

# SSD\_7874 HARBOURSIDE SHOPPING CENTRE REDEVELOPMENT

## Stage 1 DA Acoustic Report

23 January 2020

Mirvac

TH964-02F02 (r5) Acoustic Rpt

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## Document control

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# 1 Introduction

This report provides a response to submissions (as relevant) and assessment of the proposed amended Concept Proposal in relation to the State Significant Development (SSD) Development Application (DA) for the redevelopment of the Harbourside Shopping Centre (Harbourside) (SSD 7874).

The SSD DA was publicly exhibited for a period of 62 days from 15 December 2016 to 14 February 2017. During this time, ten (10) submissions were received from government agencies and City of Sydney Council and over 140 submissions were received from the general public.

This report should be read in conjunction with the original assessment prepared by Renzo Tonin & Associates dated 14 November 2016 to support the Harbourside Concept Proposal Square (SSD 7874).

## 1.1 Background

Mirvac acquired Harbourside, a key location within the Darling Harbour precinct, in November 2013. Harbourside, which was opened in 1988 as part of the Bicentennial Program, has played a key role to the success of Darling Harbour as Australia's premier gathering and entertainment precinct.

Despite its success, with an annual pedestrian visitation of around 13 million people, Harbourside is now outdated and in decline. The building lacks a quality interface to the Darling Harbour public domain and Cockle Bay and does not integrate well with the major transformation projects underway and planned for across Darling Harbour.

Harbourside is at risk of being left behind and undermining the significant investment being made in Darling Harbour that will see it return to the world stage as a destination for events and entertainment.

Accordingly, Mirvac are taking a carefully considered and staged approach to the complete revitalisation of the site and its surrounds.

## 1.2 Site description

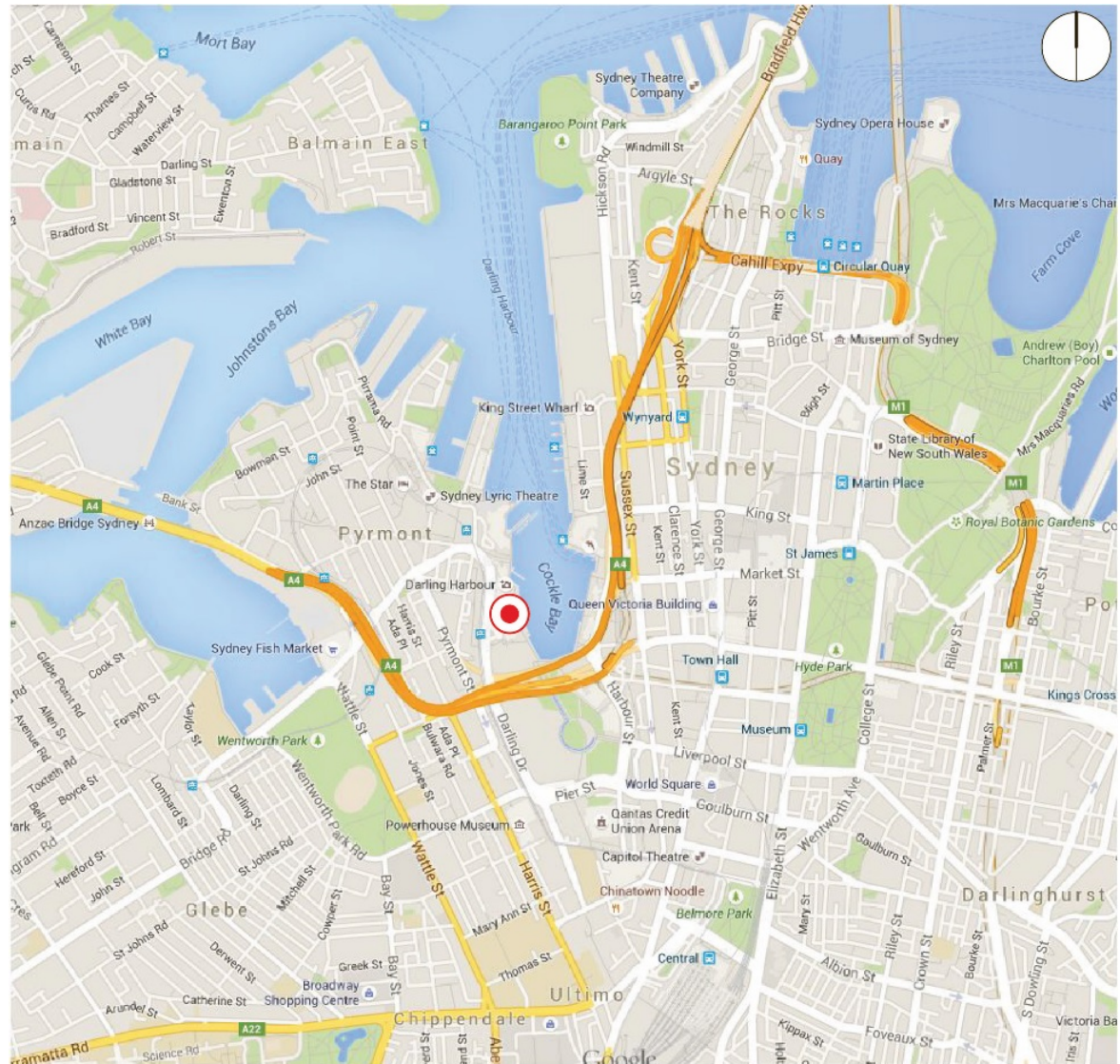
The Site is located within Darling Harbour. Darling Harbour is a 60 hectare waterfront precinct on the south-western edge of the Sydney Central Business District that provides a mix of functions including recreational, tourist, entertainment and business.

