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TRANSPORT ASSESSMENT

PROPOSED WAREHOUSING DEVELOPMENT

THE VINERY, POLING, ARUNDEL

CLIENT

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Littlehampton
West Sussex
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EXECUTIVE SUMMARY

The proposed development involves the relocation to the application site of a local company (FARGRO) from nearby premises in north Littlehampton. FARGRO is a horticultural wholesale supplier of goods to the UK horticultural industry. Founded in 1946, the business has operated from its nearby present site at Toddington Lane, Littlehampton since the late 1970s. The company need to relocate as their current site is at the centre of recently approved urban housing expansion at North Littlehampton.

FARGRO's current Toddington Lane site has poor public transport accessibility, few relevant cycle facilities on the nearby and wider higher network serving the site, and is outside a reasonable walk distance from most housing in the local urban areas. The application site also has poor public transport accessibility, but the shared footway / cycleway along the dual carriageway A27 adjacent to the site does provide for safe, segregated access by walk or cycle. Only the application site offers direct access to the strategic highway network for heavy goods vehicles associated with FARGRO's operations. For a development such as this, heavy goods vehicle movements can be the most contentious consequence. Taking all the above into account, there is at worst no material overall difference in site transport sustainability between the existing and application sites. Given its better location for heavy goods vehicle traffic, it can reasonably be argued that the application site offers a small improvement in overall transport sustainability.

Staff employed at FARGRO and regularly working at or from the existing site are largely local (Littlehampton / Arundel) although some live in Goring / Worthing and further afield. The bulk live within Arun District. A questionnaire survey of the 41 site based office and warehouse staff has been carried out. This recorded home postcode, usual time of travel to and from work, usual existing travel to work modal choices to the existing FARGRO site, and anticipated travel to work modal choices to the application site. Following assignment of those journeys to the highway network, it can be concluded that there are no material highway network impacts resulting from the proposed relocation of FARGRO from its current Toddington site to The Vinery.

The existing junction of the The Vinery access road with the A27 has a short length of diverge lane. Should a diverge lane be required by the Highways Agency, the existing diverge lane would be sub-standard in respect of the combination of its length and the major road design speed. Judged against the provisions of the appropriate DMRB standard (DMRB Volume 6 Section 2 Part 6, TD 42/95, 'Geometric Design of Major/Minor Priority Junctions') and forecast AADT (Annual Average Daily Traffic) traffic flows on the access, no diverge lane is required. The junction improvement proposed as part of the current planning application has been developed in accordance with the requirements of TD42/95 and has taken account of advice supplied by the Highways Agency in its initial consultation response to Arun District Council of 27 June 2013. It has been subject to a Stage 1 Safety Audit and Non Motorised User Audit in accordance with DMRB HD19/03. Authorisations for Departures from Standards in respect of corner radii and separation from a layby on A27 to the east are being sought.

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1 INTRODUCTION

1.1 Context

- 1.1.1 This report has been prepared in support of the current planning application relating to this site. No responsibility is accepted to any third party for all or part of this study in connection with this or any other development.
- 1.1.2 Millwood House Consultants Ltd has been commissioned to prepare a report dealing with transport matters in support of a planning application relating to development proposals at The Vinery, Poling, West Sussex.
- 1.1.3 The relevant Planning Authority is the Arun District Council. The site lies adjacent to the A27 trunk road; the relevant Highway Authority is therefore The Highways Agency. West Sussex County Council, as local highway authority, will have an interest in any material impacts of the development on local transport networks serving the site or affected by the application proposals.

1.2 This Report

- 1.2.1 There have been various Planning Applications relating to The Vinery over the past decade. Some of the development sought has been approved and constructed; other is still to be implemented. All previous applications have been supported by Transport Statements.
- 1.2.2 The Guidance for Transport Assessment, Department for Transport, 2007 (GTA 2007) sets out recommendations for the type of transport assessment needed depending on the type and size of development proposed, and is the reference used by The Highways Agency. The current proposal is for a size of B8 use that, in accordance with Appendix B of the GTA 2007, requires a Transport Assessment plus a Travel Plan.
- 1.2.3 This report therefore comprises that Transport Assessment. It supersedes and replaces any previous Transport Assessment or Transport Statement prepared in support of this planning application. A Travel Plan has been prepared as a complementary document.
- 1.2.4 This Transport Assessment considers the all transport related aspects of the site, in accordance with national and local guidance. The report makes use of:
- Information from relevant planning websites;
 - Client supplied data re proposed uses and sizes;
 - Documents / reports supporting existing planning permissions at The Vinery; and
 - Traffic surveys carried out for this planning application at the existing FARGRO site and at the proposed new site.

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1.3 Definitions

1.3.1 In this report, reference is frequently made to units of traffic flow. Highway design Standards referenced in the report, and vehicle classified traffic count data reported, can vary in their definitions. In this report consistent definitions employed in analysis are:

- AADT = Annual Average Daily Traffic (i.e. total traffic in year divided by number of days in year)
- AAWT = Annual Average Weekday Traffic (i.e. total traffic on all Mondays – Fridays in year divided by number of Mondays-Fridays in year)
- traffic flow is defined as all vehicles excluding pedal cycles.
- a heavy goods vehicle (HGV) is defined as any vehicle in the classes OGV1, OGV2, Medium goods, and buses, where:
 - o OGV is any goods vehicle other than a light goods vehicle (van type). The disaggregation between OGV1 and OGV2 is broadly based on number of axles and whether the vehicle legally requires chevron / long vehicle plates;
 - o Medium goods is a goods vehicle that is not a light goods vehicle, and is not an OGV requiring plates.

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2 THE SITE AND PROPOSED DEVELOPMENT

2.1 The Site

- 2.1.1 The proposed development site (the 'application site') is shown in Appendix 1. The site is located on land abutting and to the south of the existing Vinery Industrial Estate, on the south side of the A27 at Poling, between Worthing and Arundel in West Sussex.
- 2.1.2 The Vinery Industrial Estate site was originally a mushroom farm operated by Blue Prince Mushrooms. Following closure of the mushroom farm in 2003, the buildings have been refurbished / replaced to provide B1/B8 use employment space in accordance with planning permission A/14/05. There is a further unimplemented planning permission (A/37/08, renewed in 2010) for an additional green waste compost facility.

2.2 Proposed Development

Land Use

- 2.2.1 The proposed development involves the relocation to the application site of a local company (FARGRO) from nearby premises in north Littlehampton.
- 2.2.2 FARGRO is a horticultural wholesale supplier of goods to the UK horticultural industry. Founded in 1946, the business has operated from its nearby present site at Toddington Lane, Littlehampton since the late 1970s. The company need to relocate as their current site is at the centre of recently approved urban housing expansion at North Littlehampton. The current Toddington Lane site and the application site at The Vinery are shown in Appendix 2.
- 2.2.3 FARGRO currently utilises 9500m² of storage at its existing site and a neighbouring rented site in a variety of structures, including warehouses and covered storage structures, 2500m² of outside storage, and 500m² of offices in a separate building (total 12500m²). FARGRO operates its own fleet of 5 HGV's (rigid trucks) and 2 LGV's.
- 2.2.4 The proposal involves the development at The Vinery for FARGRO of a 6400m² storage and distribution warehouse together with 5337m² of covered storage (total 11737m²).

Access Junction

- 2.2.5 As part of this planning application an associated highway scheme is proposed for the improvement of the existing junction between the A27 and the access road serving the Vinery Estate, which also gives access to 16 residential properties in 4 terraces. For convenience, this report labels the access road 'The Vinery'. The current junction layout between the A27 and The Vinery is historical and, in light of the design speed for this part of the A27, would not comply with DMRB Volume 6 Section 2 Part 6, TD 42/95, 'Geometric Design of Major/Minor Priority Junctions', should the amount of traffic use of The Vinery warrant an improvement. It has, however, been considered (on Appeal, for removal of a Condition to a planning permission) to be adequate, without modification, to serve a significant intensification of use of the access.

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- 2.2.6 The junction improvement proposed as part of the current planning application has been developed in accordance with the requirements of DMRB TD 42/95. The scheme design has taken account of advice supplied by the Highways Agency in its initial consultation response to Arun District Council of 27 June 2013, and has been subject to a Stage 1 Safety Audit and Non Motorised User Audit in accordance with DMRB HD19/03. Authorisations for Departures from Standards in respect of corner radii and separation from a layby on A27 to the east are being sought.

Rights of Way

- 2.2.7 The proposed development site contains a Right of Way footpath. This extends from a combined cycleway / footway along the southern side of the A27 down to the application site, across that site and with links to further paths to the south. The Rights of Way Officer at Arun District Council has examined the submitted drawings and is satisfied that the Right of Way / Public Footpath has been correctly maintained in the application proposals. Any implications for the connection between this Right of Way and the A27 combined cycleway / footway should the improvement of the junction between A27 and The Vinery progress, are considered in the Non Motorised User Audit reported separately.

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3 PLANNING CONTEXT

3.0.1 Relevant transport planning context for the application site is set by:

- National Planning Policy Framework (NPPF)
- West Sussex Local Transport Plan (LTP)
- Adur Local Plan (2011-2029)

3.1 The National Planning Policy Framework

3.1.1 The National Planning Policy Framework (NPPF) (March 2012) replaced National Guidance concerning Highways and Transport matters (formerly PPG13) and makes several references to transport matters. In respect of this planning application, the relevant paragraphs of the NPPF are set out below.

Para 32. "All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:

- the opportunities for sustainable transport modes have been taken up on the nature and location of the site, to reduce the need for major transport infrastructure;*
- safe and suitable access to the site can be achieved for all people; and*
- improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe."*

Para 34. "Plans and decisions should ensure developments that generate significant movement are located where the need to travel will be minimised and the use of sustainable transport modes can be maximised. However this needs to take account of policies set out elsewhere in this Framework, particularly in rural area."

Para 36 "A key tool to facilitate this will be a Travel Plan. All developments which generate significant amounts of movement should be required to provide a Travel Plan."

Para 37 "Planning policies should aim for a balance of land uses within their area so that people can be encouraged to minimise journey lengths for employment, shopping, leisure, education and other activities."

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Para 39. "If setting local parking standards for residential and non-residential development, local planning authorities should take into account:

- the accessibility of the development;*
- the type, mix and use of development;*
- the availability of and opportunities for public transport;*
- local car ownership levels; and*
- an overall need to reduce the use of high-emission vehicles."*

3.1.2 This Transport Assessment demonstrates that:

- the application site is, overall, at least as sustainable in transport terms as the existing FARGRO site;
- appropriate transport improvements are proposed;
- sufficient parking is proposed; and
- residual cumulative transport impacts of the proposed development are not severe.

3.2 West Sussex Local Transport Plan (LTP)

3.2.1 The West Sussex Transport Plan 2011-2026 identifies key transport issues in Arun District including:

- Road congestion during peak hours which causes disruption and air pollution especially on the A27 at Arundel, the A29 and A259;
- Level crossings on the A29 and the A284 cause delay between the A27 and the main towns of Bognor Regis and Littlehampton;
- Lack of safe crossing points along the main routes through the District causes community severance;
- Rail services between both Littlehampton, Bognor Regis and London are perceived as slow and upgrades to improve accessibility to rail stations are required;
- The current provision of pedestrian and cycling facilities is disjointed and suffers from inadequate signage, crossing points and poor surfacing;
- The Public Right of Way (PROW) network linking the South Downs National Park with the coast is also disjointed and deficient in bridleway access and requires surface enhancements; and
- Due to low use of some services, there is uncertainty over the future viability of some bus services.

3.2.2 This Transport Assessment demonstrates that the proposed development at the application site will not contribute in a material way to any deterioration in those identified transport issues.

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3.3 Arun Local Plan (2011-2029)

3.3.1 The current approved Local Plan is the 2003-2011 version. The District Council is in the process of preparing its new Local Plan which will cover the period 2011-2029. A draft Submission version is still under consideration by the council.

3.3.2 Policy SP21 (Transport and Development) covers the Local Plan's strategy for transport. Key elements related to the proposed development at the application site are:

"The Council will support development which:

iv. incorporates appropriate levels of parking in line with West Sussex County Council guidance on parking provision

v. where required by current guidance, is supported by an effective and deliverable Transport Assessment which demonstrates that the transport effects of development on the local and strategic road network can be satisfactorily mitigated and a Travel Plan, which is effective and deliverable"

3.3.3 This Transport Assessment demonstrates that the proposed development at the application site:

- Includes appropriate on-site parking;
- Would not lead to any material impacts on the local and strategic highway networks;
- Is supported by an effective and deliverable Travel Plan.

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4 SITE ACCESSIBILITY

4.1 Application Site

Public Transport

- 4.1.1 The nearest bus services to the application site are provided by Compass Buses at Poling Corner, about 670m from the junction of The Vinery and the A27. Services are shown in Table 4.1.

TABLE 4.1 BUS SERVICES AT POLING CORNER

Service number	Termini	Buses per day (weekday)
69	Pulborough Station - Worthing	1 per day 2 x per week
85 / 85A	Arundel - Chichester	1 per day
670	Poling – Littlehampton	School service 1 per day each way
R3	Westergate – Rustington	1 per day 2 x per week
X4	Bognor Regis – Shoreham (Holmbush centre)	1 per day 1 x per week

- 4.1.2 None of these would provide a consistent service to meet the daily needs of employees travelling to the site.

Walk / Cycle

- 4.1.3 Other than the properties on The Vinery, the application site is outside reasonable walk distance (1-1.5km max – 12-20 mins) for housing in the major residential areas in Wick / Littlehampton / Arundel. However, it is within reasonable cycling distance.
- 4.1.4 A shared footway / cycleway passes The Vinery along the A27 dual carriageway trunk road. This shared path runs between the B2225 junction to the east and Poling Corner to the west, from where it crosses the A27 and connects to Crossbush Lane. At the entrance to The Vinery, the shared path is on the same (southern) side of the road as the site. This shared path provides a safe, segregated facility for part of the route for pedestrians and cyclists to access the site from local residential areas. The shared path is little used at present (Appendix 3 shows the results of a survey in August 2013 of non-motorised users on this stretch of the A27).

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Road

- 4.1.5 The site connects directly to the dual carriageway A27 via the junction with The Vinery. The A27 is a trunk road and provides connections with both strategic national and local highway networks. The application site is therefore very well located for serving its customers' needs, particularly for bulk deliveries by lorry to and from FARGRO, without impacting unnecessarily on local roads; nearly all HGV deliveries from and to FARGRO are to destinations best connected to by use of the national strategic road network.
- 4.1.6 To the east of the site, the nearest junction giving access from the A27 to the local road network is at Clapham. This is a grade separated modern standard junction providing connections to the A280 and A2700. To the west, the nearest junction is at Crossbush, providing connections to the A284 and the opportunity to make the U-turn back towards Worthing. About 600m west of the site there is a gap in the central reservation, signposted to give an earlier opportunity for traffic from areas to the south of this stretch of the A27 (including The Vinery and Poling village) to turn back towards Worthing without having to use Crossbush junction.

Parking

- 4.1.7 All existing parking demands associated with the Vinery Industrial Estate and the residential properties served by The Vinery are met on-site. All future parking demands generated by the proposed development will also be provided for on-site as part of the proposals, in accordance with local authority standards and taking account of the known requirements of Fargro at their existing site.
- 4.1.8 The parking standard in the local plan for storage and distribution uses (class B8) of over 240m² is set by Appendix 2, Table 5 of the Arun Local Plan 2003-2011, as a maximum of:

$$12 \text{ spaces} + 1 \text{ space per } 100 \text{ m}^2 \text{ over } 240 \text{ m}^2$$

- 4.1.9 The main FARGRO building at the new site will therefore generate a maximum requirement of 61 parking spaces.
- 4.1.10 52 parking spaces are provided in the site proposals for staff and visitors to the building and a further six parking spaces relating to the trade counter. The total proposed parking is therefore compatible with local standards and is consistent with the known requirements of FARGRO themselves.

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4.2 Existing FARGRO Site

- 4.2.1 Although nearer to Littlehampton, the existing FARGRO site at Toddington Lane is also not well served by sustainable transport modes.

Public Transport

- 4.2.2 Stagecoach service 700 runs on a 10 min frequency from Littlehampton station east to Worthing and beyond. This service is closest to the existing FARGRO site at the A259 Wick roundabout which is at least 1.35km, i.e. 15-20 min walk, by available roads and paths. West of Littlehampton station, service 700 operates 1/2 hourly Arundel to Littlehampton station via Lyminster Road (nearest bus stop to site at least 1.25 km distant by available roads and paths, i.e. 15-20min walk); and at approx 20min frequency from Chichester / Bognor to Littlehampton station (nearest point on that route to the existing site is at least 2km distant by available roads and paths, i.e. 25 minutes walk).
- 4.2.3 By comparison, maximum desirable walk distance from new development to a bus route is generally taken as 400m (i.e. 5 minutes walk) to be attractive, and absolute maximum no more than 800m (i.e. 10 minutes walk).

Walk / Cycle

- 4.2.4 There is some nearby housing, but the existing site is outside reasonable walk distance (1-1.5km max – 12-20 mins) for most housing in the major residential areas in Wick / Littlehampton / Arundel.
- 4.2.5 There are few relevant dedicated facilities serving cyclists accessing the site. There is no cycleway on A259 Littlehampton bypass, and a shared footway /cycle way only on parts of A259 west of Wick. No separate provision is made on minor access roads accessing the site, although these carry relatively low traffic volumes.

Road

- 4.2.6 The existing FARGRO site connects via local residential roads to the A284 and A259, either of which must be used to provide connections to the strategic A27 trunk road, in particular for HGVs associated with deliveries to and from FARGRO.

Parking

- 4.2.7 There is sufficient parking provided at the existing FARGRO site to meet all demands.

4.3 Comparison

- 4.3.1 While the application site is not very sustainable in terms of public transport accessibility, the shared footway / cycleway along the dual carriageway A27 adjacent to the site does provide for safe, segregated access by walk or cycle. Although FARGRO's current site is nearer to Littlehampton it also has poor public transport accessibility, few relevant cycle facilities on the nearby and wider highway network serving the site, and is outside a reasonable walk distance from most urban housing in local urban areas.

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- 4.3.2 Transport sustainability is not simply a reflection of a site's ability to be accessed by sustainable modes for personal travel; it is a compound of all transport activities associated with a site, and their consequences. Any unnecessary propensity for staff journeys to work to be car driver oriented at either site can be addressed, and the consequences managed, by measures such as those in the Travel Plan for the application site, which target increased car sharing and cycling.
- 4.3.3 Conversely, only the application site offers direct access to the strategic highway network for heavy goods vehicles associated with FARGRO's operations. For a development such as this, heavy goods vehicle movements can be the most contentious consequence, not least in the public's perception of possible impacts. There is no alternative means of transport access other than by road for goods to / from either site. The application site is excellently placed to provide ready access to national and local strategic highway networks for heavier vehicles generated by FARGRO and their suppliers, without the need to unnecessarily impact on nearby local roads. FARGRO's current site does not provide as well as the application site for heavy goods vehicle access to and from the strategic highway network.
- 4.3.4 Taking all the above into account, there is at worst no material overall difference in site transport sustainability between the existing and application sites. Given its better location for heavy goods vehicle traffic, it can reasonably be argued that the application site offers a small improvement in overall transport sustainability.

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5.0 EXISTING SITUATION

5.1 Traffic

- 5.1.1 Traffic flows on the dual carriageway A27 at the The Vinery access junction in 2012 are shown in Table 5.1. The flows are recorded for the Highways Agency as part of their programme of continuous traffic flow monitoring. The nearest continuous monitoring site near Crossbush junction has not been operational for some years. The data presented in Table 5.1 relates to a site at Clapham west of the A280, and is considered sufficiently representative of flows past the application site. Full data and site location details are shown in Appendix 4.

TABLE 5.1 2012 TRAFFIC FLOWS ON A27 NEAR SITE ENTRANCE

	AADT	AAWT	AM peak hour Mon-Fri	PM peak hour Mon-Fri
Eastbound	14180	14780	1031	1199
Westbound	13934	14646	1106	1140
Two-way	28114	29426	2137	2339

- 5.1.2 Highway link capacities are expressed as Congestion Reference Flow (CRF) in the Design Manual for Roads and Bridges (DMRB) Volume 5, Section 1, Part 3 TA46/97, Annex D. The CRF of a highway link is an estimate of the AADT flow at which the carriageway is likely to be congested in the peak periods of an average day. In calculating CRF, congestion is defined as the situation when the hourly traffic demand exceeds the maximum sustainable hourly throughput of the link.
- 5.1.3 The CRF of a link depends on a range of factors describing the physical character of the link and the variation and composition of traffic flows. CRFs are therefore site specific. However, TA46/97 includes typical values for different road types with average characteristics. For a modern dual carriageway such as the A27 at the application site, the typical CRF is 68000 AADT.
- 5.1.4 The actual flow on A27 is only about 40% of the CRF. On a link basis, there are therefore no capacity issues on this part of the A27.
- 5.1.5 Generally, junction capacities, rather than link capacities, are the limiting factor. Crossbush junction (A27 / A284) to the west of The Vinery marks the end of the dual carriageway section of A27 westwards from Worthing. The junction is traffic signal controlled. On weekdays, this junction experiences some peak period congestion and delays, principally between A27 west and east (and vice versa), and on the A284 approach from the south. The nearest major junction on A27 to the east of The Vinery is with the A280 / A2700 at Clapham. This is a modern standard grade separated junction with no significant capacity issues.

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5.2 Safety

- 5.2.1 Accident records have been obtained from the Sussex Safer Roads Partnership. The records are for the 3-year period from 1/7/2010 to 30/6/2013, and cover an area encompassing the A27 between Crossbush junction and the A280 Clapham junction, together with both junctions and their approaches. Appendix 5 shows the accidents plotted onto the relevant highway network.
- 5.2.2 Taking the whole of the assessment area into account, there were 2 Fatal, 8 Serious, and 25 Slight injury accidents recorded over the 3 year period, i.e. an average of 11.67 PIAs (Personal Injury Accidents) per annum of which 3.67 per annum were KSIs (Killed and Seriously Injured). Considering only the A27 between the junctions, over the 3 year period there were 1 Fatal, 3 Serious and 12 Slight, i.e. an average of 5.33 PIAs per annum of which 1.33 were KSIs.
- 5.2.3 Using the 2012 AADT for this part of the A27 (see Table 5.1), the actual accident rate is 132 per billion vehicle miles for the A27 between the junctions, and 289 for the whole assessment area. By comparison, Transport Statistics GB (Table TSG0803) gives a rural A class road accident rate in 2011 of 508 per billion vehicle miles. This part of the A27 therefore has a lower accident rate than the national average.
- 5.2.4 None of the recorded accidents occurred at or in close proximity to the access to The Vinery. Similarly, none were recorded at the exit from the layby to the east of The Vinery, or on the stretch of westbound A27 between the exit from that layby and The Vinery.

5.3 The Vinery Access Traffic

- 5.3.1 Transport Statements prepared in support of previous, approved, applications for land at the Vinery Industrial Estate included estimates of the maximum number (2-way vehicles per day) and composition of vehicles using The Vinery at the access junction when the mushroom farm was operational. Those figures are shown in Table 5.2. Figures for residential were based on trip rates derived at that time from TRICS. Figures for the mushroom farm were based on general patterns of use. Both estimates were accepted by all parties at that time.

**TABLE 5.2 TRIP GENERATIONS
HISTORIC USES SERVED FROM THE VINERY**

	TOTAL	HGV	%HGV	
Residential	180	0	0.0	<i>Figures based on TRICS</i>
Mushroom farm	308	28	9.1	<i>Figures based on general pattern</i>
TOTAL	488	28	5.7	

- 5.3.2 With those historic site uses, the total daily volume of traffic using The Vinery as the access road was therefore estimated to have been 488 2-way, or 244 vehicles (5.7% HGV) turning left into The Vinery daily, and 244 turning out.

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- 5.3.3 Those Transport Statements also estimated the volume and composition of traffic associated with proposals to replace or convert the mushroom farm buildings for B1/B8 use, and with the small green waste processing plant for which there is an outstanding current planning permission. The estimates were based on first principles for the Waste facility and an interrogation of the TRICS database for the B1/B8 uses. Together with the existing residential properties, the consequential estimated volume and composition of traffic using The Vinery as the access junction was estimated at that time to be as shown in Table 5.3.

**TABLE 5.3 TRIP GENERATIONS
ESTIMATED EXISTING RESIDENTIAL AND APPROVED DEVELOPMENT**

	TOTAL	HGV	%HGV	
Residential	180	0	0.0	<i>Figures based on TRICS</i>
Approved B1/B8	608	79	13.0	<i>Figures based on TRICS</i>
Approved Waste Scheme	46	37	80.4	<i>Figures based on 1st principles</i>
TOTAL	834	116	13.9	

- 5.3.4 For the combination of existing residential and approved B1/B8 etc uses, together with the approved but unimplemented green waste facility, the total daily volume of traffic using The Vinery as the access road was therefore estimated to be 834 2-way, or 417 vehicles (13.9% HGV) turning left into The Vinery daily, and 417 turning out.
- 5.3.5 New counts undertaken by Count-on-U's in 2012 (Appendix 6) measured separately the actual trips generated by the 16 residential properties and those by the B1/B8 elements on The Vinery Industrial Estate that had been developed at that time.
- 5.3.6 The count of 119 total (9 HGV) daily 2-way vehicles for the residential properties was significantly lower than the previous TRICS-based estimate of 180 (which with hindsight could be considered unrealistically high at over 11 per day for each of the 16 properties) and is considered to be much the more robust measure being based on actual observation, and with a more reasonable implied average daily trip rate of 7.4.
- 5.3.7 The count of traffic associated with the B1/B8 uses was reported as 320 total (64 HGV) daily 2-way vehicles in the earlier (now superseded) Context Report and Transport Statement in support of this application. The Transport Statement also noted that a small part (1500m² of the total 12200m²) of the permitted B1/B8 floorspace was under development at that time and, accordingly, the observed count of 320 was expanded to 365 for use in subsequent analyses.
- 5.3.8 On further investigation, it has now become apparent that there was a considerable amount of construction related activity on The Vinery Industrial Estate at the time of the 2012 traffic survey associated with that part of the B1/B8 elements still being developed, and which could have generated substantial volumes of traffic.

