RESISTANT
BUILDING PRODUCTS (2025) LTD

Uniclass
L5142
CI/SfB
Rr9

Magnesium Oxide Building Board Trading Association

STA ASSUREGOLD

BBA APPROVAL INSPECTION TESTING CERTIFICATION
CERTIFICATE 15/5255

multi-rend

Multi-Rend Board

What is it?

Resistant Multi-Rend is a high strength external render carrier board suitable for any location across the British Isles. It is a vapour permeable, A1 Non-combustible building board with excellent dimensional stability. Multi-Rend is moisture, frost, mould and impact resistant. It offers an alternative to block and render, brick, masonry or cladding finish.
Available in either 9 or 12mm for selection with thin or thicker coat render finishes

Where and when is it used?

To form the external facades of domestic and commercial projects which utilise timber, steel or hybrid framed structures to achieve lightweight, fast erect, thermally efficient building envelopes with smaller footprints.

Multi-Rend's unique characteristics

- A1 Non-combustible
- Breathable
- Low thermal expansion
- Low moisture expansion
- High strength to thickness ratio
- Lightweight
- Easy cut - Score & Snap
- Impact resistant - in accordance with ISO 7892
- Keyed Surface
- Both 9 & 12mm Multi-Rend can be bent at an 8m Radius curve (studs maximum 300mm c/c)

Multi-Rend board must be fully dry throughout before applying a final finish. Use a wire brush to remove any loose particles / dust to provide a good keyed surface ready for the render system.

Finish

Resistant Multi-Rend has been approved as a substrate to accept an extensive range of finishes, see below:

- Mineral based renders including dash
- Acrylic / Silicone / Polymer modified renders
- Solvent based renders
- Lime Renders - Thorough consideration, specification & application required
- Brick slips, stone cladding, natural thin cut marble.

Approving Render Companies

Render suppliers named below have extensively tested and approved Multi-Rend as a suitable substrate. Please contact the render supplier for relevant specification which will include board preparation advice which may differ from one supplier to another. If a render other than listed below is chosen the applicator should test to completely satisfy compatibility before deciding to proceed.


City West Hotel - Dublin
Multi-rend board must be dry, clean & free from dust etc before a render is applied to the board

Fitting Design Guidance

Multi-Rend Construction for Timber & Steel Frame

Batten Fixing Guide

Multi-Rend can be either fixed onto timber battens or hot dipped galvanised steel battens.

Timber Battens

Kiln dried treated timber battens to be used.
Battens to be less than 20% moisture content before installation of Multi-Rend.
Vertical battens - located at maximum 600mm vertical centres.

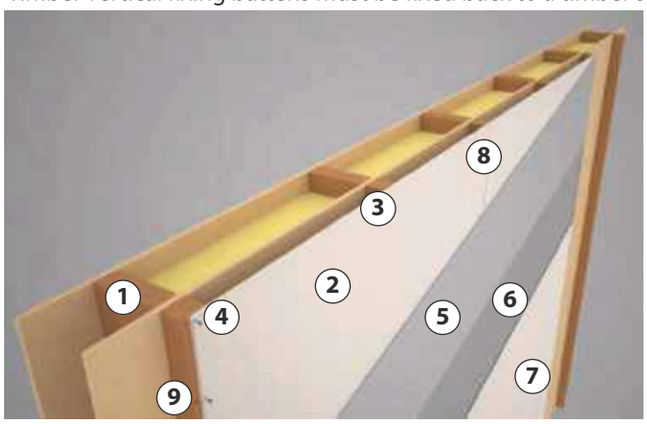
Typical Fixing Centres

-Board to be fixed at 300mm vertical centres with 600mm batten centres.
-Board to be fixed at 400mm vertical centres with 400mm batten centres.
All to batten engineers design specification
Edge fixing - all fixings should be located at a minimum of 15mm from the edge of the boards. Fixing type - see recommended accessory page.

Notes

Timber Frame

Timber vertical fixing battens must be fixed back to a timber stud of the structure and not just fixed to the sheathing board.



Key

1. Timber Frame
2. 9 or 12mm Multi-Rend Board (Keyed Surface Outwards)
3. Batten size to suit project design as specified by engineer on project.
4. Multi-Rend Fixings (minimum of 15mm from edge of board)
5. Base Coat
6. Mesh
7. Render
8. 4mm gap is a fitting gap between boards horizontal & vertical.
9. Batten fixing size as specified by project engineer.

Steel Battens

Hot dipped, galvanised steel are manufactured using dx51/140g material that is manufactured to BS EN 10143-2009.
Dimensions - minimum 75mm face x 25mm deep.
Vertical battens - located at 400mm or 600mm centres.

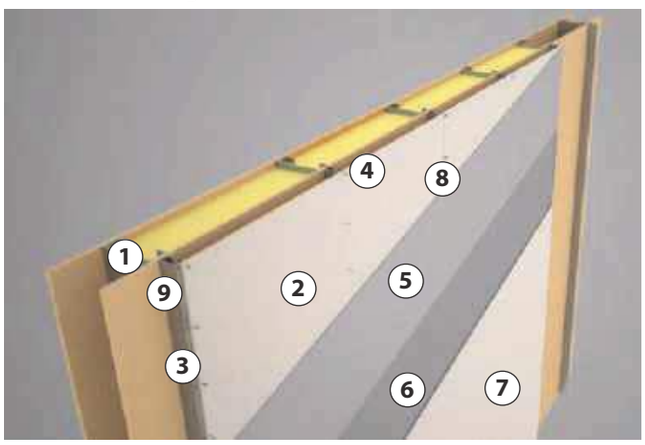
Typical fixing centres

-Board to be fixed at 300mm vertical centres with 600mm batten centres.
-Board to be fixed at 400mm vertical centres with 400mm batten centres.
All to batten engineers design specification
Edge fixing - all fixings should be located at a minimum of 15mm from the edge of the boards. Fixing type - see recommended accessory page.

Notes

Steel Frame

Steel vertical fixing battens must be fixed into solid members behind the insulation.



Key

1. Steel Frame
2. 9 or 12mm Multi-Rend Board (Keyed Surface Outwards)
3. Batten size to suit project design as specified by engineer on project.
4. Multi-Rend Fixings (minimum of 15mm from edge of board)
5. Base Coat
6. Mesh
7. Render
8. 4mm gap is a fitting gap between boards horizontal & vertical.
9. Batten fixing size as specified by project engineer.

