

floth

SUSTAINABLE BUILDING CONSULTANTS

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MIXED USE DEVELOPMENT 2b-6 Hassall Street, Parramatta

Lighting Impact Assessment for Development Application

Prepared for:



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LIGHTING IMPACT ASSESSMENT

This register identifies each issue of and each amendment to this document by Revision No, Page No, the details of each amendment and date of issue.

AMENDMENT REGISTER						
Rev. No	Section & Page No	Issue/Amendment	Author	Project Engineer	Checked	Date
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Disclaimer

This report undertaken at concept/schematic design stage describes the intended development design features and desired outcomes. Design features and outcomes provided herein are preliminary in nature and are subject to further review during design development.

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1. INTRODUCTION

This report describes the lighting impacts of the mixed-use development at 2b-6 Hassall St, Parramatta, and measures to reduce spill to surrounding sensitive receivers.

2. RESPONSE TO SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

This report has been prepared to accompany the EIS for the proposed development. It responds to the infrastructure and water management issues addressed in the SEARs as outlined in the table below.

Relevant SEARs	Item discussed at
4. Environmental Amenity Include a lighting strategy and measures to reduce spill into any surrounding sensitive receivers.	Section 5

3. DESCRIPTION OF BUILDING

This lighting impact assessment has been prepared by Floth and is submitted to the Department of Planning and Environment to accompany a Development Application (DA) for a State Significant Development (SSD) at 2b-6 Hassall Street, Parramatta.

The proposal relates to the broader site redevelopment plan which includes a mixed-use development comprising a tertiary institution, commercial and retail uses. The proposed development has undergone an Architectural Design Competition, which has since been awarded.

Two separate Development Applications have been submitted to the Local Authority, City of Parramatta Council, to enable the necessary Demolition and Early Works to proceed while the design competition was underway. The benefits of this approach included the expedited local assessment and determination of an application for these early works, which are key to ensuring the development can proceed according to the timeline for the project completion in Q1 2021.

The two early works applications include:

- DA/714/2018
 - Demolition of existing structures
 - Removal of trees on site
 - Archaeological testing and salvage work.
- DA/66/2019
 - Site preparation works, including piling
 - Bulk excavation
 - Construction of below ground shoring walls.

This lighting impact assessment for the SSD includes the following works:

- Construction and use of one basement level comprising:
 - Car parking,
 - Refuse and recycling facilities,
 - Loading Bay,
 - Bicycle parking, and
 - WSU Net Lettable Area (NLA).
- Construction and use of a 19-storey mixed-use building comprising:
 - Retail tenancies, End of Trip (EOT) and educational use on Ground Level.

- WSU educational use on Level 1 to Level 9;
- Commercial office use on Level 10 to 17;
- Plant room on Level 18;
- Terrace on Level 12.
- Landscaping and public domain works.

4. DESCRIPTION OF PROPOSED LIGHTING

4.1 Public Activity Areas

Lighting will be provided throughout the ground floor public activity areas to promote the activation and use of the space. Vertical illumination will be provided in accordance with AS/NZS 1158.3.1 recommendations for public activity areas in order to ensure reliable passive surveillance of the area, and to improve CCTV operation.

4.2 Feature Lighting

Feature lighting will be provided throughout the podium levels to highlight structural and architectural elements of significance, such as the columns, bracing and soffit of Level 3. The lighting design will be coordinated with the architect to ensure the items of significance are illuminated in a manner complimentary to their design.

4.3 Bicycle Parking

Functional lighting will be provided to the bicycle parking to ensure reliable passive surveillance of the area and to improve CCTV operation.

4.4 Vehicular Entrance

The vehicular entrance will be illuminated in accordance with the AS/NZS 1158.3.1 recommendations for mixed pedestrian and vehicular activity use, including the use of vertical illumination to enable easy identification of pedestrians, bicycles and vehicles for the users of this mixed activity space.

4.5 Terraces

The terraces will be provided with low-level illumination such as low-mounted wall lights, bollards and the like. Horizontal illumination only will be provided to meet the recommendations of AS/NZS 1158.3.1 only.

4.6 Internal Lighting

All levels of the building will be provided with functional illumination to meet the recommendations of the AS 1680 series.

5. PROPOSED MEASURES TO REDUCE LIGHT SPILL

5.1 General

All lighting emissions from the site will be control in order to comply with the requirements of AS 4282.

Luminaires will be selected and installed to ensure no direct upward light emissions are generated in order to minimise light pollution. Reflected emissions may occur.

5.2 Public Activity Areas

In order to minimise direct and reflected emissions, the public activity lighting will be dimmed after curfew hours (23:00 in the evening). Compliance with the minimum recommended requirements of AS/NZS 1158.3.1 for safe movement will be maintained.

5.3 Feature Lighting

Feature lighting will be located to ensure no direct upward light emissions occur from the site. In addition, feature lighting will be turned off after curfew hours to minimise reflected emissions and reduce light pollution.

5.4 Bicycle Parking

Bicycle parking lighting will be selected such that no direct upward lighting emissions occur. Lighting will be dimmed after curfew hours and will increase in illumination in response to movement to ensure safety and security are not compromised.

5.5 Vehicular Entrance

The vehicular entrance lighting will be selected such that no direct upward lighting emissions occur. Lighting will be dimmed after curfew hours and will increase in illumination in response to movement to ensure safety and security are not compromised.

5.6 Terraces

Terrace illumination will be switched off after curfew hours in order to reduce reflected emissions and light pollution. To further reduce light pollution, the vertical illumination requirements of AS 1158.3.1 will not be applied to the terrace areas.

5.7 Internal Lighting

While not considered by AS 4282 for light spill, all internal lighting will be provided with occupant activated sensors to ensure that only the minimum lighting required for building operations will be on, thereby minimising indirect lighting emissions and reducing light spill and light pollution.