



FIRE ENGINEERING STATEMENT

FOR

Warringah Mall Stage 2B– Development Application

Report 2020 / 1686 – R3.0

31 August 2021

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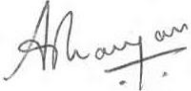

DISTRIBUTION

Scentre Design and Construction – Project Managers
Northern Beaches Council – Consent Authority

REPORT HISTORY

Version	Status	Date	Purpose
Revision 0.0	Draft	23/04/2021	For internal review
Revision 1.0	Draft	23/04/2021	For review by Client
Revision 2.0	Final	21/05/2021	For submission with DA
Revision 3.0	Final updated	31/08/2021	For submission with updated DA

REPORT AUTHORISATION FOR THE CURRENT REVISION

Report by:	Reviewed by:	Authorised by:
Atul Bhargava Fire Safety Engineer	Daniel Burgess Fire Safety Engineer	Rob Taylor Fire Safety Engineer
		
Date: 31/08/2021	Date: 31/08/2021	Date: 31/08/2021

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1. EXECUTIVE SUMMARY

This report documents the findings of a high level fire safety engineering review carried out for the proposed construction associated with Stage 2B of the Target Backfill project at Warringah Mall. Fire Engineering Professionals Pty Ltd (FEP) undertook this review at the request of Scentre Design & Construction, who are the Project Managers for the construction project.

Westfield Warringah Mall is understood to have building characteristics as detailed in **Table 1-1**.

Table 1-1: BCA Descriptive Building Characteristics

Characteristic	Description	
Classification	Class 6	Retail
	Class 7a	Car parking
	Class 9	Cinemas, Library, and Community Centre
Number of Retail Storeys Contained	3 main retail levels	
Type of construction	Type A	
Effective Height	16m	
Approximate Retail Floor Area	135,000m ² (approximately)	

The proposed works associated with the development include construction of specialty retail tenancies (4 off); associated loading dock modifications and upgrade to the existing northern entry on Ground Level to be located in the south eastern portion of Warringah Mall. The proposed construction also involves demolition of an existing pedestrian ramp which links the eastern carpark to the retail levels. An awning is also proposed to be installed to replace the existing roof structure over the mall providing access to the Fresh Food Market.

Fire Engineering Professionals Pty Ltd have been requested to review the proposed works with a view to providing Northern Beaches Council with a statement on whether the likely non-compliances with BCA DTS provisions associated with the proposed works, as identified by Steve Watson & Partners [Report No. 2020/1737 dated 21/04/2021], are likely to be able to be addressed by a "Performance Solution". The report is also proposed to serve as a confirmation to the Northern Beaches Council for the intention of Fire Engineering Professionals Pty Ltd to provide a "Performance Solution" for the identified list of non-compliances with the proposed building concept design.

It must be noted that this is a general fire engineering overview of the development and not a detailed fire engineering assessment, which will be developed in consultation with relevant stakeholders.

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2. INTRODUCTION

This report documents the findings of a high level fire safety engineering review carried out for the proposed construction associated with Stage 2B of the Target Backfill project at Warringah Mall. Fire Engineering Professionals Pty Ltd (FEP) undertook this review at the request of Scentre Design & Construction, who are the Project Managers for the construction project.

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FEP have been supplied with a Preliminary BCA assessment prepared by Steve Watson & Partners [Report No. 2020/1737 dated 21/04/2021] outlining the issues of non-compliance with the BCA DTS provisions which may require a detailed fire engineering assessment. This fire engineering review is based on the drawings showing the architectural design of the proposed works prepared by Scentre Design and Construction and review of the associated BCA report provided by Steve Watson and Partners.

3. PURPOSE

The purpose of this review is to provide a statement to Northern Beaches Council on the ability of the proposed design of the works associated with the construction on Ground Level of Westfield Warringah Mall, which are subject of a DA, with the non-compliances identified by the BCA Consultant, to be addressed as a “Performance Solution”.

This report is also likely to form the basis of a Fire Engineering Brief (FEB) for further discussions with relevant stakeholders for the project.

4. FIRE SAFETY OBJECTIVES

The core fire safety objectives of this review are:

- To review the non-compliances identified (by Steve Watson & Partners) with the DTS provisions of BCA associated with the building design that may require a “Performance Solution”; and
- To clarify the fire safety objectives of the preliminary assessment. The preliminary assessment will take into consideration the ability of the proposed building design and the fire safety measures in meeting the following fire safety objectives in the affected areas:
 - a. Prevention of fire spread within the building and to adjoining allotments; and

- b. Facilitating safe evacuation of building occupants in the event of an accidental fire in the areas of the building which are affected by the proposed works; and
- c. Facilitating Fire Brigade access to the building and intervention in the event of fire in the areas of the building which are affected by the proposed works.

