



betterBRACE 4Steel Design & Installation Guide



Purpose of Document

This document is intended to help Designers, Builders and Building Consent Authority (B.C.A.) Building Officials who want to ensure that saveBOARD betterBRACE 4Steel rigid air barrier lining is specified, installed, and performs correctly as a thermally broken rigid air barrier lining.

The following instructions within this document are important to ensure correct product use and the ongoing support of the manufacturer's warranty.

What is saveBOARD betterBRACE™ 4Steel?

saveBOARD betterBRACE 4Steel is a 17mm composite panel manufactured in Hamilton, NZ for New Zealand conditions as a bracing element and/or rigid air barrier.

saveBOARD betterBRACE 4Steel is a multi-layer rigid air barrier system available in New Zealand. The composition is made from a 10mm expanded Polystyrene Foam, glued to a 7mm saveBOARD composite panel, then once installed on the frame is covered with either a flexible underlay or joints taped. The combined system offers a **R-Value of 0.40**.

The finished building gets protection from the weather during your building process and replaces traditional building wrap. When compared to similar products it is more cost effective, easy to install, lightweight, makes your house warmer, stronger and quieter.

Compliance with NASH standard Part Two: 'Light Steel Framed Buildings' (or NZS 3404:2009 - Steel Structures) saveBOARD betterBRACE 4Steel meets the requirements of Table C.2.1.1 of E2/AS1 from the compliance document for the NZ Building Code (NZBC).

Designer and Installer Qualification and Skill level

Where saveBOARD betterBRACE 4Steel is specified / installed, the designer/installers should have the appropriate skills and knowledge of the product and, where necessary, the qualification required by law.

Please Note:

The design and Installation of saveBOARD betterBRACE 4Steel relates to building work that forms part of the primary structure and weathertight envelope of a building which is Restricted Building Work (RBW). RBW must be carried out or supervised by a Licensed Building Practitioner (LBP). It is also necessary to obtain building consent before the commencement of work. Failure to do so is an offence under the Building Act 2004.

Technical Support

This document must be read in conjunction with the saveBOARD betterBRACE CodeMark Certification CMNZ70162. Please refer to saveBOARD betterBRACE 4Steel 'download section', which contains other important information from the saveBOARD website <https://www.saveboard.nz/betterbrace-4steel>

For product maintenance and warranty requirements, please refer to the guidance on the saveBOARD website <https://www.saveboard.nz/betterbrace-4steel>

saveBOARD provides technical support for the full range of saveBOARD products. By visiting <https://www.saveboard.nz/technical-literature> you can access all the latest information regarding our products, including:

Material Safety Datasheet, Substitution Guides, Test Certificates and Environmental Product Declarations.

Product Information

saveBOARD betterBRACE 4Steel is a unique structural composite panel made from 98% upcycled materials. The core of the product is made from shredded and compressed composite packaging, giving the user a sustainable and superior performing product.

The manufacturing process of the panel does not involve glues, resins, or other biological or environmentally harmful products – however we do use a PVA glue to adhere the board to the polystyrene thermal break. During construction or in-service use, it does not create toxic dust, vapours, or other potentially harmful inhalants Volatile Organic Compounds (V.O.C.'s) or Formaldehydes.

saveBOARD betterBRACE 4Steel is a semi-vapour permeable¹, rigid air barrier specifically designed for use with steel framing (thermal break must be used). It is finished with a moisture-resistant facer on one side and a 10mm expanded polystyrene thermal break on the interior side.

saveBOARD betterBRACE 4Steel is manufactured in New Zealand and Australia for exclusive use. Please refer to the saveBOARD Product Assurance Supplier Statement for compliance with relevant performance clauses of the New Building Code.

saveBOARD betterBRACE 4Steel sheet sizes are as follows:

- 2450mm x 1200mm x 17mm
- 2750mm x 1200mm x 17mm
- 3050mm x 1200mm x 17mm

¹ saveBOARD is a semi-permeable Class II vapour retarder as defined by the International Residential Code (IRC).

- Custom cut up to 6000mm (special order, min x 30)

Performance Summary

The high-level performance and Environmental credentials of 17mm saveBOARD betterBRACE 4Steel is displayed below for quick reference. The document goes into further details on design and installation requirements to ensure that betterBRACE 4Steel is correctly used.

Bracing Type	Fixings (horizontal/vertical/centre)	Bracing Capacity Wind , Earthquake
System 7 – Steel	600 x 2400mm, Fixing: 10g x 50mm galv screws	57 BU/m, 68 BU/m
System 8 – Steel	1200 x 2400mm, Fixing: 10g x 50mm galv screws	73 BU/m, 80 BU/m
Environmental	Description	Credentials
EPD-IES-0014118	Environmental Product Declaration (EPD)	-5.5 kgCO2e/m2
Declare	Voluntary Product Disclosure of ingredients	Red List Free
EcoChoice	EcoChoice Aoteroa EcoLabel	Type 1 Ecolabel
Pack Size	Dimension of Pack	Weight
30	17mm x 2450mm x 1200mm x 500mm	820 kg
30	17mm x 2750mm x 1200mm x 500mm	860 kg
30	17mm x 3050mm x 1200mm x 500mm	900 kg

Not Perfect

betterBRACE is made from 98% recycled composite packaging. Please note that the surface may look marked, or even mouldy. This appearance is simply the colour in the recycled packaging that can be seen through the moisture resistant face. The colour can get embedded into the surface during manufacture when heat and pressure are applied. This does not affect the performance of the product in any way. saveBOARD products also have a dimensional tolerance of + / - 1mm.



NZBC Building Compliance Approval

saveBOARD betterBRACE 4Steel has been evaluated as an ALTERNATIVE SOLUTION material through testing to the reference standards in the NZ ACCEPTABLE SOLUTIONS for the following New Zealand Building Code clauses:

B1 structure Performance Clauses B1.3.1, B1.3.2, B1.3.3 (b, f, h), B1.3.4

B2 Durability Performance Clauses B2.3.1 (a); B2.3.2

E2 External moisture Performance Clauses E2.3.2 (contributes to), E2.3.5 (contributes to), E2.3.6 (contributes to), E2.3.7

F2 Hazardous building materials Performance clauses F2.3.1

H1 Energy efficiency Performance Clauses H1.3.1 (b) (contributes to)

Working safely with saveBOARD

All saveBOARD products are safe to work and live with.

