

APPENDIX B. Transport Assessment Scoping Report

Technical Note

Project No: ITB11383
Project Title: Lovedean Lane, Waterlooville
Title: Transport Assessment Scoping Note
Ref: SJ/BB/SG/ITB11383-004 TN
Date: 7 November 2019

SECTION 1 INTRODUCTION

1.1 i-Transport LLP has been appointed by Bargate Homes to provide transport and highways advice in relation to a forthcoming planning application for a residential development of up to 50 dwellings.

1.2 Site Location

1.2.1 The site is bounded to the north by dwellings that form part of the current development by Bargate Homes, which is accessed from Lovedean Lane, to the south by James Copse Road and dwellings accessed off Ashley Close and to the west by mature woodland.

1.2.2 The location of the site in the context of the local highway network is presented in **Figure 1**, an extract of which is illustrated as **Image 1.1**.

Image 1.1: Site Location Plan



Source: Extract of Figure 1

SECTION 2 POLICY CONTEXT

2.1.1 The TA will review and summarise the following national and local policy:

- National Planning Policy Framework (NPPF) – February 2019;
- National Planning Practice Guidance (NPPG) – Updated 2019;
- East Hampshire District Local Plan Joint Core Strategy – Adopted 2014;
- East Hampshire Draft Local Plan – Currently in a consultation period (September – October 2019);
- East Hampshire District Local Plan – ‘Vehicle Parking Standards’ Supplementary Planning Document – Adopted July 2018;
- Hampshire County Council Local Transport Plan 3; and
- East Hampshire District Transport Statement – Adopted September 2012.

2.1.2 This review will provide the context for assessing the development proposal in transport and highway terms.

1.3 Background

1.3.1 The site is allocated for development in the Draft East Hampshire District Council (EHDC) Local Plan as Site SA36 – Land at Cottage Farm. The draft allocation is for 75 to 85 dwellings. Hampshire County Council (HCC) are the local highway authority (LHA). However, the intended site access is split between EHDC and Havant Borough Council (HBC).

1.3.2 In March 2016, a Pre-Application Design Review was submitted to HCC (in line with their Section 278 Procedures) to establish the acceptability of the proposed site access works ‘in principle’. Following submission of the Pre-Application Design Review, an ‘in principle’ agreement was reached with HCC on the point and concept of the site access junction. Further details are provided below.

1.3.3 It is now proposed to make a detailed planning application for a residential development at the site.

1.4 Structure of Scoping Note

1.4.1 This Transport Assessment Scoping Note (TASN) sets out the proposed scope, methodology, parameters and structure of the TA to assess the transport and highways implications of the development.

1.4.2 The remainder of this note follows the same proposed structure as the TA:

- **Section 2** sets out the relevant national and local transport policies;
- **Section 3** reviews the existing transport conditions in the vicinity of the site;
- **Section 4** summarises the development proposal, including the proposed site access arrangements and car parking provisions;
- **Section 5** sets out the proposed measures for promoting sustainable transport;
- **Section 6** sets out the traffic parameters to assess the impact of the development proposal on the local and strategic highway network;
- **Section 7** provides a summary of this note.

SECTION 3 EXISTING CONDITIONS

3.1 This section of the TS will describe the existing transport conditions in the vicinity of the site, including the opportunities for walking, cycling and public transport.

3.2 Walking and Cycling

3.2.1 A review of the existing walking and cycling provision in the vicinity of the site will be set out in the TA and will consider the quality of the routes.

3.2.2 There is an existing street (a pedestrian footway on either side of Lovedean Lane, which is approximately 1.7m in width. This provides a safe pedestrian route south towards the services and facilities located in the nearby local centre and Woodcroft primary school. Voell Lane opposite the proposed site access is a lightly trafficked street (a road with footways on both sides of the carriageway, making it safe for both pedestrians and cyclists. Victory Avenue, just north of the Voell Lane / Frogmore Lane priority junction, provides a shared footway/cycleway on the northern side of the carriageway. This runs all the way to the Victory Avenue / Caterington Lane junction, where it continues north towards Homdean Technology College, providing a safe pedestrian/cyclist route to the school.

3.2.3 The pedestrian and cycle connections and infrastructure will be described.

3.3 Public Transport

3.3.1 The site is located close to bus services, which provide excellent links to Portsmouth and Havant. Havant railway station is adjacent to the bus station, allowing access to the railway network.

Bus

3.3.2 The nearest bus stop to the site is located adjacent to Blackbird Close, approximately a 900m walk from the centre of the site. The bus stop is served by bus service numbers 39 and 7 The Star. The bus stop infrastructure includes a bus stop flag and a bus shelter with associated timetable information and seating.

3.3.3 Additional bus services are available from the bus stops on either side of Lovedean Lane, which are located approximately 1.2km from the centre of the site. These bus stops are served by bus service numbers 8 and 37K. The bus stop infrastructure includes bus stop flags and bus shelters, with

associated timetable information and seating. On-camageway bus stop cages are also provided for each bus stop.

3.3.4 A summary of the local bus services operating within the local area is provided in **Table 3.1**.

Table 3.1: Local Bus Services

Stop	No.	Route	Mon-Fri	Sat	Sun
Blackbird Close	39	Worock – Waterlooville – Havant Bus Station	Every 12 minutes – first departure 05:37, last return 23:00	Every 12 minutes – first departure 06:11, last return 23:00	Hourly – first departure 07:38, last return 18:55
	7 The Star	Worock – Waterlooville – Portsmouth city centre	Every 12 minutes – first departure 05:00, last return 23:04	Every 15 minutes – first departure 05:27, last return 23:04	Every 15 minutes – first departure 06:38, last return 23:04
Lovedean Lane	8	Quincey Pier – Gunwharf – Portsmouth City Centre – Cosham – Waterlooville – Copple – Clarendon	Every 15 minutes – first departure 05:33, last return 23:15	Every 15 minutes – first departure 06:14, last return 23:15	Every 30 minutes – first departure 07:22, last return 23:15
	37X	Horsdean – Clarendon – Petersfield – Alton	School Service	–	–

Source: Traveline

3.3.5 The site is well connected to the local bus network, ensuring that residents will be offered frequent and realistic opportunities for bus travel to a range of destinations including Havant, Portsmouth, Waterlooville and Alton. Of particular note is the 7 The Star service, which provides bus services at less than 15-minute frequencies throughout the course of an entire week.

Rail

3.3.6 The nearest railway station to the site is Havant, which is located circa 9.8km from the centre of the site. It is served by trains operated by Southern and Southwestern Railway, which together provide frequent services to a number of destinations including London Waterloo, Chichester, Brighton, Portsmouth & Southsea and Southampton Central. **Table 3.2** provides a summary of railway services available from Havant railway station.

Table 3.2: Summary of available rail services from Havant station

Destination	Frequency		Journey time (minutes)
	Peak	Off-peak	
London Waterloo	4	3	60
Chichester	6	5	13
Brighton	3	2	68
Portsmouth & Southsea	7	6	13
Southampton Central	3	2	41

Source: National Rail

3.3.7 Access to Havant station can be achieved by the number 39 bus service, which operates from the existing bus stop at Blackbird Close. The bus service operates at a 12-minute frequency Monday to Friday and stops at Havant bus station, which is a less than 5-minute walk from Havant railway station.

3.3.8 Residents at the site will be afforded a realistic opportunity to access local rail services by more sustainable means of transport.

3.4 Local Highway Network

3.4.1 A narrative describing the local and strategic highway network will be provided within the TA. Personal Injury Accident (PIA) data will be obtained from Hampshire Constabulary and the study area will include:

- Lovedean Lane;
- Yorks Lane; and
- Frogmore Lane.

3.4.2 A plan showing the extent of the study area is presented in **Appendix A**. Agreement to the extent of the study area is sought from HCC.

3.5 Baseline Traffic Flows

3.5.1 To establish the baseline traffic conditions on the local highway network, a series of traffic surveys were undertaken between 30 September 2019 and 8 October 2019. The surveys included:

- Manual Classified Count (MCC) surveys at:

- the Lovedean Lane / Yorks Lane priority junction;
 - the Yorks Lane / Frogmore Lane priority junction; and
 - the Lovedean Lane / Milton Road priority junction.
- Two, 7-day long, Automatic Traffic Counter (ATC) surveys on Lovedean Lane.

3.5.2 These surveys provide understanding of the existing traffic conditions along with the vehicle speeds along Lovedean Lane.

3.5.3 The baseline traffic flows are illustrated in **Figures TF1 and TF2** and summarised in **Table 3.3**.

Table 3.3: Existing Traffic Flows

Road	Direction	Morning Peak Period (07:45-08:45)	Evening Peak Period (17:00-18:00)
Lovedean Lane (North of Yorks Lane)	NB	335	248
	SB	219	274
Lovedean Lane (West of Milton Road)	NB	550	356
	SB	556	447
Lovedean Lane (East of Milton Road)	EB	411	288
	WB	375	468
Yorks Lane	EB	87	96
	WB	120	70
Frogmore Lane	NB	278	200
	SB	268	185
Milton Road	NB	468	511
	SB	552	582

Source: Traffic Surveys, October 2019

3.5.4 The two ATCs on Lovedean Lane (North and South of the Lovedean Lane / Yorks Lane junction respectively) also recorded vehicle speeds; these are presented in **Table 3.4**.

Table 3.4 Recorded traffic speeds (7-day 24 hours)

Link	Direction	Average Speeds (mph)	85th % Wet Weather Speed (mph)
Lovedean Lane (North of Yorks Lane)	Northbound	28.6	33.5
	Southbound	30.1	34.0
Lovedean Lane (South of Yorks Lane)	Northbound	29.8	34.9
	Southbound	28.6	33.3

Source: ATC Surveys – October 2019 (8% wet weather adjustment made as some rain fell in week)

3.6 Highway Safety

3.6.1 Personal Injury Accident (PIA) data has been obtained from Hampshire Constabulary for the most recently available five-year period between. The study area is shown in **Image 3.1** and agreement over the proposed extent is sought.

Image 3.1: Proposed extent of Personal Injury Accident analysis



Source: Google / i-Transport

SECTION 4 DEVELOPMENT PROPOSAL

4.1 This section of the TA will describe the development proposal and the access, parking and servicing arrangements.

4.2 Development Schedule

4.2.1 It is proposed to provide a residential development at this site, comprising up to 90 dwellings.

4.3 Site Access Arrangements

4.3.1 Vehicular, along with pedestrian and cycle access, will be achieved from Lovedean Lane. A new priority junction is proposed, which will result in a slightly off-set crossroads type arrangement being established between Lovedean Lane / Yoells Lane and the proposed site access junction.

