

The Montefiore Home, Randwick

Part 3A Concept Application and Stage 1 Project
Application

Traffic and Transport Assessment

01 September 2010

Final Report

Prepared for

Sir Moses Montefiore Jewish Home

The Montefiore Home, Randwick

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This report has been issued and amended as follows:

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Executive Summary

This traffic and transport report has provided details on the transport impacts of the proposed Concept Plan development and Stage 1 Project Application for the redevelopment of the Montefiore Aged Care facility at Randwick.

Background

An initial Stage 1 (Master Plan) DA was submitted to Randwick City Council in August of 2008. In response to a number of community submissions to Council regarding the potential traffic impacts of the proposed development, Montefiore commissioned a peer review from Halcrow of the initial traffic study, prepared by Urbanhorizons. Although Halcrow found no significant issues with the report, subsequent to a community meeting, Montefiore commissioned a new study with revised assumptions, specifically to re-visit parking requirements for staff and volunteers.

Halcrow was commissioned to undertake this study, to assess the traffic and transport implications of the proposed redevelopment of the Montefiore Home at Randwick, and where necessary identify measures to mitigate these implications.

Summary of Existing Conditions

The current facility provides the following:

- 276 beds for Low and High Care residential;
- The Burger Day Care Centre;
- Child Care Centre for 20 children;
- A total of 155 parking spaces.

Based on the June 2009 surveys and observations of the site travel behaviour and surrounding road networks it is concluded that:

- The existing Montefiore home is a low traffic generator relative to the size of the site;
- Local intersections surrounding the site are operating satisfactorily with significant spare capacity;
- There is spare on-site and on street parking capacity; and

- A proportion of Montefiore staff currently park on street (approx. 22%). Of these staff some 70% of staff would prefer to park on-site.

In response to the community concerns, Montefiore management has improved access to on-site parking by issuing swipe cards for site entry to all staff / volunteers who wish to park on-site. In October 2009, follow-up parking surveys were undertaken. These surveys concluded that the measures implemented by centre management had resulted in a decrease in demand for on-street parking by people associated with the Montefiore Home.

Overview of Proposed Redevelopment

The current facility will be increased by the proposed Concept Plan development to ultimately provide the following:

- 552 beds for Low and High Care residential;
- 35 Self Care units;
- 350m² of retail;
- The Burger Day Care Centre;
- Child Care Centre for 50 children;
- A total of 212 parking spaces.

This development will be undertaken in 3 stages.

This report also supports the Project Application for Stage 1, which will increase the development to provide the following:

- 357 beds for Low and High Care residential;
- 350m² of retail;
- The Burger Day Care Centre;
- The existing Child Care Centre for 20 children;
- A total of 175 parking spaces.

Traffic Generation

- Traffic generation of the proposed development for the site can be adequately accommodated by the existing surrounding road network.

Car Parking

- A comprehensive assessment of the proposed parking provision has been undertaken for the Concept Plan development and the Stage 1 development. The assessment concluded that:
 - The proposed on-site car parking provisions comply with the minimum requirements specified by Council (DCP) and SEPP requirements;
 - The proposed on-site parking provision would also provide sufficient on-site parking to accommodate estimated parking demand.
- The following table summarises the proposed parking provision against the relevant requirements calculated for Stage 1 and Concept Plan.

Summary of Montefiore Nursing Home Parking Requirements

DEVELOPMENT STAGE	Existing		Stage 1		Concept Plan	
Provision based on:	SEPP / DCP	Demand Based	SEPP / DCP	Demand Based	SEPP / DCP	Demand Based
Requirement	103	149	118	36	174	55
<i>Proposed Parking</i>	<i>155</i>		<i>175</i>		<i>212</i>	
Overflow Supply	+ 44	+ 6	+ 31	+ 7	+ 38	+ 5

- Although measures implemented by centre management has reduced the demand for on-street parking generated by people associated with the Home, it is noted that some staff may continue to park on street as is their lawful right. Should on street parking continue to be an issue for surrounding residents, consideration of a residential parking scheme is recommended.

Site Access

- The proposed site vehicle access arrangements will be similar to those already constructed;
- The proposed site access arrangements for the Montefiore aged care facility will facilitate satisfactory car and service vehicle access to and from the site.

Public Transport and Non Private Vehicle Travel Modes

- The site has reasonable access to good levels of public transport;

- Nearly 20% of all staff travel to and from work using non private motor vehicle modes (ie. walk, cycle or public transport), and the Concept Plan includes shower and locker room facilities to encourage this option;
- The promotion of non-private motor vehicle modes through the implementation of a green travel plan has the potential to increase the existing percentage of such modes higher and take advantage of the site's good accessibility to public transport.

In summary, the proposed Concept Plan development of the Montefiore site at Randwick is consistent with the traffic and transport aspects of the approved Master Plans and would not have a significant adverse impact on the surrounding road network.

1 Introduction

The Montefiore Home has operated a site in Randwick as a seniors living and care facility since 2002.

Halcrow has been commissioned to undertake a traffic and transport study of the proposed Concept Plan and Stage 1 Project Application for redevelopment of the site. The site will continue to be used as an aged care and seniors living facility.

The purpose of the study is to assess the traffic and transport implications of the proposed redevelopment and where necessary identify measures to mitigate these implications.

In undertaking the traffic and transport assessment, Halcrow has completed an analysis of the existing travel demands and travel behaviour of the users of the Montefiore Home ('The Home'). It is noted that consultation with the local surrounding residential community has highlighted the lack of available on street parking in the area as a key concern. Detailed assessment of existing and future parking demands for the Montefiore aged care facility has been undertaken as part of this study.

This report presents the findings of the traffic and parking assessment in the following sections:

- Section 2 – provides a description of the site and the existing conditions on the surrounding road network;
- Section 3 – provides an overview of the proposed Concept Plan and Project Application
- Section 4 – assesses the traffic and transport implications of the development proposal; and
- Section 5 – provides the assessment conclusions.

2 Existing Conditions

An appreciation of the existing traffic and transport conditions can be gained by examining the road network, traffic volumes and the operation of intersections. These aspects are discussed below.

2.1 *Site Location*

The Montefiore site is located at the corner of King Street and Dangar Street, Randwick as shown in **Figure 1**. The site is located within Randwick City Council, approximately 5km south-east of the Sydney CBD.

The site has frontage to King Street to the south, Dangar Street to the east and Govett Lane to the north.

The land use surrounding the site is largely residential. However there are several non-residential land uses in the vicinity of the site which have some effect on traffic and parking conditions, namely:

- University of NSW (Randwick Campuses);
- TAFE NSW Randwick Campus;
- Sydney Buses Randwick Depot; and
- Randwick Racecourse.

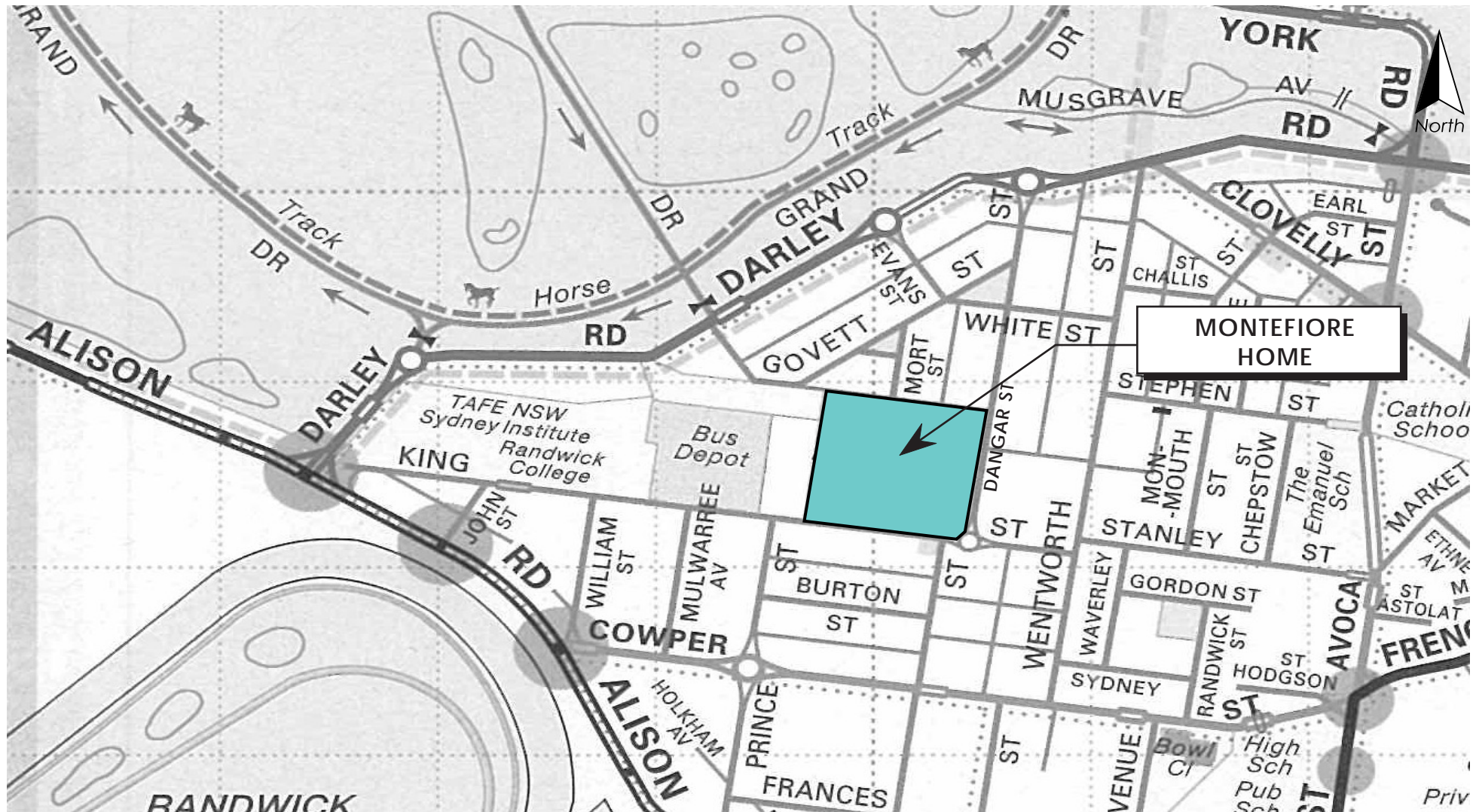
The Montefiore aged care facility site can be accessed by vehicles at two locations. The King Street access is located about 130 metres west from the Dangar Street roundabout with King Street. The Dangar Street access is located about 80 metres north of the roundabout. The Dangar Street access is restricted to entry only.

Additional vehicle access driveways are provided along King Street for:

- The Burger Day Care Centre (mini bus drop off / porte cochere); and
- Child Care Centre.

SITE LOCATION

RANDWICK MONTEFIORE HOME



Pedestrian access is provided via a number of access points along King Street, Dangar Street and Govett Lane.

2.2 *Existing Montefiore Development*

The existing Montefiore development at Randwick provides a number of community services namely:

- Residential aged care facilities;
- Day care facilities; and
- Child care centre.

These services are facilitated with on-site parking for staff and visitors and an on-site service vehicle / loading dock facility.

The existing development comprises three blocks (A, B and C) over 5 levels. These three blocks accommodate 276 hostel beds for residents. Recreation facilities and other ancillary functions are accommodated within the building; a separately run Day Centre in Block C (The Burger Centre); and a separately-run Child Care Centre for 20 children located at the southwest corner of the site.

A total on-site parking provision of 155 spaces is allocated over the following three main areas:

- Covered staff parking of 108 spaces over Levels 1 and 2 of Block A;
- Part covered visitor parking of 33 spaces on Level 2 in and adjacent to Block C;
- 6 short term parallel parking spaces located on the internal highway near the main entrance; and
- 8 parking spaces for Child Care staff.

As identified by the parking survey (see following sections), a certain amount of parking on the grass is currently tolerated.

Current staff numbers have been provided by Montefiore. A full breakdown of staff numbers is attached at **Appendix A**. Current staff numbers can be summarised as follows:

- 135 Day staff members;
- 51 Evening staff members;
- 14 Night staff members.

For a total of 200 staff members.

Current staff shift times are:

- Day Shift: 6.30am – 2.30pm (nurses / carers, etc);
9.00am – 5.30pm (admin, etc);
- Evening Shift: 2.30pm – 10.30pm; (nurses / carers etc);
- Night Shift: 10.30pm – 6.30am (nurses / carers, etc).

It is noted that there is currently a transition of staff between shifts, particularly between the Day and Evening shift, generally occurring over a 1-hour period. The transition ensures staff are available to care for residents but also spreads the travel demands of staff across a broad period of time.

In addition to paid staff, Montefiore also has a number of volunteers who periodically assist within the Home. Volunteers typically provide assistance during the day and evening shifts with the duration of stay ranging from a few to several hours.

The frequency of volunteer visits to the home is generally low. At any one time there may be 10 volunteers on the site.

2.3 Road Network

A description of the road network in the vicinity of the site is presented below.

Alison Road is a sub arterial road providing a connection between Randwick and the City via Anzac Parade. Local to the site the road generally consists of three travel lanes

(subject to parking and lane restrictions) in each direction. This road carries significant volumes of traffic.

Darley Road is a collector road, which provides a connection to Allison Road and Carrington Road. It generally has one travelling lane in each direction and on-street parking is allowed on either side of the road.

King Street is a local road, which provides a connection to Allison Road and Wentworth Street. It has one travelling lane in each direction with on-street parking allowed on either side of the road. It has a posted speed limit of 50km/hr.

Dangar Street is also a local road, which provides a connection to Darley Road and King Street. It has one travelling lane in each direction with on-street parking allowed on either side of the road. It has a posted speed limit of 50km/hr.

2.4 Existing Traffic Flows

2.4.1 Surrounding Road Network

Peak hour intersection turning movements were surveyed at three intersections. The surveys were conducted in June 2009 at the following locations:

- King Street / Dangar Street roundabout;
- King Street / Site Access driveway; and
- Dangar Street / Site Access driveway.

The surveys were conducted during the morning (7-10pm) and evening (3-7pm) peak periods on a weekday.

The surveys concluded:

- The morning peak hour period on the surrounding road network is between 8-9am, which corresponds with the typical morning commuter peak period;
- The afternoon/evening peak hour period on the surrounding road network is between 3-4pm, which corresponds with the afternoon school run and the shift changeover period for the Montefiore Home (see following sections).

The mid block two-way peak hour flows for these are summarised in **Table 2.1** and intersection turning movement flows are presented in **Figure 2**; the detailed survey data is attached at **Appendix B**.

Table 2.1 – Two-way Peak Hour Flows (June 2009)

Locations	Morning Peak Hour (vph)	Evening Peak Hour (vph)
King Street, west of the site access	435	353
King Street, west of Dangar Street	488	443
King Street, east of Dangar Street	251	203
Dangar Street, north of King Street	289	286
Dangar Street, north of the site access	278	297

King Street in the vicinity of the site currently carries peak hour flows in the order of 250 to 490 vehicles per hour (vph) during the morning peak period and about 200 to 450 vph during the evening peak period.

Dangar Street currently carries peak hour flows in the order of 270 to 300 vph during the morning and evening peak periods.

2.4.2 *Existing Montefiore Nursing Home Site Traffic Generation*

The surveys concluded that the peak hour traffic periods for the Montefiore Home occurred between 8:45-9:45am for the morning peak period and between 3:45-4:45pm and for the afternoon peak period.

The following table presents the surveyed arrival and departure traffic flows for the site.

Table 2.2 – Existing Nursing Home Site Traffic Flows (June 2009)

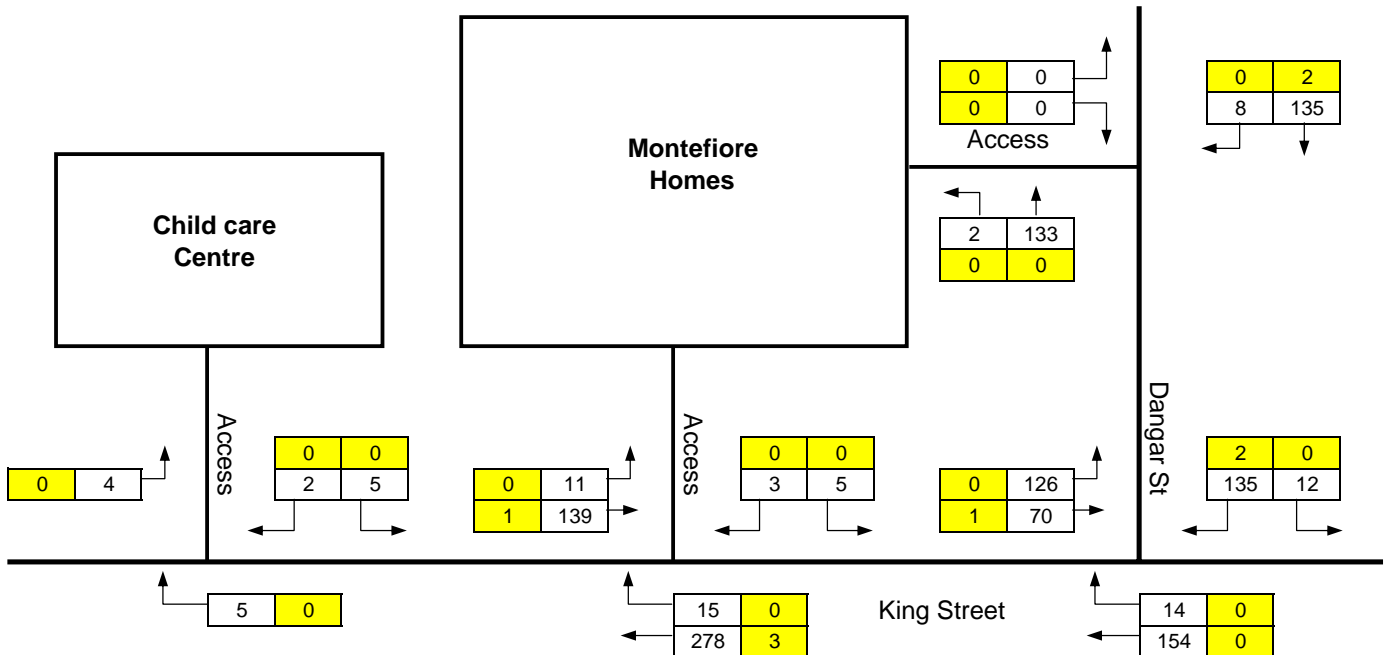
	MORNING PEAK			AFTERNOON PEAK		
	In	Out	Total	In	Out	Total
Light vehicle	42	14	56	23	49	72
Heavy vehicle	1	1	2	0	0	0
Total	43	15	58	23	49	72

EXISTING PEAK HOUR INTERSECTION FLOWS

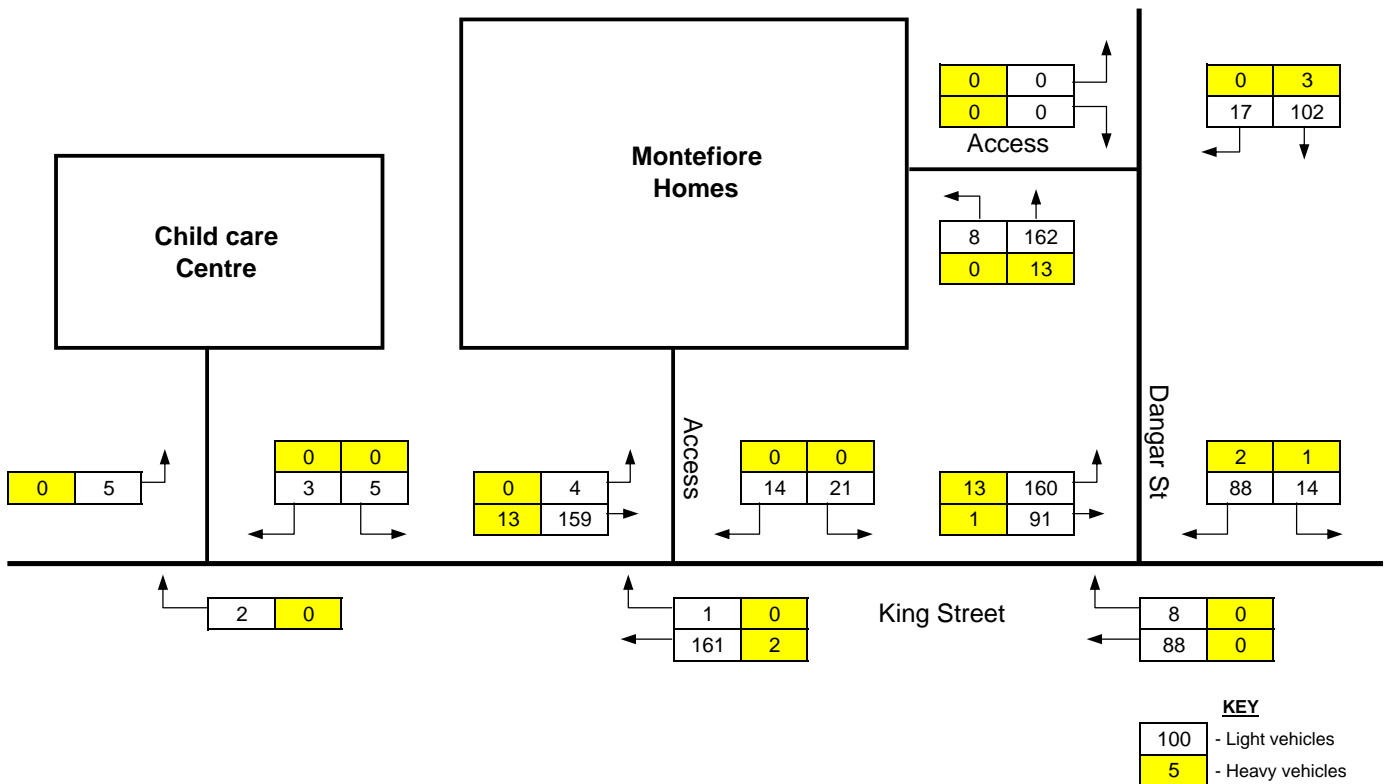
RANDWICK MONTEFIORE HOME



AM Traffic Flows



PM Traffic Flows



These periods correspond with the morning and afternoon shift changeover periods and therefore (excluding the service trip during the morning peak) would be predominantly comprised of staff trips.

