Technical Due Diligence Report

For and on behalf of
CENTURIA FUNDS MANAGEMENT (NZ) LIMITED

196 Roydale Avenue
Christchurch

MAY 2021
P21-0103

Hampton Jones

Document Control

Document Revision History

REPORT TITLE	Technical Due Diligence Report
JOB NUMBER	P21-0103
CLIENT	Centuria Funds Management (NZ) Limited
CLIENT CONTACT	Gavin Fiddes Asset Manager

REV	DATE	REVISION DETAILS
0	10/05/2021	Initial issue to client

Authorisation for Issue

Author

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Position **Associate Director**

For and on behalf of Hampton Jones Property Consultancy Limited.

Peer Reviewer

Name Simon O Brien BSc (Hons) MRICS

Position **Director**

For and on behalf of Hampton Jones Property Consultancy Limited.

Executive Summary

i This report is concerned with the review of the building fabric, services and structure of 196 Roydale Avenue, Burnside, Christchurch, known as City Fitness. Specialist consultants have not been engaged to report on the building services and structure. The main observations have been incorporated within the following Executive Summary and have been undertaken from a building surveyor's perspective.

ii We also understand that a separate geotechnical survey or land investigation, has been instructed directly. We have not been party to this commission or had sight of their report at the time of this report being written.

iii The property is a purpose designed and built fitness center. It is constructed of a steel frame, with both pre-cast concrete paneling and powder coated aluminum joinery with double sheet glazing and aluminum composite paneling to the external elevations. The accommodation is single storey, built off an insitu concrete floor slab and covered by a profile steel roof sheet and associated parapet.

iv Overall, the building fabric is in good condition, albeit it is relatively modern and was only completed in 2019. There were no major issues noted with the building, although there is a small concern over the cracking to the floor slab, as noted externally. The area in question is the RH side of the south elevation (photo 2). The issue is in isolation to this location and the cause is unknown, however, we note that the site has previously been cleared of the existing materials and potentially filled to make up levels prior to construction. There is further deep excavation being undertaken opposite this elevation on an adjacent site. We further note that a separate Geotech / ground investigation has been commission and the client should appraise themselves of all the ground conditions prior to any purchase.

v Otherwise, with some short term reactive and longer term planned maintenance, the property should provide a secure asset.

vi The building services reviewed were as follows:

a. Mechanical services (heating & ventilation)
b. Electrical services (lighting, power, communications & security)
c. Fire protection services (manual call points, smoke detectors, sprinklers, hose reels & fire extinguishers)

vii Generally, from a building surveyor's perspective, the existing building services are in good condition. There was a specific query over the HVAC capacity and following our review on site and the as built drawings from the property file, there does not seem to be any issue. Clearly, any alterations to the on-site accommodation and facilities may need to be reflected in the HVAC provision being reviewed / upgraded. However, as it stands it appears suitable for its purpose.

viii The other issue on the services, is the disposal of the surface water drainage, which appears to be backing up. The on-site staff did not report any issues with WC or plumbing facility drainage, but this does not mean that an issue is not still occurring. Following, our on-site inspection it is apparent that there appears to be some debris within the gutters / downpipes and outlets. Potentially this is from the original build as some elements of expanded foam core cut out were noted to a downpipe outlet. This area can be readily rectified by some reactive maintenance; however, it is recommended that the below ground drainage system is checked for any other debris, blockages, or restrictions as a priority and by a specialist.

Contents

Section 1.0 Introduction

1.1 Survey Details

1.1.1 Instructions were received from Gavin Fiddes Asset Manager of Centuria Funds Management (NZ) Limited on 20th April 2021. The instructions were to provide a Technical Due Diligence report commenting on the condition of a City Fitness at 196 Roydale Avenue, Christchurch**Error! Reference source not found.**, in connection with a proposal for Centuria Funds Management (NZ) Limited purchasing the property.

COMMISSIONED BY	Gavin Fiddes Asset Manager on behalf of Centuria Funds Management (NZ) Limited
SITE ADDRESS	City Fitness at 196 Roydale Avenue, Christchurch
DATE	30th April 2021
WEATHER ON DATE OF SURVEY	Dry and Sunny
BUILDING SURVEY BY	Jason Brooks
PERSONS PRESENT	On site City Fitness staff
FORMAL DIALOGUE	With Gavin Fiddes and Mark Johnston of Centuria Funds Management (NZ) Limited

1.2 Extent of Instruction

1.2.1 The site survey was undertaken using visual aids only. All elements were inspected from the ground level. Where access to the roof was gained, the inspection was limited to areas which were safe. Roof voids, floor voids, confined spaces, services, ducts, or chambers were not inspected unless specifically detailed in the main body of the report.

1.2.2 Photographs were taken during the survey using a digital camera, samples of which are included in Appendix A. Additional photographs can be provided upon request.

1.2.3 Defects associated with weather-tightness issues are detailed within this report wherever noted during our inspection. However, it is not possible to guarantee that all areas of water penetration have been identified due to possible leaks from hidden pipe work, blocked drains, etc., which are not readily evident during the survey. Also, without any destructive investigation any underlying issues cannot be recorded.

1.2.4 The report has been compiled on an element by element basis, describing its construction and condition.

1.3 Definitions

1.3.1 The following is a definition of the comments as to the condition of the elements surveyed.

Good: Items which have suffered minimal weathering, wear, or decay, and should remain in such condition for at least another five years if maintained according to good practice and as per the manufacturer's recommendations where applicable. No repair currently needed (minor blemishes and small defects may still exist).

Reasonable/Satisfactory: Items that have worn through 'normal' use and weathering and are in commensurate condition to the building's age and use. Maintenance is required to prevent premature deterioration from occurring.

Poor: Items that are considered defective, worn, decayed, or weathered, either due to age, abnormal use, poor design, or lack of maintenance. Accelerated deterioration will occur unless remedial works are undertaken. These items generally represent significant defects, or health & safety items requiring further investigation, or urgent repair (items typically include weather-tightness issues, hazardous wiring, structural issues, etc.).

1.4 Reporting Conditions

1.4.1 This report is based on a visual inspection and covers the building fabric, super-structure, and permanently fixed items only, and does not cover any temporary fixtures, fittings, or chattels on or at the property. It is intended to be an overview of the general condition, focusing on defects of a reasonably significant nature/quantity and not minor defects. Minor defects are defined in NZS 4306:2005 as a matter which, in view of the age, type or condition of the building, does not require substantial repairs or urgent attention and rectification and which could be attended to during normal maintenance.

1.4.2 For the avoidance of any doubt, this report is not a structural or geotechnical survey and does not cover the inspection or testing of any services unless specifically identified in the main body of the report. All comments relating to services are a guide only and should not be taken as verification that they are installed in accordance with current regulations. All recommendations should be verified by a suitably qualified engineer prior to any physical works proceeding.

1.4.3 No intrusive or destructive investigation has been undertaken, and as such, we have not inspected woodwork or other parts of the structure or services that are covered, unexposed or inaccessible. Therefore, we are unable to report that any such part of the structure is free from defect or deleterious materials.

1.4.4 Signs of water ingress were searched for during our survey. However, this report cannot warrant that the building is free from water penetration from defective roofing, cladding, rainwater goods, rising damp or the like.

1.4.5 Where recommendations are provided, these are for the most appropriate repair in consideration of the current use and occupation of the site. These are not intended to be a specification or design, and therefore cannot be held liable for any repairs/maintenance implemented either by Hampton Jones or any other third party without full design being undertaken.

1.4.6 This report is provided for the use of Centuria Funds Management (NZ) Limited only and may not be used by others without written permission. Hampton Jones accepts no liability to third parties who may act on the contents of this report.

1.4.7 References made to contamination and deleterious materials are for guidance only. Purchasers should satisfy themselves in relation to the condition and extent of contamination that may exist at the property.

1.5 Exclusions

1.5.1 This report specifically excludes any investigation or advice on the following:

i Value of the property.
ii Design of the property.
iii Code Compliance issues.
iv Design for Maintenance or Repair works and long-term maintenance.

v Statutory Notices, such as Notice to Fix or Compulsory Purchase Orders.
vi Local authority files, including legal title, LIM or PIM reports.
vii Valuations or Rates.
viii Building Consent issues, including Identification of Illegal Works.
ix Resource Consent matters.
x Contamination or deleterious materials.
xi Geotechnical matters/ground stability.
xii Restrictive Covenants or Rights of Way.
xiii Design or value of the surrounding area or environment.
xiv Comment as to suitability of purpose for the existing or any proposed use.
xv Lease obligation and financial commitments.
xvi Body Corporate matters and any shared financial commitments.

1.6 Areas Not Accessed

1.6.1 The following areas were not accessed:

i Concealed voids / areas of structure not generally visible.
ii Ceiling voids.
iii Female changing and WC's, as assumed identical to male facilities, upon speaking with onsite staff.

Section 2.0 Property Description

2.1 Building History

2.1.1 Building consent **BCN/2017/9242** was issued on 21 June 2018, to Gravitas Consulting Limited for **Construction of city fitness gym.**

2.1.2 A final council inspection was undertaken on 1 July 2019.

2.1.3 Code Compliance Certificate was issued on 11th July 2019, following several Certificate of Public Use certificates.

2.2 Location

2.2.1 Lot 16 DP 82036 196 Roydale Avenue, Burnside, Christchurch. Earthquake zone 2, Exposure Zone C, wind zone medium and climate zone 3.

2.3 Age, Type and Size of Property

2.3.1 The property is approximately 2no. years old (completion 2019). The site area is 7576m2, with a building floor area of 2,000 m^2 and landscaping of 996 m^2. The building is a commercial fitness centre, single storey, with associated car parking.

2.4 Accommodation and Internal Layouts

2.4.1 Large main gymnasium, with weight and fitness classrooms off. Male, female, and accessible user changing and wc facilities, staff office, administration and welfare areas and a main reception at the entrance.

2.5 Construction and Finishes

2.5.1 The building is constructed of a main steel portal frame construction, exposed internally to most part and having cross tension cabling to restrain. The west elevation externally, is exposed precast concrete panel with a paint finish, the north elevation has horizontally fixed aluminum composite panel cladding with powder coated aluminium double glazed joinery associated.

