MASSON | WILSON | TWINEY
TRAFFIC AND TRANSPORT CONSULTANTS

Mr Scott Gregg
Toga Group
Level 5, 45 Jones Street
ULTIMO NSW 2007

26 November 2008

Dear Scott,

Re: Modified Development Proposal for 61-79 Hall Street, Bondi Beach

This letter is to advise on traffic and parking implications of the modified proposal for this site. We provide this advice by way of reference to our traffic assessment of the original application.

Modified Scheme

The original proposal comprised three levels of basement parking, two levels of retail, restaurant development and 135 hotel rooms and 31 apartments above. The modified scheme would leave the lower levels essentially unchanged but reduce the number of hotel rooms to 113 and provide three additional apartments. In addition, minor changes have been made to the proposed loading area to improve its capacity and allow independent operation by two trucks and a van at the same time.

Parking Implications

We have recalculated the parking provisions based on Waverley Council's DCP 2006, Part 1l, Land Use and Transport. This specifies a minimum parking requirement and a maximum parking allowance. These are calculated for the modified scheme on Table 1 below. Table 1 indicates that the development is required to provide between 130 and 182 parking spaces. A total of 180 parking spaces are proposed and therefore this would comply with the provisions of the DCP.

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Table 1: Parking Requirement of Proposed Development

Use	Number (or GFA)	Minimum Parking		Maximum Parking	
		Rate	Minimum Number Allowed	Rate	Maximum Number Allowed
Residential (34 units)	12x 3-bed	0.8	9.6	1.2	14.4
	18x2-bed	0.4	7.2	0.8	14.4
	4x1-bed	0.3	1.2	0.6	2.4
Hotel	113	1 per 4 rooms	28.25	1 per 4 rooms	28.25
Restaurant	804sqm	1 per 50sqm	16.04	1 per 50sqm	16.04
Shops	2,324sqm	1 per 60 sqm	38.73	1 per 30 sqm	77.46
Gym	652 sqm	4.5 per 100sqm	29.34	4.5 per 100sqm	29.34
TOTAL			**130.36**		**182.29**

Note Gymnasium requirement is based on RTA guidelines

Traffic Implications

The reduced hotel rooms would result in a reduction in the traffic generation of 5.5 vehicle trips per peak hour. On the other hand the additional apartments would increase the traffic generation by about 0.9 vehicle trips per peak hour. The result would be a reduction of 4.6 vehicle trips per peak hour compared to the original proposal.

The net effect of the change would be negligible and the assessment that accompanied the original application together with the supplementary information supplied at the request of the Local Traffic Committee would still be applicable.

Conclusion

Overall the proposed changes would have little effect on the traffic and parking implications of the proposed development. In accordance with our original findings we consider that traffic and parking aspects would be satisfactory.

We trust that these comments will assist in the processing of the application.

Yours Sincerely,

Bruce Masson
Director, Transport Planning

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TRAFFIC AND TRANSPORT CONSULTANTS

Mr Scott Gregg
Toga Group
Level 5, 45 Jones Street
ULTIMO NSW 2007

4 December 2008

Dear Scott,

Re: 61-79 Hall Street, Bondi Beach – Council's Queries

As requested we have reviewed the comments from the Waverley Council concerning the Hall Street development. Our responses are as follows:

1. *Effects of development on the intersection of Roscoe Street/ Glenayr Avenue*

Our response: It was assumed in the traffic analysis that all traffic would turn left out of the site to provide a worst case scenario at the intersection of O'Brien Street and Hall Street.

Our survey of traffic movement into and out of the existing carpark indicated that no exiting vehicle turned right in the morning peak hours, 7:00am-9:00am. In the evening peak hours, between 4:30am-6:30pm, 9 vehicles turned right out of 67 vehicles, representing 13.4 percent.

Notwithstanding this, we have analysed the operation of the Roscoe Street/Glenayr Avenue intersection using the SIDRA intersection analysis program assuming that 13.4% of the car park traffic was to leave the site via this intersection.

The analysis determined that the average delay to Roscoe Street traffic turning into Glenayr Avenue would be about 10 seconds. Thus there would be no problems at this intersection.