- saveBOARD can be cut, drilled, and sanded in the same manner and methods as most wood-based products.
- saveBOARD products do not contain materials that are known to cause cancer if work-related dust is inhaled.
- saveBOARD cutting activities do not generate harmful dust, but we recommend you always follow Health & Safety best practices to reduce or limit inhalation.

Safety recommendations for working with saveBOARD betterBRACE 4Steel

- We recommend cutting is completed outside or in a well-ventilated area.
- ALWAYS wear Personal Protective Equipment (PPE). We recommend minimum PPE of Safety glasses - Hearing protection – Dust mask. When working near others, instruct them to also wear PPE. Always use the right tool(s), following the manufacturer's safety recommendations.
- The front face of betterBRACE has a facing material for external exposure. The installer should wear gloves & covered sleeves during the installation along with the minimum PPE. Repeated rubs on bare skin can cause irritation. We recommend carrying sheets with the paper side against the body to minimise contact with skin.
- Refer to saveBOARD Material Safety Data Sheet for further details.

Cutting – Hand saw and Power tools

saveBOARD betterBRACE 4Steel can be cut in the same manner and methods as most wood-based products.

STEP 1 – Using a standard carpentry pencil, mark the cut line on the saveBOARD betterBRACE 4Steel Hand-Cut - For handsaw cutting, a standard 500mm Handsaw with a > 7 Teeth Per Inch (T.P.I.) is suitable.

STEP 2 - For accurate cutting, it is always recommended that the cut is made with a power saw running against a fixed straight edge.

Power Cut - For power saw cutting, a circular saw with > 1200w motor fitted with a standard ripping blade > 40 Teeth is suitable.

Step 3 – Clean up the cut with a sandpaper block/ 80 Grade sandpaper or as required.

*For all cutting, always follow the tool manufacturer's safety recommendations.

Drilling - Hole forming - For smooth, clean-cut circular holes:
saveBOARD betterBRACE 4Steel can be drilled in the same manner and methods as most wood-based products.

STEP 1 – Mark the centre of the hole required on the sheet.

STEP 2 – Using a 3 – 5mm standard drill bit, pre-drill a central 'pilot' hole.

STEP 3 - Using the pilot hole as a guide, cut the hole with the hole saw that is correct for the hole size required. It is recommended

to use a heavy-duty power drill, but a battery drill with sufficient power can achieve a good result.

T.I.P. – Allow the hole saw to cut. Do not apply excessive pressure as this may damage the back of the board upon exit.

Always follow the tool manufacturer's safety recommendations.

Sanding

Clean up cut edges with a sandpaper block /80 Grade Sandpaper or as required.

Seal

All cut edges must be sealed with an acrylic undercoat sealer, unless covered by joint tape.

Handling and Storage

Safe handling in transport and storage on-site is essential for worker's safety and protection of saveBOARD betterBRACE 4Steel.

When manually handling saveBOARD betterBRACE 4Steel ensure the panels are lifted correctly. For safety, we recommend a minimum of 2 people.

Where multiple pallets are stacked, all storage bearers must align to the ground. For safe working, it is not advisable to stack materials above chest height on-site and materials should always remain restrained to protect against high wind exposure.

Do not store betterBRACE outdoors without protective waterproofing. betterBRACE is intended for external use, but whilst laid flat on a pallet water will migrate between the layers that could lead to delamination between the board and polystyrene backing. betterBRACE should be stored flat on suitable bearers under protective waterproofing with a minimum of 50mm clearance from the ground and water sources. The spacing between the bearers should be no more than 600mm apart. If not stored correctly claims for damaged product will not be accepted.

It is good to trade practice to allow sheet materials to climatize to the site conditions for 48 hours prior to installation.



DIAGRAM 1 – Drilling & hole forming picture

Standard Installation

Installation Scope

saveBOARD betterBRACE 4Steel is suitable for use as a rigid air barrier for buildings up to and including E.H. wind zone within the scope of NZS 3604 and E2/AS1, not exceeding 10 metres in height for bracing applications, follow the saveBOARD betterBRACE 4Steel bracing details specified in this installation guide. Bracing with rigid air barriers can only be achieved when fixed directly to the frame. The board must be fixed in accordance with the bracing details of all framing.

saveBOARD betterBRACE 4Steel must always be fixed directly to the framing, the vertical face joints and bottom edge must be sealed with acrylic undercoat sealer if cut on site.

The cladding systems used over saveBOARD betterBRACE 4Steel must satisfy the various performance requirements of the NZBC E2 (Accepted or Alternative Solution) saveBOARD betterBRACE 4Steel is suitable for use behind NZBC E2/AS1 complying cladding systems approved by a B.C.A.

The cladding system must not be directly fixed to saveBOARD betterBRACE 4Steel and must be installed by incorporating a ventilated cavity E2/AS1 type cladding system.

Support Framing

All support steel framing shall comply with NASH standard Part Two: 'Light Steel Framed Buildings' (or NZS 3404:2009 - Steel Structures) or comply with the Specific Engineering Design (S.E.D.) requirements. Steel framing by S.E.D.

Wall framing must comply with NASH Standard Part Two: 2019 'Light Steel Framed Buildings'. It is the designer's responsibility to ensure that the framing and the saveBOARD substrate are suitable for installing the selected cladding.

Table 1. Structural framing stud set out

Wind Exposure	Stud Centres (Max)
Up to including H (High)	600mm
VH (Very High)	400mm
EH (Extra High)	400mm

Limitations

Steel fixings and fastenings must be in accordance with Section 4.4 Steel Fixings and Fastenings, NZS 3604:2011 in particular Table 4.3 Nails or screw use.

When using Cedar as a cladding a structural batten must be used, and copper nails cannot penetrate through the battens into the saveBOARD betterBRACE 4Steel or steel studs due to the high risk of rapid galvanic corrosion.

Vertical Installation and Joints

All saveBOARD betterBRACE 4Steel sheets must be installed vertically (stencil side out), with an expansion gap between the sheet edges of 2-4mm required. This includes external and internal vertical corner joints.

All vertical board joints should be fully supported by vertical steel studs. Any horizontal joints or cut-outs within a sheet should be supported by solid blocking of the same gauge as the studs.

The bottom edge of sheets must overhang below the bottom plate by 15 – 20mm. The bottom sheet edge must remain a minimum of 100mm clearance (150mm recommended) to the ground and saveBOARD betterBRACE 4Steel should not be in contact or exposed to standing water during construction.

