

SUPAPANEL  
FIRE ASSESSMENT REPORT

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AS 1530.4-2014  
AS 4072.1-2005

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## TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION</b>	<b>5</b>
1.1	Assessment Objectives	5
1.2	Background	6
1.3	Summary of Test Evidence tested to AS 1530.4-2014 for Superpanel	6
1.4	Conclusion	8
<b>2</b>	<b>SCHEDULE OF COMPONENTS</b>	<b>9</b>
<b>3</b>	<b>NATIONAL CONSTRUCTION CODE COMPLIANCE</b>	<b>14</b>
3.1	General	14
3.2	Fire Safety Measures	14
<b>4</b>	<b>EXTENDED SPAN</b>	<b>15</b>
4.1	General	15
4.2	Robert Bird Engineers Report	15
<b>5</b>	<b>VARIATION TO TESTED PROTOTYPES</b>	<b>17</b>
5.1	General	17
5.2	Fire Dampers	17
	Holyoake passive fire damper	19
<b>6</b>	<b>VERTICAL INSTALLATION</b>	<b>20</b>
6.1	General	20
6.2	Conclusion	20
<b>7</b>	<b>DIRECT FIELD OF APPLICATION</b>	<b>21</b>
<b>8</b>	<b>PROPOSED VARIATION</b>	<b>22</b>
8.1	INTRODUCTION	22
8.2	Testing, Evaluation and Compliance	22
8.3	Conclusion	23
<b>9</b>	<b>DOOR EVALAUTION – 60 MIN IN 62 MM WALL SYSTEM</b>	<b>24</b>
9.1	Door Assessment Objective	24
9.2	Product Installation	24
9.3	National Construction Code Compliance	24
9.4	Application	25
<b>10</b>	<b>DOOR EVALAUTION – 120 MIN IN 72 MM WALL SYSTEM</b>	<b>27</b>
10.1	Door Assessment Objective	27
10.2	Product Installation	27
10.3	National Construction Code Compliance	27
10.4	Application	28
10.5	Limitations	29
10.6	Term of Validity	29
<b>11</b>	<b>PASSIVE PRODUCT EVALUATION</b>	<b>32</b>
11.1	General	32



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12	SUMMARY OF ASSESSED DETAIELD DRAWINGS _____	43
	12.1 General	43
13	DETAILED DRAWINGS _____	47
14	DIRECT FIELD OF APPLICATION _____	65
15	REQUIREMENTS _____	65
16	VALIDITY _____	65
17	CONCLUSION OF PERFORMANCE CAPABILITY _____	66
18	APPENDIX A _____	67
19	APPENDIX B – ROBERT BIRD ENGINEERING ASSESSMENT _____	68
	CONDITIONS AND LIMITATIONS _____	69



# 1 INTRODUCTION

## 1.1 Assessment Objectives

The purpose of this report is to assess the increase in height of the 72mm thick and 62mm thick Supapanel walls up to 6.5m for the 72mm thick panel and 4.0m for the 62mm thick panel. The fire testing that has been undertaken on the Supapanel walls was tested to AS1530.4:2014 and this report is to evaluate the application of the Supapanel in line with the National Construction Code – Volume One – Building Code of Australia 2022 (BCA) for the inclusion of the wall system as well as installation of the Supapanel in a vertical orientation.

Supapanel is permitted to be installed in a vertical orientation for an unlimited wall length and maximum height of up to 6.5m for the 72mm thick panel or 4.0m for the 62mm panels. The fire testing of the Supapanel has demonstrated its ability to maintain a Fire Resistance Level of -/120/120 for the 72mm panel and -/180/60 for the 62mm panel respectively. The structural analysis undertaken by Robert Bird Group has documents the installation requirements to install the Supapanel in a vertical orientation.

Supapanel has been tested in accordance with AS 1530.4-2014 by Pfits / Fire TS Lab for the 62mm panel Warringtonfire for the 72mm panel. The Supapanel is proposed to be increased in height from the tested system of 3m to 6.5 m within the subject installation method and detailed connection details nominated in this report.

Door systems that are required to be installed in a Supapanel wall the evaluation of the treatment of the door frame connected to the Supapanel wall with the fire integrity of the particular door system, and the fire capacity of the door system that is to be maintained.

Pipes, services and penetrations that are inserted into the Supapanel wall, the relative use of passive fire products around these items to maintain fire integrity of the wall system.

In accordance with the National Construction Code Clause A5G3 (1)(d) evidence to support that the use of a material, product, form of construction or design meets a Deemed-to-Satisfy Provision may be in the form of a report issued by an Accredited Testing Laboratory. The report demonstrates that a material, product or form of construction fulfils specific requirements of the BCA, and sets out the tests the material, product or form of construction has been subjected to and the results of those tests and any other relevant information that has been relied upon to demonstrate it fulfils specific requirements of the BCA.

In accordance with the National Construction Code Specification 1 Clause S1C2 the tested building element meets the requirement of Specification 1 for fire resistance of building elements where it differs in only a minor degree from a prototype tested under the standard fire test. The FRL attributed to the building element is confirmed in a report from an Accredited Testing Laboratory.

AS 1530.4-2014 outlines the minimum information required for regulatory compliance within Clause 2.16.3. It is required that details of the testing body, details of the test and the applicability of the results for the specimens to be evaluated.

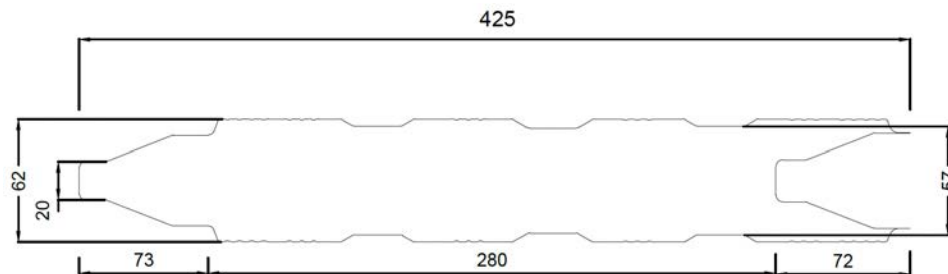
This report is issued by Benjamin Hughes-Brown, Accredited Laboratory Signatory and Chartered Professional Engineer of Ignis Labs Pty Ltd for use under the Deemed-to-Satisfy requirements of the BCA Volume 1 and BCA Volume 2. This report is by an Accredited Testing Laboratory, NATA accreditation 20534 and serves as a certificate from a signatory of an Accredited Testing Laboratory and professional engineer in accordance with Clause A5G3(1)(d) and A5G3(1)(e) of the BCA. Ignis Labs holds accreditation to AS 1530.4-2014 and AS 4072.1-2005 with NATA.



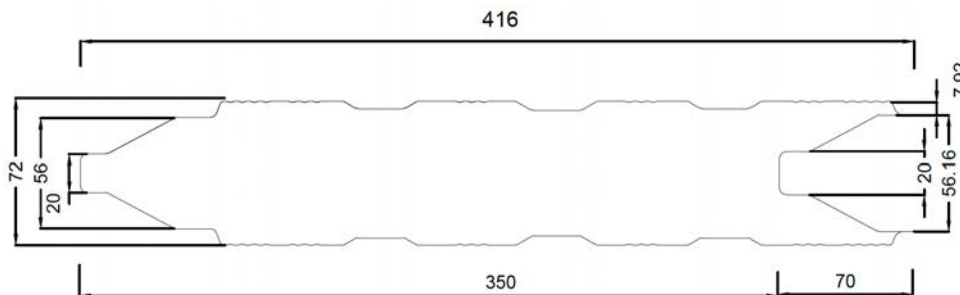
## 1.2 Background

The Fire Resistance Level (FRL) of the 72mm Supapanel up to a height of 6.5m and up to 4.0m for the 62mm Supapanel in a vertical orientation is as follows:

**FIGURE 1:**  
62 MM SUPAPANEL PROFILE



**FIGURE 2:**  
72 MM SUPAPANEL PROFILE



## 1.3 Summary of Test Evidence tested to AS 1530.4-2014 for Superpanel

The Supapanel wall system has been tested by PFITS, Fire TSLabs and Warringtonfire in accordance with AS 1530.4:2014. The Supapanel, being a 62mm and 72mm thick panel achieves the following Fire Resistance Levels:

A	Supapanel 62 mm	-/180/60
B	Supapanel 62 mm + 16 mm fire rated plasterboard over one face of the wall	-/180/120
C	Supapanel 72 mm	-/120/120



**TABLE 1:**  
SYSTEM A – 62 MM THICK SUPAPANEL

**A** Wall System - Supapanel 62 mm

The wall system consists of a 62 mm Supapanel

**BCA Clause**

Clause A5G5

AS 1530.4-2014

**Supporting Evidence**

PFITS Test Report

**Test Report**

PF19066 R4.0 26.11.2020

**Application**

The Supapanel is considered suitable for installation where a wall that achieves a Fire Resistance Level of at least -/60/60 is required.

**Installation Conditions**

The Supapanel is to be installed in accordance with Supapanel Installation Guide 2020

**Fire Resistance Level**

Structural Adequacy	-
Integrity	180
Insulation	60

**TABLE 2:**  
SYSTEM B – 62 MM THICK SUPAPANEL + 16 MM FIRE GRADE PLASTERBOARD

**B** Wall System - Supapanel 62 mm + fire grade plasterboard

The wall system consists of a 62 mm Supapanel

**BCA Clause**

Clause A5G5

AS 1530.4-2014

**Supporting Evidence**

Warringtonfire

**Test Report**

FRT200129.1 10.06.2020

**Application**

The Supapanel with 16 mm fire grade plasterboard is considered suitable for installation where a wall that achieves a Fire Resistance Level of at least -/180/120 is required.

**Installation Conditions**

The Supapanel is to be installed in accordance with Supapanel Installation Guide 2020

**Fire Resistance Level**

Structural Adequacy	-
Integrity	180
Insulation	120



**TABLE 3:**  
SYSTEM C – 72 MM THICK SUPAPANEL

**C Wall System - Supapanel 72 mm**

The wall system consists of a 72 mm Supapanel

**BCA Clause**

Clause A5G5  
AS 1530.4-2014

**Supporting Evidence**

FireTSLabs

Test Report

PF23046 13.09.2023

**Application**

The Supapanel is considered suitable for installation where a wall that achieves a Fire Resistance Level of at least -/120/120 is required.

**Installation Conditions**

The Supapanel is to be installed in accordance with Supapanel Installation Guide 2020

**Fire Resistance Level**

Structural Adequacy	-
Integrity	120
Insulation	120

**1.4 Conclusion**

The Supapanel being a 425mm wide x 62mm and 72mm thick panel (nominal 350mm between panel-to-panel joints) comprising of an aerated cement core encased in a 0.3 to 0.4mm thick mild galvanised steel 250 MPa skin with a 425 Kg concrete core. The 0.35 mm thick steel casing was subjected to testing to AS1530.4: 2014. The below table nominates the maximum vertical span for the 62mm and 72mm thick Supapanel panels.

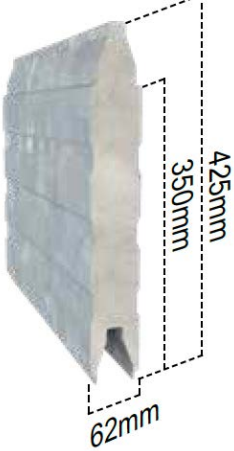

**TABLE 4:**  
SUPAPANEL APPLICATION SUMMARY

Supapanel wall thickness	62 mm Supapanel	62 mm Supapanel with one side caulked joint or 13 mm fire rated plasterboard	62 mm Supapanel with One 16 mm fire rated plasterboard on one face	72 mm Supapanel
Maximum wall span	4000 mm	4000 mm	4000 mm	6500 mm
Fire Resistance Level	-/60/60	-/90/90	-/180/120	-/120/120
Fire core door system	-/60/30	-	-/120/30	-/120/30
Penetration passive fire product	-/60/60	-/90/90	-/120/120	-/120/120
Access hatches	-/60/30	-/90/30	-/120/30	-/120/30
Ducting fire dampers	-/60/-	-/90/-	-/120/-	-/120/-







## 2 SCHEDULE OF COMPONENTS

Item	Description	
PANELS		
1	Item Name	62 MM SUPAPANEL
	Product Name	Supapanel
	Specification	425 mm wide x 62 mm thick panels (nominal 350 mm between panels joints) comprised an aerated cement core encased in 0.35 mm thick galvanised steel skin
		
2	Item Name	72 MM SUPAPANEL
	Product Name	Supapanel
	Specification	416 mm wide x 72 mm thick panels (nominal 350 mm between panels joints) comprised an aerated cement core encased in 0.35 mm thick galvanised steel skin
		



Item	Description	
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### TRACKS

<b>3</b>	Item Name	Top Track / Capping Track
	Material	1.15 BMT Galvanised Steel
	Size	<ul style="list-style-type: none"> <li>72 mm or 62 mm – 50/75/50 or 50/65/50</li> <li>72 mm or 62 mm – 50/75/63 or 60/65/63</li> </ul> 
<b>4</b>	Item Name	Bottom Track
	Material	Galvanised Steel
	Size	<ul style="list-style-type: none"> <li>72 mm or 62 mm – 50/75/50 or 50/65/50</li> <li>72 mm or 62 mm – 50/75/50 or 19/65/50</li> </ul> 




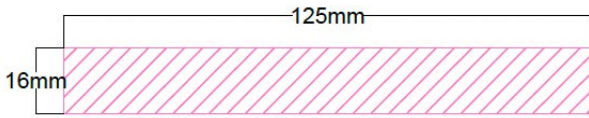

### SEALANT

<b>5</b>	Item Name	Fire Rated Sealant
	Material	BOSS FireMastic 300™, Fullers firesound, Promaseal

### INTUMESCENT STRIP

<b>6</b>	Item Name	Intumescent Strip
	Material	BOSS UniWrap® or Rely Intumescent Wrap
	Size	12 mm x 2 mm 



Item	Description	
<b>FIXINGS</b>		
<b>7</b>	Item Name	Joint Screw / Bottom Track Screw
	Product description	6g x 16 mm flat head, self drill screws 8g x 25 mm wafer head, self-drill screws 
<b>8</b>	Item Name	Plasterboard Screw
	Product description	6g x 45 mm bugle head, self-drill plasterboard needle point screws 
<b>9</b>	Item Name	Seismic Anchor Screw
	Product description	AnkaScrew™ 14g x 45 mm long 
<b>PLASTERBOARD</b>		
<b>10</b>	Item Name	Head Track Protection
	Material	Fire rated plasterboard
	Density	653 kg/m <sup>3</sup>
	Size	12 mm x 2 mm 
<b>EQUAL ANGLE</b>		
<b>11</b>	Item Name	Top and Bottom Support
	Size	50/50 – 1.15 mm BMT internal angle 



Item	Description
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**EXTERNAL METAL FLASHING**

<b>12</b>	Item Name	External Metal Flashing 0.7 BMT Min
	Size	
<b>13</b>	Item Name	12 gauge SDS with Washer

**HORIZONTAL – VERTICAL COVER**

<b>14</b>	Item Name	Horizontal / Vertical Flashing

**BOARD PROTECTION**

<b>15</b>	Item Name	MGO board
		<p>6 mm 125 wide MGO board</p>



Item	Description	
<b>STEEL BEAM</b>		
16	Item Name	Steel Beam
	Steel beam to engineer specification	
<b>ROCKWOOL</b>		
17	Item Name	Steel Beam
	Fire rated Rockwool to fill void and achieve the required FRL	
<b>SHAFT LINER</b>		
18	Item Name	Shaft Liner
		25 mm Shaft Liner sheet 
<b>6 mm FIBRE CEMENT</b>		
19	Item Name	6 MM Fibre Cement
		25 mm Shaft Liner sheet 
<b>STEEL STUD</b>		
20	Item Name	Steel Stud
<b>50 MM BOSS FIRE BATT</b>		
21	Item Name	50 mm Boss Fire Batt



## 3 NATIONAL CONSTRUCTION CODE COMPLIANCE

### 3.1 General

The following fire safety measures relate to elements that are associated with the performance analysis. All other elements of the buildings fire safety measures not specifically documented in the following section is to comply with the requirements of the BCA and documented by others.

The following clauses of the BCA (including all related State and Territory variations) have been evaluated and is of the opinion of Ignis Labs to satisfy the following parts of the Building Code of Australia. The joints have been tested and reported as per AS 1530.4: 2014, AS 4072.1: 2005 by Fire TS Lab and as per Specification 1 and Clause C4D15 for a tested system. The installation of fire doors within the Supapanel has been evaluated against the requirements of AS 1530.4;2014 and AS4072.1:2005.

#### Volume One – Building Code of Australia 2022

- 3.1.1 [Clause A5G2](#) evidence to support the use of a material meets the nominated Performance Requirements through the Governing Requirements of the NCC.
- 3.1.2 [Clause A5.2 \(1\)\(e\)](#) as evidence to support that the Supapanel meets the nominated Performance Requirements and Deemed-to-Satisfy Provisions under a certificate issued by an Accredited Testing Laboratory and being tested by an Accredited Testing Laboratory being Fire TS Lab and Warringtonfire.
- 3.1.3 [Clause A5G5](#) Fire-resistance of building elements
  - a. The FRL of a building element has been determined in accordance with Specification 1 for vertical or horizontal orientation.

### 3.2 Fire Safety Measures

#### 3.2.1 Wall Compliance (including shaft lining in vertical orientation)

- a. It is proposed that the following clause of the BCA has been evaluated and identified as being complied with:
  - i. [Clause A5G5](#) Fire-resistance of building elements
- b. [Specification 1 Clause S1C2\(c\)](#) being a building element tested to the standard fire curve achieving an FRL for each wall thickness being improved from the tested wall system and listed above.

#### 3.2.2 Installation

- a. The installation of Supapanel to maintain the required fire resistance level over the vertical height of 3.0 m and up to the height of 6.5 m for 72mm Supapanel and 4.0m for 62mm Supapanel and is documented in the attached drawings by Supapanel nominated in section 5 in this report. This includes screw spacing, fixings, head and base track and equal angle connection details, obtuse connections, fixing to steel structure, intersecting with other light weight fire rated walls in the vertical orientation.



## 4 EXTENDED SPAN

### 4.1 General

The purpose of this assessment is to report the applicable use and compliance of Supapanel to maintain its tested Fire Resistance Level when oriented in a vertical position extending the height from the tested specimen of 3.0m to 6.5m. The strength and ability of the Supapanel is considered to maintain the Fire Resistance Level of the wall system provided.

From the fire testing detailed above, the weakness in the panel occurs in the deflection of the panel joints under pressure. The deflection varied by 10 mm when the wind pressure was increased over the greater 6.5 m length. The greatest deflection occurred during the fire resistance test. It is considered that as the panels increase in size and with the uniform fixing of the joints, the wall is capable to withstand the deflection without failure. Accordingly, the panels, being non-loadbearing, are considered able to maintain their joint and as such maintain the tested fire resistance level for integrity and insulation.

Robert Bird Group undertook structural load testing of the Supapanel on 18 November, 2020. It is the nature of the Supapanel core material, being concrete, to have a natural compressive strength. The testing demonstrated an ability for the Supapanel to have the loaded weight up to 6.5m in height without detriment to the established Fire Resistance Level.

### 4.2 Robert Bird Engineers Report

The following is an extract of reporting form Robert Bird Group based on the testing conducted by Ian Bennie & Associates.

Robert Bird Group – Consulting Structural Engineers, were commissioned from Wall Technologies Pty Ltd to prepare an Interim Structural Design Certificate for the 72 mm Supapanel System maximum height vs wind pressure vs deflection charts based on the available test data and installations tabulated below and derived via methods of theoretical interpolation of testing data.

Robert Bird Group undertook this theoretical desktop assessment and detailed design work for the proprietary installations as specifically tested and reported by Ian Bennie Associates to formulate theoretical interpolations of various spans:

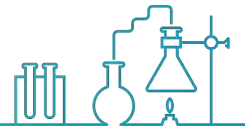
- a. Supapanel Test Report: Supapanel - 0.35BMT/380 kg/m<sup>3</sup>@3600 Span, Report No. 2021-085-S1- S4 (Amended) dated 3rd February 2022.
- b. Supapanel Test Report: Supapanel - 0.35BMT/380 kg/m<sup>3</sup>@6000 Span under maximum 300 and 600 Pa testing loads received in January 2022.

The Supapanel wall system used in the 3.6m and 6m high Supapanel testing typically comprised of 2 # 350mm wide core samples combined and interconnected with a half width core each side to form the 3.6m and 6.5m high x 1.0m wide tested system except one testing wall system comprised of 4 # 350mm wide core samples combined with a half width core each side to form the 6.5m high x 1.75m wide tested system. Each core contained 380 kg/m<sup>3</sup> density concrete with the screw fixings only installed between panels on the positive pressure face.

The testing report from Ian Bennie & Associates provides an outline for this engineering review undertaken of the wind testing data and how this data was collated to validate the certification of the Supapanel products with 0.35 BMT. The testing application is limited to 3.6 m and 6.5 m maximum height as per the tested panels for the specified 'Safe Working and Ultimate Wind Loads' in the testing reports.