2. *Traffic Generation of Restaurant and Retail Components*

Waverley Council has a restrictive parking policy that limits the amount of parking that is allowed to be provided on site. The policy has been adopted as a tool to reduce private car usage and hence the traffic generation. RTA traffic generation rates are based on the unconstrained provision of car parking. Hence they should not be applied in areas in which parking is constrained without qualification.

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In the case of restaurants the RTA Guidelines suggest that for unconstrained parking situations the following generation rates apply:

- Parking – 15 spaces per 100m2 of floor space
- Traffic – 5 vehicle trips per hour per 100m2

In contrast, Waverley Council's DCP only allows 1 space per 50m2. Thus the RTA unconstrained parking rate is about 7.5 times the Waverley Council rate. On a pro- rata basis (i.e. assuming the same trip generation rate per parking space), the equivalent trip generation rate for parking provided at the maximum rate allowed by the Waverley DCP would be 0.67 veh/hr/100m2. For the 804m2 of restaurant proposed this equates to only about 5.5 vehicle trips per hour.

In the traffic analysis, we have allowed for 16 vehicle trips per hour which provides a leeway for additional drop-off vehicle trips that might be made. A similar situation applies to retail traffic generation in that the DCP restriction on parking provision would result in a traffic generation rate well below the RTA's unconstrained rate. The comparison in as follows:

RTA unconstrained parking demand rate: 6.1 spaces/100m2
RTA unconstrained traffic generation rate: 12.5 veh/hr/100m2
Waverley DCP max parking provision rate: 1 space/30m2 (3.3/100m2)
Equivalent Waverley DCP max traffic generation rate: 6.8 veh/hr/100m2

On this basis the traffic generation of the 2,324m2 retail component would be 158 vehicle trips per hour. The calculation in the traffic report of 156veh/hr is comparable. The small difference relates to rounding changes.

RTA Guidelines recognise that not all shopping trips are single purpose trips to and from the shops only. Many are linked trips made as part of a chain of trips on a single journey. This includes trips that would be intercepted from traffic that would be passing by any way. In addition new shops often intercept shopping trips that would otherwise have been made to another destination in the local area. RTA guidelines suggest that a discount of 25% be applied to account for such behaviour and this was done in the analysis.

3. Traffic Generation of a Possible Supermarket

The proposal has specifically not been designed to accommodate a supermarket. This is reflected in the size and shape of the retail tenancies and because normal provisions for shopper trolleys have not been made. If a supermarket was to be proposed in the future then this would need to be the subject of a separate development application which would then be considered on its merits.

Notwithstanding this, as explained above, the DCP restriction on the amount of parking that could be provided on the site would attenuate the traffic generation of the project.

4. Size of loading dock:

Waverley DCP Part 1 Clause 4 specifies loading space requirements for different land uses. Table indicates loading requirements calculated for the development calculated by applying the specified rates.

Table 1: Loading Dock Requirement

Use	Size	Waverley Council DCP	
		Rate	**Number of Spaces**
Retail	2,324 m²	1 per 400 m² up to 2,000m² plus 1 per 1000 m² thereafter	5.3
Restaurant	804 m²	1 per 400 m²	2
Residential	31 units	1 per 50 dwellings	1
Total			**8.3**

We note that the Clause 4 requirements are almost identical to those provided in the RTA's Guide to Traffic Generating Developments of 2002. This was an update of an RTA Guide which was first published in 1984. The RTA Guide provides a table setting requirements for delivery and service vehicle parking which was sourced from a 1980 Council of the City of Sydney Draft Parking Code. In relation to this the RTA Guide states the following:

"The number of service bays required for a development depends on the size and nature of the development. The Council of the City of Sydney has developed a code for the provision of service bays based on surveys undertaken in 1972. Table 5.1 gives relevant details from this code for general guidance. Because of the age of the data used in this code, major developments should ideally quantify their service vehicle requirements through new surveys of similar developments."

Given that the City of Sydney draft code and the RTA and apparently Waverley DCP rates date back to research conducted in 1972, their current applicability is highly questionable. Accordingly it is appropriate to determine service vehicle requirements using another method.