Horizontal Joints

For wall heights greater than 3050 mm or the custom length used, horizontal wall joints are permitted, provided the panel joint is over solid blocking of the same gauge as the studs.



saveBOARD betterBRACE 4Steel fixings

saveBOARD betterBRACE 4Steel must be installed with its fiberglass side facing out towards the external cladding. The fiberglass applied on the face helps the board to drain the moisture freely over the face and keeps it dry. To retain board integrity, all nail fixings must finish flush with the board surface.

Bracing and Non-Bracing fixings

saveBOARD betterBRACE 4Steel must be fixed with screws (steel frames). Tables 2 & 3 below lists the recommended fixing types.

Screw fixings must be 10g x 50mm Galvanized Countersunk Self Drilling to provide the minimum bracing capacity required.

Table 2. saveBOARD betterBRACE 4Steel 17mm Fixings (Non-Bracing)

Type of fixing	Description	Fixing centres (incl intermediate studs)	Frame type
Screw	10g x 50mm Galvanized Countersunk Self Drilling	Corner pattern - 25, 300mm horizontal. 25, 300mm vertical	Steel Only

Table 3. saveBOARD betterBRACE 4Steel 17mm Fixings (Bracing)

Type of fixing	Description	Fixing centres (incl intermediate studs)	Frame type
Screw	10g x 50mm Galvanized Countersunk Self Drilling	Corner pattern - 25, 75mm horizontal. 25, 150mm vertical	Steel Only

Fixing Durability

Structural fixings are a critical component of a building system. To comply with the NZBC B2 Durability requirements, all structural fixings must have the same level of Durability as required for a structural wall system. Tables 2 and 3 list fixings suitable fixings for NZBC Corrosion Zones A-C only.

It is the designer's responsibility to confirm exposure requirements for individual projects. When such corrosion risks as Sea Spray or Geothermal exposure exist, it will be necessary to increase the fixing Durability to Stainless steel type or equivalent to the satisfaction of the B.C.A.

Bottom Plate Fixing

Use FrameCAD® HDFA1 (or similar) hold-down for Steel Frames at each end of the bracing element. Install in accordance with the installation instructions supplied with the connectors and follow instructions for the recommended fastenings to be used for either concrete or timber floors. Within the length of the bracing element, bottom plates are to be fixed in accordance with the requirements of NZS 3604.

saveBOARD betterBRACE 4Steel – Bracing Capacity – Steel Frames

Description - 17mm Steel Frames	Concrete Slab (150 BU/m max)		Timber Floor (120 BU/m max)	
	Wind (BU/m)	EQ (BU/m)	Wind (BU/m)	EQ (BU/m)
System 7: saveBOARD betterBRACE 4Steel - 600mm x 2400mm with FrameCAD® HDFA1 (or similar). Fixing 10g x 50mm Galv Csk Self Drilling Screw	57 BU/m	68 BU/m	57 BU/m	68 BU/m
System 8: saveBOARD betterBRACE 4Steel - 1200mm x 2400mm with FrameCAD® HDFA1 (or similar). Fixing 10g x 50mm Galv Csk Self Drilling Screw	73 BU/m	80 BU/m	73 BU/m	80 BU/m

System 7: saveBOARD betterBRACE 4Steel

600 x 2400 mm wall using FRAMECAD HOLD DOWN® HDFA1 (or similar)

Wall construction:

- 89 x 41 x 0.75 G550 Steel Studs.
- saveBOARD betterBRACE 4Steel 17 mm panel one side.
- Fixings: 10g x 50mm Galv Csk Self Drilling Screw at 150 mm centres around the perimeter.
- FRAMECAD® Hold down HDFA1 washer combined with hold down bracket and a M12 Anchor screw. Designed for steel Frames 0.75BMT - 1.55BMT (or similar).
- Tested for concrete or timber floors with M12 hold down bolts.

Wall framing must comply with: NASH Standard Part Two: 2019 'Light Steel Framed Buildings'

