



Doc Ref: WA567-52F02(rev2)- R4B S4.55 Mod Letter

Date: July 19, 2021

To: NSW Department of Planning, Industry and Environment

Address: 320 Pitt Street  
Sydney NSW 2000

Attn: Mr Jim Betts (Secretary)

RE: RESIDENTIAL BUILDING R4B, BARANGAROO SOUTH  
SECTION 4.55 MODIFICATION APPLICATION

## 1 INTRODUCTION

This report supports a modification application submitted to the Department of Planning, Infrastructure and Environment (DPIE) pursuant to section 4.55(1A) of the Environmental Planning and Assessment Act 1979 (EP&A Act) to modify Development Consent SSD 8892218 (Amending SSD 6965) relating to Residential Building R4B, Barangaroo South (the site).

## 2 SITE DESCRIPTION

Barangaroo is located on the north western edge of Central Sydney, 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 containing large commercial tenants.

The Barangaroo site has been divided into three distinct redevelopment areas (from north to south) – the Barangaroo Reserve, Barangaroo Central and Barangaroo South. The Residential Building R4B site is located within Barangaroo South. The site of this proposed modification application is located on land generally known and identified in the approved Concept Plan (as modified) as Block 4A, as shown in Figure 1 below.

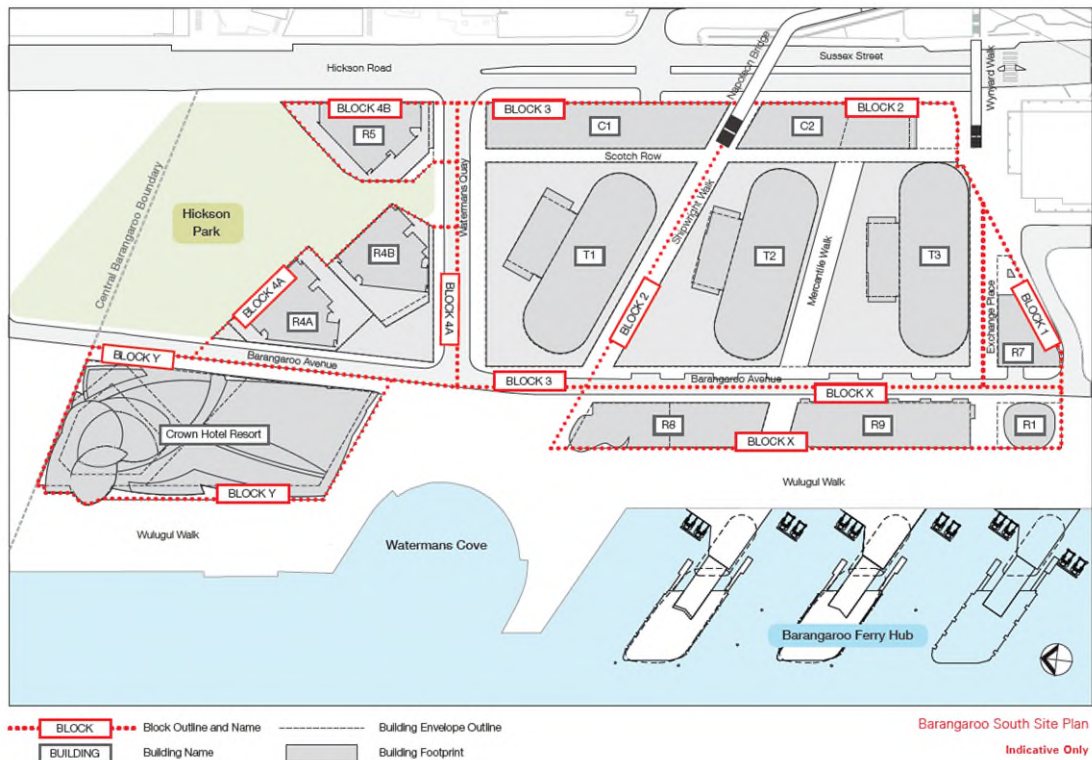


Figure 1: Block 4A in relation to Barangaroo South, with the location of Building R4B shown

### 3 BACKGROUND

Barangaroo South Concept Plan (as modified)

The approved Barangaroo South Concept Plan (MP06\_0162) (as modified), includes approval for the following:

