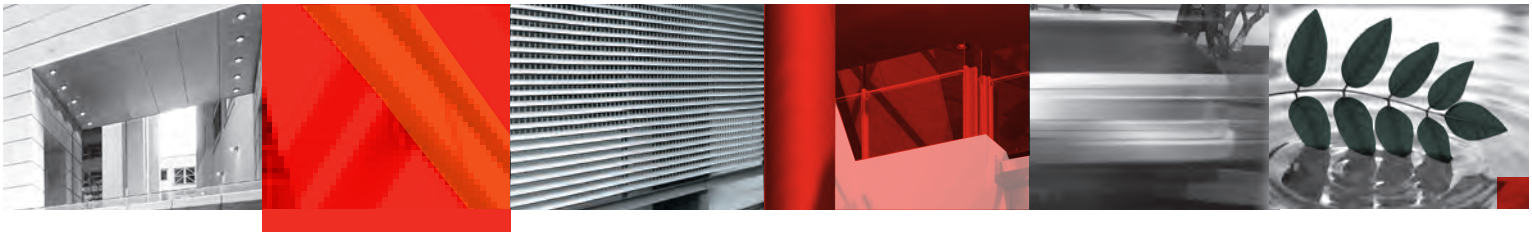
Concept Plan Application
Environmental Assessment Report



71-79 Macquarie Street, Sydney
Mixed Use Residential Building

Submitted to Department of Planning & Infrastructure
On Behalf of AMP Capital Investors and Mirvac

November 2011 ▪ 10359

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JBA Urban Planning Consultants Pty Ltd operates under a Quality Management System. This report has been prepared and reviewed in accordance with that system. If the report is not signed below, it is a preliminary draft.

This report has been prepared by: Robert Stark

Signature  Date 20/12/11

This report has been reviewed by: Oliver Klein

Signature  Date 20/12/11

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Statement of Validity

Prepared under Part 3A of the Environmental Planning and Assessment Act, 1979 (as amended)

Environmental Assessment prepared by	
Name	Robert Stark
Qualifications	B.Urb.Reg.Plan, MPIA
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In respect of	a Concept Plan application
Concept Plan	
Applicant name	AMP Capital Investors and Mirvac
Applicant address	c/- Mirvac, Level 26, 60 Margaret Street, Sydney
Land to be developed	71-79 Macquarie Street, Sydney
Proposed development	Mixed use residential building
Environmental Assessment	An Environmental Assessment (EA) is attached.
Certificate	I certify that I have prepared the content of this Environmental Assessment and to the best of my knowledge: ▪ It is in accordance with the Environmental Planning and Assessment Act and Regulation. ▪ It is true in all material particulars and does not, by its presentation or omission of information, materially mislead.
Signature	
Name	Robert Stark
Date	20 December 2011

Executive Summary

This Environmental Assessment Report in relation to a Concept Plan for the development of 71-79 Macquarie Street, Sydney is submitted to the Minister for Planning and Infrastructure pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979* and State Environmental Planning Policy (Major Development) 2005. (The Concept Plan is a transitional Part 3A project as defined by the Act.) The proponents are AMP Capital Investors and Mirvac.

The site is located at East Circular Quay and is currently occupied by the Amatil Building. It is located within the City of Sydney local governmental area.

Project Outline

The Concept Plan seeks approval for:

- the building envelope (above and below ground);
- land uses;
- the location of future public domain works including a through-site link;
- pedestrian and vehicle access arrangements; and
- car parking rates as follows:
  - 1 space per studio apartment;
  - 1 space per one bedroom apartment;
  - 1.4 spaces per two bedroom apartment; and
  - 1.8 spaces per three or more bedroom apartment.

It is proposed a subsequent application for development for the detailed design of the building and public domain will be lodged should the Concept Plan be approved.

The Concept Plan provides the opportunity to:

- Complete the redevelopment of East Circular Quay, one of Sydney's most significant locations;
- Create a new pedestrian link connecting two of Sydney's most important areas of public domain, being Circular Quay and the Royal Botanic Gardens;
- Enable the completion of the East Circular Quay colonnade;
- Enhance the quality of the public domain through retail activation and public domain improvements;
- Remove vehicular traffic from Circular Quay; and
- Provide the city with a new 5 star residential and serviced apartment complex.

Environmental Assessment

The Environmental Assessment concludes that:

- The site is suitable for the proposed development in that:
  - it will facilitate the upgrading of foreshore access through the creation of a pedestrian link between Circular Quay and Macquarie Street (with the Royal Botanic Gardens beyond);
  - it will provide residential dwellings (that will assist in meeting the subregion's target of 55,000 new dwellings by 2031) in a location very close to excellent public transport facilities, including rail, bus and ferry; and
  - it will provide employment opportunities and contributing to the tourism sector of Sydney's economy.
- The scale, bulk, height and setbacks of the proposed envelope can be supported having regard to the lack of significant impact on overshadowing or views from surrounding properties or the public domain.
- The proposed envelope will allow for a detailed design that is architecturally harmonious with the surrounding development and provides excellent amenity for future occupants.
- The proposed parking rates are acceptable based on anticipated traffic generation and the unique context of the site.
- The proposal includes a draft Statement of Commitments with regard to future actions by the proponents, to ensure that the development is suitable in terms of impacts on the neighbouring Cahill Expressway and City Circle rail line, heritage, wind, reflectivity, noise and vibration, transport, traffic and access, contamination, geotechnics, water quality management, climate change and sea level rise.

Given the planning merits above, the proposed concept plan is justified and warrants the approval of the Minister for Planning.

1.0 Introduction

This Concept Plan and Environmental Assessment Report (EAR) is submitted to the Minister for Planning pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This is to fulfil the Environmental Assessment Requirements issued by the Director General for the preparation of an Environmental Assessment of a Concept Plan for a predominately residential mixed use development at 71-79 Macquarie Street, Sydney.

The Concept Plan is seeking to address strategic project issues and establish the key parameters of the development prior to more detailed design work being undertaken.

This report has been prepared by JBA Planning on behalf of the AMP Capital Investors and Mirvac joint venture (the proponent) and is based on information provided by the proponent, design information provided by HASSELL and supporting technical documents provided by the expert consultant team.

This EAR describes the site, its environs and the proposed development, and includes an assessment of the proposal in accordance with the Director-General's Requirements (DGRs) under Part 3A of the EP&A Act. It should be read in conjunction with the information contained within and appended to this report.

These studies address the DGRs for the environmental assessment. They provide a technical assessment of the environmental impact of the proposed development, and recommend proposed mitigation measures to manage potential environmental impacts associated with the proposal.

1.1 Overview of Approval Sought

The Concept Plan seeks approval for:

- the building envelope (above and below ground);
- land uses;
- the location of future public domain works including a through-site link;
- pedestrian and vehicle access arrangements; and
- car parking rates as follows:
  - 1 space per studio apartment;
  - 1 space per one bedroom apartment;
  - 1.4 spaces per two bedroom apartment; and
  - 1.8 spaces per three or more bedroom apartment.

It is proposed a subsequent detailed application for development for the detailed design of the building and public domain will be lodged should the Concept Plan be approved.

1.2 Background

AMP Capital Investors have owned 71-79 Macquarie Street for more than 30 years, and recently it has explored various options for the redevelopment of the increasingly redundant commercial building. To assist in the exploration of options, AMP Capital Investors invited Mirvac to partner on the project given their track record of delivering quality residential and serviced apartments, including the neighbouring Quay Grand apartments.

1.3 Project Need and Alternatives

The existing commercial building on the site was built in 1963-64 and is presently known as the Amatil Building. It is becoming increasingly inefficient and its relative environmental performance is declining, meaning it is now largely redundant. This is typical of commercial towers in Sydney over 45 years old. Furthermore, the site is dislocated from the commercial hub of the CBD with commercial activities having moved south of the Cahill Expressway over time. Therefore the owners of the building are seeking to revitalise the site with a development that is both viable and suited to its context. A variety of options were explored early in the feasibility process, and these are summarised below.

Firstly, a 'status quo' approach was examined. However, the building was never built to take into account current environmental performance requirements and these requirements will only continue to become more stringent in the future. Furthermore, the site's superior location with superb views and access to transport results in the market demanding that any building at 71-79 Macquarie Street is to provide premium accommodation (whether it be commercial or residential). Such premium accommodation cannot be provided within the framework of the existing building's environmental performance.

It should also be noted that the 'do nothing' approach would also mean that the opportunity to complete the East Circular Quay colonnade and the provision of a through-site link connecting Circular Quay and the Royal Botanic Gardens would be further delayed.

The opportunity for a complete service upgrade of the commercial building to increase its environmental performance was explored, however this was deemed not to be feasible for two main reasons:

- the building was not constructed with a high environmental performance facade or with the required plant areas to support such an upgrade; and
- a commercial building in this location would be an anomaly in terms of buildings surrounding Sydney Cove, and the commercial floor space would generate better and more synergies if it was located in the core of the CBD.

The option to keep the existing structure but to refit the building as a residential development, more in keeping with the surrounding land uses, was considered. Again, the constraints of the existing structure render this option unfeasible. In particular, the floor to ceiling heights of the existing building are not suitable for residential requirements as per SEPP 65, and the financial cost of the conversion would be unfeasible.

Once it was determined that the existing structure was to be demolished, attention turned to consideration of the replacement envelope, as described below.

Limiting the height of the replacement envelope to that of the neighbouring Quay Grand building was considered, however this was not considered appropriate for the following reasons:

- the site's location presents an opportunity for the envelope to provide a suitable transition between the lower residential buildings to the north and the higher residential and commercial buildings to the south, as shown in **Figure 1**; and
- such a significant constraint to the total floor space available would render the project financially unfeasible, which would result in a continuation of the unsuitable 'do nothing' approach.

As detailed above, key elements of the envelope design are the completion of the colonnade and the provision of the through-site link. Both of these informed the design of the envelope. In particular, the completion of the colonnade results in the building envelope being extended to the west at lower levels. Architecturally and to be consistent with the buildings to the north, the colonnade is required to be located below the bulk of the building rather than standing alone. Therefore, the envelope was also extended to the west for the levels above ground.

A crucial driver of the envelope design was to ensure that it does not impact on existing view corridors. To achieve this, the envelope extension to the west has been limited in depth and height to match the neighbouring Quay Grand building. Furthermore, a chamfer was provided to the south western corner of the envelope to ensure that no building bulk will significantly intrude into the existing view corridors.

Most importantly, the height of the envelope matches that of the existing Amatil Building.

All the above deliberations resulted in a set of design principles as detailed below.

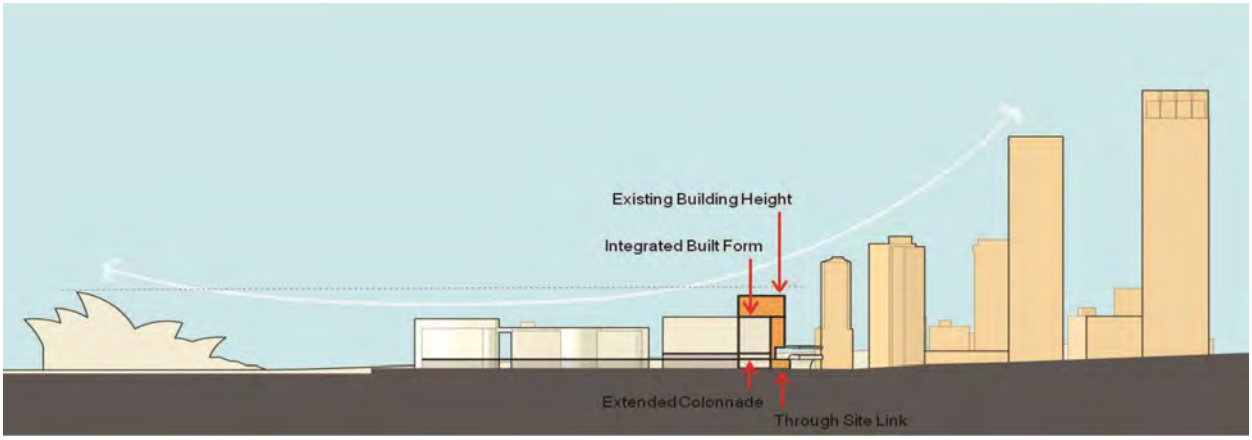

Figure 1 – Western elevation of the East Circular Quay and CBD Precinct

Urban Design Principles

- Complete the vision of the East Circular Quay precinct;
- Remove vehicle traffic from the East Circular Quay promenade;
- Revitalise and activate the unsightly south-east corner of Circular Quay and create a new and usable public domain;
- Complete the colonnade and activate the ground plane;
- Provide a continuous pedestrian experience along the Circular Quay promenade;
- Maintain critical view lines across public spaces and from relevant neighbouring residential properties; and
- Create enhanced connectivity by a through site pedestrian link to the Royal Botanic Gardens and Macquarie Street.

Architectural Design Principles

- Integrate the built form with the massing and design of the adjacent East Circular Quay buildings;
- Strengthen the transition in building scale between Circular Quay and the CBD;
- Extend built form to the west over a portion of the Council roadway, and integrate with the existing colonnade;
- Unify the harbour-front built edge created by the surrounding buildings to complete the East Circular Quay vision;
- Maintain the existing building height with no additional overshadowing to adjacent Royal Botanic Gardens;
- Provide a mix of residential and serviced apartment uses that are consistent with East Circular Quay providing 24 hour activation; and
- Achieve design excellence and enhanced environmental performance.

Public Domain Principles

- The proposed integrated development provides the opportunity to complete the East Circular Quay vision and create a new and revitalised harbour-front public domain;
- Completion of the colonnade and harbour front promenade by providing a continuous pedestrian experience and weather protection along East Circular Quay ensuring the quality and proportions of the colonnade are continued;
- The removal of vehicular traffic from the pedestrian promenade and clear separation of vehicles and pedestrian circulation will allow for the creation of a larger and more usable harbour-front public space;
- Activation of the ground plane with high quality retail edges will define the public domain with opportunities for both cultural and restaurant uses with outdoor alfresco dining;
- A seamless continuation of the promenade and ground surface materials throughout the new larger public space will create consistency through the Circular Quay promenade; and
- The Cahill Expressway undercroft will be flanked with an active retail edge and canopy protection to continue the pedestrian experience and conceal the Cahill Expressway undercroft and vehicle loading areas beyond.

Through-Site Link Principles

- The through-site link will create an important pedestrian link connecting Circular Quay to Macquarie Street and the Royal Botanic Gardens;
- The link has the potential to become an actively used public and event space and a destination in its own right, with opportunities for cafes, public seating and performance spaces along the stair route with informal platforms and elevated spaces to dwell adding further vibrancy to the public domain;
- Provide a direct line of sight between Circular Quay and the Royal Botanic Gardens, making the link easy to identify and negotiate;

- The visual connection will link different quadrants of the city and activate movement and permeability between them;
- The through-site link will act as an appropriate end point for the colonnade and create a feature point to terminate views;
- Possibility for integration of the through-site link with public artworks and temporary installations; and
- Creation of a safe and secure public space by ensuring there are no unsafe corners, appropriate lighting is provided at night, and ownership and management of the different spaces are clearly defined.

1.4 Approval Process

State Environmental Planning Policy (Major Projects) 2005 (the Major Projects SEPP) identifies development to which Part 3A of the EP&A Act applies, and for which the Minister is the approval authority.