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- 5.3.9 It is also observed that the entry and exit flows recorded in the 2012 survey for the Industrial Estate are substantially different. The previous analyses used the higher of the two for robustness, but further consideration of actual count site location suggests that the higher entry value may have resulted from larger vehicles crossing the recording tubes at an angle.
- 5.3.10 A new survey (1 day Manual Classified count) of traffic entering and leaving The Vinery Industrial Estate was therefore carried out to provide an unambiguous measure of actual current activity. This was done on the same date as the Non-Motorised-User survey on 12 August 2013 (see Appendix 7).
- 5.3.11 This new survey recorded 271 total daily vehicles (2-way). This is lower than the 320 derived (higher counted figure x2) in the now suspect 2012 survey. The new 2013 count is also lower than the historic TRICS-based estimate shown in Table 5.3 but is validated by a more recent analysis of similar sites in the most recent TRICS database (2013b v6.12.1), as shown in Table 5.4 (full supporting TRICS analyses are at Appendix 8). The TRICS Good Practice Guide recommends use of the most up-to-date information using the most recent version of TRICS.
- 5.3.12 The 2013 count is considered more robust than its predecessor counts or estimates in view of its reflection of the measured current and potential use of that part of the Vinery Industrial Estate; and its validation by a more recent TRICS interrogation than had been used in previous analyses.

**TABLE 5.4 TRIP GENERATIONS
COMPARISON OF 2013 COUNT DATA FOR EXISTING B1/B8
WITH TRICS DERIVED ESTIMATES**

	Daily (12hr)	AM peak	PM peak
TRICS trip rate/100m²gfa	2.110	0.223	0.170
TRICS estimated flows (12200m²)	257	27	21
2013 Count	271	23	12

- 5.3.13 Substituting actual for estimated figures for the existing residential and B1/B8 development, Table 5.3 becomes Table 5.5.

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**TABLE 5.5 TRIP GENERATIONS
ACTUAL EXISTING RESIDENTIAL AND B1/B8 USES
PLUS ESTIMATED APPROVED DEVELOPMENT**

	Daily			AM peak	PM peak
	All vehs	HGV	HGV %	all vehs	all vehs
Residential	119	10	8.4%	14	13
B1/B8	271	30	11.1%	24	12
Approved Waste Facility	46	37	80.4%	3	3
TOTAL	436	67	15.4%	41	28

5.4 FARGRO Traffic

Staff Travel Choices

- 5.4.1 Staff employed at FARGRO and regularly working at or from the existing site are largely local (Littlehampton / Arundel) although some live in Goring / Worthing and further afield. The bulk live within Arun District.
- 5.4.2 Arun District as a whole has good rail connections along the coast and towards the capital, and some urban concentrations of workplace / homeplace development where sustainable transport linkages are available. However, in common with many similarly placed districts, the general pattern of travel to work in this area is one of a majority reliance on the car.
- 5.4.3 2011 Census Journey to Work, Table CT0015, showing the pattern of modal choice for the journey to work by Arun District employed persons is summarised in Table 5.8. The Table shows the results in two ways, including and excluding those who work from / at home.

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**TABLE 5.8 CENSUS JOURNEY TO WORK 2011
ARUN DISTRICT EMPLOYED RESIDENTS**

MODE	% modal use	Adjusted % modal use
Car driver	60.5	69.6
Car passenger	6.0	6.9
Taxi	0.3	0.4
Motorcycle	0.8	0.8
Bus	2.4	2.7
Train	4.4	5.1
Cycle	3.6	4.2
Walk	8.3	9.6
Other	0.6	0.7
Work from/at home	12.9	
TOTAL*	100	100

* Totals subject to rounding of individual measures.

5.4.4 Actual FARGRO staff travel to work transport choices have been monitored by the company in the lead up to an eventual move to the application site. Total staff numbers at the existing site are:

- 41 Office and warehouse staff based at site. The site operates from 0600 – 1900. Site based staff operate different shifts, with staggered arrival / departure times.
- 9 Sales and technical staff operating in the southeast – no fixed workplace – seldom attend site.
- 8 Staff based outside southeast – attend site once every 6 weeks on average

5.4.5 A questionnaire survey of the 41 site based office and warehouse staff was carried out in January 2013. This recorded home postcode, usual time of travel to and from work, usual existing travel to work modal choices to the existing FARGRO site, and anticipated travel to work modal choices to the application site.

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- 5.4.6 A summary of the data for the existing FARGRO site is shown in Table 5.9, together with the district-wide data from Table 5.8 for comparison. More details of the questionnaire responses are as shown in Appendix 9 (edited from the originals to remove personal information including actual home postcode). Where a response shows alternative modal choices, the analysis has assumed each to be equally likely on any given day.

TABLE 5.9 FARGRO STAFF TRAVEL TO WORK (EXISTING SITE)

	EXISTING FARGRO SITE						DISTRICT
	AM 0800-0900		PM 1700-1800		Daily		Daily
MODE	No.	%	No.	%	No.	%	%
Car Driver	23	79.4	26.5	82.8	33.5	81.7	69.6
Passenger	0	0.0	0	0.0	0	0.0	6.9
Motor cycle	0	0.0	0.5	1.6	0.5	1.2	0.8
<i>Total</i>						82.9	77.3
Cycle	1	3.4	2	6.2	2	4.9	4.2
Walk	5	17.2	3	9.4	5	12.2	9.6
<i>Total</i>						17.1	13.8
Bus	0	0	0	0	0	0	2.7
Train	0	0	0	0	0	0	5.1
						0	7.8
Other	0	0	0	0	0	0	1.1
TOTAL	29	100	32	100	41	100	100

- 5.4.7 The combined proportion of staff currently using walk or cycle to travel to and from the existing FARGRO site is consistent with the district-wide average, taking into account the site's accessibility by those modes. Differences between site and district-wide use of public transport reflects the existing site's poor accessibility by those modes. Nearly all car based staff trips to and from the existing FARGRO site are currently as car driver.

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Other FARGRO Related Traffic

- 5.4.8 FARGRO operates its own fleet of 5 HGV's (rigid trucks) and 2 LGV's. Nearly all of FARGRO's own commercial vehicle movements use A284 to/from A27 Crossbush junction, the exceptions being small numbers of weekly trips using the A259 to access nurseries in Bognor Regis and Ferring. Trade visitors delivering and collecting to/from the existing Fargro site also tend to use the A27 via Crossbush.
- 5.4.9 FARGRO's Operations Manager's assessment of average daily traffic movements associated with their existing site (excluding staff travel) is as follows:

FARGRO owned HGV's	5 out and 5 in per day 10
HGV deliveries	5 in and 5 out per day 10
FARGRO LGV's	2 out and 2 in per day 4
LGV deliveries	5 in and 5 out per day 10
Business visitors	4 in and 4 out per day 8
Trade counter collections	15 in and 15 out per day 30
Total	72

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6.0 TRIP GENERATIONS

6.0.1 To establish typical daily traffic movements associated with FARGRO three data sources have been used:

- A traffic survey carried out on 24 July 2013 at the entrance to their existing site;
- A staff questionnaire, which recorded both current travel mode choices at the existing site and probable choices at the application site; and
- Information from FARGRO's Operations Manager relating to commercial vehicle movements.

6.0.2 The results of the 2013 traffic survey are included in Appendix 10 and are summarised in Table 6.1.

TABLE 6.1 COUNTED FARGRO TRIP GENERATIONS (EXISTING SITE)

TOTAL vehs	HGV	%HGV	AM peak	PM peak	Highest peak 1600-1700
164	21	12.8	22	16	26

6.0.3 Table 6.1 shows that on the survey day the hourly vehicle 2-way movement associated with FARGRO were no more than 26 in any hour, and no more than 22 in either the conventional AM and PM peak hours. HGV traffic concentrated in time periods before the AM peak hour and between the AM and PM peak hours.

6.0.4 FARGRO currently operates 5 HGV's and 2 LGV's and receives up to 10 delivery vehicles per day, approximately half HGV's and half LGV's. The operating hours are from 6am until 7pm, with the majority of HGV movements between 6am – 7.30am and between 9am and 4pm. Supplier deliveries and trade activity take place between 9 am and 5 pm.

6.0.5 FARGRO's Operations Manager's assessment of traffic movements associated with their existing site on an average day is as follows:

FARGRO owned HGV's	5 out and 5 in per day 10
HGV deliveries	5 in and 5 out per day 10
FARGRO LGV's	2 out and 2 in per day 4
LGV deliveries	5 in and 5 out per day 10
Staff cars	36 in and 36 out per day 72
Business visitors	4 in and 4 out per day 8
Trade counter collections	15 in and 15 out per day 30
Total	144 (13.9% HGV)

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- 6.0.6 FARGRO's estimate of average daily total vehicles (144) is very similar to, though slightly lower than, the volume counted in the July 2013 survey at the FARGRO entrance (164). The counted and FARGRO estimated daily volumes of HGVs are almost identical.
- 6.0.7 Table 6.2 shows the results of the staff travel questionnaire survey for both existing and application sites. Note that where a response shows alternative modal choices, the analysis has assumed each to be equally likely on any given day (i.e. 0.5 to each of 2 modes; 0.33 to each of 3 modes).

TABLE 6.2 FARGRO STAFF TRAVEL TO WORK (EXISTING AND APPLICATION SITES)

	EXISTING SITE						APPLICATION SITE					
	Daily		AM 0800-0900		PM 1700-1800		Daily		AM 0800-0900		PM 1700-1800	
MODE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Car Driver	33.5	81.7	23	79.4	26.5	82.8	36.2	88.3	25.7	88.6	27.8	86.9
Passenger	0	0.0	0	0.0	0	0.0	0.3	0.7	0.3	1.0	0.3	0.9
Motor cycle	0.5	1.2	0	0.0	0.5	1.6	0.5	1.3	0	0	0.5	1.6
Cycle	2	4.9	1	3.4	2	6.2	3.7	9.0	2.7	9.3	3.4	10.6
Walk	5	12.2	5	17.2	3	9.4	0.3	0.7	0.3	1.0	0	0
Bus	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	41	100	29	100	32	100	41	100	29	100	32	100

- 6.0.8 Goods vehicle activity associated with FARGRO takes place in off-peak times of the day (before 0730 and between the highway peak hours). The staff travel questionnaire survey therefore provides a robust representation of the total volume of traffic associated with FARGRO during the general highway morning and evening peak hours. The questionnaire results for the number of car drivers at peak times at the existing site (23 AM and 26.5 PM) compare very well with the numbers counted at the FARGRO entrance as shown in Table 6.1 (22 AM and 26 highest PM).
- 6.0.9 The questionnaire results indicate that FARGRO's move to the application site could reduce the number of staff who walk to work and result a consequential small increase in use of car and cycle. Car sharing is likely to remain small unless positively influenced.
- 6.0.10 The company will prepare and implement an agreed Travel Plan to effectively influence staff travel to work transport choices, targeting increased cycle use and increased car sharing. The Travel Plan is described in outline in Section 9 of this report, and in more detail in the companion Travel Plan report.

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7.0 FORECAST YEARS

- 7.0.1 The Highways Agency's guidelines include that network impact assessments are carried out at opening year, and for ten years after the registration of an application if more than 30 two-way peak hour trips on any strategic road network junction or slip road.
- 7.0.2 The trip generation assessment in Section 6 has demonstrated that FARGRO at the application site would not generate more than 30 vehicles / hour in any hour of the day. However, by itself, this does not necessarily translate into 'no more than 30 two-way peak hour trips on any strategic road network junction or slip road'.
- 7.0.3 FARGRO generated traffic has been assigned to the network for both the existing and application sites. The results are reported in Section 8, which concludes that the guideline of 30 additional trips per hour is not exceeded on any part of the network.
- 7.0.4 It is therefore only necessary to assess the network impacts of the proposed development at the opening year. The application site vehicle generations are fixed over time; the development would be completed within 2 years; and the conventional TEMPRO approach to forecasting general traffic growth would only suggest an increase of 1 to 2% over the period from now to opening year. An assessment of the impacts of FARGRO generations in addition to existing traffic flows is therefore considered sufficient.

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8.0 HIGHWAY NETWORK IMPACTS

- 8.0.1 Adding the data presented earlier in this report in Tables 5.5 (existing + committed) and 6.1 (application FARGRO), total traffic using The Vinery access at its junction with A27 will increase as a result of the proposed development as shown in Table 8.1.

**TABLE 8.1 TRIP GENERATIONS
ACTUAL EXISTING RESIDENTIAL AND B1/B8 USES
PLUS ESTIMATED APPROVED DEVELOPMENT
PLUS APPLICATION FARGRO**

	Daily (AAWT)			AM peak	PM peak
	All vehs	HGV	HGV %	all vehs	all vehs
Residential	119	10	8.4%	14	13
B1/B8	271	30	11.1%	24	12
<i>Sub total (actual existing)</i>	390	40	10.3%	38	25
Approved Waste Facility	46	37	80.4%	3	3
<i>Sub-total (actual existing + estimated approved)</i>	436	77	17.7%	41	28
FARGRO	164	21	12.8%	22	26
TOTAL	600	98	16.3%	63	64

- 8.0.2 As demonstrated in Section 6, goods vehicle activity associated with FARGRO takes place in off-peak times of the day. The staff travel questionnaire survey therefore provides a robust representation of the total volume of peak hour traffic associated with FARGRO at both their existing and proposed locations. FARGRO peak hour generations for both existing and proposed scenarios have been assigned to the highway network on the basis of shortest route. The central reservation to the west of the site has a gap, signed and designed to enable vehicles travelling west to turn back towards Worthing without the need to negotiate Crossbush junction. The assignment has directed all traffic to avoid this central reservation gap and to instead all use Crossbush junction. The assignment results therefore present the maximum potential impact on Crossbush junction.
- 8.0.3 The results are presented in traffic flow diagrams, Figures 1 to 6 in Appendix 11. Differences (i.e. net changes resulting from FARGRO's proposed move) in network traffic loadings are shown in Figures 3 and 6, for the AM and PM peak hours respectively.

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8.0.4 Key conclusions are (all expressed as APPLICATION SITE – EXISTING SITE):

- AM peak hour
 - o Total 2-way flow on the A27 to the west of the site increases by less than 1 vehicle on an average day. Total 2-way flow on A27 to the east of the site increases by 17. The existing AM peak hour 2-way flow on A27 at this point is 2137 (Table 5.1). The maximum increase in A27 link flow arising from FARGRO relocation is therefore less than 1% and is therefore not material;
 - o Total junction inflow at Crossbush junction would fall slightly. Total increase in junction inflow at the Clapham junction is 21.6 vehicles per hour. This is substantially less than the guideline of 30. No actual flow information is available for the Clapham junction but as the total inflow must by definition be greater than the total 2-way flow on the A27 arm (2137 vehicles per hour), the additional junction inflow at the Clapham junction resulting from the proposed development would not exceed 1% and is therefore not material.
 - o There are no significant flow increases on the local road network. The highest flow increase would be on the A280 Angmering bypass (an increase due to FARGRO relocation of up to 15 vehicles / hour). Some concerns have been expressed that this traffic may in fact use the old route through Angmering itself. The number involved is small but this is, in any event, not considered likely. The existing traffic calming and other impediments to smooth traffic flow on that route are designed to make its choice unattractive. FARGRO can influence the route choices taken by their staff through the site Travel Plan.
- PM peak hour
 - o Total 2-way flow on the A27 to the west of the site increases by about 31 vehicles per hour. Total 2-way flow on A27 to the east of the site increases by under 4. The existing PM peak hour 2-way flow on A27 at this point is 2339 (Table 5.1). The maximum increase arising from FARGRO relocation is therefore only 1.5% and is therefore not material;
 - o Total increase in junction flow at the Clapham junction is less than 4 vehicles per hour and is therefore not material. Total junction inflow at Crossbush junction would increase by about 18 vehicles per hour. Flows on the approach to the junction from the east would increase by about 28 vehicles per hour, but 50% would be turning to the south, and thus not impact on any existing queuing or delays. No actual flow information is available for the Crossbush junction but as the total inflow must by definition be greater than the total 2-way flow on the A27 arm (2339 vehicles per hour), the additional junction inflow at the Crossbush junction resulting from the proposed development would not exceed 1.5% and is therefore not material, especially given that 50% of the increase would be on the A27 east to A284 south movement which does not impact on overall junction queues and delays.
 - o There are no significant flow increases on any part of the local road network, including A280 Angmering Bypass.

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- 8.0.5 Before the AM peak and between the peak hours, FARGRO related traffic consists of commercial vehicle and visitor movements. Currently, 98% of commercial vehicle movements use the Crossbush roundabout when they leave the existing Toddington site and similar on return (generally leaving between 6am and 7.30am and returning between 12noon and 5pm). The remaining 2% are split evenly between trips east and west along the A259 to nurseries in Ferring to the east and Bognor in the west.
- 8.0.6 Commercial vehicles delivering to FARGRO show the same pattern, with almost all using Crossbush junction and A284 south when accessing the existing site, reversing the journey on the return. The few visitors are mainly local with their routes and times spread across the local network.
- 8.0.7 The relocation of FARGRO to the application site at The Vinery will only increase heavy goods FARGRO related traffic through Crossbush roundabout from the existing 98% to 100%. Spread over the operating day this is essentially no change. There will be a slight increase in the number of FARGRO's own commercial vehicles using the Angmering bypass to access nurseries at Ferring, but this would only amount to 2 or 3 trips per week.
- 8.0.8 There are therefore no material highway network impacts resulting from the proposed relocation of FARGRO from its current Toddington site to The Vinery.

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9.0 HIGHWAY ACCESS DESIGN

9.1 Design Standards

9.1.1 Design standards for an access of this type are set out in the Design Manual for Roads and Bridges, Volume 6, Section 2, Part 6, TD 42/95.

9.1.2 When the major road design speed is at least 85kph, the key determinants of whether diverging or merging tapers should be employed at a junction are (TD42/95 references in brackets):

- Nearside Diverging Tapers should be provided where:
 - o The volume of left turning traffic is greater than 600 vehicles AADT (para 7.52a); or
 - o The volume of left turning traffic is greater than 450 vehicles AADT and the percentage of large goods vehicles is greater than 20% (para 7.52b); or
 - o The volume of left turning traffic is greater than 450 vehicles AADT and the junction is on an up or down gradient of greater than 4% (para 7.52c).

Para 7.52 also states that where the major road flow is greater than 7-8000 AADT then the above flow figures for turning traffic can be halved.

- Merging Tapers should be provided where:
 - o The volume of left turning traffic is greater than 600 vehicles AADT (para 7.59); or
 - o The volume of left turning traffic is greater than 450 vehicles AADT and the percentage of large goods vehicles is greater than 20% (para 7.59); or
 - o The volume of left turning traffic is greater than 450 vehicles AADT and the junction is on an up gradient of greater than 4% (para 7.59).

Unlike for diverging tapers, there is no equivalent adjustment depending on major road flow. In addition, para 7.59 of TD42/95 also states that merging tapers shall not be provided where the cost of provision would be excessive.

9.1.3 If those traffic figures indicate the need for diverging or merging tapers, the lengths of the tapers are dependent on the main road design speed. Full DMRB standards would require diverge tapers of 110m for a main road design speed of 120kph, 80m for 100kph and 55m for 85kph. Merge tapers requirements would be 130m for a main road design speed of 120kph, 110m for 100kph, and 90m for 85kph. Relaxations from those full standards are allowable with the Highways Agency's agreement in the light of local circumstances.

9.1.4 The 2012 average daily traffic flow (AADT) on the A27 at The Vinery access junction was 28114, exceeding the critical value of 8000 vpd in TD42/95. The gradient of the A27 at this point does not exceed 4%. The design speed of the A27 is 120kph.

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9.2 Existing Access Junction

- 9.2.1 The existing junction between The Vinery and the A27 has a 48m long diverging taper and no merging taper.

9.3 Approved Development Access

- 9.3.1 The Highways Agency's consultation responses to previous planning applications for the Vinery Estate were based on maximum forecast flows on The Vinery at the junction with A27 as shown in Table 5.3 (reproduced below), i.e. 834 2-way vehicle trips / day (417 in and 417 out) with 13.9% HGV.

**TABLE 5.3 TRIP GENERATIONS
ESTIMATED EXISTING RESIDENTIAL AND APPROVED DEVELOPMENT**

	TOTAL	HGV	%HGV	
Residential	180	0	0.0	<i>Figures based on TRICS</i>
Approved B1/B8	608	79	13.0	<i>Figures based on TRICS</i>
Approved Waste Scheme	46	37	80.4	<i>Figures based on 1st principles</i>
TOTAL	834	116	13.9	

- 9.3.2 Based on those figures, the TD42/95 design standards, if applied without variation, would not have required a merging taper, but would have required a diverging taper of 110m.
- 9.3.3 HA ultimately accepted a variation consisting of a lower diverging lane length of 55m as a Relaxation of Standards, taking into account all the circumstances of the site. This represented a 2 design speed step relaxation for the A27 design speed of 120kph.
- 9.3.4 Following successful appeals against a Condition in the relevant planning permissions requiring the 55m diverging taper, the existing access junction with only a 48m diverging taper remains in place, serving the residential and approved B1/B8 uses.

9.4 Proposed Development Access Design

- 9.4.1 The current estimates of total access flows that would use The Vinery for the combination of existing, permitted and currently proposed development are as shown in Table 8.1 (reproduced below).

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**TABLE 8.1 TRIP GENERATIONS
ACTUAL EXISTING RESIDENTIAL AND B1/B8 USES
PLUS ESTIMATED APPROVED DEVELOPMENT
PLUS APPLICATION FARGRO**

	Daily (AAWT)			AM peak	PM peak
	All vehs	HGV	HGV %	all vehs	all vehs
Residential	119	10	8.4%	14	13
B1/B8	271	30	11.1%	24	12
<i>Sub total (actual existing)</i>	390	40	10.3%	38	25
Approved Waste Facility	46	37	80.4%	3	3
<i>Sub-total (actual existing + estimated approved)</i>	436	77	17.7%	41	28
FARGRO	164	21	12.8%	22	26
TOTAL	600	98	16.3%	63	64

- 9.4.2 At 600 (16.3% HGV) 2-way vehicle trips / weekday, or 300 vehicles in and the same out, these design flows are substantially lower than those previously considered (c.f. Table 5.3 – 834 2-way).
- 9.4.3 The Highways Agency has indicated that as part of the current application it would require the junction of A27 and The Vinery to be improved to comply with the requirements of DMRB.
- 9.4.4 DMRB TD42/95 is based on AADT flows. All previous flow forecasts prepared in support of previous applications for The Vinery site are actually AAWT, being based on observations or estimates of average weekday flows. Similarly, the estimates prepared thus far in support of the current application are also AAWT as they have been prepared principally to inform assessments of weekday network-wide impacts of the development proposal.
- 9.4.5 The data and analyses presented in this Transport Assessment enables the weekday daily figures given in Table 8.1 to be converted into AADT format, with the results shown in Table 9.1.

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**TABLE 9.1 THE VINERY ACCESS FLOWS (AAWT AND AADT)
ACTUAL EXISTING RESIDENTIAL AND B1/B8 USES
PLUS ESTIMATED APPROVED DEVELOPMENT
PLUS APPLICATION FARGRO**

	2-way Daily (AAWT)			2-way Daily (AADT)		
	All vehs	HGV	HGV %	All vehs	HGV	HGV%
Residential	119	10	8.4%	116	9	7.8%
B1/B8	271	30	11.1%	209	23	10.7%
Approved Waste Facility	46	37	80.4%	33	26	78.8%
FARGRO	164	21	12.8%	117	15	12.8%
TOTAL	600	98	16.3%	475	73	15.4%

Residential based on 2013 count;
B1/B8 based on 2013 count with 2012 count 5-day to 7-day factor;
Waste facility based on agreed weekday estimates a 5-day week operation;
FARGRO based on counts and other supporting surveys, and a 5-day week operation.

- 9.4.6 Judged against the TD42/95 criteria set out in section 9.1 above, the forecast level of exiting traffic (50% of figures in Table 9.1, i.e. 238 AADT; 300 AAWT) falls well short of the 600 vehicles per day (when less than 20% HGV) that would indicate the need for a merging taper. No merging taper is required.
- 9.4.7 Judged against the TD42/95 criteria set out in section 9.1 above, and in light of the local major road AADT flow of more than 7-8000 vehicles per day, the AADT forecast level of exiting traffic (238) also does not require a diverging taper. However, at AAWT flow level (300) the need for a diverging taper is marginal. Full application of TD42/95 for the main road design speed would require a 110m diverging lane.
- 9.4.8 However, in all the circumstances it is considered that, should an improved diverge lane be provided as part of this application, a 1 design speed step relaxation to an 80m diverging taper is acceptable and appropriate in this case, on the basis that:
- The requirement of TD42/95 is only (just) met when considering AAWT flows, and not at AADT level which is the determining flow unit in TD42/95.
 - The percentage of HGVs is not forecast to exceed the additional 'trigger' of 20% of total flow at either AADT or AAWT level;
 - A 2 design speed step relaxation had been accepted by the Highways Agency for previous approved applications for this site which were, at that time, estimated to generate significantly higher access traffic flows (417 vehicles per day entering, 13.9% HGV; and the same leaving) than are now estimated for the current application;

THE VINERY TRANSPORT ASSESSMENT FINAL.doc	Date	Job No.
	30/08/2013	4144

- Even with a 1 design speed step relaxation to the diverging taper, the proposed design represents a major improvement on the existing situation.
- 9.4.9 The junction improvement proposed as part of the current planning application is shown in Appendix 12. It has been developed in accordance with the requirements of DMRB Volume 6 Section 2 Part 6, TD 42/95, 'Geometric Design of Major/Minor Priority Junctions'. The scheme design has taken account of the above analysis, and of advice supplied by the Highways Agency in its initial consultation response to Arun District Council of 27 June 2013, and has been subject to a Stage 1 Safety Audit and Non Motorised User Audit in accordance with DMRB HD19/03.
- 9.4.10 Corner radii limitations mean that that aspect of the proposed scheme represents a Departure from Standards. Appropriate authorisation has been sought.
- 9.4.11 Separation between the start of the existing diverge into The Vinery and the western exit from the layby provided on A27 to the east of the site is currently below standard. The proposed improvement at The Vinery junction would, by increasing the length of the diverge lane, further shorten the separation distance. The review of existing accident records shows no accidents related to either the existing The Vinery access or to the separation between it and the layby exit. However, as requested by the Highways Agency, appropriate authorisation is being sought for the Departure from Standards involved.

