Sydney Harbour Federation Trust

Platypus renewal project: Opening the site for public access

Transport Assessment

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Executive Summary

In December 2016 the Sydney Harbour Federation Trust (the Harbour Trust) adopted a statutory Management Plan for Platypus. The Management Plan proposes to reactivate the site through the provision of public open space, and adaptation of buildings for a range of cultural, recreational, community and commercial uses.

The Harbour Trust has commissioned Arup to undertake a transport assessment of the Harbour Trust's proposed works aimed at implementing a significant part of the Management Plan's plan vision for the site. The works involve opening up the site to public access including use as a place of passive recreation. The focus of the works to be undertaken in this Renewal Project is:

- Kesterton Park Link
- New stairway link from Northern Park to the upper level
- Landscaping improvements to the Northern Park
- Public domain improvements
- Access improvements including construction of a new lift between the Upper and Lower Levels of Platypus
- Refurbishment of selected buildings to enable future reuse
- Road safety improvements for vehicles and pedestrians to Kiara Close

The proposal will be assessed by the Harbour Trust under the Harbour Trust's planning framework. The Harbour Trust's assessment will be informed by this Transport Assessment.

In August 2016, Arup prepared a Draft Transport and Access Management Plan (TAMP) as a main supporting study for the Platypus Management Plan to guide the future development and reuse of the site. The TAMP investigated potential impacts for a variety of uses once the site is fully functional and proposes ways to avoid, mitigate and manage potential transport-related impacts and issues.

This Transport Assessment focuses on the opening of the site for public access for passive recreation only. It provides a review of the existing site and locality conditions and it provides an assessment of the potential impacts and issues associated with the re-opening of the site for public access and how these will be managed. Further assessment will be required once buildings are reoccupied for future new uses as indicated in the Platypus Management Plan.

A separate Construction Traffic Management Plan has also been prepared to consider the management of potential impacts during works.

1 Introduction

Sydney Harbour Federation Trust has commissioned Arup to undertake a transport assessment of the Harbour Trust's renewal of the former HMAS Platypus site in North Sydney (Platypus), which will involve opening up the site to public access.

In August 2016, Arup prepared a Draft Transport and Access Management Plan (TAMP) as a main supporting study for the Platypus Management Plan to guide the future development and reuse of the site. This TAMP examined ways to avoid, mitigate and manage potential transport-related impacts and issues, once the site is opened to the public and buildings are reoccupied for new uses.

This transport assessment focuses on the opening of the site for public access for passive recreation only. It provides a review of the existing site and locality conditions and it provides an assessment of the potential impacts and issues associated with the re-opening of the site for public access and how these will be managed in accordance with the TAMP.

1.1 Opening the site for public access

The Harbour Trust is now working towards implementing key elements of the Plan. The initial focus is to undertake the following works to enable public access to be provided to as much of the site as soon as possible:

- Kesterton Park Link
- New stairway link from Northern Park to the upper level
- Landscaping improvements to the Northern Park
- Public domain improvements
- Access improvements including construction of a new lift between the Upper and Lower Levels of Platypus
- Refurbishment of selected buildings to enable future reuse
- Road safety improvements for vehicles and pedestrians to Kiara Close

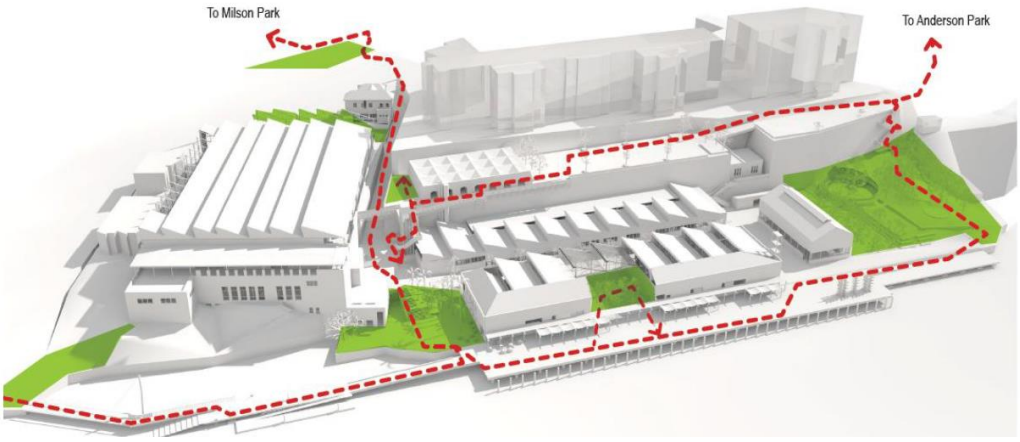


Figure 1: Overall accessibility

Further details of the proposed works can be found in the Schematic Design Documentation – Platypus Renewal Project, prepared by Aspect Studios and Lahznimmo Architects, dated July 2017.

1.2 Background

Platypus is a waterfront site located on the foreshore of Neutral Bay. Operating as a gasworks from 1876 to the mid 1930s, the North Shore Gas Company supplied gas to local authorities for street lighting and to the residents and businesses of the North Shore of Sydney for home and business use.

As part of the war effort, the Commonwealth Government resumed a portion of the site in 1942 to establish a torpedo manufacturing and maintenance facility as well as a facility for servicing the naval vessels of the Pacific Fleet.

In 1967 the site was named 'HMAS Platypus' when it was commissioned as the eastern seaboard base for the Australian Navy's six Oberon Class submarines. This facility was closed in 1998.

The site is currently vacant and remediation works commenced in 2010, and were completed in 2016. The Harbour Trust's vision is to create a revitalised urban park on the foreshore which would be open to the public.

- The Commonwealth Government is providing $20 million in funding towards the Platypus Renewal Project with an additional $3.8 million provided by the Harbour Trust. These funds will allow a significant part of the Management Plan vision to be realised. This vision will be progressively implemented as further funding becomes available.
- The first stage of the renewal project will be to improve access to the site; create new open spaces; refurbish a selection of buildings; and improve the public presentation of the site.
- Works are scheduled to start in the second half of 2017 and are estimated to take approximately 2 years to complete. Where possible the Harbour Trust will endeavour to open parts of the site to the public as works are progressively completed.

The Harbour Trust's approach is to utilise and build on the existing efficient public transport around the site, to facilitate travel by modes other than cars. Part of the strategy is to find a balanced mix of uses that fits within the constraints of the site and locality. An artist's impression of the completed Platypus site showing parks; the shortened wharf; a walkway to Kesterton Park; and buildings adaptively re-used is shown in Figure 2.

Figure 2: Artists impression of the complete Platypus site

Source: http://www.harbourtrust.gov.au/

1.3 Draft Transport and Access Management Plan

In August 2016, Arup prepared a Draft Transport and Access Management Plan (TAMP) as a main supporting study for the Management Plan to guide development and reuse of the site as a whole. The elements of the TMP that are relevant to the opening of the site for public access are:

- Several initiatives to improve walking accessibility to the site are discussed. These initiatives would improve connectivity, travel times and encourage active transport to the site. Walking distance is envisaged to reduce from 850 metres to 600 metres, from Milsons Point Station, with the most significant change being pedestrians using Milson Park to get to the site through improved gateways and wayfinding.
- With the significant reduction in walking distance (8 to 10 minutes walking time) and increased amenity of the pedestrian route through parks, the site would be highly accessible through walking. Walking would be the major component, and a sustainable means of transportation to the site. These works should be initiated by North Sydney Council and the Trust should work closely with Council to ensure that a budget for the works is included in forward works programs.
- It is proposed that a form of parking fee be implemented at times. A pre-booking system should be investigated to control the amount of traffic generated by the site.
- The anticipated levels of traffic generated by the uses on the site will be noticeable on the local road system due to the existing low level of traffic flow. However, the additional traffic will not increase traffic above the environmental capacity of a local street of 200-300 vehicles per hour. A detailed assessment of key intersections would need to be assessed at later stages, as the site is gradually re-occupied. (It should be noted that this relates particularly to when buildings are re-occupied for new uses, which is not considered at this stage).

- A mix of public and active transport improvements and parking fees are required to encourage travel by means other than cars, provide an efficient mode share of transport to the site and create an efficient use of on-site parking. With all the initiatives implemented, development of the site would be feasible and would be able to contain a large proportion of the parking on site.

This transport assessment focuses on the opening of the site for public access for passive recreation only. It provides a review of the existing site and locality conditions and it provides an assessment of the potential impacts and issues associated with the re-opening of the site for public access and how these will be managed in accordance with the 2016 TAMP.

1.4 Site location

The former HMAS Platypus site in Neutral Bay (the site), is 1km from North Sydney CBD and 4km from Sydney CBD. It is located within the vicinity of two Train Stations, a ferry wharf and several bus stops. The site is located off High Street, which has unrestricted on-street parking along certain sections. On-site parking availability is however limited. The location is illustrated in Figure 3.

Figure 3: Former HMAS Platypus site location

2 Existing conditions

This chapter summarises the existing conditions surrounding the site. More detailed analysis can be found in the Draft Transport and Access Management Plan, produced by Arup on 10 August 2016.

2.1 Pedestrian access

Pedestrian access to the site, with opportunities for improvement, is illustrated in Figure 4.

A network of footpaths and pedestrian crossings/traffic lights link the site to North Sydney and Milsons Point stations, however there is some disconnect between key links. This lack of permeability means there are opportunities to improve walking conditions to the site.

The Kiara Close access road has very narrow pedestrian footpaths which do not extend through to the site access point. Kiara Close is a private road however there is a public right of way to Platypus which also enables North Sydney Council to manage and maintain the street.

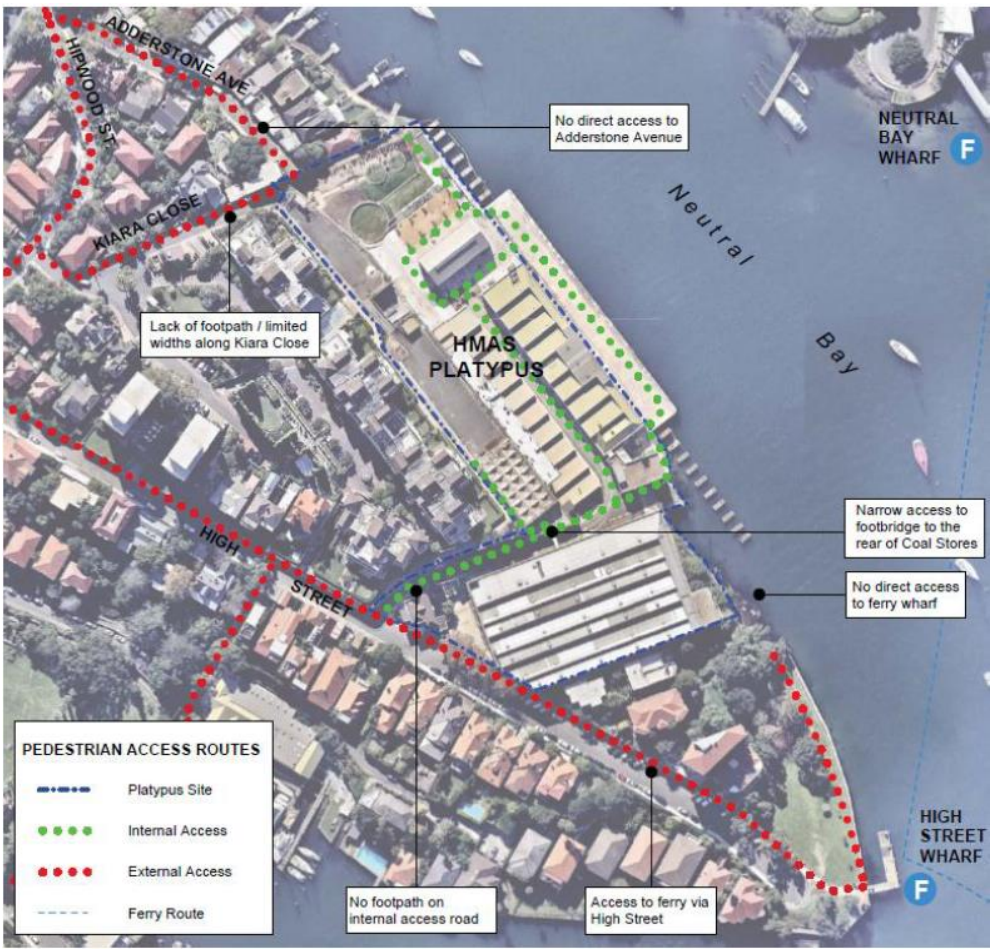


Figure 4: Existing pedestrian conditions

Source: Platypus Management Plan 2016

2.2 Cycling

An upgraded cycle route along Clarke Road and Broughton Street is in the planning and concept development stage with North Sydney Council. Council is currently working with the NSW State Government to deliver this new cycleway connection between Sydney Harbour Bridge and Neutral Bay (Route 2). These sections of the cycle route have yet to be approved for construction.