Clause 6 of the SEPP states that development, which in the opinion of the Minister is development of a kind referred to in Schedule 1 (Classes of Development), Schedule 2 (Specified Sites) or Schedule 3 (State significant development) of the SEPP, is declared to be a project to which Part 3A applies.

Clause 10 of Schedule 2 of the Major Development SEPP identified the following developments as being Part 3A Major Projects:

> ***10 Sydney Harbour Foreshore Sites***
>
> *(1) Development (with a capital investment value of more than $5 million) in the areas identified on Map 9 to this Schedule.*

In accordance with section 75B of the EP&A Act, and clause 6 of the Major Projects SEPP, JBA Planning on behalf of the proponent requested that the Minister:

- declare the project to be a Major Project subject to Part 3A of the EP&A Act; and
- authorise the preparation and lodgement of a Concept Plan for the site.

On 7 February 2011 the delegate of the Director-General of the Department of Planning declared the project to be a Major Project. On 4 March 2011 and in accordance with section 75F of the EP&A Act, the Director-General issued the requirements for the preparation of an Environmental Assessment to accompany a Concept Plan for the project.

The Concept Plan is a transitional Part 3A project as defined by schedule 6A of the EP&A Act.

A copy of the Director General's Environmental Assessment requirements and authorisation to lodge a Concept Plan is included in **Appendix A**. This report constitutes the Environmental Assessment Report (EAR) for a Concept Plan application for the site.

1.5 Project Team

An expert project team has been formed to deliver the project and includes:

Proponent	AMP Capital Investors and Mirvac
Architecture	HASSELL
Urban Planning	JBA Planning
Consultation	Elton Consulting
Traffic and Transport	Halcrow
Geotechnical	Coffey
Contamination	Coffey
Heritage	Godden Mackay Logan
Engineering	Arup
Sustainability and Climate Change	Arup
Wind and Solar	Windtech
Safety by Design	HASSELL
Noise and Vibration	Renzo Tonin & Associates
Construction Management	Mirvac
Electrical Design	WEBB
Surveying	Denny Linker & Co

2.0 Site Analysis

2.1 Site Location and Context

The proposal is positioned on the site known as 71-79 Macquarie Street, Sydney and is legally described as Lot 1 in DP 202431. This parcel of land is owned by AMP Life. The Council-controlled street to the west, which will also form part of the site, is legally known as Circular Quay East. The site is located at the southern end of East Circular Quay, as shown in the Location Plan and Aerial Photograph in **Figures 2** and **3**, respectively.

Figure 2 – Site location map

Figure 3 – Aerial photo

2.2 Site Description

The site has an area of approximately 890m^2 (excluding Council owned land) and is currently occupied by a commercial building (refer **Figure 4**). It is bounded by Macquarie Street to the east, the City Circle Railway and Cahill Expressway to the south, the Circular Quay public domain (controlled by SHFA) to the west and the Quay Grand mixed use development to the north (see land ownership diagram at Figure 4). The site also includes a stratum of basement floor space located beneath Macquarie Street that is used for parking. The proposal is to extend this basement area beneath Macquarie Street in a southerly direction to align with the southern boundary of Lot 1 in DP 202431 (the AMP land).

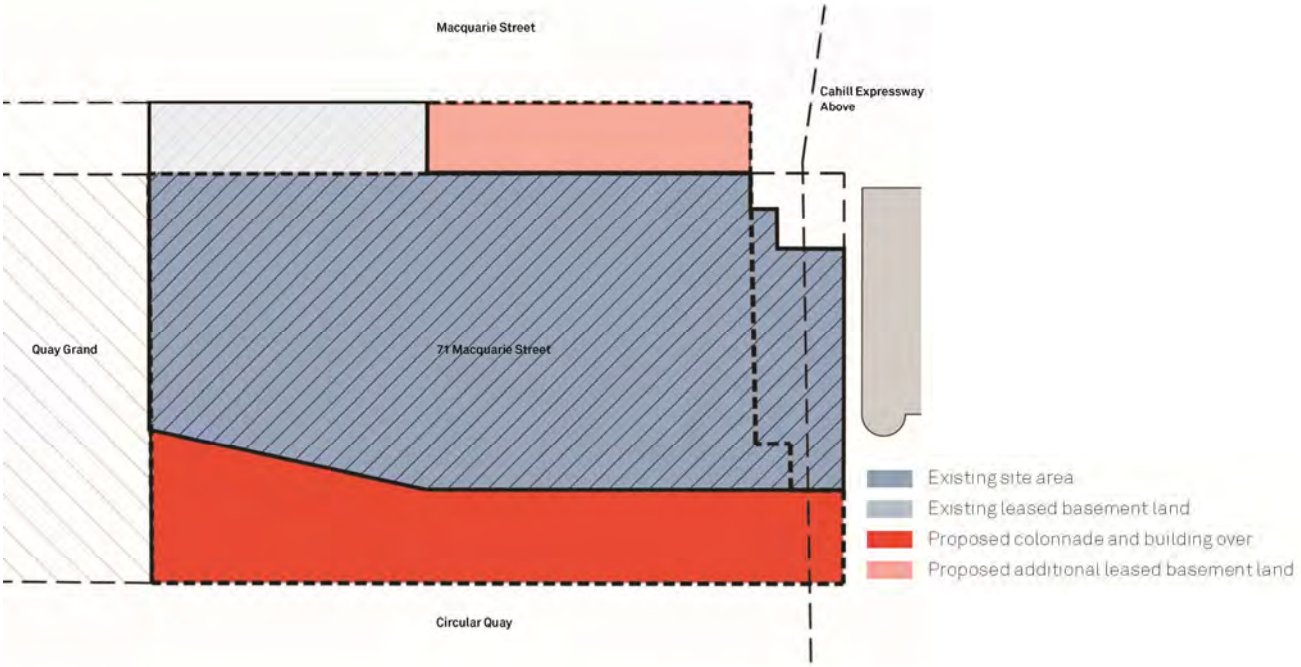

Figure 4 – Site ownership plan

Existing Development

The existing 17 level building on the site is currently used for commercial offices with short and mid-term lease arrangements, and is known as the Amatil Building (see **Figures 5** and **6**). It is noted that the current commercial uses are not in keeping with the range of residential, tourist and cultural uses existing in the redeveloped East Circular Quay and this part of Sydney's CBD north of the Cahill Expressway.

Figure 5 – The Amatil Building as viewed from the west

Figure 6 – The Amatil Building as viewed from the east

Landform

Topographically, the site has a significant fall (approximately nine metres or two generous floor levels) from Macquarie Street down to Circular Quay. This means that any proposed pedestrian link will be required to incorporate stairs and other access measures to achieve the transition in levels.

Vegetation

The vegetation within and surrounding the site consists of a single tree and a number of palm trees, as shown in **Figure 7**.

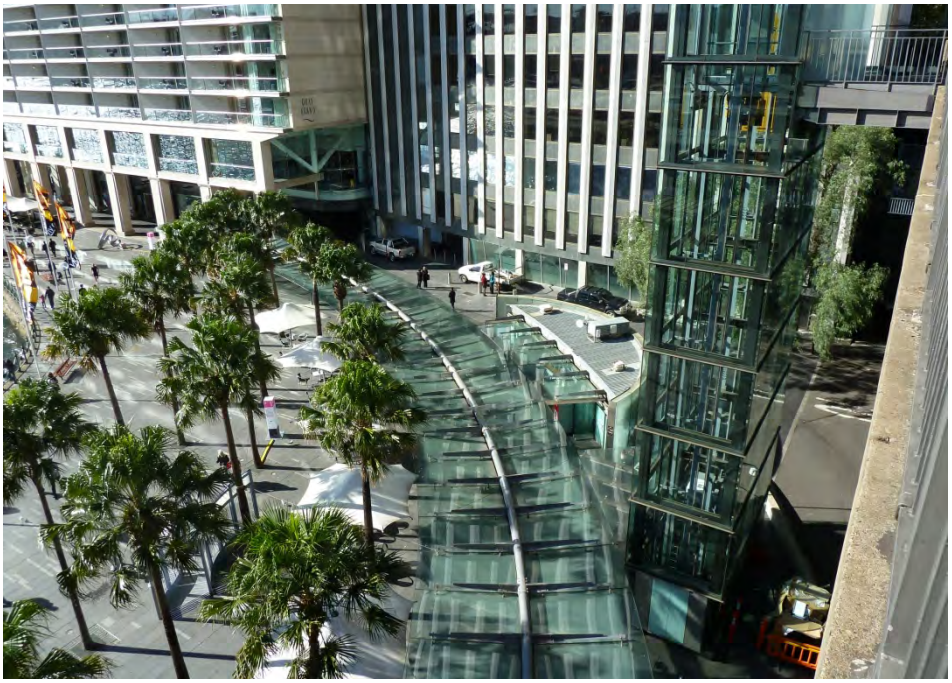

Figure 7 – Existing tree and palm trees to the west of the Amatil Building

Heritage

The Amatil Building was designed by Stephenson and Turner Architects and constructed in 1963-4. It is not included in any statutory or non-statutory heritage lists, however it is located in the vicinity of the following listed heritage items:

- Sydney Opera House;
- the Royal Botanic Gardens and Domain;
- the Moore Stairs;
- the sea wall and balustrade extending around Circular Quay;
- the Bennelong Stormwater Channel;
- Circular Quay Railway Station;
- Customs House; and
- the Royal Automobile Club of Australia (RACA).

Archaeology

With the basement of the Amatil building excavated down to bedrock there is no or little archaeological potential over much of the site. However, when the excavation for the basement was undertaken in 1963 the works involved the destruction of various tunnels, vaults and arches. Remnants of these features may remain, or they may have been totally destroyed. The area to the west of the basement may be partially unexcavated and therefore may have historical and Aboriginal archaeological potential.

Pedestrian Access

Public footpaths are currently provided along both sides of all roads in the local road network. There is a generous pedestrian walkway along the foreshore of Circular Quay linking the Sydney Opera House in the north to Circular Quay transport hub in the west and beyond (refer **Figure 8**).

The majority of intersections (with the exception of a small number of minor intersections) in the area have signalised pedestrian crossings. There is also a mid-block signalised pedestrian crossing on Macquarie Street adjacent to the subject site providing access to the Royal Botanic Gardens (refer **Figure 9**). In addition to this, a section of Alfred Street in front of the Circular Quay Railway Station has been converted into a pedestrian area.

Figure 8 – East Circular Quay walkway

Figure 9 – Signalised crossing of Macquarie Street

A stair is provided to allow access between Macquarie Street and the Cahill Expressway (refer **Figure 10**), and a lift is provided to provide access between East Circular Quay and the expressway.

Figure 10 – Stair between Macquarie Street and the Cahill Expressway

Vehicular Access

The roads in the vicinity of the site include the Cahill Expressway, Alfred Street, Macquarie Street (refer **Figure 11**), Phillip Street, Young Street and Albert Street. With the exception of Cahill Expressway which is a classified road, all of these are local roads that are under the jurisdiction of Council. These local roads are generally configured with one traffic lane and one parking lane in each direction.

Figure 11 – Macquarie Street looking south

The Cahill Expressway connects the north-eastern quadrant of the CBD and the Eastern Distributor to the Sydney Harbour Bridge, providing access to North Sydney and beyond (refer **Figure 12**).

Figure 12 – The Cahill Expressway looking west

Vehicular access to the site is currently via a public access road that leads to the east from the corner of Alfred and Phillip Streets. This access road is shared with the following neighbouring developments:

- Quay Apartments (service vehicles only);
- the RACA; and
- Quay Grand.

The access road crosses beneath the railway viaduct (refer **Figure 13**), and wraps around either side of an island formed by the columns supporting the viaduct. The western section of the access road has a clearance of 3.9 metres, whilst the eastern section has a clearance of 2.7 metres (refer **Figure 14**). Although logically the road would operate as a small gyratory system, there is no prohibition on movements. This allows vehicles to enter and leave the Quay Grand and Amatil buildings by the 3.9 metre clearance lane if required. Within one of the traffic islands is a small washroom for the convenience of bus drivers.

Figure 13 – Access road and rail viaduct, with the Cahill Expressway above

Figure 14 – Access road with restricted height clearance under the rail viaduct

The existing access to Quay Grand from the access road is along a public road that runs along the western boundary of the Amatil building (refer **Figure 15**). However, the development consent for the Quay Grand included a requirement for a 'breakthrough deed' which requires the access to be realigned through the basement of the 71 Macquarie Street site should it be redeveloped. This breakthrough deed is discussed in more detail in Section 3.6 of this report.

Figure 15 – Public road along the western frontage of the Amatil Building

Public Transport

The site is located in close proximity to all three traditional forms of public transport: train, bus and ferry. A description of the these services is provided below.

The site is located approximately 150 metres from Circular Quay Railway Station, which is typically a comfortable walking distance. Circular Quay Railway Station services trains running on four main railway lines within the CityRail network, being the South Line, the Inner West Line, the Bankstown Line and the Airport and East Hills Line. Circular Quay is one of the six City Circle railway stations serving the CBD and is very well serviced. An average day sees over 1,300 train services, with a typical frequency of eight or nine minutes.

The site is also located within 200m walking distance of the Alfred Street bus terminus. This provides access to more than 65 different bus routes serving the area providing bus services to numerous destinations around Sydney and surrounding suburbs. These services travel to destinations as far as Watson's Bay and Bondi Beach in the east, La Perouse in the south, Kogarah and Canterbury in the south-west, Parramatta in the west, and Ryde and in the north. The services are operated by Sydney Buses and generally have a frequency of 5 to 10 minutes during peak times.

The site is located within walking distance to the Circular Quay Ferry Terminal, adjacent to the railway station. From the Circular Quay Ferry Terminal, there are direct services to all parts of the Sydney's ferry network such as Parramatta, Balmain, Neutral Bay, Mosman Bay, Manly, Watson's Bay and Taronga Zoo. Ferry services generally have a frequency of approximately 30 minutes.

Cyclist Facilities

A combination of on-road and off-road bicycle paths are available providing cycle access from the site to other areas within the CBD and the wider Sydney area. On-road cycle routes are provided along Alfred Street, Albert Street, George Street, Pitt Street, Phillip Street and Macquarie Street.

There is a RTA off-road, shared cycling/walking path that starts near the site and runs in a westerly direction along Cahill Expressway to link up with another RTA off road cycle route that extends across the Sydney Harbour Bridge (refer **Figure 16**).

There are currently no formal bicycle parking facilities within the immediate vicinity of the site.

Figure 16 – Shared cycle and pedestrian path to the Cahill Expressway

Utilities and Infrastructure

The site is well serviced by potable water, storm water drainage, electricity, gas and telecommunications infrastructure. A number of these services will ultimately require diversions to accommodate the redevelopment of the site.

2.3 Land Ownership

The legal description and ownership of each allotment which comprises the development site is detailed in the Title Report prepared by Denny Linker and Co (refer **Appendix B**) and illustrated at **Figure 17**. AMP Capital Investors and the City of Sydney own land which comprises the development site.