More generally the site is bound by Pyrmont Bridge to the north, the Sydney International Convention, Exhibition and Entertainment Centre Precinct (SICEEP) to the south, Darling Drive and the alignment of the Light Rail to the west and Cockle Bay to the east.

A locational context area plan and location plan are provided at Figures 1 and 2 below.

The Darling Harbour precinct is undergoing significant redevelopment as part of the SICEEP, Darling Square, and IMAX renewal projects. The urban, built form and public transport / pedestrian context for Harbourside will fundamentally change as these developments are progressively completed.

**Figure 1: Location Context Area Plan**



● The Site

### 1.3 Proposed amended concept proposal for Harbourside

Since exhibition of the proposal and given the nature and range of submissions made from agencies and the public, Mirvac has been reviewing the overall approach and elements of the Concept Proposal. This has accordingly led to developing an Amended Concept Proposal. The final Concept Proposal therefore includes substantial amendments made by Mirvac pursuant to Clause 55 of the Environmental Planning & Assessment Regulation, in the main to address matters raised in the submissions and deliver an overall significantly improved outcome on the site and for the broader Darling Harbour precinct.

The following key amendments have been made to the proposal:

### **1.3.1 Relocation of the Tower**

The tower element of the Concept Proposal has been relocated from the north of the site to the centre of the site (the widest part of the site) to allow for an increased setback from the heritage listed Pymont Bridge, improved relationship to the waterfront and ICC Hotel, to minimise view impacts from 50 Murray Street, together with reducing overshadowing impacts on the public domain and improved solar amenity to the northern end of the retail centre.

### **1.3.2 Reduction in Height of the Tower**

The height of the tower has also been reduced from RL 166.35 to RL 153.75. The reduction in the height will minimise overshadowing impacts to the public domain as well better relate to the height of the ICC Hotel.

### **1.3.3 Reduction in Height of the Podium**

A portion of the podium height at its northern extent has been partly reduced from 30.5 RL to RL 25. The reduction in height provides for improved view sharing from 50 Murray Street.

### **1.3.4 Removal of Tower 'Tail' element**

As part of the relocation of the tower and refinement of the podium, the stepped form of the lower tower element has now been removed. This design move has been made in order to again improve views from adjacent buildings from the west.

### **1.3.5 Building Footprint of the Tower**

The building footprint of the tower has increased in width, to accommodate the floorspace from the reduction in height of the tower and removal of the 'tail'.

### **1.3.6 Gross Floor Area / Land Use Mix**

The amended proposal retains the same overall 87,000sqm of GFA, however there is a minor adjustment in the split between non-residential and residential:

- Non-residential uses floor space – 49,000sqm; and
- Residential uses floor space – 38,000sqm

In response to market demand and the focus of local and regional strategic planning policies, it is proposed for the podium to include both retail and commercial land uses. Indicatively, comprising ~23,000sqm net lettable area of commercial and ~15,000sqm gross lettable area of retail.