THE VINERY TRANSPORT ASSESSMENT FINAL.doc	Date	Job No.
	30/08/2013	4144

10.0 TRAVEL PLAN OUTLINE

10.0.1 A companion Travel Plan has been prepared to complement this Transport Assessment which sets out the procedures, measures and processes that FARGRO will undertake. The Travel Plan sets out the proposals in more detail but, in summary, will contain:

- a) Identification of a Travel Plan Co-ordinator from company management;
- b) Support for the TPC and the process by management and through regular consultative processes;
- c) Encouragement of car sharing by FARGRO staff for the journey to work by establishing, maintaining and promoting a car share database and supporting system;
- d) Encouragement of cycle to work through provision of on-site changing / showers facilities, and through consideration of subsidised cycle purchase scheme;
- e) Direction of staff HGV drivers, and encouragement of suppliers drivers, to use designated access routes to the new site, if considered appropriate by the Highways Agency to include prohibiting use of the central reservation gap to the west of the site on A27.

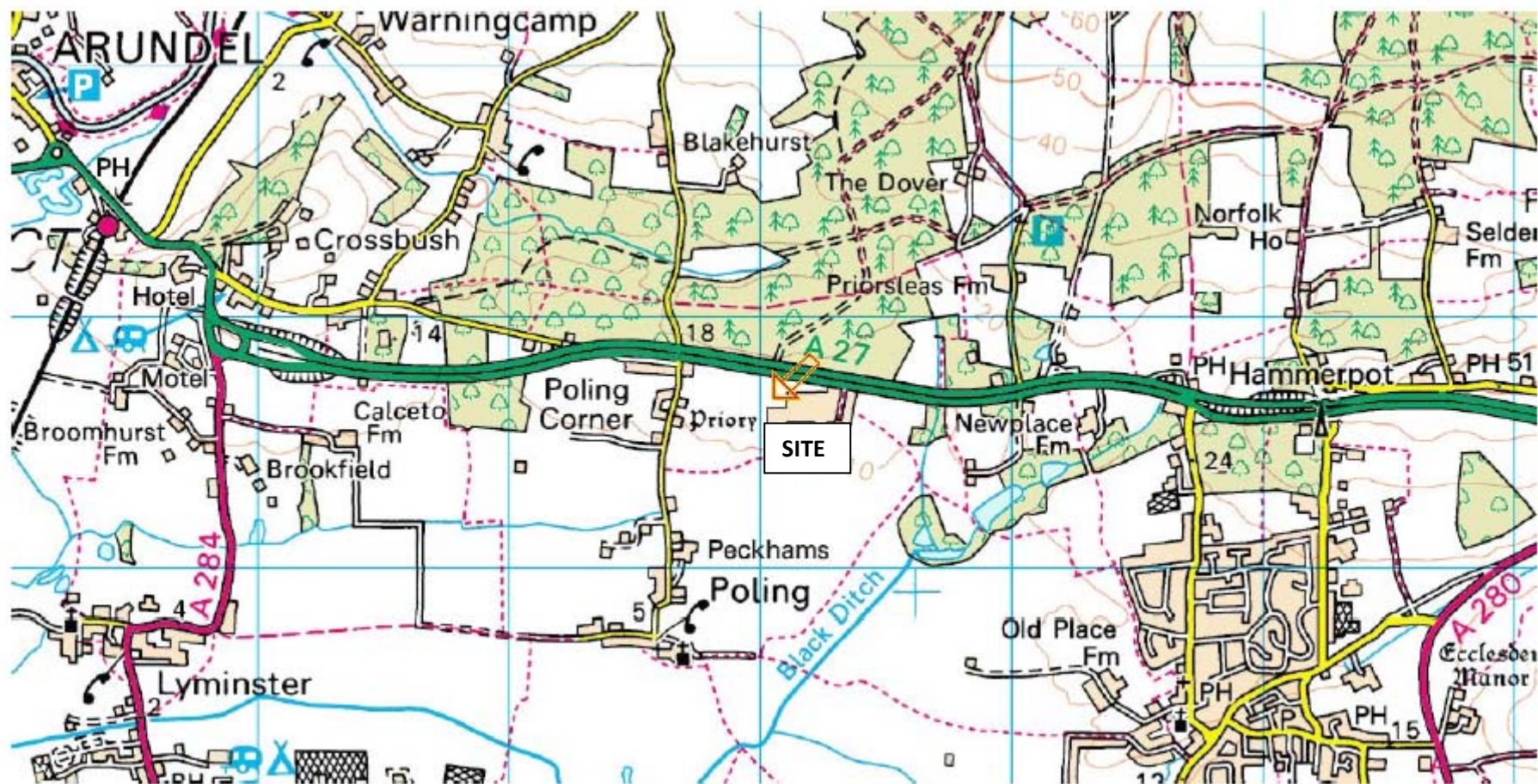
THE VINERY TRANSPORT ASSESSMENT FINAL.doc	Date	Job No.
	30/08/2013	4144

APPENDICES

THE VINERY TRANSPORT ASSESSMENT FINAL.doc	Date	Job No.
	30/08/2013	4144

APPENDIX 1

APPLICATION SITE LOCATION



APPENDIX 2

EXISTING AND PROPOSED FARGRO SITES



APPENDIX 3

NON MOTORISED USER SURVEY



The Vinery, Poling, Arundel, West Sussex, BN18 9PY

Manual Classified Traffic Count 12th August 2013

A27 Arundel Road / The Vinery Junction

Equestrian, pedestrian & pedal cycle manual count 12/08/13

E	P	C	Total
0	0	4	4
(2)			
0	0	1	1

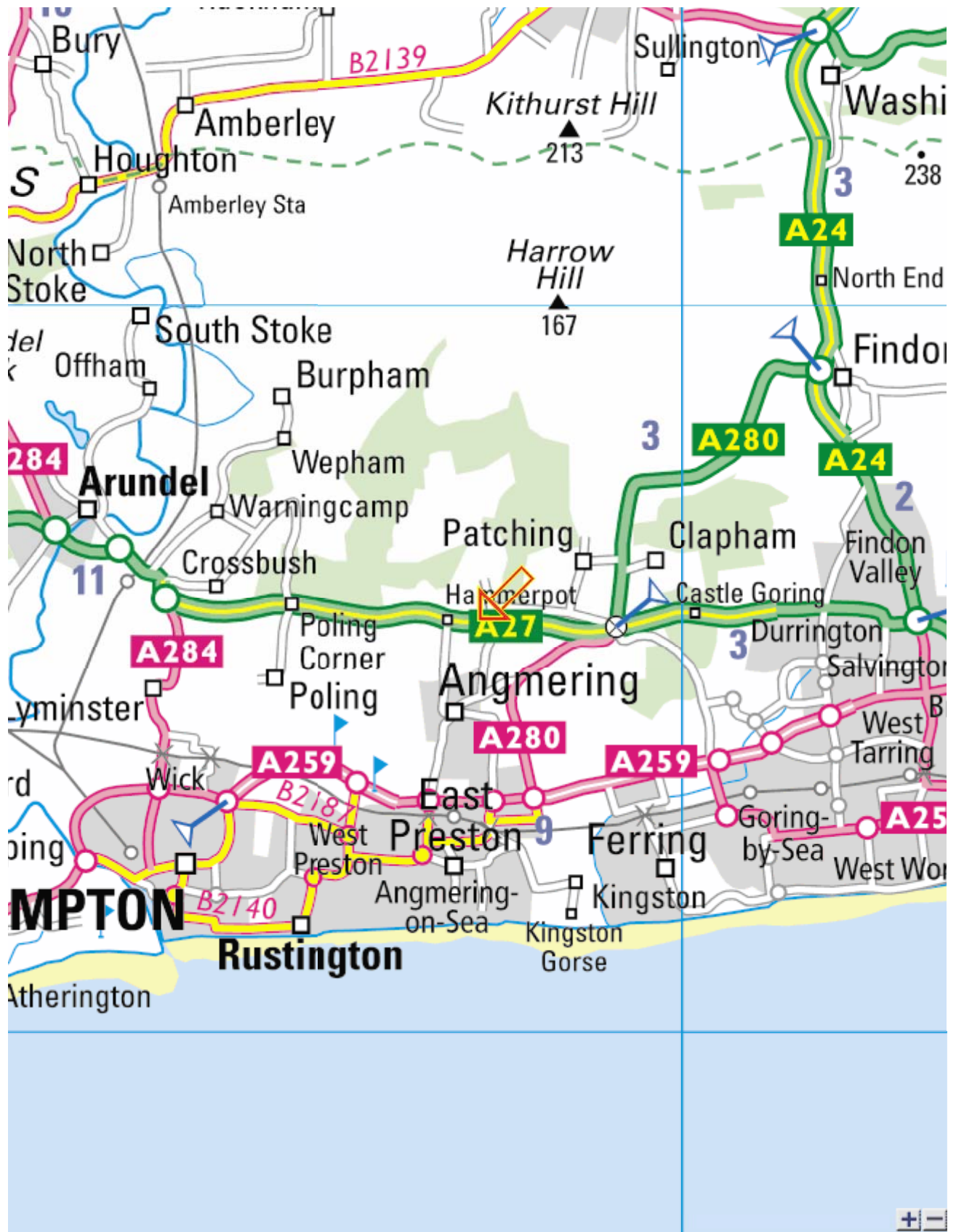


Total	E	P	C
7	0	1	6
(3)			
4	0	1	3

N.B. Figures in brackets are travelling on road and not using cycle path

APPENDIX 4

A27 TRAFFIC FLOW DATA AND COUNT SITE LOCATION



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[Print](#)

Period report between Sunday 1st Jan 2012 and Monday 31st Dec 2012 for site 4/407EB, A27, Clapham West of A280(E507176, N105631) [view site location on map](#)**Hourly Flows**

	b Mon x53	b Tue x52	b Wed x51	Thu x51	b Fri x51	Sat x52	Sun x52	Mn-Fr Mean	Mn-Sn Mean
01:00	69	58	61	70	76	125	160	66	88
02:00	40	36	34	34	42	63	78	37	46
03:00	28	28	28	26	32	42	49	28	33
04:00	30	31	35	35	35	37	38	33	34
05:00	58	54	54	57	55	43	39	55	51
06:00	165	158	158	163	152	82	63	159	134
07:00	572	590	590	601	554	185	113	581	457
08:00	979	1059	1062	1062	993	357	200	1031	816
09:00	949	1037	1075	1066	992	525	336	1023	854
10:00	868	913	933	964	886	748	572	912	840
11:00	936	873	884	920	937	924	818	910	898
12:00	930	855	871	895	962	1006	984	902	929
13:00	932	847	880	922	990	1015	1021	914	943
14:00	923	874	906	927	1057	960	984	937	947
15:00	953	939	963	994	1103	931	971	990	979
16:00	1024	1043	1071	1088	1170	981	1079	1079	1065
17:00	1144	1159	1181	1211	1244	1032	1158	1187	1161
18:00	1146	1200	1210	1230	1212	1009	1091	1199	1156
19:00	877	947	985	1007	1064	852	893	976	946
20:00	542	561	594	649	746	614	692	618	628
21:00	354	374	389	429	494	414	506	408	422
22:00	269	276	305	316	357	308	337	304	309
23:00	201	241	252	262	294	315	218	250	254
24:00	127	149	177	166	243	261	135	172	179

Totals

07-19hr	11661	11746	12021	12286	12610	10340	10107	12064	11538
06-22hr	13398	13547	13899	14281	14761	11861	11755	13977	13357
06-24hr	13726	13937	14328	14709	15298	12437	12108	14399	13791
00-24hr	14116	14302	14698	15094	15690	12829	12535	14780	14180

AM Peak

Time	08:00	08:00	09:00	09:00	08:00	12:00	12:00	08:00	12:00
Flow	979	1059	1075	1066	993	1006	984	1031	929

PM Peak

Time	18:00	18:00	18:00	18:00	17:00	17:00	17:00	18:00	17:00
Flow	1146	1200	1210	1230	1244	1032	1158	1199	1161

Peak hourly flow was **1435** and occurred hour ending **19:00** on **Sunday 01 Jul 2012**Peak daily flow was **18145** and occurred on **Friday 31 Aug 2012****b** Bank Holiday **w** Weather **a** Accident **t** Time change **r** Road Works **s** Sporting Event **o** Other

Showing only complete days. No estimated data. Not including hidden data.

Period report between Sunday 1st Jan 2012 and Monday 31st Dec 2012 for site 4/408WB, A27, Clapham West of A280(E507329, N105625) [view site location on map](#)**Hourly Flows**

	b Mon x53	b Tue x52	b Wed x51	Thu x51	b Fri x51	Sat x52	Sun x52	Mn-Fr Mean	Mn-Sn Mean
01:00	61	59	63	65	74	112	131	64	80
02:00	34	35	34	34	40	61	73	35	44
03:00	26	26	26	26	28	40	49	26	31
04:00	35	34	31	37	38	42	38	35	36
05:00	59	55	57	64	61	68	37	59	57
06:00	205	178	179	196	180	123	63	187	160
07:00	629	620	620	655	584	301	166	621	510
08:00	1043	1106	1137	1169	1077	542	295	1106	909
09:00	1013	1083	1106	1118	1063	708	472	1076	937
10:00	940	965	999	1020	1017	934	809	988	954
11:00	971	936	943	967	1065	1046	1024	976	993
12:00	990	907	945	953	1083	1070	1112	975	1008
13:00	954	877	917	942	1086	1042	1066	955	983
14:00	889	844	890	900	1079	960	944	920	929
15:00	869	874	895	937	1112	869	835	937	913
16:00	911	942	978	1016	1151	805	811	999	944
17:00	1052	1120	1143	1158	1228	784	854	1140	1048
18:00	1052	1129	1161	1160	1174	802	808	1135	1040
19:00	797	879	919	914	971	746	676	896	843
20:00	480	521	564	578	686	526	526	565	554
21:00	313	322	342	366	409	325	373	350	350
22:00	221	238	246	272	267	241	261	248	249
23:00	168	209	212	225	233	238	181	209	209
24:00	107	126	128	139	174	202	117	134	141

Totals

07-19hr	11481	11662	12033	12254	13106	10308	9706	12107	11507
06-22hr	13124	13363	13805	14125	15052	11701	11032	13893	13171
06-24hr	13399	13698	14145	14489	15459	12141	11330	14238	13523
00-24hr	13819	14085	14535	14911	15880	12587	11721	14646	13934

AM Peak

Time	08:00	08:00	08:00	08:00	12:00	12:00	12:00	08:00	12:00
Flow	1043	1106	1137	1169	1083	1070	1112	1106	1008

PM Peak

Time	17:00	18:00	18:00	18:00	17:00	13:00	13:00	17:00	17:00
Flow	1052	1129	1161	1160	1228	1042	1066	1140	1048

Peak hourly flow was **1568** and occurred hour ending **8:00** on **Friday 29 Jun 2012**Peak daily flow was **18417** and occurred on **Friday 14 Sep 2012****b** Bank Holiday **w** Weather **a** Accident **t** Time change **r** Road Works **s** Sporting Event **o** Other

Showing only complete days. No estimated data. Not including hidden data.

APPENDIX 5

ACCIDENT DATA

Arundel – A27 – GTA Civils Ltd

Collision report 01/07/2010 – 30/06/2013

Date produced
26 July 2013

Sussex Safer Roads
P A R T N E R S H I P

Safer Roads
Safer Communities
Sharing the Responsibility

Produced by Sussex Safer Roads Partnership on behalf of Sussex Police

Data regarding personal injury collisions is recorded by Sussex Police in accordance with the DfT Stats 19 requirements. The data is subsequently used by Sussex Safer Roads Partnership for monitoring and planning. While every effort is made to ensure that this data is accurate, it is subject to change should further information become available.

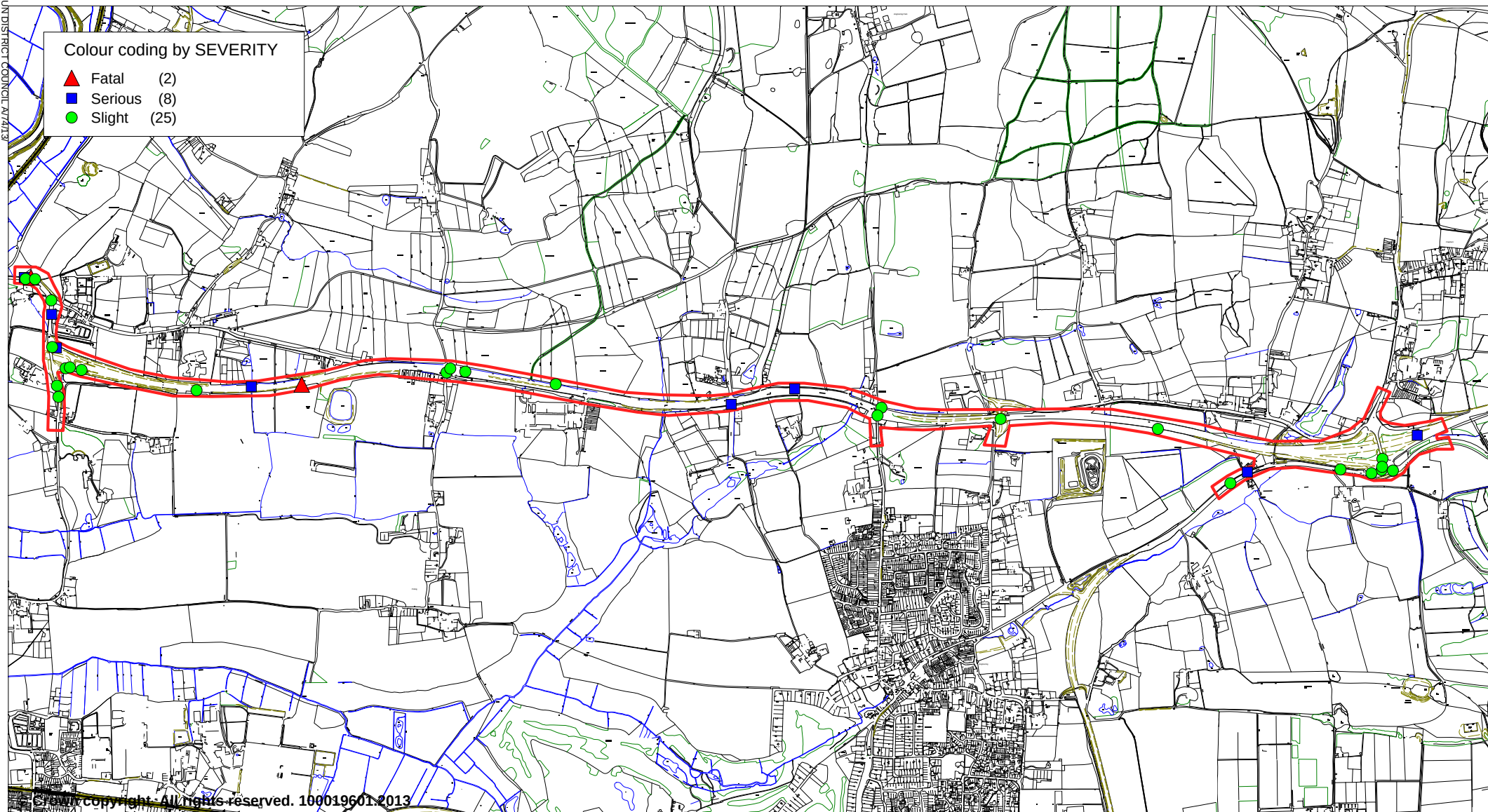
This data may not be fully validated and while every effort is made to ensure its accuracy any statistics provided may not match those published elsewhere.

Sussex Safer Roads Partnership does not hold collision data either where there are no recorded casualties or the incident has not been reported to Sussex Police.

For further information:

web: www.sussexsaferroads.gov.uk

email: data@sussexsaferroads.gov.uk



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Collision data
Arundel - A27 - GTA Civils Ltd
01/07/2010 - 30/06/2013

Sussex Safer Roads
 PARTNERSHIP

SCALE

1 : 25000

DATE

26/07/2013

DRAWING No.

DRAWN BY

Details of Personal Injury Accidents for Period - **01/07/2010** to **30/06/2013** (36) months

Selection:

Selected using Manual Selection

Notes:

Police Ref.	Day	Location Description	Vehicles				Casualties			
			Veh No / Type / Manv / Dir / Class				Sex / Age / Sev			
Road No.	Date									
Grid Ref.	Time									
	D/L									
	R.S.C									
	Weather									
	Speed									
	Account of Accident									

1006761 Thursday A280 WATER LANE 637m West of A27 Veh 2 Car Going ahead NE to SW
A 280 07/10/2010 Veh 1 Pedal cycle Turning right NW to SW Dri M 68 Slight
 0948hrs
 Daylight: no street lighting
E 508,393 Dry
N 105,320 Fine without high winds
 60 mph

V2 WAS TRAVELLING SOUTH ON THE A280 WHEN V1 A PEDAL CYCLE CROSSED IN TO THE PATH OF V2 FROM THE OPPOSING VERGE/CYCLE WAY INTENDING TO HEAD SOUTH. V2 STRUCK V1, RIDER OF V1 SUSTAINED SLIGHT INJURIES AS A RESULT.

1006573 Sunday A270 TITNORE LANE of A280 Veh 2 Car Wait go ahead held S to N Dri F 35 Slight
A 270 03/10/2010 ANGMERING BY PASS ENTERING RA Veh 1 Car Going ahead S to N
 1015hrs FROM NORTHBOUND TITNORE
 Daylight: no street lighting
E 509,159 Wet/Damp
N 105,380 Raining without high winds
 60 mph

V1 MOTOR CAR TRAVELLING NORTH UP TITNORE LANE APPROACHING R/A, DRIVEN BY FEMALE DRIVER TWICE OVER THE DRINK DRIVE LIMIT, SHUNTED REAR OF V2 WHICH WAS WAITING OR JUST PULLING OFF FROM R/A.

1007458 Friday A27 STATION ROAD 126m East of U Veh 1 Minibus Going ahead W to E F 27 Serious
A 27 29/10/2010 WARNINGCAMP ROAD
 2140hrs
 Darkness: street lights present
E 502,708 Dry
N 106,290 Fine without high winds
 30 mph

AS V1 WAS TRAVELLING ON THE ASCENT AT ARUNDEL TOWARDS CROSSBUSH ADULT FEMALE PASSENGER FELL FROM REAR OF VEHICLE CAUSING INJURY.

1007917 Tuesday A27 ARUNDEL ROAD 97m East of U Veh 2 Car Going ahead W to E Dri F 53 Slight
A 27 23/11/2010 BLAKEHURST LANE Veh 1 Car Going ahead W to E
 1258hrs
 Daylight:street lights present
E 504,787 Dry
N 105,846 Fine without high winds
 70 mph

VEHICLE 2 WAS TRAVELLING BEHIND VEHICLE 1 IN LANE 2 ON THE A27 EASTBOUND AT POLING. VEHICLE 1 WAS LOOKING TO TURN RIGHT OFF THE A27 INTO POLING STREET BUT MISSED THE JUNCTION. VEHICLE 1 HAS THEN BRAKED HARD SEVERAL TIMES LOOKING FOR ANOTHER EXIT OFF THE A27 AND HAS CAUSED VEHICLE 2 TO TRY TO TAKE EVASIVE ACTION TO AVOID A COLLISION BUT THERE WAS NO ROOM TO MOVE INTO LANE 1. VEHICLE 2 HAS THEN COLLIDED WITH VEHICLE 1.

Details of Personal Injury Accidents for Period - **01/07/2010** to **30/06/2013** (36) months

Selection:**Notes:**

Selected using Manual Selection

Police Ref.	Day	Location Description	Vehicles					Casualties			
			Veh No / Type / Manv / Dir / Class					Sex / Age / Sev			
Road No.	Date										
Grid Ref.	Time										
	D/L										
	R.S.C										
	Weather										
	Speed										
	Account of Accident										

1004309 Thursday A27 ARUNDEL ROAD of A284 Veh 1 Goods > 7.5t Going ahead LH bend N to E Dri M 55 Serious
A 27 01/07/2010 LYMINSTER ROAD
 0615hrs
 Daylight:street lights present
E 502,860 Dry
N 105,958 Fine without high winds
 40 mph

VEHICLE ONE ARTICULATED LORRY, TRAVELLING ON EAST BOUND CARRIAGEWAY, NEGOTIATED LEFT HAND BEND AT EXCESSIVE SPEED, VEHICLE TURNED OVER ONTO OFFSIDE AND STRUCK KERB AND ARMCO. DRIVER SUFFERED SERIOUS INJURY TO RIGHT ARM.

1101552 Thursday A280 600m North of U WATER LANE Veh 2 Goods < 3.5t Going ahead S to N Dri M 54 Slight
A 280 10/03/2011 ANGMERING Veh 1 Car Starting S to N Dri F 84 Serious
 1643hrs
 Daylight: no street lighting
E 508,473 Dry
N 105,373 Fine without high winds
 60 mph

VEH 1 STATIONARY AT NEARSIDE OF SINGLE CARRIAGEWAY, MOVED OFF AND ENTERED CARRIAGEWAY, INTO PATH OF MOVING VEH 2 TRAVELLING IN SAME DIRECTION. DVR 2 TOOK AVOIDING ACTION BUT FNS OF VEH 2 COLLIDED WITH FOS OF VEH 1.

