

PROWALL

RAINSCREEN CLADDING





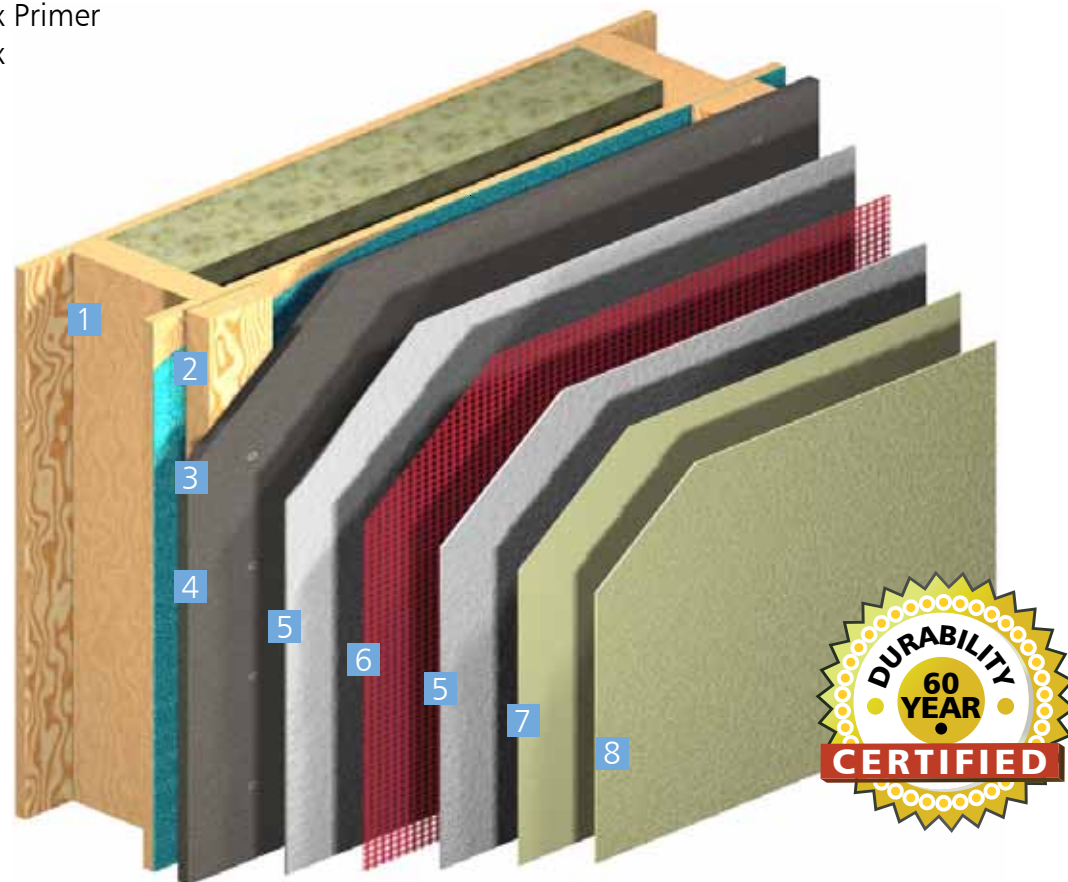
ProWall

ProWall Rainscreen Cladding is an external envelope system with a range of attractive colours and finishes from the ProRend Colourtex render system.

Rainscreen cladding is installed creating a clear cavity from the main superstructure providing healthy living by allowing the building to breathe and to provide protection from the elements.

ProWall System

- 1 Timber frame sheathed with breather membrane
- 2 Timber battens creating clear cavity
- 3 ProBoard timber frame fixing
- 4 ProBoard
- 5 ProRend Lite Basecoat
- 6 ProMesh Grade 3
- 7 ProRend Colourtex Primer
- 8 ProRend Colourtex



Ideal Substrates

- Timber frame
- Warm steel frame
- Cold steel frame
- SIPS (Structural Insulated Panel System)
- Masonry (Renovation)

Property Types

- Residential
- Commerical
- Education
- Healthcare
- New Build
- Refurbishment
- Extension

ProWall Finishes

ProWall Rainscreen Cladding is available in 2 ProRend Colourtex textures with a colour range of over 65,000 shades including RAL, NCS and British Standard



Uniform



Grained

Features & Benefits

- Approved Document Part B Fire Safety compliant
- Horizontal ventilated cavity barrier seals tested to 99 mins integrity (Testing conducted by Chiltern International Fire Ltd)
- Clear cavity - Creating a breathable render system
- System durability up to 60 years - BBA certificate 13/4983
- Highly water-repellent silicone resin finish
- Low maintenance costs
- Reduced preliminary costs due to quick installation



ProBoard

ProBoard Advanced Render Carrier Board is the cementitious substrate for the ProWall Rainscreen Cladding system.

The ProBoard is fixed with austenitic stainless steel (A2) fasteners into timber or metal studs.

ProBoard meets the latest regulation requirements in respect of fire protection and wind.

Technical Data

• Fire classification EN 13501-1	A1
• Compressive strength, N/mm ²	15.5
• Weight, kg/m ²	14.65
• Bending radius, m	1.5
• Thermal conductivity, W/mK	0.196
• Linear variation due to moisture, %	0.05
• Water absorption % by weight / 24 hrs	<8
• Freeze / thaw cycles	100

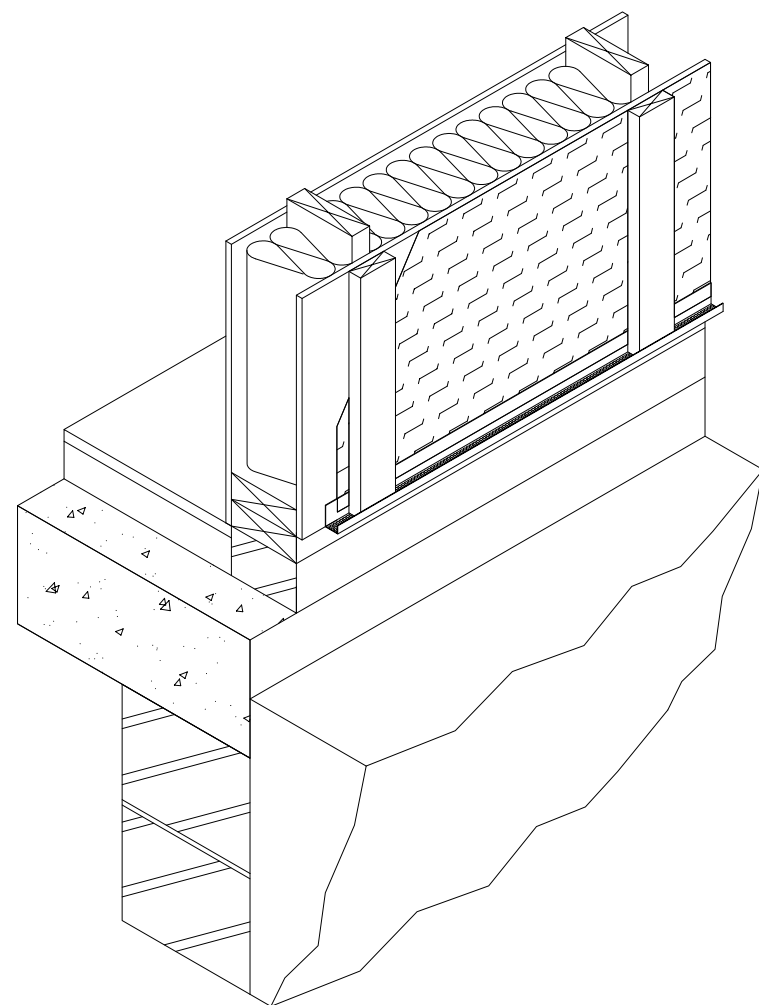


General Information

• Dimensions, m	1.2x 2.4
• Thickness, mm	12.7
• Weight /sheet, kg	42.2
• Sheets / pallet	33
• Weight / pallet, kg	1392
• System weight, kg/m ²	~22



Ventilation Profile Base Bead



- 1 ProWall Ventilated Base Bead mechanically fixed through sheathing into main timber studs
- 2 Breather membrane to overlap ProWall Ventilated Base Bead
- 3 75mm x 25mm treated timber battens (class 3) fixed into main timber studs
- 4 ProWall Base Bead, PWBB fitted to face of timber battens creates level at base of system and improves impact resistance

Figure 1 - Ventilation Profile and Base Bead

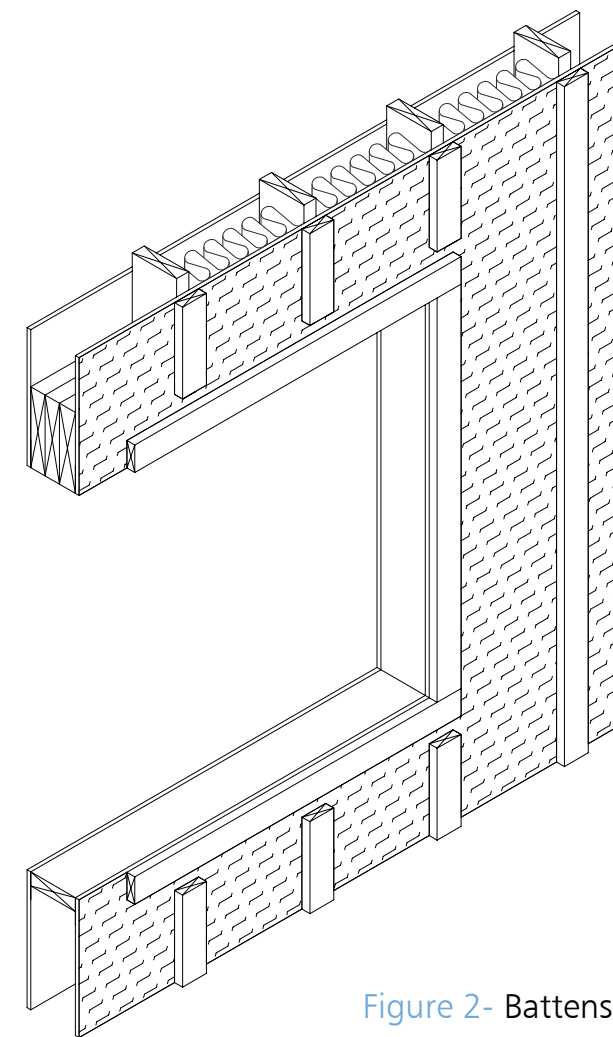


Figure 2- Battens



Battens To Apertures

- 1 75 x 25mm timber battens framing aperture to aid fire performance and board fixing pattern
- 2 50mm gap between vertical battens and aperture framing battens