4.3.2 The junction has been designed in accordance with Manual for Streets (MfS) for a 60kph (37.5mph) design speed. This design methodology is appropriate for the recorded 85th percentile wet weather vehicle speeds along Lovedean Lane and there are no Departures from Standard sought with the proposed design. The design has previously been agreed with HCC under the pre-application design review process.

4.3.3 The proposed access is shown in principle on i-Transport drawing number **ITB11383-GA-101 Rev A**. A summary of the key features of the proposed site access is provided below, whilst an extract of drawing number **ITB11383-GA-101 Rev A** is provided at **Image 4.1**.

- 5.5m wide carriageway width;
- 2m footways on either side of the carriageway, which tie into the existing footways on either side of Lovedean Lane;
- 8m kerb radii; and
- 2.4m x 59.0m visibility splays in either direction along Lovedean Lane (plotted to an offset of 0.5m).

4.3.4 In addition, to facilitate safe pedestrian crossing of the carriageway, two dropped kerb pedestrian crossings are proposed to the north and south of the proposed junction respectively.

4.3.7 Sweep path analysis has been undertaken using the relevant super large refuse vehicle. The details are shown on **drawing number ITB11383-GA-102 Rev A**.

4.3.8 The proposed junction has also been tested with sweep path analysis using a scenario where large private cars wish to access the site. The drawing is presented as on **drawing number ITB11383-GA-104 Rev A** and demonstrates that the slightly off-set crossroads arrangement results in a 'non-hooking' right / left stagger where all movements can safely interact.

4.3.9 The design of the proposed site access was subject to a Stage 1 Road Safety Audit (compliant with what is now GG 119). The road safety audit is presented at **Appendix C**. Both of the commissioned Auditor's recommendations were accepted and a package of specific measures suggested in response, as noted with integral designer's response.

4.4 Site Layout and Parking Provision

4.4.1 A site layout will be prepared to accompany the planning application. The internal roads will be designed in accordance with the principles of MfS and built to adoptable standards. The TA will describe and demonstrate the suitability of the proposed site layout, including providing evidence on street geometry, visibility, service vehicle access, refuse arrangements and emergency vehicle access.

4.4.2 Sweep path analysis of the internal site layout will be carried out for a refuse vehicle and a fire tender, and the efficient operation of any car parking spaces.

4.4.3 The TA will demonstrate how sufficient and satisfactory parking will be provided. Car and cycle parking will be provided in accordance with the standards set out in the East Hampshire District Council 'Vehicle Parking Standards' SPD.

Image 4.1: Proposed Site Access Junction



Source: Extract of i-Transport drawing number **ITB11383-GA-101 Rev A**

4.3.5 The proposed site access was submitted to HCC as part of the Pre-Application Design Check Review process and was subsequently agreed 'in principle'. HCC produced a Pre-Application Design Check Report (**Appendix B**) which identified the following points to be addressed at the next stage:

- Ensuring the site access road has a level gradient for 15m;
- Consider re-surfacing Yoells Lane to provide a high skid resistant surface course;
- Assess drainage at the junction;
- Relocate telegraph poles from within junction;
- Consider parking restrictions within junction; and
- Re-align access road 'as far south as possible' to reduce 'see through' issue.

4.3.6 All points have been incorporated into the proposed access arrangement shown on **drawing ITB11383-GA-101 Rev A**. The re-alignment of the junction 'as far as possible' south is to be viewed within the context of HCC's acceptance of the 'crossroads form' of junction and whilst the scope for realignment is limited, the design has been rotated within the site boundary and a much alignment has been achieved which creates a 4m stagger and eliminates the 'see through' issue.

SECTION 5 PROMOTING SUSTAINABLE TRANSPORT

5.1 Introduction

5.1.1 This section of the TA will provide a review of the accessibility of the proposed development to local facilities by walking, cycling and public transport including employment, leisure and shopping.

5.2 Walking and Cycling

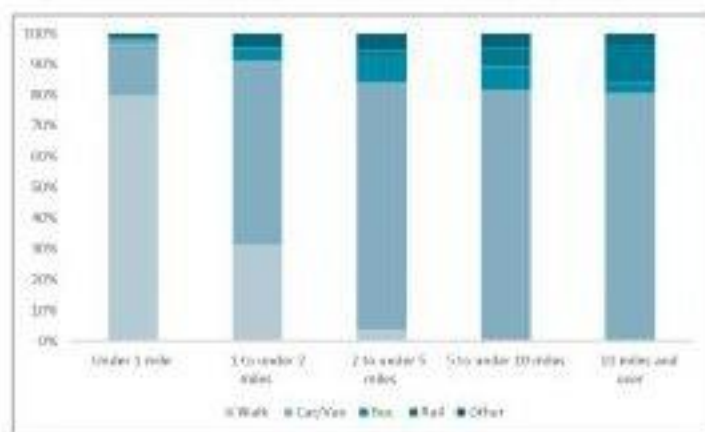
Walking Distances

5.2.1 Paragraph 4.4.1 of the Manual for Streets identifies that "Walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes (up to about 800 m) walking distance of residential areas".

5.2.2 MfS continues to note "this is not an upper limit and PP613 states that walking offers the greatest potential to replace short car trips, particularly those under 2km."

5.2.3 The National Travel Survey (NTS) 2018 identifies the mode share journeys of different lengths. This is repeated in **Image 5.1** and demonstrates that the vast majority (80%) of trips of up to one mile (1.6km) are undertaken on foot for journeys. This is corroborated by the CHT guidance 'Planning for Walking'. The NTS data also shows that 32% of journeys between 1 and 2 miles will be on foot, i.e. a significant proportion of people are prepared to walk for journeys of up to 2 miles (3.2km).

Image 5.1: Mode Share of Trips by Main Mode for Different Trip Lengths: England



Source: NTS 2016 (NTS0308)

- 5.2.4 DMRB TD91/05 'Provision for Non-Motorised Users' identifies that walking is a 'normal' mode of transport for journeys undertaken within a range of two miles:

"Walking is used to access a wide variety of destinations including educational facilities, shops, and places of work, normally within a range of up to 2 miles. Walking and rambling can also be undertaken as a leisure activity, often over longer distances". (Para 2.3)

- 5.2.5 Against all of this background, the following walking distances are identified and will be used in the TA:

- Up to **800m** – A comfortable walking distance;
- Up to **2,000m** – A reasonable walking distance i.e. the distance that 'offers the greatest potential to replace short car trips', and where the majority of trips are undertaken on foot; and
- Up to **3,200m** – A maximum regular walking distance i.e. the distance within which a significant proportion (circa one-third) of journeys will be on foot.

Cycling Distances

- 5.2.6 Paragraph 1.5.1 of LTN 02/08 'Cycle Infrastructure Design' discusses typical cycle trip distances and states that local highway networks are primarily for local journeys and many utility cycle journeys are

under three miles (4.8km) although for commuter journeys a trip distance of 5 miles (8km) is not uncommon.

- 5.2.7 DMRB TA 91/95 'Provision for Non-Motorised Users' paragraph 2.11 states:

"Cycling is used for accessing a variety of different destinations, including educational facilities, shops and places of work, up to a range of around 5 miles. Cycling is also undertaken as a leisure activity, often over much longer distances. As well as being a mode of transport in its own right, cycling frequently forms part of a journey in combination with cars and public transport."

- 5.2.8 The National Travel Survey 2016 (NTS0308) identifies that the average trip length by bicycle is 3.5 miles, or 5.6km.

- 5.2.9 A cycling distance of up to around 5km (3 miles) therefore offers the greatest potential to replace car trips and is therefore a 'reasonable' cycling distance although a number of cycle journeys may be longer at 8km (5 miles). Cycling also frequently forms part of a longer journey in combination with public transport.

- 5.2.10 For the purposes of the proposed assessment, a 5km cycling distance is considered to represent a 'reasonable' cycle distance, with 8km considered to be a 'maximum' cycling distance.

5.3 Local Facilities and Services

- 5.3.1 The location of existing facilities and services in the local area is shown in **Figure 2**.

- 5.3.2 **Table 5.1** provides an assessment of the travel distance to reach the identified local facilities, and the time such journeys would take by walking and cycling.

Table 5.1: Local Facilities and Services

Destination Type	Destination		Approx. Distance (m)	Walking Time (Minutes)	Cycling Time (Minutes)
Education	Woodcroft Pre-School	ED1	800	10	3
	Woodcroft Primary School	ED2	800	10	3
	Homdean Technology College	ED3	1600	19	6
	Homdean Infants and Junior School	ED4	2000	24	8
Health	Rowlands Pharmacy	H1	700	8	3
	The Village Practice, Complain Surgery	H2	1800	21	7
	Complain Dental Practice	H3	1800	21	7
Retail	Central Convenience Store	R1	350	7	2
	Tesco Express	R2	600	7	2
	Costcutter	R3	750	9	3
	Co-Op Store	R4	1300	15	5
	Monsoons	R5	2200	26	8
Employment	Widess Gate Industrial Estate	E1	1700	20	6
	Westfield Industrial Estate	E2	2000	24	8
Leisure	Lovedean Village Hall	L1	580	7	1
	The Bird in Hand Pub	L2	800	10	3
	Jubilee Hall Community Centre	L3	1500	18	6
	Crouch Lane Park	L4	1500	18	6
	Adon Community Centre	L5	1700	20	6
	Homdean Football and Social Club	L6	2300	27	9
	Five Heads Recreation Ground	L7	2400	29	9

Source: Consultants Estimates

- 5.3.3 **Table 5.1** demonstrates that the site is in an accessible location with a large range of everyday facilities located within a reasonable walking and cycling distance of the site.

SECTION 6 TRAFFIC IMPACT

- 6.1 This section of the TA will identify the traffic parameters and approach that will be used to assess the traffic impact of the proposed development on the local highway network during the morning and evening peak periods.

6.2 Proposed Development – Trip Generation

- 6.2.1 In order to determine the likely vehicular traffic generation of the proposed residential development, the TRICS database has been interrogated. The trip rates have been obtained using the following parameters:

- **Region** – all of England (excluding Greater London);
- **Size Relevance** – developments with a range of 50 to 100 dwellings;
- **Time Period** – surveys for the last 7-year period;
- **Location Relevance** – surveys in 'suburban' / 'edge of town' locations only; and
- **Date Relevance** – surveys undertaken during week days only.