2.3 Public transport

Platypus is located in close proximity to a range of public transport services, including bus, train and ferry. Services operate every day.

2.3.1 Train services

The site is located less than 1km (walk) from North Sydney Train Station or 850 metres (walk) from Milsons Point Station. Both train stations serve the T1 North Shore line, which has high service frequencies during peak hours. Trains operate approximately every 4 minutes during both morning and evening peak periods.

2.3.2 Bus services

Existing bus routes to the site operate with an average frequency of 20 minutes. Bus stops along Clark Road, near High Street, are located some 350 metres from the site. Route 263 runs between Circular Quay and Crows Nest via Neutral Bay every day. Route 269 runs a loop service between Kirribilli and McMahons Point on weekdays.

2.3.3 Ferry services

North Sydney Wharf, located along Kesterton Park, provides ferry services to Circular Quay. The wharf is located less than 250 metres from the existing site entrance and can be easily accessed along High Street. There is no existing foreshore pedestrian access between Kesterton Park and Platypus.

Travel times from the site to Circular Quay are approximately 15 minutes and conversely 10 minutes from Circular Quay.

2.3.4 Key findings of existing public transport

Overall, the public transport accessibility to the site is good during the peaks and daytime but reduces in the evening. Key findings of existing public transport infrastructure include:

- Buses run every 20 minutes within 500m of the site. Whilst they serve the local area, they also connect with Milsons Point Station and Route 263 connects through to the Sydney CBD. Buses operate every day.
- Trains arrive frequently at North Sydney Station, located less than 1 km from the site, via High Street. This route is clear, evident and mostly flat.

- Trains arrive frequently at Milsons Point Station, however the train station is located 850 metres from the site. The distance, disconnect between key links, a lack of permeability and wayfinding means walking conditions to the site poor.
- Ferry services provide a convenient mode of transport to the site, with quick travel times to Circular Quay from the site. Passengers are able to transfer to other modes of transport at Circular Quay.
- The site is efficiently accessible via several modes of public transport which would encourage usage away from private vehicles.

Figure 5: Existing public transport around the site

The proposed opening of the site to public access would not affect existing public transport operations. The increased demand for public transport generated by the site is expected to be accommodated on existing services.

2.4 Vehicle access

Vehicle access to the site's High Street entry is relatively direct from the main road system with High Street connecting with the Sydney Harbour Bridge ramps and with Pacific Highway into North Sydney.

Access to the upper level car park via Kiara Close is less direct, making navigation less visible for visitors unfamiliar with the area.

Southbound vehicles access the site off Warringah Freeway by taking the Alfred Street off ramps. Northbound vehicles exit the Bradfield Highway via the High Street / Mount Street exits. Alternatively, vehicles may take the Pacific Highway or local roads.

High Street is approximately 500 metre in length and a no through road. It provides access between the site and the Ferry Wharf. A cul-de-sac, 13 metres in diameter, can be found at the end of High Street, allowing cars to make a reverse manoeuvre. Time and unrestricted on-street parking is provided on both sides of the street. Site entries for pedestrians, cyclists and vehicles are found along High Street and via Kiara Close. These routes are illustrated in Figure 6.

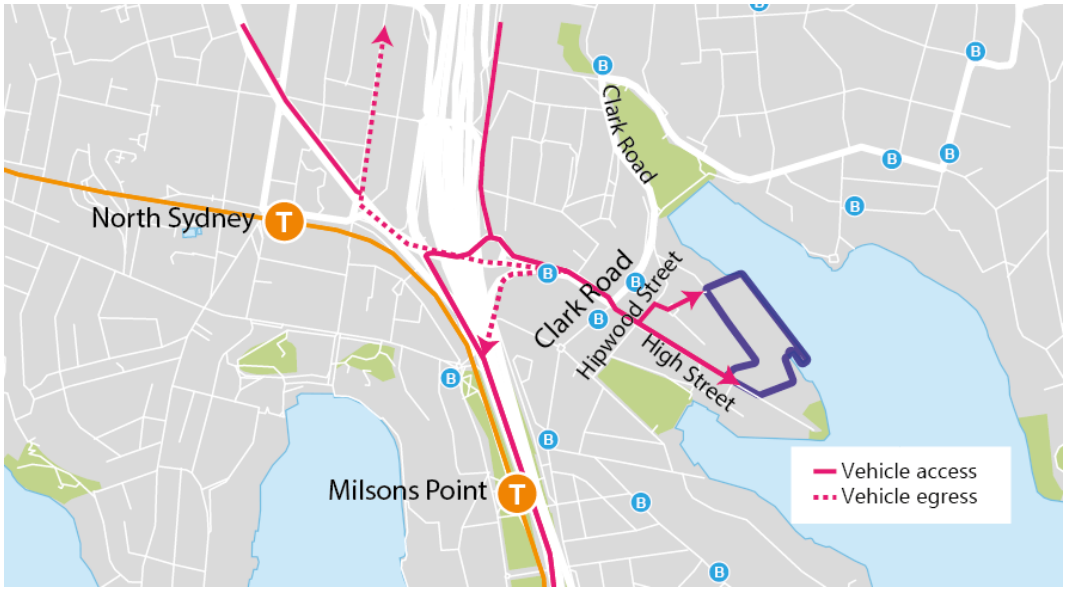


Figure 6: Vehicle access and egress to site

The vehicle site access roads and the internal roads are shown in Photo 1.

Hipwood Street looking south at Kiara Close

Kiara Close looking east from Hipwood Street

Kiara Close looking north

Main site access looking north from High Street

Internal road

Internal road

Photo 1: External connections and internal vehicle access roads

2.5 Existing traffic volumes/speeds/composition

Arup commissioned Matrix to carry out seven day tube counts to assess the traffic volumes, speeds and composition near the site, with the locations of the survey shown in Figure 7.

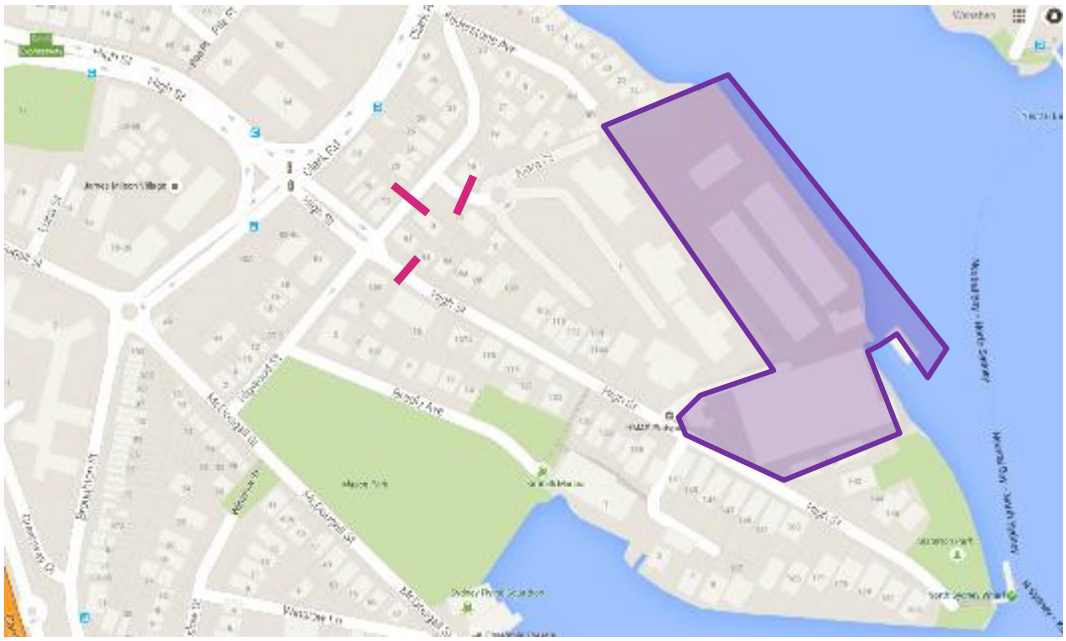


Figure 7: Seven day tube count locations

Key findings of the survey included:

- Peak hourly volumes were found to be on weekdays during 8am – 9am and 5pm – 6pm on all the streets. Peaks in the morning and afternoon had the same amount of traffic, indicating the roads are mainly used by residents or commuters.
- Kiara Close had a peak traffic volume of 45 vehicles per hour, 85% speed of 19 km/hr and no medium sized trucks
- High Street had a peak traffic volume of 60 vehicles per hour, 85% speed of 38 km/hr and 7% medium sized trucks
- Hipwood Street had a peak traffic volume of 53 vehicles per hour and 85% speed of 22 km/hr and 5% medium sized trucks

Overall the streets have low traffic volumes, low vehicle speeds, no large trucks and operate efficiently with minimal or no delay.

The environmental capacity of streets is determined by a number of factors; the traffic volume, vehicle speed and proportion of heavy vehicles. The Roads and Maritime Services Guide to Traffic Generating Developments provides the criteria to be used to determine the environmental capacity performance. For local streets, a maximum vehicle speed of 40km/hr and a maximum peak hour volume of 300 vehicles is usually applied with a target environmental goal of 200 vehicles per hour. On this basis, all access roads currently operate well within the environmental capacity of the local street classification.

2.6 On-street parking

2.6.1 Parking Surveys

Arup conducted parking occupancy surveys of the surrounding streets, to gain an understanding of the existing occupancy and capacity. The area surveyed was bounded by Adderstone Avenue, Clark Road and McDougall Street and contained 133 parking spaces. Occupancy rates were calculated every 15 minutes over the hour. The surveys were undertaken on the following days:

- Evening – Tuesday 22nd March 2016 (6-7pm)
- Midday – Friday 10th of March 2016 (1-2pm)
- Weekend – Sunday 20th March 2016 (2-3pm)

The surrounding streets in the study area had the following parking restrictions:

- 1P, 8.30am to 10pm, Monday to Sunday, Permit Holders Excepted (Area 2)
- 2P, 8.30am to 10pm, Monday to Sunday, Permit Holders Excepted (Area 2)
- 1/2 P
- Unrestricted parking

Unrestricted parking adjacent to the site, along High Street, was found to be close to capacity (Photo 2). These are likely used by commuters using the ferry or walking to North Sydney CBD. A proportion of the other spaces are likely utilised by residents, visitors to the nearby Marina and Milson Park.

Photo 2: Unrestricted parking on High Street, taken on a Thursday 12pm

2.6.2 Occupancy

The on-street parking surrounding the site is utilised to varying levels of occupancy depending on the type of control in place. Generally the unrestricted spaces are the most heavily utilised with over 80% occupancy. The 1-hour and 2-hour restricted car spaces have greater levels of availability on all days except Sunday when the 1 hour spaces were heavily occupied.

The significantly higher occupancy on the weekend for the restricted parking spaces was likely due to recreational use of the area by visitors and tourists.

