

Your ref
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File ref

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Dear Stephanie

Darling Square North West Plot Commercial Building Reflectivity Statement for Section 96 Modification Application

Introduction

This report supports an application made under section 96 of the Environmental Planning and Assessment Act 1979 (EP&A Act) to modify Development Consent, SSD-6013 relating to the development of the North West Plot of Darling Square which is part of the Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP).

Development Consent SSD-6013 was granted on 7 May 2014 by the delegate of the Minister for Planning for the following components of development:

- Site preparation works including demolition of existing structures, tree removal, minor excavation, and site remediation as required;
- Staged construction of a 12 storey building to be used for commercial premises, and above ground car parking;
- Various public domain improvements including provision (part) new east-west pedestrian laneway (known as Dickson's Lane) linking Darling Drive to the Boulevard, upgrading of existing footpaths, provision of street trees, and provision of bicycle parking facilities;
- Building identification signage and wall advertising sign.

This section 96 application (the Modification Application) constitutes the third modification to the consent. This Modification Application follows the approval and current assessment of a number of SSDAs within the SICEEP site as set out in Table 1.

This letter supports an application for a Construction Certificate relating to the development of the North West Plot of Darling Square which is part of the Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP).

Table 1: Status of initial SICEEP SSD DAs

DA No	Description of Application	Status
12_5752	SICEEP Core Facilities – Exhibition Centre, Convention Centre, The Theatre, Event Deck and Tumbalong Park	Approved: 22 August 2013
MOD 1	S96(1A) - various	Approved: 20 February 2014
MOD 2	S96(1A) – various	Approved: 18 July 2014
MOD 3	S96(1A) – various	Approved: 1 July 2015
13-5878	Darling Square Concept Proposal	Approved: 5 December 2013
MOD 1	S96(1A) – various	Approved: 26 November 2015
MOD 2	S96(1A) – various	<i>Under Assessment</i>
6010	Western Plot (Student Accommodation – Building W2)	Approved: 7 May 2014
MOD 1	S96(2) – various	Approved: 1 April 2016
6013	North-West Plot (Public car park/ commercial office building)	Approved: 7 May 2014
MOD 1	S96(2) – various	Approved: 20 July 2015
MOD 2	S96(1A) – various	Approved: 26 November 2015
MOD 3	S96(1A) – various	Subject of this application
6011	South-West Plot (Mixed Use Residential Development)	Approved: 21 May 2014
MOD 1	S96(1A) – various	Approved: 27 July 2015
6116	ICC Hotel	Approved: 15 June 2014
MOD 1	S96(1A) – various	Approved: 8 July 2015
6626	North-East Plot (Mixed Use Residential Development)	Approved: 16 April 2015
6831	ICC Hotel fit-out, façade lighting system and subdivision	Approved: 16 October 2015
7133	Western Plot (Student Accommodation – Building W1)	Approved: 1 April 2016
7021	North Plot (Community and Retail Building and Public Open Space)	<i>Under Assessment</i>
6633	South East Plot (Mixed Use Residential Development)	<i>Under Assessment</i>

Overview of Proposed Modifications

This Modification Application seeks approval for the following amendments:

- Changes to roof plant/structures and minor alterations to the roof form;
- Minor external amendments at the ground level including interfaces with the public domain; and
- External amendments to the building design including an enhancement of the car parking screening materials.

A range of other minor amendments resulting from design development (including in response to feedback from potential commercial tenants) are illustrated on the amended Architectural Drawings. These changes are to be expected in any project, especially given the nature and scale of the approved North West Plot development.

Site Description

The SICEEP 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.

With an area of approximately 20 hectares, the SICEEP Site is generally bound by the Light Rail Line to the west, Harbourside shopping centre and Cockle Bay to the north, Darling Quarter, the Chinese Garden and Harbour Street to the east, and Hay Street to the south (refer to Figure 1).