Multi-Rend board must be dry, clean & free from dust etc before a render is applied to the board

Approved Fixing Information

Timber Stud

Wood Screw
Self Tapping
Countersunk head
Stainless Steel

Steel Stud

Case hardened
Self Tapping
Countersunk head
Stainless Steel

Multi-Rend fixings into Timber Battens

Assumptions
Maximum unfactored weight of render system = **15kg/sq.m**
Weight of 12mm Multi-Rend Board = **12.6 kg/sq.m**
Axial withdrawal resistance of fixings based on **10mm dia** screw head in **1050kg/m3**
Multi-Rend board - derived by calculation to Cl 8.7.2 EC5
Shear resistance in timber assumes **30mm** pointside penetration in timber batten of grade C16 in service class SC2

Fixing type: **Bi-Metal Drywall Screws (BMDW)4.8 x 42mm (or equivalent)**

Wind load resistance of fixings

Batten/Stud Spacing	Screw spacing	Design windresistance* (Nm^{-2})
600	200	3100
	300	2000
	400	1500
	600	900
400	200	4700
	300	3100
	400	2300
	600	1500

Multi-Rend fixings into Steel

Assumptions
Maximum unfactored weight of render system = **15kg/sq.m**
Weight of 12mm Multi-Rend Board = **12.6 kg/sq.m**
Head pull-through resistance of fixings based on theoretical values assuming min 10mm dia screw head in 1050kg/m3 Multi-Rend board to Cl 8.7.2 EC5
Shear resistances in board material calculated in accordance with Cl 8.2.3 EC5 in service class SC2 and is based on the following screw parameters derived in accordance with EC5 Cl 8.3.1.
Characteristic fastener yield moment = 3704 Nmm
Characteristic fastener embedment strength in Multi-Rend Board = 30.4 N/sq.mm

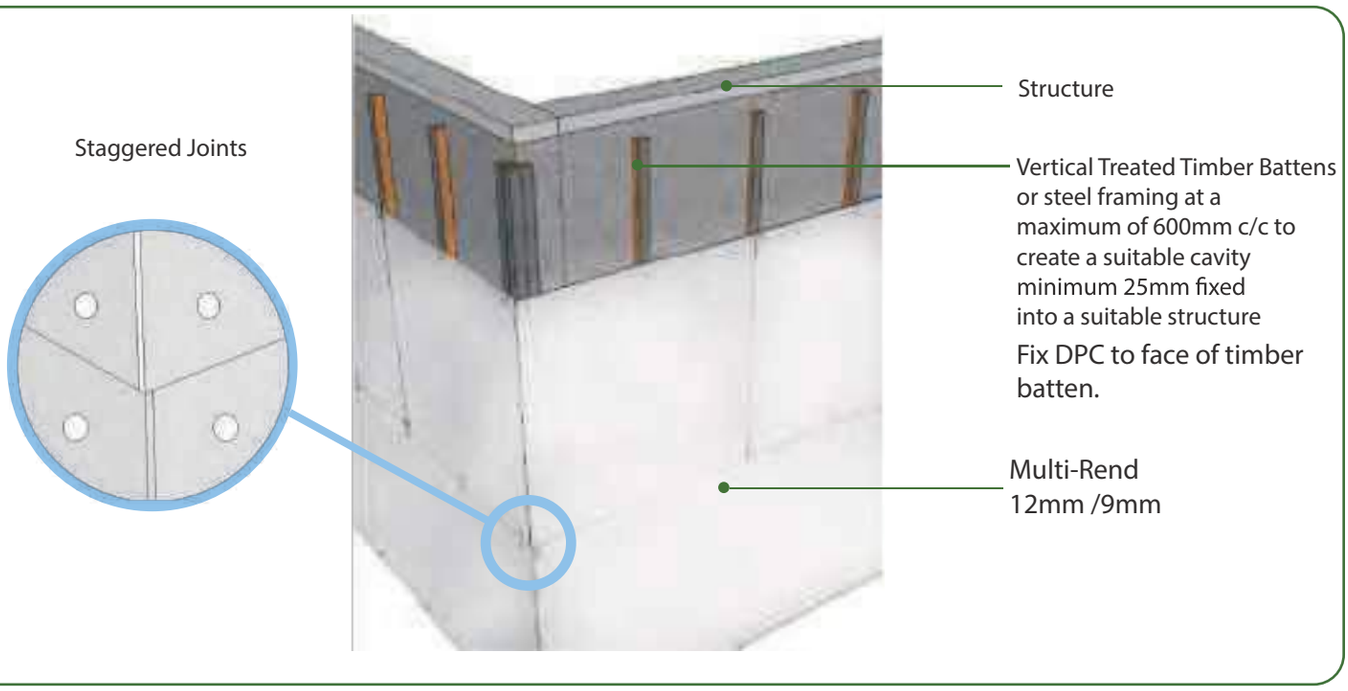
Fixing type: **Bi-Metal Drywall Screws (BMDW)4.8 x 42mm (or equivalent)**

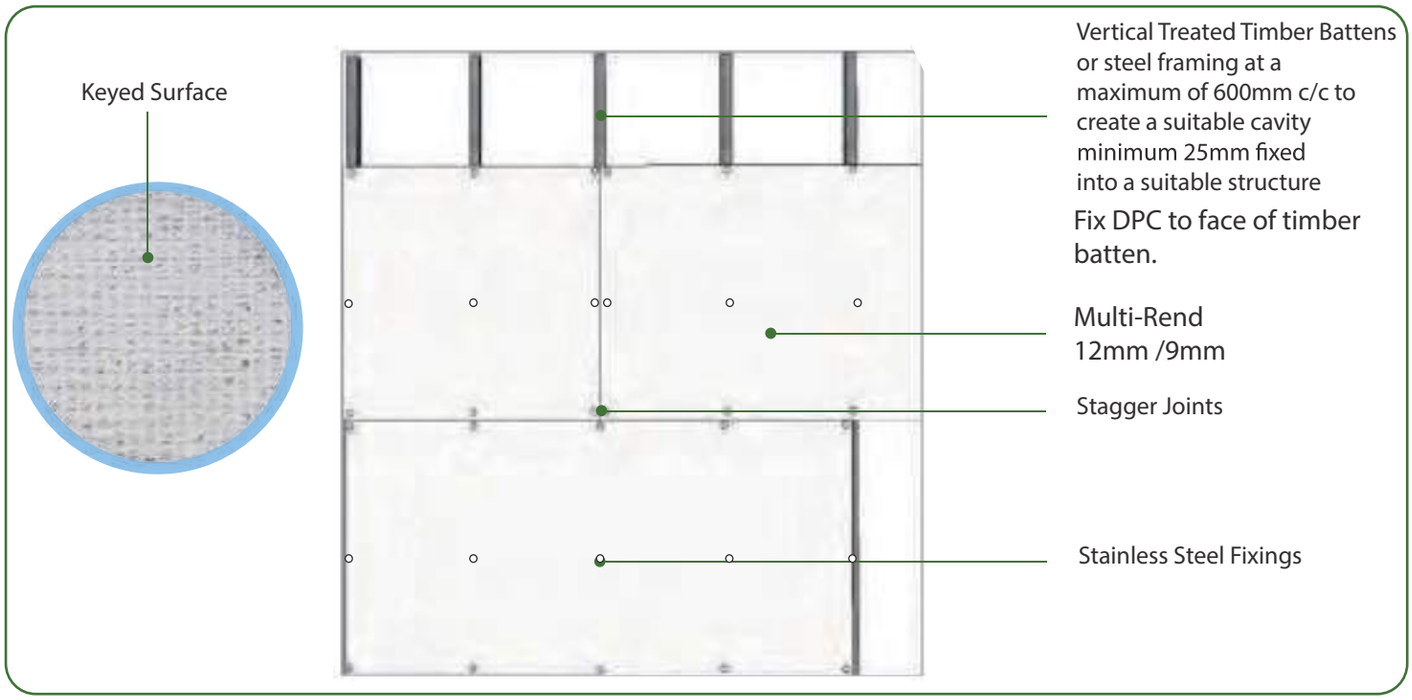
Wind load resistance of fixings

Batten/Stud Spacing	Screw spacing	Design windresistance* (Nm^{-2})
600	200	2900
	300	1850
	400	1350
	600	750
400	200	4400
	300	2900
	400	2150
	600	1350

Multi-Rend board must be dry, clean & free from dust etc before a render is applied to the board

Staggering boards at corners





Multi-Rend boards must be fitted horizontally to create a brick bond effect. This will stagger joints and increase the strength of the overall boards. If fixed at 300mm centres 27 fixings per board will be required.