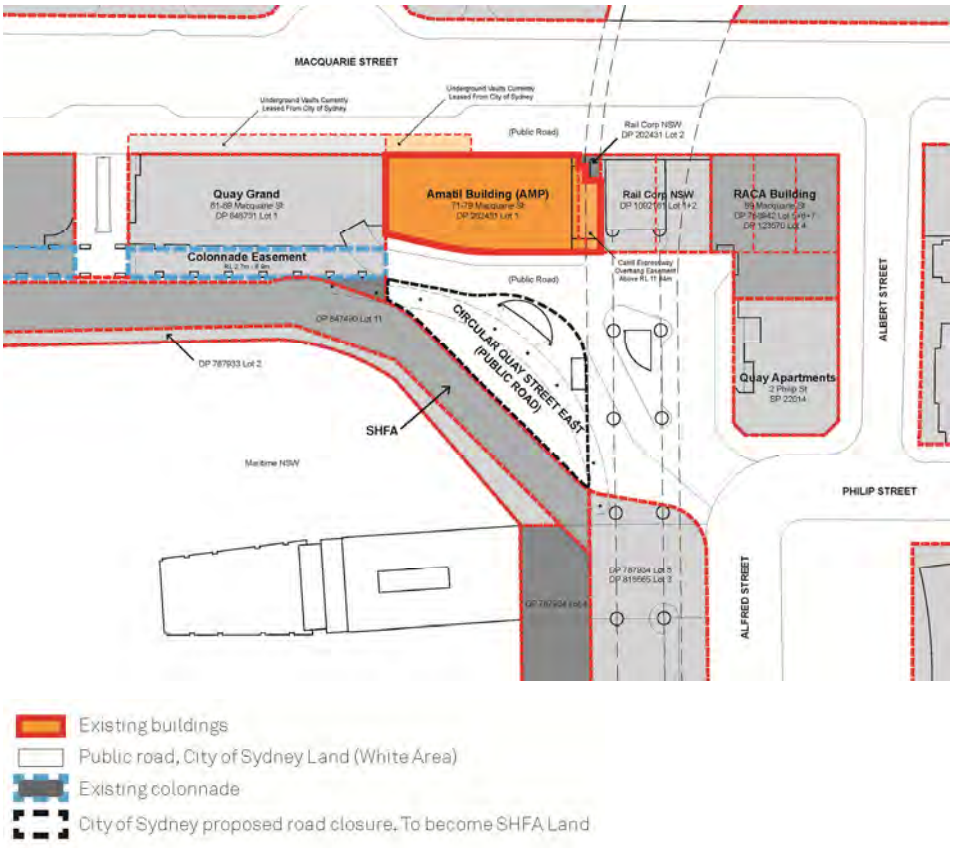

Figure 17 – Site ownership

2.4 Surrounding Development

The site is located at a pivotal point between the East Circular Quay buildings developed in the 1990s to the north and the taller residential, hotel and commercial buildings to the south (refer **Figures 18**, **19** and **20**). The site is also positioned between the colonnade that extends along the western facade of the East Circular Quay buildings, leading to the Opera House, and the Circular Quay transport interchange.

The neighbouring building to the north, Quay Grand, accommodates hotel-style serviced apartments and residential apartments with retail and restaurant/bar uses at lower levels. To the south, beyond the City Circle Railway line with the Cahill Expressway above, are located the Quay Apartments and the RACA Building (refer **Figure 21**). To the east of the site, across Macquarie Street, are the Royal Botanic Gardens.

Figure 18 – Neighbouring residential development to the north

Figure 19 – The colonnade

Figure 20 – Quay Apartments (left) and AMP Building at 33 Alfred Street to the south

Figure 21 – The Royal Automobile Club of Australia

3.0 Concept Plan

The Concept Plan establishes the vision and planning and development framework which will be used by the approval authority to assess future development proposals for the site. It articulates what the proponent is seeking to achieve for future development and sets the broad parameters for the development of the site.

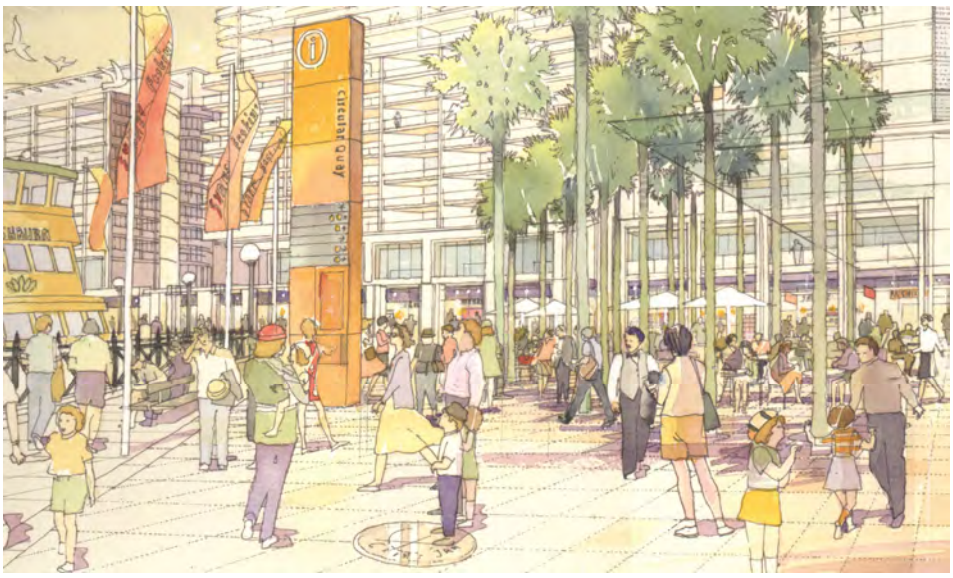

Figure 22 – Artist's impression of the indicative design

3.1 Project Vision

The proponent is seeking Concept Plan approval for the development envelope on the site and the proposed serviced apartments and residential uses. It is anticipated that there will be some retail or restaurant floor-space at ground level (Circular Quay level) to provide activation of the public domain (refer **Figure 22**).

A key component of the proposal is the completion of the colonnade and the creation of a through-site link from Circular Quay up to Macquarie Street. This would provide more convenient access along East Circular Quay and between Circular Quay and the Royal Botanic Gardens, both significant Harbour foreshore attractions.

Another key element of the proposal allows vehicular traffic to be removed from Circular Quay and redirected through the basement of the redeveloped building. The connection to the Quay Grand basement will be facilitated via the breakthrough deed[1] that formed part of the Quay Grand's development consent.

Pedestrian access to the building will be available from both Macquarie Street and Circular Quay. To provide for sufficient circulation space within the basement, additional basement space under Macquarie Street will be leased from Council. Car parking spaces are to be provided within the basement, which will include an adequate provision of accessible parking spaces.

[1] The breakthrough deed is an agreement between Council and the owner of the Quay Grand by which the Council can demand that the vehicular access to the Quay Grand over Circular Quay East be closed off and instead open the breakthrough panels in the southern wall of the basement of that development and gain access through 71-79 Macquarie Street.

The car parking spaces will be provided at the following rates:

- 1 space per studio or one bedroom apartment;
- 1.4 spaces per two bedroom apartment;
- 1.8 spaces per three or more bedroom apartment.

Based on an indicative yield study undertaken by HASSELL, this would result in the provision of approximately 133 spaces. However, it should be noted that the detailed design of the building, including yield and final car parking provision, will be the subject of the future application for development.

The building will be designed to provide premium quality accommodation and will seek to achieve ESD excellence. An indicative photomontage of the proposed envelope is shown in **Figure 23**. It should be noted that the detailed design of the building will be the subject of a future Project Application (or equivalent).

The Concept Plan provides the opportunity to:

- Complete the redevelopment of East Circular Quay, one of Sydney's most significant locations;
- Create a new pedestrian link connecting two of Sydney's most important areas of public domain, being Circular Quay and the Royal Botanic Gardens;
- Enable the completion of the East Circular Quay colonnade;
- Enhance the quality of the public domain through retail activation and public domain improvements;
- Remove vehicular traffic from Circular Quay; and
- Provide the city with a new 5 star serviced apartment complex.

Existing

Proposed

Figure 23 – Photomontage of Concept Plan envelope

3.2 Concept Approval

Approval is sought for the building envelope shown on the drawings within Attachment A of the Design Report prepared by HASSELL (refer **Appendix P**) and as illustrated in **Figure 24** below. Approval is also sought for the following:

- the location of future public domain works including a through-site link;
- serviced apartment and residential uses, and other uses (such as retail) to support the ground level activation of the site's accessible frontages;
- pedestrian and vehicle access arrangements; and
- car parking rates as follows:
  - 1 space per studio;
  - 1 space per one bedroom apartment;
  - 1.4 spaces per two bedroom apartment; and
  - 1.8 spaces per three or more bedroom apartment.

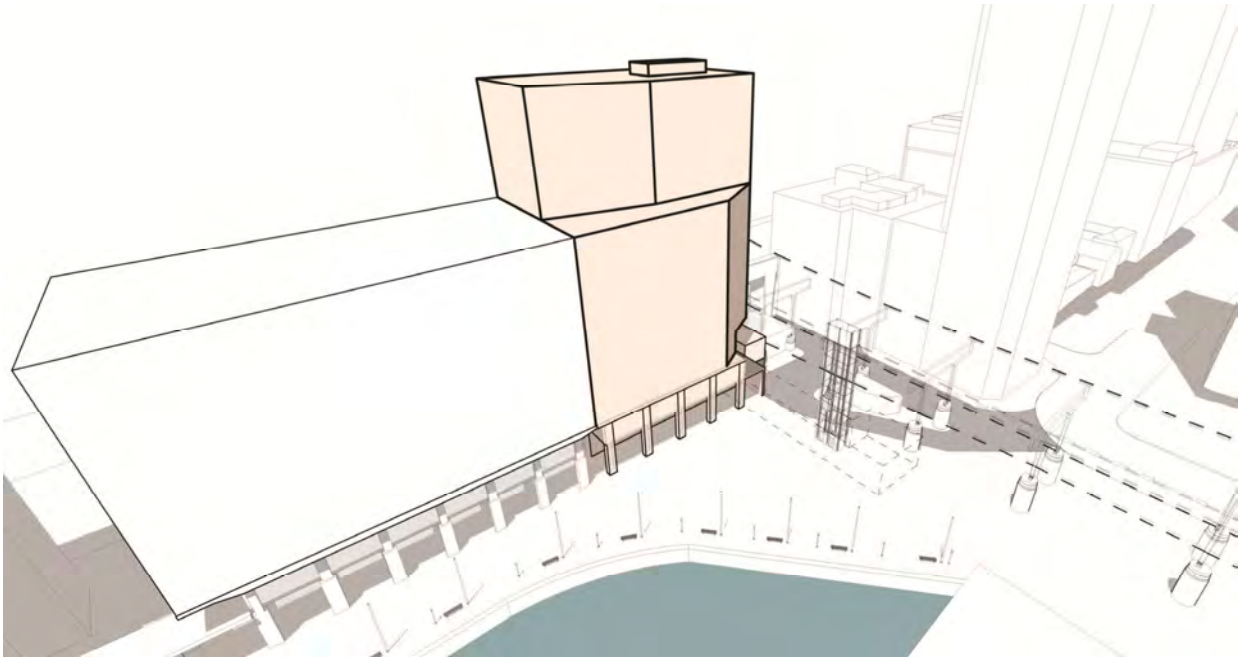

Figure 24 – Perspective sketch of Concept Plan envelope

3.3 Built Form

The proposed envelope has a parapet height of RL65.37, which is the same as the existing Amatil building. The proposed envelope has a height of RL67.23 to the top of the plant room[2], which is also the same as the existing Amatil building.

The upper portion of the proposed envelope (being that portion of the envelope above the level of the roof of the neighbouring Quay Grand building at RL46.70) is the same as that of the existing Amatil building. The lower portion of the envelope (that below the level of the Quay Grand building's roof) is the same as that of the Amatil building to the north, east and south, however it extends further to the west to align with the facade of the Quay Grand building. It is this extension to the west that allows for the completion of the East Circular Quay colonnade consistent with the built form to the north.

The south western corner of the envelope has been chamfered to ensure that it does not impose on any view corridors.

The proposed envelope incorporates six basement levels that will accommodate car parking, storage and plant. **Figure 25** below illustrates the western elevation of the Concept Plan envelope.

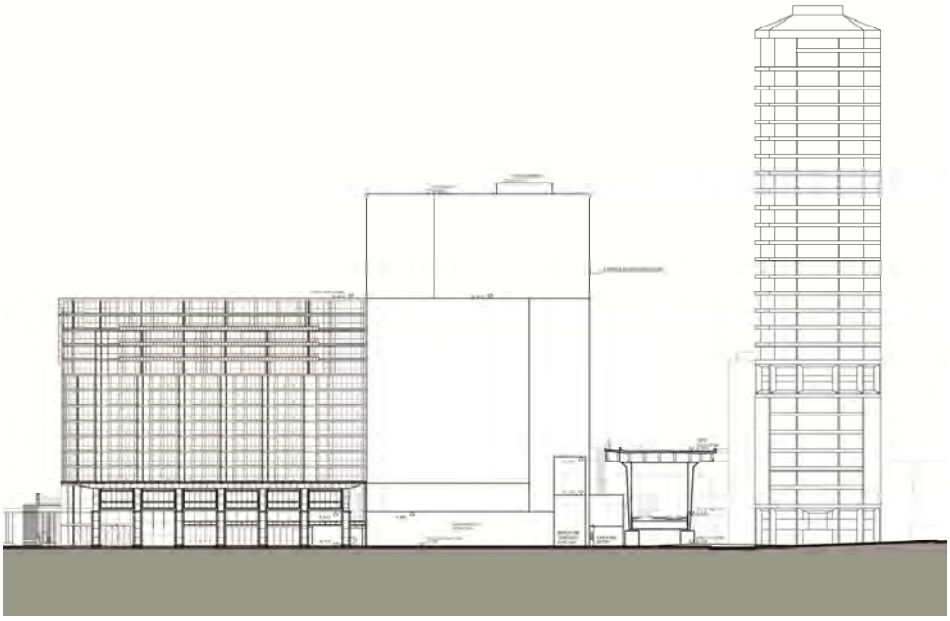

Figure 25 – Western elevation of Concept Plan envelope

[2] As per the definition of building height in the Standard Instrument, height in this instance excludes communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like.

3.4 Public Domain

Crucial components of the proposed concept are the completion of the East Circular Quay colonnade, the integration of a new pedestrian link from Circular Quay to the Royal Botanic Gardens, and the removal of vehicular access to the Quay Grand across the public domain. All these elements will contribute to the revitalisation of this neglected corner of one of the State's premier public domain areas (refer **Figure 26**).

The actual design of the public domain will require significant input from the various stakeholders, including the City of Sydney, SHFA and the proponent. It is envisaged that this will be resolved as part of the detailed design of the development at the future application stage. Accordingly, this Concept Application does not seek to resolve the design of this area but merely provides a defined area within which the through-site link will be provided. The Design Report (refer **Appendix P**) provides some detail around the existing framework of public domain elements in the vicinity of the site, however it must be stressed again that the actual design will be prepared prior to the submission of the future application for development and in agreement with the City of Sydney (refer to draft Statement of Commitments at Section 6.0).

