

**Framework Residential
Travel Plan
(Volume I)**

**Thames Quarter,
Reading**

**Prepared for
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ACRONYMS AND ABBREVIATIONS

CIHT	Chartered Institution of Highways and Transportation
DfT	Department for Transport
LTP3	Third Local Transport Plan
MCC	Manual Classified Counts
MfS	Manual for Streets
NPPF	National Planning Policy Framework
PTP	Personal Travel Planning
RBC	Reading Borough Council
SMA	Stuart Michael Associates Limited
TP	Travel Plan
TIP	Travel Information Pack
TPC	Travel Plan Coordinator
TRICS	Trip Rate Information Computer System
SPD	Supplementary Planning Document
RPSD	Revised Parking Standards and Design



1.0 INTRODUCTION

- 1.1 This Residential Travel Plan ('Travel Plan') has been prepared by Stuart Michael Associates Limited, consulting engineers, on behalf of Lochailort Reading Limited (the 'Applicant'). This Travel Plan is in support of a Planning Application for the redevelopment on the former Cooper BMW Garage site, Reading (**Figure 1.1**), located on land south of Kings Meadow Road (the 'site'). The site is situated within the jurisdiction of Reading Borough Council.
- 1.2 The development when complete will comprise of erection of a part 13 storey, part 23 storey building comprising 335 apartments in a mix of studio, one-bedroom, two-bedroom and 3-bedroom units; residents' lounges, tech-hub, dining room, and cinema room; various rooftop outdoor amenity spaces; concierge/reception with coffee meeting area; residents' storage facilities; postroom; ancillary back-of-house facilities; 335 secure cycle parking spaces; 49 car parking spaces; landscaping; and associated works. Demolition of existing multi-storey car park. Vehicular access is to be retained from Napier Road / Kings Meadow Road.

Background

- 1.3 This document has been prepared as a 'Framework' (or 'Draft') document, which will form the basis for determining the final provisions of the Travel Plan. It is anticipated that the Final Travel Plan would be required as a Condition of the planning permission.
- 1.4 A Travel Plan has been provided to promote sustainable travel for future residents of the development. The aim of the Travel Plan is to improve and/or promote the availability of a variety of travel modes to/from a development. Site specific Travel Plans such as this are considered to be an important mechanism in the underlying aim to manage vehicle trips at source.
- 1.5 This Travel Plan proposes a package of measures designed to encourage trips by sustainable travel modes. The Travel Plan would be monitored over a period of 5 years during which time travel patterns will be monitored annually and a range of measures introduced as appropriate in order to meet target mode share.



Site Description

- 1.6 The development site is located on the eastern periphery of Reading Town Centre (**Figure 1.1**). The site was previously used as a temporary car park and incorporated a multi storey car park which previously served the dealership and an external parking area of some 133 spaces.
- 1.7 Previously the site was a car dealership with servicing garage. The Site is identified within the Reading Central Area Action Plan (RCAAP) under policy RC1h as a Major Opportunity Area. The site is suitable in adopted policy terms for a landmark building, containing residential and/or offices.
- 1.8 The site is bound by Kings Meadow Road / Napier Road to the north and a railway line to the south. East of the site is the Napier Court Business Park with the A329 delimiting the western most boundary.
- 1.9 The existing vehicular access to the site is to be retained via the site access road from Napier Road. The main pedestrian entrance will be on the Vastern Road / Kings Meadow Road corner, with a separate secure cycle entrance on the northern elevation.

Assessment Methodology

- 1.10 The Travel Plan has largely been informed by the accompanying Transport Assessment (TA). The TA has provided the basis for the potential trip generation for the development. In the preparation of this document the following research has been undertaken:
- Review of local and national planning policy and guidance;
 - Site visit to assess local infrastructure and facilities;
 - Assessment of existing public transport provision, timetable information and bus routes;
 - Assessment of current infrastructure provision for pedestrians and cyclists;
 - Consideration of appropriate measures to encourage modal shift away from the private car and towards the use of foot, cycle and public transport;
 - Assessment of the potential vehicular and person trip generation of the site;



- Analysis of the potential modal shift target based on the projected modal split for the development. This will be based on the expected trip generation, comparative 2011 ward census data and local sustainable transport infrastructure provisions.
- Identification of suitable measures which if implemented would encourage a modal shift away from the use of the private car.

Report Structure

1.11 The remainder of this report will be structured as follows:

Section 2.0 provides an overview of the relevant national and local policies.

Section 3.0 describes the existing conditions around the site.

Section 4.0 describes the overall aims of the Travel Plan to reduce the use of vehicular travel and promote sustainable travel modes (car sharing, public transport, walking and cycling) and the objectives associated with these aims.

Section 5.0 proposes action targets and modal share targets for the development, to be achieved over the lifetime of the Travel Plan (5 years).

Section 6.0 describes how the implementation of the Travel Plan will be managed; this is to be overseen by a Travel Plan Coordinator (TPC), to be appointed by the developer.

Section 7.0 proposes travel planning measures to be implemented in order to achieve the modal share targets, particularly the proposed target reduction in vehicular travel. This section also provides details of the communication strategy to be used to ensure the Travel Plan objectives and measures are effectively communicated. The strategy includes the distribution of Travel Information Packs to each household upon occupation.

Section 8.0 describes the commitment to undertake an audit and review of the Travel Plan in order to monitor the progress towards achieving the



aims and objectives of the plan. It is intended that this process will be carried out in accordance with RBC requirements.

Section 9.0 presents an Action Plan which may be used to set up and maintain the Travel Plan, from appointing a TPC to undertaking the final audit and review tasks.



2.0 TRANSPORT PLANNING POLICY AND GUIDANCE

2.1 National and local government policy places great importance upon the contribution that Travel Plans can make in reducing the impact of travel upon the environment. The benefits are considered to be; lowering greenhouse gas emissions, reducing delays and congestion, improving road safety and moving towards sustaining a vibrant economy.

National Policy

2.2 The **National Planning Policy Framework** (NPPF) was published in March 2012 replacing all previous Planning Policy Guidance and Statements. At the heart of the NPPF is a presumption in favour of sustainable development.

2.3 With regard to promoting sustainable transport, it is recognized that all developments that generate significant amounts of movement should be supported by a Transport Statement or Assessment and decisions should take account of whether:

- “the opportunities for sustainable transport modes have been taken up depending 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 refused on transport grounds where the residual cumulative impacts of development are severe” (NPPF, paragraph 32).

2.4 Developments expected to generate significant movement should be located such that the need to travel is reduced and the use of sustainable transport modes is maximised (NPPF, paragraph 34). The location of these developments should allow for the efficient delivery of goods and supplies; prioritise pedestrian and cycle movements; have access to high quality public transport facilities; utilise safe and secure layouts which result in minimal street clutter and minimises conflicts between traffic and non-motorised road users; incorporate facilities for low emission vehicles where practical; and show consideration for the needs of disabled users of all modes of transport (NPPF, paragraph 35).



2.5 The NPPF states that a Travel Plan is “a key tool” in achieving the considerations described above; all developments which generate significant amounts of movement should produce a Travel Plan (NPPF, paragraph 36).

2.6 NPPF is supported by National Planning Practice Guidance (NPPG), including specific guidance on the topics of Travel Plans and Transport Assessments. This guidance was released in March 2014.

2.7 The NPPG states:

“Travel Plans should identify the specific required outcomes, targets and measures, and set out clear future monitoring and management arrangements all of which should be proportionate. They should also consider what additional measures may be required to offset unacceptable impacts if the targets should not be met.

2.8 They should evaluate and consider:

- benchmark travel data including trip generation databases;
- Information concerning the nature of the proposed development and the forecast level of trips by all modes of transport likely to be associated with the development;
- relevant information about existing travel habits in the surrounding area;
- proposals to reduce the need for travel to and from the site via all modes of transport; and
- Provision of improved public transport services.”

2.9 A detailed analysis is provided within the Planning Statement submitted in support of the application.

Local Policy

Reading Borough Council (RBC)

2.10 RBC’s **Third Local Transport Plan (LTP3)** dated April 2011 details the aims and objectives in Reading between 2011 and 2026.



- 2.11 The vision set out within the document is labeled 'Connecting Reading'. Four delivery themes (Inclusion, Intervention, Infrastructure and Innovation) are set out, core enabling policies explain how the vision will be delivered under these themes¹.

Inclusion

- Improve the condition of footways and cycle ways.
- Improve public transport in deprived and inaccessible areas.

Intervention

- Maintain and manage transport network to ease congestion and improve safety.
- Prioritise walking, cycling and public transport.

Infrastructure

- Upgrade current transport networks.
- Secure provision of improved public transport.

Innovation

- Support use of technology to ease congestion.

- 2.12 The LTP3 recognizes that although Reading has very good employment rates and strong economy there are still deprived areas which suffer due to high costs of living and housing. The LTP3 therefore seeks to deliver available and affordable public transport and the provision of walking and cycling facilities to ensure equality of opportunity and connectivity across the Reading area.
- 2.13 The Reading Borough **Local Development Framework (LDF)** is a collection of development plans which affect Reading, of which the **Reading Borough Core Strategy** is the central document. It was adopted in 2008; setting out the Council's planning strategy for the Borough. It sets out how planning and development will achieve the Reading 2020 Vision for the town.
- 2.14 RBC aim to influence travel behavior by encouraging sustainable travel choices. The Core Strategy states under **Policy CS23** that all major developments must implement measures to promote and improve sustainable transport facilities through agreed travel plans before planning permission is granted.

¹ Reference: LTP3 Section 6 (April 2011)



2.15 The LDF **Revised Parking Standards and Design Supplementary Planning Document (RPSD) (SPD)** adopted in October 2011 states that a travel plan is a package of measures produced by developers to encourage future residents to use alternatives to single-occupancy car-use. It suggests the following to reduce traffic:

- Promote car sharing schemes
- Commitment to improving cycling facilities
- Providing a dedicated bus service
- Provide restricted car parking allocations
- Promote flexible-working
- Use technology such as remote access and video conferencing

2.16 RBC state in the RPSD that Travel Plans should comply with the latest Department for Transport (DfT) requirements.

Further Guidance

2.17 Further advice on the required content of a Travel Plan and complementary scheme design considerations has been taken from the following documents:

- Manual for Streets (2007);
- Manual for Streets 2 (September 2010);
- Making Residential Travel Plans Work;
- DfT: Good Practice Guidelines: Delivering Travel Plans Through The Planning Process (2009).

Other Relevant Guidance and Statistics

National and Local Transport Statistics

2.18 The site lies within the Abbey Ward or the Middle Super Output Area (MSOA) 'Reading 011'. The local ward typical modal split for journeys to work, have been derived from the 2011 'Method of Journey to Work' census data, presented in **Table 2.1** below.



Table 2.1: 2011 Census Data – Method of Journey to Work

	Abbey	Reading	South East	England
	Ward	Unitary Authority	Region	Country
All Usual Residents Aged 16 to 74	7589	76131	3981067	23813153
Underground, Metro, Light Rail, Tram	0%	0%	0%	4%
Train	21%	10%	8%	6%
Bus, Minibus or Coach	12%	12%	5%	8%
Taxi	0%	0%	0%	1%
Motorcycle, Scooter or Moped	0%	1%	1%	1%
Driving a Car or Van	30%	49%	65%	60%
Passenger in a Car or Van	3%	5%	5%	5%
Bicycle	3%	4%	3%	3%
On Foot	30%	18%	12%	11%
Other Method of Travel to Work	1%	1%	1%	1%

2.19 The data indicates that the predominant mode of travel is by car, with a mode share of 30% driving. This is however significantly lower than the regional or country mode share for driving of 65% and 60% respectively. Travel by rail services (21%) and trips on foot (30%) are significantly higher for the ward than the comparative datasets presented in Table 2.1. Trips by public bus services (12%) are comparative of the local area and higher than that of the south east region and national situation.

2.20 This indicates that the mode of travel by residents in the Abbey ward of Reading is already influenced by the central, accessible location of the ward and the transport infrastructure available.

