



SSD DA Fire engineering statement


TOGA Central

Client: TOGA

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Quality management

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A	25 Jul 2022	Description	Report issued to TOGA and Urbis.
		Prepared by	
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		Signature	

Executive summary

This fire engineering review has been prepared by Warringtonfire to accompany a detailed State significant development (SSD) development application (DA) for the mixed-use redevelopment proposal at TOGA Central, located at 2 & 8A Lee Street, Haymarket (the site). The site is legally described as Lot 30 in Deposited Plan 880518, Lot 13 in Deposited Plan 1062447 and part of Lot 14 in Deposited Plan 1062447. The site is also described as 'Site C' within the Western Gateway sub-precinct at the Central Precinct.

This report concludes that the proposed mixed-use redevelopment is suitable and warrants approval.

Contents

1.	Introduction	5
2.	The site	6
3.	Methodology	8
4.	Description of performance solutions	8
5.	Assessment and findings	10
6.	Cumulative impacts	10
Appendix A	Drawings and information	11

1. Introduction

This report has been prepared to accompany a SSD DA for the for the mixed-use redevelopment proposal at TOGA Central, located at 2 & 8A Lee Street, Haymarket.

The Minister for Planning, or their delegate, is the consent authority for the SSD DA and this application is lodged with the NSW Department of Planning and Environment (DPE) for assessment.

The purpose of the SSD DA is to complete the restoration of the heritage-listed building on the site, delivery of new commercial floorspace and public realm improvements that will contribute to the realisation of the Government's vision for an iconic technology precinct and transport gateway. The application seeks consent for the conservation, refurbishment and adaptive re-use of the Adina Hotel building (also referred to as the former Parcel Post building (fPPb)), construction of a 45-storey tower above and adjacent to the existing building and delivery of significant public domain improvements at street level, lower ground level and within Henry Deane Plaza. Specifically, the SSD DA seeks development consent for:

- Site establishment and removal of landscaping within Henry Deane Plaza.
- Demolition of contemporary additions to the fPPb and public domain elements within Henry Deane Plaza.
- Conservation work and alterations to the fPPb for retail premises, commercial premises, and hotel and motel accommodation. The adaptive reuse of the building will seek to accommodate:
 - Commercial lobby and hotel concierge facilities,
 - Retail tenancies including food and drink tenancies and convenience retail with back of house areas,
 - 4 levels of co-working space,
 - Function and conference area with access to level 7 outdoor rooftop space, and
 - Reinstatement of the original fPPb roof pitch form in a contemporary terracotta materiality.
- Provision of retail floor space including a supermarket tenancy, smaller retail tenancies, and back of house areas below Henry Deane Plaza (at basement level 1 (RL12.10) and lower ground (RL 16)).
- Construction of a 45-storey hotel and commercial office tower above and adjacent to the fPPb. The tower will have a maximum building height of RL 202.28m, and comprise:
 - 10 levels of hotel facilities between level 10 - level 19 of the tower including 204 hotel keys and 2 levels of amenities including a pool, gymnasium and day spa to operate ancillary to the hotel premises. A glazed atrium and hotel arrival is accommodated adjacent to the fPPb, accessible from Lee Street.
 - 22 levels of commercial office space between level 23 - level 44 of the tower accommodated within a connected floor plate with a consolidated side core.
 - Rooftop plant, lift overrun, servicing and BMU.
- Provision of vehicular access into the site via a shared basement, with connection points provided to both Block A (at RL 5) and Block B (at RL5.5) basements. Primary access will be accommodated from the adjacent Atlassian site at 8-10 Lee Street, Haymarket, into 4 basement levels in a split-level arrangement. The basement will accommodate:
 - Car parking for 106 vehicles, 4 car share spaces and 5 loading bays.
 - Hotel, commercial and retail and waste storage areas.
 - Plant, utilities and servicing.
- Provision of end of trip facilities and 165 employee bicycle spaces within the fPPb basement, and an additional 72 visitor bicycle spaces within the public realm.

- Delivery of a revitalised public realm across the site that is coordinated with adjacent development, including an improved public plaza linking Railway Square (Lee Street), and Block B (known as 'Central Place Sydney'). The proposal includes the delivery of a significant area of new publicly accessible open space at street level, lower ground level, and at Henry Deane Plaza, including the following proposed elements:
 - Provision of equitable access within Henry Deane Plaza including stairways and a publicly accessible lift.
 - Construction of raised planters and terraced seating within Henry Deane Plaza.
 - Landscaping works within Henry Deane Plaza.
- Utilities and service provision.
- Realignment of lot boundaries.

2. The site

The site is located within the City of Sydney Local Government Area (LGA). The site is situated 1.5km south of the Sydney CBD and 6.9km north-east of the Sydney International Airport within the suburb of Haymarket.