1103949 Monday A280 WATER LANE of A280 TITNORE Veh 2 Car Wait go ahead held S to N Dri M 61 Slight
A 280 13/06/2011 LANE Veh 2 Car Wait go ahead held S to N FSP F 59 Slight
 1010hrs Veh 1 Car Going ahead S to N
 Daylight: street lighting
E 509,106 Dry
N 105,382 Fine without high winds
 30 mph

V1 STOPPED AT ROUNDABOUT, V2 DROVE INTO THE BACK OF V1. AFTER VERBAL V2 DROVE OFF.

1105340 Monday A27 ARUNDEL ROAD 80m West of Veh 2 M/C < 125 cc Going ahead W to NE Dri M 36 Serious
A 27 29/08/2011 A280 Veh 1 Car Change lane to right W to NE
 1252hrs
 Daylight: no street lighting
E 509,274 Dry
N 105,546 Fine without high winds
 70 mph

VEH (MC) TRAVELING EB BEHIND PARTNER ALSO ON MC. VEH 1 (CAR) SEEN TO ATTEMPT TO TURN OFF ONTO SLIP ROAD, CHANGED MIND AND SWERVED RIGHT BACK INTO LANE 1. VEH 1 THEN SEEN TO APPROACHED THE REAR OF VEH 2 AT SPEED AND CRASH INTO IT.

Details of Personal Injury Accidents for Period - **01/07/2010** to **30/06/2013** (36) months

Selection:

Selected using Manual Selection

Notes:

Police Ref.	Day	Location Description	Vehicles				Casualties			
			Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Date									
Grid Ref.	Time									
	D/L									
	R.S.C									
	Weather									
	Speed									
	Account of Accident									

1104113 Friday A27 ARUNDEL ROAD 920m West of U Veh 2 Car Going ahead W to E
A 27 10/06/2011 POLING STREET Veh 1 M/C > 500 cc Going ahead W to E Dri M 38 Serious
 1333hrs
 Daylight:street lights present
E 503,778 Dry
N 105,775 Fine without high winds
 70 mph

VEHICLE 2 HAS BEEN TRAVELLING IN LANE 2 EASTBOUND ON THE A27 AT POLING. VEHICLE 1 HAS ALSO BEEN TRAVELLING IN LANE 2 EASTBOUND AND HAS COLLIDED WITH THE REAR OF VEHICLE 2.

1104882 Sunday A27 THE OLD STABLES OF U DECOY Veh 2 Car Going ahead E to W
A 27 07/08/2011 LANE O/S THE OLD STABLES Veh 1 Car O/take on n/side E to W Dri M 59 Serious
 0842hrs
 Daylight: no street lighting
E 506,040 Dry
N 105,692 Fine without high winds
 70 mph

V1 TRAVELLING AT SPEED NEGOTIATES LEFT HAND BEND IN LANE 2. AT THIS POINT A VEHICLE IS IN LANE 2 AND UPON SEEING V1 APPROACHING ATTEMPTS TO MANOUVRE INTO LANE 1. V1 AT THIS TIME ALSO ATTEMPTS TO UNDERTAKE THIS VEHICLE AND IN DOING SO LOOSES CONTROL AND S LIDES OFF THE CARRIAGEWAY BY THE OFFSIDE INTO THE ARMCO CENTRAL BARRIER TRAVELLING OVER A DISTANCE ALONG THE ARMCO BEFORE FLIPPING OVER ONTO THE ROOF AND STOPPING IN THE UNDERGROWTH NEXT TO THE ARMCO

1105240 Wednesday A27 WORTHING ROAD 170m East of U Veh 2 Car Going ahead W to E FSP F 45 Slight
A 27 24/08/2011 ARUNDEL RD Veh 2 Car Going ahead W to E Dri M 48 Slight
 1822hrs Veh 3 Car Going ahead W to E
 Daylight: no street lighting Veh 1 Car Change lane to right W to E
E 506,748 Dry
N 105,676 Fine without high winds
 70 mph

V1, V2 AND V3 ALL HEADING EAST ON A27. V1 IN LANE 1, BEHIND V3. V2 IN LANE 2 AND ABOUT TO OVERTAKE V1 AND V3. PEDAL CYCLES ON PAVEMENT TO THE NEARSIDE. YOUNG MALE RIDER (4 YEARS OLD) STARTED TO LOSE CONTROL OF HIS PEDAL CYCLE, AND DROPPED OFF OF KERB, SL IGHLY INTO LANE 1. V3 DRIVER BRAKED. V1 ALSO BRAKED BUT WOULD NOT HAVE STOPPED IN TIME, SO MOVED TO OFFSIDE INTO LANE 2, AND IMPACTED WITH V2, CAUSING V2 TO LOSE CONTROL, EXIT ROAD TO NEARSIDE, ACCROSS VERGE, INTO SMALL TREES/BUSHES AND ROLLED ONTO SIDE IN A FIELD HAVING GONE THROUGH WOODEN FENCE.

1105350 Tuesday A27 ARUNDEL ROAD of U POLING Veh 2 Car Going ahead E to W Dri F 74 Slight
A 27 30/08/2011 STREET AT JUNCTION AS STATED Veh 1 Car Turning right N to W
 0933hrs ABOVE.
 Daylight: no street lighting
E 504,698 Dry
N 105,842 Fine without high winds
 70 mph

Details of Personal Injury Accidents for Period - **01/07/2010** to **30/06/2013** (36) months

Selection:**Notes:**

Selected using Manual Selection

Police Ref.	Day	Location Description	Vehicles						Casualties		
			Veh No / Type / Manv / Dir / Class						Sex / Age / Sev		
Road No.	Date										
Grid Ref.	Time										
	D/L										
	R.S.C										
	Weather										
	Speed										
	Account of Accident										

V1 FACING SOUTH, AND ABOUT TO JOIN WESTBOUND LANES OF A27 AT CROSSOVER SECTION OF THIS ROAD. V2 HEADING WEST. V1 MOVED OFF INTO PATH OF V2, CAUSING IMPACT.

1106231	Monday	A27 of U CROSSBUSH LANE	Veh 2	Car	Wait go ahead held	S	to N	Dri	F	21	Slight
	19/09/2011		Veh 3	Car	Wait go ahead held	S	to N				
A 27	1745hrs		Veh 1	Car	Going ahead	S	to N				
	Darkness: street lights present										
E 502,835	Dry										
N 106,182	Fine without high winds										
	30 mph										

V2 TRAV W IN ROAD, STATIONARY IN LINE OF TRAFFIC. V1 DROVE INTO REAR OF V2, PUSHING IT INTO REAR OF V3. ALL STOPPED AND EXCHANGED DETAILS. V2 DRIVER SUBSEQUENTLY HAS WHIP LASH INJURY.

1200540	Tuesday	A27 ARUNDEL ROAD 637m West of	Veh 1	M/C < 125 cc	Change lane to right	E	to W	Dri	M	20	Slight
	31/01/2012	A280									
A 27	0846hrs										
	Daylight: no street lighting										
E 508,051	Dry										
N 105,576	Fine without high winds										
	70 mph										

VEHICLE 1 WAS TRAVELLING WEST AND ON OVERTAKING AN HGV LOST CONTROL CAUSING THE RIDER TO FALL OFF HIS MOTORCYCLE.

1105252	Thursday	A27 STATION ROAD 156m East of U	Veh 2	Goods > 7.5t	Going ahead	W	to SE				
	25/08/2011	WARNING CAMP JUNCTION	Veh 1	Car	Going ahead LH bend	SE	to W	Dri	M	19	Fatal
A 27	0711hrs										
	Daylight:street lights present										
E 502,740	Wet/Damp										
N 106,290	Raining without high winds										
	40 mph										

VEH/1 TRAVELLING WEST ON A27 NEGOTIATES LEFT HAND BEND LOSES CONTROL FOR UNKNOWN REASON ENTERS EAST BOUND CARRIAGEWAY AND IMPACTS WITH VEH/2 HGV TRAVELLING EAST ON A27. DRIVER OF VEH/1 SUSTAINED FATAL INJURIES.

1200278	Tuesday	A27 of C617 ARUNDEL ROAD	Veh 2	Car	Stopping	E	to W				
	17/01/2012		Veh 1	Car	Stopping	E	to W	Dri	M	26	Slight
A 27	0050hrs										
	Darkness: no street lighting										
E 506,730	Dry										
N 105,639	Fine without high winds										
	70 mph										

VEHICLE 2 WESTBOUND LANE 2 A27 TOWARDS ABOVE JUNCTION. VEHICLE 1 ALSO WESTBOUND IN LANE 2 BEHIND VEHICLE 2. FOR UNKNOWN REASON VEHICLE 2 BRAKES HARD. VEHICLE 1 FAILS TO SLOW IN TIME, COLLIDING WITH REAR OF VEHICLE 2. VEHICLE LEAVES ROAD ON NEAR SIDE AND STRIKES WALL OF BUILDING

Details of Personal Injury Accidents for Period - **01/07/2010** to **30/06/2013** (36) months

Selection:**Notes:**

Selected using Manual Selection

Police Ref.	Day	Location Description	Vehicles				Casualties			
			Veh No / Type / Manv / Dir / Class				Sex / Age / Sev			
Road No.	Date									
Grid Ref.	Time									
	D/L									
	R.S.C									
	Weather									
	Speed									
	Account of Accident									

1202503 Monday A284 LYMINSTER ROAD ARUNDEL Veh 2 Car Wait to turn right N to W Dri F 42 Slight
A 284 14/05/2012 At Junction of U Veh 1 Car Turning left W to N
 1220hrs
 Daylight:street lights present
E 502,862 Wet/Damp
N 105,780 Raining without high winds
 30 mph

V2 WAS INDICATING TO TURN RIGHT INTO ROAD LEADING TO PETROL STATION, MOTEL AND MACDONALDS RESTAURANT. V1 HAS PULLED OUT OF ROAD, COLLIDED WITH V2, CAUSING IT TO SPIN. DRIVER OF V1 DID NOT STOP TO EXCHANGE DETAILS AT THE SCENE.

1204031 Tuesday A280 CLAPHAM CLAPHAM At Veh 1 Car Going ahead S to N Dri F 67 Slight
A 280 07/08/2012 Junction of A280 CLAPHAM
 2120hrs
 Darkness: street lights present
E 509,110 Wet/Damp
N 105,435 Fine without high winds
 60 mph

VEHICLE ONE TRAVELLING NORTH FOR UNKNOWN REASON FAILED TO NEGOTIATE TURN COLLIDED WITH STREET FURNATURE AND CAME TO REST AT RAILINGS OVER THE A27

1200421 Monday A27 CROSSBUSH ROUNDABOUT Veh 2 Car Starting E to W FSP M 37 Slight
A 27 23/01/2012 ARUNDEL At Junction of A27 Veh 2 Car Starting E to W Dri F 17 Slight
 1535hrs LYMINSTER ROAD Veh 1 Goods < 3.5t Starting E to W
 Daylight: no street lighting
E 502,903 Wet/Damp
N 105,862 Fine without high winds
 70 mph

V1 AND V2 BOTH TRAVELLING WEST ON A27. ON EXITING TRAFFIC LIGHTS BOTH VEHICLES CONTINUED WEST ON A27. V1 DROVE INTO REAR OF V2 CAUSING MINOR DAMAGE. DRIVER AND PASSENGER OF V2 SUSTAINED MINOR WHIP LASH INJURIES .

1204308 Monday A27 ARUNDEL ROAD ARUNDEL At Veh 2 Car Going ahead E to W
A 27 20/08/2012 Junction of A27 LYMINSTER ROAD Veh 1 Car Turning right N to W RSP F 7 Slight
 1742hrs
 Daylight:street lights present
E 502,923 Dry
N 105,866 Fine without high winds
 40 mph

VEHICLE ONE ON APPROACH TO WESTBOUND A27 FROM SLIP ROAD FROM EAST BOUND A27. TRAFFIC LIGHTS AT JUNCTION U/S . VEHILCE ONE DUE TO BEING UNFAMILAR WITH LOCATION HAS PULLED OU ONTO WESTBOUND A27 INOT PATH OF VEHICLE 2 CAUSING MINOR INJURY RTC.

Details of Personal Injury Accidents for Period - **01/07/2010** to **30/06/2013** (36) months

Selection:**Notes:**

Selected using Manual Selection

Police Ref.	Day	Location Description	Vehicles				Casualties			
			Veh No / Type / Manv / Dir / Class				Sex / Age / Sev			
Road No.	Date									
Grid Ref.	Time									
	D/L									
	R.S.C									
	Weather									
	Speed									
	Account of Accident									

1205658 Saturday A27 ARUNDEL ROAD CROSSBUSH Veh 1 Car Going ahead E to W Ped M 52 Fatal
A 27 27/10/2012 500m East of A264 LYMINSTER ROAD
 0131hrs outside JUST BEFORE 50 LIMIT
 Darkness: no street lighting
E 504,016 Dry
N 105,785 Fine without high winds
 70 mph

V1 HEADING WEST ON A27 IN LANE 1. NEAR SIDE OF VEHICLE 1 COLLIDED WITH PEDESTRIAN IN WEST BOUND CARRIAGEWAY CAUSING FATAL INJURIES TO PEDESTRIAN.

1202797 Wednesday A27 CROSSBUSH 60m East of A284 Veh 2 Car Going ahead S to W
A 27 30/05/2012 LYMINSTER ROAD Veh 3 Goods < 3.5t Going ahead S to W
 1230hrs Veh 1 Goods < 3.5t Going ahead S to W Dri M 32 Slight
 Daylight:street lights present
E 502,978 Dry
N 105,854 Fine without high winds
 60 mph

V1 TRAVELLING NORTH TO SOUTH, ROAD DIVIDES INTO 2,V1 ON OUTSIDE LANE HITS V2 ON OFFSIDE, V3 TRAVELLING BEHIND HITS V1

1205513 Monday A27 EASTBOUND CARRIAGEWAY Veh 1 Car Going ahead W to E RSP F 23 Slight
A 27 15/10/2012 POLING 500m East of U BLAKEHURST Veh 1 Car Going ahead W to E RSP F 17 Slight
 0112hrs LANE Veh 1 Car Going ahead W to E FSP F 20 Slight
 Darkness: no street lighting
E 505,213 Dry
N 105,787 Fine without high winds
 70 mph

VEHICLE ONE TRAVELLING EASTBOUND A27 LANE 2 AND THE DRIVER STATES HE SWERVED TO MISS SOMEONE RUNNING IN THE ROAD . THE VEHICLE HAS THEN SWERVED TO THE NEARSIDE AND OFF THE ROAD INTO A LAYBY COLLIDING WITH STREET FURNITURE. IN SIDE THE VEHICLE WAS MCD ONALDS FOOD IT IS BELIEVED BY POLICE THAT THE DRIVER WAS EATING AT THE TIME OF THE CRASH THIS HOWEVER CAN NOT BE PROVED.

1206682 Friday A27 POLING POLING At Junction of U Veh 2 Car Going ahead W to E Dri M 27 Slight
A 27 14/12/2012 BLACKHURST LANE Veh 1 Car Going ahead W to E Dri M 23 Slight
 0908hrs
 Daylight: no street lighting
E 504,716 Wet/Damp
N 105,861 Raining with high winds
 70 mph

V2 TRAVELLING EAST IN LANE 2 BEING CLOSELY FOLLOWED BY V1. V1 WHEN MOVING INTO LANE 1 CLIPPED THE REAR OF V2 CAUSING IT TO LOSE CONTROL AND EXIT ROAD TO NEARSIDE

Details of Personal Injury Accidents for Period - **01/07/2010** to **30/06/2013** (36) months

Selection:

Selected using Manual Selection

Notes:

Police Ref.	Day	Location Description	Vehicles				Casualties			
			Veh No / Type / Manv / Dir / Class				Sex / Age / Sev			
Road No.	Date									
Grid Ref.	Time									
	D/L									
	R.S.C									
	Weather									
	Speed									
	Account of Accident									

1206405 Sunday A27 ARUNDEL ROAD ANGMERING Veh 1 Car Going ahead W to E Dri M 41 Serious
 02/12/2012 298m East of U DOVER LANE
A 27 2038hrs
 Darkness: no street lighting
E 506,339 Wet/Damp
N 105,765 Raining without high winds
 70 mph

VEHICLE 1 HAS BEEN TRAVELLING ON THE A27 EASTBOUND AT ANGMERING WHEN THE DRIVER HAS LOST CONTROL AND THE VEHICLE HAS LEFT THE ROAD TO THE NEAR SIDE. THE VEHICLE HAS THEN CRASHED THROUGH A FENCE AND ROLLED ONTO A FIELD.

1300250 Monday A27 ARUNDEL At Junction of A27 Veh 2 Car Going ahead NW to E
 14/01/2013 Veh 3 Car Going ahead NW to E RSP F 89 Slight
A 27 1205hrs Veh 3 Car Going ahead NW to E Dri F 59 Slight
 Daylight: street lights present Veh 1 Car Turning right S to E
E 502,840 Wet/Damp
N 105,962 Fine without high winds
 40 mph

V1 WAS TRAVELLING ON THE A27 FROM THE A284 AND APPROACHING THE JUNCTION WITH THE A27 INTENDING TO HEAD TOWARDS WORTHING. HE WAS APPROACHING THE GIVE WAY SIGN QUICKLY AND V2 THOUGHT HE WASN'T GOING TO STOP AND BRAKED SHARPLY CAUSING V3 TO GO INTO THE REAR OF V2. V1 WAS NOT HIT AND DID NOT STOP.

1300066 Sunday A27 ARUNDEL 136m West of U Veh 2 Car Going ahead W to E Dri M 70 Slight
 06/01/2013 CROSSBUSH LANE Veh 3 Car Going ahead W to E Dri M 46 Slight
A 27 1111hrs Veh 3 Car Going ahead W to E FSP F 73 Slight
 Daylight: street lights present Veh 1 Goods > 7.5t Going ahead LH bend SE to SW Dri M 53 Slight
E 502,714 Dry
N 106,283 Fine without high winds
 40 mph

V1 WAS TRAVELLING WEST ALONG A27 WHILST V2 AND V3 WERE TRAVELLING EAST. V1 LOST CONTROL ON A LEFT HAND BEND CAUSING THE NEAR SIDE WHEELS TO LIFT OFF OF THE GROUND. V1 COLLIDED WITH V2 TRAVELLING TOWARDS, V1 ROLLED ONTO ITS NEAR SIDE AND COLLIDED HEAD ON WITH V3.

1300498 Sunday A27 ARUNDEL ROAD ANGMERING Veh 1 Car Going ahead LH bend E to SW Dri M 30 Slight
 27/01/2013 570m West of U ARUNDEL ROAD
A 27 0342hrs outside OPPOSITE SPEED CAMERA
 Darkness: no street lighting
E 507,310 Wet/Damp
N 105,623 Raining without high winds
 70 mph

V1 DRIVING WEST ALONG DUAL CARRIAGE WAY, FOX ENTERS CARRIAGE WAY FROM NEAR SIDE AND DRIVER STEERS RIGHT TO AVOID. V1 COLLIDES WITH CENTRAL RESERVATION CAUSING DAMAGE TO BARRIER AND HEAVY DAMAGE TO VEHICLE.

Details of Personal Injury Accidents for Period - **01/07/2010** to **30/06/2013** (36) months

Selection:

Selected using Manual Selection

Notes:

Police Ref.	Day	Location Description	Vehicles				Casualties			
			Veh No /	Type /	Manv /	Dir /	Class	Sex /	Age /	Sev
Road No.	Date									
Grid Ref.	Time									
	D/L									
	R.S.C									
	Weather									
	Speed									
	Account of Accident									

1301342 Tuesday A284 LYMINSTER ROAD ARUNDEL Veh 1 Goods < 3.5t Going ahead S to N Ped M 15 Slight
A 284 12/03/2013 75m North of U CALCETO LANE
 1050hrs
 Daylight:street lights present
E 502,869 Snow
N 105,727 Fine without high winds
 40 mph

CASUALTY ONE WAS WALKING ALONG LYMINSTER ROAD IN A NORTHERLY DIRECTION TOWARDS THE TRAFFIC LIGHTS AT CROSSBUSH. A VAN (COMING FROM THE SAME DIRECTION) APPEARED TO SWERVE TOWARDS HIM DELIBERATELY TO DRIVE THROUGH A PUDDLE AND COLLIDED WITH THE CASUALTY'S RIGHT ARM, CAUSING PAIN. THE DRIVER OF THE VAN PULLED OVER AND WOUND DOWN HIS WINDOW AND ASKED IF THE CASUALTY WAS OK. HE DROVE AWAY FROM THE SCENE WITHOUT EXCHANGING DETAILS AND THE CASUALTY DID NOT TAKE NOTE OF THE VEHICLE REGISTRATION PLATE.

1301677 Tuesday A27 ARUNDEL 867m East of A284 Veh 1 Car Going ahead E to W Dri F 44 Slight
A 27 02/04/2013 LYMINSTER ROAD
 1218hrs
 Daylight: no street lighting
E 503,520 Dry
N 105,758 Fine without high winds
 70 mph

V1 TRAVELLING WESTBOUND HAS SWERVED TO AVOID ANIMAL (BIRD) WHICH HAS CAUSED LOSS OF CONTROL TO V1. V1 HAS THEN LEFT THE CARRIAGEWAY TO N/S COMING TO REST ON ITS SIDE IN UNDERGROWTH.

1302080 Monday A280 WATER LANE CLAPHAM At Veh 2 Car Wait go ahead held S to N FSP F 48 Slight
A 280 22/04/2013 Junction of A27 ARUNDEL ROAD Veh 2 Car Wait go ahead held S to N Dri F 49 Slight
 0755hrs Veh 1 Goods < 3.5t Going ahead S to N
 Daylight:street lights present
E 509,108 Dry
N 105,397 Fine without high winds
 30 mph

V2 TRAV NORTH. STOPPED AT RBT GIVEWAY LINES DUE TO VEHICLE ALREADY ON RBT. V1 ALSO TRAV NORTH DROVE INTO REAR OF V2. BOTH PARTIES GOT OUT EXCHANGED DETAILS. DRIVER AND PASSENGER OF V2 SUBSEQUENTLY SUFFERED WITH WHIPLASH INJURIES.

1302137 Monday A280 WATER LANE ANGMERING 42m Veh 2 Goods < 3.5t Turning right E to N Dri F 31 Slight
A 280 29/04/2013 West of C37 TITNORE LANE Veh 1 Car O/take m/veh o/side E to W Dri F 60 Slight
 0850hrs
 Daylight: no street lighting
E 509,058 Dry
N 105,367 Fine without high winds
 60 mph

VEHICLE 2 WEST ON WATER LANE FROM ABOVE ROUNDABOUT. DRIVER INDICATES AND SLOWS WITH THE INTENTION OF TURNING ON TO UNMADE AREA ON NORTHERN SIDE OF WATER LANE. VEHICLE 1 TRAVELLING WEST BEHIND VEHICLE 2 WHEN VEHICLE 1 STARTS TO OVERTAKE VEHICLE 2 AS VEHICLE 2 IS TURNING

Details of Personal Injury Accidents for Period - **01/07/2010** to **30/06/2013** (36) months

Selection:

Selected using Manual Selection

Notes:

Police Ref.	Day	Location Description	Vehicles				Casualties			
			Veh No / Type / Manv / Dir / Class				Sex / Age / Sev			
Road No.	Date									
Grid Ref.	Time									
	D/L									
	R.S.C									
	Weather									
	Speed									
	Account of Accident									

1302153 Tuesday A27 THE CAUSEWAY ARUNDEL At Veh 2 M/C > 500 cc Turning left N to E Dri M 42 Serious
A 27 30/04/2013 Junction of U CROSSBUSH INN Veh 1 Car Going ahead N to S
 1727hrs ENTRANCE outside AT ENTRANCE TO
 Daylight:street lights present
E 502,837 Dry
N 106,116 Fine without high winds
 40 mph

IT WOULD APPEAR THAT VEHICLE TWO WAS TRAVELLING EAST ALONG THE A27 AT CROSSBUSH WHEN IT SLOWED AND INDICATED TO TURN INTO THE CROSSBUSH INN CAR PARK. VEHICLE ONE TRAVELLING IMMEDIATELY BEHIND FAILED TO OBSERVE THE CHANGE IN SPEED AND COLLIDED WITH THE REAR OF VEHICLE ONE, CAUSING THE RIDER TO FALL.

1303166 Saturday A27 THE CAUSEWAY ARUNDEL At Veh 1 Goods < 3.5t Going ahead N to S Dri M 29 Slight
A 27 22/06/2013 Junction of U PRIVATE DRIVEWAY TO
 0819hrs CONVENT outside CONVENT
 Daylight:street lights present
E 502,759 Wet/Damp
N 106,282 Raining without high winds
 40 mph

V1 HEADING OUT OF UNNAMED ROAD APPROACHING A27 WHEN DRIVER LOST CONTROL AND COLLIDED WITH LAMP POST ON EAST BOUND C/WAY OF A27. DRIVER STATED BRAKES FAILED.

1303184 Friday A280 WATER LANE ANGMERING 50m Veh 2 Car Going ahead E to W Dri M 48 Slight
A 280 21/06/2013 South of A27 Veh 2 Car Going ahead E to W FSP F 41 Slight
 1205hrs Veh 1 Car U turn W to W Dri M 54 Slight
 Daylight: no street lighting
E 508,912 Dry
N 105,385 Fine without high winds
 60 mph

VEH 1 SAT STATIONARY AT SIDE OF CARRIAGEWAY. VEH 2 TRAVELLING SOUTH FROM THE A27 CLAPHAM OVERPASS. AS VEH 2 DREW LEVEL WITH VEH 1, DRIVER OF SAME PULLED OUT ACROSS PATH OF VEH 2.