2.4.3 *Existing Child Care Centre*

It is understood that the existing Child Care Centre caters for 20 children. Located in the southwest corner of the site, the centre has no formal on-site Drop-off / Pick-up area. Staff parking is provided for approximately eight vehicles; however, it is of a non-standard layout and consists of four bays double parked over the other four bays.

As a result of the Child Care Centre having no formal on-site collection point to survey, the traffic generation of the existing Centre has been assumed using RTA trip rates. The following table presents the assumed trip generation of the existing Child Care Centre (based on 20 children); the methodology used to calculate these trips is set out in greater detail at **Section 4.2.4**.

Table 2.3 – Existing Child Care Centre Traffic Flows (Based on RTA trip rates)

	MORNING PEAK			AFTERNOON PEAK		
	In	Out	Total	In	Out	Total
Trips	9	7	16	6	8	14

2.5 *Existing Intersection Operation*

The existing operation of the surveyed intersections were analysed using the SIDRA intersection analysis programme.

SIDRA determines the average delay that vehicles encounter and the corresponding level of service. For roundabouts and sign posted intersections, the assessed intersection delay is the delay for the worst movement at the intersection.

SIDRA provides analysis of the operating conditions which can be compared to the performance criteria set out in the following **Table 2.4**.

The results of the existing intersection performances are presented in **Table 2.5**.

Table 2.4 – Level of Service Criteria

Level of Service	Average Delay per Vehicle (secs/veh)	Signals & Roundabouts	Give Way & Stop Signs
A	less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays & spare capacity	Acceptable delays & Spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity & accident study required
E	57 to 70	At capacity; at signals, incidents will cause excessive delays Roundabouts require other control mode	At capacity, requires other control mode
F	> 70	Extra capacity required	Extreme delay, traffic signals or other major treatment required

Adapted from RTA Guide to Traffic Generating Developments, 2002.

Table 2.5 – Existing Intersection Operating Conditions

Intersection	Control Type	Level of Service		Average Delay (sec)	
		AM Peak	PM Peak	AM Peak	PM Peak
King Street-Dangar Street	Roundabout	A	A	10	10
King Street site access	Priority	A	A	8	8
Dangar Street site access	Priority	A	A	8	8

Average Delay is for the worst movement at priority and roundabouts.

From **Table 2.5**, it can be seen that all intersections currently operate at a good level of service (LoS A) during both morning and afternoon peak periods with ample spare capacity.

2.6 *Existing Parking Survey*

Both the on-site and on-street parking surveys were conducted in June 2009. The on-street parking surveys were conducted for the following road sections:

- King Street, between Mulwarree Avenue and Wentworth Street;
- Dangar Street, between King Street and White Street;
- Prince Street, between King Street and Burton Street; and
- Church Street, between King Street and Burton Street.

The surveys were conducted between 7:00am and 8:00pm (13 hours) on a weekday. The results of the parking occupancy surveys are summarised in **Table 2.6**.

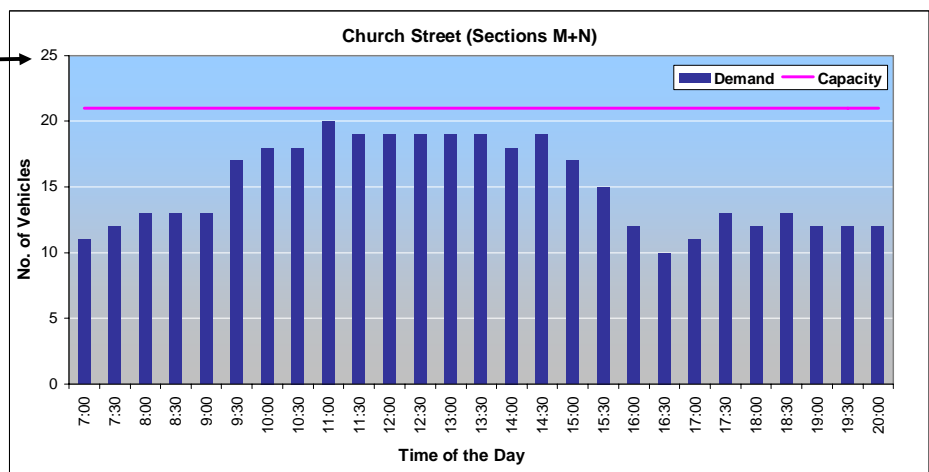
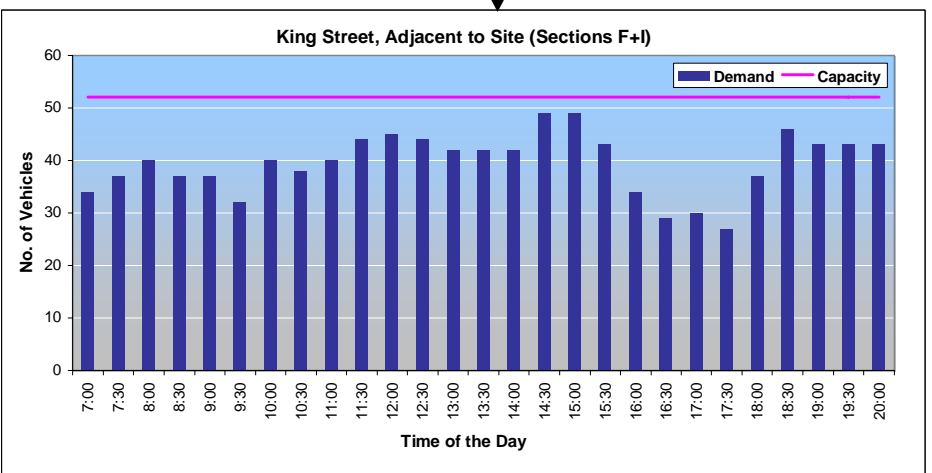
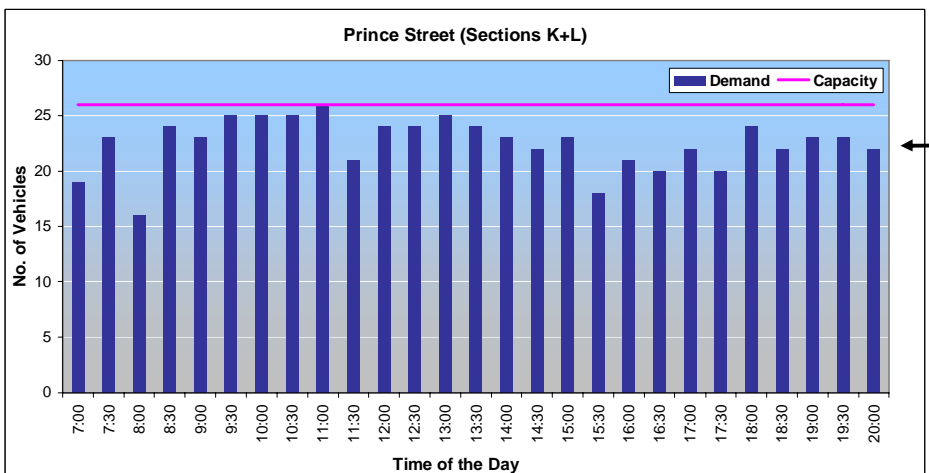
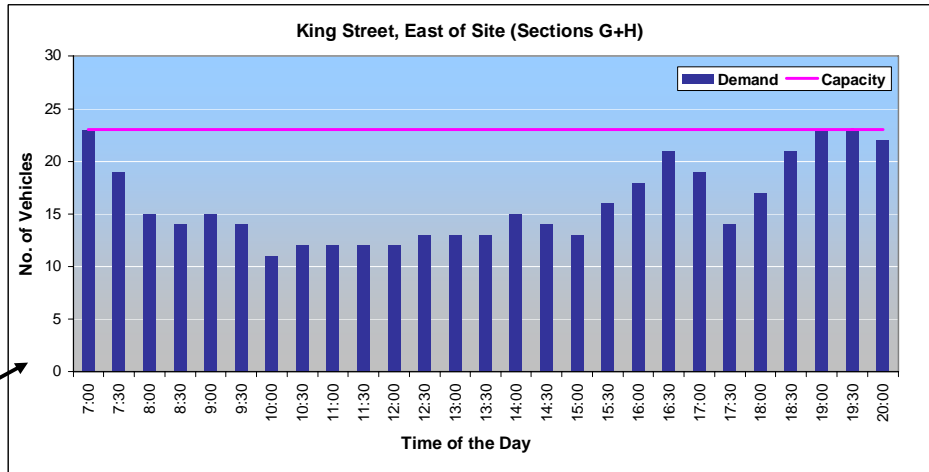
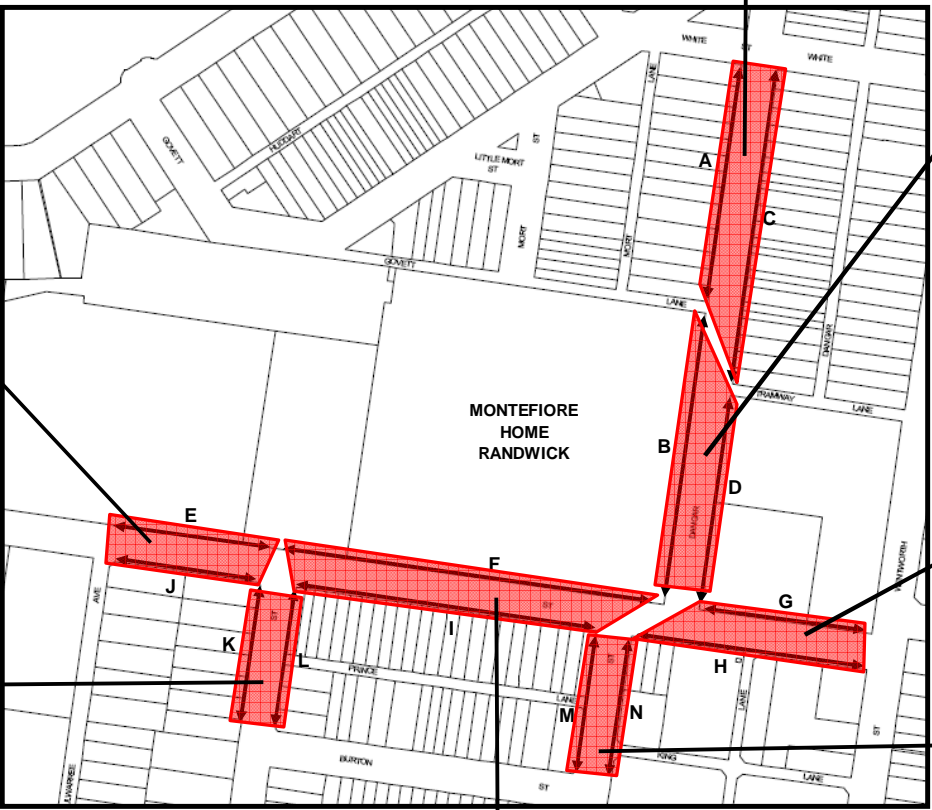
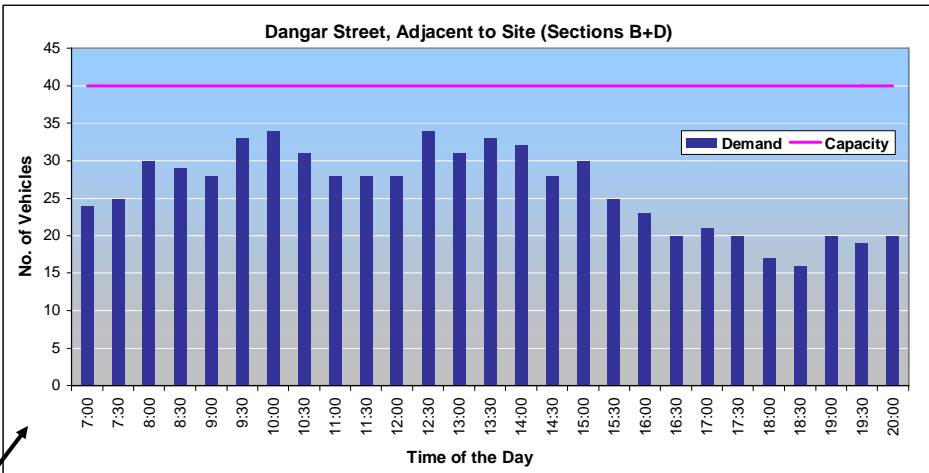
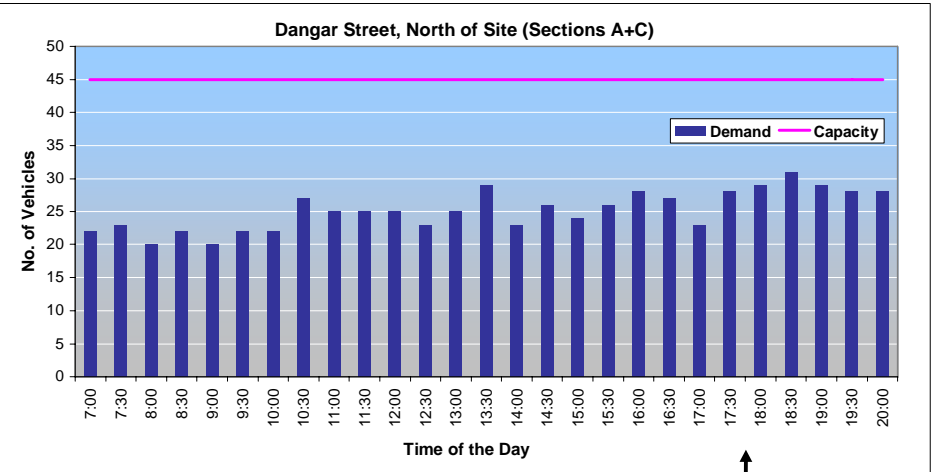
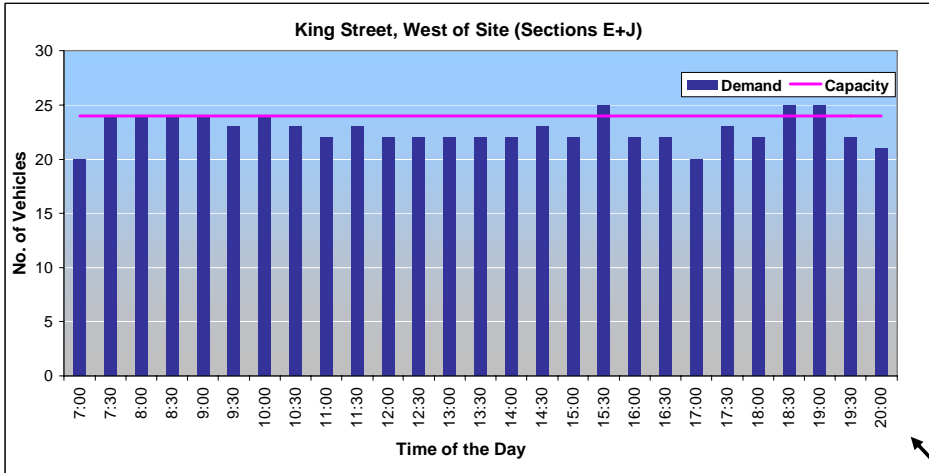
A graphical representation of the parking demand against the capacity is included in **Figure 3** for the on-street parking and **Figure 4** for the existing Montefiore on-site parking.

The detailed parking survey results are attached at **Appendix C**.

Table 2.6 – Summary of Parking Occupancy Survey Results

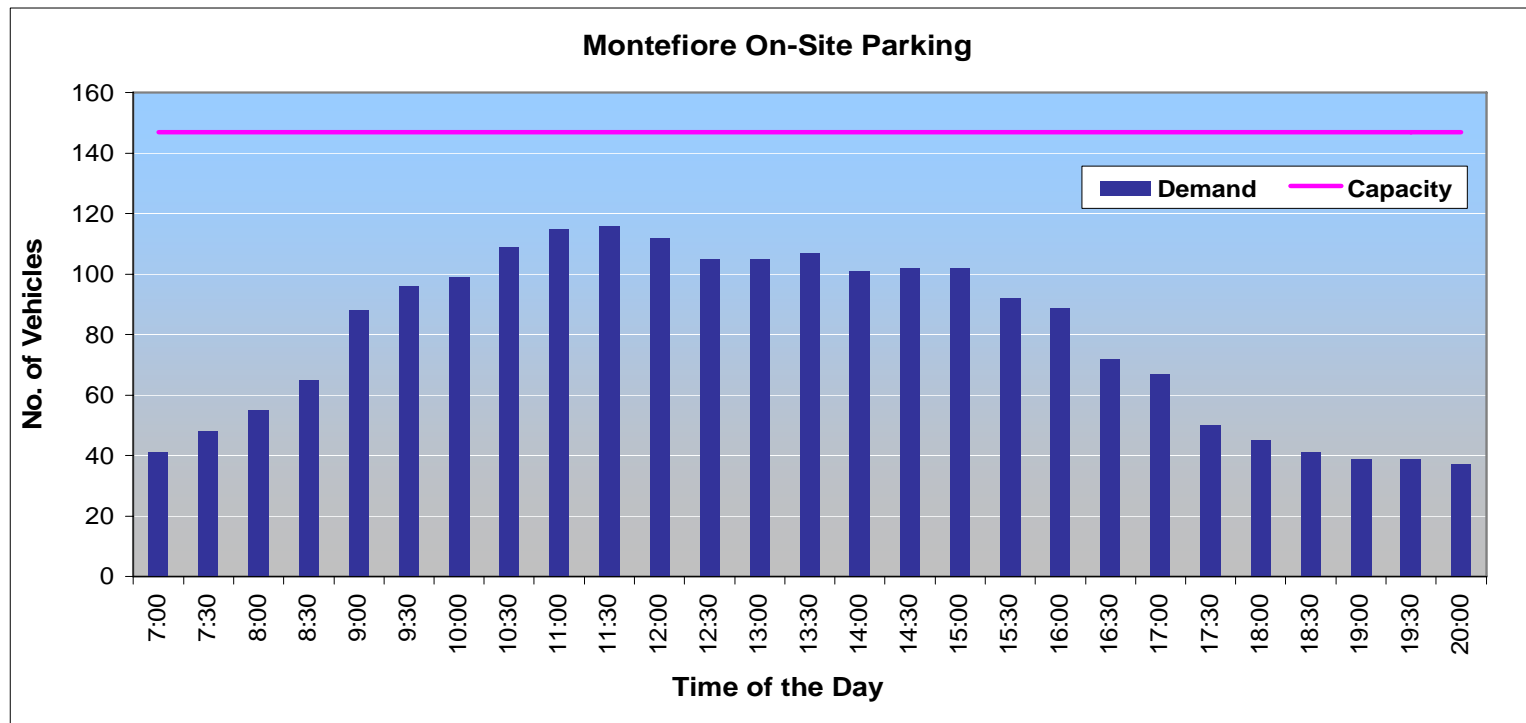
Time	On-Street Parking			Montefiore
	Dangar St	King St	Prince St/Church St	Car Park
7:00	56%	81%	74%	33%
8:00	60%	80%	79%	44%
9:00	65%	77%	89%	65%
10:00	68%	76%	91%	74%
11:00	62%	80%	98%	79%
12:00 noon	67%	80%	91%	76%
13:00	73%	78%	94%	73%
14:00	65%	87%	87%	69%
15:00	64%	85%	85%	69%
16:00	60%	75%	70%	61%
17:00	56%	70%	70%	46%
18:00	55%	93%	77%	31%
19:00	58%	92%	74%	27%
20:00	56%	87%	72%	25%

ON-STREET PARKING SURVEY
RANDWICK MONTEFIORE HOME



ON-SITE PARKING SURVEY

RANDWICK MONTEFIORE HOME



The parking survey results shown in **Table 2.6** indicate that on-street parking demands are relatively high throughout the day.

The survey results indicate that King Street experiences significant demand (approximately 80%) throughout the day, peaking at around 7pm before dropping off slightly at 8pm. This indicates that there demand for residential parking when residents return from work but also from other uses which park on street during the day. Such uses are likely to include the Montefiore nursing home, TAFE and the bus depot.

Prince Street and Church Street were surveyed to experience peak demands between 9am and 3pm indicating demand from non-residential uses.

The surveys indicate that the demand for on street parking is relatively high and demand includes both residential and non residential land uses. However, it is noted that the surveys indicate that some spare on street parking spaces was available at each of the survey periods throughout the day within the survey area.

The demand for on street parking is understood to be generated by a general lack of on-site parking provisions for many of the older style residential apartment blocks and terraces. Furthermore the parking demand generated by TAFE and UNSW (and potentially nursing home uses) is understood to occur to some degree in the area due to restricted on-site parking provisions and / or costs of accessing on-site parking.

However, the parking survey results also indicate that the peak parking demand for the Montefiore on-site parking at is less than 80% of its capacity. According to the results, there would be at least 30 parking spaces or more available at any time of the day.

To quantify the extent and better understand the reasons behind Montefiore parking demand occurring on street a travel survey was undertaken of Montefiore staff.

2.7 *Staff Travel Questionnaire Survey*

As part of the information gathering process for this study, a Travel Questionnaire survey was distributed in July 2009 to the 200 staff members and volunteers of the existing Montefiore nursing home at Randwick.

The purpose of the survey was to determine current travel patterns of staff and volunteers, including:

- mode of travel;
- demand for car parking;
- extent of on street parking demand; and
- reasons for staff parking on street.

A copy of the Staff / Volunteer Travel Survey is provided in **Appendix D**.