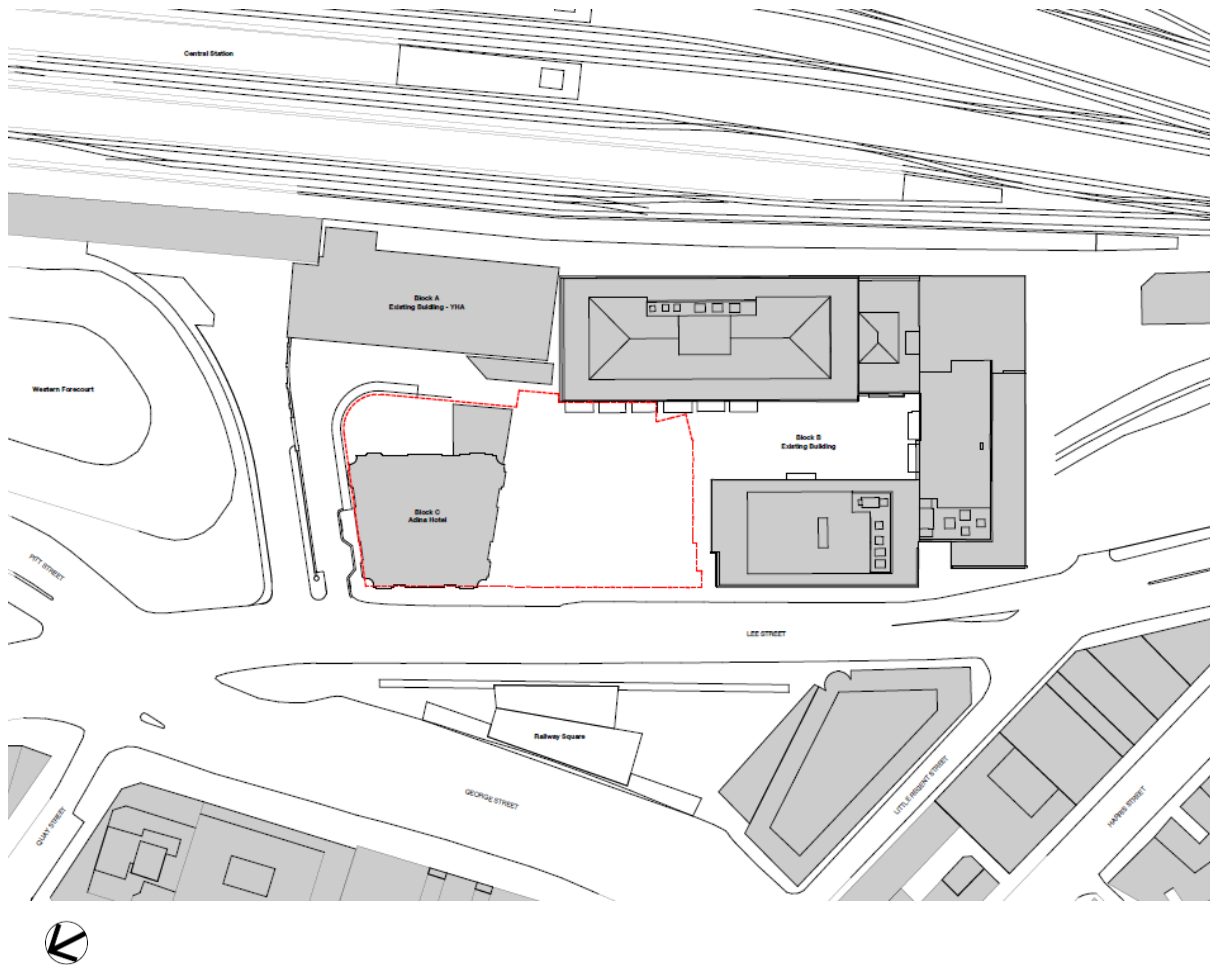
The site is located within the Western Gateway sub-precinct, an area of approximately 1.65ha that is located immediately west of Central Station within Haymarket on the southern fringe of the Sydney CBD. Immediately north of Central Station is Belmore Park, to the west is Haymarket (including the University of Technology, Sydney and Chinatown), to the south and east is rail lines and services and Prince Alfred Park and to the east is Elizabeth Street and Surry Hills.

Central Station is a public landmark, heritage building, and the largest transport interchange in NSW. With regional and suburban train services, connections to light rail, bus networks and to Sydney Airport, the area around Central Station is one of the most-connected destinations in Australia.

The site is located at 2 & 8A Lee Street, Haymarket and is legally described as Lot 30 in Deposited Plan 880518, Lot 13 in Deposited Plan 1062447 and part of Lot 14 in Deposited Plan 1062447.

The land that comprises the site under the Proponent's control (either wholly or limited in either height or depth) comprises a total area of approximately 4,159sqm.