The podium enables large campus sized commercial floor plates that are favoured by large multinational tech, finance and professional services companies.

### **1.3.7 Apartment numbers**

As a result of a review of the mix and sizing of apartments, there is a minor reduction in the indicative number of apartments, from 364 to 357. Note, this yield is on the 'Indicative Design' only and will be subject to future design development and a Stage 2 DA. This Stage 1 DA only seeks approval for land uses and the building envelope comprising a total of 87,000sqm GFA.

### **1.3.8 Car Parking Spaces**

The extent of the basement will remain the same, but there has been an increase of 11 car parking spaces from 295 spaces to 306 spaces. As above, this is based on the 'Indicative Design' only.

### **1.3.9 Landscaped Open Space and Public Domain**

All of the key concepts and public benefits as originally proposed are retained under the amended Concept Proposal, with the addition of further landscaping opportunities on the northern rooftop extent of the retail podium, further enhancing views and outlook from 50 Murray Street.

The final Concept Proposal seeks approval for the following key components and development parameters:

- Demolition of existing site improvements, including the Harbourside Shopping Centre, pedestrian bridge link across Darling Drive, obsolete monorail infrastructure, and associated tree removal;
- A network of open space areas and links generally as shown within the Public Domain Concept Proposal, to facilitate re-integration of the site into the wider urban context;
- Building envelopes;
- Land uses across the site, non-residential and residential uses;
- A maximum total Gross Floor Area (GFA) across the Harbourside site of 87,000sqm for mixed use development (49,000sqm non-residential and 38,000sqm residential development);
- Basement car parking;
- Car parking rates to be utilised in subsequent detailed (Stage 2) Development Applications;
- Urban Design and Public Realm Guidelines to guide future development and the public domain; and
- Strategies for utilities and services provision, drainage and flooding, and ecological sustainable development.

A more detailed and comprehensive description of the amended proposal is contained in the Response to Submissions and Amended Concept Proposal prepared by Ethos Urban.