A total of 98 responses were received, equating to response rate of approximately 50%. A response rate to a questionnaire survey in the vicinity of 50% can be considered suitable from which to draw assumptions about staff travel patterns as a whole. Therefore, from the responses it was possible to derive the following assumptions about staff travel characteristics.

2.7.1 *Mode of Travel*

Table 2.7 presents details relating to journey to work mode choice for staff at Montefiore, Randwick.

The table presents the calculated mode split from respondents and applies this mode split to total staff number to calculate the journeys by mode for all staff.

Table 2.7 – Surveyed Mode of Travel

Mode	Respondents	Mode Split
Car	78	79.6%
Car Passenger	2	2.0%
Bus	11	11.2%
Bus + Train	5	5.1%
Walk	2	2.0%
TOTAL	98	100.0%

The assessment concludes that over 20% of staff prefer to use alternative forms of transport from the private motor car or car pool.

2.7.2 *Parking Demand and Parking Location*

Table 2.8 presents a summary of where Montefiore staff, who drive to work, currently park their vehicles.

Table 2.8 – Location of Current Staff Parking Choice

Parking Location	Respondents	Percentage	Total Staff
On-site	61	78.2%	124
On-street	17	21.8%	35
TOTAL	78	100.0%	159

As can be seen, some 22% of staff who drive to work currently park on the street rather than in the on-site car park.

By applying this percentage to total staff numbers, this could equate to as much as 35 vehicles parking on the street spread across the whole day (and night).

2.7.3 *Preferred On-site or On-street Parking Choice*

Staff who parked on-street were asked their preferred parking location. In addition, those who park on-street, but preferred to park in one of the Montefiore car parks, were asked what prevented them from doing so.

Similarly, those who parked on-street and preferred to park on-street were asked why they choose to park on the neighbouring streets.

Table 2.9 provides a summary of these results.

Table 2.9 – Location of Preferred Staff Parking Choice for On Street Parkers

Preferred Parking Location	Respondents	Reason for Parking On-street	Total Staff
On-site	10	No Swipe Card	21
	2	Other / None Given	4
On-street	4	Easily Accessible	8
	1	Other / None Given	1
TOTAL	17		35

As can be seen from the table above, the majority (60%) of those who park on the street would prefer to park in one of the Montefiore car parks and not possessing a security access card is the main issue preventing to them doing so.

As the Home currently has spare on-site parking capacity, the survey results indicated that reductions in the number of Montefiore staff / volunteers parking on street could be achieved with increase provision of swipe card or security controlled access to on-site parking.

If staff access to on-site parking is made freely available, the predicted number of staff vehicles currently parked on-street could reduce from 35 vehicles to about 9 vehicles.

Of these estimated 9 vehicles to park on street, as many as 8 vehicles are parked on-street because of a perceived convenience in doing so. This could be related to the hassle involved with 'buzzing' reception; therefore, greater access to security cards could also reduce the number of these vehicles from being parked on neighbouring streets.

As an outcome of the staff / volunteer travel survey, recommendations have been made to Montefiore management regarding the distribution of swipe cards to staff / volunteers and reception controlled access.

Subsequent to the June 2009 surveys, Montefiore management adopted a policy of providing swipe cards to all staff and frequent volunteers who wish to have one. In addition, less frequent visiting volunteers are buzzed through at reception with security being advised in advance of their scheduled (rostered) arrival.

In order to assess the effectiveness of the swipe card distribution and encouragement of staff and volunteers to use on-site parking, a follow-up parking survey was undertaken on Monday 26 October 2009. The results of this survey are described later in **Section 4**.

Notwithstanding the above, it is noted that staff can legally park on the surrounding streets without restrictions if they wish to do so. It is considered that no matter what

measures are implemented by Montefiore that some staff will continue to park on street as they are entitled to do.

2.7.4 *Parking Demand Rate*

A parking demand rate for the residential aged care facilities of the proposed development has been estimated using the surveys of existing staff travel behaviour and the on-site / on-street parking.

Firstly, from the Parking Survey, the current peak on-site parking occurs between 11:30 – 12:00, with 117 spaces full. However, from the Staff Travel Survey, it was concluded that on-site parking accounted for 78.2% of staff who drive to work, with the remaining 21.8% parking on neighbouring streets.

By applying the percentages to the 117 peak, it can be calculated that staff or visitors to the Montefiore Nursing Home could generate up to 32 vehicles being parked on neighbouring streets. Therefore, this equates to a potential total peak demand of up to 149 vehicles. It should be noted that because the staff related on-site / on-street parking ratio has been applied to all 117 vehicles parking on-site (both staff and visitors) during the 11:30 peak, the 149 demand calculated is likely to be an upper bound as visitors are more likely to use the on-site parking provided.

Local resident concerns relating to a lack of available on-street parking is possibly related to day staff parking on neighbouring streets. From the details above, it can be assumed that the current 135 day-shift staff members correspond to a potential peak parking demand of 149 spaces (note, the discrepancy between these two figures corresponds to visitor or volunteer parking demand). This equates to a parking demand of **1.1 spaces per day-shift staff member**.

By applying the surveyed 80% mode split by car for staff (see **Table 2.7** – i.e. 8 out of 10 staff members drive to work, the remainder walk, cycle or take public transport), this rate of 1.1 spaces would indicate that for every 11 spaces provided, 8 would be used by staff and 3 would be used by visitors or volunteers. In the context of an Aged-Care facility with high levels of staff numbers, this split is considered reasonable and therefore supports the validity of the rate.

This rate is used in following sections to check the adequacy of the proposed parking provision.

2.8 *Public Transport*

STA buses provide services along Darley Street, Allison Road and Cowper Street, which are within walking distance of the site.

Routes servicing this area are as follows:

- 339 Clovelly – City;
- 372/373 Coogee – City via Randwick;
- 374 Coogee – City via Bream St;
- 376/377 Maroubra Beach – City via Randwick
- 400/410 Burwood – Bondi Junction.

The bus route map of the area is shown in **Figure 5**. The frequencies of these services are also summarised in **Table 2.10**.

Table 2.10 – Bus Frequencies

Route	Weekday		Weekend
	Peak	Off-Peak	
339 via Darley Rd	5-15 minutes	30 minutes	30 minutes
372/373 via Cowper St/Cook St	<5 minutes	5 minutes	5 minutes
374 via Cowper St/Cook St	5-10 minutes	30 minutes	30 minutes
376/377 via Cowper St/Cook St	5-10 minutes	15 minutes	15 minutes
400/410 via Cowper St/Cook St	5-10 minutes	7 minutes	10 minutes

Nearest Bus Stop on Cowper Street (just east of Church Street) is approximately 400m walking distance from the main Dangar Street access. This bus stop serves bus routes 372, 373, 374, 376 & 377.

Nearest Bus Stop on Cook Street (just north of Frances Street) is approximately 500m walking distance from the main Dangar Street access. This bus stop serves bus routes 400 & 410.

BUS ROUTE MAP

RANDWICK MONTEFIORE HOME



Nearest Bus Stop on Darley Road (just west of Evans Street) is approximately 500m walking distance from the main Dangar Street access. This bus stop serves bus routes X39 & 339.

2.9 Summary of Existing Conditions

Based on the surveys and observations of the site travel behaviour and surrounding road networks it is concluded that:

- Local intersections surrounding the site are operating satisfactorily with significant spare capacity;
- There is spare on-site and on street parking capacity;
- A proportion of Montefiore staff currently park on street (approx. 22%). Of these staff some 70% of staff would prefer to park on-site; and
- Management of on-site parking provision for Montefiore can be improved to reduce the demand for on street parking by Montefiore staff members.

3 Proposed Development

3.1 *Full Concept Scheme*

3.1.1 *Montefiore Nursing Home Accommodation*

As mentioned earlier, the existing development comprises three blocks, A, B and C, over 5 levels, and includes car parking of 108 spaces over levels 1 and 2 in Block A and 33 visitor spaces currently in and adjacent to Block C at Level 2.

The Concept Plan proposes the construction of an additional three blocks: D, E and F over a total of 6 levels. Relevant plans showing the development are attached at **Appendix E** presents a roof plan for the Development, which shows the layout of the proposed blocks D-F in the context of the existing Blocks A-C.

The proposed development can be summarised as follows:

- 276 beds
- 35 Self-Care units
- 350m² of retail
- Expansion of the Child Care Centre to accommodate an additional 30 children.

The proposal's car parking provision can be summarised as follows:

- Level 1 – 22 spaces in proposed Block F;
- Level 2 – The existing 33 spaces near Block C to be reconfigured across Blocks C-E and increased in number to 69 spaces.

3.1.2 *Child Care Centre*

Proposed Block F is located at the area currently housing the Child Care Centre. A new and larger Child Care Centre, catering for up to 50 children, will be incorporated in Block F at Level 2 (ground level from King Street). The proposal includes a car park for 13 vehicles with a significantly improved layout to that of the existing centre.

Access to the Child Care Centre will be shared with the King Street entry to the Montefiore Nursing Home; however, the direct access to the centre will be outside the

nursing homes security perimeter. To view the proposed Child Care Centre layout, please refer to plans attached at **Appendix E**.

3.1.3 *Concept Plan Schedule*

By combining the details above with the existing development details set out in Section 2, the Concept Plan can be summarised as follows:

- 552 beds for Low and High Care residential;
- 35 Self Care units;
- 350m² of retail;
- The Burger Day Care Centre;
- Child Care Centre for 50 children; and
- A total of 212 parking spaces.

3.1.4 *Stage 1 Development Schedule*

The development is to be constructed in 3 stages.

Stage 1 includes the amendments to Block C and construction of Block D. The additional proposed development can be summarised as adding the following:

- 81 beds;
- 350m² of retail; and
- 28 parking spaces.

Again, by combining the details above with the existing development details set out in Section 2, the Stage 1 Project Application can be summarised as follows:

- 357 beds for Low and High Care residential;
- 350m² of retail;
- The Burger Day Care Centre;
- Existing Child Care Centre for 20 children; and
- A total of 175 parking spaces.

Relevant Stage 1 development plans are attached at **Appendix F**.

3.2 *Servicing Arrangements*

3.2.1 *Stage 1 Development*

Under the Stage 1 development scenario, the existing service area located in Block A will become the main service area for the completed site. Day to day servicing, such as refuse collection, will continue from the Block A service area and refuse/recycling will be trolleyed to the area from around the complex.

A new loading dock will be provided within the new car park of Block C, as shown on the plans attached at **Appendix F**. This loading dock will provide access to service the ancillary requirements of Blocks C and D.

3.2.2 *Concept Plan*

Under the Concept Plan development scenario, a new loading dock will be provided in the car park of Block E, as shown on the plans attached at **Appendix E**. This loading dock will provide service access for all of the requirements of Blocks C, D and E.

Swept path analysis of the loading dock, accessed via the proposed car park in Block E, has been undertaken. **Appendix G** contains plans showing a 10.5m Large Rigid Truck accessing the loading dock. As can be seen, the proposed car park layout provides sufficient manoeuvring space for this vehicle to access the loading dock satisfactorily.

3.3 *Staff Numbers and Parking Access*

Details of predicted staff numbers have been provided by Montefiore. From the information provided it can be concluded that total day-shift staffing levels would increase by 53 workers, from 135 to 188 staff. A full breakdown of staff levels is attached at **Appendix A** and presents forecast staff numbers for the Evening and Night shifts.

The level of volunteer visitation to the Home is expected to remain relatively constant with up to 10 volunteer staff on-site at any particular time.

Furthermore, the staff questionnaire survey identified a number of staff / volunteers would prefer to park on-site but do not possess a security access card and others prefer to park on neighbouring street because of a perceived security concern relating to covered car parks.

As discussed in **Section 2.7** as a result of the survey findings, Montefiore management has introduced a policy to provide a swipe card for on-site parking access to all staff members and volunteers who request one and staff and volunteers would be made aware of both the availability and security of parking on-site.

3.4 *Green Travel Plan*

To encourage the use of public transport, walking, cycling and other measures to reduce car traffic, it is proposed that a Green Travel Plan (GTP) be prepared prior to the operation of any new development on the Montefiore site.

The GTP would promote the use of alternative transport choice for travel to and from the site. Emphasis will be mainly on reducing staff travel by private car; however, measures that can be targeted towards reducing visitor car travel will also be promoted. The GTP could include measures such as:

- **Car sharing scheme** – A car-sharing database would be compiled that stores residential address data for staff and identifies opportunities for car-sharing;
- **Bicycle facilities** – Secure staff bicycle storage facilities plus lockers and showers for persons travelling to work by bicycle would be provided;
- **Travel Plan Noticeboards** – Noticeboards located in highly visible areas to staff (and customers) would present relevant alternative transport information such as, local walk routes, bus stops/rail station locations, service timetables and dedicated cycle routes. These noticeboards would be updated at regular intervals; and
- **Fleet cars** – On-site fleet cars will be provided so that staff who use alternative transport modes to get to work can be secure in the knowledge that they would have access to a vehicle should it be required for work related purposes.

4 Transport Assessment

4.1 *Development Scenarios*

In terms of traffic and transport analysis, this report has so far identified three relevant development scenarios: existing Montefiore home, Stage 1 development and Concept Plan.

For clarity, **Table 4.1** presents the three scenarios and their relevant characteristics.

Table 4.1 – Development Scenarios and Schedules

	Existing Home	Stage 1	Concept Plan
TOTAL DEVELOPMENT			
Bedrooms	276	357	552
Self-Care units	0	0	35
Day-shift Staff	139	153	192
Volunteers	10	10	10
Child Care – Children	20	20	50
Parking provision	155	175	212
NET DEVELOPMENT			
Bedrooms	-	+ 81	+ 276
Self-Care units	-	-	+ 35
Day-shift Staff	-	+ 14	+ 53
Volunteers	-	-	-
Child Care – Children	-	-	+ 30
Parking provision	-	+ 28	+ 65

Table 4.1 also presents the net or change in on-site development for each scenario relative to the existing Home.

4.2 *Traffic Generation, Distribution and Design Year Traffic Flows*

4.2.1 *Current Nursing Home Site Traffic Generation*

Section 2.4.2 presented the existing morning and afternoon peak traffic generation of the Montefiore Home; for clarity, these details have been reproduced in **Table 4.2**.

Table 4.2 – Existing Site Traffic Flows (June 2009)

	MORNING PEAK			AFTERNOON PEAK		
	In	Out	Total	In	Out	Total
Light vehicle	42	14	56	23	49	72
Heavy vehicle	1	1	2	0	0	0
Total	43	15	58	23	49	72

As the peak hour periods coincide with the morning and afternoon shift changeover periods, the majority of this traffic is likely to be staff trips.

In addition, the Staff Travel Questionnaire survey concluded that only 78.2% of staff members who drive to work, park in the Montefiore car parks; the remaining 21.8% parking on the neighbouring streets.

By using these percentages, a correction factor of 1.28 (= 1 + [21.8 ÷ 78.2]) can be applied to the figures in **Table 4.2** to calculate a more accurate traffic generation for the existing site. The results of this correction calculation are presented in **Table 4.3**.

Table 4.3 – Amended Site Traffic Generation

	MORNING PEAK			AFTERNOON PEAK		
	In	Out	Total	In	Out	Total
Light vehicle	54	18	72	29	63	92
Heavy vehicle	1	1	2	0	0	0
Total	55	19	74	29	63	92

4.2.2 *Nursing Home Trip Rate*

As mentioned, the trips shown in the above tables will be predominantly staff trips; therefore, it is possible to calculate a likely trip rate per staff member based on the current 200 staff of the Montefiore Home.

Table 4.4 – Current Trip Rate per Staff Member (Currently 200 Staff)

	MORNING PEAK			AFTERNOON PEAK		
	In	Out	Total	In	Out	Total
Light vehicle	0.270	0.090	0.360	0.145	0.315	0.460
Heavy vehicle	0.005	0.005	0.010	0.000	0.000	0.000
Total	0.275	0.095	0.370	0.145	0.315	0.460

4.2.3 *Proposed Nursing Home Traffic Generation*

The Concept Plan proposal for the Montefiore Nursing Home would employ an additional 89 staff (see **Appendix A**). By applying this staff level to the trip rates in **Table 4.4**, it is possible to calculate the likely additional traffic generation for the scheme post completion, as presented in **Table 4.5**.

Table 4.5 – Additional Traffic Generated by Montefiore Proposed Development

	MORNING PEAK			AFTERNOON PEAK		
	In	Out	Total	In	Out	Total
Light vehicle	24	8	32	13	28	41
Heavy vehicle	0	0	0	0	0	0
Total	24	8	32	13	28	41

4.2.4 *Proposed Child Care Centre Traffic Generation*

The proposed Child Care Centre will cater for up to 50 children, which corresponds to an increase of 30 children. The predicted traffic generation relating to this increase in child levels have been based on RTA trip rates for long-day child care.

Table 4.6 presents the relevant RTA trip rates for the morning and evening peak; a 55:45 split (arrivals:departures) has been assumed for the morning peak and vice versa for the afternoon peak.

Table 4.6 – RTA Trip Rates, Long-Day Care (per child)

	MORNING PEAK			AFTERNOON PEAK		
	In	Out	Total	In	Out	Total
Trip Rate	0.44	0.36	0.80	0.32	0.38	0.70

By applying the above trip rates to the proposed increase in child numbers of 30, the predicted additional traffic generation of the Child Care Centre has been calculated and is presented in **Table 4.7**.

Table 4.7 – Additional Traffic Generated by Proposed Child Care Centre

	MORNING PEAK			AFTERNOON PEAK		
	In	Out	Total	In	Out	Total
Trip Rate	13	11	24	9	12	21

4.2.5 *Total Traffic Generation, Trip Distribution and Assignment*

By adding the additional Nursing Home traffic generation (**Table 4.5**) to the additional Child Care traffic generation (**Table 4.7**) the total forecasted traffic generation for the Concept Plan has been calculated and is shown in **Table 4.8**.

Table 4.8 – Additional Traffic Generated by Concept Plan Development

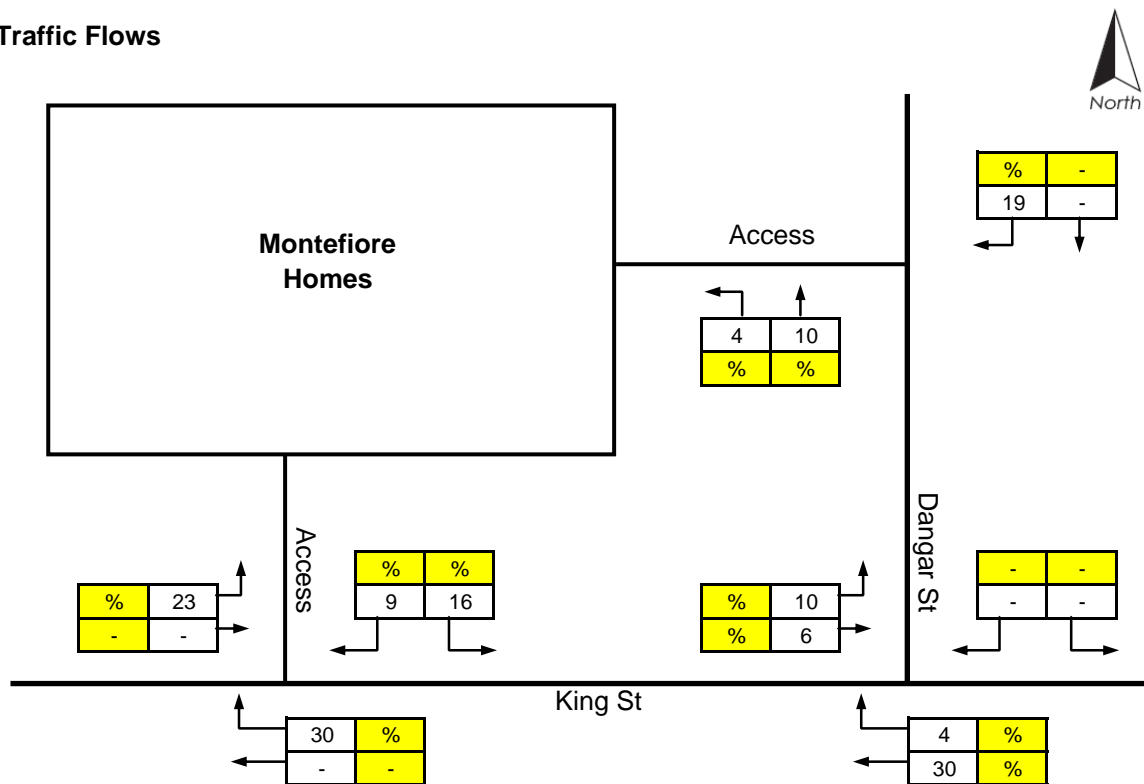
	MORNING PEAK			AFTERNOON PEAK		
	In	Out	Total	In	Out	Total
Trip Rate	37	19	56	22	40	62

The assumptions used to distribute the generated traffic on the local network have been derived from the existing traffic flows on the network. **Figure 6** presents the assumed trip distribution and **Figure 7** presents the corresponding trip assignment of the predicted development trips.