Cutting Multi-Rend

Multi-Rend can be cut by simply using a stanley knife and the 'score and snap' method. This is adequate for low volume work. For high volume work we can recommend using a stone disc/blade or a Tungsten Carbide blade.
The board is to be fitted keyed surface outwards

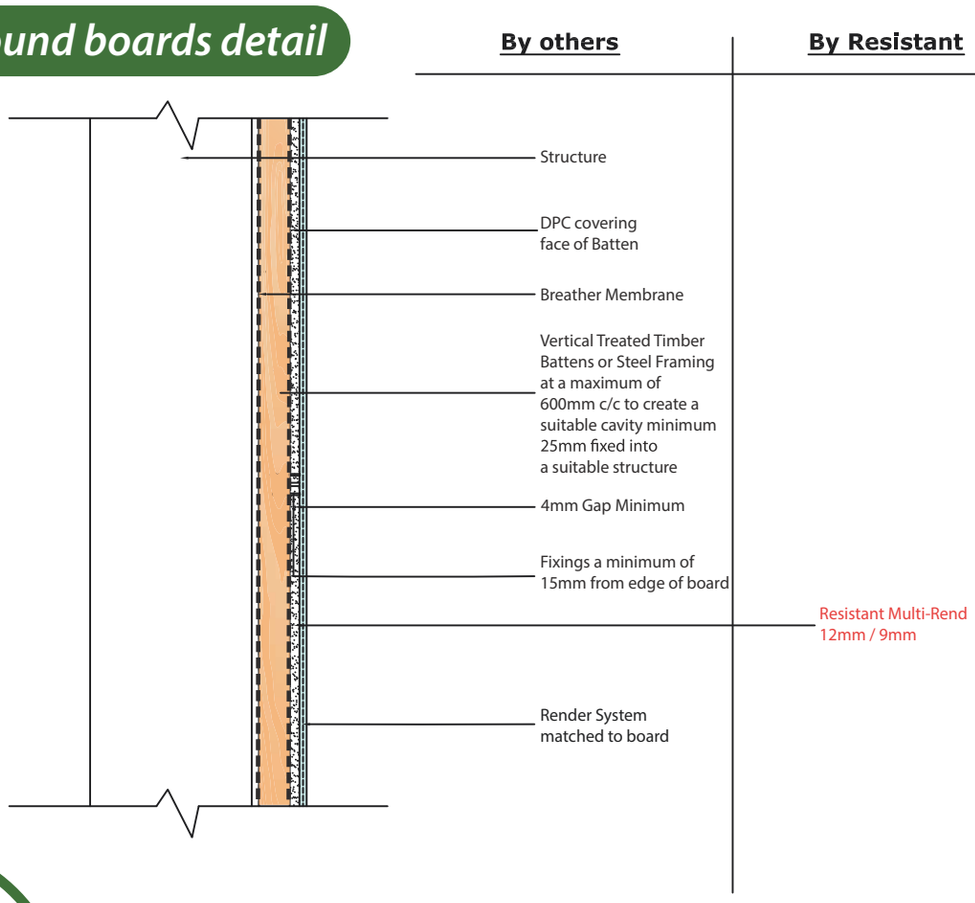
PPE

We recommend that adequate personal protective equipment is used at all times when installing Multi-Rend.

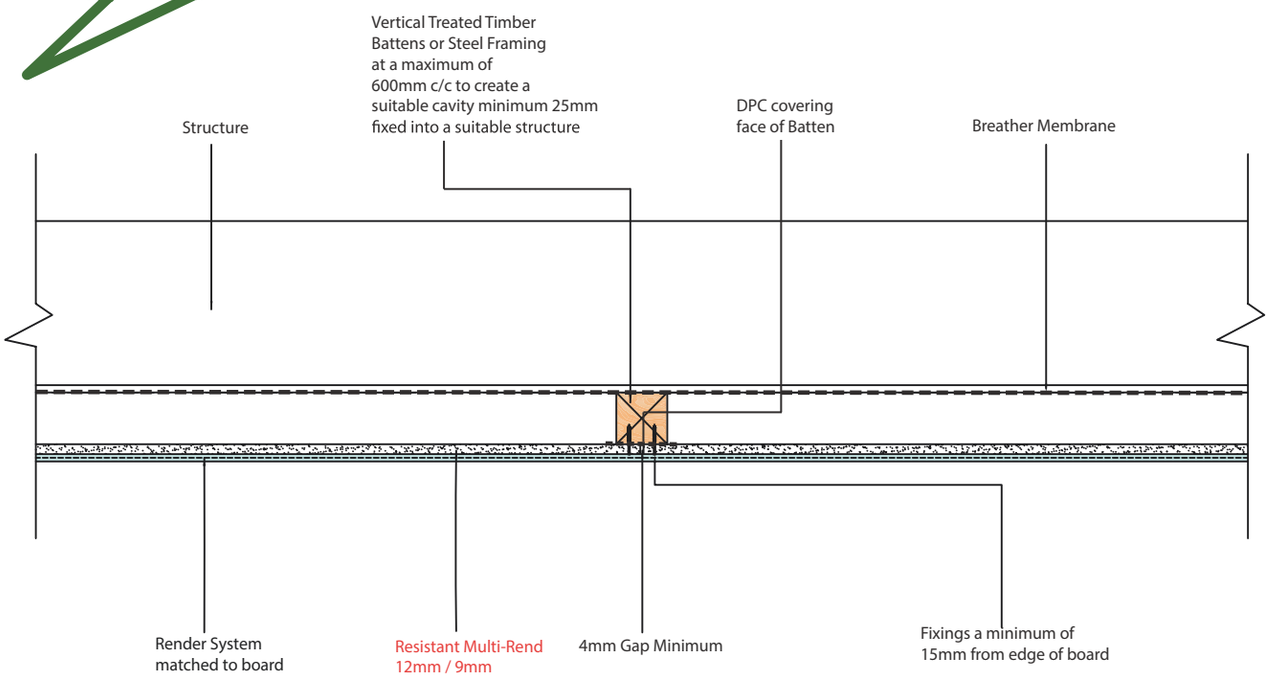
Multi-Rend board must be dry, clean & free from dust etc before a render is applied to the board

