING ESTATE Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area:		3772 sqm	
	<i>Survey date: MONDAY</i>		<i>09/07/18</i>	<i>Survey Type: MANUAL</i>
12	SY-14-A-01 MIDDLE BANK DONCASTER HYDE PARK	HYUNDAI		SOUTH YORKSHIRE
	Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area:		500 sqm	
	<i>Survey date: FRIDAY</i>		<i>21/12/12</i>	<i>Survey Type: MANUAL</i>
13	TW-14-A-02 STONEYGATE CLOSE GATESHEAD	RENAULT		TYNE & WEAR
	Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area:		2200 sqm	
	<i>Survey date: FRIDAY</i>		<i>04/10/13</i>	<i>Survey Type: MANUAL</i>
14	TW-14-A-03 SOUTHWICK ROAD SUNDERLAND MONKWEARMOUTH	CAR SHOW ROOM		TYNE & WEAR
	Suburban Area (PPS6 Out of Centre) Development Zone Total Gross floor area:		282 sqm	
	<i>Survey date: WEDNESDAY</i>		<i>05/04/17</i>	<i>Survey Type: MANUAL</i>
15	WL-14-A-02 GREAT WESTERN WAY SWINDON	MERCEDES BENZ		WILTSHIRE
	Suburban Area (PPS6 Out of Centre) Retail Zone Total Gross floor area:		3250 sqm	
	<i>Survey date: WEDNESDAY</i>		<i>21/09/16</i>	<i>Survey Type: MANUAL</i>
16	WM-14-A-04 LAWLEY MIDDLEWAY BIRMINGHAM	VOLKSWAGEN		WEST MIDLANDS
	Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area:		5700 sqm	
	<i>Survey date: THURSDAY</i>		<i>25/10/12</i>	<i>Survey Type: MANUAL</i>
17	WM-14-A-05 HAGLEY ROAD STOURBRIDGE	EVANS HALSHAW		WEST MIDLANDS
	Edge of Town Centre Built-Up Zone Total Gross floor area:		2028 sqm	
	<i>Survey date: WEDNESDAY</i>		<i>29/11/17</i>	<i>Survey Type: MANUAL</i>
18	WO-14-A-01 BROMYARD ROAD WORCESTER HENWICK	HONDA		WORCESTERSHIRE
	Neighbourhood Centre (PPS6 Local Centre) No Sub Category Total Gross floor area:		655 sqm	
	<i>Survey date: FRIDAY</i>		<i>23/05/14</i>	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

19	WS-14-A-03 BROUGHAM ROAD WORTHING	FORD		WEST SUSSEX
	Edge of Town Residential Zone Total Gross floor area:		1450 sqm	
	<i>Survey date: FRIDAY</i>		<i>17/10/14</i>	<i>Survey Type: MANUAL</i>
20	WY-14-A-03 ELLAND ROAD LEEDS	VOLKSWAGEN		WEST YORKSHIRE
	Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area:		3324 sqm	
	<i>Survey date: TUESDAY</i>		<i>24/09/13</i>	<i>Survey Type: MANUAL</i>
21	WY-14-A-04 LEEDS ROAD NEAR DEWSBURY WOODKIRK	PEUGEOT		WEST YORKSHIRE
	Neighbourhood Centre (PPS6 Local Centre) Village Total Gross floor area:		1122 sqm	
	<i>Survey date: THURSDAY</i>		<i>15/09/16</i>	<i>Survey Type: MANUAL</i>

*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

Estimated TRIP rate value per 7493 SQM shown in shaded columns

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS				DEPARTURES				TOTALS			
	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated 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	15	2141	0.533	39.905	15	2141	0.069	5.134	15	2141	0.602	45.039
08:00 - 09:00	21	2051	0.947	70.982	21	2051	0.374	28.010	21	2051	1.321	98.992
09:00 - 10:00	21	2051	0.708	53.063	21	2051	0.580	43.494	21	2051	1.288	96.557
10:00 - 11:00	21	2051	0.625	46.800	21	2051	0.508	38.101	21	2051	1.133	84.901
11:00 - 12:00	21	2051	0.550	41.232	21	2051	0.567	42.450	21	2051	1.117	83.682
12:00 - 13:00	21	2051	0.620	46.452	21	2051	0.613	45.930	21	2051	1.233	92.382
13:00 - 14:00	21	2051	0.592	44.364	21	2051	0.546	40.885	21	2051	1.138	85.249
14:00 - 15:00	21	2051	0.525	39.319	21	2051	0.622	46.626	21	2051	1.147	85.945
15:00 - 16:00	21	2051	0.453	33.925	21	2051	0.555	41.580	21	2051	1.008	75.505
16:00 - 17:00	21	2051	0.483	36.187	21	2051	0.694	52.019	21	2051	1.177	88.206
17:00 - 18:00	21	2051	0.362	27.140	21	2051	0.685	51.323	21	2051	1.047	78.463
18:00 - 19:00	20	2128	0.096	7.217	20	2128	0.498	37.316	20	2128	0.594	44.533
19:00 - 20:00	6	2675	0.012	0.934	6	2675	0.243	18.207	6	2675	0.255	19.141
20:00 - 21:00	1	6623	0.045	3.394	1	6623	0.075	5.657	1	6623	0.120	9.051
21:00 - 22:00	1	6623	0.000	0.000	1	6623	0.211	15.839	1	6623	0.211	15.839
22:00 - 23:00												
23:00 - 24:00												
<b>Total Rates:</b>			6.551	490.914			6.840	512.571			13.391	1003.485

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.

The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

#### Parameter summary

Trip rate parameter range selected:	45 - 6623 (units: sqm)
Survey date date range:	01/01/11 - 09/07/18
Number of weekdays (Monday-Friday):	21
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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