- A mixed use development involving a maximum of 602,354 sqm gross floor area (GFA), comprised of:
  - a maximum of 191,031 sqm of residential GFA of which a maximum of 162,031 sqm will be in Barangaroo South;
  - a maximum of 76,000 sqm of GFA for tourist uses of which a maximum of 59,000 sqm will be in Barangaroo South;
  - a maximum of 34,000sqm of GFA for retail uses of which a maximum of 30,000 sqm will be in Barangaroo South;
  - a maximum of 5,000 sqm of GFA for active uses in the Public Recreation zone of which 3,500 will be in Barangaroo South; and
  - a minimum of 12,000sqm GFA for community uses.

- Approximately 11 hectares of new public open space/public domain, with a range of formal and informal open spaces serving separate recreational functions and including an approximate 2.2km public foreshore promenade.
- Built form design principles, maximum building heights and GFA for each development block within the mixed use zone.
- Public domain landscape concept, including parks, streets and pedestrian connections.
- Alteration of the existing seawalls and creation of a partial new shoreline to the harbour.
- Construction, operation and maintenance of a concrete batching plant to supply concrete for construction of future development under this Concept Plan at Barangaroo South.
- No approval is granted or implied for the future use of a heliport and/or a helipad.

This modification will result in a building consistent with the Concept Plan (as modified).

Residential Building R4B – Development Consent SSD 6965 and Development Consent SSD 8892218 (amending SSD 6965)

Development consent SSD 6965 was granted by the Planning Assessment Commission on the 7 September 2017 for Residential Building R4B, comprising a 60 storey mixed use building, with 297 residential apartments and retail floor space at ground level. This included a total gross floor area (GFA) of 38,896m<sup>2</sup>, 38,602m<sup>2</sup> of which was for residential floor space and the remaining 294m<sup>2</sup> was for retail floor space.

Consent was also provided for associated building public domain works, fit-out and use of basement and associated building identification signage.

SSD 6965 was subsequently modified twice.

SSD-8892218 was determined on 26 March 2021 for alterations and additions to the approved Residential Building R4B. This included an additional eight storeys and 5,650m<sup>2</sup> of gross floor area (GFA), amongst other items. SSD 8892218 amends SSD 6965 by way of conditions and is understood to now be the relevant consent for Building R4B.

Accordingly, this modification application relates to SSD 8892218 (which will in turn amend Development Consent SSD 6965).

## 4 OVERVIEW OF THE PROPOSED MODIFICATIONS

This modification application seeks consent for the following amendments:

- Transfer of the approved Strada which connects Building R4A and Building R4B from the Building R4A Development Consent (SSD 6964) to the Building R4B Development Consent SSD 8892218 (amending SSD 6965).
- Deletion of conditions relating to the need for obstacle lighting under Part E and F of the consent.
- Revision of car park entrance design.
- Revised entry vestibule design for ground floor lobby
- Alteration to the secondary exit arrangement for the ground level lobby.
- Minor layout changes to the ancillary communal facilities adjacent to the swimming pool.

A further detailed description of the proposed modifications is contained in the supporting letter for the modification application prepared by Ethos Urban.

## 5 IMPACT UPON PEDESTRIAN WIND ENVIRONMENT

Windtech Consultants have previously undertaken the detailed wind tunnel testing for the entire One Sydney Harbour development site as presented in the initial reporting provided in December 2014 (report reference: WA567-06F01 (rev1)- WE Report). This report was prepared to assess the wind environment conditions within and around the R4A, R4B and R5 towers and trafficable communal spaces of the One Sydney Harbour development site with reference to wind comfort and safety criteria. Since the time of issuance of the above reports, various updates were undertaken to provide reporting for the expected effect of staging of the development, separate Development Applications, consideration for future developments and design changes. The latest updated reports presenting the wind conditions at ground level of the One Sydney Harbour development site were presented in the latest reports outlined as follows:

- Ground Level areas adjacent to Tower R4B (Report Reference: WA567-11F02 (rev6)- WE Report R4B)
- Ground Level areas adjacent to Tower R4A (Report Reference: WA567-11F01 (rev7)- WE Report R4A)
- Ground Level areas adjacent to the updated Strada design scheme (WA567-45F01 (rev2)- WE report)

The areas tested as part of these studies included the surrounding trafficable ground level areas of the entire One Sydney Harbour development site and the areas directly adjacent to the latest secretary approved Strada design scheme.