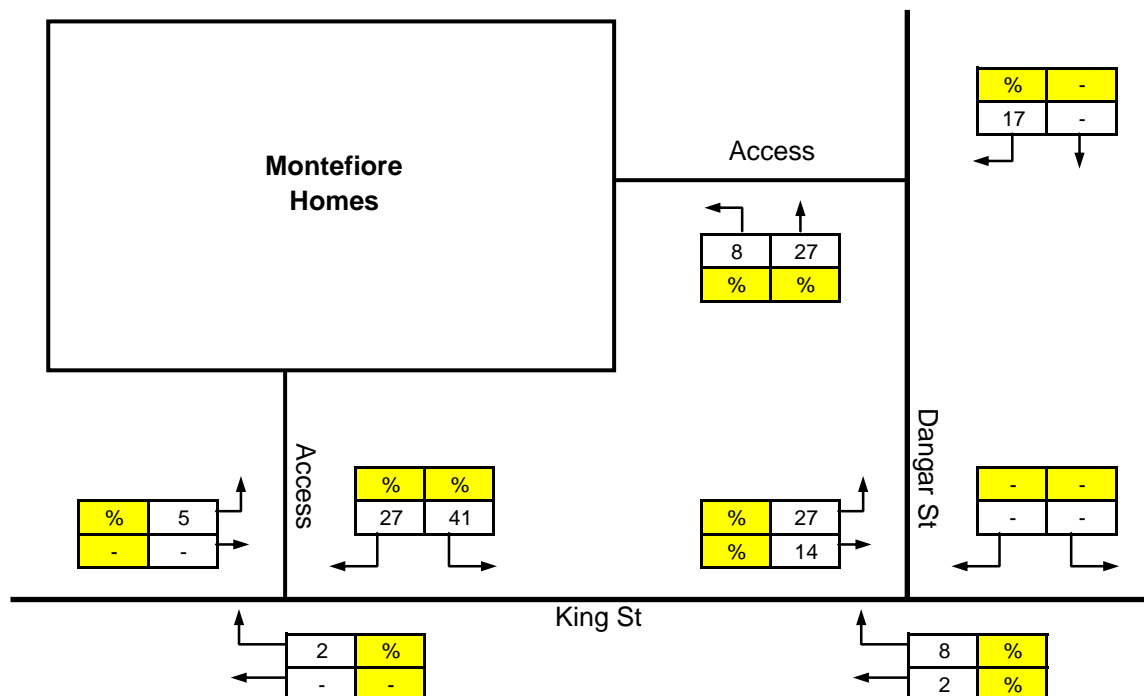
ESTIMATED TRIP DISTRIBUTION (PERCENTAGE)

RANDWICK MONTEFIORE HOME

AM Traffic Flows



PM Traffic Flows

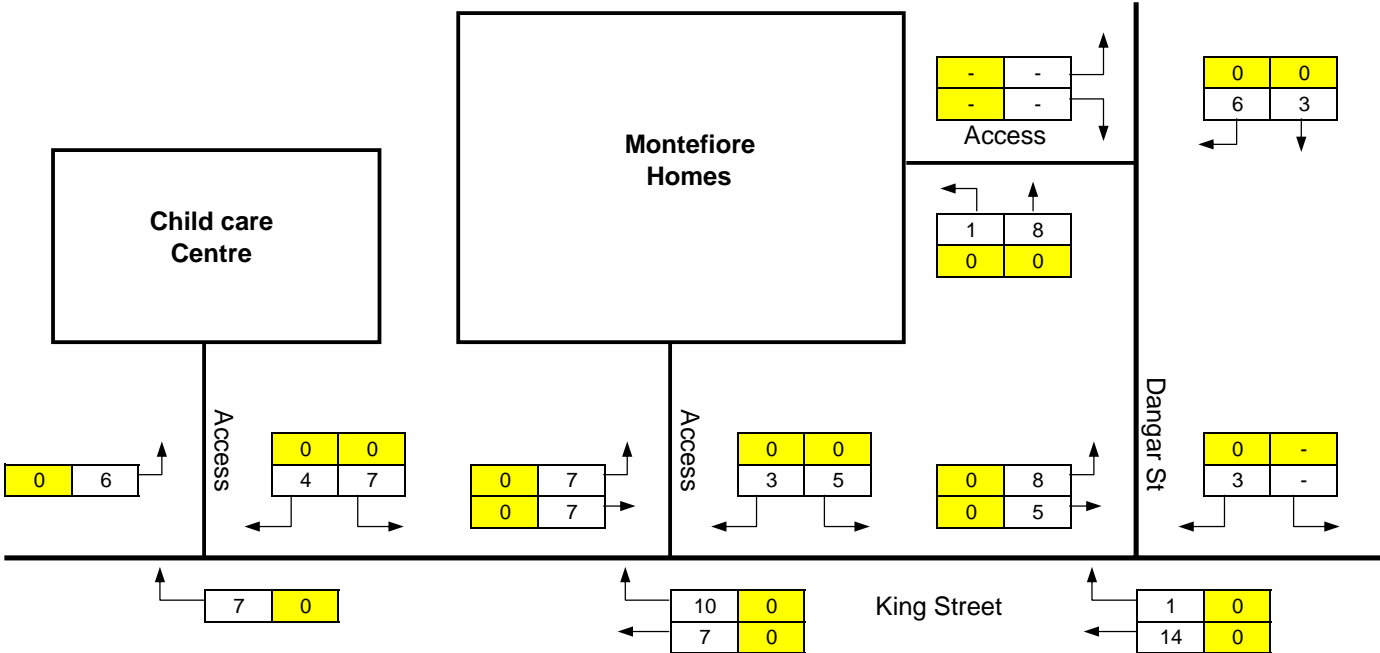


ADDITIONAL DEVELOPMENT TRIPS

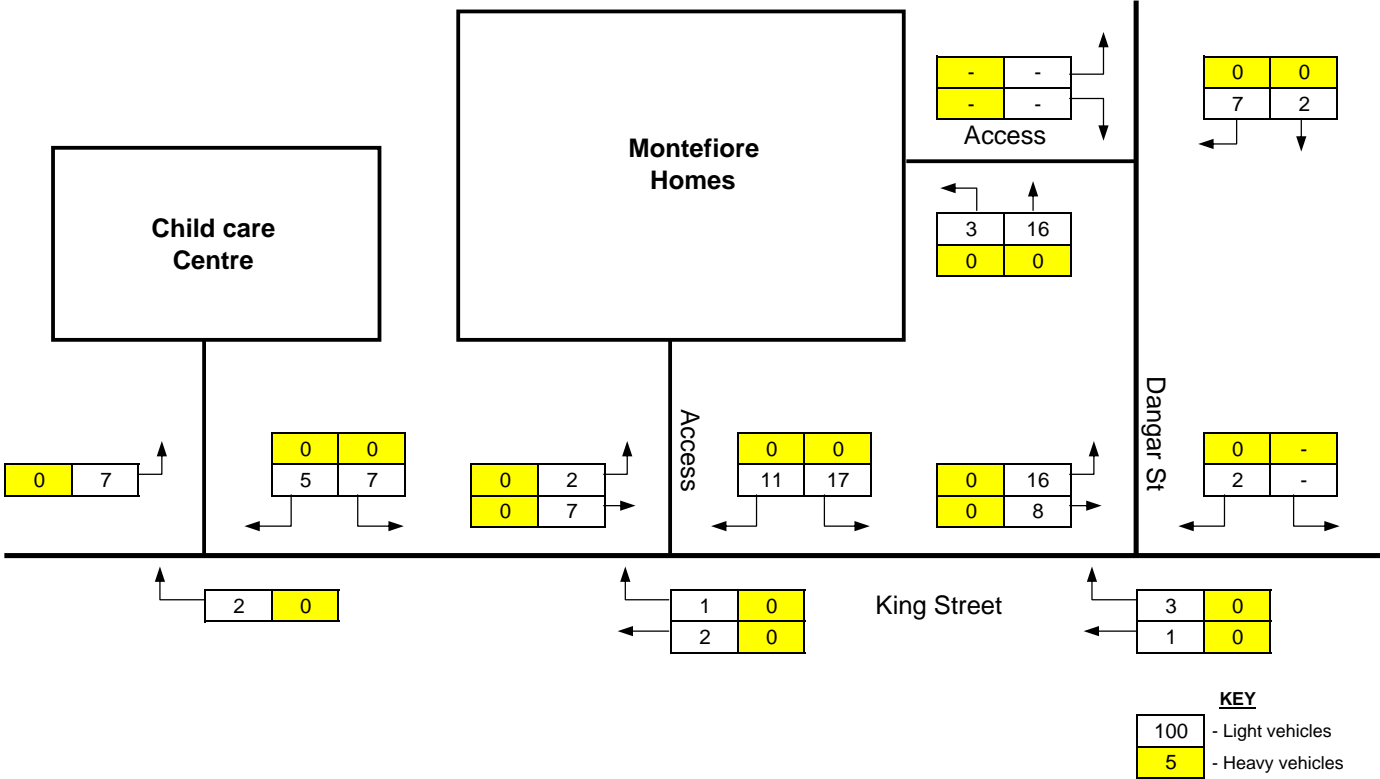
RANDWICK MONTEFIORE HOME



AM Traffic Flows



PM Traffic Flows



4.2.6 *Traffic Growth and Design Year Traffic Flows*

A Design Year of 2020 (year of submission +10 years) has been chosen for the assessment of the surrounding road network.

Historical traffic volume count data for the nearest RTA count stations to the site have been interrogated to determine a likely traffic growth factor for the area. However, the interrogation concluded the roads on which the stations were located have in fact experienced a reduction in traffic volumes since the mid 1990s. This can be attributed to a number of factors including the construction of significant road network infrastructure such as the Eastern Distributor, and changing travel patterns resulting from improvements to, and encouragement of, public transport.

Both King Street and Dangar Street are residential local roads, catering mainly for local residential traffic. Scope for development on land within proximity of the site appears limited; therefore, it is assumed that the main source of traffic growth local to the site will be the development of the Montefiore site.

It should be noted that residential aged care uses on such a large site can be considered a relatively low traffic generator compared with other possible uses for the site including medium density / high density residential uses, which would also be allowed under the current DCP for the site.

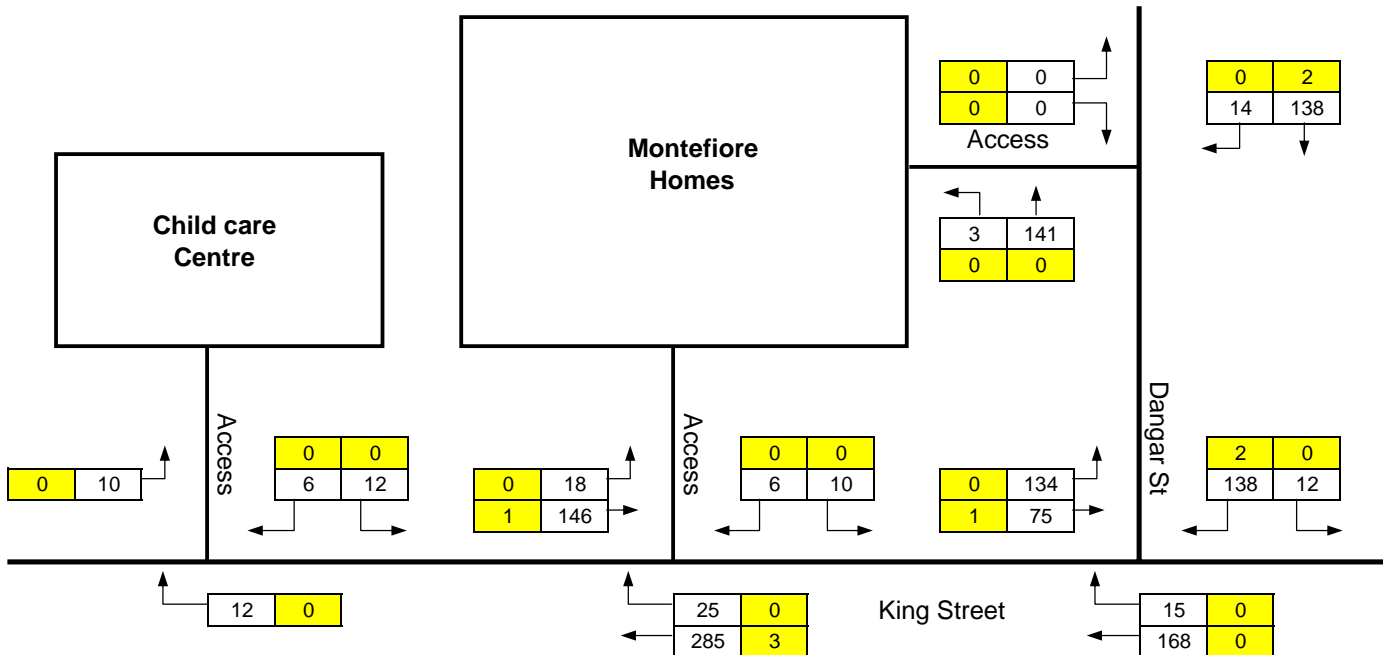
The additional traffic presented in **Table 4.8** represents the likely traffic growth local to the site; correspondingly, no traffic growth has been applied to the 2009 surveyed traffic flows.

Therefore, the predicted 2020 Design Year traffic flows (Background + Development) can be calculated by combining the 2009 surveyed flows (**Figure 2**) with the development traffic flows (**Figure 7**). These flows, presented on **Figure 8**, have been taken forward for intersection operation testing.

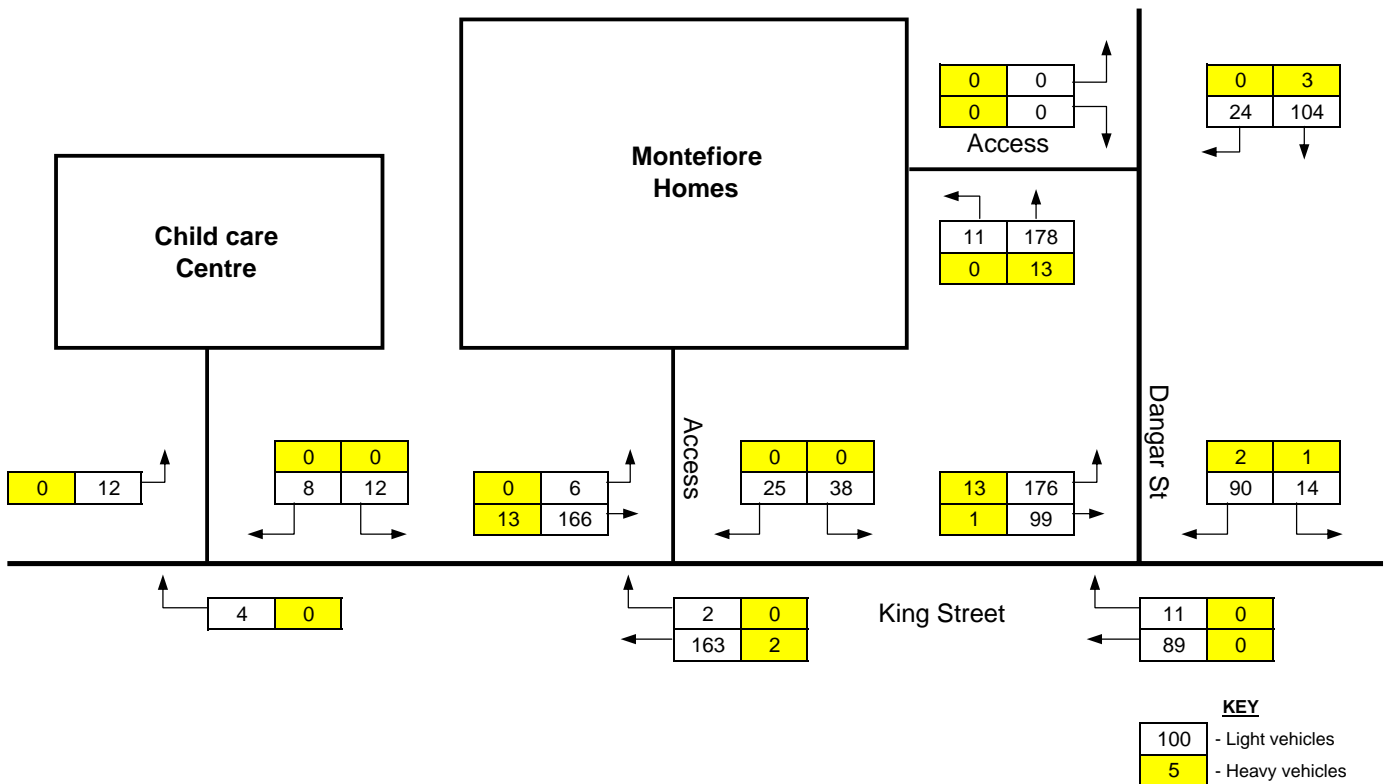
2020 POST DEVELOPMENT PEAK HOUR INTERSECTION FLOWS

RANDWICK MONTEFIORE HOME

AM Traffic Flows



PM Traffic Flows



4.3 *Intersection Operation*

Intersection analyses for the three intersections are repeated for the 2020 Design Year traffic flows and the results are summarised in **Table 4.9**.

Table 4.9 – 2020 Post Development Intersection Operating Conditions

Intersection	Control Type	Level of Service		Average Delay (sec)	
		AM Peak	PM Peak	AM Peak	PM Peak
King Street-Dangar Street	Roundabout	A	A	10	10
King Street site access	Priority	A	A	8	8
Dangar Street site access	Priority	A	A	8	8

Average Delay is for the worst movement at priority and roundabouts.

Table 4.9 indicates that all intersections would continue to operate at a good Level of Service (LoS) A during both peak periods under the 2020 post development conditions.

By comparing the development schedules in **Table 4.1** for Stage 1 and the Concept Plan, it can be determined that the Concept Plan proposes:

- 195 more beds;
- An additional 35 self care units;
- 39 more staff members; and
- 37 more parking spaces.

As the Concept Plan is significantly larger than Stage 1, it can be assumed that all intersections would correspondingly operate at a good LoS A during both peak periods under the Stage 1 development conditions as well.

4.4 *Site Access Arrangements*

The existing vehicle site access arrangements at Dangar Street will remain unchanged by the proposed development.

The access arrangements at King Street will be modified to incorporate a new one way internal loop road for the proposed Child Care Centre. It is noted that the location of the proposed access to the Home and the Child Care Centre will be generally consistent with the existing locations.

The design of the proposed access driveways to both the Home and the Child Care Centre comply with AS2890.1/2 with regard to:

- driveway width;
- available sight distances;
- gradients;
- location (ie. separation and setback from adjacent intersections / driveways); and
- vehicle turning paths for design vehicles (ie. service vehicles accessing the loading dock).

The driveway accessing the Home will be security controlled for inbound vehicles. The location of the security gate and associated intercom / card swipe device will allow vehicles to stand outside of the security area but within the site. As such vehicles would not stand across the footpath or roadway when accessing the site.

Observations and analysis of the site access arrangements indicated that the existing arrangements operate efficiently with spare capacity and minimum delays. The proposed access arrangements will also provide spare capacity and will continue to operate efficiently such that delays and queuing are minimised.

In summary the proposed access arrangements are considered satisfactory for the proposed development.

4.5 On-site Parking Provisions

4.5.1 Parking Assessments

The following assessment of on-site parking requirements has been undertaken with regard to both:

- DCP / SEPP requirements; and
- Estimated site specific parking demand.

4.5.2 DCP / SEPP Requirements

Council's Parking DCP (December 1998) provides minimum parking rates for various types of land uses. Council's DCP includes the following minimum rates for land uses contained in the proposal:

- Housing for aged and disabled persons:
 - 1 visitor space per 10 beds; plus
 - 1 space per 2 staff; plus
 - 1 space for ambulance parking
- Self-contained dwellings:
 - 0.5 spaces per bedroom where the development application is made by a person other than the Department of Housing or Randwick Council or a community housing provider.
- Child Care centres:
 - 1 space for every 2 staff members in attendance plus adequate space for drop off/pick up of children.

It is noted that these rates are consistent with SEPP Housing for Seniors or People with Disability 2004.

The exact number of staff for the child care centre is not yet determined. Thus the parking requirements for the proposed child care centre are based on RTA guidelines, namely 1 space per 4 children.

Table 4.10 sets out the SEPP/DCP parking calculation for each of the relevant development scenarios.

Table 4.10 – Summary of Montefiore Nursing Home DCP/SEPP Parking Requirements

DCP / SEPP Parking Rate		Existing		Stage 1		Concept Plan	
		<i>Beds / Units or Staff</i>	Parking Spaces	<i>Beds / Units or Staff</i>	Parking Spaces	<i>Beds / Units or Staff</i>	Parking Spaces
0.10	spaces per Care BED (visitors)	276	28	357	36	552	55
0.50	spaces per Self- Care UNIT	0	0	0	0	35	18
0.50	spaces per STAFF or VOLUNTEER	149	75	163	82	202	101
0.25	spaces per CHILD	20	5	20	5	50	13
DCP Requirement		-	103	-	118	-	174
Existing or Proposed Provision		-	155	-	175	-	212
Overflow Supply		-	+ 52	-	+ 57	-	+ 38

Table 4.10 shows that at each of the four development stages, the Montefiore Home will comply with the relevant SEPP/DCP minimum parking requirements.

4.5.3 Sensitivity Test - Site Specific Demand Provision

Notwithstanding that the proposed development parking provision complies with SEPP/DCP parking requirements, an assessment of the proposed provision compared with estimated parking demand has also been undertaken.

From **Section 2.7.4**, the site specific parking demand for the existing Home has been calculated at 1.1 spaces per day-shift staff member.

Table 4.11 sets out the staff based demand parking calculation for the Stage 1 and Concept Plan development scenarios.

Table 4.11 – Summary of Montefiore Nursing Home Staff-Demand-Based Parking Requirements

SITE SPECIFIC Parking Rate		Existing		Stage 1		Concept Plan	
		<i>Day-Shift Staff</i>	Parking Spaces	<i>Day-Shift Staff</i>	Parking Spaces	<i>Day-Shift Staff</i>	Parking Spaces
1.1	spaces per Day STAFF	135	149	153	168	188	207
Existing or Proposed Provision		-	155	-	175	-	212
Overflow Supply		-	+ 6	-	+ 7	-	+ 5

Table 4.11 shows the Montefiore Home will provide sufficient parking to ensure that the potential demand can be accommodated on-site and the impact to on-street parking would be minimised. To provide more on-site parking than this would potentially discourage the use of public transport options, or result in underutilisation of the development.

Notwithstanding the above, the Montefiore development is part of the community and its staff and visitors have the same legal rights to park on street provided they do so in accordance with the applicable parking controls. The Montefiore site has street frontages of some 500 metres. This street frontage equates to approximately 85 parked cars. The use of some of the available on street parking along the site's frontage by site generated traffic would not be an unreasonable community expectation.

