

Parliamentary Standing Committee on Public Works
C/0 - Committee Secretary
PO BOX 6021
Parliamentary House
CANBERRA ACT 2600

Dear Committee members

Project name: HMAS Watsons Redevelopment Project
Address: 1 Watsons Road, Watsons Bay

Whilst I am a local Woollahra Councillor and representative of the community, this submission is a personal representation.

Firstly, may I apologise for the late submission. I was briefed on the development at Council on 21 October, three days prior to the close of submissions. At that time I requested further information and was awaiting access to this detailed documentation prior to composing a submission. I have since been informed by Council staff that we were unable to access the information I requested in relation to landscaping, flood management, parking and construction management plans. Needless to say, this denotes an extremely poor process of community consultation. It is extraordinary that one can have a \$500 million dollar development on an adjoining property and receive such inadequate documentation and only be given three days to review the proposal and compose a response.

My home is arguably the 'nearest neighbour' adjoining the HMAS Watsons campus, the proposed development has the potential to significantly impact my amenity. Having been on the development approval committee for the Council I am well versed in the level of documentation required by developers within this area and was stunned by the lack of information provided by government for this significant development.

My core areas of concern are regarding:

1. Parking
2. Construction traffic management plan for the proposed five years of building works
3. Sydney Harbour water quality and sewerage treatment proposal
4. Flood mitigation
5. Support of the National Park- Detailed landscaping plans including diverse local species plan and reduced light spillage to support local flora and fauna.
6. Community access and public interest - consideration of connection for the Bondi to Manly Coastal cliff walk around the Eastern foreshore of the HMAS base.
7. Helicopter movements

1. Parking

The document I was given during the briefing session stated there would be 100 additional car spaces provided by this development. I was informed on the evening that this was in fact misleading as there are to be **no additional car spaces**.

I was given verbal reassurances that no additional spaces would be required as there are no plans to increase the training capacity at the facility. Naval representatives and proponents of the development offered verbal assurances that the near five hundred million dollar investment is simply to ensure better dormitory accommodation and training is provided to the existing trainees and that there will be no expansion of activities at the site following this upgrade. Even with this assumption, the fact is, naval trainees currently do not have sufficient parking at the base and already overflow into the surrounding streets. Every morning I personally observe young men in uniform parking in my street and making their

way on foot to the base. With no traffic study or formal documentation on traffic impacts it is impossible for anyone to adequately assess the merits of this proposal. In order to assess the recent Dockside proposal on the adjoining site, local residents commissioned an extensive traffic report which I attach for your information. This study of parking occupancy survey indicated:

- The majority of the parking provisions within the study area are at or over capacity during the weekend peak periods.
- The existing on-street and off- street parking provisions within Watsons Bay are insufficient to accommodate the additional vehicles.
- There is currently a high level of parking saturation that exists within the peninsula due a number of contributing factors:
 - ♣ Residential dwellings have limited off-street parking due to old-style allotment layouts
 - ♣ The beach and surrounding sceneries attract high levels of visitors to the areas, including tourists
 - ♣ Public transport servicing the peninsula is limited.

High levels of parking saturation result in increased vehicle circulation by visitors to the area as well as residents. The impacts of this include increased potential for a vehicle incident, illegal and unsafe parking and reduced amenity of the local area. An impact of the proposed developments would be that the number of vehicles circulating (as drivers search for car parking spaces) would increase which would further reduce safety and amenity in the area.

It is further noted that Gap Bluff Road forms part of the Sydney Harbour Bridge to South Head coastal walk and is a major attractor for pedestrians to the area. Increased vehicular traffic to the region and internal circulation could compromise pedestrian safety, particularly during the spring-summer period during which there is high volume of coastal walkers.

In conclusion, it is fair to say that parking and traffic are at capacity in the Watsons Bay peninsula, furthermore there is extremely limited public transport options for trainee naval staff therefore they will need to access the site via private vehicles, so it is essential that all vehicles associated with this development must be accommodated on site. The site accommodates a prestigious large function centre and this area is proposed to be a hub for war briefings, all parking for these larger capacity events must also be accommodated on site as there simply isn't parking in the surrounding streets to accomodate the additional vehicles. I would request that a traffic management study is undertaken and this issue is given serious consideration in the planning for this development.

2. Construction Traffic Management Plan

Based on the above traffic management and parking concerns it would be appropriate for a detailed traffic management plan to be submitted prior to consideration of this proposal. Vehicular movement within the small surrounding streets will be extremely difficult. I would propose that there should be no construction vehicular movement on the weekends in summer as adding large construction vehicles to the already gridlocked small residential streets will exacerbate concerns that emergency vehicles cannot access either Camp Cove Beach or homes in emergency events.

3. Sydney Harbour Water Quality and Sewerage treatment.

Currently there is no sewerage treatment for the HMAS site and surrounding streets. All sewerage generated on this site is fed directly into the ocean from a pipe further down the cliff at Diamond Bay. Any increase in capacity at this site should be restricted until it is connected to the Bondi treatment facility. Literally anything that is put down the drains goes straight into the ocean.

The Stormwater pipe takes water directly from the site out into Lady Jane beach. After heavy rains the beach is littered with vegetation and rubbish. Prior to commencing construction it is essential that a stormwater trap is installed to prevent construction materials from entering the harbour, furthermore, all sand and light materials should be well covered to prevent wind and water erosion during construction. The stormwater trap should have retention tanks to enable the water to be used for irrigation and landscaping.

4. Flood Mitigation on Cliff Street

At the briefing I requested further information regarding the flood mitigation strategy for the development proposal. Council staff have since met with representatives from HMAS to discuss this further. Whilst we have received verbal reassurances that the development will aim to ameliorate the current issue of flooding within Cliff and Cove street I would value the opportunity to study the Hydrolic engineering report in detail. The Watsons Bay Flood Study and Plan report can be found here:

https://www.woollahra.nsw.gov.au/_data/assets/pdf_file/0005/167585/Watsons_Bay_Flood_plain_Risk_Management_Study_And_Plan_2016.pdf

As you will note rainwater from the HMAS site is largely directed down into Cliff Street, which has caused significant flooding issues to the homes beneath HMAS. In 2010 there was serious flooding in many of the homes, since this time Woollahra Council has undertaken a number of initiatives to ameliorate the issue (as per the report above). In undertaking a development of this magnitude I would like to see that all water that lands on the HMAS site is retained on that site, as is the stipulation for local residents who undertake new developments. As the hard surfaces are increased I would like to see sufficient soft planting areas with high absorption capacity and typographical landscaping treatments to slow the deluge of water that floods down from HMAS into the Watsons Bay Village. In addition, I would like to see details of extensive retention tanks to hold and recycle rain water.

5. Developments connection to the National Park

Given that this extensive development is to take place within a precious remnant National Park, I believe it is well within reason to be provided with a landscaping plan that details the sensitivity to the surrounding flora and fauna. On the same evening Council received the HMAS submission, we reviewed a proposal by the Royal Sydney Golf Club. The Clubs extensive flora and fauna studies and the detailed plans for a diversity of flora to attract back the natural fauna and to retain rain water on the site really highlighted the complete lack of detail provided by the HMAS developments landscape plan. Both sites had similar flood issues and flora and fauna concerns, while the Club development had given extensive consideration to these important concerns the HMAS had little or no understanding of the developments proposed impact on the surrounding environment.

6. Re-connecting the coastal cliff walk from Manly to Bondi

Naval representatives confirmed that no consideration had been given to the ongoing requests to re-connect the coastal cliff walk along the Eastern boundary of the naval base. HMAS Watsons Bay is sited on a spectacular piece of public land, the adjoining site had been occupied by the Army, however the department of defence returned it to the public and handed it to NSW Parks to manage. Some of the submission have made a sound case that the Navy should also vacate Watsons Bay site and return it to the public as parkland. Whilst this argument has merit, I believe the Navy has long held these lands and that if anyone is

deserving of exclusive access to a magnificent public property then the young men and women who we might one day ask to put themselves in harms way to defend our country are certainly deserving. HMAS has long been a good neighbour and an important part of the community in Watsons Bay, as demonstrated by their annual hosting the Christmas carols and support for the local public school. That said, I would like to see that some consideration is given to the issue of public access along the coastal foreshore, as this would be a significant milestone in the public interest. Re-connecting the coastal walk will leave a magnificent legacy for future generations and it is appropriate that every effort is made to achieve this outcome within this project.

7. Wilson Helicopter landing site

In the past an agreement was reached between local residents and the HMAS that no helicopters would fly over the residences. This agreement was made to address noise and safety concerns regarding the low flying helicopters. I would like assurances that this agreement will be maintained and that all helicopters will take off and land over the water rather than across our homes.

Thank you for the opportunity to provide this submission.

Claudia Cullen

Attachment to Submission 9



Gap Bluff Precinct and the South Head, Camp Cove and Green Point Precinct Development

Traffic Advisory Report

Final Report

Watsons Bay Association
Date: 6 November 2015



Project Name:	Gap Bluff Precinct and the South Head, Camp Cove and Green Point Precinct Development, Traffic Advisory Report
Internal Reference:	30011792
Report prepared for:	Watsons Bay Association

REVIEWS AND APPROVALS FOR ISSUE

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1. INTRODUCTION

1.1 Background

The NSW Government has sought expressions of interest (EOI) to develop up to nine existing buildings owned by National Parks and Wildlife (NPWS) and located within Sydney Harbour National Park. Gap Bluff Hospitality Pty Ltd has submitted a proposal for six of these properties within the Gap Bluff Precinct and the South Head, Camp Cove and Green Point Precinct. Ason Group was engaged by Gap Bluff Hospitality Pty Ltd to prepare a Traffic Impact Assessment (TIA) to support a Review of Environmental (REF) for the proposed development. The plans and impact assessment are on exhibition from 20 August to 10 November 2015 and NPWS is seeking comment on the proposal.

1.2 Scope

Watsons Bay Association (WBA) commissioned SMEC Australia Pty Ltd (SMEC) to review the TIA prepared by Ason Group and provide traffic advisory services to support their submission to NPWS. The scope of this commission involved:

- Carrying out a peer review of the TIA report prepared for the REF (Ason Group, 12 June 2015)
- Conducting a desktop analysis of the existing available traffic data
- Reviewing of other anecdotal information from residents collated by WBA
- Advising on further transport assessment and next steps required to support WBA's submission to NPWS
- Commissioning and analyse traffic and parking surveys to support the review
- Conducting a safety assessment of the proposed site access arrangements for the proposed development site.

1.3 Report objective

The objective of this report is to undertake a peer review and assess the impact of the traffic generated by the proposed development on the surrounding transport network. The report also considers the impact of the proposed development on pedestrian connectivity.

1.4 Report structure

The remainder of this report is structured as follows:

- Section 2 summarises the key features of the development proposal and the studies prepared to support the development
- Section 3 provides the findings of the peer review of the TIA prepared by Ason Group and the further assessment identified to support WBA's submission to NPWS
- Section 4 provides an assessment of the traffic and parking survey data collected for the purpose of the traffic advisory services
- Section 5 reports on the safety assessment undertaken as part of this study
- Section 6 presents a summary and conclusion for the study.

2. DEVELOPMENT PROPOSAL

2.1 Key features of proposed development

The key features of the proposed development at the Gap Bluff Precinct and the South Head, Camp Cove and Green Point Precinct are:

- Gap Bluff Precinct:
 - + Officer's Mess: refurbishment of the existing function facility to cater for a 115-patron banquet function or 140-patron cocktail function
 - + Armoury: refurbishment of the existing function facility to cater for a 140-patron banquet function or 160-patron cocktail function on the ground floor and 110-patron banquet function or 120-patron cocktail function on the first floor
 - + Gap Bluff: new use as short-stay accommodation
- South Head, Camp Cove and Green Point Precinct:
 - + Constable's Cottage: New café / restaurant to cater for 72 diners, including 37 internal and 35 external seats
 - + 33 Cliff Street: new use as short-stay accommodation
 - + Green Point Cottage: refurbishment of existing short stay accommodation.

Figure 2-1 illustrates the location of the proposed development.