- 6.2.2 A summary of the vehicular trip rates is provided in **Table 6.1**, and the full TRICS output report is presented in **Appendix D**.

Table 6.1: Proposed Traffic Generation – Residential

	Morning Peak (0800-0900)			Evening Peak (1700-1800)			Daily (0700-1900)		
	Arrive	Depart	Total	Arrive	Depart	Total	Arrive	Depart	Total
Trip Rate	0.134	0.407	0.541	0.352	0.158	0.510	2.225	2.184	4.527
Trips	12	37	49	32	14	46	200	207	407

Source: TRICS

- 6.2.3 **Table 6.1** demonstrates that the proposed residential development at the site is likely to generate some 49 two-way vehicle movements in the morning peak period and some 46 two-way movements during the evening peak period. This broadly equates to one additional vehicle movement every one and a quarter minutes in the morning and evening peak periods respectively.

6.3 Traffic Distribution and Assignment

6.3.1 To distribute the development generated traffic onto the local highway network, data will be obtained from the National Travel Survey (NTS) 2018 and Nominet (2011 Census data). The traffic likely to be generated by the development proposal will then be assigned to the local highway network in the following formats:

- Commuting journeys will be assigned using a distribution model derived from 2011 Census 'Travel to Work Data', and
- Non-commuting journeys will be assigned using a distribution derived from a 2/T² gravity model within a 40-minute drive time of the site.

6.3.2 The two sets of data will then be combined to generate a single set of distribution parameters to inform the development assignment. A summary of the proposed traffic distribution and assignment will be provided in a table within the TA and illustrated as figures.

6.4 Traffic Growth and Committed Development

6.4.1 Factors to allow for background traffic growth from 2019 (the year the traffic surveys will be undertaken) to 2022 (the year of opening) have been derived using the TEMPRO software for the East Hampshire 014 mid-layer super output area. A 2024 (five years after submission) sensitivity scenario will also be assessed. Whilst there is no national or local guidance supporting this assessment, the applicant is aware that HCC often initiates it.

6.4.2 The TEMPRO growth factors are summarised in **Table 6.2** and the TEMPRO calculations are provided in **Appendix E**.

Table 6.2: TEMPRO Derived Growth Factors

Growth Factor	Morning Peak	Evening Peak
2019-2022	1.03857	1.037261
2019-2024	1.067455	1.066855

Source: TEMPRO

6.4.3 HCC is requested to advise on any committed developments that need to be considered within the TA.

SECTION 7 SUMMARY

7.1 This Transport Assessment Scoping Note sets out the proposed methodology and parameters for a TA to assess the transport and highways implications of a residential development on land off Lovedean Lane in Waterlooville. The proposed development would see the construction of up to 90 dwellings, with access in a form previously agreed with HCC.

7.2 Agreement is sought from HCC that the parameters and suggested approach identified in this report are acceptable to enable the production of the TA on an agreed basis.

6.5 Junction Capacity Testing

6.5.1 The proposed development will generate around one to two additional vehicle movements per minute onto the local highway network during the peak hours.