These wind loads have been determined for Region A zones to AS 1170.2-2011 and are not applicable to cyclonic regions.

The testing by Ian Bennie & Associates as well as the evaluation by Robert Bird Group has concluded that the Supapanel has the capacity to maintain its integrity and fixing over a span of 6m when subject to Safe Working and Ultimate Wind Loads.



Further to the wind loading testing of the Supapanel, several jointing options have been considered where the span can be increased to 4m for 62mm panels and 6.5m for 72mm panels. The joints provide the equivalent connection and jointing to the panels and are deemed to present an equivalent level of strength to the wall system, should it be tested.





## 5 VARIATION TO TESTED PROTOTYPES

### 5.1 General

The Supapanel 62mm and 72 mm wall panels have been subjected to testing by Warringtonfire, Pfits and Fire TS Lab. The Supapanel is proposed to be increased in height from the tested system of 3.0m to 6.5 m within the subject installation as well as installed within various connection details.

The purpose of this assessment is to report the applicable use and compliance of the 62 mm and 72 mm thick Supapanel against the requirements of the National Construction Code – Volume One – Building Code of Australia 2022 (BCA) and AS 1530.4-2014 to be used as a non-combustible infill panel wall system where it is to span up to 6.5 m high in a vertical orientation for 72mm panels and 4.0m high for 62mm panels as per Robert Bird Group assessment whilst maintaining its Fire Resistance Level.

This assessment considers the additional span above the tested 3.0m height to a 6.5 m height. A 6.0 m length of Supapanel was tested by Ian Bennie and Associates to AS/NZS 4284:2008 and evaluated by Robert Bird Group in assessment 21626M dated 16 March, 2022. Robert Birds assessment indicated the wall system when subjected to substantial wind pressure (at least 250 Pa) that the wall joints did not fail.

During the testing at 1.75 Kpa for the 3.6m length specimen a deflection of 17.3 mm was measured and at 600 pascals for the 6 m length specimen a deflection of 27.4 mm was measured.

AS 1530.4:2014 permits variations to the tested specimen provided no individual component is removed or reduced the increase in the length of a wall of identical construction if the specimen was tested with one vertical edge unrestrained. The following evaluation considers the fire and wind testing of the panels to demonstrate that increasing the panels length to 6.5 m does not present a reduction in performance.

Testing of the wall system in accordance with AS 1530.4-2014 has been undertaken by pfits / Fire TS Lab and documented in their report PF19066 achieved an FRL of at least -/180/60 during testing of the bare 62 mm panel and PF23046 achieved an FRL of at least -/120/120 during testing of the bare 72 mm panel. During the pfits / Fire TS Lab laboratory test a deflection in the order of 160 mm was measured at the peak point of the 240 minute test. It is considered important to note that the Supapanel maintained general integrity over the 240 minutes in this test.

From the above testing, the weakness in the panel occurs in the deflection of the panel joints under pressure. The deflection varied by 10 mm when the wind pressure was increased over the greater 6.5 m length. The greatest deflection occurred during the fire resistance test. It is considered that as the panels increase in size and with the uniform fixing of the joints, the wall can withstand the deflection without failure. Accordingly, the panels, being non-loadbearing, are considered able to maintain the joint strength during exposure to heat and gas as well as wind loading and as such maintain the tested fire resistance level for integrity and insulation.

### 5.2 Fire Dampers

The National Construction Code (NCC), Clause C4D15 details that where an electrical, electronic, plumbing, mechanical ventilation, air-conditioning or other service penetrates a building element that is required to have an FRL with respect to integrity or insulation (structural adequacy is excluded) the installation must comply with a tested system.

BCA Clause C4D15(a)(i) details the service is to be identical with a prototype which has been tested to AS 4072.1 and AS 1530.4. Within the subject installation, the tested system achieved a Fire Resistance Level of up to -/120/120. The proposed penetration installations have been tested in accordance with AS 4072.1 and AS 1530.4 by the CSIRO and Warringtonfire. The only variation to the proposed installations is the installation through the substrate being the K8



Supapanel and the consideration to remove the plasterboard lining. Both the K8 Supapanel as well as each of the penetration mediums have been tested to an equivalent level of fire resistance.

Section 10 of AS 1530.4 provides details of how the penetration through a wall system is to be undertaken. There are three mechanisms in which fire can spread through the wall and penetration. This occurs for thermal transmission as well as through integrity failure where holes occur in the wall, penetration of the joint or via the penetrating material.

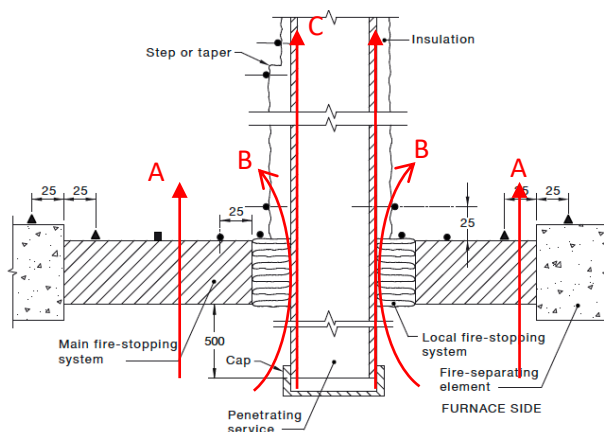
Within the following figure failure of the fire test could occur through three points A, B or C. Failure through A occurs in failure of the wall. Failure of point B occurs in the joint between the penetration, protection medium and penetrating item. Failure of point C occurs through the penetrating material.

Point A and C is likely to have thermal failure occurring from an increase in temperature through the wall or penetrating item. Point B can include failure of both temperature (measured through a roaming thermocouple) or integrity where an opening occurs or via a cotton wool pad check ignition occurs.

The K8 Supapanel has been tested to achieve an FRL of at least -/120/120 based on a 72 mm wall thickness. As this is a tested system, enhancement of the wall to suite the installation of the Holyoake fire damper is not warranted. The testing of the fire damper to maintain a 120 minute integrity was demonstrated in the fire testing by Exova Warringtonfire in their report 2358000.5.

**FIGURE 3:**

AS 1530.4 PENETRATION INSTALLATION REQUIREMENT AND AREAS OF FAILURE



Warringtonfire undertook a series of tests associated with the Promaseal passive fire systems including the Bulkhead batt and sealer, Supa Mastic, FCW Wall Collar, FlexiWrap, acrylic sealant, mortar, pillows and IBS foam strip. The testing of the Promaseal passive fire systems were documented within their Regulatory Information Report RIR 25948-07 dated 10 August 2017 as well as Fire Assessment Report 45821 R2.1 dated 3 April 2020. The report was generated in accordance with AS 1530.4-2014 as well as provide assessment in accordance with AS 4072.1-2005 as required by BCA Clause C3.15(a) for tested systems. The assessment considers installations within masonry, concrete, AAC or plasterboard lined walls. Each of the Promaseal passive fire systems has the ability, when installed in accordance with the tested system, to achieve an equivalent level of fire resistance to the K8 Supapanel wall system.

The CSIRO undertook evaluation of the Holyoake IBD-FS fire dampers in ducts in accordance with AS 1530.4-2014 and AS 4072.1-2005 and reported in their short form assessment report FCO-3356 dated 5 December 2019. The testing of the Holyoake damper was completed within a wall by Exova Warringtonfire in report 2358000.5 to achieve an FRL of at least -/120/-. The assessment considers installation within masonry walls as well as plasterboard stud walls. The Holyoake fire damper has the ability, when installed in accordance with the tested system, to achieve an equivalent level of fire resistance to the K8 Supapanel wall system.



Each of the above penetrations for the Promaseal passive fire systems as well as the Holyoake fire dampers has been assessed for installation in masonry/concrete walls. This assessment considers the installation of the Promaseal passive fire systems as well as the Holyoake fire dampers within the K8 Supapanel wall system.

The installation of the Promaseal passive fire systems is to be in accordance with the Promat installation guide as well as that documented within this assessment.

The CSIRO installation of the Holyoake fire damper requires a collar around a single side of the penetration of 13mm fire grade plasterboard being 125mm wide as recommended by the CSIRO. This is to increase the wall thickness around the penetration to be equivalent to the tested wall. As the wall system has the ability to maintain an FRL of at least -/120/120 for its established thickness of 72 mm. It is not considered required that the wall thickness need to be increased.

The following table outlines a summary of the penetrations tested within an equivalent wall system.

### Holyoake passive fire damper

Service F	Fire Damper	
Product Name	Holyoake IBD-FS	
Penetration Size	1200 mm wide max x 1200 mm high max, single unit.	
Penetration Protection	<p>The Holyoake IBD-FS fire damper is installed as a single unit in a penetration of 1200 mm x 1200 mm maximum.</p> <p>A Steel C channel is installed around the opening with 20 mm 8g screws at maximum 200 mm centres on one side.</p> <p>4 x 40 mm x 60 mm x 2 mm steel angles are to be bolted to the damper body on each side of the perimeter.</p>	
Installation		
Fire Resistance Level		-/120/-



## 6 VERTICAL INSTALLATION

### 6.1 General

The results of these fire tests may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazards under all fire conditions.

This report details the methods of construction, test conditions and the results obtained when the specific element of construction described herein was tested following the procedure outlined in AS 1530.4: 2014. Any significant variation with respect to size, constructional details, loads, stresses, edge or end conditions, other than that allowed under the field of direct application in the relevant test method, is not covered by this report.

Because of the nature of fire resistance testing and the consequent difficulty in quantifying the uncertainty of measurement of fire resistance, it is not possible to provide a stated degree of accuracy of the result.

The fire-resistance level of the wall system is applicable when the system is exposed to fire from the same direction as tested. As the test was asymmetric it is considered that direction of the wall will be suitable from either side.

### 6.2 Conclusion

Based on the discussion points in sections 4 and the variations to the tested prototype nominated in section 5 including the summary of assessed drawing in section 12. the Supapanel being a 425mm wide x 62mm and 72mm thick panel (nominal 350mm between panel-to-panel joints) comprising of an aerated cement core encased in a 0.3 to 0.4mm thick mild galvanised steel 250 MPa skin with a 425 Kg concrete core. The 0.35 mm thick steel casing was subjected to testing to AS1530.4: 2014. The below table nominates the maximum vertical span for the 62mm and 72mm thick Supapanel panels and the relative FRLs for the respective panel thickness.

**TABLE 5:**  
SUPAPANEL SPECIFICATION

Superpanel wall thickness	62 mm Supapanel	72 mm Supapanel
Maximum wall height	4000 mm	6500 mm
Fire Resistance Level	-/ 60/60	-/120/120



## 7 DIRECT FIELD OF APPLICATION

The results of the fire test contained in this test report are directly applicable to similar constructions of the subject wall. Variations in building elements that are not minor will require re-testing.

This report is by an Accredited Testing Laboratory, NATA accreditation 20534 and serves as a certificate from a signatory of an Accredited Testing Laboratory and professional engineer in accordance with Clause A5G3 (1)(d) and A5G3 (1)(e) of the BCA Volume 1. Ignis Labs holds accreditation to AS 1530.4- 2014, AS 4072.1-2005 with NATA

Warringtonfire was an accredited laboratory with NATA No. 3277 at the time of testing and reporting.

Fire TS Lab is accredited with IANZ and recognised by NATA through a mutual recognition agreement under the International Laboratory Accreditation Cooperation. BCA Clause A5G3(1)(d) identifies Evidence of Suitability in relation to a report issued by the defined term Accredited Testing Laboratory. The BCA defines an Accredited Testing Laboratory being one of the following:

- (a) An organisation accredited by the National Association of Testing Authorities Australia (NATA) to undertake the relevant tests.
- (b) An organisation outside Australia accredited to undertake the relevant tests by an authority recognised by NATA through a mutual recognition agreement.
- (c) An organisation recognised as being an Accredited Testing Laboratory under legislation at the time the test was undertaken.

In relation to Warringtonfire, they are now known as Jensen Hughes, in accordance with the definition of an Accredited Testing Laboratory under the BCA, option (c) is applied being an organisation recognised as being an Accredited Testing Laboratory under legislation at the time the test was undertaken. At the time the reference testing in this report was conducted by Warringtonfire, they were accredited with NATA to the scope listed.

In relation to Fire TS Lab, they are located in New Zealand and accredited with IANZ, being an equivalent accreditation body to NATA. In accordance with the definition of an Accredited Testing Laboratory, option (b), an organisation outside Australia accredited to undertake the relevant tests by an authority recognised by NATA through a mutual recognition agreement. IANZ and NATA are accredited and members of the International Laboratories Accreditation Cooperative (ILCA) being signatories to an international mutual recognition agreement. In accordance with this agreement, IANZ and by extension Fire TS Lab satisfy the definition of an Accredited Testing Laboratory.



## 8 PROPOSED VARIATION

### 8.1 INTRODUCTION

The BCA sets the requirements for fire doors to comply with AS 1905.1: 2015. Clause 1.4.13 which details that the nominal grading period, in minutes, that is determined by subjecting a specimen to the standard time temperature curve regime as set out in AS 1530.4: 2014. Clause 1.4.17 details full-scale testing whilst Clause 1.4.25 details pilot-fire tests where the furnace opening is not less than 1000mm x 1000mm and the minimum clear opening size of 800 mm x 800mm. The normative section of AS 1905.1: 2015 being section 3 sets the determination of fire resistance by testing a specimen doorset in accordance with the fire resistance test specified in AS 1530.4: 2014.

The TVC-Core doorset has been tested numerous times to AS 1530.4: 2014 and established a consistent FRL of -/120/30. The 72mm Supapanel has been tested and considered to achieve a Fire Resistance Level of -/120/120.

Section 4 of AS 1905.1: 2015 sets variations from the tested specimen. Clause 4.4(a) details the following criteria to trigger a retest of the system. This includes:

- More severe deflection characteristics than the previously tested wall;
- Different frame and wall mounting details on the proposed wall that may be detrimental to the FRL of the doorset; and
- Achieved a lower required FRL

The proposed wall system includes the same framing system with the only difference being the physical materials being the installation of the 72mm Supapanel in lieu of a lightweight wall system or Hebel wall system. The requirements of AS 1905.1: 2015 and the testing relate to the door and wall framing,

accessories and the door itself. The material of the wall system is not a direct criteria established under AS 1905.1: 2015.

As such the criteria to confirm variations in the wall design is as follows:

- The wall framing and connection to the door frame is to be equivalent
- The wall system is to achieve an equivalent Fire Resistance Level.

The proposed Supapanel system has an equivalent wall framing and connection to the door frame. The proposed Supapanel wall system achieves an FRL of at least -/120/120 being equivalent to that of the tested system with the TVC-Core doorset.

### 8.2 Testing, Evaluation and Compliance

#### 8.2.1 Tested 72 mm System

<b>72 mm Supapanel</b>	
Structural Adequacy	-
Integrity	120
Insulation	120
<b>TVC-Core Door and Frame</b>	
<b>CSIRO FCO-2872 August 2019</b>	
Structural Adequacy	-
Integrity	120
Insulation	30



### 8.3 Conclusion

The following clauses of the BCA (including all related State and Territory variations) have been evaluated and identified as being complied with should the full wall and door system be tested:

- Specification C3.4 Fire Doors, Smoke Doors, Fire Windows and Shutters
- Performance Requirement CP2
- Clause 2 Fire Doors

A required fire door must

- a. Comply with AS 1905.1: 2015; and
- b. Not fail by radiation through any glazed part during the period specified for integrity in the required FRL.

The evaluation wall and door system complies with the following:

<a href="#">72 mm Supapanel</a>	
Structural Adequacy	-
Integrity	120
Insulation	120
<a href="#">TVC-Core Door and Frame</a>	
<a href="#">CSIRO FCO-2872 August 2019</a>	
Structural Adequacy	-
Integrity	120
Insulation	30

Note:

All door jambs to be in filler with suitable fire-retardant material

- Fire-rated plaster strips
- Grout filled
- Plaster liquid in fill set

## 9 DOOR EVALAUTION – 60 MIN IN 62 MM WALL SYSTEM

### 9.1 Door Assessment Objective

The purpose of this assessment is to report the applicable use and compliance of the Firecore TVC30 refractory core panel door to be installed within the Wall Technologies Supapanel wall system steel encased concrete wall system against the requirements of the National Construction Code - Volume One - Building Code of Australia 2022 (BCA) as well as AS 1905.1: 2015.

The FireCore TVC30 doorset has been tested in accordance with the requirements of AS 1530.4: 2014 within a 64mm steel stud dual wall and shaftliner wall system using fire grade plasterboard wall elements and Steel structural elements. This is documented in CSIRO test report FSV 1870 to AS 1530.4: 2014 being a full scale test and FSP 1143 to AS 1530.4: 2014 being a pilot test where the TVC 30 door achieved an FRL of at least -/60/30.

The FireCore TVC30 doorset has been tested in accordance with the requirements of AS 1530.4 as well as AS 1905.1-2015. This is documented in CSIRO test report FSV 1001. The FireCore TVC 30 door achieved an FRL of at least -/60/60.

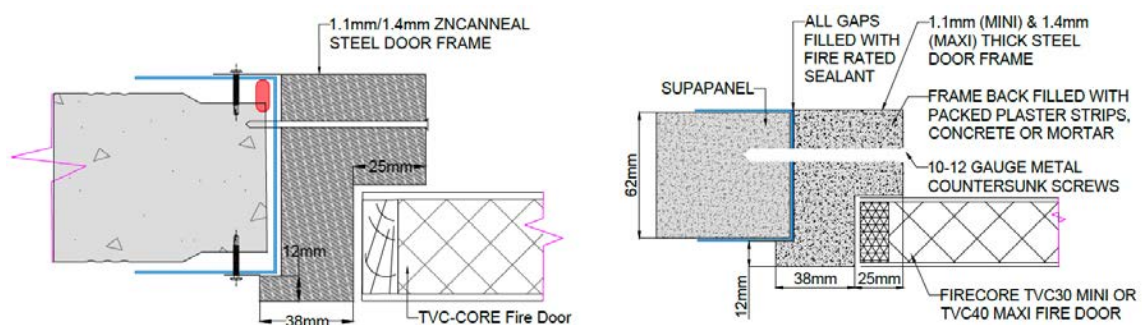
Supapanel has been tested in accordance with the requirements of AS 1530.4: 2014 in test report FRT190206 R1.0 dated 6 August 2019 as well as test report FRT 190207 R1.0 dated 25 September 2019.

This evaluation reviews the inclusion of the FireCore TVC30 doorset within the Supapanel system. The TVC 30 fire door as well as its frame and fittings will be equivalent to the tested system and its inclusion within the Supapanel system.

### 9.2 Product Installation

The proposed wall and door system includes the Supapanel system and the TVC 30 door. The tested wall and door system is detailed below.

**FIGURE 4:**  
SUBJECT WALL, DOOR AND FRAMING SYSTEM



### 9.3 National Construction Code Compliance

The following clauses of the BCA (including all related State and Territory variations) have been evaluated and identified as being complied with:

- Specification C3.4 Fire Doors, Smoke Doors, Fire Windows and Shutters
- Performance Requirement CP2
- Clause 2 Fire Doors

A required fire door must

(a) Comply with AS 1905.1: 2015; and

(b) Not fail by radiation through any glazed part during the period specified for integrity in the required FRL.





The evaluated wall and door system complies with the following:

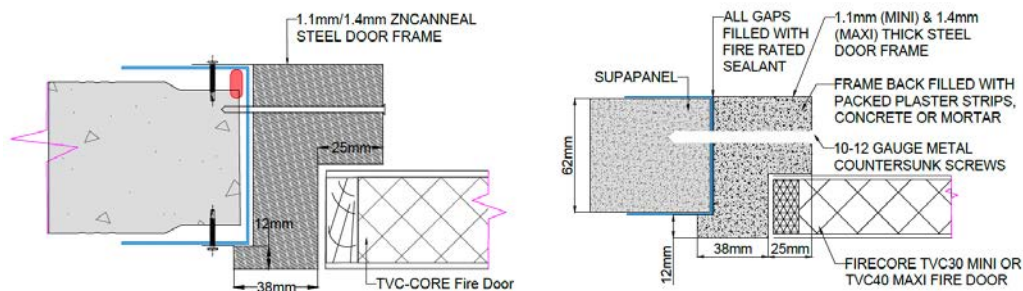
62 mm Supapanel Exova Warringtonfire FRT190206 dated 06 August 2019 Structural Adequacy Integrity Insulation	- 60 60
TVC-Core Door and Frame CSIRO FCO-2872 August 2019 Structural Adequacy Integrity Insulation	- 60 30

#### 9.4 Application

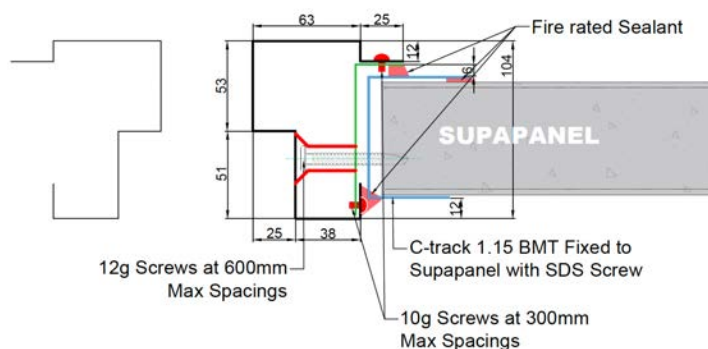
From the above testing and evaluation the TVC 30 door and associated frame can be used in a nonloadbearing wall being the Supapanel wall system where an FRL of at least -/60/60 is required as well as a fire door achieving an FRL of at least -/60/30. The door, wall and framing system is to be installed as per the following figure.

