Museum of Applied Arts & Sciences

Powerhouse Museum
500 Harris Street
Ultimo NSW 2007
+61 2 9217 0111

Sydney Observatory
1003 Upper Fort Street
Millers Point NSW 2000
+61 2 9217 0111

Museums Discovery Centre
172 Showground Road
Castle Hill NSW 2154
+61 2 9762 1300

January 20, 2021

Candice Pon
Planning Officer
Planning & Assessment
Department of Planning, Industry and Environment

Dear Candice,

Re: Building R4B alterations and additions (SSD SSD-8892218)

The Museum of Applied Arts and Sciences operates Sydney Observatory as an active public museum and place of education, with a program of highly successful public and educational programs and tours focused on telescope viewing experiences of the Southern Night Sky.

The Museum wishes to raise two potential areas of impact on Sydney Observatory resulting from the proposal to increase the height of R4B from RL 210 to RL 235 (+ 25 m). The potential areas of impact are Sky View Loss and Light Spill.

These concerns have been outlined previously in our submission to the Department of Planning, Industry and Environment dated 25 May 2020 in response to Modification 10 (MP 06_0162 Barangaroo Concept Plan MOD 10 and Proposed Amendment to State Environmental Planning Policy (State Significant Precincts) 2005), and subsequently in correspondence to the proponent dated 19 October 2019.

Sky View Loss
The 25m increase in height of Building R4B will significantly reduce opportunities for viewing of celestial objects of interest from Sydney Observatory, including:

- The Jewel Box Cluster (open star cluster);
- The Southern Cross; and
- The Pointers (Alpha and Beta Centauri).

These celestial objects are some of the most well-known and popular constellations with both local and international visitors to Sydney Observatory.

Light Spill Impact
The Museum acknowledges that the potential light spill impact of this development on astronomical observation from Sydney Observatory has been considered as part of the

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Light Spill Mitigation Strategy Revision C (18 September 2020) provided to us. The Museum notes that this report states that the final lighting design will be compliant with AS4282 limits, and therefore that it can be inferred that no direct light will detrimentally affect the Observatory. However, this report also acknowledges that the impact of indirect light spill (sky glow) is subjective. The cumulative effect of sky glow from surrounding developments is an issue of great concern for Sydney Observatory as it impacts on the ability to conduct its core function as a public observatory.

We would appreciate the opportunity to work collaboratively with the proponent to ensure impacts from this development on Sydney Observatory from Sky View Loss and Light Spill (including sky glow) can be minimized and mitigated to the greatest extent possible, in order to ensure this valued public asset is able to continue to serve the people of NSW and visitors. Please find following recommended conditions:

Item	Impact	Recommended condition
Sky view loss due to building height increase	Reduced opportunities for viewing of celestial objects of interest from Sydney Observatory	The Museum requests that the proponent is required to consult with MAAS on potential initiatives to mitigate the impact of sky view loss
Increased light spill impact due to building height increase	Negative impact on ability of Sydney Observatory to conduct its core function as a public observatory	The Museum requests that the proponent is required to consult with MAAS on building lighting throughout design and construction phases in order to minimize the impact of light spill to the greatest extent possible

If you require additional information or wish to discuss this matter further, please do not hesitate to contact myself or James Rongen-Hall at james.rongen-hall@maas.museum.

Yours sincerely

Lisa Havilah
Chief Executive 21.01.21