Note: Detail ensures appropriate drainage and ventilation

Aperture Flashing

- 1 Flashing tape applied beneath window frame and sill prior to window installation
- 2 Flashing wrapped around the head framing batten and lapped up under breather membrane
- 3 Flashing tape downturned at ends of opening to maximise drainage

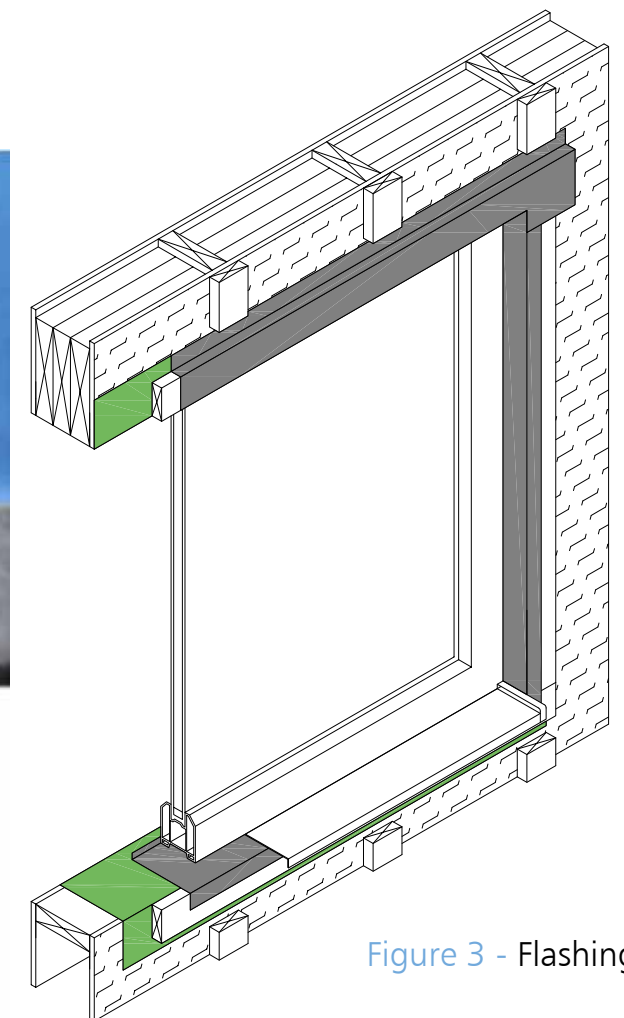
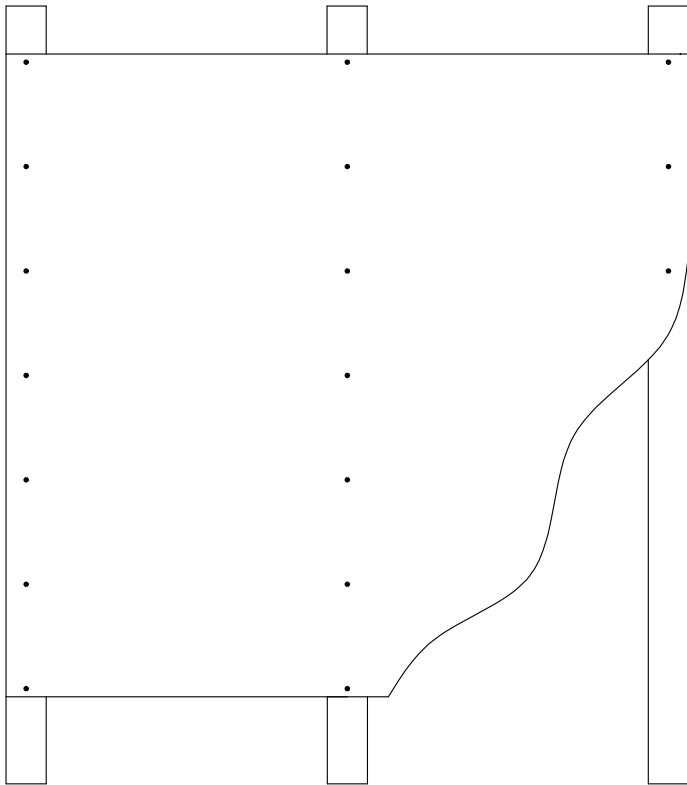


Figure 3 - Flashing

ProBoard Fixing

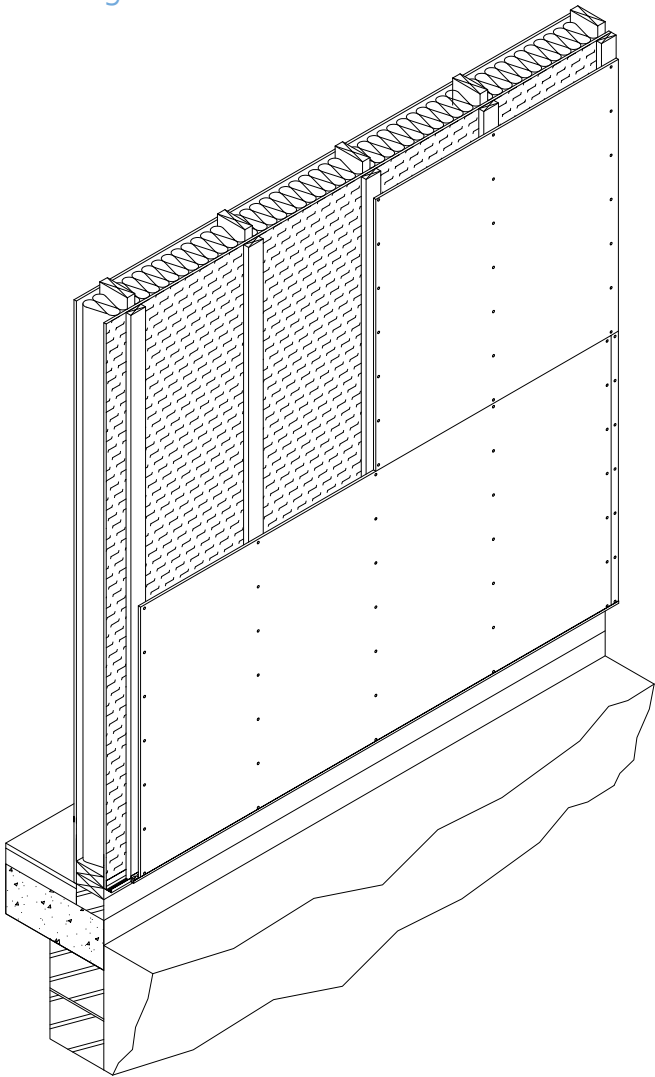
- 1 ProBoard to be fixed in block bond style
- 2 3mm spacings required between ProBoards

Figure 5- Fixing spacings



Maximum Spacing of Timber Studs (mm)	Minimum Number of Timber Frame Fixings per 2.4 m Long Stud	Design Resistance against Wind Load kN
400	5	1.68
600	6	1.58

Figure 4- ProBoard Installation



- 1 Maximum 200mm centres on general battens (subject to minimum number of fixings as outlined below)

Note: Adherence to BS 5268-2 for avoidance of batten splitting. Drawing assumes 600mm stud spacing.

Elevation Layout

- 1 ProBoard fitted around apertures to avoid vertical or horizontal joints at corners
- 2 ProBoard joints minimum 150mm from the edge of opening