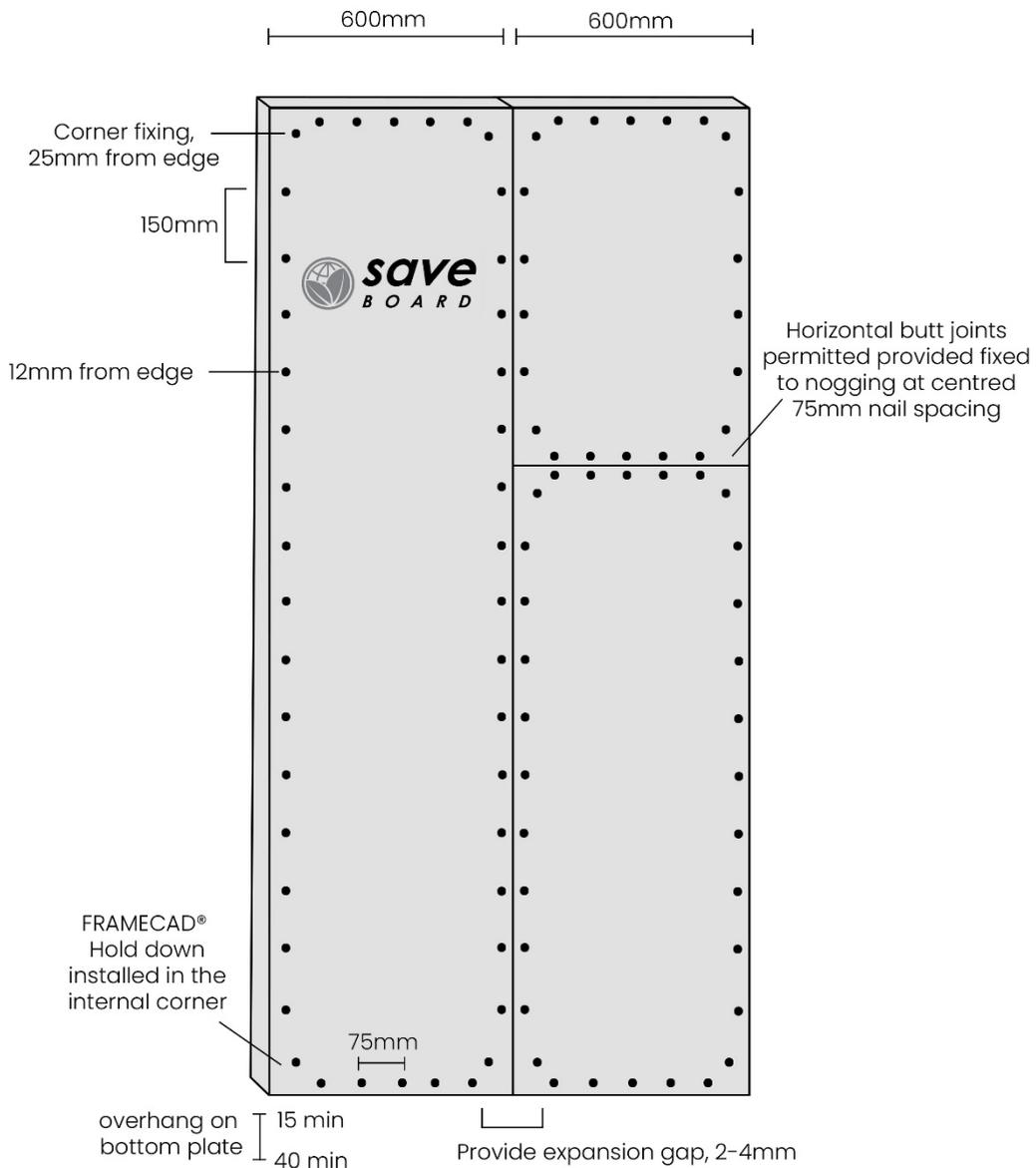


DIAGRAM 3 – System 7 saveBOARD betterBRACE 4Steel – 600mm x 2400mm bracing element

System 8: saveBOARD betterBRACE 4Steel

1200 x 2400 mm wall using FRAMECAD HOLD DOWN® HDFA1 (or similar)

Wall construction:

- 89 x 41 x 0.75 G550 Steel Studs.
- saveBOARD betterBRACE 4Steel 17 mm panel one side.
- Fixings: 10g x 50mm Galv Csk Self Drilling Screw at 150 mm centres around the perimeter.
- FRAMECAD® Hold down HDFA1 washer combined with hold down bracket and a M12 Anchor screw. Designed for steel Frames 0.75BMT - 1.55BMT (or similar).
- Tested for concrete or timber floors with M12 hold down bolts.

Wall framing must comply with: NASH Standard Part Two: 2019 'Light Steel Framed Buildings'

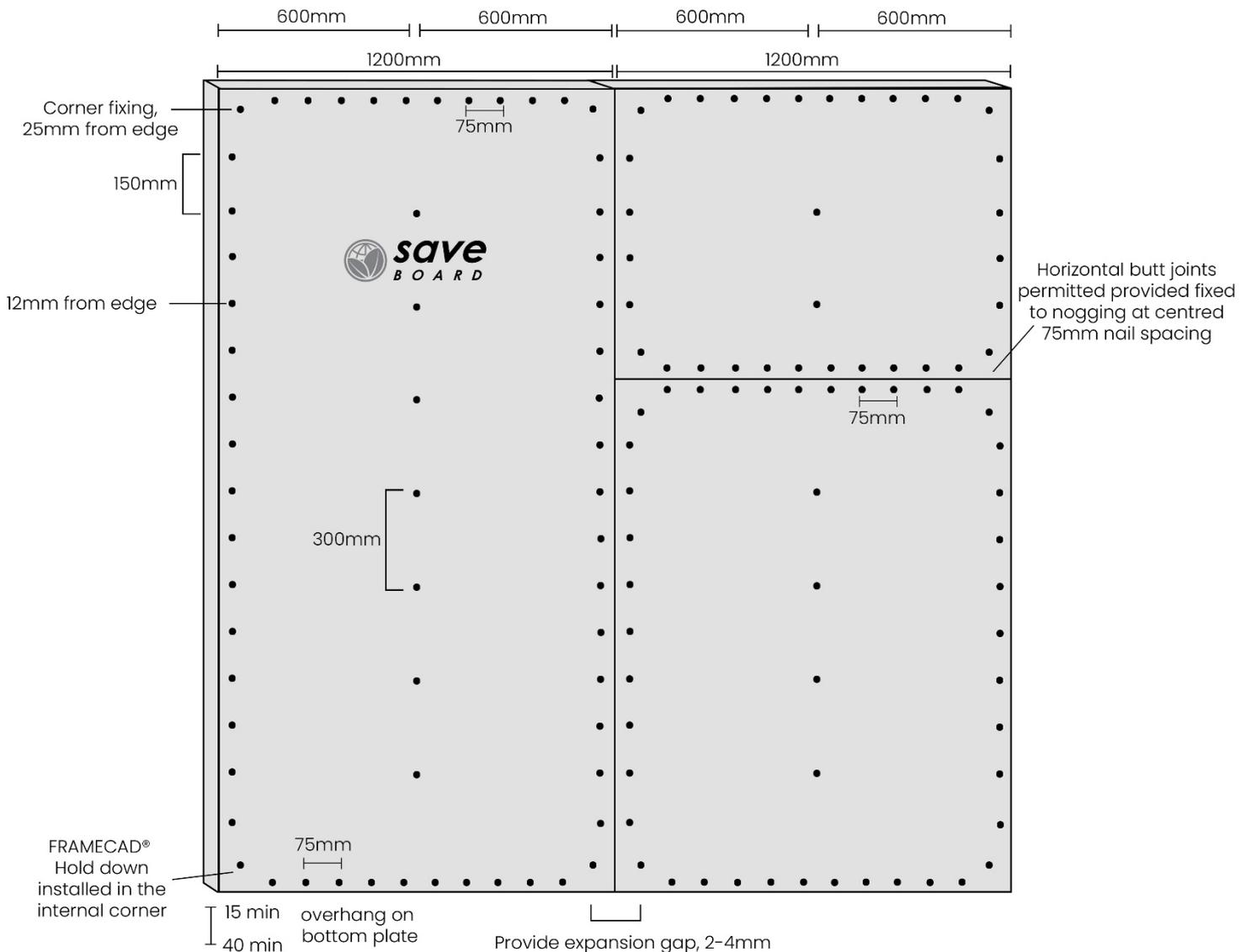


DIAGRAM 4 – System 8 saveBOARD betterBRACE 4Steel – 1200mm x 2400mm bracing element

BRACING DESIGN AND INSTALLATION

saveBOARD betterBRACE 4Steel may be used as a bracing element with structural steel framing systems that comply with New Zealand Building Code

Scope of use

saveBOARD betterBRACE 4Steel bracing may be used for;

- New buildings construction; and
- Alterations to existing buildings

For alterations to existing buildings, the designer/ builder must satisfy themselves that the existing subframe/structure is suitable to achieve the desired bracing performance, and the saveBOARD betterBRACE 4Steel BU/m must be considered indicative only when applied to the existing structure.