Objectives such as protection of property; protection of furnishings; protection of reputation and ensuring business continuity; safety other than fire safety; have not been identified as design objectives of this assessment. However, by satisfying the core fire safety objectives some of the above objectives may also be satisfied.

5. ASSUMPTIONS AND LIMITATIONS OF THIS REVIEW

The following assumptions and limitations apply to this review:

- This document presents a high-level review only and is not based on detailed site inspections or a review of detailed fire system design drawings or condition reports; and
- This preliminary assessment is limited to a review of the proposed works taking into consideration the potential BCA DTS non-compliances identified by the BCA Consultant (Steve Watson & Partners); and
- FEP takes no responsibility in respect to costing of the works and the accuracy of any budgets developed by Scentre Group; and
- This high-level review is based on information provided to FEP without any specific smoke and evacuation modelling or detailed assessments being carried out.

6. PRINCIPAL BUILDING CHARACTERISTICS

Warringah Mall is an existing major urban shopping centre development located in Brookvale, NSW 2100. The building is located within an industrial business precinct and is bounded by Cross Street, Pittwater Road, Condamine Street and Old Pittwater Road. Refer to **Figure 6-1** below for the general location of the shopping centre building.

The existing building is spread over three (3) interconnected retail levels and currently accommodates a number of major tenancies (Myer, David Jones, Coles, Woolworths, Target and Big W). The shopping centre also contains a number of mini-major and specialty tenancies. There are a number of multi-level undercover and open deck carparks and a cinema complex, library and a community centre forming part of the building.

In accordance with the DTS provisions of the BCA, Westfield Warringah Mall is understood to have the characteristics identified in **Table 6-1**.

Table 6-1: BCA Descriptive Building Characteristics

Characteristic	Description	
Classification	Class 6	Retail
	Class 7a	Car parking
	Class 9	Cinemas, Library, and Community Centre
Number of Retail Storeys Contained	3 main retail levels	
Type of construction	Type A	
Effective Height	16m	
Approximate Retail Floor Area	135,000m ² (approximately)	

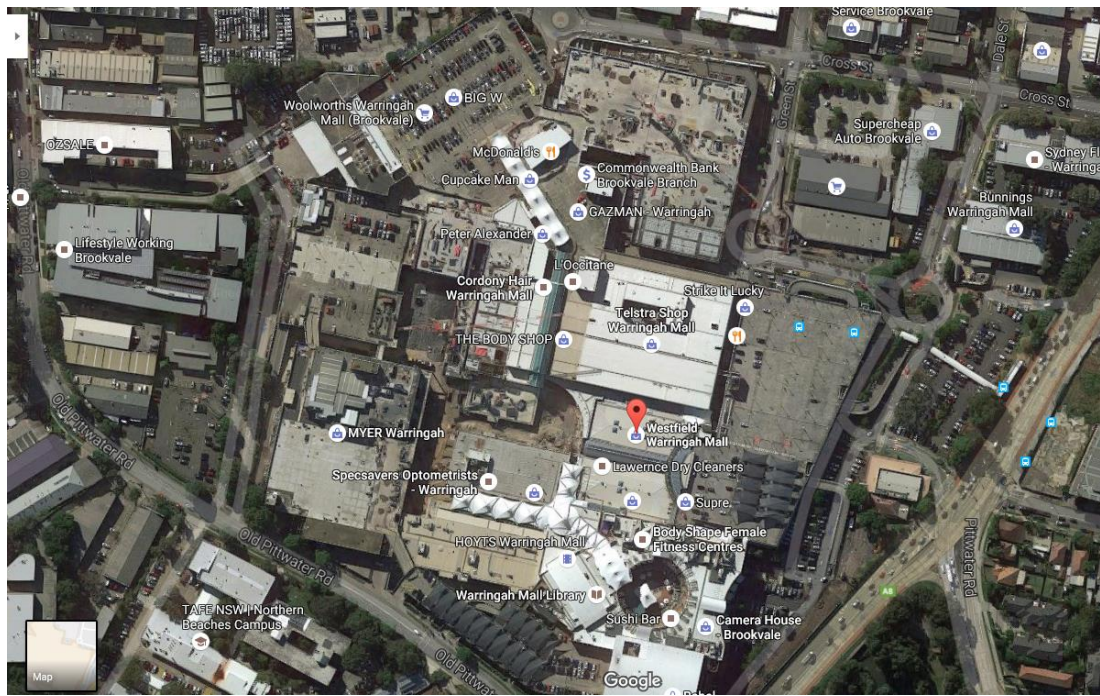


Figure 6-1: Aerial snapshot of the Westfield Warringah Mall shopping centre and surrounding streets (courtesy Google Maps)