The location of the TOGA Central site is illustrated in Figure 1.



Source: Bates Smart

Figure 1 Site identification plan

The site currently comprises the following existing development:

- Lot 30 in Deposited Plan 880518 (Adina Hotel building): the north-western lot within the Western Gateway sub-precinct accommodates a heritage-listed building which was originally developed as the Parcels Post Office building. The building has been adaptively re-used and is currently occupied by the Adina Hotel Sydney Central. The eight-storey building provides 98 short-stay visitor apartments and studio rooms with ancillary facilities including a swimming pool and outdoor seating at the rear of the site.
- Lot 13 in Deposited Plan 1062447 and part of Lot 14 in Deposited Plan 1062447 (Henry Deane Plaza): the central lot within the Western Gateway sub-precinct adjoins Lot 30 to the south. It accommodates 22 specialty food and beverage, convenience retail and commercial service tenancies. The lot also includes publicly accessible space which is used for pop-up events and a pedestrian thoroughfare from Central Station via the Devonshire Street Tunnel. At the entrance to Devonshire Street Tunnel is a large public sculpture and a glazed structure covers the walkway leading into Railway Square. This area forms part of the busy pedestrian connection from Central Station to Railway Square and on to George and Pitt Streets, and pedestrian subways.

The site is listed as an item of local significance under Schedule 5 of the Sydney Local Environmental Plan 2012 'Former Parcels Post Office including retaining wall, early lamp post and building interior', Item 855.

The site is also included within the Central Railway Station State heritage listing. This is listed on the State Heritage Register 'Sydney Terminal and Central Railway Station Group', Item SHR 01255, and in Schedule 5 of the Sydney Local Environmental Plan 2012 'Central Railway Station group including buildings, station yard, viaducts and building interiors' Item 824.

The site is not however listed independently on the State Heritage Register. There is an array of built forms that constitute Central Station, however the Main Terminal Building (particularly the western frontage) and associated clocktower constitute key components in the visual setting of the Parcel Post building.

3. Methodology

Warringtonfire has undertaken a preliminary fire safety engineering review of the proposed design for the development application. The intent of the review was to determine whether we believe the design can be demonstrated to achieve compliance with the performance requirements of the National Construction Code Volume One – Building Code of Australia (NCC) 2019 Amendment 1.

The preliminary review has been undertaken in consultation with the project stakeholders listed in Table 1. Preliminary fire and smoke modelling have also been undertaken which assisted in the development of the current architectural design.

Table 1 Stakeholders

Name	Role	Organisation
David Springford Steve Robson	Client	TOGA
Peter Ohnrich	Architect	Bates Smart
Mitchell Starkey	Structural engineer	Robert Bird Group
Kheng Ip	Mechanical engineer	Lehr Consultants International
Goran Muratbegovic	Fire services engineer	Norman Disney & Young
Tim Abovian	Certifying authority	Steve Watson & Partners
Victor Tung	Certifier – fire safety – BDC0417	Warringtonfire

4. Description of performance solutions

The design of the building includes areas that do not comply with the deemed-to-satisfy (DTS) provisions of the NCC. We intend to use performance solutions to meet relevant performance requirements of the NCC.

The current extent of the non-compliances with the DTS provisions of the NCC are identified in the Building Code of Australia assessment report 2022/0627 R1.1 dated 25 July 2022 prepared by Steve Watson & Partners.

Table 2 shows the NCC requirements associated with the performance solutions.

Table 2 NCC requirements associated with the performance solutions

No	Description of performance solutions	DTS provision	Performance requirements
1.	Reduction of fire ratings of storage areas in the basement carpark from 4 hours to 2 hours.	Specification C1.1	CP1 and CP2
	Reduction of fire ratings of supermarket storage areas from 4 hours to 3 hours.		
2.	The heritage timber facade elements may be retained in the external walls.	Clause C1.9	CP2
3.	The hotel arrival lifts on ground level also serve levels below and are not proposed to be wholly contained within a fire rated shaft. The atrium lifts between levels 2 to 6 also extend down to basement level 1 and are not proposed to be wholly contained within a fire rated shaft.	Clause C2.10	CP2
4.	The class 3 public corridor that forms part of the atrium will not be divided in 40 m intervals by smoke-proof walls.	Clause C2.14	CP2 and EP2.2
5.	Rationalisation of protection requirements for facade openings exposed to the eastern and southern property boundaries.	Clause C3.2	CP2 and CP8
6.	The following areas are only served by a single exit: <ul style="list-style-type: none"> • Scissor stair lift lobby on basement level 2 • Northern plant room on level 8 • Northern plant room on level 9 	Clause D1.2	DP4
7.	Performance-based egress strategy utilising neighbouring allotments and buildings that share the common mall space on basement level 1 and lower ground level.	Clauses D1.4 and D1.5	DP4 and EP2.2
8.	Extended travel distances (excluding hotel portions): <ul style="list-style-type: none"> • 30 m to a point of choice instead of 20 m • 60 m to the nearest exit instead of 40 m • 90 m between alternative exits instead of 60 m 	Clauses D1.4 and D1.5	DP4 and EP2.2
9.	Alternative egress paths in the plant areas on levels 7 and 9 converge to less than 6 m apart	Clause D1.5	DP4 and EP2.2
10.	The basement fire stair discharges to the covered plaza on the lower ground floor.	Clause D1.7	DP5
11.	Connection between rising and descending stair flights in the high-rise scissor stair between basement levels 2 to 4.	Clause D2.4	DP2 and DP4
12.	The fire hydrant pump room does not open directly into the adjacent fire stair.	Clause E1.3	EP1.3
13.	Performance-based design of the smoke hazard management system for the building.	Clause E2.2	EP2.2
14.	Performance-based design of the proposed atrium: <ul style="list-style-type: none"> • Atrium well dimensions • Separation of atrium well by bounding walls • Construction of bounding walls 	Clauses G3.2, G3.3 and G3.4	CP2 and EP2.2