In this regard we previously prepared an analysis of likely daily service vehicle movements that would be generated by the proposed development. This was prepared to assist in the analysis of noise impacts and is provided in Appendix A to this response. This analysis indicates that the two truck loading bays proposed for the site would be sufficient provided car and van deliveries were directed to the basement car park. This is to be incorporated in a management plan for the carpark with an appropriate number of bays to be dedicated for loading during daylight hours. In this regard we note that the attached plan of the loading area (Appendix B) indicates a slightly modified arrangement which now accommodates one 10m long large rigid truck, one small rigid truck and one van. These will be able to have independent access.

In defference to the Waverley DCP it is proposed that initially 5 van and car size additional loading spaces be allocated in the basement car park next to the loading area lift. These will be allocated for loading in business hours and for general parking outside of these times.

The use of these spaces would be monitored and the number reduced if, as is expected, the need for all of them was not demonstrated.

5. *Details of parking security access for the gym/retail component*

The public parking would be charged for at rates comparable to those applying in other public parking areas in Bondi. Depending on arrangements with tenants, discounts would be provided to regular visitors such as to the gymnasium, or to persons spending more than a certain amount of money on a particular visit.

The public carpark is proposed to operate between the hours of 6:00am and midnight.

6. *Sensitivity analysis for the cumulative impacts of other developments on Hall St/Campbell Parade, Curlewis Street /Glenayr Avenue, Curlewis Street/ Wellington Street, Hall St/O'Brien Street and Hall Street/Glenayr Avenue.*

Our analysis has already taken into account the traffic effects of the subject proposal. We have estimated the traffic generation of the other developments cited by the Local Traffic Committee as follows:

- Swiss Grand Hotel
  - additional 75 vehicles per hour for the recently submitted scaled down proposal.
  - Source: MWT Traffic Report
- Bondi Beach Hotel Conversion
  - prior to redevelopment 28 vehicles per hour
  - post development 27 vehicles per hour
  - Therefore effectively no change
  - Source: MWT Traffic Report
- Ravesis Development at 10-14 Hall Street
  - 30 hotel suites plus replacement of existing ground floor retail etc, with new retail plus hotel foyer.
  - Expect traffic increase due to hotel rooms only as redevelopment will otherwise just replace existing facilities.
  - Indicative increased traffic generation is 12 vehicle trips per hour
  - Access is off Jaques Avenue so traffic will arrive via Hall Street and depart via Lamrock Avenue.

Appendix C provides diagrams which show potential traffic increases arising from the subject and other two developments on Hall Street, Curlewis Street, and Campbell Parade. For the purposes of this assessment and to examine a "high sensitivity" case for the nominated intersections, greater use of Curlewis Street by Swiss Grand Hotel traffic was assumed than in the traffic report for that development.

The resultant traffic volumes were analysed using the SIDRA intersection analysis program. Results are provided below in Table 2.

The analysis indicates that all intersections would work satisfactorily with all of the additional traffic added.

Analysis was not conducted for the intersection of Curlewis Street with Wellington Street because a traffic count was not available for that intersection. However, it is noted that there would be no increase in traffic in Wellington Street and traffic on Curlewis Street would increase by only about 26 vehicles per hour (5.8%) during the Thursday evening peak hour. During Saturday mid-day peak hour, traffic would also increase by 26 vehicles per hour (4.15%). These increases would be low and would be unlikely to have any significant impact on the operation of the intersection.

It is thus concluded that the cumulative effect of the additional traffic generated by the proposed development would not have any material adverse impact on the operation of the nominated intersections.

Table 2: Intersection operation on Thursday PM with other developments

		Future Thursday Evening Peak Hour		Future Saturday Mid-day Peak Hour	
Intersection	**Control**	**Delay**	**LOS**	**Delay**	**LOS**
Campbell Pde and Hall St	Signals	20.4	B	34.6	C
Hall St and O'Brien St	Priority	14.9	B	16.1	B
O'Brien St and Glenayr Ave	Priority	18.1	B	22.3	B
Glenayr Ave and Curlewis St	Signals	21.0	B	24.4	B

Note: LOS A = excellent, Los F = inadequate capacity, desirable minimum LOS is D

7. Number of accessible parking spaces

The DCP requirement is difficult to apply literally in this case because every dwelling would not be allocated a parking space and the code makes no mention of hotel requirements. On interpretation, we believe that the following reflects the DCP requirements.