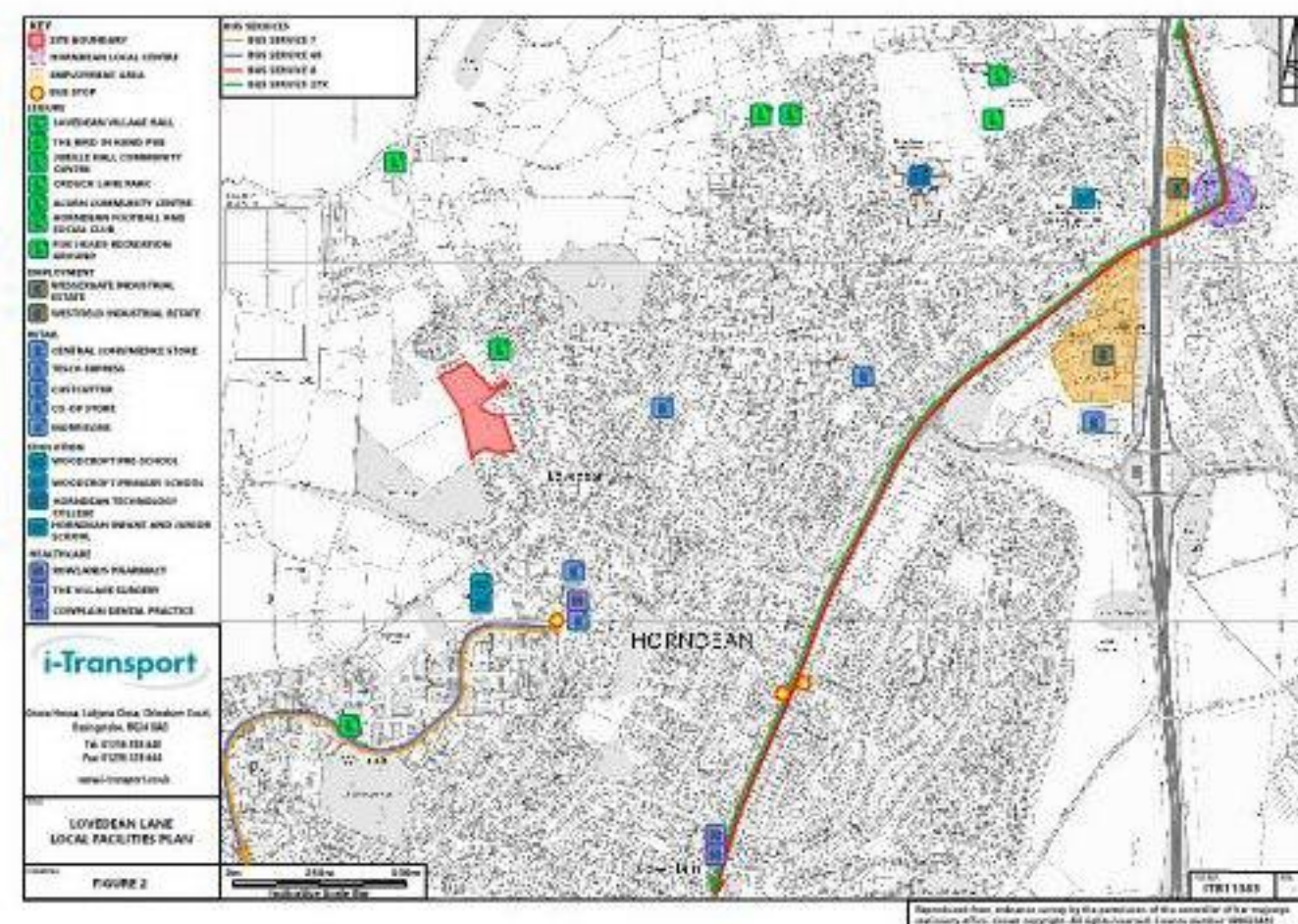
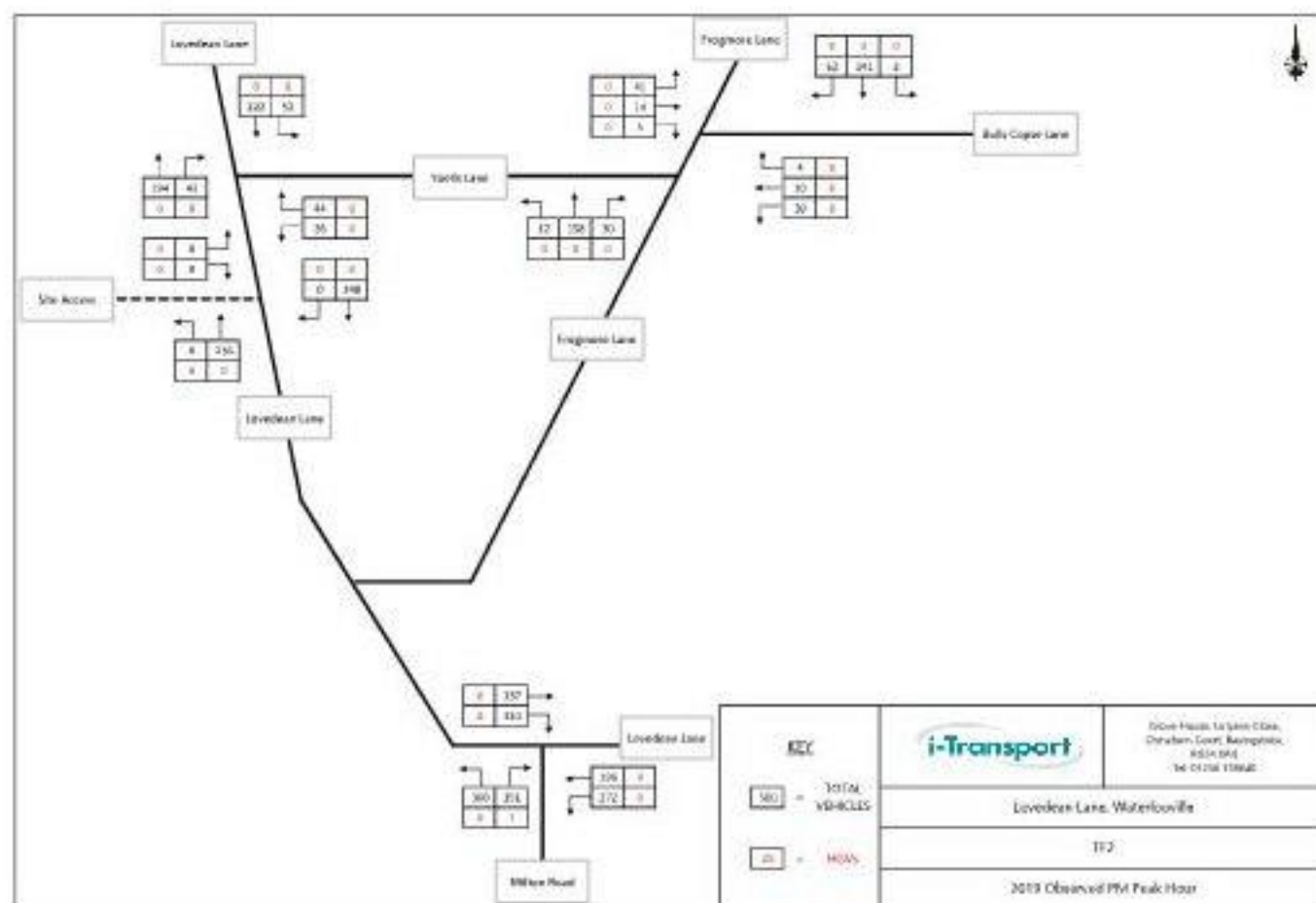
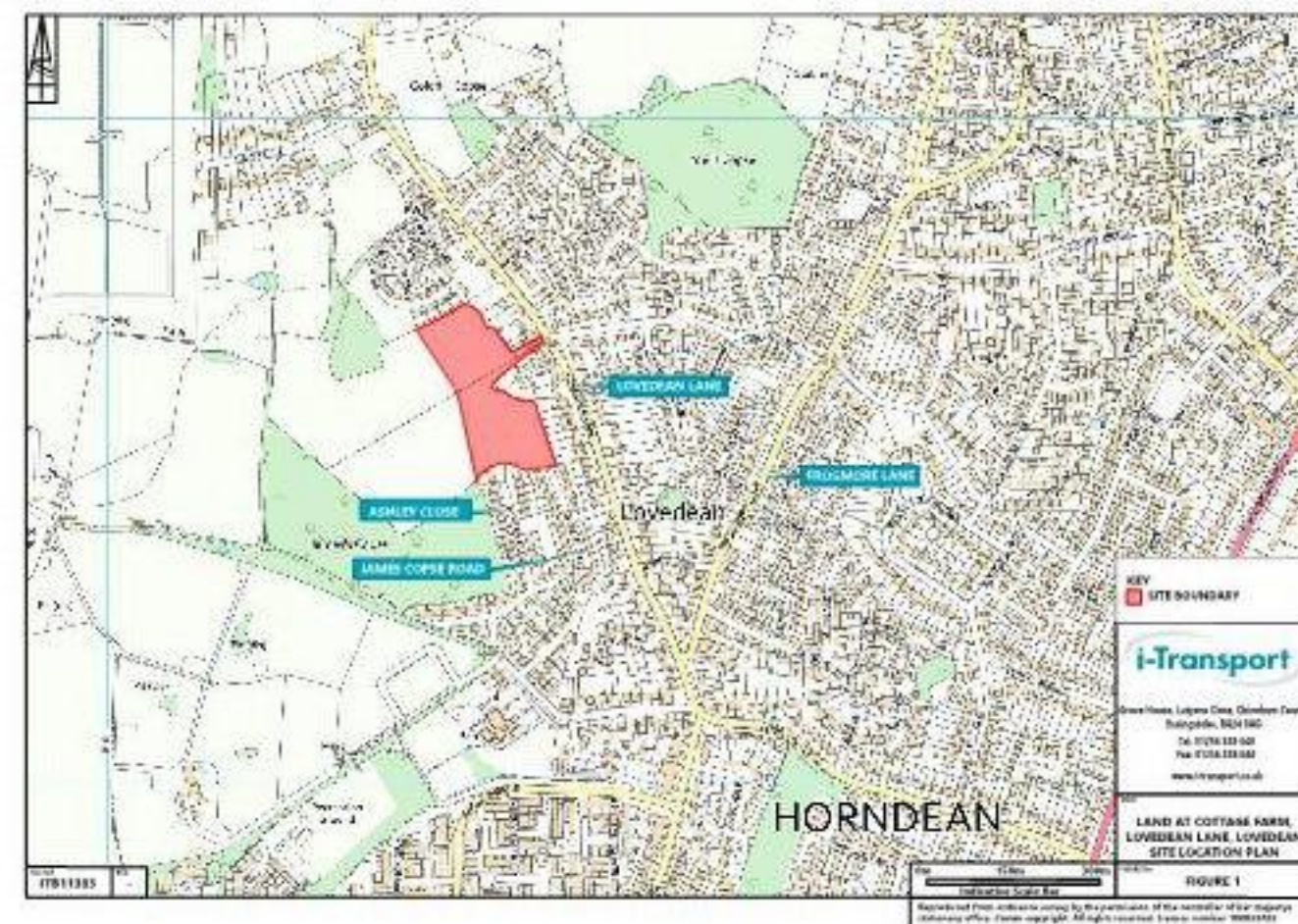
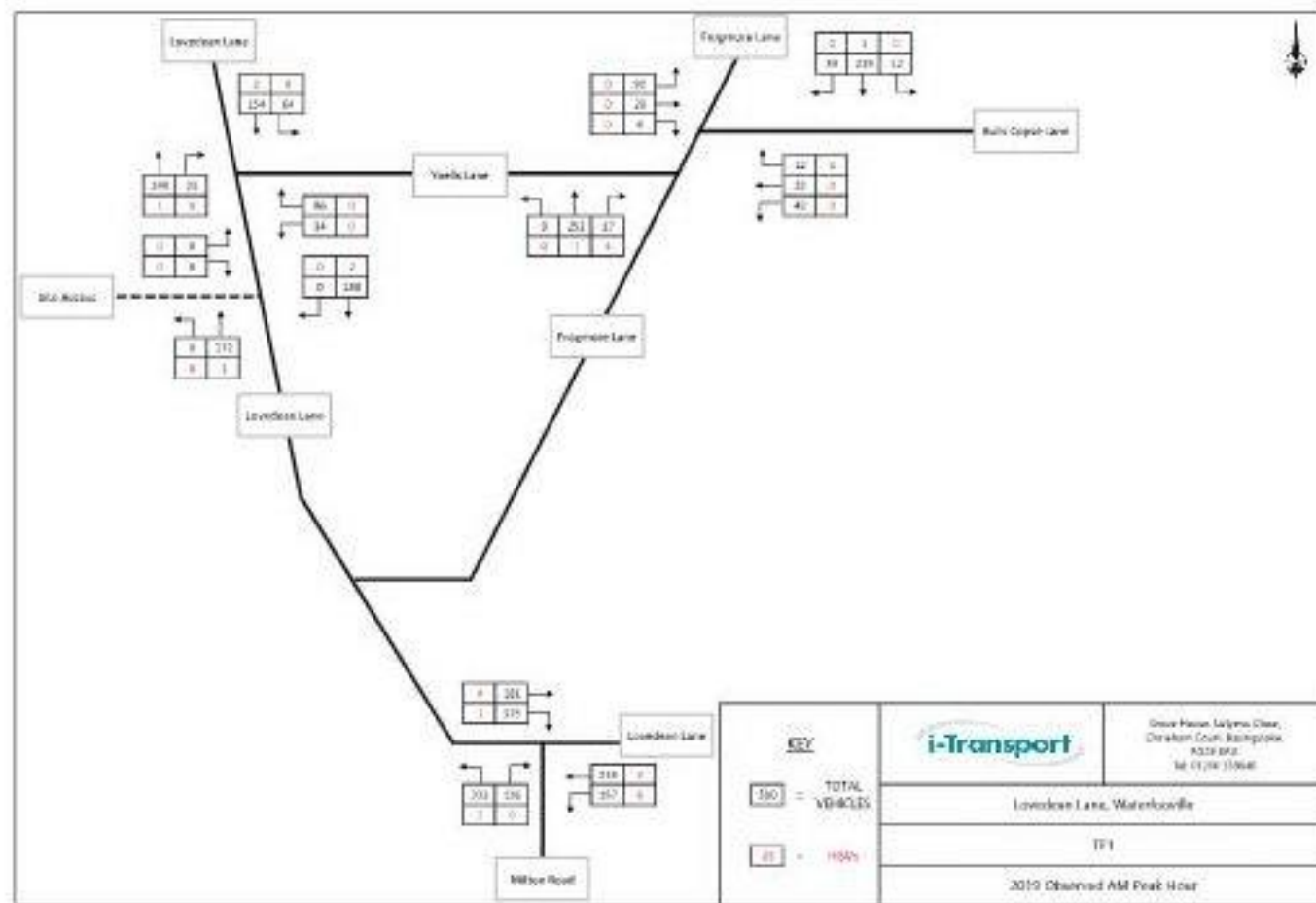
6.5.2 Notwithstanding this it is proposed to assess the impact of the development generated traffic on the proposed site access junction with Yorks Lane and Lovedean Lane using Junctions 9 software.

6.5.3 The detailed modelling will be undertaken considering the following:

- 2019 base year,
- 2022 future year, and
- 2022 future year with development.

