



Weatherline® Rigid Air Barrier Systems

Specification and installation manual

CBI5113

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NATIONAL SUPPORT

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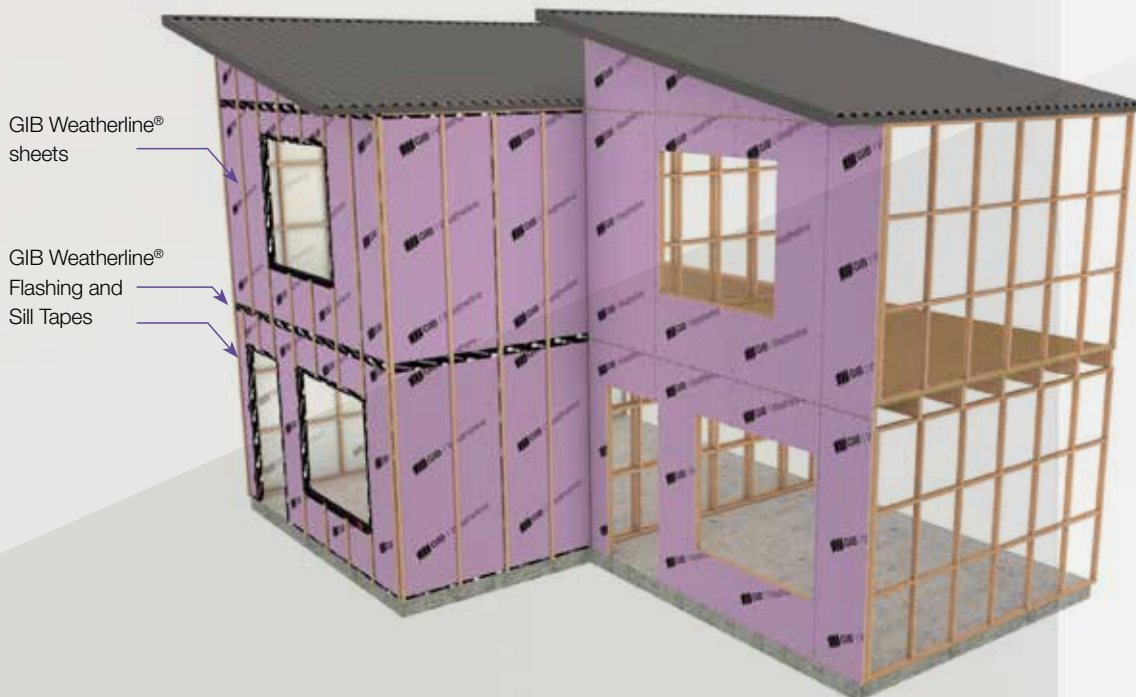
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GIB® HELPLINE

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FIGURE 1: TYPICAL INSTALLATION OF GIB WEATHERLINE® SYSTEM



Two regular barrier fixing options:

- Fixing option A: GWTa Structural batten, screw and tape.
- Fixing option B: GWTb Screw and tape.

GIB Weatherline® Performance Options:

- Four structural bracing systems.
- Four fire rated systems.
- Environmental noise.

GIB Weatherline® Rigid Air Barrier Systems are intended for use exclusively with drained and vented cavity cladding systems (used in place of a flexible wall underlay). They not only function as an air barrier but also as an effective secondary line of defence against water penetration into the building interior.

This document covers the use of GIB Weatherline® Rigid Air Barrier Systems in buildings designed within the scope of the current version of NZS 3604, or elements may be incorporated into specific design.

Why use a rigid air barrier

A rigid air barrier is an extremely effective way of managing the air pressure that acts on the exterior of a building – the higher pressure external air has the potential to drive external moisture through the exterior weather envelope (cladding) and into the wall assembly or lower pressure building interior. By installing a rigid air barrier to moderate this pressure, the external driving force is reduced and any potential moisture penetration is mitigated.

In situations where external moisture is driven through the exterior cladding (the main line of defence against moisture), in a correctly designed and built cavity cladding system this moisture should drain down the back face of the cladding and out through the opening at the bottom of the cladding.

In extreme situations where moisture that is driven through the exterior cladding goes beyond the back of the cladding and reaches the face of the rigid air barrier, the barrier acts as a secondary line of defence and in a correctly designed and built system, effectively drains this moisture downwards and out through the opening at the bottom of the cavity cladding system.

The GIB Weatherline® Rigid Air Barrier Systems constitute an effective rigid air barrier and a weather resistant secondary line of defence to manage potential external moisture penetration.

Once installed, the system in conjunction with completed roof, soffit linings and exterior joinery installation, constitutes a temporary weathertight exterior (able to be exposed for up to 90 days).

Other benefits of the GIB Weatherline® Rigid Air Barrier Systems are covered on page 6.

GIB Weatherline® Rigid Air Barrier Systems

The systems have been appraised by BRANZ as both a rigid air barrier and also as temporary weather protection for the exterior of a building (in conjunction with installed roof, soffit linings and exterior joinery) for a period of up to 90 days, prior to the installation of the exterior cladding. They are suitable for use in both residential and commercial buildings.

GIB Weatherline® Rigid Air Barrier Systems also provide structural bracing and fire protection performance. They can also assist in the reduction of external environmental noise.

GIB Weatherline® Rigid Air Barrier Systems consist of a 10mm or 13mm sheet with a water and mould resistant fibreglass reinforced gypsum core and a water resistant synthetic glass fibre sheet facing on both sides. Sheets are screw fixed to the outside face of a timber frame with all vertical and horizontal joints, and penetrations covered with a weathertight flashing tape. A range of sheet sizes are available. All of the GIB Weatherline® Rigid Air Barrier Systems are fast and easy to install.

GIB Weatherline® Rigid Air Barrier Systems comply as an Alternative Solution proprietary system, with the New Zealand Building Code (NZBC) requirements for rigid underlays. These are covered in E2/AS1 (the compliance document for Building Code clause E2 External Moisture) section 9.1.4, 9.1.7.2 and the performance requirements of Table 23 (Properties of roof underlays and wall underlays).

GIB Weatherline® Rigid Air Barrier Systems have been tested for wind speeds up to and including Extra High wind zone as defined in NZS 3604 and for buildings outside the scope of NZS 3604 (specific design). For extra technical information and for applications outside the scope of NZS 3604, contact the GIB® Helpline on 0800 100 442 or go to gib.co.nz

GIB Weatherline® Rigid Air Barrier Systems must be accurately installed in accordance with Winstone Wallboards Ltd's instructions and in line with good building practices and sound design principles to comply with the Building Act 2004, the NZBC, and any applicable New Zealand Standards.

This document contains information and instructions regarding the properties, handling, installation, usage and maintenance of GIB Weatherline® Rigid Air Barrier Systems.

Winstone Wallboards Ltd accepts no liability if the GIB Weatherline® Rigid Air Barrier Systems are not used in accordance with the instructions contained in this publication.



GIB Weatherline® Rigid Air Barrier Systems

Specification number	LB/ NLB	Insulation	Cavity batten	FRR	Lining requirements	Detail	Pg
Fixing Options							
Rigid Air Barrier Systems	GWTa	LB	Any	Timber*/ James Hardie CLD**	—	Internal lining: Any GIB® plasterboard Exterior sheathing: 10mm or 13mm GIB Weatherline®	 12
	GW Tb	LB	Any	Timber*/ James Hardie CLD**/None	—	Internal lining: Any GIB® plasterboard Exterior sheathing: 10mm or 13mm GIB Weatherline®	 22
Structural Bracing Systems							
Structural Bracing Systems	GSW-N	LB	Any	Timber*/ James Hardie CLD**/None	—	Internal lining: 10mm or 13mm GIB® Standard plasterboard Exterior sheathing: 10mm or 13mm GIB Weatherline®	 38
	GSW-H	LB	Any	Timber*/ James Hardie CLD**/None	—	Internal lining: 10mm or 13mm GIB® Standard plasterboard Exterior sheathing: 10mm or 13mm GIB Weatherline®	 40
	W-H	LB	Any	Timber*/ James Hardie CLD**/None	—	Internal lining: None Exterior sheathing: 10mm or 13mm GIB Weatherline®	 42
	BLW-H	LB	Any	Timber*/ James Hardie CLD**/None	—	Internal lining: 10mm or 13mm GIB® Braceline® GIB® Noiseline® Exterior sheathing: 10mm or 13mm GIB Weatherline®	 44
Fire Rated Systems							
External Walls	GWTL 30a	LB	Pink® Batts®^	Timber*/ James Hardie CLD**/None	30/30/30	Internal lining: 1 x 10mm GIB Fyrelite® Exterior sheathing: 1 x 10mm GIB Weatherline®	 48
	GWTL 60a	LB	Pink® Batts®^	James Hardie CLD**	60/60/60	Internal lining: 1 x 13mm GIB Fyrelite® Exterior sheathing: 1 x 13mm GIB Weatherline®	 50
Parapet & Wing Walls	GWTL 30b	LB	Pink® Batts®^	Timber*/ James Hardie CLD**/None	30/30/30	Exterior sheathing: 1 x 10mm GIB Weatherline® each side	 52
	GWTL 60c	LB	Pink® Batts®^	James Hardie CLD**	60/60/60	Exterior sheathing: 1 x 13mm GIB Weatherline® each side	 54
Environmental Noise							
GIB Weatherline® Systems when combined with GIB® internal linings contribute to quieter indoor spaces by effectively reducing the transmission of environmental noise.							

*45 x 18mm minimum H3.1 treated timber structural cavity batten.

**70 x 19mm minimum James Hardie CLD structural cavity batten.

^ Pink® Batts® R2.2 (90mm) glass wool insulation.

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Benefits – GIB Weatherline® Rigid Air Barrier Systems



BENEFITS TO HOMEOWNERS

- **Enhances thermal efficiency** of the home by reducing air leakage.
- **Protection against moisture penetration** by providing a water resistant secondary line of defence.
- **Quicker construction times** by allowing work to commence inside before the cladding is installed.
- **Fire protection options** for external walls.
- **Environmental noise control options** to help make a quieter home.



BENEFITS TO BUILDERS

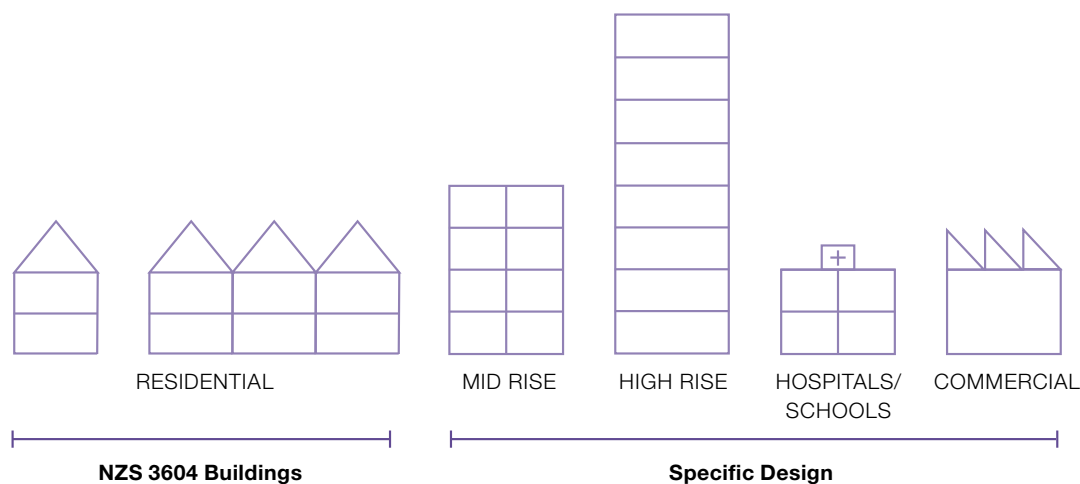
- **Easy handling and fast installation:** simply score, snap and screw fix.
- **Safe to handle and environmentally friendly:** no harmful dust created when cutting and off cuts can be recycled.
- **Early close in** providing temporary weather protection for up to 90 days allowing work to commence inside before the cladding is installed.
- **NZBC compliant:** made and tested in New Zealand specifically for New Zealand conditions.
- **Cost effective fire rated systems** including 30min and 60min FRR options using Pink® Batts® infill insulation.
- **Structural bracing elements** with double and single sided options.
- **Dimensionally stable sheets** with moisture and mould resistance.



BENEFITS TO DESIGNERS

- **Moisture protection** by providing a second line of defence against water penetration.
- **Enhanced thermal efficiency** of the building by reducing air leakage.
- **Environmentally friendly:** offcuts can be safely recycled.
- **NZBC Compliant:** thoroughly tested and BRANZ appraised for New Zealand conditions up to and including Extra High wind zones.
- **Four cost effective fire rated systems** including 30min and 60min FRR external, parapet and wing walls.
- **Four structural bracing elements** with double and single sided options easily accessed in the GIB Ezybrace® calculator.
- **Environmental noise control options** using typical claddings.

Suitable building types for GIB Weatherline® Systems



Compliance with the NZBC

NZBC CLAUSE B1 – STRUCTURE

The design and material specification for framing used in conjunction with this manual must be in accordance with NZS 3604 and for specific design, with NZS 3603 and AS/NZS 1170.

NZBC CLAUSE B2 – DURABILITY

Under the conditions of use set out in this manual GIB Weatherline® Rigid Air Barrier Systems comply with NZBC Clause B2.3.1(a), not less than 50 years when used where the cladding durability requirement or expected serviceable life is not less than 50 years, or when it is used in a bracing or fire rated system.

GIB Weatherline® Rigid Air Barrier Systems comply with NZBC Clause B2.3.1(b), not less than 15 years where the cladding durability requirement is 15 years and when it is not used as part of a bracing or fire rated system. GIB Weatherline® Rigid Air Barrier Systems comply with NZBC Clause B2.3.2.

NZBC CLAUSES C1–C6 – PROTECTION FROM FIRE

GIB Weatherline® Rigid Air Barrier Systems can be used to provide passive fire protection in accordance with the requirements of the NZBC Clauses C1–C6 – Protection from Fire.

NZBC CLAUSE E2 – EXTERNAL MOISTURE

GIB Weatherline® Rigid Air Barrier Systems meet the NZBC requirements for rigid underlays (rigid air barriers) as an Alternative Solution proprietary system as outlined in E2/AS1 section 9.1.4, 9.1.7.2 and the performance requirements of Table 23 'Properties of roof underlays and wall underlays'.

NZBC CLAUSE F2 – HAZARDOUS BUILDING MATERIALS

Under normal conditions of use and serviceable life the products detailed in this manual meet the provisions of the NZBC Clause F2 and do not constitute a health hazard.

GIB WEATHERLINE® RIGID AIR BARRIER SYSTEMS COMPONENTS

GIB Weatherline® Sheet

- Available thicknesses 10mm and 13mm (approximate mass 9.0kg/m² and 11.5kg/m²)
- Available lengths 2700mm and 3000mm long (other lengths to order)
- Available widths 1200mm wide
- Square edges
- Purple exterior face



GIB Weatherline® Flashing Tape

- Available widths 30mm, 60mm, 100mm, 150mm and 200mm
- 30m roll length



GIB Weatherline® Sill Tape

- Available widths 150mm and 200mm
- 20m roll length



GIB® Grabber® 41mm x 6g Ceramic Coated High Thread Screw

- Available in cartons of 1,000 (collated only)



SCOPE OF USE

GIB Weatherline® Rigid Air Barrier Systems are designed to provide a NZBC compliant rigid air barrier exclusively for drained and vented cavity cladding systems (used in place of a flexible wall underlay), where they function not only as an air barrier but also as an effective secondary line of defence against water penetration into the building interior.

The systems have been BRANZ Appraised, both as a rigid air barrier and as temporary weather protection, for the exterior of a building (in conjunction with fully installed roof, soffit linings and exterior joinery) for a period up to 90 days, prior to the installation of the exterior cladding. They are BRANZ Appraised for use in buildings designed within the scope of NZS 3604, E2/AS1 or elements may be incorporated into specific design.

GIB Weatherline® Rigid Air Barrier Systems also provide structural bracing and fire protection performance and assist in the reduction of external environmental noise.

BEWARE OF SUBSTITUTION

The performance of GIB Weatherline® Rigid Air Barrier Systems requires accurate design detailing and construction practices. All GIB® Systems have been developed specifically for New Zealand conditions and the systems independently tested, assessed or appraised, to ensure the required level of performance. It is important to use GIB® components where specified and to closely follow the specified design details and construction practices, to be confident that the required level of performance and quality is achieved on site.