Unrestricted parking was found to be close to capacity during the weekdays, suggesting residents or commuters are using the spaces for long term parking.

The data indicates that existing on-street parking can offer some overflow parking from the site at peak times. There were between 21 and 30 (16% to 22%) unoccupied spaces in the area on different days.

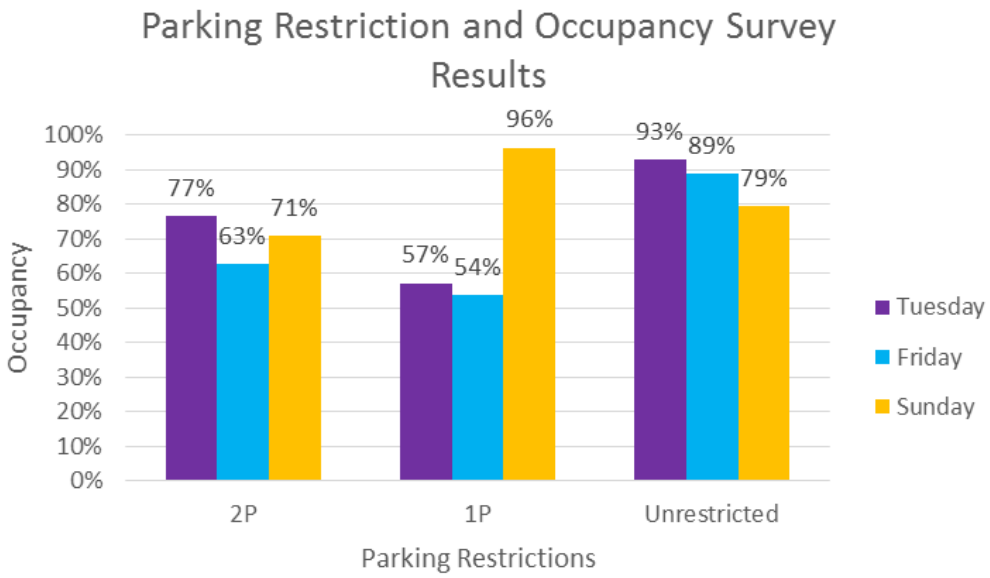


Figure 8 Parking restriction and occupancy survey results

2.6.3 Resident permit holder car parking occupancy

The number of spaces occupied by resident permit holders was observed and is shown in Figure 9. On Sunday there were 32 resident permit holders parked and on Tuesday and Friday this increased to 38 resident permit holders parked. There may be additional resident vehicles parked in the unrestricted spaces which do not have a resident permit. Given the nature of resident and commuter parking, the turnover of these unrestricted spaces are relatively low.

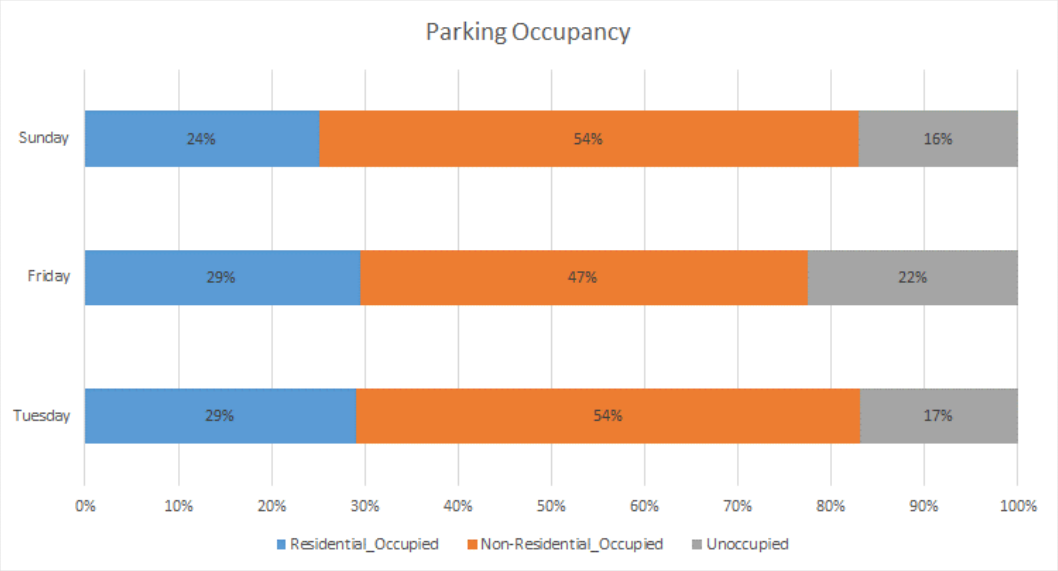


Figure 9: Overall usage of on-street car parking by user type

2.6.4 Turnover

The turnover of spaces was observed to match very closely the time restrictions given that the area is predominantly residential which does not generate high turnover associated with retail and business areas.

The restricted parking areas had resident parking exemptions. Cars parked with resident permits had a low level of turnover with the other cars generally parked for the length of stay permitted.

More detailed results can be found in the Draft Transport and Access Management Plan (TAMP), produced by Arup on 10 August 2016.

Figure 10: Parking restrictions and capacity

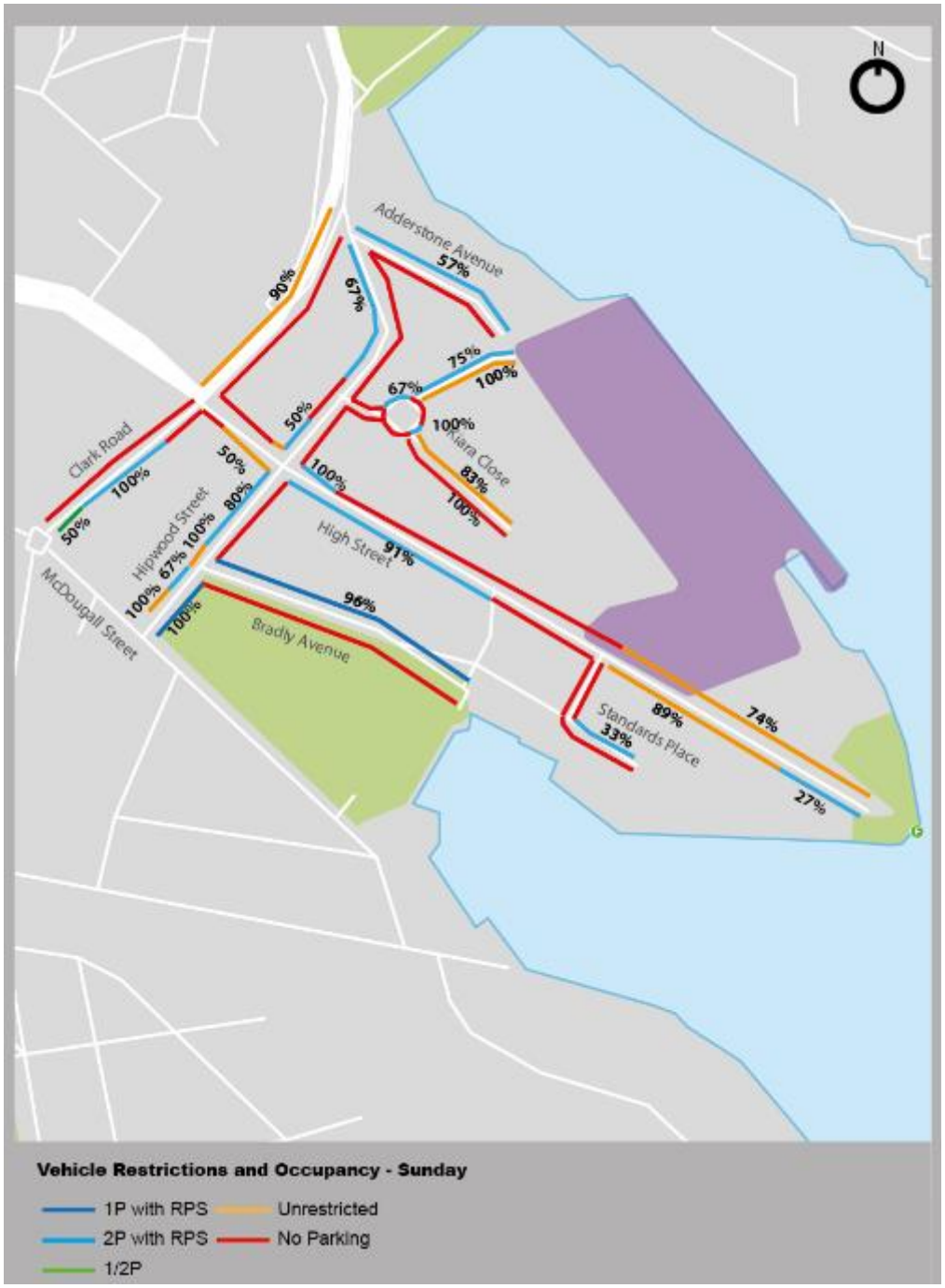


Figure 11: Parking occupancy on Sunday 20th March 2pm to 3pm

3 Potential Visitation

This section looks at potential visitation to Platypus once the site is opened for public access. As previously mentioned, the proposed works are aimed at providing the public with safe access to and through the site and use for passive recreation.

3.1 Estimated number of visitors

The proposed works will create a new open space, however buildings will remain unoccupied. It is expected that once opened the site would be more attractive to local residents rather than a wider catchment. As local residents, a majority of these visitors are expected to walk to the site. The smaller proportion of visitors who live outside the walking catchment would likely be inclined to drive or use public transport to get to the site.

Platypus is well situated to take advantage of its proximity to walking and cycling networks and public transport facilities (bus, train and ferry). These modes provide viable access to the site to minimise private car use.

This section of the report estimates the level of visitation to Platypus that the proposal will generate. It also examines the likely modal split for visitors, and the peak times for visitation.

3.1.1 Number of visitors

It could be expected that the grassed area will attract visitors to stop and dwell whereas the plaza and wharf spaces are suitable for walking through with limited opportunities for seating. Typical visitor activity would include dog walking, walking through the site as part of a longer walk, picnics or gatherings on the grass, children playing, etc.

An estimate of the potential maximum number of visitors at a busy weekend time could be 50 people seated on the grass, 30 people gathered on the paved areas and 20 people walking through the site. This is 100 people at any one time.

It could be expected that there will be a greater level of interest in the first weeks of opening of the public space, predominantly by local residents, who will be keen to explore the new facility. This is likely to settle down after the first month.

3.1.2 Mode share of visitors to the park

With a peak visitor rate of 100 people at any one time, the estimated travel mode splits are shown in Figure 12. A majority of the visitors will be by local residents who will walk or cycle. With improved accessibility from the ferry wharf via Kesterton Park Link, a proportion of the visitors would use the ferry. Private vehicle users are expected to consist of 20%.

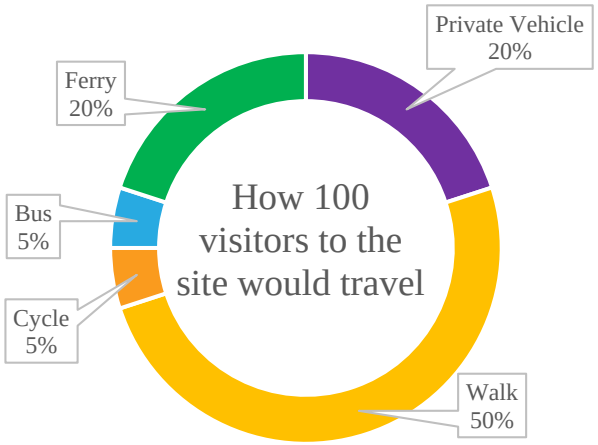


Figure 12: Estimated mode share of visitors to the site

3.1.3 Cars

With the majority of these visitors being local residents walking into the site, we assume 20% may arrive by private car with 2 people per car. This generates the need for 10 car parking spaces, which is within the range of the observed peak parking occupancy at Ballast Point Park, Birchgrove which has some similarities to Platypus, as discussed later in section 3.2.