<u>Residential</u>	
6 x 3 & 4-bedroom units	0.6 disabled spaces
24 x 2-bedroom units @ 0.8/unit (19.2 spaces)	1.9 disabled spaces
1 x 1 – bedroom units @ 0.3/unit (0.3 spaces)	0 disabled space
Total Residential	2.5 disabled spaces
<u>Hotel</u>	
33.25 parking spaces @ 1/10 spaces	3.4 disabled spaces
<u>Public carpark</u>	
131 parking spaces @ 1/10 spaces	13.1 disabled spaces
<u>Total</u>	19 disabled spaces

The allocation of 10 percent of public spaces as disabled spaces in the circumstances of highly constrained on-site parking provision may result in under-utilisation of the carpark with adverse effects on the surrounding area. In view of this, the Australian Standards requirement of 1 to 2 percent disabled parking is considered to represent a more realistic provision rate. At a 2 percent provision rate, 3 disabled spaces would be required in the public carpark.

The carpark design provides 3 accessible spaces in the public carpark as calculated above. A total of 5 accessible spaces are provided in the hotel/residential carpark. In line with the analysis above this should be increased to 6 spaces.

8. Pedestrian safety at the exit from Carpark

We suggest that adherence to Clause 6.4.3 of Waverley DCP 1 in relation to pedestrian safety at the point of vehicle access to the site be made a condition of consent.

9. Other Matters

The remainder of the Traffic Committee comments relate to the need for a construction traffic management plan. It is a standard requirement to condition an application such as this to prepare such a plan for approval prior to the commencement of construction. We suggest such treatment in this case.

We trust that these comments will assist in the processing of the application.

Yours Sincerely,

Bruce Masson
Director

Appendix A - Hall Street Development – Analysis of Volume of Service Vehicles

The analysis of potential number of service vehicles that would visit the retail section of the Hall Street development has been based on the surveys of usage of the three main loading areas at Chatswood Chase shopping centre between 6:00am and 6:00pm on a Monday and a Tuesday in 2007. The surveys involved recording of the arrival and departure time of each truck as well as its length. Trucks servicing the major shops such as David Jones, K-Mart and Coles were recorded separately as they have their own loading areas. The service vehicles for the major shops were not included in this analysis.

The number of service vehicles visiting each of the three loading areas is provided in Table 1.

Table 1: Survey of Service Vehicles at Chatswood Chase

Loading Area	Monday	Tuesday
Archer Street	86	135
Victoria Avenue	109	118
Malvern Avenue	14	8
Total	**209**	**261**

This indicated that 209 and 261 service vehicles made deliveries to the speciality shops on Monday and Tuesday respectively. Therefore the average number of service vehicles per day is 235.

The following mix of service vehicles was recorded during the survey:

- Cars and Vans - 40%
- Small Trucks and Vans- 35%
- Medium Trucks - 20%
- Large Trucks - 5%

During the surveys, the three loading areas served a combined of 18,750m^2 of non-major GLA retail space. With an average of 235 service vehicles per day, the average number of service vehicles per 100m^2 is 1.25/100m^2 GLA.

The total GLA of retail shops and restaurants in the Hall Street development is 3,716m^2. Using an average of 1.25/100m^2 GLA, the potential number of service vehicles that would visit the Hall Street retail section is 46 per day. The mix of service vehicles would be as shown in Table 2, based on the mix at the non-major section of Chatswood Chase. The mix of service vehicles indicated that 18 of the 46 service vehicles would be cars and vans and only 28 trucks per day would visit the Hall Street retail shops per day.

Table 2: Retail/ Restaurant Mix of Service Vehicles

Type of Vehicles	Proportion (%)	Number of Vehicles
Cars & Vans	40	18
Small Trucks	35	16
Medium Trucks	20	9
Large Trucks up to 10m long	5	3
Total	100	46

In addition it is expected that the hotel may have about 5 truck deliveries per day and the apartments, one per day. Thus on a typical day 18 cars and vans and 34 trucks of different sizes may visit the site.