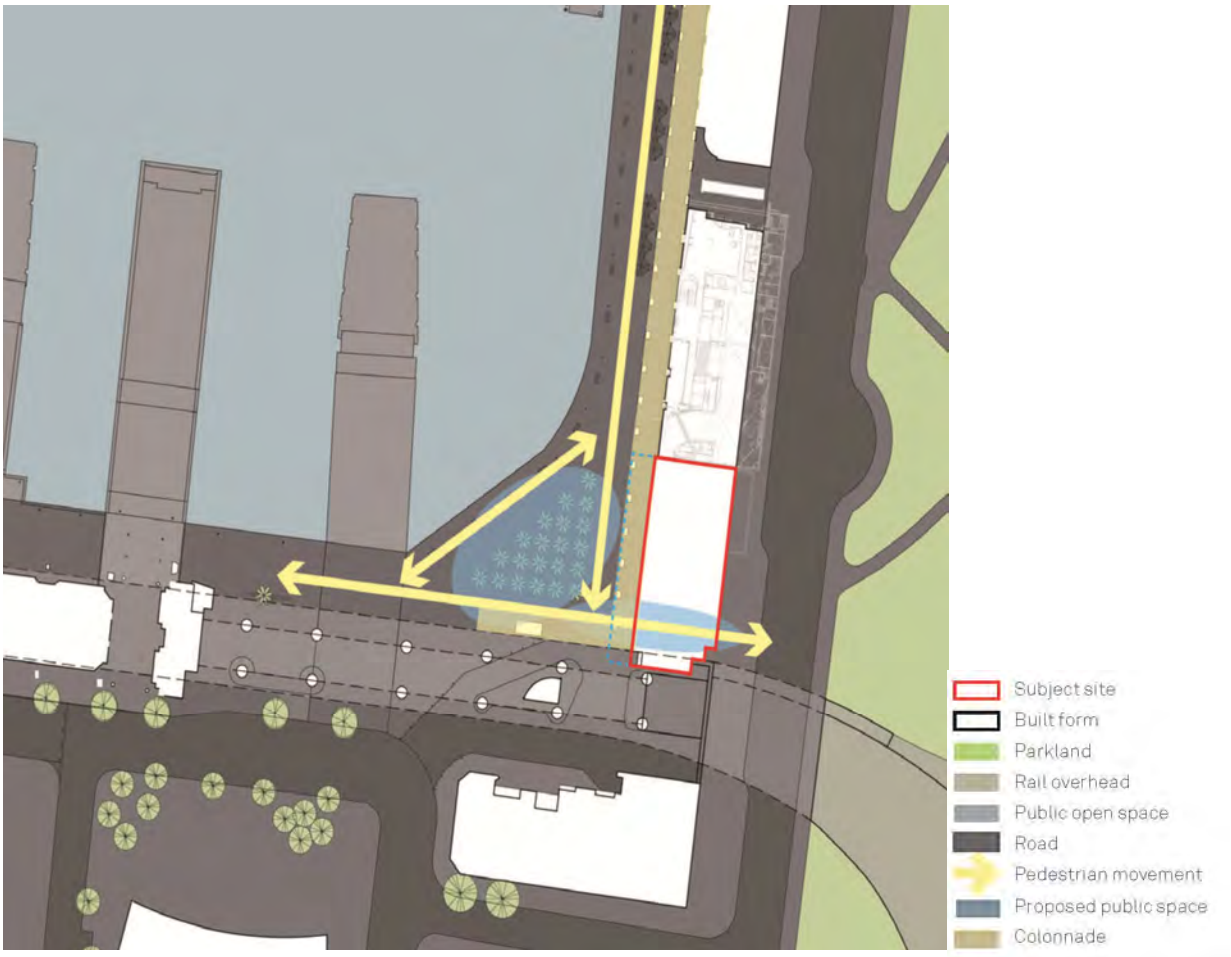

Figure 26 – Proposed public domain elements

3.5 Land Use

The proposed building envelope will ultimately predominately accommodate serviced apartment and residential uses, with ancillary retail uses at ground level.

An indicative design analysis prepared by HASSELL has suggested that the proposed building may potentially accommodate approximately 103 apartments. For the purposes of the design analysis it assumes:

- approximately 10 studio apartments;
- approximately 43 one bedroom apartments;
- approximately 24 two bedroom apartments; and
- approximately 26 three bedroom or larger apartments.

It is anticipated that serviced apartments will be located within the lower portion of the building and permanent residential apartments within the upper portion. This separation of the land uses, likely to be serviced by separate lift cores, will ensure that the amenity of each use is protected. In any case, the neighbouring Quay Grand building has demonstrated that premium serviced apartments and permanent residential accommodation can be appropriately managed to avoid any amenity conflicts.

The building is also likely to incorporate lobbies accessible from both Macquarie Street and Circular Quay, pool and gym facilities, and communal terraces overlooking Sydney Cove (refer **Figure 27**).

Figure 27 – Indicative arrangement of ground levels

3.6 Pedestrian and Vehicular Access

As indicated above, pedestrian access to the building will be provided via lobbies at both Macquarie Street and Circular Quay level. Pedestrians will also be able to directly access the ground level retail tenancies from Circular Quay.

The most significant pedestrian feature of the Concept Plan is the through-site link connecting Circular Quay to Macquarie Street and the Royal Botanic Gardens beyond. It is anticipated that this link will incorporate the existing lift between the Quay and the Cahill Expressway to ensure that equitable access is provided.

Vehicular Access

As previously described, the existing colonnade that currently terminates at the southern edge of the Quay Grand building is proposed to be extended southward.

This requires the removal of all traffic from this area with the section of the access road between the two existing driveways that serve the Quay Grand development and the existing building on the subject site to be closed. In its place will be a new combined driveway that serves both the Quay Grand and the subject development (refer **Figures 28** and **29**).

The new combined driveway would be located at approximately the same location as existing driveway that serves the subject site. The proposed access arrangement would require traffic to and from the Quay Grand building to be provided through the basement of 71 Macquarie Street. This will be facilitated via the existing breakthrough deed required by the development consent for Quay Grand[3].

The proposed driveway would connect to a curved ramp that provides access to the basement (Level B1). This ramp is proposed to be designed to comply with the Australian Standard AS2890.1-2004 and AS2890.2-2002. However, it is not possible to provide independent two-way traffic flows between all potential vehicles (i.e. cars and trucks) due to the existing height constraints of the railway viaduct.

Potential conflicts will be managed with a variety of measures that may include warning signage, passing bays and traffic controls. However, the low volume of traffic expected to use the basement means that any two way traffic flow issues or conflicts will be infrequent. This is further discussed in Section 5.10 of this report.

[3] Condition 22 of Development Consent Z94-00280 is as follows:

Future Connection of basement levels to adjoining development

The applicant shall provide "break-through" panels in the southern wall of each basement, in anticipation of the future redevelopment of the adjacent AMP site at 71-79 Macquarie Street and the connection of both basement areas, in order to facilitate the closure of the vehicular access, of the subject development in East Circular Quay and the use of the vehicular access in the future redevelopment of the AMP site. In this regard, the applicant shall enter into a deed with Council, prepared by Council's solicitor, which requires the building owner, upon the written instruction of Council, to connect all basement levels of the subject development with the adjacent basements of the adjacent site at 71-79 Macquarie Street, remove the vehicular entrance in East Circular Quay within the subject development and convert it to retail facilities, to the satisfaction of the Assistant General Manager, Planning and Building. The cost of the preparation of the deed is to be borne by the applicant. The deed is to be executed prior to the release of the building approval for the development.

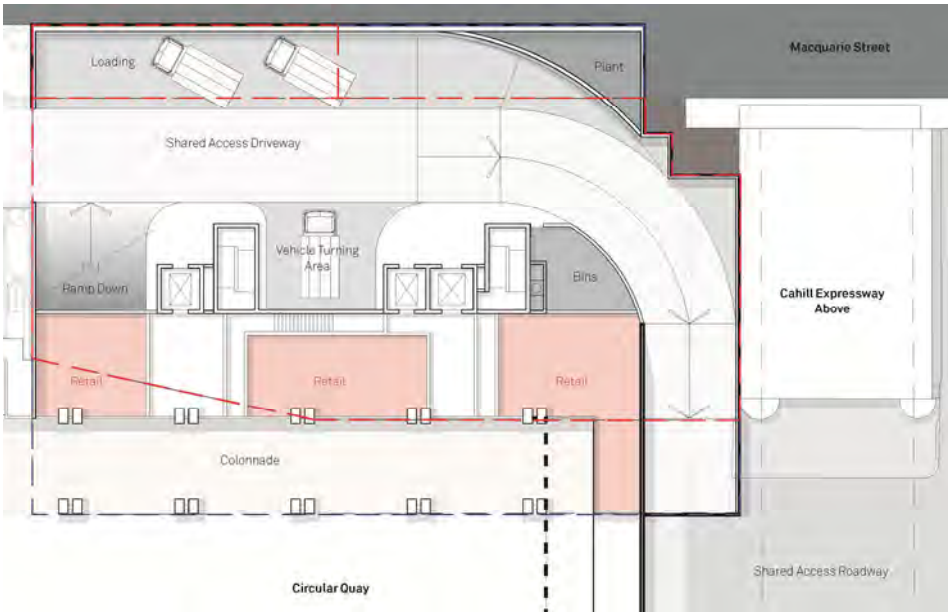

Figure 28 – Indicative upper basement design

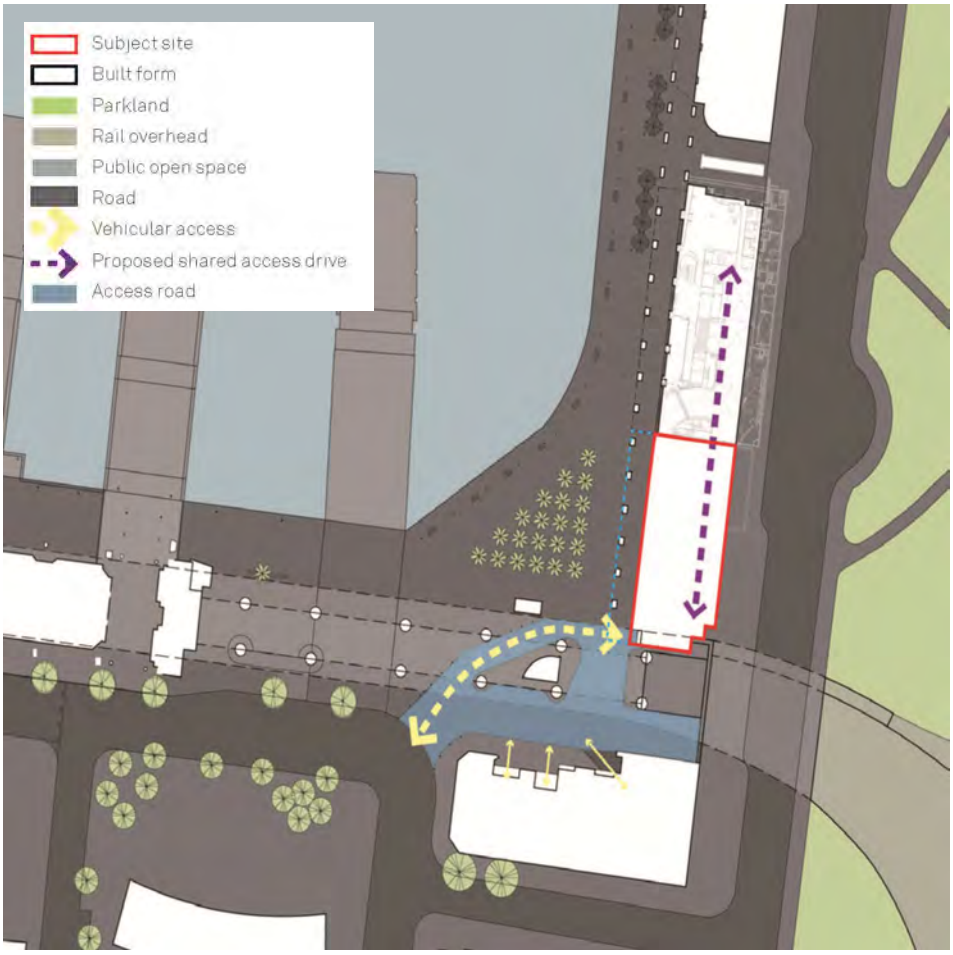

Figure 29 – Proposed vehicular access arrangements

Within the basement levels, the floor plates are generally rectangular in shape with a central core. The loading area serving the proposed development would be located on Level B1 within the central core.

Once within Level B1, vehicles will be able to undertake the following:

- proceed unhindered to the Quay Grand basement;
- use the loading docks at this level; or
- proceed to the lower parking levels.

Appropriate security measures will be implemented to restrict access where required.

The existing height restriction into the Quay Grand loading area is indicated as 3.0 metres, however the maximum available height clearance has been measured and is actually 3.6 metres. The existing building on the site (the Amatil Building) has a height restriction of 2.0m. It is proposed to provide a height clearance of 3.6 metres along from the external road network to the basement of the Quay Grand building.

As the available vertical clearance in the loading area will be 3.6 metres, the loading area will be designed to accommodate the turning geometry of a medium sized refuse truck with an overall length of 8.6 metres and a height of 3.05 metres. This is the largest truck that currently serves Quay Grand (this truck collects only once a day and generally before 6.00am).

Car Parking

An indicative design for the basement has been prepared to test car parking and circulation arrangements (refer **Figure 30**). Residential parking spaces would be located on Levels B1 to B6, with parking spaces located around the periphery of the basement footprint and configured 90 degree to the boundary walls. An inter-floor ramp would be provided on each floor and located to the north of the central core to provide access between the parking levels.

The circulation aisles wrapping around the central core would gently ramp up to reduce the grading of the inter-floor ramps between levels. The basement levels will be designed to comply with the relevant Australian Standard for car parking facilities AS2890.1-2004 and fully detailed within the future application for development.

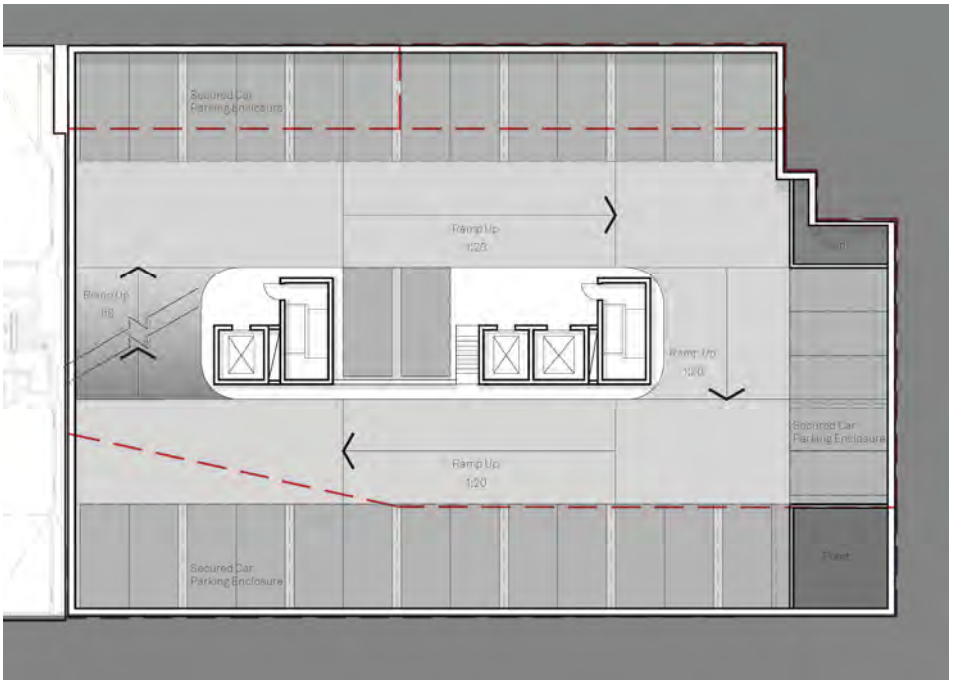

Figure 30 – Indicative parking level design

3.7 Indicative Project Staging

It is anticipated that, subject to future development approval, the development will be completed in a single construction stage.