Figure 2-1: Location of proposed development

2.2 Previous studies

Ason Group was engaged by Gap Bluff Hospitality Pty Ltd to prepare a TIA to support a REF for the proposed development. The key findings from the TIA (Ason Group, 12 June 2015) were:

- Traffic and parking surveys were conducted in April 2015 to support the TIA
- On-street parking surveys indicated that is sufficient on-street parking available within walking distance of Constable’s Cottage
- Traffic surveys indicated that existing traffic volumes within the Watsons Bay study area comply with the Roads and Maritime Services’ (Roads and Maritime) environmental capacity thresholds
- It is anticipated that a significant number of patrons of the proposed development would use public transport services, such as ferry and bus services
- The Gap Bluff precinct has capacity to accommodate 85 to 90 per cent of parking demand generated by the proposed development, with the remaining spaces to be provided in an overflow on-street parking to be provided along Gap Bluff Road to accommodate for the simultaneous use of all three proposed Gap Bluff function centres, without requirement for existing on-street parking within Watsons Bay to be used by patrons
- Traffic analysis indicated that the traffic generated by the proposed development would only have moderate impacts on the surrounding road network and the road network would remain within the Roads and Maritime’s environmental capacity thresholds
- The TIA concludes that the traffic generated by the proposed development would operate satisfactorily and “will not have any adverse parking, traffic and / or environmental impacts and the developments are therefore supportable on traffic planning grounds.”

3. REVIEW OF PREVIOUS STUDY

3.1 Key findings of review

Following a review of the background documentation provided and in particular the TIA Report (Ason Group, 12 June 2015) prepared in support of the proposed development at the Gap Bluff, South Head, Camp Cove and Green Point precincts, SMEC has identified the following key shortcomings of the assessment undertaken:

- Parking and traffic surveys were carried out in April 2015, which was noted as a 'shoulder month', stating that "transport planning 'best practice' recommends undertaking analysis based on shoulder period demands". SMEC disagrees with this practice and believes that best practice requires analysis of proposed developments based on the peak use for the proposed development.

As per Section 3 of the RMS Guide to Traffic Generating Developments (2002) guidelines, a traffic impact assessment needs to consider two key periods, namely:

- + the peak activity time of the development itself
- + the peak activity time of the adjacent road network.

The proposed developments include two function centres and a restaurant/ café. High season for weddings and special functions is December to February. Presumably, the peak activity time of the proposed developments would coincide with warmer seasons and holiday periods, namely, the summer season.

A primary land use attractor for Watsons Bay is the beach and recreational land, therefore, the summer season would be considered as the peak activity period for the area.

Ason's study was not undertaken during this peak season, therefore, the validity of the study can be challenged. SMEC's analysis provides a closer representation of the traffic behaviour and parking demands to those that would be experienced during the peak activity period.

SMEC's view is that 'best practice' involved undertaking an in accordance with RMS guidelines which suggest that traffic studies must consider the peak activity period of the proposed development. The peak use of the proposed function centre is likely to coincide with peak seasonal variations experienced by Watsons Bay, for example, summer months and holiday periods. Therefore, it is recommended that analysis should be conducted for a peak period for the area rather than a shoulder period

- The proposed restaurant / café at Camp Cove was assumed to "almost exclusively" attract people from the population, including residents and beachgoers that are already in the area. This could be challenged, since the proposed restaurant / café will be open for dinner and licensed, which could attract patrons from outside the area
- The transport accessibility map provided in Figure 8 appears to be incorrect and does not show the 400 and 800-metre catchments for the bus terminus and ferry wharf, respectively. The assessment of the pedestrian accessibility between the ferry wharf, bus stop and proposed development sites is considered inadequate for the purpose of a TIA to support the developments

- The assessment assumes that a substantial proportion of patrons to the proposed function centre would use public transport. SMEC understands that a primary use of the function centre is likely to be weddings and comparable functions. It is unlikely that a high proportion of function attendees would use public transport to access the site for the following reasons:
 - + Existing public transport service routes are limited and are unlikely to cover the origins of function attendees
 - + Public transport services to and from the area are limited during evening periods. Ferry services between Watsons Bay wharf and Circular Quay wharf end at 9:30pm on Saturday and Sunday; bus services to Town Hall operate every 30 minutes from Military Road Terminus to Town Hall station; taxi services are infrequent within the vicinity due to surrounding land uses primarily consisting of residential and recreational.
 - + Function attendees often consist of a cross-section of the population with respect to age and mobility. The use of public transport requires patrons to walk substantial lengths comprising varying grades, making public transport use undesirable
 - + Similarly, function attendees are likely to primarily be dressed in formal / semi-formal attire, which is not conducive to walking substantial lengths with varying grades
- A parking occupancy survey was conducted during the October long weekend to determine the parking demand within surrounding streets of the proposed venues. The survey analysis and results are detailed in Section 4 of this report. The key finding is that the majority of on-street parking within the study area is operating at or over capacity during the weekend peak periods. This conflicts with Ason's conclusion which states that "parking demand reduces significantly in the area". SMEC believes there is greater validity in surveys conducted during the October long weekend as opposed to April since the data is more representative of the summertime peak season.
- There are some critical safety issues associated with the recommendations in the assessment for access to the proposed development for general traffic and potential mini-bus services. The existing road alignment would not permit safe access and egress for the site resulting in potential crashes. Additionally, pedestrian access to the site is unlikely to comply with design and access requirements.

In conclusion, a review of the previous TIA prepared in support of the proposed development, demonstrates that the traffic generated by the proposed development is likely to have an adverse impact on the existing traffic operation, parking provision and environment. Additionally, pedestrian accessibility between public transport facilities and the proposed development sites needs to be assessed further.

3.2 Further assessment required

In order to support WBA in their submission to the proposed development application and address the shortcomings identified above, SMEC undertook the following tasks:

- Commissioned traffic and parking surveys on the October long weekend in 2015 to provide traffic data that is more closely representative of the peak holiday and summer use for the area

- Analysed the traffic and parking survey data collected and assessed the impacts of the proposed development
- Carried out a detailed safety assessment, including a detailed site investigation to identify the safety issues associated with the proposed development access and egress arrangements. This safety assessment included consideration of all road users, including general traffic, heavy vehicle movements associated with deliveries to the site, public transport, pedestrians and cyclists.

4. TRAFFIC AND PARKING ASSESSMENT

4.1 Data collection

Parking and traffic survey data was collected during the October long weekend from Saturday 3 October to Monday 5 October 2015, inclusive. This period is considered to similarly represent the annual peak for the study area, namely, the summer Christmas and New Year period.

The scope of the survey data collection was as follows:

- Parking survey:
 - + From Saturday 3 to Monday 5 October 2015, 12pm to 6pm
 - + Parking inventory, capacity and restrictions
 - + Parking occupancy, hourly
- Mid-block traffic volume and speed survey:
 - + Cliff Street, about 70 metres north of Military Road
 - + Seven-day period, 24-hours from Wednesday 30 September 2015.

Figure 4-1 illustrates the parking survey zones and location of the mid-block traffic and speed survey commissioned for the purpose of this analysis.

The weather conditions during the parking survey period were dry, sunny and very warm.



Figure 4-1: Parking and traffic survey locations

4.2 Parking assessment

Table 4-1 summarises the results of the parking occupancy survey for the three survey days. The full set of parking survey results are contained in Appendix A.

Key:

Over capacity

At capacity

Up to five per cent capacity available

Five to ten per cent capacity available

More than 10 per cent capacity available



Table 4-1: Parking occupancy

Parking zone	Number of spaces available	Survey day	Hour commencing					
			12pm	1pm	2pm	3pm	4pm	5pm
A	21	Saturday	100%	100%	95%	95%	95%	95%
		Sunday	105%	105%	105%	105%	105%	105%
		Monday	95%	95%	100%	100%	100%	100%
B	25	Saturday	96%	96%	96%	96%	96%	96%
		Sunday	100%	104%	104%	104%	104%	104%
		Monday	92%	92%	96%	96%	100%	100%
C	25	Saturday	100%	104%	104%	100%	100%	96%
		Sunday	96%	96%	100%	100%	100%	100%
		Monday	104%	104%	100%	96%	96%	100%
D	17	Saturday	106%	106%	100%	94%	94%	100%
		Sunday	94%	94%	112%	112%	112%	112%
		Monday	112%	112%	112%	112%	112%	112%
E	16	Saturday	119%	119%	113%	100%	106%	106%
		Sunday	106%	106%	106%	100%	100%	100%
		Monday	100%	106%	113%	113%	113%	106%
F ¹	23	Saturday	104%	104%	104%	104%	100%	104%
		Sunday	91%	91%	87%	87%	87%	78%
		Monday	96%	104%	100%	100%	100%	91%
G ¹	28	Saturday	79%	89%	96%	96%	104%	104%
		Sunday	96%	96%	96%	93%	86%	89%
		Monday	93%	93%	100%	96%	93%	96%
H	8	Saturday	100%	100%	100%	113%	113%	88%
		Sunday	100%	100%	100%	100%	100%	100%

Parking zone	Number of spaces available	Survey day	Hour commencing					
			12pm	1pm	2pm	3pm	4pm	5pm
I ¹	21	Monday	100%	100%	100%	100%	100%	100%
		Saturday	100%	90%	100%	105%	105%	105%
		Sunday	105%	105%	100%	100%	100%	100%
J ¹	22	Monday	105%	100%	100%	100%	95%	100%
		Saturday	86%	86%	86%	82%	86%	64%
		Sunday	86%	86%	82%	82%	73%	82%
K	3	Monday	100%	100%	95%	95%	86%	91%
		Saturday	133%	133%	133%	167%	167%	167%
		Sunday	133%	133%	133%	133%	133%	133%
L ²	6	Monday	133%	133%	167%	167%	167%	133%
		Saturday	0%	0%	0%	0%	0%	0%
		Sunday	0%	17%	17%	0%	0%	0%
M ³	15	Monday	0%	0%	0%	0%	0%	0%
		Saturday	93%	113%	133%	120%	107%	107%
		Sunday	107%	113%	113%	120%	120%	120%
N	8	Monday	140%	147%	147%	133%	107%	107%
		Saturday	138%	138%	100%	75%	75%	50%
		Sunday	138%	138%	113%	113%	113%	88%
O ^{1, 5}	23	Monday	125%	125%	125%	125%	125%	125%
		Saturday	91%	91%	91%	104%	104%	100%
		Sunday	91%	96%	91%	87%	87%	100%
P	5	Monday	117%	117%	113%	96%	87%	87%
		Saturday	120%	120%	100%	100%	100%	100%
		Sunday	100%	100%	100%	120%	120%	100%
Q ⁴	13	Monday	140%	140%	120%	120%	120%	120%
		Saturday	131%	131%	131%	123%	123%	115%
		Sunday	131%	138%	123%	131%	115%	100%
R	14	Monday	154%	154%	138%	154%	154%	154%
		Saturday	93%	93%	107%	100%	100%	100%
		Sunday	136%	129%	129%	121%	107%	100%

Parking zone	Number of spaces available	Survey day	Hour commencing					
			12pm	1pm	2pm	3pm	4pm	5pm
		Monday	121%	121%	114%	107%	114%	129%
Car park 1	53	Saturday	91%	92%	92%	87%	83%	83%
		Sunday	96%	96%	92%	91%	89%	96%
		Monday	87%	92%	91%	91%	87%	85%
Car park 2	49	Saturday	98%	98%	98%	98%	98%	98%
		Sunday	102%	102%	102%	100%	94%	94%
		Monday	96%	96%	96%	94%	96%	96%

Notes:

1. Parking survey site includes resident permit holder parking in the total number of spaces available
2. No stopping zone on Saturdays, Sundays and public holidays
3. Includes authorised vehicle parking and disabled parking in the total number of spaces
4. Includes loading zones in the total number of spaces
5. Vehicles observed to park in the no stopping restricted areas.

The key findings from the parking occupancy survey indicate:

- The majority of the parking provisions within the study area are at or over capacity during the weekend peak periods
- The on-street parking provisions with more than 10 per cent capacity available during weekend peaks periods include:
 - + Spaces that were not occupied were within resident permit parking only sections
 - + No stopping zones, where some vehicles were observed parking illegally.

Ason undertook a parking assessment of mode split for a comparable function venue in Mosman. The findings show the attendee mode split by private car, bridal cars and taxi represented 73%, 10% and 17% of the total 338 attendees, respectively. Also, the average private car occupancy is 3 guests per vehicle. Applying these rates to the proposed developments, there is a parking requirement of 33 car spaces for the Armoury Function Centre and 27 car spaces for the Officer’s Mess Function Centre.