The number of service vehicles likely during each period of the day are summarised in Table 3. The evening and night time deliveries would relate mainly to waste collection or after hours delivery to residents.

Table 3: Truck Movements During Daytime, Evening Time and Night Time

Time of Day	Number of Trucks			Vans and Cars
	Small	Medium	large	
Day time (7:00am-6:00pm)	19	9	3	18
Evening Time (6:00pm-10:00pm)	1	1	0	0
Night Time (10:00pm-7:00am)	0	0	1	0

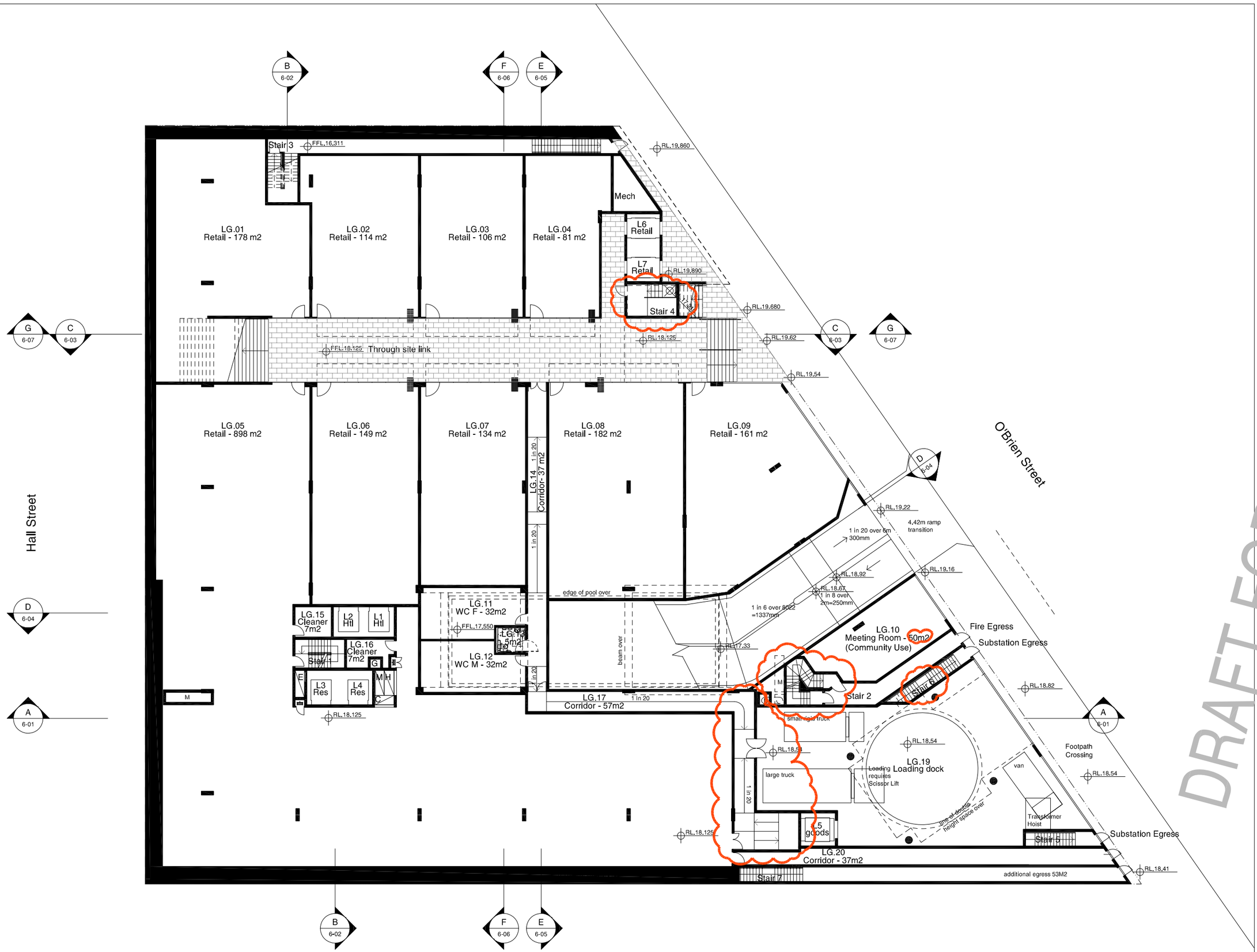
From Table 7 it will be seen that during an average day time hour there would be the following deliveries:

- 1.6 cars or vans
- 1.7 small trucks
- 0.8 medium trucks
- 0.3 large truck

As part of a management plan for the site it would be appropriate to allocate one space in the carpark for vans or car deliveries during the daytime period.