4.0 Director General's Environmental Assessment Requirements

On 4 March 2011, in accordance with Section 75F of the EP&A Act, the Director-General of the Department of Planning issued the requirements for the preparation of an Environmental Assessment to accompany a Concept Plan for the project. A copy of the DGRs is included in **Appendix A**.

Table 1 provides a detailed summary of the individual matters listed in the DGRs and identifies where each of these requirements has been addressed in this report and the accompanying technical studies.

Table 1 – Director General's Requirements

Requirement	Location in Environmental Assessment	
Executive Summary	Page ii	
Statement of Validity	Page i	
Quantity Surveyor's Certificate	Appendix C	
Site Analysis	Section 2.0	
Description of the Proposed Development	Section 3.0	
Assessment of the Key Issues	Section 5.0	
Draft Statement of Commitments	Section 6.0	
Conclusion and Justification	Section 7.0	
Key Issues	**Report**	**Technical Study**
EPIs, Policies, Guidelines		
Planning provisions applying to the site, including permissibility and the provisions of all plans and policies	Section 5.1	N/A
Built Form and Height		
The methodology and justification for the non-compliance with the existing local controls	Section 5.4	Appendix P
Analysis of proposed bulk and scale of the development against the existing bulk and scale of surrounding development	Section 5.4	Appendix P
The form and external appearance of the proposed building and how it will improve the quality and amenity of the public domain	Section 5.4	Appendix P
Urban Design		
Design quality of the building with specific consideration of the facade, massing, setbacks, building articulation, use of appropriate colours, materials/finishes, landscaping, safety by design (CPTED) and public domain.	Section 5.4.7	Appendix D
The sustainable design principles incorporated into the development in terms of sunlight, natural ventilation, reflectivity, visual privacy, safety and security.	Section 5.17	Appendix P
Wind	Section 5.7	Appendix E
Acoustic	Section 5.9	Appendix F
Resources, and water and energy efficiency	Section 5.17	N/A

Requirement	Location in Environmental Assessment	
Environmental and Residential Amenity		
Solar access, visual privacy, view loss	Sections 5.4.3 and 5.4.4	Appendices P and O
Acoustic privacy	Section 5.9	Appendix F
BASIX certificate	Section 5.17	Not applicable to this Concept Plan application. To be addressed as part of the future application for development.
Potential land use conflicts, with particular regard to serviced apartments and residential accommodation	Section 3.5	N/A
View Impacts		
Assess the visual impacts of the building on the harbour foreshore and surrounding areas, particularly affected residential and commercial buildings, including those along Macquarie Street, Albert Street and Philip Street	Section 5.4.4	Appendix P
A view analysis is to be undertaken inclusive of photomontages and perspectives of: ▪ key elements and views of the development from key locations (including, but not limited to, George Street, Circular quay, Macquarie Street, Cahill Expressway, Albert Street and Philip Street)	Section 5.4.4	Appendix P
Transport and Accessibility		
Detail the proposed changes to the street network and access arrangements adjoining the site.	Section 5.10	Appendix G
Daily and peak traffic movements likely to be generated by the proposed development, including modelling and assessment of the performance of key intersections providing access to the site, and any upgrades (road/intersections) required as a consequence of the proposal.	Section 5.10	Appendix G
Transport and Accessibility Impact Assessment with particular regard to: ▪ Transport and traffic management, including the demonstration of a minimalist approach to car parking provision: ▪ Justification of proposed quantum of on-site car parking for the proposal having regard to RTA guidelines and relevant council policies, and accessibility of the site to public transport. ▪ Pedestrian and cycle access/circulation and connections to the external networks; ▪ Measures to promote public transport usage and pedestrian and bicycle linkages.	Section 5.10	Appendix G

Requirement	Location in Environmental Assessment	
Identification of Travel Demand Management (TDM) measures that will optimise the opportunity provided by the project site's proximity to public transport, including the preparation of a Work Place Travel Plan.	Section 5.10	Not applicable to this Concept Plan application. To be addressed as part of the future application for development.
In relation to construction traffic: ▪ Details of anticipated truck movements to and from the site; ▪ Details of access arrangements for works to/from the site, emergency vehicles and service vehicle movements:	Not applicable to this Concept Plan application. To be address as part of the future application for development.	Appendix H
Streetscape and Public Domain		
Outline the relationship between the development and the public domain, including how it relates to the predominant pedestrian path along the waterfront and how the southern end of the colonnade is to be activated.	Sections 3.4 and 5.5	Appendix P
Demonstrate that the existing public road, over which the colonnade is proposed to be built, is not necessary, as required when considering the closure of a public road.	Section 5.5	Appendices P and G
Outline the changes to the public domain, in particular the encroachment of the building's envelope in the public domain and how this will not impede the ability to provide sufficient space for a pedestrian promenade and sufficient carriageway width along the foreshore.	Sections 3.4 and 5.5	Appendix P
Outline the changes to public street and public pedestrian connections, in particular the north-south west connections.	Sections 3.4 and 5.5	Appendix P
Demonstrate the new access hierarchy, including the relationship between the street, footpaths and building.	Sections 3.4 and 5.5	Appendix P
Clearly identify and distinguish between the public domain and streets, and private spaces/commercial spaces.	Sections 3.4 and 5.5	Appendix P
Ensure and demonstrate adequate vehicular access throughout the area and to adjoining properties.	Section 5.10	Appendices P and G
Detail the amendments to the foreshore promenade and its relationship with Sydney Harbour.	Sections 3.4 and 5.5	Appendix P
Outline the design, location and access arrangements for the proposed public link from Macquarie Street to Circular Quay.	Sections 3.4 and 5.5	Appendix P
Geotechnical Matters		
Assess the geotechnical and contamination issues associated with the construction of the building, associated promenade and pedestrian link between Macquarie Street and Circular Quay.	Section 5.12	Appendix I

Requirement	Location in Environmental Assessment	
Rail Corridor		
An accurate survey locating the development with respect to the rail boundary and rail infrastructure. This works is to be undertaken by a registered surveyor to the satisfaction of RailCorp.	N/A	Appendices B and P
A geotechnical and structural report	Section 5.12	Appendix I
An excavation and construction methodology.	Section 5.16	Appendix H
Cross sectional drawings showing ground surface, rail tracks, sub soil profile, proposed basement excavation and structural design of sub ground support adjacent to the rail corridor.	N/A	Appendices I and P
Design guidelines are to be prepared regarding the fencing to be used/constructed along the entire common boundary with the rail corridor. Fencing guidelines are to be developed in consultation with RailCorp.	Section 5.14	Not applicable to this Concept Plan application. To be addressed as part of the future application for development.
Derailment Protection		
A derailment protection risk assessment must be prepared in accordance with AS5100 for new structures located within 25m of the rail corridor. Where the risk assessment has identified a need for derailment protection or where required by the Australian Standard, the proponent is to incorporate those measures into the design and engineering details of the building.	Section 5.14	Not applicable to this Concept Plan application. To be addressed as part of the future application for development. (Refer to draft Statement of Commitments at Section 6.0)
Cahill Expressway		
An accurate survey locating the development with respect to the rail boundary and rail infrastructure. This work is to be undertaken by a registered surveyor to the satisfaction of the RTA.	N/A	Appendix B
A geotechnical and structural report.	Section 5.12	Appendix I
An excavation and construction methodology.	Section 5.16	Appendix H
Cross sectional drawings showing ground surface, sub soil profile, proposed basement excavation and structural design of sub ground support adjacent to the Cahill Expressway.	N/A	Appendix I
Design guidelines are to be prepared regarding the fencing to be used/constructed along the entire common boundary with the rail corridor. Fencing guidelines are to be developed in consultation with the RTA.	Section 5.14	Not applicable to this Concept Plan application. To be addressed as part of the future application for development.

Requirement	Location in Environmental Assessment	
Soil and Water		
Address the potential impacts due to construction and operations on water quality, marine vegetation and aquatic ecology.	Section 5.13	Appendix H
Consider the drainage and stormwater management issues, including on-site detention of stormwater, water sensitive urban design and drainage infrastructure, particularly in relation to the rail corridor and Cahill Expressway.	Section 5.13	Not applicable to this Concept Plan application. To be addressed as part of the future application for development. (Refer to draft Statement of Commitments at Section 6.0)
Address potential impacts on aquatic habitats from changes to the quantity, quality and discharge of stormwater from the site.	Section 5.13	N/A
Utilities		
Consider how the development can be satisfactorily serviced for utilities and infrastructure services such as the supply of potable and potable water, sewerage, stormwater, gas and electricity.	Section 5.11	Appendix J
Contamination		
The EA is to demonstrate compliance with SEPP 55 and conclude that the site is suitable for the proposed use in accordance with SEPP 55.	Section 5.12	Appendix K
Staging		
Detail the staging of the proposal.	Section 3.7	N/A
Air, Noise and Odour Quality		
Identify potential air quality and odour impacts, in particular during the construction and operation of the development and appropriate mitigation measures.	Section 5.16	Appendix H
Identify potential noise impacts, in particular during the construction and operation of the development and appropriate mitigation measures.	Section 5.9	Appendix F
Heritage		
An assessment of the likely impacts of the proposal on heritage and archaeological items and proposed conservation and mitigation measures.	Section 5.6	Appendix L
Climate Change and Sea Level Rise		
An assessment of the risks associated with sea level rise on the modifications as set out in the NSW Coastal Planning Guideline: Adapting to Sea Level Rise.	Section 5.15	Appendix M
ESD		
Identify how the development will incorporate ESD principles in the design, construction and ongoing operation phase of the development.	Section 5.17	Not applicable to this Concept Plan application.

Requirement	Location in Environmental Assessment	
		To be addressed as part of the future application for development. (Refer to draft Statement of Commitments at Section 6.0)
Address water quality management for the site including an "Integrated Water Management Plan" to include any proposed alternative water supply, proposed end uses of potable and non-potable water, demonstration of water sensitive urban design and any water conservation measures.	N/A	Not applicable to this Concept Plan application. To be addressed as part of the future application for development. (Refer to draft Statement of Commitments at Section 6.0)
Planning Agreements/Developer Contributions		
Scope and justification for any planning agreement/developer contributions proposed.	Section 5.19	Refer to draft Statement of Commitments at Section 6.0
Consultation		
Undertake an appropriate and justified level of consultation in accordance with the Departments major Project Community Consultation Guidelines October 2007.	Section 5.2	Appendix N
General		
A Quantity Surveyor's Certificate of Cost to verify the capital investment value of the project (in accordance with the definition contained in the Major Projects SEPP	Appendix C	
An existing site survey plan drawn at an appropriate scale illustrating; ▪ the location of the land, boundary measurements, area and north point; ▪ the existing levels of the land in relation to buildings and roads; ▪ location and height of existing structures on the site, and ▪ location and height of adjacent buildings and private open space. All levels to be Australian height Datum.	Appendix B	
A Site Analysis Plan must be provided which identifies existing natural elements of the site (including all hazards and constraints), existing vegetation, footpath crossing levels and alignments, existing pedestrian and vehicular access points and other facilities, slope and topography, utility services, boundaries, orientation, view corridors and all structures on neighbouring properties where relevant to the application (including windows, driveways, private open space etc).	Appendix P	

Requirement	Location in Environmental Assessment
A locality/context plan drawn at an appropriate scale should be submitted indicating; ▪ significant local features such as parks, community facilities and open space and heritage items: ▪ the location and uses of existing buildings, shopping and employment areas; ▪ traffic and road patterns, pedestrian routes and public transport nodes.	Appendix P
Architectural drawings ▪ the location of any existing building envelopes or structures on the land in relation to the boundaries of the land and any development on adjoining land; ▪ Indicative floor plans, sections and elevations of the proposed building; ▪ Accessibility requirements of the Building Code of Australia and the Disability Discrimination Act: ▪ The height (AHD) of the proposed development in relation to the land; ▪ The level of the lowest floor, the level of any unbuilt area and the level of the ground ; ▪ Any changes that will be made to the level of the land by excavation, filing or otherwise.	Appendix P
Stormwater Concept Plan – illustrating the concept for stormwater management:	Not applicable to this Concept Plan application. To be addressed as part of the future application for development.
Erosion and Sediment Control Plan – plan or drawing that shows the nature and location of all erosion and sedimentation control measures to be utilised on the site:	Appendix H
Geotechnical Report – prepared by a recognised professional which assesses the risk of Geotechnical failure on the site and identifies design solutions and works to be carried out to ensure the stability of the land and structures and safety of persons;	Appendix I
Landscape plan – illustrating treatment of open space areas on the site, screen planting along common boundaries and tree protection measures both on and off the site:	Not applicable to this Concept Plan application. To be addressed as part of the future application for development.
Shadow diagrams showing solar access to the site and adjacent properties at summer solstice (Dec 21), winter solstice (June 21) and the equinox (March 21 and September 21) at 9.00am, 12.00 midday and 3.00pm.	Appendix O

5.0 Environmental Assessment

This section of the report assesses and responds to the environmental impacts of the Concept Plan proposal. It addresses the matters for consideration set out in the DGRs (see Section 4.0).

The draft Statement of Commitments at Section 6.0 complements the findings of this section.

5.1 Consistency with Relevant Strategic and Statutory Plans and Policies

The DGRs require the following legislation, strategies and planning instruments, which are relevant to the proposed development to be addressed:

- State Environmental Planning Policy (Major Development) 2005
- State Environmental Planning Policy 55 - Remediation of Land
- State Environmental Planning Policy 65 - Design Quality of Residential Flat Development
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004
- State Environmental Planning Policy (Infrastructure) 2007
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005
- Sydney Local Environmental Plan 2005
- Draft Sydney Local Environmental Plan 2011
- Sydney Harbour Foreshores and Waterways Area Development Control Plan

The Concept Plan's consistency with the relevant strategic and statutory plans and policies is located in **Table 2** below. Variations to, and non-compliance with, the key standards and guidelines highlighted in the table are discussed in detail in the following sections of this environmental assessment.

Table 2 – Summary of consistency with key strategic and statutory plans and policies

Instrument/Strategy	Comments
State Legislation	
Environmental Planning and Assessment Act 1979	The proposed development is consistent with the objects of the EP&A Act, particularly for the following reasons: ▪ it allows for the orderly and economic development of land; and ▪ opportunity for public involvement and participation has been and will further be provided.
Strategic Plans	
NSW State Plan 2010	The NSW State Plan 2010 is a long-term plan to deliver services in NSW and sets clear priorities to guide Government decision-making and resource allocation. The 2010 State Plan sets out ten priorities including a new priority to speed up planning decisions to support investment in NSW and a new approach to integrated transport and land use planning and delivery. The State Plan also aims to focus growth around existing transport hubs. The Concept Plan will facilitate improvements to the public domain that will improve the functionality and attractiveness of this important corner of NSW's premier city.