Ason has assumed 85-90% of function days would be standard-busy operations where The Armoury function centre and Officer’s Mess function centre are to cater for special functions simultaneously while the Constable’s Cottage operates as a restaurant/ café. Ason’s estimations show that this scenario would generate the need for 60 car spaces, that is, 60

spaces for function centre guests and zero spaces for restaurant/ café patrons, hence, all car parking could be accommodated onsite. SMEC understands that the daytime and evening hours of restaurant/ café operations would attract visitors other than simply walk-in patrons. In this scenario, there would be a spill-over of 14 car spaces onto the on-street network.

During the remaining 10-15% of function days, all three venues will be in use and there would be an additional 110 guests at The Armoury function centre. This would generate a parking demand for an additional 26 car spaces. In this scenario, there would be a spill-over of 26 cars spaces onto the on-street network.

Based on the parking surveys conducted during a seasonal peak period, which is likely to coincide with the peak use of the proposed development sites, the existing on-street and off-street parking provisions within Watsons Bay are insufficient to accommodate the additional vehicles, irrespective of the parking rate assumed for the development. Additionally, the proposed on-street overflow parking area located along Gap Bluff Road is constrained by vegetation, a narrow carriageway and poor horizontal and vertical alignment.

There is currently a high level of parking saturation that exists within the peninsula due a number of contributing factors:

- Residential dwellings have limited off-street parking due to old-style allotment layouts
- The beach and surrounding sceneries attract high levels of visitors to the areas, including tourists
- Public transport servicing the peninsula is limited.

High levels of parking saturation result in increased vehicle circulation by visitors to the area as well as residents. The impacts of this include increased potential for a vehicle incident, illegal and unsafe parking and reduced amenity of the local area. An impact of the proposed developments would be that the number of vehicles circulating (as drivers search for car parking spaces) would increase which would further reduce safety and amenity in the area.

It is further noted that Gap Bluff Road forms part of the Sydney Harbour Bridge to South Head coastal walk and is a major attractor for pedestrians to the area. Increased vehicular traffic to the region and internal circulation could compromise pedestrian safety, particularly during the spring-summer period during which there is high volume of coastal walkers. Figure 4-2 illustrates the Sydney Harbour Bridge to South Head coast walk network within the locality of the subject site.



Figure 4-2: Sydney Harbour Bridge to South Head coastal walk (Walking Coastal Sydney, Sydney Coastal Councils Group)

Section 5 of this report summarises the safety issues identified along the Gap Bluff Road corridor. Based on this safety assessment and the constraints along Gap Bluff Road, on-street parking at this location is not considered appropriate.

4.3 Traffic assessment

A seven-day traffic and speed survey was conducted on Cliff Street, about 70 metres north of Military Road. It is to be noted that Cliff Street is considered a residential collector street under Roads and Maritime’s classification. The key findings from the traffic and speed survey are:

- The average speed at this location for the week was 18.2 kilometres per hour for northbound traffic and 17.1 kilometres per hour for southbound traffic. The posted speed limit along Cliff Street is 40 kilometres per hour. Therefore, the average speed at the survey location is below the post speed limit, indicating potential congestion
- The average daily traffic volume for the survey location was 4,500 vehicles per day (both directions combined)

- During the weekend peak period (3 to 5 October) the hourly traffic volumes reached up to 734 vehicles per hour (both directions combined). The RMS Guide to Traffic Generating Developments stipulates a maximum peak hour volume of 500 vehicles on collector roads. Hence, the traffic conditions on Cliff Street exceed the environmental capacity threshold.

Figure 4-3 shows the average northbound and southbound traffic volumes for the seven-day period beginning Thursday 1 October, 2015. Appendix B contains the full data set of traffic volumes along Cliff Street.

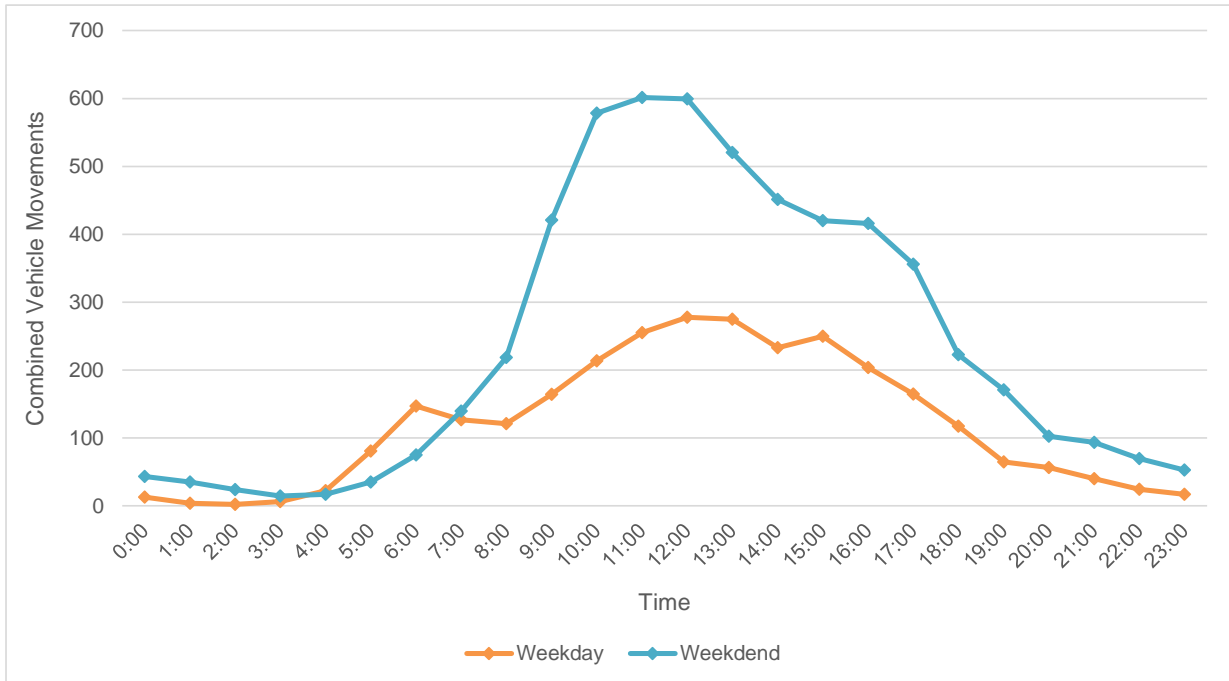


Figure 4-3: Traffic volume data, Cliff Street

As seen in Figure 4-3, the average weekday and weekend traffic volumes have increased considerably in comparison to the April period. The weekend average peak period traffic volumes have increased by approximately 63%, which coincides with the high parking saturation experienced in the area.

In addition, it is noted that the geographical location of the subject site is that it is located within a peninsula which means traffic is not easily dispersible throughout the road network. Any additional traffic to the area has a funnelling impact which results in congestion.

Based on the assessment of the existing traffic conditions on Cliff Street during a peak period, any additional traffic on the road network is likely to have a substantial impact on the operation of the road network resulting in congestion, which increases the risk of safety issues occurring along key routes to the proposed development sites.

5. SAFETY ASSESSMENT

5.1 Safety assessment methodology

A detailed site investigation was undertaken within the precinct along key access corridors (vehicular and pedestrian) for the proposed development. The site investigation was undertaken by Nicole Vukic on 28 October 2015 during fine weather conditions. Nicole is an accredited Level 3 Lead Road Safety Auditor (auditor identification RSA-02-0290) with Roads and Maritime Services.

Safety assessments can be applied to all phases of a road project or to an existing road. The purpose of the assessment is to identify any road safety concerns from the perspective of road users. This is not a formal road safety audit, but follows the same principles as a road safety audit.

The objectives of this safety assessment are:

- To review the operational site, design and background information and form conclusions about the safety performance and crash potential for the road
- To evaluate the operational site in terms of interaction with its surrounds and nearby roads and to visualise potential impediments and conflicts for road users
- Identify and report on aspects of the design that may result in unnecessary or unreasonable hazards for all road users.

This safety assessment followed a standard practice in identifying safety related issues of the existing transport network. Standard issues such as sight distance, speed zones, safety barriers, alignment, delineation, pedestrian facilities and signage (amongst others) were assessed with respect to safety.

The safety assessment covers physical features of the site, which may affect user safety and it has sought to identify potential safety hazards. However, no guarantee is made that every deficiency has been identified.

The safety assessment is structured around a similar standard checklist used for road safety audits, provided in the Austroads Part 6: Road Safety Audit and NSW Roads and Maritime Services' Guide to Road Safety Audit Practices 2011.

5.2 Safety assessment area

The safety assessment area focussed on the key vehicular and pedestrian routes likely to be used to access the proposed development sites. Table 5-1 illustrates the safety assessment area and key corridors investigated.



Figure 5-1: Safety assessment area

5.3 References

The following documents were used as a reference for this Road Safety Audit:

- Guide to Road Safety Audit Practices (Roads and Maritime Services, 2011)
- Part 6: Road Safety Audit (Austroads, 2009)
- Regulatory Signs, Version 1.2 (Roads and Maritime Services, September 2002)
- Road Design Guide, (Roads and Maritime Services, 2002).

5.4 Risk classification methodology

5.4.1 Risk assessment system

Issues and deficiencies have been identified and rated in order of importance based on estimated crash frequency, crash severity and level of risk in accordance with *Austroads Guide to Road Safety, Part 6 – Road Safety Audit*.

5.4.2 Crash frequency

The probable frequency of an incident or crash occurring has been estimated for each issue listed in the Road Safety Audit findings based on the options listed in Table 3.1.

Table 3.1: Crash frequency ratings

FREQUENCY	DESCRIPTION
Frequent	Once or more per week
Probable	Once or more per year (but less than once a week)
Occasional	Once every five or ten years
Improbable	Less often than once every ten years

5.4.3 Crash severity

The severity of a crash identified in the Road Safety Audit is assessed based on the options listed in Table 3.2.

Table 3.2: Crash severity ratings

SEVERITY	DESCRIPTION	EXAMPLES OF INCIDENT
Catastrophic	Likely multiple deaths	<ul style="list-style-type: none"> ▪ High speed, multi vehicle crash on freeway ▪ Car runs into crowded bus stop ▪ Bus and tanker collide ▪ Collapse of a bridge or tunnel
Serious	Likely death or serious injury	<ul style="list-style-type: none"> ▪ High or medium speed vehicle/vehicle collision ▪ High or medium speed collision with a fixed roadside object ▪ Pedestrian or cyclist struck by a car
Minor	Likely minor injury	<ul style="list-style-type: none"> ▪ Low speed vehicle collision ▪ Cyclist falls from bicycle at low speed. Low speed collision with a fixed object resulting in minor injury ▪ Left turn rear end crash in a slip lane
Limited	Likely trivial injury or property damage only	<ul style="list-style-type: none"> ▪ Minor vehicle collision, property damage only ▪ Pedestrian walks into object (no head injury) ▪ Car reverses into post

5.4.4 Level of risk


Deficiencies are rated for their importance according to a three tiered system based on the matrix in Table 3.3.