Construction Details

Fitting Gap around boards detail

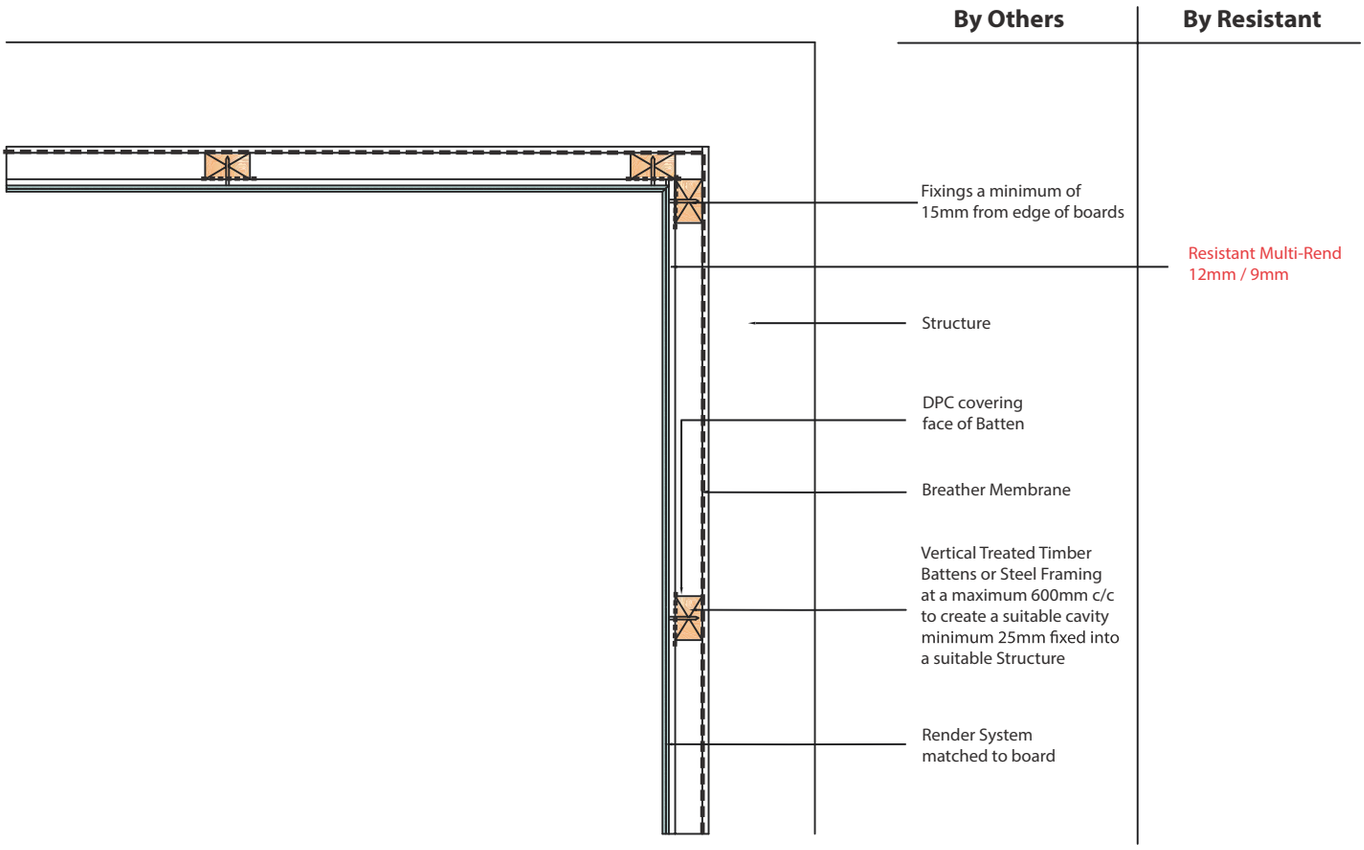


Please Note
The Fitting Gap between the boards to be prepared and reinforced as per approved render suppliers specification

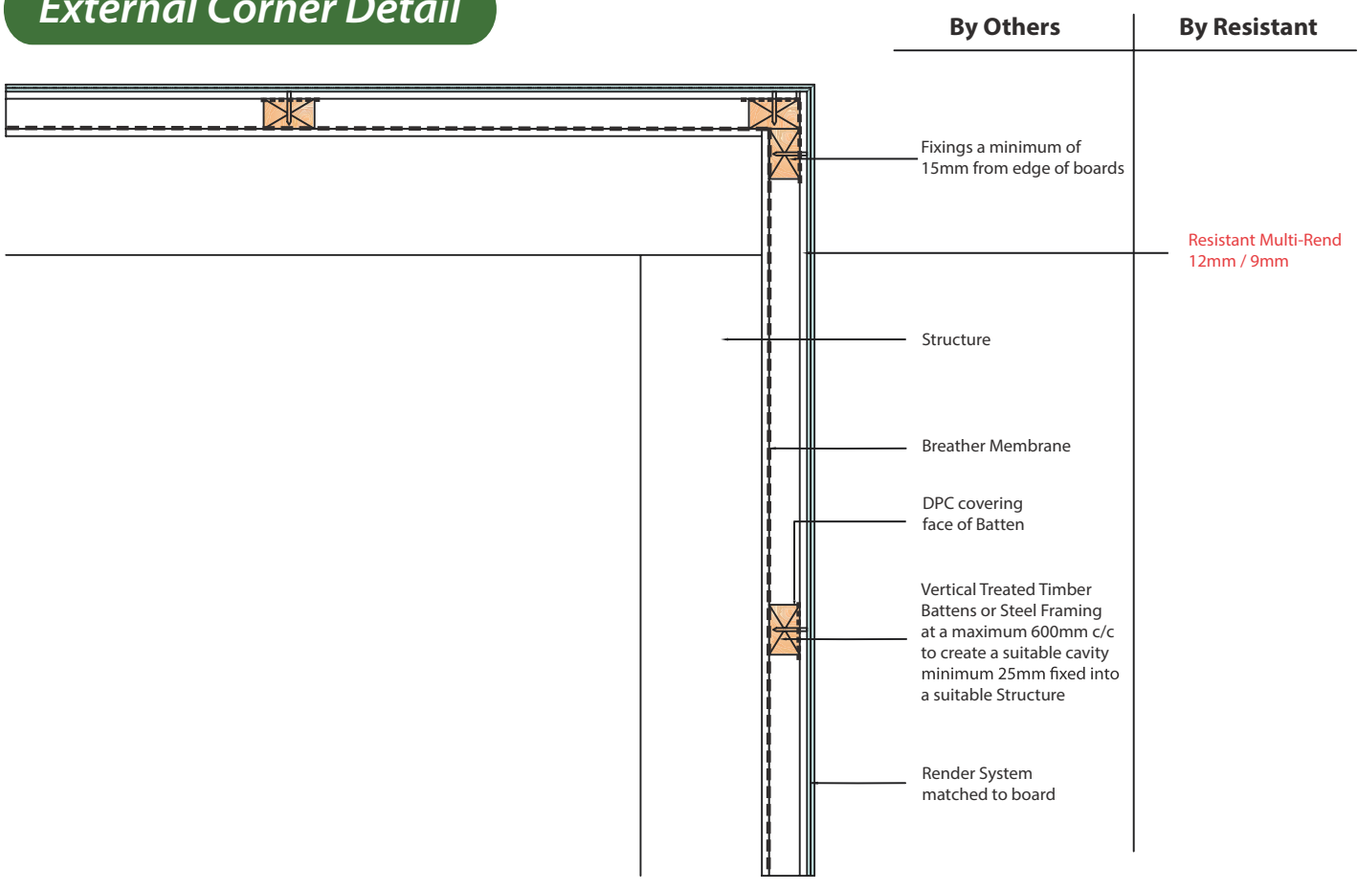


Multi-Rend board must be dry, clean & free from dust etc before a render is applied to the board

