

M^CLAREN TRAFFIC ENGINEERING

Address: Shop 7, 720 Old Princes Highway Sutherland NSW 2232

Postal: P.O Box 66 Sutherland NSW 1499

Telephone: +61 2 8355 2440

Fax: +61 2 9545 1227

Web: www.mclarentraffic.com.au

Email: admin@mclarentraffic.com.au

Division of RAMTRANS Australia ABN: 45067491678

Transport Planning, Traffic Impact Assessments, Road Safety Audits, Expert Witness

17 June 2013

Ref: 2010/030.F01B.CM/hc

Sydney Heritage Fleet
C/o CRAWFORD ARCHITECTS
Suite 100, Jones Bay Wharf
Pirrama Rd
PYRMONT NSW 2009

Attention: John Crawford

Dear John,

**ENVIRONMENTAL ASSESSMENT FOR
PROPOSED SYDNEY HERITAGE FLEET FACILITIES
AT BANK STREET, PYRMONT
LAND TRANSPORT, TRAFFIC & PARKING ISSUES**

RESPONSE TO MATTERS RAISED BY ARUP DATED 12 APRIL 2013

Reference is made to your request to provide a response to the matters raised by the NSW Department of Planning & Infrastructure's traffic consultants, ARUP, dated 12 April 2013.

The matters raised are attached in **Annexure A** and are briefly described as follows:

1. Justification for waiving of any provision of on-site parking for staff, volunteers and visitors, related to:
 - a) List those developments for which McLaren identifies that a parking provision rate of one space per 232.2m² has been previously applied by City of Sydney and justify the relevance of this rate for application to the SHF in assessing parking requirements.
 - b) Provide comparisons of user (staff, volunteer + visitor) numbers estimated for the proposed facility to those that already occur at the Wharf 7 facility in Rozelle.
 - c) Parking for disabled users and visitors.
 - d) Provide details of travel patterns of staff and volunteers of the existing Wharf 7 facility at Rozelle would assist in substantiating claims that staff and volunteers will use public transport to access the Bank Street site and will not impact on local parking.
2. Whether the eastern abutment of the Old Glebe Island Bridge is to be relied upon for parking in the short or long term.
3. Whether bus route diversions are relied upon for this application.
4. Capacity of existing public transport services in the area.

5. Critical intersection performances, particularly the Bank St / Miller St intersection.
6. Swept path of service vehicles and buses generated by the development application.

Our responses to each of these matters are as follows:

1. Justification for Waiving of On-site Parking Provision

In response to this concern, it is evident from the Executive Summary as well as Sections 4.8 and 4.9 of the lodged TMAP report that the proposed public museum is a use not covered by Councils control with respect to off-street parking. Further, as noted in the lodged report the following extract is relevant:

“Draft Sydney Development Control Plan (DCP) 2010 Section 2 states the following:

- *Where the development comprises a land use not specified in the LEP, the proposed rate of car parking provision is to be justified via a Parking and Access Report*

... In view of this, it is considered that staff and visitors be encouraged to use prevailing and future embellishments to public transport services provided within the region of Bank Street. This traffic and parking assessment considers improvements to public transport services for SHF site on Bank Street.

Whilst the objective is to limit on-site car parking to encourage public transport usage, Section 8 of this report provides information about visitation & employee levels, with the conclusion that some 30 visiting persons per day may arrive by private car and spend an average of 2 hours at the museum. Assuming a 6 hour (10am to 4pm) peak visitation period, then this equates to some 10 visiting persons or up to 20 persons at one time that may seek to park near the site. With a typical car occupancy rate of 3 persons per car this equates to some 7 cars on average.

While the lodged TMAP report made reference to an alternate calculation, that alternate calculation is not relied upon as it is not clear with reference to Council's DCP that the alternate rate of 1 space per 232.2m² does not apply to museums. **Annexure B** provides the clauses that are relevant such that on-site parking is not required and in any event the type of museum proposed requires the full site area to achieve its aims to provide the Sydney Heritage Fleet experience to residents and visitors to New South Wales.

Annexure B also presents the relevant information with respect to the existing SHF site in Rozelle Bay that relies upon bus / light rail / taxi services as well as footpaths with no dedicated parking for visitors.

In relation to how staff and volunteers will be transported to and from the site **Annexures C & D** provide details of the proposed ferry services.