The c-track forming the opening for the door is screwed through the frame on each side into the panels at 350mm centres starting at 100 mm from the floor. The floor track is to be screwed into the door jamb track where they cross.

**FIGURE 5:**  
SUBJECT WALL, DOOR AND FRAMING SYSTEM



**FIGURE 6:**  
OPTIONAL WALL, DOOR AND FRAMING SYSTEM



Note:

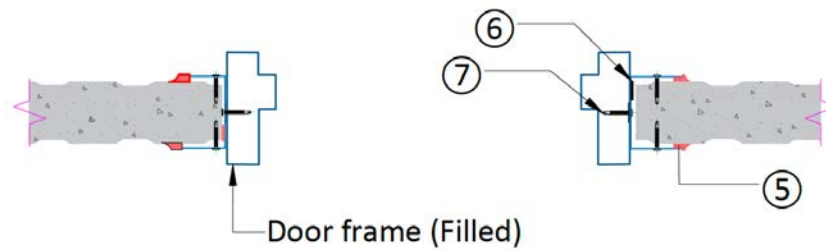
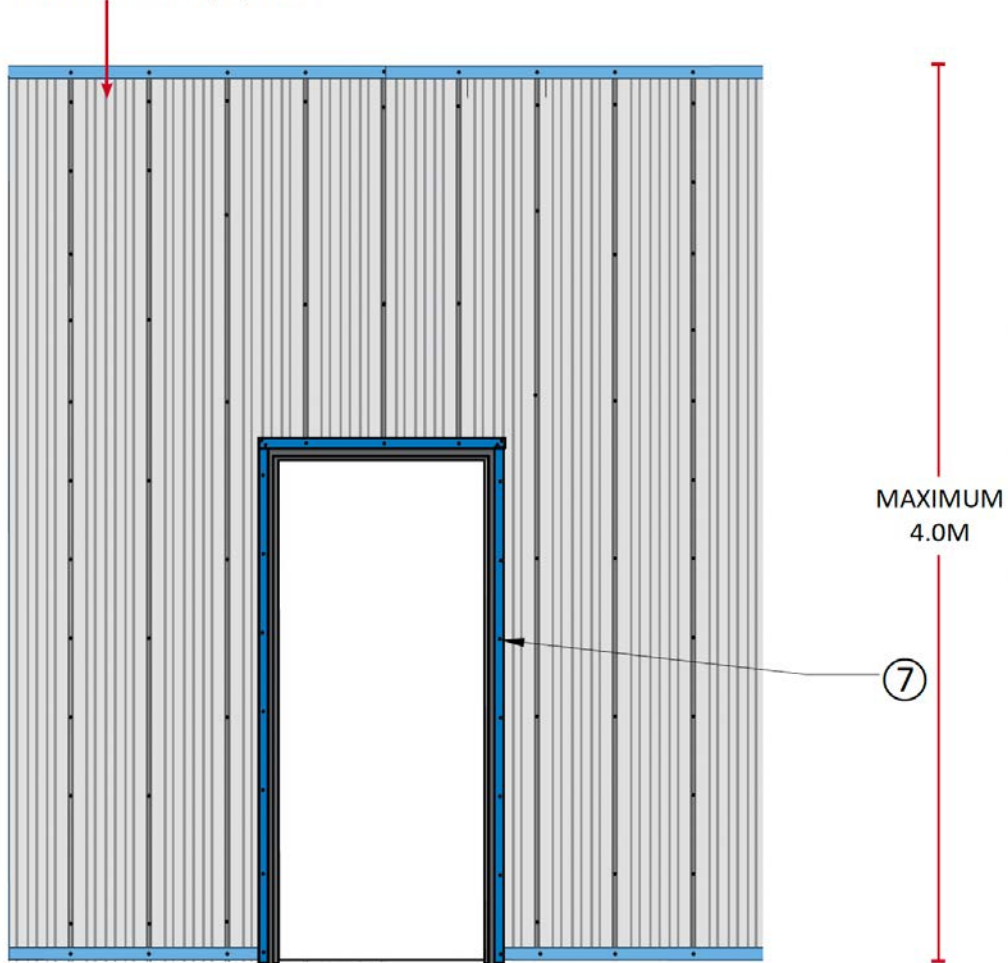
All door jambs to be in filler with suitable fire-retardant material

- Fire-rated plaster strips
- Grout filled
- Plaster liquid in fill set



**FIGURE 7:**  
FIRE CORE DOOR SYSTEM

62mm Vertical Supapanel



Max Height for door size less than 920W x 2100H – 6.5m

Max Height for door in greater than 920W x 2100H – 4.0m



## 10 DOOR EVALAUTION – 120 MIN IN 72 MM WALL SYSTEM

### 10.1 Door Assessment Objective

The purpose of this assessment is to report the applicable use and compliance of the Firecore TVC refractory core panel door to be installed within the Supapanel intertenancy walls have apertures if fire rated boundary wall system against the requirements of the National Construction Code - Volume One - Building Code of Australia 2022 (BCA) as well as AS 1905.1-2015.

The FireCore TVC-Core doorset has been tested in accordance with the requirements of AS 1530.4: 2014 within multiple walls. This is documented in CSIRO test reports FCO-2872 Rev F August 2019 which evaluates a number of wall variations for the Firecore TVC-Core fire doors within a -/120/30 Fire Resistance Level wall system.

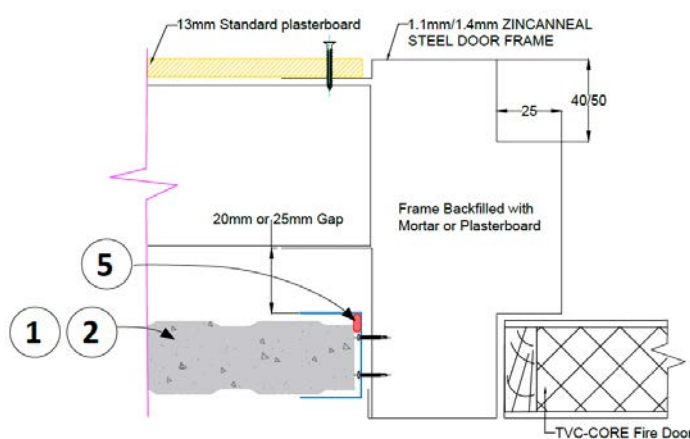
The FireCore TVC-Core doorset has been tested in accordance with the requirements of AS 1530.4: 2014 within a number of wall system that achieves an FRL of at least -/120/120. This is documented in CSIRO test report FCO-2872. The FireCore TVC-Core door achieved an FRL of at least -/120/30.

This evaluation reviews the substitution of the tested wall systems being the CSR partywall, the Boral wall system and AAC wall systems for the Supapanel wall system. The TVC-Core fire door as well as its frame and fittings will be equivalent to the tested system for installation into the wall system.

### 10.2 Product Installation

The proposed wall and door system includes the 72mm Supapanel intertenancy wall and the TVC-Core door. The tested wall and door system is detailed below.

**FIGURE 8:**  
SUPERPANEL WALLS UP TO 4M IN HEIGHT



Note:

All door jambs to be in filler with suitable fire-retardant material

- Fire-rated plaster strips
- Grout filled
- Plaster liquid in fill set

### 10.3 National Construction Code Compliance

The following clauses of the BCA (including all related State and Territory variations) have been evaluated and identified as being complied with:

- Specification C3.4 Fire Doors, Smoke Doors, Fire Windows and Shutters
- Performance Requirement CP2
- Clause 2 Fire Doors

A required fire door must

(a) Comply with AS 1905.1: 2015; and



(b) Not fail by radiation through any glazed part during the period specified for integrity in the required FRL.

The evaluated wall and door system complies with the following:

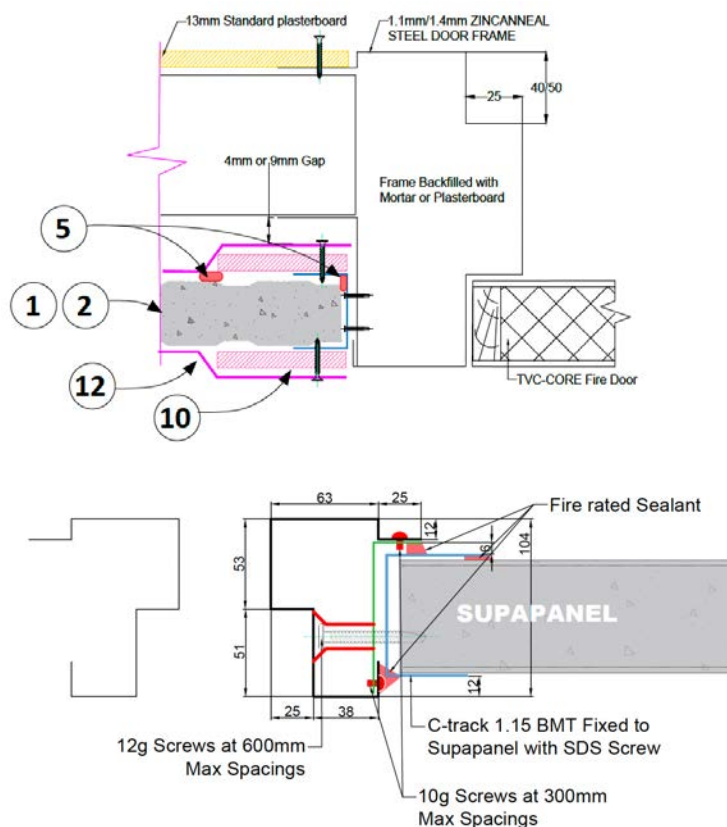
72 mm Supapanel	
Structural Adequacy	-
Integrity	120
Insulation	120
<hr/>	
TVC-Core Door and Frame	
CSIRO FCO-2872 August 2019	
Structural Adequacy	-
Integrity	120
Insulation	30

## 10.4 Application

From the above testing and evaluation of the TVC-Core door and associated frame can be used in a nonloadbearing wall being the 72mm Supapanel system where an FRL of at least -/120/120 is required as well as a fire door achieving an FRL of at least -/120/30. The door, wall and framing system is to be installed as per the following figure.

The c-track forming the opening for the door is screwed through the frame on each side into the panels at 350mm centres starting a 100 mm from the floor. The floor track is to be screwed into the door jamb track where they cross.

**FIGURE 9:**  
SUPAPANEL WALL 4 M TO 6.5M IN HEIGHT

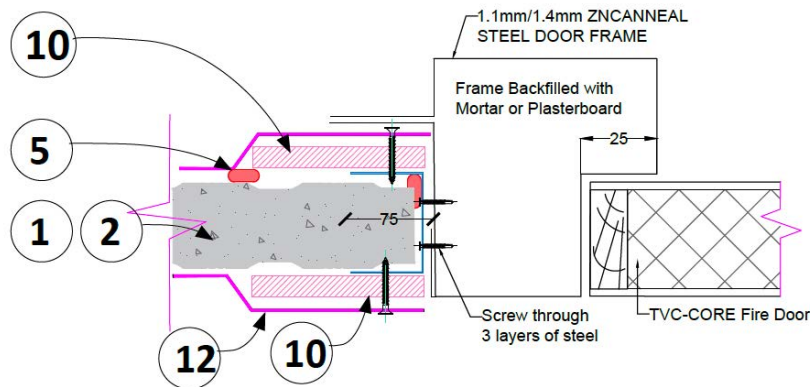


Note:

All door jambs to be in filler with suitable fire-retardant material

- Fire-rated plaster strips
- Grout filled
- Plaster liquid in fill set

**FIGURE 10:**  
SUPAPANEL WALL OVER 4M IN HEIGHT UP TO 6.5 M IN HEIGHT- ALTERNATIVE INSTALL 1

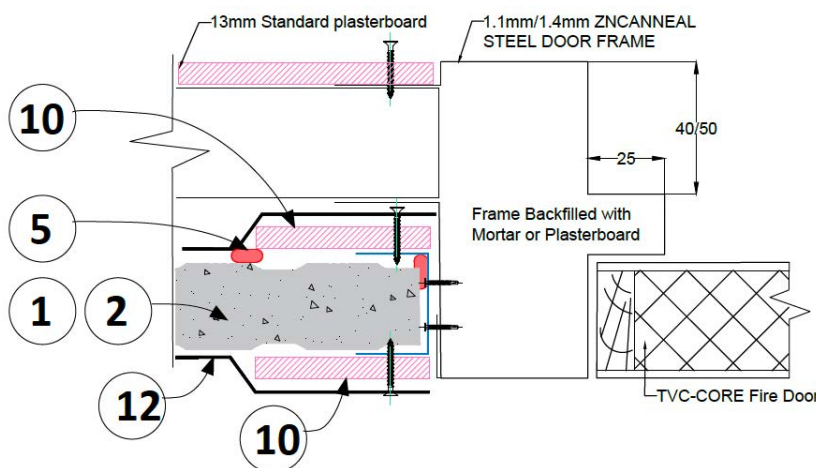


Note:

All door jambs to be in filler with suitable fire-retardant material

- Fire-rated plaster strips
- Grout filled
- Plaster liquid in fill set

**FIGURE 11:**  
SUPAPANEL WALL OVER 4M IN HEIGHT UP TO 6.5 M IN HEIGHT- ALTERNATIVE INSTALL 2



Note:

All door jambs to be in filler with suitable fire-retardant material

- Fire-rated plaster strips
- Grout filled
- Plaster liquid in fill set

## 10.5 Limitations

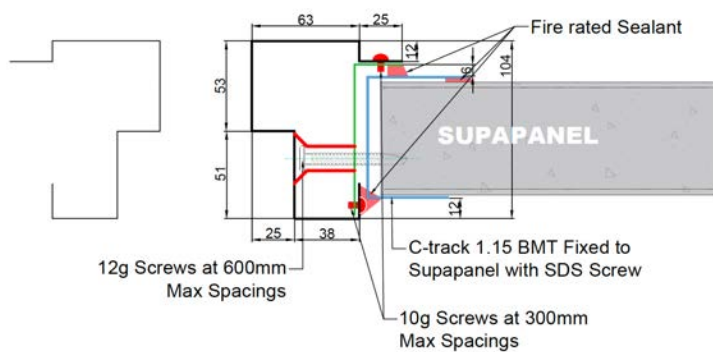
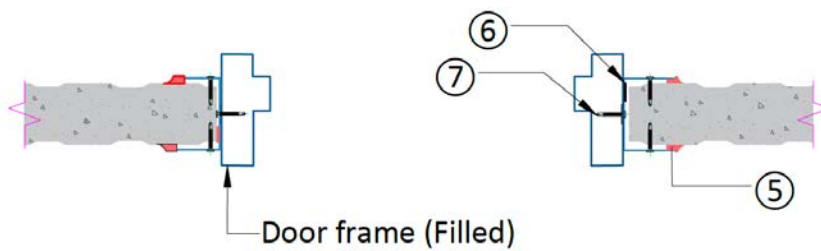
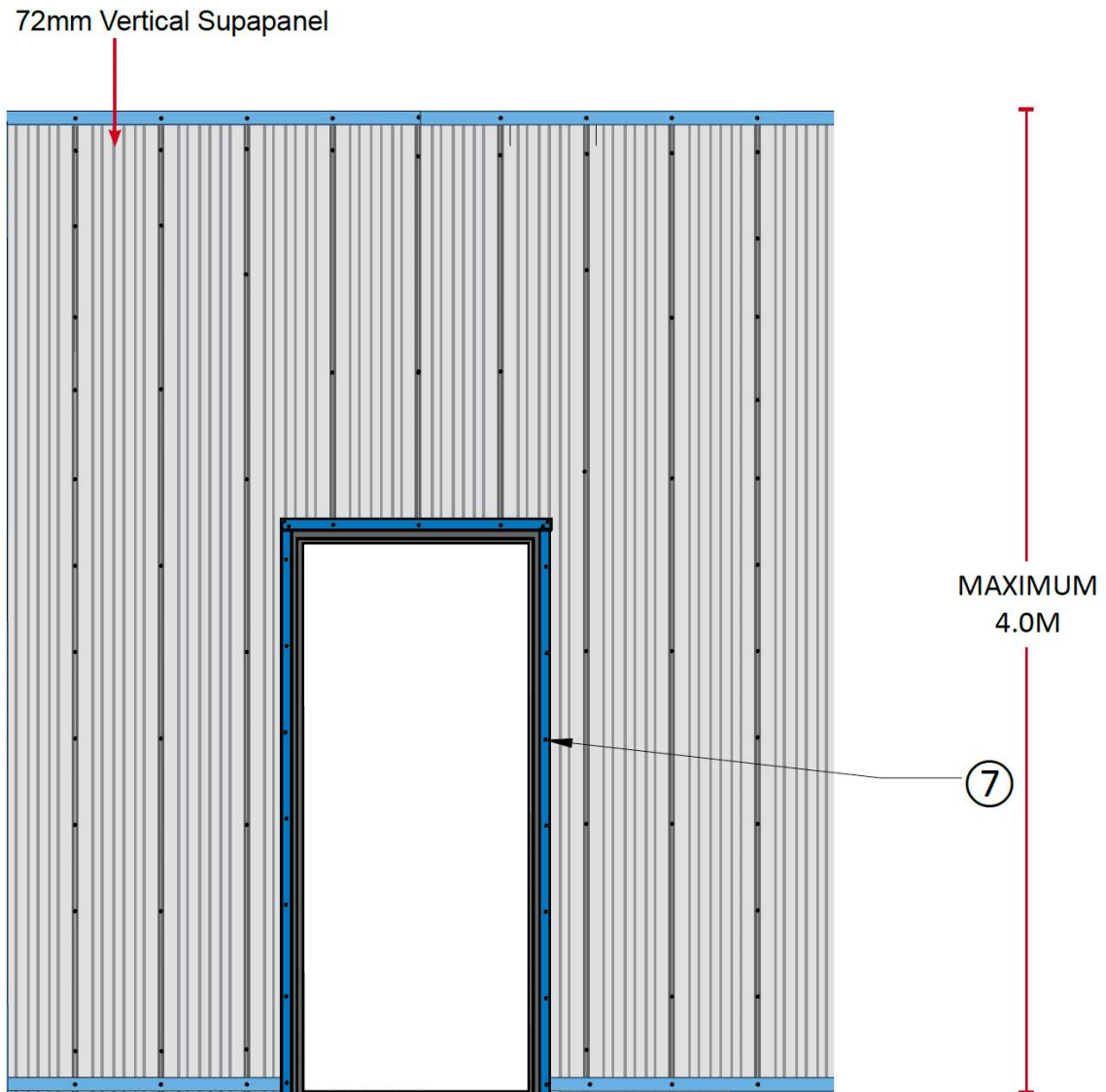
Any variations with respect to the size or construction detail other than those identified in this report may invalidate the conclusions drawn.

## 10.6 Term of Validity

This evaluation is valid for the National Construction Code of Australia - Volume One - Building Code of Australia 2022.