The average daytime truck deliveries would be 2.8 per hour. Allowing for some bunching during the day there may be 5 or 6 truck deliveries in any one hour. Allowing an average delivery time of 20 minutes per truck the requirement would be for two truck spaces at any one time and this is proposed.

Appendix B - Plan of Modified Loading Dock



Check all dimensions and site conditions prior to commencement of any work, the purchase or ordering of any materials, fittings, plant, services or equipment and the preparation of shop drawings and/or the fabrication of any components.

Do not scale drawings - refer to figured dimensions only. Any discrepancies shall immediately be referred to the architect for clarification.

NOTE - Retail Arrangement may be subject to future subdivision under separate application

External Walls
Type - Cavity Masonry
Insulation - R1.5
Colour - Light

Internal Walls
Type - Stud / Masonry

Party Walls
Type - Stud / Masonry

Windows
Glass Type - Single Glazed Clear (except where noted differently in basix specification below)
Glass Height - Full Height Glazing
Frame Type - Aluminium Framed
External Cover - 1100mm concrete slab overhang with 400mm downturn in etched glass

Roof
Type - Concrete
Colour - Light

Ceilings below R.L for Balconies
Plasterboard
Insulation - Polystyrene

Floors
Covering - Tile where pattern shown, carpet elsewhere
Type - suspended concrete
Insulation - as recommended Bassetts

BASIX specifications relating to residential apartments
1. all external walls of apartments to have R1.5 insulation
2. all ceilings below roofs or balconies of apartments to have R3 insulation
3. Units 401,501, 509,510,519,601 and 602 to have glazing to meet the following: U value no greater than: 4.32 and SHGC +/- 10% of: 0.47
4. Units 502 to 504 to have glazing to meet the following: U value no greater than: 3.58 and SHGC +/- 10%: 0.68
5. Basement to have Rainwater storage tank to supply at least 1100L/day to flush toilets to residential apartments.
6. Residential apartments to have Gas hot water system with supplemented from 60m2 of solar panels.
7. Basement to have central chilled water fan coil units with gas boiler for heating residential apartments. Unit efficiencies have a COP of greater than 4.5.
8. Lifts servicing apartments to be gearless traction with VVVF motors.
9. Common building services for residential apartments are to be controlled by a Building Management System (BMS). Active Power Factor Correction is to be utilised for the electrical supply to the building.

Rev.	Date	Description	Initial	Checked
1	04/12/2008	DA ISSUE	BH/DS	KP/PAV

DRAFT FOR CURRENT REVIEW

Hall Street Development Bondi

Lower Ground
O'Brien Street Entry

Status	DA
Scale	1/200 @ A2
Drawn	KP/BH
Project no.	s10788
Date	FRIDAY, NOVEMBER 28, 2008, 9:48:02AM
Plot file	N:\ACAD\WG\S10788_TOGA_HALL_STREET\PLOTS\DA\A R-DA-2-04.DWG

Drawing no.

AR DA 2 04

Discipline. Stage/ Package. Type. No. Revision.

Melbourne 1 Nicholson Street
Melbourne VIC 3000 Australia
T 03 8664 6200 F 03 8664 6300
email melb@batessmart.com.au
http://www.batessmart.com.au