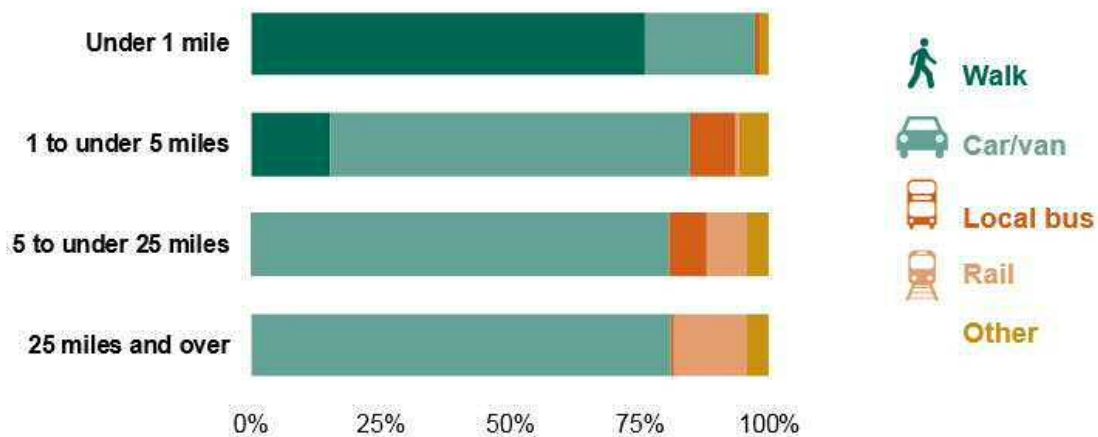
2.21 The **National Travel Survey: England** (2014), published by the Department of Transport, incorporates the most recent national travel survey and records. The records from the 2014 bulletin have provided data to include average trip length, proportion of trips by mode and distance travelled. These results are summarised below:

- The average trip length is now reported at 7 miles, a reduction of 0.1 miles since 2013;
- Trips with a journey length of 5 miles or less account for 66% of all trips;
- Travel by car accounts for 64% of all trips;



- Walking accounts for 22% of trips, but is mainly predominant for very short distances;
- The average trip rate per person per year has been steadily falling since 1995/97 and is now 921 trips per person per year;
- The NTS provides a summary of the average number of trips by main mode and distance. It is apparent from this information that for trips under 1 mile, walking is the most common travel choice (**Figure 2.1**). Travel by bus is most represented for trips between 1 and 5 miles (**Figure 2.1**).

Figure 2.1: Mode Share of Trips By Main Mode for Different Trip Lengths (Source: NTS0308 National Travel Survey, 2014)



2.22 The national and local travel statistics identified above provide a useful basis for assessing the merits of the proposed development in terms of, accessibility and potential travel mode choice.



3.0 EXISTING CONDITIONS

- 3.1 The development site is located at the site of the former Cooper BMW Garage site, situated on land adjacent to and immediately south of the Kings Meadow Road/A329 (Vastern Road) roundabout junction (**Figure 1.1**).
- 3.2 The site is currently used as a temporary car park and incorporates a multi storey car park which previously served the dealership and an external parking area of some 133 spaces.
- 3.3 The site access road off Napier Road is shared with the adjacent Napier Court Business Park. Opposite the site access road is the access to the Kings Meadow recreational area and public (surface) car park. Napier Road continues east of the site providing access only to further residential units (Lusciana Way) and a hypermarket.
- 3.4 The site is situated on the edge of Reading Town Centre. This is a well-established business and retail centre, with a range of high order facilities within 800m (10 minutes walk) of the site (**Figure 3.1**).
- 3.5 The local area is supported by a good pedestrian and cycle network facilitating safe and convenient movement on foot and cycle between the site and the surrounding area. Reading Town Centre is served by high quality bus routes which operate past the site frontage. Reading rail station, the largest interchange outside of London is located approximately 300m from the site (Figure 3.1) and is accessible on foot via pedestrian crossings and convenient footways and footpath links.

Access on Foot/Cycle

- 3.6 The development is to provide pedestrian and cycle linkages to the existing foot/cycle ways on the A329 and Kings Meadow Road. Ramped and stepped access is proposed to enable inclusive mobility. There are existing, controlled, pedestrian crossing on the A329 adjacent to the main site access point. This reduces severance enabling safe pedestrian and cycle movement between the site and the town centre/rail station.
- 3.7 Manual for Streets stresses the importance of walking and cycling as sustainable alternatives to the private car. A walkable neighborhood is “typically characterised by having a range of facilities within 10 minutes (around 800m)



walking distance of residential areas, which residents may access comfortably on foot”. MfS advises that this should not be considered an upper limit, in view of now previous government policy (PPG13) which identified that walking offers the greatest potential to replace short car trips, particularly up to 2km. This is supported by, guidance contained within the CIHT ‘Providing for Journeys on Foot’ (2000) which indicates acceptable distances of between 200m and 2km depending on the journey purpose (**Table 5.2**)

Table 3.1: Suggested Acceptable Walking Distances by Journey Purpose (CIHT)

	Town Centres	Commuting/School/ Sight Seeing	Elsewhere
Desirable	200m	500m	400m
Acceptable	400m	1km	800m
Maximum	800m	2km	1.2km

- 3.8 **Figure 3.2** demonstrates that much of the town centre area is situated within 800m of the site. Extending the catchment area to 1.2km encapsulates all of the central area and the residential areas adjacent to the town centre.
- 3.9 Reading has a comprehensive cycle network with 7 colour coded routes from the town centre to the wider urban area of Reading and a circular route around the town centre (**Figure 3.3**). The cycle network connects all the town’s major public facilities, employment and leisure areas.
- 3.10 The development site is located on the town centre circular route (Figure 3.3 - colour ref: Purple) which provides access to each of the 7 arterial routes. Napier Road links directly with the National Cycle Network (NCN) route No. 5 which continues north to Oxford and Wallingford and east to connect with the NCN Route No. 4. The RBC Cycling Strategy includes the opening up of the Napier Road underpass to provide a key link between Newtown and the National Cycle Route.
- 3.11 Cycle parking is available at various locations across Reading as identified on the Reading Cycle Network Map reproduced under **Figure 3.3**.

Access by Bus and Rail Services

- 3.12 The nearest bus stops to the development are located on Kings Meadow Road adjacent to the site. These are located well within the required 400m walking



catchment². The bus stops on Kings Meadow Road are served by the number 28 an hourly weekday service (**Figure 3.4**). More frequent services are available from bus stops located approximately 300m from the site on Troopers Way and Forbury Road (**Figure 3.1**). These bus stops provide to access more frequent urban and inter-urban bus services, 7 days a week illustrated on **Figure 3.4**.

Table 3.2: Summary of Local Bus Services

Service	Route	Monday-Friday		Weekends		Additional Notes
		Operating Hours	Typical Frequency	Operating Hours	Typical Frequency	
1	Newbury - Thatcham - Theale - Reading	05:00-23:20	Every 30mins	06:15-23:21	Every 30mins	(Sundays 06:55-19:40, 1/hour)
2/2A	Central Reading - Mortimer	05:02-23:59	Every 30mins	06:30-23:59	Every 30mins	(Sundays 09:00-19:28, 1/hour)
4	Reading - Bracknell	05:43-23:53	Every 30mins	06:18-23:53	Every 30mins	(Sundays 08:22-19:49, 1/hour)
11	Central Reading - Coley Park	05:43-23:37	Every 20mins	05:47-23:47	Every 20mins	(Sundays 08:15-22:37, 20 mins)
22	Central Reading - Caversham Bridge - Caversham Heights	05:40-23:11	Every 30mins	05:58-23:56	Every 30mins	(Sundays 08:35-18:49, 1/hour)
27/29	Central Reading - Caversham Centre - Amersham Road	06:54-23:09	Every 30mins	06:36-23:09	Every 30mins	(Sundays 09:11-19:20, 1/hour)
28/28a/28b	Emmer Green - Reading - Tilehurst - Purley	06:58-17:27	1/hour	N/A	N/A	(no service on Sundays)
127/128/129	Reading - Twyford - Wokingham/Maidenhead	06:07-18:29	1/hour	07:38-18:15	1/hour	(no service on Sundays)
800/850	High Wycombe - Marlow - Reading	06:00-23:19	Every 30mins	06:40-23:19	Every 30mins	(Sundays 07:45-21:47, 30mins)
T1 (FREE)	Reading Town Centre - Tesco (Kings Meadow)	09:30-14:27	Every 20mins	N/A	N/A	(no service on Sundays)

- 3.13 Bus services and frequency will be much improved once the MRT is developed. MRT is a proposed dedicated public transport link between central Reading and Thames Valley Park (and the proposed East Reading Park & Ride facility) and A3290 to the east of the Reading urban area, running parallel to the Great Western mainline.
- 3.14 It will improve access to Reading town centre, Reading Station and major employment sites by substantially increasing capacity, providing significantly reduced public transport journey times, and improving reliability and congestion relief on the heavily congested road network.
- 3.15 The site is located within 400m east of Reading Rail station (Figure 3.1) a major rail interchange. The majority of services into Reading have an origin destination of London Paddington. The station is served by three major rail operating

² ref: paragraph 5.21 Planning for Public Transport in developments, IHT 1999



companies: Great Western Rail, Cross Country, and South West Trains. Services operate 7 days a week at a high frequency through the day and night.

3.16 Destinations that can be access from Reading Station are summarised below by rail operator:

- **Great Western Rail:** London Paddington, Slough, Basingstoke, Gatwick Airport, Oxford, Hereford, Worcester, Bristol, South Wales and the South West of England;
- **Cross Country Trains:** Bournemouth, Southampton, Guildford, Banbury, Coventry, Birmingham, the North of England and Scotland; and
- **South West Trains:** Wokingham, Staines, Richmond, Clapham Junction, London Waterloo, Basingstoke, Winchester, Southampton, Portsmouth and Brighton.

3.17 Major redevelopment works have been undertaken at the station to increase the number of trains that can operate through the station at any one time and ease congestion. Additional works included the widening of the railway bridges over Cow Lane to reduce congestion and facilitate double-decker buses to pass beneath the bridges, as well as a new cycle lane. These works are now complete.

Accessibility by Car

3.18 Kings Meadow Road and Napier Road provide access only and is not through traffic route. The road is subject to a 30mph speed restriction, typical of a built-up area. On-street parking is not permitted to the length of the road, enforced by way of double yellow lines. Street lighting is present to the length of the road with a footway along the southern side of the carriageway.

3.19 Kings Meadow Road connects with the local strategic network at the roundabout junction with the A329 and B3345. The A329 forms part of the Inner Distribution Road (IDR) which loops around Reading town centre. The A329 takes the form of a dual carriageway on both approaches to the roundabout (Vastern Road and Forbury Road), restricted at 40mph.

3.20 The A329 continues west of the site as Vastern Road providing direct access to the A33 which links with junction 11 of the M4. Alternative access to the M4, for



destinations east of Reading, can be sought via the A329 south of the site linking with the A4 and then the A3290 (**Figure 1.1**).



4.0 AIMS AND OBJECTIVES

- 4.1 Aims and objectives would be required to ensure that the Travel Plan progresses towards delivering a modal shift. The following proposed aims and objective would seek to guide the Travel Plan towards delivering this modal shift.

Aims

- 4.2 The purpose of the Travel Plan is to encourage residents of the site to make smarter travel choices when travelling to and from the site. In accordance with national and local policy, which aims to reduce reliance on the private car, the proposed aims are:

Aim 1: To reduce overall use of vehicular travel;

Aim 2: To promote the use of sustainable travel modes.

- 4.3 The aims will be supported by a number of objectives. These will focus on increasing awareness of the sustainable travel choices available to residents, and informing residents about the benefits of travelling by modes other than the private car.
- 4.4 It is intended that the following proposed objectives would be met through the implementation of SMART targets (Section 6.0 refers).

Objective 1: Reduce single occupancy car travel by implementing smarter travel measures and a communication strategy to influence travel behaviour;

Objective 2: Promote sustainable travel by publicising the available sustainable travel options and associated benefits (Providing convenient and easy-to-use information regarding sustainable travel modes available in the vicinity of the site);

Objective 3: Encourage cycling by promotion of cycle facilities available on site (parking) and the opportunities to connect via the Reading strategic cycle routes to key trip ends as well as the use of the Reading hire bike scheme 'readybike';



Objective 4: Encouraging travel by public transport, both urban and inter-urban services, through the distribution of information and incentives to trial services.

Objective 5: Promoting the walkable nature of the local area by promoting journey distance and time to key trip ends within 2km of the site.

Objective 6: Reduce car ownership through a reduced parking strategy and provision of 3 car club vehicles on site, which could be expanded to 4 vehicle subject to demand.

Objective 7: Promote shopping locally to both support the local economy as well as reducing the need to travel by car.