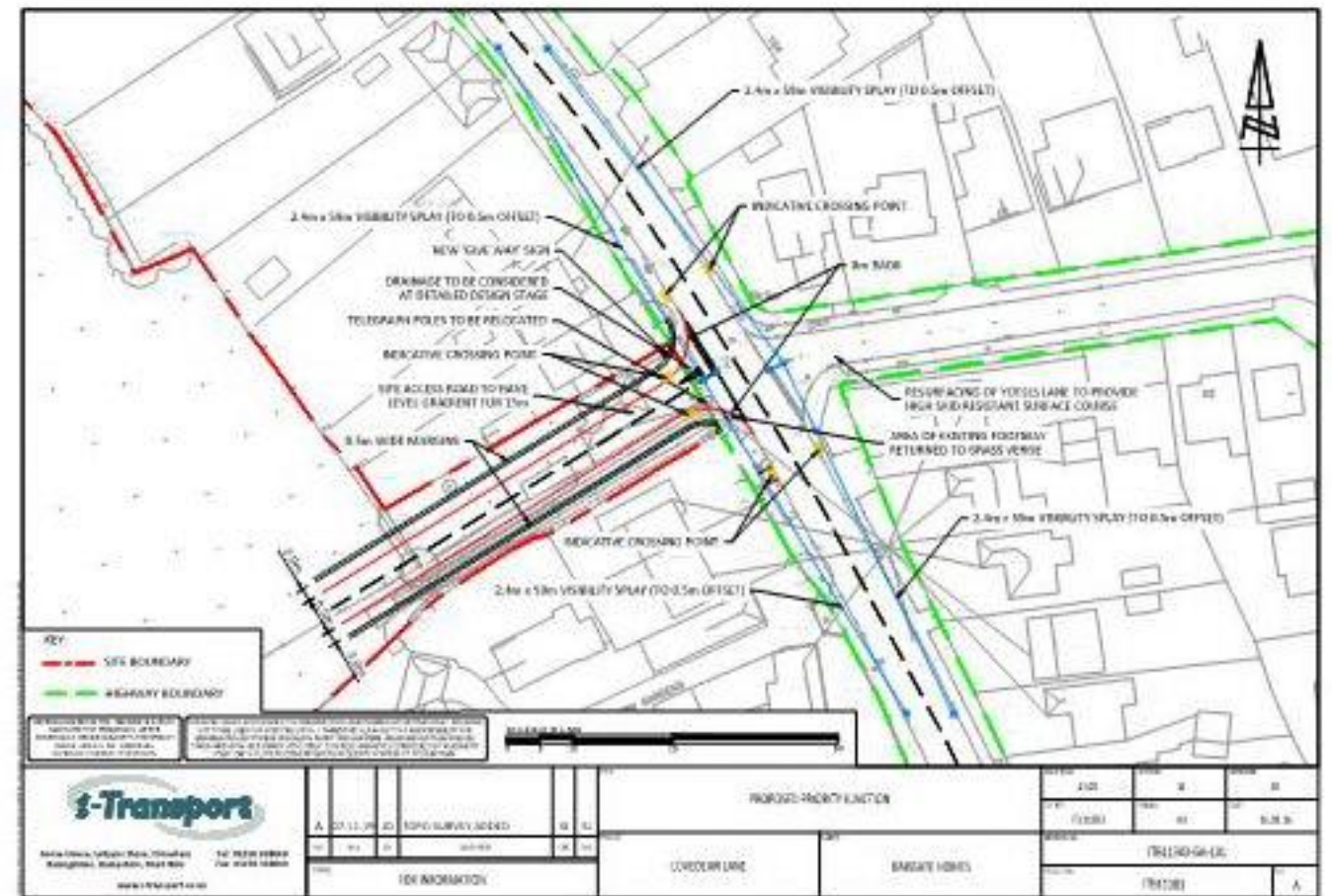
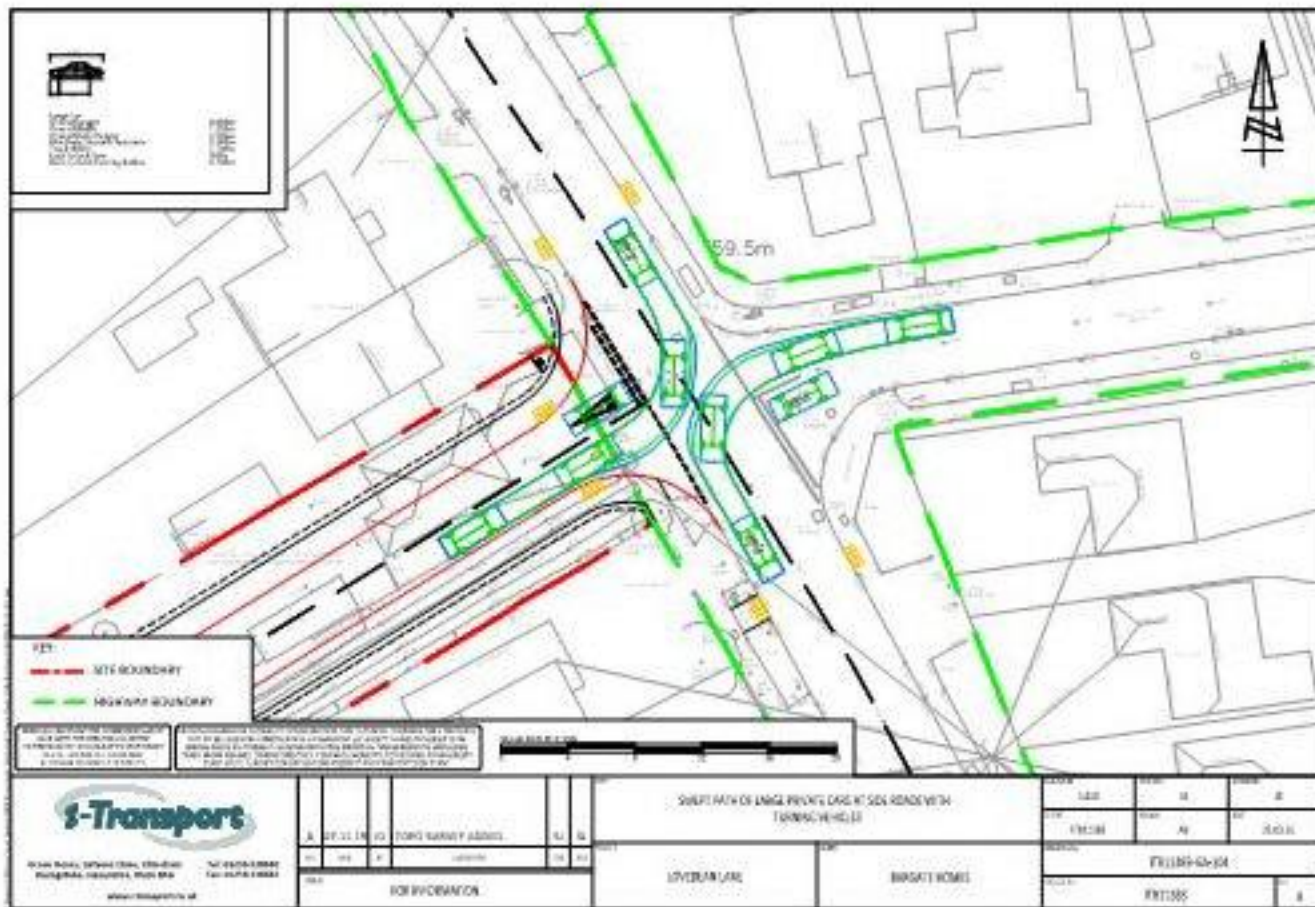
6.5.4 A 2024 sensitivity test will also be undertaken for information only.

FIGURES





DRAWINGS





PIA data request: Lovedean Lane, Frogmore Lane & Yoells Lane, Lovedean, Waterlooville.

APPENDIX A. PERSONAL INJURY ACCIDENT STUDY AREA

APPENDIX B. HCC'S PRE-APPLICATION DESIGN CHECK REPORT

Lovedean Lane, Horndean

Pre-Application Design Review Report

Job No: R.J505862 (JZA1U)
Report No: R.J505862 -A



engineering
CONSULTANCY

Stuart Jarvis BSc DipTP FCIHT MRTPI
Director of Economy, Transport and Environment, The Castle, Winchester

Scheme title

Prepared by: Dave O'Shea

Signed:

18/4/16

Checked by: Graham Redman

Signed:

18/4/16

Report issued to Development Planning

Officer: Andrew Lubman

Date:

18/4/16

REPORT EXPIRY DATE: April 2018

CONTENTS

1. Scheme Details	4
1.1. CONSULTANT DETAILS	4
1.2. DEVELOPER	4
1.3. SCHEME LOCATION	4
1.4. DESCRIPTION OF HIGHWAY IMPROVEMENTS	4
1.5. ESTIMATE	4
1.6. SUBMITTED INFORMATION	4
1.6.1. Drawings	4
1.6.2. Documents	4
2. Design Check Details	5
2.1. DATE DOCUMENTS RECEIVED FROM DEVELOPMENT PLANNING	5
2.2. DATE REVIEW MEETING WAS HELD	5
2.3. INTERNAL CONSULTATIONS	5
2.4. QUALITY OF DRAWINGS ETC. PROVIDED	5
3. Comments on Design	6
3.1. HORIZONTAL ALIGNMENT	6
3.2. VERTICAL ALIGNMENT	6
3.3. DRAINAGE	6
3.4. STREET LIGHTING	6
3.5. SIGHT TRIANGLES	6
4. STATUTORY REQUIREMENTS	7
5. future submissions	8
5.1. GUIDANCE	8
5.2. CONSIDERATIONS	8
5.2.1. Officers	8
5.2.2. Preliminary Design Check	8
5.2.3. Combined Design Check	8
6. Recommendation on Proposals	11

1. Scheme Details**1.1. Consultant Details**

Name: i-Transport
 Address: Grove House, Lutyens Close, Chichester Court, Basingstoke RG24 8AG
 Tel: 01256 316516
 Contact: Steve Jenkins

1.2. Developer

Name: Bargate Home
 Address: TBA

1.3. Scheme Location

Lovedean Lane at its junction with Yoells Lane

1.4. Description of Highway Improvements

New priority junction and pedestrian crossing facilities.

1.5. Estimate

Not provided.

1.6. Submitted Information**1.6.1. Drawings**

Drawing no.	Rev	Drawing Title	Date Received
ITB11383-GA-101	-	Proposed priority junction	7/4/16
ITB11383-GA-102	-	Swept path analysis	7/4/16
ITB11383-GA-104	-	Swept path of large private cars at side roads with turning vehicles	7/4/16

1.6.2. Documents

Document no.	Rev	Document Title	Date Received
SJ/ITB11383-101 TN	-	Technical note – includes GA, RSA Stage 1, speed data, traffic data, traffic accident figures and swept paths	7/4/16

2. DESIGN CHECK DETAILS**2.1. Date documents received from Development Planning**

7th April 2016

2.2. Date review meeting was held

Review meeting not necessary.

2.3. Internal Consultations

Informal discussions were held with safety Engineering as part of the review.

2.4. Quality of Drawings etc. provided

Drawings and documents provided are acceptable for Pre app design check to be undertaken.

3. COMMENTS ON DESIGN

3.1. Horizontal Alignment

Location of proposed priority junction is opposite the existing Yoells lane junction, thus creating a crossroads. Referring to Table 2/1 in TD42/95, a crossroads junction is considered an appropriate type of junction in this situation.

There is concern that the new junction may create a see through issue when approaching from the Yoells Lane arm, which is also raised in the Stage 1 Road Safety Audit.

The 85th percentile wet weather measured speeds are below 37.5mph, therefore Manual for Streets visibility standards apply. Appropriate junction visibility has been provided in relation to the recorded speeds.

3.2. Vertical Alignment

From site observation on the 15th April 2016, the proposed site access will have an uphill gradient approach. Referring to 3.6 and 3.7 TD42/95, a level section of 15m should be created adjacent to the major road.

The approach on Yoells lane arm to the major road has significant downhill approach, due to land constraints it is not feasible to re-grade the approach. However it should be considered at the Preliminary and detailed design stages, to resurface the approach of Yoells Lane with high skid resistant surface course. This should be at least 15m into the junction.

3.3. Drainage

Given the vertical alignment of Yoells Lane, naturally a significant amount of surface water falls towards Lovedean Lane. With the proposals creating a crossroads, the drainage at the entire crossroad junction should be assessed and upgraded as required at the preliminary and detailed design stages.

3.4. Street Lighting

An assessment of the street lighting should be undertaken at the Preliminary design stage and be in accordance with HCC's Street Lighting guidance.

3.5. Sight Visibilities

With the creation of a crossroads, the junction should be unobscured by any significant street furniture such as Telegraph poles which are currently sited within the junction area. In addition, parking restrictions should be considered to ensure that junction intervisibility is provided between all arms and proposed pedestrian crossing points.