The required 10 car spaces can easily be accommodated on-site within the car park off High Street, discussed later in section 4.4. As such, existing on-street parking would not be affected by the proposal.

Further to this, the Former HMAS Platypus TAMP prepared by Arup in 2016 assessed traffic volumes for 50 to 100 vehicles entering and leaving the site within the same hour. The findings of the study concluded that while the increase in traffic will be noticeable, local streets will be well within the environmental capacity of a local street of 200-300 vehicles per hour. It is therefore considered that opening up the site for public access will not detrimentally affect local traffic and parking supply.

3.2 Ballast Point Park comparison

Ballast Point Park, Birchgrove offers some insights into visitation levels at a new park on the harbour.

Ballast Point Park is located along Ballast Point Road, Birchgrove, fronting Snails Bay, with the nearest Balmain Ferry Wharf located 800 metres away. Ballast Point Park was converted from an industrial estate and is located at the end of a peninsular. Unlike Platypus, Ballast Point Park does not have remnant buildings, but in terms of its use as public open space it makes for a suitable comparison to the Platypus site for the purposes of this assessment.

While the historical and geographical aspects of both parks are similar, Ballast Point Park however has a much lower public transport accessibility level when compared to the Platypus Site. There are no train stations within walking distance, with the primary mode of transport being private vehicles.

As such it is expected that Ballast Point Park would attract local residents and visitors arriving predominantly by private vehicles. However the comparison would provide us with an understanding of the vehicle generation rates to such parks and open spaces

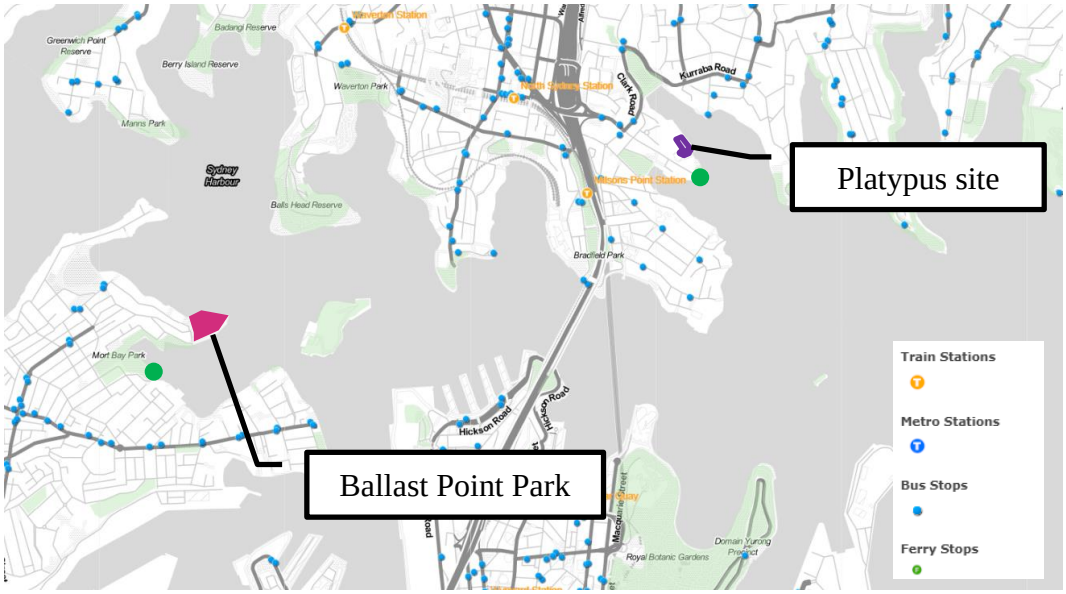


Figure 13: Compared to Platypus, Ballast Point Park has low public transport accessibility

A comparison of the key factors to Ballast Point Park and Platypus is shown in Table 1. Platypus has a total site area of 1.8 hectares composed partly of open space and partly of buildings. Ballast Point Park has 2.6 Hectares. This means that Platypus will have less area available for passive recreational use. When compared to Ballast Point Park. As such, visitor numbers to the Platypus Site as a result of the proposed works would not be expected to attract significantly more visitors than Ballast Point Park currently does.

Table 1: Comparison of parks

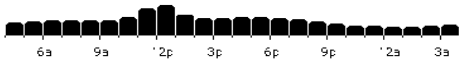
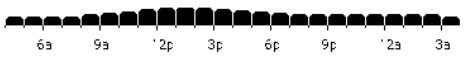
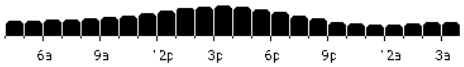
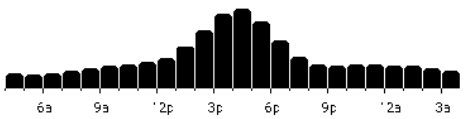
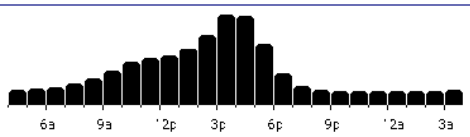
Issue	Ballast Point	Platypus
Total Site area of park for use as passive recreation (approx.)	26,000 m^2 (generally open space)	18,000m^2 (comprising of open space + buildings)
Proposed uses	Five precincts for predominantly passive recreation including mobile coffee kiosk, amenities blocks and children's play area. Interpretive elements, planting and shade structures will be provided.	Urban park for predominantly passive recreation including public amenities and children's play area. Interpretive elements, planting and shade structures will be provided
Existing Road Network	Predominantly residential Constrained	Predominantly residential Constrained
Existing Pedestrian Access	Public access to site was prohibited prior to opening of park. Mort Bay Park provides potential foreshore promenade access for pedestrians and cyclists and links from the site to public ferry services at Thames Street Wharf.	Public access to site was prohibited prior to opening of park. Kesterton Park link will provide access for pedestrians and cyclists to public ferry services at High Street Ferry Wharf.
Public Transport	Reasonable level of ferry services, and a good level of bus services, within some 400 to 500 metres of the Site.	Good level of bus and ferry services within some 400 to 500 metres of the Site. Good level of train services within 1 km of the Site.
Carparking	There are presently 15 car parking spaces along the Wharf Road edge of the site. The Transport Review undertaken for the Masterplan identified comparable Harbour foreshore passive recreation areas have 20 – 30 spaces.	Carspaces on High Street and surrounding local streets. Parking for up to 30 vehicles identified in RANTME Factory Building.
Water Access	Small wharf located just outside of the site, at the end of Yeend Street. Proposed provision of new or refurbished water based access points to Ballast Point Park	Existing High Street wharf located close to the site. Proposed Kesterton Park Link, including pontoon and kayak steps.
Surrounding land uses/ environment	Located within a relatively dense residential environment with additional greenspace located close by	Located within a dense residential environment with additional greenspace located close by

3.2.1 Ballast Point current visitation

Google maps provides an indication of the number of visits to Ballast Point Park based on GPS data. This will provide an indication of the busiest period for a park.

The daily profile is shown in Table 2 and shows the busiest period being Saturdays and Sundays at 5pm. It should be noted that the below data is based on an estimated arrival profile and it does not provide the number of visitors to the area. From this profile, the busiest parking period can be assessed.

Table 2: Visitation profile of Ballast Point Park, Google Maps 2017

Day	Visitation profile (viewed on 11 July 2017) Y axis – % of peak visitation X axis – time of day
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

Unrestricted parking with 18 spaces is provided along Ronald Street. Given the busiest visitation period to the Ballast Point Park is during the Saturday period, satellite imagery of a Saturday peak and off-peak period for the year 2017 is shown in Figure 14 and Figure 15 respectively.

This provides an understanding of the current peak utilisation during the busiest periods. The Saturday peak had an occupancy of 12 spaces, with six being unoccupied.

As seen from the images, parking during peak Saturday periods does not exceed available capacity, with additional on-street parking still available. This suggests the level of visitation at parks with this geographical and historical profile are likely to generate and attract local residents to the site.

Figure 14: Saturday peak parking with 6 unoccupied angled parking spaces

Figure 15: Saturday off-peak parking with 13 unoccupied angled parking spaces

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3.2.2 Conclusion of Ballast Point comparison

As has been noted from this comparison of Ballast Point with Platypus that there are a number of similarities that can be drawn between the sites' context and transport access constraints and opportunities.

Ballast Point only provides 18 car spaces to service the requirements of visitors to the park and to date this has been deemed sufficient.

It is anticipated that the use of Platypus for passive recreational use would not be dissimilar, in that it would predominantly be used by local residents and on weekends.

What is a key consideration and point of difference between the two parks is that Platypus is located less than 1km (walk) from North Sydney Train Station or 850 metres (walk) from Milsons Point Station. This coupled with the facts that the area of open space is much smaller than Ballast Point and the greater parking availability for general public use means Platypus would have sufficient parking capacity to meet demand generated by passive recreation use of the site.

4 Site Management for Public Access

This section of the report describes how the site will be managed when Platypus is opened for passive recreational purposes. It discusses the proposed access improvements, provides commentary on potential impacts on traffic and transport, and makes recommendations to improve arrangements.

The Harbour Trust anticipates that these upgrades would improve the accessibility of the site and encourage walking, cycling and public transport (buses, trains and ferries) as viable modes of transport to the site.

The proposal involves public domain improvements and new connections to adjoining land. Wayfinding and accessibility improvement works will enable the site to be opened to the public as a park. These works will improve accessibility to the site through walking, cycling and public transport, discussed in section 4.1 and 4.2.

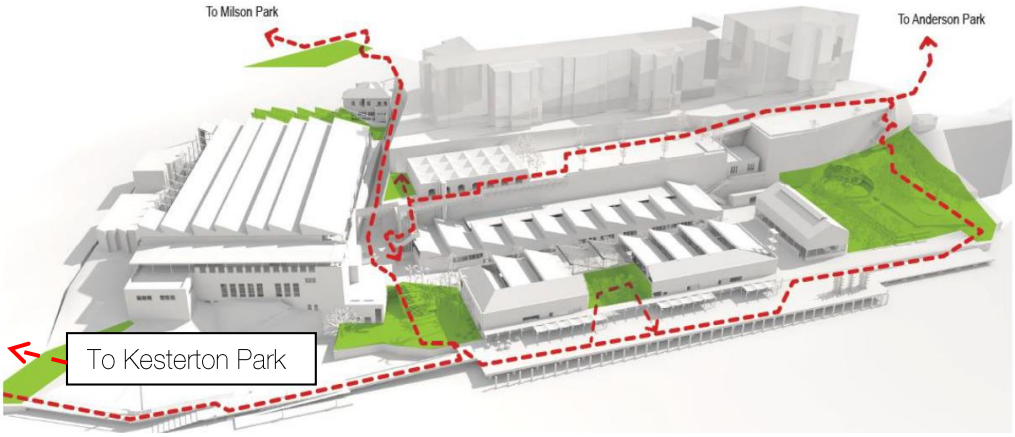


Figure 16: Overall accessibility

4.1 Access

A number of access improvements are proposed to provide the public with safe access to and within the site.

Various pedestrian access improvements are proposed including the construction of the Kesterton Park Link and other general access improvements to allow public access to different levels of the site (of which many will make the site accessible to persons with mobility issues).

A number of vehicular access improvements are also proposed comprising of improvements to the upper level car park including a shared zone along Kiara Close.

4.1.1 Kesterton Park Link

Pedestrian accessibility between the North Sydney Ferry Wharf and the site will be greatly enhanced through the completion of the Kesterton Park Link. Existing routes currently require pedestrians to walk along High Street from the wharf which has a steep gradient that is less ideal for wheelchairs and prams.

The Kesterton Park Link will be accessible via wheelchairs and prams and provides a direct and unique path from the ferry wharf.

This improvement would also increase the attractiveness of taking the ferry as means of transport to the site as opposed to private vehicles. An indicative design is illustrated in Figure 17.

