

IGNIS ADVISORY NOTE

Evaluation No. IGNS-7257 Issue 01 Revision 00 [2019]

RESCOM WALL SYSTEM COMPLIANCE

Ignis Solution has been requested to provide a statement on the compliance of the ResCom wall system in accordance with the National Construction Code Volume Two Building Code of Australia 2019 (BCA) to be applied to a boundary wall system where under the BCA a boundary or separating wall is to achieve a Fire Resistance Level of at least 60/60/60.

The following wall systems are proposed for a single or two storey residential Class 1a Dwelling where the fire resistance level is provided from the exterior side only and should they be tested in accordance with the requirements of the BCA likely to achieve an FRL of at least -/60/60. The exterior lining can be 10mm, 12mm or 16mm ResCom Board. Where the 16mm ResCom board is applied, the internal lining can be substituted for standard grade plasterboard. The standard wall configuration is detailed below:

Exterior Lining:	10mm, 12mm, 16mm, ResCom Board
Vapour Barrier Wrap:	Flammability index ≤ 5 and thickness ≤ 1 mm.
Frame Size:	Timber or Metal Stud Frame Wall Min 90mm x 35mm / 0.75bmt x 75mm x 35mm (Structural performance as per structural engineers specifications to the NCC 2019)
Stud Spacing:	Max 600mm centres
Cavity Insulation:	Min R2.5 non-combustible insulation
Interior Wall Lining:	Min 13mm fire grade plasterboard; 12mm ResCom board; or Standard grade plasterboard where exterior lining is 16mm ResCom Board.

- The above wall configurations are likely to achieve a minimum Fire Resistance Level of at least -/60/60.
- To achieve a Fire Resistance Level of -/90/90 a minimum 10mm ResCom board is to be applied to the exterior and rockwool insulation is to be installed with a density of at least 80kg/m³.
- To achieve a Fire Resistance Level of -/180/180 a minimum 12mm ResCom board is to be applied to both the exterior and interior lining as well as rockwool insulation is to be installed with a density of at least 80kg/m³.

The basis of the above wall systems is on the following large scale tests which were undertaken on a 3m x 3m wall system by ILAC MRA testing facilities.

SGS is an international testing service. Their Shanghai test facility completed testing on the ResCom Board within a wall installation.

The test was undertaken on 03 June 2015 in report SHCCM150401181 with the wall set up being 10mm thick ResCom Board on either side of a 75mm light gauge steel joist and 50kg/m³ mineral wool insulation. The following results were produced:

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SGS SHCCM150401181 Structural adequacy Integrity Insulation	Fire Resistance Level CONFIDENTIAL -/90/60	03 June 2015 - 90 minutes 67 minutes
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Testing undertaken by Intertek Shanghai testing facility to ASTM E119-16a where the equivalent standard fire curve was used in the boards evaluation.

The test was undertaken on 19 December 2016 in report 160929005SHF-BP-1 with the wall set up being 12mm thick ResCom Board on either side of a 75mm steel studs at nominally 600mm centres and 180kg/m³ Rockwool insulation. The following results were produced:


Intertek 160929005SHF-BP-1 Structural adequacy Integrity Insulation	Fire Resistance Level CONFIDENTIAL -/180/90	19 December 2016 - 180 minutes 90 minutes
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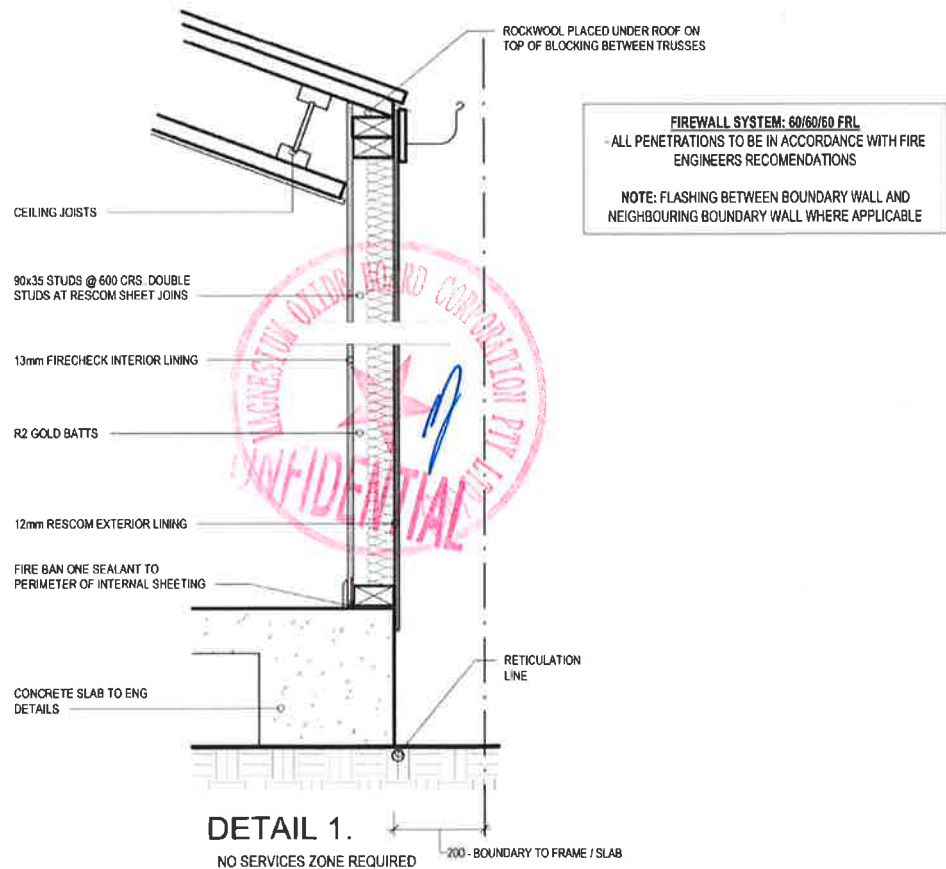
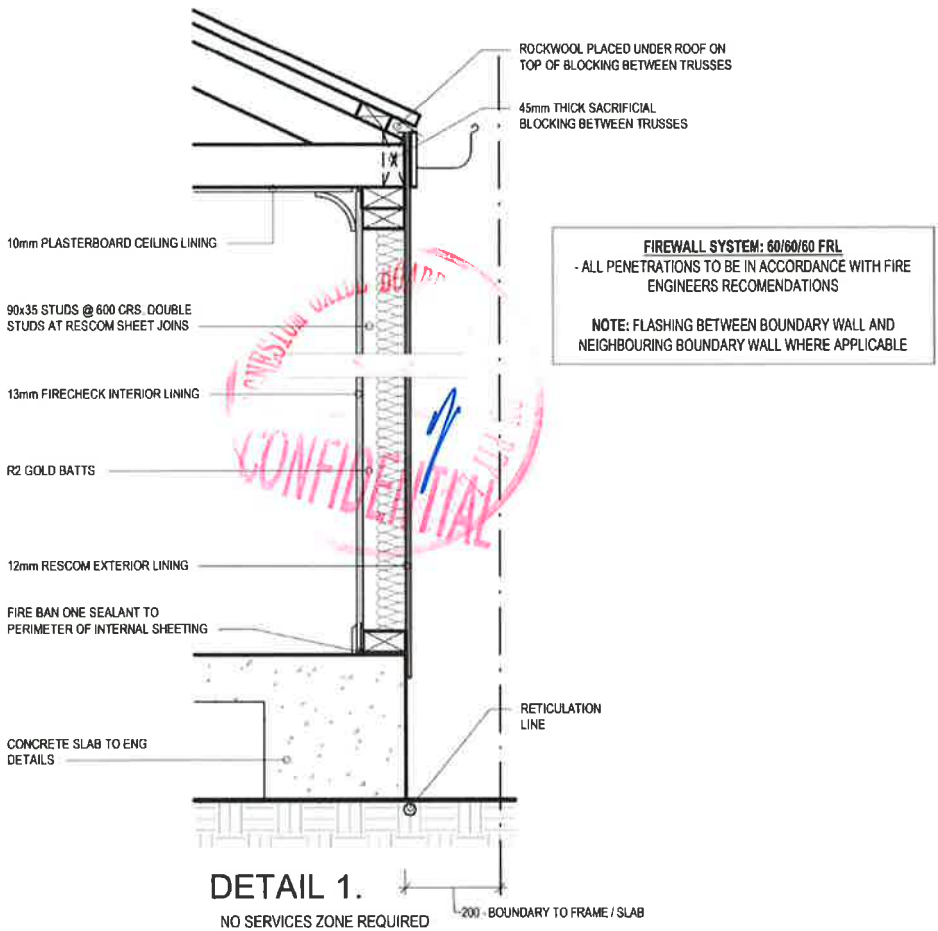
Testing undertaken by Research Engineering Development Façade Consultants Limited to BS 476 part 22 where the equivalent standard fire curve was used in the boards evaluation.