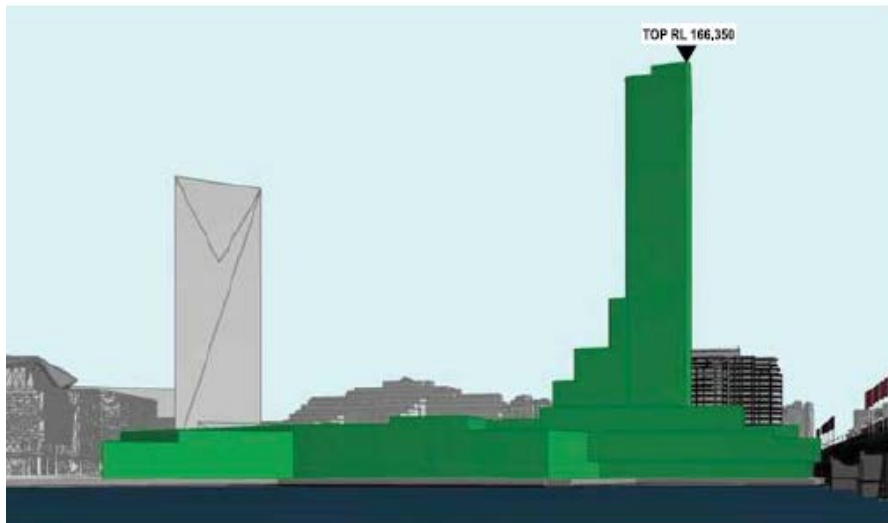


Figure 2 Original submitted Concept Proposal

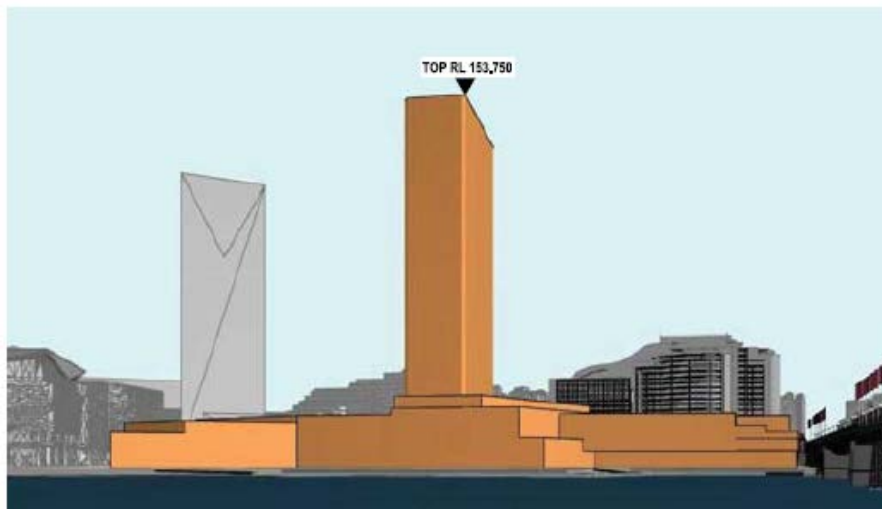


Figure 3 Amended Concept Proposal

## 1.4 Planning approvals strategy

The Site is located within the Darling Harbour precinct, which is identified as a State Significant Site in Schedule 2 of State Environmental Planning Policy (State and Regional Development) 2011. As the proposed development will have a capital investment exceeding \$10 million, it is declared to be State Significant Development (SSD) for the purposes of the Environmental Planning and Assessment Act 1979 (EP&A Act), with the Minister for Planning the consent authority for the project.



This State Significant Development Application (DA) is a staged development application made under section 83B of the EP&A Act. It seeks approval for the concept proposal for the entire site and its surrounds.

More specifically this staged DA includes establishing land uses, gross floor area, building envelopes, public domain concept, pedestrian and vehicle access and circulation arrangements and associated car parking provision.

Detailed development application/s (Stage 2 DAs) will accordingly follow seeking approval for the detailed design and construction of all or specific aspects of the proposal in accordance with the approved staged development application.

The Department of Planning and Environment provided the Secretary's Environmental Assessment Requirements (SEARs) to the applicant for the preparation of an Environmental Impact Statement for the proposed development on 30 August 2016. This report has been prepared having regard to the SEARs as relevant.

## **1.5 Scope of acoustic assessment**

The DA seeks approval for retail and residential uses however will be subject to subsequent detailed Stage 2 DAs. Therefore, this report outlines the relevant considerations for the Stage 2 detailed DA(s), including relevant criteria and assessment methodology.

## 2 Stage 2 DA requirements

### 2.1 Assessment criteria

In accordance with recent State Significant Development assessments, the Stage 2 development proposals are to be assessed in accordance with relevant NSW policies and guidelines, such as those listed below:

Policy or guideline	Assessment outline
NSW Industrial Noise Policy [1]	Operational noise, including retail use, loading docks and mechanical equipment serving the development, and its potential impact on surrounding noise sensitive land uses.
Office of Liquor Gaming and Racing	Operational noise from within any licensed premises should they be proposed as part of the development.
NSW Road Noise Policy [2]	Road traffic generated by the development on the local road network and its potential impact on surrounding noise sensitive land uses.
State Environmental Planning Policy (Infrastructure) 2007	Assessment of noise onto the development from busy roads and rail corridors. Only required for noise sensitive development should it be proposed within the site.
Development Near Rail Corridors and Busy Road-Interim Guideline [3]	Supporting guideline for the State Environmental Planning Policy – Infrastructure 2007.
Interim Construction Noise Guideline [4]	Construction noise and its potential impact on surrounding development.
Assessing Vibration: A Technical Guideline [5]	Primarily utilised for assessment of vibration generated during the demolition and construction phase. Also referenced in the State Environmental Planning Policy – Infrastructure 2007 with regard to rail vibration.

### 2.2 Assessment approach

The following outlines the general approach for the acoustic assessment of the Stage 2 DA(s):

- Examine the proposed development to identify acoustic aspects of the construction and operation,
- Identify the sensitive receiver locations surrounding the site, which are to be assessed with regard to construction and operational activities,
- Establish the existing noise environment at the site and surrounding receiver locations for the purpose of setting noise targets for the project,
- Carry out a quantitative acoustic assessment of potential impacts and compare against the relevant noise and vibration targets,
- Where required, identify potential noise and vibration mitigation measures, inclusive of both physical and management measures for the construction and operation phases. The report will also outline where further design development and detailed specifications are required.