**FIGURE 12:**  
FIRECORE DOOR SYSTEM



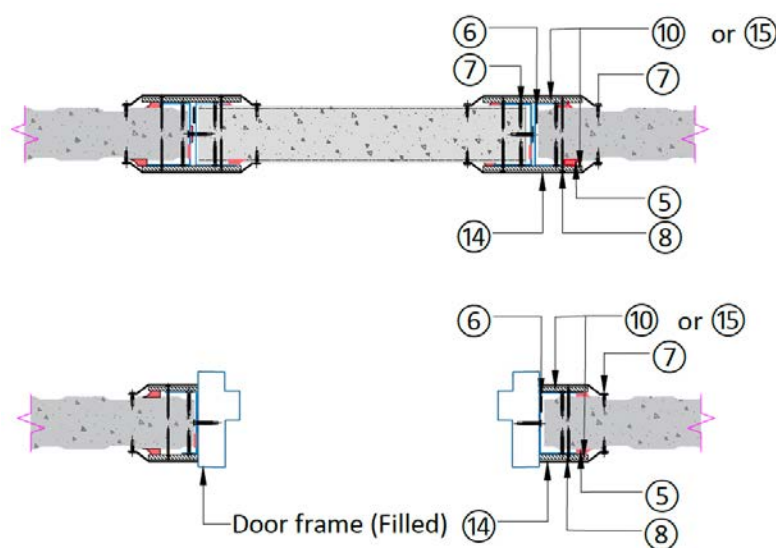
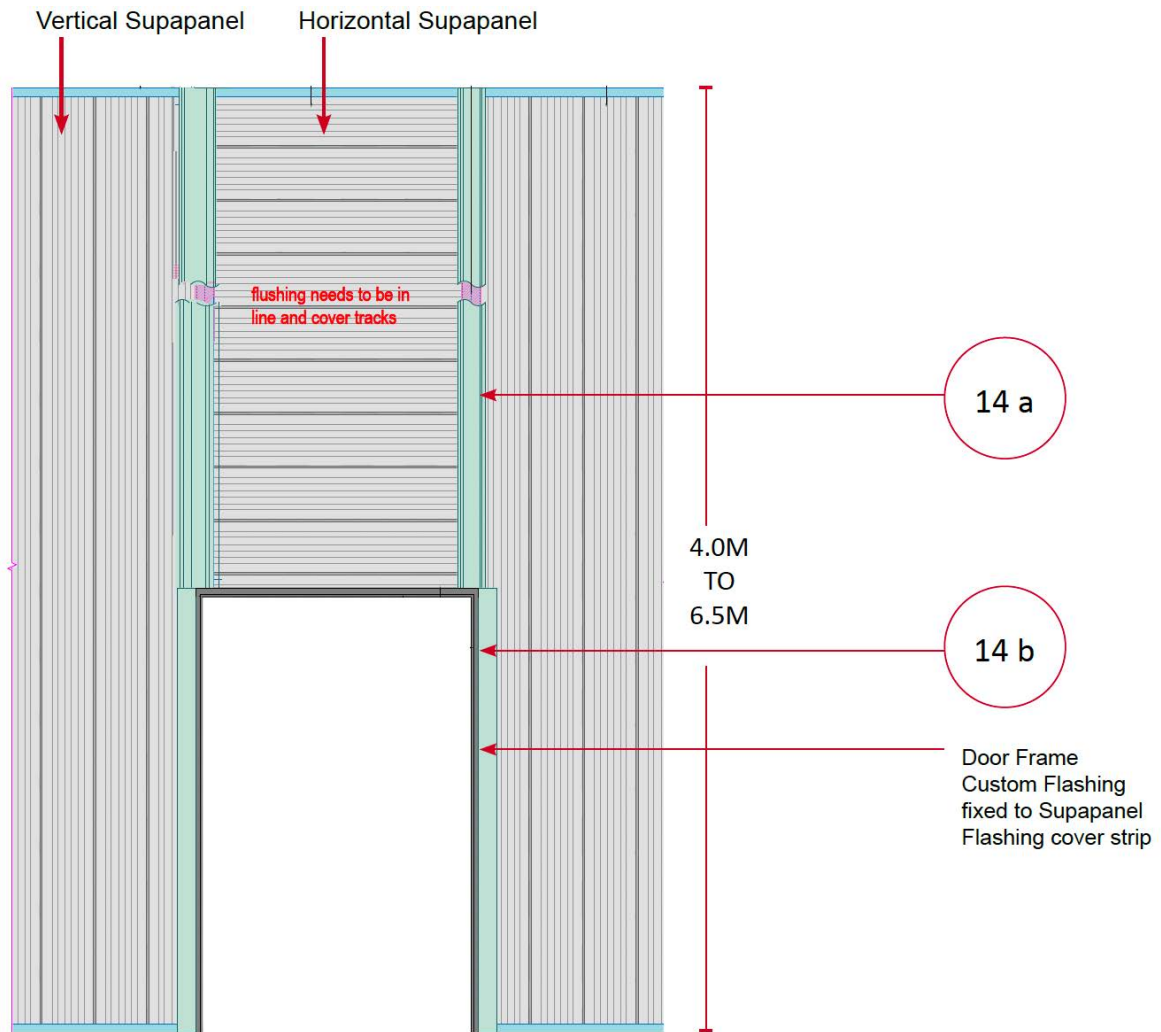
Note:

All door jambs to be in filler with suitable fire-retardant material

- Fire-rated plaster strips
- Grout filled
- Plaster liquid in fill set



**FIGURE 13:**  
FIRECORE DOOR SYSTEM



Note:

All door jambs to be in filler with suitable fire-retardant material

- Fire-rated plaster strips
- Grout filled
- Plaster liquid in fill set



## 11 PASSIVE PRODUCT EVALUATION

### 11.1 General

The purpose of this assessment is to report the applicable use and compliance of the 72mm and 62mm wide Supapanel against the requirements of the National Construction Code – Volume One – Building Code Testing of the wall system in accordance with AS 1530.4-2014 has been undertaken by FireTSLab laboratory and documented in their report PF23046 achieved an FRL of at least -/120/120 during testing of the raw 72mm panel.

Testing of the wall system in accordance with AS 1530.4-2014 has been undertaken by FireTSLab laboratory and documented in their report PF19066 achieved an FRL of at least -/180/60 during testing of the raw 62mm panel. Warringtonfire undertook a series of development and prototype tests on the 62mm panel in a raw application as well as within a pilot wall with a layer of 16mm fire grade plasterboard.

A number of passive fire penetration treatments are required to have a layer of fire grade plasterboard to maintain the required Fire Resistance Level. The initial development test demonstrated the ability for the Supapanel to achieve an ongoing ability to maintain general integrity for greater than 4 hours as well as the method and process of thermal transmission through the joints in which the insulation criteria fails.

A additional pilot testing was undertaken by Warringtonfire in their report FRT200129 the 62mm Supapanel wall system with a 16mm plasterboard liner. The specimen achieved no failure of integrity and resulted in insulation failure at 165 minutes. The resultant FRL is determined by Warringtonfire to be -/180/120.

Various penetrations are proposed for a building to be installed within the 72 mm Supapanel as well as within the Promaseal Batt. The penetrations include the following to satisfy a Fire Resistance Level of at least -/120/120. The cables are considered for copper only in accordance with AS 1530.4:2014.

- 3 x 2.5 mm Cable (PVC Sheathed)
- 150 x 50 mm Cable Tray with D1 and/or D2 Config. Cables
- Power Cable up to 3 x 3C+ E 20mm
- 20 mm PEX Pipe
- 25 mm PEX Pipe
- 150 mm uPVC Pipe
- 100 mm uPVC Pipe
- 110 mm HDPE Pipe
- Up to 25 mm NBN Conduit
- HiFire 1B Damper
- Holyoake IBD-FS
- Up to 50 mm Gal Pipe through Supapanel or Promaseal Batt
- Up to 50 mm or 80 mm Copper Pipe through Supapanel or Promaseal Batt
- Boss UniWrap
- Boss Firematic 300
- Promat Promaseal
- Promat Promastop UniCollars
- HB Fuller FireSound Fire Rated Acoustic Sealant
- HB Fuller FulaFlex FR Hybrid Polymer Fire Rated Sealant
- 

Installer of passive fire products to verify correct installation to respective manufacturers requirements.





**TABLE 6:**  
PIPES CABLES AND THROUGH SUPAPANEL

Material identification and product name	Penetration Type		FRL
PROMASEAL A Acrylic sealant 30mm cone and PROMASEAL Supawrap	3 x 2.5mm cable (PVC sheathed)	A.1	-/120/120
Boss Fire Mastic 300	3 x 2.5mm cable (PVC sheathed)	A.1	-/120/120
PROMASEAL Bulkhead Batt and PROMASEAL Supawrap	150 x 50mm cable tray with D1 and/or D2 Config Cables	A.2	-/120/120
Boss FireMastic 300 and Boss Thermal defence wrap	150 x 50mm cable tray with D1 and/or D2 Config Cables	A.2	-/120/90
PROMASEAL A Acrylic sealant 30mm cone and PROMASEAL Supawrap	Power Cable up to 3 x 3C+E 20mm	A.3	-/120/120
Boss Fire Mastic 300 and Boss Thermal defence wrap	Power Cable up to 3 x 3C+E 20mm	A.3	-/120/120
PROMASEAL Conduit collar (CFC32)	20mm Pex Pipe	A.4	-/120/120
Boss Fire Mastic HPE or Boss FireMastic	300 20mm Pex Pipe	A.4	-/120/120
PROMASEAL Conduit collar (CFC32)	25mm Pex Pipe	A.5	-/120/120
Promastop Unicollar plus Armaflex	50-70 mm Pex-Al-Pex	A.6	-/120/30
PROMASEAL Retrofit collar (FC150)	150mm uPVC pipe	A.7	-/120/120
PROMASEAL Retrofit collar (FC100)	100mm uPVC pipe	A.8	-/120/120
Boss Maxi Collar	100mm uPVC pipe	A.8	-/120/120
PROMASEAL Retrofit collar (FC100)	110mm HDPE pipe	A.9	-/120/120
PROMASEAL Conduit collar (CFC32)	Up to 25mm NBN Conduit	A.10	-/120/120
Boss FireMastic HPE or Boss FireMastic 300	Up to 25mm NBN Conduit	A.10	-/120/120
PROMASEAL A Acrylic sealant 30mm cone	Up to 30mm bunch of 2.5mm <sup>2</sup> cables		-/120/120
Boss Fire Mastic 300 and Boss Thermal defence wrap	Up to 30mm bunch of 2.5mm <sup>2</sup> cables		-/120/120
Hi Fire Mech Damper	HiFire IB Damper - mechanical		-/120/120
Blendair SHD and MFSD series fire dampers	125 mm strip of 16 mm fire rated plasterboard on one side of opening		-/120/-
Wastech Chute Doors	Garbage self-closing hopper door	A.11	-/120/45
Boss Fire Mastic 300 and Boss P40 Mak wrap	Up to 50mm Gal pipe	A.15	-/120/120
Boss Fire Mastic 300 and Boss Thermal defence wrap	32mm or up to 50 mm or 80 mm Copper pipe	A.16	-/120/120
Promaseal A and Promashield or Promaseal SupaWrap	32 mm to 150 mm Copper pipe	A.14	-/120/120



A1	3 x 2.5 mm Cable
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Service

Product Name	Boss FireMastic HPE or Boss FireMastic 300 Fire Grade Mastic
Aperture Side	Close fit core hole up to 25 mm in diameter
Test Evidence	Tested system <a href="#">Clause C4D15(2)(a)(iii)</a> Openings for service installations Warringtonfire 49599300.7 dated 22/02/2019
Installation	Complete infill around service with 25mm deep fire mastic controlled by foam backing rod. Sealant finished with a nominal 25 mm fillet on both sides of the wall.
Fire Resistance Level	-/120/120
Product Name	Promat Promaseal Fire Grade Mastic Promaseal Supawrap
Aperture Side	Close fit core hole
Test Evidence	Tested system <a href="#">Clause C4D15(2)(a)(iii)</a> Openings for service installations Warringtonfire FAS200022 R2.1 dated 06.04.2020
Installation	Complete infill around service with 30mm deep fire mastic controlled by foam backing rod. Sealant finished with a nominal 25 mm fillet on both sides of wall. Promaseal Supa Wrap 600 mm on each side.
Fire Resistance Level	-/120/120

A2	150 x 50 mm Cable tray
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Service

Product Name	Boss Fire Mastic-HPE Fire Grade Mastic + Wrap
Aperture Side	Close fit core hole
Test Evidence	Tested system <a href="#">Clause C4D15(2)(a)(iii)</a> Openings for service installations Warringtonfire FAS200332 R1.0 dated 04.12.2020 Complete infill around service with fire mastic.
Installation	Install BOSS Thermal Defence Wrap in accordance with BOSS installation instruction.
Fire Resistance Level	-/120/90



A3	Power Cable up to 3 x 3C+ E 20mm
Service A1	
Product Name	Boss Fire Mastic-HPE Fire Grade Mastic
Aperture Side	Close fit core hole up to 125 mm in diameter
Test Evidence	Tested system Clause C4D15(2)(a)(iii) Openings for service installations Warringtonfire 49599300.7 dated 22/02/2019
Installation	Complete infill around service with 25mm deep fire mastic controlled by foam backing rod. Sealant finished with a nominal 25 mm fillet on both sides of wall.
Fire Resistance Level	-/120/120
Service	
Product Name	Promat Promaseal Fire Grade Mastic Promaseal Supawrap
Aperture Side	Close fit core hole
Test Evidence	Tested system Clause C4D15(2)(a)(iii) Openings for service installations Warringtonfire FAS200022 R2.1 dated 06.04.2020
Installation	Complete infill around service with 30mm deep fire mastic controlled by foam backing rod. Sealant finished with a nominal 25 mm fillet on both sides of the wall. Promaseal Supa Wrap 600 mm on each side.
Fire Resistance Level	-/120/120



A4	20 mm PEX Pipe
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Service A1

Product Name	Boss Fire Mastic-HPE Fire Grade Mastic
Aperture Side	Close fit core hole up to 125 mm in diameter
Test Evidence	Tested system Clause C4D15(2)(a)(iii) Openings for service installations Warringtonfire 49599300.7 dated 22/02/2019
Installation	Complete infill around service with 25mm deep fire mastic controlled by foam backing rod. Sealant finished with a nominal 25 mm fillet on both sides of wall.
Fire Resistance Level	-/120/120

Service

Product Name	Promat Promaseal Fire Grade Mastic Promaseal Supawrap
Aperture Side	Close fit core hole
Test Evidence	Tested system Clause C4D15(2)(a)(iii) Openings for service installations Warringtonfire FAS200022 R2.1 dated 06.04.2020
Installation	Complete infill around service with 30mm deep fire mastic controlled by foam backing rod. Sealant finished with a nominal 25 mm fillet on both sides of the wall. Promaseal Supa Wrap 600 mm on each side.
Fire Resistance Level	-/120/120

A5	25 mm PEX Pipe
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Service A1

Product Name	Boss Fire Mastic-HPE Fire Grade Mastic
Aperture Side	Close fit core hole up to 60 mm in diameter
Test Evidence	Tested system Clause C4D15(2)(a)(iii) Openings for service installations Warringtonfire RIR FRT 190033 R1.0 dated 27.02.2019
Installation	Complete infill around service with 25mm deep fire mastic controlled by foam backing rod. Sealant finished flush with the wall on both sides of wall.
Fire Resistance Level	-/120/120

Service

Product Name	PROMASTOP Unicollar FC 32 Promaseal Acrylic Sealant
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Aperture Side	Close fit core hole
Test Evidence	Tested system Clause C4D15(2)(a)(iii) Openings for service installations Warringtonfire FAS200022 R2.1 dated 06.04.2020
Installation	Complete infill around service with 30mm deep fire mastic controlled by foam backing rod. Sealant finished with a nominal 25 mm fillet on both sides of the wall. Promaseal Supa Wrap 600 mm on each side.
Fire Resistance Level	-/120/120

<b>A6</b>	50-70 mm PEX Pipe
Service	
Product Name	Promaseal Unicollar plus Armaflex (25 mm thickness)
Aperture Side	Close fit core hole up to 60 mm in diameter
Test Evidence	Tested system Clause C4D15(2)(a)(iii) Openings for service installations A-14-946 dated 26.02.2015
Installation	Install Promastop Unicollar as well as Armaflex with a thickness of 25 mm.
Fire Resistance Level	-/120/120

<b>A7</b>	150 mm uPVC Pipe – Fire Collar
Service	
Product Name	Promaseal FC Collar FC150
Aperture Side	Close fit core hole
Test Evidence	Tested system Clause C4D15(2)(a)(iii) Openings for service installations Warringtonfire FAS190113 R7.0 dated 09.09.2021
Installation	Install fire collar as per Boss installation instructions on both sides of the wall. Two layers of 13 mm fire grade plasterboard is required on single side of the Supanel.
Fire Resistance Level	-/120/120

<b>A8</b>	100 mm uPVC Pipe
Service	
Product Name	Boss 100 mm MaxiCollar
Aperture Side	Close fit core hole up to 60 mm in diameter
Test Evidence	Tested system Clause C4D15(2)(a)(iii) Openings for service installations Warringtonfire RIR FRT 190033 R1.0 dated 27.02.2019
Installation	Install fire collar as per Boss installation instructions on both sides of the wall. Two layers of 13 mm fire grade plasterboard is required on single side of the Supanel.
Fire Resistance Level	-/120/120



<b>A9</b>	<b>110 mm HDPE Pipe</b>
Service	
Product Name	Boss Fire Mastic-HPE Fire Grade Mastic or Boss 300 Mastic
Aperture Side	Close fit core hole up to 60 mm in diameter
Test Evidence	Tested system Clause C4D15(2)(a)(iii) Openings for service installations Warringtonfire 49599300.7 dated 22/02/2019
Installation	Complete infill around service with 25mm deep fire mastic controlled by foam backing rod. Sealant finished with a nominal 25 mm fillet on both sides of wall.
Fire Resistance Level	-/120/120
Service	
Product Name	Promaseal FC Collar FC100
Aperture Side	Close fit core hole
Test Evidence	Tested system Clause C4D15(2)(a)(iii) Openings for service installations Warringtonfire FAS190113 R7.0 dated 09.09.2021
Installation	Install fire collar as per Promat installation instructions on both sides of the wall. Two layers of 13 mm fire grade plasterboard is required on a single side of the Supapanel.
Fire Resistance Level	-/120/120
<b>A10</b>	<b>Up to 25 mm NBN Conduit</b>
Service	
NBN Conduit	
Product Name	Boss Fire Mastic-HPE or Boss FireMastic 300 Fire Grade Mastic
Aperture Side	Close fit core hole up to 25 mm in diameter
Test Evidence	Tested system Clause C4D15(2)(a)(iii) Openings for service installations Warringtonfire 49599300.7 dated 22/02/2019
Installation	Complete infill around service with fire mastic. Sealant finished with a nominal 20 mm fillet on both sides of wall.
Fire Resistance Level	-/120/120
<b>A11</b>	<b>Wastech Garbage Chute</b>
Service	
Garbage self-closing hopper door	
Product Name	Wastedch Chute Doors
Aperture Side	Close fit hole 1200 mm x 1200 mm
Test Evidence	Tested system Clause C4D15(2)(a)(iii) Openings for service installations Warringtonfire FRT200126 R1.0 dated 03 July 2020
Installation	Opening to be supported by Steel L angles and C channels around perimeter screw fixed to the wall. Door is to be fixed to opening as per manufactures installation instructions.



Fire Resistance Level	-/120/45
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<b>A12</b>	Fyreguard Access Panel
Service	Wall Access panel
Product Name	Fyreguard Access Panel
Aperture Side	Close fit hole up to 1200 mm x 1500mm
Test Evidence	Tested system Clause C4D15(2)(a)(iii) Openings for service installations BRANZ FC10241-001 Issue 2 dated 27 July 2020
Installation	Opening to be supported by Steel L angles and C channels around perimeter screw fixed to the wall. Access door is to be fixed to opening as per manufactures installation instructions.
Fire Resistance Level	-/120/120

<b>A13</b>	HiFire 1B Damper
Service	High Fire Heating
Product Name	Ruskin IBS Fire Damper
Aperture Side	Close fit hole 1200 mm x 1200 mm
Test Evidence	Tested system Clause C4D15(2)(a)(iii) Openings for service installations Warringtonfire FRT190122 R1.0 dated 24 June 2019
Installation	Two sets of 1200 mm high x 15 mm wide x 15 mm high x 1.15 mm thick galvanised steel L angle installed at nominal 80 mm apart from each other
Fire Resistance Level	-/120/-
	Where the damper is attached to the wall directly, if there are no combustible elements within 100 mm from the edge of the channel perimeter for a distance of 2 m, the installed system will maintain the fire resistance level as listed. No insulation criteria is required where BCA C4D15(2)(a)(iii) is satisfied.