For more information, call the GIB® Helpline on 0800 100 442 or go to gib.co.nz

STRUCTURAL BRACING

The GIB Weatherline® Rigid Air Barrier Structural Bracing Systems in this manual are suitable to meet wind and earthquake bracing demand when constructed in accordance with NZS 3604. Refer to Section 5 for more details.

FIRE RESISTANCE RATINGS

The GIB Weatherline® Rigid Air Barrier Fire Rated Systems outlined in this manual achieve the stated Fire Resistance Ratings (FRR) when constructed in accordance with the details in this manual. Refer to Section 6 for more details.

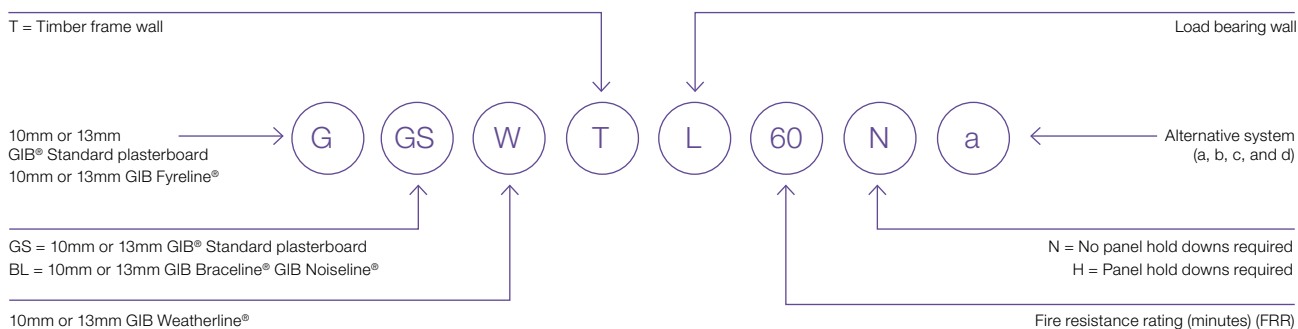
LIABILITY

Winstone Wallboards Ltd accepts no liability if the GIB Weatherline® Rigid Air Barrier Systems are not designed and installed in strict accordance with instructions contained in this manual, or any other technical information associated with the systems.

USE ONLY THE CURRENT SPECIFICATION

This manual may be superseded by a new publication. Winstone Wallboards Ltd accepts no liability for reliance upon publications that have been superseded. You should check the current index of publications contained in your GIB® Technical Manual before using this publication. If you are unsure whether this is the current publication, call the GIB® Helpline on 0800 100 442 or go to gib.co.nz

Specification reference example



SPECIFICATION REFERENCE

The specification reference allows a quick and precise reference to a particular system.

Design considerations

DESIGN RESPONSIBILITY

Responsibility for the design and detailing of the building incorporating GIB Weatherline® Rigid Air Barrier Systems lies with the building owner and the parties that they engage for design services. The Designer and Specifier for the building must ensure that all products and details in the drawings and specification that relate to the GIB Weatherline® Rigid Air Barrier Systems are relevant to the intended application. They must also make sure that additional information is provided for any aspects of construction that fall outside the scope and specifications of this literature, or that incorporate specific design requirements.

If an element within a building is designated with more than one GIB Weatherline® Rigid Air Barrier Systems specification number, the details and drawings must be documented to reflect this.

WIND LOADINGS

GIB Weatherline® Rigid Air Barrier Systems meet the NZBC requirements for rigid underlays (rigid air barriers) as an Alternative Solution proprietary system as outlined in E2/AS1, sections 9.1.4 and 9.1.7.2, and the performance requirements of Table 23.

They have been tested to Extra High wind zone as defined in NZS 3604 and for buildings outside the scope of NZS 3604.

Refer to Sections 2 and 3 of this manual for framing requirements, fastener type and fixing centres.

BUILDING MOVEMENT

Design and detailing of the building must take into account movement of the building structure that may affect the installation and performance of GIB Weatherline® Rigid Air Barrier Systems.

Unless specifically designed, a 10mm gap between sheets must be incorporated at the horizontal joints occurring at a building mid or intermediate floor, to facilitate potential movement of the structure.

Unless specifically designed, a 5mm gap between sheets must be incorporated at a horizontal joint anywhere on the building face (other than at a building mid or intermediate floor), to facilitate potential movement of the structure. In all locations vertical sheet joints shall be touch fitted.

Where the building is outside the scope of NZS 3604 and may be subject to potential movement under various loads, movement control joints and fixings must be specifically designed by a suitably qualified professional.

For more information call the GIB® Helpline on 0800 100 442 or go to gib.co.nz

DURABILITY DURING CONSTRUCTION

GIB Weatherline® is a 10mm or 13mm sheet with a water and mould resistant fibreglass reinforced gypsum core and a water resistant synthetic glass fibre sheet facing on both sides. Sheets are screw fixed to the outside face of a timber frame with all vertical and horizontal joints, and penetrations covered with a weathertight flashing tape.

Once installed, the GIB Weatherline® Rigid Air Barrier Systems are weather resistant and, in conjunction with completed roof, soffit linings and exterior joinery installation, constitute a temporary weathertight exterior (able to be exposed for up to 90 days). This allows work to continue on the building interior prior to the completion of the exterior cladding (consult your local Building Consent Authority).

ON-SITE STORAGE

GIB Weatherline® Rigid Air Barrier Systems components must be stored and handled with care to maintain their condition prior to installation.

GIB Weatherline® Rigid Air Barrier Systems components must be stored on site, covered and protected from the elements. The sheets must be protected from any mechanical damage and must be kept dry prior to installation.

GIB Weatherline® Rigid Air Barrier Systems sheets must be fully supported on pallets or consistently along the length and width of the sheets when supported flat on the structure prior to installation.

GIB Weatherline® Rigid Air Barrier Systems sheets must always be stacked flat and never on their edges.

Any sheets or part sheets that are damaged on site must not be installed. Ensure that sheets are dry at time of installation.

HEALTH AND SAFETY

There are no harmful components in GIB Weatherline® Rigid Air Barrier Systems and no specific requirements other than normal safe handling practices associated with gypsum plasterboard, which are covered in the current edition of the GIB® Site Guide. Cutting and fixing is easy with no harmful dust created.

There are no special requirements for the disposal of waste (refer to Section 8).

Ensure safe working practices are always followed when handling and installing GIB Weatherline® Rigid Air Barrier Systems.

For further information, refer to Material Safety Data Sheets available online from gib.co.nz

BRANZ APPRAISAL

GIB Weatherline® Rigid Air Barrier Systems have been appraised by (BRANZ), Appraisal No.1048 (2019).

It is of prime importance to comply with the details of design, construction and workmanship as outlined in this manual.

GWTa – Structural batten, screw and tape

Two fixing options are available dependent upon wind zone, wall framing stud centres and the exterior cladding system.

The GWTa system is the default fixing option and is suitable for use with a drained and vented cavity cladding system that incorporates a structural cavity batten. The GWTb system must be used for masonry veneer and vertical cladding.

FRAMING

All timber framing sizes and set out must comply with NZS 3604 or be specifically designed to NZS 3603 and AS/NZS 1170. Timber framing preservative treatment and moisture content must comply with the NZBC and any relevant NZ Standard.

All wall framing studs must be at a maximum of 400mm or 600mm centres (as set out in Table 1) and must be true and plumb. The minimum framing width is 45mm.

FASTENERS

Screw fix GIB Weatherline® sheets to the exterior wall framing with GIB® Grabber® 41mm x 6g Ceramic Coated High Thread Screws.

GIB® Grabber® 41mm x 6g Ceramic Coated High Thread Screws can be used for all sheet fixings when covered with GIB Weatherline® Rigid Air Barrier Systems Flashing Tape or a structural cavity batten for NZS 3604 Exposure Zones B, C and D.

STRUCTURAL CAVITY BATTENS

Structural cavity battens are to be 45 x 18mm minimum H3.1 treated timber or 70 x 19mm minimum James Hardie CLD structural cavity battens. Fixings for structural cavity battens shall be either 75 x 3.15mm jolt head galvanised nails or 75 x 3.06mm D Head power-driven galvanised nails or as required by specific cladding types.

Timber batten fixings must be at a maximum of 300mm centres vertically staggered 12mm either side of the batten centre line. James Hardie CLD batten fixings must be at a maximum of 200mm centres vertically on the batten centre line.

SHEET LAYOUT

GIB Weatherline® sheets must be installed with the purple branded face outwards. Ensure the sheets are in good condition with no damage prior to installation and are dry and free of sawdust, dirt or any other contaminants.

Sheets must be installed vertically with the long side of each sheet in line with the wall framing studs. Sheets should be touch fitted at vertical joints on the mid-line of the stud. Sheet lengths should be selected to ensure that a horizontal movement control joint is achievable at any mid or intermediate floor and at any other horizontal sheet joints. Sheets may be installed horizontally across gable ends of buildings. All sheet edges (vertical, horizontal and raked) must be fully supported by wall framing.

Bottom edges of the sheets at the ground floor bottom plate junction must overhang by 15mm minimum. Cavity closers, as required, must be installed in conjunction with structural cavity battens.

Soffit framing should be fixed over the GIB Weatherline® Rigid Air Barrier Systems, once all sheets have been installed and joints have been taped.

HANDLING AND CUTTING

Position the sheet with the purple side of the sheet facing up. Mark and cut the sheet as required with a straight edge and utility knife, cutting through the face and the core.

Break the sheet core by snapping the sheet back along the cut line. Turn the sheet over and cut along the back liner to complete the cut. For further information on cutting, refer to page 60.

FIXING SHEETS

All GIB Weatherline® sheet edges must be fixed to vertical and horizontal framing. The mid-sheet must be fixed to studs at either 400mm or 600mm maximum (as set out in Table 1). Screw fixings are also required to wall framing at any raked sheet edges. There is no requirement to screw fix sheets to any nogs or any other horizontal mid-sheet framing.

Edge fixing for screws must be a minimum distance of 12mm from bound sheet edges and 18mm from unbound sheet edges (or cut sheet edges).

Ensure screws are not over driven and that the head of the screw finishes flush with the face of the sheet. Where screws have been over driven (and the face liner has been damaged and the core exposed), install a new screw fixing 25mm away and adjacent to the over driven fixing.

FLASHING TAPES

Once all GIB Weatherline® sheets have been screw fixed in place, install GIB Weatherline® Flashing Tape to all horizontal and vertical sheet joints and all other screw fixings. Mid-sheet vertical screw fixings do not need to be covered with flashing tape when covered with a vertical cavity batten. It is recommended that horizontal flashing tape be installed before vertical flashing tape. Ensure all tape is firmly pressure fitted using a plastic paddle.

Exterior joinery, window and door openings must be sealed with GIB Weatherline® Flashing and Sill Tapes.

External penetrations must be sealed with proclima Kaflex or Reflex sealing grommets.

Refer to Section 4 for tape installation.

FIXING STRUCTURAL BATTENS

Structural cavity battens must then be nail fixed vertically to the studs behind, to fix the sheets securely in place. These battens must be placed at a maximum of 400mm or 600mm centres (as set out in Table 1), or as required for specific cladding support.

COMPLETION AND EXPOSURE

GIB Weatherline®, including tape and structural batten installation, must be completed in a timely sequence when the sheet material is dry. Installed sheets must not be left without tape and battens when extreme wet or windy conditions can be reasonably expected.

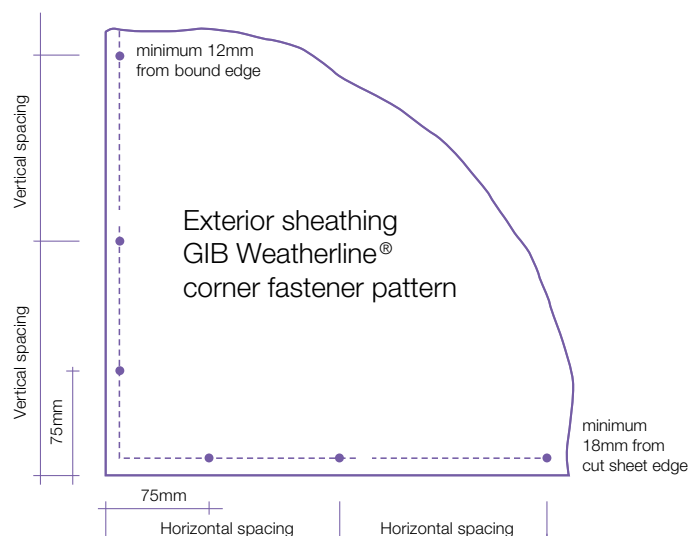
The cladding system must be installed within 90 days of the GIB Weatherline® installation.

Table 1: GWTa screw fixing centres for NZS 3604 applications

GIB Weatherline® – GWTa		
Wind Zone	Stud Centres	
	400mm	600mm
	VERTICAL SCREW FIXING CENTRES (MAXIMUM)	
L	600mm	600mm
M	600mm	600mm
H	600mm	600mm
VH	600mm	600mm
EH	600mm	SED
SED	SED	SED
	HORIZONTAL SCREW FIXING CENTRES (TOP AND BOTTOM OF SHEETS)	
ALL	200mm	200mm

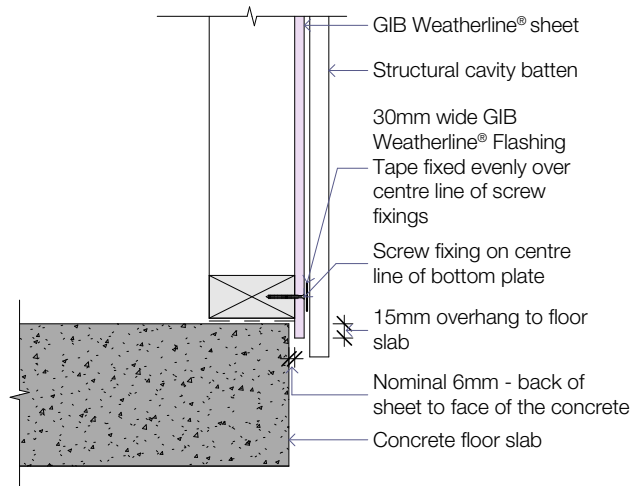
SED = Specific Engineering Design

1. All screw fixings to be taped, apart from mid-sheet vertical screw fixings when covered by a structural cavity batten.
2. Screw fixings to commence 75mm in from sheet corners.
3. H3.1 treated timber structural cavity battens to be fixed at 300mm centres. CLD structural cavity battens to be fixed at 200mm centres.



BOTTOM PLATE OVERHANG

Ensure that sheet set out allows for the bottom edge of the sheet to overhang the ground floor bottom plate to floor junction by 15mm minimum. Cavity closers, as required, must be installed in conjunction with structural cavity battens.

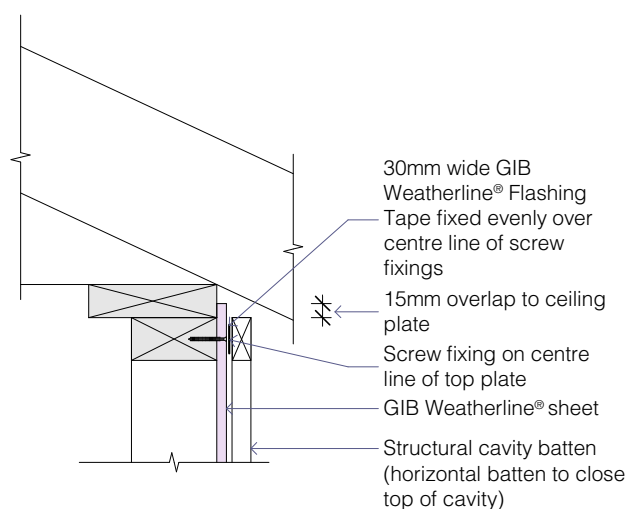


It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape - refer to Section 4 for tape installation.

GWL010

TOP PLATE OVERHANG

Where applicable, ensure that sheet set out allows for the top edge of the sheet to overhang the top plate to ceiling plate junction by 15mm minimum.