2.5.2 The east elevation is powder coated aluminium double-glazed joinery with part aluminium composite cladding and insol solaris 200 louvers powder coated matt black, added over in part.

2.5.3 The southern elevation has powder coated aluminium double-glazed joinery and part horizontally fixed aluminum composite cladding.

2.5.4 The roof is a dual pitch, Kingspan profile steel sheet with butynol / TPO sheet to perimeter gutters. The roof is boarder by a main parapet upstand, to form a concentric horizontal appearance to the building perimeter. The interior of this parapet is clad with profile steel sheet and the top provided with a colour steel metal cap and apron flashing. The low-level canopies have been provided with a fibre cement sheet soffit with a paint decoration over and a butynol / TPO sheet covering to the canopy roof and gutter.

2.5.5 Surface water is collected from the roof and canopies, within internal gutters to the roof and canopy area, however, they discharge through the structure to external rain heads and downpipes.

2.5.6 Internal wall finishes comprise of standard gib plasterboard with a paint finish to most circulation and usage areas, with gib aquiline paneling provided with paint finishes to wet areas, kitchen and changing rooms. The internal segregation comprises of light weight timber stud walls and some ceilings, with standard plasterboard over with paint decorations. Part ceiling areas have metal ceiling battens and isolated areas have acoustic tiling. Particle board has also been provided local to the hot water cylinders within the roof access void above the male changing rooms.

2.5.7 The main floor construction is insitu concrete slab, with either carpet tiles over to main work out areas or non-slip vinyl sheet to wet areas.

2.6 Tenant's Alterations/ Fit-Out

2.6.1 We are assuming that this building has been purpose built and no specific tenant fit out is applicable.

2.7 External Areas and Boundaries

2.7.1 Approximately 150 no. car parking spaces have been provided, with some accessible adjacent to the main entrance and cycle racks also provided.

2.7.2 The car park is accessed via a private road, off Roydale Avenue and is boarded by pre-cast concrete kerb edgings.

Section 3.0 Elemental Description and Condition

3.1 Structure

3.1.1 Good. Steel portal frame and diagonal cross tension bracing. Galvanized U purlins, to roof and tray to external wall structure. Frame set and bolted to the concrete slab footings.

3.2 Roofs and Roof Areas

3.2.1 Good. The roof is a dual pitch, Kingspan insulated profile steel roofing sheet. The roof is boarder by a main parapet upstand, to form a concentric horizontal appearance to the building perimeter. The interior of this parapet is clad with colorsteel profile steel sheet and the top provided with a colour steel metal cap flashing over, set to a fall and a colorsteel apron flashing to the base over the main roof. The low level, cantilevered canopies have been provided with a fibre cement sheet soffit with a paint decoration over and Viking enviroclad TPO membrane sheet covering to the canopy roof and extended into the gutter. The roof is accessed via a Monkeytoe access hatch, located above the male changing rooms.

3.3 Rainwater System

3.3.1 Good. A Kingspan engineered, internal gutter system comprising of a Viking enviroclad TPO membrane sheet to perimeter internal gutters, over a timber framed gutter, discharging through the roof parapets and overhanging canopies, to metal rainhead and subsequent 150 mm PVC downpipes.

3.4 External Walls and Cladding

3.4.1 Good. The west elevation externally, is exposed precast concrete panel with a paint finish, the north elevation has colorsteel horizontally fixed aluminum composite panel cladding with powder coated aluminium double glazed joinery. The east elevation is powder coated aluminium double-glazed joinery with part aluminium composite cladding and insol solaris 200 louvers powder coated matt black, added over in part. The southern elevation has powder coated aluminium double-glazed joinery and part colorsteel horizontally fixed composite cladding.

3.4.2 Some aluminium composite panels with a polyethylene or plastic core have been linked to fire risks in tall buildings. ACP is a common material used for many purposes, including building signage, architectural features, and full building facades. Aluminum composite panels (ACP) are also often used as a cladding material on buildings as in this case. Over the last twelve / eighteen months several investigations have been carried out by several government agencies into buildings with ACP cladding. None of the buildings assessed so far qualify as unsafe or dangerous.

3.4.3 There are potential Issues with ACP cladding, however, given that this structure is single storey, has very little internal segregation and there is a decent level of both fire detection and fire-fighting precautions provided, this risk is minimal. There are many types of ACP, and most are:

Polyethylene (PE core) panels that are combustible

Fire rated (FR) panels with a modified less combustible core

Non-combustible panels.

3.4.4 Included within appendix B is the Ministry of Business, Innovation and Employment MBIE, paper Reaction to fire performance of aluminium composite panels Issue date: 6 May 2016.

3.5 Doors, Windows, and Joinery

3.5.1 Good. Powder coated aluminium double-glazed joinery throughout.

3.6 Office Finishes

3.6.1 Good. Lightweight timber frame with part metal ceiling battens, covered with plasterboard and painted.

3.7 Staff Facilities

3.7.1 Good. The staff benefit from 2no. administration offices, a WC / changing room and kitchenette.

3.8 Public Fitness Accommodation & Finishes

3.8.1 Good. Includes a full height, engineered timber farmed wall to segregate the main gym area from the group fitness area.

3.9 Floor Construction & Finishes

3.9.1 Good. An engineered insitu concrete slab throughout designed for a superimposed dead load of 0.5 kPa and a superimposed live load of 5kPa. Provided with individual concrete footings for vertical steel work, to a depth of 1800mm.

3.9.2 Also provided with falls to incorporated floor drains within the wet areas, discharging surface water away within the below ground system and covered with non-slip vinyl sheet. The remainder of the floor areas have carpet / acoustic sound absorbing tiles.

3.10 Internal Finishes General

3.10.1 Good. Standard gib plasterboard to main, non-wet areas, with gib aquiline ceilings and walls to the changing and welfare facilities.

3.10.2 Timber sheet particle board provided over the male changing rooms to facilitate access to the roof above.

3.11 Accessible Facilities

3.11.1 Good. Dedicated car parking close to the entrance, level, and accessible access throughout and accessible reception, changing and welfare facilities.

3.12 Car Parking and External Boundaries

3.12.1 Good. There are approximately 150 no. regular and accessible car parking bays on site. They are boarded by raised, pre-cast concrete edgings and the surface areas laid to slight falls to drain surface water through land drains and into below ground surface drainage systems.

3.12.2 Three sides / boundaries to the site, are open, to either Roydale Avenue, the private road to the sub section or the adjacent development site. The east boundary, however, is enclosed by differing timber fence types that separate the site from several residential properties.

Section 4.0 Design and Specification (Building & Structure)

4.1 Quality and Standards Generally

4.1.1 No issues are apparent. The quality and standards are more than satisfactory.

4.2 Space Planning and Adaptability

4.2.1 Assuming that the premises are purpose built and therefore, are suitable for their intended purposes. Given the location and the space surrounding the build on the plot, there appears to be great scope for adaptability and extension if so required.

Section 5.0 Statutory Matters

5.1 Code Compliance

5.1.1 Building consent BCN/2017/9242 was issued on 21 June 2018, to Gravitas Consulting Limited for Construction of city fitness gym.

5.1.2 A final council inspection was undertaken on 1 July 2019.

5.1.3 Code Compliance Certificate was issued on 11th July 2019, following several Certificate of Public Use certificates.

5.2 Fire Precautions and Means of Escape

5.2.1 Good. Standard fire-fighting elements are present, externally visible fire panel, internal dry powder portable fire extinguishers, sprinkler systems (within room within rooms) smoke and fire detection systems and emergency lighting / exit hardware over external doors, throughout.

5.3 Health & Safety

5.3.1 Good. No issues are apparent. However, access to the roof could be improved by the provision of a static ladder from the roof access hatch to the staging over the male changing rooms. This will illuminate the need to carry a separate ladder up the existing pull-down ladder in the area.

5.4 Provisions for Disabled Persons

5.4.1 Good. The site is level throughout, including the main access and emergency egress ways, and all internal facilities. There are also dedicated car parking spaces local to the main entrance and changing / welfare facilities available internally.

5.5 Energy Efficiency

5.5.1 Good. As the premises are relatively modern, we are assuming that the materials and systems incorporated within have been designed and installed with the regard to energy efficiency. However, there are no apparent specific energy efficient elements of facilities of note.

5.6 Deleterious and Hazardous Materials

5.6.1 Following our review of the property file it is apparent that the ground, prior to the construction of the existing property, was contaminated. We also understand that a separate Geotech / ground investigation has been undertaken and therefore, we have not made any comment within this report.

5.7 Warranties

5.7.1 We have not been provided with copies of any warranties. However, your solicitor may be able to advise if any collateral warranties or other types of warranty are still available. Your solicitor should also be

able to advise if any warranties can be assigned to a new purchaser or if the levels of professional indemnity cover provided by the design team are considered adequate.

5.8 Tenure

5.8.1 The leasing provisions have not been reviewed as part of this instruction.

5.9 Tenant's Alterations

5.9.1 As before described, we are assuming that this property has been purpose designed and built, therefore, we have not included an assessment of any tenant's alterations.

5.10 Dilapidations Issues

5.10.1 We have not been provided with a copy of the lease agreement and therefore are unable to advise specifically on any dilapidation issues. However, we recommend you obtain from the vendor a schedule of condition and review it in consideration of the comments contained within this report.

5.11 Building Management and Maintenance

5.11.1 The building is relatively new, and the general structure would be considered low maintenance, given the number of pre-finished elements. However, there is some evidence of maintenance being undertaken, given the use by the public. As with every building, a regular planned system of preventative maintenance should be encouraged and at the time of writing some small amount of reactive maintenance would be of benefit.

5.12 Adjoining Owner Issues

5.12.1 At the time of our inspection there were no other buildings present on the lot or sub-division. The property in question is within thirty meters of the boundary with a residential property but there are no issues apparent.

5.12.2 The remaining sites within the sub-division appear to be in the early stages of construction, with some ground works being carried out on the same day as our inspection.

5.13 Further Investigations

5.13.1 It is recommended that further investigation is carried out to the below ground drainage system and a review of the ground conditions generally, given the cracking noted to the floor slab to the south / east corner of the building.