Table 3.3: Risk matrix



	FREQUENT	PROBABLE	OCCASIONAL	IMPROBABLE
Catastrophic	Intolerable	Intolerable	Intolerable	High
Serious	Intolerable	Intolerable	High	Medium
Minor	Intolerable	High	Medium	Low
Limited	High	Medium	Low	Low



5.5 Safety assessment findings



Table 5-1: Road safety assessment findings



Item	Description	Risk rating	Photo reference
1	<p>There is a footpath located on the north western side of Military Road, between the Watsons Bay ferry wharf and Cliff Street and the bus terminus on Military Road. This footpath has a continuous uphill grade in the north eastern direction, which appears to be greater than the maximum grade for this length, which could result in mobility impaired pedestrians being unable to walk the length of the path without resting. When travelling in the downhill direction, pedestrians in wheelchairs or prams could lose control and enter the road carriageway.</p> <p>The alternative pedestrian access from the ferry terminal to Military Road through Robertson Park also comprises a continual uphill grade towards Military Road.</p>	Medium	 <p>Footpath on southern side of Military Road, continuous uphill grade travelling in eastbound direction</p>


Item	Description	Risk rating	Photo reference
2	<p>To access the footpath on the southern side of Military Road, pedestrians are required to cross at a location with poor sight distance to oncoming traffic, travelling southbound on Cliff Street. The sight distance at this location is obstructed by an electrical supply box, a hedge, vehicles parked kerbside and an electrical pole. This could result in drivers not seeing pedestrians and pedestrian not seeing vehicles creating potential conflicts.</p>	Intolerable	 <p>Obstructions to sight distance for pedestrian crossing at intersection of Military Road and Cliff Street</p>
3	<p>There is no direct pedestrian crossing between the footpath along Military Road and the proposed site access at Gap Bluff Road. This could result in pedestrians crossing Cliff Street and Military Road at unsafe locations and being hit by vehicles. This issue is exacerbated by the poor visibility to oncoming traffic because of kerbside parked vehicles and buses parked in the layover area on Military Road. During the site investigation, pedestrians were observed to cross at this location to access Gap Bluff Road. Pedestrians were also observed to be walking along Military Road on the western side within the traffic lanes.</p>	Intolerable	 <p>Parked cars and buses obstructing potential informal crossing location for pedestrians accessing Gap Bluff Road from the footpath on Military Road</p>


Item	Description	Risk rating	Photo reference
4	<p>The footpath on the eastern side of the bus turning area is narrow and obstructed by vegetation. This footpath does not provide adequate access for mobility and visually impaired pedestrians from the bus stop to the proposed site access at Gap Bluff Road. This could result in pedestrians walking on the bus turning area, creating potential conflicts with turning buses.</p> <p>During the site investigation a number of pedestrians were observed to be walking within the bus turning facility.</p>	High	 <p>Footpath on eastern side of bus turning area narrow and obstructed by vegetation</p>
5	<p>There is poor pedestrian access at the Gap Bluff Road entrance on the southern end of the study area, with a narrow footpath on the eastern side, which is obstructed by the sandstone pillar and an informal pedestrian route on the western side comprising loose rock and dirt. This presents potential pedestrian trip hazards and inadequate access for mobility and visually impaired pedestrians.</p>	Medium	 <p>Poor pedestrian access at Gap Bluff Road entrance, southern end of study area</p>


Item	Description	Risk rating	Photo reference
6	<p>Gap Bluff Road is steep and signposted at 25 km/h, which is considered too fast for a shared pedestrian / vehicle zone (10 kilometres per hour). In addition, the curved alignment in combination with obstructions such as rock cuttings and vegetation is likely to result in poor visibility between pedestrians using the road and oncoming traffic. Additionally, the grade of Gap Bluff Road appears to be greater than six per cent for the majority of its length, with limited passing opportunities. This grade is considered unsuitable for buses and could result in drivers becoming impatient with slower vehicles travelling uphill and performing hazardous manoeuvres to overtake vehicles.</p>	High	 <p>Gap Bluff Road, steep vertical alignment and curved horizontal alignment in combination with rock cuttings and vegetation hindering sight distance</p>
7	<p>The camber of Gap Bluff Road at the proposed car park access to the development site is steep, which is combined with the location of a drainage channel and pit. This could result in vehicles losing control at this location and driving into the drainage channel and pit.</p>	Low	 <p>Steep road profile and drainage channel and pit, adjacent to Officers Mess site entrance</p>



Item	Description	Risk rating	Photo reference
8	<p>The narrow footpath located on the eastern side of Gap Bluff Road on its northern end was observed to be covered in debris, which presents trip and slip hazards for pedestrians. The narrow path is also likely to result in pedestrians walking within the traffic lanes, creating potential vehicular / pedestrian conflicts.</p> <p>Additionally, the gutter was full of debris at the time of the site investigation, which could result in poor drainage and vehicle skids / loss of control.</p>	Medium	 <p>Narrow footpath obstructed by vegetation and debris on Gap Bluff Road</p>
9	<p>There is no formal pedestrian connection between the existing footpath on Gap Bluff Road and the pedestrian crossing located on Lighthouse Road. Pedestrians are currently required to cross Gap Bluff Road and walk on the uneven and steep surface between Gap Bluff Road and Lighthouse Road to access the pedestrian crossing. This surface comprises loose gravel and dirt, which presents a slip / trip hazard. This informal path is unsuitable for mobility and visually impaired pedestrians.</p>	High	 <p>Lack of formal pedestrian access from Gap Bluff Road footpath to pedestrians crossing on Lighthouse Road</p>



Item	Description	Risk rating	Photo reference
10	<p>The existing pedestrian crossing on Lighthouse Road is non-standard. The crossing is too narrow and there is not kerb ramp located on the western end of the pedestrian crossing. In addition, the visibility for drivers approaching from the south of Lighthouse Road have poor visibility to the crossing and pedestrians waiting to cross on the eastern side, due to the vertical and horizontal alignment of Lighthouse Road.</p>	High	 <p>Non-standard pedestrian crossing on Lighthouse Road</p>
11	<p>The left turn from Gap Bluff Road into Lighthouse Road has poor horizontal and vertical alignment. There is insufficient turning path for drivers to perform this manoeuvre without crossing the barrier centre line into the opposing traffic lane. This is particularly an issue for heavy vehicles and buses.</p>	High	 <p>Poor horizontal and vertical alignment, left turn from Gap Bluff Road into Lighthouse Road</p>

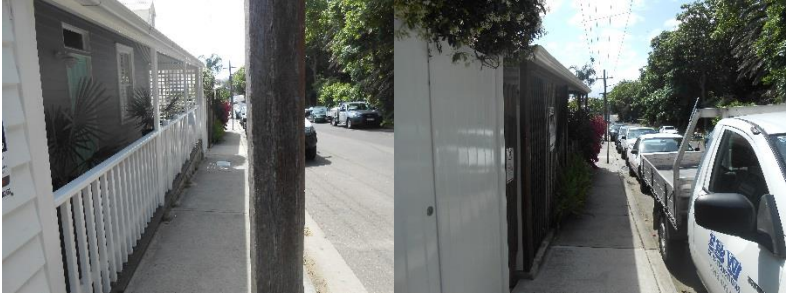

Item	Description	Risk rating	Photo reference
12	<p>The barrier line around the curve of Lighthouse Road on its approach to the intersection with Gap Bluff Road is faded and is difficult to see, particularly at night. There are also no reflective raised pavement markers along this delineation. This could result in drivers not being able to judge the alignment of the road and losing control and encroaching on the opposing traffic lane.</p>	High	 <p>Faded barrier centreline, Lighthouse Road</p>
13	<p>The pedestrian railing located along the western side of Lighthouse Road is non-standard and would be insufficient for containing pedestrians tripping causing them to fall over the railing and onto the steep embankment adjacent to the path.</p>	Medium	 <p>Non-standard pedestrian railing along footpath on Lighthouse Road</p>


Item	Description	Risk rating	Photo reference
14	<p>The footpath along Lighthouse Road has a continuous uphill grade in the north eastern direction, which appears to be greater than the maximum grade for this length, which could result in mobility impaired pedestrians being unable to walk the length of the path without resting. When travelling in the downhill direction, pedestrians in wheelchairs or prams could lose control and enter the road carriageway.</p>	Low	 <p>Steep grade footpath on Lighthouse Road, towards north</p>

Item	Description	Risk rating	Photo reference
15	<p>The stop sign on the southbound approach of Lighthouse Road its intersection with Cliff Street is unclear and blocked by the sandstone wall. A warning sign is posted on the northern side of the sandstone wall, however, if the stop sign is not seen by drivers, the stop line is located on a crest and is unlikely to be seen by approaching vehicles. This could result in vehicles driving through the intersection without stopping and causing potential vehicular conflicts.</p> <p>This issue is exacerbated by the poor sight distance to vehicles on the southbound approach from Cliff Street's one-way section, which is hindered by the sandstone wall.</p>	High	 <p>Poor visibility to stop sign and traffic approaching southbound from Cliff Street</p>


Item	Description	Risk rating	Photo reference
16	<p>The pavement on Lighthouse Road on the approach to its intersection with Cliff Street is in poor condition with debris in the gutter. This could result in vehicles skidding at this location and losing on approach to the intersection.</p>	Low	 <p>Pavement in poor condition on Lighthouse Road at intersection with Cliff Street</p>
17	<p>The left turn from the Cliff Street southbound approach into Lighthouse Road has insufficient radius to perform the manoeuvre without encroaching into the opposing traffic lane, creating potential vehicular conflicts.</p> <p>This issue is of particular concern for drivers who are visiting the area and are unfamiliar with the road network.</p>	High	 <p>Tight curve radius for traffic turning left from Cliff Street into Lighthouse Road</p>


Item	Description	Risk rating	Photo reference
18	Vehicles travelling northbound on Cliff Street have poor sight distance from the stop line to traffic travelling southbound on Cliff Street's one-way section due to obstructions such as trees and parked cars along Cliff Street. This could result in drivers entering the intersection in insufficient gaps and creating vehicular conflicts.	High	 <p data-bbox="1218 799 2018 852">Poor sight distance from northbound stop line on Cliff Street to traffic travelling southbound on Cliff Street</p>
19	The sight distance for traffic travelling southbound on Cliff Street's one-way section to pedestrians using the pedestrian stairs between Lighthouse Road and Cliff Street is poor, which could result in pedestrians stepping into the traffic lane and being hit by cars.	Intolerable	 <p data-bbox="1218 1211 2018 1264">Poor sight distance for southbound traffic on Cliff Street to pedestrian stairs between Lighthouse Road and Cliff Street</p>

Item	Description	Risk rating	Photo reference
20	<p>The footpath along Cliff Street is narrow and obstructed by signage posts, electrical poles and plants. This does not allow sufficient width for two able pedestrians to pass, let alone pedestrians in wheelchairs or with prams, which is likely to result in pedestrians stepping onto the traffic lanes and being hit by vehicles trying to park.</p>	High	 <p>Narrow footpath along Cliff Street, obstructed by poles and plants</p>
21	<p>The footpath along Cliff Street crosses numerous driveway accesses. This could result in drivers reversing out of their driveways potentially not seeing pedestrians crossing and hitting pedestrians.</p>	High	 <p>Driveway crossings of footpath along Cliff Street</p>

Item	Description	Risk rating	Photo reference
22	<p>Sight distance from the southbound Cliff Street approach to pedestrians crossing Cove Street is poor and is obstructed by property fencing and a planted kerb build-out. Drivers would not be able to see pedestrians crossing at this location until they are in the roundabout's circulating lane. This could result in vehicular and pedestrian conflicts at this location.</p>	High	 <p>Poor sight distance from southbound traffic on Cliff Street to pedestrians crossing Cove Street</p>

Item	Description	Risk rating	Photo reference
23	<p>There is limited formal pedestrian access for the on-street parallel and angle parking provided along the eastern side of Cliff Street. Where a narrow footpath is provided, it is obstructed by vegetation and debris. This could result in pedestrians walking along Cliff Street within the traffic lanes or crossing to access the western side of Cliff Street at unsafe locations, creating potential vehicle / pedestrian conflicts.</p> <p>During the site investigation pedestrians were observed to walk along the traffic lanes to access their parked vehicles.</p>	High	 <p>Limited pedestrian access to parking on Cliff Street</p>

Item	Description	Risk rating	Photo reference
24	<p>The off-street car park located on Cliff Street, opposite Watsons Bay Hotel comprises a poor layout, with a poor circulating arrangement, a number of parking spaces that are difficult to access and pavement that is in poor condition. These issues could result in vehicles hitting parked vehicles to enter an exit parking spaces, vehicular conflicts associated with the poor circulating arrangement and slip and trip hazards for pedestrians accessing their vehicles as a result of the poor pavement conditions.</p> <p>The issue of poor layout is likely to be exacerbated by the car park being over-capacity</p>	Medium	 <p>Poor pavement conditions, layout and circulating arrangement of off-street car park on Cliff Street</p>

Item	Description	Risk rating	Photo reference
25	<p>The road network within Watsons Bay is very narrow with kerbside parking allowed on the majority of the corridors, particularly along sections of Cliff Street, Pacific Street and Cove Street. During periods of congestion and vehicles waiting to park on the kerbside, there are limited opportunities for overtaking and passing. This could result in drivers becoming impatient and performing hazardous manoeuvres to pass vehicles waiting to park or queued traffic.</p> <p>This issue is of particular concern for emergency vehicle access with the corridor constrained by property boundaries close to the carriageway, which restricts emergency vehicles from mounting the kerb to pass traffic.</p>	Low	 <p>Narrow road network around Watsons Bay</p>

6. SUMMARY AND CONCLUSION

The key findings from the parking occupancy survey indicate that under existing conditions the majority of the parking provisions within the study area are at or over capacity during the weekend peak periods, which is likely to coincide with the peak use of the proposed development sites. Therefore, existing parking provisions are insufficient for supporting the parking requirements of the proposed development.

