



FIRE ENGINEERING STATEMENT

FOR

Westfield Penrith – Development Application

Report 2020 / 1662 – R3.0

30 March 2021

Fire Engineering Professionals Pty Ltd

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DISTRIBUTION

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REPORT HISTORY

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Revision 1.0	Draft	19/03/2021	For Client review
Revision 2.0	Final Draft	25/03/2021	For review by Planners
Revision 3.0	Final	30/03/2021	For submission

REPORT AUTHORISATION

Report by:	Reviewed by:	Authorised by:
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Date: 30/03/2021	Date: 30/03/2021	Date: 30/03/2021

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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 works associated with the development project incorporating a change of use from retail to an entertainment and amusement tenancy at Westfield Penrith which are subject of a DA submission. 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 Penrith 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 Park
	Class 9	Cinema
Type of construction required	Type A	
Effective Height	Less than 25m	

The proposed works are associated with the change of use of an existing portion of retail floor space on Level 1 of Westfield Penrith to an entertainment and amusement tenancy which form subject of a DA submission. In addition to the proposed conversion of the north-eastern corner (at the intersection of Riley Street and Jane Street) to an entertainment and amusement tenancy, the construction works also involve the installation of a new means of vertical transportation (travelators) and relocation of an existing emergency egress stairway within the carpark. These travelators are proposed to serve Level 1 to through to 2M.

Fire Engineering Professionals Pty Ltd have been requested to review the proposed works with a view to providing Penrith City 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 25/03/2021], are likely to be able to be addressed by a "Performance Solution". The report is also proposed to serve as a confirmation to the Penrith City 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 works associated with the development project incorporating a change of use from retail to an entertainment and amusement tenancy at Westfield Penrith which are subject of a DA submission. 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 25/03/2021] 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 Penrith City Council on the ability of the proposed design of the works associated with a change of use of an existing portion of retail floor space on Level 1 of Westfield Penrith, 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 account 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

Westfield Penrith is considered a typical metropolitan shopping centre comprised of two (2) distinct parts, located on the east and west of Riley Street. The shopping centre contains two (2) retail levels and associated basement, at grade, and above ground carparks. Refer to **Figure 6-1** below for the general location of the shopping centre building.

The retail levels of the building consist of mall zones which incorporate a number of smoke zones and adjoining zones which are occupied by the mini-major and major stores. The shopping centre building incorporates numerous voids connecting the two retail levels.

In accordance with the DTS provisions of the BCA, Westfield Penrith 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 Park
	Class 9	Cinema
Type of construction required	Type A	
Effective Height	Less than 25m	

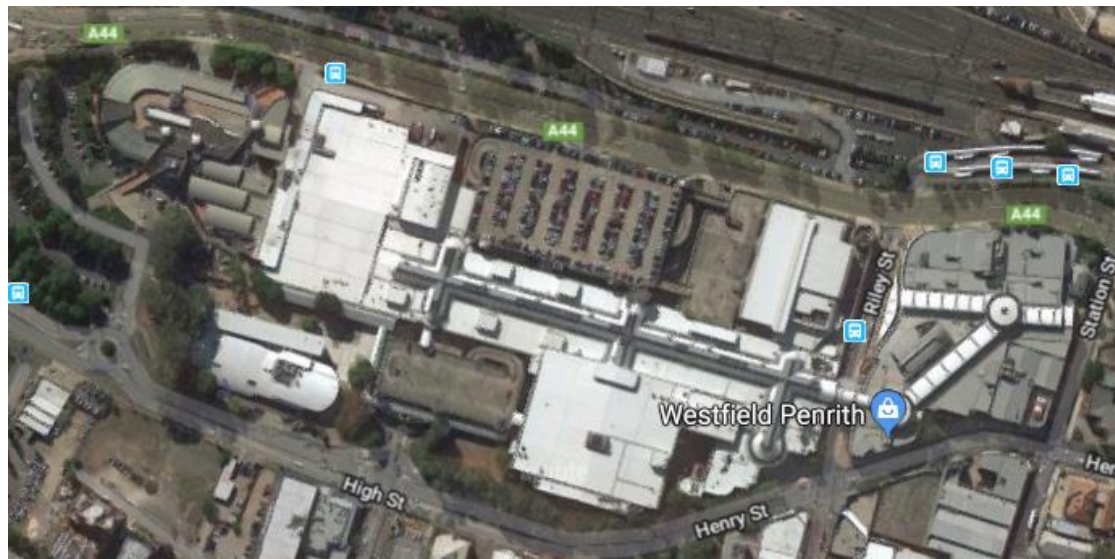


Figure 6-1: Aerial snapshot of the Westfield Penrith shopping centre and surrounding streets (courtesy Google Maps)