A Travel Access Guide (TAG) / workplace travel plan will be prepared in accordance with RMS Guidelines for distribution to all employees. In particular the following measures will be introduced by the management of SHF in its information package to all staff / volunteers:

- Provide public transport access information on proposed and available public transport / cycling / walking transport options by detailing location of and directions to / from ferry services / bus stops / bus routes / light rail services / bus & light rail timetables / taxi rank / bicycle paths / pedestrian path connections to ferry wharf / bus stops / light rail station.

- Display travel information in staff areas such as amenity areas.
- Provide transport options and public transport timetable information on its website.
- Restricted Car Parking Supply, such that all staff will be advised that there is no on-site staff spaces.
- Bicycle Parking & Shower Provision.
- On-site bicycle parking will be provided with shower / amenities for employees to utilise.

Disabled access is addressed in our response to point 6 below.

2. Use of Eastern Abutment of Old Glebe Island Bridge

In response to this concern, SHF are not relying upon using the car parking supply in its management plan at the present time but may investigate it in future should the need arise.

3. Whether Bus Route Diversions will be relied Upon

In response to this concern whilst bus route diversions were listed as possible options it is understood that there is considerable opposition to this such that this option was rejected by Sydney Heritage Fleet in favour of providing further details on ferry services that are now planned to bring the vast majority of staff and visitors to this community facility.

4. Capacity of Public Transport Services

In response to this concern, SHF will be relying largely upon new ferry and minibus shuttle services and not to any great degree existing bus and light rail facilities in the area. Although it is acknowledged that a Travel Access Guide (TAG) will be publically available on the SHF website and in other forms of advertising to the general public outlining the various ways patrons can travel to and from the site. The timetables and routes of these new and existing services will be made available in these forms of advertising. The location and access details of nearby public car parks will also be made available. On-site bicycle parking racks will also be provided.

Ferry and minibus services will be provided from Wharf 7 (58 Pirrama Road, Pyrmont) to the Bank Street site via sales of Exhibition / Gallery and Big Tickets via the internet or at the wharf. Arrangements will be made for new minibus or ferry services to transport patrons who have previously purchased tickets to and from the proposed Bank Street museum on demand and/or scheduled services once the museum is operational.

Wharf 7 is currently accessed by bus services that operate along Pirrama Road with the nearest bus stop within a 200m walking distance. The nearest train service is at Town Hall station within a 1.4km walking distance and the nearest light rail station is within a 170m walking distance.. Taxi services also regular operate from a rank at the Star City Casino within a short walking distance from Wharf 7. Thus significant public transport options exist for access to and from Wharf 7 and then via new ferry / minibus services to the proposed Bank Street museum.

In view of the foregoing, the spare patronage details of existing nearby bus and light rail services is not necessary to be provided for the subject application given the extent of other new services that will be provided as discussed at the meeting with ARUP representative

5. Critical Intersection Performances

In response to this concern it is evident from Section 8 of the lodged TMAP report that the development will not generate any significant peak hourly traffic flows during the weekday 8-9AM & 5-6PM commuter periods, which is the time when the nearby critical intersection of Bank / Miller streets is accommodating high traffic flow demands. The assessed peak hourly additional traffic of 5 to 7 (demand assessment range) is very low in peak hourly flow terms representing 1 additional vehicle either entering or leaving the local precinct every 8 to 12 minutes during a peak hour.

The proposed Sydney Heritage Fleet museum will only be generating staff trips during the weekday AM & PM commuter peak hour periods and these staff will be using ferry services or other non-private transport modes given that dedicated ferry services will be provided and that staff will be advised via a Workplace Travel Plan (WTP) of these alternate forms of transport and that no on-site parking will be provided. Further staff will be advised through the WTP that on-street parking near the museum will not be available due to its current high utilisation.

6. Swept Path Analysis for Service Vehicles and Buses

In response to this concern, the swept path details provided in the lodged TMAP report (Section 4.11 and in Annexure D) shown that an 8.8m long Medium Rigid Vehicle (MRV) in accordance with AS2890.2:2002 can enter and leave the site in a forward direction. Whilst the clearances to gate and building obstructions may be less than the 300mm standard clearance, this is acceptable in a low speed low traffic managed environment.