Bracing Design requirements

When specifying saveBOARD betterBRACE 4Steel as a design bracing element, it is the designer's responsibility to confirm the following site-specific conditions:

- Environmental exposure zone
- Wind zone
- Critical structural design input (Wind and Earthquake loads) as applicable to the wall bracing calculations required
- Structural framing specification requirements
- Suitable durability treatment for structural frames/substrate
- Suitable design and specification for an NZBC compliant cladding and roof system
- All other matters that may affect performance

Specification for Extra High Wind Zone

Wind zones: Extra High.

Wind pressure: Up to 4.5 kPa U.L.S.

Substrate structural fixings: saveBOARD betterBRACE 4Steel installation must be as per the instructions in this manual. Bracing elements can be achieved effectively by using all current New Zealand Building Code approved mechanical fixing strap, bracket, and hold down systems (Pryda, HandiBrac, Mitek, etc.).

Substrate framing - Steel: Wall stud spacing must not exceed 400 mm centres for EH Wind Zones as per Table 2 & 3. Prior to internal lining installation, the structural framing moisture content is recommended to be $\leq 16\%$.

Bracing Sheet service penetrations: Service penetrations holes must not exceed 100mm x 100mm in dimension or 150mm diameter maximum. Penetrations are limited to a maximum of 2 holes per sheet, and multiple penetrations must be a minimum of 750mm apart. Penetrations are not to be located within the top 150mm or bottom 250mm of a bracing sheet.

Sheet Installation and fixing: Must be strictly in accordance with the instructions in this guide.



DIAGRAM 5 – Permitted penetrations in Bracing board. Note: All penetrations are to be sealed as per the instructions in this guide.

JOINT TREATMENT, OPENINGS AND PENETRATIONS

Option A: Over-fix with Synthetic Wall Wrap / Underlay

betterBRACE can be over-fixed with a synthetic underlay within **30 days**, to achieve a **90-day** exposure duration before cladding installation as per the wall wrap manufacturers specification. Follow the manufacturers' instructions for fixing over a rigid air barrier. When over-fixing a wall underlay betterBRACE sheet joints do not need to be taped but all openings and penetrations must be sealed.

If the underlay is torn or punctured, the damaged area must be patched with flashing tape or additional wrap overlaid (ship lapped) with an overlap of at least 150mm.

Leave window and door openings covered (diagram 6) until the joinery is ready to be installed. Cut the underlay and install flashing tape when the joinery has arrived and is ready to be installed (diagram 7)



DIAGRAM 6 – leave openings covered



DIAGRAM 7 – Complete install of underlay when joinery ready to be installed

Recommended Underlays

- Thermakraft Watergate Plus
- Marshalls Tekton Building Wrap
- Proclima Tescon Extora, Tescon Extoseal and Solitex Extasana Adhero.

Sealing Site Cut Edges

All cut edges made on site must be sealed with an acrylic undercoat sealer before wrapping, unless covered by joint tape.

Penetrations

Service penetrations (including cabling) must be sealed with a flexible flashing tape providing a minimum of 100mm cover beyond the joint or penetration or a penetration seal.

Service penetrations through saveBOARD betterBRACE 4Steel and a wall underlay must slope to the outside (Angle of > 5°).

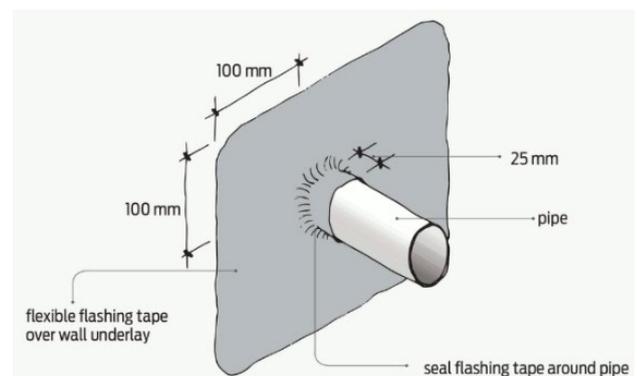


DIAGRAM 8 – service penetrations

The flashing tape or penetration seal must be installed with a minimum of 25 mm cover projecting around the pipe and 100 mm minimum surface adhesion to the underlay surrounding the penetration.

Recommended Penetration Seals

- Thermakraft OneSeal
- Marshalls Trade Seal

Window /Door Openings

The surface must be free of dust and dirt and must be dry before applying any tape. Use a minimum of 150mm wide tape and refer to the tape manufacturer installation instructions for full details.

Check that the flashing tape being used is compatible with the wall underlay. Extend the flashing tape from the corner in both directions a minimum of 200mm, or further if required, to ensure all exposed framing and the exposed edge of betterBRACE has been covered. As best practice, it is recommended that the full opening is taped.

Use a strip of tape 75mm x 150mm across all corners at a 45 degree angle (butterfly strip). Apply first, under the tape used to seal the opening on the bottom of the opening. On the top corners, apply the butterfly strips over the top sealing tape, pushing the tape into the corners of the opening. This provides a secondary measure of protection in the corners.



DIAGRAM 9 – bottom butterfly strip



DIAGRAM 10 – top butterfly strip

Recommended Flashing Tapes

- Thermakraft Thermaflash
- Marshalls SuperStick Building Tape

Option B: Tape Joints and Penetrations

betterBRACE joints and penetrations can be taped to achieve a **30-day** exposure duration before cladding installation. All vertical board joints and openings must be sealed to stop the moisture ingress into the framing behind betterBRACE. The vertical joints must be sealed with a minimum of a compatible 75mm wide joint tape applied with even coverage to both sheets.

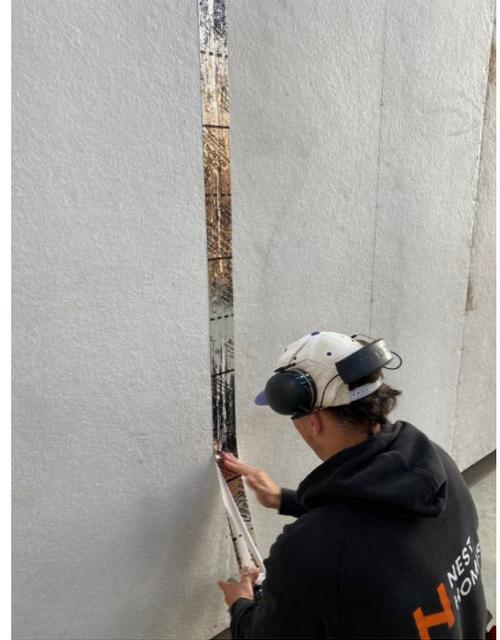
Jointing Tape

The following products are recommended

- Thermakraft Premium Joining Tape
- Marshall Superstick
- SIGA Wigluv

It is important to follow the joint tape manufacturers' recommendations regarding the installation of their jointing tapes in specific climatic conditions and substrate preparation. We recommend the use of a firm rubber roller to ensure firm and even pressure resulting in the correct bond when installing the joint tape to the saveBOARD betterBRACE 4Steel surface.