7. BRIEF DESCRIPTION OF THE PROPOSED WORKS

The proposed works associated with a change of use of an existing portion of retail floor space on Level 1 of Westfield Penrith which form subject of a DA involve the following. The proposed works are located in the central portion of the shopping centre adjoining Jane Street and Riley Street as highlighted in 'red' in the part floor plan in **Figure 7-1** below.

- Construction of an entertainment and amusement tenancy incorporating a floor area of approximately 1684m², with tenancy access directly from Riley Street. The proposed floor plan of the tenancy is shown in **Figure 7-2**; and
- Installation of a means of vertical transportation (travelators) which are proposed to connect Level 1 through to Level 2M, as highlighted in 'purple' in **Figure 7-3**; and
- Construction of an emergency egress staircase serving Level 1 through to Level 4, as highlighted in 'blue' in **Figure 7-3** to replace an existing stairway proposed to be demolished.

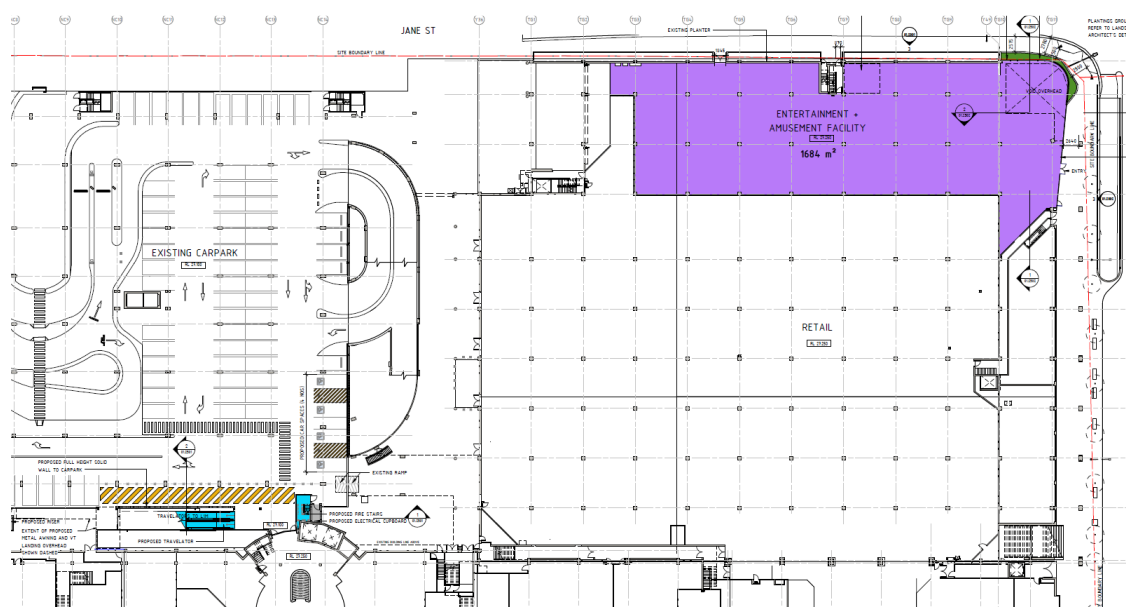


Figure 7-1: Part Retail Level 1 floor plan – Location of proposed works

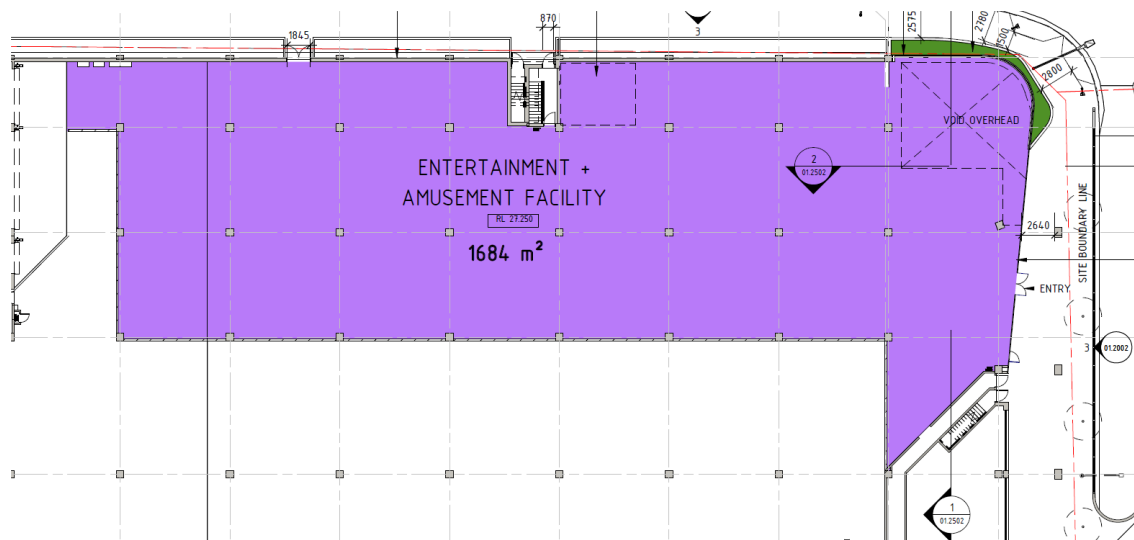


Figure 7-2: Floor Plan for Entertainment + Amusement Facility