Notwithstanding the MRV conducted swept path tests the more regular vehicle that will enter the site is a 7m minibus which can deliver up to 22 patrons at any one time given that this is the seating capacity of these vehicles. As discussed previously these minibus shuttle services will operate on demand generally outside the weekday commuter peak hourly periods from Wharf 7. Minibus swept path tests are presented in **Annexure E** to this letter.

Discussions with Council will be ongoing to secure an appropriately sized kerbside parking zone for larger buses / coaches to utilise. It is expected that a single bus length will only be necessary to accommodate charter buses and the timing of these buses can be managed by SHF management such that only one large bus arrives or departs the kerbside zone once that zone is operational.

In terms of disabled access arrangements will be made in the operational management plan that permits arrival and departure of disabled visitors via prearranged measures within the on-site set-down / pick-up drive through facility.

In relation to the road train shown in Annexure D, SHF has a further potential additional service in mind similar to the type in use at Darling Harbour. The details of this are still preliminary requiring further discussion with Council, however SHF envisage that it would operate along the footpath between the Fish Market car park and the Bank Street site.

We trust the above information suits your needs and we ask that you contact the undersigned should you require further information or assistance.

Yours faithfully,

M^CLAREN TRAFFIC ENGINEERING



Craig M^CLaren
Director

BE Civil. Graduate Diploma (Transport Eng) MAITPM MITE

RMS Accredited Level 3 Road Safety Auditor

RMS Accredited Traffic Control Planner, Certifier & Auditor (Orange Card)

Website: www.mclarentraffic.com.au

ANNEXURE A: ARUP RECOMMENDATIONS, 12 APRIL 2013

Conclusion

In summary, on the basis of our review of available traffic-related documentation and analysis for the proposed relocation of the public activities associated with the Sydney Heritage Fleet to a site at 3 Bank Street Pyrmont, the traffic analysis does not support that the development can be accommodated by the existing transport system.

Arup recommends the following:

- 1. Insufficient justification is provided in the TMAP by McLaren Traffic Engineering to support the waiving of any provision of on-site parking for staff, volunteers and visitors. To substantiate this it is recommended that the Department seeks further clarification from the proponent on the following:*
 - a) List those developments for which McLaren identifies that a parking provision rate of one space per 232.2m² has been previously applied by City of Sydney and justify the relevance of this rate for application to the SHF in assessing parking requirements.*
 - b) Provide comparisons of user (staff, volunteer + visitor) numbers estimated for the proposed facility to those that already occur at the Wharf 7 facility in Rozelle.*
 - c) The TMAP and the EA report do not address parking for disabled users. The proponent should clarify the proposed amount of and/or arrangements for parking for disabled users and visitors.*
 - d) Arup suggests that an assessment of the travel patterns of staff and volunteers of the existing Wharf 7 facility at Rozelle would assist in substantiating otherwise vague claims that staff and volunteers will use public transport to access the Bank Street site and will not impact on local parking.*
- 2. Although the eastern abutment of the Old Glebe Island Bridge is currently utilised for parking by the Anzac Bridge Maintenance Project, it could not be relied upon that RMS will turn this area over either as a dedicated car park for the SHF development or as a public parking area at some time in the future, and this should not be considered for the purposes of the development application.*
- 3. Bus route diversions suggested in the McLaren TMAP are highly preliminary and are without necessary supporting analysis on the impact on existing users and patronage. In view of this and that these have not been discussed with Transport for NSW, we would think that no reliance be given that these service changes will occur for the purposes of the development application.*
- 4. Despite placing a high reliance on public transport for the provision of access to the proposed development, the McLaren TMAP provides no evidence of the ability of the existing public transport system to cater for travel generated by the development. It is recommended that the Department seeks clarification from the proponent on the capacity of existing public transport services and the ability of existing services to provide access for the proposed development.*
- 5. The McLaren TMAP provides no assessment of the operation of critical intersections, particularly the critical Bank Street / Miller Street intersection. However in the event that parking demands for the development can be substantiated to be no more than some five vehicles, impacts on the operation of this intersection will not be significant.*
- 6. The swept path analysis for medium rigid service vehicles provided in the McLaren TMAP is not consistent with the requirements of AS2890.1 Appendix B and indicates several deficiencies. The TMAP does not demonstrate that service vehicles can adequately access the development.*

ANNEXURE B: FURTHER DETAILS JUSTIFYING NO ON-SITE CAR PARKING (Sheet 1 of 2)

Extracts from **Central Sydney DCP 1996(Consolidated August 2010) Section 5- On Site Parking**

Summary

Car – Discouraged.