The speed and traffic surveys demonstrate that the average speed over the one-week period surveyed on Cliff Street, is well below the posted speed limit of 40 kilometres per hour suggesting congested conditions. Additionally, the existing traffic volumes on Cliff Street exceed Roads and Maritime's environmental capacity threshold for a residential collector of 500 vehicles per hour during with up to 734 vehicles per hour observed. Any additional traffic on the road network is likely to impact operation substantially, which in-turn increases the risk of safety issues occurring along key routes to the proposed development sites.

A detailed site investigation and safety assessment was undertaken within the precinct along key vehicular and pedestrian access corridors to the proposed development. The following issues, ranked by their level of risk, were identified:

Intolerable:

- Poor sight distance for southbound traffic on Cliff Street to pedestrian stairs between Lighthouse Road and Cliff Street
- Obstructions to sight distance for pedestrian crossing at intersection of Military Road and Cliff Street
- Parked cars and buses obstructing potential informal crossing location for pedestrians accessing Gap Bluff Road from the footpath on Military Road.

High:

- Gap Bluff Road has a steep vertical alignment and curved horizontal alignment in combination with rock cuttings and vegetation hindering sight distance
- Lack of formal pedestrian access from Gap Bluff Road footpath to pedestrians crossing on Lighthouse Road
- Non-standard pedestrian crossing on Lighthouse Road
- Poor horizontal and vertical alignment, left turn from Gap Bluff Road into Lighthouse Road
- Faded barrier centreline on Lighthouse Road
- Poor visibility to stop sign and traffic approaching southbound from Cliff Street
- Tight curve radius for traffic turning left from Cliff Street into Lighthouse Road
- Poor sight distance from northbound stop line on Cliff Street to traffic travelling southbound on Cliff Street

- Narrow footpath along Cliff Street, obstructed by poles and plants
- Driveway crossings of footpath along Cliff Street
- Poor sight distance from southbound traffic on Cliff Street to pedestrians crossing Cove Street
- Limited pedestrian access to parking on Cliff Street.

Medium:

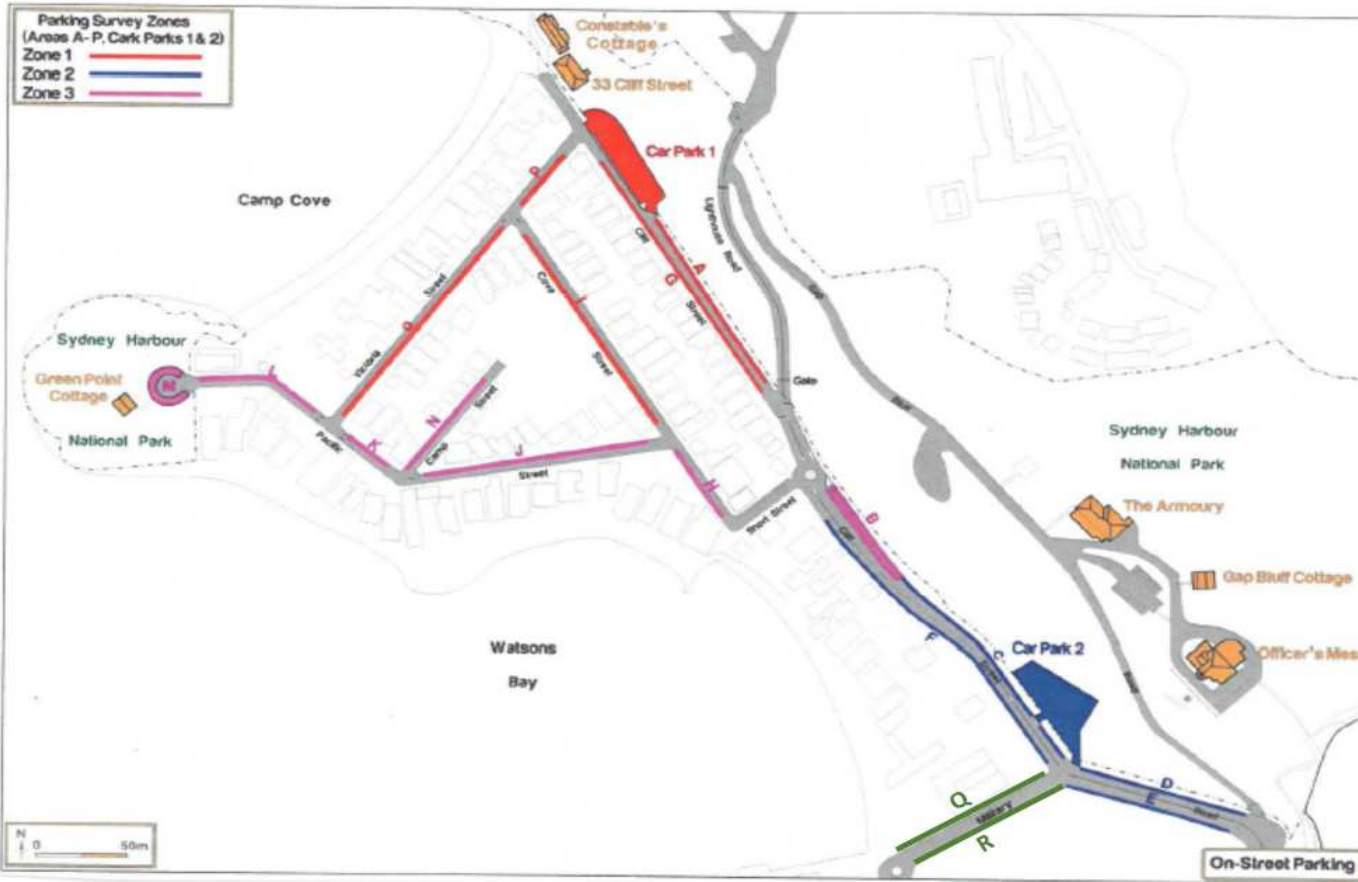
- The footpath on the southern side of Military Road has a continuous uphill grade travelling in eastbound direction
- The footpath on eastern side of bus turning area is narrow and obstructed by vegetation
- Poor pedestrian access at Gap Bluff Road entrance, southern end of study area
- Narrow footpath obstructed by vegetation and debris on Gap Bluff Road
- Non-standard pedestrian railing along footpath on Lighthouse Road
- Poor pavement conditions, layout and circulating arrangement of off-street car park on Cliff Street.

Low:

- Poor pavement conditions, layout and circulating arrangement of off-street car park on Cliff Street.

APPENDIX A: PARKING SURVEY DATA

Client SMEC
Date Sat, 3rd Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey



Location

1. Zone A - Cliff St (East side)
2. Zone B - Cliff St (East side)
3. Zone C - Cliff St (East side)
4. Zone D - Military Rd (North side)
5. Zone E - Military Rd (South side)
6. Zone F - Cliff St (West side)
7. Zone G - Cliff St (West side)
8. Zone H - Cove St (East side)
9. Zone I - Cove St (West side)
10. Zone J - Pacific St (North side)
11. Zone K - Pacific St (East side)
12. Zone L - Pacific St (East side)
13. Zone M - Pacific St (Car Park)
14. Zone N - Camp St (North side)
15. Zone O - Victoria St (South side)
16. Zone P - Victoria St (South side)
17. Zone Q - Military Rd (North side)
18. Zone R - Military Rd (South side)
19. Car Park 1
20. Car Park 2



Client SMEC
Location 1. Zone A - Cliff St (East side)
Date Sat, 3rd Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone A - Cliff St									
	No Restriction		21	21	21	20	20	20	20
	Total		21	21	21	20	20	20	20
	% Capacity			100%	100%	95%	95%	95%	95%



Client SMEC
Location 3. Zone C - Cliff St (East side)
Date Sat, 3rd Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone C - Cliff St									
	No Restriction		25	25	26	26	25	25	24
	Total		25	25	26	26	25	25	24
	% Capacity			100%	104%	104%	100%	100%	96%

Few motorbikes parked in between cars at following times which is included in above data

12:00	1
13:00	1
14:00	1
15:00	1
16:00	1
17:00	1



Client SMEC
Location 4. Zone D - Military Rd (North side)
Date Sat, 3rd Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone D - Military Rd									
	No Restriction		17	18	18	17	16	16	17
	Total		17	18	18	17	16	16	17
	% Capacity			106%	106%	100%	94%	94%	100%

Over utilisation, vehicles parking closely



Client SMEC
Location 5. Zone E - Military Rd (South side)
Date Sat, 3rd Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone E - Military Rd									
	No Restriction		16	19	19	18	16	17	17
	Total		16	19	19	18	16	17	17
	% Capacity			119%	119%	113%	100%	106%	106%

Few motorbikes parked in between cars at following times which is included in above data

12:00	3
13:00	3
14:00	2
15:00	1
16:00	1
17:00	1



Client SMEC
Location 6. Zone F - Cliff St (West side)
Date Sat, 3rd Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone F - Cliff St									
	No Restriction		10	10	10	11	11	10	11
	No Parking								
	No Restriction		3	3	3	3	3	3	3
	No Parking	Permit Holders Excepted Area WB	3	3	3	3	3	3	3
	No Restriction		7	8	8	7	7	7	7
	Total		23	24	24	24	24	23	24
	% Capacity			104%	104%	104%	104%	100%	104%

Few motorbikes parked in between cars at following times which is included in above data (10 spaces inventory)

12:00	0
13:00	0
14:00	1
15:00	1
16:00	0
17:00	1

Client SMEC
Location 7. Zone G - Cliff St (West side)
Date Sat, 3rd Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone G - Cliff St									
	No Restriction		8	8	8	8	9	10	10
	No Parking	Permit Holders Excepted Area WB1	5	3	4	5	5	5	5
	No Restriction		7	7	7	7	6	6	7
	No Parking	Permit Holders Excepted Area WB-1	7	4	6	6	6	7	7
	No Parking								
	No Parking	Permit Holders Excepted Area WB-1	1	0	0	1	1	1	0
	Total		28	22	25	27	27	29	29
	% Capacity			79%	89%	96%	96%	104%	104%

Few motorbikes parked in between cars at following times which is included in above data (8 spaces inventory)

12:00	0
13:00	0
14:00	0
15:00	1
16:00	2
17:00	2



Client SMEC
Location 8. Zone H - Cove St (East side)
Date Sat, 3rd Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone H - Cove St									
	No Restriction		8	8	8	8	9	9	7
	Total		8	8	8	8	9	9	7
	% Capacity			100%	100%	100%	113%	113%	88%

Few motorbikes parked in between cars at following times which is included in above data (8 spaces inventory)

12:00	0
13:00	0
14:00	0
15:00	1
16:00	1
17:00	1



Client SMEC
Location 9. Zone I - Cove St (West side)
Date Sat, 3rd Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone I - Cove St									
	No Stopping								
	No Restriction		7	7	7	7	7	7	7
	No Parking	Permit Holders Excepted Area WB-1	8	8	6	8	9	9	9
	No Restriction		6	6	6	6	6	6	6
	Total		21	21	19	21	22	22	22
	% Capacity			100%	90%	100%	105%	105%	105%



Client SMEC
Location 10. Zone J - Pacific St (North side)
Date Sat, 3rd Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone J - Pacific St									
	No Restriction		4	3	3	3	3	4	3
	No Parking	Permit Holders Excepted Area WB-1	2	2	2	2	2	2	2
	No Restriction		7	6	6	6	6	6	6
	No Parking	Permit Holders Excepted Area WB-1	9	8	8	8	7	7	3
Total			22	19	19	19	18	19	14
% Capacity				86%	86%	86%	82%	86%	64%

Few motorbikes parked in between cars at following times which is included in above data (4 spaces inventory)

12:00	0
13:00	0
14:00	0
15:00	0
16:00	1
17:00	0



Client SMEC
Location 11. Zone K - Pacific St (East side)
Date Sat, 3rd Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone K - Pacific St									
	No Restriction		3	4	4	4	5	5	5
	Total		3	4	4	4	5	5	5
	% Capacity			133%	133%	133%	167%	167%	167%

Client SMEC
Location 13. Zone M - Pacific St (Car Park)
Date Sat, 3rd Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey



Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone M - Pacific St									
	No Restriction	90' Angle Parking Vehicles Under 6m Only	13	13	15	18	16	15	15
	No Parking	Authorised Vehicles Only	1	0	1	1	1	0	0
	Disabled		1	1	1	1	1	1	1
	Total		15	14	17	20	18	16	16
	% Capacity			93%	113%	133%	120%	107%	107%

Few motorbikes parked in between cars at following times which is included in above data