It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

GWL012

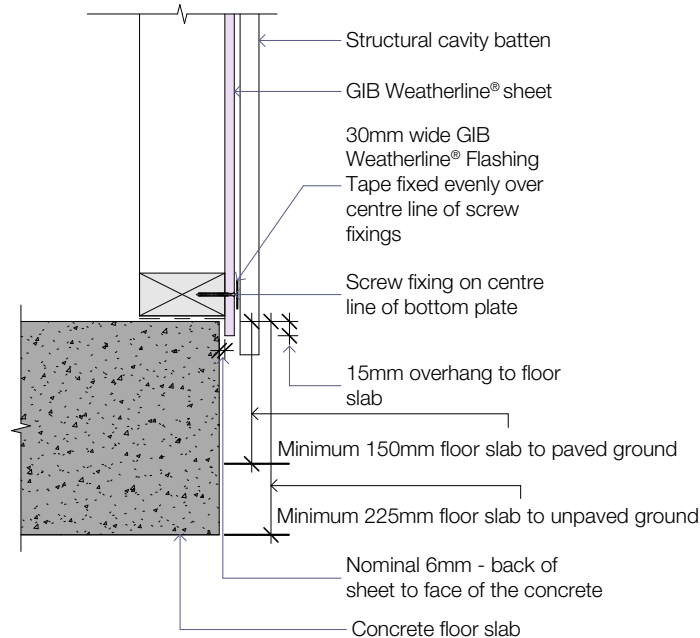
CLADDING GROUND CLEARANCE

Minimum ground clearances must be maintained for the cladding system being installed. Cavity closers, as required, must be installed in conjunction with structural cavity battens.

Cladding ground clearances must comply with E2/AS1 Clause 9.1.3, Table 18 and Figure 65 together with the cladding

clearances for timber floors in NZS 3604. The ground adjacent to the cladding must slope away from the cladding.

GIB Weatherline® sheets must not be installed where they will remain in contact with non-draining water, damp ground, or soil.



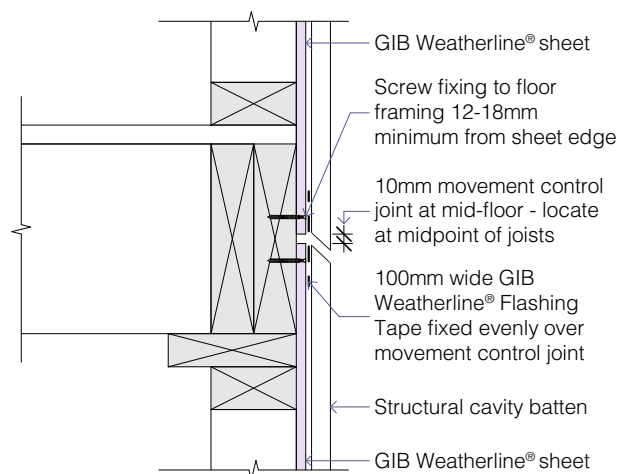
GWL013

It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

HORIZONTAL SHEET JOINT AT MID FLOOR

For buildings of two or more storeys, a horizontal sheet junction is required at the building's mid or intermediate floors, to allow for any potential floor structure movement. The sheets can be screw fixed to the mid-floor framing.

Ensure the sheets are positioned to allow a 10mm gap between the upper and lower sheet edges, at mid-floor horizontal junctions. It is recommended to form a break in the cavity batten at mid-floor.



GWL014

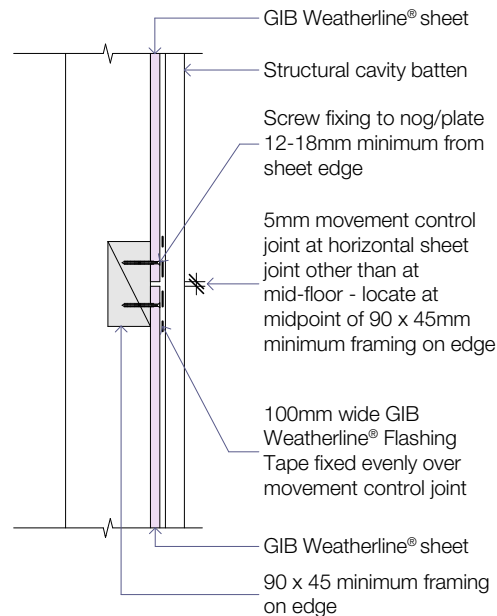
It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

HORIZONTAL SHEET JOINT

For buildings with stud heights requiring more than one sheet length (i.e. where horizontal joints are located other than mid or intermediate floor locations), position sheets to allow for any potential wall structure movement.

Ensure the sheets are positioned to allow a 5mm gap between the upper and lower sheets.

To achieve the required screw fixing edge distances, the joint must be positioned over 90 x 45mm minimum framing on edge, at the horizontal junction.

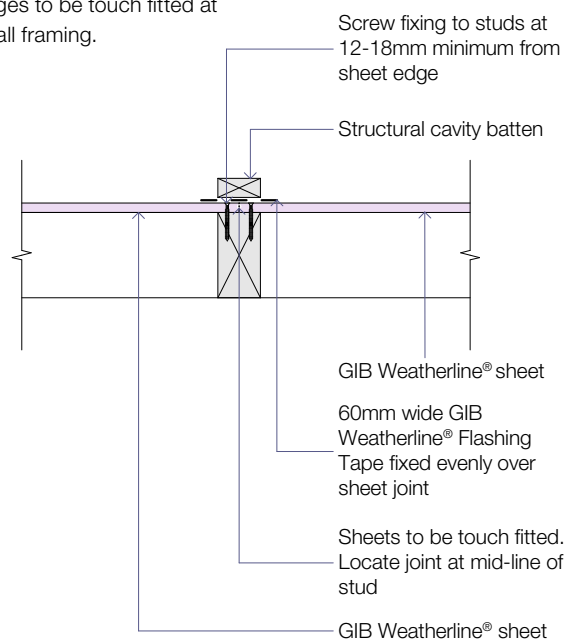


GWL015

It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

VERTICAL SHEET JOINT

Setout should allow for vertical sheet edges to be touch fitted at vertical joints, on the centre line of the wall framing.

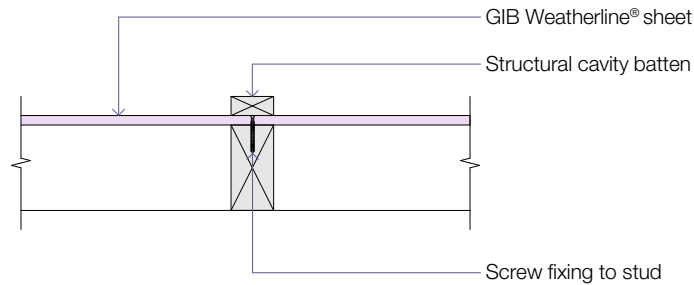


GWL016

It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

VERTICAL MID-SHEET FIXING

Vertical mid-sheet fixings to be covered by a structural cavity batten. No flashing tape required to vertical mid-sheet fixings.

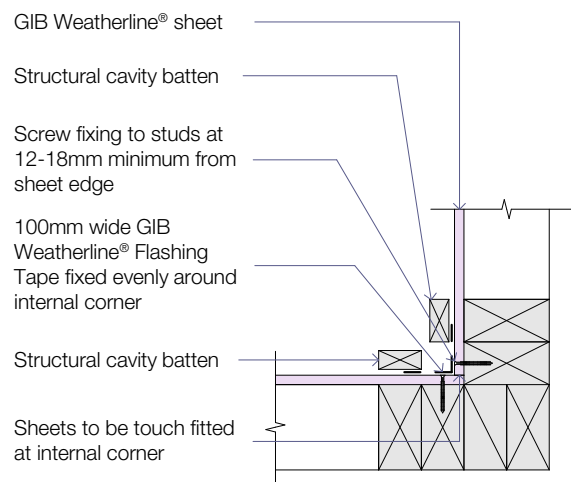


GWL025

INTERNAL CORNER

At internal corners install the sheets so that they are touch fitted to each other (or to the face of the wall framing), into the corner.

Structural cavity batten layout at corner may vary depending upon cladding.



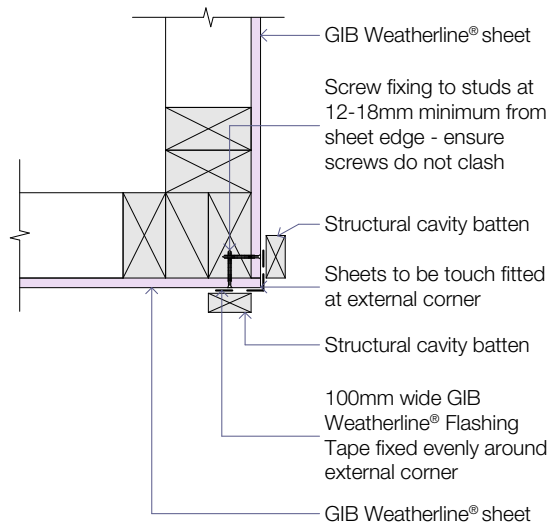
GWL017

It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

EXTERNAL CORNER

At external corners install the first sheet, vertically overlapping the corner framing by the thickness of the sheet. Touch fit the adjacent sheet vertically to the back face of the previously installed overlapping sheet.

Structural cavity batten layout at corner may vary depending upon cladding.

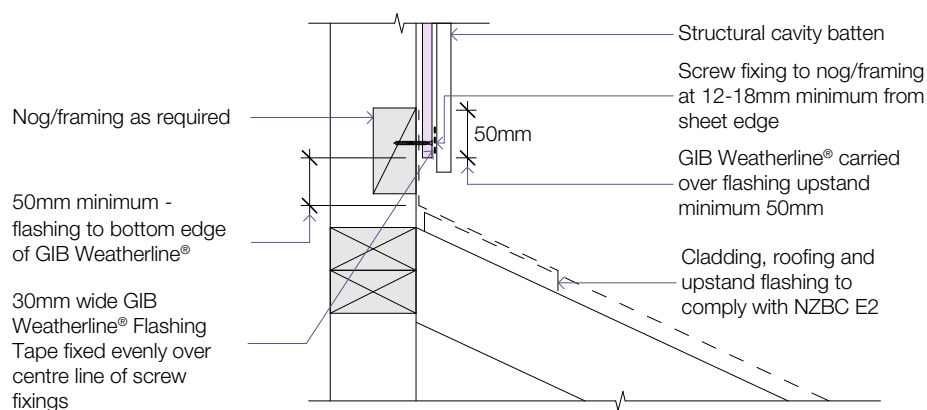


It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

GWL018

SKIRT ROOF JUNCTION

For GIB Weatherline® Rigid Air Barrier Systems terminating at roof flashing upstand, cavity closers, as required, must be installed in conjunction with structural cavity battens.

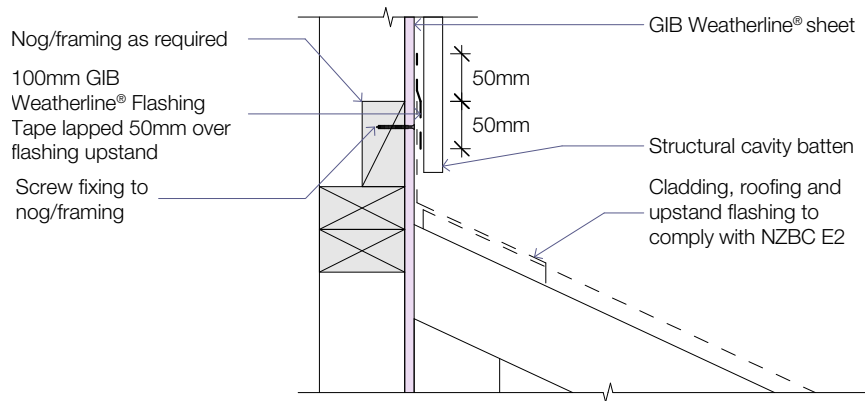


It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

GWL023

SKIRT ROOF JUNCTION

For GIB Weatherline® Rigid Air Barrier Systems continuing past roof flashing upstand, cavity closers, as required, must be installed in conjunction with structural cavity battens.



It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

GWL021

Notes

This image shows a blank sheet of white paper with horizontal ruling lines. The top portion of the page features alternating light gray and white bands, creating a striped effect. A diagonal line separates this patterned section from the plain white ruled area below.

GWTb – Screw and tape

Two fixing options are available, dependent upon wind zone, wall framing stud centres and the exterior cladding system.

The GWTb must be used for masonry veneer and vertical claddings (on a drained and vented cavity batten system). It may also be used for horizontal claddings systems (such as weatherboards). However, Fixing Option A – GWTa incorporates fewer fixings and is the preferred system for horizontal claddings.

FRAMING

All timber framing sizes and set out must comply with NZS 3604 or be specifically designed to NZS 3603 and AS/NZS 1170. Timber framing preservative treatment and moisture content must comply with the NZBC and any relevant NZ Standard.

All wall framing studs must be at a maximum of 400mm or 600mm centres (as set out in Table 2) and must be true and plumb. The minimum framing width is 45mm.

FASTENERS

Screw fix GIB Weatherline® sheets to the exterior wall framing with GIB® Grabber® 41mm x 6g Ceramic Coated High Thread Screws.

GIB® Grabber® 41mm x 6g Ceramic Coated High Thread Screws can be used for all sheet fixings when covered with GIB Weatherline® Rigid Air Barrier Systems Flashing Tape or a structural cavity batten for NZS 3604 Exposure Zones B, C and D.

CAVITY BATTENS

As required for specific cladding types, the battens can be installed at any stage up to 90 days from the completion of the GIB Weatherline® sheet installation.

SHEET LAYOUT

GIB Weatherline® sheets must be installed with the purple branded face outwards. Ensure the sheets are in good condition with no damage prior to installation and are dry and free of sawdust, dirt or any other contaminants.

Sheets must be installed vertically with the long side of each sheet in line with the wall framing studs. Sheets should be touch fitted at vertical joints on the mid-line of the stud. Sheet lengths should be selected to ensure that a horizontal movement control joint is achievable at any mid or intermediate floor and at any other horizontal sheet joints. Sheets may be installed horizontally across gable ends of buildings. All sheet edges (vertical, horizontal and raked) must be fully supported by wall framing.

Bottom edges of the sheets at the ground floor bottom plate junction must overhang by 15mm minimum. Cavity closers, as required, must be installed in conjunction with cavity battens.

Soffit framing should be fixed over the GIB Weatherline® Rigid Air Barrier Systems, once all sheets have been installed and joints have been taped.

HANDLING AND CUTTING

Position the sheet with the purple side of the sheet facing up. Mark and cut the sheet as required with a straight edge and utility knife, cutting through the face and the core.

Break the sheet core by snapping the sheet back along the cut line. Turn the sheet over and cut along the back liner to complete the cut. For further information on cutting, refer to page 60.

FIXING SHEETS

All GIB Weatherline® sheet edges must be fixed to vertical and horizontal framing. The mid-sheet must be fixed to studs at either 400mm or 600mm maximum (as set out in Table 2). Screw fixings are also required to wall framing at any raked sheet edges. There is no requirement to screw fix sheets to any nogs or any other horizontal mid-sheet framing.

Edge fixing for screws must be a minimum distance of 12mm from bound sheet edges and 18mm from unbound sheet edges (or cut sheet edges).

Ensure screws are not over driven and that the head of the screw finishes flush with the face of the sheet. Where screws have been over driven (and the face liner has been damaged and the core exposed), install a new screw fixing 25mm away and adjacent to the over driven fixing.

FLASHING TAPES

Once all GIB Weatherline® sheets have been screw fixed in place, install GIB Weatherline® Flashing Tape to all horizontal and vertical sheet joints and all other screw fixings. It is recommended that horizontal flashing tape be installed before vertical flashing tape. Ensure all tape is firmly pressure fitted using a plastic paddle.

Exterior joinery, window and door openings must be sealed with GIB Weatherline® Flashing and Sill Tapes.

External penetrations must be sealed with proclima Kaflex or Reflex sealing grommets.

Refer to Section 4 for tape installation.

COMPLETION AND EXPOSURE

GIB Weatherline®, including tape installation, must be completed in a timely sequence when sheet material is dry. Installed sheets must not be left without tape when extreme wet or windy conditions can be reasonably expected.