The test was undertaken on 18 May 2007 in report R07A15A with the wall set up being 12mm thick ResCom Board on either side of a 46mm galvanised steel joist at nominally 610mm centres and 94kg/m³ Luyangwool 72 mullite crystal fibre blanket insulation. The following results were produced:

RED R07A15A Structural adequacy Integrity Insulation	Fire Resistance Level CONFIDENTIAL -/120/120	18 May 2007 - 150 minutes 132 minutes
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Based on the above detail and results, the ResCom wall systems are considered to satisfy the requirements of the Building Code of Australia with sufficient evidence of suitability on a large scale wall test should they be tested.


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 CPEng, NER (Fire Safety / Mech) 2590091, RPEQ 11498, BPB-C10-1875, EF-39394
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CAPPING AND FLASHING

45mm THICK SACRIFICIAL SOLID TIMBER POLE PLATE

ROOF PURLINS

R2 GOLD BATTENS

WEATHER BARRIER

90x35 STUDS @ 600 CRS

12mm RESCOM EXTERIOR LINING

13mm FYRCHEK INTERIOR LINING

FIRE BAN ONE SEALANT TO PERIMETER OF INTERNAL SHEETING

45mm THICK TIMBER POLE PLATE

FLOOR JOISTS

NOGGING

10mm PLASTERBOARD CEILING LINING

90x35 STUDS @ 600 CRS

12mm RESCOM EXTERIOR LINING

13mm FIRECHECK INTERIOR LINING

FIRE BAN ONE SEALANT TO PERIMETER OF INTERNAL SHEETING

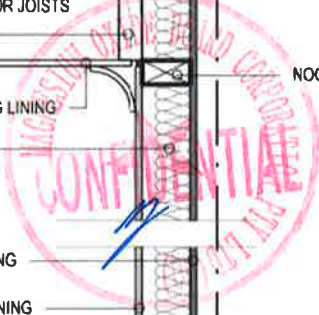
CONCRETE SLAB TO ENGINEERS DESIGN & DETAILS

RETICULATION LINE

50 - BOUNDARY TO FRAME / SLAB

DETAIL 1.
NO SERVICES ZONE REQUIRED

FIREWALL SYSTEM: 60/60/60 FRL
- ALL PENETRATIONS TO BE IN ACCORDANCE WITH FIRE ENGINEERS RECOMENDATIONS
NOTE: FLASHING BETWEEN BOUNDARY WALL AND NEIGHBOURING BOUNDARY WALL WHERE APPLICABLE