4.5.4 *Parking Layout and Internal Circulation*

The proposed layout of the on-site parking areas and associated internal vehicle circulation paths has been reviewed. The review determined that the car park and internal pathways have been designed in accordance with AS2890.1/2 requirements for the appropriate user class.

The proposed layout is considered satisfactory for the proposed development.

4.5.5 Parking Summary

In summary, a detailed and careful investigation of parking requirements has been undertaken as this has been identified as a key perceived issue with the proposed expansion of the Montefiore Home amongst neighbouring residents.

With regard to on-site parking, the proposed parking levels meet the requirements of both the DCP and the demand analysis undertaken.

Management initiatives have already been implemented to improve utilisation of the on site car park, in the form of issuing of swipe cards to all staff. To increase the percentage of staff currently using alternate forms of transport to the site, shower and locker room facilities are included in the proposal.

These measures should significantly reduce the level of Montefiore-related parking that occurs on neighbouring streets.

4.6 Assessment of Improved Access to On-Site Parking

4.6.1 Background

As mentioned earlier, subsequent to the June 2009 surveys, Montefiore Home implemented a system of improved access to the on-site parking consisting of distributing security access cards to staff and volunteers and encouragement of the use of on-site parking by staff and volunteers.

At the request of Montefiore Home management, follow-up surveys were undertaken of on-site parking and local on-street parking, similar to that carried out on Monday 22 June 2009. The comparison survey was undertaken on Monday 26 October 2009 to correspond to the June survey. On Sunday 25 October, an additional survey was undertaken to gain an understanding of parking demand over the weekend.

The survey results were compared and a letter of 10 February 2010, detailing the assessment and its results, was issued to Montefiore. This letter is attached at **Appendix H**; the following summarises the key findings of this follow-up assessment.

4.6.2 On-site Car Park Comparison – Monday 22.06.09 with Monday 26.10.09

Figure H.1 (Figure 1 in Appendix H) presents a plot of the existing Montefiore Home car park showing the parking accumulation during the original Monday 22.06.09 survey and the follow-up Monday 26.10.09 re-survey (the plot of the Sunday 25.10.09 survey is also presented).

As can be seen, the plots for the two Monday surveys follow generally the same profile; however, **Figure H.1** clearly shows that usage of the car park has increased since the distribution of security cards to staff and volunteers.

Table 4.12 provides further details of the surveys showing the increased usage of the car park.

Table 4.12 – Details of Increased On-site Parking

	Peak Half-hour	Average Half-hour
Original Survey		
Vehicles parked	116	79
% of Capacity	79%	54%
Follow-up Survey		
Vehicles parked	132	85
% of Capacity	90%	58%
Comparison		
Actual Increase	16	6
% Increase	14%	8%

From **Figure H.1** and **Table 4.12** it can be concluded that the greater access to security cards for staff and volunteers has improved the usage of the existing on-site car park.

4.6.3 On-street Parking Comparison – Monday 22.06.09 with Monday 26.10.09

Figure H.2 presents a plot of the on-street parking accumulation surrounding the Montefiore Home during the original Monday 22.06.09 survey and the follow-up Monday 26.10.09 resurvey. The corresponding King Street, Dangar Street, Princes Street and Church Street sections surveyed in June were re-surveyed in October.

From **Figure H.2** it can be concluded that on-street parking demand on all three sections of King Street are generally lower following the implementation of security card distribution particularly during the core business hours of 9.00am to 5.00pm. This trend is also evident for the side roads of Prince Street and Church Street. On-street parking at the north section A+C of Dangar Street remains relatively unchanged.

Some increased demand for on street parking was surveyed along section B+D on Dangar Street adjacent to the Montefiore Home, particularly between 10.00am and 3.00pm. However during these times the number of vehicles parked does not exceed the 40 space capacity of this section of Dangar Street. Furthermore, on-street parking demand for local residents is most likely before 9.00am and after 5.00pm. During these times, the plots show plenty of spare capacity on-street.

From **Figure H.2** it can be concluded that the greater access to security cards for staff and volunteers has reduced the level of on-street car parking by staff/volunteers of the Montefiore Home.

4.6.4 *On-street Parking - Sunday 22/06*

Figure H.3 presents a plot of the on-street parking accumulation local to the Montefiore Home during the survey undertaken on Sunday 25.10.09. No Sunday survey was undertaken in June; therefore, it is not possible to draw conclusions with regard to the affect the distribution of security access cards has had on weekend on-street parking.

However, the survey shows there is generally available on-street parking local to the Montefiore Home.

4.6.5 *Summary*

Based on the findings of the follow-up parking surveys, it is concluded that the distribution of security card access for on site parking to a broader number of Montefiore staff and volunteers has resulted in a decrease in demand for on-street parking by people associated with the Montefiore Home.

5 Construction Traffic Management

Owing to the scale of the project and the need to undertake the development whilst maintaining a safe and functional aged care facility, it is proposed that construction would occur over three stages.

As mentioned, Stage 1 would involve the amendments to Block C and construction of Block D; Stages 2 & 3 would involve building out the remainder of the Concept Plan proposal.

Separate formal Construction Traffic Management Plans will be submitted for each development stage once a contractor has been engaged. Whilst at this stage of planning the formal construction methodologies have not been determined, the following principles would be incorporated

- The Construction Traffic Management Plan (CTMP) will include proposed truck parking areas, construction zones, crane usage, truck routes, etc;
- Pedestrian movements along footpaths will be maintained as much as possible on roads surrounding the site;
- Trucks must enter and leave the site in a forward direction unless accredited flag persons are in place to control traffic and pedestrians;
- The Building Contractor will maintain strict traffic management procedures to ensure the safety of the public road users and pedestrians utilising traffic wardens;
- All vehicles carrying materials to, or from the site must have their loads covered with tarpaulins or similar covers;
- Openings in the construction fencing at the construction access driveways will be managed and controlled by qualified site personnel; and
- Temporary pedestrian warning signs and flashing lights will be erected adjacent to construction access driveways where appropriate.

In addition, discussions have been held with the operators of the Randwick Bus Depot located to the west of the Montefiore Home site. From these discussions, the following peak periods for the bus depot have been identified:

- Peak 1 - 6.30 to 8.00am, morning peak of outgoing buses, the majority heading west (away from the site) towards Allison Road;
- Peak 2 - 9.00 to 9.30am, morning peak of returning buses, the majority arriving from Allison Road in the west (i.e. not passing the site);
- Peak 3 - 2.45 to 3.30pm, afternoon peak of outgoing buses, the majority heading west towards Allison Road;
- Peak 4 - 6.00 to 7.00pm, evening peak of returning buses, the majority arriving from Allison Road in the west.

Only Peaks 1-3 are of relevance to the proposed construction activities at the Montefiore site as Peak 4 occurs outside of likely hours of construction works on the site.

During Peaks 1-3 the majority of buses accessing the depot would not travel past the Montefiore site and the associated work zones and construction accesses. Further, the volume of construction traffic to be generated by the Montefiore development would not be of a sufficient amount to cause significant impacts on bus operations on routes to/from the depot.

It is proposed that consultation with the bus depot would be undertaken during the development of the CTMP for construction works. At this stage measures to limit the potential implications to their operations will be formulated.

6 Conclusion

This traffic and transport report has provided details on the transport impacts of the Concept Plan development for the proposed Montefiore Aged Care facility at Randwick.

The assessment has determined the following conclusions with regard to the proposed development.

Traffic Generation

- Traffic generation of the proposed development for the site can be adequately accommodated by the existing surrounding road network.

Car Parking

- For each of the relevant development stages, the proposed on-site car parking provision complies with the minimum requirements specified by Council (DCP) and SEPP requirements;
- Notwithstanding the above, the proposed on-site parking provision would also provide sufficient on-site parking to accommodate existing parking demand rates generated by staff, volunteers and visitors to the site;
- Analysis of June 2009 parking surveys of staff / volunteer travel behaviour indicated some staff parked on-street rather than on-site despite available on-site parking. The main reason for staff parking on street appeared to be a lack of access rights. This has been rectified with the changes to access policies including issue of swipe cards to staff and regular volunteers such that staff (and visitors) can readily access on-site parking. Follow-up surveys carried out in October 2009 concluded that the measures implemented by centre management had resulted in a decrease in demand for on-street parking by people associated with the Home;
- It is noted that some staff may continue to park on-street as is their lawful right. Should on street parking continue to be an issue for surrounding residents, consideration of a residential parking scheme is recommended.

Site Access

- The proposed site vehicle access arrangements will be similar to those already constructed;
- The child care centre will be provided with entry / exit driveways with a one way circulating drop off area system. This will be separate from the Montefiore aged care facility and provides significant benefits to on street traffic and parking conditions;
- The proposed site access arrangements for the Montefiore aged care facility will facilitate satisfactory car and service vehicle access to and from the site.

Public Transport and Non Private Vehicle Travel Modes

- The site has reasonable access to good levels of public transport;
- Nearly 20% of all staff travel to and from work using non private motor vehicle modes (ie. walk, cycle or public transport), and showers and locker room facilities are being provided to encourage this option;
- The promotion of non private motor vehicle modes through the implementation of a green travel plan could increase the existing percentage of such modes higher and take advantage of the site's good accessibility to public transport.

In summary, the proposed Concept Plan development of the Montefiore site at Randwick is consistent with the traffic and transport aspects of the approved Master Plans and would not have a significant adverse impact on the surrounding road network.

Appendix A Existing and Proposed Staffing Levels

RANDWICK STAFF NUMBERS BY SHIFT

Supplied by Robert Orie, Chief Executive Officer, Sir Moses Montefiore Jewish Home
13 July 2009

	EXISTING			PROPOSED ADDITIONAL			FULL CONCEPT PLAN		
	DAY	EVENING	NIGHT	DAY	EVENING	NIGHT	DAY	EVENING	NIGHT
LOW-CARE HOSTEL									
Admin	6	2	2	0	1	1	6	3	3
RN	4	4	1	6	2	1	10	6	2
Personal Carers	9	4	1	12	4	1	21	8	2
HIGH-CARE									
Admin	5	2	2	0	0	0	5	2	2
RN	5	5	1	2	2	1	7	7	2
Personal Carers	20	12	6	10	6	3	30	18	9
OTHER									
DT/RAO	10	2	0	6	2	0	16	4	0
Physio	5	0	0	0	0	0	5	0	0
Social Work	3	0	0	0	0	0	3	0	0
Catering	35	16	0	10	10	0	45	26	0
Laundry	5	0	0	2	0	0	7	0	0
Maintenance	3	0	0	1	0	0	4	0	0
Cleaning	6	3	0	4	2	0	10	5	0
Reception	3	1	1	0	0	0	3	1	1
Stores	1	0	0	0	0	0	1	0	0
Corporate	15	0	0	0	0	0	15	0	0
TOTALS	135	51	14	53	29	7	188	80	21
		TOTAL -	200		TOTAL -	89		TOTAL -	289

Appendix B Traffic Flow Survey Data

**R.O.A.R. DATA****Reliable, Original & Authentic Results**

Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Halcrow M.W.T
 Job No/Name : 2726 RANDWICK Montefiore H
 Day/Date : Monday 22nd June 09

Lights	NORTH		WEST		SOUTH			Heavies	NORTH		WEST		SOUTH			Combined	NORTH		WEST		SOUTH		
	Dangar St		Montefiore Access		Dangar St				Dangar St		Montefiore Access		Dangar St				Dangar St		Montefiore Access		Dangar St		
Time Per	I	R	L	R	L	I	TOT	Time Per	I	R	L	R	L	I	TOT	Time Per	I	R	L	R	L	I	TOT
0700 - 0715	10	1	0	0	1	10	22	0700 - 0715	0	0	0	0	0	1	1	0700 - 0715	10	1	0	0	1	11	23
0715 - 0730	11	1	0	0	0	16	28	0715 - 0730	0	0	0	0	0	0	0	0715 - 0730	11	1	0	0	0	16	28
0730 - 0745	20	2	0	0	0	20	42	0730 - 0745	0	0	0	0	0	0	0	0730 - 0745	20	2	0	0	0	20	42
0745 - 0800	21	1	0	0	0	15	37	0745 - 0800	0	0	0	0	0	0	0	0745 - 0800	21	1	0	0	0	15	37
0800 - 0815	18	1	0	0	0	32	51	0800 - 0815	0	0	0	0	0	0	0	0800 - 0815	18	1	0	0	0	32	51
0815 - 0830	39	2	0	0	0	31	72	0815 - 0830	1	0	0	0	0	0	1	0815 - 0830	40	2	0	0	0	31	73
0830 - 0845	47		0	0	2	32	81	0830 - 0845	0	0	0	0	0	0	0	0830 - 0845	47	0	0	0	2	32	81
0845 - 0900	31	5	0	0	0	38	74	0845 - 0900	1	0	0	0	0	0	1	0845 - 0900	32	5	0	0	0	38	75
0900 - 0915	27	3	0	0	3	37	70	0900 - 0915	0	0	0	0	0	0	0	0900 - 0915	27	3	0	0	3	37	70
0915 - 0930	21	2	0	0	1	33	57	0915 - 0930	0	0	0	0	0	0	0	0915 - 0930	21	2	0	0	1	33	57
0930 - 0945	21	2	0	0	4	14	41	0930 - 0945	0	0	0	0	0	1	1	0930 - 0945	21	2	0	0	4	15	42
0945 - 1000	21	2	0	0	1	27	51	0945 - 1000	1	0	0	0	0	0	1	0945 - 1000	22	2	0	0	1	27	52
Per End	287	22	0	0	12	305	626	Per End	3	0	0	0	0	2	5	Per End	290	22	0	0	12	307	631

Lights	NORTH		WEST		SOUTH				Heavies	NORTH		WEST		SOUTH				Combined	NORTH		WEST		SOUTH			
	Dangar St		Montefiore Access		Dangar St					Dangar St		Montefiore Access		Dangar St					Dangar St		Montefiore Access		Dangar St			
Peak Per	I	R	L	R	L	I	TOT		Peak Per	I	R	L	R	L	I	TOT		Peak Per	I	R	L	R	L	I	TOT	
0700 - 0800	62	5	0	0	1	61	129		0700 - 0800	0	0	0	0	0	1	1		0700 - 0800	62	5	0	0	1	62	130	
0715 - 0815	70	5	0	0	0	83	158		0715 - 0815	0	0	0	0	0	0	0		0715 - 0815	70	5	0	0	0	83	158	
0730 - 0830	98	6	0	0	0	98	202		0730 - 0830	1	0	0	0	0	0	1		0730 - 0830	99	6	0	0	0	98	203	
0745 - 0845	125	4	0	0	2	110	241		0745 - 0845	1	0	0	0	0	0	1		0745 - 0845	126	4	0	0	2	110	242	
0800 - 0900	135	8	0	0	2	133	278		0800 - 0900	2	0	0	0	0	0	2		0800 - 0900	137	8	0	0	2	133	280	
0815 - 0915	144	10	0	0	5	138	297		0815 - 0915	2	0	0	0	0	0	2		0815 - 0915	146	10	0	0	5	138	299	
0830 - 0930	126	10	0	0	6	140	282		0830 - 0930	1	0	0	0	0	0	1		0830 - 0930	127	10	0	0	6	140	283	
0845 - 0945	100	12	0	0	8	122	242		0845 - 0945	1	0	0	0	0	1	2		0845 - 0945	101	12	0	0	8	123	244	
0900 - 1000	90	9	0	0	9	111	219		0900 - 1000	1	0	0	0	0	1	2		0900 - 1000	91	9	0	0	9	112	221	
PEAK HR 144 10 0 0 5 138 297								PEAK HR 2 0 0 0 0 0 2								PEAK HR 146 10 0 0 5 138 299										



R.O.A.R. DATA

Reliable, Original & Authentic Results

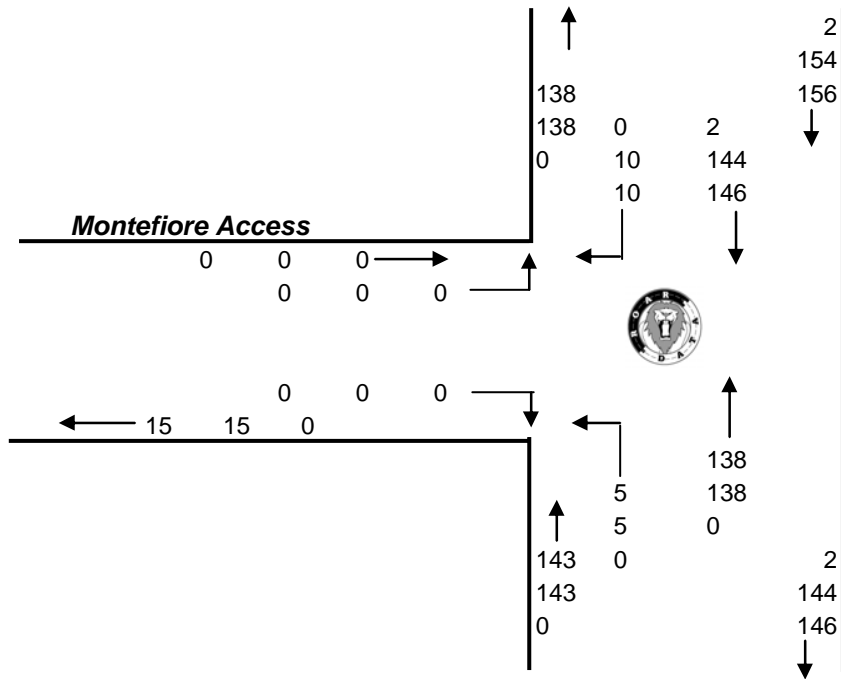
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Halcrow M.W.T
Job No/Name : 2726 RANDWICK Montefiore H
Day/Date : Monday 22nd June 09

AM PEAK

0815 - 0915

Dangar St



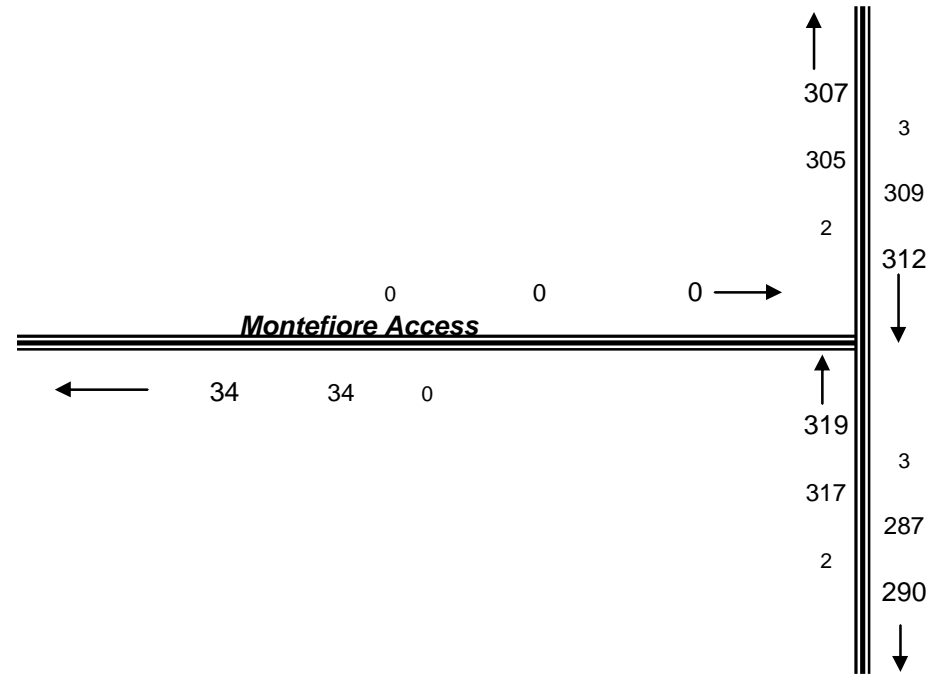
Dangar St

N



**TOTAL VOLUMES
FOR COUNT
PERIOD**

Dangar St



Dangar St



R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Halcrow M.W.T
Job No/Name : 2726 RANDWICK Montefiore H
Day/Date : Monday 22nd June 09

Lights	NORTH		WEST		SOUTH		
	Dangar St		Montefiore		Dangar St		
Time Per	T	R	L	R	L	T	TOT
1500 - 1515	35	4	0	0	2	39	80
1515 - 1530	24	2	0	0	1	44	71
1530 - 1545	19	6	0	0	3	46	74
1545 - 1600	24	5	0	0	2	33	64
1600 - 1615	20	0	0	0	3	38	61
1615 - 1630	18	4	0	0	1	28	51
1630 - 1645	23	4	0	0	3	36	66
1645 - 1700	20	4	0	0	2	20	46
1700 - 1715	27	3	0	0	1	41	72
1715 - 1730	30	0	0	0	1	36	67
1730 - 1745	19	2	0	0	1	31	53
1745 - 1800	18	1	0	0	3	41	63
1800 - 1815	18	5	0	0	1	27	51
1815 - 1830	17	1	0	0	1	25	44
1830 - 1845	12	3	0	0	1	29	45
1845 - 1900	8	1	0	0	1	23	33
Per End	332	45	0	0	27	537	941

Heavies	NORTH		WEST		SOUTH		TOT
	Dangar St		Montefiore		Dangar St		
Time Per	T	R	L	R	L	T	
1500 - 1515	0	0	0	0	0	4	4
1515 - 1530	0	0	0	0	0	7	7
1530 - 1545	1	0	0	0	0	1	2
1545 - 1600	2	0	0	0	0	1	3
1600 - 1615	0	0	0	0	0	0	0
1615 - 1630	2	0	0	0	0	0	2
1630 - 1645	2	0	0	0	0	0	2
1645 - 1700	0	0	0	0	0	1	1
1700 - 1715	3	0	0	0	0	1	4
1715 - 1730	1	0	0	0	0	0	1
1730 - 1745	0	0	0	0	0	0	0
1745 - 1800	1	0	0	0	0	0	1
1800 - 1815	1	0	0	0	0	0	1
1815 - 1830	0	0	0	0	0	0	0
1830 - 1845	3	0	0	0	0	0	3
1845 - 1900	0	0	0	0	0	0	0
Per End	16	0	0	0	0	15	31