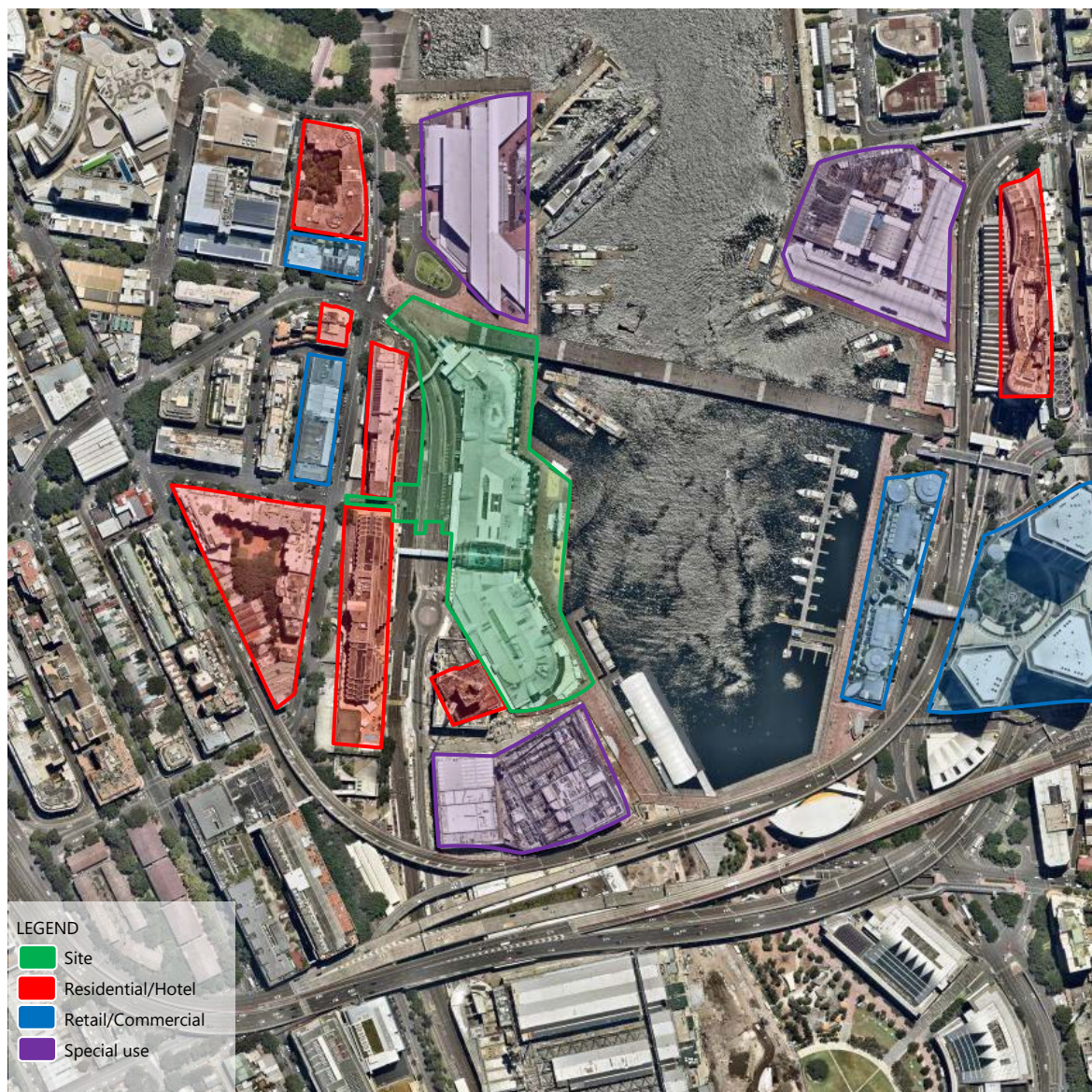
## 2.3 Preliminary site review

At this Stage 1 phase, a preliminary review of the site and surrounds has been carried out to establish the nearest most potentially affected receiver locations.

The nearest land uses surrounding the site have been identified in Figure 4. The primary locations considered sensitive with regard to operational noise are the Novotel and Ibis Hotels located to the west of the site, along with the International Convention Centre (ICC) Hotel currently under construction.

In addition to the existing residential receivers above, the construction phase will also need to consider potential impacts upon less sensitive uses within the vicinity of the site. Consideration may need to be given to the ICC site uses, depending upon the construction program.