<b>A14</b>	Holyoake Passive Fire Damper
Service	Fire Damper
Product Name	Holyoake IBD-FS
Aperture Side	1200 mm Wide max x 1200 mm high max, single unit
Test Evidence	Tested system CSIRO-FCO-3356, 5 December, 2019
Installation	The Holyoake IBD-FS fire damper is installed as a single unit in a penetration of 1200mm x 1200mm maximum. A Steel C channel is installed around the opening with 20mm 8g screws at maximum 200mm centres on one side. 4 x 40mm x 60mm x 2mm steel angles are to be bolted to the damper body on each side of the perimeter. One layer 16mm fire rated plaster on one side of the wall 125mm wide.
Fire Resistance Level	-/120/-



<b>A15</b>	Up to 50 mm Gal Pipe
Service	Up to 50 mm Gal Pipe
Product Name	Boss FM300
Aperture Side	Close fit core hole
Test Evidence	Tested system Clause C4D15(2)(a)(iii) Openings for service installations Warringtonfire 49599300.7 dated 22/02/2019
Installation	Complete infill around service fire mastic. Sealant finished with a nominal 20mm fillet on both sides of wall. If there are no combustible elements within 100mm from the edge of the service for a distance of 2m, the installed system does not require the insulation criteria to be satisfied. i.e. a thermal wrap is not required. No insulation criteria is required where BCA Clause C3.15(a)(ii) is satisfied.
Fire Resistance Level	-/120/120

<b>A16</b>	32 mm up to 80 mm Copper Pipe
Service	32 mm to 80 mm Copper Pipe
Product Name	Boss FM300 and Boss Thermal Defence Wrap
Aperture Side	Close fit core hole
Test Evidence	Tested system Clause C4D15(2)(a)(iii) Openings for service installations Warringtonfire FAS190346 R1.5 dated 04.08.2021
Installation	Complete infill around service with fire mastic. Sealant finished with a nominal 20mm fillet on both sides of wall. Installation advice from BOSS is for the wall itself to be 116mm thick to achieve the required FRL of -/120/120. This is based on typical light weight and masonry wall systems. The Supapanel itself maintains an FRL of at least -/120/120. Therefore, based on the tested system the thickness can be reduced to the size of the Supapanel and the ability to maintain an FRL of -/120/120 is maintained. If there are no combustible elements within 100mm from the edge of the service for a distance of 2m, the installed system does not require the insulation criteria to be satisfied. i.e. a thermal wrap is not required. No insulation criteria is required where BCA Clause C4D15(2)(a)(iii) is satisfied.
Fire Resistance Level	-/120/120

<b>A17</b>	32 to 150 mm Copper Pipe
Service	32 mm to 150 mm Copper Pipe
Product Name	Promaseal Acrylic Sealant For 32 mm to 100 mm Promashield For 100 mm to 150 mm Promaseal SupaWrap 600 mm each side
Aperture Side	Close fit core hole
Test Evidence	Tested system Clause C4D15(2)(a)(iii) Openings for service installations Warringtonfire FAS200022 R2.1 dated 06.04.2020





Installation	Complete infill around service with fire mastic. Sealant finished with a nominal 20 mm fillet on both sides of wall. If there are no combustible elements within 100 mm from the edge of the service for a distance of 2 m, the installed system does not required the insulation criteria to be satisfied. i.e. a thermal wrap is not required. No insulation criteria is required where BCA Clause C4D15(2)(a)(iii) is satisfied.
Fire Resistance Level	-/120/120

<b>A18</b>	25 mm and 40 mm Copper Pipe
Service	Wall
Product Name	Promaseal Acrylic Sealant and Armaflex (25 mm thick)
Aperture Side	Close fit core hole plus Armaflex diameter
Test Evidence	Tested system Clause C4D15(2)(a)(iii) Openings for service installations FSRG A-14-946 dated 26/02/2015
Installation	If there are no combustible elements within 100 mm from the edge of the penetration for a distance of 2 m, the installed system does not require the insulation criteria to be satisfied i.e. a thermal wrap is not required. No insulation criteria is required where BCA Clause C4D15(2)(a)(iii) is satisfied. Complete infill around service fire mastic. FR Armaflex 400 mm long either side of the penetration and through the wall.
Fire Resistance Level	-/120/120

<b>A19</b>	HB Fuller FireSound Fire Rated Acoustic Sealant
Service	Wall
Product Name	HB Fuller FireSound Fire Rated Acoustic Sealant
Aperture Side	
Test Evidence	Tested system FireTslab Test report PF23046
Installation	
Fire Resistance Level	-/120/120

<b>A20</b>	HB Fuller FulaFlex FR Hybrid Polymer Fire Rated Sealant
Service	Wall
Product Name	HB Fuller FulaFlex FR Hybrid Polymer Fire Rated Sealant
Aperture Side	
Test Evidence	Tested system FireTslab Test report PF23046
Installation	
Fire Resistance Level	-/120/120



<b>A21</b>	Pyropanel PromaSeal Fire Grade Mastic
Service	Wall
Product Name	Pyropanel PromaSeal Fire Grade Mastic
Aperture Side	
Test Evidence	Tested system Pyropanel FSRG A-14-946
Installation	
Fire Resistance Level	-/120/120

<b>A22</b>	BOSS FireMastic-300
Service	Wall
Product Name	Boss Fire Mastic-3000
Aperture Side	
Test Evidence	Tested system PFITS PF 1190667 R4.0
Installation	
Fire Resistance Level	-/120/120



## 12 SUMMARY OF ASSESSED DETAIELD DRAWINGS

### 12.1 General

AS 1530.4: 2014 testing of a wall systems relates to a single test specimen being horizontal or vertical. The application of joints is considered under engineering evaluation based on the joints within the system that is tested. An equivalent fixing to the side or internal systems provides the equivalent fixing which is to be applied to any jointing in various applications.

The following figures detail the installation arrangements that are equivalent to the installed and tested system with consideration to the addition of screws into the joints for vertical spans above 6.5m for 72mm Supapanel and up to 4.0m for 62mm Supapanel walls.

**Figure 1: Subject Wall, Door and Framing System**

Door frame Assembly with mounting points to Supapanel design to suit separated stud wall system or battened plaster system attached to Supapanel fire rated walls system.

**Figure 2: Subject Wall, Door and Framing System**

Door frame assembly with mounting points to Supapanel design to suit separated stud wall system or battened plaster system attached to Supapanel fire rated walls system.

**Figure 4: Subject Wall, Door and Framing System - Alternate Install 1**

Variation in door frame design for bare wall installation into Supapanel wall fire rated with extend height requirement.

**Figure 5: Subject Wall, Door and Framing System - alternate install 2**

Variation in door frame design with plaster board wall system attached to Supapanel wall system for extended height requirement.

**Figure 7: Fire Core Door Systems**

Panel and track assembly in Supapanel for preparation of door frame assembly for vertical walls maximum height 4 metres.

**Figure 8: Fire Core Door Systems**

Panel and track assembly in Supapanel for preparation of door frame assembly with a shielding requirement for vertical walls from 4 metres to maximum height 6.5 metres.

**Figure 9: Subject Wall, Door and Framing System**

Door frame assembly for 1 hour door in 62 mm bare Supapanel.

**Figure 10: Subject wall, door and framing system**

Door frame assembly for 1 hour door in 62 mm bare Supapanel.

**Figure 11: Fire Core Door Systems**

Track and opening assembly for bare 62 mm Supapanel maximum height 4 metres.

**Figure 12: 72mm Vertical Supapanel Installation (Head Track and Base Track Options)**

Top track shielding options using 2 x 16mm fire rated plasterboard fixed to either side of the top track to maintain insulation of the wall system or 1 x 16mm fire rated plasterboard fixed to either side of the track with 12mm x 2mm thick intumescent strip stuck in place to the underside of the head track , fire rated sealant detail to the top of the track and from the plasterboard strip to the face of the wall.

Bottom track details showing fixing to either side of the wall from the track into the Supapanel face or the joints.



### 62mm Vertical Supapanel Installation (Head Track and Base Track Options)

Top track shielding options using 2 x 16mm fire rated plasterboard fixed to either side of the top track to maintain insulation of the wall system or 1 x 16mm fire rated plasterboard fixed to either side of the track with 12mm x 2mm thick intumescent strip stuck in place to the underside of the head track, fire rated sealant detail to the top of the track and from the plasterboard strip to the face of the wall.

Bottom track details showing fixing to either side of the wall from the track into the Supapanel face or the joints.

#### Figure 13: 72mm Vertical Supapanel Installation (Equal Angle Options)

Top angle shielding options using 2 x 16mm fire rated plasterboard fixed to either side of the top angle to maintain insulation of the wall system or 1 x 16mm fire rated plasterboard fixed to either side of the angle with 12mm x 2mm thick intumescent strip stuck in place to the underside of the head angle, fire rated sealant detail to the top of the angle and from the plasterboard strip to the face of the wall.

Bottom angle details showing fixing to either side of the wall from the angle into the Supapanel face or the joints.

### 62mm Vertical Supapanel Installation (Equal Angle Options)

Top angle shielding options using 2 x 16mm fire rated plasterboard fixed to either side of the top angle to maintain insulation of the wall system or 1 x 16mm fire rated plasterboard fixed to either side of the angle with 12mm x 2mm thick intumescent strip stuck in place to the underside of the head angle, fire rated sealant detail to the top of the angle and from the plasterboard strip to the face of the wall.

Bottom angle details showing fixing to either side of the wall from the angle into the Supapanel face or the joints.

#### Figure 14: 62mm Vertical Supapanel Installation (Base Track Options)

Bottom track installation details showing fixing into the face of the panels using 16mm SDS screws or into the joints using 30mm SDS screws at 350mm centres, fire rated sealant details into one side of the wall where the panel meets the track.

### 72mm Vertical Supapanel Installation (Base Track Options)

Bottom track installation details showing fixing into the face of the panels using 16mm SDS screws or into the joints using 30mm SDS screws at 350mm centres, fire rated sealant details into one side of the wall where the panel meets the track.

#### Figure 15: 72mm Vertical Supapanel Installation (T-Intersection)

Supapanel T intersection details for vertical-to-vertical Supapanel walls with the option to thermally protect the capping track with equal angle or a strip of 16mm fire rated plasterboard or MgO board on either side of the wall.

### 62mm Vertical Supapanel Installation (T-Intersection)

Supapanel T intersection details for vertical-to-vertical Supapanel walls with the option to thermally protect the capping track with equal angle or a strip of 16mm fire rated plasterboard or or MgO board on either side of the wall.

#### Figure 16: 72mm Vertical Supapanel Installation (Corner Connection Details)

External and Internal corner connection details showing an equal angle to the internal side of face of the Supapanel wall or 0.5mm BMT flashing to the external side of the face or strips of 16mm fire rated plasterboard or MgO board to the external face.



### 62mm Vertical Supapanel installation (Corner Connection Details)

External and Internal corner connection details showing an equal angle to the internal side of face of the Supapanel wall or 0.5mm BMT flashing to the external side of the face or strips of 16mm fire rated plasterboard or MgO board to the external face.

### Figure 17: 72mm Vertical Supapanel Installation (Equal Angle Options to the Base of the Wall)

The option of using 1.15 BMT equal angles fixed on both sides of the base of the wall with fixing options using SDS into the Supapanel joints on one side using 30mm SDS or a through fixing through both equal angles.

### 62mm Vertical Supapanel Installation (Equal Angle Options to the Base of the Wall)

The option of using 1.15 BMT equal angles fixed on both sides of the base of the wall with fixing options using SDS into the Supapanel joints on one side using 30mm SDS or a through fixing through both equal angles.

### 72mm Vertical Supapanel Installation (Equal Angle Options to the Head of the Wall)

The option to use min 50 x 50 x 1.15mm BMT steel equal angles on both sides at the top of the wall protected with 1 x 125mm strip of 16mm fire rated plasterboard or MgO board with the fixing options using SDS into the Supapanel joints on one side using 30mm SDS or a through fixing going through both equal angles.

### 62mm Vertical Supapanel Installation (Equal Angle Options to the Head of the Wall)

The option to use min 50 x 50 x 1.15mm BMT steel equal angles on both sides at the top of the wall protected with 1 x 125mm strip of 16mm fire rated plasterboard or MgO board with the fixing options using SDS into the Supapanel joints on one side using 30mm SDS or a through fixing going through both equal angles.

### Figure 18: 72mm Vertical Supapanel Installation (Obtuse or Acute Angles)

Obtuse or Acute vertical Supapanel walls connected with the addition of steel angle on one side protected with 6mm MgO or 16mm fire rated plasterboard.

### 62mm Vertical Supapanel Installation (Obtuse or Acute Angles)

Obtuse or Acute vertical Supapanel walls connected with the addition of steel angle on one side protected with 6mm MgO or 16mm fire rated plasterboard.

### 72mm Vertical Supapanel Installation to Protected Steel Structure

Vertical Supapanel wall installation to a protected steel structure.

### 62mm Vertical Supapanel Installation to a Protected Steel Structure

Vertical Supapanel wall installation to a protected steel structure.

### Figure 19: 72mm Vertical Supapanel Installation for Walls up to 4.8m in Height

Typical screw fixings for 72mm Supapanel walls up to 4.8m high.

### Figure 20: 72mm Vertical Supapanel Installation for Walls up to 4.8m to 6.5m in Height

Typical screw fixings for 62mm Supapanel walls from 4.8m to 6.5m in height.

### Figure 21: 62mm Vertical Supapanel Installation for Walls up to 4.0m in Height

Typical screw fixings for 62mm Supapanel walls up to 4.0m in height.

### Figure 22: Supapanel Sineat Transition Detail Shaft Wall Plan View

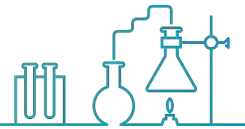
2 hour Shaftliner system butting into end of Supapanel system

### Figure 23: Supapanel Sineat Transition Detail Shaft Wall Plan View

Bare Shaftliner panel butting into end of bare Supapanel



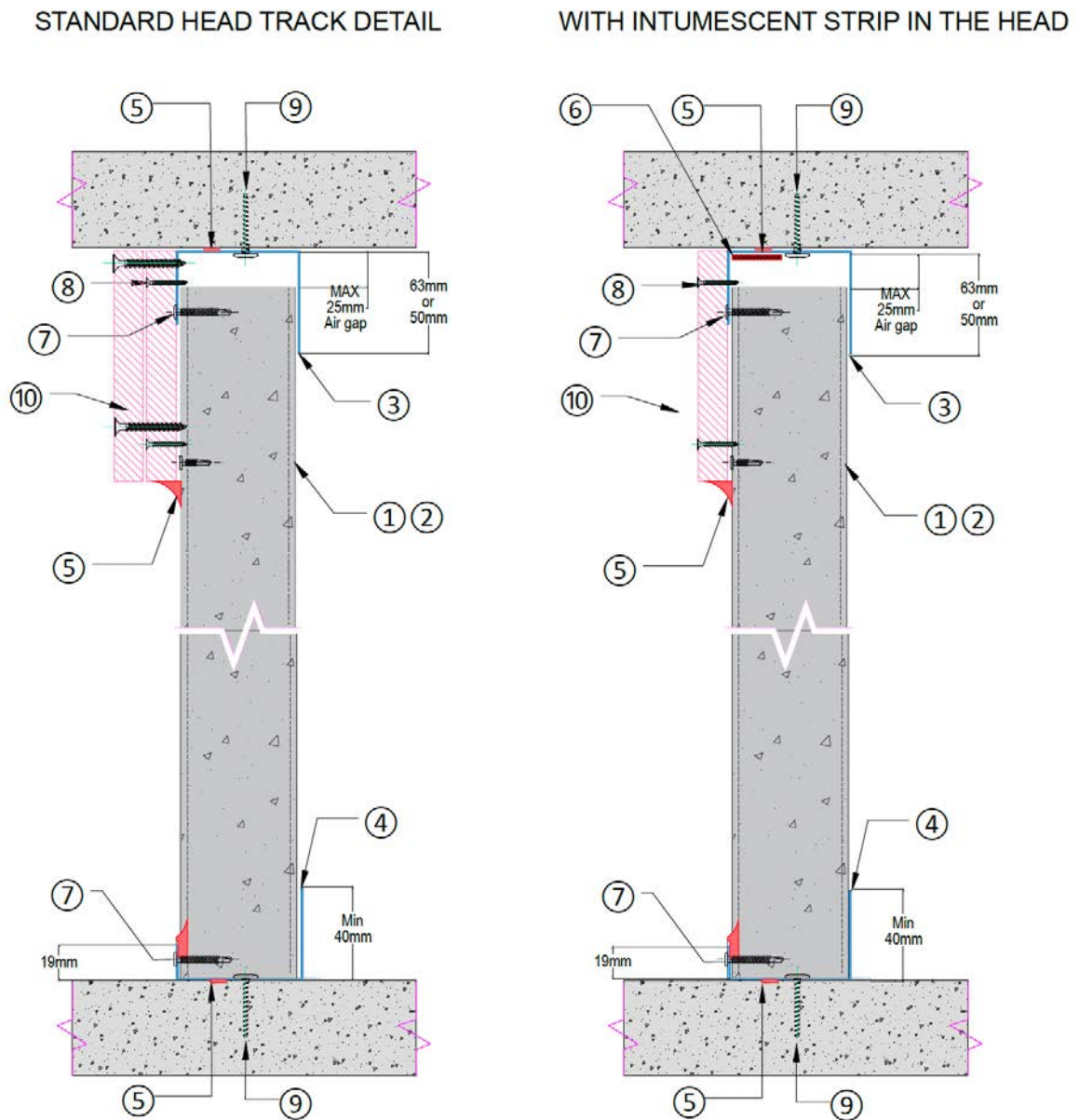
- Figure 24: [Supapanel Knauf Transition Detail Shaft Wall Plan View](#)  
T intersection of 1 hour plaster system into 62 mm or 72 mm Supapanel system
- Figure 25: [Supapanel Sineat Transition Detail Shaft Wall Plan View](#)  
T intersection of 2 hour plaster system into 62 mm or 72 mm Supapanel system
- Figure 26: [Supapanel Sineat Transition Detail Shaft Wall Plan View](#)  
Corner junction of 2 hour shaft lines system connected to 72 mm or 62 mm Supapanel systems
- Figure 27: [Access Panel and Waste Chute Openings](#)  
Access panel and garbage chute products to be installed as per supplier instructions
- Figure 28: [General Openings](#)  
General opening details and linings for dampers, cable trays and square openings in Supapanel 72mm and 62mm panel wall systems
- Figure 29: [Penetration 62mm Spapanel](#)  
PVC and HDPE pipe penetration detail through 62 mm Supapanel with two layers 16 mm fire rated plasterboard
- Figure 30: [Penetration 72mm Supapanel](#)  
PVC and HDPE pipe penetration detail through 72 mm Supapanel with one layers 16 mm fire rated plaster board
- Figure 31: [Penetration 62mm Supapanel](#)  
PVC and HDPE pipe penetration detail through Rock wool fire rated bat system in framed opening
- Figure 32: [Penetration 72mm Supapanel](#)  
Variation PVC and HDPE pipe penetration detail through rock wool fire rated bat system in framed opening.
- Figure 33: [Mid Panel Joint](#)  
Where a panel is to be joined mid panel there are two options, gaps less then 3.5mm and gaps up to 20mm. This is reflected in the tested systems head track clearance as well as the deflection of the panel. The joint is to be filled in a 12mm Strip Uniwrap within the centre of the joint. On a one face of the wall, the side joint is to be fixed to the adjacent panel with four screws spaced as detailed.  
  
This increases the integrity of the joint and is considered to mitigate the deflection. Where the panel deflection occurs the fire grade intumescent mastic will expand and maintain the seal.  
  
A gap up to 20mm is to comply with the installation requirements set out in the gap of 3.5mm with the exception that an increased quantity of mastic is required in the joint as well as a steel cover strip of steel being at least 350mm over the centre of the joint. The cover strip is to be direct fixed by screws to the panels inline with the spacing on outside of the joint panel over.  
  
Gaps greater than 2mm but less than 20mm require backing rod and mastic Thickness as well as a cover plate on one face of the wall.



## 13 DETAILED DRAWINGS

FIGURE 14:  
72 MM AND 62 MM SUPAPANEL

### FLOOR AND SOFFIT MOUNTINGS



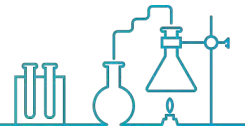
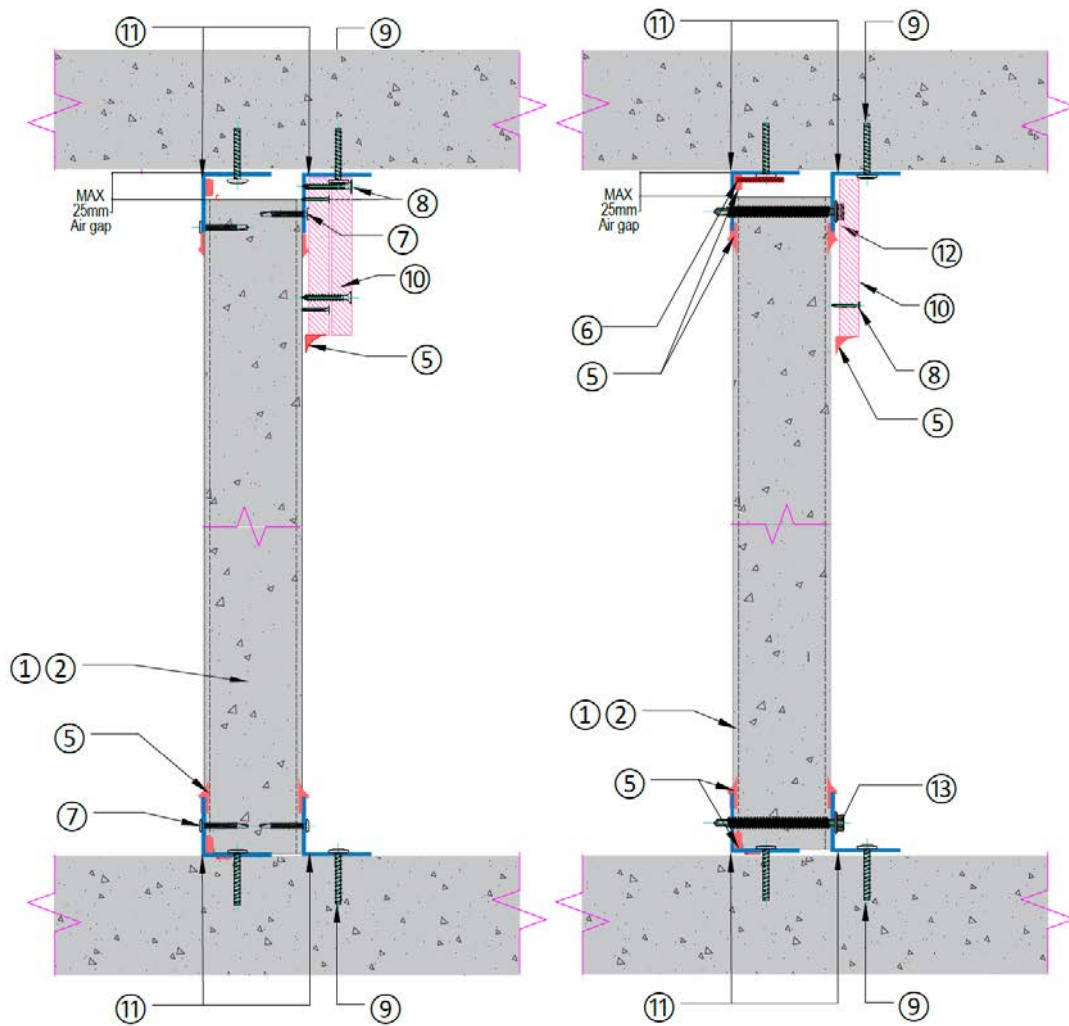