The Darling Square Site is:

- Located in the south of the SICEEP Site, within the northern portion of the suburb of Haymarket;
- Bounded by the Powerhouse Museum to the west, the Pier Street overpass and Little Pier Street to the north, Harbour Street to the east, and Hay Street to the south; and
- Irregular in shape and occupies an area of approximately 37,701m².

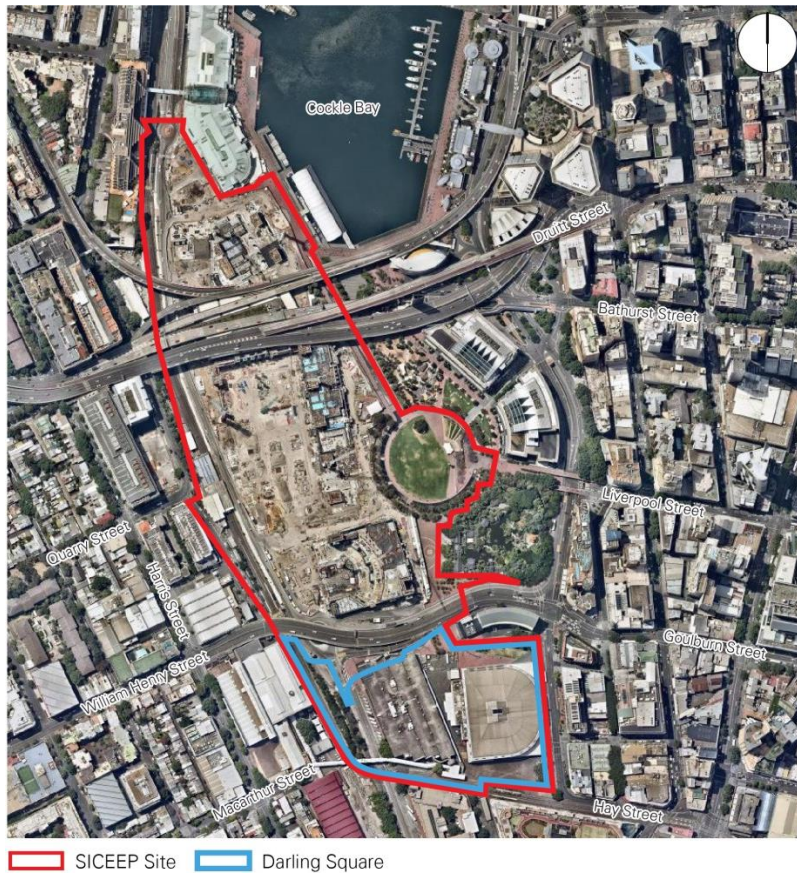


Figure 1: Aerial Photograph of the SICEEP site

The Modification Application Site relates to the North West Plot and surrounds as detailed within the drawings submitted in support of Modification Application. Figure 2 illustrates the North West Plot in the approved Concept Proposal.

