

DPT and DPPT Operator Pty Ltd

Level 10 201 Kent St
PO Box 76 Millers Point
Sydney 2000
Australia

t +61 2 9320 9320
rob.fleury@arup.com
www.arup.com

18 August 2017

Dear Sir/Madam

Cockle Bay Park Development Stage 1 SSDA - Fire Engineering

This letter concerns the fire safety design of the Cockle Bay Park development at Darling Harbour, Sydney, and specifically those aspects of the fire safety design that impact upon planning and hence are State Significant Development Approval (SSDA) related issues for the development.

1.1 Introduction

This report supports the Response to Submissions and amended Concept Proposal associated with a State Significant Development Application (SSDA 7684) submitted to the Minister for Planning and Infrastructure pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

DPT Operator Pty Ltd and DPPT Operator Pty Ltd (the Proponent) is seeking to secure approval to establish concept proposal details for the redevelopment of the Cockle Bay Wharf Building and surrounding area to create a new area of open space and commercial, retail and tourist precinct in the heart of the CBD (now referred to as Cockle Bay Park). The amended concept plan includes:

- a large area of publicly accessible open space;
- new retail outlets, including new food and beverage destinations;
- new cultural and entertainment destinations; and
- a new commercial office tower.

The project will add new open space to the Sydney CBD and help to reconnect the city to the Darling Harbour waterfront. Cockle Bay Park will take its place in a revitalised Sydney CBD and speaks directly to local government objectives to create a 'Green, Global and Connected City' (City of Sydney) as well as the strategic vision outlined in 'Towards Greater Sydney 2056' to grow the "developing central city". The vision for this project was developed with consideration for the NSW Government objectives to support and "grow the knowledge industry", double tourism expenditure and "strengthen our local

environment and communities” as outlined in ‘NSW 2021: A Plan to Make NSW Number One’.

1.2 Background

The Proponent controls the lease of the site, and also of the adjacent Darling Park site. The Darling Park site is a successful premium grade office precinct located on the west of the Sydney CBD, the associated Crescent Garden, located to the west of the three existing Darling Park towers, is a key area of open space in this part of the city.

The Proponent has recognised a number key issues with the existing layout of the Darling Park and Cockle Bay precinct, these being:

- The existing Cockle Bay Wharf building is not well integrated with the city, the Western Distributor freeway currently acts as a barrier to separate this area from the CBD;
- Publicly accessible open space is limited to the existing Crescent Garden in Darling Park; and
- The existing Cockle Bay Wharf building is outdated and is not in keeping with the future of Darling Harbour area as a vibrant entertainment and tourist destination.

The Cockle Bay precinct is at risk of being left behind and undermining the significant investment being made in Darling Harbour that will see it return to the world stage as a destination for events and entertainment. Accordingly, the Proponent is taking a carefully considered and staged approach to the complete revitalisation of the site and its surrounds. The envisaged development, which will be facilitated by the proposed building envelopes will:

- Reconnect the city with the Darling Harbour waterfront;
- Create new publicly accessible open space in the heart of the Sydney CBD;
- Create new public land above the Western Distributor;
- Provide new access routes between the city and the ICC Sydney / Darling Harbour Live precinct;
- Support the Sydney economy by providing a new premium commercial building; and
- Refresh and renew an existing entertainment and tourist destination.

1.3 Site Description

The 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.

The Site is located to the immediate south of Pyrmont Bridge, within the Sydney CBD on the eastern side of the Darling Harbour precinct. The Site is located within the City of Sydney local government area (LGA). A locational context area plan and location plan are provided at Figure 1 below.

The project area has been slightly amended by this Response to Submissions, a comparison of the exhibited and now-proposed site area is provided as Figure 2, and the now proposed site area is shown below as Figure 3.

The Darling Harbour precinct is undergoing significant redevelopment as part of the SICEEP, Darling Square, and IMAX renewal projects. The urban, built form and public transport / pedestrian context for Harbourside will fundamentally change as these developments are progressively completed.

