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Air Quality and Odour Impact Analysis - Stage 1B Public Domain Works

1.0 Background

This document has been prepared on behalf of Lend Lease as required for the Development Consent for the Barangaroo South Stage 1B Public Domain. The document has been prepared to support the Review of Environmental Factors (REF) prepared for the Barangaroo Delivery Authority pursuant to Part 5 of the *Environmental Planning and Assessment Act 1979 (NSW)* (EP&A Act).

Barangaroo is located on the north western edge of the Sydney Central Business District (CBD). It is, bounded by Sydney Harbour to the west and north, the historic precinct of Millers Point (for the northern half), The Rocks and the Sydney Harbour Bridge approach to the east; and bounded to the south by a range of new development dominated by large CBD commercial tenants. The Barangaroo site has been divided into three distinct redevelopment areas (from north to south) – the Headland Park, Barangaroo Central and Barangaroo South. The works assessed within this document are located within the Barangaroo South Area, in an area designated as Stage 1B.

The areas within the Barangaroo development expected to be included in the Barangaroo South Stage 1B Public Domain project (as defined by the REF documentation) are as follows:

- Hickson Park and a portion of Block 5 is included with the Stage 1B Public Domain planning application;
- The Stage 1B Public Domain works exclude the proposed infrastructure to be located beneath Watermans Quay; and
- The Stage 1B Public Domain works include those above ground works within the Stage 1B area and associated infrastructure works outside this area as follows (see site plan below):
 - Wulugul Walk;
 - Watermans Cove; and
 - A potential new pier including community building (directly adjacent to the northwest corner of Stage 1A).

A site plan showing the extent of the works planned for the site is shown below in **Figure 1**.