It should be noted that the existing North Sydney Ferry Wharf is currently not accessible to less mobile individuals. The Harbour Trust will liaise with RMS to seek upgrade improvements to the wharf.

The Harbour Trust will also work closely with North Sydney Council regarding the installation of a path through Kesterton Park to connect the Ferry Wharf with the Kesteron Park link.

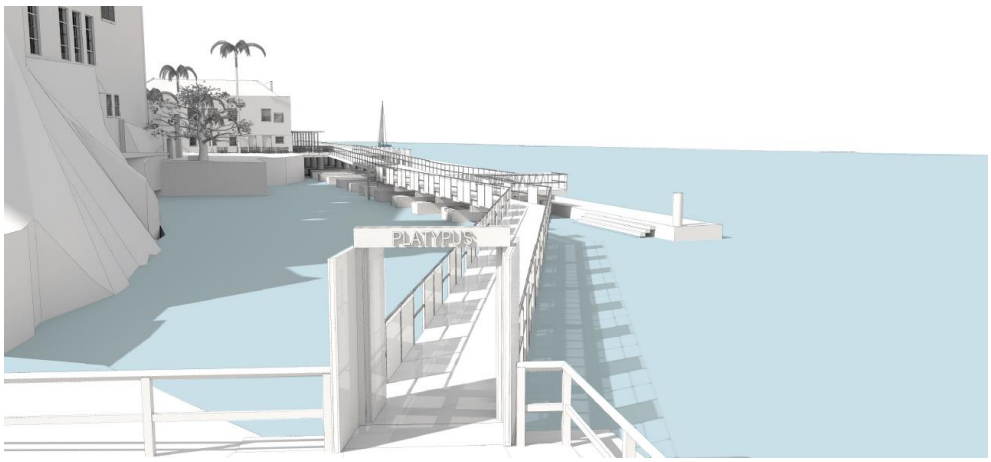


Figure 17: Kesterton Park Link (indicative design only)

4.1.2 Links between levels

4.1.2.1 Stairways

A stairway link would provide pedestrian access from the Northern Park to and from the upper car park and Kiara Close.

A set of stairs and lifts will provide access between the car park and the lower levels at the southern end of the car park – refer to section 4.4.1,

Figure 18: Pedestrian access upgrades between the upper level car park and lower level

4.1.2.2 Lift

A lift is proposed to link multiple levels across the site. The lift and accompanying stairs would be located near the Coal Stores and would link the Upper Level car park to the Cutting level, and then to an existing tunnel, providing access to the foreshore. At the Upper Level, the lift would be accessed by a new cantilevered, cliff-edge walkway, and a new pedestrian bridge over the Cutting, connecting to the RANTME Factory building.

The lift would be provided access for people with a disability to all levels of the site.

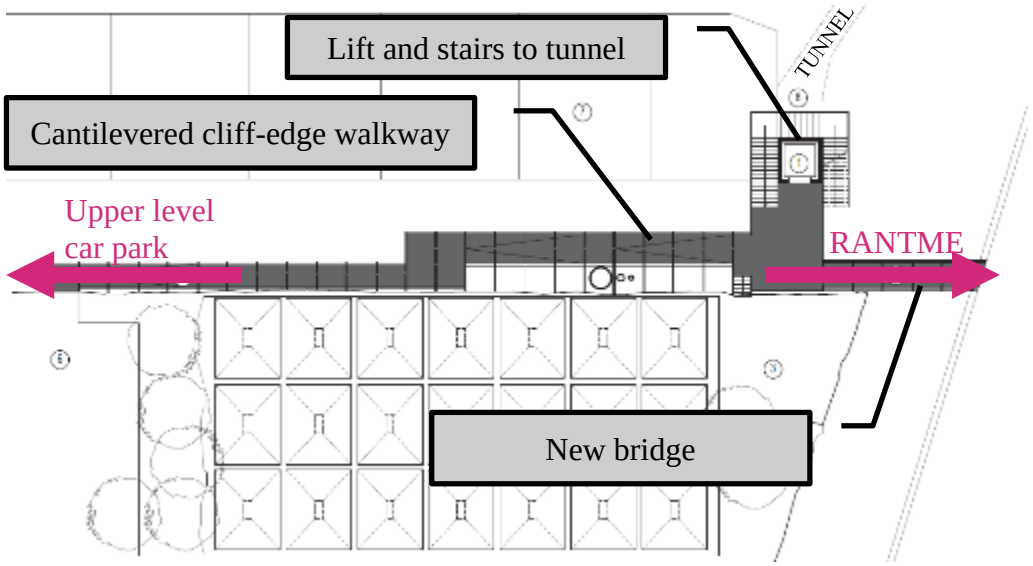


Figure 19: Proposed lift and stairs to tunnel, connecting the bridge link

4.1.3 Internal site access

The internal street network (the Cutting and the laneway) will be closed to general vehicular access. These streets will be designated as for pedestrians/cyclists only. Occasional access will be allowed for authorised vehicles (deliveries, waste collection, maintenance, occasional drop-offs for people with a disability, etc). Vehicle access would be controlled by means of a boom-gate at the High Street entrance.

A low vehicular speed limit of 10 km/h should be enforced throughout the internal streets. This can be done through surface paintings of 10 km/h speed limits at entry and exit point of the internal street network and speed signage. Ensuring only occasional and restrictive vehicle movements through internal roads will facilitate a safer pedestrian environment throughout the site.

The existing vehicular entry off High Street has no footpath provision for pedestrians (Photo 3). This entry is proposed to be the main pedestrian access point to the site. As such, it is recommended that the roadway, known as “the Cutting” be designated as a shared zone. Design principles of the Kiara Close Shared Zone (section 4.2) should be used in this location. Other design factors include:

- Convex mirrors around all bends
- All required shared zone signage shown in section 4.2
- Additional lighting
- Wayfinding signage from High Street
- Speed humps
- On-street furniture in the form of plants or parked vehicles to act as traffic calming measures
- Stencilled paving
- Boom gate with CCTV / intercom facility

The boom gate will restrict vehicular entries to deliveries, maintenance, garbage collection, drop-off and pick-up of disabled persons. It could be controlled by intercom with security personnel managing the entries of vehicles. CCTVs will provide visual information for security personnel. During occasional special events and functions, the boom gate can be raised where required to provide unrestricted entry.

Photo 3: Existing vehicular entry off High Street

Planter boxes along ‘the laneway’ (between Buildings 2 & 10) will be used to improve the appearance of the area but would not impede sight lines of vehicles or pedestrians.

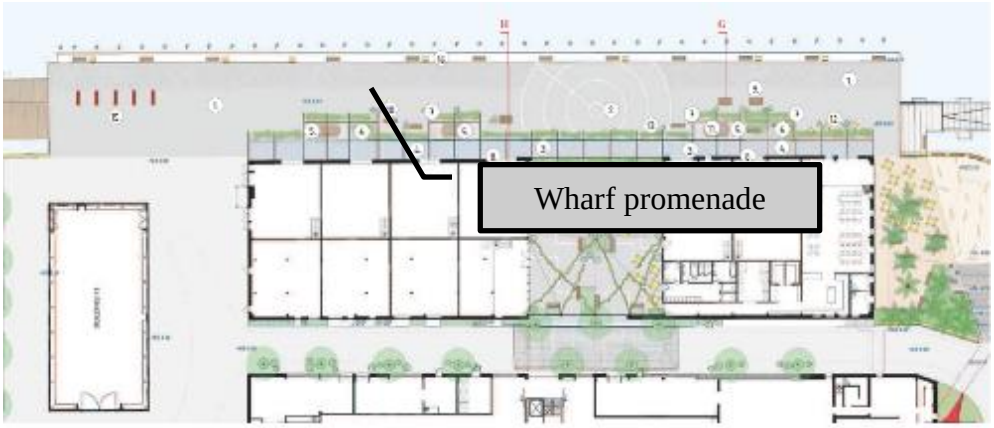


Figure 20: Wharf promenade proposed works

4.1.4 Wayfinding

To assist pedestrians find the most direct and convenient way into the site, there needs to be a clear access strategy for pedestrians. The Harbour Trust will work closely with North Sydney Council in developing a suitable wayfinding strategy for the locality.

Key pedestrian and vehicular routes along with the proposed wayfinding signage nodes are shown in Figure 23. The signage will direct regular parking to the upper level car park, and casual parking to the RANTME car park respectively. Signs will also highlight distance (metres) and estimated walking times (minutes) to key landmarks.

To assist pedestrians to easily navigate from North Sydney and Milsons Point train stations to Platypus, wayfinding signs along High Street and Broughton Road could be installed.

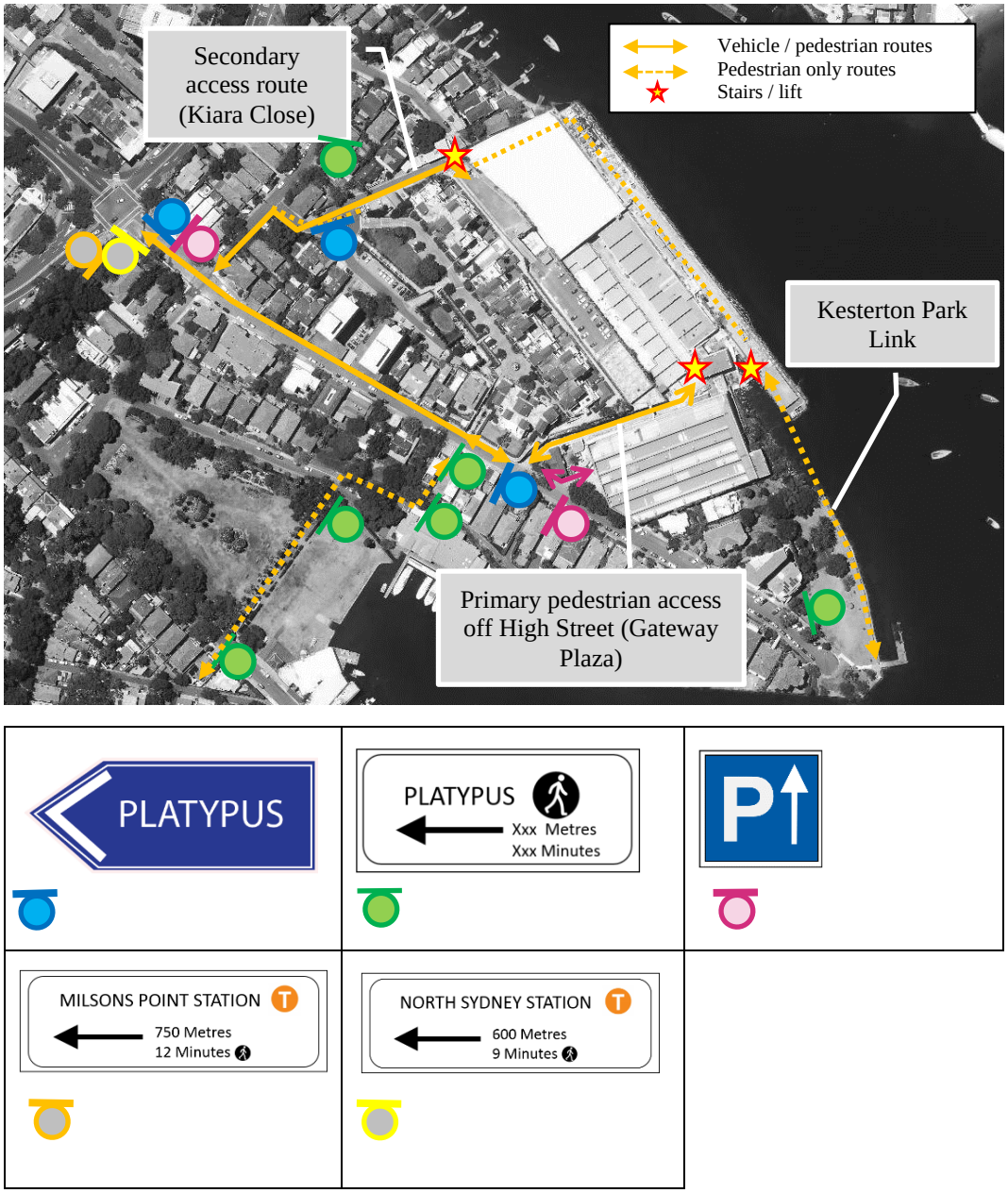


Figure 21: Key vehicle and pedestrian routes and proposed wayfinding signage nodes

4.2 Kiara Close – proposed shared zone

4.2.1 Background

Kiara Close is a private road, however both North Sydney Council and the Harbour Trust benefit from a right-of-way (ROW) which allows public access. Under this ROW, Council is also responsible for the management and maintenance of the roadway.