Bicycle – 1 per 100 car spaces

Motorcycle - 1 per 100 car spaces

Servicing – Other uses 1 per 1750sqm, Commercial premises 1 per 3300sqm

Accessible – 1 or 2% of car spaces

5.5.2 Bicycle parking space should equal at least one car parking space for every 100 car parking spaces or part thereof.

5.6.1 Motorcycle parking is to be provided in all buildings that provide on-site car parking, and is to be equal to at least one car parking space for every 100 car parking spaces or part thereof.

5.4.1 The following requirements apply to new development for the provision of parking spaces for delivery and service vehicles:

- | | |
|-----------------------------|---|
| (i) Commercial premises | 1 space/3,300 sqm FSA or part |
| (ii) Retail | 1 space/350 sqm FSA or part |
| (iii) Residential buildings | 1 space for first 50 dwellings/and Serviced Apartments serviced apartments 0.5 spaces for every 50 dwellings/apartments thereafter. |
| (v) Hotels | 1 space/50 hotel bedrooms |
| (vi) Wholesale, industrial | 1 space/700 sqm FSA or part |
| (vi) Other uses | 1 space for 1,750 sqm FSA or part |

5.3.1 Car parking for people with mobility impairment is to be provided in accordance with Australian Standard 2890.1 This requires a minimum of 1-2% of parking spaces to be provided and appropriately designated for use by people with mobility impairments.

5.1 Design and location of on-site parking Strategy

On-site parking in Central Sydney should generally be located below ground so that active uses are maximised at the street level. Car parking for commercial development and hotels is to be located below ground and is not to be visible from the street. While above ground parking for residential buildings and serviced apartments is discouraged, it is permissible subject to certain conditions in certain locations. Any such parking is to be designed so that in the future the space can be readily converted to other uses.

ANNEXURE B: FURTHER DETAILS JUSTIFYING NO ON-SITE CAR PARKING (Sheet 2 of 2)

Extracts from South Sydney City Council DCP 11 – Transport Guidelines for Development 1996

Car – Art Galleries 1 per 200sqm

Bicycle – Art Galleries 1 per 200sqm

Motorcycle – n/a

Servicing – To meet needs

Accessible – Entertainment 3-4% of car spaces

LAND USE	CAR PARKING	COACH	SERVICING	BICYCLES
Table 4. COMMUNITY, EDUCATION & HEALTH FACILITIES				
MEDICAL				
Hospitals - Doctors	1/doctor		To meet needs	
- Staff	1/2 non medical staff			1 / 20 staff
- Visitors	Greater of 1/5 total staff at peak or 1/3 beds			1 / 20 visitors
Medical Centres and Consulting Rooms	2 / effective full time doctors		To meet needs	1 / 5 doctors
Nursing/Convalescent Homes - refer to Residential				
CHILD EDUCATION & CARE				
Child Care Centres	1/4 staff + 1/8 children for parents drop-off and pick-up (on-street considered)		To meet needs	1 / 10 staff
Primary Schools	1/2 staff for staff + 1/4 staff for parents drop-off and pick-up (on-street considered)	To meet needs	To meet needs	1 / 10 staff and 1 / 10 students over year 4
Secondary Schools	1/2 staff	To meet needs	To meet needs	1 / 10 staff and students
ADULT EDUCATION & ENLIGHTENMENT				
Art Galleries	1/200 sq.m GFA		To meet needs	1 / 200 sq.m GFA
Entertainment				
Theatres, libraries, art galleries, sports centres, entertainment centres			3 - 4 percent (see Note 1)	

Extract from WWW.SHF.ORG.AU/WHERE/WHERE2.html

Transport details to Heritage Docks & Workshop, James Craig Rd, Rozelle Bay:

(Sydney Harbour Secrets, Lady Hopetoun, Waratah, Boomerang, Protex, Kanangra, John Oxley) (links give details, routes, timetables)

- [Bus](#) from QVB - near Town Hall, (alight Victoria Rd near Lilyfield Rd - search Route 441 or 442) + short walk (5 min)
- [Light Rail](#) from Central Station (alight Rozelle Bay) + short walk (5 min)
- Taxi
- Self drive - some parking available in areas off James Craig Drive a short walk from the shipyard.

Town Hall and Central are stations on the [Sydney Rail Network](#).