5.0 PROPOSED MODAL SHIFT TARGETS

- 5.1 To accord with national and RBC requirements, Specific, Measurable, Achievable, Realistic and Time-Bound (SMART) modal shift targets will be set. These are essential to give direction to the Travel Plan and measuring its outcomes.
- 5.2 In view of the site being currently unoccupied and the travel patterns of the residents largely unknown the SMART targets below are set as interim targets. These would be finalised following the occupation of the development and the undertaking of a baseline travel survey. The overall modal share targets are proposed as achievable over the life of the Travel Plan (5 years).
- 5.3 The targets, together with the proposed measures (refer to Section 7.0), support the aims and objectives of the Travel Plan. Should the targets be achieved, a reduction will be seen in the proportion of trips being made by the single occupancy car drivers. Travel by other, more sustainable modes (walking, cycling, public transport use, car share and car club) will increase as a result of this reduction.

Current Trip Generation and Modal Split

- 5.4 The potential trip generation and modal share of travel patterns has been based upon multi-modal trip data derived from the TRICS database and the local ward (2011) census data.
- 5.5 The Transport Assessment has assessed the potential multi-modal trip generation for the proposed development. The development will deliver 315 apartments, comprising a mix of Studio, 1, 2 and 3 bed flats.
- 5.6 The TRICS peak hour and daily two-way multi-modal trip rates with the resulting trip generation is presented in **Table 5.1** below. The full TRICS reports are reproduced under **Appendix 2**.



Table 5.1: TRICS Peak Hour and Daily Multi-Modal Trip Rates and Trip Generation (Two-Way)

Time Range	0800-0900		1700-1800		Daily	
	Trip Rate	Trip Gen	Trip Rate	Trip Gen	Trip Rate	Trip Gen
Total People	0.64	202	0.662	209	5.553	1749
Vehicles	0.152	48	0.116	37	1.326	418
Vehicle Occ	0.202	64	0.011	3	1.621	511
Cyclists	0.009	3	0.011	3	0.122	38
Pedestrians	0.253	80	0.19	60	2.61	822
PT users	0.176	55	0.137	43	1.203	379

Modal Shift

- 5.7 Taking the calculated trip generation above (**Table 5.1**) from TRICS it is possible to calculate the modal split for each respective housing type and the combined development as a whole (**Table 5.2**).

Table 5.2: Peak Hour and Daily Modal Split

Time Range	0800-0900		1700-1800		Daily	
	Trip Gen	Modal Share	Trip Gen	Modal Share	Trip Gen	Modal Share
Vehicles Driver	48	24%	37	23%	418	24%
Vehicles Passenger	16	8%	18	11%	93	5%
Cyclists	3	1%	3	2%	38	2%
Pedestrians	80	40%	60	37%	822	47%
PT users	55	27%	43	27%	379	22%
Total	202	100%	161	100%	1750	100%

Nb¹: Vehicle Driver = No. Vehicles

Nb²: Vehicle Passengers = No. Vehicles – Vehicle Occupants

- 5.8 The modal split data indicates that 23%-24% of trips would be undertaken by car during the peak hours, with 24% over the course of the day. The most dominant form of travel is anticipated to be trips on foot representing 40% of trips during the AM peak, 37% of trips during the PM peak and 47% of trips over the course of the day.
- 5.9 The TRICS database has enabled the calculation of the potential multi-modal trip generation arising from the site (Table 5.3 refers) and resulting modal split. The projected modal split has been compared with that of the 2011 local census data for the Abbey Ward, presented in **Table 5.3**.



Table 5.3: Development modal split compared to Abbey Ward

	Abbey	TRICS modal share		
	Ward	0800-0900	1700-1800	Daily
Underground, Metro, Light Rail, Train	33%	28%	27%	22%
Bus, Minibus or Coach				
Taxi				
Motorcycle, Scooter or Moped	0%	N/A	N/A	N/A
Driving a Car or Van	30%	24%	23%	24%
Passenger in a Car or Van	3%	8%	11%	5%
Bicycle	3%	1%	2%	2%
On Foot	30%	40%	37%	47%
Other Method of Travel to Work	1%	N/A	N/A	N/A

- 5.10 Based on the TRICS data it has been calculated that the proposed development would have a similar modal share to that of the local ward. The TRICS data indicates a slightly lower modal share for car driver and a higher modal share for trips on foot.
- 5.11 The Abbey ward covers the central area of Reading incorporating both zone 1 and zone 2 of the RBC parking strategy. Zone 2 is considered to be slightly less accessible by sustainable travel modes than that of zone 1 and therefore the car ownership and user levels are expected to be higher. This is reflected in the higher provision of parking standards required in this zone comparative of zone 1.
- 5.12 It is therefore likely that the ward data is skewed by incorporating Zone 2 and provides a more broad perspective, whereas the TRICS data presents a more site specific situation. Taking account of the foregoing it is considered that the TRICS data projects a relatively sustainable modal share for the development. As such marginal modal shift targets should be targeted with the aim being to maintain the walking, cycling, public transport modal shares and reduce car ownership through promotion of these modes and the on-site car club.
- 5.13 RBC wishes to achieve a maximum of 70% single occupancy vehicle trips within the development. However analysis of the TRICS data for the daily modal split indicates that the potential baseline car modal split is already lower than this target. Therefore it is suggested that the Travel Plan concentrate on providing information and marketing to promote the wide range of services and facilities available within the area. The target for reducing single occupancy car travel



reflects the already sustainable travel patterns expected for the site and so aims for a further 5% reduction in single occupancy vehicle trips should be achieved instead.

Action Targets

- 5.14 Action Targets are proposed to aid the implementation and ongoing management of the Travel Plan. They do not constitute the SMART targets.

Action Target 1: Appoint a Travel Plan Coordinator prior to occupation of the development;

Action Target 2: Implement appropriate travel measures before occupation and continue for the duration of the review period of the Travel Plan;

Action Target 3: Implement a communication strategy to disseminate information to all residents; and

Action Target 4: Regularly monitor the travel measures throughout the duration of the Travel Plan, as required by RBC.

Smart Targets

- 5.15 The SMART targets provide quantifiable multi-modal targets for trips generated by the development (private car, pedestrians, cyclists and public transport users). They primarily support **Aim 1** of the Travel Plan “**To reduce overall use of single occupancy vehicular travel**”.
- 5.16 It is important that the SMART targets are considered as a whole, with the principal aim of reducing trips by private car as a result of modal shift. If for example more people walk than cycle than is forecasted, it should not be seen as a failure, so long as the main aim of reducing vehicle trips is achieved and sustainable travel journeys increase.



6.0 MANAGEMENT AND OPERATION

- 6.1 The Travel Plan would require a management structure which would be led by a Travel Plan Coordinator (TPC). The PRS Operator / Manager would be responsible for appointing the TPC. The TPC would be responsible for setting up and managing the implementation of the Travel Plan across the Site.
- 6.2 The TPC would be responsible for finalising the provisions of the Travel Plan and subsequent implementation of the agreed travel planning measures and communication initiatives. The TPC would also market the aims, objectives and initiatives of the Travel Plan; monitor and evaluate the performance of the Travel Plan; and maintain the Travel Plan's momentum. The TPC would also be responsible for communicating with external parties (public transport operators, car club providers for example) and RBC. It is proposed that the TPC would adopt the following responsibilities:
- Finalise the Travel Plan document in liaison with RBC;
 - Oversee the implementation and development of the Travel Plan;
 - Implement effective marketing and awareness raising campaigns to promote the Travel Plan amongst residents;
 - Coordinate the necessary data collection exercises required to monitor and review the Travel Plan;
 - Act as a point of contact for all residents requiring information about the Travel Plan and sustainable travel choices;
 - Ensure that all residents are aware of the site's commitment to the Travel Plan.
- 6.3 As a purpose designed build to rent development, the operator / manager would be ideally placed to undertake the TPC role as part of the wider management of the building's facilities and activities.



7.0 PROPOSED MEASURES

- 7.1 The Travel Plan will be delivered through implementing a package of measures which are focused around the aims, objectives and targets of the Travel Plan. The measures are clearly linked with specific SMART targets and are key components in achieving the targets. This framework document provides an overview of all proposed measures which would be implemented.
- 7.2 The listed measures are to be communicated to residents by way of a communication strategy.
- 7.3 The proposed package of measures are designed to provide a realistic response to the potential travel demand resulting from the proposed development. The measures consist of short, medium and long term actions and include incentives to encourage use of alternative modes to the car, as well as some demand restraint.
- 7.4 'Hard' measures ensuring the relevant infrastructure for walking, cycling and public transport use, and 'soft' measures promoting awareness of such sustainable modes are proposed.

Walking Strategy

- 7.5 In order to maintain the proportion walking by the end of the Travel Plan review period, the following measures would be implemented.

Provide convenient pedestrian access to the Site

- 7.6 Walking (and cycling) access points will be provided enabling convenient access to the main building access and cycle access from the A329 and Kings Meadow Road respectively. Stepped and ramped access will be provided from the A329 to facilitate all-inclusive mobility access.
- 7.7 It is also proposed that the development will fund, through S106 Agreement, a new signalised pedestrian crossing on Kings Meadow Road, which will be provided as part of the MRT scheme. This crossing is shown on **Drawing 5277.027 C**. This design has been agreed with officers at RBC. This crossing will increase accessibility and provide a safe crossing point over Kings Meadow Road.



- 7.8 The Developer is also offering to provide S106 funds to be spent delivering improvements to the pedestrian experience passing below the railway bridge. These improvements along with the new signalised crossing will benefit not just the new residents of the development but also existing residents / commuters.

Promote walking events throughout the year

- 7.9 Events such as the Living Streets campaign 'Walk to Work Week' (held annually each May) can help to create a sense of community and encourage willingness to try an alternative mode of transport. Another event being trialed is car-free days where streets and roads are temporally closed and opened up to pedestrians, encouraging people to walk.

Public Realm and Off-site Improvements

- 7.10 The Applicant is reviewing public realm improvements in the locality of the site which could make walking to the town centre more attractive than current conditions.

Cycling Strategy

- 7.11 In order to increase the proportion cycling by the end of the Travel Plan review period, the following measures would be implemented.

Provide sufficient cycle parking facilities on site

- 7.12 Cycle parking is to be provided within the podium structure of the building for 315 cycles. RBC requires that 0.5 cycle spaces are provided per unit, the proposed level of provision therefore exceeds local policy.

Subsidised Cycle Voucher

- 7.13 The first occupants of each household would be provided with a subsidised cycle voucher of up to £50 (one per household). This would be redeemable against purchases of new cycles and/or cycle accessories at an identified retailer. The voucher is intended to encourage residents to travel by bicycle by facilitating access to equipment.

Readybike

- 7.14 The TPC would liaise with the Reading hire bike scheme 'Readybike' to establish any potential discount rates for residents. Based on experience elsewhere in Reading, it is likely that residents could be provided with additional rental hours



subsidized by Readybike. This promotion, if available, would be offered to first occupants of each residential unit.

Promote cycling events

- 7.15 To encourage more people to cycle residents will be provided with information on local and national cycle events they can participate in. There is National Bike Week held annually in June³.

Public Transport Strategy

- 7.16 In order to increase the proportion travelling by public transport by the end of the Travel Plan review period, the following measure(s) would be implemented.

Provide bus vouchers to residents for local bus services

- 7.17 A subsidised travel voucher will be provided to all first occupants of the residential development at a level of one per household. This is intended to encourage new residents within the development to trial the local bus services. A minimum of 1 months travel would be provided to residents, valid on all Reading bus services, within Reading. It would allow the user access onto any bus within the boundaries of Reading. This voucher incentive could encourage residents to travel by bus and ensure a long term commitment to this mode of transport.

Ensure bus timetables are provided to residents

- 7.18 All residents will be provided with current timetables for the local bus services that operate in Reading, as well as a map showing the routes navigated.

Vehicular Strategy

- 7.19 A target to reduce single occupancy vehicle travel is proposed. However it is acknowledged that the proposed site is extremely well located for non-car travel and expected car travel mode share for future residents is expected to be very low compared to the national average. Therefore this Travel Plan will concentrate on promoting alternatives to car ownership and single occupancy car travel.

³ <http://www.bikeweek.org.uk/>



Car sharing scheme

- 7.20 Car sharing is a non-profitable scheme and is a cheaper alternative to single occupancy vehicles, this is due to shared fuel costs. Car sharing provides the benefits of convenience, reducing congestion and lowering emissions.
- 7.21 The easiest and safest way to find a person to car share with is using the website 'Liftshare' <https://liftshare.com/uk>. It allows you to search for ideal lift sharing companions to arrange trial runs and potential long term commitments.
- 7.22 Residents in the new development will be encouraged to car share through information provided on the benefits of using the scheme. They will be advised to communicate with other residents common travel destinations (shopping centres, workplaces, etc.) to share journeys taken by car.