APPENDIX 6

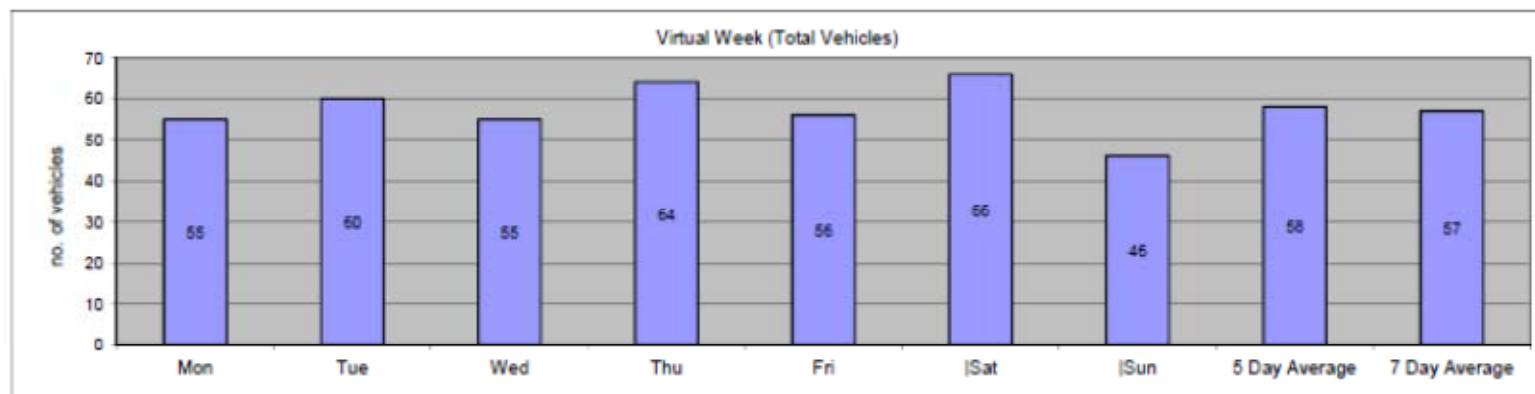
2012 TRAFFIC COUNT

AT THE VINERY

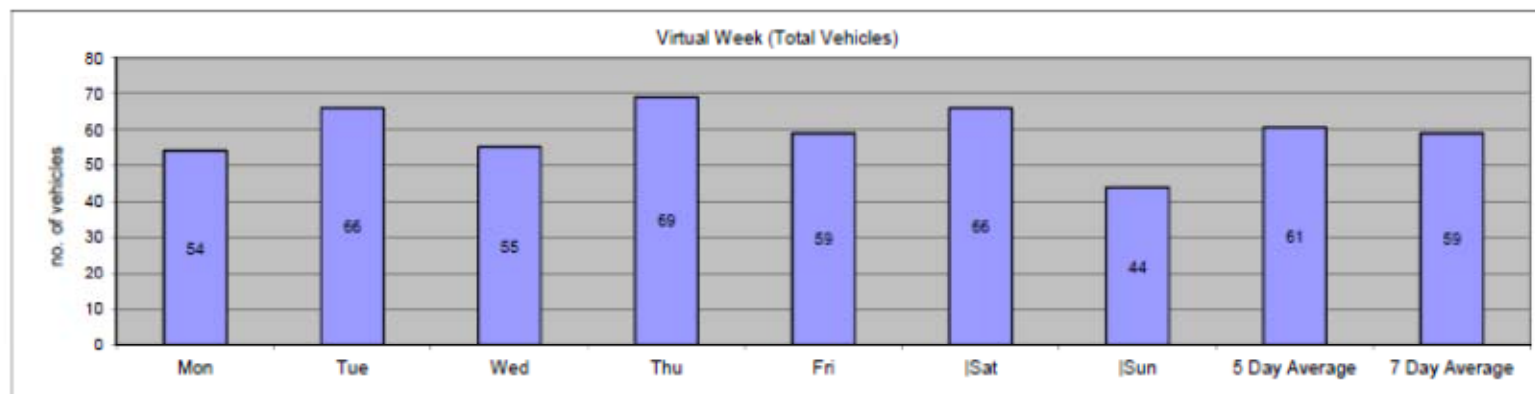
Note: Incorrect client name where stated on results sheets (not Scottish Executive)



41021	Vinery, Poling ATC					Site	2	Location	Access to Houses (50 50 28N, 0 30 18W)						
20 February 2012		to		26 February 2012		Direction	Northbound								
													FIVE OR LESS		
				CARS OR			TWO		FOUR OR	FOUR OR		SIX OR	AXLE	SIX AXLE	SEVEN OR
				CAR-			AXLE, SIX	THREE	MORE	LESS		MORE	MULTI-	MULTI-	MORE
				BASED			TYRE,	AXLE	AXLE	AXLE		AXLE	TRAILER	TRAILER	AXLE
				LGV			RIGID	RIGID	RIGID	ARTIC	FIVE AXLE	ARTIC	ARTIC	ARTIC	ARTIC
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES			BUSES										
Virtual Week (1)															
Mon	55	0		47	5	0	0	3	0	0	0	0	0	0	0
Tue	60	1		49	7	0	0	3	0	0	0	0	0	0	0
Wed	55	1		43	4	0	1	5	0	1	0	0	0	0	0
Thu	64	0		52	6	0	0	5	0	1	0	0	0	0	0
Fri	56	2		46	4	0	0	3	0	1	0	0	0	0	0
ISat	66	0		62	1	0	0	3	0	0	0	0	0	0	0
ISun	46	0		41	2	0	0	3	0	0	0	0	0	0	0
5 Day Average															
[--]	58	1		47	5	0	0	4	0	1	0	0	0	0	0
7 Day Average															
[--]	57	1		49	4	0	0	4	0	0	0	0	0	0	0
Total Vehicles															
[--]	402	4		340	29	0	1	25	0	3	0	0	0	0	0



41021	Vinery, Poling ATC					Site	2	Location	Access to Houses (50 50 28N, 0 30 18W)						
20 February 2012		to		26 February 2012		Direction	Southbound								
													FIVE OR LESS		
				CARS OR			TWO		FOUR OR	FOUR OR		SIX OR	AXLE	SIX AXLE	SEVEN OR
				CAR-BASED			AXLE, SIX	THREE	MORE	LESS		MORE	MULTI-	MULTI-	MORE
				LGV			TYRE, RIGID	AXLE RIGID	AXLE RIGID	AXLE ARTIC	FIVE AXLE	AXLE ARTIC	TRAILER ARTIC	TRAILER ARTIC	AXLE ARTIC
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES			BUSES										
Virtual Week (1)															
Mon	54	0		45	3	0	0	6	0	0	0	0	0	0	0
Tue	66	0		53	6	0	1	4	0	1	0	1	0	0	0
Wed	55	1		44	4	0	1	5	0	0	0	0	0	0	0
Thu	69	0		58	5	0	1	2	0	1	1	1	0	0	0
Fri	59	0		53	3	0	0	3	0	0	0	0	0	0	0
ISat	66	0		57	2	0	0	6	0	0	0	1	0	0	0
ISun	44	0		37	5	0	0	1	0	0	0	1	0	0	0
5 Day Average															
[--]	61	0		51	4	0	1	4	0	0	0	0	0	0	0
7 Day Average															
[--]	59	0		50	4	0	0	4	0	0	0	1	0	0	0
Total Vehicles															
[--]	413	1		347	28	0	3	27	0	2	1	4	0	0	0





41021

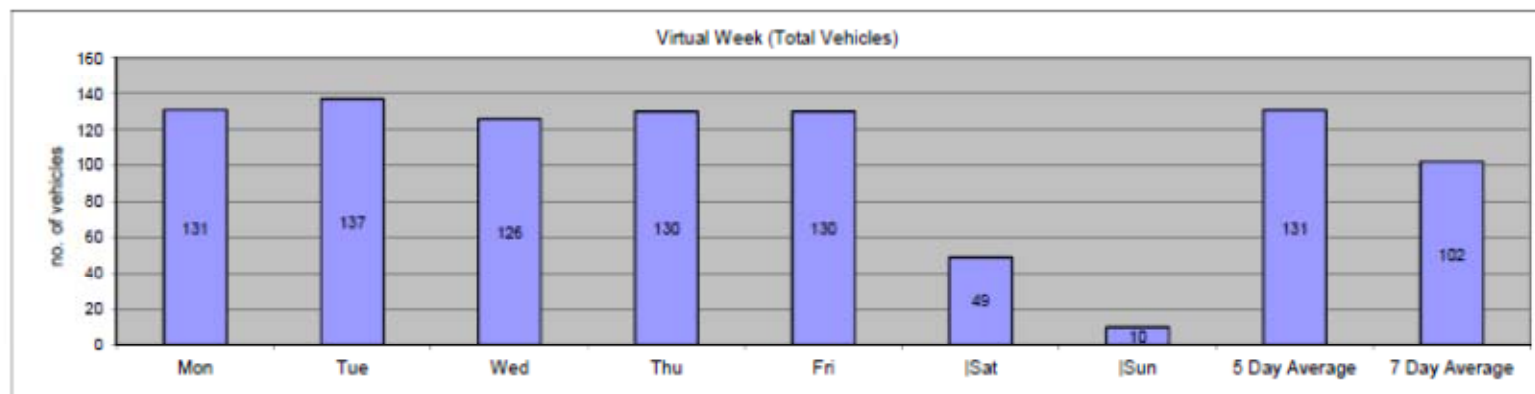
Vinery, Poling ATC

February 2012

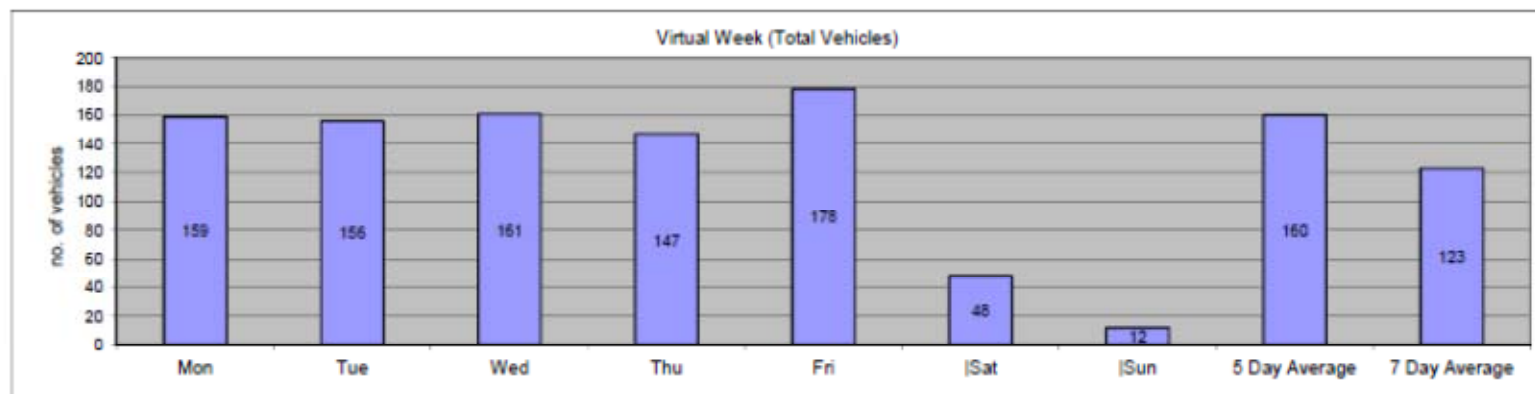
SITE PHOTO



41021	Vinery, Poling ATC					Site	1	Location	Entrance to Yard (50 50 28N, 0 30 18W)						
20 February 2012		to		26 February 2012		Direction	Eastbound								
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC	
Virtual Week (1)															
Mon	131	8	93	4	1	0	14	0	10	0	1	0	0	0	
Tue	137	14	94	2	0	1	18	0	8	0	0	0	0	0	
Wed	126	4	89	6	0	0	21	0	6	0	0	0	0	0	
Thu	130	7	89	6	0	0	21	0	7	0	0	0	0	0	
Fri	130	2	97	4	0	0	13	0	11	0	1	1	0	1	
ISat	49	4	29	6	0	0	8	0	2	0	0	0	0	0	
ISun	10	0	7	2	0	0	1	0	0	0	0	0	0	0	
5 Day Average															
[--]	131	7	92	4	0	0	17	0	8	0	0	0	0	0	
7 Day Average															
[--]	102	6	71	4	0	0	14	0	6	0	0	0	0	0	
Total Vehicles															
[--]	713	39	498	30	1	1	98	0	44	0	2	1	0	1	



41021	Vinery, Poling ATC					Site	1	Location	Entrance to Yard (50 50 28N, 0 30 18W)						
20 February 2012			to			26 February 2012			Direction	Westbound					
													FIVE OR LESS		
			CARS OR				TWO		FOUR OR	FOUR OR		SIX OR	AXLE	SIX AXLE	SEVEN OR
			CAR-				AXLE, SIX		MORE	LESS		MORE	MULTI-	MULTI-	MORE
			BASED				TYRE,		AXLE	AXLE		AXLE	TRAILER	TRAILER	AXLE
			LGV				RIGID		RIGID	ARTIC		ARTIC	ARTIC	ARTIC	ARTIC



APPENDIX 7

2013 TRAFFIC COUNT

AT THE VINERY



The Vinery, Poling, Arundel, West Sussex, BN18 9PY

Manual Classified Traffic Count 12th August 2013

The Vinery, Poling, West Sussex 12/08/13
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Left In - from A27 Arundel Road

Time start	pedal cycles	motorcycles	cars/vans	medium goods	heavy goods	buses/coaches	Total (exc pedal cycles)	Total HGV
06:00	0	0	0	0	0	0	0	0
06:30	0	0	1	0	0	0	1	0
07:00	0	0	5	0	0	0	5	0
07:30	0	0	3	0	0	0	3	0
08:00	0	0	6	0	0	0	6	0
08:30	0	1	10	1	0	0	12	1
09:00	0	0	6	2	0	0	8	2
09:30	0	0	12	1	0	0	13	1
10:00	0	0	6	0	0	0	6	0
10:30	0	0	4	1	0	0	5	1
11:00	0	0	7	1	0	0	8	1
11:30	0	0	6	2	0	0	8	2
12:00	0	0	4	0	1	0	5	1
12:30	0	0	8	0	0	0	8	0
13:00	0	0	7	2	0	0	9	2
13:30	0	0	4	0	1	0	5	1
14:00	0	0	4	0	0	0	4	0
14:30	0	1	5	1	0	0	7	1
15:00	0	0	8	0	0	0	8	0
15:30	0	0	2	0	0	0	2	0
16:00	0	0	4	0	0	0	4	0
16:30	0	0	3	2	1	0	6	3
17:00	0	0	2	0	0	0	2	0
17:30	0	0	0	0	0	0	0	0
18:00	0	0	3	0	0	0	3	0
18:30	0	0	9	0	0	0	9	0
Total	0	2	129	13	3	0	147	16
Total 12 hour (07:00 - 19:00)	0	2	128	13	3	0	146	16

The Vinery, Poling, West Sussex 12/08/13
--

Left Out - from The Vinery onto A27 Arundel Road westbound

Time start	pedal cycles	motorcycles	cars/vans	medium goods	heavy goods	buses/coaches	Total (exc pedal cycles)	Total HGV
06:00	0	0	2	0	0	0	2	0
06:30	0	0	2	0	0	0	2	0
07:00	0	0	1	0	0	0	1	0
07:30	0	0	2	0	0	0	2	0
08:00	0	0	4	0	0	0	4	0
08:30	0	0	2	0	0	0	2	0
09:00	0	0	3	1	0	0	4	1
09:30	0	0	4	0	0	0	4	0
10:00	0	0	7	1	0	0	8	1
10:30	0	0	3	1	0	0	4	1
11:00	0	0	6	1	0	0	7	1
11:30	0	0	6	1	0	0	7	1
12:00	0	0	3	1	2	0	6	3
12:30	0	0	9	0	0	0	9	0
13:00	0	0	4	0	0	0	4	0
13:30	0	0	7	3	0	0	10	3
14:00	0	0	3	0	0	0	3	0
14:30	0	0	5	0	0	0	5	0
15:00	0	0	11	0	0	0	11	0
15:30	0	0	8	1	0	0	9	1
16:00	0	0	2	1	0	0	3	1
16:30	0	0	7	0	0	0	7	0
17:00	0	1	6	0	1	0	8	1
17:30	0	0	2	0	0	0	2	0
18:00	0	0	3	0	0	0	3	0
18:30	0	0	2	0	0	0	2	0
Total	0	1	114	11	3	0	129	14
Total 12 hour (07:00 - 19:00)	0	1	110	11	3	0	125	14

The Vinery, Poling, West Sussex 12/08/13
--

Total (Into + Out from The Vinery)

Time start	pedal cycles	motorcycles	cars/vans	medium goods	heavy goods	buses/coaches	Total (exc pedal cycles)	Total HGV
06:00	0	0	2	0	0	0	2	0
06:30	0	0	3	0	0	0	3	0
07:00	0	0	6	0	0	0	6	0
07:30	0	0	5	0	0	0	5	0
08:00	0	0	10	0	0	0	10	0
08:30	0	1	12	1	0	0	14	1
09:00	0	0	9	3	0	0	12	3
09:30	0	0	16	1	0	0	17	1
10:00	0	0	13	1	0	0	14	1
10:30	0	0	7	2	0	0	9	2
11:00	0	0	13	2	0	0	15	2
11:30	0	0	12	3	0	0	15	3
12:00	0	0	7	1	3	0	11	4
12:30	0	0	17	0	0	0	17	0
13:00	0	0	11	2	0	0	13	2
13:30	0	0	11	3	1	0	15	4
14:00	0	0	7	0	0	0	7	0
14:30	0	1	10	1	0	0	12	1
15:00	0	0	19	0	0	0	19	0
15:30	0	0	10	1	0	0	11	1
16:00	0	0	6	1	0	0	7	1
16:30	0	0	10	2	1	0	13	3
17:00	0	1	8	0	1	0	10	1
17:30	0	0	2	0	0	0	2	0
18:00	0	0	6	0	0	0	6	0
18:30	0	0	11	0	0	0	11	0
Total	0	3	243	24	6	0	276	30
Total 12 hour (07:00 - 19:00)	0	3	238	24	6	0	271	30

APPENDIX 8

TRICS OUTPUTS

B8 LAND USE

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : F - WAREHOUSING (COMMERCIAL)
 VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	EN ENFIELD	1 days
03	SOUTH WEST	
	CW CORNWALL	1 days
10	WALES	
	NW NEWPORT	1 days
	WR WREXHAM	1 days
12	CONNAUGHT	
	GA GALWAY	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: 5150 to 16275 (units: sqm)
 Range Selected by User: 5000 to 20000 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/05 to 12/10/12

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	2 days
Wednesday	1 days
Friday	2 days

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

Selected survey types:

Manual count	5 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	3
Free Standing (PPS6 Out 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
Residential Zone	1
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:

B8	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®.

Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	3 days
50,001 to 100,000	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	2 days
100,001 to 125,000	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	1 days
1.1 to 1.5	3 days
1.6 to 2.0	1 days

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

Travel Plan:

No	5 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	CW-02-F-01	WAREHOUSING	CORNWALL
	A390		
	THREEMILESTONE		
	NEAR TRURO		
	Edge of Town		
	No Sub Category		
	Total Gross floor area:	5150 sqm	
	Survey date: TUESDAY	18/09/07	Survey Type: MANUAL
2	EN-02-F-01	WAREHOUSING	ENFIELD
	OAKTHORPE ESTATE		
	PALMERS GREEN		
	ENFIELD		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Gross floor area:	13251 sqm	
	Survey date: WEDNESDAY	19/11/08	Survey Type: MANUAL
3	GA-02-F-01	LOGISTICS	GALWAY
	PARKMORE WEST		
	IDA BUS. & TECH. PARK		
	GALWAY		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	11000 sqm	
	Survey date: FRIDAY	12/10/12	Survey Type: MANUAL
4	NW-02-F-01	LOGISTICS CENTRE	NEWPORT
	TREDEGAR TERRACE		
	CROSSKEYS		
	NEWPORT		
	Edge of Town		
	No Sub Category		
	Total Gross floor area:	16275 sqm	
	Survey date: FRIDAY	12/10/07	Survey Type: MANUAL
5	WR-02-F-01	WAREHOUSE	WREXHAM
	UNIT 1-2 PACIFIC PARK		
	WREXHAM IND. ESTATE		
	NEAR WREXHAM		
	Free Standing (PPS6 Out of Town)		
	Industrial Zone		
	Total Gross floor area:	9000 sqm	
	Survey date: TUESDAY	18/10/11	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.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
AN-02-F-02	Tesco distribution centre
CR-02-F-01	food distributor regional HQ (offices)

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

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 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	5	10935	0.038	5	10935	0.035	5	10935	0.073
07:30 - 08:00	5	10935	0.080	5	10935	0.013	5	10935	0.093
08:00 - 08:30	5	10935	0.064	5	10935	0.022	5	10935	0.086
08:30 - 09:00	5	10935	0.095	5	10935	0.042	5	10935	0.137
09:00 - 09:30	5	10935	0.037	5	10935	0.029	5	10935	0.066
09:30 - 10:00	5	10935	0.042	5	10935	0.035	5	10935	0.077
10:00 - 10:30	5	10935	0.046	5	10935	0.046	5	10935	0.092
10:30 - 11:00	5	10935	0.049	5	10935	0.046	5	10935	0.095
11:00 - 11:30	5	10935	0.062	5	10935	0.038	5	10935	0.100
11:30 - 12:00	5	10935	0.033	5	10935	0.044	5	10935	0.077
12:00 - 12:30	5	10935	0.053	5	10935	0.038	5	10935	0.091
12:30 - 13:00	5	10935	0.046	5	10935	0.051	5	10935	0.097
13:00 - 13:30	5	10935	0.051	5	10935	0.040	5	10935	0.091
13:30 - 14:00	5	10935	0.048	5	10935	0.040	5	10935	0.088
14:00 - 14:30	5	10935	0.057	5	10935	0.079	5	10935	0.136
14:30 - 15:00	5	10935	0.046	5	10935	0.062	5	10935	0.108
15:00 - 15:30	5	10935	0.037	5	10935	0.068	5	10935	0.105
15:30 - 16:00	5	10935	0.027	5	10935	0.044	5	10935	0.071
16:00 - 16:30	5	10935	0.035	5	10935	0.059	5	10935	0.094
16:30 - 17:00	5	10935	0.022	5	10935	0.055	5	10935	0.077
17:00 - 17:30	5	10935	0.013	5	10935	0.057	5	10935	0.070
17:30 - 18:00	5	10935	0.018	5	10935	0.082	5	10935	0.100
18:00 - 18:30	5	10935	0.018	5	10935	0.037	5	10935	0.055
18:30 - 19:00	5	10935	0.015	5	10935	0.016	5	10935	0.031
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			1.032			1.078			2.110

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.