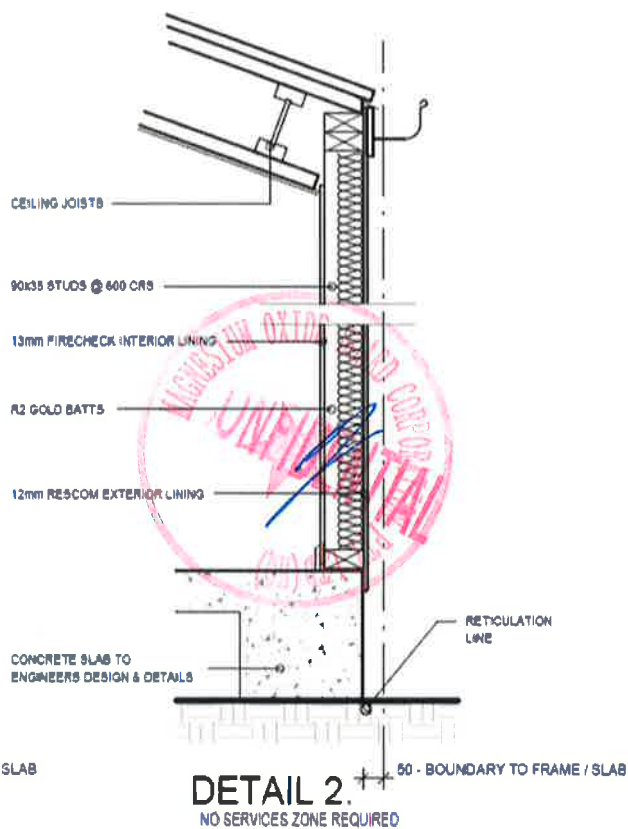
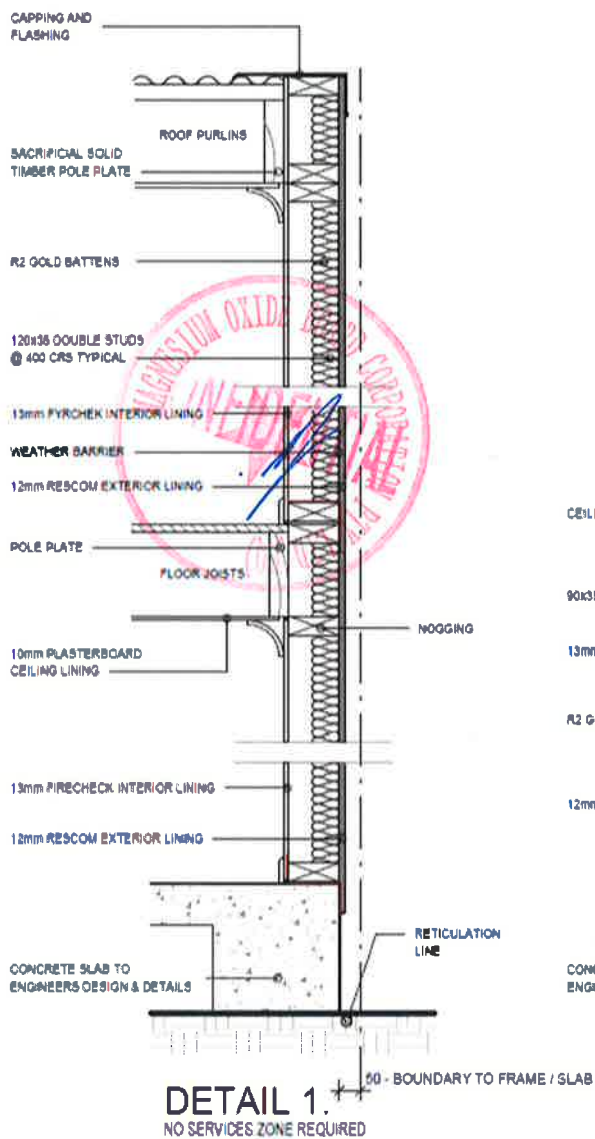


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ResCom Boundary Wall: 60/60/60

FIREWALL SYSTEM: 60/60/60 FRL
 - ALL PENETRATIONS TO BE IN ACCORDANCE WITH FIRE ENGINEERS RECOMMENDATIONS
 NOTE: FLASHING BETWEEN BOUNDARY WALL AND NEIGHBOURING BOUNDARY WALL WHERE APPLICABLE



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