Car club scheme

- 7.23 The availability of a car club on site provides an alternative to residents to owning a car, especially when living in a town centre location. The scheme provides a is a pay as you go hiring service meaning you only pay for the car when you are using it.
- 7.24 Reading's car club scheme (Commonwheels or Co-wheels) has cars located in four separate locations across the town. Members of the club can book the use of a vehicle for a time period of between 30 minutes and several days.
- 7.25 The site will provide 3 car club vehicles on site. It is proposed to provide the first occupants of each household with a voucher to use towards becoming a member (joining fee) of the car club. Subject to scheme uptake and demand, a 4th vehicle could be added in due course.

Communication Strategy

- 7.26 The Travel Plan must be effectively communicated to residents and businesses if it is to be successful. Communicating the measures and sustainable travel options available will begin at the earliest possible stage to encourage smarter travel choices.
- 7.27 The main aim of the Communication Strategy is to ensure that residents are made aware of the Travel Plan as early as possible, and that this awareness becomes inherent. Communication will be ongoing throughout the life of the Travel Plan.



This will ensure that residents are familiar with the sustainable options available and will help maintain the momentum of the Travel Plan. Participation in sustainable travel will be continuously promoted and information regarding the Travel Plan would be available to residents in perpetuity.

7.28 A key tool in the communication strategy and fundamental to the initial communication of the Travel Plan is the proposed 'Travel Information Pack'. Other methods include, but are not limited to the following:

- Ensuring availability of leaflets and other printed materials regarding sustainable travel options;
- Establishing an informative community website and/or webpage;
- Providing Personal Travel Planning sessions; and
- Promoting sustainable travel events.

7.29 These tools for communication are detailed in the following paragraphs.

Travel Information Packs

7.30 Action: Distribute a Travel Information Pack (TIP) to the first occupants of each household on their move in day.

7.31 TIPs would contain information regarding the travel options associated with the site. The TIP would include, but not be limited to:

- information regarding alternatives to single-occupancy car use available to residents;
- walking and cycling route maps;
- discounted/subsidised travel on local bus services;
- local bus transport timetables and route maps;
- subsidised cycle voucher for use in a local cycle store;
- subsidised car club scheme joining voucher
- the contact details of the Travel Plan Coordinator; and
- references to useful resources such as the Transport Direct Journey Planner website (www.transportdirect.info), which provides a wealth of travel information allowing users to check live travel news, plan door-to-door journeys and research discount rail fares.



Community Website and Notice Board

7.32 Action: A community website would be set up for the development which would provide residents with the travel options in the area and create a platform for communication. This would form an interactive version of the TIP, the following information would be provided on the website:

- Public transport timetables
- Local walking and cycle route maps
- A notice board for the latest news and events
- Discussion board to arrange car sharing and planning events

7.33 Feedback about the travel options available could be collected from site users via the webpage, providing a useful method of communication.

Leaflets, posters and other printed materials

7.34 Action: Compile and distribute travel choice information leaflets for use at site promotional events and within the sales suite.

7.35 Promoting the Travel Plan at the earliest stage will ensure that potential residents are aware of the Site's commitment to the Travel Plan.

Personal Travel Planning Sessions

7.36 Action: Offer Personal Travel Planning (PTP) sessions with residents within the first month of occupancy.

7.37 PTP sessions would be delivered to all households on site. At a minimum, this would comprise the provision of sustainable travel information and face-to-face meetings using 'motivational interviewing' to encourage discussions about the available travel choices.

7.38 The TPC would offer PTP sessions to first occupants upon their arrival at the development. PTP would be funded by the developer and its methodology would be included within the Final Travel Plan.

7.39 PTP's are designed to raise awareness and provide the opportunity to offer tailored travel advice specific to each respective household. The sessions also



provide the TPC with the opportunity to communicate the Travel Plan and the benefits associated with choosing alternative travel modes communicated verbally to new residents.

Email

- 7.40 The TPC would endeavour to contact residents by way of email where possible. This will ensure that residents are kept up-to-date with the Travel Plan and its initiatives. This would include emailing the latest bus and rail timetables for residents' use. Communicating in this way would reduce the amount of paper and cost of printed materials required as part of the Travel Plan.

Events Promotion

- 7.41 Action: National travel campaigns would be promoted through leaflets, posters and on the community website.
- 7.42 Events to be promoted include:
- Walk to Work Week (May);
 - Team Green Britain Bike Week (June);
 - European Mobility Week (September); and
 - 'In Town Without My Car'/European 'Without My Car' Day (September).



8.0 MONITORING AND REVIEW

Monitoring

- 8.1 The Travel Plan would be monitored annually over a 5 year period. Monitoring would be conducted by the way of a multi-modal travel survey.
- 8.2 Monitoring would be conducted over a 12 hour period (07:00-19:00) on a weekday so as to include all potential journey patterns generated by the site. The multi-modal survey would provide the multi-modal trip generation of the development. This would be undertaken at all (vehicular and non-vehicular) points of access to the site. The data would be compared with that of the projected trip generation for the development based upon the TRICS trip rates and/or previous year's data.
- 8.3 The first (baseline) survey would be carried out after the development reaches 50% occupancy (guidance from DfT Good practice guidelines). This data would be compared with the TRICS mode share data used within this Travel Plan to estimate likely mode share from the site (Section 5.0) and subsequently replaced.
- 8.4 Results of all travel surveys would be submitted to the Local Planning Authority one month after the completion of the survey and made available to residents

Review

- 8.5 Following each travel survey period a review of the survey data and modal split would be undertaken. The review process allows the measures to be adapted to ensure the Travel Plan remains effective. I



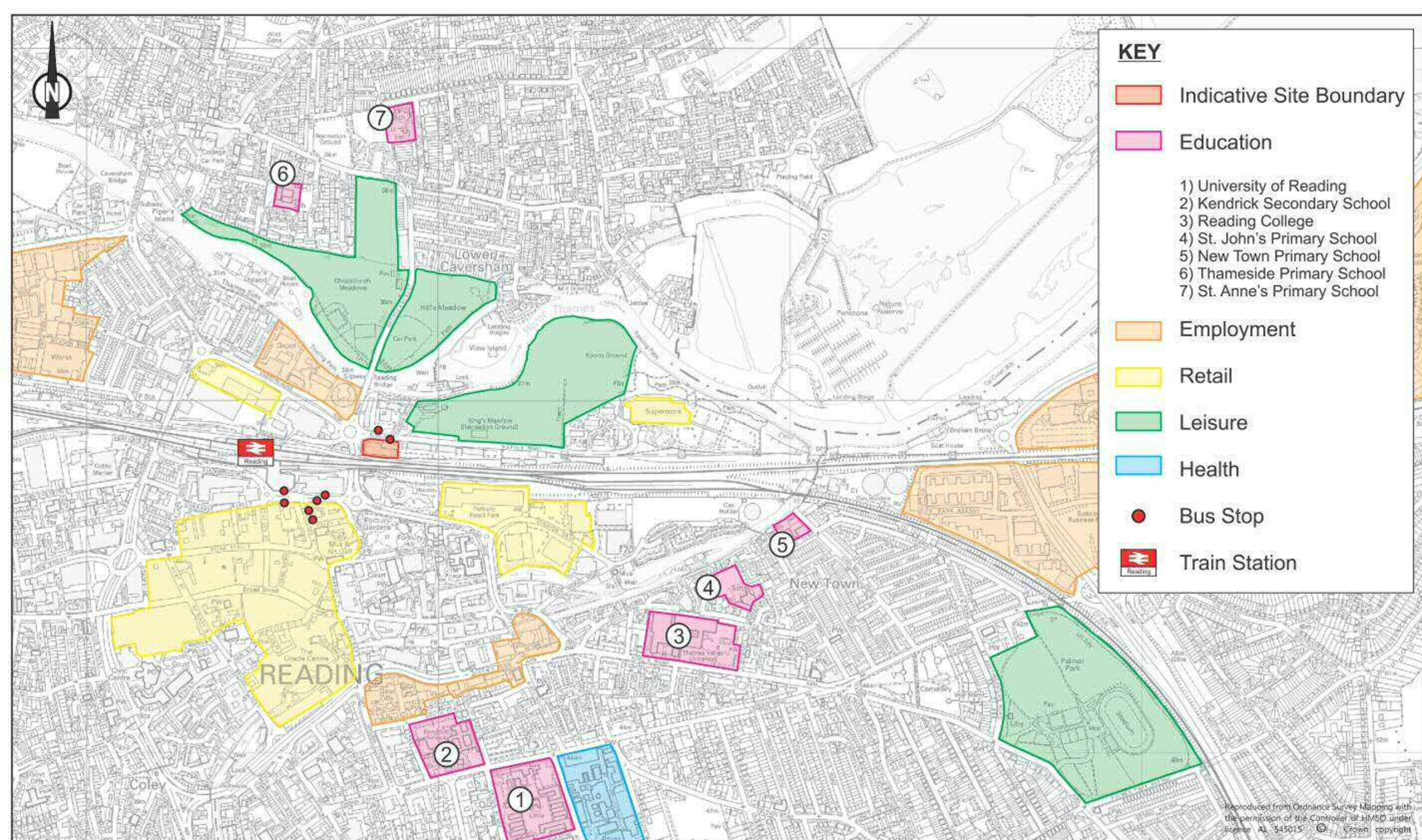
9.0 ACTION PLAN

- 9.1 A draft Action Plan has been prepared (presented overleaf) which may be used to set up and maintain the Travel Plan. Please note that the monitoring period of the Travel Plan will only extend beyond the 5 years if it does not deliver its objectives and targets by the end of Year 5.