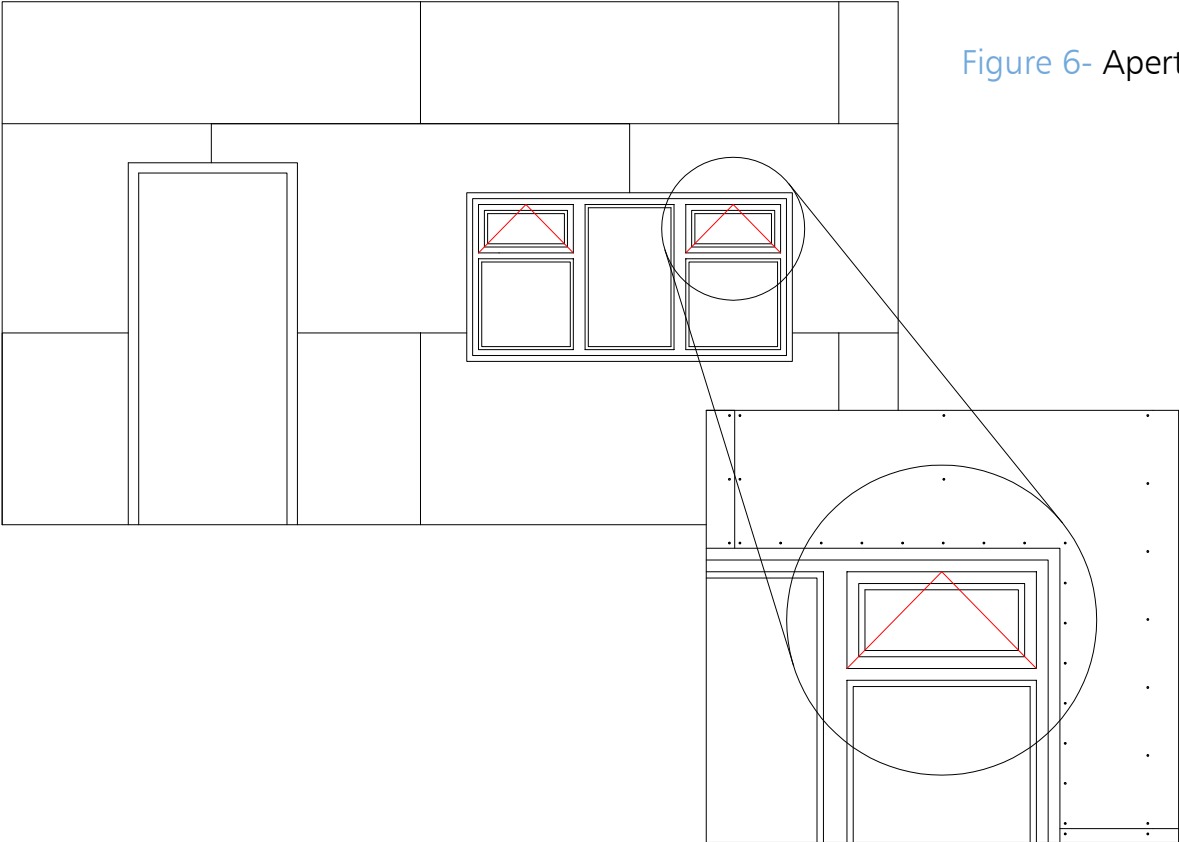
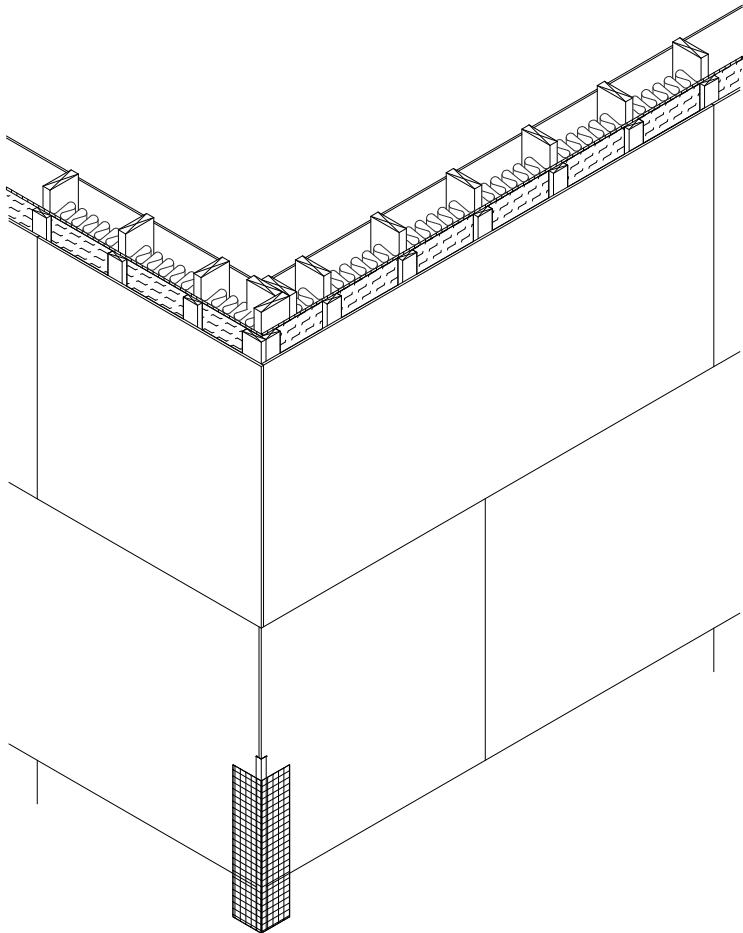


Figure 6- Aperture Planning

Corner Fixing

- 1 Corner ProBoards fitted alternately block bond
- 2 ProBead NMAB to be bedded on at corner during render application

Figure 7- Corner Installation



Fire Break

- 1 Intumescent strip placed above horizontal slip joint creating cavity fire barrier
- 2 Continual line of intumescent strip fixed with stainless steel screws
- 3 Independent lengths tightly butted

Note: Firebreak detail is offered as a guidance detail only. All firebreak designs must be signed off/ approved by appropriate parties.

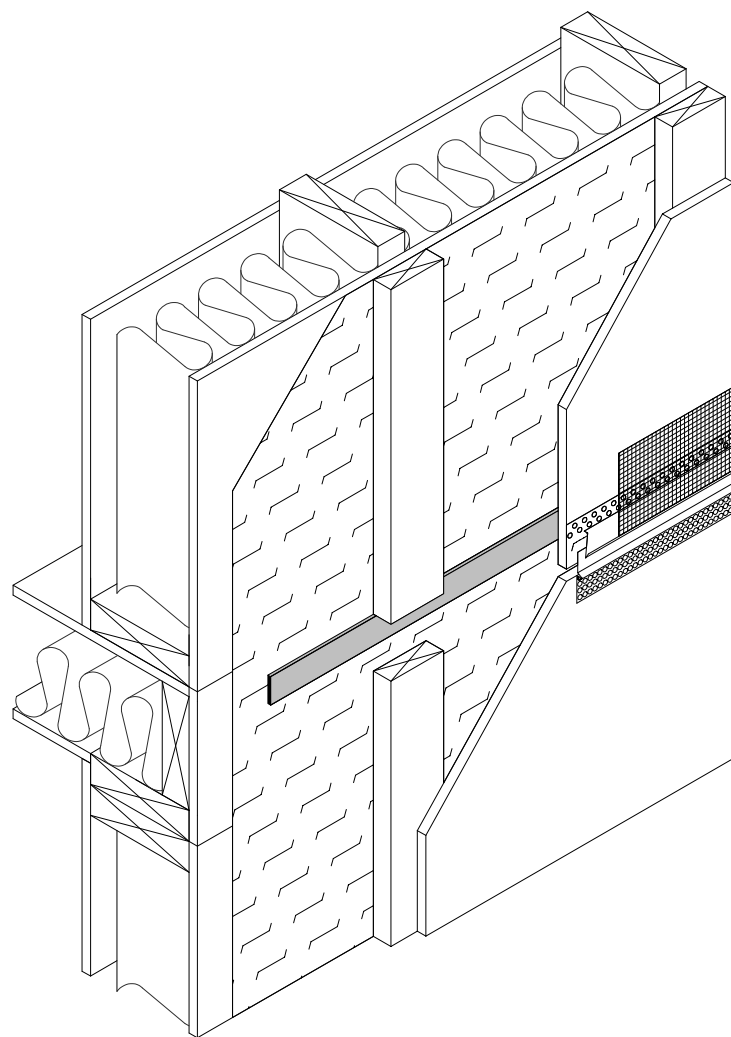
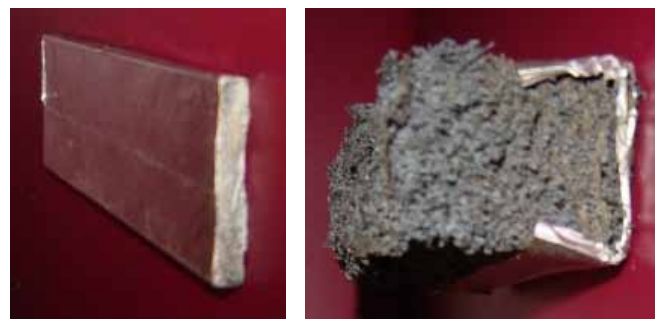


Figure 8- Fire Barrier



Intumescent Fire Strip before and after.

Services

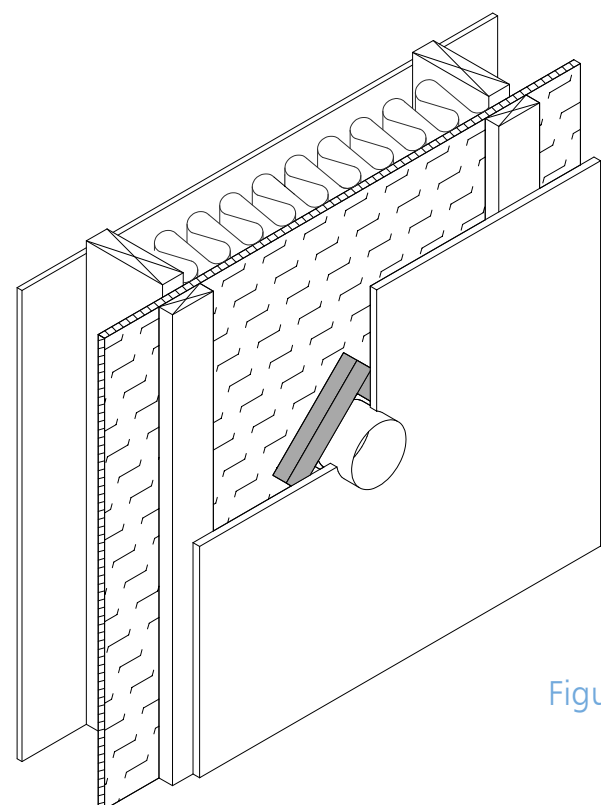


Figure 9- Services

- 1 Battens fitted at angle around service to provide drainage
- 2 Treated battens required for hot flue
- 3 Allow 50mm vertical batten spacings from framing battens
- 4 ProBoard surface cut to accommodate service

Expansion And Slip Joints

- 1 Expansion joints in substrate to be mimicked in timber battens and ProBoard
- 2 ProBead EX6 profile to be installed on surface of ProBoard