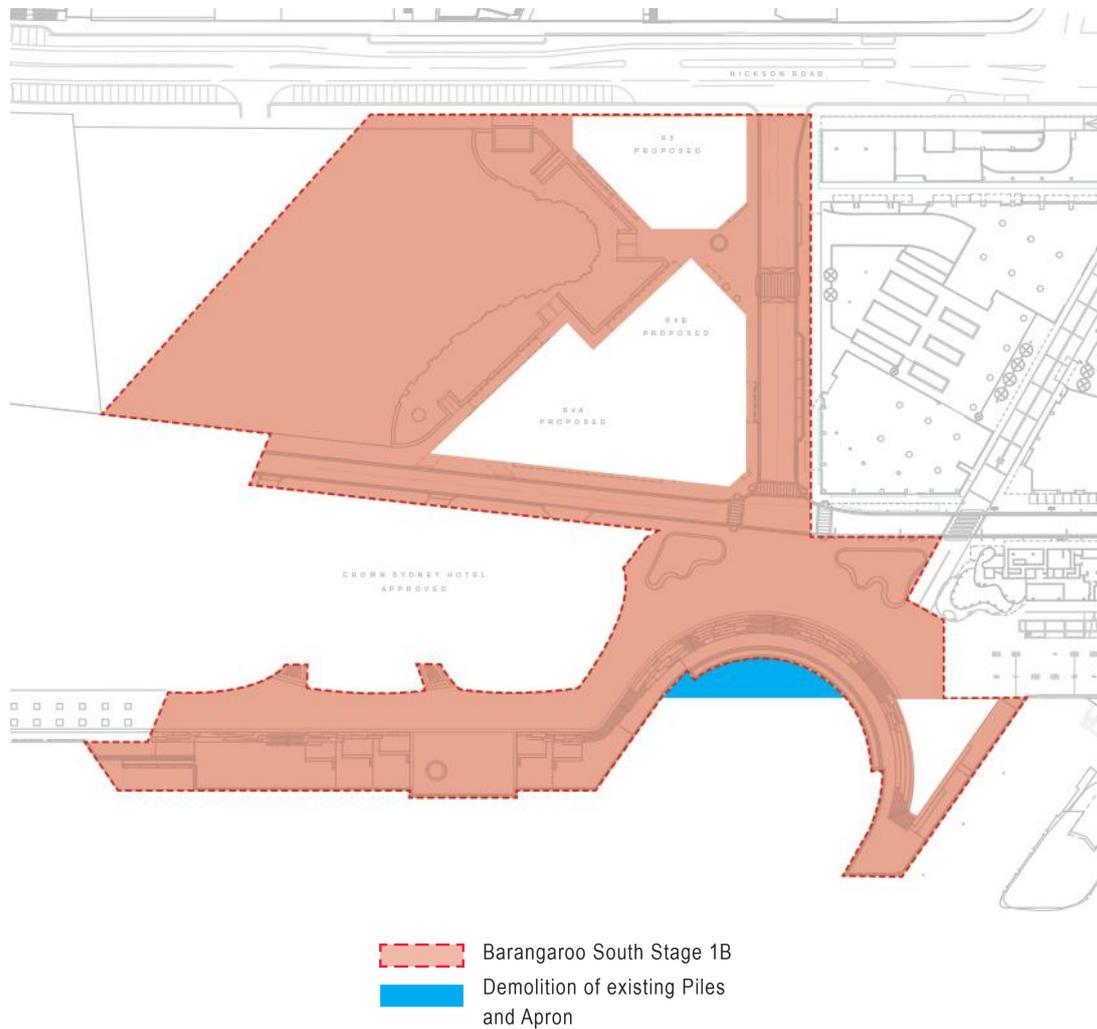


Figure 1 Extent of Stage 1B Public Domain (as defined by the dotted red line)

2.0 Proposed Stage 1B Public Domain Works

The State Significant Development application will seek consent for all public domain works within 'Stage 1B' of the Barangaroo South Site as well as the additional area of Hickson Park, added through Concept Plan MOD 8. The extent of public domain works is illustrated on the site plan prepared by Lend Lease in **Figure 1**, and the preliminary indicative design drawing in **Figure 2**.