Last modified on Friday, 01-Mar-2013 14:34:59 EST

ANNEXURE C:

PROPOSED SHF BANK STREET SITE ACCESS FOR VOLUNTEERS AND VISITORS

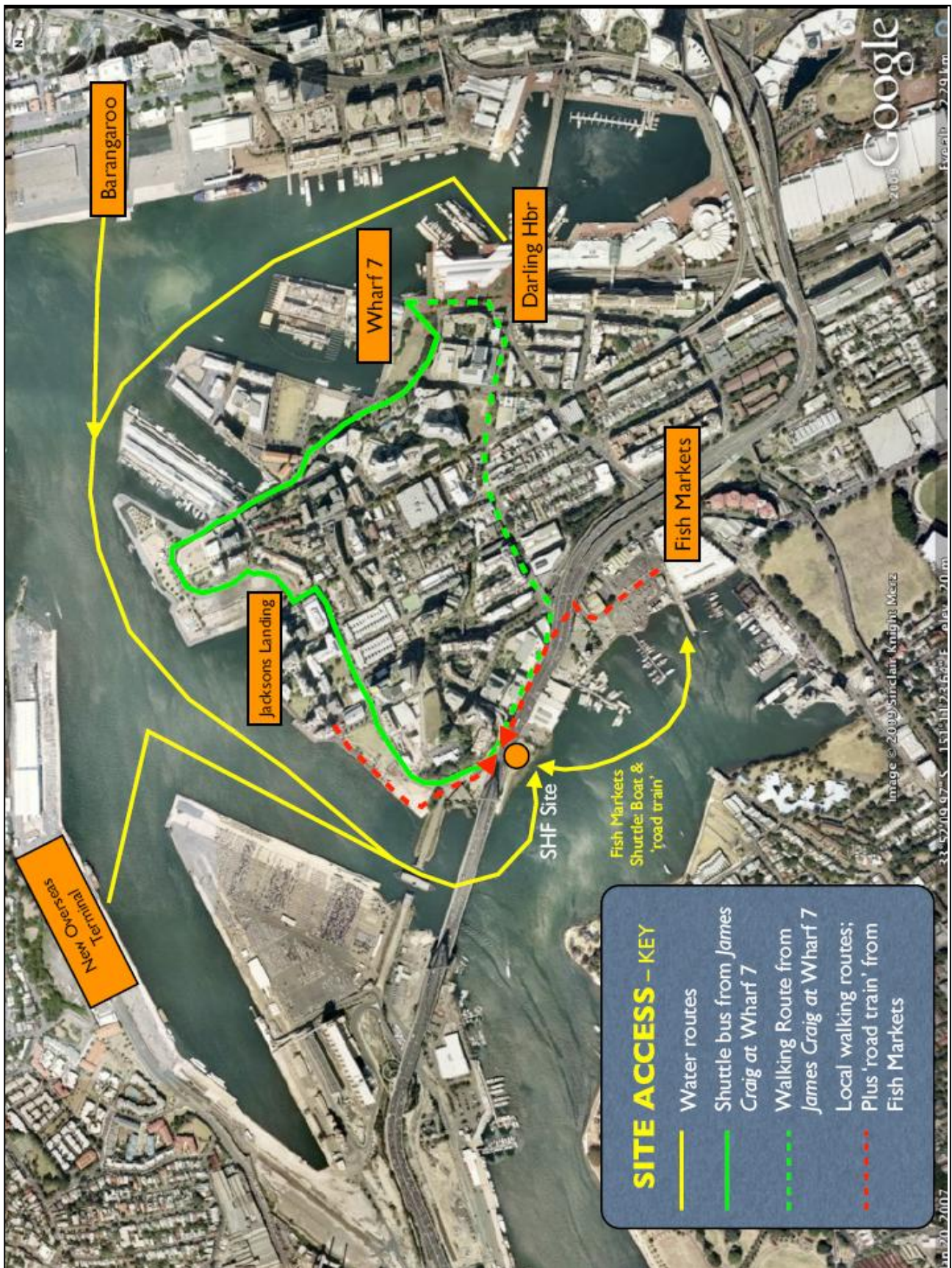
1: PUBLIC ACCESS

- 1.1: Sydney Heritage Fleet will encourage public visitation by public transport and details will be included in all references to the site whether on the Fleet's website, in printed or Fleet promotional material. Public walk-up visitation is anticipated to be low in numbers.
- 1.2: SHF will actively promote group tours to Bank Street and these will involve groups arriving by (a) water in one of the Fleet's own vessels, or (b) coach where the coach will unload inside the purpose-built drive-through access to the site. Groups will usually commence their tour either by water or by coach at Darling Harbour at the Australian National Maritime Museum site. The Fleet currently successfully promotes and manages group tours to its existing sites.