7. BRIEF DESCRIPTION OF THE PROPOSED WORKS

The works associated with the proposed development are in the eastern portion of the shopping centre, on Ground Level of Westfield Warringah Mall. The proposed works are as outlined below and highlighted in the part floor plan of the Ground Level in **Figure 7-1** below.

- Construction of four (4) new speciality tenancies as highlighted in '*pink*' in **Figure 7-1**; and
- Reconfiguration of an existing loading dock located at the south eastern portion of the building – highlighted '*pink*' in **Figure 7-1**;
- Upgrade to the northern entry into the shopping centre. The northern entry is highlighted in '*pink*' in **Figure 7-1**.
- Replacement of the existing glazed roof structure above the mall providing access to the Fresh Food market with an awning. The extent of the awning is conceptually highlighted in '*blue*' in **Figure 7-1** and a conceptual perspective view is shown in **Figure 7-3**.

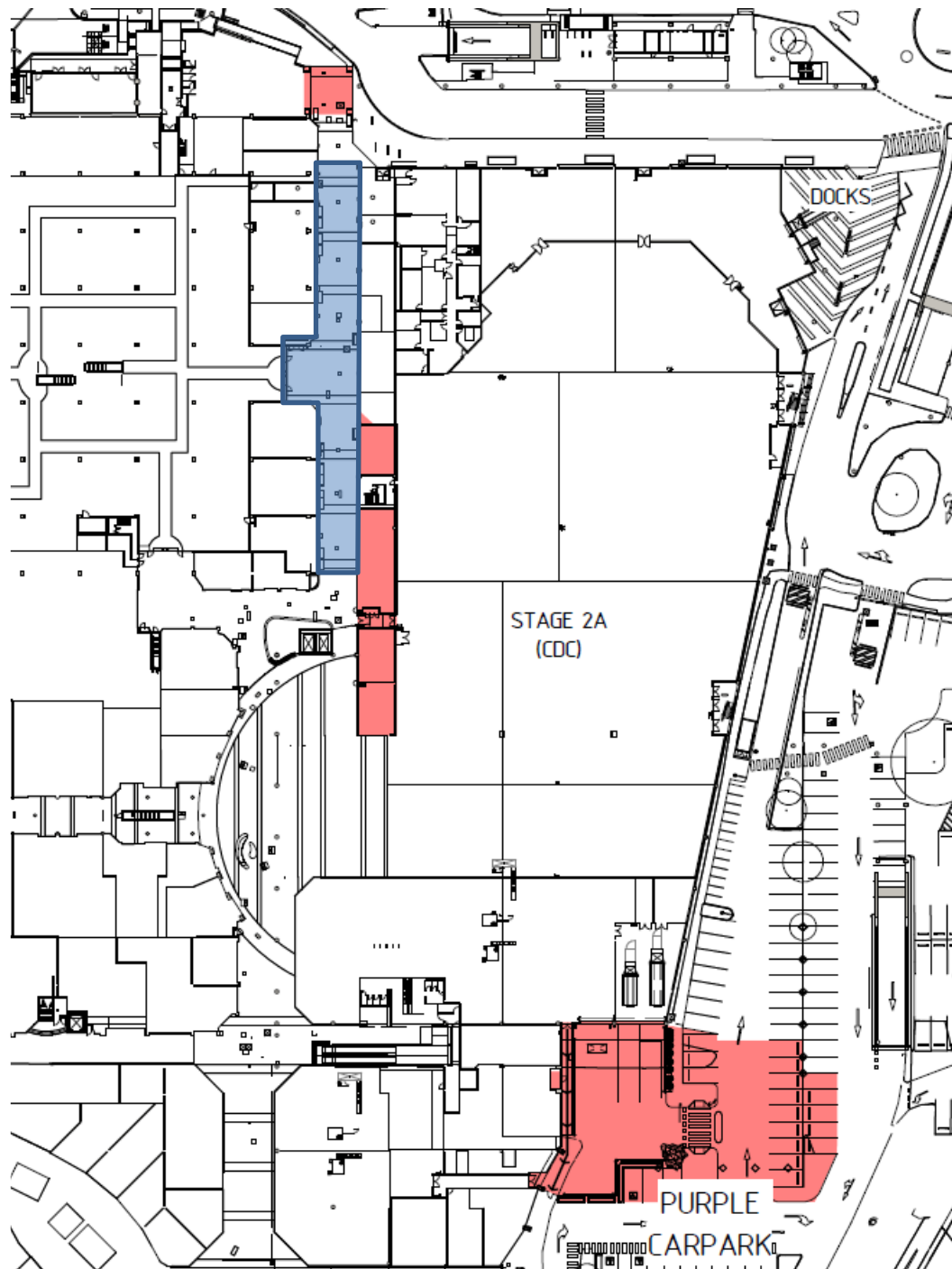


Figure 7-1: Part Ground Level floor plan – Location of proposed works (highlighted)

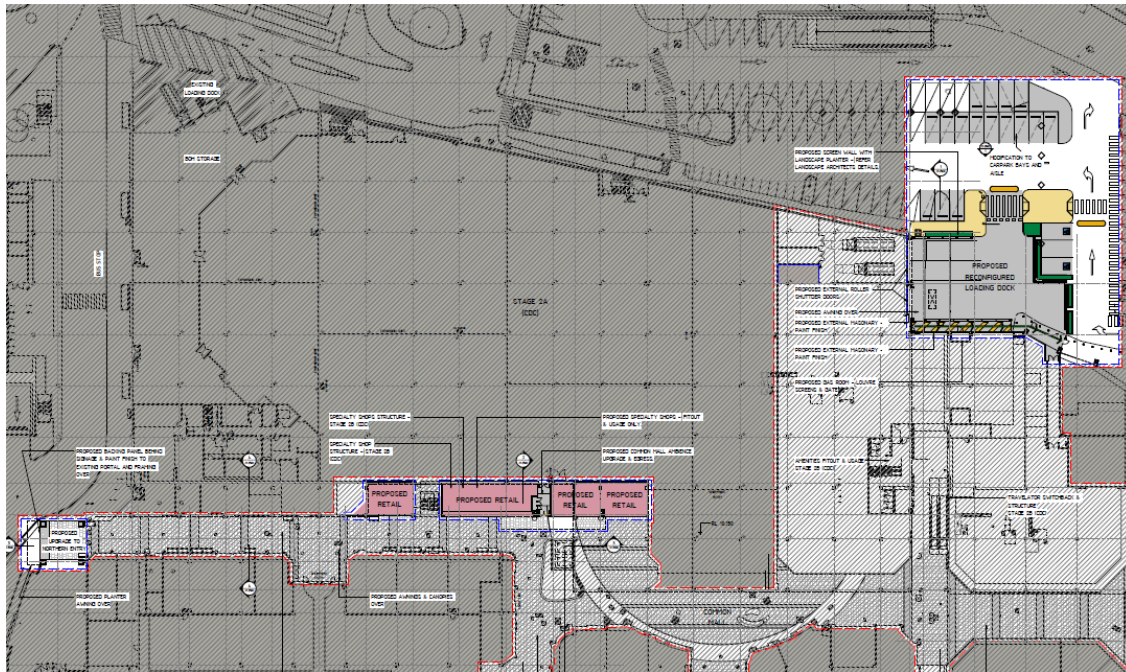


Figure 7-2: Part Ground Level floor plan showing the proposed works (highlighted)



Figure 7-3: Concept perspective view of proposed awning

8. FIRE AND RESCUE NSW ACCESS

The Fire and Rescue NSW access to Westfield Warringah Mall is provided around the building as illustrated in 'blue' in **Figure 8-1** below. The proposed development is not considered to cause an adverse impact on the existing perimeter vehicular access around the Warringah Mall building.

The perimeter vehicular access around the Warringah Mall building is understood to comply with the BCA DTS provisions, with the exception that this access is greater than 18m from the external building wall in some locations. Furthermore, the following provisions have been made in respect to the perimeter vehicular access:

- No materials are permitted to be stored in or adjacent to the access road north of Woolworth tenancy.
- Provision of dedicated parking bays for emergency vehicles including fire brigade appliances within proximity of the fire control room.
- The access roads being maintained with a minimum clear useable width of not less than 6m.
- The perimeter vehicular access has a clear unobstructed vertical clearance above the road surface of not less than 4.5m.
- Provision of alternative access routes (where possible), detours and additional signage and plans as necessary if access roads are blocked due to building or road works.
- Notifying the local two fire stations (Dee Why and Manly) of any temporary or permanent arrangements with respect to the perimeter vehicular access roads.
- The evacuation and traffic management plans developed by Centre Management is required to provide priority to Fire Brigade access to the roads.