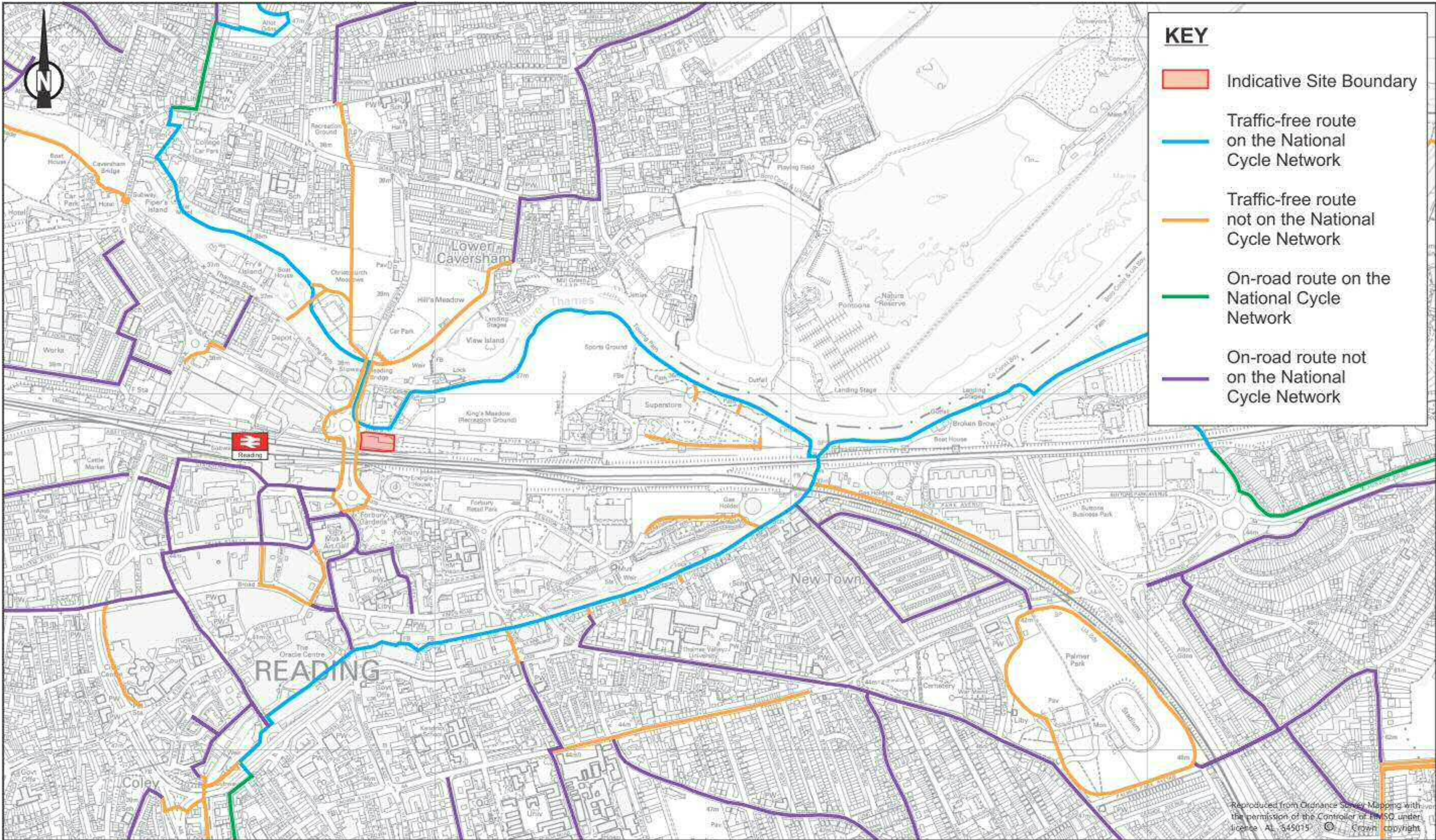
Table 9.1: Proposed Action Plan

	Action	Target Date	Responsibility
Prior to Occupation	Appoint TPC	6 months prior to occupation	Developer
	TPC to prepare Final Travel Plan	3-6 months prior to occupation	TPC
	Agree contents of final Travel Plan with LHA/LPA including SMART targets	3 months prior to occupation	TPC/LHA
	Prepare Welcome Travel Pack (text/graphics/printing)	3 months prior to occupation	TPC
	Set up Bus voucher scheme	3 months prior to occupation	TPC
	Acquire relevant bus/rail/cycling/walking maps	3 months prior to occupation	TPC
	Acquire relevant bus/rail timetables and fare info	3 months prior to occupation	TPC
	Set-up car club and secure discount rate for first year membership	3 months prior to occupation	TPC
	Investigate opportunities for ReadyBike subsidised hours	3 months prior to occupation	
	Acquire additional marketing materials regarding benefits of sustainable travel	3 months prior to occupation	TPC
	Set-up cycle voucher scheme with local or online retailer	3 months prior to occupation	
	Set up website	3 months prior to occupation	TPC
	Approval of Resident Travel Pack (LHA/LPA)	1 month prior to occupation	TPC/LHA
Site Occupation	Implement Travel Plan	within 1 month of 1st occupation	TPC
	Launch website	within 1 month of 1st occupation	TPC
	Distribute Welcome Travel Pack to 1st residents inclusive of all subsidised vouchers and membership schemes	within 1 month of 1st occupation	TPC
Year 1 - 5	Offer PTP to residents	within 1 month of 1st occupation and 6 months thereafter	TPC
	Continued distribution of Welcome Travel Pack	within 3 weeks of occupation	TPC
	Resident Meeting	offered once annually	TPC
	Periodic distribution of bus/walking/cycling maps	once annually	TPC
	Periodic distribution of timetables and fare info	once annually	TPC
	Further distribution of subsidised travel vouchers (subject to initial redemption and budget available)	once annually following complete distribution of travel packs	TPC
	Undertake baseline travel survey	On occupation of 50% of development	TPC
	Review SMART targets	1 month after survey	TPC
	Review Travel Plan and proposed targets with LHA/LPA	1 month after survey	TPC/LHA
	Management of website	ongoing	TPC
	Responding to resident enquiries	ongoing	TPC
	Annual travel survey	anniversary of the first survey for subsequent 4 years	TPC
	Review Travel Plan and targets with LHA/LPA	1 month after survey	TPC/LHA

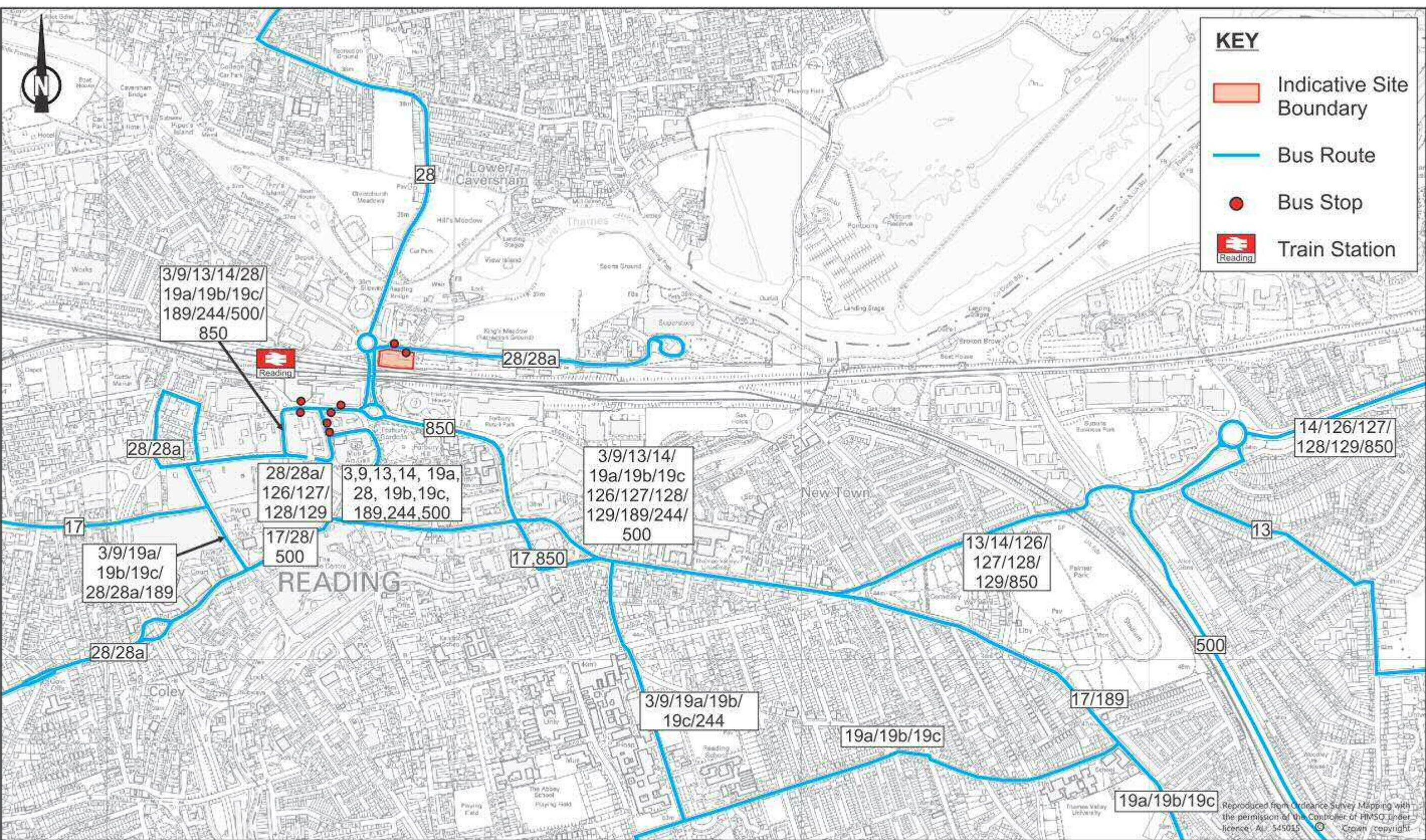




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Nicola Clay

From: Saunders, Chris [Chris.Saunders@reading.gov.uk]
Sent: 04 December 2014 16:32
To: Nicola Clay
Subject: RE: Coopers BMW Reading
Attachments: Convenience Store MM Trip Rates.pdf

Nicola

Thank you for your email and the proposed trip rates for a convenience store. I have had assessed the TRICS database as well and have reached the same conclusion as yourself that there are a very limited number of comparison sites on the system similar to that proposed.

Given the small nature of the store and the extensive parking restrictions on the neighbouring roads , I am happy to progress as detailed below.

Kind Regards

Chris Saunders IEng, FIHE
Transport Development Control Manager
Transport
Department of Environment and Neighbourhood Services

Reading Borough Council
Civic Offices
Bridge Street
Reading Borough Council
RG1 2LU

0118 937 3949 (73949 internal extension)

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From: Nicola Clay [mailto:njc@stuartmichael.co.uk]
Sent: 25 November 2014 15:05
To: Saunders, Chris
Subject: RE: Coopers BMW Reading

Hi Chris

Apologies my mistake! Please find attached.

Kind Regards

Nicola

Nicola Clay

Senior Transport Planner
Stuart Michael Associates Limited
Coombe House

Coombe Square
Thatcham
Berkshire
RG19 4JF

Tel: (01635) 867711

Website: www.stuartmichael.co.uk

From: Saunders, Chris [<mailto:Chris.Saunders@reading.gov.uk>]
Sent: 25 November 2014 15:04
To: Nicola Clay
Subject: RE: Coopers BMW Reading

Nicola

Thank you for your email but unfortunately there was no TRICs output attached. If this can be sent I will look at it as soon as possible.

Regards

Chris Saunders IEng, FIHE
Transport Development Control Manager
Transport
Department of Environment and Neighbourhood Services

Reading Borough Council
Civic Centre
Reading Borough Council
RG1 7AE

0118 937 3949 (73949 internal extension)

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From: Nicola Clay [<mailto:njc@stuartmichael.co.uk>]
Sent: 25 November 2014 11:38
To: Saunders, Chris
Subject: RE: Coopers BMW Reading

Chris,

Following on from our previous discussions regarding trip rates for the proposed scheme at Coopers Garage we are moving forward with a convenience store. It is intended that the store would serve the residential development (similar to that which would be provided on site for a housing development) with no parking provided on site. should parking be required the Kingsmeadow car park is located opposite the site. It is therefore anticipated that any vehicular movements associated with the store would be minimal.

I have therefore based my selection criteria within TRICS on town centre sites with no associated parking, please find the output report attached. I note that the sample size is small, however these sites best reflect the proposed development site. The cross test reports less than 30% for the peak periods and is therefore in line with TRICS guidance. I have applied a 75% reduction to the trips generation to account for passby-linked in trips as was the approved methodology for the Station Hill 3 and Sorting Office applications.

Please could you confirm that you accord with the proposed trip rates and/or provide comment on any adjustments that should be applied.

Kind Regards

Nicola

Nicola Clay

Senior Transport Planner
Stuart Michael Associates Limited
Coombe House
Coombe Square
Thatcham
Berkshire
RG19 4JF

Tel: (01635) 867711

Website: www.stuartmichael.co.uk

From: Saunders, Chris [<mailto:Chris.Saunders@reading.gov.uk>]

Sent: 17 September 2014 14:49

To: Nicola Clay

Cc: Stewart Andrews

Subject: FW: Coopers BMW Reading

Dear Nicola

Thank you for your email and attachments and I apologise for the delay in replying. I have now had the opportunity to examine the details and comment as follows.

With regards the minutes of the meeting I had with Stewart Andrews I find these a true reflection of meeting and I am happy with them.

In respect of the trip rates proposed I have also interrogated TRICS and for the residential I came out similar to your rates and those used previously in the nearby developments and as a result I am happy to use the ones you propose.

With the retail I get a much higher rate than yourself and I include my trip rate print out for your information. The cross test on these was 6% which is in accordance with the TRICS user guide for small samples. The problem with the retail is however given they are two small isolated units and until your client has some firm indication of who will occupy them, it is hard to pin down an accurate trip rate given the vast differences between trip rates between different retail uses.

With regards the Station Hill TRICS sites used I do not have details of the actual sites uses. However I do have the technical report from the first Station Hill application which indicates the varied types of retail uses chosen, which I attach for your information. Given the close proximity of the various applications the same methodology was used on all.

I hope this information is of use and if you require any more, please do contact me.

Kind Regards

Chris Saunders IEng, FIHE

Nicola Clay

From: Saunders, Chris [Chris.Saunders@reading.gov.uk]
Sent: 13 November 2014 16:13
To: Nicola Clay
Subject: RE: Coopers BMW Reading - Development Flows

Dear Nicola

Thank you for your email. Given the close proximity of the junctions I am happy for one ARCADY model combining both junctions.

If you need anything else, please let me know.