Instrument/Strategy	Comments
	Furthermore, by providing residential apartments near significant rail, bus and ferry services the Concept Plan will increase the share of peak hour public transport journeys.
Sydney Metropolitan Plan	In December 2010, the NSW Government released its Metropolitan Plan for Sydney 2036. The Metropolitan Plan provides commentary and direction for the next 25-30 years at a regional level on issues such as land use, economic development, jobs, transport, innovation, centres and corridors, and residential areas within Sydney. The Metropolitan Plan sets the planning context for the provision of residential development in Sydney. New dwellings are encouraged to be located in the vicinity of public transport nodes. The Concept Plan is consistent with this aim.
Draft Sydney City Subregional Strategy	This Concept Plan is consistent with the Strategy in that it contributes to the provision of diverse housing stock that is well connected to existing public transport infrastructure. The Concept Plan facilitates the creation of approximately 100 dwellings, which will contribute to the Subregion's target of 55,000 additional dwellings by 2031.
State Planning Instruments and Controls	
SEPP 55	A Preliminary Contamination Assessment has been undertaken in relation to the site by Coffey Geotechnics (refer **Appendix K**). Based on this investigation, the potential for significant widespread soil contamination in the development area is relatively low and the site is suitable for the proposed development.
SEPP 65	A SEPP 65 Statement has been prepared (refer **Appendix P**) in relation to the Concept Plan that addresses the ten Design Quality Principles of SEPP 65. This statement includes a Design Verification Statement and has been prepared in relation to the Concept Plan only.
SEPP (Infrastructure)	The aim of this Policy is to facilitate the effective delivery of infrastructure across the State, including providing for consultation with relevant public authorities about certain development during the assessment process. The proposed Concept Plan does not trigger consultation with the RTA under the provisions of Schedule 3 of the SEPP.
SEPP (Major Development)	State Environmental Planning Policy (Major Development) 2005 provided the planning framework for the assessment of State and regionally significant projects. As detailed in Section 1.4, at the time of the declaration of the project clause 10 of Schedule 2 of the Major Development SEPP provided for development with a Capital Investment Value (CIV) greater than $5 million to be considered as a Major Project under Part 3A of the Act. The proposed development has an estimated CIV of $100 million. A copy of the quantity surveyor's calculation is provided at **Appendix C**. The development has been declared a Major Project by the Minister. This EAR has been prepared in response to the Director General's Environmental Assessment Requirements in accordance with Part 3A of the EP&A Act.
Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005	The site is located in the Foreshore & Waterways area, but not 'zoned' under the REP where the majority of the plan's provisions apply.

Instrument/Strategy	Comments	
	The proposal is consistent with the aims of the REP in that the development will: ▪ create a high quality and ecologically sustainable urban development on the site; ▪ ensure a healthy, sustainable environment by effectively managing all environmental impacts associated with the development (erosion, sediment control, stormwater, etc.); ▪ contribute to the vibrancy of the CBD through the provision of high quality residential space with an active public domain at ground level. ▪ will not impede public access to foreshore; and ▪ maintains a high quality urban environment through urban design, and will not detract from long distance views and vistas that may be available from the surrounding public domain to and from the harbour.	
Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 Matters for Consideration	Biodiversity, ecology and environment protection	The development, through the application of water sensitive urban design principles, will have a neutral effect on the quality of water entering the Harbour.
	Public access to the foreshore	The Concept Plan expressly facilitates improved public access to the foreshore through the provision of a through- site link.
	Maintenance of a working harbour	Not applicable
	Interrelationship of waterway and foreshore uses	As demonstrated in Section 5.10.1 of this report, the development will not generate additional significant traffic generation.
	Scenic quality	The scale, form and design of the Concept Plan has been based on a careful analysis of the site and the locality, and the development will enhance the visual quality of Sydney Cove.
	Protection of views	As demonstrated in Section 5.4.4 of this report, the Concept Plan reasonably protects existing views to and from Sydney Harbour.
	Boat storage facilities	Not applicable
Local Planning Instruments and Controls		
Sydney Local Environmental Plan 2005	Clause 32 – Zone	City Centre. Within this zone, any development is permissible with consent.
	Clause 50 – Height of Buildings	RL46.7 See discussion in Section 5.4.1
	Clause 54 – Floor Space Ratio	14:1 See discussion in Section 5.4.2
Draft Sydney Local Environmental Plan 2011	Height Floor Space Ratio	RL46.7 12.5:1

5.2 Consultation

In accordance with the Environmental Assessment Requirements for this project issued by the Director-General consultation must be undertaken with relevant public authorities, community groups and affected landowners . A Consultation Report has been prepared by Elton Consulting (refer **Appendix N**) that provides a synopsis of the consultation undertaken to date.

In summary, consultation has been undertaken with the following stakeholders:

- City of Sydney;
- Sydney Harbour Foreshore Authority (SHFA);
- Department of Planning and Infrastructure;
- Residents/owners of Quay Grand;
- Residents/owners of Bennelong Apartments;
- Residents/owners of Quay Apartments; and
- The Royal Automobile Club of Australia.

Further to this consultation, several of the specialists responsible for the preparation of the technical reports that comprise the appendices of this EAR, engaged in various consultations with relevant stakeholders, including the relevant utility providers.

The objectives of these consultations have been to:

- Fulfil the Director General's requirements for the provision of consultation prior to lodgement of a Concept Plan application;
- Provide accurate and relevant information about the proposal to neighbouring residents and businesses and key influencers to create or increase stakeholder awareness of the proposal;
- Provide a means by which stakeholders can comment on the proposed plans to the project team
- Assist the project team to understand the local and metropolitan context;
- Provide the project team with the opportunity to incorporate stakeholder feedback into the planning and development process;
- Minimise the opportunity for speculation and misinformation about the planning and development process by ensuring that there are no information gaps regarding the process; and
- Establish relationships with key stakeholders that can benefit current and future projects.

The key issues raised during the consultation are as follows:

- Public domain;
- Building envelope;
- Traffic;
- Community consultation;
- Quality of redevelopment;
- Visual amenity;
- Demolition and construction; and
- Planning process.

Each of these is addressed in this Environmental Assessment Report.

Consultation meetings held with the City of Sydney and SHFA to date are as follows:

- meeting with Council in August 2010;
- meeting with SHFA in August 2010;
- briefing meeting with Department of Planning in September 2010;
- private briefing of CSPC in November 2010; and
- meeting with Council in July 2011.

Council raised the following key issues:

- Consistency with East Circular Quay built form to the north;
- Potential of increasing building footprint to the west, allowing the colonnade to connect to the Circular Quay interchange and screening the Cahill Expressway; and
- Existing height controls.

SHFA raised the following key issues:

- Support for the proposal in principle, particularly the clear public benefits of the proposal (completion of colonnade, public access, delineation of space and upgrade of public domain generally, access to Macquarie Street and Royal Botanic Gardens beyond);
- 'High-end' serviced apartments are much less likely to generate amenity issues for permanent residents; and
- Innovation and compromise are required for this site and strict compliance with planning controls would not deliver SHFA's vision for Circular Quay. Therefore, the retention of the existing height is considered justifiable.

Additional meetings were held with Council to discuss issues relating to the public domain on the following dates:

- 17th August 2011;
- 7th September 2011;
- 16th September 2011 (also attended by SHFA);
- 18th October 2011 (also attended by SHFA and the NSW Government Architects Office); and
- 20th October 2011.

Similarly, additional meeting to discuss public domain issues were held with SHFA on 31 August and 8 September 2011.

The overriding purpose of all the consultation meetings detailed above was to promote a cooperative approach to an integrated design and development outcome with public domain improvements.

5.3 Site Suitability

As described in Section 1.3 of this report, a number of options in relation to the development of the site were examined. These included:

- the 'status quo' approach;
- completely upgrading the services of the existing building to increase its environmental performance;
- keeping the existing structure but to refit the building as a residential development;
- limiting the height of a replacement envelope to that of the neighbouring Quay Grand building; and
- limiting the size of a replacement envelope to that of the existing building above the height of the Quay Grand building, and providing additional volume to facilitate the completion of the colonnade and the provision of a through-site link.

The testing of each of these alternatives indicates that the final option is the most appropriate in the circumstances, taking into account the constraints of the site and the realities of the development market. The suitability of the site to accommodate the concept proposal has been considered from a site, development and environmental capacity perspective. The site is considered suitable for the project for the following reasons:

- it will facilitate the upgrading of foreshore access through the creation of a pedestrian link between Circular Quay and Macquarie Street (with the Royal Botanic Gardens beyond);
- it will provide residential dwellings (that will assist in meeting the subregion's target of 55,000 new dwellings by 2031) in a location very close to excellent public transport facilities, including rail, bus and ferry; and
- it will provide employment opportunities and contributing to the tourism sector of Sydney's economy.

5.4 Built Form and Urban Design

The following sections of this report consider the built form and urban design of the Concept Plan.

5.4.1 Massing, Height and Setbacks

A key intention of the built form is to provide a stepped transition in building scale between the Circular Quay buildings and the CBD, as illustrated in **Figure 31**. This is to be achieved by extending the built form to the west over the completed colonnade and integrating it with the massing and design of the adjacent Quay Grand building.

Stepping the building creates consistency in public streetscape and provides a unified built edge to the public domain and harbour front. The proposed envelope also provides the opportunity to integrate a pedestrian link between Circular Quay and the Botanical Gardens via Macquarie Street.

The proposed built form will maintain critical view lines across public spaces and have negligible impact on views from neighbouring residential properties, as further discussed in Section 5.4.4 below. A key factor in the preservation of these views is the introduction of a chamfer to the south western corner of the envelope, 'slicing off' a significant portion of the envelope's volume and preserving the existing view corridor.

Importantly, the proposed building envelope maintains the existing building height with no additional overshadowing to adjacent Royal Botanic Gardens.

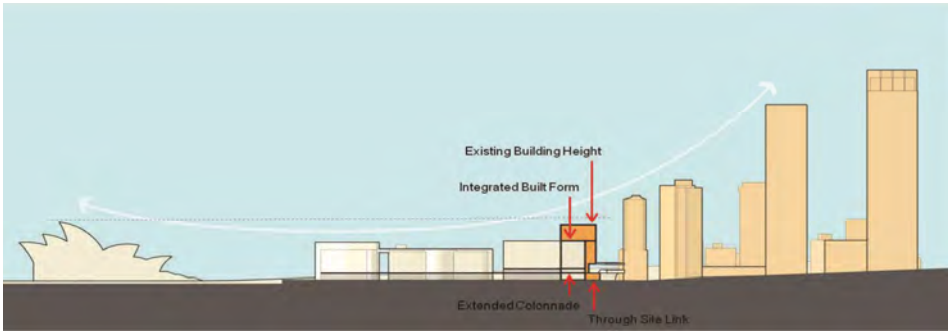

Figure 31 – Integration of proposed Concept Plan envelope

To ensure consistency with the surrounding development, the proposed envelope generally extends to the boundaries of the site. To provide an appropriate architectural expression and to obscure any differences in floor to floor height[4], it is anticipated that architectural consideration (such as a recess or a slot) will be provided between the Quay Grand and the proposed development at the detailed design stage.

The obscure glazed windows in the southern facade of Quay Grand (refer **Figure 32**) will be addressed as part of the detailed design and will ensure an appropriate level of amenity is provided in terms of the relationship between the two buildings (refer to draft Statement of Commitments at Section 6.0).

Under Sydney LEP 2005 the height limit of the site is RL46.7, which is the height of Quay Grand building to the north. This equates to approximately 44 metres above the level of the East Circular Quay pedestrian areas. The proposed envelope maintains the height of the existing building, with a parapet height of RL65.37, and a height to the top of the plant room of RL67.23.

Development of a scale and standard commensurate with meeting strategic planning objectives (including the Metropolitan and Sub-regional Strategies) cannot be achieved under the current height control applicable to the site, which is lower than the existing building. To reduce the height of the existing building to match the current height limit would result in a loss of approximately six floors or 5,340m^2 of floor space area. Reducing the scale of the building would render redevelopment uneconomic and result in the retention of a redundant commercial building and the failure to deliver the important public domain components of the project.

The Draft Sydney LEP 2011 was exhibited in February to April 2011. The Draft LEP specified the same height limit of RL46.7 for the site.

[4] Differences in floor to floor height are a result of the Quay Grand being constructed before the introduction of SEPP 65, whereas the proposed development will comply with SEPP 65 in this regard. Quay Grand has a floor to ceiling height of approximately 2.4 metres, whereas the future building on the site is anticipated to have a floor to ceiling height of 2.7 metres.

Figure 32 – Interface between Amatil Building and the Quay Grand

5.4.2 Floor Space Ratio

This Concept Plan does not seek approval for a specified amount of floor space or a particular floor space ratio. Rather, the Concept Plan envelope is utilised to restrain the bulk and scale of the development.

Nevertheless, an indicative design prepared by HASSELL demonstrates that the Concept Plan envelope is capable of containing approximately 12,800m^2 of floor space area. This equates to a floor space ratio of approximately 14.4:1, based on the site area of the land owned by AMP Capital Investors and excluding the area of the site to be transferred from Council ownership.

Under Sydney LEP 2005 the maximum floor space ratio is 14:1. However, clause 10 of the LEP allows the FSR development control to be varied by up to 10 percent if the development, among other things, achieves design excellence. This increases the maximum possible floor space ratio to 15.4:1.

Notwithstanding that this Concept Plan application is made under Part 3A, the future development of the site would be consistent with the requirements of clause 10 and the effective maximum floor space ratio for the site.

5.4.3 Amenity

The Concept Plan envelope has been carefully designed to accommodate a future development that will provide excellent amenity for future residents. An indicative floor plan has been prepared by HASSELL (see **Figure 33**) that shows how a residential floor can provide apartments with acceptable cross flow ventilation, access to natural light, generous balconies and exceptional views. The specific details of the final development in relation to amenity, and in particular the application of the principles of design and rules of thumb contained in SEPP 65, will be detailed in the future application for development.

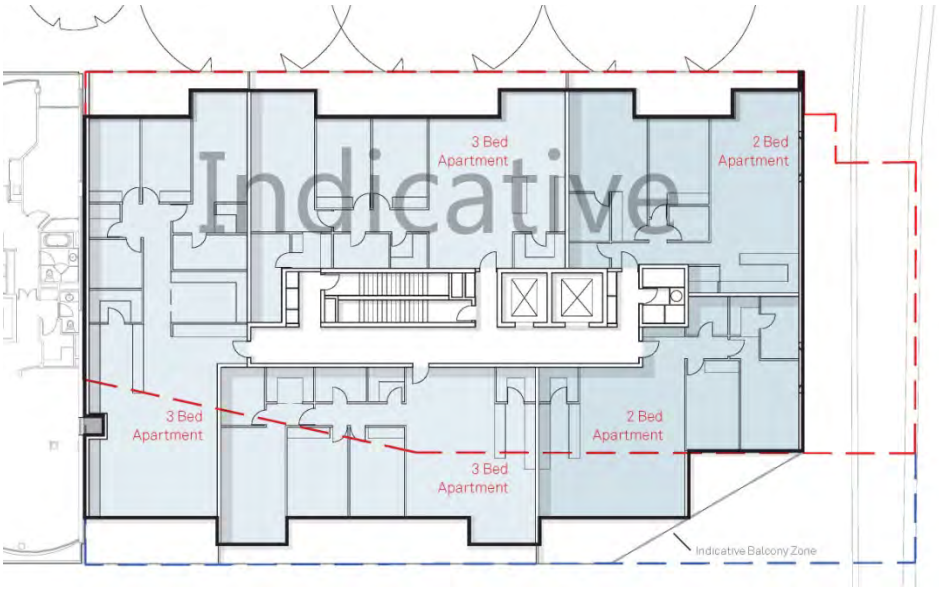

Figure 33 – Indicative floor plan

5.4.4 View Impacts

The view analysis diagrams within the Design Report (refer **Attachment P**) demonstrate that the proposed concept does not impact on any views from the following locations:

- the mid and upper levels of the Quay Apartments; and
- the mid and upper levels of the AMP Building at 33 Alfred Street.