Section 6.0 Structural Report

6.1 Introduction

6.1.1 A non-invasive visual inspection was undertaken from a building surveyor's perspective. The purpose of this inspection was to investigate and report on the structural condition of the building generally.

6.2 Design and Construction

6.2.1 The buildings were designed and constructed as before described in section 2 of this report.

6.3 Structural Condition and Observations

6.3.1 The building structure is generally in good condition and no adverse observations were made. We would, however, reiterate that there is a slight concern over the ground floor concrete slab cracking to the right-hand side of the south elevation. There are no defects noted in any other area, either internally or externally, however at the time of our site inspection there was some fairly heavy equipment undertaking some deep bore holes to the adjacent site on the south side of the site.

6.4 Recommended Actions

6.4.1 We would recommend further investigation to the above area is undertaken in conjunction with the review of the separate Geotech / ground condition report prepared by others.

Section 7.0 Mechanical Services

7.1 Mechanical Overview

7.1.1 A non-intrusive visual inspection was undertaken from a building surveyor's perspective. There were no issues encountered other than the potential backing up of the surface drainage system and given the suspected cause of this, construction material build up, the below ground plumbing drainage as well.

7.2 Recommended Actions

7.2.1 We would recommend that the entire drainage system is inspected and reviewed by a specialist, to confirm whether there are any issues present.

Section 8.0 Electrical Services

8.1 Electrical Overview

8.1.1 A non-intrusive visual inspection was undertaken from a building surveyor's perspective and no issues were apparent nor recorded.

8.2 Recommended Actions

8.2.1 None.

Section 9.0 Communications, Security and Ancillary Services

9.1 Communications, Security and Ancillary Overview

9.1.1 A non-intrusive visual inspection was undertaken from a building surveyor's perspective and no issues were apparent at the time of our inspection. There is an audible alarm and associated panel and an integrated sound / speaker system.

9.2 Recommended Actions

9.2.1 None.

Section 10.0 Fire Protection Services

10.1 Fire Protection Overview

10.1.1 A non-intrusive visual inspection was undertaken from a building surveyor's perspective. There were no as-built services documents or operation and maintenance manuals available for review to assist with the evaluation on site. Therefore, the latest design drawings and documents included within the property file were used to identify plant and equipment locations.

10.1.2 The fire protection services systems can be summarized as including the following:

i Externally visible fire panel,

ii Internal dry powder portable fire extinguishers,

iii Sprinkler systems (room within rooms),

iv Smoke detection system,

v Fire detection systems,

vi Emergency / exit lighting,

vii Hardware over external doors.

10.2 Recommended Actions

10.2.1 None

Appendices

Appendix A Photographs

Photograph 1

General view of the property

Photograph 2

Suspect crack within the concrete floor slab to the right-hand side of the southern elevation, externally.

Photograph 3

Drainage system appear block and is backing up.

Photograph 4

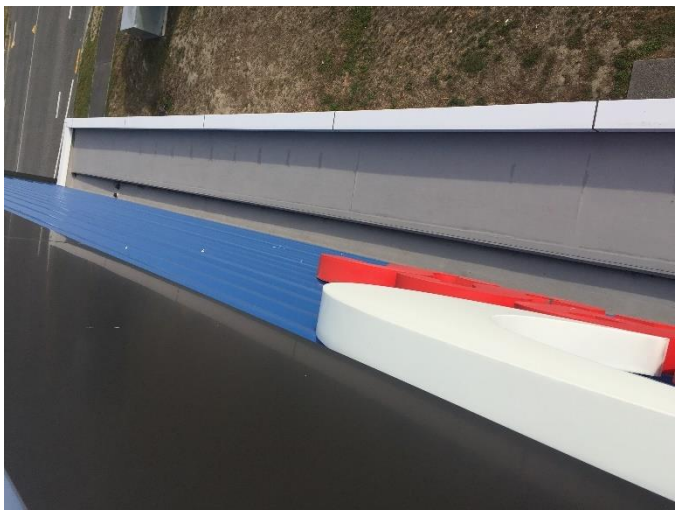
Overview of the main roof

Photograph 5

Overview of the perimeter roof parapet

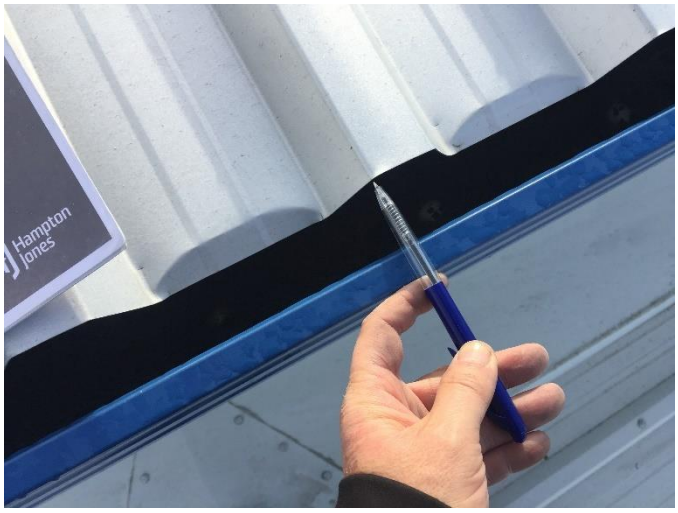
Photograph 6

Example of the cantilevered canopy, from above



Photograph 7

Example of the cantilevered canopy, from above



Photograph 8

Limited access to clear out gutter.

Photograph 9

Debris and ponding water within the main roof gutters

Photograph 10

Apparent left-over construction building materials within gutter and to isolated locations on the roof sheets

Photograph 11

The commencement of corrosion around a roof sheet fixing

Photograph 12

The underside of the insulated Kingspan roof sheet, as viewed from the gutter.

Photograph 13

The colorsteel parapet cap flashing was designed to sit at a fall, but in some instances the constructed fall is incorrect.

Photograph 14

The colorsteel parapet cap flashing was designed to sit at a fall, but in some instances the constructed fall is incorrect

Photograph 15

Apparent retrospective mastic repairs to roof sheet / flashing joints. Should only be deemed as a temporary repair though. No evidence to the underside of any issues

Photograph 16

Apparent retrospective repair to the TPO within the gutter. Repair is acceptable and no evidence internally was noted

Photograph 17

A rather large gasket / mastic infill joint, between differing cladding members. This will have a limited life expectancy

Photograph 18

Impact damage, presumed from foot traffic to the roof sheets

Photograph 19

Air Conditioning condensers, example

Photograph 20

The Monkey toe roof access hatch

Photograph 21

Example how penetrations through the roof sheets have been treated

Photograph 22

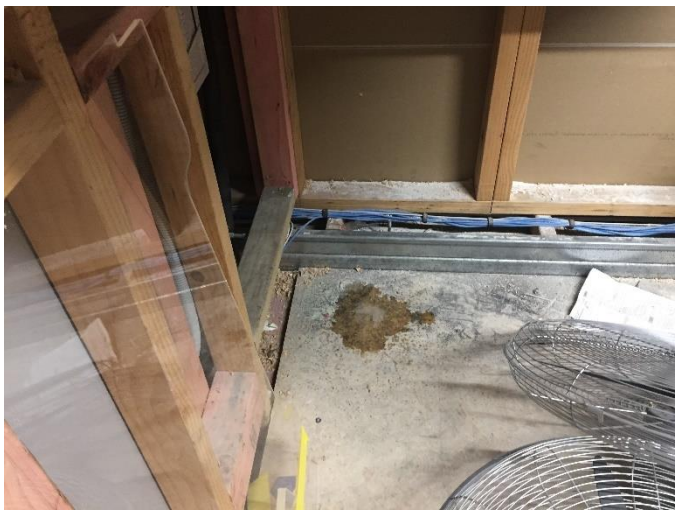
Internally, above the male changing rooms, showing the room access provision

Photograph 23

The ceiling void above the changing rooms

Photograph 24

Air conditioning duct insitu



Photograph 25

The above air conditioning duct is leaking

Photograph 26

Internal segregation extended to within the roof void

Photograph 27

Underside of the insulated Kingspan roof sheet

Photograph 28

Example interaction of external cladding panels and louvres

Photograph 29

Example interaction of external cladding panels and louvres

Photograph 30

The underside of the external cladding panel, at a corner junction

Photograph 31

Low level exposed concrete slab face beneath a shopfront joinery unit

Photograph 32

Canopy room drainage from above, through structure and into 100 mm PVC downpipe

Photograph 33

Downpipe discharge in to below ground system

Photograph 34

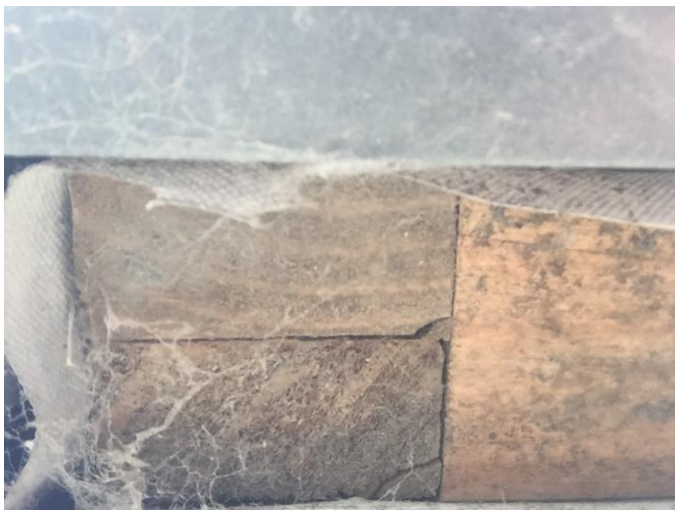
Level main entrance, adjacent to accessible car parking spaces. Insitu concrete laid to slight fall away from the building but also has a slot drain incorporated at the building entrance