Kind Regards

Chris Saunders IEng, FIHE
Transport Development Control Manager
Transport
Department of Environment and Neighbourhood Services

Reading Borough Council
Civic Centre
Reading Borough Council
RG1 7AE

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From: Nicola Clay [mailto:njc@stuartmichael.co.uk]
Sent: 11 November 2014 10:35
To: Saunders, Chris
Subject: RE: Coopers BMW Reading - Development Flows

Chris,

We are in the process of building the traffic models. In view of the proximity of the two A329 roundabout junctions (Forbury Road/A329N/A329E and A329W/George St/Kings Meadow/A329S/station Car Park) we are proposing to build a combined ARCADY model as opposed to two separate models.

Could you confirm that you approve of this approach or comment whether you would prefer separate models to be prepared.

Kind regards

Nicola

Nicola Clay

Senior Transport Planner

Nicola Clay

From: Saunders, Chris [Chris.Saunders@reading.gov.uk]
Sent: 21 October 2014 14:05
To: Nicola Clay
Subject: RE: Coopers BMW Reading

Nicola

Thank you for your email and I can confirm that I find your approach acceptable. Given our model is for the traditional peak times, these will need to be assessed but undertaking sensitive testing on the observed peak hours is a sensible way forward.

With regards the data you asked for I have chased our consultants up. I do have a meeting with them on Thursday, so hopefully I will get the data by then.

Kind Regard

Chris Saunders IEng, FIHE
Transport Development Control Manager
Transport
Department of Environment and Neighbourhood Services

Reading Borough Council
Civic Centre
Reading Borough Council
RG1 7AE

0118 937 3949 (73949 internal extension)

[Website](#) | [Facebook](#) | [Twitter](#) | [YouTube](#)



From: Nicola Clay [mailto:njc@stuartmichael.co.uk]
Sent: 20 October 2014 14:53
To: Saunders, Chris
Subject: RE: Coopers BMW Reading

Chris,

I have now received the MCC data from our traffic consultant for the A329 roundabout junctions :

- . Vastern Rd/Kings Meadow Rd/George Street/Station Car Park
- . Vastern Rd/Forbury Rd

The data indicates that the local peaks at these junctions vary to that of the typical commuter peak periods (0800-0900 and 1700-1800). The observed peak periods (based on total hourly traffic flows) are as follows:

- . Vastern Rd/Kings Meadow Rd/George Street/Station Car Park: 0730-0830 and 1615-1715
- . Vastern Rd/Forbury Rd: 0700-0800 and 1600-1700

It is assumed that the variation in peak periods between the roundabouts is likely attributed to the traffic flow from one to the other.

I am proposing that the Transport Assessment would undertake junction capacity testing for the typical commuter peak periods and then further sensitivity testing for the observed peak periods at both junctions. Please could you confirm that you accord with this approach, or advise as to your preferred approach should you not accord with my suggested method.

Kind Regards

Nicola

Nicola Clay

Senior Transport Planner
Stuart Michael Associates Limited
Coombe House
Coombe Square
Thatcham
Berkshire
RG19 4JF

Tel: (01635) 867711

Website: www.stuartmichael.co.uk

From: Saunders, Chris [<mailto:Chris.Saunders@reading.gov.uk>]

Sent: 09 October 2014 16:35

To: Nicola Clay

Subject: RE: Coopers BMW Reading

Nicola

Thanks you for your emails and I am sorry that I missed you this morning. Following your query I have looked back through our records and the following information may be of use to you. There are revised model runs from April 2013 and a copy of the runs you have with notes from me which indicated errors. Also there is a response from our consultants, below with regards my queries.

I can confirm that you have labelled the junctions correctly.

With regards the early email on turning movements at the Caversham Road / Vastern Road roundabout as the revised extracts show the turning movements are 40% Caversham Road, 60% Vastern Road.

If you need anything else, please let me know

Kind Regards

Chris Saunders IEng, FIHE
Transport Development Control Manager
Transport
Department of Environment and Neighbourhood Services

Reading Borough Council
Civic Centre
Reading Borough Council
RG1 7AE

Nicola Clay

From: Saunders, Chris [Chris.Saunders@reading.gov.uk]
Sent: 17 September 2014 14:49
To: Nicola Clay
Cc: Stewart Andrews
Subject: FW: Coopers BMW Reading
Attachments: Residential MM Trip Rates.PDF; Retail MM Trip Rates.PDF; 4710 - Trip Generation - TRICS comparison.pdf; 4710 - Initial Transportation Scoping Meeting.pdf; TEchnical Note Trip Rates.pdf; Retail Rate Flats Sept 2014 RBC.pdf

Dear Nicola

Thank you for your email and attachments and I apologise for the delay in replying. I have now had the opportunity to examine the details and comment as follows.

With regards the minutes of the meeting I had with Stewart Andrews I find these a true reflection of meeting and I am happy with them.

In respect of the trip rates proposed I have also interrogated TRICS and for the residential I came out similar to your rates and those used previously in the nearby developments and as a result I am happy to use the ones you propose.

With the retail I get a much higher rate than yourself and I include my trip rate print out for your information. The cross test on these was 6% which is in accordance with the TRICS user guide for small samples. The problem with the retail is however given they are two small isolated units and until your client has some firm indication of who will occupy them, it is hard to pin down an accurate trip rate given the vast differences between trip rates between different retail uses.

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I hope this information is of use and if you require any more , please do contact me.

Kind Regards

Chris Saunders IEng, FIHE
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From: Nicola Clay [mailto:njc@stuartmichael.co.uk]
Sent: 03 September 2014 12:47
To: Saunders, Chris
Cc: Stewart Andrews
Subject: Coopers BMW Reading

Chris,

I understand that you met with my colleague Stewart Andrews, 19th August, to discuss the scope of the transport assessment in relation to the proposed development at the existing Coopers Garage, Reading site. Please find attached the meeting minutes which provide a summary of your discussions. I trust that these are reflective of your discussions, however should you wish for any amendments to be made please let me know.

Following on from your meeting with Stewart I have undertaken a TRICS assessment for the proposed development. I have also taken into consideration the trip rates agreed as part of the Station Hill and Chatham Place developments, as advised by yourself during the scoping meeting. I attach the proposed trip rates TRICS output reports for the proposed development (both Residential and Retail t). I have applied the following criteria in the selection process:

	Residential	Retail
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Area	Sites Located in Scotland, Wales and Ireland have been excluded.	Sites Located in Scotland, Wales and Ireland have been excluded.
Land Use	C3: Residential	Retail
Sub-Land Use	C3: Flats Privately Owned	Local Shops (Neighbourhood Centre)
Quantum	100-400 units (output= 132-294units)* *294 – maximum units available	1000-1890sqm GFA (output 100-1890)* *1890 = maximum sqm GFA available
Output	Multi-Modal	Multi-Modal
Travel Plan	No	No

Nb: With regards to the retail development there are no sites available within a town centre location and therefore the public transport provision for each site is much lower than the residential site selected.

I have reviewed the TRICS trip rates against those of the Station Hill and Chatham Place trip rates. The attached PDF provides an overview of the trip rates for ease of reference. The residential trip rates prove comparable, however the retail trip rates are much lower than those applied for the Station Hill development. If you have access to the approved TRICS outputs for the Station Hill development this would likely provide a good basis for comparing the proposed trip rates against those of Station Hill.

In terms of assessing the existing site traffic generation we are undertaking surveys tomorrow to provide initial data with which we can then compare existing with proposed and this will inform us of the potential increase in traffic flow.

If you could provide some feedback with regards to the proposed trip rates this would be much appreciated.

Kind regards

Nicci

Nicola Clay

Senior Transport Planner
Stuart Michael Associates Limited
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Nicola Clay

From: Saunders, Chris [Chris.Saunders@reading.gov.uk]
Sent: 09 October 2014 16:35
To: Nicola Clay
Subject: RE: Coopers BMW Reading
Attachments: Turning arrival flows April 2013.pdf; Station Hill Model runs 15-03-13 with RBC comments.PDF; SKMBT_C28014100910440.pdf

Nicola

Thanks you for your emails and I am sorry that I missed you this morning. Following your query I have looked back through our records and the following information may be of use to you. There are revised model runs from April 2013 and a copy of the runs you have with notes from me which indicated errors. Also there is a response from our consultants, below with regards my queries.

I can confirm that you have labelled the junctions correctly.

With regards the early email on turning movements at the Caversham Road / Vastern Road roundabout as the revised extracts show the turning movements are 40% Caversham Road, 60% Vastern Road.

If you need anything else, please let me know

Kind Regards

Chris Saunders IEng, FIHE
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From: Tom Withey [twithey@peterbrett.com]
Sent: 28 March 2013 12:09
To: Saunders, Chris
Cc: Scott Witchalls; Leuillet, Ruth
Subject: RE: Station Hill - Reading Transport Model Invoice
Chris,

Thanks for your email.

With regards your comments on the document, my responses are below with reference to the page number of the report:

12-26. In the junction diagram, the numbers all refer to Volume/Capacity (V/C) ratios, rather than flows. These were required as part of the model brief. Considering them in this light, I think all the diagrams are sensible. For example, it is not unusual for all turns from the same arm at a roundabout to have the same v/c ratio, as the model tries to balance out the flow and capacity evenly across all turns from an arm, in order to minimise the V/C for any single turn.

33-34. The access from the car park you refer to are actually all flows from the civic centre/hexagon car park. Regarding the town centre restrictions, note that the diagrams are showing V/C flows, and that there are some flows in the model on this link due to buses.

35-36. The flows on the link highlighted are on the slip road. Generally, these vehicles are using the slip road as an alternative to the IDR.

For item 2, I believe the junction diagrams have prompted this question. I can assure that the model has been modified to take into account the town centre restrictions. What you believed to be flows were in fact V/C ratios, and for those links you highlight, we are showing V/C ratios due to the presence of bus flows. Pages 8-11 of the scanned report show the development flows, and these show zero flow on Friar Street, West Street and Gun Street, as expected.

For item 3, there is no assumed model forecast year (we have always maintained this when dealing with developers). For the purposes of development control, the modelled forecast must include all significant consented developments. Because in many of these cases we don't know when the build out is likely to be, we can't say what the forecast year for the model is. However, at the same time need to assume an increase in background traffic so that not all of the growth in the model comes from consented development. To account for this background growth, we use Temprow factors to generate a nominal growth up to 2015. We know that the model doesn't actually represent a 2015 forecast year, however, we have to add in something for the background, and 2015 was the year chosen for that.

I hope that clears everything up to your satisfaction, but please get in touch if there are any unresolved issues, or if you have any further queries.

Tom

From: Saunders, Chris [mailto:Chris.Saunders@reading.gov.uk]

Sent: 28 March 2013 10:58

To: Tom Withey

Cc: Scott Witchalls; Leuillet, Ruth

Subject: RE: Station Hill - Reading Transport Model Invoice

Tom

Thank you for the model runs for Station Hill and unfortunately I have some questions to ask before I can finally release this to the developer's agent. I comment as follows.

- 1) The model runs show some inconsistencies with flows not corresponding with preceding flows which results in flows increasing and decreasing through junctions for no apparent reasons. I attach a scanned version of the document with all my queries and would be grateful if these could be answered.
- 2) The runs show large volumes of development traffic going through West Street, Friar Street and Gun Street during the morning and evening peak periods. I questioned these flows given since April 2011, the Town Centre restrictions have been changed so only buses, taxis and certain permit authorised vehicles can enter the central area between 7am and 11am and 4pm and 7pm, 7 days a week. Before the changes the restrictions were 11am to 4pm so vehicles could travel through the area during peak hours. Can you therefore confirm that the model has been adjusted to take in to account the new restrictions and if so why are there development flows along these roads.
- 3) The proxy year for development is 2015 and this clearly needs to be explained as the completion year of the development is going to be considerably latter than this and the Highway Authority has informed the developers agent that the proposals need to be assessed on year of opening.

As you are probably aware this is a high profile site and I have to ensure the data we are giving the developers agent is correct so we are not open to criticism during the planning process.

I look forward to hearing from you.

Kind Regards

Chris Saunders IEng, FIHE

Transport Development Control Manager

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Reading
RG1 7AE

Tel 0118 937 3949

DIFFICULT TIMES, BIG QUESTIONS...WE NEED TO TALK.

Tell us what you think and register for updates at

www.reading.gov.uk/weneedtotalk

From: Nicola Clay [mailto:njc@stuartmichael.co.uk]
Sent: 09 October 2014 11:03
To: Saunders, Chris
Cc: Leuillette, Ruth
Subject: RE: Coopers BMW Reading

Good Morning Chris and Ruth,

I tried calling this morning but understand you were both out of the office/in meetings.