The Kiara Close access driveway has parking along the northern side which narrows the roadway to a single lane width for traffic movements. There are no pedestrian footpaths in this section of the roadway. The "roundabout" does not function effectively as a roundabout.

Some basic road safety improvements will be needed along Kiara Close in association with the Harbour Trust's renewal project. These works would need to be implemented by North Sydney Council, in consultation with the landowner. As such, the following conceptual improvements to Kiara Close are provided for the consideration of Council and the landowner, and are subject to Council's approval process

Photo 4: Kiara Close, extent of proposed shared zone highlighted

It is proposed to designate Kiara Close as a shared zone. One of the key requirements of shared zones is that they provide safe access for pedestrians.

Designating Kiara Close as a shared zone would ensure vehicular activity reduces speeds and prioritises pedestrians. This would not only be beneficial to residents but also visitors to the reactivated site.

See **Appendix A** for design requirements.

4.3 Water Access

A pontoon and kayak steps are proposed as part of the Kesterton Park link but will be constructed at a later stage, when funds are available, with the indicative schematic plan shown in Figure 22. The use of small boats and kayaks to access the site will reduce demand for public transport, as well as reduce pressure on the local road network.

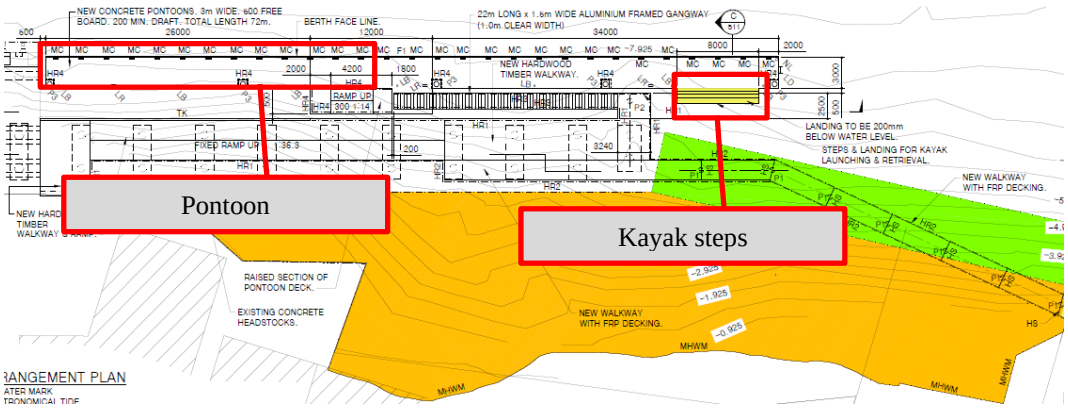


Figure 22: Schematic plan of platypus wharf pontoon and kayak steps

Source: tlb (not for construction purposes)

4.4 Car parks

Platypus will have two car parks: (1) the existing upper level car park (55 spaces), accessed from Kiara Close; and (2) the new parking (up to 30 spaces) to be established within the RANTME Factory, accessed from High Street.

Each car park will go through a detailed design process to ensure compliance with relevant Australian Standards including but not limited to the inclusion of disabled spaces for persons with mobility issues.

The upper car park is best suited to regular users, as it is accessed via a narrow private road. The RANTME Factory car park is best suited to casual parking, as its access route is more legible to visitors unfamiliar with the area. Each car park is examined in the following sections. However, parking is limited on site and the Harbour Trust will encourage site users (workers/visitors) to access the site by walking, cycling or public transport. This will be achieved primarily by improving access to public transport and by managing parking demand through permits, time restrictions and paid parking, as discussed further in this report.

4.4.1 Upper level car park refurbishment

The Upper level car park (55 spaces) already exists and it is proposed to be retained for regular users and occasional special event use. The car park will be refurbished as a 10 km/h shared vehicle/pedestrian zone with new lighting, balustrades, car safety stops and line markings as shown in Figure 23.

The works will include:

- Demolition and removal of existing vehicle access gate and gate house
- New lockable gate at entrance for after hours security
- Replacement of handrails
- New vehicle safety barriers
- Pedestrian path along the cliff edge
- Bitumen resurfacing
- New line markings
- New Bike racks
- Statutory signage only (not wayfinding signage or branding)
- Provision of services including lighting, power (including for special events), data, water, CCTV and access control
- Minor landscaping works which may include some low level shrubs and bushes
- Designated parking spaces for disabled persons (close to the new lift)

Landscaping will be low-level and minimal, to protect the views of the water from adjacent residences. Improved access to the car park will be achieved once Kiara Close road safety improvement works (section 4.2) have been completed.

Use will need to be managed by restricting parking to authorised vehicles. This could be managed by providing a limited number of permits to tenants and regular site users, potentially on a paid basis. Specific spaces would not be allocated to permit holders, as this would be an inefficient use of the car park.

The car park may be used for occasional special events. For any event, the Harbour Trust will work closely with organisers to manage traffic management. There would be an emphasis on use of public transport or use of charter coaches and ferries to transport people to and from the venue. In general terms, temporary permits could be provided to invitation-only attendees to events, where invitees could be provided with detailed information about how to access the car park.

Where necessary, event organisers would be required to prepare a specific transport management plan.

Another way of managing these limited number of spaces may be the use of on-line bookings (see section 4.4.3).

Figure 23: Proposed concept design for the upper level car park

4.4.2 RANTME Factory car park

There is potential for up to 30 parking spaces in the upper level of the RANTME Factory (i.e. inside the building). The number of spaces will depend on the final adaptive reuse of the building, which is yet to be determined. Facilitating parking at the RANTME Factory would not require major works. This car park would be used by casual visitors to Platypus.

Access is possible via the existing single-lane vehicle ramp off High Street shown in Figure 24.

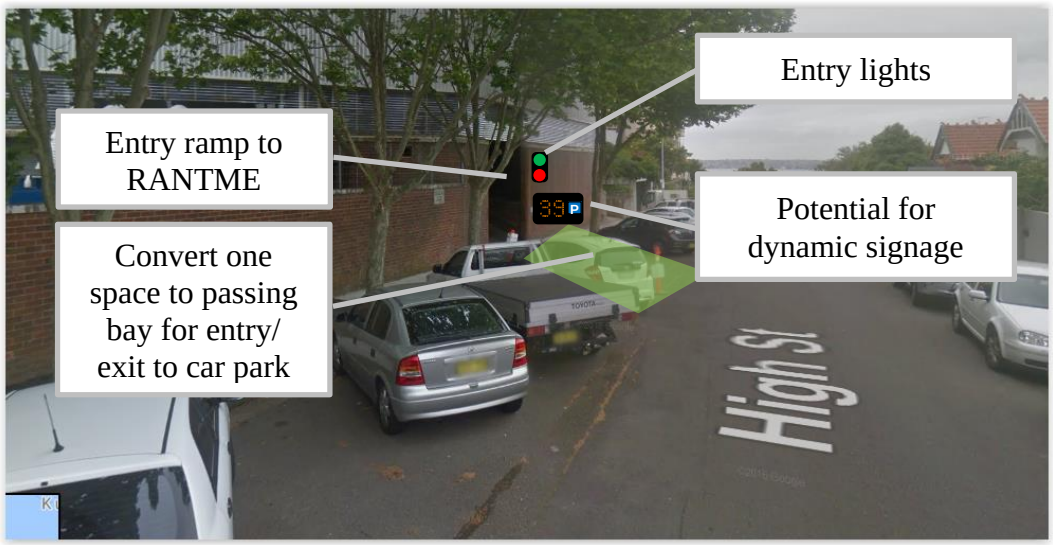


Figure 24: Proposed entry arrangements along High Street into the car park

A designated passing bay for entry/ exit to the car park is proposed on High Street, with traffic lanterns providing entry and egress signals. Traffic lanterns could be phased to green for traffic entering the car park, to avoid queuing in High Street. Exiting vehicles could trigger the loop to activate the green light to exit. The passing bay would involve the loss of one parking space, but this would be more than off-set by the provision of spaces within the RANTME Factory. A passing bay will also be required within the RANTME building for egressing vehicles to allow for entering vehicles to pass. Given an estimated turnover rate of

1 to 3 hours, this arrangement would be suitable to accommodate a 30 space car park.

Parking within the RANTME Factory would need to be managed to prevent the car park being used all-day by non-site users (ie commuters). This could be achieved by parking meters and time restrictions. A "Pay and Display" system would be monitored by Harbour Trust rangers to encourage turnover of spaces and the use of public transport to access the site.

Signage would be needed at the intersection of Hipwood and High Streets to direct casual visitors to park in the RANTME Factory.

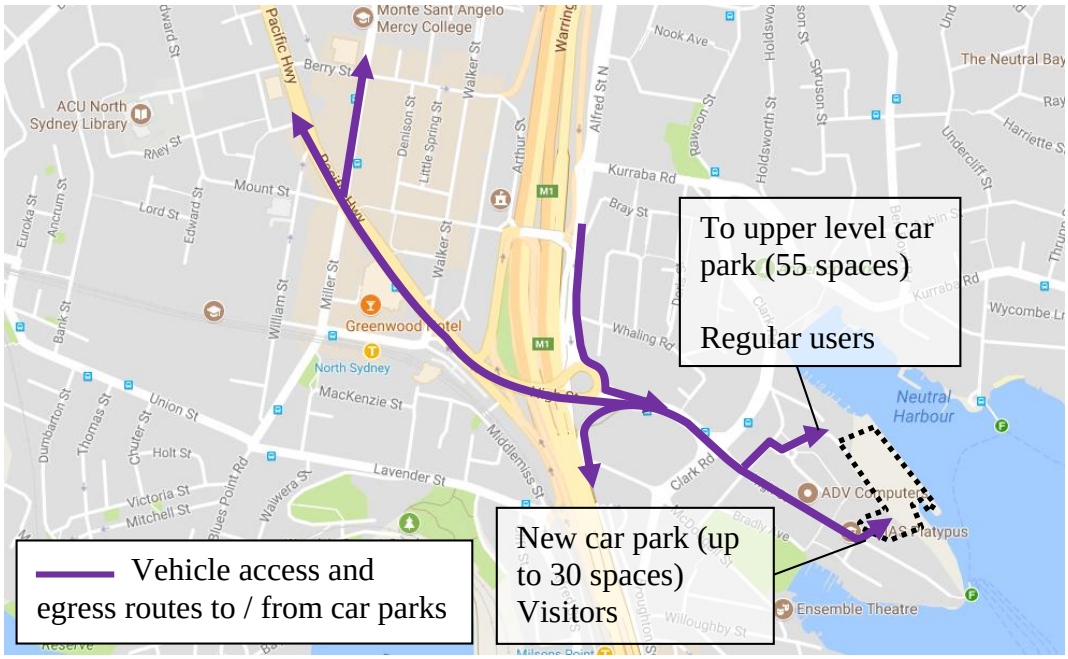


Figure 25: Access and egress to / from car parks

Whilst a Pay and Display system is preferred, an alternative is the use of boom gates. If installed, boom gates would be provided within the car park building, at a location which will allow for a two-way entry and egress. A key advantage of a boom gate is that it would support dynamic signage, regulating the number of available spaces.