FIGURE 15:  
72 MM AND 62 MM SUPAPANEL

### OPTIONAL FLOOR AND SOFFIT DETAILS





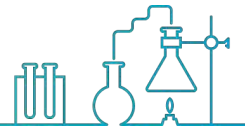


FIGURE 16:  
72 MM AND 62 MM BASE TRACK FIXING DETAIL

### FLOOR DETAILS

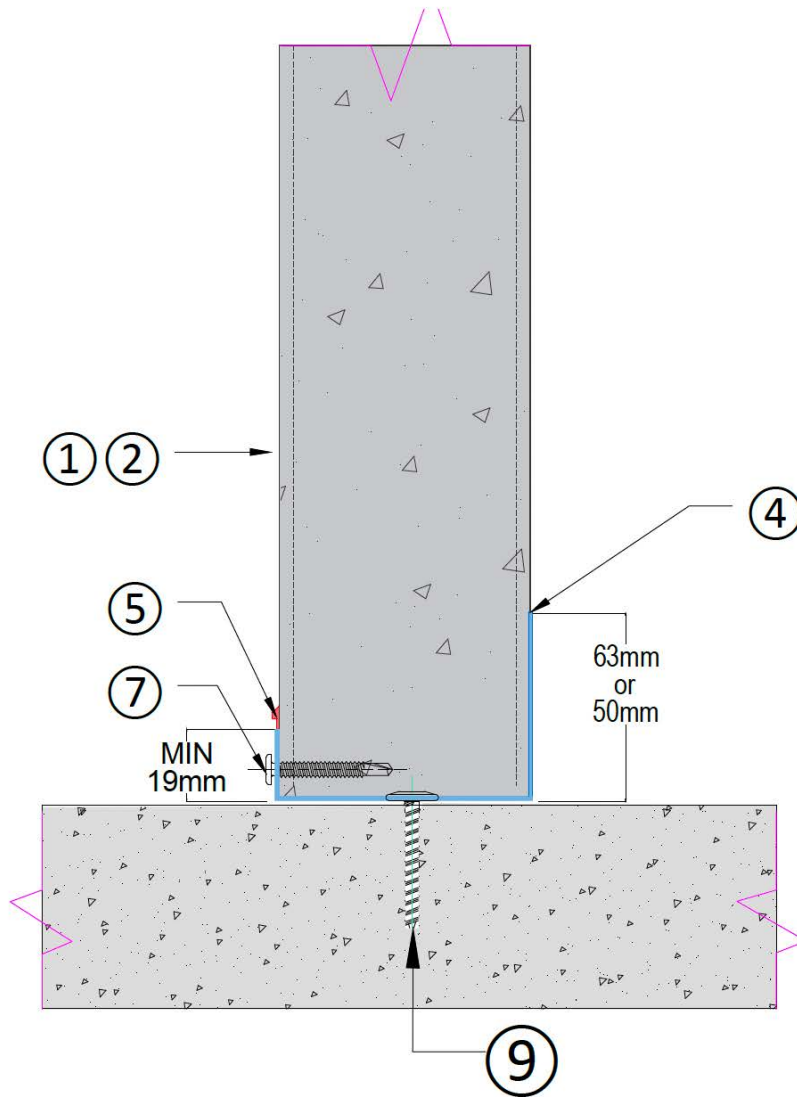
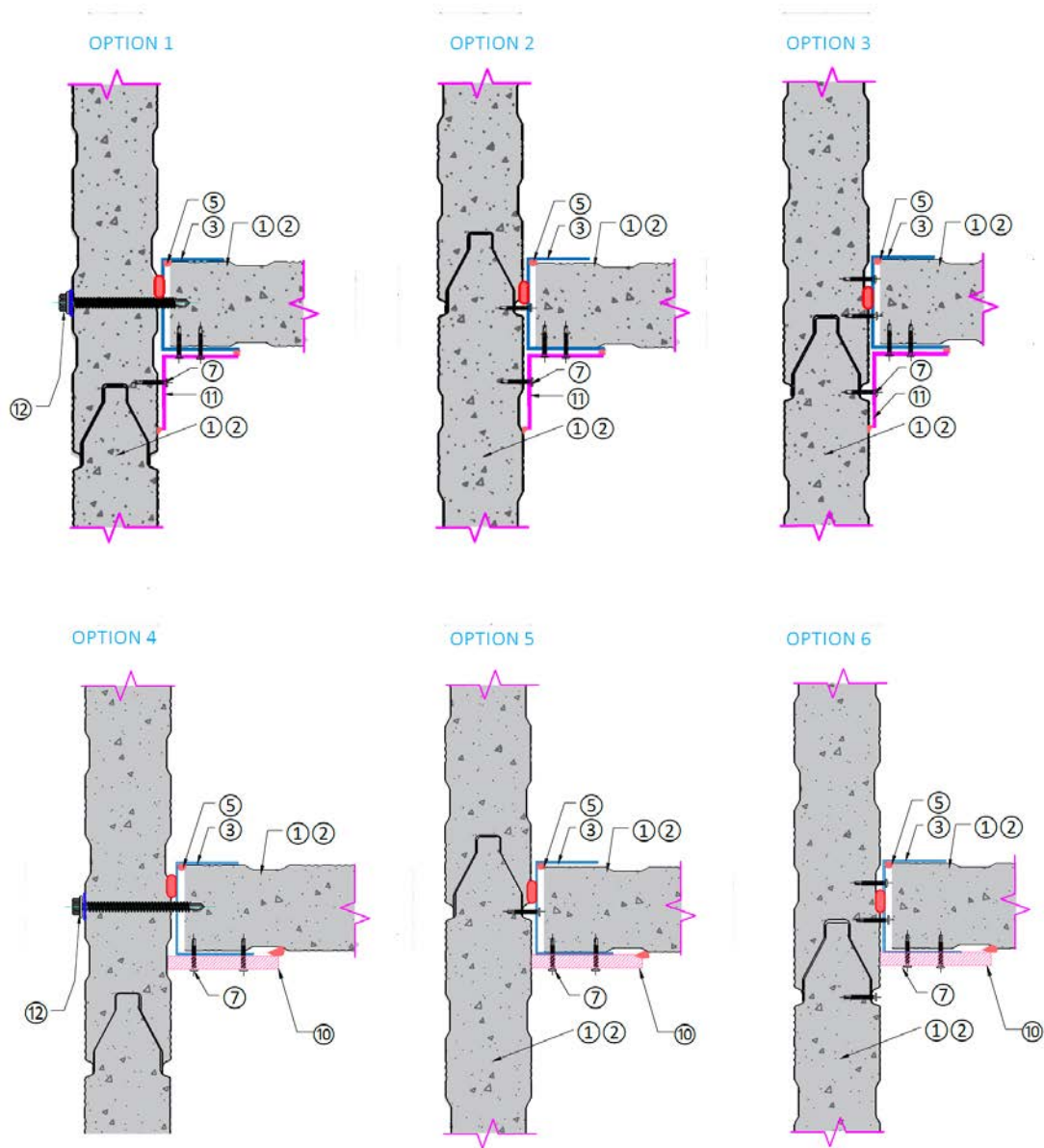




FIGURE 17:  
T-JUNCTION JOINTING DETAIL

VERTICAL TO VERTICAL T-JUNCTION



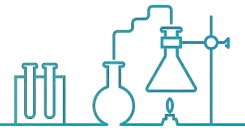
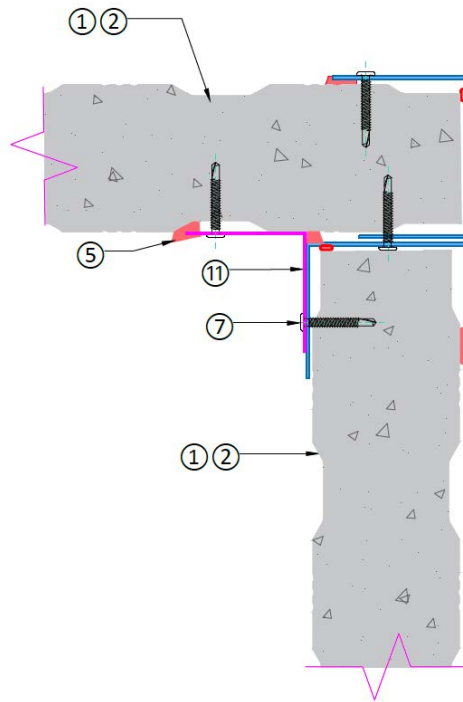
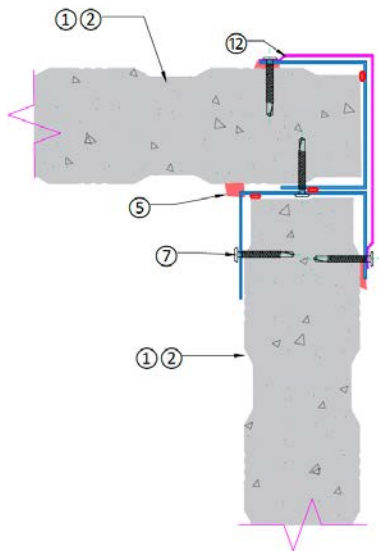


FIGURE 18:  
EXTERNAL CORNER DETAIL

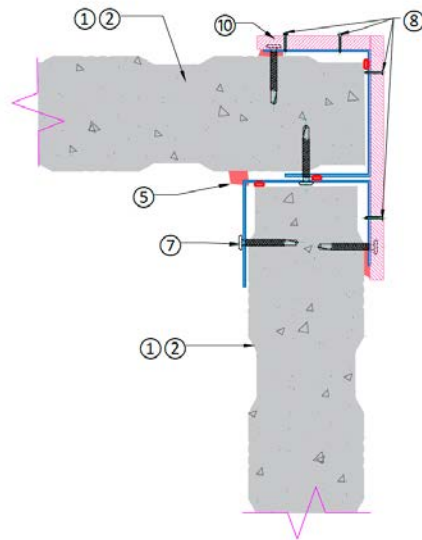
### IRREGULAR CORNER WITH INTERNAL ANGLE



EXTERNAL CORNER WITH FLASHING



EXTERNAL CORNER WITH PLASTERBOARD



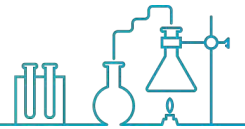
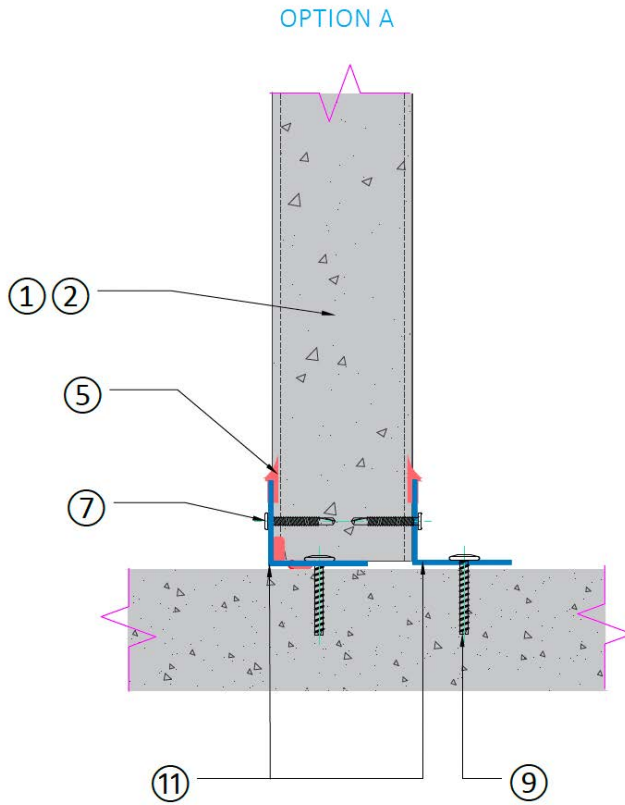
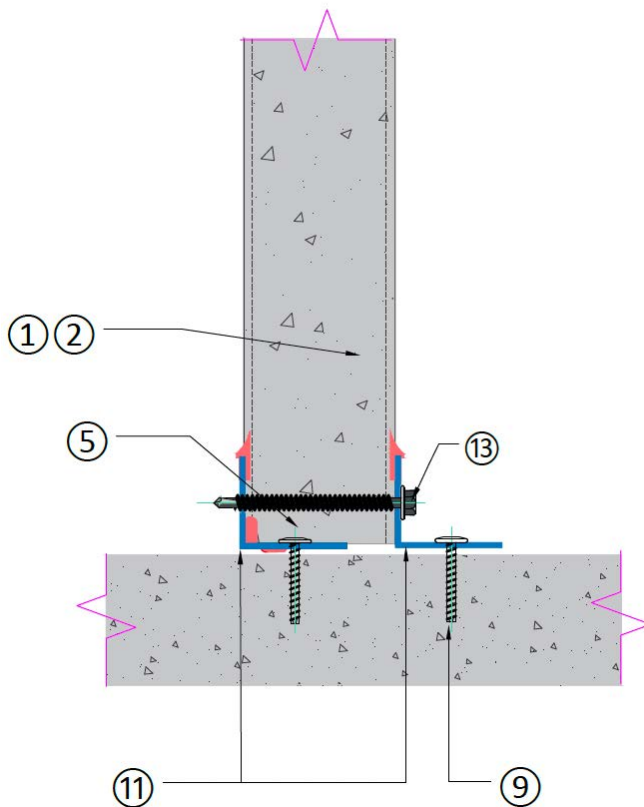


FIGURE 19:  
DOUBLE ANGLE DETAIL WITH SCREWS BOTH SIDES

### OPTIONAL FLOOR DETAILS



### BOTTOM ANGLE DETAIL – OPTION B



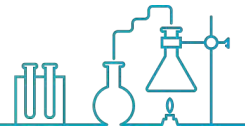
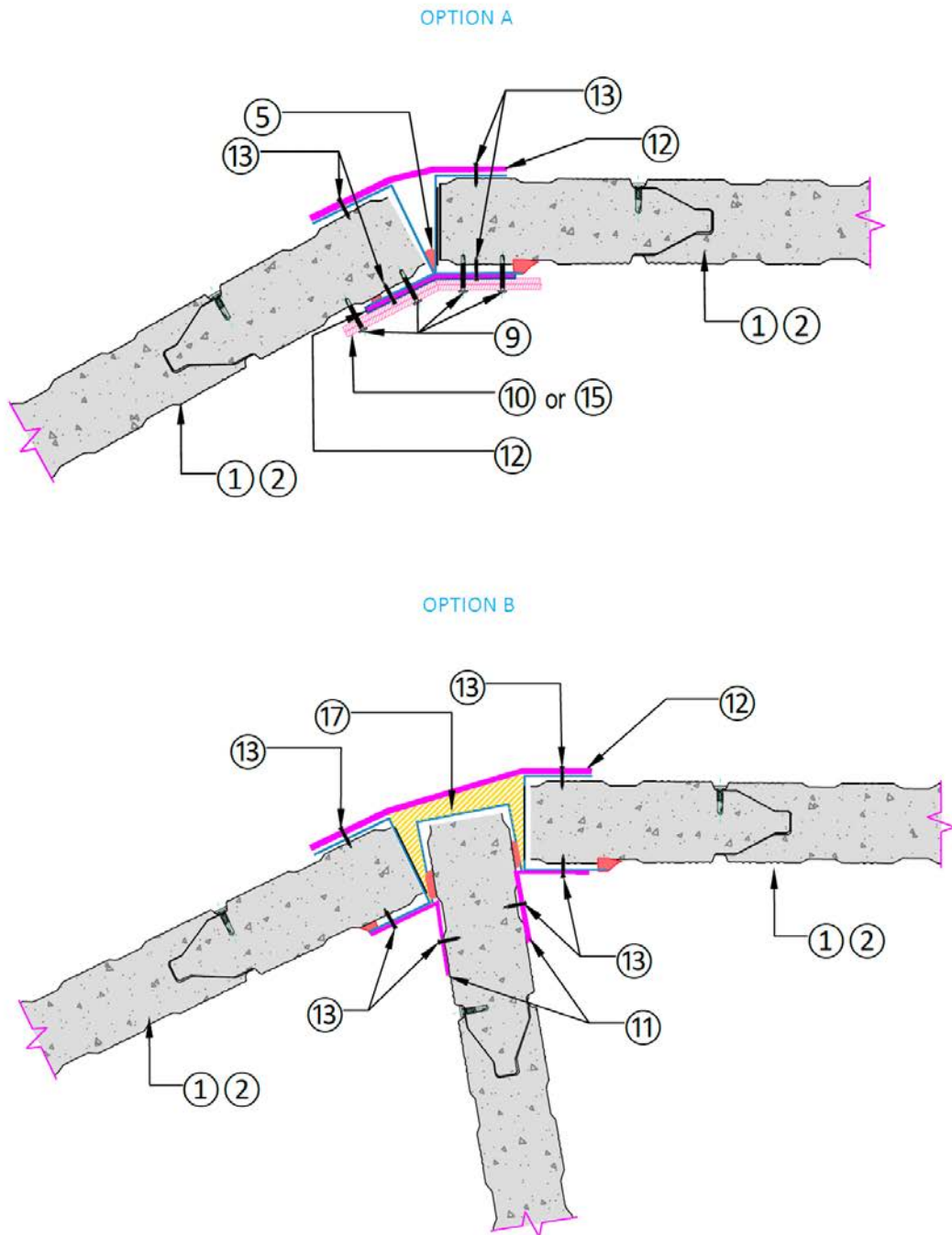


FIGURE 20:  
OBTUSE WALL DETAIL

### IRREGULAR CORNER DETAILS

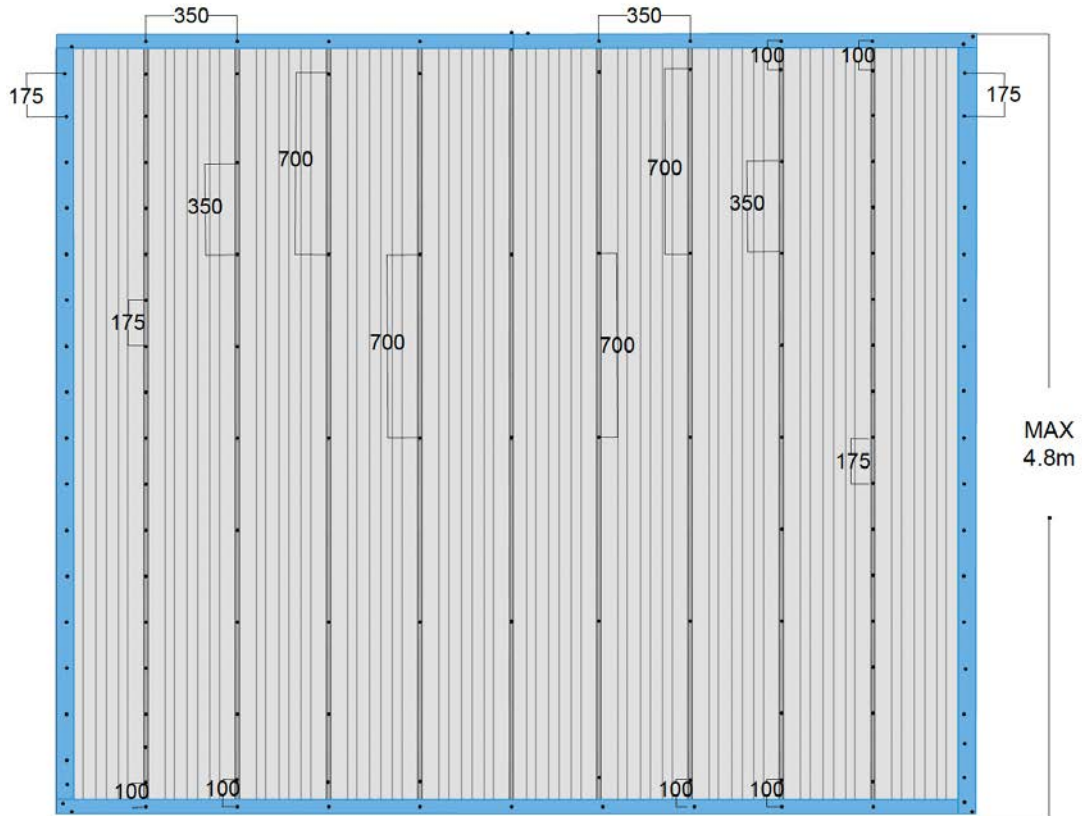




**FIGURE 21:**  
FOR WALLS UP TO 4800 MM

### 72MM PANEL FIXING DETAILS UP TO 4.8M

First joints from corner intersection or connection to structure.