Figure 7-3: Section drawing showing the proposed travelators and emergency egress stairway

8. FIRE AND RESCUE NSW ACCESS

The Fire and Rescue NSW access to Westfield Penrith is provided around the building as illustrated in 'blue' in **Figure 8-1** below. Where Westfield Penrith is landlocked with the adjoining building, pedestrian access is provided as highlighted in 'red'.

Fire brigade personnel are expected to initially arrive at High Street from where access to the fire hydrant booster assembly and the fire control room is available. The fire hydrant booster is as highlighted in 'green' and the fire control room is located in the basement level carpark highlighted in 'purple'. The proposed works are not expected to affect the existing fire brigade perimeter vehicular access around Westfield Penrith.

The closest Fire and Rescue NSW stations to Westfield Penrith is Penrith Fire Station, located approximately 1.0km to the east of Westfield Penrith building.

The closest back-up Fire and Rescue NSW stations are St Marys fire station, located approximately 9.0km to the east, and Glenbrook fire station, located 9.7km to the south-west.

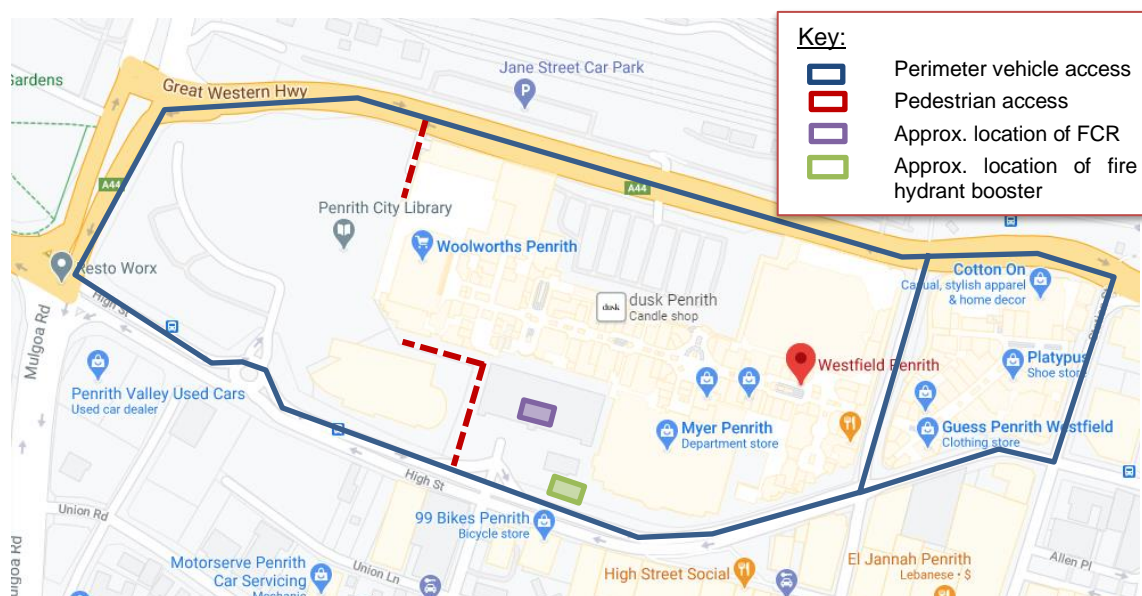


Figure 8-1: Site Plan of Westfield Penrith (courtesy Google)