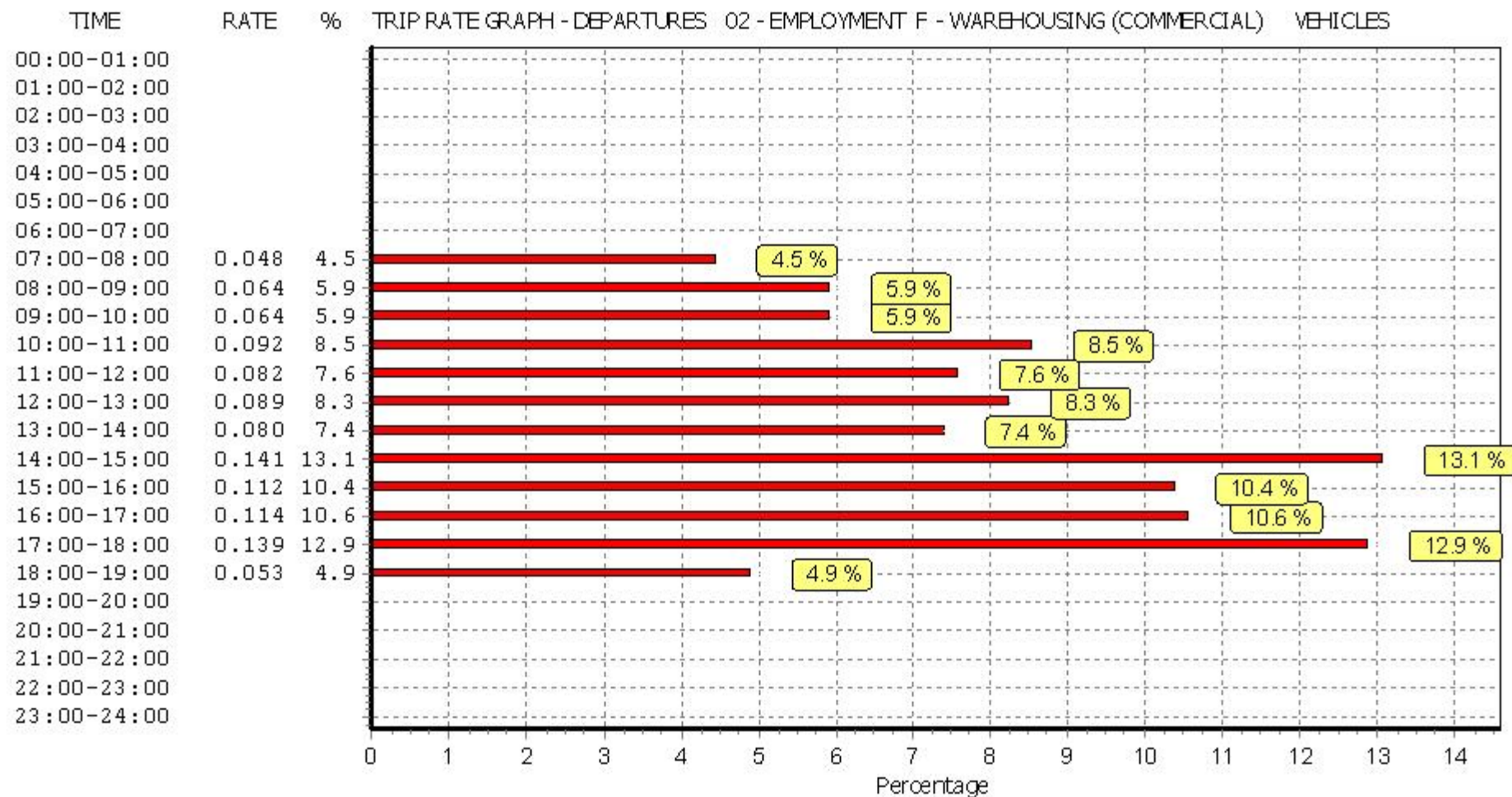
Parameter summary

Trip rate parameter range selected:	5150 - 16275 (units: sqm)
Survey date date range:	01/01/05 - 12/10/12
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

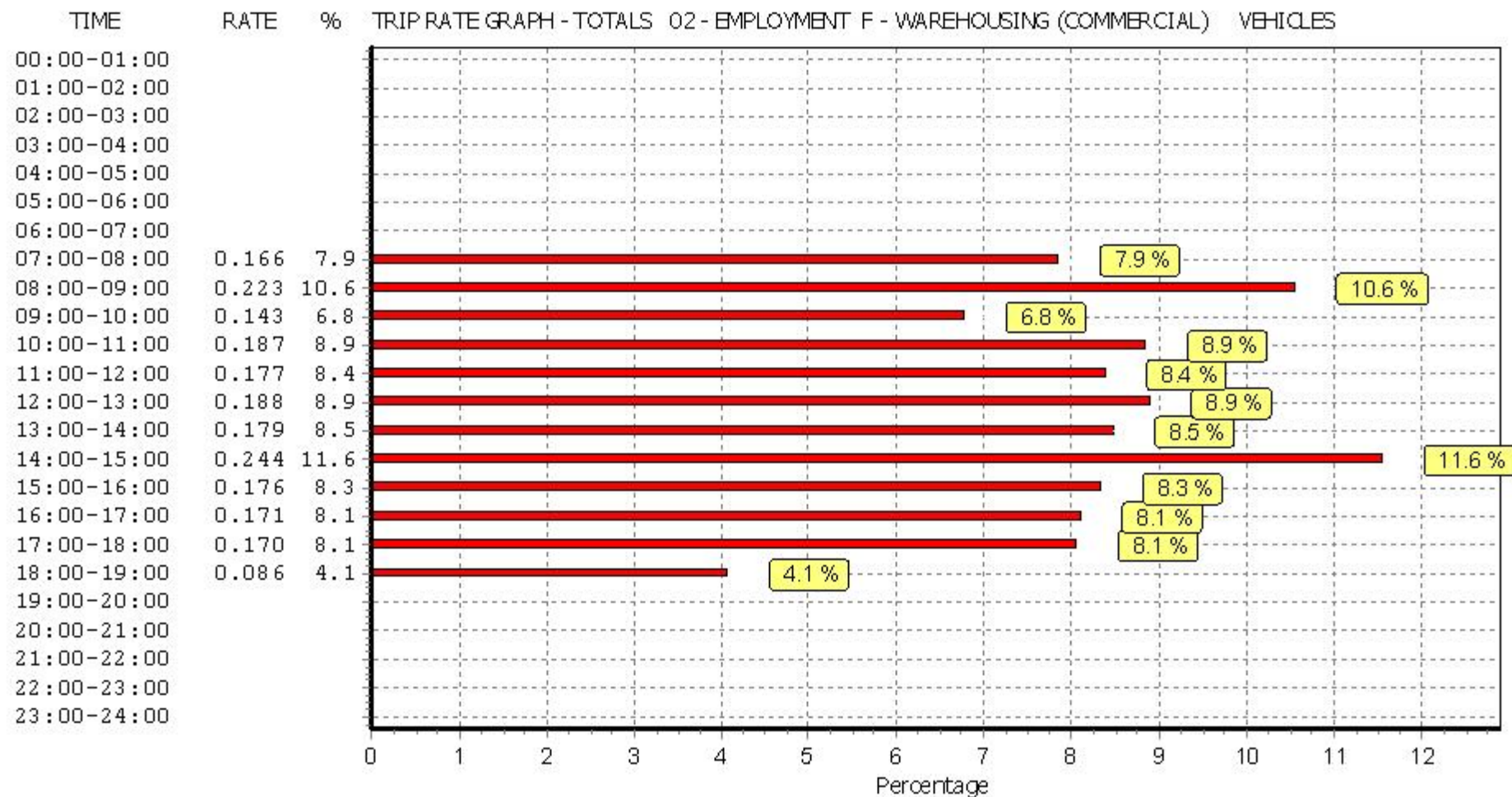
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected 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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TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

TAXIS

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 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
07:30 - 08:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
08:00 - 08:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
08:30 - 09:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
09:00 - 09:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
09:30 - 10:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
10:00 - 10:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
10:30 - 11:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
11:00 - 11:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
11:30 - 12:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
12:00 - 12:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
12:30 - 13:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
13:00 - 13:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
13:30 - 14:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
14:00 - 14:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
14:30 - 15:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
15:00 - 15:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
15:30 - 16:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
16:00 - 16:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
16:30 - 17:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
17:00 - 17:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
17:30 - 18:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
18:00 - 18:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
18:30 - 19:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.000			0.000			0.000

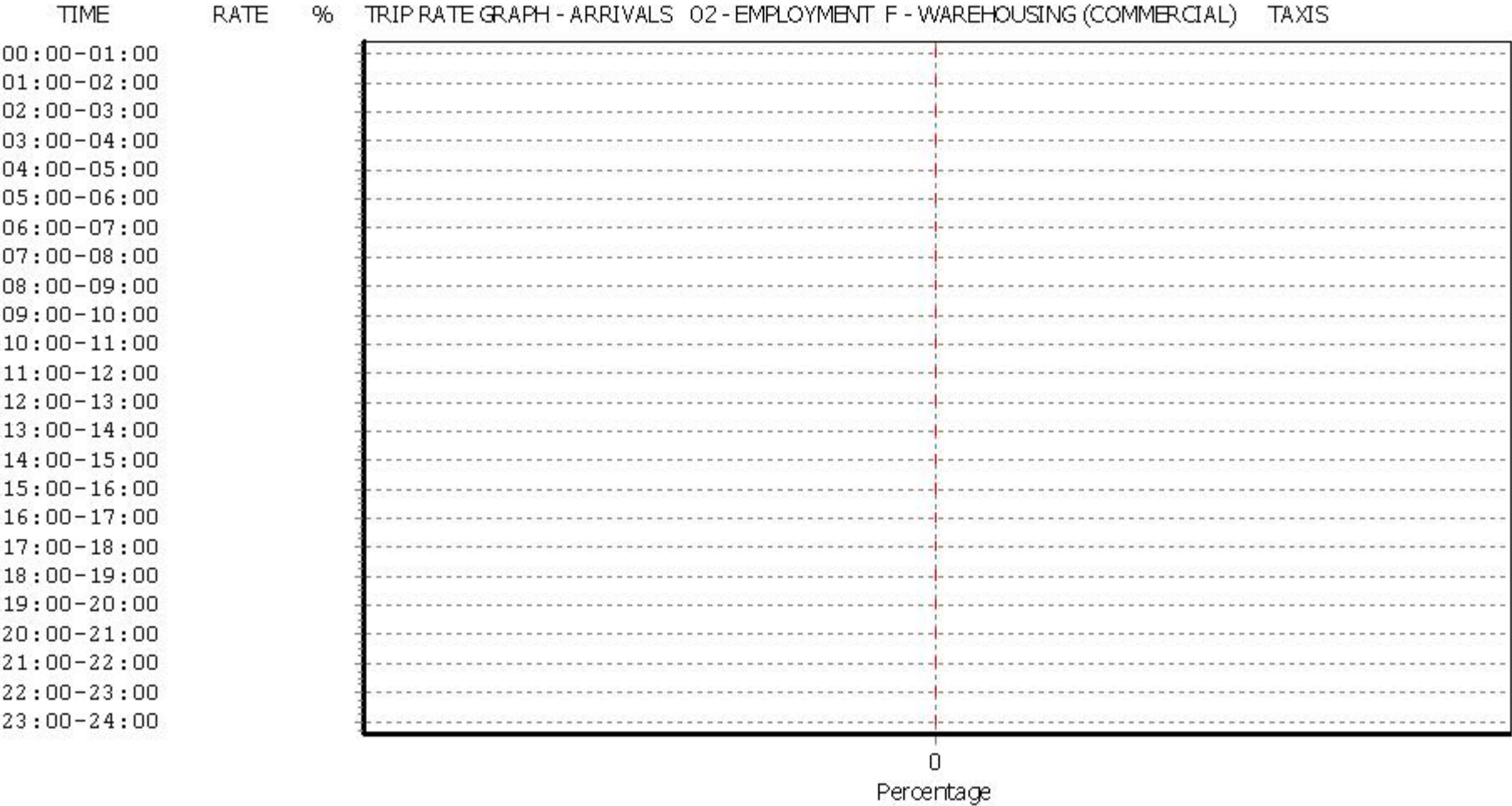
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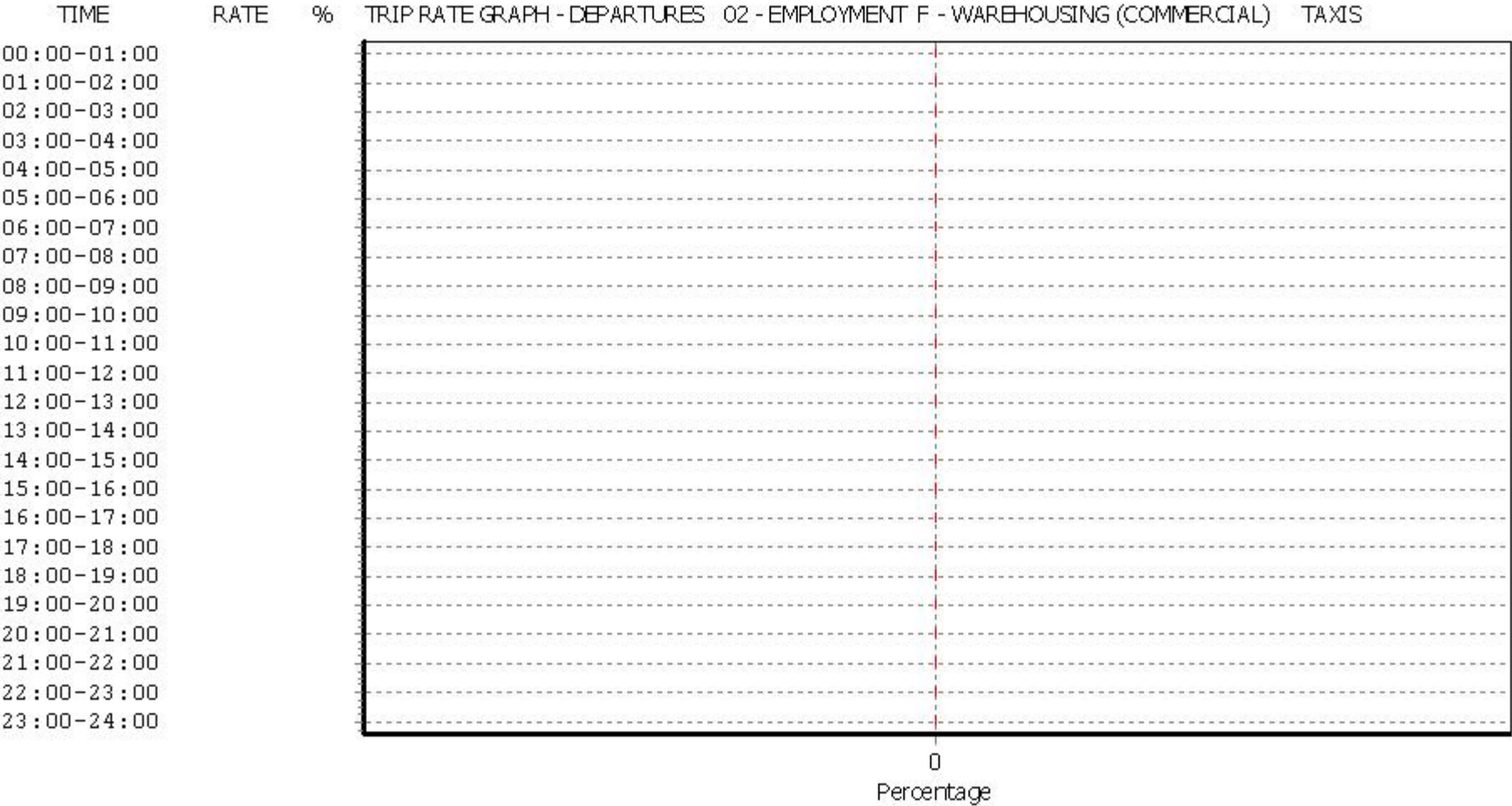
Parameter summary

Trip rate parameter range selected:	5150 - 16275 (units: sqm)
Survey date date range:	01/01/05 - 12/10/12
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

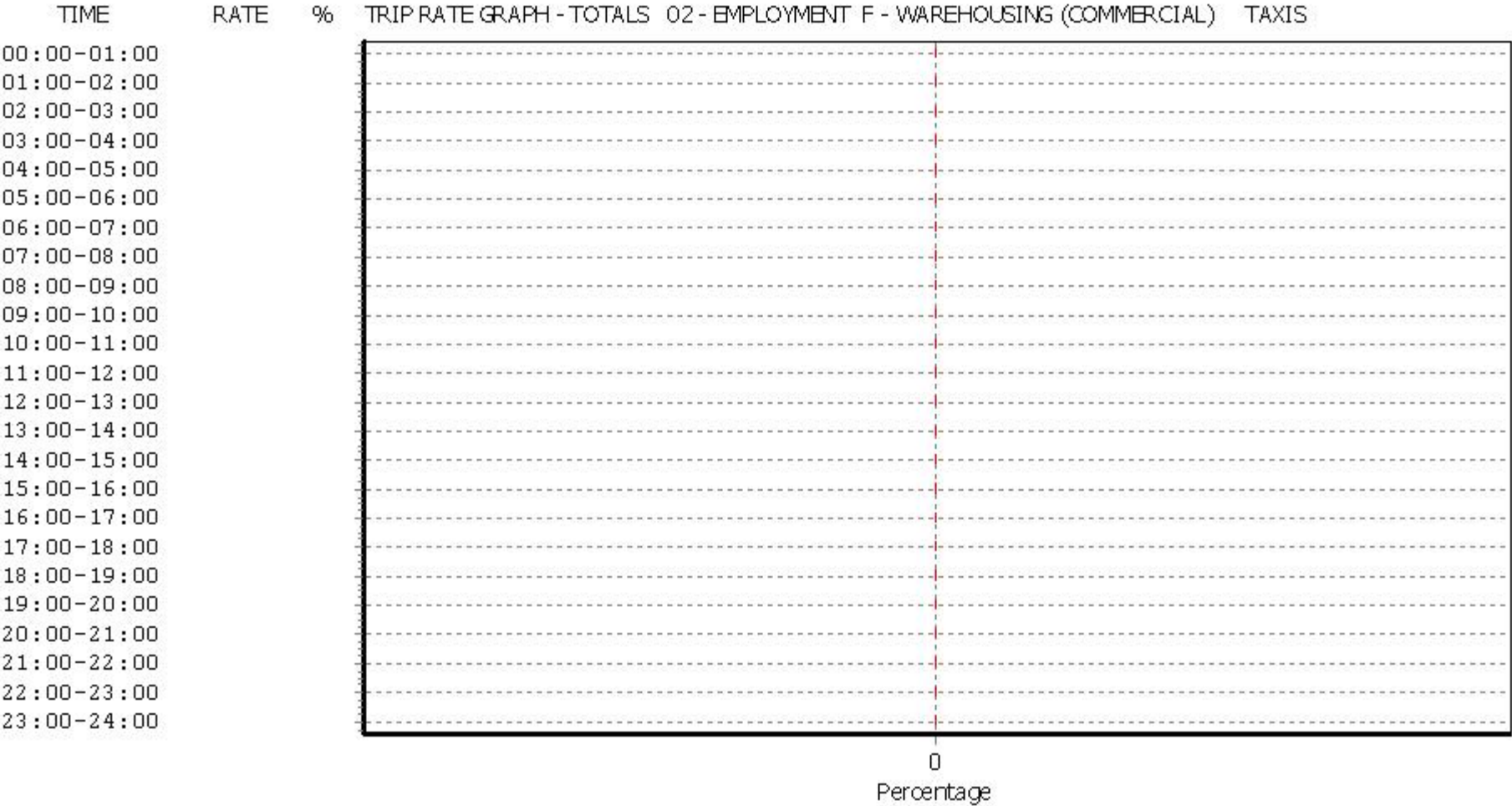
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected 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.



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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TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

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 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	5	10935	0.005	5	10935	0.011	5	10935	0.016
07:30 - 08:00	5	10935	0.009	5	10935	0.009	5	10935	0.018
08:00 - 08:30	5	10935	0.020	5	10935	0.013	5	10935	0.033
08:30 - 09:00	5	10935	0.018	5	10935	0.020	5	10935	0.038
09:00 - 09:30	5	10935	0.011	5	10935	0.013	5	10935	0.024
09:30 - 10:00	5	10935	0.004	5	10935	0.009	5	10935	0.013
10:00 - 10:30	5	10935	0.018	5	10935	0.011	5	10935	0.029
10:30 - 11:00	5	10935	0.024	5	10935	0.018	5	10935	0.042
11:00 - 11:30	5	10935	0.029	5	10935	0.016	5	10935	0.045
11:30 - 12:00	5	10935	0.016	5	10935	0.024	5	10935	0.040
12:00 - 12:30	5	10935	0.027	5	10935	0.009	5	10935	0.036
12:30 - 13:00	5	10935	0.015	5	10935	0.011	5	10935	0.026
13:00 - 13:30	5	10935	0.024	5	10935	0.009	5	10935	0.033
13:30 - 14:00	5	10935	0.018	5	10935	0.015	5	10935	0.033
14:00 - 14:30	5	10935	0.016	5	10935	0.018	5	10935	0.034
14:30 - 15:00	5	10935	0.013	5	10935	0.016	5	10935	0.029
15:00 - 15:30	5	10935	0.009	5	10935	0.011	5	10935	0.020
15:30 - 16:00	5	10935	0.013	5	10935	0.009	5	10935	0.022
16:00 - 16:30	5	10935	0.015	5	10935	0.020	5	10935	0.035
16:30 - 17:00	5	10935	0.009	5	10935	0.007	5	10935	0.016
17:00 - 17:30	5	10935	0.005	5	10935	0.004	5	10935	0.009
17:30 - 18:00	5	10935	0.009	5	10935	0.016	5	10935	0.025
18:00 - 18:30	5	10935	0.009	5	10935	0.007	5	10935	0.016
18:30 - 19:00	5	10935	0.007	5	10935	0.004	5	10935	0.011
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.343			0.300			0.643

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.

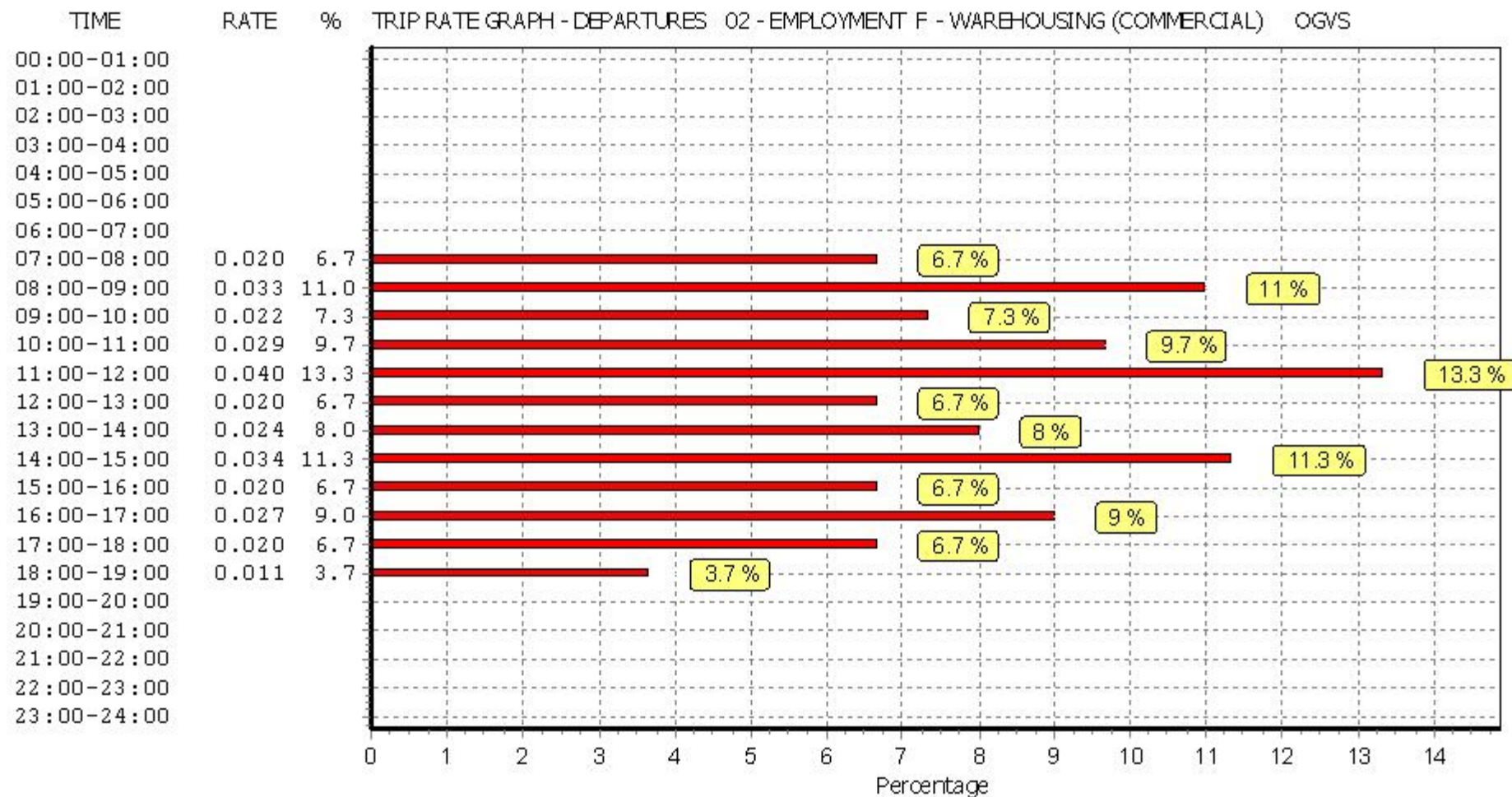
Parameter summary

Trip rate parameter range selected:	5150 - 16275 (units: sqm)
Survey date date range:	01/01/05 - 12/10/12
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

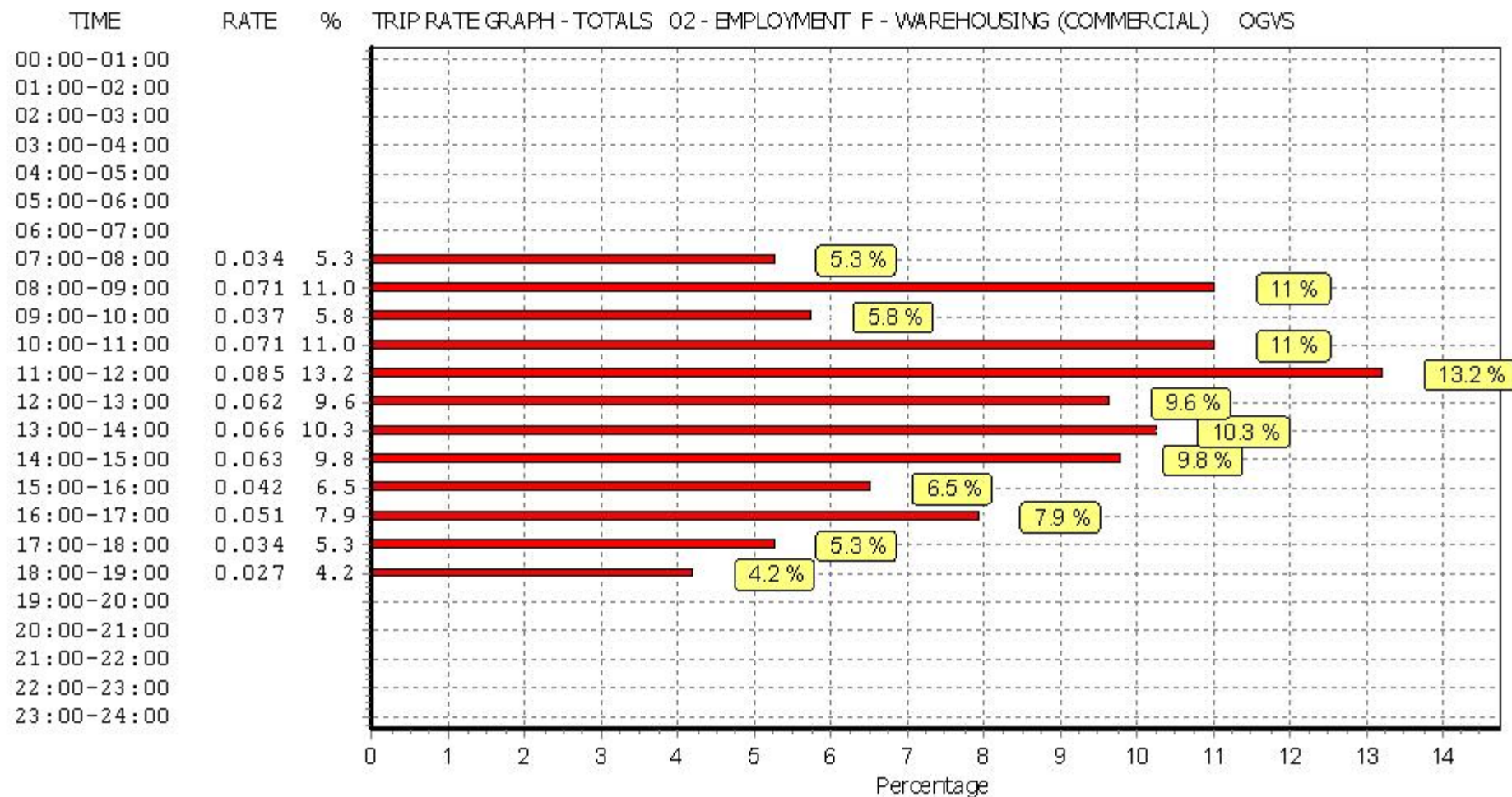
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected 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.