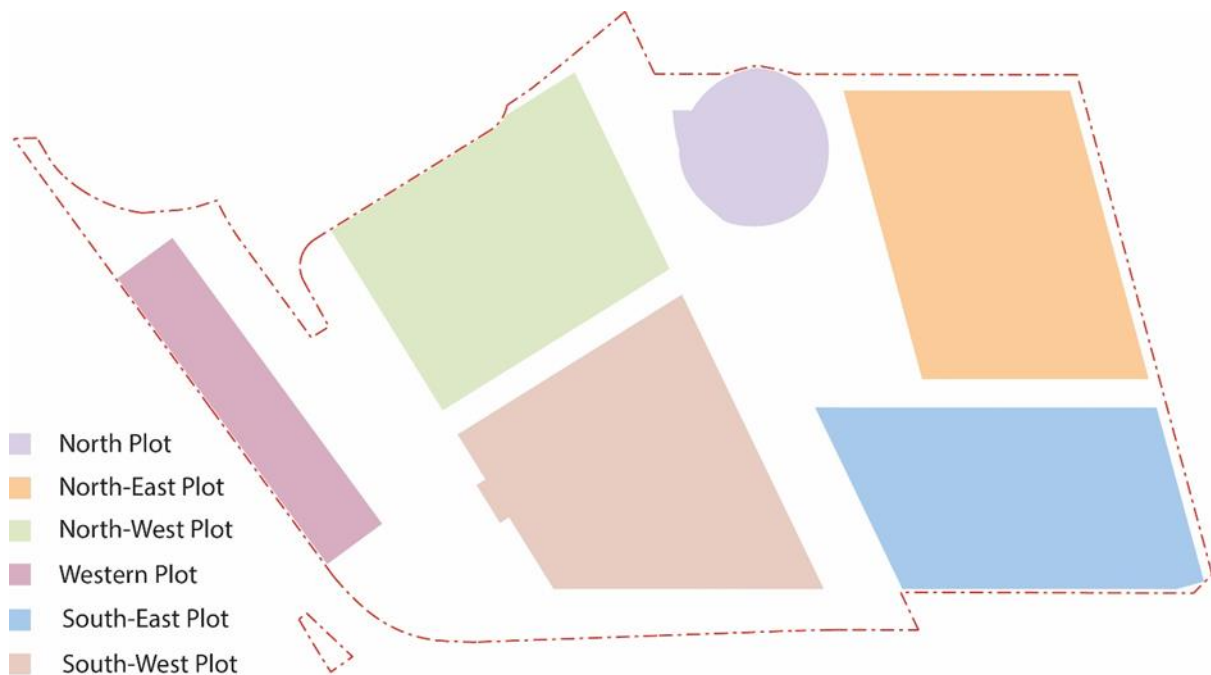


Figure 2: Concept Proposal Development Plots

Reflectivity Impact

Arup has reviewed the following drawing series prepared for the Modification Application:

- Architectural plan, section and elevation drawings of Ground Level and above, comparison set prepared by Woods Bagot for the Section 96 modification application (MOD3) for the North West Plot – SSD 6013

The reflectivity study letter titled “Darling Square North West Plot Commercial Building – Reflectivity Statement for Section 96” (dated 11 June 2015), prepared by Arup to support the first modification under section 96 to the Development Consent SSD-6013, assessed impact of potential reflections off the building facades, and found that these would not exceed limits of acceptability according to the Hassall methodology adopted in the study, as long as normal external reflectivity of glazing and cladding elements is kept within a limit of 20% (as per Sydney Central DCP limitations).

This finding was confirmed for the design modifications proposed under the further Section 96 modification application (MOD2, approved 26 November 2015) in the letter titled “Darling Square North West Commercial Building – Reflectivity Statement for Section 96 Modification Application” (dated 1 October 2015).

The modification to the proposed commercial building as contained in the current third modification application is within the scope of the original reflectivity study letter. Changes to elements of the façade that have a bearing on the effect of reflections are limited to the materiality of the car park metal cladding.

This proposed new cladding consists of specialist anodised perforated aluminium panels, with perforated tabs not fully cut out of the panel, but bent out of the plane at varying angles to achieve a visual effect. The matt type anodising will result in a material specular reflectivity well below 20% (typically around 5%). The actual surface reflectivity is further reduced due to perforation holes and self-shading from the perforation tabs. Specular reflections from perforated tabs themselves visible at distance will be strongly reduced in intensity as they will only be of a small portion of the sun disk. Tabs are generally intended

to be bent downwards, making them unlikely to reflect sun close to the viewing plane of drivers and pedestrians.

On this basis, Arup is of the opinion that the proposed modification will not result in any glare impact of reflections off the façade in addition to that identified within the reflectivity study letter and requires no further investigation or analysis at this stage of planning and design.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Jorg Kramer', with a long horizontal stroke extending to the right.

Jorg Kramer
Senior Consultant