High Street currently functions as a two way street with sufficient passing width and parking on both sides of the street. Two short term parking/drop-off bays could be provided near the Gateway Plaza to facilitate for deliveries/drop-offs. Any changes to parking on High Street would be subject to approval by North Sydney Council.

4.4.3 Car park management

In addition to improving access to public and active transport, individuals driving to the site can be further encouraged to use public transport through implementation of a suitable parking fee. Vehicle access points can be managed through pay and display systems. The hourly/maximum fee should be priced to:

- Achieve the right balance between supply and demand
- Encourage carpooling
- Promote driver mentality change to public/active transport
- Promote efficient use of available parking spaces
- Justify the assumption of low driver rate and higher car occupancy rates

For people who choose to drive, an option is for car parking to be pre booked through an online booking system for staggered use of the car park. This system would need to be sophisticated enough to allocate parking spaces by time slots to maximise use.

Major car park operators are now offering pre booking of car parking spaces. An example of a booking using the Secure Parking website is shown in Figure 26.

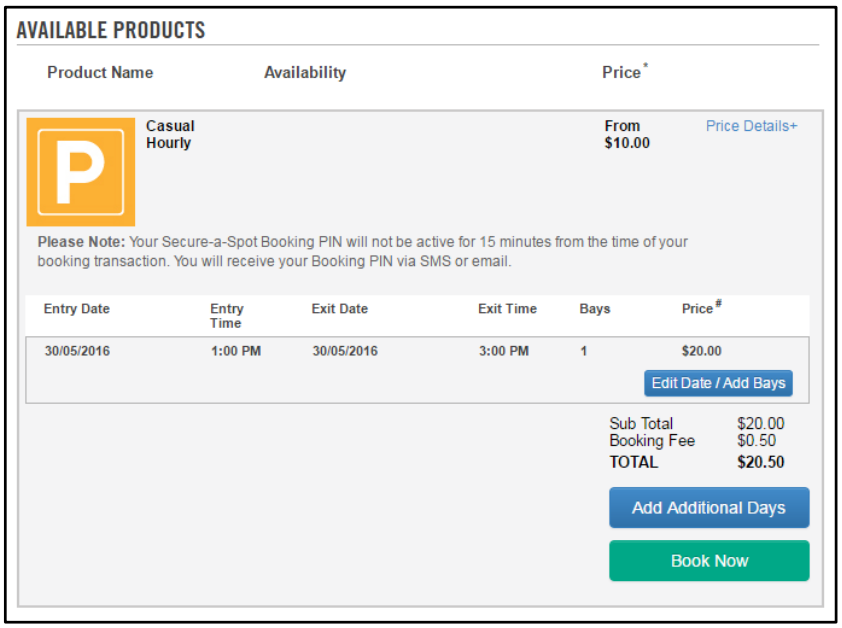


Figure 26: Pre booked parking example

In this example, a 2 hour time slot has been booked at a cost of $20 + booking fee. A unique number is sent to the customer via SMS.

Opportunities to partner with a car park operator to provide a user friendly app booking system could be explored.

4.4.4 Key findings

The site will be opened to the public with the main attractor at this stage being the public open spaces. Peak visitation periods would therefore likely be during the weekends.

Existing weekend parking occupancy surveys in surrounding streets are shown in Figure 10 and Figure 11 and show that there was spare capacity along High Street and Stannards Place. This spare capacity combined with the parking to be provided at Platypus is shown below:

- Off-street parking for casual visitors (RANTME): 30 spaces available
- Off-street parking for regular users and attendees at special events (upper level car park): 55 spaces available
- On-street Unrestricted parking: 9 spaces available
- On-street 2P, 8.30am to 10pm, Monday to Sunday, Permit Holders Excepted (Area 2): 6 spaces available

Opening of the site for public access is expected to primarily attract local residents to utilise the site. A large majority of the local residents are expected to walk to the site to use the facilities. The smaller proportion of visitors who live outside the walking catchment would likely utilise public transport or drive to the site. To accommodate anticipated demand for parking, up to 30 spaces parking spaces for casual visitors are proposed to be established in the RANTME building.

The number of staff associated with the opening of the site for public access will be minimal. Regular site users including staff will utilise the upper level car park and no staff parking is expected to overflow onto local streets.

The additional 30 spaces parking spaces is provided for short to medium term parking by visitors and hence could generate approximately 160 vehicle entering and leaving the site over the day. This equates to some 20 vehicles per hour. The TAMP prepared by Arup in 2016 has assessed traffic volumes for 50 to 100 vehicles entering and leaving the site within the same hour. The findings of the study concluded that while the increase in traffic will be noticeable, local streets will be well within the environmental capacity of a local street of 200-300 vehicles per hour. This is a conservative estimate as analysis in section 3 of the report indicate a low parking rate is expected.

Wayfinding signage will be used to assist pedestrians and drivers to locate the entrance to Platypus and to minimise confusion or queuing on local streets.

During special events, the Harbour Trust will work closely with organisers on a case by case basis. Permits could be issued to manage use of the car park and to ensure there is no overflow parking on local streets. A separate transport management plan would be considered for larger events. For any event, there would be an emphasis on use of public transport or use of charter coaches and ferries to transport people to and from the venue.

In the case that a charter ferry was used to transport attendees to a special event, it is anticipated that ferry operators could use the North Sydney ferry wharf to drop people off. The Harbour Trust will look to build a pontoon at a later stage that would enable visitors to be dropped off at the site. This will be subject to future funding becoming available.

As such, traffic generated by opening the site to public access would not affect the surrounding road network adversely.

Emergency vehicles will continue to access the site through existing routes using Kiara Close and High Street, once the site is open to public access. The proposed access arrangements will not affect the surrounding road network or accessibility for emergency vehicles.

4.5 Refurbishment of selected buildings

Part of the proposed works include the refurbishment of several buildings.

These buildings will be progressively occupied following a thorough tenant selection process. When suitable tenants are identified, consideration will be given to the management of their specific transport-related impacts and issues.

One exception at this early stage of the site's renewal is the Gatehouse, which will be restored as two private residences. Two off-street parking spaces for these residents will be provided in the Gatehouse Plaza. The North Sydney Development Control Plan 2013 (DCP) recommends the following maximum parking provision rate:

TABLE B-10.1 – Residential Parking Rates				
Development Type	**Zone**	**Location**	**Maximum Parking Rate**	
	All zones other than B4 – Mixed Use	All	Studio, 1-2 bedrooms	1 space / dw
			3 or more bedrooms	1.5 spaces / dw
			Visitor	0.25 space / dw (min of 1 space)

Figure 27: North Sydney DCP parking rates for residential development

The site does not sit under the jurisdiction of North Sydney Council, however the DCP can be used as a guide to the number of parking spaces required. The provision of two parking spaces is therefore within the range of the maximum number of parking spaces allowed for the two private residences and is deemed sufficient.

Base building fitout works in Buildings 2 and 10 are to facilitate future leasing of these spaces. Future uses would be consistent with the Management Plan and will be subject to a separate planning/approval process. The Harbour Trust will keep the community informed regarding activation of the buildings when more information is available.

5 Conclusion

Opening up of Platypus to public access would deliver 'High' and 'Medium' priority outcomes in the Management Plan, specifically delivering public domain, wayfinding and accessibility improvements.

It would open the former HMAS Platypus Site to the public as a pedestrian friendly environment. Opening up the site to public access involves creation of a number of landscaped plazas and new connections to adjoining public open spaces. The upgrades will address the key walking strategies of connectivity, convenience, comfort, a sense of place and visibility. Key findings of this Transport report are:

- Opening up the site to public access are not considered to detrimentally affect local traffic and parking and can be appropriately managed through implementing the recommendations of this report
- Pedestrian accessibility between the North Sydney Ferry Wharf and the site will be greatly enhanced through the completion of the Kesterton Park Link.
- Platypus is well situated to take advantage of its proximity to walking and cycling networks and public transport facilities (bus, train and ferry). The Harbour Trust will work with relevant stakeholders to provide community information and wayfinding signage to further encourage walking and the use of public transport to access the site.
- Measures such as time restrictions, paid parking, permits and online booking will help manage demand for limited parking spaces
- Various pedestrian access improvements are proposed including a shared zone along Kiara Close; a set of stairs and a lift to deliver the public from the Upper Level to the to the Wharf Level; and the Kesterton Park link to provide access from adjoining public open space and High Street ferry wharf to Platypus
- The key attractor of the site is the provision of new public open space. Opening the site to the public is expected to primarily attract local residents as well as some visitors from further afield. Peak visitation periods are expected to be during the day on weekends.
- A large majority of visitors to the site are anticipated to be local residents, who would walk to the site. A proportion of visitors who live outside the walking catchment may use public transport. Some visitors may decide to use their private vehicle to access the site.
- Visitors choosing to drive to the site are expected to be low given the local catchment. However, the proposed parking within the RANTME Factory and on-street parking are expected to meet demand.
- Regular visitors to the site, or attendees to occasional special events, would use the Upper Level car park (approximately 55 spaces). The Harbour Trust will work closely with event organisers on a case by case bases. Permits would be issued to manage use of the car park and to ensure there is no overflow parking on local streets. A separate transport management plan would be considered for larger events.

- The Kesterton Park link will be designed to accommodate use by prams and mobility impaired persons. In addition, a new lift from the Upper Level car park to the Wharf level will provide access for mobility impaired persons.
- Part of the proposed works include the refurbishment of several buildings. These buildings will be progressively occupied following a thorough tenant selection process. When suitable tenants are identified, consideration will be given to the management of their specific transport-related impacts and issues.
- The Harbour Trust will work closely with North Sydney Council and local residents regarding the proposed road safety improvements in Kiara Close and to appropriately manage vehicle and pedestrian traffic in the vicinity of the site.

Appendix A

Design requirements of Shared Zones

A1 Design requirements of Shared Zones

A1.1 Traffic volumes

According to the RMS Technical Direction TTD 2016/001 - Shared Zones and the TfNSW Policy & Guidelines for shared zones (July 2012 Version 1.0), shared zone will only be considered where:

- Adequate footpaths cannot be retained within the road reserve
- Where there are very low numbers of slow moving vehicles
- Current traffic flows $\leqslant$ 100 vehicles per hour and $\leqslant$ 1000 vehicles per day

The Guide to Traffic Generating Developments (2002 Issue 2.2) does not provide guidelines a specific development such as Platypus located within North Sydney. As such, traffic movements have been estimated based on car park turnover of 50% of spaces in the busiest hour and is deemed conservative. The upper level car park which consists of 55 car spaces would be generally used by regular site users once the site buildings are reoccupied. This would generate 27 cars entering and exiting Kiara Close during the PM peak hour.

The estimated future traffic flows along Kiara Close during the PM peak hour are shown in the table below. The estimated two way traffic flows along Kiara Close fulfils the peak hour traffic flow requirements for a shared zone.

Table A1: Potential future two way traffic along Kiara Close

Kiara Close	**Weekday 8:00am**	**Weekday 5:00pm**	**Weekend 12:00pm**
Existing	45	45	40
Traffic generated by future use of Platypus upper level car park	55	55	55
Total vehicles per hour (two-way)	100	100	95

A1.2 North Sydney Traffic Management Strategy consideration

As noted in this report, Kiara Close is a private road that is owned by the Iora apartment complex and is managed and maintained by North Sydney Council. The Harbour Trust will liaise closely with the landowner and Council regarding proposed works in Kiara Close.

Consequently, the detailed design of the proposed shared zone should have regard to the following North Sydney Traffic Management assessment criteria:

- Safety
- Residential amenity
- Pedestrian amenity

- Cyclist amenity
- Through traffic control
- Public transport benefits
- Equity

A1.3 Category

The RMS TTD 2016/001 Design and implementation of shared zones including provision for parking provides requirements and guidelines for implementing a shared zone.