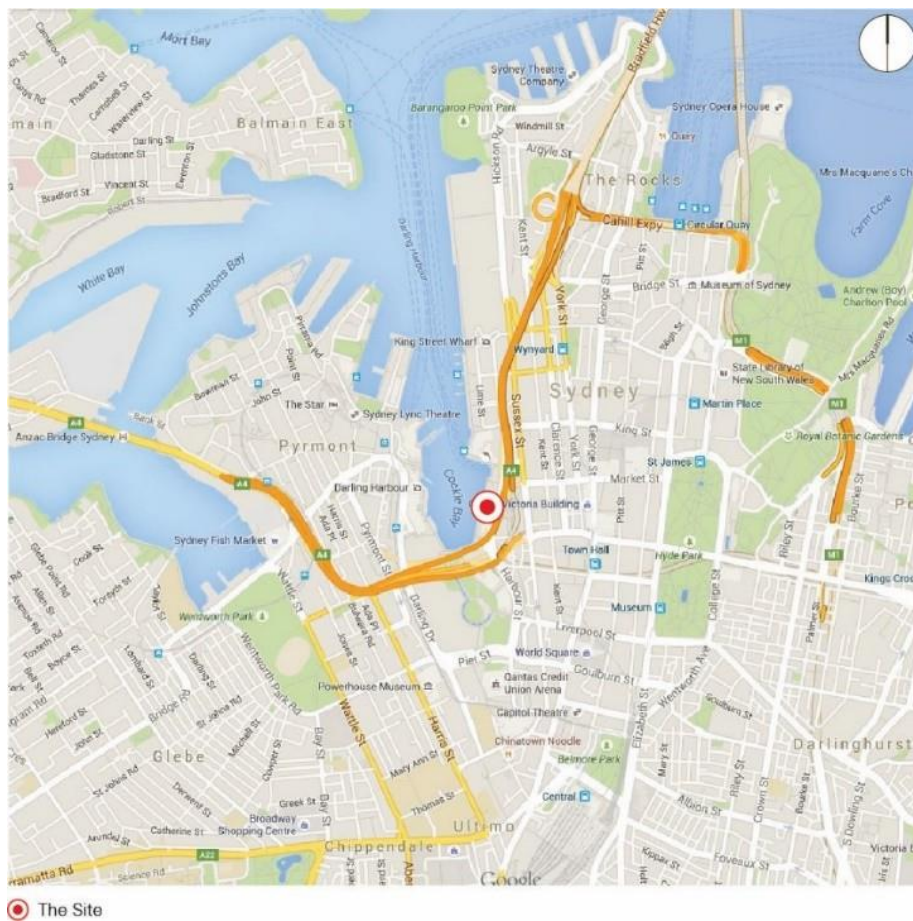


Figure 1 – Location Context Area Plan



- ▬ Exhibited Site Area
- - - Amended Site Area

Figure 2 – Location Plan (revised site area in yellow)



 Amended Site Area

Figure 3 – Amended Location Plan

1.4 Overview of Proposed Development

The proposal relates to a staged development application and seeks to establish concept proposal details for the renewal and re-imagining of Cockle Bay Park. The concept proposal establishes the vision, planning and development framework which will be the basis for the consent authority to assess future detailed development proposals. The Cockle Bay Park site is to be developed for a mix of Retail, Cultural and Commercial (Office) uses, including retail and restaurants, commercial offices, and publicly accessible open space.

The Concept Proposal seeks approval for the following key components and development parameters:

- Demolition of existing site improvements, including the existing Cockle Bay Wharf building complex, pedestrian bridge links across the Western Distributor, and obsolete monorail infrastructure;
- Building envelopes;
- Land uses across the site;
- A maximum total Gross Floor Area (GFA) across the Cockle Bay Park of 75,000m² for commercial development and 14,000m² for retail (including food and beverage) development;
- Urban Design and Public Realm design principles to provide a Design Excellence framework; and
- Strategies for utilities and services provision, drainage and flooding, and ecological sustainable development.

1.5 Fire Safety Commentary

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 are to be developed using performance based, fire engineered Performance Solutions to achieve compliance with the Performance Requirements of the BCA.

The fire safety strategy is still at an early stage of development, therefore specific areas subject to fire engineered Performance Solutions have not been detailed, however, some areas anticipated to be addressed through fire engineering are:

- Fire resistance levels (FRLs) for the retail portions of the development: It is proposed that the fire resistance of some parts of the retail areas have an FRL of 120 minutes, allowing for a more efficient structure. This does not comply with the DTS provisions of the BCA, which states that the FRL requires 180 minutes. This may be achieved on the basis of equivalent fire severity, calculated as an equivalent time of exposure to the standard fire. The fire resistance level of fire rated elements must have a higher fire rating than the design fire severity calculated for the specific fire compartment or building. The calculation takes into account fuel load, ventilation openings, floor area, materials of construction and the number of floors supported, as well as a factor for sprinklers. Specific areas that this Performance Solution may be applied will be subject to further assessment.
- Egress provisions: are generally expected to satisfy the DTS Provisions of the BCA, except that the fire strategy will be able to accommodate areas of extended travel distance. The assessment will utilise an improved smoke detection system in order to offset the increased distance that occupants need to travel to an exit.
- Smoke control: a performance based smoke hazard management strategy may need to be adopted for the retail portion of the development in order to provide a more suitable and sustainable system than the generic DTS application.
- Fire brigade access: a single, consolidated fire fighting staging area is proposed for the development, to afford fire brigade personnel with appropriate access to the retail podium and tower via emergency lifts and fire stairs, in addition to appropriate road access to the 'land bridge' (see below).

Part of the development proposes the construction of a land bridge over a section of the existing Western Distributor roadway. A preliminary assessment of the life safety

(occupant tenability) aspects of the 'land bridge' is given in a report prepared by Aurecon. The fire safety study for the land bridge is subject to further design development, including aspects such as fire fighting measures, structural fire resistance, egress and wayfinding, appropriate fire suppression systems (if required), appropriate smoke ventilation systems (if required) and a general fire risk assessment process. These aspects will be further assessed and documented by Aurecon in future design stages and will be subject to agreement with Transport for NSW, Roads & Maritime Services and Fire & Rescue NSW.

Conclusion

Based on our review of the project documentation for the building, it is considered that a performance based approach can be used to demonstrate compliance with Performance Requirements of the BCA relating to fire safety.

It is anticipated that other non-compliances with the DTS Provisions of the BCA will be identified as the design further develops. However, it is considered that there are no significant issues that would affect the building layout arising from fire safety and hence no impediments to the issuing of SSDA Approval for the project.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Rob Fleury', with a stylized, cursive script.

Rob Fleury
Senior Engineer | Fire Engineering

cc Steve Colomb - Arup