Photograph 35

Slot drain insitu, will need period clearing out of debris to remain effective

Photograph 36

Acceptable ground clearance for external cladding relative to hardstanding



Photograph 37

The underside of the external cladding showing exposed timber framework

Photograph 38

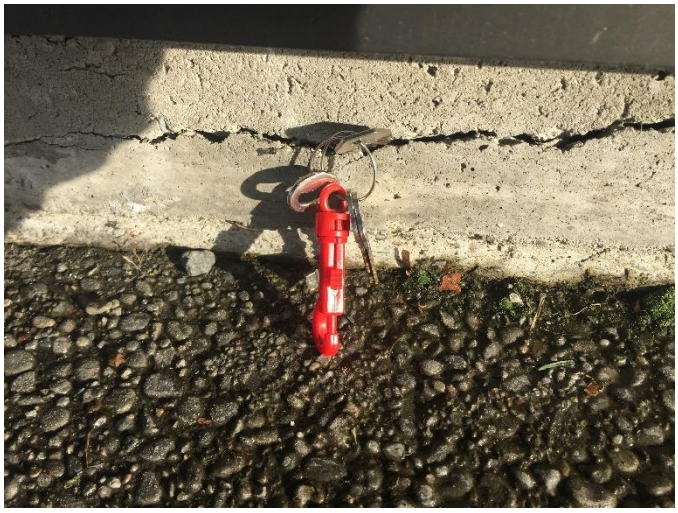
Vent insitu, effective but condenser internally requires minor overhaul

Photograph 39

Close up of the above vent

Photograph 40

Location of the suspect crack to the concrete floor slab on the south elevation



Photograph 41

Representation of the crack in terms of depth

Photograph 42

Minor corrosion spotting beginning to painted metal soffit

Photograph 43

As a reference, the face of timber shuttered insitu concrete floor slab

Photograph 44

The concrete panel to the west elevation

Photograph 45

Example of roof drainage, penetrating the parapet and discharging into a rain head, complete with overflow

Photograph 46

Example of debris found within the drainage system. Apparent foam core cut out, potentially left over from original construction

Photograph 47

Interaction of metal cladding and concrete panel

Photograph 48

Potential minor repair to concrete panel or infill of securing anchor points

Photograph 49

Construction movement joints provided between concrete panels

Photograph 50

Drainage inspection point

Photograph 51

The above inspection point filled with water

Photograph 52

Potential vehicle damage

Photograph 53

Water meter and housing potentially damage by a vehicle

Photograph 54

Exposed earth local to the base of the northern elevation

Photograph 55

Flashing band tape exposed to below shopfront joinery units, but extended up and over the concrete slab

Photograph 56

Water weep holes formed in the external cladding for the cantilever canopies

Photograph 57

Example penetration through the external cladding, well-formed and sealed overflow

Photograph 58

Sheet material, waterproofing membrane provide to below ground concrete slab in two layers

Photograph 59

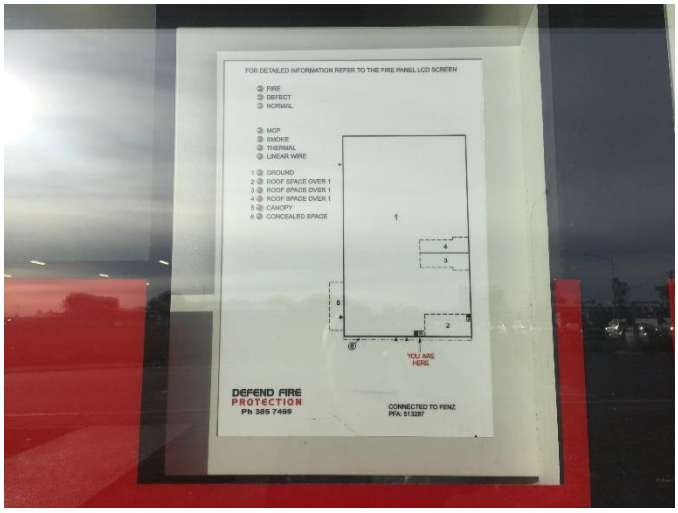
Section of deteriorating waterproofing membrane, as above

Photograph 60

Land drainage to south elevation, appears effective

Photograph 61

Unknown units to the corner north east corner of the building. Presumed electrical supplies



Photograph 62

Fire panel visible adjacent to the main entrance

Photograph 63

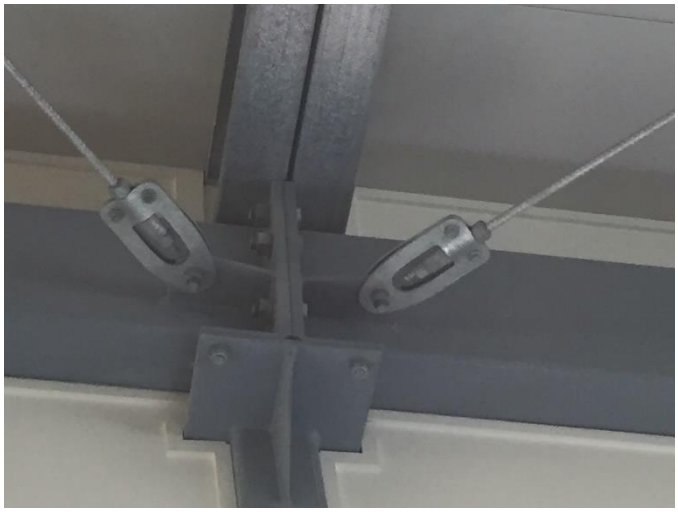
Underside of the main roof, internally

Photograph 64

Example of the structural frame and comfort cooling provision

Photograph 65

Treatment of service pipes through the roof structure. Corresponding element externally has been fitted with a neoprene boot



Photograph 66

Cross tension cable bracing secured to main portal structural frame

Photograph 67

Interaction of portal frame vertical and the internal finish linings at ceiling level