I am trying to clarify the Station Hill 3 development trips. I have been through the TA and as far as I can determine the only development link flows are provided under Appendix E of the document.

I have extracted the relevant junctions which we are to test as part of the Coopers Garage proposals:

- . Vastern Road(A329)/Napier Road/George St (B3345)/A329(south to Forbury Road)
- . Vastern Road (A329)/Caversham Road/Caversham Road (A329)

These junctions are attached. However, should I have located these junctions incorrectly please do advise!

What I would like to understand is whether these diagrams show the development trips or are they inclusive of baseline traffic/future year traffic also? I query this based on the fact that there are trips on all arms of the junctions as opposed to those which one would expect in terms of accessing the development site.

Kind Regards

Nicola

Nicola Clay

Senior Transport Planner
Stuart Michael Associates Limited
Coombe House
Coombe Square
Thatcham
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Tel: (01635) 867711

Website: www.stuartmichael.co.uk

From: Saunders, Chris [mailto:Chris.Saunders@reading.gov.uk]
Sent: 08 October 2014 12:40
To: Nicola Clay

Cc: Leuillet, Ruth
Subject: RE: Coopers BMW Reading

Dear Nicola

Thank you for your email. The officer responsible for the Reading Transport Model is Ruth Leuillet and I have copied her in on this response.

To help you out the Station Hill 3 TA with all the model runs is on the web under this application number 130436, on the bottom of the first page of documents and the Royal mail Site is on the web under application number 110024 with the final TA on page 5 of the documents.

If you need anything else, please let me know

Chris Saunders IEng, FIHE
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From: Nicola Clay [<mailto:njc@stuartmichael.co.uk>]
Sent: 07 October 2014 16:31
To: Saunders, Chris
Subject: RE: Coopers BMW Reading

Chris,

I wonder if you might be so kind as to provide me with the contact details of a colleague who deals with the Reading Transport Model.

I am struggling to extract the development trips from some of the committed development TA's (e.g. Station Hill) and therefore it would prove of assistance if this could be provided to me to ensure that our traffic modelling is robust.

I am still trying to clarify the type of retail development being proposed at Coopers Garage.

Kind Regards

Nicola

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Coombe House
Coombe Square
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Website: www.stuartmichael.co.uk

From: Saunders, Chris [<mailto:Chris.Saunders@reading.gov.uk>]
Sent: 17 September 2014 14:49
To: Nicola Clay
Cc: Stewart Andrews
Subject: FW: Coopers BMW Reading

Dear Nicola

Thank you for your email and attachments and I apologise for the delay in replying. I have now had the opportunity to examine the details and comment as follows.

With regards the minutes of the meeting I had with Stewart Andrews I find these a true reflection of meeting and I am happy with them.

In respect of the trip rates proposed I have also interrogated TRICS and for the residential I came out similar to your rates and those used previously in the nearby developments and as a result I am happy to use the ones you propose.

With the retail I get a much higher rate than yourself and I include my trip rate print out for your information. The cross test on these was 6% which is in accordance with the TRICS user guide for small samples. The problem with the retail is however given they are two small isolated units and until your client has some firm indication of who will occupy them, it is hard to pin down an accurate trip rate given the vast differences between trip rates between different retail uses.

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To: Saunders, Chris
Cc: Stewart Andrews
Subject: Coopers BMW Reading

Chris,

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MEETING RECORD

Project:	Coopers BMW Reading	Job Reference:	4710
Subject:	Initial Transportation Scoping Meeting	Date:	19 th August 2014
Venue:	Civic Centre, Reading		
Attendees:	Chris Saunders (CS) - Reading Borough Council Stewart Andrews (SWA) - Stuart Michael Associates		
Apologies:			
Distribution:	As above plus the Applicants		
1.0	SWA identified the site and described the proposals. SWA also noted that initial pre-application discussions had been held with the Council's Planning Officers.		
1.1	CS agreed that the proposed development was located in a highly accessible area.		
1.2	With regard to parking provision SWA noted that a parking provision of 35% had been agreed with Officers as part of a previous proposal for the site. CS confirmed that although the site is just outside of the Councils Zone 1 parking area, to all intents and purposes it should be treated as being Zone 1 and therefore a reduced parking standard would be appropriate.		
1.3	CS requested that any Transport Assessment include a parking accumulation assessment to demonstrate that the proposed parking provision is appropriate.		
1.4	CS also noted that although the site was not located within an existing car park permit zone, it is likely that a Planning Condition will be applied to any consent to remove the rights of future residents to a parking permit. CS requested that the Transport Assessment include a plan detailing the existing parking restrictions in force around the proposed development site.		
1.5	CS requested that the Transport Assessment include a comparison between the trip generation resulting from the existing and proposed uses of the site. If there is little difference between the trip generation characteristics of the uses CS will only require an assessment of the operation and capacity of the Napier Road and Forbury Road roundabout junctions. Should the differences be significant however CS will require that the traffic impact of the proposed development be assessed using the Council's Traffic Model.		
1.6	The timing for traffic surveys was discussed and CS noted that given the different term dates for Schools in Reading, traffic surveys should be scheduled for the week commencing 15 th September. (Post meeting note, CS confirmed that the Council do not have any road works programmed for the road network around the site during the week commencing 15 th September).		
1.7	With regard to trip generation rates for the proposed development, CS requested that TRICS be used to provide a representative rate, CS confirmed that given the site location and accessibility he would be content to include London sites (TRAVL) as part of the TRICS analysis in this case.		
1.8	CS noted that a full Residential Travel Plan would be required to support the trip generation rates used for the Transport Assessment.		
1.9	With regard to provision for a car club on-site, CS noted that the Common Wheels Car Club is already active in this part of Reading and might be a good first contact regarding provision and levels of service. Other options to be considered for the Travel Plan could include integrated ticketing.		
1.10	CS also noted that he now follows DfT advice regarding projected year for future assessment as full occupation.		

1.11	It was agreed that 2011 Census data regarding journey to work should be used for traffic assignment and distribution.	
1.12	CS requested that account be taken of the following consented schemes: • The redevelopment of the Royal mail Sorting Office on Caversham Road (residential); • Kenavon Drive (residential); • Station Hill (retail, hotel and residential); • Chatham Place (residential).	
1.13	CS also requested that the impact of the new cycle crossing over the River Thames be included as part of the assessments.	
1.14	With regard to Crossrail, CS noted that only two trains per hour will run from Reading.	
1.15	CS also noted that there is still a protected line for road improvements along Napier Road which will need to be respected by any scheme for the site. (plans detailing the protected line provided by CS post meeting).	
1.16	SWA undertook to provide a Transport Assessment Scoping Report for agreement with CS.	SWA



TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : C - FLATS PRIVATELY OWNED
MULTI-MODAL VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	KI KINGSTON	1 days
	KN KENSINGTON AND CHELSEA	1 days
08	NORTH WEST	
	GM GREATER MANCHESTER	1 days

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

Filtering Stage 2 selection:

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

Parameter:	Number of dwellings
Actual Range:	132 to 294 (units:)
Range Selected by User:	100 to 400 (units:)

Public Transport Provision:

Selection by:	Include all surveys
---------------	---------------------

Date Range:	01/01/05 to 13/10/11
-------------	----------------------

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

Selected survey days:

Monday	1 days
Tuesday	1 days
Thursday	1 days

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

Selected survey types:

Manual count	3 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:

Town Centre	1
Edge of Town Centre	2

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

Selected Location Sub Categories:

Residential Zone	1
Built-Up Zone	1
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.

Filtering Stage 3 selection:

Use Class:

C3	3 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:

25,001 to 50,000	2 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:

500,001 or More	3 days
-----------------	--------

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

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	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	3 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 | GM-03-C-02 | BLOCK OF FLATS | GREATER MANCHESTER |
| | WHITWORTH STREET W. | | |
| | MANCHESTER | | |
| | Town Centre | | |
| | Built-Up Zone | | |
| | Total Number of dwellings: | 154 | |
| | Survey date: THURSDAY | 13/10/11 | Survey Type: MANUAL |
| 2 | KI-03-C-02 | BLOCK OF FLATS | KINGSTON |
| | SOPWITH WAY | | |
| | KINGSTON UPON THAMES | | |
| | Edge of Town Centre | | |
| | No Sub Category | | |
| | Total Number of dwellings: | 132 | |
| | Survey date: MONDAY | 14/06/10 | Survey Type: MANUAL |
| 3 | KN-03-C-02 | BLOCK OF FLATS | KENSINGTON AND CHELSEA |
| | BECKFORD CLOSE | | |
| | SOUTH KENSINGTON | | |
| | Edge of Town Centre | | |
| | Residential Zone | | |
| | Total Number of dwellings: | 294 | |
| | Survey date: TUESDAY | 15/06/10 | Survey Type: MANUAL |

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
SC-03-C-01	low pt provision

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS 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
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	3	193	0.012	3	193	0.055	3	193	0.067
08:00 - 09:00	3	193	0.045	3	193	0.107	3	193	0.152
09:00 - 10:00	3	193	0.050	3	193	0.047	3	193	0.097
10:00 - 11:00	3	193	0.022	3	193	0.034	3	193	0.056
11:00 - 12:00	3	193	0.050	3	193	0.034	3	193	0.084
12:00 - 13:00	3	193	0.029	3	193	0.040	3	193	0.069
13:00 - 14:00	3	193	0.033	3	193	0.033	3	193	0.066
14:00 - 15:00	3	193	0.034	3	193	0.045	3	193	0.079
15:00 - 16:00	3	193	0.048	3	193	0.043	3	193	0.091
16:00 - 17:00	3	193	0.047	3	193	0.041	3	193	0.088
17:00 - 18:00	3	193	0.069	3	193	0.047	3	193	0.116
18:00 - 19:00	3	193	0.072	3	193	0.072	3	193	0.144
19:00 - 20:00	1	294	0.071	1	294	0.058	1	294	0.129
20:00 - 21:00	1	294	0.054	1	294	0.034	1	294	0.088
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.636			0.690			1.326

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: 132 - 294 (units:)
 Survey date range: 01/01/05 - 13/10/11
 Number of weekdays (Monday-Friday): 3
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 1

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/C - FLATS 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	3	193	0.002	3	193	0.002	3	193	0.004
08:00 - 09:00	3	193	0.012	3	193	0.012	3	193	0.024
09:00 - 10:00	3	193	0.007	3	193	0.007	3	193	0.014
10:00 - 11:00	3	193	0.002	3	193	0.002	3	193	0.004
11:00 - 12:00	3	193	0.003	3	193	0.003	3	193	0.006
12:00 - 13:00	3	193	0.000	3	193	0.000	3	193	0.000
13:00 - 14:00	3	193	0.002	3	193	0.002	3	193	0.004
14:00 - 15:00	3	193	0.002	3	193	0.002	3	193	0.004
15:00 - 16:00	3	193	0.005	3	193	0.005	3	193	0.010
16:00 - 17:00	3	193	0.005	3	193	0.005	3	193	0.010
17:00 - 18:00	3	193	0.003	3	193	0.003	3	193	0.006
18:00 - 19:00	3	193	0.005	3	193	0.005	3	193	0.010
19:00 - 20:00	1	294	0.007	1	294	0.007	1	294	0.014
20:00 - 21:00	1	294	0.010	1	294	0.010	1	294	0.020
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.065			0.065			0.130

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: 132 - 294 (units:)
 Survey date range: 01/01/05 - 13/10/11
 Number of weekdays (Monday-Friday): 3
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 1

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/C - FLATS PRIVATELY OWNED

MULTI-MODAL OGVS

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	3	193	0.002	3	193	0.002	3	193	0.004
08:00 - 09:00	3	193	0.000	3	193	0.000	3	193	0.000
09:00 - 10:00	3	193	0.000	3	193	0.000	3	193	0.000
10:00 - 11:00	3	193	0.000	3	193	0.000	3	193	0.000
11:00 - 12:00	3	193	0.000	3	193	0.000	3	193	0.000
12:00 - 13:00	3	193	0.000	3	193	0.000	3	193	0.000
13:00 - 14:00	3	193	0.000	3	193	0.000	3	193	0.000
14:00 - 15:00	3	193	0.002	3	193	0.002	3	193	0.004
15:00 - 16:00	3	193	0.000	3	193	0.000	3	193	0.000
16:00 - 17:00	3	193	0.002	3	193	0.002	3	193	0.004
17:00 - 18:00	3	193	0.000	3	193	0.000	3	193	0.000
18:00 - 19:00	3	193	0.000	3	193	0.000	3	193	0.000
19:00 - 20:00	1	294	0.000	1	294	0.000	1	294	0.000
20:00 - 21:00	1	294	0.000	1	294	0.000	1	294	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.006			0.006			0.012

