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By email
06 March 2025

Hanna Knight
University of New South Wales
UNSW Sydney, NSW, 2052

Our ref 300702-00
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Dear Ms Knight,

UNSW E25 Biolink Redevelopment

Fire Safety Engineering – State Significant Development Application

Introduction

This letter has been prepared by Arup to accompany a detailed State Significant Development Application (SSDA) for alterations and additions to a UNSW teaching facility within the Kensington campus at 356 Anzac Parade, Kensington, NSW 2052. The site is made up of a single building within a large lot. The legal description of the site is outlined in Table 1.

Table 1: Legal Description.

Property Address	Title Description
356 Anzac Parade, Kensington, NSW 2052	Lot 5 in Deposited Plan 1264171
Project Site Area	2,173sqm

This letter has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) issued for the project (SSD-73456206 dated 7 August 2024). This letter outlines specific aspects of the fire safety design of the proposed redevelopment of UNSW's E25 Biolink building that impact upon planning and hence SSDA issues for the building.

This letter concludes that the proposed development is suitable and warrants approval, subject to detailed fire safety engineering design including the implementation of the fire engineering Performance Solutions outlined within.

Building Description

The application seeks consent for alterations and additions to Building E25 for fit out and use as a teaching and research facility within the UNSW Kensington campus.

The purpose of the project is to facilitate the delivery of an upgraded and expanded teaching facility to meet the University's needs. The current building is not fit for purpose and underutilised with a large portion of the building vacant.

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The existing E25 Biolink building is joined to the D26 Biosciences building to the north and the E26 Biological Sciences building to the east, and also has link bridges on Level 1 and Level 4 to the F25 Samuels building to the south. The E25 building is to be refurbished and extended as part of the redevelopment project. The E25 building will be mixed classification, including; Class 5 office, Class 7b storage, Class 8 laboratory and Class 9b teaching spaces.

Fire safety design approach

The fire safety design of the development will generally satisfy the Performance Requirements of the Building Code of Australia (BCA) by complying with the Deemed-to-Satisfy (DtS) Provisions. However, there are some aspects of the design that will be supported through performance-based fire engineering to achieve compliance with the Performance Requirements of the BCA.

Departures from DtS provisions, which are proposed to be addressed via fire engineered Performance Solutions, are outlined below:

- **Fire resistance levels and compartmentation:** The building is proposed to have construction elements with a Fire Resistance Level (FRL) generally in accordance with the DtS Provisions of the BCA, other than storage areas and laboratory spaces, which have the potential to have rationalised FRLs of 120 mins in lieu of 240 mins.
- **Interconnecting stair void:** An interconnecting stair from Ground floor to Level 5 is being explored by the project. The connection of more than three storeys within the sprinklered building may be addressed by a fire engineered Performance Solution.
- **Unprotected openings in the external wall**: Between E25 and E26/D26, there are unprotected openings in the external walls which are to be performance-justified in line with the existing FERs for all three buildings.

Partial conformity for Lower Ground (LG) radioactive rooms

In the LG level of the E25 building, there are two rooms for which partial conformity is being sought from the consent authority, as it is not considered feasible to achieve full conformity with the current NCC 2022 within those rooms. The two rooms are the LG002 radioactive lab office and LG002A radioactive store. Please refer to the Memo produced by UNSW which provides further context behind the request, and the BCA Report by City Plan which requests partial conformity.

Arup is supportive of the partial conformity approach to the LG radioactive rooms, considering the wider fire safety strategy for the E25 building.

Concluding remarks

At this stage of the design, other fire safety aspects of the building appear to be in accordance with the DtS provisions of the BCA. It is anticipated that additional departures from the DtS Provisions of the BCA may arise as the design develops; however, it is not expected that they would affect the building layout, hence they would not impact the approval of the State Significant Development Application.

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Yours faithfully

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cc Adam Glew, Krishi Jayanandan (Arup)