Photograph 68

Portal from bolts to ground footing

Photograph 69

Cross tension cable anchor bolts

Photograph 70

Comfort cooling insitu and interior of concrete slab elevation

Photograph 71

HVAC cassette suspended from ceiling

Photograph 72

AC controlled

Photograph 73

Firefighting precautions

Photograph 74

Internal partitioning

Photograph 75

Acoustic panelling to walls

Photograph 76

Acoustic panelling to ceiling

Photograph 77

Minor crack to plasterboard lining of internal partition

Photograph 78

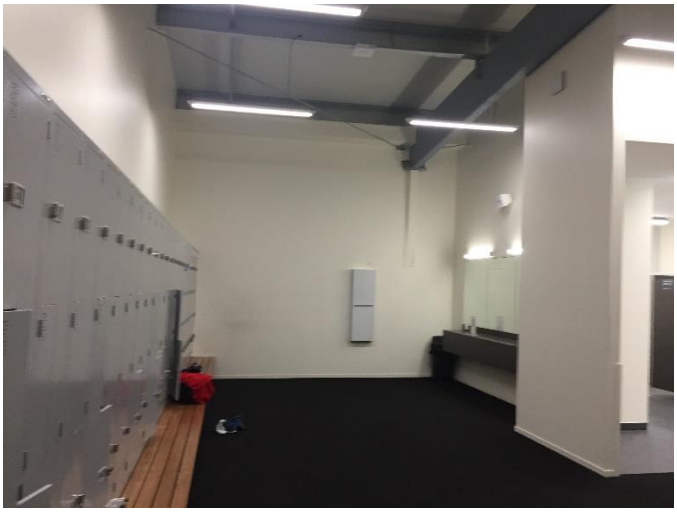
Area signage

Photograph 79

Example of internal finishes and location of roof void access hatch

Photograph 80

Roof construction above the male changing room



Photograph 81

General view of the male changing room

Photograph 82

General view of male showers

Photograph 83

Male WHB

Photograph 84

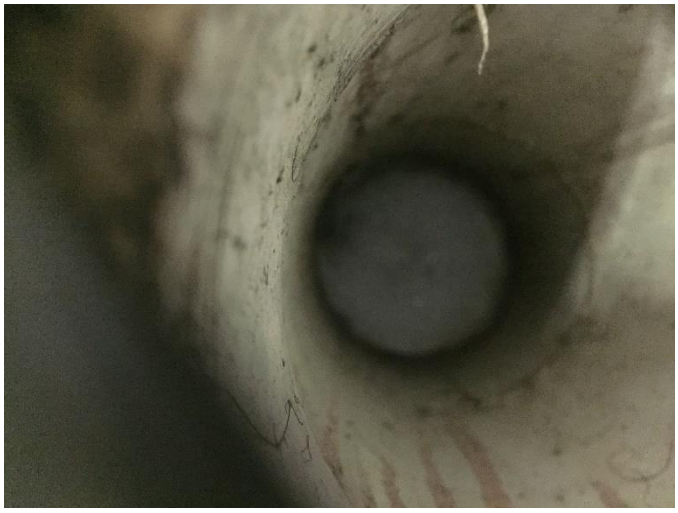
General view sanitary ware

Photograph 85

Weld and joints to non-slip vinyl floor sheet

Photograph 86

Floor laid to fall into flush drain system



Photograph 87

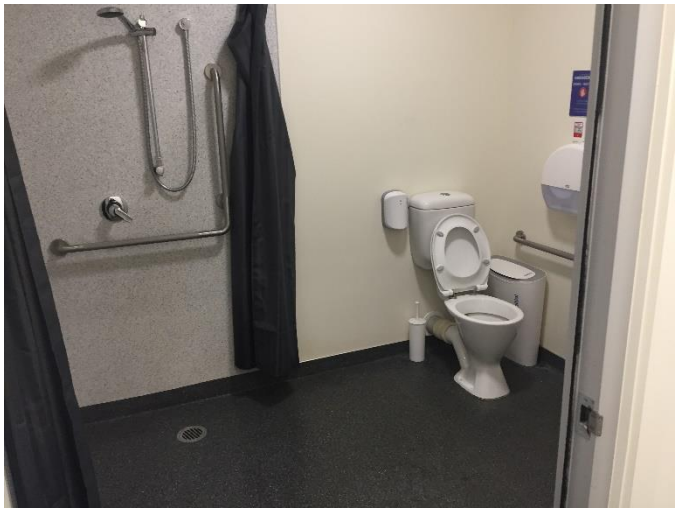
Interior of drain appear free flowing

Photograph 88

Example WC

Photograph 89

Accessible facilities



Photograph 90

Overview accessible WC

Photograph 91

Overview accessible WC

Photograph 92

General provisions

Photograph 93

Unisex WC

Photograph 94

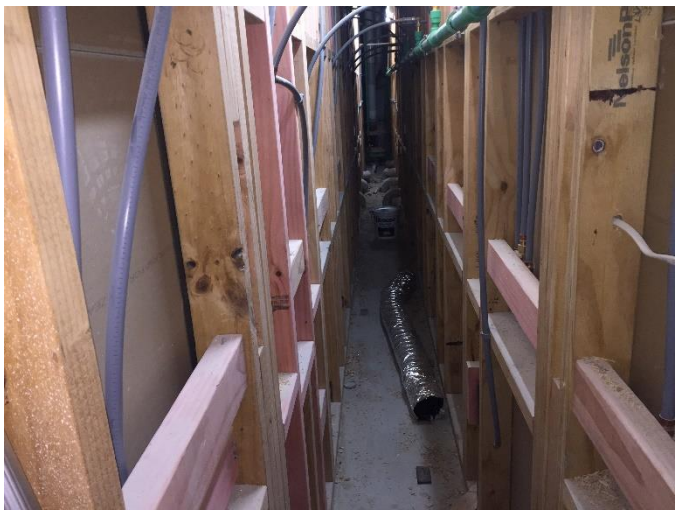
Sprinkler system to ceiling

Photograph 95

Staff store interior

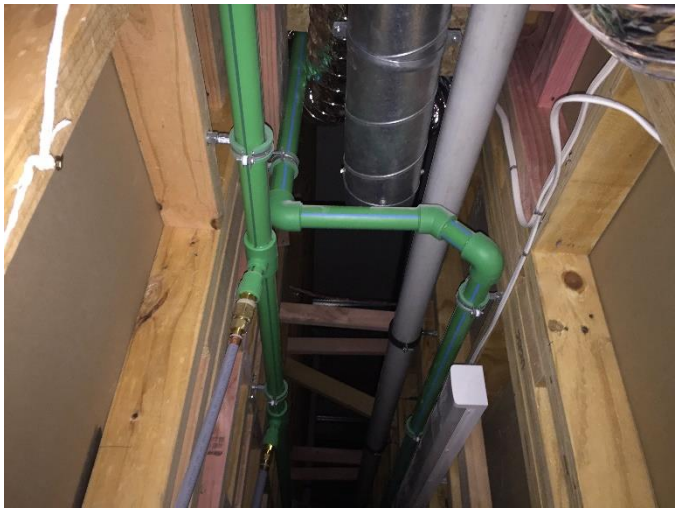
Photograph 96

Service duct access



Photograph 97

Void between changing rooms, allows access to shower installations



Photograph 98

Example of service installations

Photograph 99

Fitness suite partition

Photograph 100

Interior finishes

Photograph 101

HVAC installation

Photograph 102

Store cupboard

Photograph 103

Main electrical switch and distribution boards

Photograph 104

Lighting control panel

Photograph 105

Lighting control panel

Photograph 106

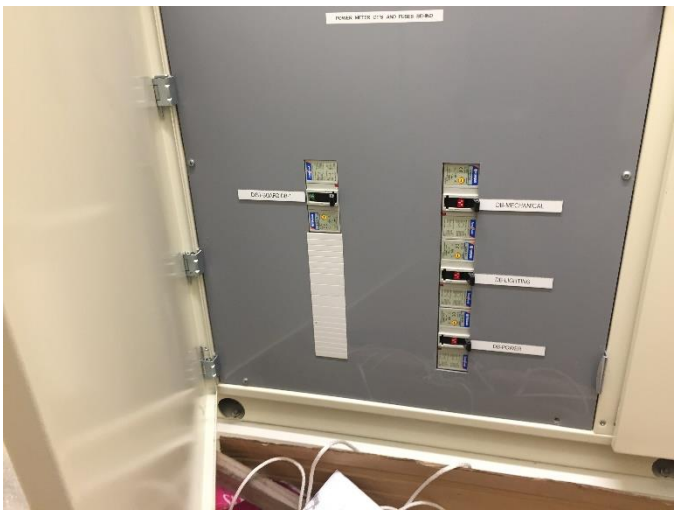
Mechanical distribution board

Photograph 107

Mechanical distribution board

Photograph 108

MCCB Distribution board

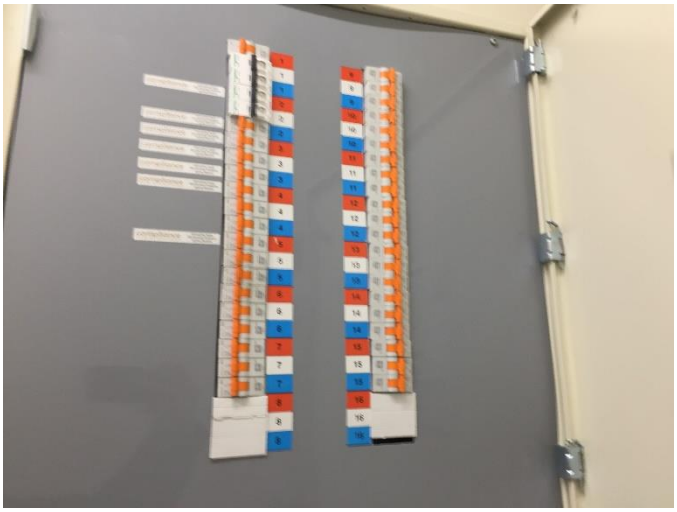


Photograph 109

MCCB Distribution board

Photograph 110

Lighting distribution board



Photograph 111

Lighting distribution board

Photograph 112

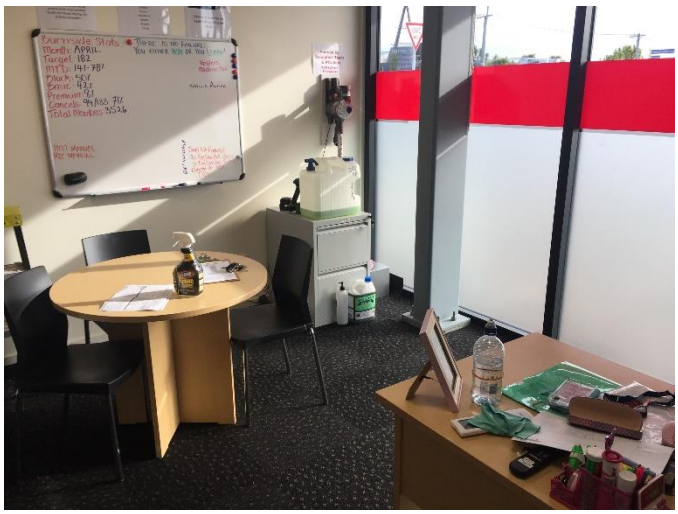
Fire alarm control

Photograph 113

Fire alarm

Photograph 114

Staff facilities



Photograph 115

Main office interior

Photograph 116

AC via Heat pump

Photograph 117

Painted plasterboard ceiling and walls, sheet carpet and fluorescent light fittings

Photograph 118

Secondary office ceiling

Photograph 119

Staff kitchenette, including hot water point

Photograph 120

Staff welfare and storage

Photograph 121

Server room / cupboard

Photograph 122

General building and carparking view from the south east corner of the site

Photograph 123

External site view from south east corner

Appendix B MBIE Guide for Aluminium Composite Cladding Panels May 2016

BUILDING PERFORMANCE

Reaction to fire performance of aluminium composite panels

Issue date: 6 May 2016

MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

New Zealand Government

Contents

Use of this guide

This guide by the Ministry of Business, Innovation and Employment (the Ministry, or MBIE) has been written in accordance with section 175 of the Building Act 2004 (the Building Act), which relates to guidance published by the Ministry's Chief Executive. While the Ministry has taken every care in preparing this document, it should not be relied upon as establishing all the requirements of the Building Act. Readers should always refer to the Building Act and associated regulations as the source document and be aware that for specific situations or problems it may be necessary to seek independent legal advice. Note that all references to the Building Act in this guide are to the Building Act 2004 and all references to the Building Code, the Code or NZBC are to the Building Code (Schedule 1, Building Regulations 1992) in force at the time of writing.

About this guide

This guide outlines some of the Building Code requirements for the fire performance of aluminium composite panels (ACPs) used as external wall claddings and discusses ways to comply with these requirements. It will mainly be of interest to manufacturers, suppliers, specifiers and certifiers of these products.

Note that this guide focuses on Building Code clause C3: Fire affecting areas beyond the fire source; in particular the performance clauses C3.5 and C3.7. There may be other relevant clauses within Building Code clause C: Fire safety as well as other Building Code clauses that apply to the cladding or the building as a whole.

Fire testing measurements

Two of the key measurements in fire testing are an element or material's 'reaction to fire' and its 'fire resistance'.

This guide is mostly concerned with **reaction to fire**, which relates to an element or material's contribution to the fire hazard. This is usually by increasing a fire's growth, energy output or both.

Fire resistance is a three-part description of an element or material's ability to carry load under elevated temperatures, its ability to resist the passage of fire and smoke, and its ability to resist heat conduction. (Refer to Building Code clause A2 for the definition of an element's fire resistance rating, or FRR.)

Aluminium composite panels (ACPs)

ACPs are thin sandwich-type panels made from two sheets of aluminium bound to a core of insulating material. A common use for ACPs is as external claddings on multi-level buildings as they are relatively lightweight and sturdy, while the aluminium sheets can be painted any colour.

ACPs are combustible[1] (i.e. capable of catching fire). Other examples of combustible external cladding systems include exterior insulation finish systems, structural insulation finish systems, high pressure laminates and weather-resistive barriers.

The degree of combustibility of ACPs ranges from:

- products that are readily combustible (ACPs with cores that are 100% polyethylene, or PE, which melts at relatively low temperatures and is highly flammable), to
- products with a core of mineral fibre and some PE, which are less combustible, to
- products with a core of almost all mineral fibre plus a small amount of PE to bind this fibre to the aluminium, which have limited combustibility.