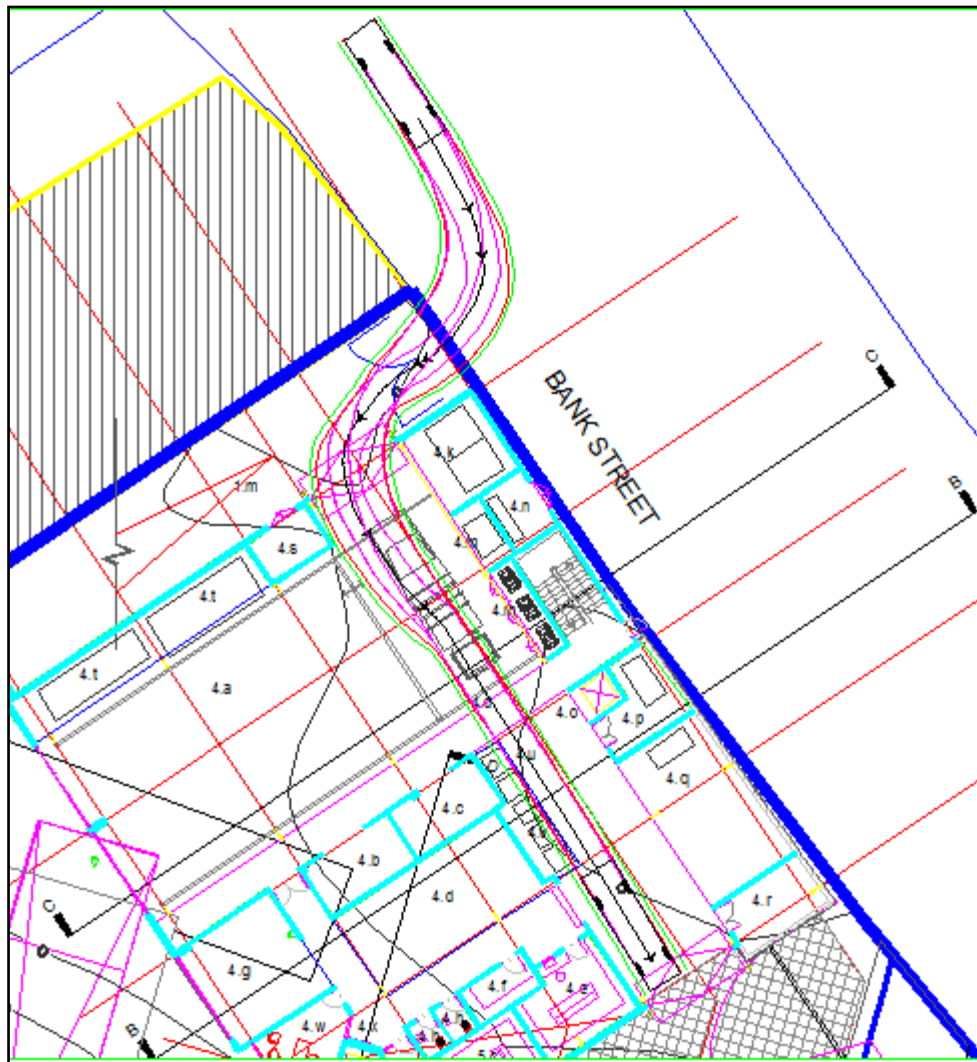
2: SHF VOLUNTEER ACCESS

- 2.1: As for the Fleet's existing Darling Harbour site, where parking is limited to expensive nearby parking stations, public transport access to Bank Street will be encouraged whenever possible for the volunteers who will operate from the site. As the Bank Street site is for operational vessels and no longer includes a restoration and maintenance facility, volunteer numbers will be restricted to operational vessel crews.
- 2.2: If all vessels were operated at once - a very rare occurrence - the total volunteer numbers on the site at any one time would total approximately 30-35.
- 2.3: To aid volunteers for whom direct public transport routes to Bank Street are not convenient, the SHF will operate a shuttle service using one of its own small work boats, picking up from such wharves as Darling Harbour, Balmain, Rozelle Bay, the Fish Market and any other location where a significant number of volunteer users justifies a pick-up. This shuttle service technique is well tried and was used successfully for many years at Goat and Cockatoo Islands when they were fully operational.
- 2.4: SHF members have been made aware, as part of SHF planning, of the proposed transport arrangements which will prevail at Bank Street.