Any horizontal joints or service penetrations should be sealed with a suitable flexible flashing tape or a penetration seal providing a minimum of 100mm cover beyond the joint or penetration.



Penetrations

Service penetrations (including cabling) must be sealed with a flexible flashing tape providing a minimum of 100mm cover beyond the joint or penetration or a penetration seal.

Service penetrations through saveBOARD betterBRACE 4Steel and a wall underlay must slope to the outside (Angle of $> 5^\circ$).

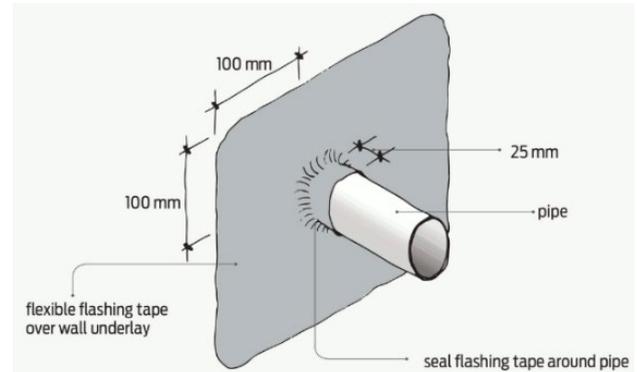


DIAGRAM 11 – service penetrations

Sealing Site Cut Edges

All cut edges made on site must be sealed with an acrylic undercoat sealer, unless covered by joint tape.

Installing Window /Door Openings

The surface of the betterBRACE 4Steel must be free of dust and dirt and must be dry before applying any tape. Refer to the tape manufacturer installation instructions for full details.

Using a recommended flashing tape or sealing tape seal the full opening to cover all exposed timber of joinery openings.

Using a minimum 150mm wide tape, apply to the steel frame as per manufacturers instruction, wrap the tape a minimum of 60mm on to the face of the betterBRACE 4Steel.

Use a strip of tape 75mm x 150mm across all corners at a 45-degree angle (butterfly strip). Apply first, under the tape used to seal the opening on the bottom of the opening. On the top corners, apply the butterfly strips over the top sealing tape, pushing the tape into the corners of the opening. This provides a secondary measure of protection in the corners.

saveBOARD betterBRACE 4Steel: Fixings

Fixings – Steel Frames

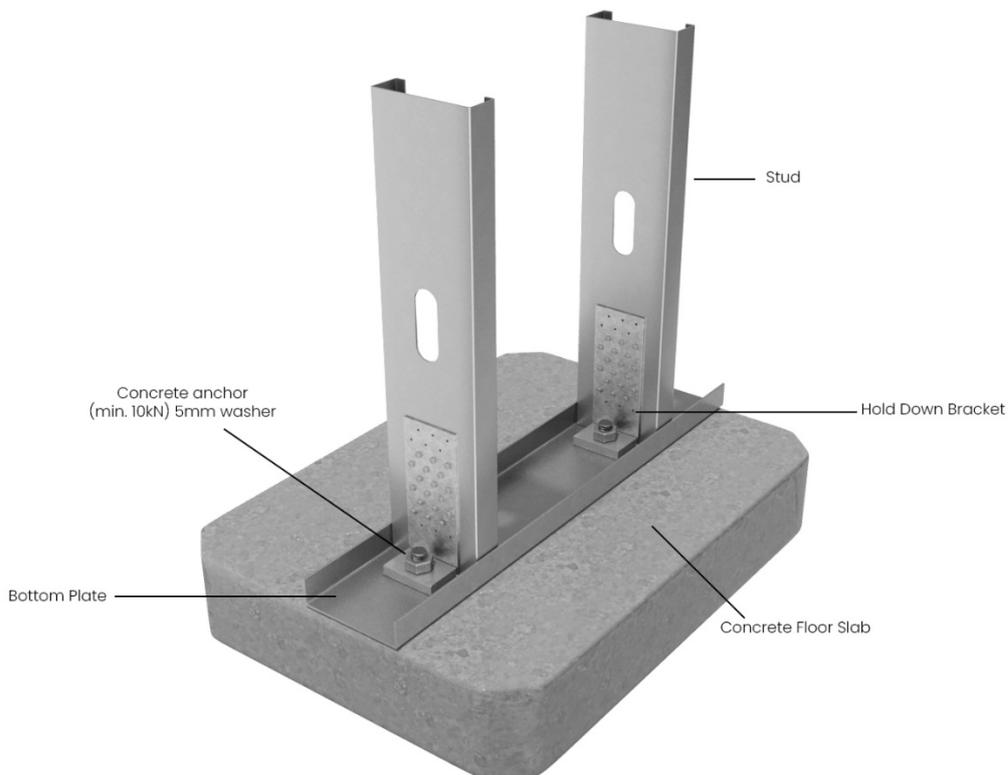
Fixing	Exposure Zone
10g x 50mm Galv Csk Self Drilling Screw	Exposure zone B & C only
Stainless Steel Nails / Screws	Exposure zone D only