Note: Detail indicates party-wall in timber frame structure

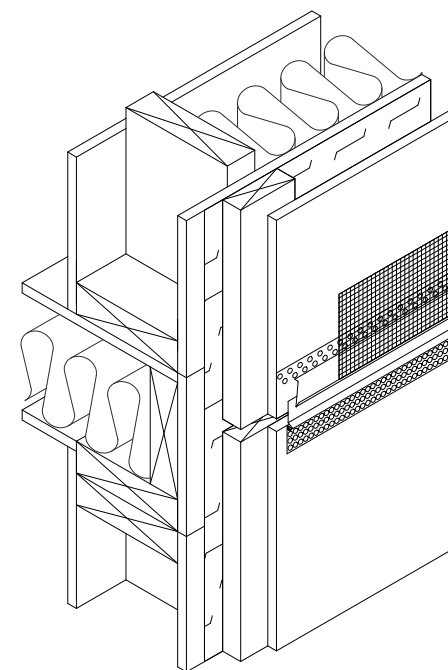


Figure 11- Horizontal Slip Joints

- 1 Shrinkage allowance provided in timber battens and ProBoard
- 2 No battens to be fixed into floor zone, timber battens should 'float' over the rim board
- 3 ProWall Slip Joint profile installed over surface of ProBoard
- 4 Typically this detail incorporates Fire Break shown opposite to ensure compartmentalisation

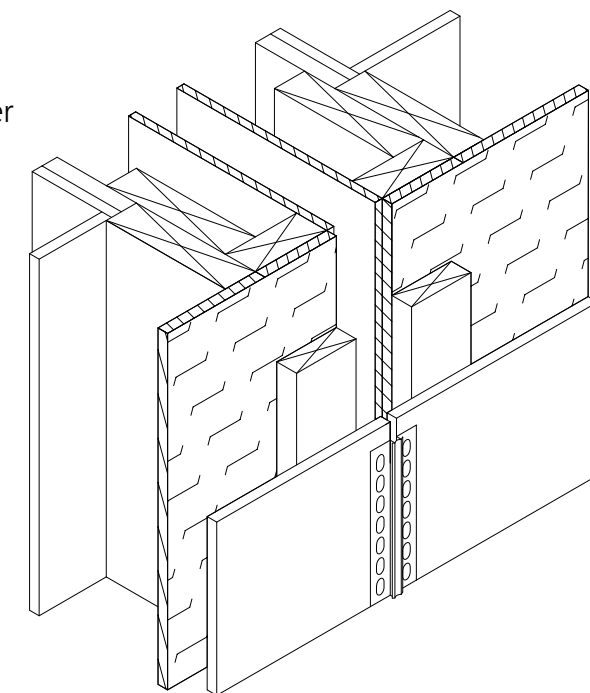


Figure 10- Vertical Expansion Joints

Note: Where no horizontal movement joint or vertical expansion joint exists in substrate, provision should be made within the ProBoards so that no area exceeds 42m² or 7.5m (linear) in any direction without a break.

System Ventilation

- 1 ProWall cavity runs up to eaves with ventilated soffit panel
- 2 Install intumescent strip at junction between ProWall and eaves to ensure appropriate compartmentalisation

Note: An alternate ventilation detail is available from the SAS Technical Team where a ventilated soffit is not available. Firebreak detail is offered as a guidance detail only. All firebreak designs must be signed off and approved by appropriate parties.

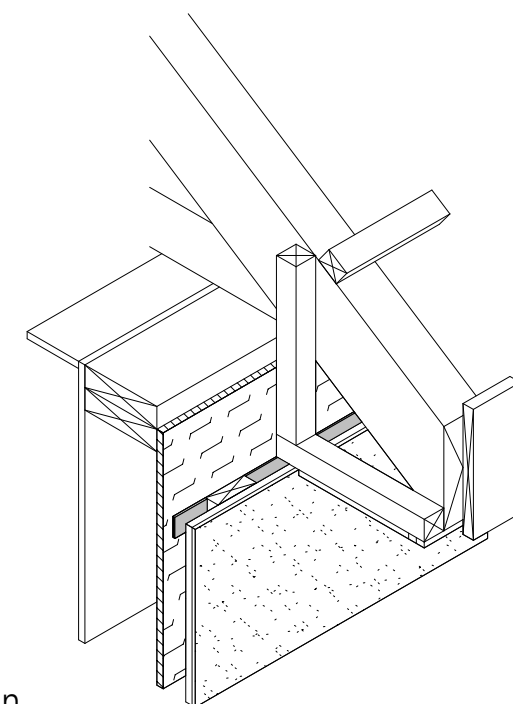


Figure 12- Eaves Ventilation



■ ProWall Helping Hand System

The ProWall Helping Hand system for steel frame structures works in conjunction with FastFrame utilising their innovative bracket and rail system to create a solution that eliminates cold bridging commonly found when installing rainscreen systems over steel frame.

The Helping Hand system allows you to insulate outside the frame creating a warm steel frame whilst maintaining a clear ventilated cavity between the insulation and rainscreen system.

■ Features

- Brackets precision engineered from 3mm structural grade aluminium
- Rails engineered from 2.2mm high specification 6063 T6 aluminium
- Designed for fixed and floating points
- Integral isolation pad to reduce cold bridging
- Unique three-part design offers superior performance and wider spanning
- Integral rail location clip to aid initial positioning
- Rails supplied in 6 metre lengths

■ Technical Data

- | | |
|------------------------------------|---------------------------|
| • Tensile strength | 200-240 N/mm ² |
| • Yield strength | 170 N/mm ² min |
| • Shear strength | 125 N/mm ² |
| • Elongation | 4-8% |
| • Brinell hardness | 60 HB |
| • Thermal conductivity | 149 W/mK |
| • Electrical conductivity | 39.4% |
| • Coefficient of thermal expansion | 23.5x10 ⁻⁶ 1/K |
| • Elastic modulus | 70000 MPa |

Ventilation Profile Base Bead

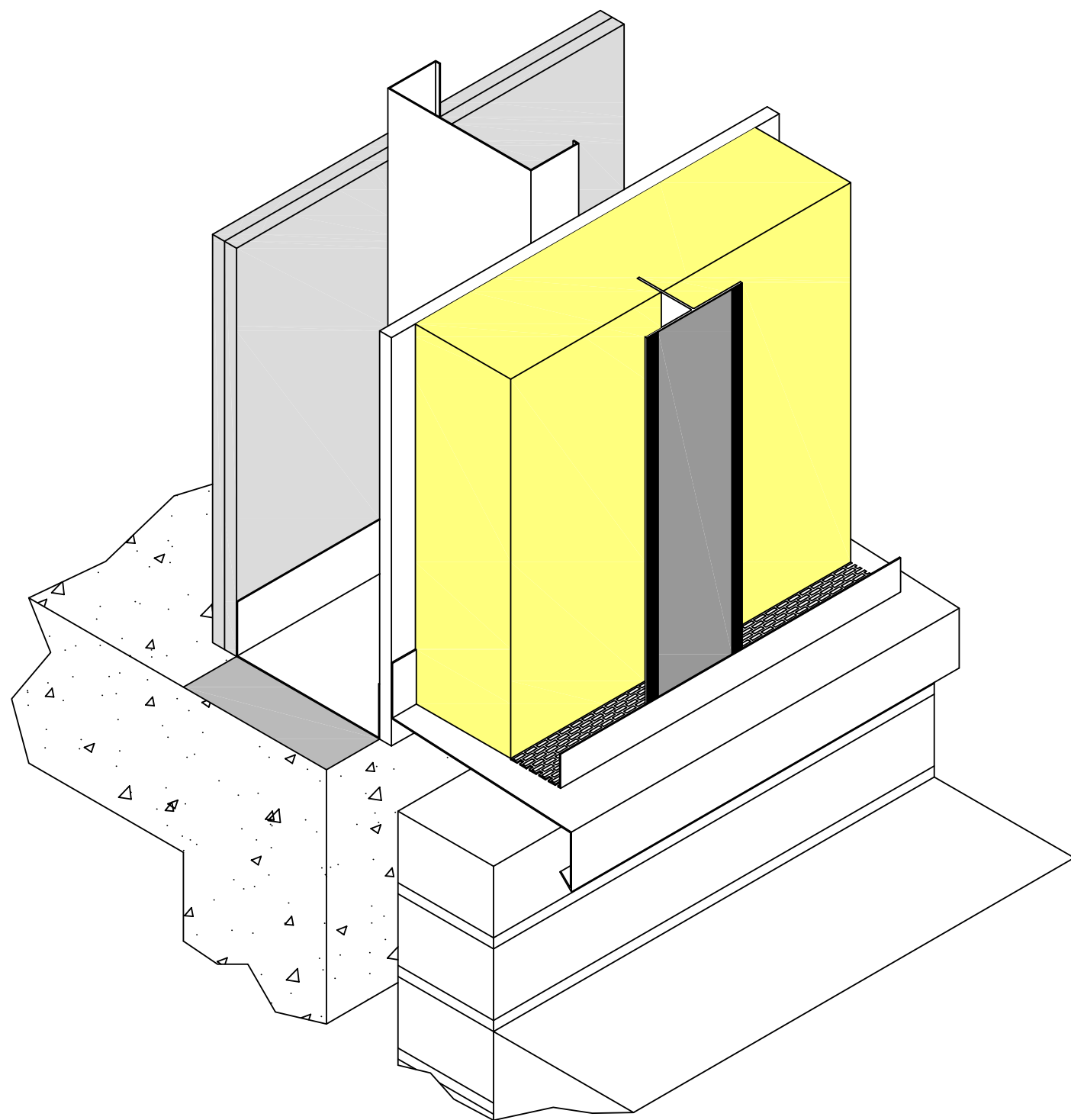


Figure 13- Ventilation Profile

- 1 ProWall Aluminium Ventilated Base Bead mechanically fixed to Helping Hand rails
- 2 Aluminium Ventilated Base Bead must be to the depth of the cavity
- 3 ProWall Base Bead, PWBB fitted to face of Helping Hand rails to create level at base of system and improve impact resistance