The diagrams show an impact on views of small areas of the sky from the following locations:

- the top floor temporary accommodation of the Royal Automobile Club; and
- the top floor terrace of 99 Macquarie Street.

In the context of the views available and remaining available from these locations, being Circular Quay, Sydney Cove, the Harbour Bridge and The Rocks, as well as a large area of northern sky, this loss of view is negligible.

The view analysis diagrams show an impact on the view from the top floor of the Sir Stamford Hotel (93 Macquarie Street), with views to a portion of the north eastern pylon of the Harbour Bridge being obstructed. The relevant view analysis diagram is reproduced in **Figure 34** below.

Figure 34 – View analysis diagram from Sir Stamford Hotel

Views are difficult to quantitatively assess against numerical development controls, and therefore in *Tenacity Consulting v Warringah*, Senior Commissioner Roseth introduced a four step approach regarding the assessment of view impacts. This four step approach has been adopted as a planning principle by the Land and Environment Court. It should be noted that the planning principle was prepared in relation to views from permanent dwellings, rather than from temporary (hotel) accommodation.

The first step involves an assessment of the views potentially affected. Water views are valued more highly than land views, and iconic views are valued more highly than views without icons. Furthermore, whole views are valued more highly than partial views, for example a water view in which the interface between land and water is visible is more valuable than one in which it is obscured.

The entire view from the affected windows of the hotel room is highly valued. The view includes the main span of the Harbour Bridge, The Rocks and Overseas Passenger Terminal and Sydney Cove. This view includes an active waterway and its interface with Circular Quay.

The second step outlined in the planning principle is to consider from what part of the property the views are obtained. For example, the protection of views across side boundaries is more difficult than the protection of views from front and rear boundaries. It should be noted that the existing views to the north eastern pylon from the affected hotel rooms are obtained across several property boundaries, rather than being direct water front views.

The third step is to assess the extent of the impact. This is to be done for the whole of the property and not just for the view that is affected. The impact may be assessed quantitatively, but it is usually more useful to assess the view loss qualitatively. In relation to the loss of views from the affected hotel rooms, the view loss is acceptable for two reasons:

- the only views affected are from the most easterly windows, with views from central and westerly windows not impacted; and
- the amount of view actually obscured from these easterly windows is very small in the context of the overall view available from this position.

The fourth and final step outlined in the planning principle is to assess the reasonableness of the proposal that is causing the impact. The existing built form of 71-79 Macquarie Street is well established, and the concept proposal does not seek to re-imagine this form. The envelope has been crafted to respect the form of the existing tower and the neighbouring Quay Grand building to the south.

In summary, although the impacted views from the Sir Stamford Hotel are highly valued and are easily obtained, the degree of view obstruction is considered acceptable from the following reasons:

- only a very small proportion of the views are affected;
- only views at the most easterly end of the building are affected, with no impacts on views from windows at the western end of the building;
- the views are obtained across several property boundaries; and
- the proposed envelope has been carefully designed to minimise view impacts on all surrounding properties.

5.4.5 Overshadowing

Shadow diagrams of the concept proposal have been prepared by Windtech (refer **Appendix O**). These illustrate that there will be no additional overshadowing to the Royal Botanic Gardens, Circular Quay or other significant areas of public open space.

This lack of additional overshadowing has been achieved through the retention of the parapet height of the existing building, and consolidating plant in a central structure away from the edge of the roof.

5.4.6 Accessibility

Accessibility has been considered throughout the preparation of the concept design. Despite the slope of the site and the provision of a through-site link up from Circular Quay level to Macquarie Street, level access will be provided. This will be achieved through the provision of lobbies at both Circular Quay and Macquarie Street for access into the building, and the utilisation of the existing lift (with minor modifications) from Circular Quay to the Cahill Expressway footpath.

5.4.7 Crime and Public Safety

A Crime Prevention Through Environmental Design (CPTED) Assessment of the Concept Plan has been undertaken by HASSELL to inform the design and layout of the proposal (refer **Appendix D**).

CPTED aims to create the reality (or perception) that the costs of committing crime are greater than the likely benefits. This is achieved by creating environmental and social conditions that:

- Maximise risk to offenders (increasing the likelihood of detection, challenge, and apprehension);
- Maximise the effort required to commit crime (increasing the time, energy, and resources required to commit crime);
- Minimise the actual and perceived benefits of crime (removing, minimizing, or concealing crime attractors and rewards); and
- Minimise excuse-making opportunities (removing conditions that encourage or facilitate the rationalisation of inappropriate behaviour).

The assessment primarily focuses on the conditions of the following locations:

- The proposed public space in Circular Quay at the base of the 71-79 Macquarie Street development;
- The through-site link connecting Circular Quay to the Royal Botanic Gardens via Macquarie Street; and
- The Macquarie Street building frontage.

The assessment found that the Concept Plan is acceptable when examined against the four key CPTED, being:

- Surveillance;
- Access control;
- Territorial reinforcement; and
- Space management.

5.5 Public Domain and Public Access

The proposed Concept Plan offers the opportunity to remove traffic to and from Quay Grand from the East Circular Quay promenade by diverting traffic through the 71-79 Macquarie Street basement (as envisaged by the breakthrough deed). The service road can be reclaimed to create a new public space, and vehicular and pedestrian circulation can be clearly separated for safety and an improved urban outcome.

The proposed scheme extends and completes the colonnade to revitalise the inactive corner spaces of the Circular Quay promenade. The completion of the colonnade is integral to the vision of East Circular Quay and creates a destination focal point in both east/west and north/south direction. The Concept Plan also provides for the creation of a new and usable foreshore public space with a new and direct pedestrian link from Circular Quay to Macquarie Street and the Royal Botanic Gardens and beyond.

The proposed scheme provides the opportunity to continue active retail and cultural waterfront uses to define, revitalise and activate the unsightly south-east corner of Circular Quay to create a usable public domain. By extending and turning the colonnade, a continuous and active pedestrian experience along the Circular Quay promenade will be created. Views to loading docks from the public spaces will be shielded by the active frontages.

The Concept Plan creates a point of interest to define key view lines. The Phillip Street harbour views will be maintained, and the through-site link will generate a direct visual link to Macquarie Street and the vegetation of the Royal Botanic Gardens. The enhancement of public view lines will result in improved public pedestrian circulation through this quadrant of the city.

The specific form and finish of the public domain will be developed with extensive involvement from all stakeholders, including the City of Sydney and SHFA. The details of this design will be provided with a future application for development.

5.6 Heritage

A Preliminary Heritage Appraisal has been prepared by Godden Mackay Logan (refer **Appendix L**). The report details that the Amatil Building is not included in any statutory or non-statutory heritage lists. It is, however, located in the vicinity of the following listed heritage items:

- Sydney Opera House;
- the Royal Botanic Gardens and Domain;
- the Moore Stairs;
- the sea wall and balustrade extending around Circular Quay;
- the Bennelong Stormwater Channel;
- Circular Quay Railway Station;
- Customs House; and
- the Royal Automobile Club of Australia (RACA).

The assessment concludes that the proposal would be unlikely to impact on any of these heritage items. Nevertheless, a comprehensive Heritage Impact for development will be prepared to accompany the future application (as listed in the draft Statement of Commitments at Section 6.0).

5.7 Wind

A Pedestrian Wind Environment Statement was prepared by Windtech in relation to the Concept Plan (refer **Appendix E**). The effect of wind activity within and around the proposed envelope was examined for the three predominant wind directions for the Sydney region (north-easterly, southerly and westerly winds). An analysis of the wind effects relating to the envelope was carried out in the context of the local wind climate, building morphology and land topography.

The results of this study indicate that wind conditions for all outdoor trafficable areas of the development are expected to be suitable for their intended uses and be similar to, or better than, the existing conditions around the site. The study provides recommendations for consideration during the detailed design for the future application for development.

5.8 Reflectivity

The potential for a future building on this site to generate uncomfortable or unsafe reflections can only be determined by an assessment of the detailed design of the facade. Therefore, the issue of reflectivity will be addressed as part of the future application for development.

5.9 Noise and Vibration

Renzo Tonin & Associates has prepared a Noise and Vibration Impact Assessment in relation to the proposed concept plan (refer **Appendix F**).
The assessment identifies the following site specific acoustic factors:

- Traffic noise intrusion from surrounding roads such as Macquarie Street and predominately the Cahill Expressway;
- Airborne rail noise intrusion from train pass-bys associated with the adjacent City Circle railway line;
- Ground-borne noise or structure-borne noise and vibration intrusion from train pass-bys;
- Airborne noise from other ambient noise sources such as ferries located at nearby wharfs and harbour activities as well as general pedestrian noise and activities;
- Operational noise emission from mechanical plant rooms on dedicated floor levels of the building onto areas of the proposed development and existing adjacent buildings; and
- Noise and vibration generated from construction activities and equipment.

The major noise intrusion sources are road traffic and rail noise. Regenerated noise (noise that propagates through a structure as vibration and is radiated by vibrating walls and floor surfaces) can be addressed through the design of the new building structure and the specific requirements will be determined during the detailed design phase and addressed as part of the future application for development.

The relevant internal noise criteria can be readily addressed through appropriate design and specification of the building envelope. The assessment establishes that a combination of laminated glass and double glazing will be required on all external building facades.

Noise from mechanical plant such as exhaust systems, air-conditioning, mechanical ventilation and refrigeration associated with the development is to be controlled to meet relevant noise criteria at nearby commercial and residential properties. As details of mechanical plant are not available at this stage of the development, in-principle noise control advice is included in the assessment and will be further detailed in the future application for development.

The major construction activities will be demolition and excavation works, concrete pours and general building works. Any construction and building work would be managed in accordance with the *NSW Interim Construction Noise Guideline* so as to minimise disruption to the local community and the environment. As details of construction equipment and operating times are not available at this stage of the project, in-principle noise and vibration measures are included in the assessment and will be further detailed in the future application for development.

5.10 Transport, Traffic and Access

A Concept Plan Transport Assessment Report has been prepared by Halcrow (refer **Appendix G**). The following sections summarise the findings of this report.

It is not appropriate to identify travel demand management measures (including the preparation of a work place travel plan) for this Concept Plan application. These measures will be determined as part of a future application for development.

5.10.1 Traffic Generation

The proposed development is for a predominantly residential building with a small retail component. The retail component would support shops, cafes and the like, which would normally be accessed by pedestrians. As such, the retail component is not expected to generate additional vehicular trips and any traffic impact would be negligible.

In relation to the residential component, some of the residential units would be provided as serviced apartments, while the others would be permanent residential apartments. This is similar to the adjacent Quay Grand, and to a lesser extent the Quay Apartments.

To estimate the potential traffic generation of the proposed development, traffic generation surveys were conducted to count the traffic entering and leaving the Quay Grand and Quay Apartments[5]. The Quay Grand and Quay Apartments have peak hour trip generation rates ranging from 0.17 to 0.21 trips per peak hour per apartment. These rates are generally consistent, albeit slightly lower, than the rates provided by the RTA's *Guide to Traffic Generating Development 2002*.

Based on an indicative yield of 103 apartments and the traffic generation rates derived from the surveys and the RTA's guide, it is estimated that the proposed development would generate between 18 and 25 vehicles per hour (vph) during the morning peak periods and between 19 and 25 in the evening peak.

[5] Quay Grand and Quay Apartments have 129 and 48 residential apartments respectively. The surveys also counted the traffic entering and leaving the existing building at 71-79 Macquarie Street.

Taking into account that the new development traffic would displace the 3-6 vph that is currently generated by the site, the net additional traffic would be about 22 vph at most (during the evening peak period) which equates to one vehicle every three minutes on average.

At this low level of change in the overall development traffic generation, it is expected that any resultant adverse traffic impacts on the wider highway network would be negligible. The external road network would continue to operate as per current situation and consequently no traffic modelling has been undertaken.

5.10.2 Car Parking

It is proposed to provide car parking at the following rates:

- 1 space per studio apartment;
- 1 space per one bedroom apartment;
- 1.4 spaces per two bedroom apartment; and
- 1.8 spaces per three or more bedroom apartment.

These rates are generally above that stipulated in the Sydney LEP2005 which are as follows:

- 0.25 spaces per studio apartment;
- 0.5 spaces per one bedroom apartment;
- 1.2 spaces per two bedroom apartment; and
- 2 spaces per three bedroom apartment.

These rates are also generally above those provided in Draft Sydney LEP 2011, which are as follows:

- 0.1 spaces per studio apartment;
- 0.3 spaces per one bedroom apartment;
- 0.7 spaces per two bedroom apartment; and
- 1 space per three bedroom apartment.

Based on the indicative yield within the concept envelope prepared by HASSELL, the future development would generate 133 car parking spaces at the proposed rates and 107 spaces at the LEP 2005 rates. This difference of 26 spaces equates to 24 percent above the LEP requirement. For comparison, the provision of car parking at Quay Grand exceeds the LEP requirement by 31 percent.

It must be noted that even with the additional parking provided, Quay Grand does not generate additional traffic. This is due to the unique location of the site with immediate access to extensive public transport and the financial core of the CBD. It appears that residents of premium accommodation in this locality require parking space for their cars even if they are typically unused.

This demonstrates that whilst the parking rate may be greater than the controls may permit, on balance and on merit the parking rate does not automatically correlate to a higher level of car usage. Hence, a minimalist approach to car parking does not equate to a greater modal share of public transport usage in this location for this land use.

Furthermore, the context of the site demands a premium development that will contribute to Sydney's status as a world class city. Premium accommodation requires additional car parking to be marketable[6]. This report has demonstrated that serviced apartments and permanent residential accommodation are the preferred uses for this location. Section 1.3 of this report also discusses the various options for the site.

If the project is not marketable or viable, then it will not proceed. This would leave an increasingly redundant and disconnected commercial building, and result in the loss of the opportunity to complete the significant public benefits of the completion of the colonnade and through-site link.

5.11 Infrastructure and Utilities

Infrastructure and utility services will generally be detailed within the future application for development. However, the redevelopment of the site requires the relocation of an existing Ausgrid high voltage substation. Accordingly, provision for a chamber substation has been made within the indicative design prepared by HASSELL. This indicative design demonstrates that the Concept Plan envelope is capable of containing the substation.

5.12 Contamination and Geotechnics

Coffey Geotechnics has prepared a Preliminary Contamination Assessment and a Geotechnical Desk Study (refer Appendices **K** and **I** respectively). The findings of these are discussed below.

Contamination

In relation to contamination Coffey undertook a site walkover and desktop review and made the following observations:

- The potential contamination of the soils and groundwater from on-site activities is considered to be low due to the good condition of the basement concrete floor slab;
- There is a low to medium potential for fill material to be present beneath the ramp to the car park and any unexcavated areas of the site, and such fill material may of unknown origin and hence potentially contaminated;
- Potentially contaminated fill material, if present on site, is considered unlikely to pose a significant health risk to site users, unless the fill material is disturbed and a direct exposure pathway is established between the site users and the fill material. If identified during the proposed redevelopment work, potentially contaminated fill material should be assessed and managed appropriately to ensure the safety of construction workers and future site occupants; and
- Groundwater contamination associated with historical or current on-site activities is considered unlikely.

Coffey concluded that the site is suitable for the proposed development under the provisions of SEPP 55, subject to appropriate investigations as required during the preparation of the future application for development (refer to draft Statement of Commitments at Section 6.0).