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.



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.



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.

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

PSVS

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 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
07:30 - 08:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
08:00 - 08:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
08:30 - 09:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
09:00 - 09:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
09:30 - 10:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
10:00 - 10:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
10:30 - 11:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
11:00 - 11:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
11:30 - 12:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
12:00 - 12:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
12:30 - 13:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
13:00 - 13:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
13:30 - 14:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
14:00 - 14:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
14:30 - 15:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
15:00 - 15:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
15:30 - 16:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
16:00 - 16:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
16:30 - 17:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
17:00 - 17:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
17:30 - 18:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
18:00 - 18:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
18:30 - 19:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.000			0.000			0.000

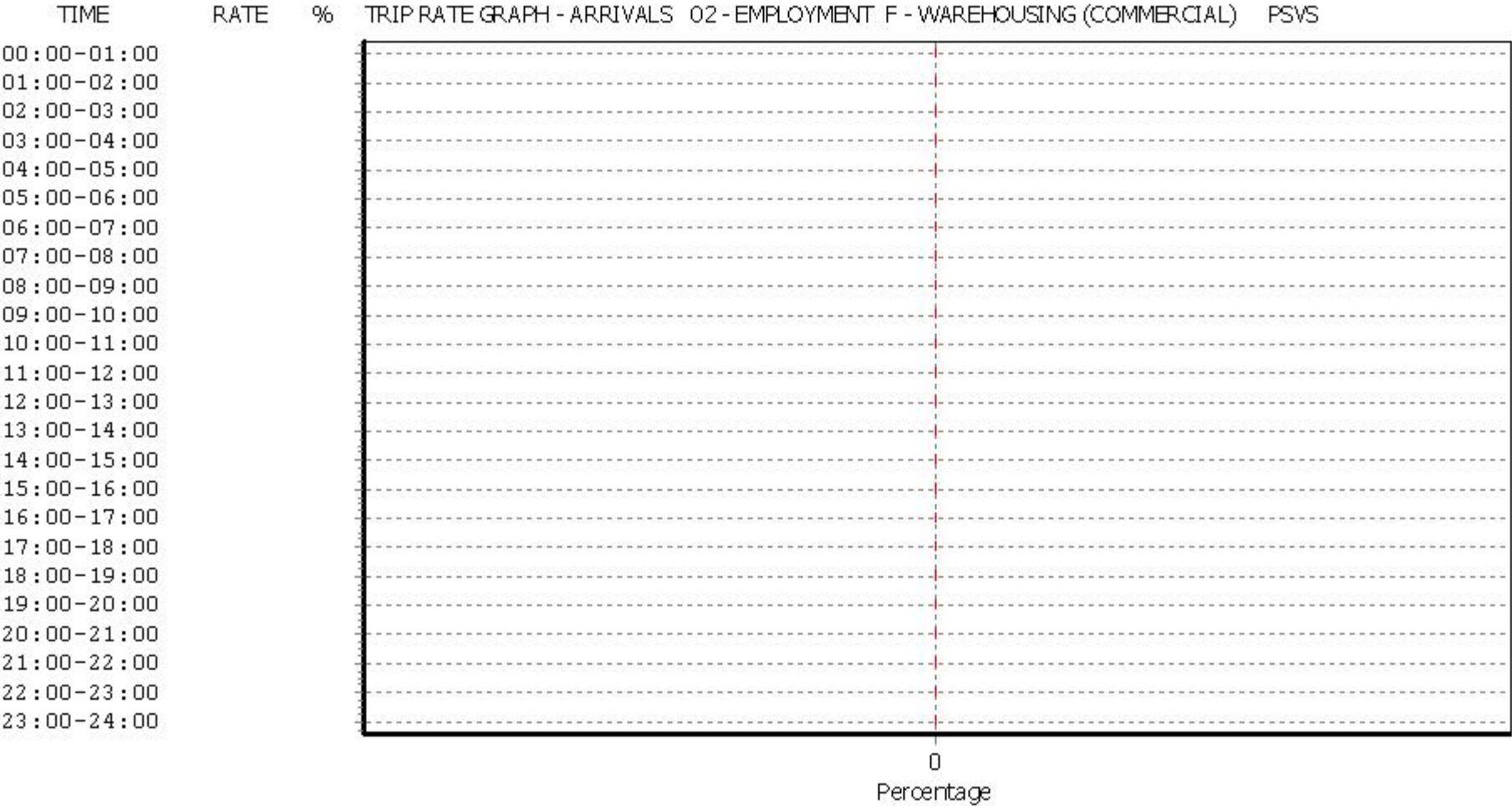
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are 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.

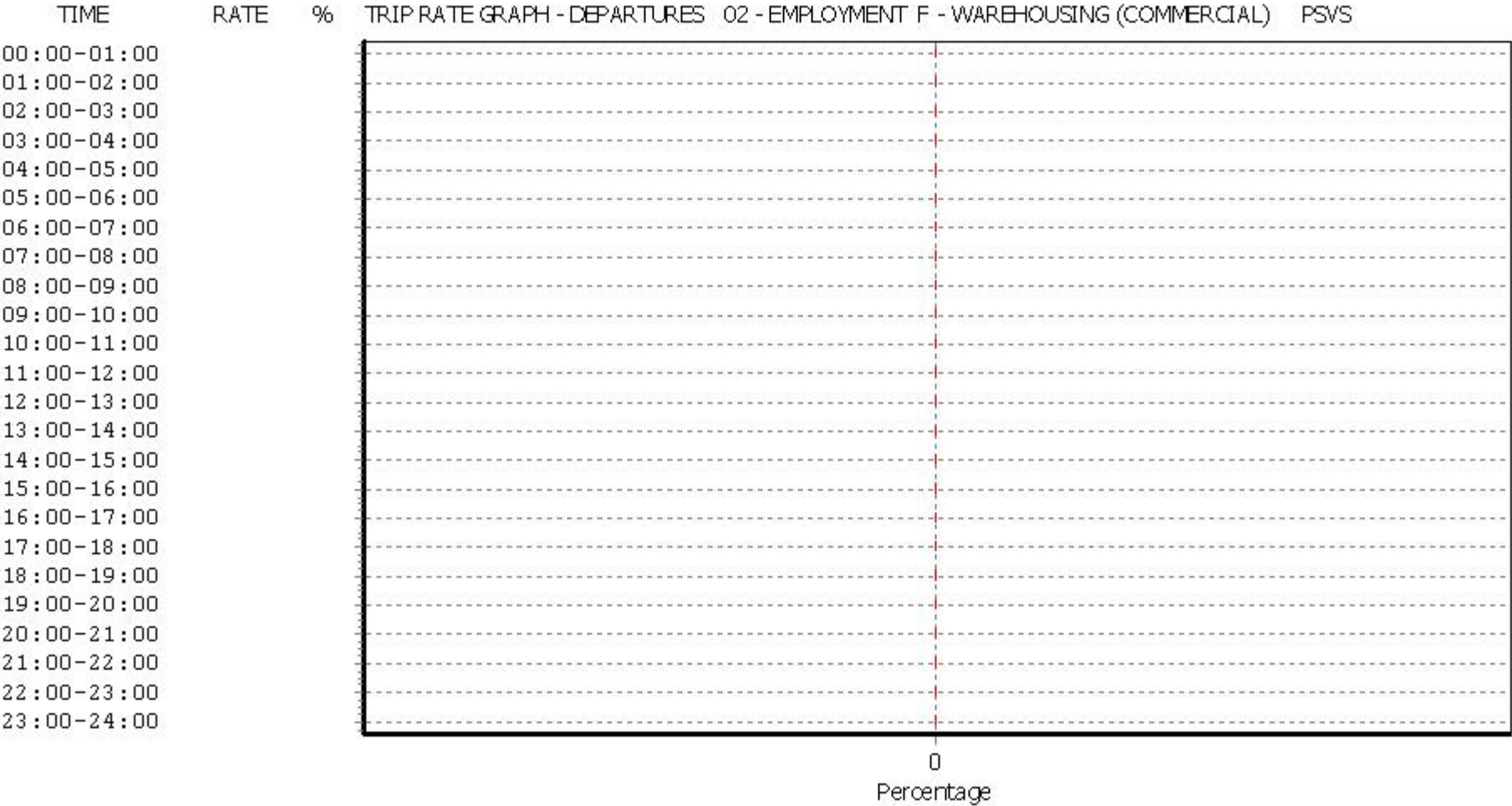
Parameter summary

Trip rate parameter range selected:	5150 - 16275 (units: sqm)
Survey date date range:	01/01/05 - 12/10/12
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

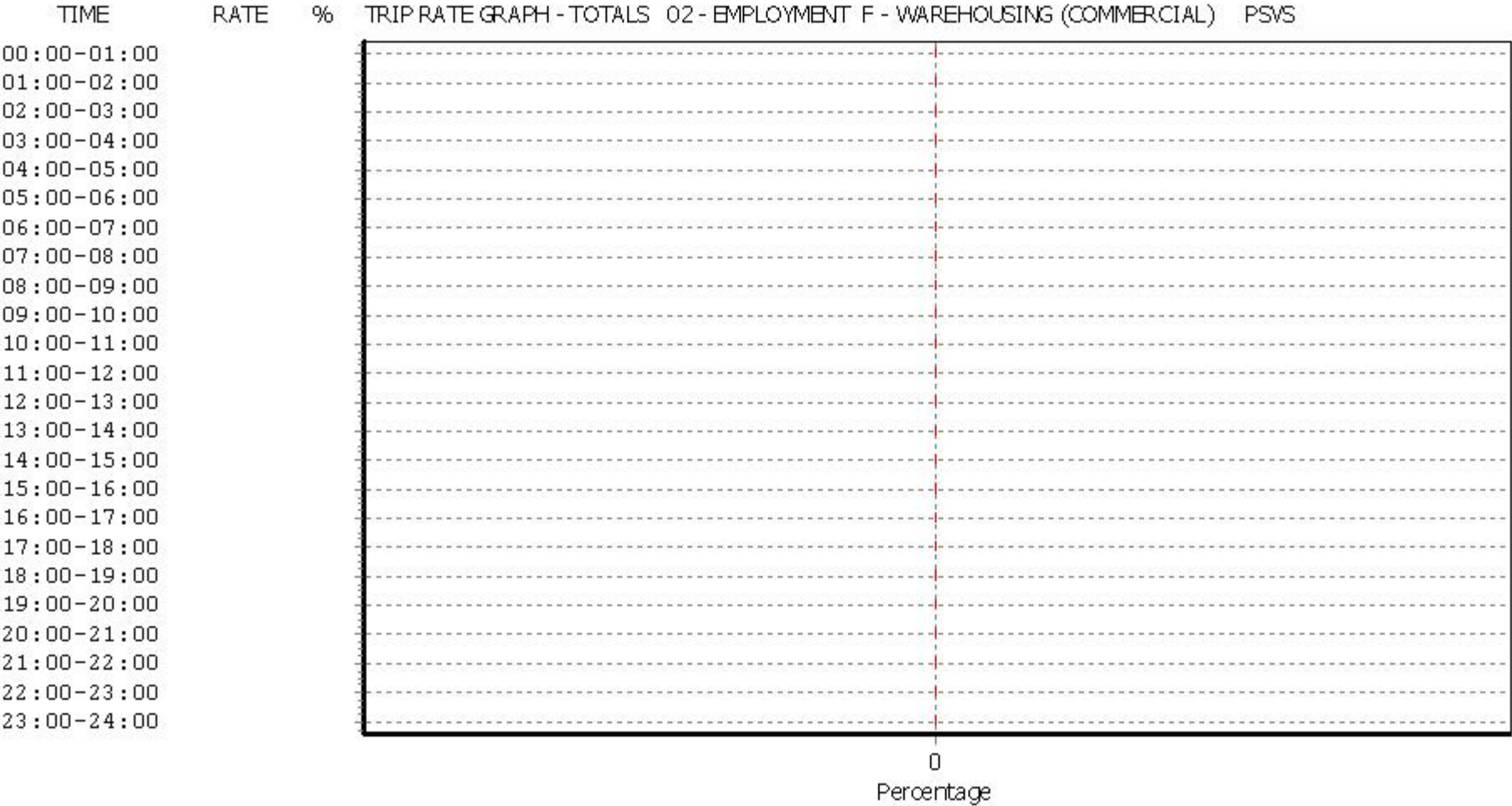
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected 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.



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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TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

CYCLISTS

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 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
07:30 - 08:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
08:00 - 08:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
08:30 - 09:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
09:00 - 09:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
09:30 - 10:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
10:00 - 10:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
10:30 - 11:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
11:00 - 11:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
11:30 - 12:00	5	10935	0.000	5	10935	0.002	5	10935	0.002
12:00 - 12:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
12:30 - 13:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
13:00 - 13:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
13:30 - 14:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
14:00 - 14:30	5	10935	0.000	5	10935	0.002	5	10935	0.002
14:30 - 15:00	5	10935	0.002	5	10935	0.000	5	10935	0.002
15:00 - 15:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
15:30 - 16:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
16:00 - 16:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
16:30 - 17:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
17:00 - 17:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
17:30 - 18:00	5	10935	0.000	5	10935	0.000	5	10935	0.000
18:00 - 18:30	5	10935	0.000	5	10935	0.000	5	10935	0.000
18:30 - 19:00	5	10935	0.004	5	10935	0.000	5	10935	0.004
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.006			0.004			0.010

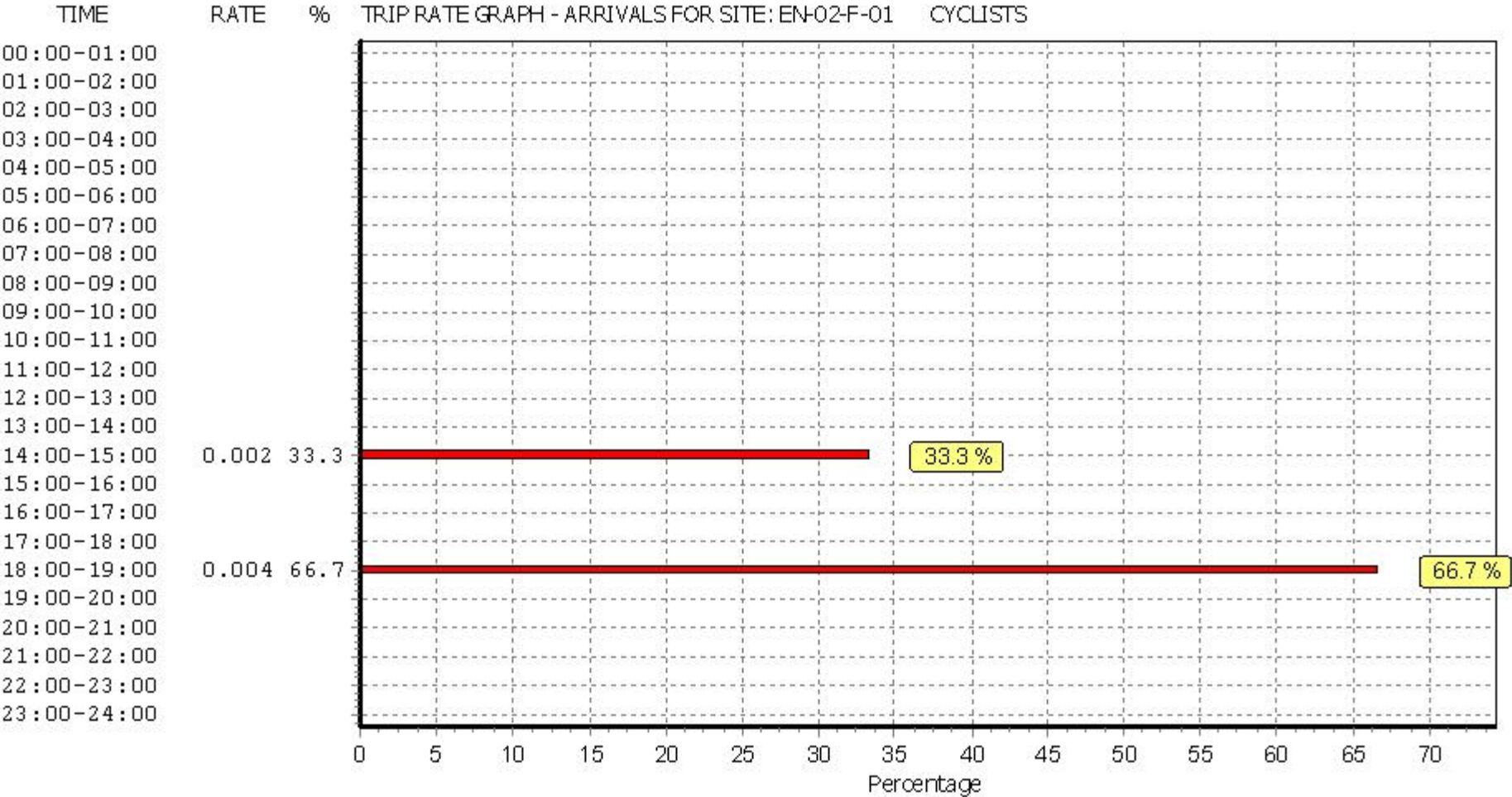
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

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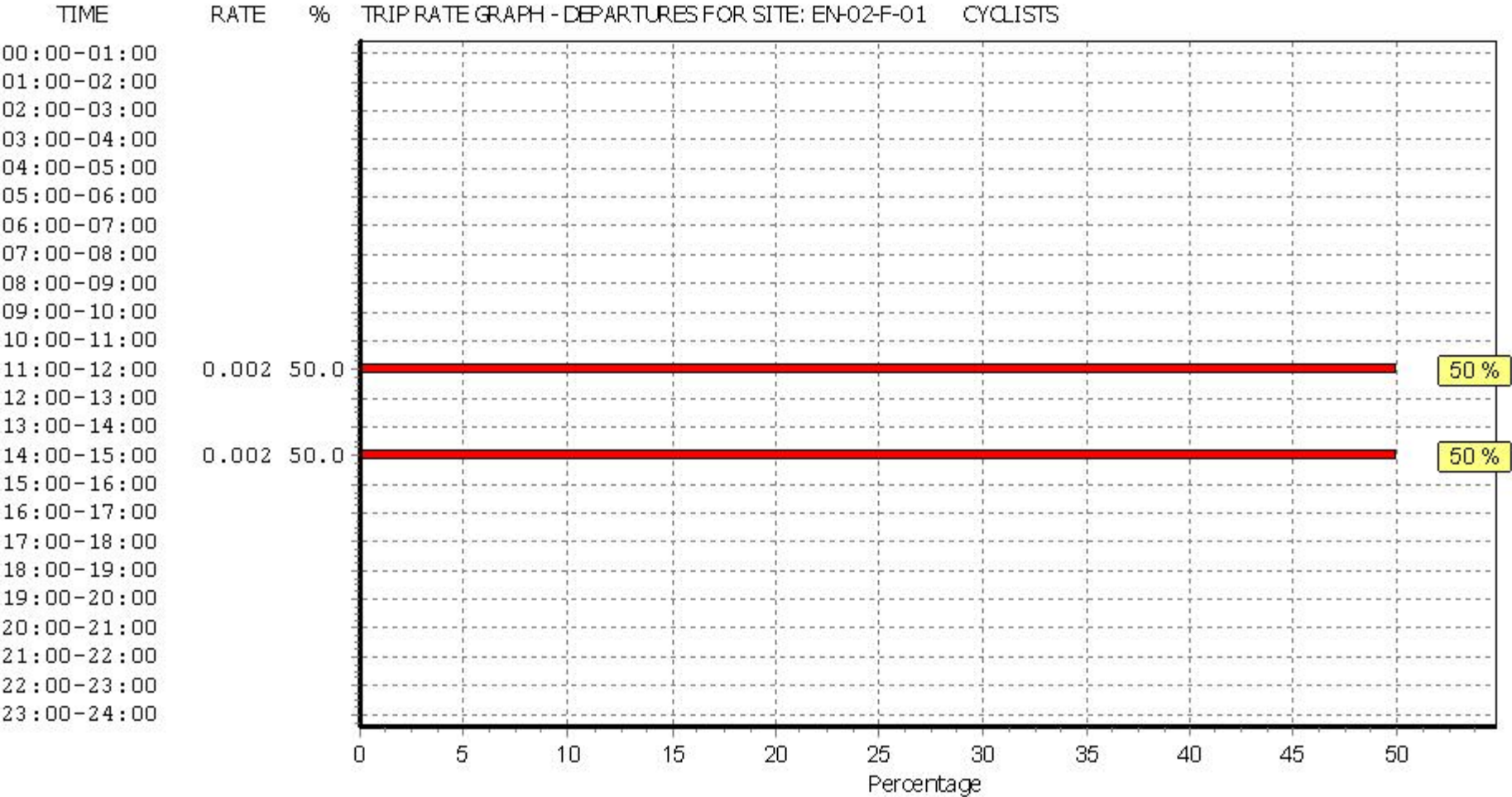
Parameter summary

Trip rate parameter range selected:	5150 - 16275 (units: sqm)
Survey date date range:	01/01/05 - 12/10/12
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

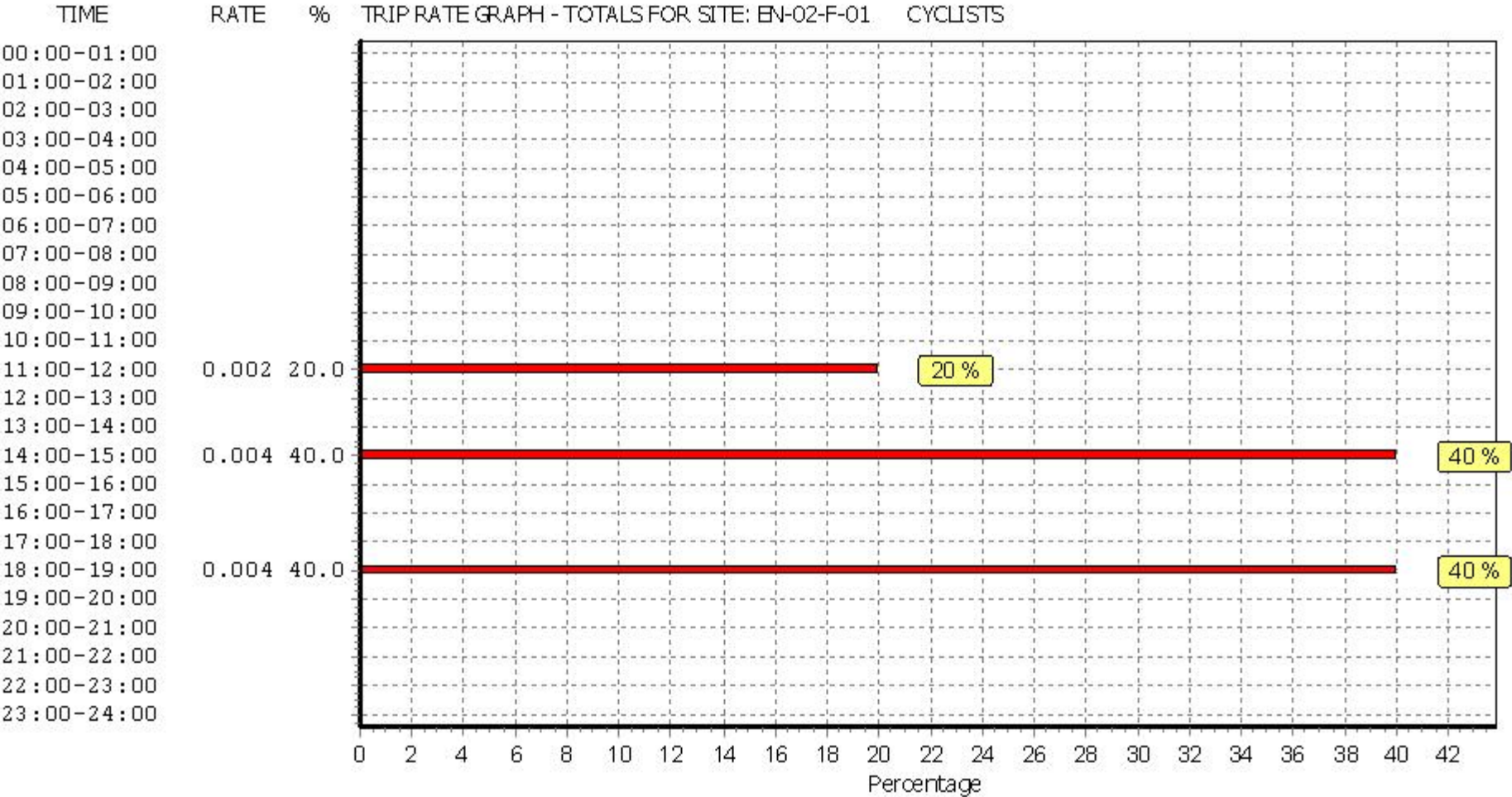
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected 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.