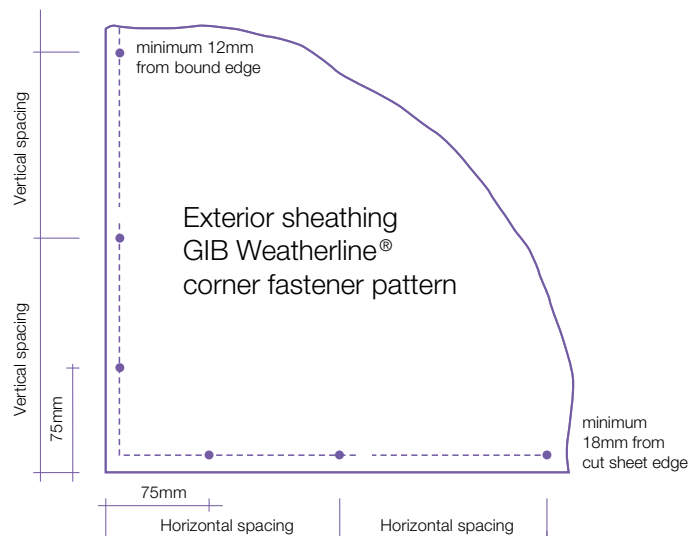
The cladding system must be installed within 90 days of the GIB® Weatherline installation.

Table 2: GWTb screw fixing centres for NZS 3604 applications

GIB Weatherline® – GWTb		
Wind Zone	Stud Centres	
	400mm	600mm
	VERTICAL AND HORIZONTAL SCREW FIXING CENTRES (MAXIMUM)	
L	300mm	200mm
M	200mm	150mm
H	200mm	100mm
VH	150mm	SED
EH	100mm	SED
SED	SED	SED

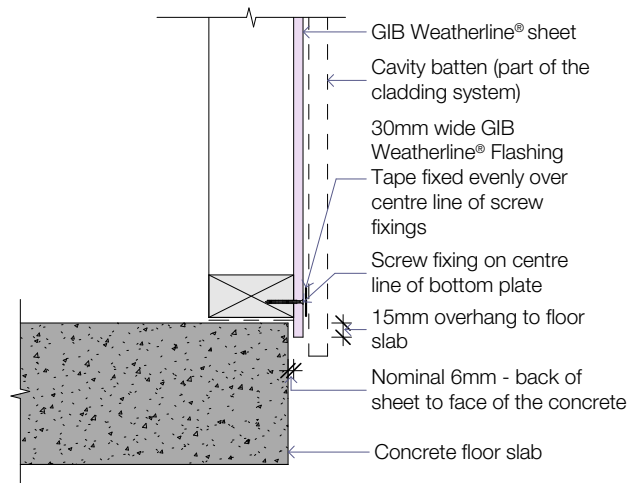
SED = Specific Engineering Design

1. All screw fixings to be taped
2. Screw fixings to commence 75mm in from sheet corners



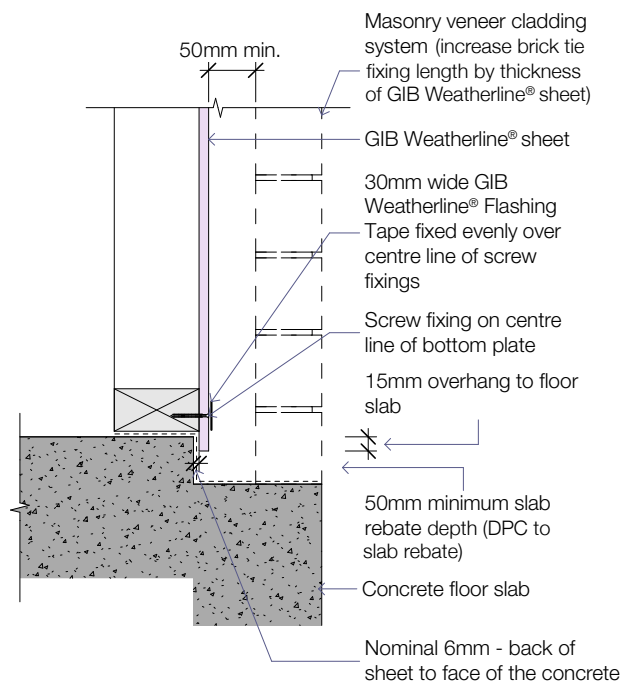
BOTTOM PLATE OVERHANG

Ensure that sheet set out allows for the bottom edge of the sheet to overhang the ground floor bottom plate to floor junction by 15mm minimum. Install cavity closers as required, as part of the cladding system.



GWL001

It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

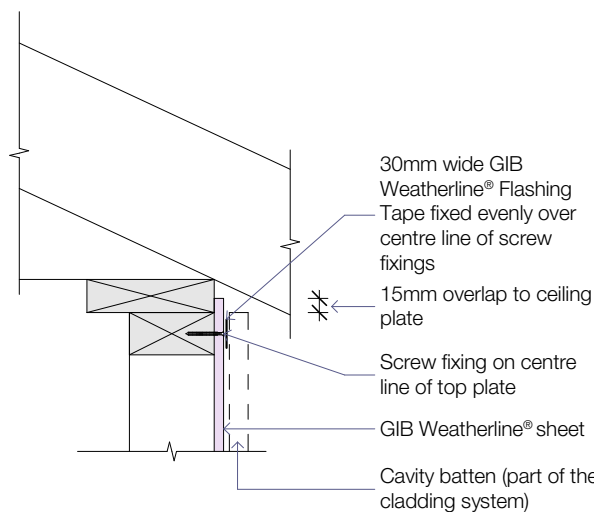


GWL002

It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

TOP PLATE OVERHANG

Where applicable, ensure that sheet set out allows for the top edge of the sheet to overhang the top plate to ceiling plate junction by 15mm minimum.



It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

GWL003

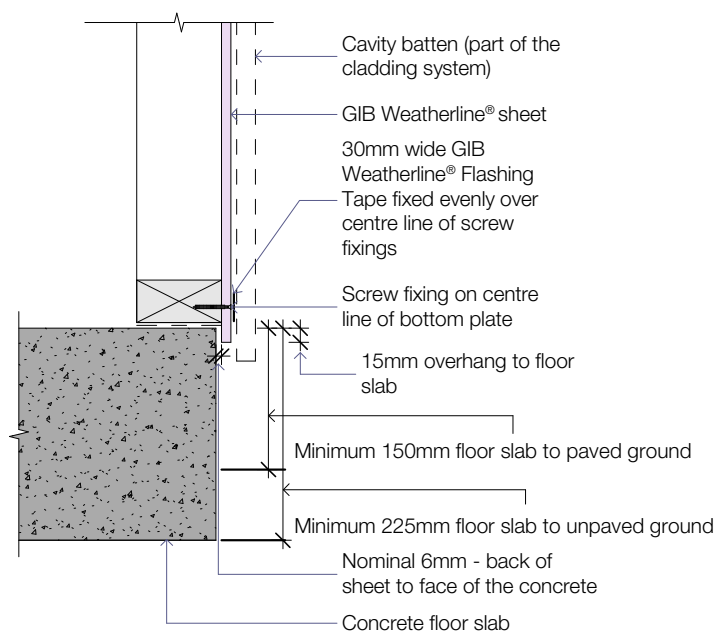
CLADDING GROUND CLEARANCE

Minimum ground clearances must be maintained for the cladding system being installed. Install cavity closers as required, as part of the cladding system.

Cladding ground clearances must comply with E2/AS1 Clause 9.1.3, Table 18 and Figure 65 together with the cladding clearances for timber floors in NZS 3604.

The ground adjacent to the cladding must slope away from the cladding.

GIB Weatherline® Rigid Air Barrier Systems sheets must not be installed where they will remain in contact with non-draining water, damp ground, or soil.



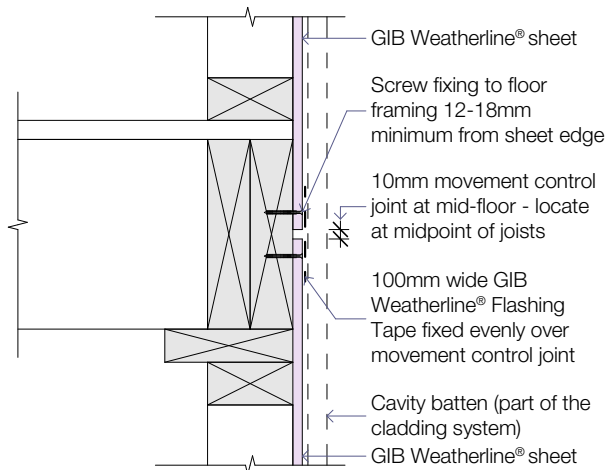
It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

GWL004

HORIZONTAL SHEET JOINT AT MID FLOOR

For buildings of two or more storeys, a horizontal sheet junction is required at the building's mid or intermediate floors, to allow for any potential floor structure movement. The sheets **can** be screw fixed to the mid-floor framing.

Ensure the sheets are positioned to allow a 10mm gap between the upper and lower sheet edges, at mid-floor horizontal junctions. It is recommended to form a break in the cavity batten at mid-floor.



It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

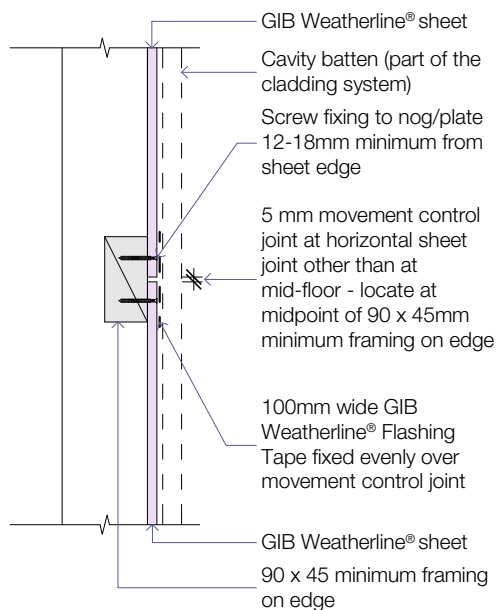
GWL005

HORIZONTAL SHEET JOINT

For buildings with stud heights requiring more than one sheet length (i.e. where horizontal joints are located other than mid or intermediate floor locations) position sheets to allow for any potential wall structure movement.

To achieve the required screw fixing edge distances, the joint must be positioned over 90 x 45mm minimum framing on edge, at the horizontal junction.

Ensure the sheets are positioned to allow a 5mm gap between the upper and lower sheets.

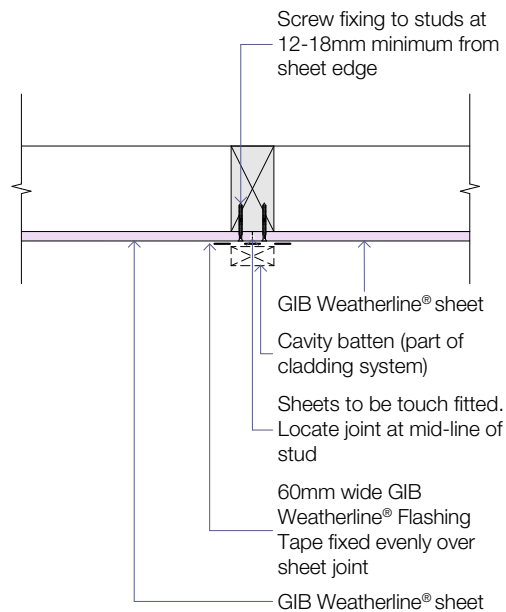


It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

GWL006

VERTICAL SHEET JOINT

Setout should allow for vertical sheet edges to be touch fitted at vertical joints, on the centre line of the wall framing.

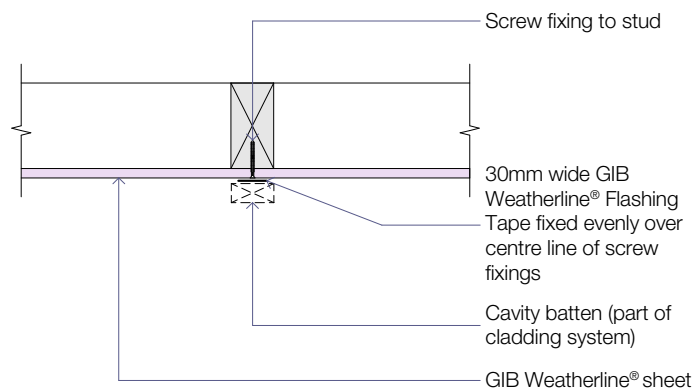


GWL007

It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

VERTICAL MID-SHEET FIXING

Vertical mid-sheet fixings to be covered by GIB Weatherline® Rigid Air Barrier Systems flashing tape.

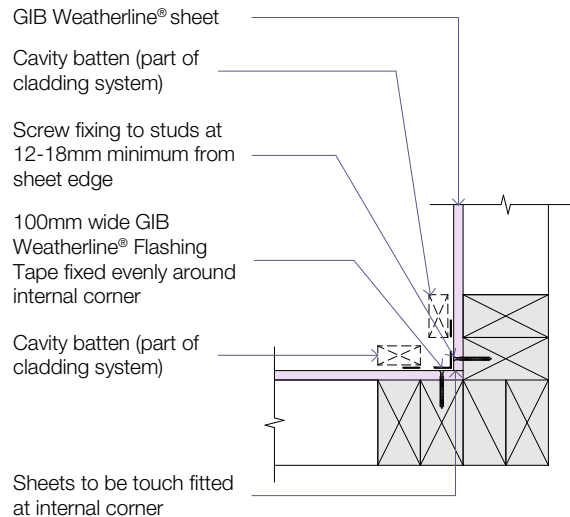


GWL026

It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

INTERNAL CORNER

At internal corners install the sheets so that they are touch fitted to each other (or to the face of the wall framing), into the corner.

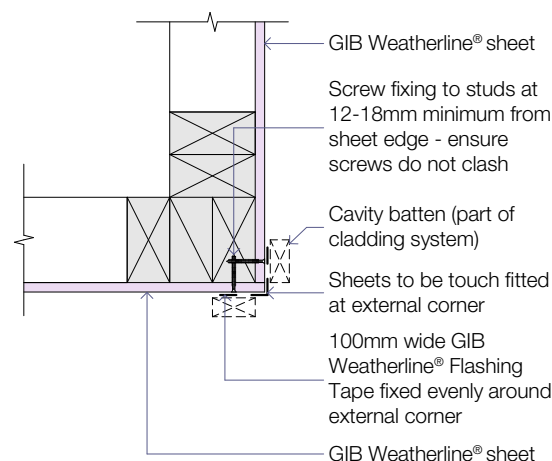


It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

GWL008

EXTERNAL CORNER

At external corners install the first sheet vertically overlapping the corner framing by the thickness of the sheet. Touch fit the adjacent sheet vertically to the back face of the previously installed overlapping sheet.

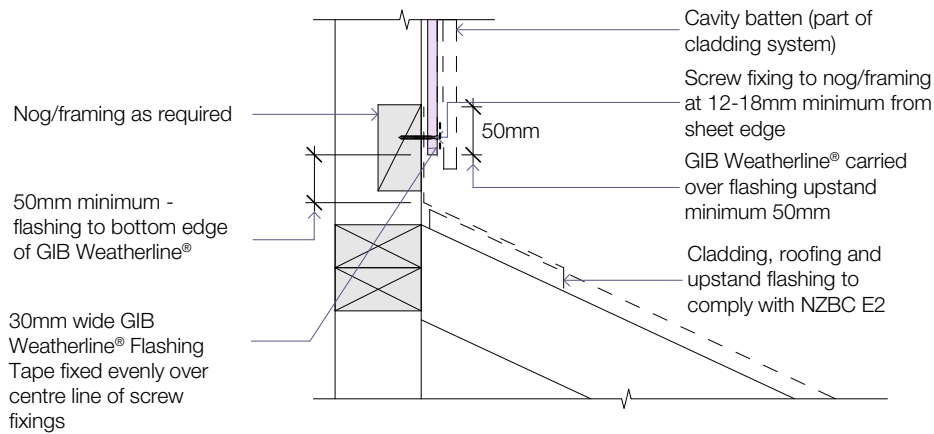


It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

GWL009

SKIRT ROOF JUNCTION

For GIB Weatherline® Rigid Air Barrier Systems terminating at roof flashing upstand, install cavity closers as required, as part of the cladding system.