Profiles To Apertures

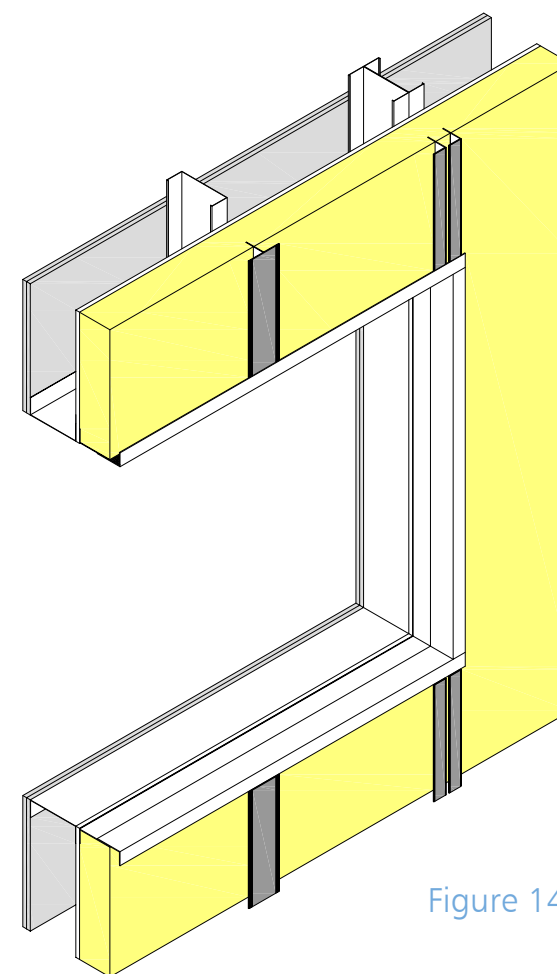


Figure 14- Aperture Profiles

- 1 'L' shape profiles fixed to Helping Hand rails at base of apertures and jambs
- 2 Ventilation profile fixed to frame and Helping Hand rails at heads of apertures

ProBoard To Apertures

- 1 ProBoard fixed to Helping Hand brackets paying close attention to layout of boards (see figure 20)
- 2 ProBoard fillets fixed to 'L' shape profiles at aperture jambs
- 3 Bellcast bead fitted to aperture head

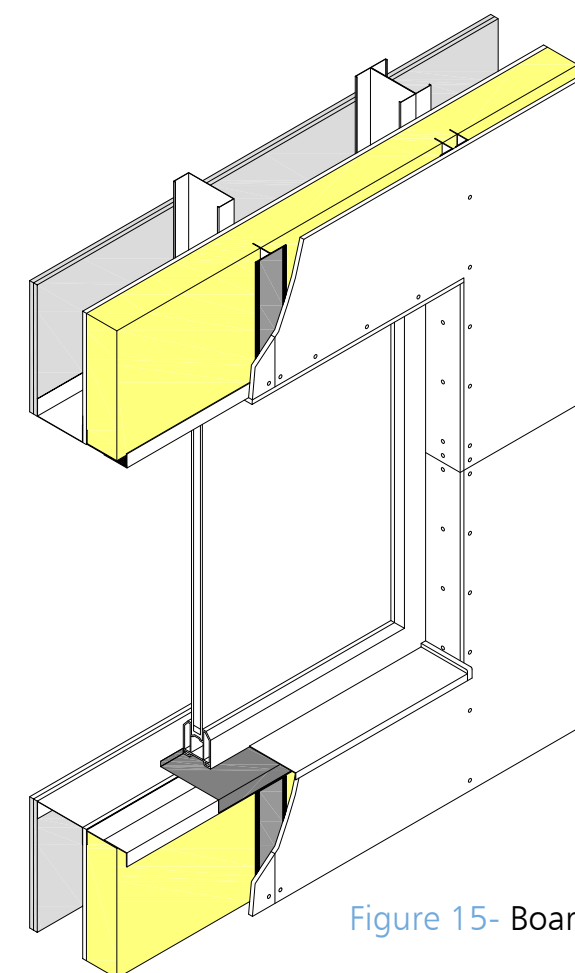


Figure 15- Boarding

Bracket Types

Figure 16- Components

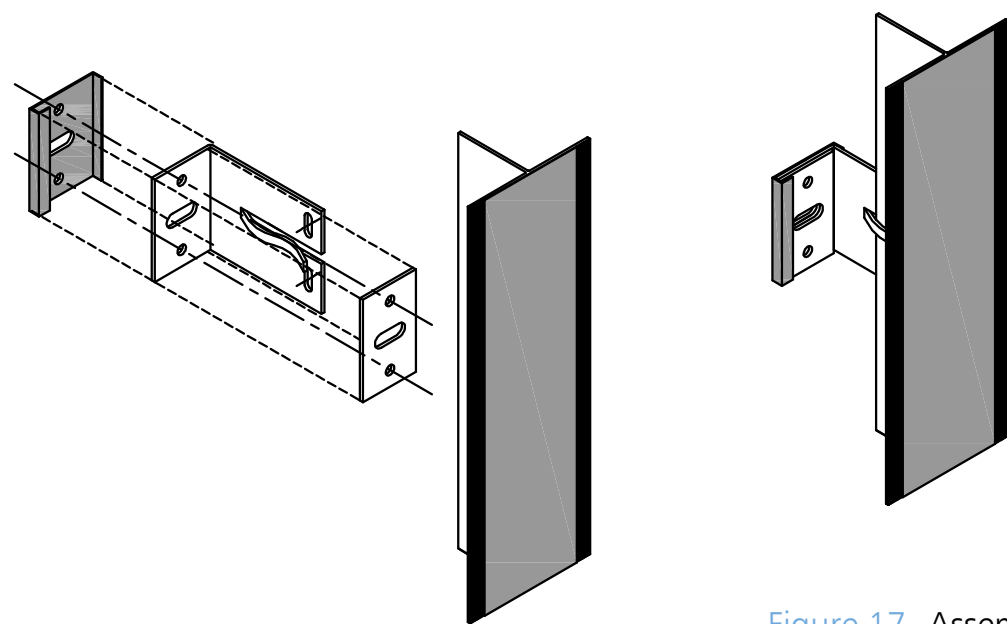
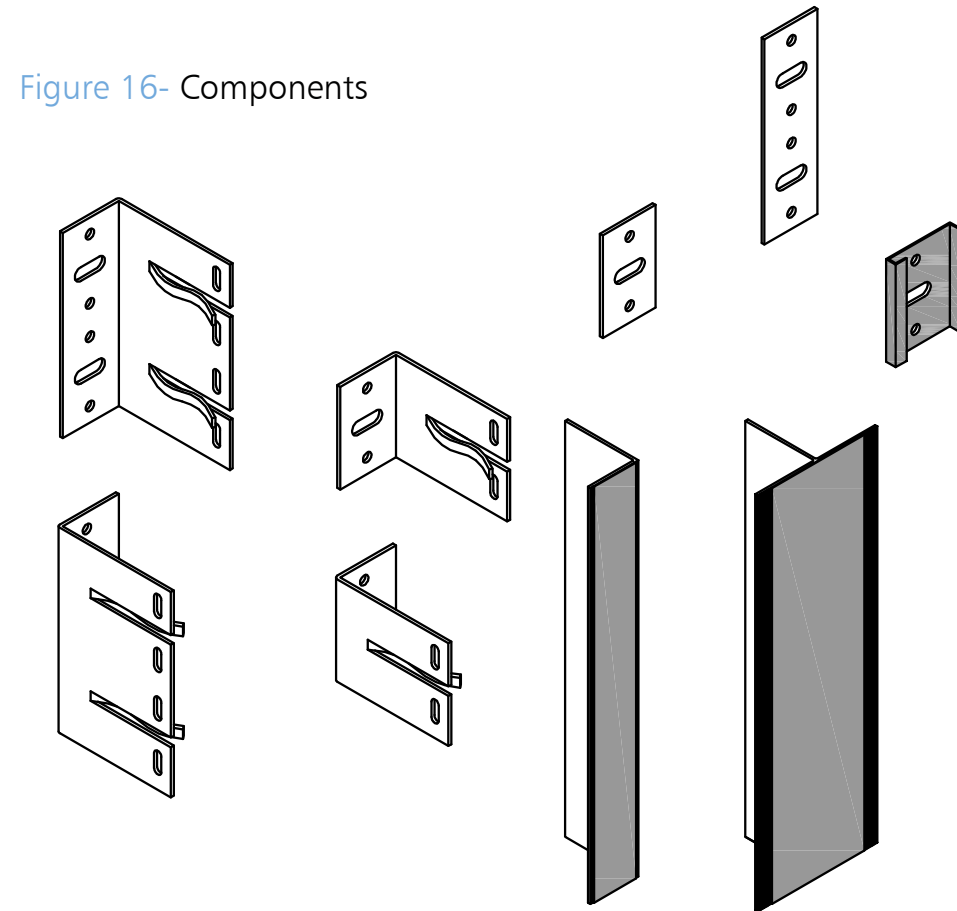


Figure 17- Assembly

ProBoard Fixing

- 1 ProBoard to be fixed in block bond style
- 2 3mm spacings required between ProBoards