Internal Corner Detail



External Corner Detail



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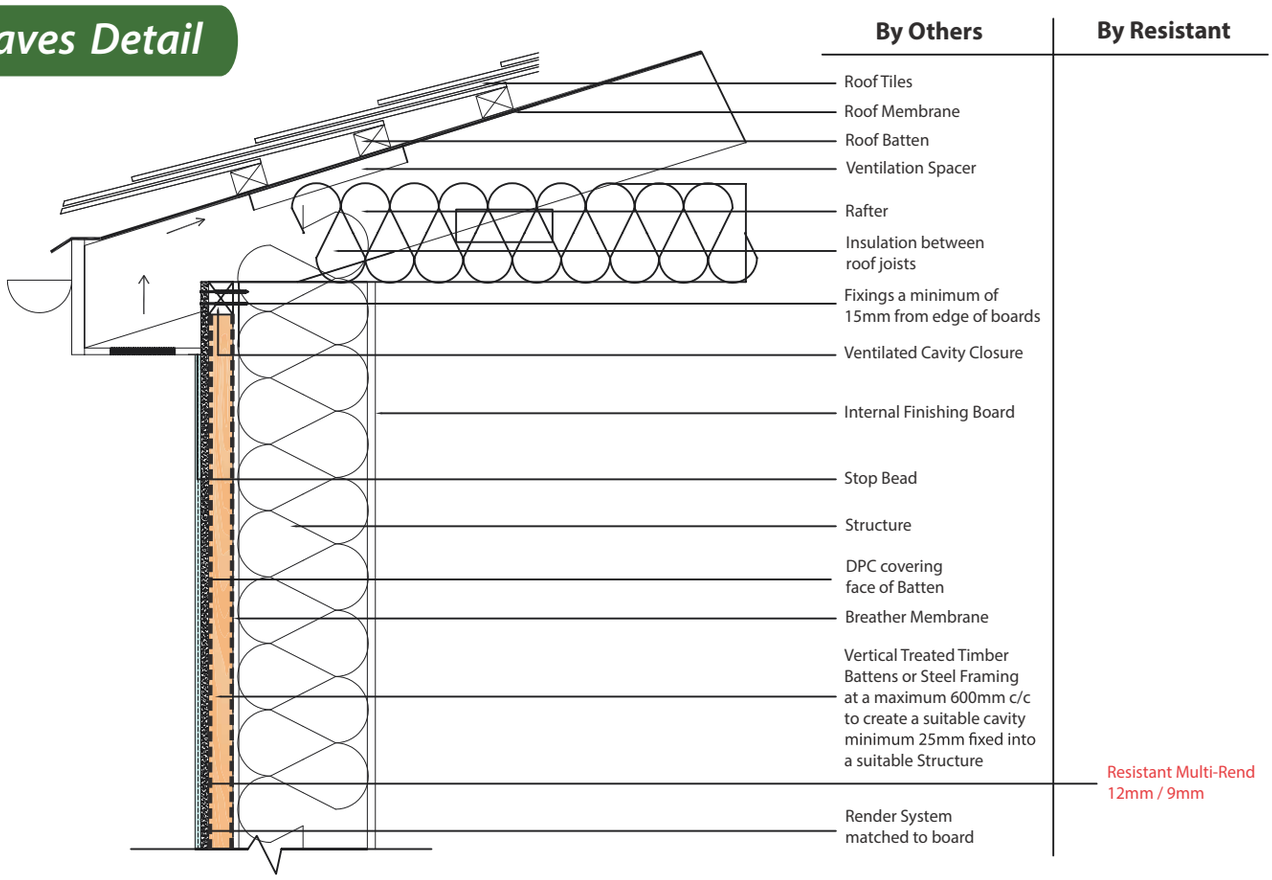
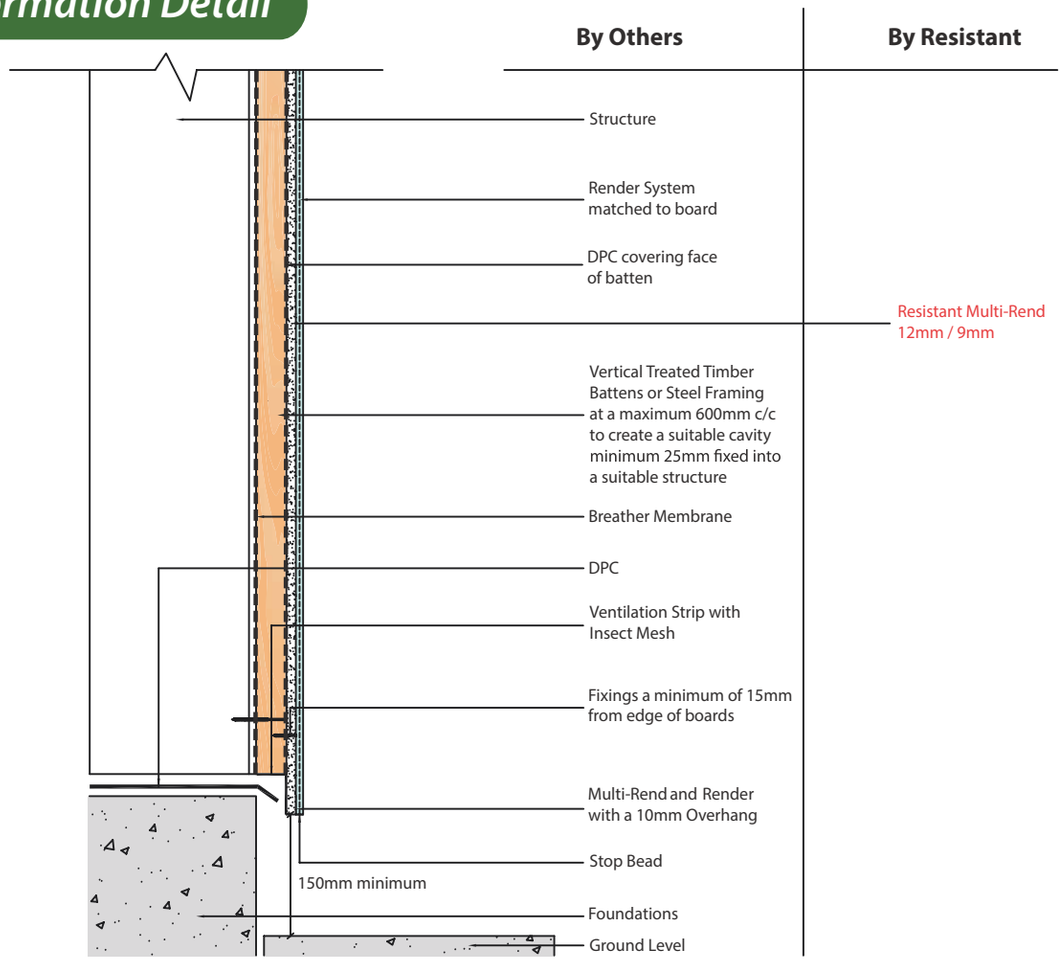
Eaves Detail