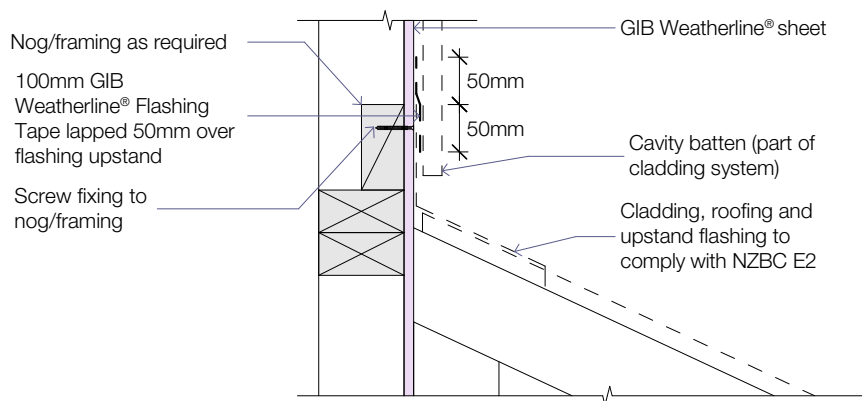


GWL024

It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

SKIRT ROOF JUNCTION

For GIB Weatherline® Rigid Air Barrier Systems continuing past roof flashing upstand, install cavity closers as required, as part of the cladding system.



GWL022

It is recommended that horizontal flashing tape be fixed prior to fixing the vertical flashing tape — refer to Section 4 for tape installation.

This image shows a blank sheet of white paper with horizontal ruling lines. A light gray shaded area covers the top-left portion of the page, extending diagonally from the top edge towards the center. The rest of the page is white and contains no other markings or text.

Flashing and Sill Tape installation

Once the GIB Weatherline® sheets have been screw fixed in place, GIB Weatherline® Flashing and Sill Tapes are to be installed, as shown in the diagrams within this section.

Handling and installation instructions are contained inside the centre of each tape roll. It is recommended that you contact your local Building Consent Authority regarding the inspection sequence.

GIB WEATHERLINE® FLASHING AND SILL TAPE RANGE

GIB Weatherline® branded tapes must be used as part of the systems contained within this manual, to ensure the required level of performance.

GIB Weatherline® Flashing and Sill Tape application location and width

— mid-sheet vertical stud fasteners	30mm flashing tape
(not required for structural batten fixing option a)	
— bottom plate fasteners	30mm flashing tape
— fasteners beneath soffits or gable end overhangs	30mm flashing tape
— vertical sheet joints	60mm flashing tape
— horizontal sheet joints	100mm flashing tape
— midfloor horizontal sheet joints	100mm flashing tape
— interior/exterior corners	100mm flashing tape
— window & door jambs 90mm frame	150mm flashing tape
— window & door jambs 140mm frame	200mm flashing tape
— window & door sills 90mm frame	150mm sill tape
— window & door sills 140mm frame	200mm sill tape

TAPE STORAGE AND HANDLING

GIB Weatherline® Flashing and Sill Tapes should be stored in a dry area, away from heat or direct sunlight, prior to installation.

TAPE INSTALLATION SHEET PREPARATION

Ensure that all sheets are free of sawdust, dirt or any other contaminants which may affect tape adhesion and that they are dry prior to applying the flashing tapes.

Split back tapes allow for easier installation at internal corners, external corners and window openings.

Tape laps – it is recommended wherever possible that any lower tape is lapped over by the tape above. The minimum tape lap is 30mm and must be pressure fitted. It is also strongly recommended that wherever possible horizontal tapes be installed first.

Tape locations – ensure tapes are centrally located over fasteners and joints. Follow the locations as shown in the diagrams within this section.

Pressure fitted – all tapes must be firmly pressure fitted along the length using the plastic paddle (as supplied).

Wrinkles/bubbles – all wrinkles or bubbles must be pressed out using the plastic paddle. Any upward facing wrinkles must be pressed tight and flat – install another appropriately sized piece of tape over wrinkles that can't be flattened out effectively.

PENETRATIONS

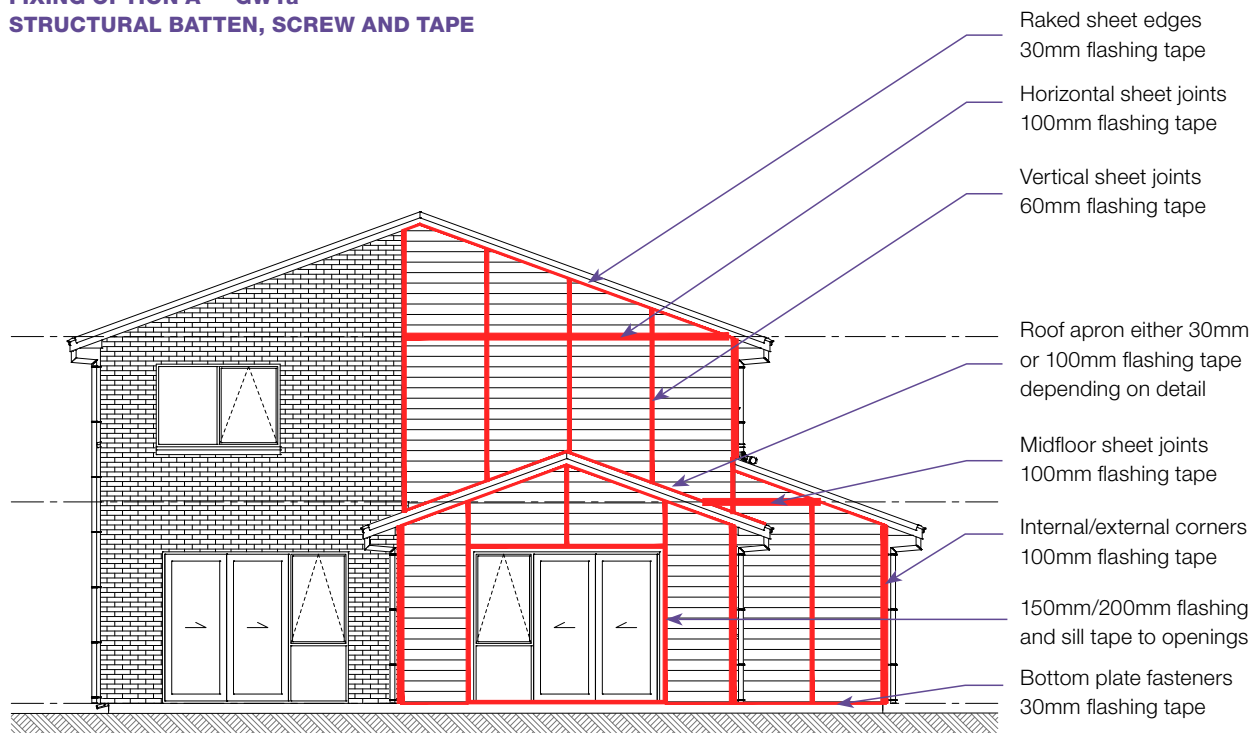
All exposed framing at external joinery openings and meter boxes (or similar) must be covered with GIB Weatherline® Flashing and Sill Tapes. The exposed timber of external openings fitted with Altus Smartfit® window and door joinery do not need to be covered with GIB Weatherline® Flashing and Sill Tapes.

Building services penetrating any of the GIB Weatherline® Rigid Air Barrier Systems must be sealed using the proclima Kaflex or Roflex penetration sealing grommets. Ensure all proclima installation instructions are followed.

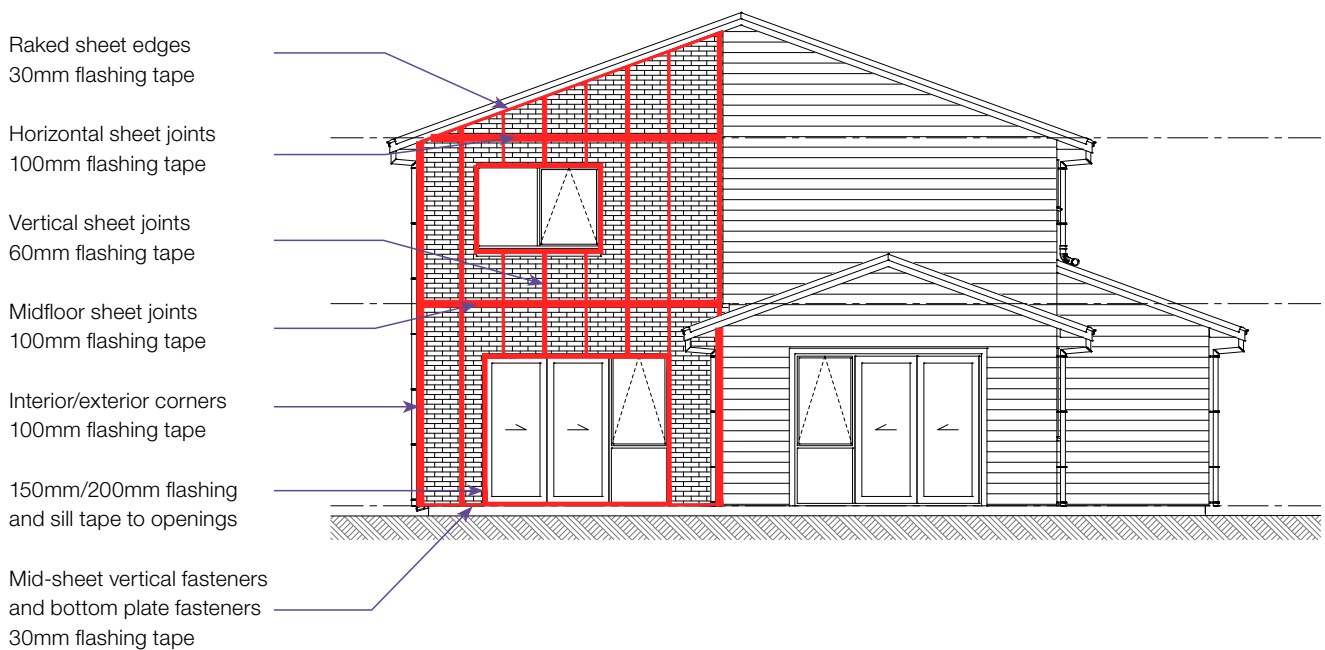
HOW TO VIDEOS

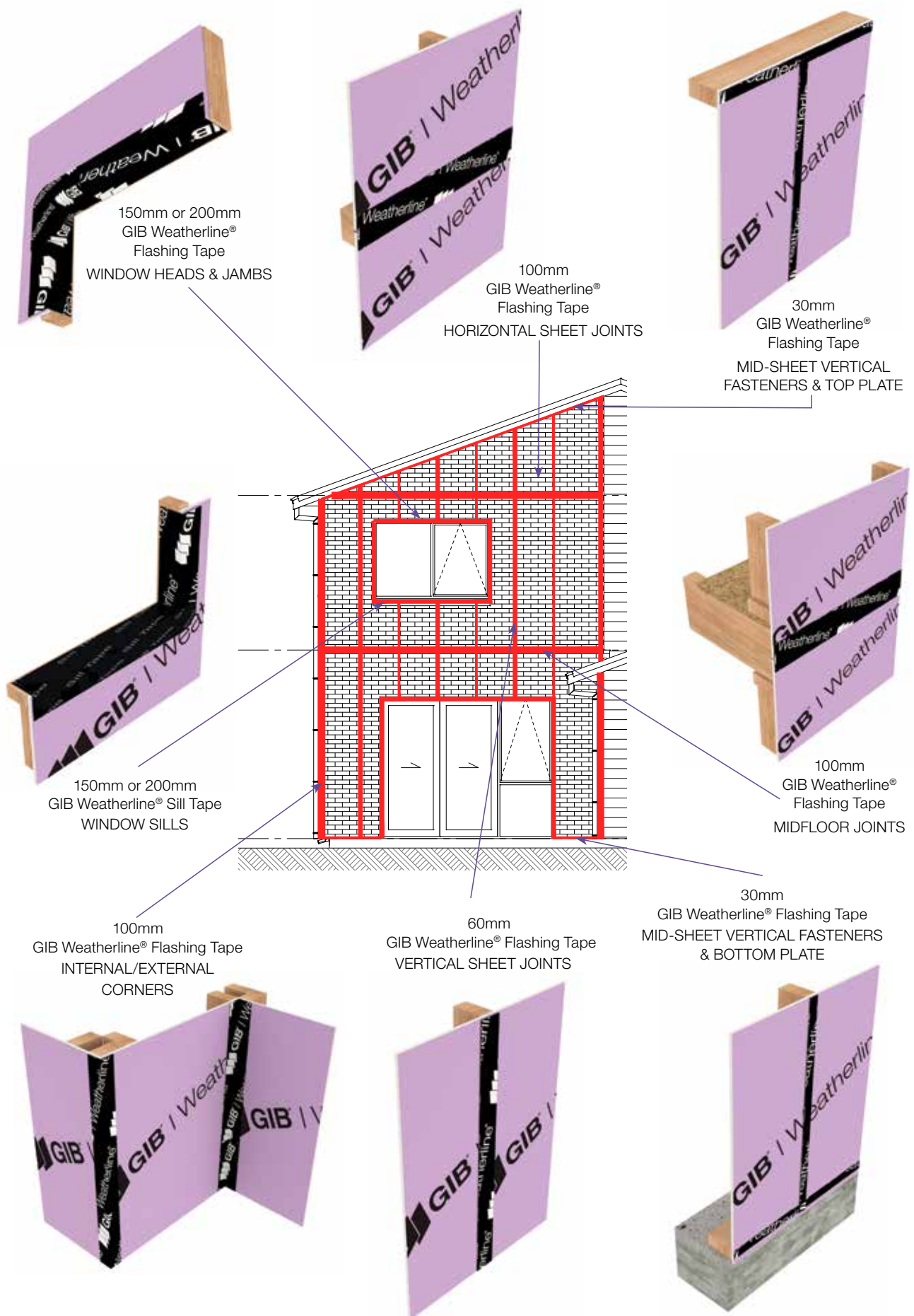
For more information, call the GIB® Helpline on 0800 100 442 or go to gib.co.nz. Helpful 'How-to' installation videos are available on the website and the GIB® app.

FIXING OPTION A – GWTa
STRUCTURAL BATTEN, SCREW AND TAPE



FIXING OPTION B – GWTb
SCREW AND TAPE





Note: Flashing tape to mid-sheet vertical fasteners not required when fasteners are covered with a structural cavity batten (fixing option GWTa).

[illegible]

Structural bracing systems

GIB EZYBRACE® SYSTEMS

GIB EzyBrace® Systems now include four bracing elements that incorporate GIB Weatherline® sheets. The bracing resistance is the same for both 10mm and 13mm GIB Weatherline® sheets. For more information relating to GIB EzyBrace® Systems, refer to the GIB EzyBrace® Systems Specification and Installation Manual.

The GIB EzyBrace® Specification Numbering System (and sub-components thereof) is protected by copyright and makes specification and identification of GIB EzyBrace® Systems transparent.

- 'GS' stands for GIB® Standard
- 'BL' for GIB Braceline® GIB Noiseline®
- 'W' for GIB Weatherline®
- 'N' for 'no specific panel hold-down fixings'
- 'H' for 'specific panel hold-down fixings required'

Where specific panel hold-down fixings are specified, refer to the GIB EzyBrace® Systems Specification and Installation Manual. GIB HandiBrac® is fully contained within the framing cavity and does not interfere with lining installation and quality of finish.

Where no specific hold-down fixings are required, the minimum NZS 3604 bottom plate fixings apply.

Full bracing element construction details are provided on the specification sheets in this section.

Table 3: Bracing element selection guide

Specifying GIB EzyBrace® elements that incorporate GIB Weatherline® (minimum wall length 400mm)	
External walls	Nominate available wall lengths as GSW-N elements Use GSW-H, W-H or BLW-H elements if higher ratings required
Internal walls	Not applicable

Table 4: Bracing unit ratings for elements that incorporate GIB Weatherline®

Specification number	Minimum length (m)	Lining requirements	Other requirements	BU/m	
				W	EQ
GSW-N	0.4	Internal lining: Any 10mm or 13mm GIB® plasterboard Exterior sheathing: 10mm or 13mm GIB Weatherline®	None	85	75
	1.2			95	85
GSW-H	0.4	Internal lining: Any 10mm or 13mm GIB® plasterboard Exterior sheathing: 10mm or 13mm GIB Weatherline®	Panel hold-down fixings	90	85
	1.2			130*	110
W-H	0.4	Internal lining: None Exterior sheathing: 10mm or 13mm GIB Weatherline®	Panel hold-down fixings	105	100
	1.2			125*	105
BLW-H	0.4	Internal lining: 10mm or 13mm GIB Braceline® GIB Noiseline® Exterior sheathing: 10mm or 13mm GIB Weatherline®	Panel hold-down fixings	105	115
	1.2			150*	145*

*Timber floors – a limit of 120 BU/m for NZS 3604 timber floors applies unless specific engineering ensures that uplift forces generated by elements rated higher than 120 BU/m can be resisted by floor framing.