Figure 8-1: Fire Brigade perimeter vehicular access around the existing Warringah Mall building

9. SUMMARY OF ITEMS REQUIRING PERFORMANCE SOLUTION

The non-compliances with the BCA DTS provisions associated with the Performance Solution Report, as nominated in BCA Assessment by Steve Watson & Partners to accompany the DA for the proposed works associated with the development project are provided below:

- Clause C1.1 and Specification C1.1 of BCA 2019 Amdt. 1 – Type of construction separating Retail and Carparking portions of the building; and
- Clause D1.4 of BCA 2019 Amdt. 1 – Travel distances to an exit exceeds 40m; and
- Clause D1.5 of BCA 2019 Amdt. 1 – Travel distance between alternative exits exceed 60m; and
- Clause D1.12 of BCA 2019 Amdt. 1 – A travelator connects four carpark storeys however, it has a connection to the retail level at Ground Level; and
- Clause E2.2 of BCA 2019 Amdt. 1 – The automatic smoke exhaust system serving the mini-major tenancy has been designed on a performance basis.

10. CONCLUSION

FEP have reviewed the architectural design for the works associated with the proposed Development Application for the Stage 2B construction works located on Ground Level of Westfield Warringah Mall. FEP have also reviewed the BCA Assessment prepared by Steve Watson & Partners that forms part of this DA submission and consider that the non-compliances with BCA DTS provisions identified with the proposed building design are able to be addressed by way of a “Performance Solution”. The preparation of the 'Performance Solution Report' will require a discussion and an agreement between relevant stakeholders (Fire Engineering Brief process).

The Fire Engineering Brief (FEB) Report will outline the fire engineering strategy that is to be adopted; the methodology for the fire engineering assessments; and the acceptance criteria nominated for each “Performance Solution” to be undertaken. A Trial Concept Design will also be nominated which outlines the building requirements which are required to be met in order for the building design to be shown, via supporting evidence in the form of fire engineering assessments, to be capable of meeting the Performance Requirements of the BCA with respect to the identified non-compliances.

11. APPENDIX A – DOCUMENTATION

The drawings identified in **Table 11-1** were examined during the production of this report.

Table 11-1: Assessment Documentation

Drawing Description	Drawing No.	Revision	Drawn	Date
Stage 2B Site Plan	SDC-01.0004	D	Scentre Design & Construction	04/08/2021
Stage 2B Existing Plan - Ground	SDC-01.0401	D	Scentre Design & Construction	05/08/2021
Stage 2B Existing Plan – Ground Mezz	SDC-01.0402	C	Scentre Design & Construction	05/08/2021
Stage 2B Existing Plan – Level 1	SDC-01.0403	C	Scentre Design & Construction	05/08/2021
Stage 2B Existing Plan – Level 1 Mezz	SDC-01.0404	C	Scentre Design & Construction	05/08/2021
Stage 2B Existing Plan – Level 2	SDC-01.0405	C	Scentre Design & Construction	05/08/2021
Stage 2B Existing Plan – Roof	SDC-01.0408	C	Scentre Design & Construction	05/08/2021
Stage 2B Proposed Plan – Ground	SDC-01.0801	D	Scentre Design & Construction	05/08/2021
Stage 2B Proposed Plan – Ground Mezz	SDC-01.0802	D	Scentre Design & Construction	05/08/2021
Stage 2B Proposed Plan – Level 1	SDC-01.0803	D	Scentre Design & Construction	05/08/2021
Stage 2B Proposed Plan – Level 1 Mezz	SDC-01.0804	D	Scentre Design & Construction	05/08/2021

Drawing Description	Drawing No.	Revision	Drawn	Date
Stage 2B Proposed Plan – Level 2	SDC-01.0805	D	Scentre Design & Construction	05/08/2021
Stage 2B Proposed Plan – Roof	SDC-01.0808	D	Scentre Design & Construction	05/08/2021
Stage 2B North Elevations Travelators Stack	SDC-01.2000	D	Scentre Design & Construction	04/08/2021
Stage 2B East Elevations	SDC-01.2001	D	Scentre Design & Construction	05/08/2021
Stage 2B South Elevations	SDC-01.2002	C	Scentre Design & Construction	04/08/2021
Stage 2B North Elevations Green St Entry	SDC-01.2003	C	Scentre Design & Construction	04/08/2021
Stage 2B Proposed Sections	SDC-01.2500	D	Scentre Design & Construction	04/08/2021