Combined	NORTH		WEST		SOUTH		
	Dangar St		Montefiore		Dangar St		
Time Per	T	R	L	R	L	T	TOT
1500 - 1515	35	4	0	0	2	43	84
1515 - 1530	24	2	0	0	1	51	78
1530 - 1545	20	6	0	0	3	47	76
1545 - 1600	26	5	0	0	2	34	67
1600 - 1615	20	0	0	0	3	38	61
1615 - 1630	20	4	0	0	1	28	53
1630 - 1645	25	4	0	0	3	36	68
1645 - 1700	20	4	0	0	2	21	47
1700 - 1715	30	3	0	0	1	42	76
1715 - 1730	31	0	0	0	1	36	68
1730 - 1745	19	2	0	0	1	31	53
1745 - 1800	19	1	0	0	3	41	64
1800 - 1815	19	5	0	0	1	27	52
1815 - 1830	17	1	0	0	1	25	44
1830 - 1845	15	3	0	0	1	29	48
1845 - 1900	8	1	0	0	1	23	33
Per End	348	45	0	0	27	552	972

Lights	NORTH		WEST		SOUTH		
	Dangar St		Montefiore		Dangar St		
Peak Per	<u>T</u>	<u>R</u>	<u>L</u>	<u>R</u>	<u>L</u>	<u>T</u>	TOT
1500 - 1600	102	17	0	0	8	162	289
1515 - 1615	87	13	0	0	9	161	270
1530 - 1630	81	15	0	0	9	145	250
1545 - 1645	85	13	0	0	9	135	242
1600 - 1700	81	12	0	0	9	122	224
1615 - 1715	88	15	0	0	7	125	235
1630 - 1730	100	11	0	0	7	133	251
1645 - 1745	96	9	0	0	5	128	238
1700 - 1800	94	6	0	0	6	149	255
1715 - 1815	85	8	0	0	6	135	234
1730 - 1830	72	9	0	0	6	124	211
1745 - 1845	65	10	0	0	6	122	203
1800 - 1900	55	10	0	0	4	104	173

Heavies	NORTH		WEST		SOUTH		TOT
	Dangar St		Montefiore		Dangar St		
Peak Per	T	R	L	R	L	T	
1500 - 1600	3	0	0	0	0	13	16
1515 - 1615	3	0	0	0	0	9	12
1530 - 1630	5	0	0	0	0	2	7
1545 - 1645	6	0	0	0	0	1	7
1600 - 1700	4	0	0	0	0	1	5
1615 - 1715	7	0	0	0	0	2	9
1630 - 1730	6	0	0	0	0	2	8
1645 - 1745	4	0	0	0	0	2	6
1700 - 1800	5	0	0	0	0	1	6
1715 - 1815	3	0	0	0	0	0	3
1730 - 1830	2	0	0	0	0	0	2
1745 - 1845	5	0	0	0	0	0	5
1800 - 1900	4	0	0	0	0	0	4

Combined	NORTH		WEST		SOUTH		
	Dangar St		Montefiore		Dangar St		
Peak Per	<u>T</u>	<u>R</u>	<u>L</u>	<u>R</u>	<u>L</u>	<u>T</u>	TOT
1500 - 1600	105	17	0	0	8	175	305
1515 - 1615	90	13	0	0	9	170	282
1530 - 1630	86	15	0	0	9	147	257
1545 - 1645	91	13	0	0	9	136	249
1600 - 1700	85	12	0	0	9	123	229
1615 - 1715	95	15	0	0	7	127	244
1630 - 1730	106	11	0	0	7	135	259
1645 - 1745	100	9	0	0	5	130	244
1700 - 1800	99	6	0	0	6	150	261
1715 - 1815	88	8	0	0	6	135	237
1730 - 1830	74	9	0	0	6	124	213
1745 - 1845	70	10	0	0	6	122	208
1800 - 1900	59	10	0	0	4	104	177

PEAK HR	102	17	0	0	8	162	289
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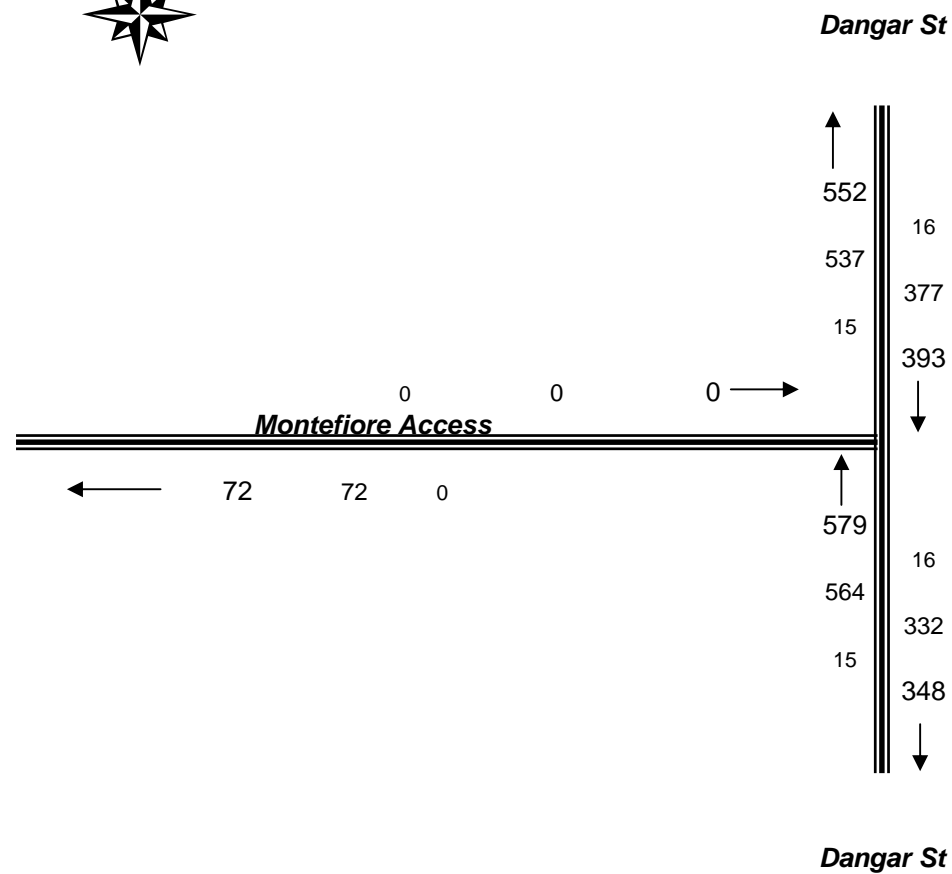
PEAK HR	3	0	0	0	0	13	16
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PEAK HR	105	17	0	0	8	175	305
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Day/Date : Monday 22nd June 09

1500 - 1600





R.O.A.R. DATA

Reliable, Original & Authentic Results

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Client : Halcrow M.W.T
Job No/Name : 2726 RANDWICK Montefiore Home
Day/Date : Monday 22nd June 09

<u>Lights</u>		<u>WEST</u>		<u>NORTH</u>		<u>EAST</u>			<u>Heavies</u>		<u>WEST</u>		<u>NORTH</u>		<u>EAST</u>			<u>Combined</u>		<u>WEST</u>		<u>NORTH</u>		<u>EAST</u>		
		<u>King St</u>		<u>Dangar St</u>		<u>King St</u>					<u>King St</u>		<u>King St</u>		<u>King St</u>					<u>King St</u>		<u>King St</u>		<u>King St</u>		
<u>Time Per</u>	<u>I</u>	<u>L</u>	<u>R</u>	<u>L</u>	<u>R</u>	<u>I</u>	<u>TOT</u>		<u>Time Per</u>	<u>I</u>	<u>L</u>	<u>R</u>	<u>L</u>	<u>R</u>	<u>I</u>	<u>TOT</u>		<u>Time Per</u>	<u>I</u>	<u>L</u>	<u>R</u>	<u>L</u>	<u>R</u>	<u>I</u>	<u>TOT</u>	
0700 - 0715	12	9	10	2	2	19	54		0700 - 0715	0	1	0	0	0	0	1		0700 - 0715	12	10	10	2	2	19	55	
0715 - 0730	12	14	11	0	2	21	60		0715 - 0730	0	0	0	0	0	0	0		0715 - 0730	12	14	11	0	2	21	60	
0730 - 0745	8	19	18	4	0	23	72		0730 - 0745	0	0	0	0	0	0	0		0730 - 0745	8	19	18	4	0	23	72	
0745 - 0800	20	16	18	4	2	43	103		0745 - 0800	0	0	0	0	0	0	0		0745 - 0800	20	16	18	4	2	43	103	
0800 - 0815	27	32	17	1	2	42	121		0800 - 0815	0	0	0	0	0	0	0		0800 - 0815	27	32	17	1	2	42	121	
0815 - 0830	10	29	41	2	2	42	126		0815 - 0830	0	0	1	0	0	0	1		0815 - 0830	10	29	42	2	2	42	127	
0830 - 0845	15	31	48	4	3	38	139		0830 - 0845	0	0	0	0	0	0	0		0830 - 0845	15	31	48	4	3	38	139	
0845 - 0900	18	34	29	5	7	32	125		0845 - 0900	1	0	1	0	0	0	2		0845 - 0900	19	34	30	5	7	32	127	
0900 - 0915	5	37	24	2	4	24	96		0900 - 0915	0	0	0	0	0	0	0		0900 - 0915	5	37	24	2	4	24	96	
0915 - 0930	14	33	19	3	1	12	82		0915 - 0930	0	0	0	0	0	0	0		0915 - 0930	14	33	19	3	1	12	82	
0930 - 0945	7	19	19	4	4	20	73		0930 - 0945	0	1	0	0	0	0	1		0930 - 0945	7	20	19	4	4	20	74	
0945 - 1000	10	24	19	2	1	13	69		0945 - 1000	0	0	1	0	0	0	1		0945 - 1000	10	24	20	2	1	13	70	
Per End	158	297	273	33	30	329	1120		Per End	1	2	3	0	0	0	6		Per End	159	299	276	33	30	329	1126	

Lights	WEST		NORTH		EAST			Heavies	WEST		NORTH		EAST			Combined	WEST		NORTH		EAST		
	King St		Dangar St		King St				King St		Dangar St		King St				King St		Dangar St		King St		
Peak Per	⌊	⌋	⌊	⌋	⌊	⌋	TOT	Peak Per	⌊	⌋	⌊	⌋	⌊	⌋	TOT	Peak Per	⌊	⌋	⌊	⌋	⌊	⌋	TOT
0700 - 0800	52	58	57	10	6	106	289	0700 - 0800	0	1	0	0	0	0	1	0700 - 0800	52	59	57	10	6	106	290
0715 - 0815	67	81	64	9	6	129	356	0715 - 0815	0	0	0	0	0	0	0	0715 - 0815	67	81	64	9	6	129	356
0730 - 0830	65	96	94	11	6	150	422	0730 - 0830	0	0	1	0	0	0	1	0730 - 0830	65	96	95	11	6	150	423
0745 - 0845	72	108	124	11	9	165	489	0745 - 0845	0	0	1	0	0	0	1	0745 - 0845	72	108	125	11	9	165	490
0800 - 0900	70	126	135	12	14	154	511	0800 - 0900	1	0	2	0	0	0	3	0800 - 0900	71	126	137	12	14	154	514
0815 - 0915	48	131	142	13	16	136	486	0815 - 0915	1	0	2	0	0	0	3	0815 - 0915	49	131	144	13	16	136	489
0830 - 0930	52	135	120	14	15	106	442	0830 - 0930	1	0	1	0	0	0	2	0830 - 0930	53	135	121	14	15	106	444
0845 - 0945	44	123	91	14	16	88	376	0845 - 0945	1	1	1	0	0	0	3	0845 - 0945	45	124	92	14	16	88	379
0900 - 1000	36	113	81	11	10	69	320	0900 - 1000	0	1	1	0	0	0	2	0900 - 1000	36	114	82	11	10	69	322

PEAK HR	70	126	135	12	14	154	511	PEAK HR	1	0	2	0	0	0	3	PEAK HR	71	126	137	12	14	154	514
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R.O.A.R. DATA

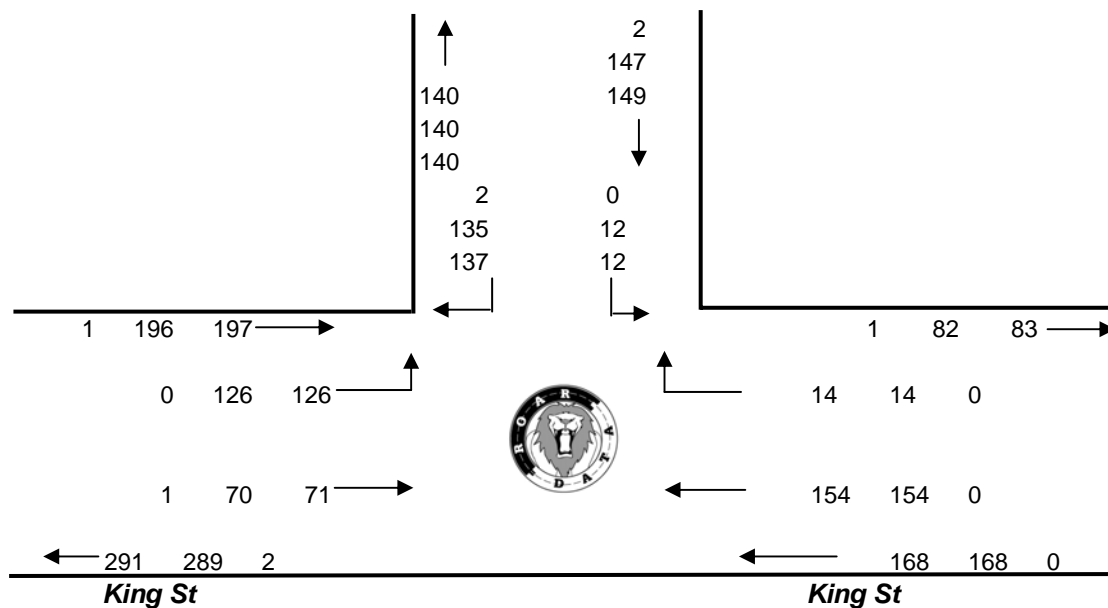
Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Halcrow M.W.T
Job No/Name : 2726 RANDWICK Montefiore Home
Day/Date : Monday 22nd June 09

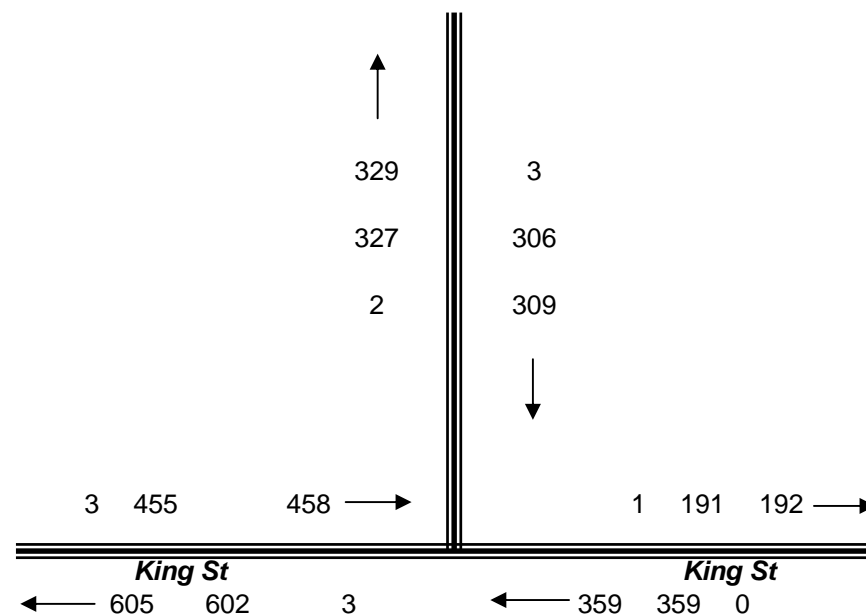
AM PEAK HR
0800 - 0900

Dangar St



TOTAL VOLUMES
FOR COUNT
PERIOD

Dangar St





R.O.A.R. DATA

Reliable, Original & Authentic Results

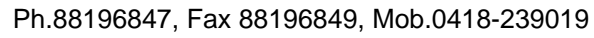
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Halcrow M.W.T
Job No/Name : 2726 RANDWICK Montefiore Home
Day/Date : Monday 22nd June 09

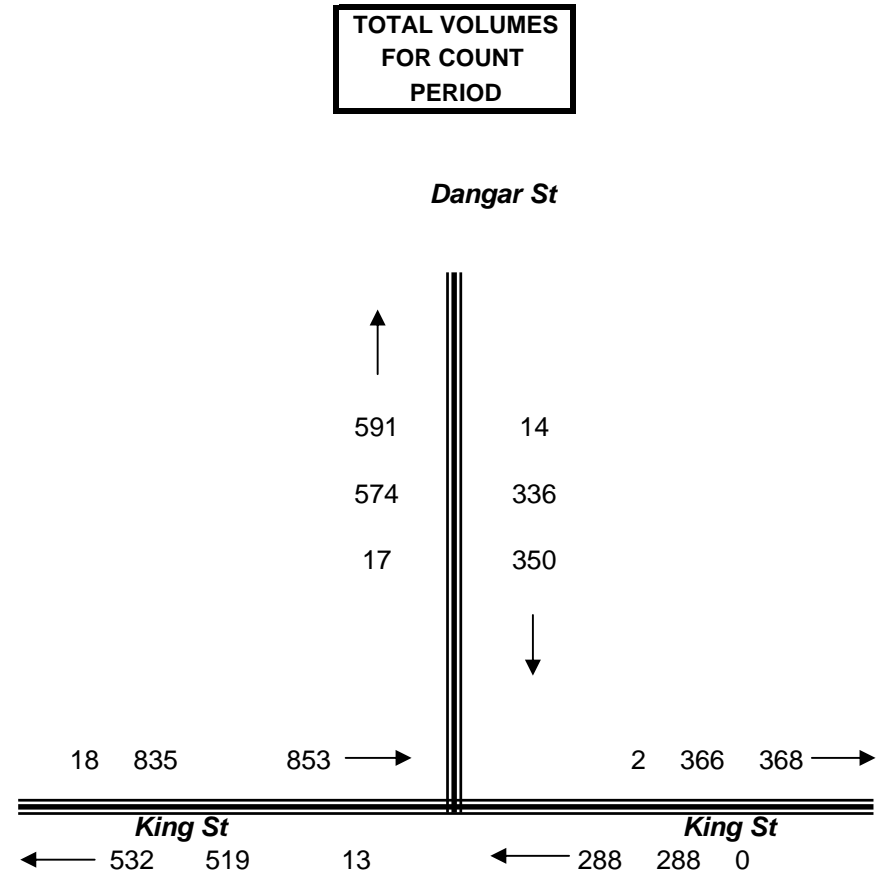
Lights	WEST		NORTH		EAST		TOT		Heavies	WEST		NORTH		EAST		TOT		Combined	WEST		NORTH		EAST		TOT
	King St		Dangar St		King St					King St		Dangar St		King St					King St		King St		King St		
Time Per	T	L	R	L	R	T	TOT	Time Per	T	L	R	L	R	T	TOT	Time Per	T	L	R	L	R	T	TOT		
1500 - 1515	29	34	31	4	4	25	127	1500 - 1515	0	4	0	0	0	0	4	1500 - 1515	29	38	31	4	4	25	131		
1515 - 1530	21	43	23	1	1	15	104	1515 - 1530	0	7	0	0	0	0	7	1515 - 1530	21	50	23	1	1	15	111		
1530 - 1545	22	49	16	3	1	25	116	1530 - 1545	1	1	0	1	0	0	3	1530 - 1545	23	50	16	4	1	25	119		
1545 - 1600	19	34	18	6	2	23	102	1545 - 1600	0	1	2	0	0	0	3	1545 - 1600	19	35	20	6	2	23	105		
1600 - 1615	13	34	18	4	7	18	94	1600 - 1615	0	0	0	0	0	0	0	1600 - 1615	13	34	18	4	7	18	94		
1615 - 1630	10	27	14	4	3	18	76	1615 - 1630	0	0	2	0	0	0	2	1615 - 1630	10	27	16	4	3	18	78		
1630 - 1645	18	35	16	7	2	10	88	1630 - 1645	0	0	2	0	0	0	2	1630 - 1645	18	35	18	7	2	10	90		
1645 - 1700	20	22	14	5	1	14	76	1645 - 1700	0	0	0	0	0	0	0	1645 - 1700	20	22	14	5	1	14	76		
1700 - 1715	16	43	23	5	3	17	107	1700 - 1715	0	1	1	0	0	0	2	1700 - 1715	16	44	24	5	3	17	109		
1715 - 1730	19	36	27	4	3	11	100	1715 - 1730	0	3	1	0	0	0	4	1715 - 1730	19	39	28	4	3	11	104		
1730 - 1745	21	27	9	7	2	15	81	1730 - 1745	0	0	0	0	0	0	0	1730 - 1745	21	27	9	7	2	15	81		
1745 - 1800	27	38	15	3	9	14	106	1745 - 1800	0	0	1	0	0	0	1	1745 - 1800	27	38	16	3	9	14	107		
1800 - 1815	18	25	17	0	1	12	73	1800 - 1815	0	0	1	0	0	0	1	1800 - 1815	18	25	18	0	1	12	74		
1815 - 1830	23	26	17	1	1	11	79	1815 - 1830	0	0	0	0	0	0	0	1815 - 1830	23	26	17	1	1	11	79		
1830 - 1845	15	29	11	3	3	4	65	1830 - 1845	0	0	3	0	0	0	3	1830 - 1845	15	29	14	3	3	4	68		
1845 - 1900	17	25	9	1	4	9	65	1845 - 1900	0	0	0	0	0	0	0	1845 - 1900	17	25	9	1	4	9	65		
Per End	308	527	278	58	47	241	1459	Per End	1	17	13	1	0	0	32	Per End	309	544	291	59	47	241	1491		