- A Category 1 (Cat 1) shared zone is provided on a road related area, has clearly different coloured and textured surface treatments from the surrounding roads, and typically does not have kerbs.
- A Category 2 (Cat 2) shared zone is provided on a road which includes footpath.

Kiara Close does not have footpaths on either side of the road and would fall under Category 2 for a shared zone.

A1.4 Shared zone design

The following attributes of the shared zone are proposed:

- 10km/h speed limit and clear signage to be designed to RMS specifications from both approaches (See Figure A1).
- Stencilling and painting of Kiara Close for a different paving colour in shared zone area to indicate change in environment.
- Removing parallel parking on Kiara Close near the entrance to the Upper Level car park will ensure clear site lines for pedestrians and facilitate manoeuvring of vehicles entering and exiting the car park at what is a tight corner.
- Making it clear through signage and line marking that the “roundabout” does not actually function as a roundabout.

Full design specifications can be found in RMS TTD 2016/001 Design and implementation of shared zones including provision for parking.

R4-4 SHARED ZONE

- Must be displayed at the start of a shared zone.
- R4-4 may be repeated in combination with R2-10 at additional locations within a shared zone.

R2-10 GIVE WAY TO PEDESTRIANS

- Must be displayed at the start of a shared zone and below the R4-4 sign.
- R2-10 may be repeated in combination with R4-4

R4-5 END SHARED ZONE
Must be displayed at the end of the shared zone.

Figure A1: Required signage on a shared zone

A1.5 Examples

The City of Sydney Council has recently adopted a shared zone along Goodchap Street in Surry Hills, shown in Photo A1. Construction was kept at a minimum by stencilling and painting over the existing asphalt. Impacts to residents as a result of road closures and noise are therefore kept at a minimum. It is anticipated that the Kiara Close shared zone could be constructed in a similar manner.

Photo A1: Goodchap Street shared zone example

A1.6 Detailed Design

Existing Conditions (See Figure A2)

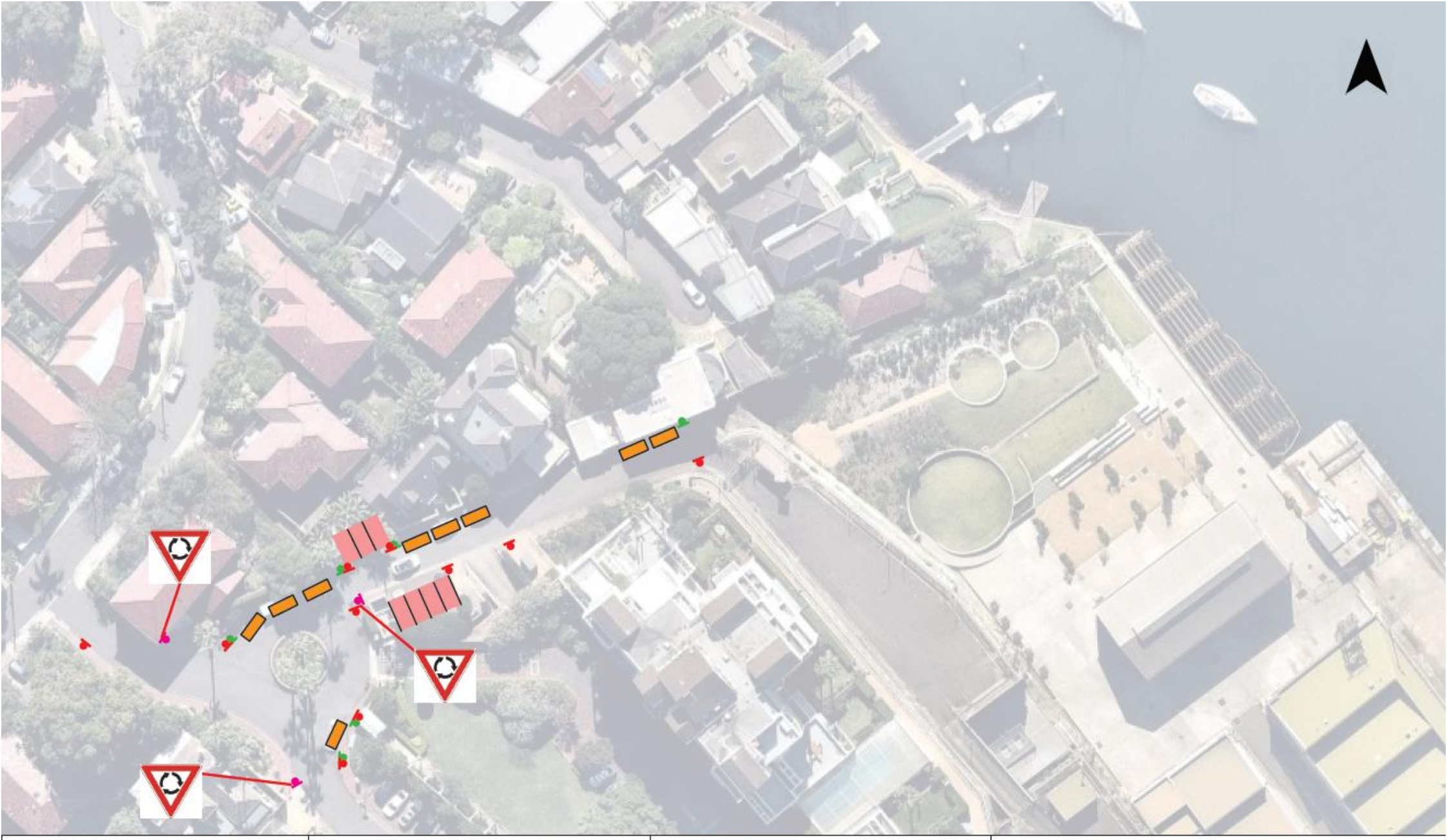
There are three sections of roadway which intersect at a "roundabout" island. Roundabout sign posts are located at each approach, however there are no line markings. This may result in cars travelling from west to east around the incorrect side of the central island. On street car parking is located along the kerbside between driveways and around the roundabout. There are 9 on-street parking bays restricted to 2 hour parking duration, 8.30am – 6.00pm Mon to Fri, resident permit holders excepted.

Proposed design (See Figure A3)

The primary straight through movements between the eastern and western approaches is formalised with the island forming a splitter for traffic to the northern approach, which continues onto Platypus. This would recognise the existing traffic patterns and formalise the give way locations. Traffic would still be able to circulate around the central island. The shared zone extend south to the give way location.

The shared zone design is shown in Figure A3, with the following key design requirements:

- Different coloured surface treatment through stencilling and painting
- Addition of footpath along the car park connecting the entrance to the Upper Level car park and the new stairway to the foreshore level
- Shared zone signage
- No stopping signage
- 2P time restrictions
- Marked parking bays along the road which will narrow the road, acting as a traffic calming measure. Two on-street parking bays are removed to improve pedestrian and allow improved vehicle access to the upper level car park
- Retention of existing kerbs to minimise construction works
- Convex mirror at the intersection of Kiara Close and Hipwood Street to improve visibility
- Partial median rumble strip at the intersection Kiara Close and Hipwood Street to discourage corner-cutting
- Line marking the 90o spaces to encourage more efficient use of spaces



Former HMAS Platypus

Traffic
Sydney Harbour Federation Trust
Kiara Close Shared Zone

0 10 20 metres

Legend

- 2P kerbside restriction signage
- No stopping kerbside restriction signage
- Existing unmarked on-street parking
- Existing marked bays
- Driveway locations

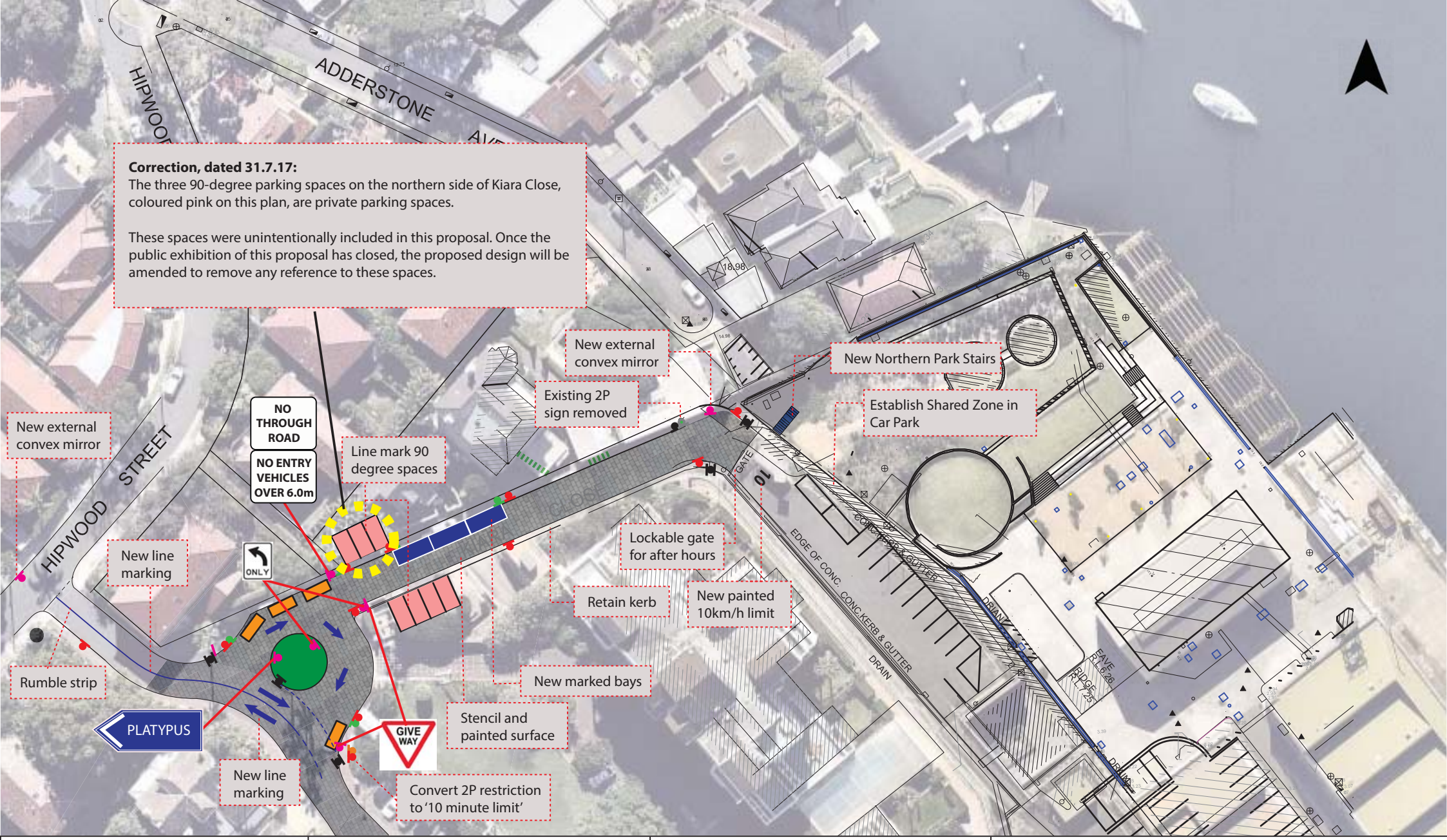
Signage

Details

Existing Parking Restrictions and Locations

Figure A2

ARUP



Platypus Renewal Project

Proposed Design
Sydney Harbour Federation Trust
Kiara Close Shared Zone
Suggested road safety improvements in Kiara Close

0 10 20 metres

Legend

- 2P kerbside restriction signage
- New signage
- No stopping kerbside restriction signage
- Shared zone signage
- Driveway locations
- New line marking for safety improvements
- Existing unmarked on-street parking
- Proposed new marked bays

Signage

Details

Drawing: AI-002
Draft 04
12/07/2017
Schematic - not for construction

ARUP