[1] The Building Code, Acceptable Solutions C/AS1-AS7 and Verification Method C/VM2 define building materials as being either combustible or non-combustible when tested to Standard Test Method AS 1530.1:1994 *Methods for fire tests on building materials, components and structures. Part 1: Combustibility test for materials.*

Note:

There have been a number of high-profile building fires internationally[2], including in Melbourne in November 2014 and Dubai in 2015, in which ACP claddings with a 100% PE core have contributed to rapid and extensive vertical fire spread.

Aluminium is a good thermal conductor and, as the aluminium skins of ACPs are very thin, heat from a fire source will conduct quickly to a PE core. The melting temperature of PE is very low and once this is reached the PE will drip and flow.

The ability of PE to act as a binding material will deteriorate as it melts and the aluminium skins will deform and delaminate. The molten PE can then become exposed to a fire source, particularly around joints and edges, and ignite. PE combusts vigorously.

Caution should be taken when using and specifying particular ACP products that they are appropriate for the intended use.

Building Code requirements: reaction to fire

ACPs used as external claddings must meet certain provisions of the Building Code which include, but are not limited to, those relating to their 'reaction to fire' performance.

In terms of fire performance the acceptable properties of external wall cladding systems depend on the building height, presence of sprinklers and the distance from the relevant boundary.

The most relevant requirements are in Building Code clause C3: Fire affecting areas beyond the fire source. The functional requirements of this clause are as follows:

Clause	Provision	Limit on application
C3.1	*Buildings must be designed and constructed so that there is a low probability of injury or illness to persons not in close proximity to a fire source.*	
C3.2	*Buildings with a building height greater than 10 m where upper floors contain sleeping uses or other property must be designed and constructed so that there is a low probability of external vertical fire spread to upper floors in the building.*	*Clause C3.2 does not apply to importance level 1 buildings.*
C3.3	*Buildings must be designed and constructed so that there is a low probability of fire spread to other property vertically or horizontally across a relevant boundary.*	

The performance requirements for clause C3 (i.e. how to satisfy the functional requirements) are set out in clauses C3.5 to 3.9. The most relevant of these for ACPs used as external claddings are the following:

[2] White, N., Delichatsios, M., Ahrens, M., & Kimball, A. (2013). *Fire hazards of exterior wall assemblies containing combustible components*. In MATEC Web of Conferences (Vol. 9, p. 02005). EDP Sciences

C3.5 *Buildings must be designed and constructed so that fire does not spread more than 3.5 m vertically from the fire source over the external cladding of multi-level buildings.*

C3.7 *External walls of buildings that are located closer than 1 m to the relevant boundary of the property on which the building stands must either:*

(a) be constructed from materials which are not combustible building materials, or

(b) for buildings in importance levels 3 and 4, be constructed from materials that, when subjected to a radiant flux of 30 kW/m^2, do not ignite for 30 minutes, or

(c) for buildings in Importance Levels 1 and 2, be constructed from materials that, when subjected to a radiant flux of 30 kW/m^2, do not ignite for 15 minutes.

The building importance levels referred to in these clauses are defined in Building Code clause A3 and summarised in Table 1.

Table 1: Building importance levels (from Building Code clause A3)

IL	Description
1	Buildings posing low risk to human life or the environment, or a low economic cost, should the building fail (typically small non-habitable buildings)
2	Buildings posing normal risk to human life or the environment, or a normal economic cost, should the building fail (typical residential, commercial, and industrial buildings)
3	Buildings of a higher level of societal benefit or importance, or with higher levels of risk-significant factors to building occupants
4	Buildings essential to post-disaster recovery or associated with hazardous facilities
5	Buildings whose failure poses catastrophic risk to a large area (e.g. 100 km^2) or a large number of people (e.g. 100,000)

Demonstrating compliance

Acceptable Solutions, Verification Methods and alternative solutions

Options for showing that ACPs, when used in building work, comply with the relevant fire performance requirements of the Building Code include following the relevant sections of the:

- Acceptable Solutions (one of C/AS1 to C/AS7, depending on the type of building the product will be used on) or
- Verification Method C/VM2.

These compliance pathways must be accepted by building consent authorities (BCAs) when the product is used as specified.

If you cannot follow the relevant Acceptable Solution or the Verification Method fully you can present an alternative solution. This is the term used to describe any other way you choose to show Building Code compliance. It can include other relevant testing, appraisals, in-service history, compliance with a standard, or a combination of these. It is up to the BCA to decide whether to accept this as sufficient evidence.

These compliance pathways are described in more detail later in this guide, followed by a description of the standard fire test methods and other testing options.

Technical information and evidence

Because you can choose how to demonstrate Building Code compliance there is theoretically no restriction on what information you use to do so. However, your claims of compliance with the Building Code must be backed up with suitable technical information and evidence.

The further your design departs from a relevant Acceptable Solution or Verification Method, the more evidence BCAs are likely to look for.

Product certification

Another way to demonstrate compliance with the Building Code when applying for a building consent is to provide a product certificate.

BCAs must accept a product certificate as proof of compliance with the Building Code clauses listed on that certificate (as long as the product's proposed use is within the certificate's scope of use and any limitations or conditions). The BCA cannot require you to provide further evidence of compliance.

If you are an ACP manufacturer or supplier you can obtain product certification by applying to a product certification body and providing enough evidence to satisfy that organisation (via test methods and the like) that either:

- you can follow the relevant Acceptable Solutions or Verification Method or
- you have a suitable alternative solution.

Obtaining product certification also involves an assessment of your quality management systems, plus factory and site audits to ensure that compliance is being achieved and can be maintained.

Find out more

Product certification is a voluntary scheme established by the Building Act to provide an easily understood and robust way to show compliance with the Building Code. The current product certification scheme is CodeMark.

Go to www.building.govt.nz/product-certification for more details, including a list of current product certificates and product certification bodies.

Following an Acceptable Solution

To demonstrate compliance with clauses C3.5 and C3.7 first select the appropriate Acceptable Solution from C/AS1 to C/AS7. This will depend on what type of building the ACPs will be used on. Table 2 provides a brief description of these and Part 1 of each Acceptable Solution provides more detail of what is in or outside its scope.

Note that the Acceptable Solutions do not cover all types of buildings. For example, buildings over 20 storeys are excluded.

Table 2: Acceptable Solutions C/AS1 to C/AS7 and corresponding risk groups

Acceptable Solution	Risk group	Description
C/AS1	SH	Buildings with sleeping (residential) and outbuildings
C/AS2	SM	Buildings with sleeping (non-institutional)
C/AS3	SI	Buildings where care or detention is provided
C/AS4	CA	Buildings with public access and educational facilities
C/AS5	WB	Buildings used for business, commercial and low level storage
C/AS6	WS	Buildings used for high level storage and other high risks
C/AS7	VP	Buildings used for vehicle storage and parking

Next, follow the relevant requirements of the Acceptable Solution Part 5: Control of external fire spread (and any other requirements that may be relevant for Building Code compliance).

These Acceptable Solutions refer to either or both of the following standard test methods:

- ISO 5660.1:2002 (a small scale test) and
- NFPA 285:2012 (a full scale test).

These are described further in Fire test methods page 12.

The following diagram illustrates the compliance pathway using these Acceptable Solutions.

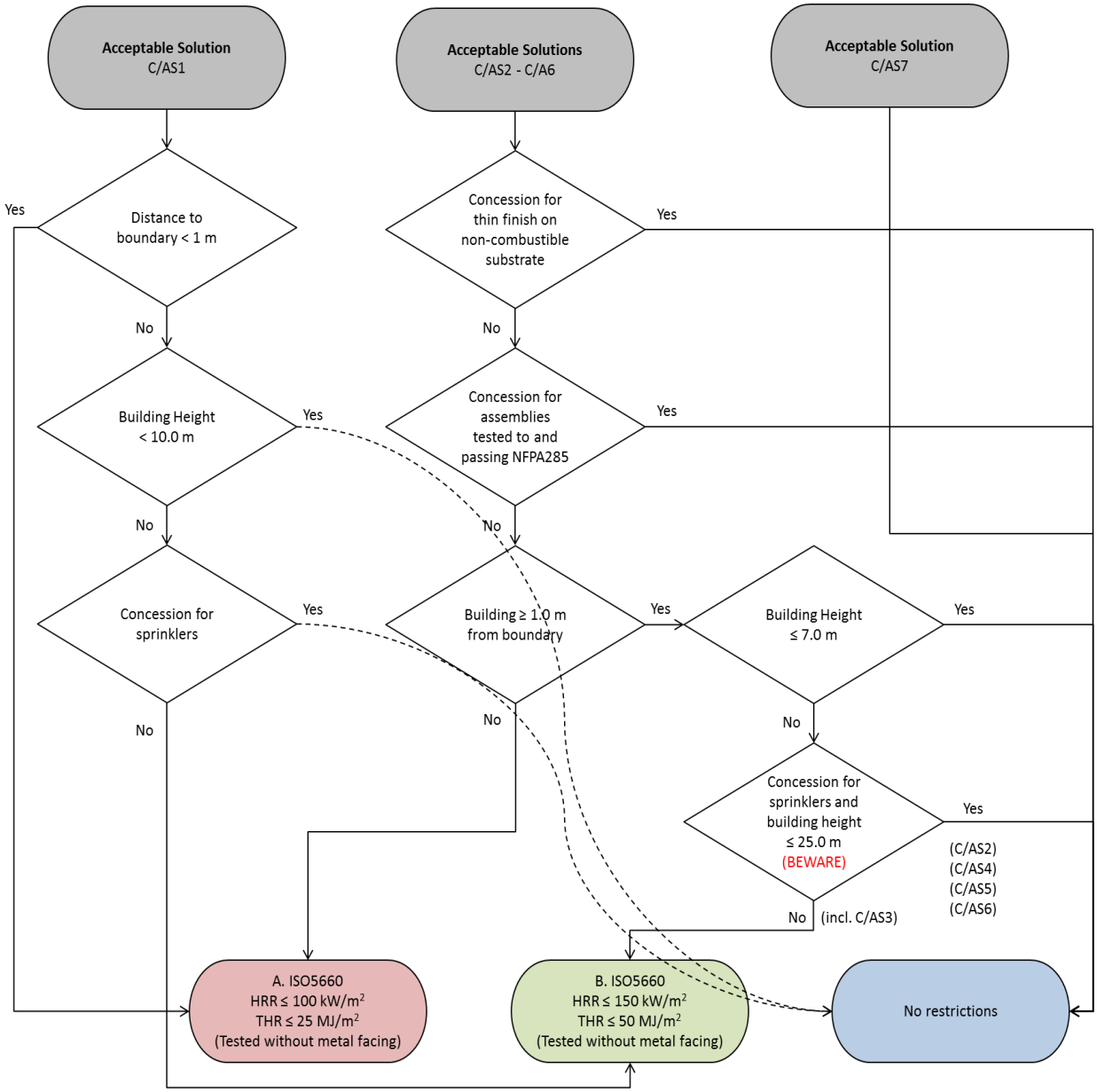


Figure 1: Compliance pathway using the relevant Acceptable Solution (C/AS1 to C/AS7)

Following the Verification Method

C/VM2 is a Verification Method for the specific design of buildings to demonstrate compliance with Building Code clauses C1 to C6 Protection from Fire. It is suitable for use by professional fire engineers who are proficient in the use of fire engineering modelling methods and can be applied to almost all building types (there are a few exceptions such as tunnels and open air stadiums).