12:00	0
13:00	2
14:00	5
15:00	3
16:00	2
17:00	2



Client SMEC
Location 14. Zone N - Camp St (North side)
Date Sat, 3rd Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone N - Camp St									
	No Restriction		8	11	11	8	6	6	4
	Total		8	11	11	8	6	6	4
	% Capacity			138%	138%	100%	75%	75%	50%

Over utilisation, vehicles parking in front of driveways



Client SMEC
Location 15. Zone O - Victoria St (South side)
Date Sat, 3rd Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone O - Victoria St									
	No Stopping								
	No Restriction		9	9	9	10	9	9	9
	No Parking	Permit Holders Excepted Area WB1	8	7	7	5	9	9	8
	No Restriction		6	5	5	6	6	6	6
	No Stopping								
	Total		23	21	21	21	24	24	23
	% Capacity			91%	91%	91%	104%	104%	100%

Few motorbikes parked in between cars at following times which is included in above data (9 spaces inventory)

12:00	0
13:00	0
14:00	1
15:00	0
16:00	0
17:00	

Few motorbikes parked in between cars at following times which is included in above data (8 spaces inventory)

12:00	0
13:00	0
14:00	0
15:00	1
16:00	1
17:00	1



Client SMEC
Location 16. Zone P - Victoria St (South side)
Date Sat, 3rd Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone P - Victoria St									
	No Stopping								
	No Restriction		5	6	6	5	5	5	5
	No Stopping								
	Total		5	6	6	5	5	5	5
	% Capacity			120%	120%	100%	100%	100%	100%

Few motorbikes parked in between cars at following times which is included in above data

12:00	1
13:00	1
14:00	0
15:00	0
16:00	0
17:00	0



Client SMEC
Location 17. Zone Q - Military Rd (North side)
Date Sat, 3rd Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone Q - Military Rd									
	No Stopping & No Parking	Sat, Sun & Public Holidays & Other Days							
	Loading Zone & No Stopping	8am-12pm & Other Times	2	0	0	1	1	1	0
	No Restriction		11	17	17	16	15	15	15
	Total		13	17	17	17	16	16	15
	% Capacity			131%	131%	131%	123%	123%	115%

Few motorbikes parked in between cars at following times which is included in above data (11 spaces inventory)

12:00	6
13:00	6
14:00	5
15:00	5
16:00	5
17:00	5



Client SMEC
Location 18. Zone R - Military Rd (South side)
Date Sat, 3rd Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone R - Military Rd									
	No Restriction		13	12	12	14	13	13	13
	Disabled		1	1	1	1	1	1	1
	No Stopping & No Parking	Sat, Sun & Public Holidays & Other Times							
	Total		14	13	13	15	14	14	14
	% Capacity			93%	93%	107%	100%	100%	100%

Few motorbikes parked in between cars at following times which is included in above data (13 spaces inventory)

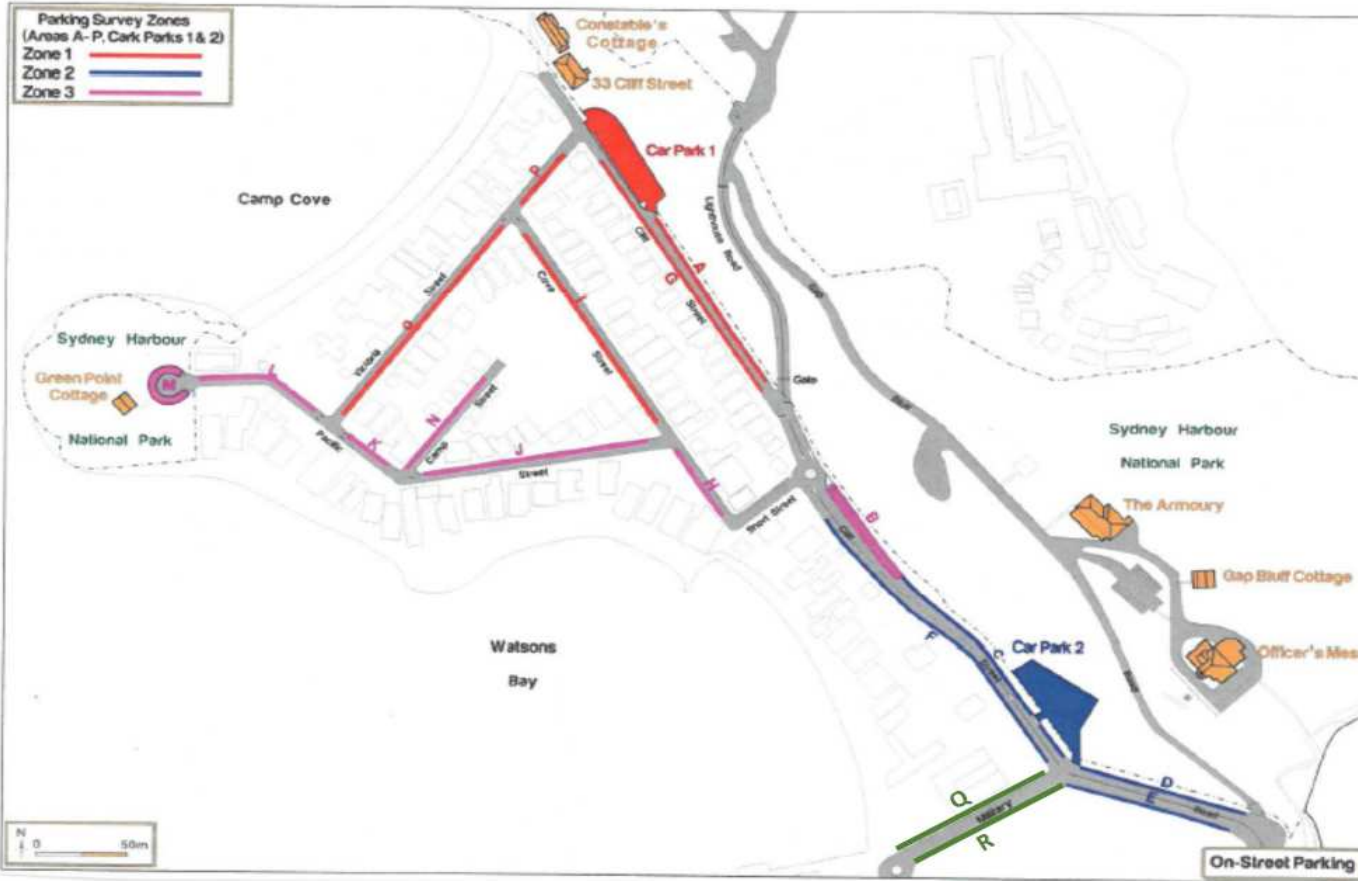
12:00	0
13:00	0
14:00	2
15:00	2
16:00	2
17:00	3



Client SMEC
Location 19. Car Park 1
Date Sat, 3rd Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Car Park 1									
	Motor Bikes	Approx 12 bikes can fit, no bays marked	12	8	9	9	9	5	5
	Disabled		2	2	2	2	1	2	2
	No Parking	Authorised Persons Only	3	2	2	2	1	2	1
	No Restriction		36	36	36	36	35	35	36
	Total		53	48	49	49	46	44	44
	% Capacity			91%	92%	92%	87%	83%	83%

Client SMEC
Date Sun, 4th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey



Location

1. Zone A - Cliff St (East side)
2. Zone B - Cliff St (East side)
3. Zone C - Cliff St (East side)
4. Zone D - Military Rd (North side)
5. Zone E - Military Rd (South side)
6. Zone F - Cliff St (West side)
7. Zone G - Cliff St (West side)
8. Zone H - Cove St (East side)
9. Zone I - Cove St (West side)
10. Zone J - Pacific St (North side)
11. Zone K - Pacific St (East side)
12. Zone L - Pacific St (East side)
13. Zone M - Pacific St (Car Park)
14. Zone N - Camp St (North side)
15. Zone O - Victoria St (South side)
16. Zone P - Victoria St (South side)
17. Zone Q - Military Rd (North side)
18. Zone R - Military Rd (South side)
19. Car Park 1
20. Car Park 2

Client SMEC
Location 2. Zone B - Cliff St (East side)
Date Sun, 4th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Availble Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone B - Cliff St									
	No Restriction	90 ⁰ Angle Parking rear to Kerb Vehicles Under 6m Only	25	25	26	26	26	26	26
	Total		25	25	26	26	26	26	26
	% Capacity			100%	104%	104%	104%	104%	104%

Few motorbikes parked in between cars at following times which is included in above data

12:00	0
13:00	1
14:00	1
15:00	1
16:00	1
17:00	1



Client SMEC
Location 3. Zone C - Cliff St (East side)
Date Sun, 4th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone C - Cliff St									
	No Restriction		25	24	24	25	25	25	25
	Total		25	24	24	25	25	25	25
	% Capacity			96%	96%	100%	100%	100%	100%

Few motorbikes parked in between cars at following times which is included in above data

12:00	0
13:00	0
14:00	1
15:00	1
16:00	1
17:00	0



Client SMEC
Location 4. Zone D - Military Rd (North side)
Date Sun, 4th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone D - Military Rd									
	No Restriction		17	16	16	19	19	19	19
	Total		17	16	16	19	19	19	19
	% Capacity			94%	94%	112%	112%	112%	112%

Few motorbikes parked in between cars at following times which is included in above data

12:00	0
13:00	0
14:00	3
15:00	3
16:00	3
17:00	3



Client SMEC
Location 5. Zone E - Military Rd (South side)
Date Sun, 4th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone E - Military Rd									
	No Restriction		16	17	17	17	16	16	16
	Total		16	17	17	17	16	16	16
	% Capacity			106%	106%	106%	100%	100%	100%

Few motorbikes parked in between cars at following times which is included in above data

12:00	1
13:00	1
14:00	1
15:00	0
16:00	0
17:00	0



Client SMEC
Location 6. Zone F - Cliff St (West side)
Date Sun, 4th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone F - Cliff St									
	No Restriction		10	10	10	10	11	11	11
	No Parking								
	No Restriction		3	3	3	3	3	3	3
	No Parking	Permit Holders Excepted Area WB 1	3						
	No Restriction		7	8	8	7	6	6	4
	Total		23	21	21	20	20	20	18
	% Capacity			91%	91%	87%	87%	87%	78%

Over utilisation, vehicles parking close to each other



Client SMEC
Location 7. Zone G - Cliff St (West side)
Date Sun, 4th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone G - Cliff St									
	No Restriction		8	8	8	8	8	7	7
	No Parking	Permit Holders Excepted Area WB1	5	4	4	4	4	4	4
	No Restriction		7	7	7	7	6	6	6
	No Parking	Permit Holders Excepted Area WB-1	7	7	7	7	7	7	7
	No Parking								
	No Parking	Permit Holders Excepted Area WB-1	1	1	1	1	1	0	1
	Total		28	27	27	27	26	24	25
	% Capacity			96%	96%	96%	93%	86%	89%



Client SMEC
Location 9. Zone I - Cove St (West side)
Date Sun, 4th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone I - Cove St									
	No Stopping								
	No Restriction		7	7	7	7	7	7	7
	No Parking	Permit Holders Excepted Area WB-1	8	9	9	8	8	8	8
	No Restriction		6	6	6	6	6	6	6
	Total		21	22	22	21	21	21	21
	% Capacity			105%	105%	100%	100%	100%	100%

Over utilisation, vehicles parking in front of driveways



Client SMEC
Location 10. Zone J - Pacific St (North side)
Date Sun, 4th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone J - Pacific St									
	No Restriction		4	3	3	3	3	4	4
	No Parking	Permit Holders Excepted Area WB-1	2	2	2	2	2	2	2
	No Restriction		7	5	5	5	5	4	5
	No Parking	Permit Holders Excepted Area WB-1	9	9	9	8	8	6	7
Total			22	19	19	18	18	16	18
% Capacity				86%	86%	82%	82%	73%	82%

Few motorbikes parked in between cars at following times which is included in above data (4 spaces inventory)

12:00	0
13:00	0
14:00	0
15:00	0
16:00	1
17:00	1



Client SMEC
Location 12. Zone L - Pacific St (East side)
Date Sun, 4th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone L - Pacific St									
	No Stopping	Sat, Sun & Public Holidays	3	0	1	1	0	0	0
	No Stopping								
	No Stopping	Sat, Sun & Public Holidays	3	0	0	0	0	0	0
	Total		6	0	1	1	0	0	0
	% Capacity			0%	17%	17%	0%	0%	0%