Bottom Plate Fixing - Steel Frames

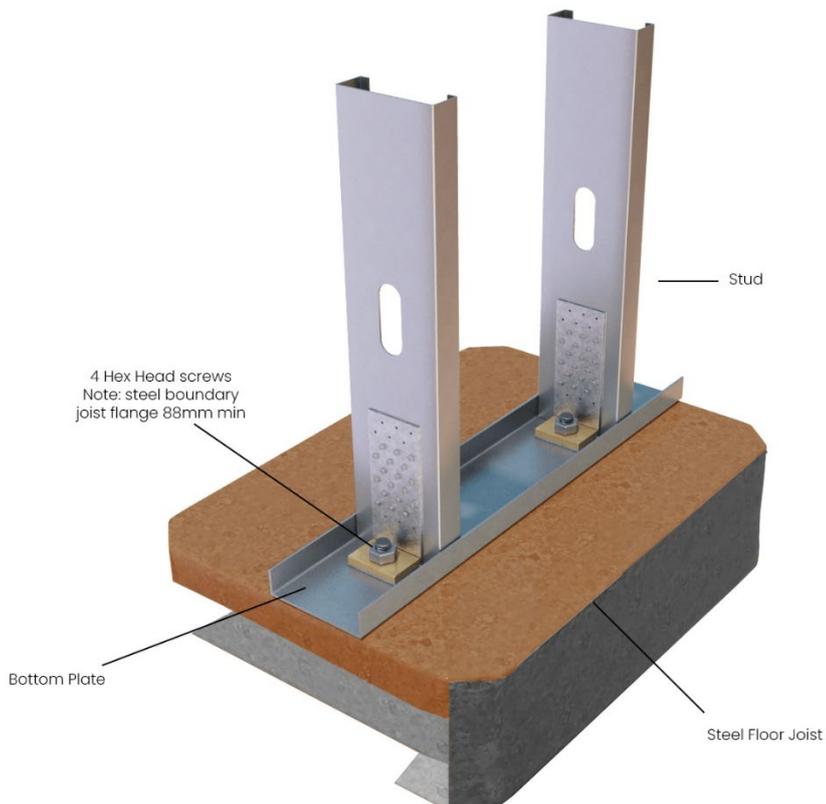
Bottom Plate Fixing	Exposure Zone
FRAMECAD® HoldDown Use supplied hold down bolts	Steel fixing as per table 4:1 NZS3604:2011
Scottsdale Hold Down 90 Degree Bracket	Steel fixing as per table 4:1 NZS3604:2011
NASH Type E Hold Down	Steel fixing as per table 4:1 NZS3604:2011

Steel Framing Hold Down Details

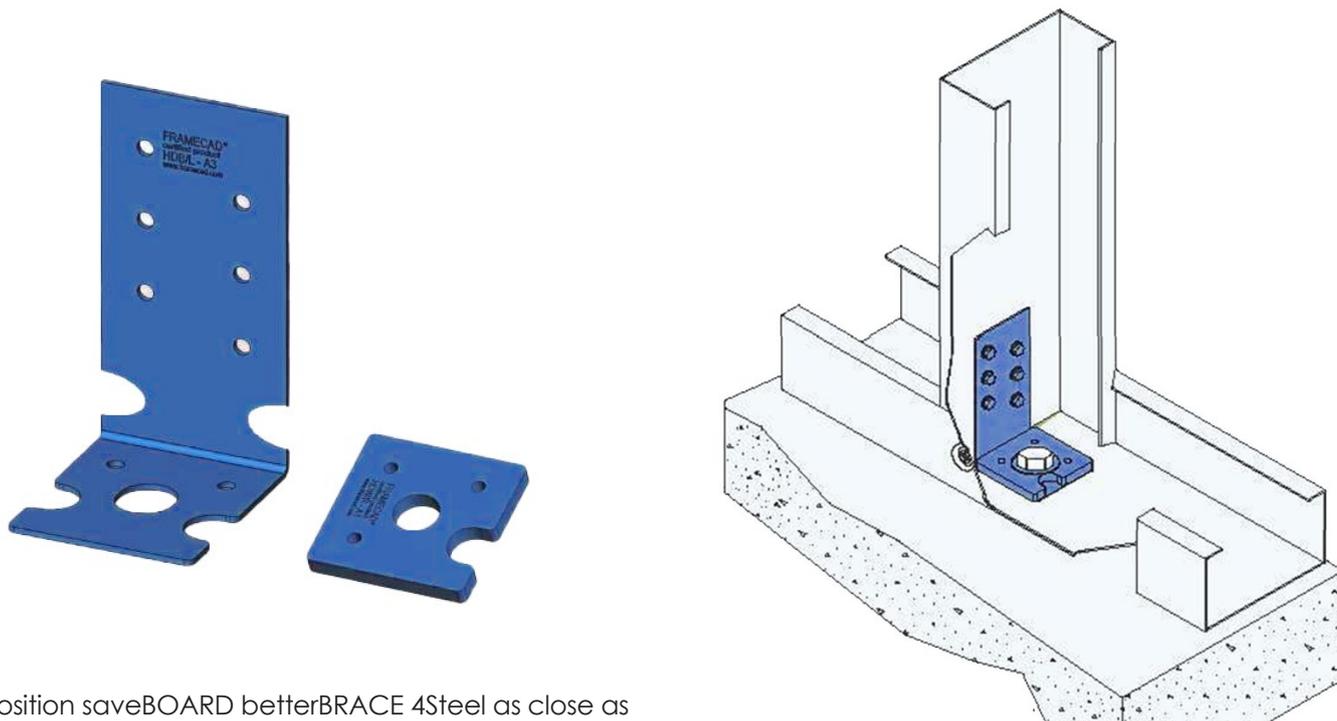
NASH Type E Concrete Hold Down



NASH Type E Timber Floor Joist Tie Down



Bottom Plate Fixing Details –Base Detail - FRAMECAD® HoldDown HDFA1



Position saveBOARD betterBRACE 4Steel as close as practicable to the internal edge of the bottom plate.