C/VM2 includes ten design fire scenarios that must each be considered and designed for. Two of these scenarios are relevant for demonstrating compliance with Building Code clauses C3.5 and C3.7 as shown in Table 3 below (refer to C/VM2 Table 1.1 for full details).

Table 3: Relevant design scenarios (from C/VM2)

Building Code clause	Relevant design scenario	Expected method
C3.5	Scenario VS: external vertical fire spread	Calculate radiation from unprotected areas as specified
C3.7	Scenario HS: horizontal fire spread	Suitable materials used (proven by testing) and construction features specified (e.g. aprons/spandrels/sprinklers) as required to limit vertical fire spread

C/VM2 refers to the following test methods:

- ISO 5660.1:2002, and
- AS/NZS 3837:1998.

These are both small scale tests and are effectively interchangeable (go to Fire test methods page 12 for more details).

The Verification Method also provides the option to use a large or medium scale façade test but does not explicitly cite one. A test such as NFPA 285:2012 would be suitable.

Note:

Engineers proposing test methods other than those explicitly mentioned in C/VM2 should be suitably qualified, familiar with international literature on fire testing of ACPs, and experienced in reaction to fire test methods.

The following diagrams (one for each of the two relevant design scenarios) illustrate the pathway to compliance using the Verification Method.

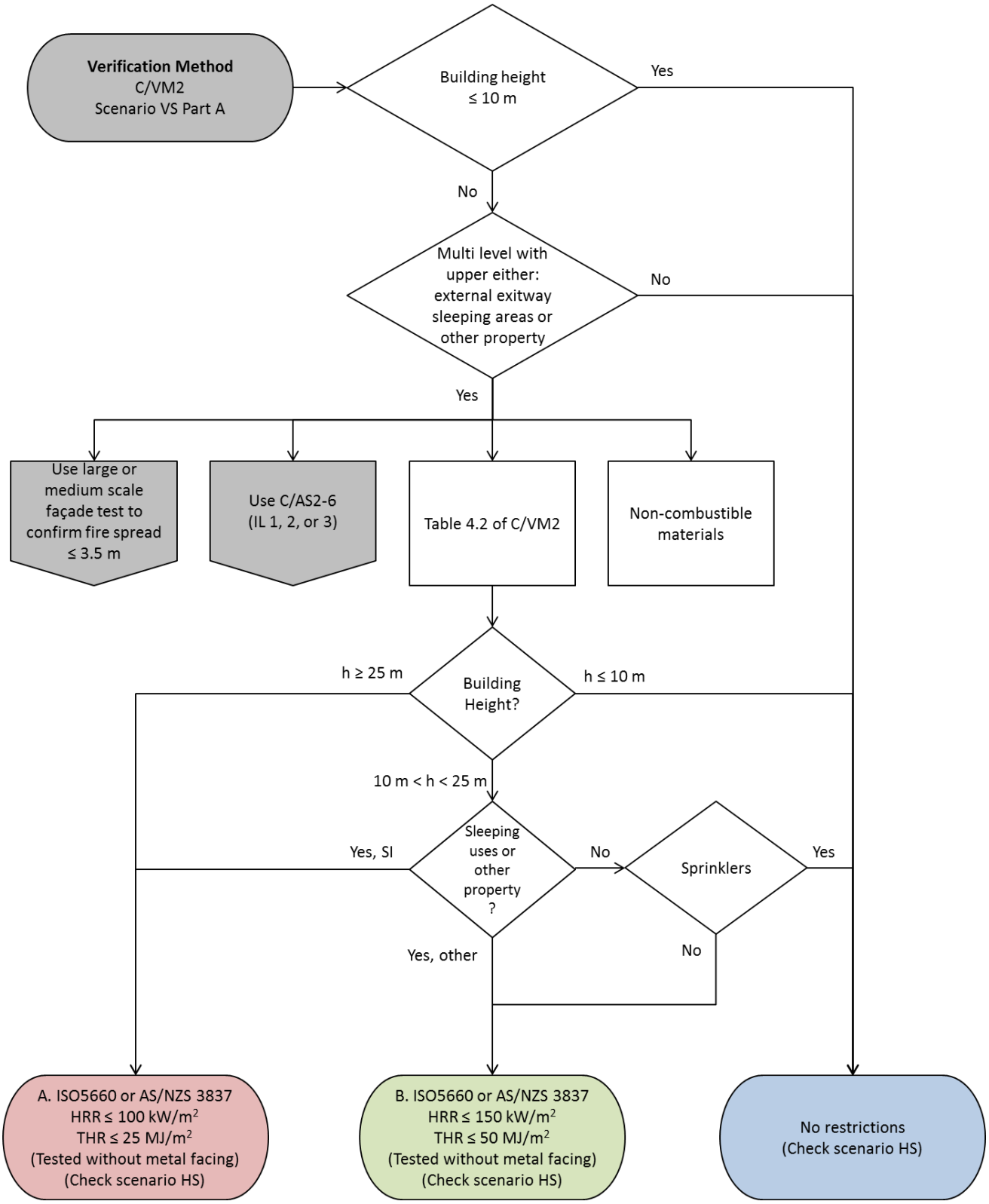


Figure 2: Compliance pathway using the Verification Method C/VM2: scenario VS

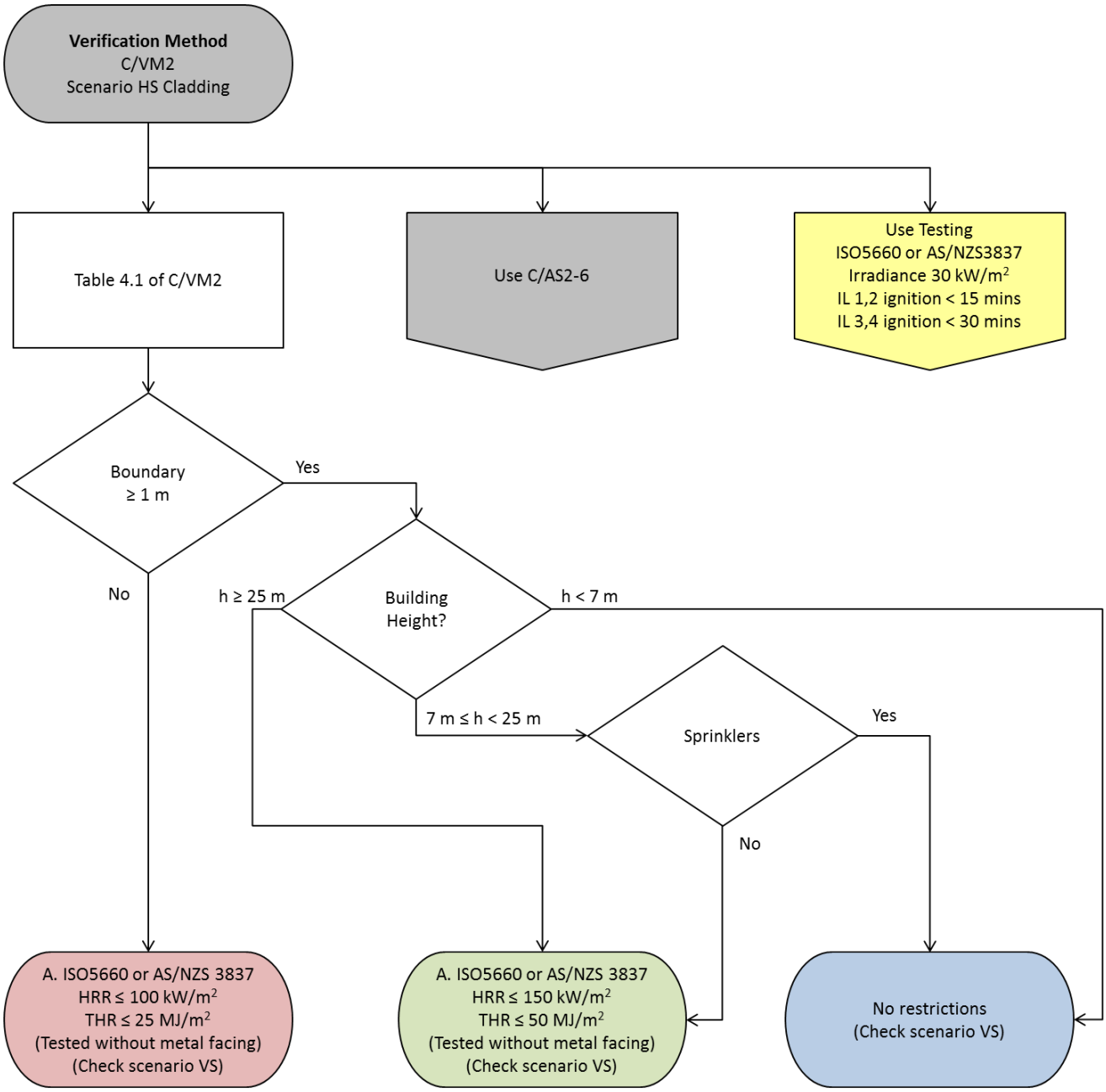


Figure 3: Compliance pathway using the Verification Method C/VM2: scenario HS

Presenting an alternative solution

The performance requirements of Building Code clauses C3.5 and C3.7 are quantitative: i.e. vertical flame spread of not more than 3.5 m, and no ignition when subject to a 30 kW/m^2 heat flux for a specified period.