#### FIXING SPACINGS

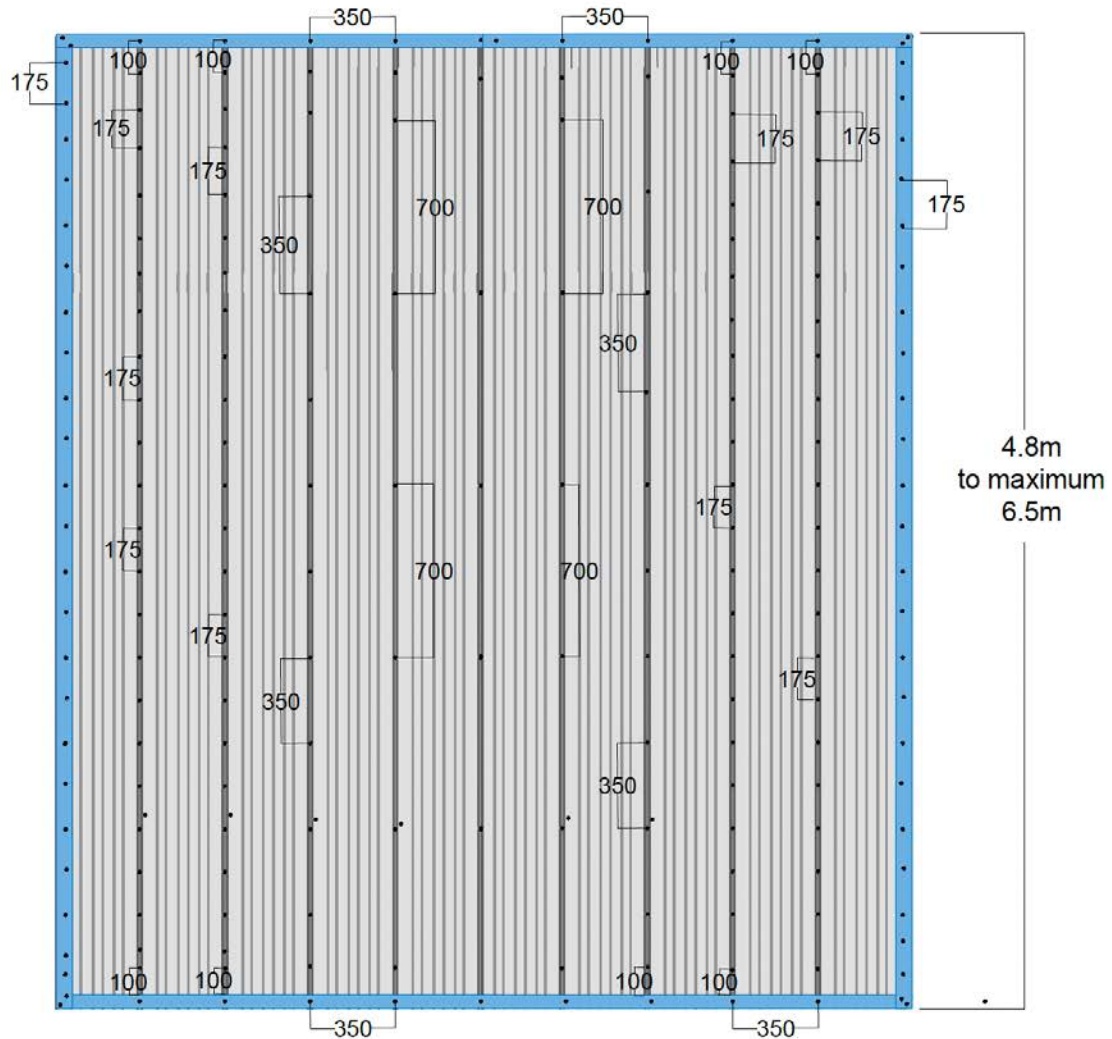
For 72mm walls below 4.8m high

- Vertical perimeter 16mm SDS at 175mm centres
- First panel joint 16mm SDS at 175mm centres
- Second panel joint 16mm SDS at 350mm centres
- Third joint and beyond 16mm SDS at 700mm centres.



**FIGURE 22:**  
FOR WALLS UP TO 6500 MM

### 72MM PANEL FIXING DETAILS 4.8 TO 6.5M



#### FIXING SPACINGS

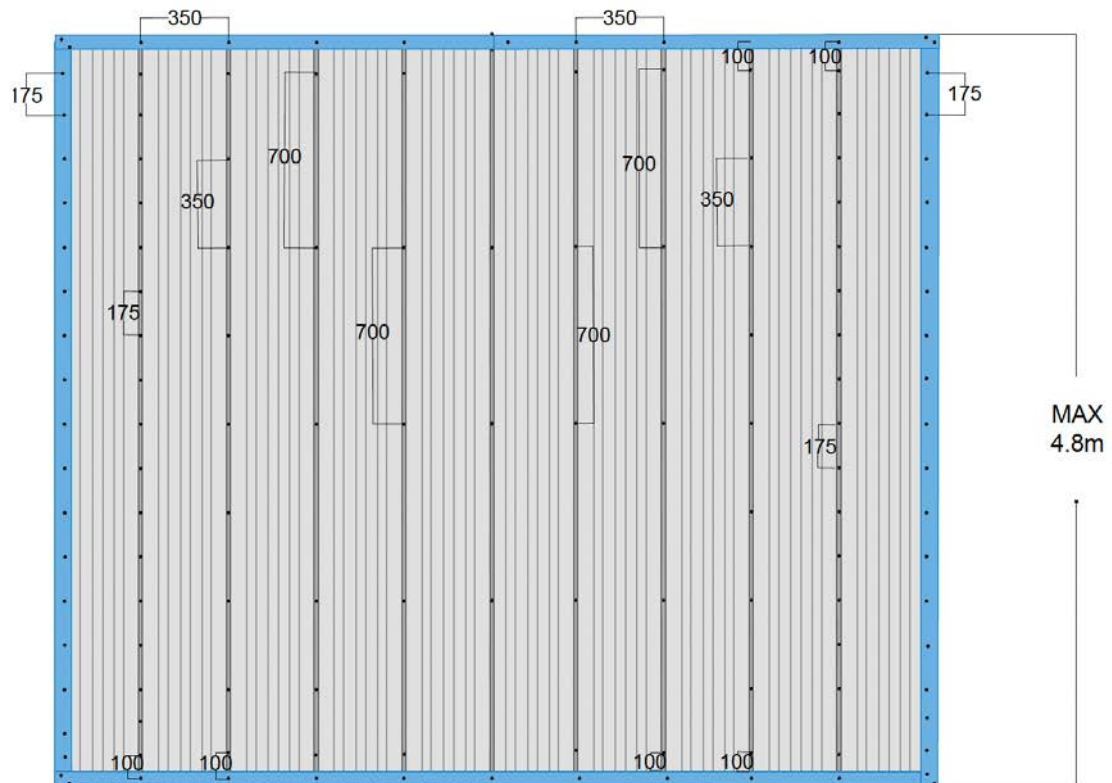
For 72mm walls 4.8 - 6.5m high

- Vertical perimeter 16mm SDS at 175mm centres
- First 2 panel joints 16mm SDS at 175mm centres
- Second 2 panel joints 16mm SDS at 350mm centres
- Third 2 joints and beyond 16mm SDS at 700mm centres.



**FIGURE 23:**  
FOR WALLS UP TO 4000 MM

### 62MM PANEL FIXING DETAILS



#### FIXING SPACINGS

For 72mm walls below 4.8m high

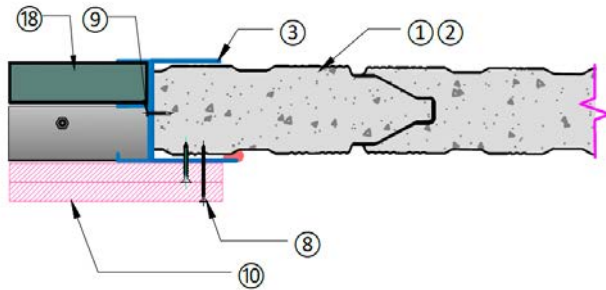
- Vertical perimeter 16mm SDS at 175mm centres
- First panel joint 16mm SDS at 175mm centres
- Second panel joint 16mm SDS at 350mm centres
- Third joint and beyond 16mm SDS at 700mm centres.





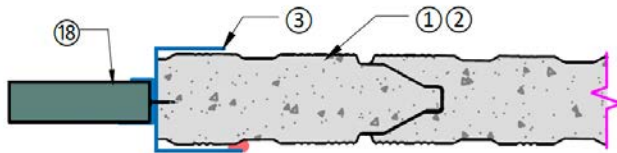
**FIGURE 24:**  
SUPAPANEL TRANSITION DETAIL SHAFT WALL PLAN VIEW

**SINIAT CONNECTION DETAILS TO SUPAPANEL**



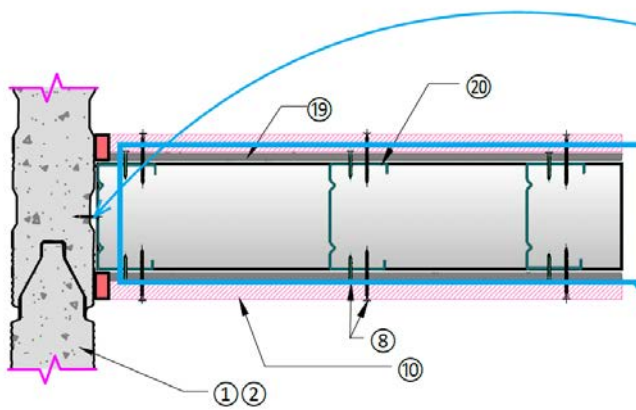
16 SDS at 600mm centres  
and 100mm from the ends

**FIGURE 25:**  
SUPAPANEL TRANSITION DETAIL SHAFT WALL PLAN VIEW



16 SDS at 600mm centres  
and 100mm from the ends

**FIGURE 26:**  
SUPAPANEL TRANSITION DETAIL SHAFTLINER WALL PLAN VIEW



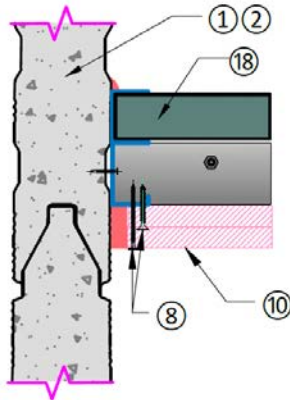
16 SDS at 600mm centres  
and 100mm from the ends

As per Siniat plaster docu-  
mentation



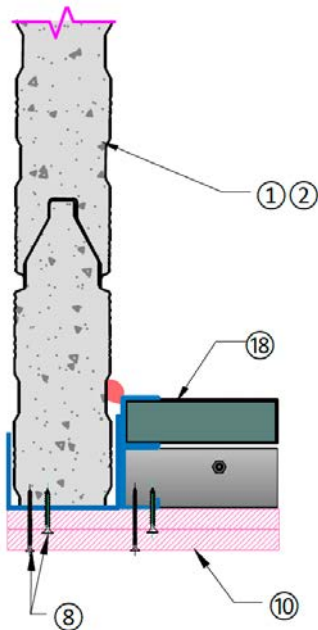
**FIGURE 27:**  
SUPAPANEL TRANSITION DETAIL SHAFTLINEER WALL PLAN VIEW

### SINIAT CONNECTION DETAILS TO SUPAPANEL



Fix together using steel framing screws into face of Supapanel at 200mm maximum centres vertically, and 100mm maximum from ends

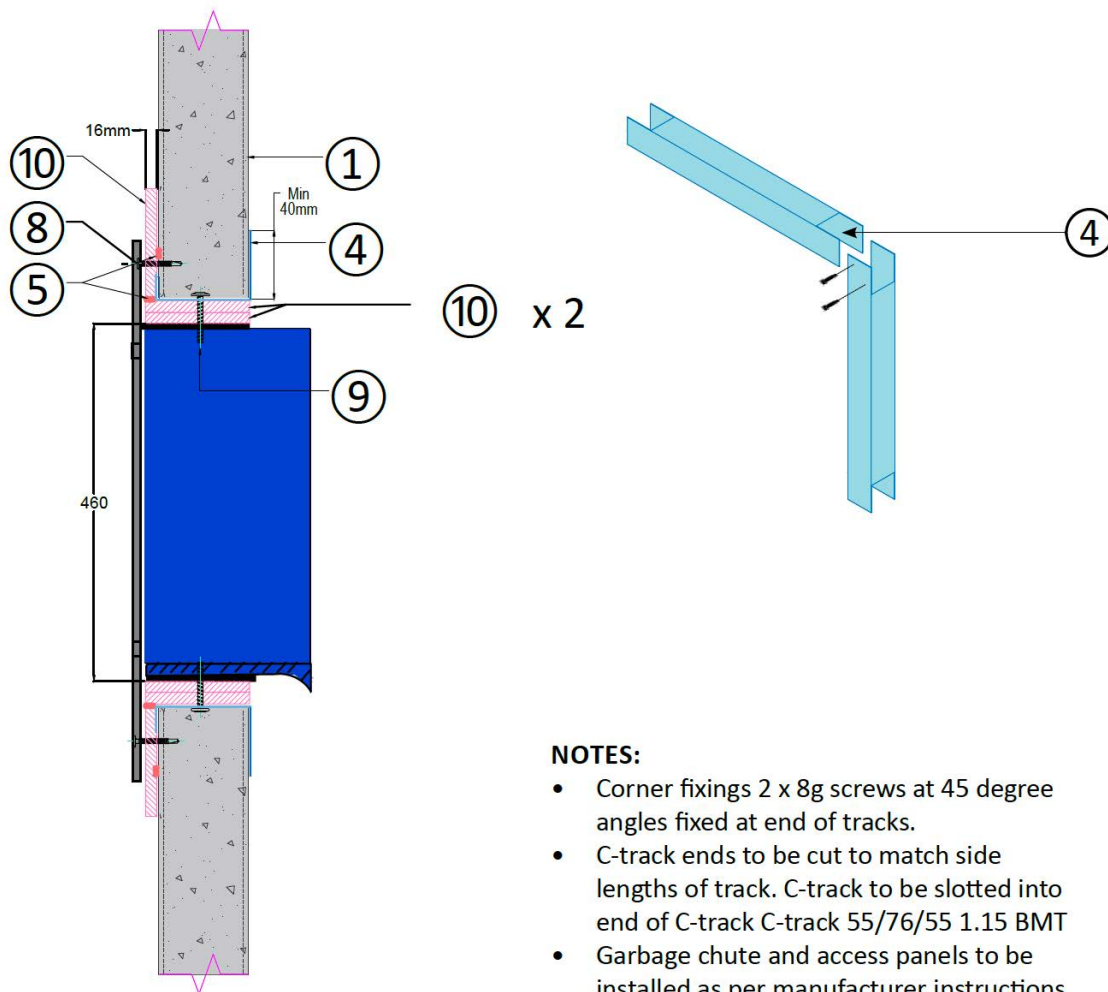
**FIGURE 28:**  
SUPAPANEL TRANSITION DETAIL SHAFTLINEER WALL PLAN VIEW



Fix together using steel framing screws into steel track at 600mm maximum centres vertically, and 100mm maximum from ends



**FIGURE 29:**  
SUPAPANEL ACCESS HATCH AND WASTE CHUTE DETAILS

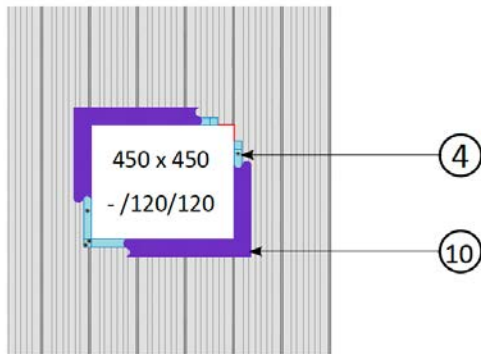


**NOTES:**

- Corner fixings 2 x 8g screws at 45 degree angles fixed at end of tracks.
- C-track ends to be cut to match side lengths of track. C-track to be slotted into end of C-track C-track 55/76/55 1.15 BMT
- Garbage chute and access panels to be installed as per manufacturer instructions



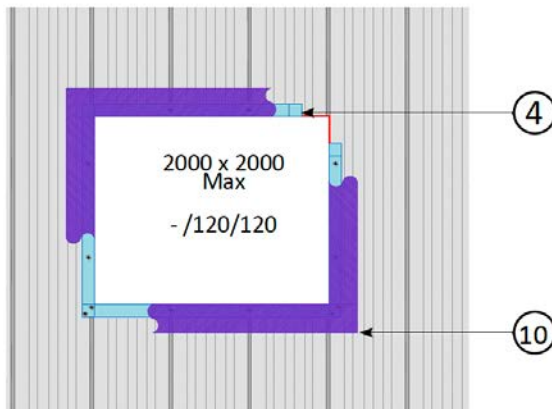
**FIGURE 30:**  
SUPAPANEL OPENING DETAIL



If thermal fire rating isn't needed around the perimeter, plasterboard is not required. However, it becomes necessary based on specific thermal rating requirements. Refer to the notes for details.

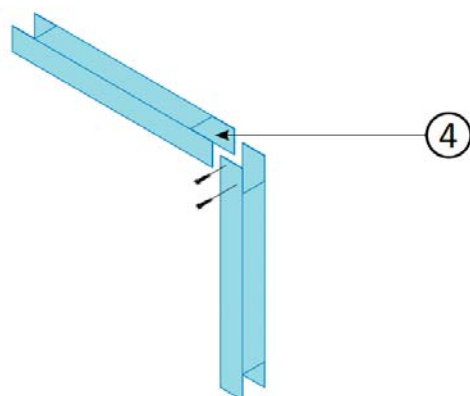
**NOTES:**

- If opening exceeds 450mm in either length or height then 16mm fire shield or 6mm magnesium board at 125mm is required.
- Additional layers of 125mm strips of fire rated plasterboard may be required to match wall thickness requirements for certified tested dampers.
- All track ends to overlap
- 72mm and 62mm Supapanel



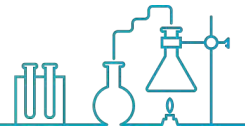
**NOTES:**

- Apertures 450-2000mm require FRPB or MgO strips.
- Additional layers of 125mm strips may be required to match wall thickness required for certified tested dampers.
- All track ends to overlap
- 72mm and 62mm Supapanel

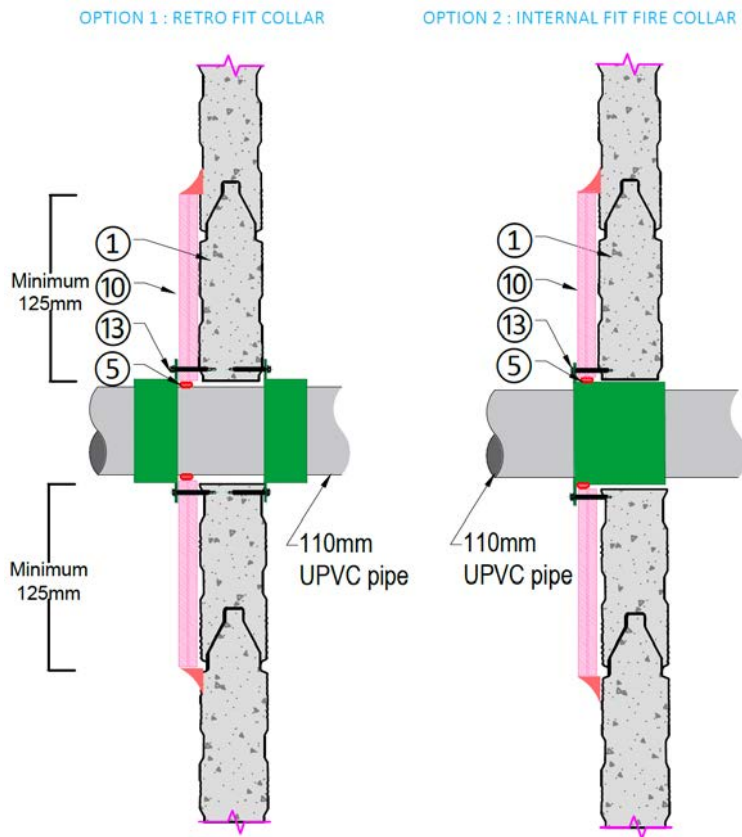


**NOTES:**

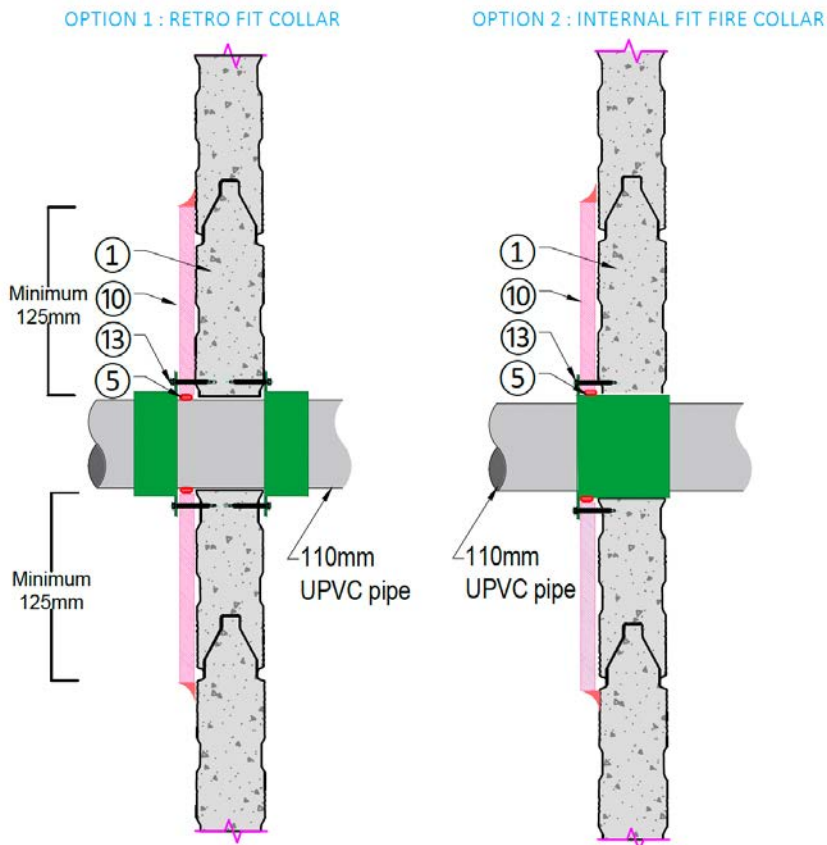
- Corner fixings 2 x 8g screws at 45 degree angles fixed at end of tracks.
- C-track ends to be cut to match side lengths of track. C-track to be slotted into end of C-track  
C-track 55 x 76 x 55 1.15 BMT