ANNEXURE D: PLANNED FERRY SERVICES TO SHF SITE



ANNEXURE E: 7m LONG MINI-BUS SWEEP PATH TESTS (Sheet 1 of 3)



MINI-BUS RIGHT TURN INTO DRIVE WAY/LOADING AREA

1 movement, successful

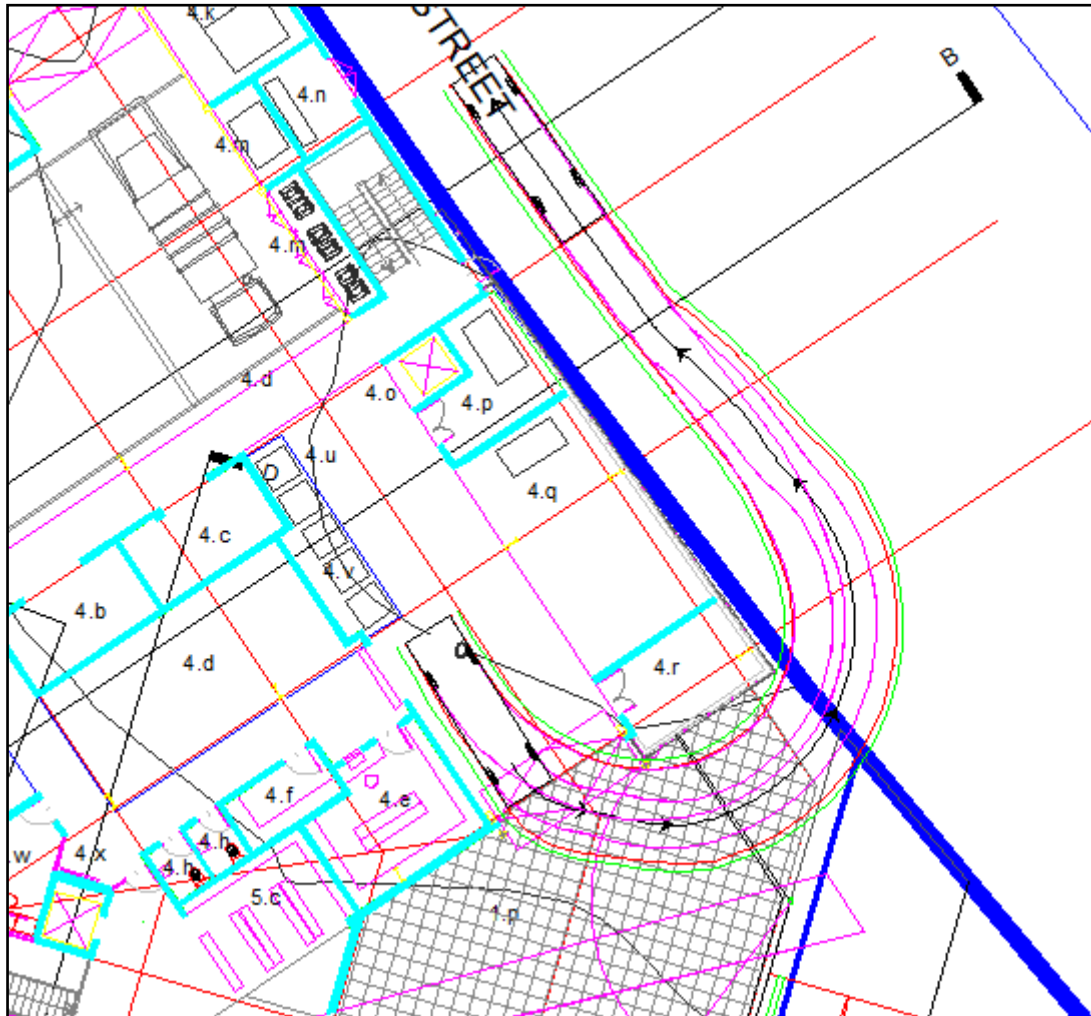
3km/h

Magenta – Wheels

Red – Vehicle body

Green – 300mm clearance

ANNEXURE E: 7m LONG MINI-BUS SWEEP PATH TESTS (Sheet 2 of 3)