5. Assessment and findings

It is Warringtonfire's professional opinion that it is possible to develop performance solutions for the issues identified to demonstrate compliance with the relevant performance requirements of the NCC without major changes to the proposed design.

The details of the proposed performance solutions are subject to the outcome of the performance-based design brief and analysis which will be carried out in accordance with the Australian Fire Engineering Guidelines (AFEG) ¹.

The areas of the design which impact upon fire brigade operations will be discussed with Fire and Rescue NSW as part of the performance-based design brief process. This includes vehicular access, location of the fire control room, fire hydrant booster and pump locations.

The performance solutions for the building will be developed as part of the ongoing design and development process and documented in a format suitable for submission to the relevant approval authorities. It is noted that additional performance solutions may be identified during this ongoing process in consultation with the design team.

6. Cumulative impacts

Given the location of the development relative to the overall Western Gateway Sub-precinct, the impacts between TOGA Central and the surrounding developments have been considered.

Preliminary consultation has been undertaken with:

- Transport for New South Wales
- Sydney Trains
- Atlassian
- Dexu Frasers

Meetings / workshops have been held on 13 April 2021, 27 April 2021, 13 May 2021, 4 June 2021, 5 August 2021, 19 October 2021, 23 November 2021 and 14 June 2022.

Fire safety requirements – specifically fire separation, wet and dry fire services and smoke hazard management – are being developed in conjunction with the proponents nominated above considering differences in staging and future ongoing operations.

¹ Australian Fire Engineering Guidelines, 2021, version 1.0, Australian Building Codes Board, Australia.

Appendix A Drawings and information

Drawing title	Dwg no	Date	Drawn
General Arrangement Plan Basement Level 04	BSMART-AR-DAD-10B04000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Basement Level 03	BSMART-AR-DAD-10B03000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Basement Level 02	BSMART-AR-DAD-10B02000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Basement Level 01	BSMART-AR-DAD-10B01000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Lower Ground Level	BSMART-AR-DAD-10GR0000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Ground Level	BSMART-AR-DAD-10GR1000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Level 02	BSMART-AR-DAD-10L02000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Level 03	BSMART-AR-DAD-10L03000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Level 04	BSMART-AR-DAD-10L04000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Level 05	BSMART-AR-DAD-10L05000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Level 06	BSMART-AR-DAD-10L06000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Level 07	BSMART-AR-DAD-10L07000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Level 08 (Plant)	BSMART-AR-DAD-10L08000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Level 09 (Plant)	BSMART-AR-DAD-10L09000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Level 10-15	BSMART-AR-DAD-10L10000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Level 16-17	BSMART-AR-DAD-10L16000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Level 18-19	BSMART-AR-DAD-10L18000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Level 20 (Plant)	BSMART-AR-DAD-10L20000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Level 21	BSMART-AR-DAD-10L21000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Level 22	BSMART-AR-DAD-10L22000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Level 23-44	BSMART-AR-DAD-10L23000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Level 45 (Plant)	BSMART-AR-DAD-10L45000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Level 45 (Plant) Upper	BSMART-AR-DAD-10L46000 rev 1	1 July 2022	Bates Smart
General Arrangement Plan Roof Level	BSMART-AR-DAD-10L47000 rev 1	1 July 2022	Bates Smart
General Arrangement Section B	BSMART-AR-DAD-30002000 rev 1	1 July 2022	Bates Smart

Other information	Ref no	Date	Prepared by
BCA Assessment Report	2022/0627 R1.1	25 July 2022	Steve Watson & Partners

Global locations



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