GIB EZYBRACE® CALCULATOR

The GIB EzyBrace® calculator is a software tool to determine wind and earthquake bracing demand and to design the bracing resistance for light timber-framed buildings constructed in accordance with NZS 3604.

The GIB EzyBrace® calculator now includes four new bracing elements that incorporate GIB Weatherline® sheets. The calculator can be downloaded free of charge by visiting gib.co.nz/ezybrace and can be on either Microsoft® or Apple® Mac environments.

OPENINGS IN BRACING ELEMENTS

For allowable openings in bracing elements that incorporate GIB Weatherline® sheets, refer to the GIB EzyBrace® Systems Specification and Installation Manual.

GIB EzyBrace® Systems specification GSW-N

Specification number	Minimum length (m)	Lining requirements
GSW-N	0.4	Internal lining 10mm or 13mm GIB® Standard plasterboard Exterior sheathing 10mm or 13mm GIB Weatherline®

WALL FRAMING

Wall framing to comply with:

- NZBC B1 – Structure B1/AS1 Clause 3 – Timber (NZS 3604).
- NZBC B2 – Durability: B2/AS1 Clause 3.2 – Timber (NZS 3602).

Framing dimensions and height as determined by NZS 3604 stud and top plate tables for load-bearing and non-load bearing walls. The use of kiln dried stress graded timber is recommended.

BOTTOM PLATE FIXING

Timber floor

Pairs of hand driven 100 x 3.75mm nails at 600mm centres; or three power driven 90 x 3.15mm nails at 600mm centres.

Concrete floor

In accordance with the requirements of NZS 3604 for external wall bottom plate fixing.

WALL LINING / SHEATHING

Internal lining

- Any 10mm or 13mm GIB® plasterboard.
- Sheets can be fixed vertically or horizontally.
- Sheets must be fixed to top and bottom plates.
- Sheet joints must be touch fitted.
- Use full length sheets where possible.

Exterior sheathing

- 10mm or 13mm GIB Weatherline® sheets.
- Sheets must be fixed vertically.
- Sheets must be fixed to top and bottom plates.
- Vertical sheet joints must be touch fitted.
- Use full length sheets where possible.

PERMITTED ALTERNATIVES

For permitted GIB® plasterboard alternatives, refer to the GIB EzyBrace® Systems Specification and Installation Manual.

FASTENING THE LINING / SHEATHING

Internal lining fasteners

32mm x 6g GIB® Grabber® High Thread Screws or 32mm x 7g GIB® Grabber® Dual Thread Screws. If using the GIBFix® Angle, use only 32mm x 7g GIB® Grabber® Dual Thread Screws.

Exterior sheathing fasteners

41mm x 6g GIB® Grabber® Ceramic Coated High Thread Screws.

Internal lining fastener centres

For corner fastening pattern refer to diagram on page 39. For vertically fixed sheets, place fasteners at 300mm maximum centres to intermediate sheet joints. For horizontally fixed sheets, place single fasteners to the sheet edge where it crosses the stud. Use daubs of GIBFix® adhesive at 300mm maximum centres to intermediate studs. Place fasteners no closer than 12mm from paper bound edges and 18mm from any sheet end or cut edge.

Exterior sheathing fastener centres

Fastener centres must depend on the selected fixing option. For GWTa, the fastener centres must be in accordance with Section 2 of this manual. For GW Tb, the fastener centres must be in accordance with Section 3 of this manual. For both fixing options, no additional fasteners are required.

JOINTING

Internal lining jointing

Joint strength is important in delivering bracing system performance. All fastener heads must be stopped and all sheet joints GIB® Joint Tape reinforced and stopped in accordance with the GIB® Site Guide.

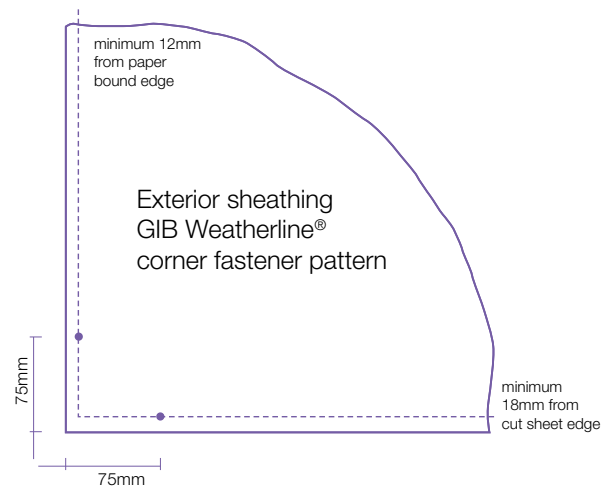
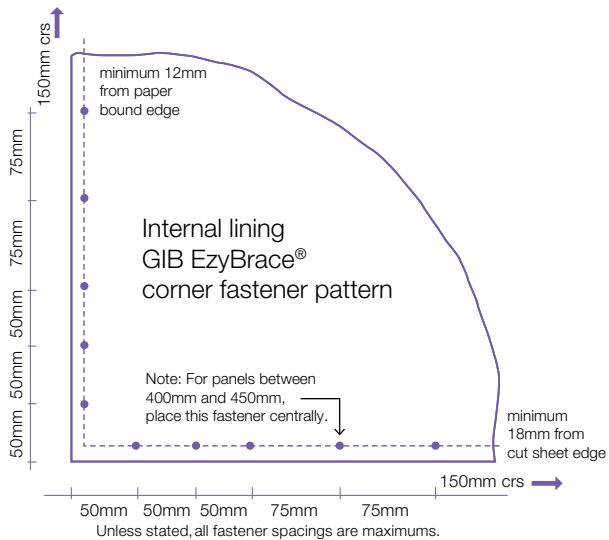
Exterior sheathing jointing

No plaster stopping is required, but all joints and screw fixings must be taped with GIB Weatherline® Flashing Tape. Flashing tape to mid-sheet vertical fasteners is not required when fasteners are covered with a structural cavity batten. Refer to Section 4 of this manual.

GIB EzyBrace® Systems specification GSW-N

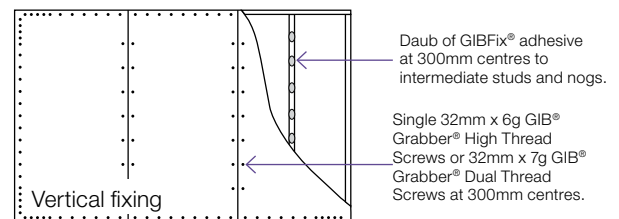
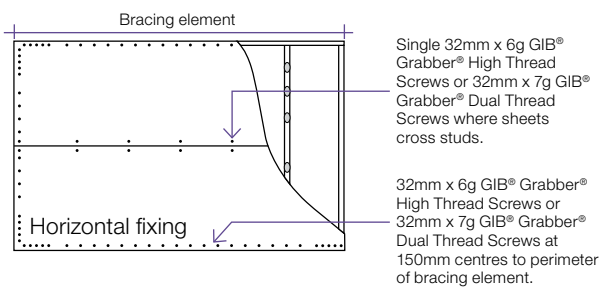
Specification number	Minimum length (m)	Lining requirements
GSW-N	0.4	Internal lining 10mm or 13mm GIB® Standard plasterboard Exterior sheathing 10mm or 13mm GIB Weatherline®

CORNER FASTENING PATTERN



Refer Table 1 (pg 13) or Table 2 (pg 23) for fastener centres.

INTERNAL SHEET LAYOUT



In order for GIB® systems to perform as tested, all components must be installed exactly as prescribed. Substituting components can produce an entirely different system and may seriously compromise performance. Follow the specifications. This specification sheet is issued in conjunction with the publication GIB EzyBrace® Systems.

GIB EzyBrace® Systems specification GSW-H

Specification number	Minimum length (m)	Lining requirements	Other requirements
GSW-H	0.4	Internal lining	10mm or 13mm GIB® Standard plasterboard
		Exterior sheathing	10mm or 13mm GIB Weatherline®

WALL FRAMING

Wall framing to comply with:

- NZBC B1 – Structure B1/AS1 Clause 3 – Timber (NZS 3604).
- NZBC B2 – Durability: B2/AS1 Clause 3.2 – Timber (NZS 3602).

Framing dimensions and height as determined by NZS 3604 stud and top plate tables for load-bearing and non-load bearing walls. The use of kiln dried stress graded timber is recommended.

BOTTOM PLATE FIXING

Timber floor

Use panel hold downs at each end of bracing element. The GIB HandiBrac® is recommended. See details in the GIB EzyBrace® Systems Specification and Installation Manual or the GIB® Site Guide. Pairs of hand driven 100 x 3.75mm nails at 600mm centres; or three power driven 90 x 3.15mm nails at 600mm centres

Concrete floor

Use panel hold downs at each end of the bracing element. The GIB HandiBrac® is recommended. See details in the GIB EzyBrace® Systems Specification and Installation Manual or the GIB® Site Guide. Within the length of the bracing element bottom plates are to be fixed in accordance with the requirements of NZS 3604.

WALL LINING / SHEATHING

Internal lining

- Any 10mm or 13mm GIB® plasterboard.
- Sheets can be fixed vertically or horizontally.
- Sheets must be fixed to top and bottom plates.
- Sheet joints must be touch fitted.
- Use full length sheets where possible.

Exterior sheathing

- 10mm or 13mm GIB Weatherline® sheets.
- Sheets must be fixed vertically.
- Sheets must be fixed to top and bottom plates.
- Vertical sheet joints must be touch fitted.
- Use full length sheets where possible.

PERMITTED ALTERNATIVES

For permitted GIB® plasterboard alternatives, refer to the GIB EzyBrace® Systems Specification and Installation Manual.

FASTENING THE LINING / SHEATHING

Internal lining fasteners

32mm x 6g GIB® Grabber® High Thread Screws or 32mm x 7g GIB® Grabber® Dual Thread Screws. If using the GIBFix® Angle use only 32mm x 7g GIB® Grabber® Dual Thread Screws.

Exterior sheathing fasteners

41mm x 6g GIB® Grabber® Ceramic Coated High Thread Screws.

Internal lining fastener centres

For corner fastening pattern refer to diagram on page 41. For vertically fixed sheets, place fasteners at 300mm maximum centres to intermediate sheet joints. For horizontally fixed sheets, place single fasteners to the sheet edge where it crosses the stud. Use daubs of GIBFix® adhesive at 300mm maximum centres to intermediate studs. Place fasteners no closer than 12mm from paper bound edges and 18mm from any sheet end or cut edge.

Exterior sheathing fastener centres

Fastener centres shall depend on the selected fixing option. For GWTa, the fastener centres must be in accordance with Section 2 of this manual. For GWTb, the fastener centres must be in accordance with Section 3 of this manual. For both fixing options, no additional fasteners are required.

JOINTING

Internal lining jointing

Joint strength is important in delivering bracing system performance. All fastener heads must be stopped and all sheet joints GIB® Joint Tape reinforced and stopped in accordance with the GIB® Site Guide.

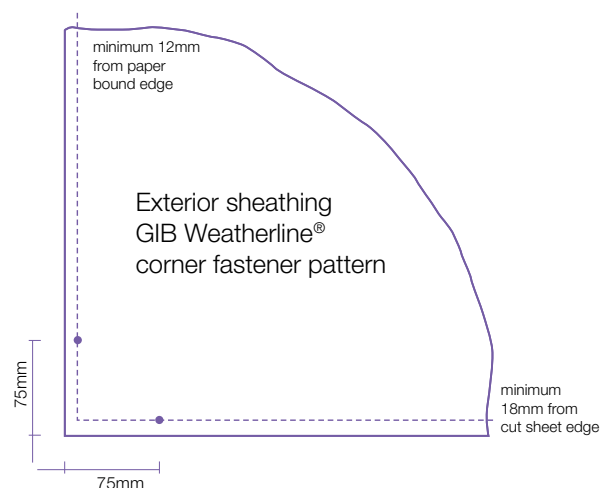
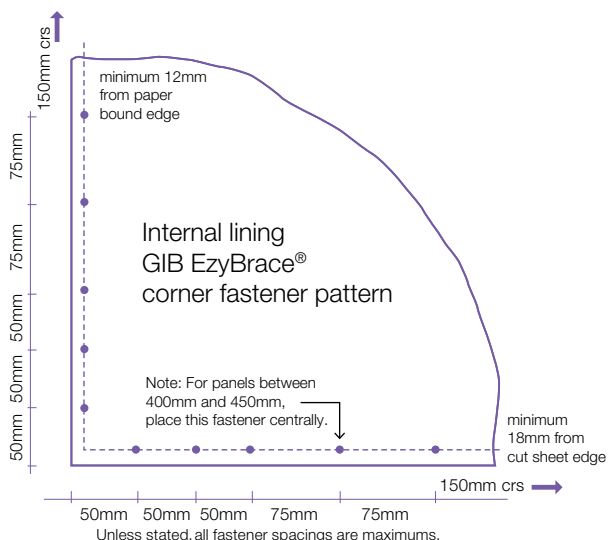
Exterior sheathing jointing

No plaster stopping is required, but all joints and screw fixings must be taped with GIB Weatherline® Flashing Tape. Flashing tape to mid-sheet vertical fasteners is not required when fasteners are covered with a structural cavity batten. Refer to Section 4 of this manual.

GIB® EzyBrace® Systems specification GSW-H

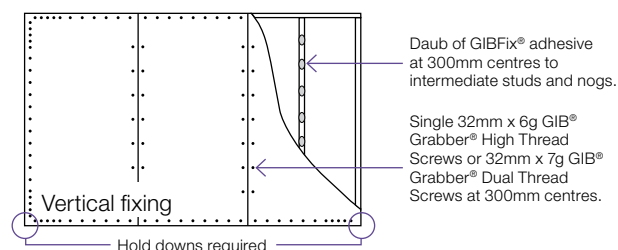
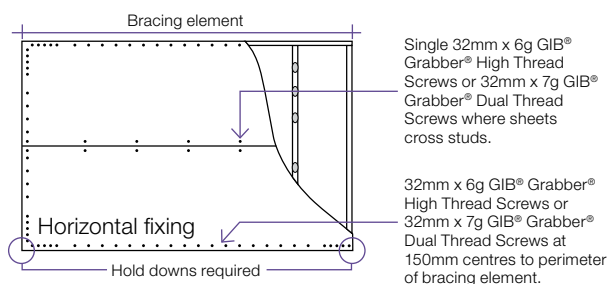
Specification number	Minimum length (m)	Lining requirements	Other requirements
GSW-H	0.4	Internal lining 10mm or 13mm GIB® Standard plasterboard Exterior sheathing 10mm or 13mm GIB Weatherline®	Hold downs

CORNER FASTENING PATTERN



Refer Table 1 (pg 13) or Table 2 (pg 23) for fastener centres.

INTERNAL SHEET LAYOUT



In order for GIB® systems to perform as tested, all components must be installed exactly as prescribed. Substituting components can produce an entirely different system and may seriously compromise performance. Follow the specifications. This specification sheet is issued in conjunction with the publication GIB EzyBrace® Systems.

GIB EzyBrace® Systems specification W-H

Specification number	Minimum length (m)	Lining requirements	Other requirements
W-H	0.4	Internal lining None Exterior sheathing 10mm or 13mm GIB Weatherline®	Hold downs

WALL FRAMING

Wall framing to comply with:

- NZBC B1 – Structure B1/AS1 Clause 3 – Timber (NZS 3604).
- NZBC B2 – Durability: B2/AS1 Clause 3.2 – Timber (NZS 3602).

Framing dimensions and height as determined by NZS 3604 stud and top plate tables for load-bearing and non-load bearing walls. The use of kiln dried stress graded timber is recommended.

BOTTOM PLATE FIXING

Timber floor

Use panel hold downs at each end of bracing element. The GIB HandiBrac® is recommended. See details in the GIB EzyBrace® Systems Specification and Installation Manual or the GIB® Site Guide. Pairs of hand driven 100 x 3.75mm nails at 600mm centres; or three power driven 90 x 3.15mm nails at 600mm centres.

Concrete floor

Use panel hold downs at each end of bracing element. The GIB HandiBrac® is recommended. See details in the GIB EzyBrace® Systems Specification and Installation Manual or the GIB® Site Guide. Within the length of the bracing element bottom plates are to be fixed in accordance with the requirements of NZS 3604.