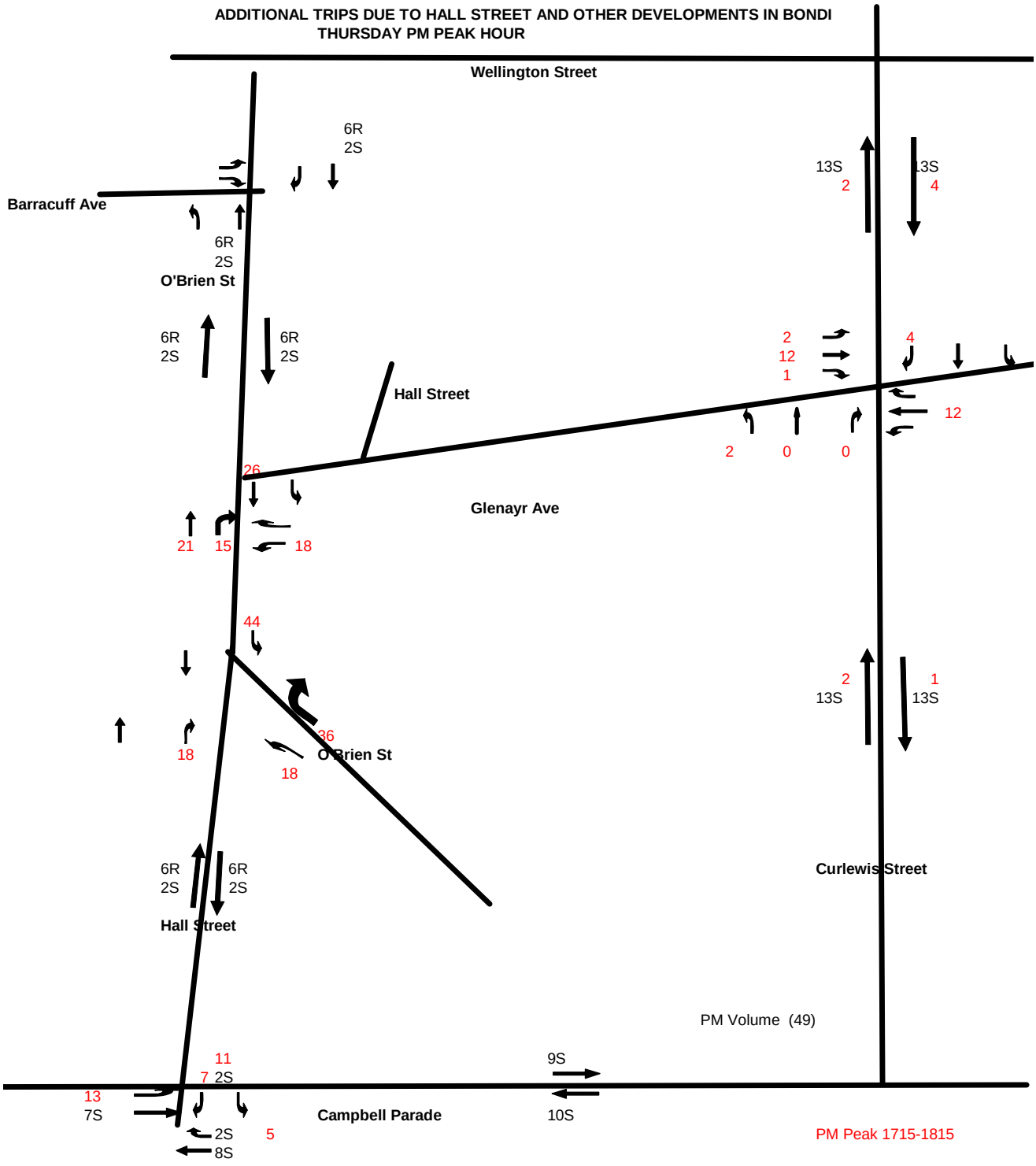
Sydney 1/243 Liverpool Street
East Sydney NSW 2010 Australia
T 02 9380 7288 F 02 9380 7280
email syd@batessmart.com.au
http://www.batessmart.com.au