Figure 4: Site and surrounding land use map



## 2.4 Operational noise

With regard to operational noise, the primary acoustic aspects of the development are expected to be the retail areas, particularly any food & beverage uses where external patron areas may be provided, and mechanical plant and equipment serving the retail and residential tower components. Traffic generated by the development on the local road network as well as loading dock operations will also need to be assessed. The Stage 2 report will seek to identify the strategies for noise control and management, which may include physical design measures and management measures such as permissible hours of operation for the various uses.

## 2.5 Noise & vibration impacts upon development

Noise and vibration from the existing environment onto the proposed development should be considered and assessed in the design of the buildings for their specific uses. Noise and vibration sources for consideration and relevant criteria and potential mitigation measures are discussed below

### 2.5.1 Road traffic & Light rail

Noise and vibration impacts from road and rail are to be assessed in accordance with the NSW the State Environmental Planning Policy (Infrastructure) 2007 (known as the 'ISEPP').

In regard to road traffic, all of the surrounding roads are identified as being below 20,000AADT and therefore do not require assessment in accordance with the ISEPP. However, in accordance with the ISEPP, an assessment of light rail is required.

Noise and vibration impact from light rail would be addressed in detail during the Stage 2 DA and design development stage. The Stage 2 report will seek to identify the strategies for noise control including physical design measures to the retail and residential land uses and recommendations to be addressed at the source, rather than by the residential building envelope.

## 2.6 Noise intrusion from existing development

The proposed residential tower would likely be the most noise sensitive component of the proposed development with regard to noise intrusion. Noise to internal areas of the residential building can readily be mitigated through appropriate design of the building envelope in order to meet relevant Australian Standards. As the acoustic design is to be delivered through a balanced responsibility between the residential building design and management and design of the retail uses, the residential building envelope will be designed on the basis specific external noise limits for the retail noise. It is necessary to provide noise limits to which the retail uses are to be designed and operated.

Standard noise policy and criteria applicable to retail type development places the onus of noise control and management upon the operator (noise emitter). In mixed use developments, the proximity of residential development can place onerous restrictions on retail usage, such as:

- limiting operating hours,

- prohibiting or minimising the extent of outdoor seating
- prohibiting or minimising the extent openable facades,
- limiting music noise levels etc.

To provide greater flexibility to the operation of the retail operations, the following approach is to be adopted through consultation with Mirvac during design development:

- Set alternative noise criteria for operation times of restaurants
- The alternative noise criteria to apply inside residential premises with windows and doors closed,
- Façade and building envelope of the residential tower to be designed to provide noise reduction of external noise to meet established internal noise goals,
- Retail external noise limit defined based on the established internal noise goals and residential façade design.

## 2.7 Construction management

The construction phase will need to consider both noise and vibration impacts in accordance with the relevant NSW policies and guidelines. A preliminary Construction Management Plan forms part of the Stage 1 submission, which will be further developed for the Stage 2 DAs and supplemented by the acoustic assessment. Assessment for each primary phase of development is expected to be carried out, including demolition, excavation, structures and fit-out phases. The management of construction noise and vibration will include consideration of work methods, equipment selection, site arrangement, physical controls, monitoring programs and consultation.

### 3 Conclusion

Renzo Tonin & Associates was engaged by Mirvac to carry out an acoustic review of the Stage 1 DA for the proposed Harbourside redevelopment. The review outlines the relevant NSW policies and guidelines with regard to construction and operational noise and vibration, which are to be adopted for the Stage 2 DAs. For this Stage 1 DA, a preliminary review of the site and surrounds has been carried out in order to identify the most sensitive developments surrounding the site that may dictate the acoustic design of the proposed development. This report also outlines the noise and vibration assessment methodology and preliminary design considerations expected to be detailed in the Stage 2 DAs.

## References

- [1] NSW EPA, NSW Industrial Noise Policy, Sydney: NSW EPA, 2000.
- [2] NSW EPA, NSW Road Noise Policy, Sydney: NSW EPA, 2012.
- [3] NSW Department of Planning, "Development near Rail Corridors and Busy Roads – Interim Guideline," NSW Department of Planning, Sydney, 2008.
- [4] Department of Environment and Climate Change NSW, "Interim Construction Noise Guideline," Department of Environment and Climate Change NSW, Sydney, 2009.
- [5] Department of Environment and Conservation (NSW), "Assessing Vibration: A technical guideline," Department of Environment and Conservation (NSW), Sydney, 2006.