[6] In this location, serviced apartment guests would typically arrive by car and require a single car space for the duration of their stay, even if they are staying in a studio or one bedroom apartment. However, the car typically remains within the space for the duration of their stay, with most trips made on foot or by public transport.

Geotechnical

In relation to geotechnical conditions, Coffey examined geological maps and the historical background of the site, reviewed other investigations undertaken in the locality and conducted a site inspection. This information allowed for the collation of a preliminary geotechnical model which allowed for the subsequent preparation of geotechnical recommendations in relation to the following aspects of the development:

- excavation conditions;
- excavation support;
- groundwater;
- protection of neighbouring structures;
- foundations; and
- monitoring measures.

These preliminary recommendations will be verified during the preparation of a detailed geotechnical assessment for the future application for development (refer to draft Statement of Commitments at Section 6.0).

5.13 Water Quality Management

The design of the stormwater management system will be undertaken as part of the detailed design of the project. It is anticipated that the system will demonstrate best practice, with rainwater collected for reuse and any overflows suitably detained on-site before discharging to the local piped infrastructure.

The project will be designed in accordance with water sensitive urban design principles and will also incorporate specific water quality control measures to ensure stormwater leaving the site will not have any significant impacts on aquatic ecology, including marine vegetation.

These measures will ensure that stormwater discharge from the site does not result in a significant negative impact on the quality of the surrounding environment.

5.14 Cahill Expressway and Rail Viaduct

During the detailed design of the project, fencing design guidelines will be prepared in consultation with RailCorp and the RTA. A derailment risk assessment will also be prepared in accordance with the relevant Australian Standards, and any recommendations of this assessment will be incorporated into the design of the future building (refer draft Statement of Commitments at Section 6.0).

These measures will ensure that future development on the site will not result in a significant risk to the operation of the rail line of the Cahill Expressway.

5.15 Climate Change and Sea Level Rise

Arup has prepared a Climate Change and Sea Level Rise Assessment in relation to the Concept Plan (refer **Appendix M**). This assessment states that it is projected that climate change induced sea level rise will result in an increase in global mean sea level of between 0.26m and 2.0m by 2100, with the NSW Government adopting a benchmark of 0.9m.

Given the height of the existing Circular Quay precinct seawall, the site is likely to be adequately protected (subject to its structural integrity) from inundation until the latter half of the century or unless sea level rise occurs greater than the NSW Government's benchmark.

Notwithstanding this, consideration of the likely physical impacts of a sea level rise of 0.9m by 2100 suggests that the development is exposed to at least some potential adverse consequences including an increase in wave overtopping potential of the seawall, and impacts on groundwater pressures and buried services. When considering higher sea level rise scenarios, the risk of impact on the development would be greater. In particular, the inundation of the ground floor and basement during high tide-surge events could be possible under these scenarios.

The most effective measure to adapt to water inundation impacts on the proposed development would be to raise the existing harbour seawall to an appropriate level. However, implementing this measure is beyond the direct control of the proponent as the seawall is owned by SHFA. Nevertheless, there are adaptation measures that the proponent does have control over which are included in the draft Statement of Commitments (refer Section 6.0). These include:

- Making a specific allowance for sea level rise during the engineering design for the development, particularly in the design of the basement and buried services;
- Locating critical infrastructure (such as power generators, and data storage) at elevated locations above the 100 year ARI tide-surge level with sea level rise allowance;
- Providing for safe exit routes above storm flood height levels;
- Incorporating appropriate surface drainage along the public domain promenade to allow overtopped wave discharge and run-up during storms to be readily removed; and
- For structures susceptible to flood inundation or wave splash, selecting materials with high durability properties to minimise long-term degradation.

5.16 Construction Management

Mirvac has prepared an Indicative Construction Environmental Management Plan (refer **Appendix H**) that outlines the various measures that will be implemented during the demolition, excavation and construction phases. These measures address the following construction management issues:

- hours of work;
- pedestrian and traffic management;
- rail corridor management;
- Cahill Expressway Management;
- noise management;
- waste management; and
- air quality management.

In particular, it should be noted that the erosion and sediment controls will ensure that the waters of Sydney Harbour will not be polluted by the demolition, excavation and construction works.

All the above construction management issues will be further detailed and committed to in the future application for development.

5.17 BASIX and ESD

The future application for development will include BASIX certification to ensure that the future development meets the appropriate water and energy reduction targets. That application will also detail ecologically sustainable design (ESD) issues relating to the following aspects of the detailed building:

- electrical services;
- mechanical services;
- hydraulic services;
- architectural design; and
- structural design.

As the design work to date has been conceptual (relating only to building envelope, land uses, location of public domain works, pedestrian and vehicle access arrangements and car parking rates) rather than detailed , it is not technically possible to test a potential future building on the site using established rating tools. Therefore, providing a speculative ESD rating tool target as part of the Concept Plan would not be supported by technical investigation.

Design development post concept approval but prior to the future application for development will include extensive investigation of suitable ESD rating tools and their application to the future development of this site. The testing of the detailed design against the suitable rating tools will ensure a building is proposed that is innovative, feasible and appropriate.

The draft Statement of Commitments (at Section 6.0) include reference to the investigation of the application of suitable ESD rating tools and targets during the detailed design of the future application for development.

The Concept Plan is consistent with the five accepted principles of ESD described below.

Integration Principle

The integration principle holds that decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations. The design of the building will be developed with reference to economic, environmental and social considerations.

Precautionary Principle

If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

The proposal is supported by environmental studies and technical reports which conclude that there are no environmental constraints that preclude the development of the site in accordance with the Concept Plan, subject to appropriate management in future planning, design, construction and operational stages to be detailed in the Project Application.

Intergenerational Equity

The principle of inter-generational equity holds that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations. The proposal as a whole will directly benefit current and future generations in that it will facilitate the improvement of the public domain and increase pedestrian linkages.

Biological Diversity

Under the biodiversity principle, the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making. The site does not contain any threatened or vulnerable species, populations, communities or significant habitats. Construction and ongoing operations of the development will be managed in accordance with the draft Statement of Commitments of the future application for development, ensuring no significant indirect impacts on the surrounding environment.

Valuation and Pricing of Environmental Resources

Under this principle, improved valuation, pricing and incentive mechanisms should be promoted. The costs of infrastructure and measures to ensure an appropriate level of environmental performance on the site have been incorporated into the cost of development.

In summary, the Concept Plan is consistent with the key principles of ecologically sustainable design.

5.18 Social and Economic Impacts

The proposed redevelopment of a redundant commercial building will deliver a number of economic and social benefits for the locality, including the completion of the colonnade, the provision of through-site link from Circular Quay to Macquarie Street, and the provision of additional serviced apartment and permanent residential accommodation.

The ongoing community consultation process will ensure that surrounding residents and land owners are informed of the Concept Plan and are able to raise any concerns in an efficient manner.

5.19 Planning Agreement and Contributions

To enable the delivery of the public domain works, it is anticipated that a voluntary planning agreement will be entered into between the proponent and the City of Sydney. This agreement will potentially address the delivery of works in kind in lieu of any cash contributions required under the *City of Sydney Section 61 (Amendment) Plan 2002*.

In preparing the Concept Plan, significant consultation was undertaken with the City of Sydney as detailed in the Consultation Outcomes Report prepared by Elton Consulting (refer **Appendix N**). The proponent continues to consult with the City of Sydney regarding a number of issues, including the mechanism for the delivery of the public domain works and any required planning agreement. The City of Sydney has provided sufficient 'in principle support' to the Concept Plan to allow this consultation to continue.

In any case, the draft Statement of Commitments (at Section 6.0) include ongoing consultation with the City of Sydney and other relevant stakeholders with regard to the types of agreements and/or contributions to be entered into, and the future application for development will include details of the amounts and commitments where agreed upon.

6.0 Draft Statement of Commitments

In accordance with the Director-General's Environmental Assessment Requirements, the proponent is required to include a draft Statement of Commitments in respect of environmental management and mitigation measures on the site. The following are the commitments made by the proponent to manage and minimise potential impacts arising from the project.

It should be noted that this application relates to a Concept Plan, with further and more detailed commitments to be made in relation to the future application for development.

6.1 Public Domain

During the detailed design of the project and prior to the submission of the future application for development, the proponent will work with key stakeholders to agree on appropriate design principles of the public domain and through-site link. The design process will be undertaken with the involvement of the proponent and its design team, the City of Sydney and the Sydney Harbour Foreshore Authority. The design principles will seek to achieve and demonstrate design excellence.

6.2 Design Principles

The following design principles will be applied to the detailed design of the project.

Urban Design Principles

- Complete the vision of the East Circular Quay precinct;
- Remove vehicle traffic from the East Circular Quay promenade;
- Revitalise and activate the unsightly south-east corner of Circular Quay and create a new and usable public domain;
- Complete the colonnade and activate the ground plane;
- Provide a continuous pedestrian experience along the Circular Quay promenade;
- Maintain critical view lines across public spaces and from relevant neighbouring residential properties; and
- Create enhanced connectivity by a through site pedestrian link to the Royal Botanic Gardens and Macquarie Street.

Architectural Design Principles

- Integrate the built form with the massing and design of the adjacent East Circular Quay buildings;
- Strengthen the transition in building scale between Circular Quay and the CBD;
- Extend built form to the west over a portion of the Council roadway, and integrate with the existing colonnade;
- Unify the harbour-front built edge created by the surrounding buildings to complete the East Circular Quay vision;
- Maintain the existing building height with no additional overshadowing to adjacent Royal Botanic Gardens;
- Provide a mix of residential and serviced apartment uses that are consistent with East Circular Quay providing 24 hour activation; and
- Achieve design excellence and enhanced environmental performance.

Public Domain Principles

- The proposed integrated development provides the opportunity to complete the East Circular Quay vision and create a new and revitalised harbour-front public domain;
- Completion of the colonnade and harbour front promenade by providing a continuous pedestrian experience and weather protection along East Circular Quay ensuring the quality and proportions of the colonnade are continued;
- The removal of vehicular traffic from the pedestrian promenade and clear separation of vehicles and pedestrian circulation will allow for the creation of a larger and more usable harbour-front public space;
- Activation of the ground plane with high quality retail edges will define the public domain with opportunities for both cultural and restaurant uses with outdoor alfresco dining;
- A seamless continuation of the promenade and ground surface materials throughout the new larger public space will create consistency through the Circular Quay promenade; and
- The Cahill Expressway undercroft will be flanked with an active retail edge and canopy protection to continue the pedestrian experience and conceal the Cahill Expressway undercroft and vehicle loading areas beyond.

Through-Site Link Principles

- The through-site link will create an important pedestrian link connecting Circular Quay to Macquarie Street and the Royal Botanic Gardens;
- The link (depending on its location) has the potential to become an actively used public and event space and a destination in its own right, with opportunities for cafes, public seating and performance spaces along the stair route with informal platforms and elevated spaces to dwell adding further vibrancy to the public domain;
- Explore providing a line of sight between Circular Quay and the Royal Botanic Gardens, seeking to make the link easy to identify and negotiate;
- The visual connection will link different quadrants of the city and activate movement and permeability between them;
- The through-site link will act as an appropriate end point for the colonnade and create a feature point to terminate views;
- Possibility for integration of the through-site link with public artworks and temporary installations; and
- Creation of a safe and secure public space by ensuring there are no unsafe corners, appropriate lighting is provided at night, and ownership and management of the different spaces are clearly defined.

6.3 Future Access Provision

The proponent commits to investigating (in consultation with relevant authorities, including the City of Sydney) a long term strategy for revisions to the location and configuration of the vehicle access to the basement and the internal layout of the car park to ensure an appropriate design outcome for the site and immediate surrounds in the event that the Cahill Expressway viaduct is removed.

6.4 Detailed Investigations

During the detailed design of the project and prior to the submission of a future application for development, the proponent will undertake detailed investigations in relation to the following:

- heritage;
- wind;
- reflectivity;
- noise and vibration;
- transport, traffic and access;
- tree planting on Macquarie Street;
- contamination;
- geotechnics;
- infrastructure; and
- water quality management.

6.5 Soil and Water

During the detailed design of the project and prior to the submission of a future application for development, the proponent will prepare a stormwater management plan which considers the drainage and stormwater management issues, including on-site detention of stormwater, water sensitive urban design and drainage infrastructure, particularly in relation to the rail corridor and Cahill Expressway.

6.6 Derailment Protection

During the detailed design of the project and prior to the submission of a future application for development, the proponent will prepare a derailment protection risk assessment in accordance with AS5100 for new structures located within 25 metres of the rail corridor. The assessment will address the additional built form proposed as part of the Concept Plan.

6.7 Integrated Water Management

During the detailed design of the project and prior to the submission of a future application for development, the proponent will prepare an integrated water management plan to address water supply, proposed end uses of potable and non-potable water, demonstration of water sensitive urban design and any water conservation measures.

6.8 Ecologically Sustainable Development

The detailed design of the project will include investigation of the application of suitable ESD rating tools and targets to ensure the future building on the site is innovative, appropriate and feasible in terms of energy use.

6.9 Quay Grand Amenity

The detailed design of the project will incorporate appropriate consideration at the north western corner to ensure that amenity of the neighbouring Quay Grand apartments is reasonably preserved.

6.10 Climate Change and Sea Level Rise

During the detailed design of the project and prior to the submission of the future application for development, the proponent will consider the following recommendations in relation to climate change and sea level rise.

- Make a specific allowance for sea level rise during the engineering design for the development, particularly in the design of the basement and buried services.
- Locate critical infrastructure (e.g. power generators, data storage) at elevated locations above the 100 year ARI tide-surge level with sea level rise allowance.
- Provide for safe exit routes above storm flood height levels.
- Incorporate appropriate surface drainage along the public domain promenade to allow overtopped wave discharge and run-up during storms to be readily removed.
- For structures susceptible to flood inundation or wave splash, select materials with high durability properties to minimise long-term degradation.
- Consider the incorporation of permanent or removable flood barriers at critical points around the site (e.g. entrance to basement).

6.11 Planning Agreements

During the detailed design of the project and prior to the submission of a future application for development, the proponent will undertake ongoing consultation with the City of Sydney and other relevant stakeholders with regard to the types of agreements and/or contributions to be entered into, and the future application for development will include details of the amounts and commitments where agreed upon.

7.0 Conclusion

The Concept Plan seeks approval for the redevelopment of the redundant commercial building at 71-79 Macquarie Street into a premium quality residential building. The proposal will provide significant public benefits, including the completion of the East Circular Quay colonnade and the provision of a through-site link from the Quay to Macquarie Street and the Royal Botanical Gardens beyond.

This assessment of the Concept Plan has demonstrated that the proposed development will have minimal adverse environmental impacts. In terms of bulk and scale, the envelope retains the height of the bulk of the existing building above the neighbouring Quay Grand to ensure that an appropriate transition in heights to the CBD is maintained. The envelope is extended to the west below the height of Quay Grand to allow for the completion of the colonnade and to provide a consistent setback to Circular Quay.

The envelope will not result in any unacceptable view loss when assessed using the planning principle set by the Land and Environment Court, and will not result in any additional overshadowing of the Royal Botanic Gardens or any other significant area of public open space.

The proposed car parking ratios are commensurate with the exceptional context of the site will ensure that the project is viable. Surveys of the surrounding residential buildings have demonstrated that anticipated traffic generation levels will be low and will not have a significant impact on the surrounding road network.

The draft Statement of Commitments has been prepared to inform the detailed design of the development. Given the environmental planning merits described above and the significant public benefits of the project, we have no hesitation in recommending this Concept Plan be approved.