Lights		WEST		NORTH		EAST			Heavies		WEST		NORTH		EAST			Combined		WEST		NORTH		EAST		
		King St		Dangar St		King St					King St		Dangar St		King St					King St		Dangar St		King St		
Peak Per	T	L	R	L	R	T	TOT	Peak Per	T	L	R	L	R	T	TOT	Peak Per	T	L	R	L	R	T	TOT			
1500 - 1600	91	160	88	14	8	88	449	1500 - 1600	1	13	2	1	0	0	17	1500 - 1600	92	173	90	15	8	88	466			
1515 - 1615	75	160	75	14	11	81	416	1515 - 1615	1	9	2	1	0	0	13	1515 - 1615	76	169	77	15	11	81	429			
1530 - 1630	64	144	66	17	13	84	388	1530 - 1630	1	2	4	1	0	0	8	1530 - 1630	65	146	70	18	13	84	396			
1545 - 1645	60	130	66	21	14	69	360	1545 - 1645	0	1	6	0	0	0	7	1545 - 1645	60	131	72	21	14	69	367			
1600 - 1700	61	118	62	20	13	60	334	1600 - 1700	0	0	4	0	0	0	4	1600 - 1700	61	118	66	20	13	60	338			
1615 - 1715	64	127	67	21	9	59	347	1615 - 1715	0	1	5	0	0	0	6	1615 - 1715	64	128	72	21	9	59	353			
1630 - 1730	73	136	80	21	9	52	371	1630 - 1730	0	4	4	0	0	0	8	1630 - 1730	73	140	84	21	9	52	379			
1645 - 1745	76	128	73	21	9	57	364	1645 - 1745	0	4	2	0	0	0	6	1645 - 1745	76	132	75	21	9	57	370			
1700 - 1800	83	144	74	19	17	57	394	1700 - 1800	0	4	3	0	0	0	7	1700 - 1800	83	148	77	19	17	57	401			
1715 - 1815	85	126	68	14	15	52	360	1715 - 1815	0	3	3	0	0	0	6	1715 - 1815	85	129	71	14	15	52	366			
1730 - 1830	89	116	58	11	13	52	339	1730 - 1830	0	0	2	0	0	0	2	1730 - 1830	89	116	60	11	13	52	341			
1745 - 1845	83	118	60	7	14	41	323	1745 - 1845	0	0	5	0	0	0	5	1745 - 1845	83	118	65	7	14	41	328			
1800 - 1900	73	105	54	5	9	36	282	1800 - 1900	0	0	4	0	0	0	4	1800 - 1900	73	105	58	5	9	36	286			

PEAK HR	91	160	88	14	8	88	449	PEAK HR	1	13	2	1	0	0	17	PEAK HR	92	173	90	15	8	88	466
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Client : Halcrow M.W.T
Job No/Name : 2726 RANDWICK Montefiore Home
Day/Date : Monday 22nd June 09





R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Halcrow M.W.T
Job No/Name : 2726 RANDWICK Montefiore Home
Day/Date : Monday 22nd June 09

Lights	WEST		NORTH		EAST			Heavies	WEST		NORTH		EAST			Combined	WEST		NORTH		EAST		
	King St		Montefiore Access		King St				King St		Montefiore Access		King St				King St		King St		Montefiore Access		
Time Per	<u>I</u>	<u>L</u>	<u>R</u>	<u>L</u>	<u>R</u>	<u>I</u>	TOT	Time Per	<u>I</u>	<u>L</u>	<u>R</u>	<u>L</u>	<u>R</u>	<u>I</u>	TOT	Time Per	<u>I</u>	<u>L</u>	<u>R</u>	<u>L</u>	<u>R</u>	<u>I</u>	TOT
0700 - 0715	18	1	0	0	3	28	50	0700 - 0715	1	0	0	0	0	0	1	0700 - 0715	19	1	0	0	3	28	51
0715 - 0730	19	2	1	4	1	36	63	0715 - 0730	0	0	0	0	1	0	1	0715 - 0730	19	2	1	4	2	36	64
0730 - 0745	18	5	0	0	1	42	66	0730 - 0745	0	0	1	0	0	0	1	0730 - 0745	18	5	1	0	1	42	67
0745 - 0800	28	2	0	1	2	64	97	0745 - 0800	0	0	1	0	0	0	1	0745 - 0800	28	2	1	1	2	64	98
0800 - 0815	39	2	0	0	3	63	107	0800 - 0815	0	0	0	0	0	0	0	0800 - 0815	39	2	0	0	3	63	107
0815 - 0830	30	1	1	0	2	69	103	0815 - 0830	0	0	0	0	0	1	1	0815 - 0830	30	1	1	0	2	70	104
0830 - 0845	31	3	1	2	5	84	126	0830 - 0845	0	0	0	0	0	1	1	0830 - 0845	31	3	1	2	5	85	127
0845 - 0900	39	5	1	3	5	62	115	0845 - 0900	1	0	0	0	0	1	2	0845 - 0900	40	5	1	3	5	63	117
0900 - 0915	29	3	0	3	3	56	94	0900 - 0915	0	0	0	0	0	0	0	0900 - 0915	29	3	0	3	3	56	94
0915 - 0930	34	2	0	1	1	30	68	0915 - 0930	0	0	1	0	1	0	2	0915 - 0930	34	2	1	1	2	30	70
0930 - 0945	16	2	2	4	1	38	63	0930 - 0945	1	0	0	0	0	0	1	0930 - 0945	17	2	2	4	1	38	64
0945 - 1000	30	3	2	7	1	32	75	0945 - 1000	0	0	0	0	0	1	1	0945 - 1000	30	3	2	7	1	33	76
Per End	331	31	8	25	28	604	1027	Per End	3	0	3	0	2	4	12	Per End	334	31	11	25	30	608	1039

Lights		WEST		NORTH		EAST		Heavies								WEST		NORTH		EAST		Combined								WEST		NORTH		EAST	
		King St		Montefiore Access		King St										King St		King St		King St										King St		King St		King St	
Peak Per		<u>I</u>	<u>L</u>	<u>R</u>	<u>L</u>	<u>R</u>	<u>I</u>	TOT	Peak Per	<u>I</u>	<u>L</u>	<u>R</u>	<u>L</u>	<u>R</u>	<u>I</u>	TOT	Peak Per	<u>I</u>	<u>L</u>	<u>R</u>	<u>L</u>	<u>R</u>	<u>I</u>	TOT	Peak Per	<u>I</u>	<u>L</u>	<u>R</u>	<u>L</u>	<u>R</u>	<u>I</u>	TOT			
0700 - 0800		83	10	1	5	7	170	276	0700 - 0800	1	0	2	0	1	0	4	0700 - 0800	84	10	3	5	8	170	280											
0715 - 0815		104	11	1	5	7	205	333	0715 - 0815	0	0	2	0	1	0	3	0715 - 0815	104	11	3	5	8	205	336											
0730 - 0830		115	10	1	1	8	238	373	0730 - 0830	0	0	2	0	0	1	3	0730 - 0830	115	10	3	1	8	239	376											
0745 - 0845		128	8	2	3	12	280	433	0745 - 0845	0	0	1	0	0	2	3	0745 - 0845	128	8	3	3	12	282	436											
0800 - 0900		139	11	3	5	15	278	451	0800 - 0900	1	0	0	0	0	3	4	0800 - 0900	140	11	3	5	15	281	455											
0815 - 0915		129	12	3	8	15	271	438	0815 - 0915	1	0	0	0	0	3	4	0815 - 0915	130	12	3	8	15	274	442											
0830 - 0930		133	13	2	9	14	232	403	0830 - 0930	1	0	1	0	1	2	5	0830 - 0930	134	13	3	9	15	234	408											
0845 - 0945		118	12	3	11	10	186	340	0845 - 0945	2	0	1	0	1	1	5	0845 - 0945	120	12	4	11	11	187	345											
0900 - 1000		109	10	4	15	6	156	300	0900 - 1000	1	0	1	0	1	1	4	0900 - 1000	110	10	5	15	7	157	304											

PEAK HR	139	11	3	5	15	278	451	PEAK HR	1	0	0	0	0	3	4	PEAK HR	140	11	3	5	15	281	455
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R.O.A.R. DATA

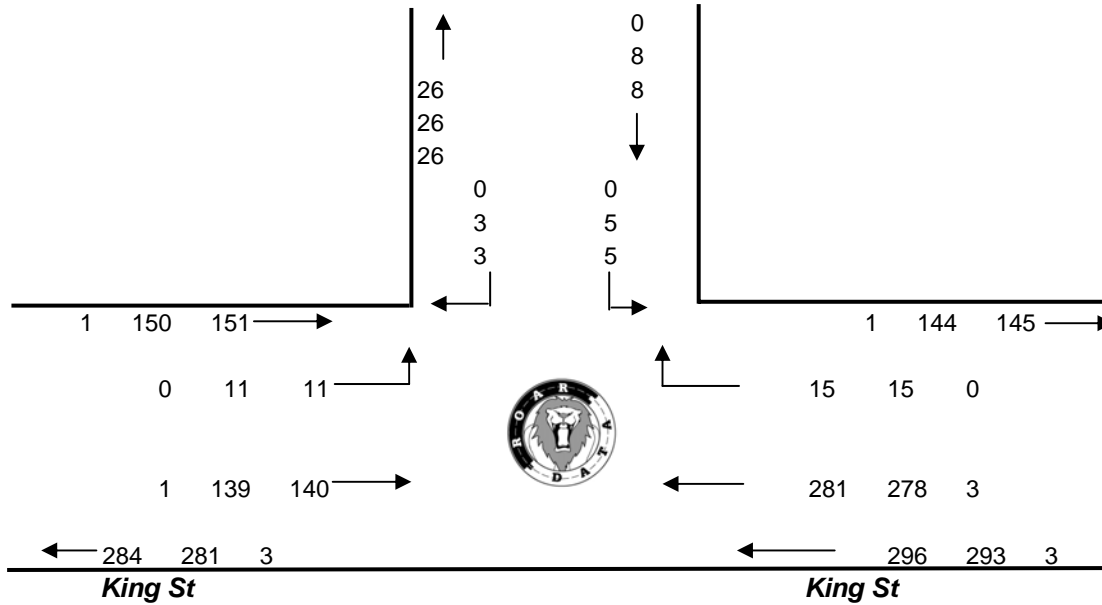
Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Halcrow M.W.T
Job No/Name : 2726 RANDWICK Montefiore Home
Day/Date : Monday 22nd June 09

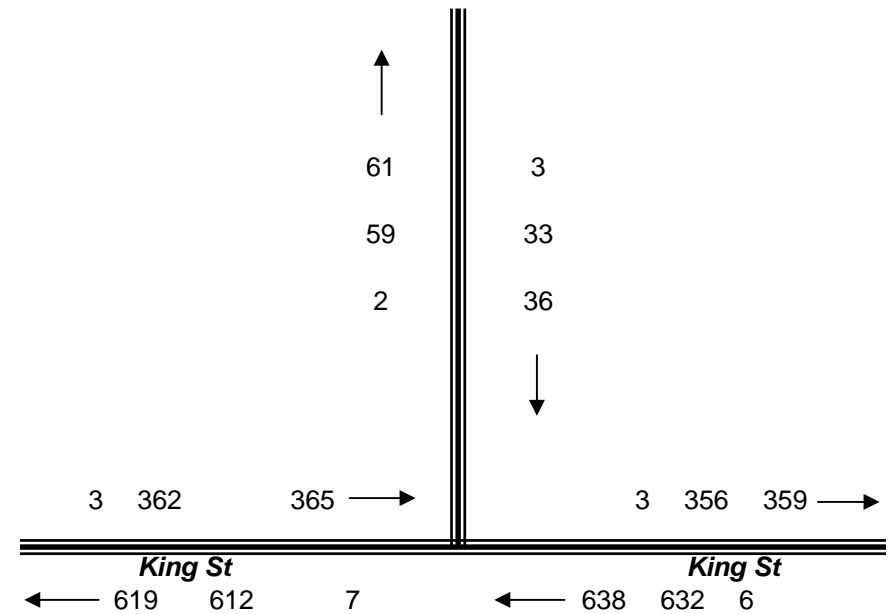
AM PEAK HR
0800 - 0900

Montefiore Access



TOTAL VOLUMES
FOR COUNT
PERIOD

Montefiore Access





R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Halcrow M.W.T
Job No/Name : 2726 RANDWICK Montefiore Home
Day/Date : Monday 22nd June 09

Lights		WEST		NORTH		EAST		Heavies								WEST		NORTH		EAST		Combined								WEST		NORTH		EAST	
		King St		Montefiore		King St										King St		Montefiore		King St										King St		Montefiore		King St	
Time Per	T	L	R	L	R	T	TOT	Time Per	T	L	R	L	R	T	TOT	Time Per	T	L	R	L	R	T	TOT	Time Per	T	L	R	L	R	T	TOT				
1500 - 1515	34	2	9	2	0	39	86	1500 - 1515	4	0	0	0	0	0	4	1500 - 1515	38	2	9	2	0	39	90												
1515 - 1530	39	1	0	7	0	38	85	1515 - 1530	7	0	0	0	0	0	7	1515 - 1530	46	1	0	7	0	38	92												
1530 - 1545	49	1	2	4	0	40	96	1530 - 1545	1	0	0	0	0	0	1	1530 - 1545	50	1	2	4	0	40	97												
1545 - 1600	37	0	3	8	1	44	93	1545 - 1600	1	0	0	0	0	2	3	1545 - 1600	38	0	3	8	1	46	96												
1600 - 1615	18	0	6	5	0	31	60	1600 - 1615	0	0	0	0	0	0	0	1600 - 1615	18	0	6	5	0	31	60												
1615 - 1630	24	0	6	7	0	37	74	1615 - 1630	0	0	0	0	0	2	2	1615 - 1630	24	0	6	7	0	39	76												
1630 - 1645	27	0	5	9	0	29	70	1630 - 1645	0	0	0	0	0	1	1	1630 - 1645	27	0	5	9	0	30	71												
1645 - 1700	31	0	1	2	0	27	61	1645 - 1700	1	0	0	0	0	0	1	1645 - 1700	32	0	1	2	0	27	62												
1700 - 1715	41	1	3	15	0	39	99	1700 - 1715	1	0	0	0	0	3	4	1700 - 1715	42	1	3	15	0	42	103												
1715 - 1730	24	1	3	5	0	39	72	1715 - 1730	0	0	0	0	0	1	1	1715 - 1730	24	1	3	5	0	40	73												
1730 - 1745	40	0	0	2	1	26	69	1730 - 1745	0	0	0	0	0	0	0	1730 - 1745	40	0	0	2	1	26	69												
1745 - 1800	44	0	2	5	0	26	77	1745 - 1800	0	0	0	0	0	1	1	1745 - 1800	44	0	2	5	0	27	78												
1800 - 1815	35	0	4	3	0	31	73	1800 - 1815	0	0	0	0	0	1	1	1800 - 1815	35	0	4	3	0	32	74												
1815 - 1830	42	0	1	4	0	29	76	1815 - 1830	0	0	0	0	0	0	0	1815 - 1830	42	0	1	4	0	29	76												
1830 - 1845	29	1	2	6	0	17	55	1830 - 1845	0	0	0	0	0	4	4	1830 - 1845	29	1	2	6	0	21	59												
1845 - 1900	32	0	0	2	1	21	56	1845 - 1900	0	0	0	0	0	0	0	1845 - 1900	32	0	0	2	1	21	56												
Per End	546	7	47	86	3	513	1202	Per End	15	0	0	0	0	15	30	Per End	561	7	47	86	3	528	1232												



R.O.A.R. DATA

Reliable, Original & Authentic Results

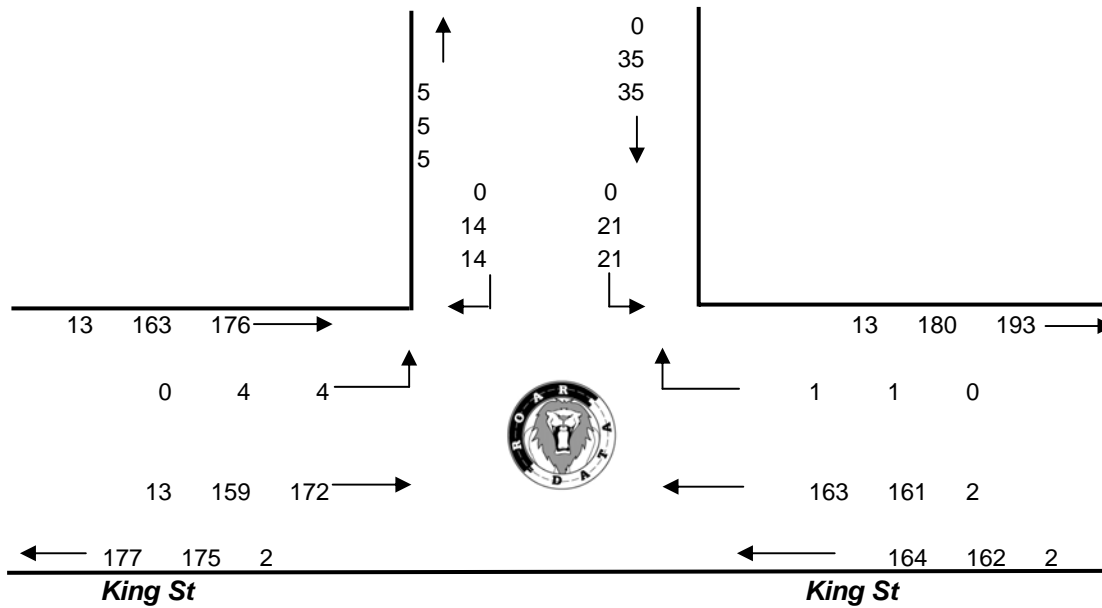
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Halcrow M.W.T
Job No/Name : 2726 RANDWICK Montefiore Home
Day/Date : Monday 22nd June 09

PM PEAK HR
1500 - 1600

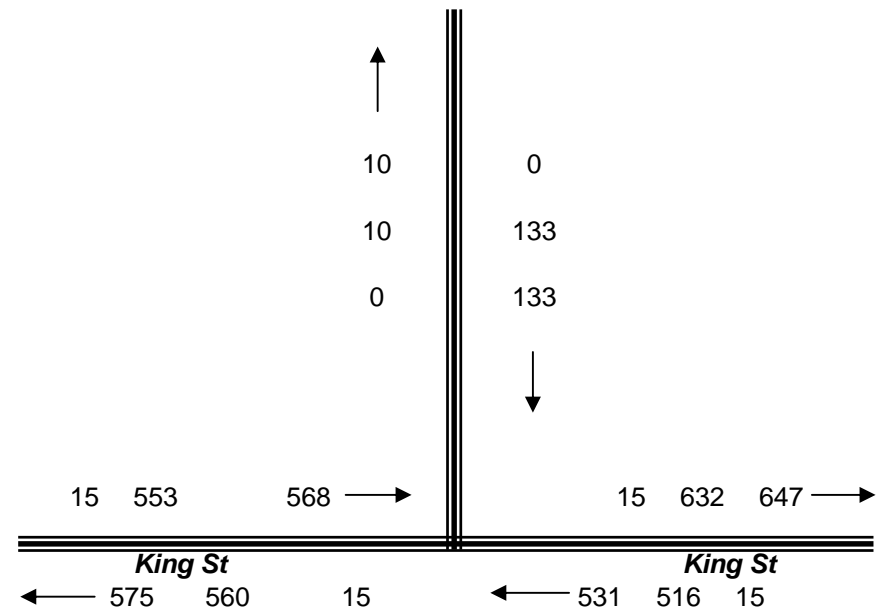


Montefiore Access



TOTAL VOLUMES
FOR COUNT
PERIOD

Montefiore Access



Appendix C Parking Survey Data



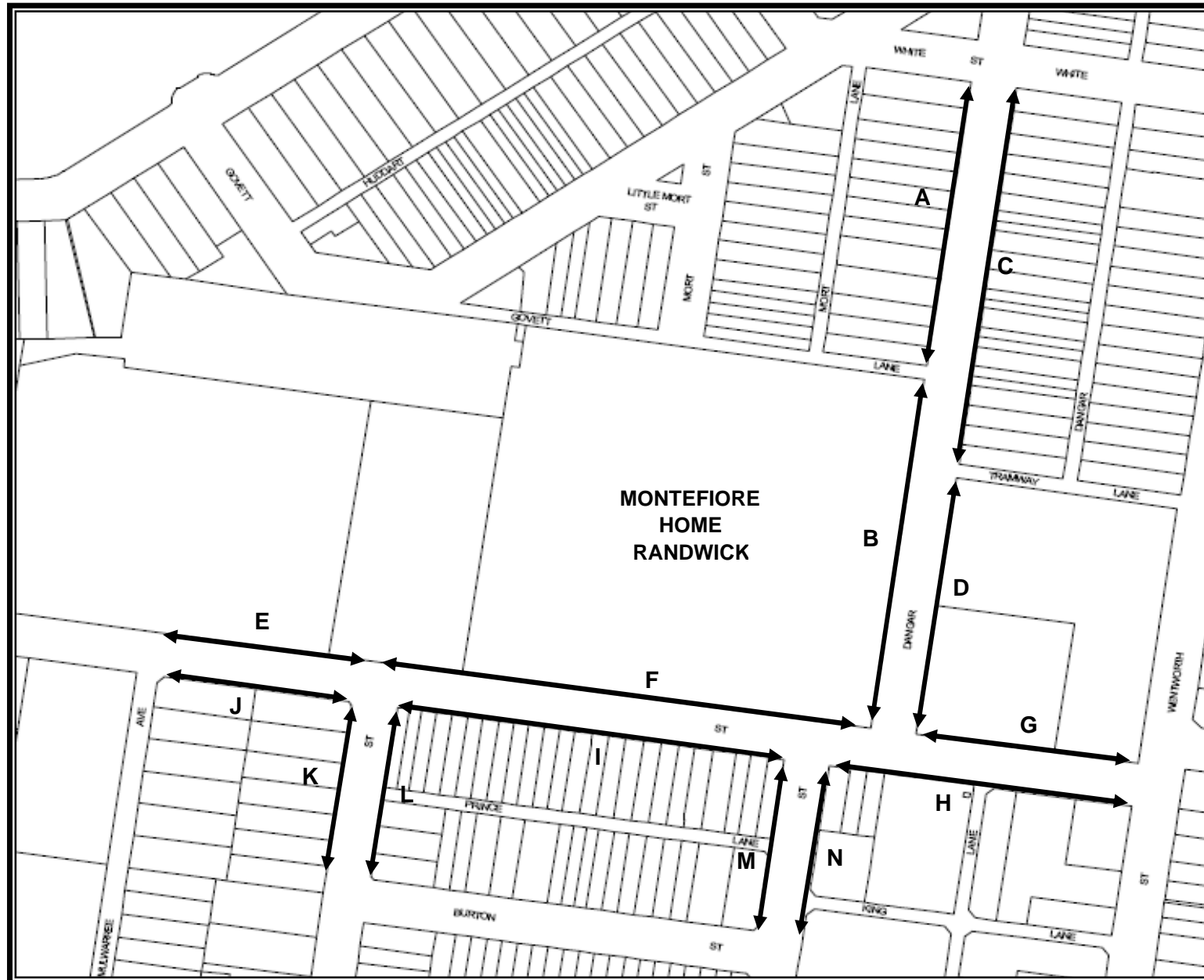
R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Halcrow M.W.T
Job No/Name : RANDWICK Parking Surveys
Day/Date : Monday 22nd June 08