Base Formation Detail



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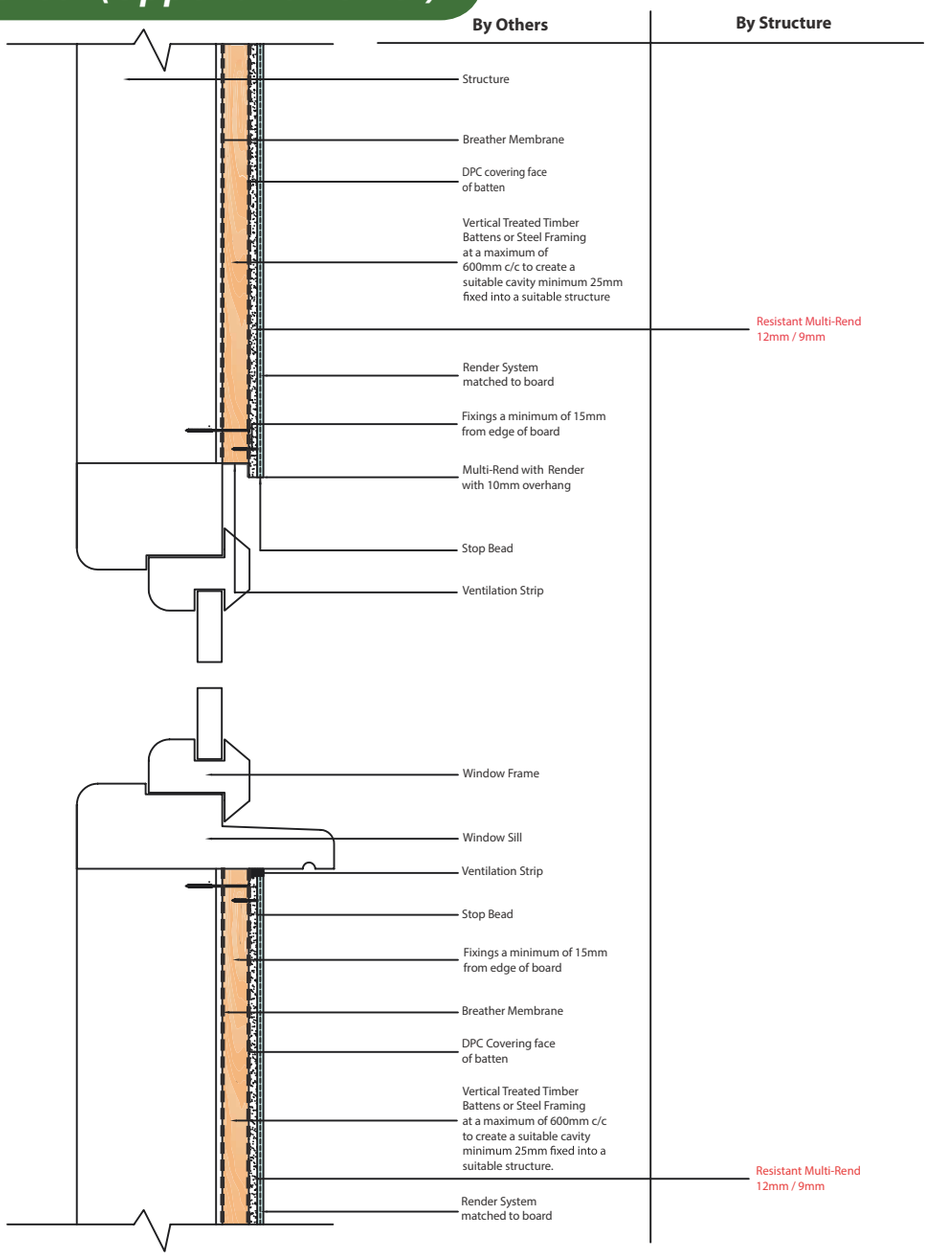
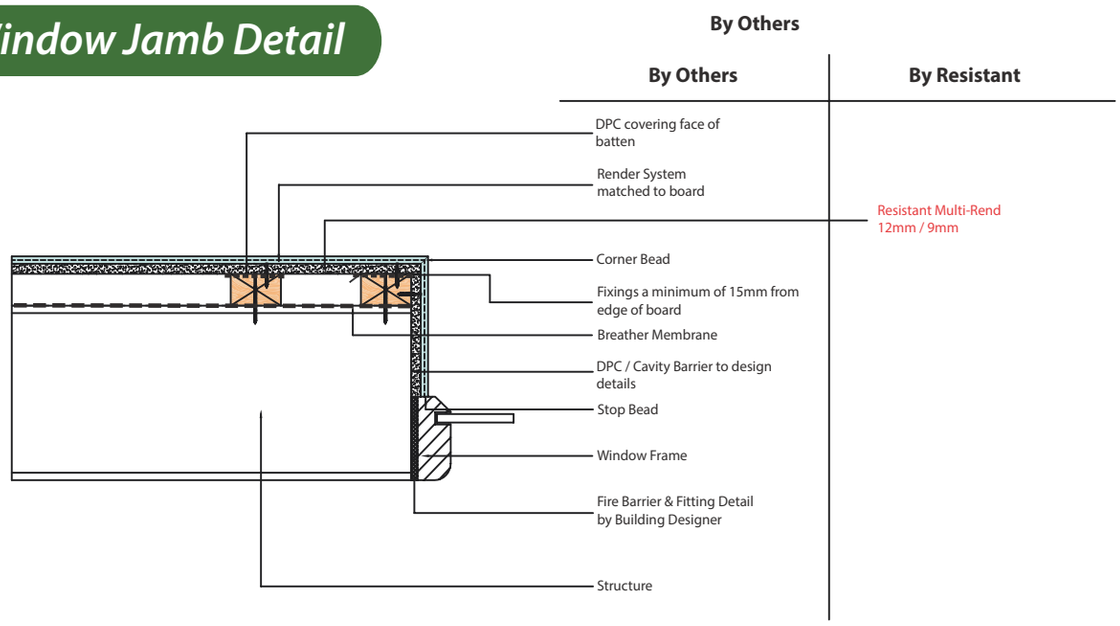
Window Reveal (Upper and Lower)