Client SMEC
Location 13. Zone M - Pacific St (Car Park)
Date Sun, 4th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Availble Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone M - Pacific St									
	No Restriction	90' Angle Parking near to Kerb Vehicles Under 6m Only	13	14	15	15	16	16	16
	No Parking	Authorised Vehicles Only	1	1	1	1	1	1	1
	Disabled		1	1	1	1	1	1	1
	Total		15	16	17	17	18	18	18
	% Capacity			107%	113%	113%	120%	120%	120%

Few motorbikes parked in between cars at following times which is included in above data

12:00	1
13:00	2
14:00	2
15:00	3
16:00	3
17:00	3



Client SMEC
Location 14. Zone N - Camp St (North side)
Date Sun, 4th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone N - Camp St									
	No Restriction		8	11	11	9	9	9	7
	Total		8	11	11	9	9	9	7
	% Capacity			138%	138%	113%	113%	113%	88%

Over utilisation, vehicles parking in front of driveways



Client SMEC
Location 15. Zone O - Victoria St (South side)
Date Sun, 4th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone O - Victoria St									
	No Stopping								
	No Restriction		9	9	9	9	9	9	9
	No Parking	Permit Holders Excepted Area WB1	8	7	7	6	5	5	7
	No Restriction		6	5	6	6	6	6	6
	No Stopping								1
	Total		23	21	22	21	20	20	23
	% Capacity			91%	96%	91%	87%	87%	100%



Client SMEC
Location 16. Zone P - Victoria St (South side)
Date Sun, 4th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone P - Victoria St									
	No Stopping								
	No Restriction		5	5	5	5	6	6	5
	No Stopping								
	Total		5	5	5	5	6	6	5
	% Capacity			100%	100%	100%	120%	120%	100%

Few motorbikes parked in between cars at following times which is included in above data

12:00	0
13:00	0
14:00	0
15:00	1
16:00	1
17:00	0

Client SMEC
Location 17. Zone Q - Military Rd (North side)
Date Sun, 4th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone Q - Military Rd									
	No Stopping & No Parking	Sat, Sun & Public Holidays & Other Days							
	Loading Zone & No Stopping	8am-12pm & Other Times	2	0	1	0	1	1	1
	No Restriction		11	17	17	16	16	14	12
	Total		13	17	18	16	17	15	13
	% Capacity			131%	138%	123%	131%	115%	100%

Few motorbikes parked in between cars at following times which is included in above data (11 spaces inventory)

12:00	7
13:00	7
14:00	6
15:00	6
16:00	4
17:00	3

Client SMEC
Location 18. Zone R - Military Rd (South side)
Date Sun, 4th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone R - Military Rd									
	No Restriction		13	18	18	17	16	14	13
	Disabled		1	1	0	1	1	1	1
	No Stopping & No Parking	Sat, Sun & Public Holidays & Other Times							
	Total		14	19	18	18	17	15	14
	% Capacity			136%	129%	129%	121%	107%	100%

Few motorbikes parked in between cars at following times which is included in above data (13 spaces inventory)

12:00	6
13:00	6
14:00	5
15:00	5
16:00	4
17:00	3



Client SMEC
Location 19. Car Park 1
Date Sun, 4th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

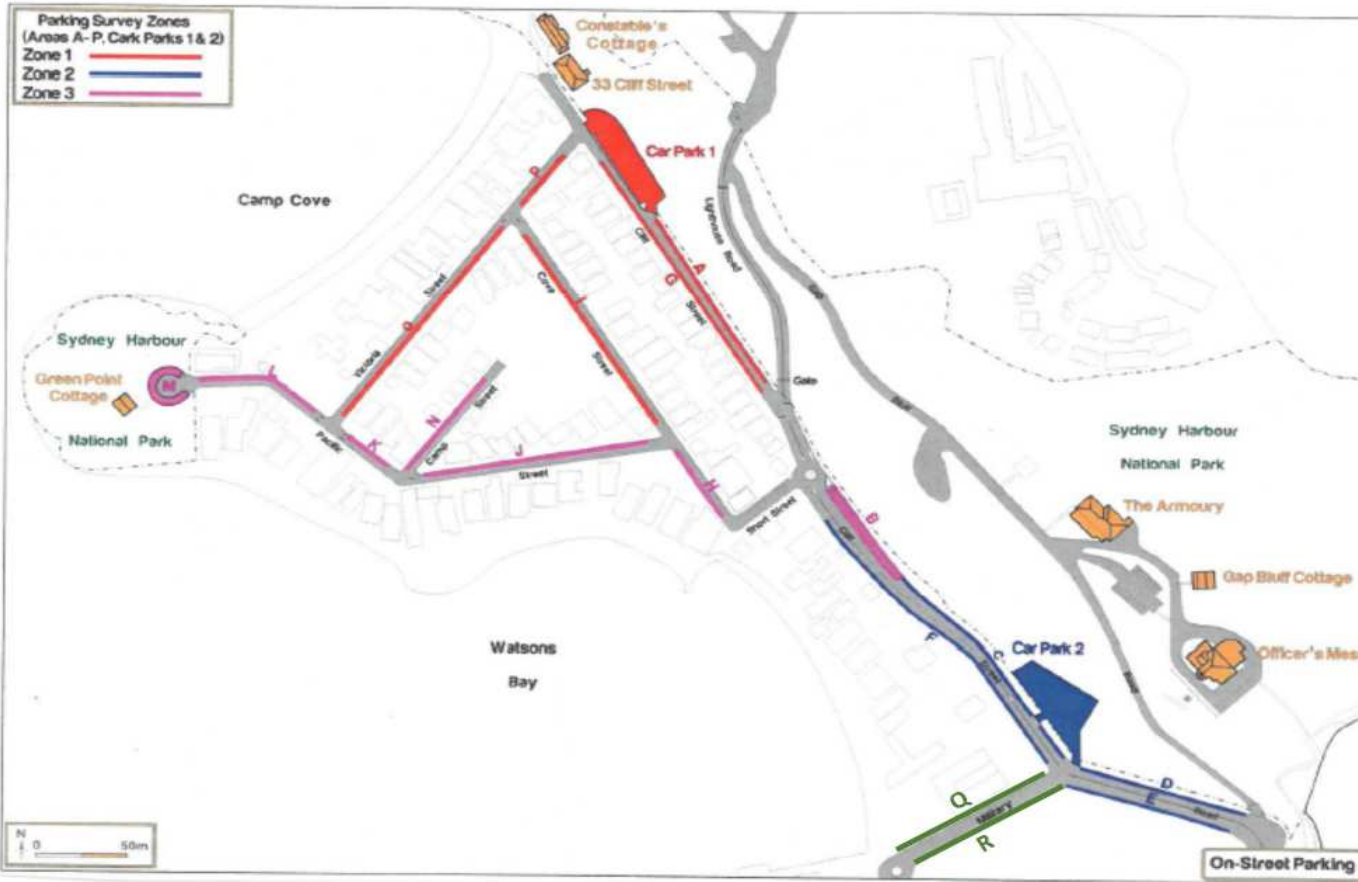
Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Car Park 1									
	Motor Bikes	Approx 12 bikes can fit, no bays marked	12	10	10	10	10	10	11
	Disabled		2	2	2	2	2	1	2
	No Parking	Authorised Persons Only	3	3	3	2	1	1	2
	No Restriction		36	36	36	35	35	35	36
	Total		53	51	51	49	48	47	51
	% Capacity			96%	96%	92%	91%	89%	96%



Client SMEC
Location 20. Car Park 2
Date Sun, 4th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Car Park 2									
	Marked Bays		39	39	39	39	39	39	39
	Marked Bays	Small Car Only	2	2	2	2	2	2	2
	Unmarked Bays		8	9	9	9	8	5	5
	Total		49	50	50	50	49	46	46
	% Capacity			102%	102%	102%	100%	94%	94%

Client SMEC
Date Mon, 5th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey



Location

1. Zone A - Cliff St (East side)
2. Zone B - Cliff St (East side)
3. Zone C - Cliff St (East side)
4. Zone D - Military Rd (North side)
5. Zone E - Military Rd (South side)
6. Zone F - Cliff St (West side)
7. Zone G - Cliff St (West side)
8. Zone H - Cove St (East side)
9. Zone I - Cove St (West side)
10. Zone J - Pacific St (North side)
11. Zone K - Pacific St (East side)
12. Zone L - Pacific St (East side)
13. Zone M - Pacific St (Car Park)
14. Zone N - Camp St (North side)
15. Zone O - Victoria St (South side)
16. Zone P - Victoria St (South side)
17. Zone Q - Military Rd (North side)
18. Zone R - Military Rd (South side)
19. Car Park 1
20. Car Park 2



Client SMEC
Location 1. Zone A - Cliff St (East side)
Date Mon, 5th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone A - Cliff St									
	No Restriction		21	20	20	21	21	21	21
	Total		21	20	20	21	21	21	21
	% Capacity			95%	95%	100%	100%	100%	100%



Client SMEC
Location 2. Zone B - Cliff St (East side)
Date Mon, 5th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone B - Cliff St									
	No Restriction	90 ⁰ Angle Parking rear to Kerb Vehicles Under 6m Only	25	23	23	24	24	25	25
	Total		25	23	23	24	24	25	25
	% Capacity			92%	92%	96%	96%	100%	100%



Client SMEC
Location 3. Zone C - Cliff St (East side)
Date Mon, 5th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone C - Cliff St									
	No Restriction		25	26	26	25	24	24	25
	Total		25	26	26	25	24	24	25
	% Capacity			104%	104%	100%	96%	96%	100%

Few motorbikes parked in between cars at following times which is included in above data

12:00	2
13:00	2
14:00	1
15:00	1
16:00	1
17:00	1



Client SMEC
Location 4. Zone D - Military Rd (North side)
Date Mon, 5th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone D - Military Rd									
	No Restriction		17	19	19	19	19	19	19
	Total		17	19	19	19	19	19	19
	% Capacity			112%	112%	112%	112%	112%	112%

Few motorbikes parked in between cars at following times which is included in above data

12:00	3
13:00	3
14:00	3
15:00	3
16:00	3
17:00	3



Client SMEC
Location 5. Zone E - Military Rd (South side)
Date Mon, 5th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone E - Military Rd									
	No Restriction		16	16	17	18	18	18	17
	Total		16	16	17	18	18	18	17
	% Capacity			100%	106%	113%	113%	113%	106%

Few motorbikes parked in between cars at following times which is included in above data

12:00	0
13:00	1
14:00	2
15:00	2
16:00	2
17:00	1



Client SMEC
Location 6. Zone F - Cliff St (West side)
Date Mon, 5th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone F - Cliff St									
	No Restriction		10	10	11	10	10	10	9
	No Parking								
	No Restriction		3	3	3	3	3	3	3
	No Parking	Permit Holders Excepted Area WB 1	3	3	3	3	3	3	2
	No Restriction		7	6	6	6	6	7	7
	Illegal Parking				1	1	1		
	Total		23	22	24	23	23	23	21
	% Capacity			96%	104%	100%	100%	100%	91%

Few motorbikes parked in between cars at following times which is included in above data (10 spaces inventory)

12:00	1
13:00	2
14:00	1
15:00	1
16:00	1
17:00	0



Client SMEC
Location 7. Zone G - Cliff St (West side)
Date Mon, 5th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone G - Cliff St									
	No Restriction		8	7	7	8	7	9	10
	No Parking	Permit Holders Excepted Area WB1	5	5	4	5	5	4	4
	No Restriction		7	6	7	7	7	7	7
	No Parking	Permit Holders Excepted Area WB-1	7	7	7	7	7	6	6
	No Parking								
	No Parking	Permit Holders Excepted Area WB-1	1	1	1	1	1	0	0
	Total		28	26	26	28	27	26	27
	% Capacity			93%	93%	100%	96%	93%	96%

Few motorbikes parked in between cars at following times which is included in above data (8 spaces inventory)

12:00	0
13:00	0
14:00	1
15:00	0
16:00	2
17:00	3



Client SMEC
Location 9. Zone I - Cove St (West side)
Date Mon, 5th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone I - Cove St									
	No Stopping								
	No Restriction		7	7	7	7	7	7	7
	No Parking	Permit Holders Excepted Area WB-1	8	9	8	8	8	8	8
	No Restriction		6	6	6	6	6	5	6
	Total		21	22	21	21	21	20	21
	% Capacity			105%	100%	100%	100%	95%	100%