MINI-BUS LEFT TURN OUT OF LOADING AREA

1 movement, successful

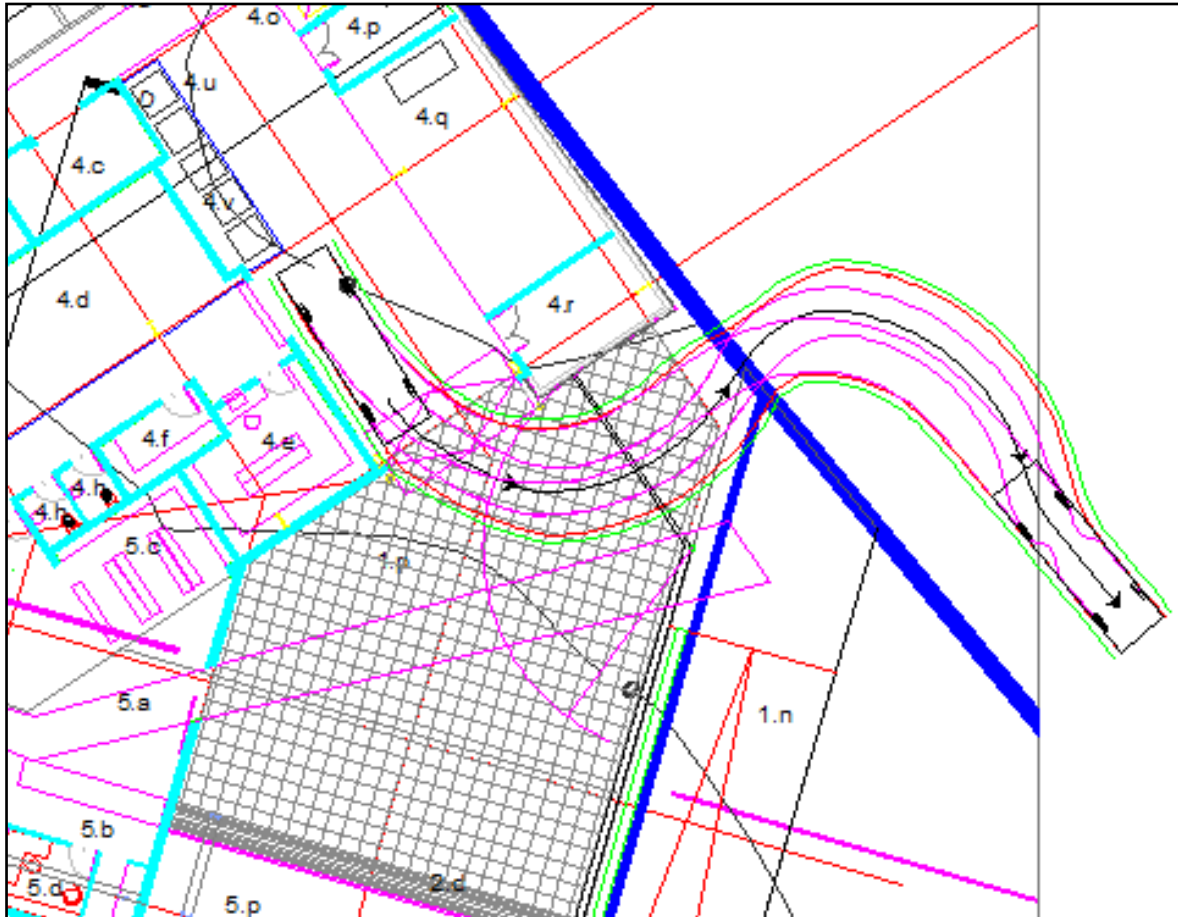
3km/h

Magenta – Wheels

Red – Vehicle body

Green – 300mm clearance

ANNEXURE E: 7m LONG MINI-BUS SWEEP PATH TESTS (Sheet 3 of 3)



MINI-BUS RIGHT TURN OUT OF LOADING AREA

1 movement, successful

3km/h

Magenta – Wheels

Red – Vehicle body

Green – 300mm clearance