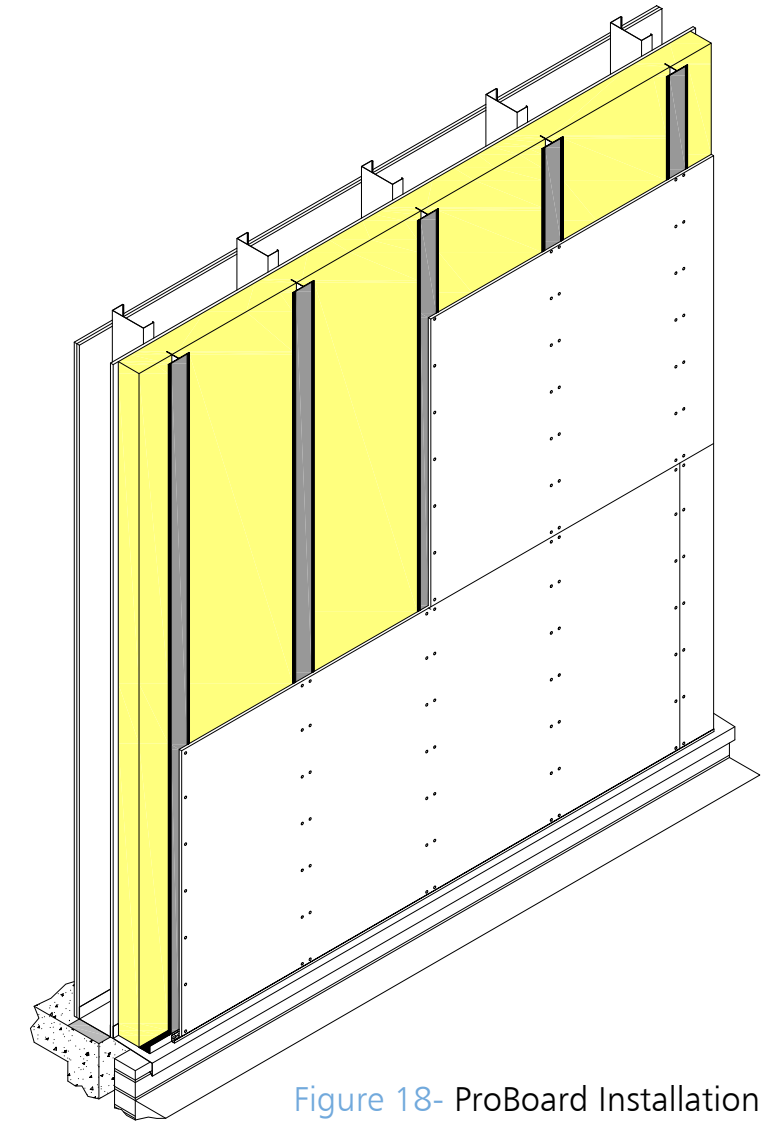
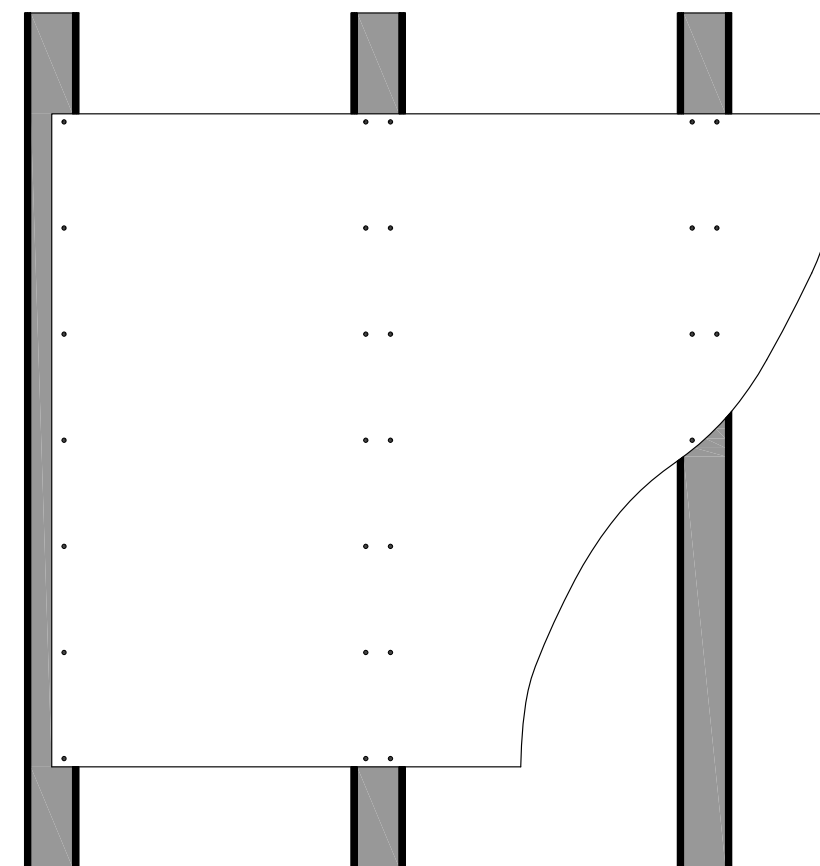


Figure 18- ProBoard Installation



- 1 Maximum 200mm centres on Helping Hand rails (subject to minimum number of fixings as instructed by structural engineer/wind load calculation)

Figure 19- Fixing Spacing

Elevation Layout

- 1 ProBoard fitted around apertures to avoid vertical or horizontal joints at corners
- 2 ProBoard joints minimum 150mm from the edge of opening

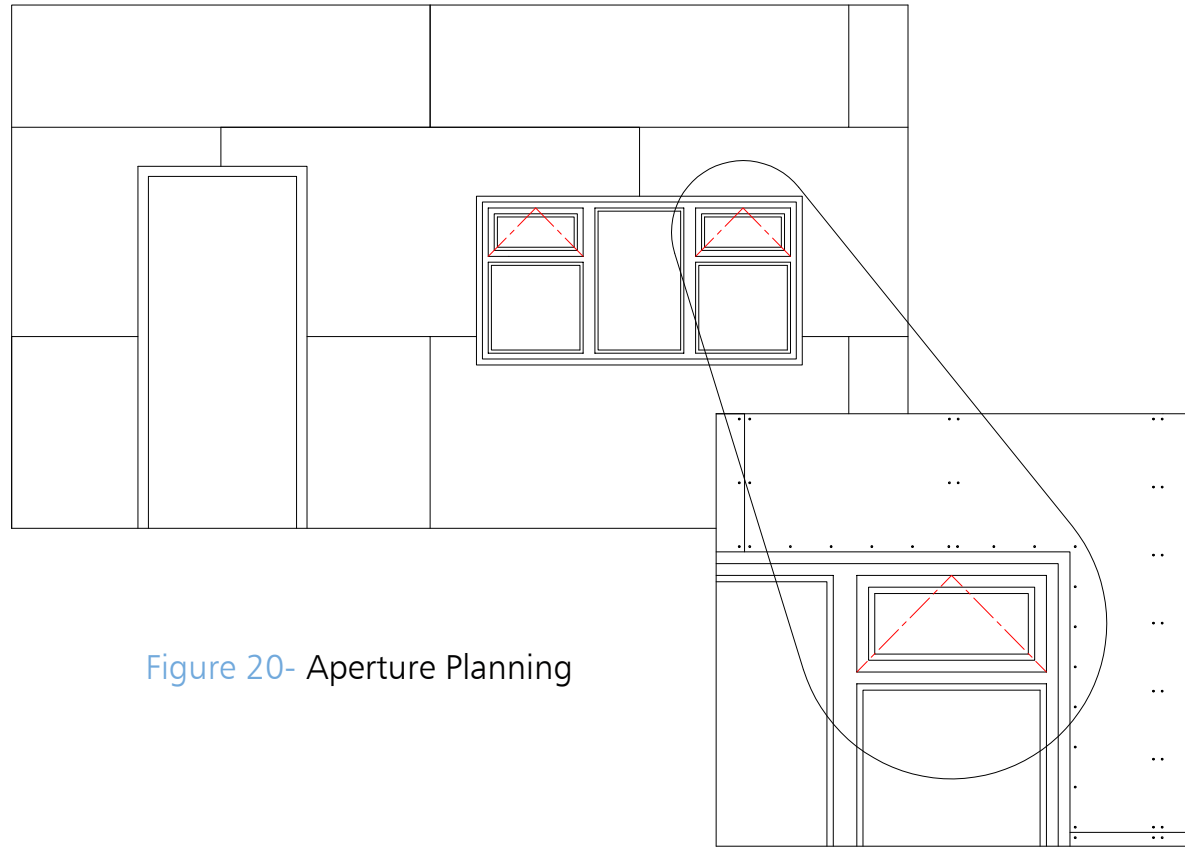


Figure 20- Aperture Planning

Corner Fixing

- 1 Corner ProBoards fitted alternately block bond
- 2 ProBead NMAB to be bedded on at corner during render application

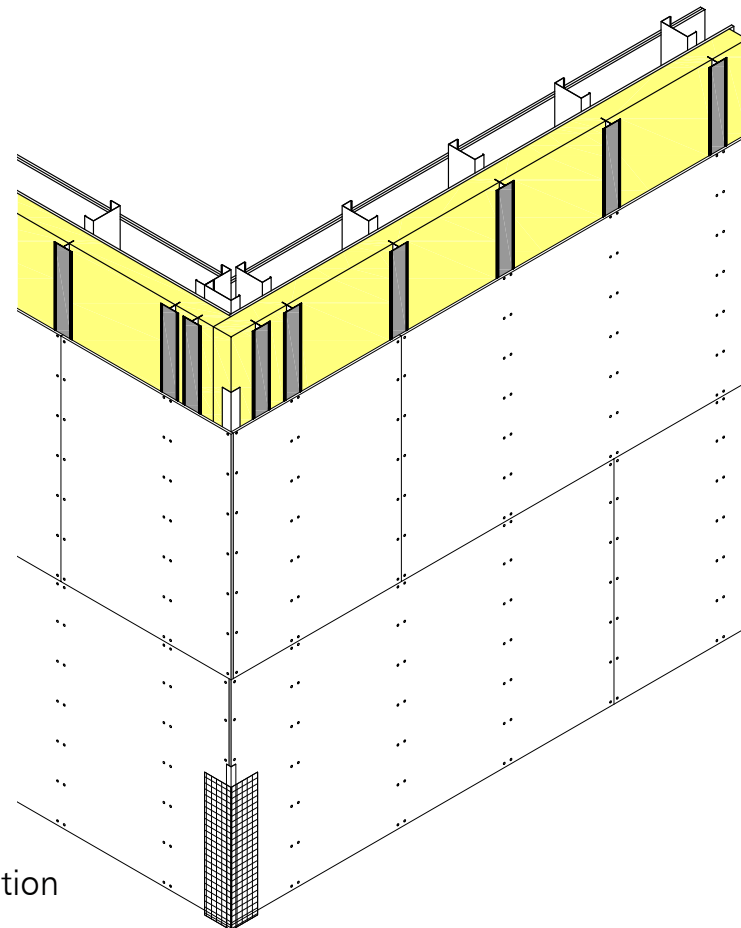


Figure 21- Corner Installation

Fire Breaks

- 1 Fire Barrier placed between insulation at floor zone
- 2 Continual line of Fire Barrier placed on the perimeter of floor zones
- 3 Independent lengths tightly butted

Note: Fire Barrier detail is offered as a guidance detail only. All Fire Barrier designs must be signed off/ approved by appropriate parties.