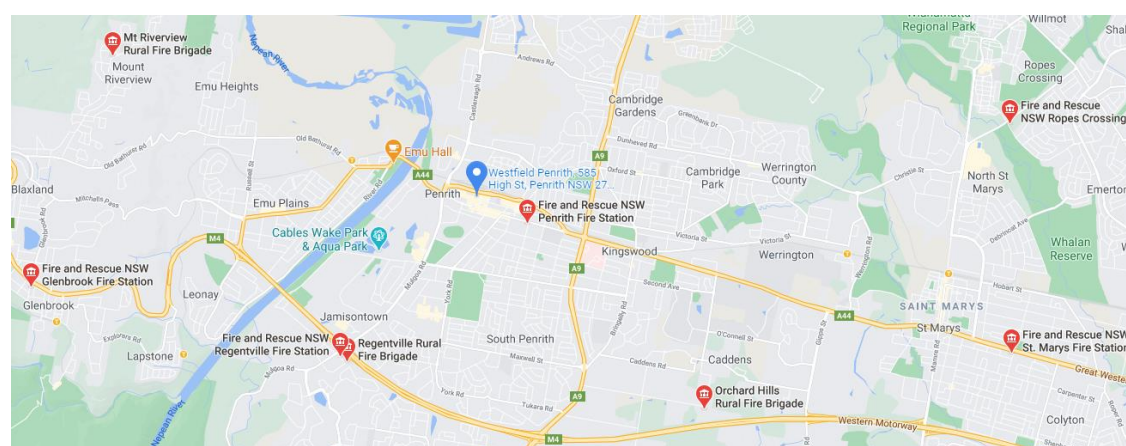


Figure 8-2: Location of Fire & Rescue NSW stations in relation to Westfield Penrith (Courtesy Google)

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 works associated with the construction project involving a change in use of a portion of the existing retail space on Level 1 of Westfield Penrith to an entertainment and amusement tenancy 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 D1.11 of BCA 2019 Amdt. 1– Construction of horizontal exits from Retail portions of the building discharging into the Carpark.

10. CONCLUSION

FEP have reviewed the proposed architectural design for the works associated with the Development Application for the proposed change of use of an existing portion of retail floor space on Level 1 of Westfield Penrith and modifications to the vertical transportation along the carpark. 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
Site Plan	SDC-01.0004	1	Scentre Design & Construction Pty Ltd	23/03/2021
Proposed Plan Basement	SDC-01.0851	1	Scentre Design & Construction Pty Ltd	23/03/2021
Proposed Plan Level 1	SDC-01.0852	1	Scentre Design & Construction Pty Ltd	23/03/2021
Proposed Plan Level 1M	SDC-01.0853	1	Scentre Design & Construction Pty Ltd	23/03/2021
Proposed Plan Level 2	SDC-01.0854	1	Scentre Design & Construction Pty Ltd	23/03/2021
Proposed Plan Level 2M	SDC-01.0855	1	Scentre Design & Construction Pty Ltd	23/03/2021
Proposed Plan Level 3	SDC-01.0856	1	Scentre Design & Construction Pty Ltd	23/03/2021
Proposed Roof (Level 4)	SDC-01.0856	1	Scentre Design & Construction Pty Ltd	23/03/2021
Façade Corner Detail Plans	SDC-01.1000	1	Scentre Design & Construction Pty Ltd	23/03/2021
North Elevation Jane Street	SDC-01.2001	1	Scentre Design & Construction Pty Ltd	23/03/2021
East Elevation Riley Street	SDC-01.2002	1	Scentre Design & Construction Pty Ltd	23/03/2021
Proposed Sections Façade Corner Riley and Jane Street	SDC-01.2502	1	Scentre Design & Construction Pty Ltd	23/03/2021
Façade Corner Detail Sections	SDC-01.2600	1	Scentre Design & Construction Pty Ltd	23/03/2021
Proposed Sections Vertical Transport	SDC-01.2501	1	Scentre Design & Construction Pty Ltd	23/03/2021