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APPENDIX 9

STAFF JOURNEY TO WORK QUESTIONNAIRE RESULTS

HOME	CURRENT LOCATION											NEW LOCATION										
	Town	Distance from work (miles)	Time to get to work (minutes)	CURRENT MODE OF TRANSPORT							Time of arrival AM	Time of departure PM	ANTICIPATED MODE OF TRANSPORT							INTEREST IN TRAVEL TO WORK SCHEM		
				Walk	Cycle	Motor-cycle	Car (drive)	Car (passenger)	Bus	Other			Walk	Cycle	Motor-cycle	Car (drive)	Car (passenger)	Bus	Other	Car share	Free/low interest bicycle loan	Free/low interest motorcycle loan
WORTHING		8	20				✓				8.25	5.00		✓		✓					✓	
WORTHING		8	20				✓				6.00- 7.00	4.30-7.00				✓						
GORING-BY-SEA		6	15		✓		✓				8.30	5.00		✓		✓						
LITTLEHAMPTON		1.5	20	✓							9.00	5.00			NOT SURE (assume car driver)							
LITTLEHAMPTON		1	5	✓			✓				9.00	2.00				✓						
ARUNDEL		15	20				✓				8.30-9.00	5.00-5.30				✓						✓
BOGNOR REGIS		9	20				✓				9.30	6.30				✓						✓
LITTLEHAMPTON		1	10 - 40	✓			✓				8.30	5.00				✓						
WORTHING		7	15				✓				7.00	4.30				✓						
BOGNOR REGIS		11	20-30				✓				9.00	5.30				✓						
YAPTON		5	5 - 10			✓	✓				7.50	5.30			✓	✓						✓
N/R (Assume BN17 south)							✓				8.30	5.30				✓						
WORTHING		11	20				✓				8.00-8.30	5.30-6.00				✓						
LITTLEHAMPTON		0.5	3	✓							9.00	6.30	✓	✓		✓					✓	
CHICHESTER		15.4	35				✓				8.30	5.00				✓						
WORTHING		6.5	15 - 20				✓				8.45	6.30				✓						
EAST PRESTON		5	10 -15				✓				8.45	3.00				✓					✓	
CHICHESTER		15	30				✓				8.25	5.05				✓						
BOGNOR REGIS		8.5	25				✓				9.00	5.30				✓			✓			
ANGMERING		3	15				✓				5.00-6.00	4.00-6.00				✓						✓
N/R (Assume BN17 south)							✓				8.30	5.30				✓						
PAGHAM		12	25 - 40				✓				6.00	5.30 - 7.00				✓						
CHICHESTER		15	25				✓				7.00	5.00				✓						✓
LITTLEHAMPTON		1	5	✓			✓				9.00	2.00				✓						
LITTLEHAMPTON		1	5 - 10		✓		✓				8.30	5.00		✓		✓				✓		
WORTHING		8	15				✓				8.30	5.00		✓		✓						
LITTLEHAMPTON		2	10		✓		✓				8.00	5.00		✓								
BOGNOR REGIS		10	25				✓				8.45-9.00	5.30				✓						
LITTLEHAMPTON		2	5 - 8	✓			✓				9.00	5.30		✓		✓	✓			✓		
RUSTINGTON		1.8	3 - 4		✓		✓				8.00	5.00				✓						✓
RUSTINGTON		2	10				✓				8.30-8.45	5.00				✓					✓	
LITTLEHAMPTON		3	8 - 10				✓				8.30	5.30				✓					✓	
WORTHING		11	25				✓				8.50	5.00				✓				✓		
WORTHING		5	20				✓				8.30	5.00				✓					✓	
LITTLEHAMPTON		0.5	2 - 10	✓			✓				9.00	5.30				✓				✓		
LITTLEHAMPTON		2	10				✓				8.30	5.00				✓				✓		
RUSTINGTON		2.7	5				✓				8.00	6.00				✓						
WORTHING		6.2	15-20				✓				8.30	5.00				✓						
CHICHESTER		22	40				✓				7.45-8.00	5.00				✓						
LITTLEHAMPTON		1	5	✓			✓				8.30	5.00				✓						
RUSTINGTON		1.5	10				✓				5.30-6.00	4.00				✓						
ALL				5	2	0.5	33.5	0	0	0	41 total	41 total	0.33	3.7	0.5	36.2	0.3	0	0	6	6	7
ARRIVE 8-9				5	1	0	23	0	0	0	29 total	29 total	0.3	2.7	0	25.7	0.3	0	0	6	6	2
DEPART 5-6				3	2	0.5	26.5	0	0	0	32 total	32 total	0	3.4	0.5	27.8	0.3	0	0	6	4	5

APPENDIX 10

2013 TRAFFIC COUNT AT FARGRO EXISTING SITE



Fargro Ltd., Toddington Lane, Littlehampton, West
Sussex, BN17 7PP

Manual Classified Traffic Count 24th July 2013

Fargro, Toddington Lane Littlehampton 24/07/13
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Inbound

Time start	pedal cycles	motorcycles	cars/vans	medium goods	heavy goods	buses/coaches	Total (exc pedal cycles)	HGVs
06:00	0	0	4	0	0	0	4	0
06:30	0	0	0	0	0	0	0	0
07:00	0	0	2	0	0	0	2	0
07:30	0	0	1	0	1	0	2	1
08:00	1	0	5	0	1	0	6	1
08:30	0	0	13	0	0	0	13	0
09:00	0	0	5	2	0	0	7	2
09:30	0	0	2	0	0	0	2	0
10:00	0	0	0	0	0	0	0	0
10:30	0	0	3	0	0	0	3	0
11:00	0	0	1	0	0	0	1	0
11:30	0	0	2	0	0	0	2	0
12:00	0	0	1	0	1	0	2	1
12:30	0	0	3	0	1	0	4	1
13:00	0	0	1	0	1	0	2	1
13:30	0	0	5	1	1	0	7	2
14:00	0	0	5	0	0	0	5	0
14:30	0	0	2	1	0	0	3	1
15:00	0	0	1	0	2	0	3	2
15:30	0	0	1	2	1	0	4	3
16:00	0	0	3	1	0	0	4	1
16:30	1	0	4	1	0	0	5	1
17:00	0	0	0	0	1	0	1	1
17:30	0	0	1	0	0	0	1	0
18:00	0	0	1	0	0	0	1	0
18:30	0	0	0	0	0	0	0	0
TOTAL	2	0	66	8	10	0	84	18
TOTAL 12 hour 07:00 - 19:00	2	0	62	8	10	0	80	18

Fargro, Toddington Lane Littlehampton 24/07/13
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Outbound

Time	pedal cycles	motorcycles	cars/vans	medium goods	heavy goods	buses/coaches	Total (exc pedal cycles)	HGVs
06:00	0	0	0	0	0	0	0	0
06:30	0	0	0	0	4	0	4	4
07:00	0	0	0	0	0	0	0	0
07:30	0	0	0	1	0	0	1	1
08:00	0	0	0	0	0	0	0	0
08:30	0	0	2	0	0	0	2	0
09:00	0	0	1	1	1	0	3	2
09:30	0	0	0	1	0	0	1	1
10:00	0	0	0	0	0	0	0	0
10:30	0	0	1	0	0	0	1	0
11:00	0	0	3	0	1	0	4	1
11:30	0	0	2	0	0	0	2	0
12:00	0	0	2	0	1	0	3	1
12:30	0	0	3	0	0	0	3	0
13:00	0	0	7	1	1	0	9	2
13:30	0	0	1	0	1	0	2	1
14:00	0	0	3	0	0	0	3	0
14:30	0	0	2	0	1	0	3	1
15:00	0	0	2	0	1	0	3	1
15:30	0	0	3	0	0	0	3	0
16:00	1	0	7	1	0	0	8	1
16:30	0	0	6	1	0	0	7	1
17:00	0	0	7	0	0	0	7	0
17:30	0	0	7	0	0	0	7	0
18:00	1	0	2	0	0	0	2	0
18:30	0	0	2	0	0	0	2	0
TOTAL	2	0	63	6	11	0	80	17
TOTAL 12 hour 07:00 - 19:00	2	0	63	6	7	0	76	13

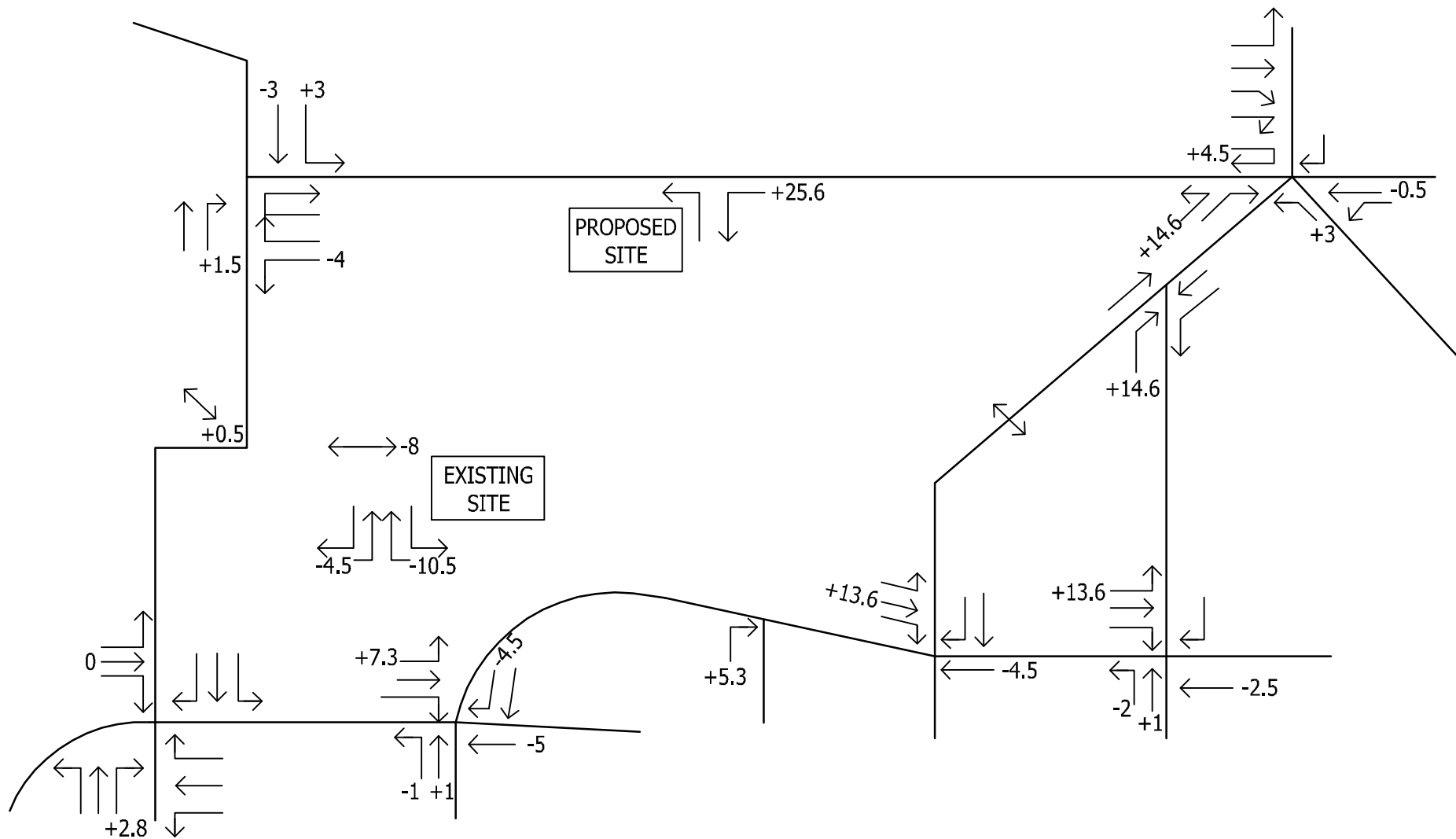
Fargro, Toddington Lane Littlehampton 24/07/13
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Total (Inbound + Outbound)

Time	pedal cycles	motorcycles	cars/vans	medium goods	heavy goods	buses/coaches	Total (exc pedal cycles)	HGVs
06:00	0	0	4	0	0	0	4	0
06:30	0	0	0	0	4	0	4	4
07:00	0	0	2	0	0	0	2	0
07:30	0	0	1	1	1	0	3	2
08:00	1	0	5	0	1	0	6	1
08:30	0	0	15	0	0	0	15	0
09:00	0	0	6	3	1	0	10	4
09:30	0	0	2	1	0	0	3	1
10:00	0	0	0	0	0	0	0	0
10:30	0	0	4	0	0	0	4	0
11:00	0	0	4	0	1	0	5	1
11:30	0	0	4	0	0	0	4	0
12:00	0	0	3	0	2	0	5	2
12:30	0	0	6	0	1	0	7	1
13:00	0	0	8	1	2	0	11	3
13:30	0	0	6	1	2	0	9	3
14:00	0	0	8	0	0	0	8	0
14:30	0	0	4	1	1	0	6	2
15:00	0	0	3	0	3	0	6	3
15:30	0	0	4	2	1	0	7	3
16:00	1	0	10	2	0	0	12	2
16:30	1	0	10	2	0	0	12	2
17:00	0	0	7	0	1	0	8	1
17:30	0	0	8	0	0	0	8	0
18:00	1	0	3	0	0	0	3	0
18:30	0	0	2	0	0	0	2	0
TOTAL	4	0	129	14	21	0	164	35
TOTAL 12 hour 07:00 - 19:00	4	0	125	14	17	0	156	31

APPENDIX 11

PEAK HOUR TRAFFIC ASSIGNMENT DIAGRAMS



Millwood House Consultants Ltd
Creating connections in construction
Structures Contamination Civils

The Studio, Millwood House, Littlehampton Road, Ferring
West Sussex, BN12 6PG
Tel: 00-44-1903-827749
E-mail: chris@millwoodconsultants.co.uk

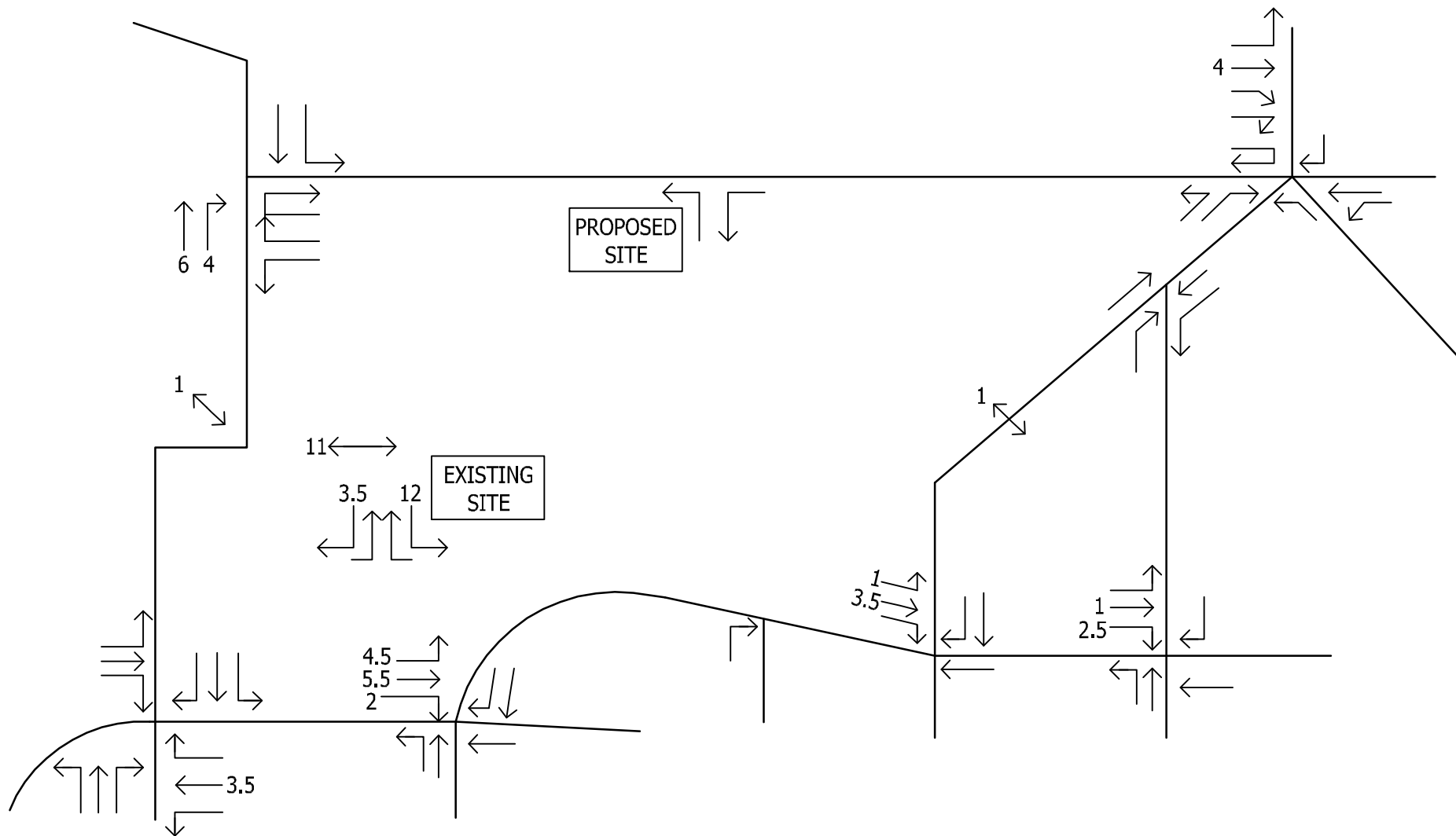
Project

THE VINERY
POLING

AM PEAK HOUR
FLOW DIAGRAM

DIFFERENCE
PROPOSED - EXISTING

3



Millwood House Consultants Ltd
Creating connections in construction
Structures Contamination Civils

The Studio, Millwood House, Littlehampton Road, Ferring
West Sussex, BN12 6PG
Tel: 00-44-1903-827749
E-mail: chris@millwoodconsultants.co.uk

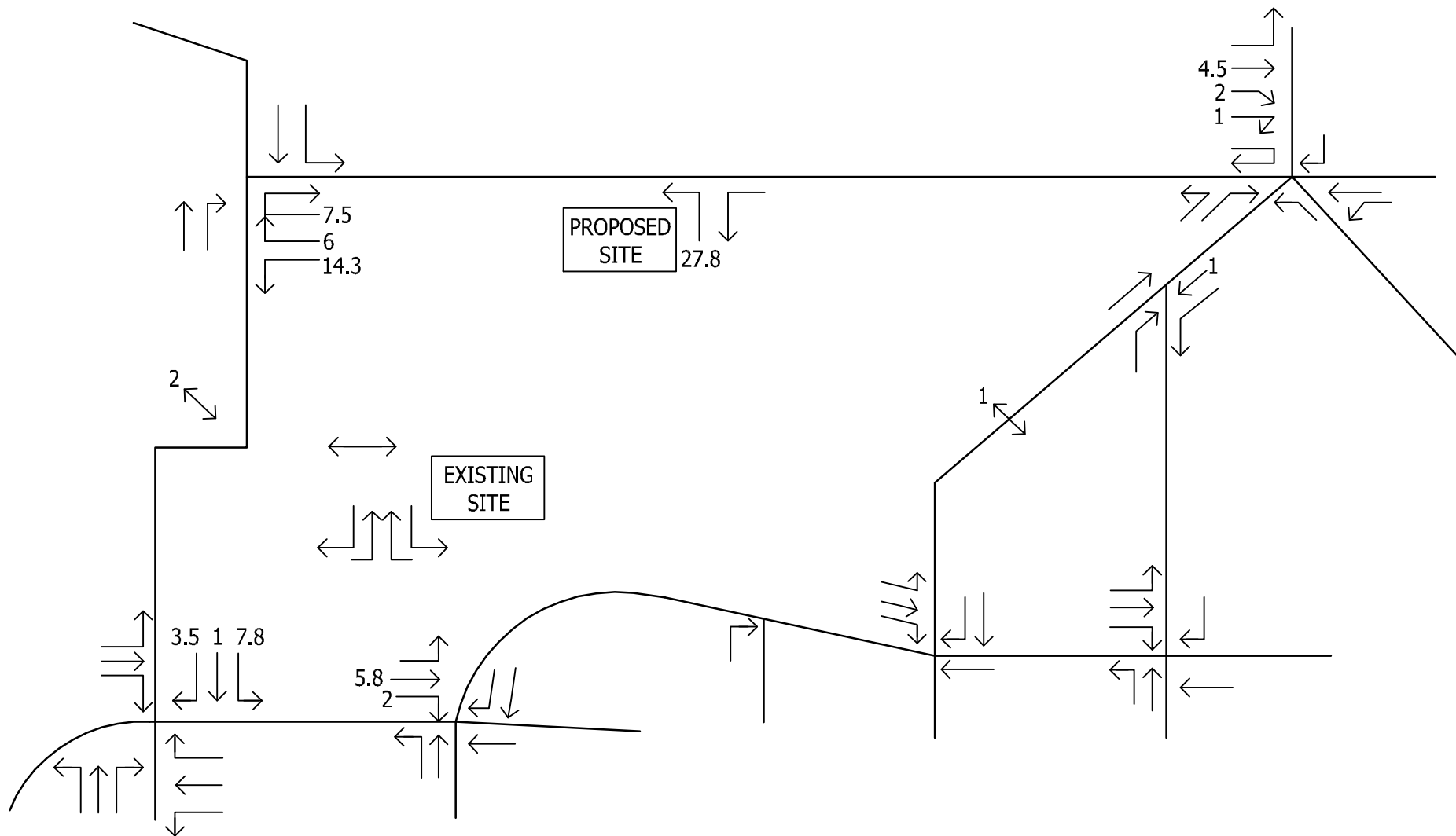
Project

THE VINERY
POLING

PM PEAK HOUR
FLOW DIAGRAM

EXISTING SITE

4



Millwood House Consultants Ltd
Creating connections in construction
Structures Contamination Civils

The Studio, Millwood House, Littlehampton Road, Ferring
West Sussex, BN12 6PG
Tel: 00-44-1903-827749
E-mail: chris@millwoodconsultants.co.uk

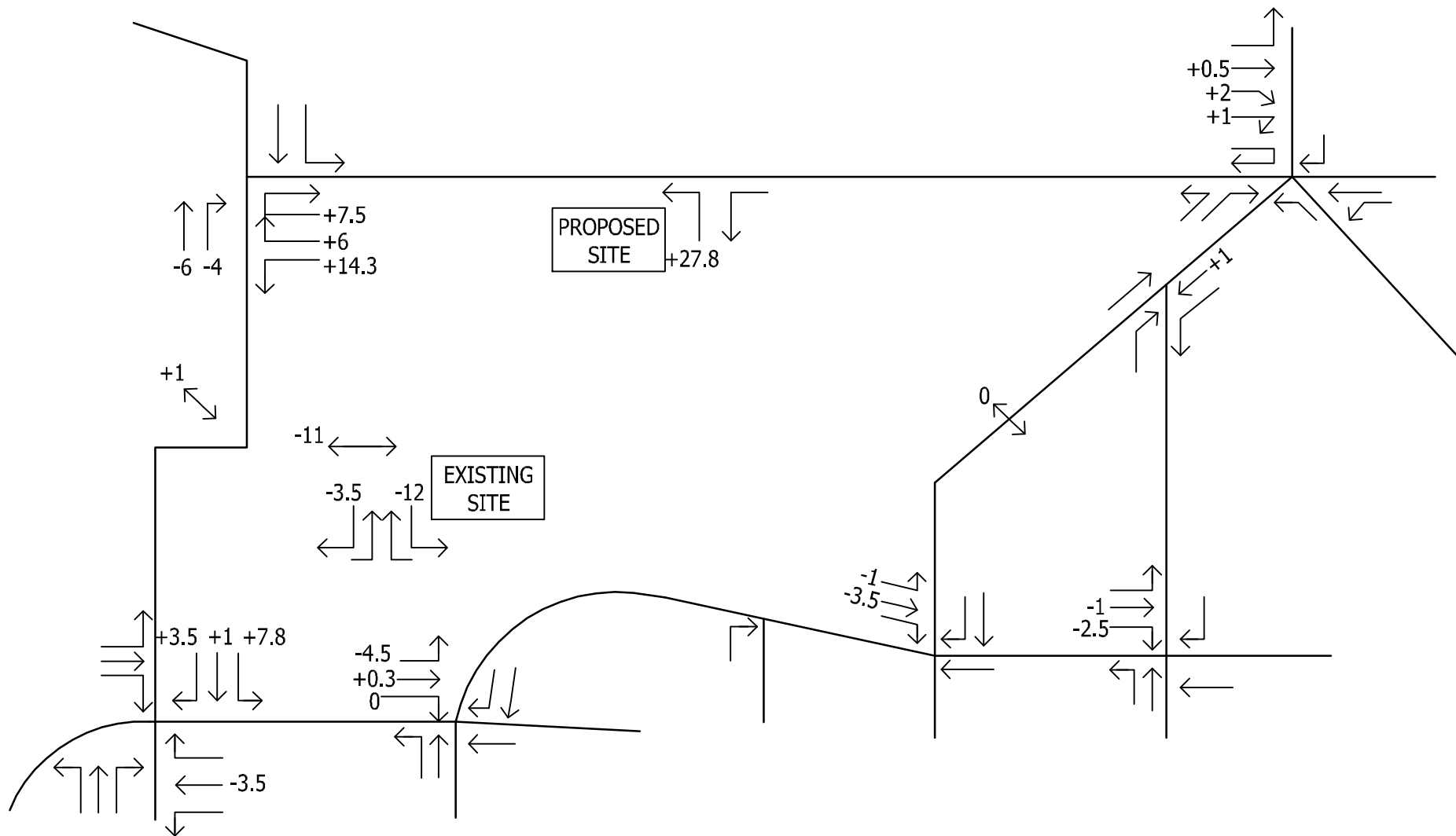
Project

THE VINERY
POLING

PM PEAK HOUR
FLOW DIAGRAM

PROPOSED SITE

5



Millwood House Consultants Ltd
Creating connections in construction
Structures Contamination Civils

The Studio, Millwood House, Littlehampton Road, Ferring
West Sussex, BN12 6PG
Tel: 00-44-1903-827749
E-mail: chris@millwoodconsultants.co.uk

Project

THE VINERY
POLING

PM PEAK HOUR
FLOW DIAGRAM

DIFFERENCE
PROPOSED - EXISTING

6

APPENDIX 12

PROPOSED IMPROVEMENT A27 / THE VINERY JUNCTION