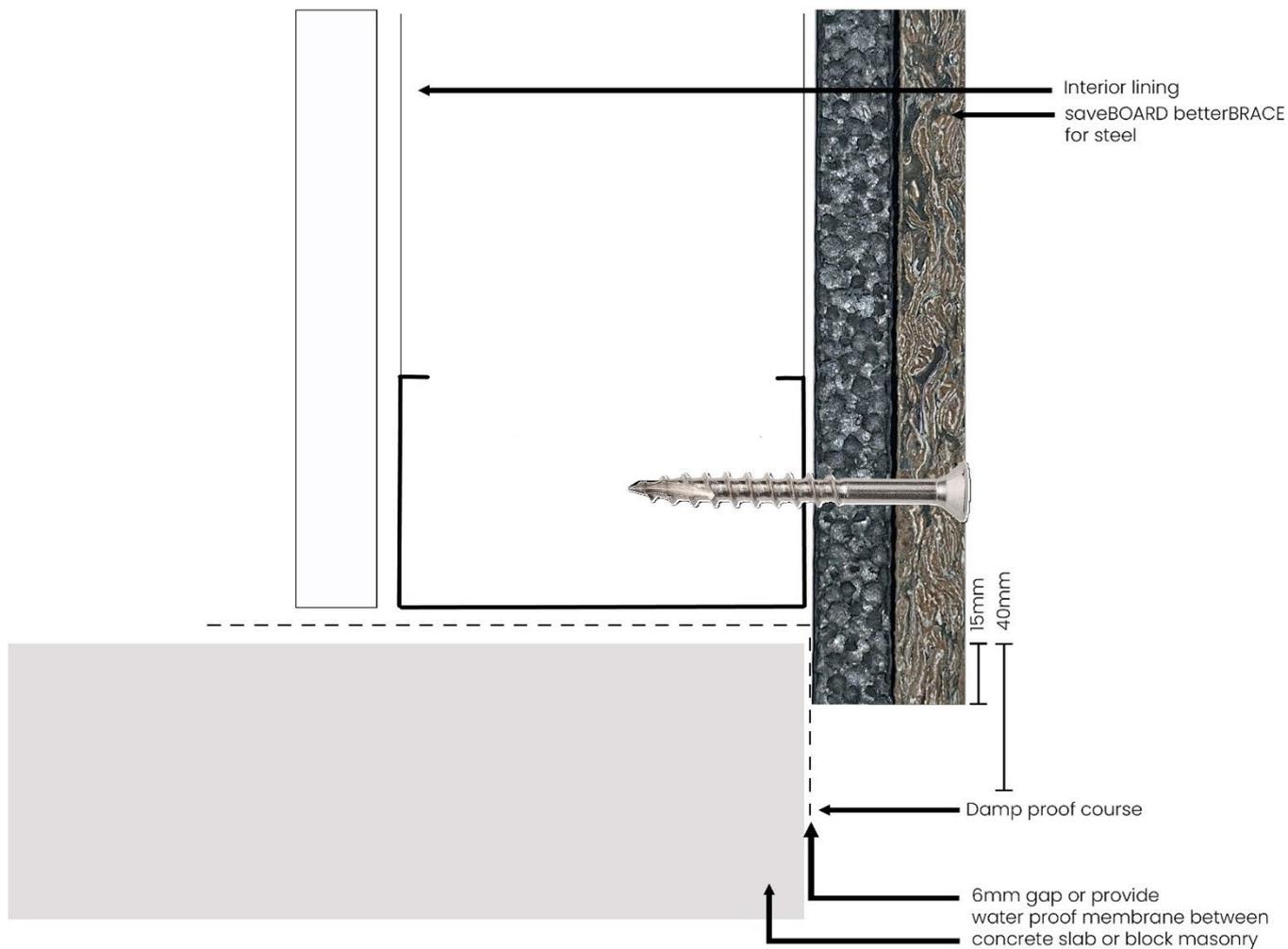
Scottsdale HoldDown 90 Degree Bracket



Position saveBOARD betterBRACE 4Steel as close as practicable to the internal edge of the bottom plate.

Detail for Fixing Over Concrete Slab

Bottom plate detail to concrete floor (with 25 mm x 1 mm strap)



ADDITIONAL INFORMATION

saveBOARD is committed to a sustainable future. We hold many of the common industry environmental certifications & labels. Ultimately, we can provide transparency to our clients and customers on how we make our saveBOARD products. We have provided relevant additional information below:

Designing Out Waste

We are focused on several initiatives that design out waste in the built environment, these include:

💰 Free Return Service: Send back off-cuts and end-of-life products to be remanufactured into new materials. It costs less than landfill and better for the planet.

✂️ Cut-to-Length Service: Only pay for what you need, saving money and reducing on-site labour for cutting sheets.

♻️ Recycling Manufacturing Waste: Our side trimmings and reject boards are continuously recycled into new saveBOARD products, its just something we do.

🌱 Soft Plastics Recycling: We offer free soft plastics recycling to all our clients, providing a comprehensive site-wide solution not just saveBOARD focused.

GreenStar Credits

The use of saveBOARD products will earn, or contribute towards earning, Green Star credits in the following Green Star categories:



Credit 19: Life Cycle Impacts

saveBOARD are low-carbon products. We have 5x EPDs covering 6x products, which are registered on EPD Australasia website. The global warming potential of our products ranges from -4.3 to -10.1 kgCO₂e/m² for A1-3 including biogenic carbon attached to the original fibre packaging.

Credit 21: Sustainable Products

Only one of following Credits may be claimed per product ie saveBOARD products currently meet 3 out the 4 requirements, but you can only claim against one requirement.

21B: Sustainable content

saveBOARD products contain 99% recycled content.

21C: EPD (Environmental Product Declaration)

Our EPD's are available on our website www.saveboard.nz

21D: Third Party

Certified by Eco Choice Aotearoa, and GECA Ecolabel both Level A certifiers.

21E: Stewardship Program

saveBOARD has a Product Steward Program that will qualify for this criterion.

Credit 22: Construction and Demolition Waste

Credits for this clause are claimed for the total amount across the project. Soft plastic waste generated on site can be collected and sent to saveBOARD to use in the manufacture of new board. This can be included in the overall total.

HomeStar (NZ Specific)



Homestar is New Zealand's leading holistic sustainability certification for new home design and construction. The use of saveBOARD products will contribute towards earning Homestar Points in the following categories:

EN2 Embodied Carbon

For use in your calculations the embodied carbon of saveBOARD products is 0.11 kgCO₂e/kg

EN3 Sustainable Materials

Up to 10 points are available where at least 50% of the material content is reused, eco-preferred or responsibly sourced materials. When calculating enter saveBOARD products in category (6), measured in m².

EN4 Construction Waste Minimisation

Minimising Waste

saveBOARD products are available cut to length (minimum quantities apply). This will reduce off cuts during installation.

Onsite Sorting

Soft Plastics can be sorted and returned to saveBOARD to be remanufactured into new board. Ask us for a copy of "Accepted Plastics".

Waste Diversion

As above, soft plastic waste can be recycled with saveBOARD. Any off cuts can also be returned to be manufactured into new boards.

Declare Label

Declare is a database of non-toxic, sustainably sourced building products that meet the stringent requirements of the International Living Future Institute's Living Building Challenge.



Declare label is available for all saveBOARD products. Declare is like a nutritional label for building products, offering specifiers, contractors and building users insight into the ingredients used in the manufacture of building products. All saveBOARD products have all achieved Red List Free status.

Environmental Labels - Eco Choice Aotearoa

Eco Choice Aotearoa is New Zealand's official ecolabel. More than listing sustainable products for green homes or businesses, Eco Choice's Type I ecolabel offers strong, independent proof of environmental best practice for those products and services that bear the mark.