On the street Parking





Area	Location	Cap	0700	0730	0800	0830	0900	0930	1000	1030	1100	1130	1200	1230	1300	1330
A	Dangar St W/S	22	8	8	7	9	9	9	8	10	10	11	11	8	10	13
B	Dangar St W/S	23	14	14	19	21	20	22	21	14	11	12	12	22	19	20
C	Dangar St E/S	23	14	15	13	13	11	13	14	17	15	14	14	15	15	16
D	Dangar St E/S	17	10	11	11	8	8	11	13	17	17	16	16	12	12	13
E	King St N/S	14	12	14	14	14	14	14	14	13	13	14	14	14	14	14
F	King St N/S	24	12	14	18	9	9	8	14	15	18	21	21	21	19	18
G	King St N/S	13	13	11	6	9	9	8	7	6	6	6	6	7	7	7
H	King St S/S	10	10	8	9	5	6	6	4	6	6	6	6	6	6	6
I	King St S/S	28	22	23	22	28	28	24	26	23	22	23	24	23	23	24
J	King St S/S	10	8	10	10	10	10	9	10	10	9	9	8	8	8	8
K	Prince St W/S	16	12	14	10	15	15	16	16	15	16	13	16	16	15	14
L	Prince St E/S	10	7	9	6	9	8	9	9	10	10	8	8	8	10	10
M	Church St W/S	11	5	5	6	6	5	8	8	10	11	10	10	10	10	10
N	Church St E/S	10	6	7	7	7	8	9	10	8	9	9	9	9	9	9
Total Vehicles		231	153	163	158	163	160	166	174	174	173	172	175	179	177	182
Number of Spaces			78	68	73	68	71	65	57	57	58	59	56	52	54	49
% Capacity Used			66.2%	70.6%	68.4%	70.6%	69.3%	71.9%	75.3%	75.3%	74.9%	74.5%	75.8%	77.5%	76.6%	78.8%

Area	Location	Cap	1400	1430	1500	1530	1600	1630	1700	1730	1800	1830	1900	1930	2000
A	Dangar St W/S	22	9	12	11	11	12	11	10	11	12	14	13	13	13
B	Dangar St W/S	23	19	18	19	13	11	8	11	10	9	8	10	10	10
C	Dangar St E/S	23	14	14	13	15	16	16	13	17	17	17	16	15	15
D	Dangar St E/S	17	13	10	11	12	12	12	10	10	8	8	10	9	10
E	King St N/S	14	13	14	13	16	14	15	13	13	12	15	15	14	13
F	King St N/S	24	17	23	24	19	14	11	11	10	17	21	20	20	21
G	King St N/S	13	8	6	6	8	8	11	10	9	11	12	13	13	12
H	King St S/S	10	7	8	7	8	10	10	9	5	6	9	10	10	10
I	King St S/S	28	25	26	25	24	20	18	19	17	20	25	23	23	22
J	King St S/S	10	9	9	9	9	8	7	7	10	10	10	10	8	8
K	Prince St W/S	16	13	13	14	11	13	13	13	12	14	13	13	13	12
L	Prince St E/S	10	10	9	9	7	8	7	9	8	10	9	10	10	10
M	Church St W/S	11	9	10	9	8	6	5	6	7	5	6	5	6	6
N	Church St E/S	10	9	9	8	7	6	5	5	6	7	7	7	6	6
Total Vehicles		231	175	181	178	168	158	149	146	145	158	174	175	170	168
Number of Spaces			56	50	53	63	73	82	85	86	73	57	56	61	63
% Capacity Used			75.8%	78.4%	77.1%	72.7%	68.4%	64.5%	63.2%	62.8%	68.4%	75.3%	75.8%	73.6%	72.7%



Client : Halcrow M.W.T
Job No/Name : RANDWICK Parking Surveys
Day/Date : Monday 22nd June 08

Area	Location	Cap	0700	0730	0800	0830	0900	0930	1000	1030	1100	1130	1200	1230	1300	1330
1	Visitor Car Park	33	7	9	11	14	14	18	23	28	30	30	29	25	21	23
2	Multilevel Car Park (Level 1)	64	21	24	28	33	47	48	47	48	48	49	49	47	48	47
	Multilevel Car Park (Level 2)	44	13	15	16	18	26	26	27	27	27	26	26	25	27	29
3	Pararel Parking (Outside)	6	0	0	0	0	1	4	1	3	5	4	4	3	5	3
4	On the grass Parking (Outside)		0	0	0	0	0	0	1	3	5	7	4	5	4	5
	Area 4 results not included															
Total Vehicles		147	41	48	55	65	88	96	98	106	110	109	108	100	101	102
Number of Spaces			106	99	92	82	59	51	49	41	37	38	39	47	46	45
% Capacity Used			27.9%	32.7%	37.4%	44.2%	59.9%	65.3%	66.7%	72.1%	74.8%	74.1%	73.5%	68.0%	68.7%	69.4%

Area	Location	Cap	1400	1430	1500	1530	1600	1630	1700	1730	1800	1830	1900	1930	2000
1	Visitor Car Park	33	21	22	24	26	26	18	17	16	18	19	15	15	13
2	Multilevel Car Park (Level 1)	64	46	48	45	36	31	26	23	12	10	8	9	9	8
	Multilevel Car Park (Level 2)	44	28	27	28	26	25	21	22	18	14	12	13	13	13
3	Pararel Parking (Outside)	6	3	3	2	1	4	5	5	4	3	2	2	2	3
4	On the grass Parking (Outside)		3	2	3	3	3	2	0	0	0	0	0	0	0
	Area 4 results not included														
Total Vehicles		147	98	100	99	89	86	70	67	50	45	41	39	39	37
Number of Spaces			49	47	48	58	61	77	80	97	102	106	108	108	110
% Capacity Used			66.7%	68.0%	67.3%	60.5%	58.5%	47.6%	45.6%	34.0%	30.6%	27.9%	26.5%	26.5%	25.2%

Appendix D Staff Travel Survey – Questionnaire

The Montefiore Home, Randwick Travel and Parking Survey

Time & Date of Survey:

1. How did you travel to Montefiore Randwick today? (please tick):

- | | | |
|--------------------------------|--|---|
| <input type="checkbox"/> Car | <input type="checkbox"/> Car Passenger | <input type="checkbox"/> Dropped Off
(Driver did not stay) |
| <input type="checkbox"/> Bus | <input type="checkbox"/> Taxi | <input type="checkbox"/> Walk |
| <input type="checkbox"/> Cycle | <input type="checkbox"/> Other (please specify)..... | |

2. Arrival Time (approx.):

Departure Time (approx.):

3. If you travelled by car, how many people were in the car? (please tick)

- | | | |
|------------------------------|--------------------------------|---------------------------------|
| <input type="checkbox"/> One | <input type="checkbox"/> Three | <input type="checkbox"/> Five |
| <input type="checkbox"/> Two | <input type="checkbox"/> Four | <input type="checkbox"/> > Five |

4. If you were the car driver, where did you park your car? (please tick)

- | |
|---|
| <input type="checkbox"/> In one of the car parks on the Montefiore site |
| <input type="checkbox"/> On one of the neighbouring streets |

5. If you parked on one of the neighbouring streets, please explain why:

.....

.....

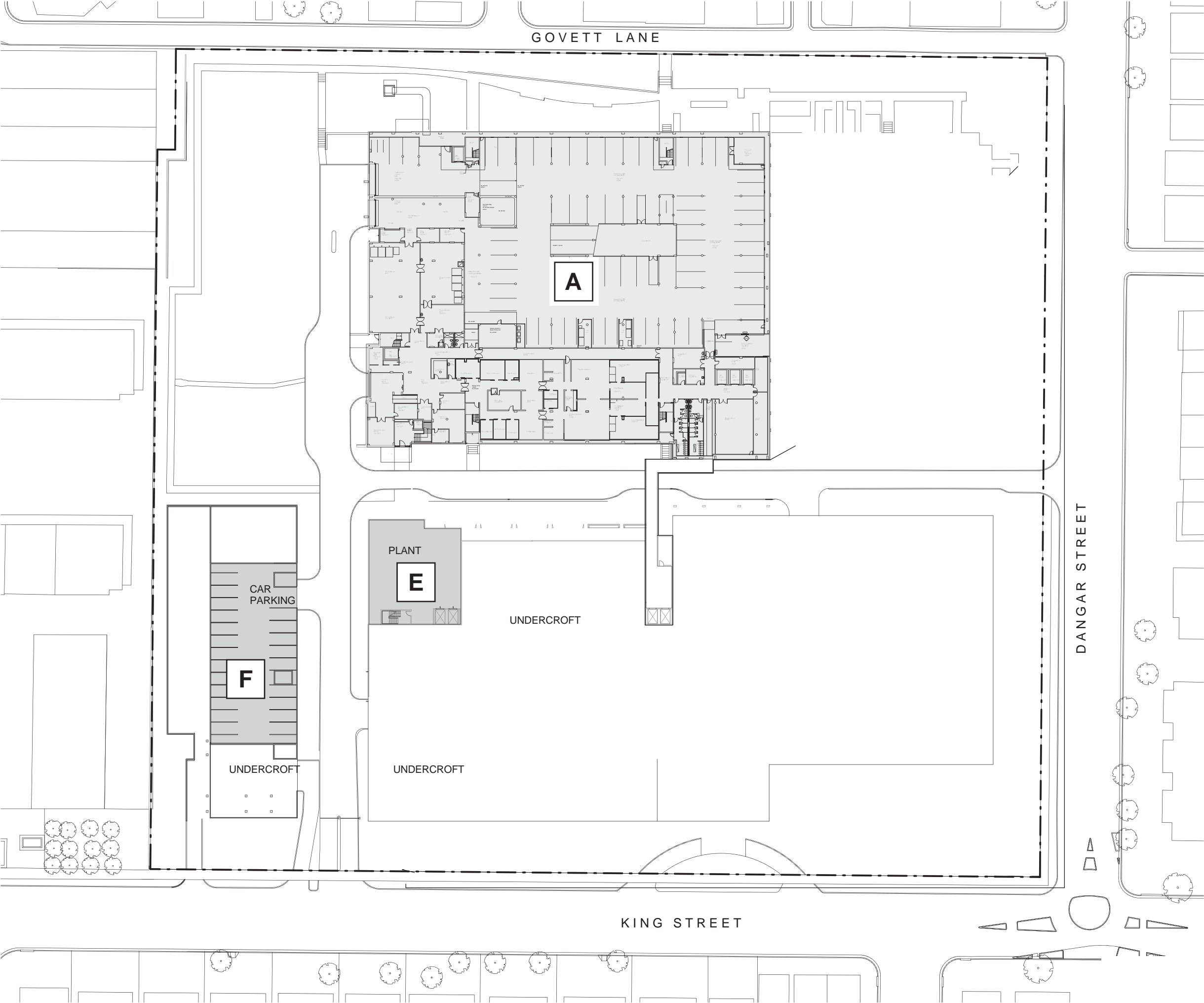
6. Where do you prefer to park? On the street or on site? Why?

.....

.....

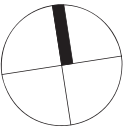
Thank you

Appendix E Full Concept Scheme – Relevant Plans

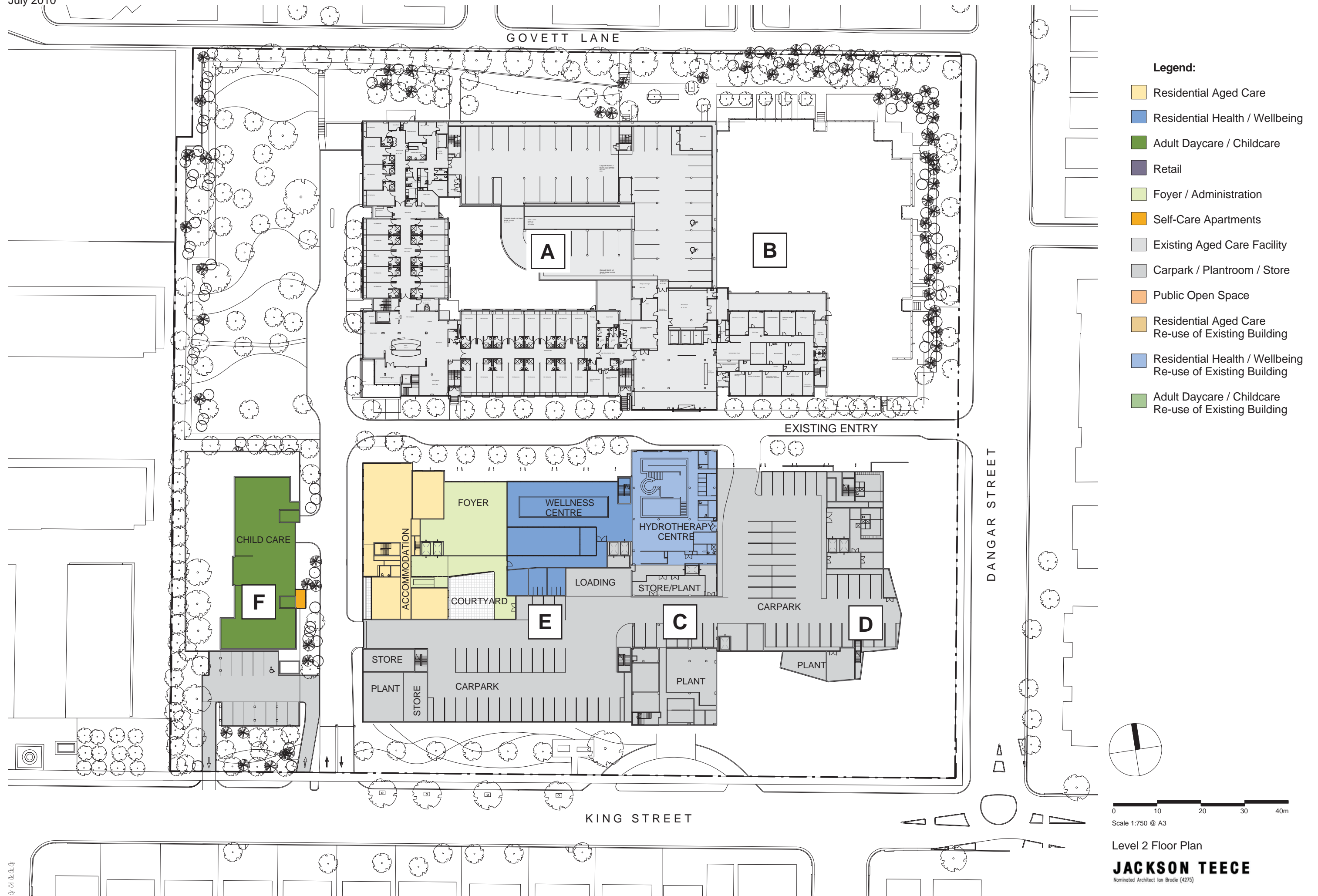


Legend:

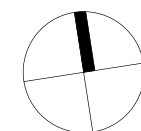
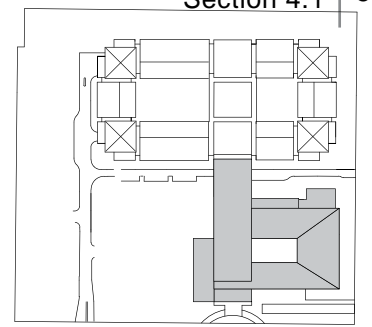
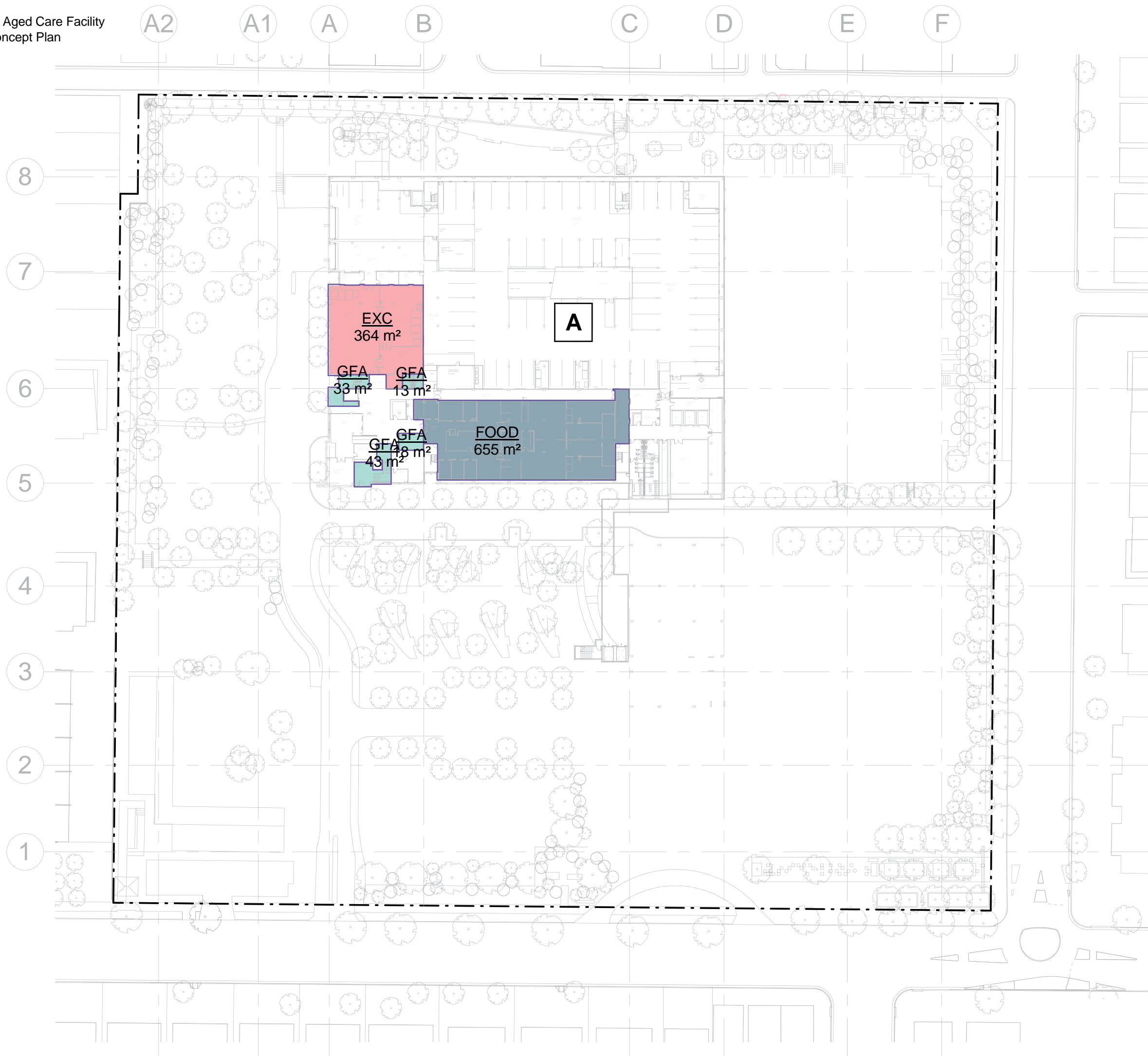
- Residential Aged Care
- Residential Health / Wellbeing
- Adult Daycare / Childcare
- Retail
- Foyer / Administration
- Self-Care Apartments
- Existing Aged Care Facility
- Carpark / Plantroom / Store
- Public Open Space
- Residential Aged Care Re-use of Existing Building
- Residential Health / Wellbeing Re-use of Existing Building
- Adult Daycare / Childcare Re-use of Existing Building



0 10 20 30 40m
Scale 1:750 @ A3



Appendix F Stage 1 Development – Relevant Plans



0 10 20 30 40m
Scale 1:750 @ A3

Stage 1 GFA - LEVEL 1

JACKSON TEECE
Nominated Architect Ian Brodie (4275)