Window Jamb Detail



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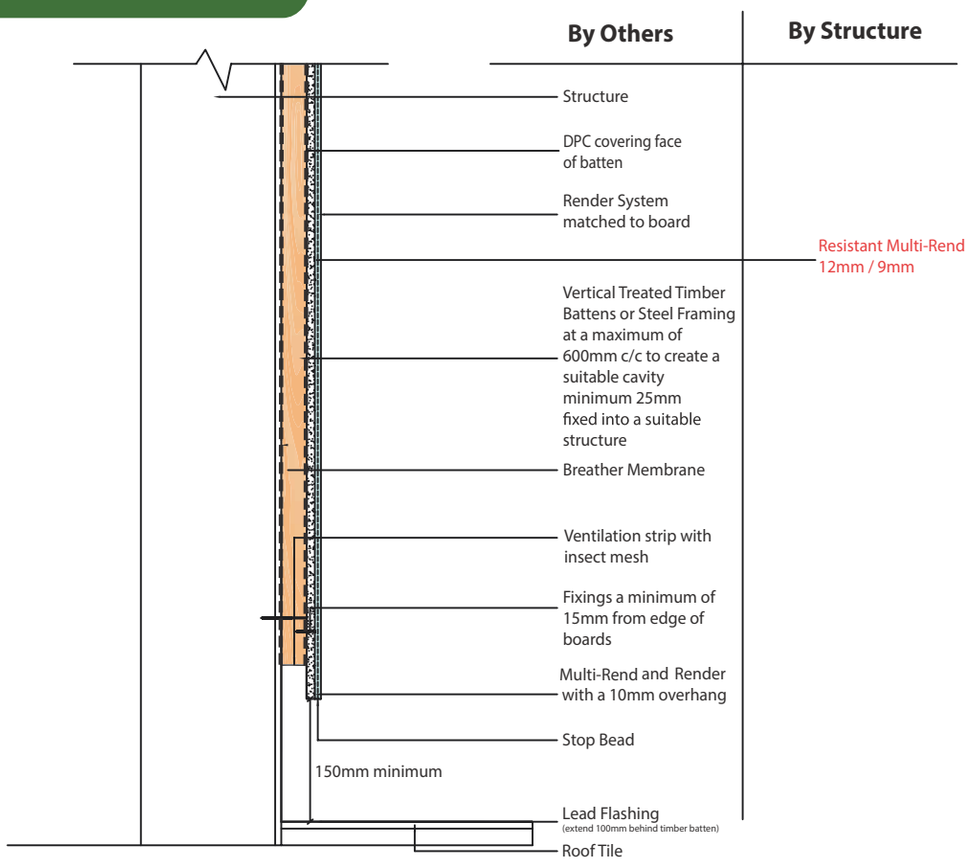
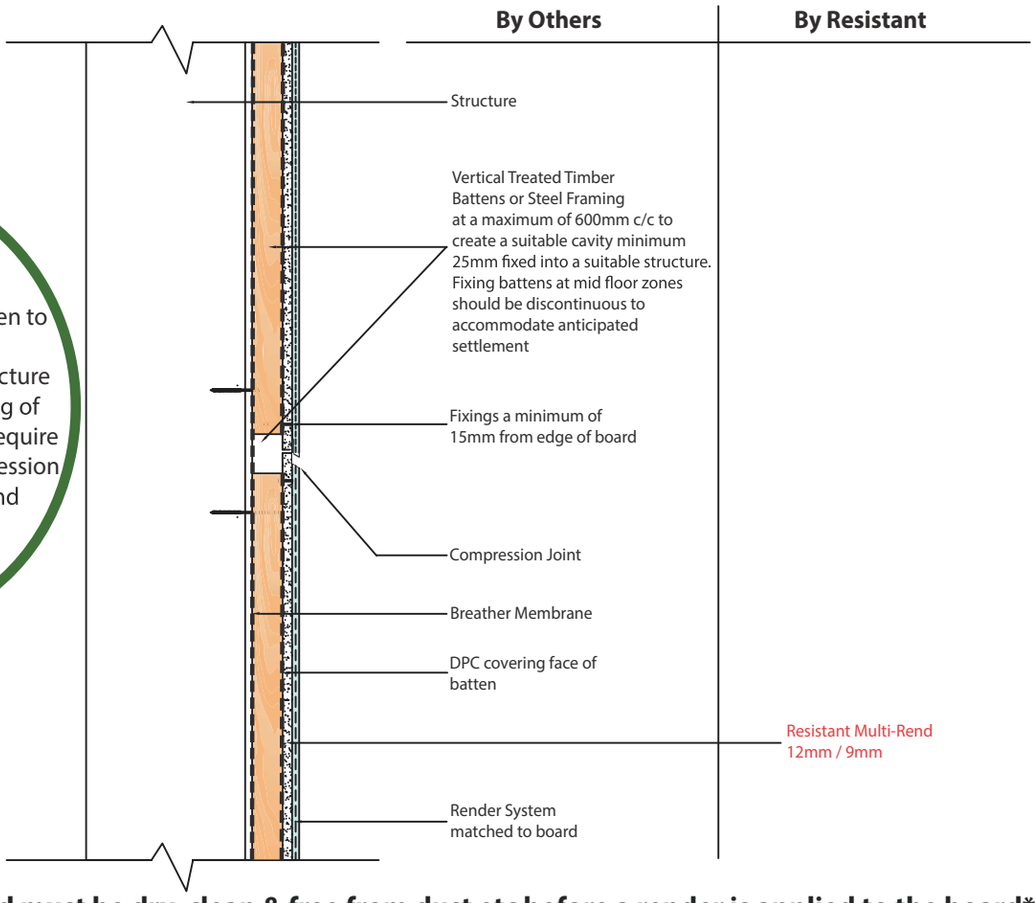
Dormer Window Detail



Horizontal Compression Joint

Please note
Architectural design consideration must be given to ensure any anticipated settlementof building structure will be reflected in detailing of external facade and may require the introduction of compression joints at mid floor zones and where different cladding types abut.



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Responsibility List

Resistant Fixing Design Guide	Render Company	Building Designer	Batten Engineer
Resistant Fixing Information	Render Specification	Structural Frame Fixing Limitations	Information to batten engineer for fixing diameter size & centres
	Board Preparation	Render Specification	Information to batten engineer for batten arrangement and structural design
		A) Cavity size & Details B) Cavity Barrier Location & type - by others C) Movement joints	Information to batten engineer for batten fixing design

Building Project Manager Checklist

Is the Multi-Rend Board fully dry throughout and free from dust & debris etc before applying Render Finish?	✓
Is the Structure designed to withstand weight of Multi-Rend and render?	✓
Are the battens kiln dried, preservative treated and correct size to create cavity?	✓
Are the batten fixings suitable for the batten and the structure behind?	✓
Are the battens lined and levelled with robust packing approved by batten engineer?	✓
Has anticipated movement within the structure been allowed for in the design of the facade?	✓
Are Multi-Rend Sheets secured to battens with approved fixings? (as per our page 5 info)	✓
Has the Render Company approved the use of the Multi-Rend boards?	✓
If the boards have been exposed to the elements for any number of days prior to rendering it is compulsary to brush the surface of the boards down with a stiff brush, to remove any salts that may of risen to the surface.	✓

