



scientific
fire
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consulting engineers
education & training

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23 FEB 2009

Attention: Mr Anthony Boehm
Target Australia Pty Ltd

Blackett Maguire + Goldsmith

Scientific Fire Services Pty Ltd
ABN 54 107 159 384
scifire@scifire.com.au
www.scifire.com.au

RE: Target Store Renovation at Warringah Mall - Design Advice.

Melbourne
50 boundary Street
South Melbourne
VIC 3205, Australia
T +61 3 9686 4730
F +61 7 9686 7420

Dear Anthony,

With regard to the proposed internal renovation/re-fit out of the Target Store within the Warringah Mall (detailed in the submitted permit plans - Drawing Number: 5078/A01, Date: 11/02/2009, Revision: D), Scientific Fire Services Pty Ltd have undertaken a review of the original Fire Engineering Report developed by Scientific Services Laboratory Pty Ltd (SSL) (Report no: XR0074/R4, File no: FD30-068, Dated: August 19997) to assess the level of impact that the proposed design may have on the original assessment outcomes and requirements. As a result of the aforementioned review Scientific Fire Service make the following comments:

Gold Coast
Corporate House
155 Varsity Parade
Varsity Lakes Qld 4227
P +617 5630 6556
F +617 5630 6531

This review of the proposed design in consideration to the original SSL report dose not represent a full fire engineering assessment of the proposed design but is an evaluation of the impact of the proposed internal renovation on the outcomes of the original fire safety engineering assessment.

Hong Kong
Block M, 4th Floor
Century Industrial Centre
33-35 Au Pui Wan St
Fotan Shatin Hong Kong

The original report prepared by SSL indicated in Table 19 that occupant evacuation to a place of safety from the Target store would occur in approximately 656 seconds (11 mins) and that the fire modelling undertaken indicated that the proposed rate of $20\text{m}^3/\text{sec}$ would maintain on going periods of tenability. The report detailed that the smoke layer within the large major tenancies did not drop below 3m in a duration of 1200 seconds and furthermore, that steady state conditions were observed hence allowing the conclusion that the smoke exhaust system was sufficient to provide on going tenability for the evacuating occupants. This RSET/ASET analysis was deemed to have met the acceptance criteria of $2\text{xRSET} < \text{ASET}$ with significant safety margins as a result of the on going tenability.

It is noted that modelling of fires within the Target store was undertaken by Norman Disney and Young Pty Ltd (NDY) and a rate of $20\text{m}^3/\text{sec}$ was adopted. SSL examined the modelling methodology employed by NDY and concluded that it was consistent with that required by the Fire Engineering Guidelines document and SSL concurred with the methodology and results in terms of acceptable extraction rates to maintain on going tenability.

With consideration of reviewing the proposed design and comparing it to the original design Scientific Fire Services make the following comments:

The internal layout changes are not considered to be significant in terms of fuel load, ignition sources, floor area occupant loading, etc, and hence the hazards associated with the occupancy in terms of fire and occupant evacuation are considered to be similar between the original floor layout and the proposed. Therefore, providing that the systems relied upon in the original assessment have been maintained and are consistent with the original assessment in the proposed layout, it is considered that the proposed design will not alter the outcome of the original fire safety results/outcomes and hence will have no impact on the requirements of the original assessment.



creating intelligent fire safety solutions

It is noted that an audit of the fire safety services was undertaken within the Target store in June 2001 by Fire Control Pty Ltd who certified that the Essential Services met the relevant standards (refer Appendix A). In addition a further audit was undertaken by NDY in December 2000 where it was certified that the mechanical services complied with the relevant standard and met the requirements of the denoted plans which detailed the requirement to achieve 20m³/sec extraction capacity (refer Appendix B). Hence it can be said that the systems relied upon in the original assessment have been maintained and are consistent with the original assessment. The internal layout of the proposed design is considered to not adversely affect the results of the original assessment and hence is deemed to be in line with the original fire safety engineering report.

Yours sincerely,



Thomas O'Dwyer
Senior Fire Safety Engineer
SCIENTIFIC FIRE SERVICES PTY LIMITED

Appendix A

FINAL / INTERIM FIRE SAFETY CERTIFICATE

.....(FORM 15).....

Issued under the environmental planning and assessment regulations 1994 clauses 80E and 80F

name of person **I, Paul Grogan**
 name of subcontractor and ACN of **FIRE CONTROL** ACN **006 386 004**

see note 2 below regarding assessment requirements

certify that:

- (a) each of the essential fire measures listed below:
 - has been assessed by a person (chosen by me) who was properly qualified to do so, and
 - was found, when it was assessed, to have been properly implemented and to be capable of performing and has been commissioned and tested and proved to be operating to a standard not less than that required by the standard of performance scheduled below.
- (b) the information contained in this certificate is, to the best of my knowledge and belief, true and accurate.

Location of building **Shop Target Warringah Mall**

new or refurbishment **refurbishment**
 describe extent if a refurbishment description of part (where applicable)

- Relocate sprinkler heads
- Install fire detection system, (Equipment supplied & commissioned by Simplex)
- Install EWIS system, (Equipment supplied & commissioned by Simplex)
- our job reference numbers MM1636 & EM1970

list each essential service (Fire safety measure) and applicable standard for this certificate	Essential Service	Standard of Performance
	• Sprinkler system	•AS2118
	• Fire system	•AS1670
	• EWIS system	•AS2220

Date of certification Dated this **15** day of **JULY** 20**01**.

Signature **P. Grogan**

A copy of this certificate together with the relevant fire safety schedule will be forwarded to the Council and the Commissioner of the New South Wales Fire Brigades.

Note 2
 The person who carried out the assessment
 • must inspect and verify the performance of each essential service (fire safety measure) being assessed, and
 • in the case of this final safety certificate whether it be for a new building or an alteration to, or enlargement or extension of existing building, that person must test and confirm the operation of each item of equipment installed in the building.

Appendix B

NORMAN DISNEY & YOUNG



20th December, 2000

24646/165a1/5/Ltr-16786

Bovis Lend Lease
Level 13, Plaza Building
Australia Square
SYDNEY NSW 2000

Attention: Mr Andrew Stanley

TARGET, WARRINGAH MALL - DESIGN CERTIFICATION

We herewith certify that the design of the mechanical, dry fire and hydraulic services comply with the relevant codes and regulations. These codes and regulations are:

- AS 1668.1 - 1998 -Fire and Smoke Control in Multi-Compartment Buildings
- AS 1668.2 - 1991 -Mechanical Ventilation for Acceptable Indoor Air Quality
- AS 2419 - 1994 -Fire Hydrants
- AS 2444 -Fire Hose reels
- AS1670 -Automatic Fire Detection and Alarm Systems
- AS 3500 -National Plumbing Code

The above certification relates to the services designed under the contract with Target only. The existing base building services are assumed to be complying.

The details of the installation are shown on the following documentation :

Mechanical	Drawings	TAM-01 TAM-02	Rev A Rev A
Fire	Drawings	TAF-01	Rev A
Hydraulic	Drawings	TAH	Rev A

Certification for the installation will be provided by others as Norman Disney & Young was not involved in the contract administration.

Norman Disney & Young

Andre Mauchle
Group Manager