From the above reporting, the previously recommended wind mitigation treatments are outlined as follows:

- Inclusion of strategic tree planting as outlined in the landscape design report prepared by Grant Associates in August 28, 2018. This mitigation strategy and landscape plan informed the design and layout of planting within the Hickson Park Public Domain. It is understood that the planting within the Hickson Park Public realm has already been installed. It should be noted that the 2 trees to the north of

the strada within the R4A development boundary that are noted for deletion within this S4.55 Modification were not included within the previous strategic tree planting wind mitigation recommendation.

- Inclusion of impermeable wind screen baffles within each end of the Strada.
- Inclusion of localised wind screening adjacent to Tower R4B north-eastern aspect to the south-east of the strada.

It should be noted that the strategic planting recommended above was tested as part of the initial Wind Tunnel testing to confirm the effectiveness of this landscaping in improving wind conditions within and around Towers R4A and R4B proposed buildings and adjacent public realm areas of the One Sydney Harbour development site. Furthermore, it has been recommended that the trees selected to be included within the final design scheme are of a sturdy densely foliating variety. These plants should also be installed in a semi-mature to mature state as early as possible into the site works to allow these trees to become sufficiently established before the completion of the various One Sydney Harbour towers. Appropriate anchoring should also be utilised whilst the trees establish if applicable for the tree size. It is Windtech's understanding that the majority of these trees within the public domain have been installed as part of the overall site wide public realm works.

## 5.1 Modification: Transfer of Approved Strada Development Consent

This Section 4.55 modification is seeking to transfer the previously approved Strada which connects Building R4A and Building R4B from the Building R4A Development Consent (SSD 6964) to the Building R4B Development Consent SSD 8892218 (amending SSD 6965). Windtech has been informed that the transfer of the Strada approval from the Building R4A to Building R4B development consent is primarily an administrative action to align with the staging of construction of the buildings. Windtech can confirm that the wind mitigation measures previously recommended for the Strada and adjacent areas remain the same as those included within the design currently approved by the secretary under condition B5 of the R4A consent SSD 6964. Therefore, Windtech can confirm that modification has no material effect on the resulting wind environment conditions adjacent to Building R4A, Building R4B or the Strada structures.

Further to the above modification request, it is noted that the Building R4A modification submitted concurrently with this Building R4B modification, seeks to delete two trees adjacent to the northern end of the strada near Hickson Park. Therefore, the Strada design to be transferred to the Building R4B consent under this S4.55 Modification will have these two trees removed from the latest landscape design documents (drawing reference: R4B430-GE-R4B002\_GRND (revR), date received: 12<sup>th</sup> July, 2021). Windtech has reviewed the impact of the deletion of these trees onto the wind conditions towards the northern end of the Strada and can confirm that the removal of these trees will have a negligible impact. Please refer to the Wind Impact letter accompanying the Building R4A S4.55 Mod 4 for further detailed discussion on the effect of the removal of these trees.

## 5.2 Modification: Change to the Entry Vestibule Design

The robustness and suitability of automated swing doors at the Tower R4B lobby entry vestibule has been reviewed in light of the potential risk for local winds to catch the various outward swinging doors. This wind drag loading has the potential to impose loads that could negatively impact upon the operation of the automatic door hardware and its long-term reliability.

Windtech were engaged to assess the wind drag loadings on these outward opening doors. Following completion of this study, a review was undertaken by the design team with input from the door system suppliers regarding the feasibility of the swing door design under wind loading. As a consequence of the door wind drag loading review, the design team determined that a sliding door system would provide a more robust, reliable and fit-for purpose solution because a sliding door would not be subject to the wind drag loads effecting the current swing door design. Windtech Consultants can confirm that the sliding door configuration presented within the latest architectural drawing set (drawing reference: BR4B\_ASD\_PA1\_2000 (rev21), Dated: 30 June, 2021) is a more suitable door design to be progressed to avoid any operational issues for the various doors of the development due to wind load impacts.

Regards,



Windtech Consultants  
Simon Ronald  
Technical Director