4. STATUTORY REQUIREMENTS

Orders, (line / side road)	N / A
Compulsory Purchase Orders.	N / A
Traffic Regulation Orders.	N / A
Parking Restriction Orders.	YES – Refer to comments in sight visibilities in section 3.4
Road Hump Regulation Consultations.	N / A
Public Consultation.	Yes – All adjacent properties should be consulted regarding the junction proposals.
Hedgerow Regulation Act.	N / A
Footway Conversion	N / A

The process of any Statutory requirements will not be commenced until a written request is received from the Consultant; this should include an undertaking to pay all costs incurred.

Consultant to note that the procedure for dealing with any Statutory Requirements will normally take some four to six months, but in exceptional circumstances could exceed nine months. The scheme programme should take this into account.

Initial contact should be made with the Assistant Service Manager for Area

Office	Tel	Email
North	01256 764455	highways-transport.north@hants.gov.uk
East	01730 235800	highways-transport.east@hants.gov.uk
South	01329 824757	highways-transport.south@hants.gov.uk
West	023 8066 3311	highways-transport.west@hants.gov.uk

5. FUTURE SUBMISSIONS

5.1. Guidance

Consultant shall note that any future preliminary, combined or detail design submissions must be made in accordance with HCC's Section 278 Technical Submission Guidance, which can be found together with other important information for developers at:

<http://www3.hants.gov.uk/roads/highways-developers/construction-standards.htm>

5.2. Considerations

The comments below are to assist the Consultant in future submissions:

5.2.1. Officers

It is suggested that the proposed access is located far south as possible, this would move the junction away from the sightline from the straight section of Yoells lane. In addition, signing and roadmarking measures should be introduced to highlight that there is a Give way priority junction ahead.

During the preliminary design stage, consultant should identify bus routes (including local school routes) and gritting routes and consult with the relevant body regarding the proposals.

5.2.2. Preliminary Design Check

Sight visibilities / Land Plan

Consultant to confirm that all land required for visibility splays will be dedicated to the Highway Authority. A plan showing extent of existing highway, new development land for adoption and any third party land required is required.

Departures from DMRB / HCC Standards.

The Consultant is to provide an explanation of the case for inclusion of any departures or relaxations to standards proposed, together with an assessment of risks involved in adopting such proposals, along with any mitigation measures proposed. An independent safety auditor's comment is also required.

The developer shall note that departures or relaxations will not be approved if their inclusion is considered inappropriate. Where proposals have been recommended for approval which are subsequently found to contain 'departures from standards' not previously indicated by the Developers Consultant it must be noted that acceptance of retrospective applications cannot be guaranteed.

Traffic speed surveys

The existing speed limit is to be confirmed. The 85th percentile speed of the site required if any Departures from Standard are included within proposals or if Consultant is applying Manual for Streets criteria.

Accident History Report.

The Consultant shall provide a narrative of the Accident History Report (5 years) from Hampshire Constabulary, contact the Force Statistical Officer (0845 045 4545) and identify any trends that are addressed by the proposals or that could exacerbated.

5.2.3. Combined Design Check

HCC Standard Detail Drawing/Specification

The Consultant shall provide a list of HCC Standard Details, including Revision suffix, relevant to the works. It should be noted that

The latest HCC standard details may be found at:

<http://www3.hants.gov.uk/roads/highways-developers/construction-standards/standard-details.htm>

Also, for all but the smallest schemes a Contract Document will be required. The Consultant must confirm they have based their specification on the latest HCC model contract document. This specification can be supplied, but will need to be made 'scheme specific'.

Road Markings and Signing

Submission to be in accordance with the Traffic Sign Regulations & General Directions and any Highway Authority's requirements. A fully detailed sign schedule will be required for larger schemes.

Pavement Design

The Sub-Base shall be recycled granular material in accordance with HCC Clauses 891AR or 892 AR (Hampshire County Council Master Contract Documents). Virgin crushed rock Sub-Base may only be used where it can be demonstrated that recycled or secondary materials are not available locally.

Furthermore, during the first week of construction work equilibrium CBR values shall be established.

Street Lighting Proposals.

The consultant should note that Southern Electric Contracting will not undertake any servicing works until a 'Certificate of Approval for Illuminated Street Furniture Installation' has been signed the HCC Street Lighting Engineer.

It is a requirement of the Consultant to consult the relevant Local Lighting Authority regarding any proposals. Written confirmation of the consultation will be required prior to commencement of works on site.

<http://www3.hants.gov.uk/index/your-area/local/pages/districts.htm> or
<http://www3.hants.gov.uk/index/council/localgov/parish.htm>

Drainage Proposals

To promote the use of recycled plastic, please consider HAPAS certified recycled plastics, such as twinwall drainage piping. Installation of such piping should be installed as per manufacturers recommendations.

Jetting of new drainage runs may be necessary at end of contract, in order to ensure all new pipe-work is free of debris and free running.

6. RECOMMENDATION ON PROPOSALS

RECOMMENDED TWO STAGE APPROACH

LOVEDEAN LANE HORNDEAN

PROPOSED PRIORITY JUNCTION

STAGE 1 ROAD SAFETY AUDIT

MARCH 2016

Revision Status	Prepared by: (Name)	Checked by: (Name)	Approved	Date Approved:
Original	Mark Barrett	Ian Medd		31 March 2016
Designer's Response	Steve Jenkins	James Bevis		1 April 2016
Authority's Response				
Audit Response				

Client:
I-TRANSPORT

Engineer:
**GM
Traffic Consultants Ltd**
2 Brook Close
North Baddesley
SO52 9FJ

Date: 31 March 2016

Road Safety Audit – Stage 1
Lovedean Lane, Horndean
Proposed Priority Junction

1.0 INTRODUCTION

1.1 General

- 1.1.1 This report results from a Stage 1 Road Safety Audit (RSA) carried out on the proposed priority junction on Lovedean Lane in Horndean. The access would serve a residential development of up to 50 dwellings.
- 1.1.2 The junction would be 'off-set' just to the north of Yoell's Lane to create a slight right / left stagger. New footway links are proposed from the site to link to existing footways on Lovedean Lane with informal tactile paved crossing points.
- 1.1.3 The RSA was carried out at the request of I - Transport.
- 1.1.4 GM Traffic Consultants Ltd carried out the Audit on 31st March 2016. The Auditors were:
Mark Barrett Highways England Cert. of Comp.
Ian Medd FSoRSA
- 1.1.5 The Audit Team are independent of the project design team and has had no other involvement with the project.
- 1.1.6 The report has been prepared in accordance with the Design Manual for Roads and Bridges (DMRB) Highways Directive (HD) 19/15.
- 1.1.7 Whilst reference is made to certain design standards, where safety may be compromised by a reduction in standard, this report is not intended to provide a design check. The Auditors have only reported on matters that might have an adverse effect on road safety in the context of the chosen design. No attempt has been made to comment on the justification of the scheme or the appropriateness of the design. Consequently, the Auditors accept no responsibility for the design or construction of the scheme.
- 1.1.8 The Audit consisted of a desktop study and a site visit, which was carried out on Thursday 31st March 2016 between 10:30 and 11:00 where traffic was light and weather sunny and dry.
- 1.1.9 The recommendations in this report are aimed at addressing the road safety problems; however there may be other alternative acceptable ways to overcome a specific problem, when other practical issues are considered. The recommendations contained herein do not absolve the Designer of his/her responsibilities.

TABLE OF CONTENTS

1.0 INTRODUCTION.....	3
2.0 ITEMS CONSIDERED.....	5
3.0 MATTERS ARISING FROM THIS STAGE 1 RSA.....	6
4.0 AUDITOR STATEMENT.....	7

APPENDIX A	Location Plan
APPENDIX B	Designers Response
APPENDIX C	Local Highway Authority Response

Road Safety Audit – Stage 1
Lovedean Lane, Horndean
Proposed Priority Junction

- 1.1.10 The Auditors would be pleased to discuss the acceptability of alternative solutions to problems identified during the Audit, and would encourage the Designer to consult them on this matter.
- 1.1.11 The LHA response to the RSA should be formally recorded and reported to the Designer and the RSA Team so that a record of the Audit process is contained in the As Built design pack to be provided and retained by the LHA on final completion.

2.0 ITEMS CONSIDERED

2.1 The Road Safety Audit was undertaken on the scheme detailed in the following documentation..

Drawing No.	Rev	Title
ITB11383-GA-101	-	Proposed Priority Junction
ITB11383-GA-004	-	Swept Path Of Large Private Cars At Side Roads With Turning Vehicle
Figure 1	-	Lovedean Lane Site Boundary Plan
JB/SJ/ITB11383 - 002 TN	-	Road Safety Brief

2.2 The Audit Team have not been informed of any Departure from Standards.

3.0 MATTERS ARISING FROM THIS STAGE 1 RSA

3.1 PROBLEM

LOCATION: Site access

SUMMARY: No crossing facilities

There are no crossing facilities for pedestrians crossing the site access. This may result in pedestrians tripping on full height kerbs.

RECOMMENDATION

Provide dropped kerb and tactile paving either side of the access.

3.2 PROBLEM

LOCATION: Site access

SUMMARY: Risk of vehicles overshooting junction

The proximity of the proposed development access to Yoell's Lane may create a "see through" issue such that motorists unfamiliar with the area may fail to recognise the need to yield and collide with traffic on Lovedean Lane.

RECOMMENDATION

At detailed design provide measures which clearly define priorities at the junction. Alternatively relocate the development access further away from Yoell's Lane.

4.0 AUDITOR STATEMENT

4.1 I certify that this audit has been carried out in compliance with HD 19/15.

AUDIT TEAM LEADER

Mark Barrett

GM Traffic Consultants Ltd

Signed: 

TEL: 07787 158 834

AUDIT TEAM MEMBER

Ian Medd

Signed: 

Date: 31 March 2016

APPENDIX B: DESIGNERS RESPONSE

Auditors: Mark Barrett (Team Leader) and Ian Medd (Team Member)

Scheme: Lovedean Lane, Horndean – Proposed Priority Junction

Date Audit Completed: 31 March 2016

This response is to a Stage 1 Road Safety Audit to the design standard detailed within HD19/10 of Volume 5, Section 2, Part 2, of the Design Manual for Roads and Bridges, as detailed by the Highways Agency.