Client SMEC
Location 10. Zone J - Pacific St (North side)
Date Mon, 5th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone J - Pacific St									
	No Restriction		4	4	4	3	3	3	3
	No Parking	Permit Holders Excepted Area WB-1	2	2	2	2	2	2	2
	No Restriction		7	7	7	7	7	7	7
	No Parking	Permit Holders Excepted Area WB-1	9	9	9	9	9	7	8
	Total		22	22	22	21	21	19	20
	% Capacity			100%	100%	95%	95%	86%	91%



Client SMEC
Location 11. Zone K - Pacific St (East side)
Date Mon, 5th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone K - Pacific St									
	No Restriction		3	4	4	5	5	5	4
	Total		3	4	4	5	5	5	4
	% Capacity			133%	133%	167%	167%	167%	133%

Over utilisation, vehicles parking in front of driveways

Client SMEC
Location 13. Zone M - Pacific St (Car Park)
Date Mon, 5th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone M - Pacific St									
	No Restriction	90 ^o Angle Parking Vehicles Under 6m Only	13	20	20	20	18	15	15
	No Parking	Authorised Vehicles Only	1	0	1	1	1	0	0
	Disabled		1	1	1	1	1	1	1
Total			15	21	22	22	20	16	16
% Capacity				140%	147%	147%	133%	107%	107%

Few motorbikes parked in between cars at following times which is included in above data

12:00	7
13:00	7
14:00	7
15:00	5
16:00	2
17:00	2



Client SMEC
Location 14. Zone N - Camp St (North side)
Date Mon, 5th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone N - Camp St									
	No Restriction		8	10	10	10	10	10	10
	Total		8	10	10	10	10	10	10
	% Capacity			125%	125%	125%	125%	125%	125%

Over utilisation, vehicles parking in front of driveways



Client SMEC
Location 15. Zone O - Victoria St (South side)
Date Mon, 5th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone O - Victoria St									
	No Stopping			1	1	1		1	1
	No Restriction		9	10	10	10	9	9	9
	No Parking	Permit Holders Excepted Area WB1	8	9	9	8	8	5	6
	No Restriction		6	6	6	6	5	5	4
	No Stopping			1	1	1			
	Total		23	27	27	26	22	20	20
	% Capacity			117%	117%	113%	96%	87%	87%

Few motorbikes parked in between cars at following times which is included in above data (9 spaces inventory)

12:00	1
13:00	1
14:00	1
15:00	1
16:00	0
17:00	0

Few motorbikes parked in between cars at following times which is included in above data (8 spaces inventory)

12:00	1
13:00	1
14:00	0
15:00	0
16:00	0
17:00	0



Client SMEC
Location 17. Zone Q - Military Rd (North side)
Date Mon, 5th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone Q - Military Rd									
	No Stopping & No Parking	Sat, Sun & Public Holidays & Other Days							
	Loading Zone & No Stopping	8am-12pm & Other Times	2	1	1	1	2	2	2
	No Restriction		11	19	19	17	18	18	18
	Total		13	20	20	18	20	20	20
	% Capacity			154%	154%	138%	154%	154%	154%

Few motorbikes parked in between cars at following times which is included in above data (11 spaces inventory)

12:00	9
13:00	9
14:00	7
15:00	7
16:00	7
17:00	7



Client SMEC
Location 16. Zone P - Victoria St (South side)
Date Mon, 5th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone P - Victoria St									
	No Stopping			1	1				
	No Restriction		5	6	6	6	6	6	6
	No Stopping								
	Total		5	7	7	6	6	6	6
	% Capacity			140%	140%	120%	120%	120%	120%

Few motorbikes parked in between cars at following times which is included in above data

12:00	1
13:00	1
14:00	1
15:00	1
16:00	1
17:00	1

Client SMEC
Location 18. Zone R - Military Rd (South side)
Date Mon, 5th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Zone R - Military Rd									
	No Restriction		13	15	15	15	15	16	17
	Disabled		1	1	1	0	0	0	1
	No Stopping & No Parking	Sat, Sun & Public Holidays & Other Times		1	1	1	0	0	0
	Total		14	17	17	16	15	16	18
	% Capacity			121%	121%	114%	107%	114%	129%

Few motorbikes parked in between cars at following times which is included in above data (13 spaces inventory)

12:00	1
13:00	1
14:00	2
15:00	3
16:00	3
17:00	4



Client SMEC
Location 19. Car Park 1
Date Mon, 5th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Car Park 1									
	Motor Bikes	Approx 12 bikes can fit, no bays marked	12	10	12	11	11	7	7
	Disabled		2	0	1	1	1	2	1
	No Parking	Authorised Persons Only	3	0	0	0	0	1	1
	No Restriction		36	36	36	36	36	36	36
	Total		53	46	49	48	48	46	45
	% Capacity			87%	92%	91%	91%	87%	85%



Client SMEC
Location 20. Car Park 2
Date Mon, 5th Oct 2015 (12:00-17:00)
Description Watsons Bay Parking Survey

Side of the Street	Parking Restriction	Time Restrictions	Available Spaces	12:00	13:00	14:00	15:00	16:00	17:00
Car Park 2									
	Marked Bays	No Restrictions	39	39	39	39	39	39	39
	Marked Bays	Small Car Only	2	2	2	2	2	2	2
	Gravel Parking		8	6	6	6	5	6	6
	Total		49	47	47	47	46	47	47
	% Capacity			96%	96%	96%	94%	96%	96%

APPENDIX B: TUBE COUNT SURVEY DATA

HMAS Watsons Redevelopment Project
Submission 9

Job No	N1984		
Client	SMEC		
Road	Cliff St - approx 70m north of Military Rd	Average Weekday	1,928
Location	Watsons Bay	7 Day Average	2,165
Site No.	1		
Start Date	1-Oct-15		
Description	Volume Summary	1. Cliff St - approx 70m north of Military Rd	
Direction	NB		

Direction

NB


Time	Day of Week							Ave W'day	7 Day Ave
	Mon 5-Oct	Tue 6-Oct	Wed 7-Oct	Thu 1-Oct	Fri 2-Oct	Sat 3-Oct	Sun 4-Oct		
AM Peak	339	152	97	101	155	266	295		
PM Peak	342	281	209	158	311	275	306		
0:00	18	2	2	2	7	8	42	6	12
1:00	9	0	2	3	2	5	46	3	10
2:00	2	1	1	1	3	7	20	2	5
3:00	5	3	8	2	1	4	17	4	6
4:00	4	11	12	4	4	5	8	7	7
5:00	19	38	58	17	11	9	17	29	24
6:00	53	71	51	50	48	33	45	55	50
7:00	45	67	65	55	46	68	53	56	57
8:00	81	72	64	60	80	77	85	71	74
9:00	179	75	81	86	89	169	188	102	124
10:00	273	127	97	101	111	258	287	142	179
11:00	339	152	87	86	155	266	295	164	197
12:00	342	178	84	107	231	275	306	188	218
13:00	254	202	149	132	311	240	267	210	222
14:00	231	197	171	110	187	219	243	179	194
15:00	237	281	209	137	153	200	222	203	206
16:00	203	143	85	158	180	199	216	154	169
17:00	192	137	49	140	118	191	169	127	142
18:00	165	122	35	81	72	111	130	95	102
19:00	55	26	36	51	61	98	80	46	58
20:00	41	27	21	53	41	53	60	37	42
21:00	21	18	15	27	36	54	51	23	32
22:00	15	12	6	18	29	43	29	16	22
23:00	7	8	6	8	23	26	21	10	14
Total	2789	1970	1394	1489	1999	2618	2897	1928	2165

7-19	2540	1753	1176	1253	1733	2273	2461	1691	1884
6-22	2710	1895	1299	1434	1919	2511	2697	1851	2066
6-24	2732	1915	1311	1460	1971	2580	2747	1878	2102
0-24	2789	1970	1394	1489	1999	2618	2897	1928	2165

HMAS Watsons Redevelopment Project
Submission 9

Job No	N1984		
Client	SMEC		
Road	Cliff St - approx 70m north of Military Rd	Average Weekday	2,101
Location	Watsons Bay	7 Day Average	2,335
Site No.	1		
Start Date	1-Oct-15		
Description	Volume Summary	1. Cliff St - approx 70m north of Military Rd	
Direction	SB		

Direction

SB 

Time	Day of Week							Ave W'day	7 Day Ave
	Mon 5-Oct	Tue 6-Oct	Wed 7-Oct	Thu 1-Oct	Fri 2-Oct	Sat 3-Oct	Sun 4-Oct		
AM Peak	395	208	179	191	186	304	338		
PM Peak	372	180	95	173	224	293	325		
0:00	21	3	3	3	4	8	29	7	10
1:00	6	0	3	1	2	7	12	2	4
2:00	0	1	1	1	4	7	14	1	4
3:00	4	6	12	3	1	2	6	5	5
4:00	9	49	50	7	7	9	12	24	20
5:00	30	153	150	45	44	17	27	84	67
6:00	61	208	179	148	159	34	38	151	118
7:00	107	64	63	191	186	78	80	122	110
8:00	138	103	77	71	103	131	145	98	110
9:00	242	116	91	94	98	230	255	128	161
10:00	306	162	92	105	123	290	322	158	200
11:00	395	187	91	121	172	304	338	193	230
12:00	372	180	83	163	205	293	325	201	232
13:00	267	143	70	173	224	253	281	175	202
14:00	220	134	88	137	155	209	232	147	168
15:00	239	149	95	115	134	198	220	146	164
16:00	206	134	82	115	120	203	214	131	153
17:00	165	106	68	93	86	191	161	104	124
18:00	85	78	46	67	72	92	112	70	79
19:00	47	28	33	52	65	110	54	45	56
20:00	56	44	29	55	29	55	37	43	44
21:00	30	33	26	35	39	40	42	33	35
22:00	22	9	3	26	31	43	24	18	23
23:00	7	5	5	13	38	37	22	14	18
Total	3035	2095	1440	1834	2101	2839	3002	2101	2335

7-19	2742	1556	946	1445	1678	2470	2685	1673	1932
6-22	2936	1869	1213	1735	1970	2709	2856	1945	2184
6-24	2965	1883	1221	1774	2039	2789	2902	1976	2225
0-24	3035	2095	1440	1834	2101	2839	3002	2101	2335

HMAS Watson Redevelopment Project
Submission 9

Job No	N1984		
Client	SMEC		
Road	Cliff St - approx 70m north of Military Rd	Average Weekday	4,029
Location	Watsons Bay	7 Day Average	4,500
Site No.	1		
Start Date	1-Oct-15		
Description	Volume Summary	1. Cliff St - approx 70m north of Military Rd	
Direction	Combined		

Direction

Time	Day of Week							Ave W'day	7 Day Ave
	Mon 5-Oct	Tue 6-Oct	Wed 7-Oct	Thu 1-Oct	Fri 2-Oct	Sat 3-Oct	Sun 4-Oct		
AM Peak	734	339	230	246	327	570	633		
PM Peak	714	430	304	305	535	568	631		
0:00	39	5	5	5	11	16	71	13	22
1:00	15	0	5	4	4	12	58	6	14
2:00	2	2	2	2	7	14	34	3	9
3:00	9	9	20	5	2	6	23	9	11
4:00	13	60	62	11	11	14	20	31	27
5:00	49	191	208	62	55	26	44	113	91
6:00	114	279	230	198	207	67	83	206	168
7:00	152	131	128	246	232	146	133	178	167
8:00	219	175	141	131	183	207	230	170	184
9:00	421	191	172	180	187	399	443	230	285
10:00	579	289	189	206	234	548	609	299	379
11:00	734	339	178	207	327	570	633	357	427
12:00	714	358	167	270	436	568	631	389	449
13:00	521	345	219	305	535	493	548	385	424
14:00	451	331	259	247	342	428	475	326	362
15:00	476	430	304	252	287	398	442	350	370
16:00	409	277	167	273	300	402	430	285	323
17:00	357	243	117	233	204	382	330	231	267
18:00	250	200	81	148	144	203	242	165	181
19:00	102	54	69	103	126	208	134	91	114
20:00	97	71	50	108	70	108	97	79	86
21:00	51	51	41	62	75	94	93	56	67
22:00	37	21	9	44	60	86	53	34	44
23:00	14	13	11	21	61	63	43	24	32
Total	5824	4065	2834	3323	4100	5457	5899	4029	4500

7-19	5282	3309	2122	2698	3411	4743	5146	3364	3816
6-22	5646	3764	2512	3169	3889	5220	5553	3796	4250
6-24	5697	3798	2532	3234	4010	5369	5649	3854	4327
0-24	5824	4065	2834	3323	4100	5457	5899	4029	4500