Bates Smart Pty Ltd ABN 70 004 999 400

BATESSMART

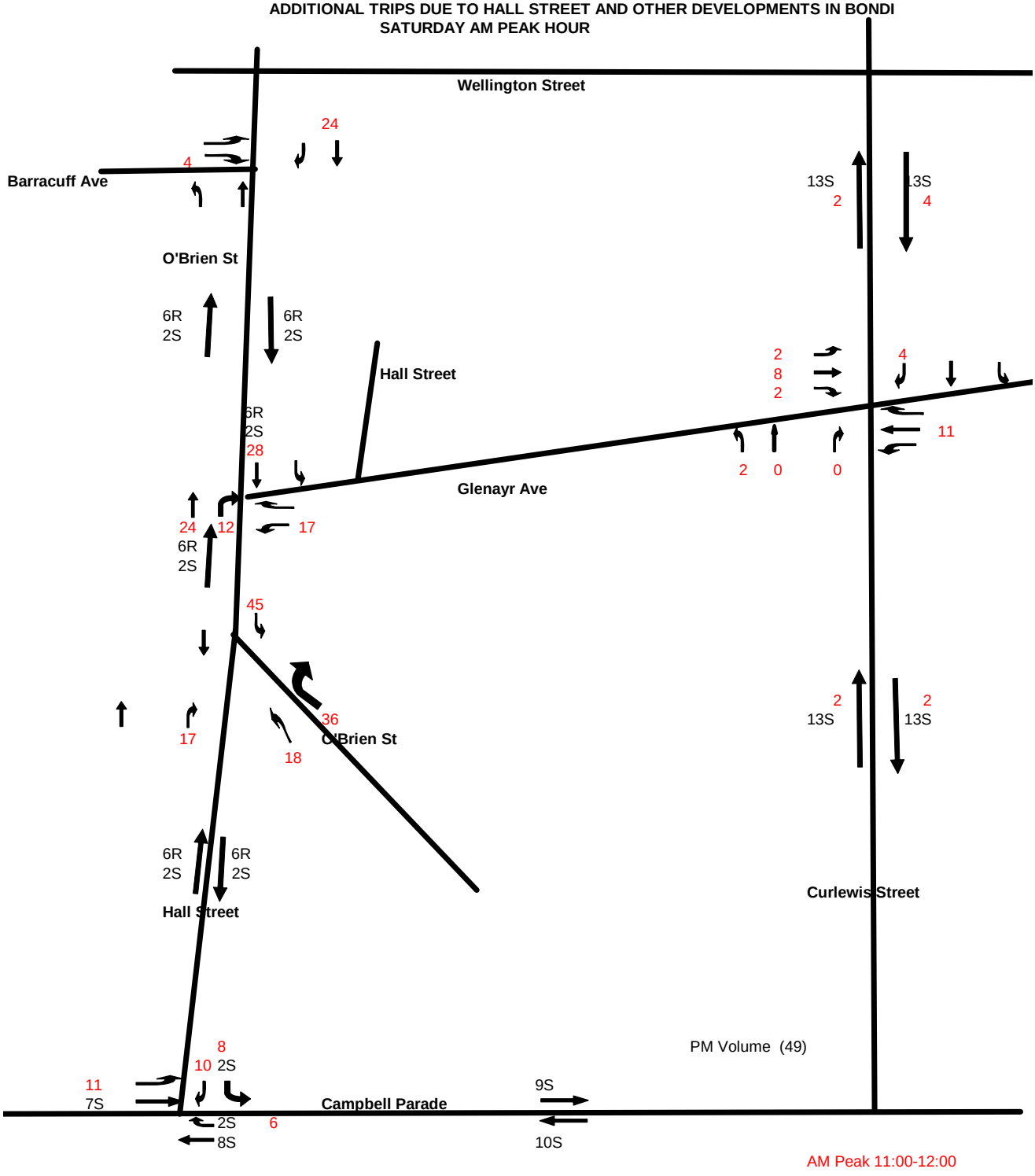
Appendix C - Potential Traffic Increases from Proposed Developments in Bondi Beach

ADDITIONAL TRIPS DUE TO HALL STREET AND OTHER DEVELOPMENTS IN BONDI
THURSDAY PM PEAK HOUR



S = Additional trips to and from Swiss Grand Hotel
R = Additional trips to and from Ravesis Development
11 = Adddtional trips to and from Hall Street development

ADDITIONAL TRIPS DUE TO HALL STREET AND OTHER DEVELOPMENTS IN BONDI
SATURDAY AM PEAK HOUR



S = Additional trips to and from Swiss Grand Hotel
R = Additional trips to and from Ravesis Development
11 = Adddtional trips to and from Hall Street development