WALL LINING / SHEATHING

Internal lining

- None.

Exterior sheathing

- 10mm or 13mm GIB Weatherline® sheets.
- Sheets must be fixed vertically.
- Sheets must be fixed to top and bottom plates.
- Vertical sheet joints must be touch fitted.
- Use full length sheets where possible.

FASTENING THE LINING / SHEATHING

Exterior sheathing fasteners

41mm x 6g GIB® Grabber® Ceramic Coated High Thread Screws.

Exterior sheathing fastener centres

For corner fastening pattern refer to diagram on page 43.

For mid-sheet and intermediate sheet joints, fastener centres must be at 300mm maximum or less if the GWTa or GWTb system specification requires them to be less. Place fasteners no closer than 12mm from paper bound edges and 18mm from any sheet end or cut edge.

JOINTING

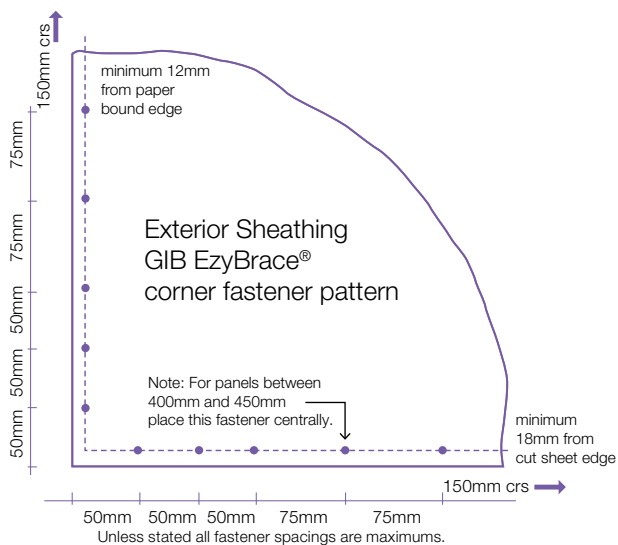
Exterior sheathing jointing

No plaster stopping is required, but all joints and screw fixings must be taped with GIB Weatherline® Flashing Tape. Flashing tape to mid-sheet vertical fasteners is not required when fasteners are covered with a structural cavity batten. Refer to Section 4 of this manual.

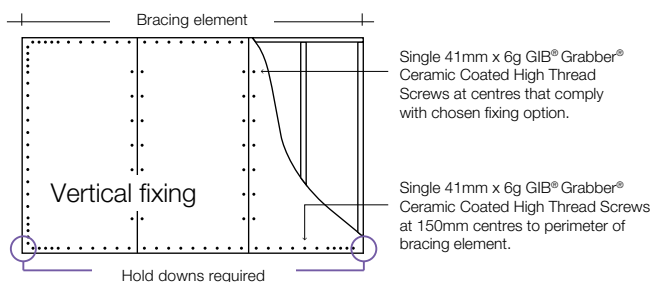
GIB EzyBrace® Systems specification W-H

Specification number	Minimum length (m)	Lining requirements	Other requirements
W-H	0.4	Internal lining None Exterior sheathing 10mm or 13mm GIB Weatherline®	Hold downs

CORNER FASTENING PATTERN



EXTERNAL SHEET LAYOUT



In order for GIB® systems to perform as tested, all components must be installed exactly as prescribed. Substituting components can produce an entirely different system and may seriously compromise performance. Follow the specifications. This specification sheet is issued in conjunction with the publication GIB EzyBrace® Systems.

GIB EzyBrace® Systems specification BLW-H

Specification number	Minimum length (m)	Lining requirements	Other requirements
BLW-H	0.4	Internal lining 10mm or 13mm GIB Braceline® GIB Noiseline® Exterior sheathing 10mm or 13mm GIB Weatherline®	Hold downs

WALL FRAMING

Wall framing to comply with:

- NZBC B1 – Structure B1/AS1 Clause 3 – Timber (NZS 3604).
- NZBC B2 – Durability: B2/AS1 Clause 3.2 – Timber (NZS 3602).

Framing dimensions and height as determined by NZS 3604 stud and top plate tables for load-bearing and non-load bearing walls. The use of kiln dried stress graded timber is recommended.

BOTTOM PLATE FIXING

Timber floor

Use panel hold downs at each end of bracing element. The GIB HandiBrac® is recommended. See details in the GIB EzyBrace® Systems Specification and Installation Manual or the GIB® Site Guide. Pairs of hand driven 100 x 3.75mm nails at 600mm centres; or three power driven 90 x 3.15mm nails at 600mm centres.

Concrete floor

Use panel hold downs at each end of bracing element. The GIB HandiBrac® is recommended. See details in the GIB EzyBrace® Systems Specification and Installation Manual or the GIB® Site Guide. Within the length of the bracing element bottom plates are to be fixed in accordance with the requirements of NZS 3604.

WALL LINING / SHEATHING

Internal lining

- 10mm or 13mm GIB Braceline® GIB Noiseline®
- Sheets can be fixed vertically or horizontally.
- Sheets must be fixed to top and bottom plates.
- Sheet joints must be touch fitted.
- Use full length sheets where possible.

Exterior sheathing

- 10mm or 13mm GIB Weatherline® sheets.
- Sheets must be fixed vertically.
- Sheets must be fixed to top and bottom plates.
- Vertical sheet joints must be touch fitted.
- Use full length sheets where possible.

PERMITTED ALTERNATIVES

For permitted GIB® plasterboard alternatives, refer to GIB EzyBrace® Systems Specification and Installation Manual.

FASTENING THE LINING / SHEATHING

Internal lining fasteners

32mm x 6g GIB® Grabber® High Thread Screws or 32mm x 7g GIB® Grabber® Dual Thread Screws. If using the GIBFix® Angle, use only 32mm x 7g GIB® Grabber® Dual Thread Screws.

Exterior sheathing fasteners

41mm x 6g GIB® Grabber® Ceramic Coated High Thread Screws.

Internal lining fastener centres

For corner fastening pattern refer to diagram on page 45. For vertically fixed sheets, place fasteners at 300mm maximum centres to intermediate sheet joints. For horizontally fixed sheets, place single fasteners to the sheet edge where it crosses the stud. Use daubs of GIBFix® adhesive at 300mm maximum centres to intermediate studs. Place fasteners no closer than 12mm from paper bound edges and 18mm from any sheet end or cut edge.

Exterior sheathing fastener centres

Fastener centres shall depend on the selected fixing option. For GWTa, the fastener centres must be in accordance with Section 2 of this manual. For GWTb, the fastener centres must be in accordance with Section 3 of this manual. For both fixing options, no additional fasteners are required.

JOINTING

Internal lining jointing

Joint strength is important in delivering bracing system performance. All fastener heads must be stopped and all sheet joints GIB® Joint Tape reinforced and stopped in accordance with the GIB® Site Guide.

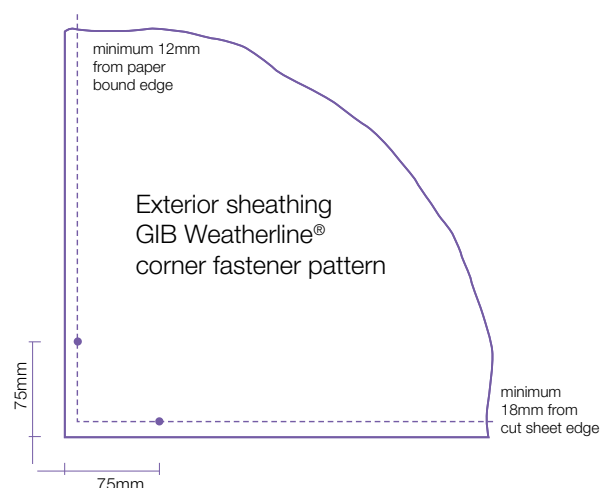
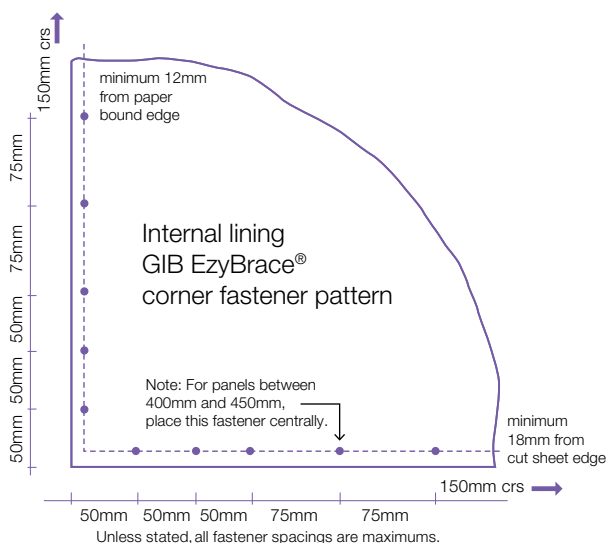
Exterior sheathing jointing

No plaster stopping is required, but all joints and screw fixings must be taped with GIB Weatherline® Flashing Tape. Flashing tape to mid-sheet vertical fasteners is not required when fasteners are covered with a structural cavity batten. Refer to Section 4 of this manual.

GIB EzyBrace® Systems specification BLW-H

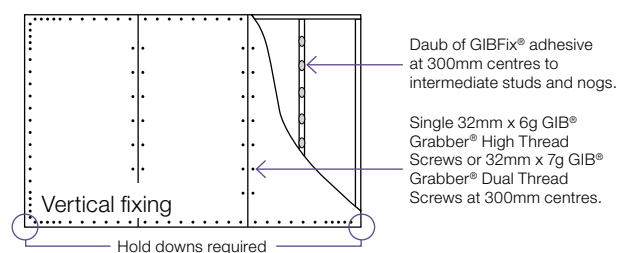
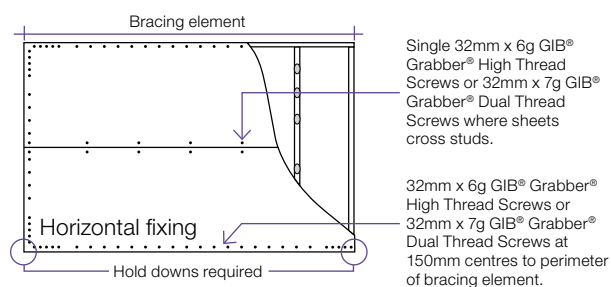
Specification number	Minimum length (m)	Lining requirements	Other requirements
BLW-H	0.4	Internal lining 10mm or 13mm GIB Braceline® GIB Noiseline® Exterior sheathing 10mm or 13mm GIB Weatherline®	Hold downs

CORNER FASTENING PATTERN



Refer Table 1 (pg 13) or Table 2 (pg 23) for fastener centres.

INTERNAL SHEET LAYOUT



In order for GIB® systems to perform as tested, all components must be installed exactly as prescribed. Substituting components can produce an entirely different system and may seriously compromise performance. Follow the specifications. This specification sheet is issued in conjunction with the publication GIB EzyBrace® Systems.

Fire rated systems

The four GIB Weatherline® Rigid Air Barrier Fire Rated Systems listed in this section are suitable for the stated Fire Resistance Rating (FRR) when designed and installed in accordance with the relevant fire rated system specification in this manual.

Typical junction details are shown in Sections 2 and 3 of this manual. Additional detailing may be required to achieve the necessary fire protection in each location. Refer to the GIB® Fire Rated Systems manual for more details.

In order to comply with NZBC Clause E2 the external face of the GIB Weatherline® Rigid Air Barrier Systems will, in all cases, be covered with an exterior cladding system. The systems listed in this section assume that the exterior cladding system provides no contribution to the fire resistance.

SURFACE FINISH PROPERTIES

GIB Weatherline® sheets and GIB Weatherline® Flashing Tapes have been tested in accordance with ISO 5660 Reaction to Fire Tests – Heat release, smoke production and mass loss rate, Parts 1 and 2.

GIB Weatherline® sheets meet NZBC Acceptable Solutions C/AS2-C/AS6, paragraphs 5.8.1a) and 5.8.1b). GIB Weatherline® Flashing Tape meets NZBC Acceptable Solutions C/AS2-C/AS6, paragraph 5.8.1b).

Table 5: Two-way FRR – Timber frame with GIB Weatherline®

Wall type	Specification number	LB/NLB	Insulation	Cavity batten	FRR	Lining requirements	Detail	Pg
External Walls	GWTL 30a	LB	Pink® Batts®^	Timber*/James Hardie CLD**/None	30/30/30	Internal lining: 1 x 10mm GIB Fyrelite® Exterior sheathing: 1 x 10mm GIB Weatherline®		48
	GWTL 60a	LB	Pink® Batts®^	James Hardie CLD**	60/60/60	Internal lining: 1 x 13mm GIB Fyrelite® Exterior sheathing: 1 x 13mm GIB Weatherline®		50
Parapet & Wing Walls	GWTL 30b	LB	Pink® Batts®^	Timber*/James Hardie CLD**/None	30/30/30	Exterior sheathing: 1 x 10mm GIB Weatherline® both sides		52
	GWTL 60c	LB	Pink® Batts®^	James Hardie CLD**	60/60/60	Exterior sheathing: 1 x 13mm GIB Weatherline® both sides		54

®LB*45 x 18mm minimum H3.1 treated timber structural cavity batten.

**70 x 19mm minimum James Hardie CLD structural cavity batten.

^ Pink® Batts® R2.2 (90mm) glass wool insulation.

Two-way FRR – timber frame external wall

Specification number	Performance	Specifications
GWTL 30a	FRR 30/30/30	<p>Lining 1 x 10mm GIB Weatherline® exterior side 1 x 10mm GIB Fyrelime® internal side</p> <p>LB/NLB LB</p> <p>Wall thickness 110mm</p>

FRAMING

Stud size: 90mm minimum. Framing to comply with:

- NZBC B1 – Structure: AS1 Clause 3 – Timber (NZS 3604) or VM1 Clause 6 – Timber (NZS 3603).
- NZBC B2 – Durability: AS1 Clause 3.2 – Timber (NZS 3602).
- Studs at 600mm centres maximum.
- Nogs at 1350mm centres maximum.

Height as determined by NZS 3604 stud and top plate tables for load bearing walls.

INSULATION

Pink® Batts® R2.2 (90mm) glass wool insulation installed between the studs and nogs (higher R-value Pink® Batts® are acceptable).

WALL LINING / SHEATHING

Exterior side – 1 layer of 10mm GIB Weatherline® sheet fixed vertically. Use full height sheets where possible. All sheet joints and edges must be formed over solid timber framing. Vertical sheet joints are touch fitted. Horizontal sheet joints must be formed with a gap between the sheet edges. This gap must be 10mm if it occurs at a mid-floor and 5mm in any other location.

Internal side – 1 layer of 10mm GIB Fyrelime® fixed vertically or horizontally. When fixing vertically, full height sheets must be used where possible. All sheet joints must be formed over solid timber framing. Sheet joints are touch fitted.

FASTENING THE LINING / SHEATHING

Exterior side fasteners

41mm x 6g GIB® Grabber® Ceramic Coated High Thread Screws.

Internal side fasteners

41mm x 6g GIB® Grabber® High Thread Drywall Screws.

Exterior side fastener centres

300mm centres around sheet perimeter.

Place fasteners 12mm from bound sheet edges and 18mm from sheet ends and cut edges.

Single fasteners at 300mm centres to all intermediate studs.

Internal side fastener centres

300mm centres around sheet perimeter.

Place fasteners 12mm from bound sheet edges and 18mm from sheet ends and cut edges.

Single fasteners at 300mm centres to all intermediate studs.

JOINTING

Exterior side

No plaster stopping is required, but all joints and screw fixings must be taped with GIB Weatherline® Flashing Tape. Flashing tape to mid-sheet vertical fasteners is not required when fasteners are covered with a structural cavity batten. Refer to Section 4 of this manual.