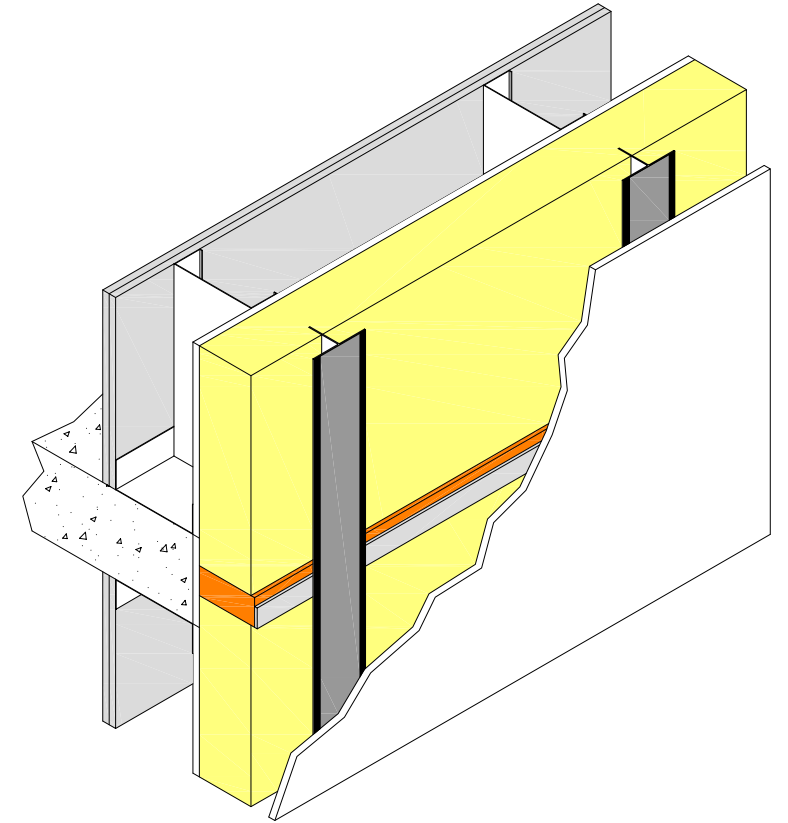
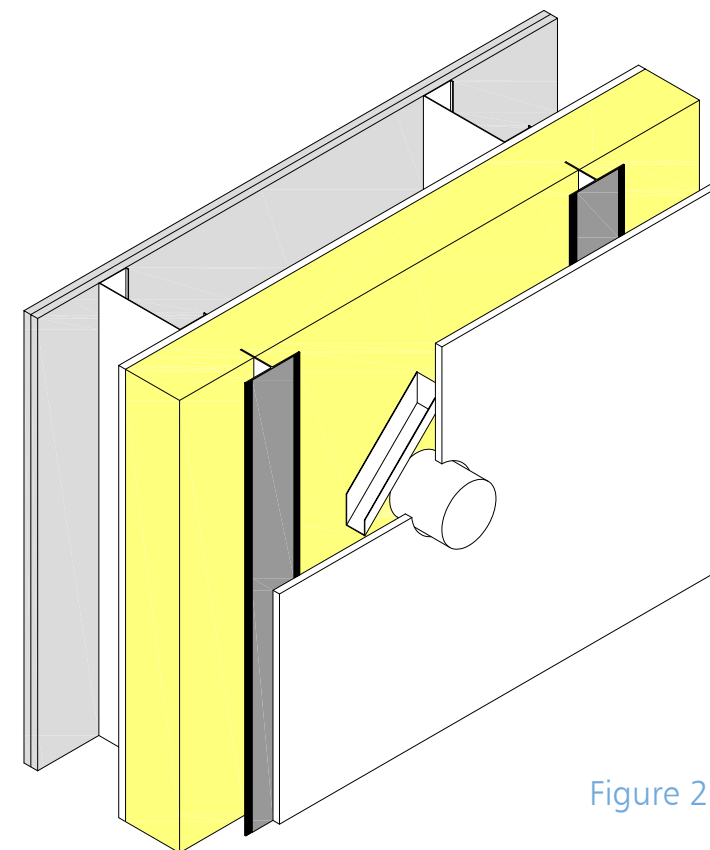


Figure 22- Fire Barrier

Services



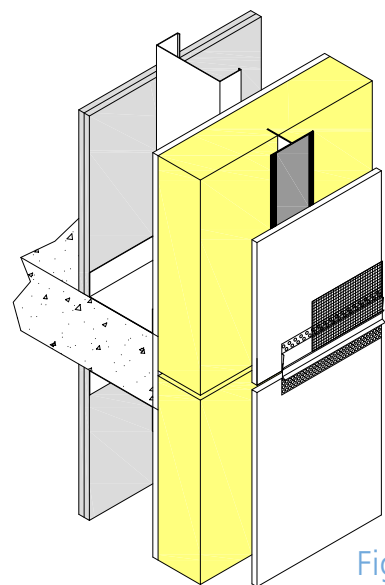
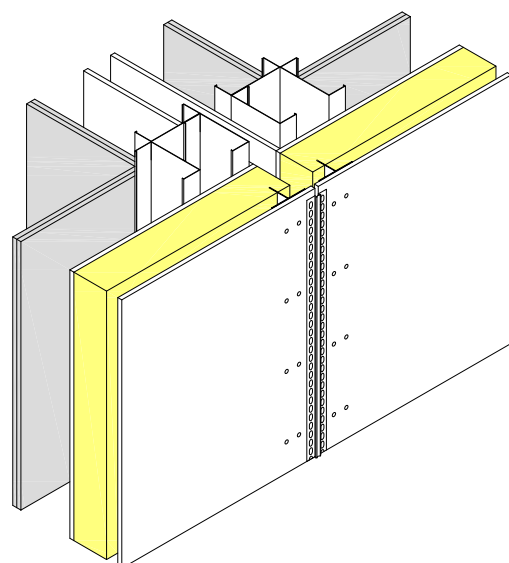
- 1 Drainage channels fitted at angle around service to provide drainage
- 2 ProBoard surface cut to accommodate service

Figure 23- Services

Expansion And Slip Joints

- 1 Expansion joints in substrate to be mimicked in steel frame and ProBoard
- 2 ProBead EX6 profile to be installed on surface of ProBoard

Figure 24- Vertical Expansion Joint



- 1 Shrinkage allowance provided in Helping Hands and ProBoard
- 2 No Brackets to be fixed into floor zone, rails should 'float' over the floor zone
- 3 ProWall Slip Joint profile installed over surface of ProBoard
- 4 Typically this detail incorporates Fire Break shown in figure 22 to ensure compartmentalisation

Figure 25- Horizontal Slip Joint

Note: Where no horizontal movement joint or vertical expansion joint exists in substrate, provision should be made within the ProBoards so that no area exceeds 42m² or 7.5m (linear) in any direction without a break.

System Ventilation

- 1 ProWall cavity runs up to coping or roof structure leaving room for ventilation
- 2 ProWall Aluminium Ventilated Base Bead installed to top of system to protect cavity and allow circulation

Note: Alternate ventilation details are available from the SAS Technical Team where different roof structures are present.

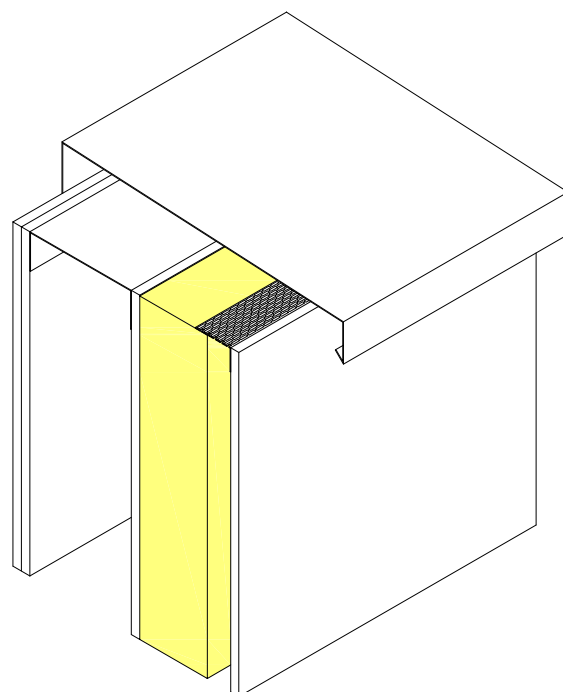
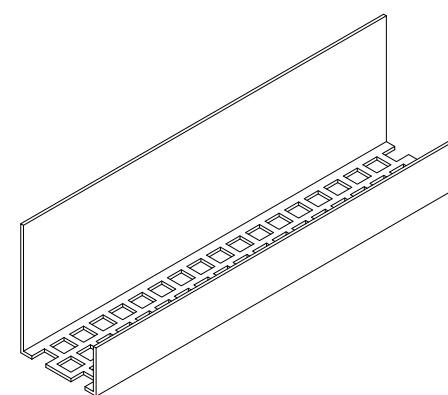
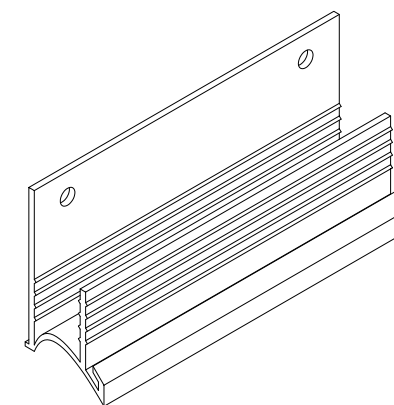