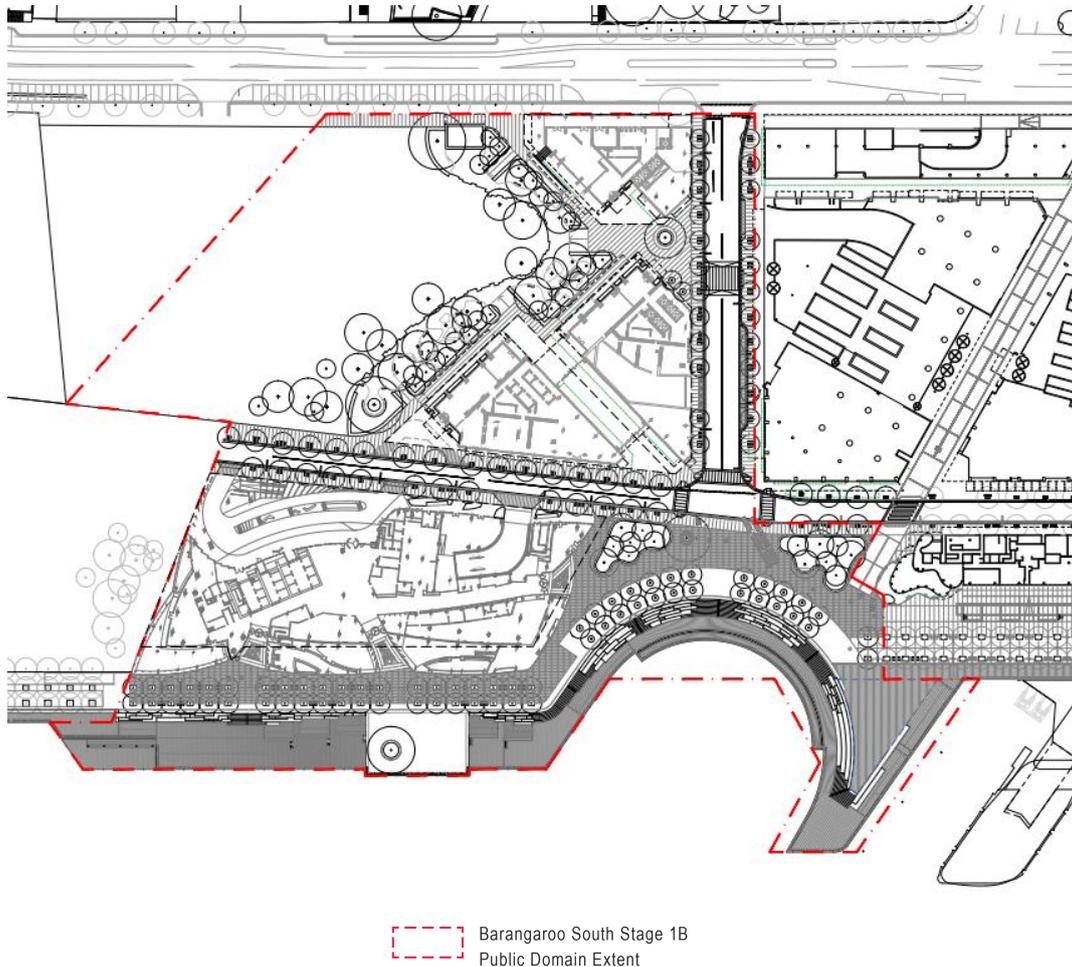


Figure 2 – Preliminary indicative design of Stage 1B Public Domain (as defined by the dotted red line)

The public domain works include:

- the construction of Waterman’s Cove and public pier along the foreshore
- the provision for a potential future building on the public pier
- public domain works associated with Hickson Park as well as all typical public domain features such as trees and other landscape features, walkways, street paving, street furniture, lighting, roads and planting.

Various services and infrastructure such as power and water with landowner consent will also be included in the public domain to enable it to be used for a range of different activities. Opportunity for boat set down/pick up (i.e. no berthing), including the potential for water taxi drop off and pick up has also been included into the design.

Staging of the proposed public domain works will be a key component in order to accommodate the efficient and timely construction of the works and to integrate with the construction of the residential buildings R4A, R4B and R5 located within the Stage 1B Site and The Crown Sydney Hotel Resort.

From an air quality perspective, the construction activities that are expected to potentially result in air emissions are the excavation of limited concrete hardstand, landscaping works and the piling and construction works associated with the construction of Waterman’s Cove. There is no spoil excavation expected as part of these works.

3.0 Consideration of Potential Air Quality Impacts and Management Measures

As discussed in **Section 2**, the proposed Stage 1B Public Domain Work areas and excavated volumes are minor in nature, with the removal of concrete waste and landscaping activities taking place that will be unlikely to generate significant quantities of air pollutants if managed correctly.

The only potential offsite air quality impacts associated with Stage 1B Public Domain Works are considered to be associated with management of particulate matter emissions, for which management measures are currently in place as part of the Lend Lease *Air Quality and Odour Management Sub Plan*.

Given the nature of the limited piling activities that are understood to be occurring and the fact that they are occurring in the harbour, air emissions from this source are not expected to be significant or warrant quantitative analysis.

The Project would not be expected to substantially increase air emissions at the Barangaroo South site. As such, pollutant emissions are not expected to be an issue of concern for the proposed Stage 1B Public Domain Works.

Lend Lease currently operates a reactive dust mitigation system at the Barangaroo South site. The system involves ambient pollution monitoring directly linked to real-time warnings and incorporates work procedures to ensure action is taken to reduce elevated dust levels where at risk of exceeding acceptable air pollution levels. The system has been operational on the Barangaroo South site since 2012, and is expected to continue to operate throughout the duration of the Project construction. Lend Lease has demonstrated that it can undertake significant materials handling activities using substantial plant and equipment numbers without adverse air quality outcomes on surrounding sensitive receptors through the operation of the reactive management and monitoring system.

4.0 Conclusions

On the basis of the review and information provided in this letter, AECOM is of the opinion that potential air quality impacts are able to be addressed through the application of air quality management methods, as applied within the existing Lend Lease *Air Quality and Odour Management Sub Plan*. Specific to the Stage 1B Public Domain Work, these measures should include:

- Active management of the excavation area dust emissions through the use of water sprays and stockpile management to limit the potential for particulate emissions; and
- Ensuring that vehicle paths are managed to minimise potential for track-out of dust, and cleaned in the event that track-out is present.

Accordingly, it is considered that the proposed Stage 1B Public Domain works do not require additional supporting information, analysis or commentary in relation to potential air quality impacts.

Yours faithfully



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