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: 132 - 294 (units:)
 Survey date range: 01/01/05 - 13/10/11
 Number of weekdays (Monday-Friday): 3
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 1

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/C - FLATS 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	3	193	0.000	3	193	0.000	3	193	0.000
08:00 - 09:00	3	193	0.000	3	193	0.000	3	193	0.000
09:00 - 10:00	3	193	0.000	3	193	0.000	3	193	0.000
10:00 - 11:00	3	193	0.000	3	193	0.000	3	193	0.000
11:00 - 12:00	3	193	0.000	3	193	0.000	3	193	0.000
12:00 - 13:00	3	193	0.000	3	193	0.000	3	193	0.000
13:00 - 14:00	3	193	0.000	3	193	0.000	3	193	0.000
14:00 - 15:00	3	193	0.000	3	193	0.000	3	193	0.000
15:00 - 16:00	3	193	0.000	3	193	0.000	3	193	0.000
16:00 - 17:00	3	193	0.000	3	193	0.000	3	193	0.000
17:00 - 18:00	3	193	0.000	3	193	0.000	3	193	0.000
18:00 - 19:00	3	193	0.000	3	193	0.000	3	193	0.000
19:00 - 20:00	1	294	0.000	1	294	0.000	1	294	0.000
20:00 - 21:00	1	294	0.000	1	294	0.000	1	294	0.000
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 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: 132 - 294 (units:)
 Survey date range: 01/01/05 - 13/10/11
 Number of weekdays (Monday-Friday): 3
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 1

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/C - FLATS 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	3	193	0.002	3	193	0.005	3	193	0.007
08:00 - 09:00	3	193	0.000	3	193	0.009	3	193	0.009
09:00 - 10:00	3	193	0.002	3	193	0.007	3	193	0.009
10:00 - 11:00	3	193	0.002	3	193	0.002	3	193	0.004
11:00 - 12:00	3	193	0.002	3	193	0.005	3	193	0.007
12:00 - 13:00	3	193	0.003	3	193	0.003	3	193	0.006
13:00 - 14:00	3	193	0.000	3	193	0.000	3	193	0.000
14:00 - 15:00	3	193	0.000	3	193	0.000	3	193	0.000
15:00 - 16:00	3	193	0.000	3	193	0.002	3	193	0.002
16:00 - 17:00	3	193	0.003	3	193	0.000	3	193	0.003
17:00 - 18:00	3	193	0.009	3	193	0.002	3	193	0.011
18:00 - 19:00	3	193	0.017	3	193	0.009	3	193	0.026
19:00 - 20:00	1	294	0.017	1	294	0.014	1	294	0.031
20:00 - 21:00	1	294	0.007	1	294	0.000	1	294	0.007
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.064			0.058			0.122

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: 132 - 294 (units:)
 Survey date range: 01/01/05 - 13/10/11
 Number of weekdays (Monday-Friday): 3
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 1

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/C - FLATS 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	3	193	0.016	3	193	0.059	3	193	0.075
08:00 - 09:00	3	193	0.038	3	193	0.164	3	193	0.202
09:00 - 10:00	3	193	0.053	3	193	0.050	3	193	0.103
10:00 - 11:00	3	193	0.022	3	193	0.038	3	193	0.060
11:00 - 12:00	3	193	0.050	3	193	0.040	3	193	0.090
12:00 - 13:00	3	193	0.029	3	193	0.048	3	193	0.077
13:00 - 14:00	3	193	0.045	3	193	0.043	3	193	0.088
14:00 - 15:00	3	193	0.045	3	193	0.055	3	193	0.100
15:00 - 16:00	3	193	0.069	3	193	0.047	3	193	0.116
16:00 - 17:00	3	193	0.053	3	193	0.043	3	193	0.096
17:00 - 18:00	3	193	0.107	3	193	0.067	3	193	0.174
18:00 - 19:00	3	193	0.093	3	193	0.078	3	193	0.171
19:00 - 20:00	1	294	0.092	1	294	0.068	1	294	0.160
20:00 - 21:00	1	294	0.065	1	294	0.044	1	294	0.109
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.777			0.844			1.621

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: 132 - 294 (units:)
 Survey date range: 01/01/05 - 13/10/11
 Number of weekdays (Monday-Friday): 3
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 1

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/C - FLATS 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	3	193	0.010	3	193	0.034	3	193	0.044
08:00 - 09:00	3	193	0.031	3	193	0.222	3	193	0.253
09:00 - 10:00	3	193	0.041	3	193	0.107	3	193	0.148
10:00 - 11:00	3	193	0.047	3	193	0.086	3	193	0.133
11:00 - 12:00	3	193	0.078	3	193	0.064	3	193	0.142
12:00 - 13:00	3	193	0.117	3	193	0.090	3	193	0.207
13:00 - 14:00	3	193	0.109	3	193	0.102	3	193	0.211
14:00 - 15:00	3	193	0.098	3	193	0.081	3	193	0.179
15:00 - 16:00	3	193	0.133	3	193	0.090	3	193	0.223
16:00 - 17:00	3	193	0.160	3	193	0.138	3	193	0.298
17:00 - 18:00	3	193	0.212	3	193	0.129	3	193	0.341
18:00 - 19:00	3	193	0.145	3	193	0.045	3	193	0.190
19:00 - 20:00	1	294	0.085	1	294	0.020	1	294	0.105
20:00 - 21:00	1	294	0.078	1	294	0.058	1	294	0.136
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.344			1.266			2.610

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: 132 - 294 (units:)
 Survey date range: 01/01/05 - 13/10/11
 Number of weekdays (Monday-Friday): 3
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 1

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/C - FLATS 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	3	193	0.002	3	193	0.034	3	193	0.036
08:00 - 09:00	3	193	0.014	3	193	0.067	3	193	0.081
09:00 - 10:00	3	193	0.010	3	193	0.033	3	193	0.043
10:00 - 11:00	3	193	0.005	3	193	0.026	3	193	0.031
11:00 - 12:00	3	193	0.014	3	193	0.019	3	193	0.033
12:00 - 13:00	3	193	0.005	3	193	0.029	3	193	0.034
13:00 - 14:00	3	193	0.012	3	193	0.010	3	193	0.022
14:00 - 15:00	3	193	0.010	3	193	0.033	3	193	0.043
15:00 - 16:00	3	193	0.045	3	193	0.014	3	193	0.059
16:00 - 17:00	3	193	0.064	3	193	0.036	3	193	0.100
17:00 - 18:00	3	193	0.045	3	193	0.007	3	193	0.052
18:00 - 19:00	3	193	0.029	3	193	0.010	3	193	0.039
19:00 - 20:00	1	294	0.037	1	294	0.007	1	294	0.044
20:00 - 21:00	1	294	0.020	1	294	0.000	1	294	0.020
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.312			0.325			0.637

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: 132 - 294 (units:)
 Survey date range: 01/01/05 - 13/10/11
 Number of weekdays (Monday-Friday): 3
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 1

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/C - FLATS PRIVATELY OWNED
 MULTI-MODAL TRAIN 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	3	193	0.000	3	193	0.066	3	193	0.066
08:00 - 09:00	3	193	0.010	3	193	0.084	3	193	0.094
09:00 - 10:00	3	193	0.003	3	193	0.026	3	193	0.029
10:00 - 11:00	3	193	0.000	3	193	0.012	3	193	0.012
11:00 - 12:00	3	193	0.003	3	193	0.021	3	193	0.024
12:00 - 13:00	3	193	0.005	3	193	0.022	3	193	0.027
13:00 - 14:00	3	193	0.005	3	193	0.012	3	193	0.017
14:00 - 15:00	3	193	0.017	3	193	0.002	3	193	0.019
15:00 - 16:00	3	193	0.005	3	193	0.003	3	193	0.008
16:00 - 17:00	3	193	0.024	3	193	0.016	3	193	0.040
17:00 - 18:00	3	193	0.071	3	193	0.014	3	193	0.085
18:00 - 19:00	3	193	0.060	3	193	0.005	3	193	0.065
19:00 - 20:00	1	294	0.054	1	294	0.003	1	294	0.057
20:00 - 21:00	1	294	0.017	1	294	0.000	1	294	0.017
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.274			0.286			0.560

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: 132 - 294 (units:)
 Survey date range: 01/01/05 - 13/10/11
 Number of weekdays (Monday-Friday): 3
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 1

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/C - FLATS 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	3	193	0.000	3	193	0.000	3	193	0.000
08:00 - 09:00	3	193	0.000	3	193	0.000	3	193	0.000
09:00 - 10:00	3	193	0.000	3	193	0.000	3	193	0.000
10:00 - 11:00	3	193	0.000	3	193	0.000	3	193	0.000
11:00 - 12:00	3	193	0.000	3	193	0.000	3	193	0.000
12:00 - 13:00	3	193	0.000	3	193	0.000	3	193	0.000
13:00 - 14:00	3	193	0.000	3	193	0.000	3	193	0.000
14:00 - 15:00	3	193	0.000	3	193	0.000	3	193	0.000
15:00 - 16:00	3	193	0.000	3	193	0.000	3	193	0.000
16:00 - 17:00	3	193	0.000	3	193	0.000	3	193	0.000
17:00 - 18:00	3	193	0.000	3	193	0.000	3	193	0.000
18:00 - 19:00	3	193	0.000	3	193	0.000	3	193	0.000
19:00 - 20:00	1	294	0.000	1	294	0.000	1	294	0.000
20:00 - 21:00	1	294	0.000	1	294	0.000	1	294	0.000
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 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: 132 - 294 (units:)
 Survey date range: 01/01/05 - 13/10/11
 Number of weekdays (Monday-Friday): 3
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 1

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/C - FLATS 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	3	193	0.002	3	193	0.100	3	193	0.102
08:00 - 09:00	3	193	0.024	3	193	0.152	3	193	0.176
09:00 - 10:00	3	193	0.014	3	193	0.059	3	193	0.073
10:00 - 11:00	3	193	0.005	3	193	0.038	3	193	0.043
11:00 - 12:00	3	193	0.017	3	193	0.040	3	193	0.057
12:00 - 13:00	3	193	0.010	3	193	0.052	3	193	0.062
13:00 - 14:00	3	193	0.017	3	193	0.022	3	193	0.039
14:00 - 15:00	3	193	0.028	3	193	0.034	3	193	0.062
15:00 - 16:00	3	193	0.050	3	193	0.017	3	193	0.067
16:00 - 17:00	3	193	0.088	3	193	0.052	3	193	0.140
17:00 - 18:00	3	193	0.116	3	193	0.021	3	193	0.137
18:00 - 19:00	3	193	0.090	3	193	0.016	3	193	0.106
19:00 - 20:00	1	294	0.092	1	294	0.010	1	294	0.102
20:00 - 21:00	1	294	0.037	1	294	0.000	1	294	0.037
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.590			0.613			1.203

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: 132 - 294 (units:)
 Survey date range: 01/01/05 - 13/10/11
 Number of weekdays (Monday-Friday): 3
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 1

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/C - FLATS 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	3	193	0.029	3	193	0.198	3	193	0.227
08:00 - 09:00	3	193	0.093	3	193	0.547	3	193	0.640
09:00 - 10:00	3	193	0.110	3	193	0.222	3	193	0.332
10:00 - 11:00	3	193	0.076	3	193	0.164	3	193	0.240
11:00 - 12:00	3	193	0.147	3	193	0.148	3	193	0.295
12:00 - 13:00	3	193	0.160	3	193	0.193	3	193	0.353
13:00 - 14:00	3	193	0.171	3	193	0.167	3	193	0.338
14:00 - 15:00	3	193	0.171	3	193	0.171	3	193	0.342
15:00 - 16:00	3	193	0.252	3	193	0.155	3	193	0.407
16:00 - 17:00	3	193	0.305	3	193	0.233	3	193	0.538
17:00 - 18:00	3	193	0.443	3	193	0.219	3	193	0.662
18:00 - 19:00	3	193	0.345	3	193	0.147	3	193	0.492
19:00 - 20:00	1	294	0.286	1	294	0.112	1	294	0.398
20:00 - 21:00	1	294	0.187	1	294	0.102	1	294	0.289
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.775			2.778			5.553

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: 132 - 294 (units:)
 Survey date range: 01/01/05 - 13/10/11
 Number of weekdays (Monday-Friday): 3
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 1

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.