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Technical Data

 Thermal Insulation Properties

 Rodent Resistant

 Low Carbon Manufacturing Process

 Fire rated, Non-Flammable
A1 Non-Combustible

 Impact Resistant

 Moisture & Water Resistant

Test Subject	Test	Result
Density Dry (ex works)		1050 kg/m^3 (+/- 10%)
Modulus of Rupture	BSEN 310	17.7 N/mm^2 (along grain) 12.4 N/mm^2 (across grain)
Modulus of Elasticity	BSEN 310	6415 N/mm^2
Impact Strength (Brinell)		34 N/mm^2
Vapour Resistance	BSEN 12086:1997	3.8 MNs/g
Thermal Conductivity at 50^0		0.307 W/mK
Fire Test	EN 13501-1:2007 + A1:2009	Class A1 Non-Combustible
Change in Thickness (After immersion in water)	BSEN 317	0-0.1% N/mm^2
Tensile Strength (perpendicular to plane)	BSEN 319	2.004 N/mm^2
Screw Withdrawal Strength (with timber)	BSEN 320	2.60kN
Pull through resistance	BS EN 1383 : 199	1.371 kN
Average Thickness Swelling	BSEN 321	0
Average Tensile Strength	BSEN 321	2.04 N/mm^2
Moisture Content	BSEN 322	8.6%

Dimensions

Resistant Multi-Rend is supplied as a rectangular board with square edges and is white in colour.

Thickness: 9-12mm

Sizes: 1200 x 2400mm

Special size requirements and thicknesses are also available upon request depending on quantity.

Tolerances

Length and Width: +/- 2mm

Thickness: 9mm = +/- 0.34mm
12mm = +/- 0.15mm

Edge Straightness: 1mm / metre

Squareness of edge: < 3mm

Manufacture

Resistant Multi-Rend is manufactured using inorganic substances, and an alkaline resistant fibreglass mesh. Why alkaline resistant - because MgO products have a slightly alkaline pH Value and durability is assured with highest grade alkaline resistant mesh.

The product is naturally cured using no energy through cold fusion, unlike similar competitive products on the market, which use autoclaving technology. This ensures that Resistant Multi-Rend has a relatively low impact on the market environment.

Multi-Rend achieves its superior strength and flexibility by the introduction of four layers of alkaline-resistant fibreglass mesh. Consistent high quality of the product of the product is maintained and monitored through a sophisticated digitally controlled process to ensure a superior finished board always reaches our commitment to quality assurance.

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Boards Tested By

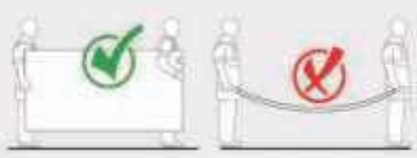
Download the complete BBA certificate at ***www.resistant.co.uk*** for full details

Correct Storage / Handling

from the ground on a pallet, in dry conditions indoors and be under cover. Boards should not be leant upright for long periods of time.

Boards should always be lifted by two people and not dragged across each other to prevent unnecessary scratching or damage.

sheets will cause permanent surface staining. They should be protected from the weather and other trades on site at all times.



Boards should be carried on edge and extra precaution should be taken to protect the visible front edge and corners.

Accessories will commonly be available from all good Render Suppliers and Builders Merchants

Useful Contact Information

Ejot UK Ltd,
Hurricane Close
Sherburn-in-Elmet
Leeds
LS25 6PB

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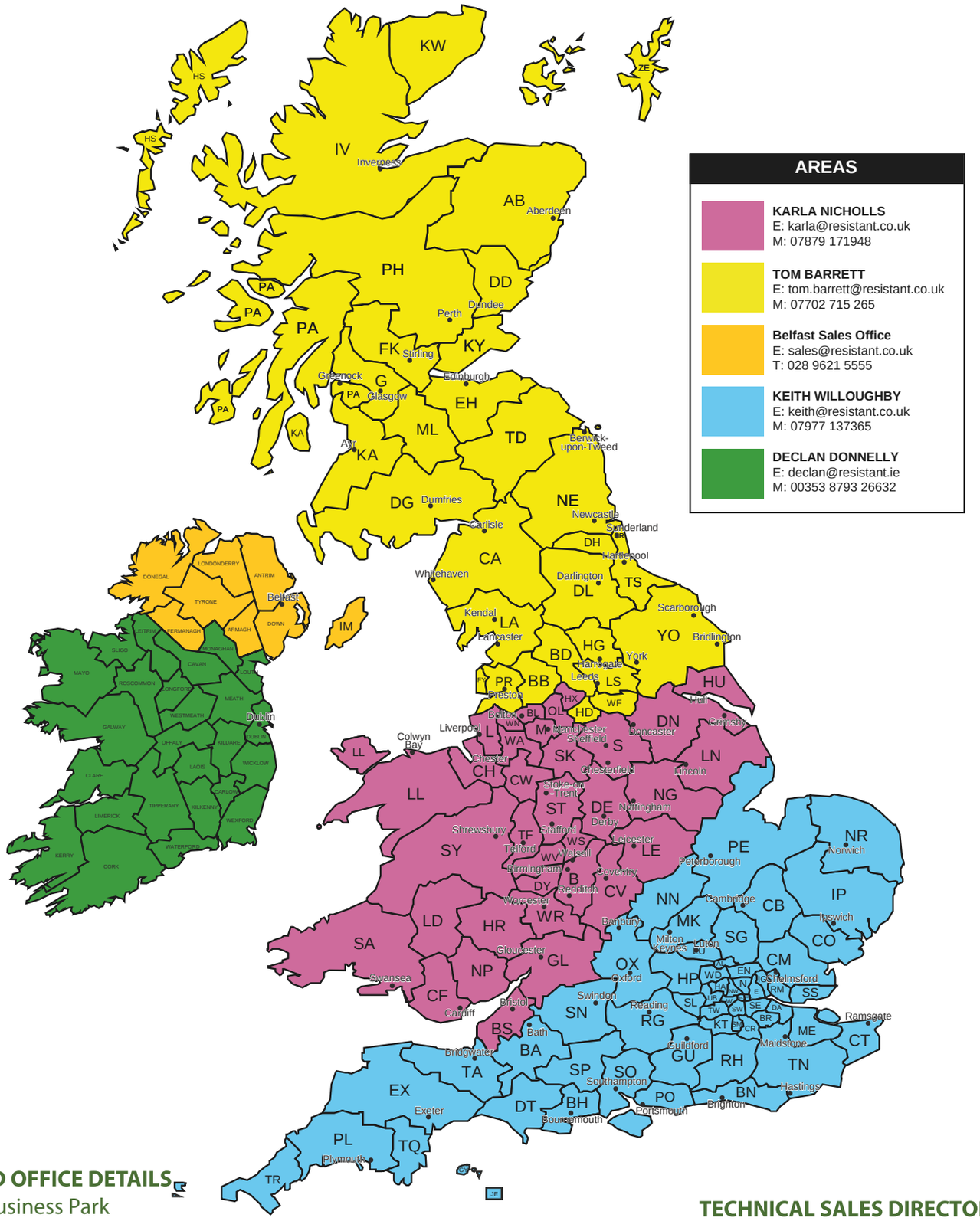
www.rawlplug.ie.uk

RESISTANT SALES MAP



HEAD OFFICE DETAILS

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