Problem no. in safety audit report	Problem accepted (Green)	Recommended measure accepted (Green)	Alternative measure (detail description)
3.1	YES	YES	Dropped kerb and tactile paving will be provided.
3.2	YES	YES	The site access road will be designed in accordance with M15 and will include measures proven to influence driving speed (Ref: M15 Figure 7.16). This will include: i) Reducing the carriageway width ii) Including measures on the site access road e.g. a pinch

Road Safety Audit – Stage 1
Lovedean Lane, Horndean
Proposed Priority Junction

			point, slight chicanes or vertical deflection to ensure that traffic from the site approaching the give-way is travelling slowly thereby reducing the risk of 'overshooting'. As part of the reducing the site access carriageway with a slight realignment of the site access road to the south will be proposed, this will reduce forward visibility into Yoell's Lane and reduce the extent of any 'see through'. In addition to the proposed road markings the scheme will include 'give-way' signs on the site access road to clearly indicate priority arrangements. The Yoell's Lane approach is considered to have less potential for 'see through' or 'overshooting' due to the sloping geometry and forward visibility into the site access from Yoell's Lane. The potential to 'see through' the junction into the site access road does not become material until some 20m back from the give-way line, at that point traffic should have slowed significantly. The above realignment of the site access road will further reduce this. To accompany the design, existing road markings would be refreshed and the scheme will include 'give-way' signs at and in advance of the junction to clearly indicate priority arrangements.
--	--	--	--

Road Safety Audit – Stage 1
Lovedean Lane, Horndean
Proposed Priority Junction

APPENDIX A: LOCATION PLAN

Road Safety Audit – Stage 1
Lovedean Lane, Horndean
Proposed Priority Junction



Road Safety Audit – Stage 1
Lovedean Lane, Horndean
Proposed Priority Junction

--	--	--	--

APPENDIX C: LOCAL HIGHWAY AUTHORITY RESPONSE

Principal Engineer's Statement:

Road Safety Audit for Lovedean Lane, Horndean – Proposed Priority Junction

I certify that I have considered the items that have arisen in the Stage 1 Road Safety Audit Report and I am content to accept all of its recommendations except for the ones listed above. I have stated my reasons for not accepting them and I seek the Chief Engineer's endorsement of my proposals.

..... Date

Principal Engineer

Chief Engineer's Decision:

Road Safety Audit – Stage 1
Lovedean Lane, Horndean
Proposed Priority Junction

--	--	--	--

I accept these proposals by the Principal Engineer.

..... Date

Chief Engineer

Road Safety Audit – Stage 1
Lovedean Lane, Horndean
Proposed Priority Junction

APPENDIX D. TRICS OUTPUT

TRICS 7.6.3 260919 05/5/23 Database right of TRICS Consortium Limited, 2019. All rights reserved

Thursday 03/10/19
Page 1

T-Transport G-Gravel Roads B-Basingstoke

License No: 736993

Calculation Reference: AUDIT-236993-191603-1889

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use: 03 - RESIDENTIAL
Category: A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLES

Selected regions and sub-regions:

02 SOUTH EAST

HC HAMPSHIRE 1 days
KC KENT 1 days
SC SURREY 1 days

03 SOUTH WEST

DU DEVON 1 days

04 EAST ANGLIA

NP NORFOLK 1 days
SF SUFFOLK 1 days

06 WEST MIDLANDS

SH SHROPSHIRE 1 days

07 YORKSHIRE & NORTH LINCOLNSHIRE

NY NORTH YORKSHIRE 2 days

09 NORTH

DM DURHAM 1 days

This section displays the number of survey days per TRICS 6 sub-region in the selected set

Secondary Filtering selection:

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

Parameter: Number of dwellings
Actual Range: 51 to 99 (units)
Range Selected by User: 50 to 100 (units)

Parking Spaces Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/11 to 09/05/19

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

Selected survey days:

Monday 3 days
Tuesday 2 days
Thursday 4 days
Friday 1 days

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

Selected survey types:

Manual count 10 days
Directional ATC Count 4 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 (FFS6 Out of Centre) 6
Edge of Town 4

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

Selected location sub-categories:

Residential Zone 9
No Sub Category 1

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

Secondary Filtering selection:

Use Class:

C3 10 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2003 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

1,001 to 5,000 1 days
 5,001 to 10,000 3 days
 10,001 to 15,000 3 days
 15,001 to 20,000 3 days
 20,001 to 25,000 3 days

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

Population within 5 miles:

1,001 to 50,000 1 days
 50,001 to 100,000 2 days
 100,001 to 150,000 2 days
 150,001 to 200,000 2 days
 200,001 to 250,000 2 days

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

Car ownership within 5 miles:

1.1 to 1.5 10 days

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

Travel Plan:

Yes 2 days
 No 8 days

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

PTAL Rating:

No PTAL Present 10 days

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

LIST OF SITES relevant to selection parameters

1	OH-03-A-03	SEMI-DETACHED & TERRACED	DURHAM
	PILGRIMS WAY		
	DURHAM		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	57	
	Survey date: FRIDAY	19/10/18	Survey Type: MANUAL
2	DV-03-A-03	TERRACED & SEMI DETACHED	DEVON
	LOWER BRADB LANE		
	HONTON		
	Suburban Area (PPSG Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	70	
	Survey date: MONDAY	26/08/18	Survey Type: MANUAL
3	HC-03-A-20	HOUSES & FLATS	HAMPSHIRE
	CANADA WAY		
	LIPHOOK		
	Suburban Area (PPSG Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	62	
	Survey date: TUESDAY	20/11/18	Survey Type: MANUAL
4	KC-03-A-03	MIXED HOUSES & FLATS	KENT
	HITHE ROAD		
	ASHFORD		
	WOLLESBOROUGH		
	Suburban Area (PPSG Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	51	
	Survey date: THURSDAY	14/07/18	Survey Type: MANUAL
5	NP-03-A-02	HOUSES & FLATS	NORFOLK
	DERHAM ROAD		
	NORWICH		
	Suburban Area (PPSG Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	98	
	Survey date: MONDAY	22/10/12	Survey Type: MANUAL
6	NY-03-A-09	MIXED HOUSING	NORTH YORKSHIRE
	GRAPHAM SCHOOL LANE		
	NORTHALLERTON		
	Suburban Area (PPSG Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	52	
	Survey date: MONDAY	26/08/12	Survey Type: MANUAL
7	NY-03-A-10	HOUSES AND FLATS	NORTH YORKSHIRE
	BOROUGHBRIDGE ROAD		
	RIPON		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:	71	
	Survey date: TUESDAY	17/09/13	Survey Type: MANUAL
8	SC-03-A-04	DETACHED & TERRACED	SURREY
	HIGH ROAD		
	WFFLEET		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	71	
	Survey date: THURSDAY	20/01/14	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9	SP-03-A-07	MIXED HOUSES	SUFFOLK
	PODHALL ROAD		
	IPSWICH		
	Suburban Area (PPSG Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	73	
	Survey date: THURSDAY	09/05/19	Survey Type: MANUAL
10	SH-03-A-05	SEMI-DETACHED/TERRACED	SHROPSHIRE
	SANDCROFT		
	TELFORD		
	SUTTON HILL		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	54	
	Survey date: THURSDAY	26/10/13	Survey Type: MANUAL

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
OH-03-A-03	Low trip rates
DV-03-A-03	Low trip rates
HC-03-A-20	Low trip rates

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
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	10	62	0.080	10	66	0.251	10	66	0.331
06:00 - 06:30	10	66	0.134	10	66	0.402	10	66	0.536
06:30 - 07:00	10	66	0.143	10	66	0.184	10	66	0.327
07:00 - 07:30	10	66	0.103	10	66	0.163	10	66	0.266
07:30 - 08:00	10	66	0.152	10	66	0.143	10	66	0.295
08:00 - 08:30	10	66	0.167	10	66	0.143	10	66	0.310
08:30 - 09:00	10	66	0.168	10	66	0.175	10	66	0.343
09:00 - 09:30	10	66	0.190	10	66	0.187	10	66	0.378
09:30 - 10:00	10	66	0.256	10	66	0.158	10	66	0.414
10:00 - 10:30	10	66	0.275	10	66	0.170	10	66	0.445
10:30 - 11:00	10	66	0.332	10	66	0.178	10	66	0.510
11:00 - 11:30	10	66	0.250	10	66	0.146	10	66	0.396
11:30 - 12:00									
12:00 - 12:30									
12:30 - 13:00									
13:00 - 13:30									
13:30 - 14:00									
14:00 - 14:30									
14:30 - 15:00									
15:00 - 15:30									
15:30 - 16:00									
16:00 - 16:30									
16:30 - 17:00									
17:00 - 17:30									
17:30 - 18:00									
18:00 - 18:30									
18:30 - 19:00									
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 Hours			2.205			2.392			4.597

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, departures, 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 columns) are also displayed at the foot of the table.

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

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

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

Parameter summary

Trip rate parameter range selected:	51 - 98 (units:)
Survey date date range:	01/01/11 - 09/05/19
Number of weekdays (Monday-Friday):	10
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	2
Surveys manually removed from selection:	3

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TAXIS
 Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	88	0.000	10	88	0.000	10	88	0.000
08:00 - 09:00	10	88	0.000	10	88	0.000	10	88	0.000
09:00 - 10:00	10	88	0.000	10	88	0.000	10	88	0.000
10:00 - 11:00	10	88	0.000	10	88	0.000	10	88	0.000
11:00 - 12:00	10	88	0.000	10	88	0.000	10	88	0.000
12:00 - 13:00	10	88	0.000	10	88	0.000	10	88	0.000
13:00 - 14:00	10	88	0.000	10	88	0.000	10	88	0.000
14:00 - 15:00	10	88	0.000	10	88	0.000	10	88	0.000
15:00 - 16:00	10	88	0.000	10	88	0.000	10	88	0.000
16:00 - 17:00	10	88	0.000	10	88	0.000	10	88	0.000
17:00 - 18:00	10	88	0.000	10	88	0.000	10	88	0.000
18:00 - 19:00	10	88	0.000	10	88	0.000	10	88	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates			0.048			0.047			0.095

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 columns) are also displayed at the foot of the table.