Figure 26- Ventilation

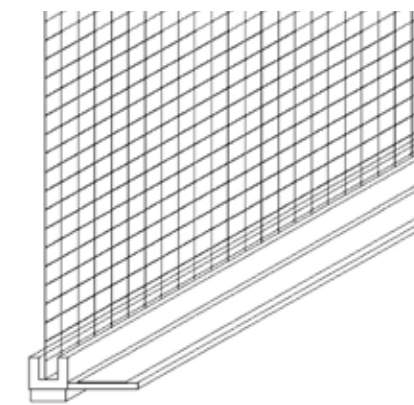
Technical Sundries



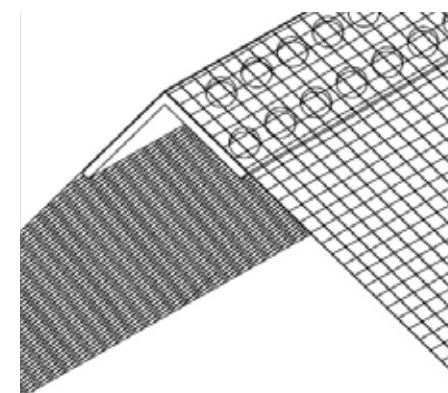
ProWall ventilation bead provides protection at the base of the system against insects and rodents whilst allowing the cavity behind the ProBoard to breathe.



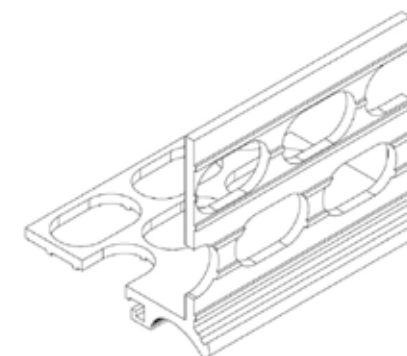
ProWall base bead provides protection to the base of the ProBoard whilst creating a level datum to install the ProBoard and a bellcast feature.



ProWall window protection bead ensures a clean line to the window frame along with a water tight seal and added protection during render application.



ProWall noseless meshed angle bead ensures clean yet concealed lines to external corners along with added protection to vulnerable areas.



The ProWall window head bead ensures good drainage from the face of the render and provides a neat edge.



The ProWall Slip Joint ensures that deflection and differential movement are allowed for within the cladding design.

For further detail on technical sundries please contact SAS Europe-Technical on: 01647 24620.

Render Application

Jointing

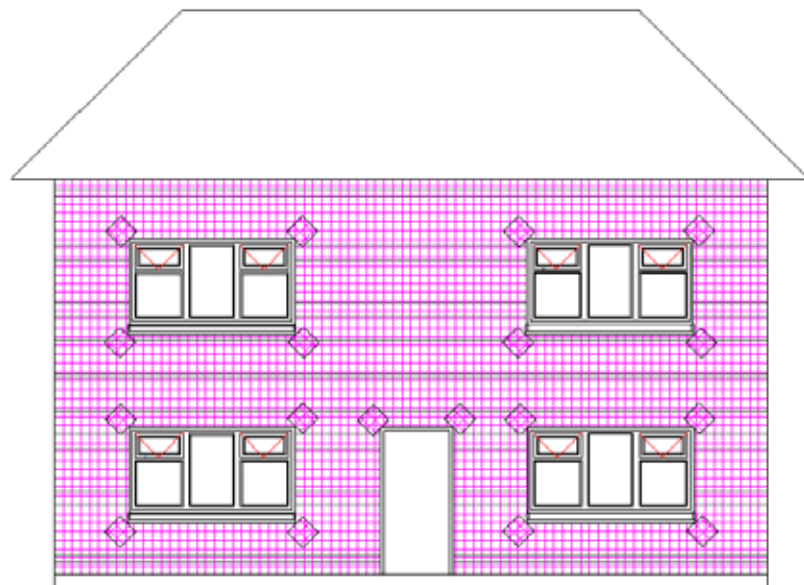
- ProBoard joints should be taped using ProRend Lite and ProMesh Grade 3 mesh cut to 300mm wide strips.

Basecoat

- Using a Hawk and Trowel, apply a 3/4mm coat of ProRend Lite to the textured ProBoard surface.
- Embed ProMesh Grade 3 into the applied material.
- Overcoat with a 2/3mm coat of ProRend Lite.

Mesh

- Elevations must be fully meshed with ProMesh Grade 3 reinforcement mesh.
- Ensure a minimum of 100mm overlap between mesh.
- Apply ProMesh Grade 3 in 300mm x 300mm squares at 45° to corners of all openings.



Ruling Off

- Using a spatula, rule off ProRend Lite to give a flat and even surface.
- The minimum finished thickness of ProRend Lite is 5mm.
- Allow ProRend Lite to cure for a minimum of 48 hours before applying other ProRend products.

ProRend Colourtex Primer

- Apply ProRend Colourtex Primer with a roller or brush ensuring complete coverage of the ProRend Lite basecoat.
- Allow to dry for 24 hours.

ProRend Colourtex Uniform/Grained

- Using a Hawk and Trowel, apply ProRend Colourtex decorative topcoat in a tight coat to the thickness of the aggregate within the material.
- A wet edge and uninterrupted application must be maintained at all times to avoid scarring.
- Allow approximately 10-30 minutes depending on conditions for material to 'pick up'.
- Finish ProRend Colourtex decorative topcoat by rubbing with a smooth plastic float in either a horizontal, vertical or circular motion.

SAS Good Application Guidelines

Application reference

- For all ProRend renders BS EN 13914-1:2005 Design, preparation and application of external rendering and internal plastering; part 1, external rendering to be followed at all times.
- Other advice and guidance is available in BS 5262:1991 Code of practice for external renderings, predecessor to BS EN 13914, and BS 8000-10:1995 Workmanship on building sites; code of practice for plastering and rendering.

General

- Surface preparation requirements for ProRend renders are the same as for ordinary sand and cement renders. Surfaces must be clean, suitably dry, sound and free from anything that may interfere with the adhesion of the materials to be applied.
- Only clean water fit for drinking should be used for gauging.
- Scaffolding must be independently tied to allow uninterrupted application.
- Masking should be used to give protection to adjacent work and to give clean straight edges. It should be removed immediately after finishing.
- Remove splashes of material from glass or aluminium immediately as they may etch the surface and leave a permanent mark.
- Walls should be protected from rain or other inclement weather during application and curing, ProRend renders should not be applied to substrates which are frost laden or have recently been exposed to prolonged rain.
- When applying in hot weather, it is advisable to ensure that work coincides with the shaded areas of the building.
- Local weather and site conditions must be taken into account by the applicator before any ProRend product is applied.

Temperature

- ProRend renders should be applied between 5°C – 30°C. Materials should not be applied if temperatures are expected to drop below 5°C within 24 hours.

Batching

- ProRend materials applied to a render elevation should either be of the same batch number or thoroughly mixed together to ensure colour consistency.

Curing and Protection

- Care must be taken to protect cement products from rapid drying conditions such as exposure to direct sunlight or drying winds. In these conditions it should be kept evenly damp for 3 - 7 days by lightly spraying periodically with clean water. This is to ensure complete hydration of the cement.
- Polythene or Hessian sheeting is recommended during curing and should be arranged to hang clear of the face of the wall in such a way that it does not form a tunnel through which the wind could increase the evaporation of water from the rendering. Intermittent contact with the render must be avoided as this may cause a patchy appearance.

Storage

- Cement based ProRend renders should be stored off the ground, under cover in dry conditions.
- ProRend Resin renders should be stored in dry cool conditions at a temperature greater than 5°C. Protect from sunlight and sources of direct heat. Containers should be kept sealed when not in use and stacked no more than four high.



SAS

At SAS we have in excess of 35 years of practical experience in the rendering and facades industry from personal application of materials to technical troubleshooting on site. We are always striving to improve our service and provide quality information as quickly as possible.

We are constantly developing and innovating new products for the market place to provide the best solutions for rendering and plastering. Our product portfolio contains premium quality products offering longevity to the proprietor as well as technically sound and fast applications to the contractor.

Nationwide Delivery

Ex stock packaged goods next working day
Ex stock palletized goods 1-3 working days

Office Hours:

Monday-Thursday - 08:00-17:00
Friday - 08:00-16:30

Details and drawings contained within this brochure are for illustration only and do not form part of any project specific guidelines or technical specification and should not be used in that way.

Information contained in this brochure was correct at the date of print. SAS (Europe) Ltd reserve the right to make alterations to the content of this brochure and to the products and services we make available as part of our continuing commitment to improvement.

* Subject to SAS specification- please contact for details

ProWall Service

Free of charge specification service providing:

- Details of required materials including sundry items
- Technical, safety and maintenance datasheets
- CAD details specific to your project
- Finish samples available in colours chosen by you
- In person visit to discuss the details at your office or on site
- Full technical support from our offices
- Comprehensive U value and condensation risk analysis calculations

Applicators:

- Providing comprehensive hands-on training courses for applicators
- Recommendations of sub-contractors to complete works
- Practical completion certificate when works have finished
- Up to 60 year system durability*

PROWALL

ProWall is part of the SAS (Europe) Ltd range of products and systems



RAINSCREEN | INSULATION | RENDER | MESH | BEADS

SAS (EUROPE) LTD

CHERITON BISHOP | EXETER | EX6 6JE | UK

T: +44 (0)1647 24620 F: +44 (0)1647 24020

E: info@sas-europe.com

www.sas-europe.com