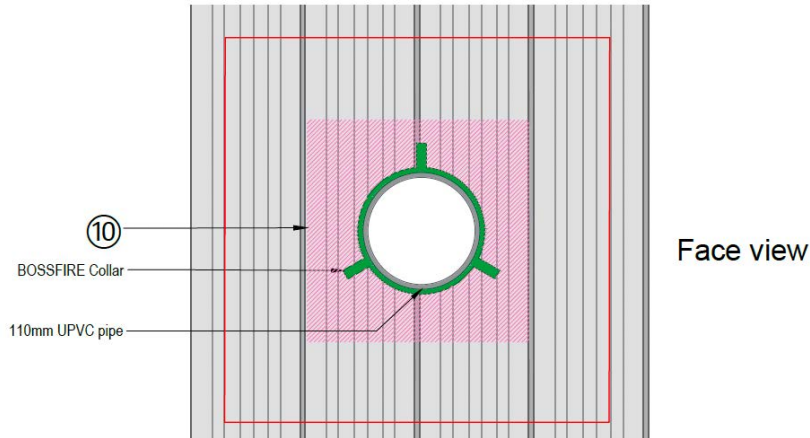


**FIGURE 31:**  
SUPAPANEL PENETRATION 62 MM



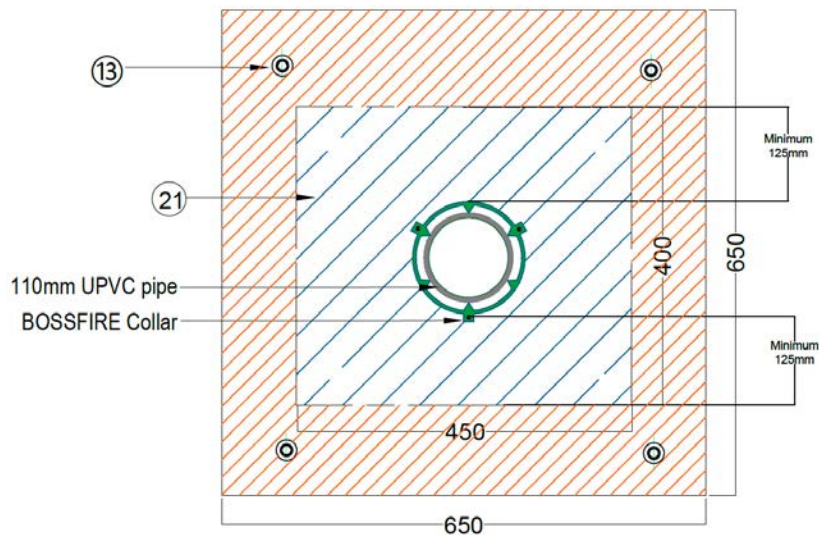
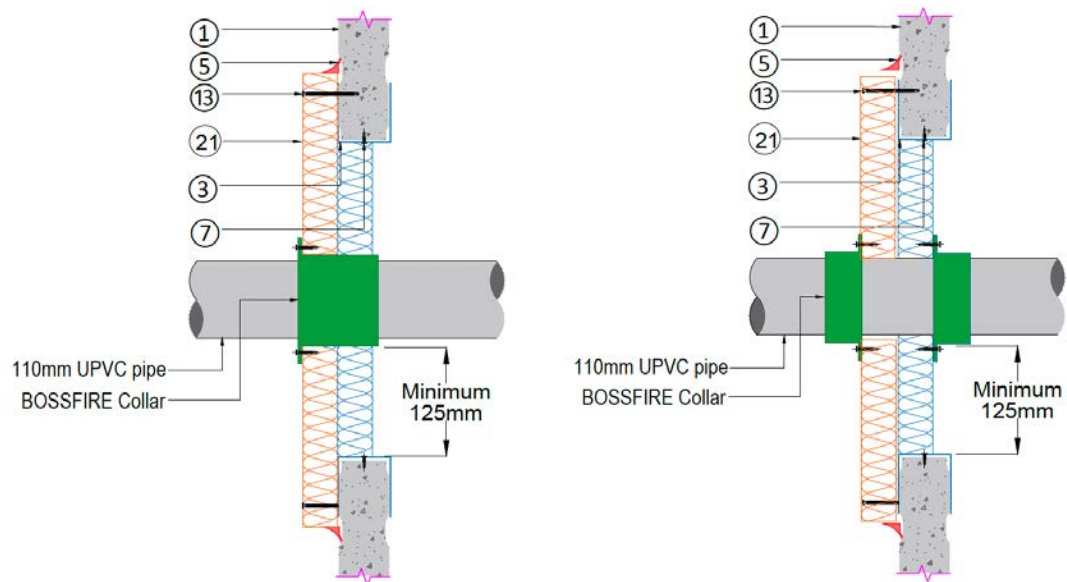
**FIGURE 32:**  
SUPAPANEL PENETRATION 72 MM





**FIGURE 33:**  
SUPAPANEL PENETRATION 62 MM

**ROCKWOOL BAT PASSIVE FIRE PENETRATION DETAILS**



\* Full fitting requirements as per suppliers details

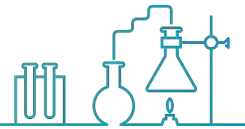
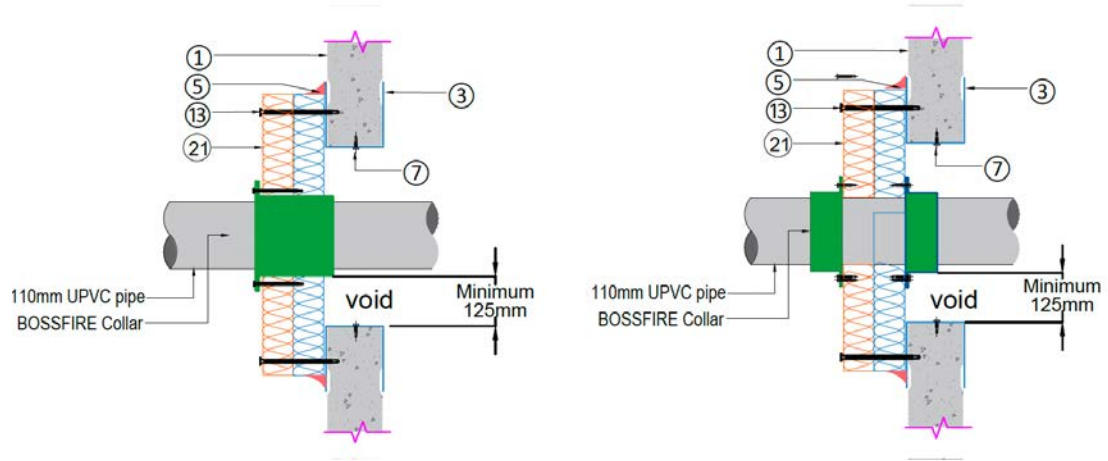
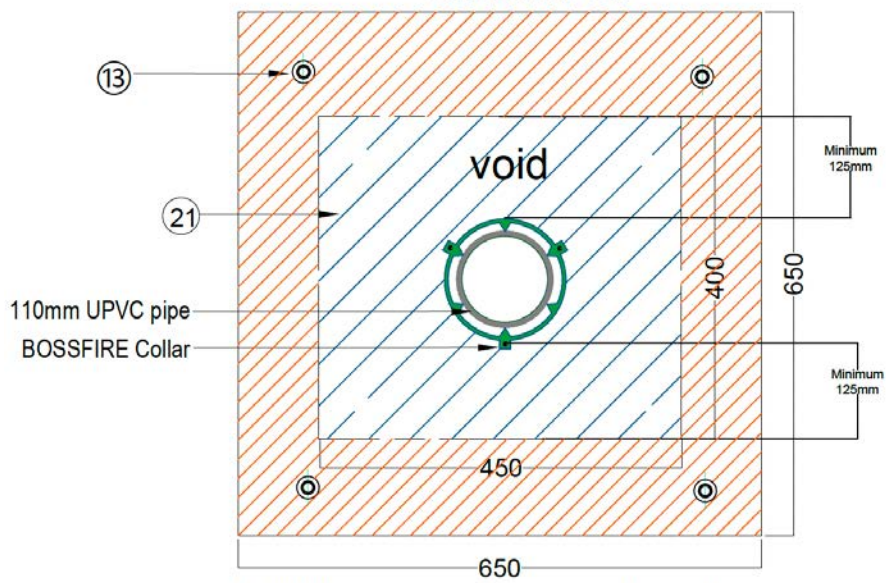


FIGURE 34:  
SUPAPANEL PENETRATION 72 MM

OPTIONAL ROCKWOOL BAT

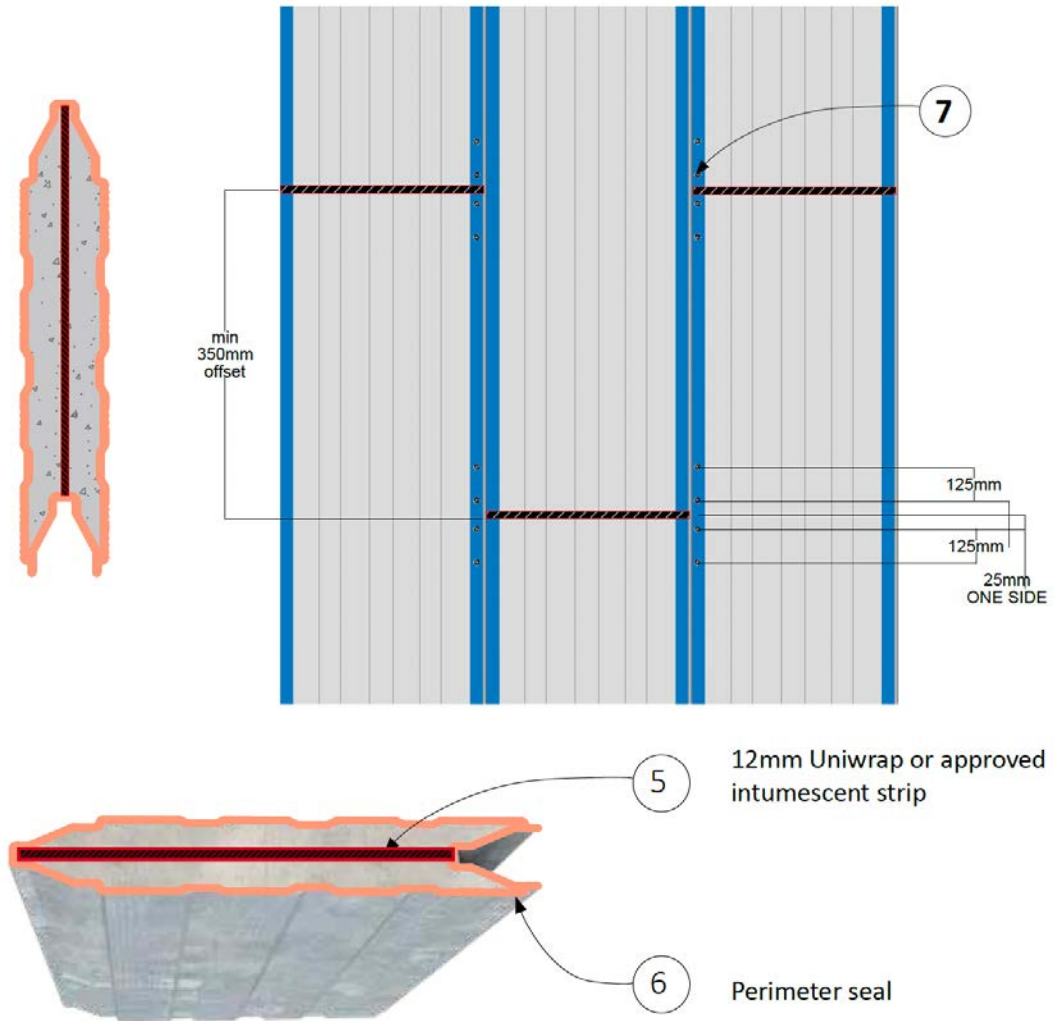


2 x 50mm Bat



\* Full fitting requirements as per suppliers details

**FIGURE 35:**  
MID PANEL JOINT







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## 14 DIRECT FIELD OF APPLICATION

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This assessment applies to the use of the Supapanel ceiling system as tested and evaluated above.

## 15 REQUIREMENTS

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The report details the methods of construction, test conditions and assessed results that would have been expected had the specific elements of construction described herein been tested in accordance with AS 1530.4.

It is required the support walls be made from construction capable of providing adequate support for the Supapanel system for the required FRL period.

It is required that any steel posts used is to be capable of providing adequate lateral support for the horizontal Supapanel wall system for the required FRL period.

Any further variations with respect to the size, construction details, loads, stresses, edge or end conditions, other than those identified in this report, may invalidate the conclusions drawn in this report.

## 16 VALIDITY

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This assessment report does not provide an endorsement by Ignis Labs Pty Ltd of the actual products supplied.

The conclusions of this assessment may be used to directly assess the fire resistance performance under such conditions, but it should be recognised that a single test method will not provide a full assessment of the fire hazard under all fire conditions.

Because of the nature of the fire resistance testing, and the consequent difficulty in quantifying the uncertainty of measurement, it is not possible to provide a stated degree of accuracy. The inherent variable in test procedures, materials and methods of construction, an installation may lead to variations in performance between elements of similar construction.

The assessment can therefore only relate to the actual prototype test specimens, testing conditions and methodology described in the supporting data, and does not imply any performance abilities of constructions of subsequent manufacture.

This assessment is based on information and experience available at the time of drafting. The published procedures for the conduct of tests and the assessment of test results are the subject of constant review and improvement and it is recommended that this report be reviewed prior to application.

The information contained in this report shall not be used for the assessment of variations other than those stated in the conclusions above. The assessment is valid provided no modifications are made to the systems detailed in this report. All details of construction should be consistent with the requirements stated in the relevant test reports and all referenced documents.



## 17 CONCLUSION OF PERFORMANCE CAPABILITY

Supapanel being a 425mm wide x 62mm and 72mm thick panel (nominal 350mm between panel-topanel joints) comprising of an aerated cement core encased in a 0.3 to 0.4mm thick mild galvanised steel 250 MPa skin with a 425 Kg concrete core. The 0.35 mm thick steel casing was subjected to testing to AS1530.4: 2014. The below table nominates the maximum vertical span for the 62mm and 72mm thick Supapanel panels.

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**TABLE 7:**  
SUPAPANEL APPLICATION SUMMARY

Supapanel wall thickness	62 mm Supapanel	62 mm Supapanel with one side caulked joint or 13 mm fire rated plasterboard	62 mm Supapanel with One 16 mm fire rated plasterboard on one face	72 mm Supapanel
Maximum wall span	4000 mm	4000 mm	4000 mm	6500 mm
Fire Resistance Level	-/60/60	-/90/90	-/180/120	-/120/120
Fire core door system	-/60/30	-	-/120/30	-/120/30
Penetration passive fire product	-/60/60	-/90/90	-/120/120	-/120/120
Access hatches	-/60/30	-/90/30	-/120/30	-/120/30
Ducting fire dampers	-/60/-	-/90/-	-/120/-	-/120/-

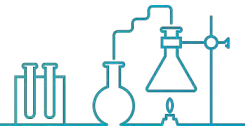


## 18 APPENDIX A

### Summary of Supanel Test Report and Listing of Supporting Test Report

The following information sources were used as supporting evidence in the evaluation of the system.

1. National Construction Code, Volume One, Building Code of Australia, Class 2 to 9 Buildings, 2022	
2. International Fire Engineering Guidelines, Australian Building Codes Board, Canberra, 2005	
3. Ian Bennie & Associates 2021: 085-55-S7,	June 21, 2022
4. Ian Bennie & Associates 2021: 085-51-S4,	November 30, 2021
5. Report Bird engineering assessment evaluation,	March 16, 2022
6. Warringtonfire FRT 200129,	June 10, 2020
7. PFits (FireTSLab) PF 19066 R4.0,	November 26, 2020
8. CSIRO FCO-2872,	August 10, 2016
9. FireTSLab PF 23046,	September 13, 2023
10. CSIRO FSU 1870,	August 23, 2019
11. Warringtonfire FAS 200022 R2.1,	April 6, 2020
12. Warringtonfire FAS 225350,	January 2, 2008
13. Warringtonfire FAS 200332 RI.0,	December 4, 2020
14. Warringtonfire FAS 190113 R7.0,	August 9, 2021
15. Warringtonfire FAS 190346 R1.5,	April 8, 2021
16. Warringtonfire FAS 190346 R1.5,	April 4, 2022
17. Warringtonfire RIP FRT 190033 R1.0,	February 27, 2019
18. Warringtonfire FAS 27776	April 11, 2023
19. Warringtonfire FAS 200126 R1.0,	July 3, 2020
20. Warringtonfire 49599300-7,	February 22, 2019
21. CSIRO-FCO-3356,	December 5, 2019
22. Warringtonfire FRT 190122 24 R1.0,	June 24, 2019
23. BRANZ FC 10241-001,	July 2, 2020
24. PYROPANEL FSRG A-14-946,	February 2, 2015
25. CSIRO FCO-3292,	February 4, 2018



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## 19 APPENDIX B – ROBERT BIRD ENGINEERING ASSESSMENT

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## CONDITIONS AND LIMITATIONS

This assessment report does not provide an endorsement by Ignis Labs of the actual product evaluated.

The conclusions of this assessment may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazards under all conditions.

Because of the nature of fire testing, and the consequent difficulty in quantifying the uncertainty of measurement, it is not possible to provide a stated degree of accuracy. The inherent variability in test procedures, materials and methods of construction, and installation may lead to variations in performance between elements of similar construction.

The assessment can therefore only relate to the actual prototype test specimens, testing conditions and methodology described in the referenced documents, and does not imply any performance abilities of constructions of subsequent manufacture.

This assessment is based on information and experience available at the time of preparation. The published procedures for the conduct of tests and the assessment of test results are the subject of constant review and improvement and it is recommended that this report is reviewed on or, before, the stated expiry date.

This report is prepared in good faith and with due care for information purposes only, and should not be relied upon as providing any warranty or guarantee. In particular, attention is drawn to the nature of the inspection and investigations undertaken and the limitations these impose in determining with accuracy the state of the building, its services or equipment and life safety.

Ignis Labs involvement in the Project is limited to the role outlined in our 'Scope of Service' of the quote. This report reflects that role.

Any reliance on, or use of, this report for purposes outside the scope of service is at the user's own risk.

Ignis Labs shall not be held liable for any loss or damage resulting from any defect of the building or its services or equipment or for any non compliance of the building or its services or equipment with any legislative or operational requirement, whether or not such defect or non-compliance is referred to or reported upon in this report, unless such defect or non-compliance should have been apparent to a competent engineer undertaking the evaluation of the type undertaken for the purpose of preparation of this report.

Ignis Labs has carefully reviewed and applied to the best of our ability the requirements of local Legislation, the current NCC and the Australian Fire Engineering Guidelines. Any changes to the reference documents including the NCC should warrant a review of this report.

This report is provided to the client at their request to evaluate the product performance under fire safety performance analysis. Ignis Labs provides no warranty that this report will be approved by building authorities, future legislation or changes to the building code that would impact this evaluation where a deemed to satisfy solution may be required, further evaluation is needed or be subject to a fire order or new legislation for its design.

Ignis Labs has relied upon the information provided by the client such as the architectural plans, building photos and construction detail. Ignis Labs has not audited these documents or the building and assumes the information provided by the client on these documents is accurate. Ignis Labs cannot provide any warranty that our report accuracy is maintained should the information provided have errors.



Page 70 of 70

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---- END OF REPORT ---