An alternative solution (i.e. one which does not follow the Verification Method or relevant Acceptable Solution completely) could take an absolute or a comparative approach:

- An absolute approach demonstrates that the alternative solution directly achieves the minimum quantitative performance requirements.
- A comparative approach demonstrates that the alternative solution indirectly satisfies the performance requirements by being equivalent to (or better than) a solution proposed in the Acceptable Solutions C/AS1 to C/AS7 or Verification Method C/VM2.

Note:

Designers proposing alternative solutions should be suitably qualified, familiar with international literature on the fire testing of ACPs, and experienced in reaction to fire test methods.

Fire test methods

The standard tests

The standard tests referenced in the Acceptable Solutions and Verification Method for demonstrating compliance with Building Code clauses C3.5 and C3.7 are contained in:

- ISO 5660.1:2002 (referenced in C/AS1-C/AS6 and VM2)
- AS/NZS 3837:1998 (referenced in C/VM2)
- NFPA 285:2012 (referenced in C/AS2-C/AS6 and which may be a suitable medium or large scale façade test to meet the vertical fire spread requirements of C/VM2).

These are described below.

ISO 5660-1:2002 and AS/NZS 3837:1998 (small scale test methods)

ISO 5660-1:2002 'Reaction to fire tests – Heat release, smoke production and mass loss rate. Part 1: Heat release rate (cone calorimeter method)' is a small scale test referred to in C/AS1 to C/AS6 and C/VM2 (noting that testing shall be to the additional requirements specified in Appendix C clause C7.1.2 of those documents).

This test involves testing a specimen 100 x 100 x 50 mm subjected to 50 kW/m^2 irradiance from a cone element (hence the test's name). Exhaust gases are collected and the amount of oxygen 'consumed' is calculated from the measurement of oxygen concentration. From this, the heat release rate can then be determined.

ISO 5660-1:2002 is effectively the same as AS/NZS 3837:1998 'Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter', a test method which is also referred to in C/VM2.

Testing without the metal facing

If the metal facing of the material being tested melts below 750°C and the inner core is combustible, paragraph C7.1.5 of Appendix C (normative): Test methods of the Acceptable Solutions CAS/1 to C/AS6 requires testing to ISO 5660 Part 1 to be carried out without the metal facing.

This requirement applies to ACPs, as aluminium has a melting point below 750°C.

NFPA 285:2012 (full scale test method)

NFPA 285: 2012 'Standard Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components' is a full scale test referred to in C/AS2 to C/AS6 and which may be used to satisfy the relevant requirements of C/VM2.

The test assembly consists of a two-storey structure 4.8 m high with a test room on each storey. This assembly is also known as the Intermediate Scale Multistorey Apparatus (ISMA).

NFPA 285 is a pass/fail test. The fire propagation characteristics are determined for post-flashover fires of interior origin. The test evaluates the ability of the wall assembly to resist:

- flame propagation over the exterior face of the wall assembly
- vertical flame propagation within the combustible components from one storey to the next
- vertical flame propagation over the interior surface of the wall assembly from one storey to the next, and
- lateral flame propagation from the compartment of fire origin to adjacent compartments or spaces.

Other medium and large scale test methods

Examples of other medium and large scale tests that may contribute to demonstrating compliance are listed below.

- BS 8414:2015
  - (Part 1) 'Fire performance of external cladding systems. Test method for non-load bearing external cladding systems applied to the masonry face of a building'
  - (Part 2) 'Fire performance of external cladding systems. Test method for non-load bearing external cladding systems fixed to and supported by a structural steel frame'
- ISO 13785:2002
  - (Part 1) 'Reaction-to-fire tests for façades - Part 1: Intermediate-scale test'
  - (Part 2) 'Reaction-to-fire tests for façades -- Part 2: Large-scale test'
- BS EN 13823:2010 (+A1:2014) 'Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item'
- BS EN 13501-1:2007 (+A1:2009) 'Fire classification of construction products and building elements. Classification using test data from reaction to fire tests'.

Note:

Test methods, including recognised international standard fire tests, are highly empirical and are not likely to be directly comparable. Anyone proposing to use these tests to demonstrate compliance must be suitably qualified and familiar with the test methods.

In particular, many fire tests do not provide comparable information for compliance with the Building Code requirements relating to external fire spread. One example is ISO 9705-1 Room corner test for wall and ceiling lining products – Part 1: Test method for a small room configuration. This is a method for generating material group numbers (categories for wall and ceiling linings). This tests a different hazard to external fire spread as it focuses on the contribution of surface linings to flashover in a confined space.

Further information

Resources

Ministry of Business, Innovation and Employment www.building.govt.nz

The Ministry's website provides a wealth of detailed information and guidance about the various topics covered in this document. This includes information about building product assurance at www.building.govt.nz/product-assurance and product substitution www.building.govt.nz/product-substitution-guide

New Zealand Legislation www.legislation.govt.nz

The New Zealand Legislation website gives free access to all current New Zealand legislation, including regulations made under an Act.

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Appendix C CapEx Budget Estimate

CAPEX Summary

Category	Location	Action required/Detail	Supporting document reference	Life expectancy	Current Age	Priority	R&M/Capex	Current replacement Cost ($)	Year (0-10)	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Use this as a high level category summary	*Where in the building does this work relate to?*	*Detailed description of works required and why*	*Reference to photo of comment in wider report if available*	*How long should this item have lasted*	*How old is this item?*	*1 = Urgent, 2 = Moderate, 3 = Minimum*	*Is this item R&M or Capex?*	*Cost in todays dollars*	*What year is cost to be incurred?*											
	Building Fabric																			
ROOFING	Roof - Parapets	Allow to remove part existing parapet caps, install new sloping parapet caps and allow for ancillary repairs		15-20	2	1	R&M	$ 5,000	0	*$ 5,000*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*
ROOFING	Roof - Box Gutters	Allow to remove existing debris and flush through		15-20	2	1	R&M	$ 1,000	0	*$ 1,000*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*
ROOFING	Roof - Gutters	Clean through annually		15-20	2	3	R & M	$ 500	0	*$ 500*	*$ 500*	*$ 500*	*$ 500*	*$ 500*	*$ 500*	*$ 500*	*$ 500*	*$ 500*	*$ 500*	*$ 500*
STRUCTUAL / FAÇADE	External Wall Cladding - Concrete panels - West elevation	Rake out and re-grout jonits		50	2	3	R&M	$ 1,000	5	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ 1,000*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*
OTHER	External Cladding / joinery	Clean down		15	2	3	R&M	$ 7,500	0	*$ 7,500*	*$ 7,500*	*$ 7,500*	*$ 7,500*	*$ 7,500*	*$ 7,500*	*$ 7,500*	*$ 7,500*	*$ 7,500*	*$ 7,500*	*$ 7,500*
OTHER	External decorative surfaces	Prep and redecorate		5	2	3	R&M	$ 10,000	5	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ 10,000*	*$ -*	*$ -*	*$ -*	*$ -*	*$ 10,000*
PLUMBING & DRAINAGE	Below ground drainge	Investigate and clear		15-20	2	1	R&M	$ 8,000	0	*$ 80,000*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*
Total								**$ 33,000**		***$ 94,000***	***$ 8,000***	***$ 8,000***	***$ 8,000***	***$ 8,000***	***$ 19,000***	***$ 8,000***	***$ 8,000***	***$ 8,000***	***$ 8,000***	***$ 18,000***

Clarifications

Item priced as single work item - no provision for savings from multiple works on a single property.

Budget purposes only and based on current market values as at September 2020

No allowances for P&G, contingency and fees have been applied to further investigations and surveys

For general items of work the following allowances have been made:-

P&G (Including scaffolding, access, site set up and accommodation etc.) at 15%
Contractor's Margin at 10%
Fees (Consultant) @ 10%
Contingency at 5%

Figures are NZ$. No account taken for inflation over time.

Exclusions

Goods and Services Tax (GST)
Removal of deleterious materials, including asbestos unless expressly stated.
Increased costs or fluctuations for labour, plant, equipment and materials beyond the date of this estimate
Fire safety upgrade works, other than those stated
Upgrades relating to compliance with statutes or regulations, other than those stated
Remediation of non-compliant original construction details/materials unless otherwise stated
Identification of illegal works and non-consented works

Any EQ damage repairs, upgrading and strengthening works, including any allowances for seismically enhanced engineered foundations
Operational/Maintenance costs
Structural works
Local Authority Fees

Capex Costs by type	Current Cost	Year 1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
ROOFING	$ 11,500.00	*$ 6,500.00*	*$ 500.00*	*$ 500.00*	*$ 500.00*	*$ 500.00*	*$ 500.00*	*$ 500.00*	*$ 500.00*	*$ 500.00*	*$ 500.00*	*$ 500.00*
PLUMBING & DRAINAGE	$ 80,000.00	*$ 80,000.00*	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
STRUCTUAL / FAÇADE	$ 1,000.00	$ -	$ -	$ -	$ -	$ -	*$ 1,000.00*	$ -	$ -	$ -	$ -	$ -
OTHER	$ 102,500.00	*$ 7,500.00*	*$ 7,500.00*	*$ 7,500.00*	*$ 7,500.00*	*$ 7,500.00*	*$ 17,500.00*	*$ 7,500.00*	*$ 7,500.00*	*$ 7,500.00*	*$ 7,500.00*	*$ 17,500.00*
Total	**$ 92,500.00**	**$ 94,000.00**	**$ 8,000.00**	**$ 8,000.00**	**$ 8,000.00**	**$ 8,000.00**	**$ 19,000.00**	**$ 8,000.00**	**$ 8,000.00**	**$ 8,000.00**	**$ 8,000.00**	**$ 18,000.00**

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