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL OVVS
 Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	88	0.000	10	88	0.000	10	88	0.000
08:00 - 09:00	10	88	0.000	10	88	0.000	10	88	0.000
09:00 - 10:00	10	88	0.000	10	88	0.000	10	88	0.000
10:00 - 11:00	10	88	0.000	10	88	0.000	10	88	0.000
11:00 - 12:00	10	88	0.000	10	88	0.000	10	88	0.000
12:00 - 13:00	10	88	0.000	10	88	0.000	10	88	0.000
13:00 - 14:00	10	88	0.000	10	88	0.000	10	88	0.000
14:00 - 15:00	10	88	0.000	10	88	0.000	10	88	0.000
15:00 - 16:00	10	88	0.000	10	88	0.000	10	88	0.000
16:00 - 17:00	10	88	0.000	10	88	0.000	10	88	0.000
17:00 - 18:00	10	88	0.000	10	88	0.000	10	88	0.000
18:00 - 19:00	10	88	0.000	10	88	0.000	10	88	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates			0.020			0.020			0.040

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 columns) are also displayed at the foot of the table.

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PSVS
 Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	88	0.000	10	88	0.000	10	88	0.000
08:00 - 09:00	10	88	0.000	10	88	0.000	10	88	0.000
09:00 - 10:00	10	88	0.000	10	88	0.000	10	88	0.000
10:00 - 11:00	10	88	0.000	10	88	0.000	10	88	0.000
11:00 - 12:00	10	88	0.000	10	88	0.000	10	88	0.000
12:00 - 13:00	10	88	0.000	10	88	0.000	10	88	0.000
13:00 - 14:00	10	88	0.000	10	88	0.000	10	88	0.000
14:00 - 15:00	10	88	0.000	10	88	0.000	10	88	0.000
15:00 - 16:00	10	88	0.000	10	88	0.000	10	88	0.000
16:00 - 17:00	10	88	0.000	10	88	0.000	10	88	0.000
17:00 - 18:00	10	88	0.000	10	88	0.000	10	88	0.000
18:00 - 19:00	10	88	0.000	10	88	0.000	10	88	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates			0.000			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 columns) are also displayed at the foot of the table.

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL CYCLISTS
 Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	88	0.000	10	88	0.000	10	88	0.000
08:00 - 09:00	10	88	0.000	10	88	0.000	10	88	0.000
09:00 - 10:00	10	88	0.000	10	88	0.000	10	88	0.000
10:00 - 11:00	10	88	0.000	10	88	0.000	10	88	0.000
11:00 - 12:00	10	88	0.000	10	88	0.000	10	88	0.000
12:00 - 13:00	10	88	0.000	10	88	0.000	10	88	0.000
13:00 - 14:00	10	88	0.000	10	88	0.000	10	88	0.000
14:00 - 15:00	10	88	0.000	10	88	0.000	10	88	0.000
15:00 - 16:00	10	88	0.000	10	88	0.000	10	88	0.000
16:00 - 17:00	10	88	0.000	10	88	0.000	10	88	0.000
17:00 - 18:00	10	88	0.000	10	88	0.000	10	88	0.000
18:00 - 19:00	10	88	0.000	10	88	0.000	10	88	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates			0.120			0.111			0.230

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 columns) are also displayed at the foot of the table.

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLE OCCUPANTS
 Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	88	0.1993	10	88	0.1993	10	88	0.1993
08:00 - 09:00	10	88	0.171	10	88	0.587	10	88	0.758
09:00 - 10:00	10	88	0.182	10	88	0.149	10	88	0.331
10:00 - 11:00	10	88	0.130	10	88	0.115	10	88	0.245
11:00 - 12:00	10	88	0.205	10	88	0.124	10	88	0.329
12:00 - 13:00	10	88	0.212	10	88	0.185	10	88	0.397
13:00 - 14:00	10	88	0.212	10	88	0.228	10	88	0.440
14:00 - 15:00	10	88	0.194	10	88	0.190	10	88	0.384
15:00 - 16:00	10	88	0.204	10	88	0.215	10	88	0.419
16:00 - 17:00	10	88	0.204	10	88	0.190	10	88	0.394
17:00 - 18:00	10	88	0.455	10	88	0.115	10	88	0.570
18:00 - 19:00	10	88	0.130	10	88	0.111	10	88	0.241
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates			3.023			3.092			6.115

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 columns) are also displayed at the foot of the table.

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PEDESTRIANS
 Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	88	0.019	10	88	0.015	10	88	0.034
08:00 - 09:00	10	88	0.007	10	88	0.199	10	88	0.206
09:00 - 10:00	10	88	0.005	10	88	0.012	10	88	0.017
10:00 - 11:00	10	88	0.041	10	88	0.046	10	88	0.087
11:00 - 12:00	10	88	0.062	10	88	0.036	10	88	0.098
12:00 - 13:00	10	88	0.052	10	88	0.035	10	88	0.087
13:00 - 14:00	10	88	0.050	10	88	0.058	10	88	0.108
14:00 - 15:00	10	88	0.025	10	88	0.010	10	88	0.035
15:00 - 16:00	10	88	0.144	10	88	0.025	10	88	0.169
16:00 - 17:00	10	88	0.100	10	88	0.041	10	88	0.141
17:00 - 18:00	10	88	0.117	10	88	0.040	10	88	0.157
18:00 - 19:00	10	88	0.047	10	88	0.044	10	88	0.091
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates			0.778			0.805			1.583

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 columns) are also displayed at the foot of the table.

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL BUS/TRAM PASSENGERS
 Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	88	0.002	10	88	0.023	10	88	0.025
08:00 - 09:00	10	88	0.000	10	88	0.014	10	88	0.014
09:00 - 10:00	10	88	0.005	10	88	0.000	10	88	0.005
10:00 - 11:00	10	88	0.000	10	88	0.014	10	88	0.014
11:00 - 12:00	10	88	0.008	10	88	0.008	10	88	0.016
12:00 - 13:00	10	88	0.008	10	88	0.009	10	88	0.017
13:00 - 14:00	10	88	0.000	10	88	0.005	10	88	0.005
14:00 - 15:00	10	88	0.011	10	88	0.008	10	88	0.019
15:00 - 16:00	10	88	0.006	10	88	0.002	10	88	0.008
16:00 - 17:00	10	88	0.015	10	88	0.000	10	88	0.015
17:00 - 18:00	10	88	0.038	10	88	0.003	10	88	0.041
18:00 - 19:00	10	88	0.012	10	88	0.000	10	88	0.012
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates			0.037			0.094			0.131

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 columns) are also displayed at the foot of the table.

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

TRIP RATE for Land Use 04 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL RAIL PASSENGERS
 Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	88	0.000	10	88	0.015	10	88	0.015
08:00 - 09:00	10	88	0.000	10	88	0.014	10	88	0.014
09:00 - 10:00	10	88	0.000	10	88	0.003	10	88	0.003
10:00 - 11:00	10	88	0.000	10	88	0.005	10	88	0.005
11:00 - 12:00	10	88	0.002	10	88	0.002	10	88	0.004
12:00 - 13:00	10	88	0.000	10	88	0.005	10	88	0.005
13:00 - 14:00	10	88	0.002	10	88	0.001	10	88	0.003
14:00 - 15:00	10	88	0.005	10	88	0.002	10	88	0.007
15:00 - 16:00	10	88	0.002	10	88	0.000	10	88	0.002
16:00 - 17:00	10	88	0.006	10	88	0.000	10	88	0.006
17:00 - 18:00	10	88	0.038	10	88	0.000	10	88	0.038
18:00 - 19:00	10	88	0.002	10	88	0.000	10	88	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates			0.037			0.068			0.105

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 columns) are also displayed at the foot of the table.

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL COACH PASSENGERS
 Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	88	0.000	10	88	0.000	10	88	0.000
08:00 - 09:00	10	88	0.000	10	88	0.000	10	88	0.000
09:00 - 10:00	10	88	0.000	10	88	0.000	10	88	0.000
10:00 - 11:00	10	88	0.000	10	88	0.000	10	88	0.000
11:00 - 12:00	10	88	0.000	10	88	0.000	10	88	0.000
12:00 - 13:00	10	88	0.000	10	88	0.000	10	88	0.000
13:00 - 14:00	10	88	0.000	10	88	0.000	10	88	0.000
14:00 - 15:00	10	88	0.000	10	88	0.000	10	88	0.000
15:00 - 16:00	10	88	0.000	10	88	0.000	10	88	0.000
16:00 - 17:00	10	88	0.000	10	88	0.000	10	88	0.000
17:00 - 18:00	10	88	0.000	10	88	0.000	10	88	0.000
18:00 - 19:00	10	88	0.000	10	88	0.000	10	88	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates			0.000			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 columns) are also displayed at the foot of the table.

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PUBLIC TRANSPORT USERS
 Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	88	0.000	10	88	0.000	10	88	0.000
08:00 - 09:00	10	88	0.000	10	88	0.000	10	88	0.000
09:00 - 10:00	10	88	0.000	10	88	0.000	10	88	0.000
10:00 - 11:00	10	88	0.000	10	88	0.000	10	88	0.000
11:00 - 12:00	10	88	0.000	10	88	0.000	10	88	0.000
12:00 - 13:00	10	88	0.000	10	88	0.000	10	88	0.000
13:00 - 14:00	10	88	0.000	10	88	0.000	10	88	0.000
14:00 - 15:00	10	88	0.000	10	88	0.000	10	88	0.000
15:00 - 16:00	10	88	0.000	10	88	0.000	10	88	0.000
16:00 - 17:00	10	88	0.000	10	88	0.000	10	88	0.000
17:00 - 18:00	10	88	0.000	10	88	0.000	10	88	0.000
18:00 - 19:00	10	88	0.000	10	88	0.000	10	88	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates			0.000			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 columns) are also displayed at the foot of the table.

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE
 Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	88	0.114	10	88	0.114	10	88	0.228
08:00 - 09:00	10	88	0.241	10	88	0.241	10	88	0.482
09:00 - 10:00	10	88	0.348	10	88	0.348	10	88	0.696
10:00 - 11:00	10	88	0.120	10	88	0.120	10	88	0.240
11:00 - 12:00	10	88	0.372	10	88	0.372	10	88	0.744
12:00 - 13:00	10	88	0.275	10	88	0.275	10	88	0.550
13:00 - 14:00	10	88	0.372	10	88	0.372	10	88	0.744
14:00 - 15:00	10	88	0.275	10	88	0.275	10	88	0.550
15:00 - 16:00	10	88	0.372	10	88	0.372	10	88	0.744
16:00 - 17:00	10	88	0.372	10	88	0.372	10	88	0.744
17:00 - 18:00	10	88	0.372	10	88	0.372	10	88	0.744
18:00 - 19:00	10	88	0.372	10	88	0.372	10	88	0.744
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates			4.016			4.145			8.161

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 columns) are also displayed at the foot of the table.

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

APPENDIX E. TEMPRO OUTPUT