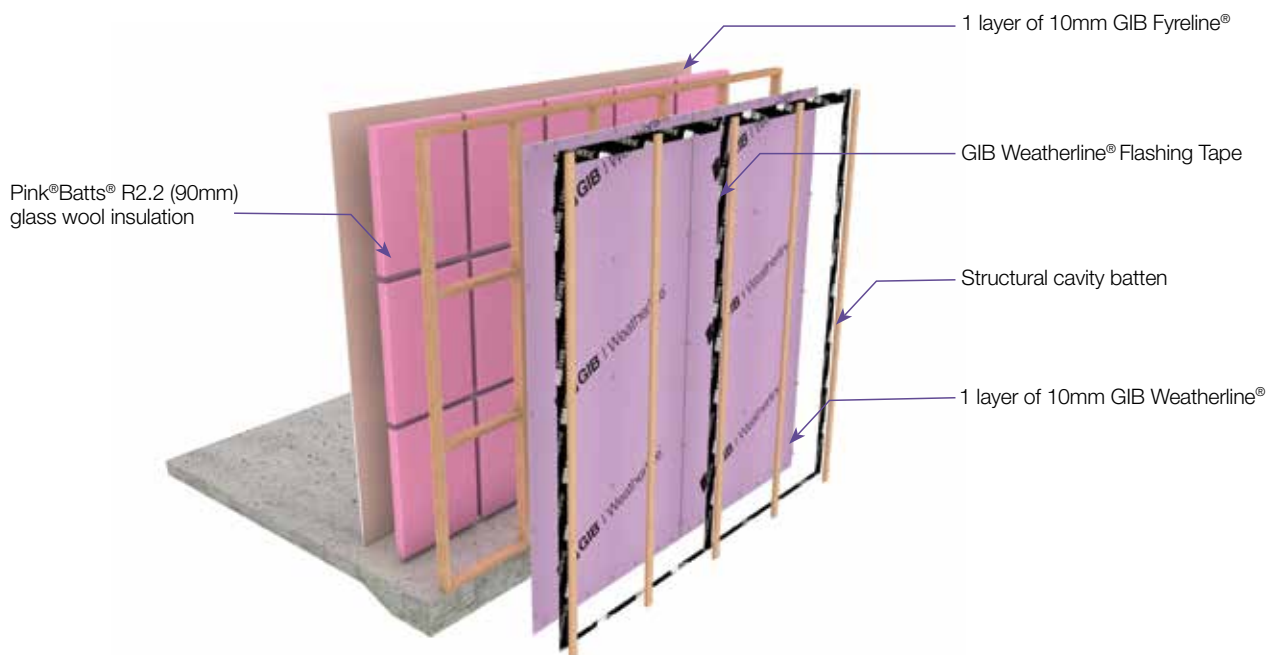
Internal side

All fastener heads must be stopped and all sheet joints tape reinforced and stopped in accordance with the publication entitled GIB® Site Guide.

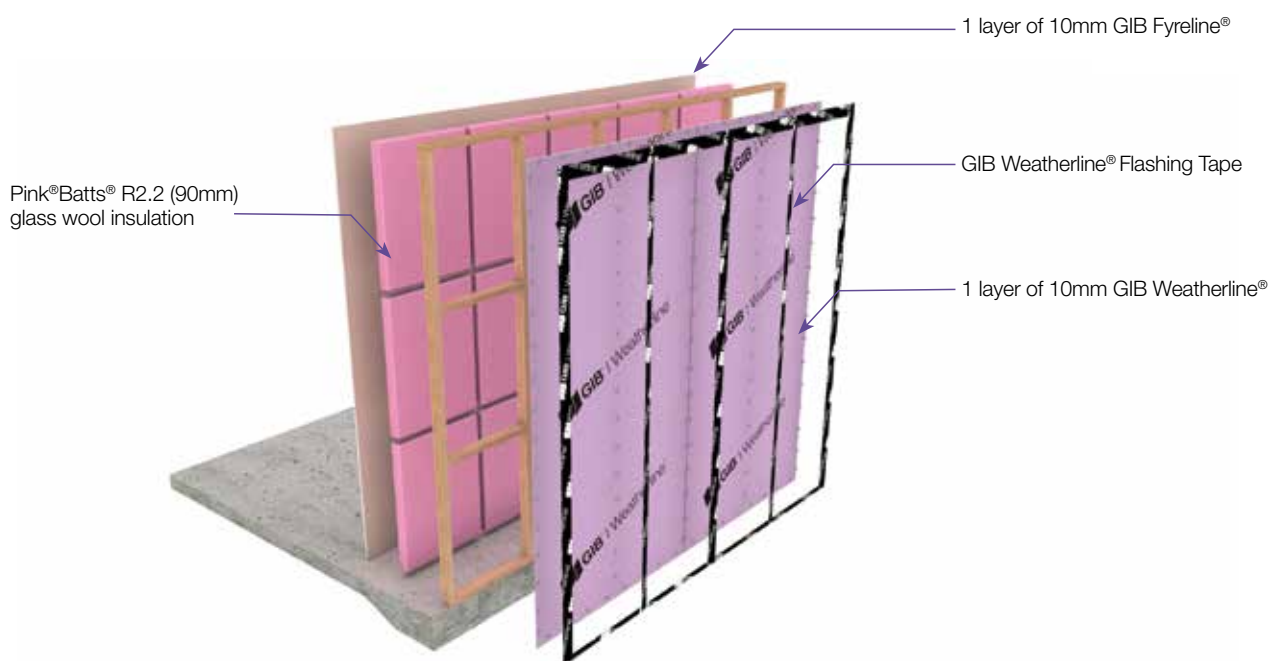
Two-way FRR – timber frame external wall

Specification number	Performance	Specifications
GWTL 30a	FRR 30/30/30	Lining 1 x 10mm GIB Weatherline® exterior side 1 x 10mm GIB Fyrelite® internal side LB/NLB LB Wall thickness 110mm

GWTL 30a (FIXING OPTION A – GWTa PICTURED)



GWTL 30a (FIXING OPTION B – GWtb PICTURED)



Two-way FRR – timber frame external wall

Specification number	Performance	Specifications
GWTL 60a	FRR 60/60/60	<p>Lining 1 x 13mm GIB Weatherline® exterior side 1 x 13mm GIB Fyrelime® internal side</p> <p>LB/NLB LB</p> <p>Wall thickness 116mm</p>

FRAMING

Stud size: 90mm minimum. Framing to comply with:

- NZBC B1 – Structure: AS1 Clause 3 – Timber (NZS 3604) or VM1 Clause 6 – Timber (NZS 3603).
- NZBC B2 – Durability: AS1 Clause 3.2 – Timber (NZS 3602).
- Studs at 600mm centres maximum.
- Nogs at 1350mm centres maximum.

Height as determined by NZS 3604 stud and top plate tables for load bearing walls.

INSULATION

Pink® Batts® R2.2 (90mm) glass wool insulation installed between the studs and nogs (higher R-value Pink® Batts® are acceptable).

WALL LINING / SHEATHING

Exterior side – 1 layer of 13mm GIB Weatherline® sheet fixed vertically. Use full height sheets where possible. All sheet joints and edges must be formed over solid timber framing. Vertical sheet joints are touch fitted. Horizontal sheet joints must be formed with a gap between the sheet edges. This gap must be 10mm if it occurs at a mid-floor and 5mm in any other location.

Internal side – 1 layer of 13mm GIB Fyrelime® fixed vertically or horizontally. When fixing vertically, full height sheets must be used where possible. All sheet joints must be formed over solid timber framing. Sheet joints are touch fitted.

FASTENING THE LINING / SHEATHING

Exterior side fasteners

41mm x 6g GIB® Grabber® Ceramic Coated High Thread Screws.

Internal side fasteners

41mm x 6g GIB® Grabber® High Thread Drywall Screws.

Exterior side fastener centres

300mm centres around sheet perimeter.

Place fasteners 12mm from bound sheet edges and 18mm from sheet ends and cut edges.

Single fasteners at 300mm centres to all intermediate studs.

Fasten 70mm x 19mm James Hardie CLD structural cavity battens to all vertical framing in accordance with fixing option GWTa, as set out in Section 2 of this manual.

Internal side fastener centres

300mm centres around sheet perimeter.

Place fasteners 12mm from bound sheet edges and 18mm from sheet ends and cut edges.

Single fasteners at 300mm centres to all intermediate studs.

JOINTING

Exterior side

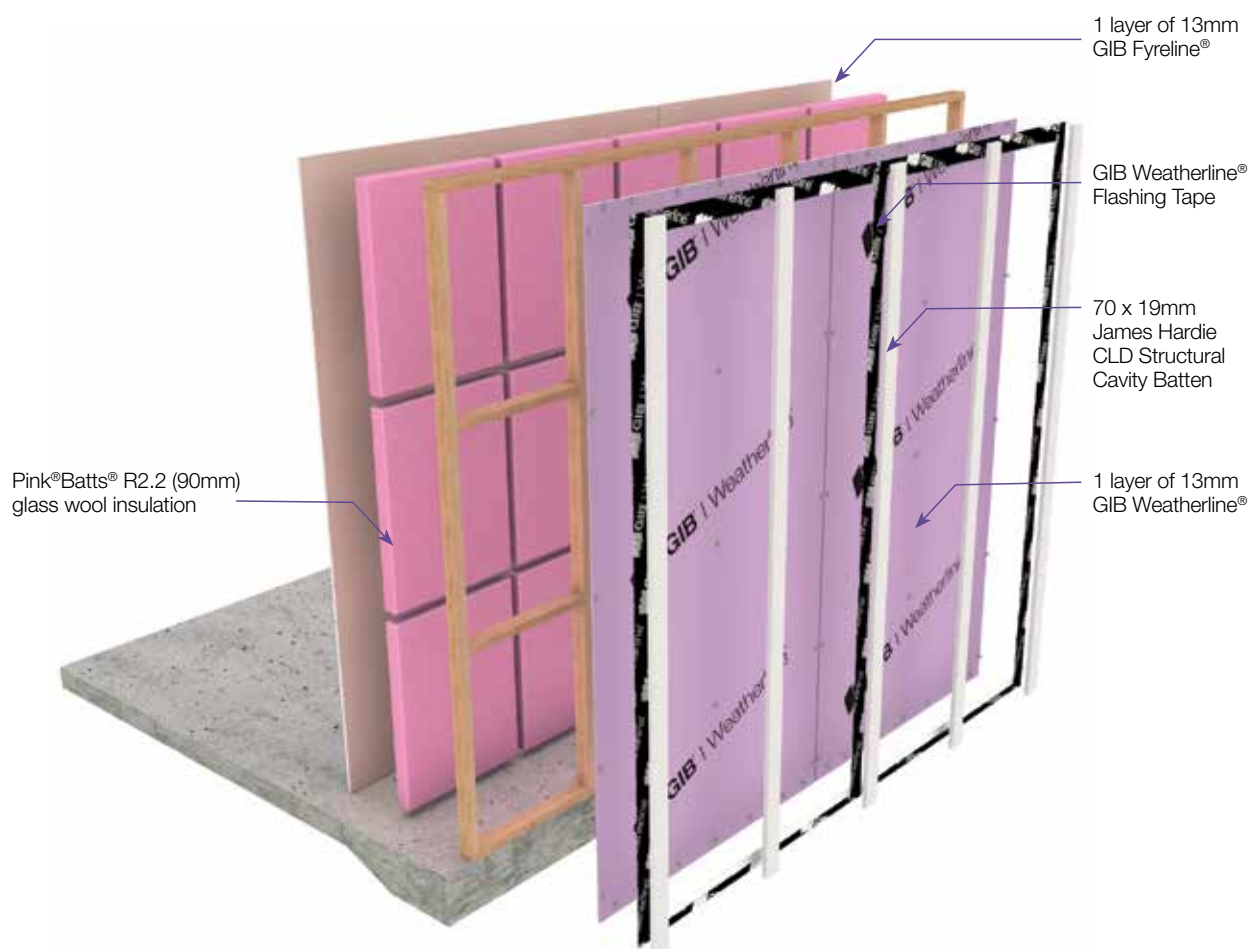
No plaster stopping is required, but all joints and screw fixings must be taped with GIB Weatherline® Flashing Tape. Flashing tape to mid-sheet vertical fasteners is not required when fasteners are covered with a structural cavity batten. Refer to Section 4 of this manual.

Internal side

All fastener heads must be stopped and all sheet joints tape reinforced and stopped in accordance with the publication GIB® Site Guide.

Two-way FRR – timber frame external wall

Specification number	Performance	Specifications	
GWTL 60a	FRR 60/60/60	Lining	1 x 13mm GIB Weatherline® exterior side 1 x 13mm GIB Fyrelite® internal side
		LB/NLB	LB
		Wall thickness	116mm



Two-way FRR – timber frame parapet and wing walls

Specification number	Performance	Specifications
GWTL 30b	FRR 30/30/30	Lining 1 x 10mm GIB Weatherline® both sides LB/NLB LB Wall thickness 110mm

FRAMING

Stud size: 90mm minimum. Framing to comply with:

- NZBC B1 – Structure: AS1 Clause 3 – Timber (NZS 3604) or VM1 Clause 6 – Timber (NZS 3603).
- NZBC B2 – Durability: AS1 Clause 3.2 – Timber (NZS 3602).
- Studs at 600mm centres maximum.
- Nogs at 1350mm centres maximum.

Height as determined by NZS 3604 stud and top plate tables for load bearing walls.

INSULATION

Pink® Batts® R2.2 (90mm) glass wool insulation installed between the studs and nogs (higher R-value Pink® Batts® are acceptable).

EXTERIOR SHEATHING

1 layer of 10mm GIB Weatherline® sheet fixed vertically to both sides of the frame. Use full height sheets where possible. All sheet joints and edges must be formed over solid timber framing. Vertical sheet joints are touch fitted. Horizontal sheet joints must be formed with a 5mm gap between the sheet edges.

FASTENING THE SHEATHING

Fasteners

41mm x 6g GIB® Grabber® Ceramic Coated High Thread Screws.

Fastener centres

300mm centres around sheet perimeter.

Place fasteners 12mm from bound sheet edges and 18mm from sheet ends and cut edges.

Single fasteners at 300mm centres to all intermediate studs.

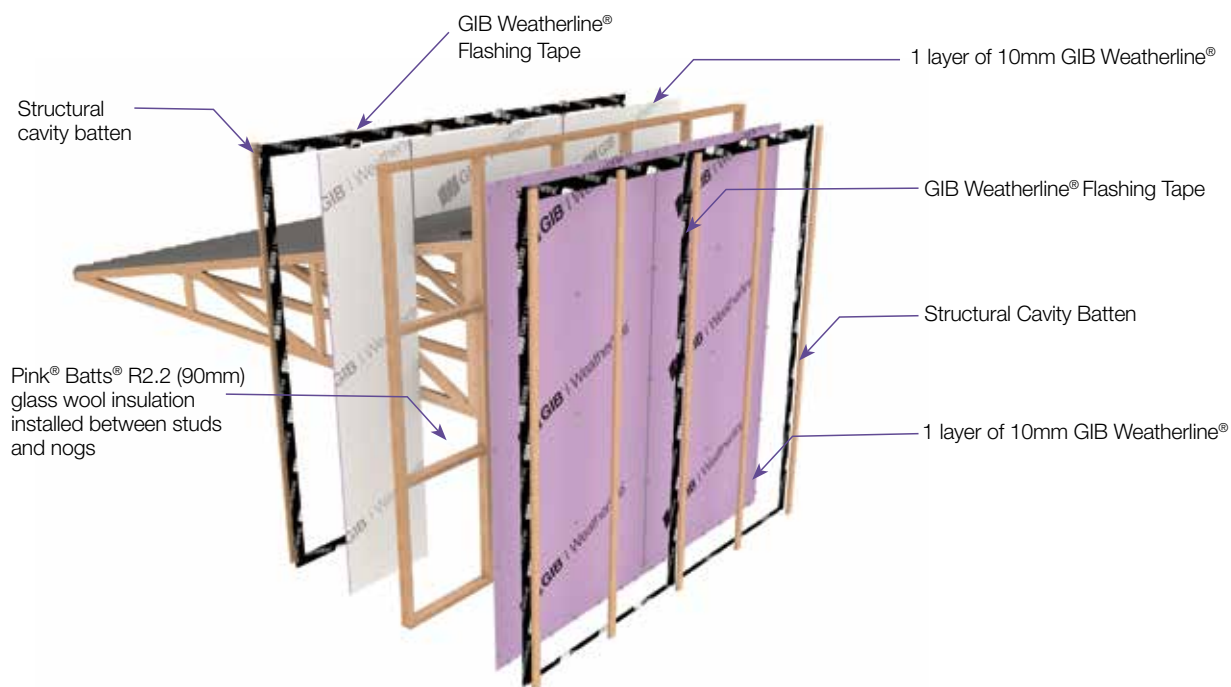
JOINTING

No plaster stopping is required, but all joints and screw fixings must be taped with GIB Weatherline® Flashing Tape. Flashing tape to mid-sheet vertical fasteners is not required when fasteners are covered with a structural cavity batten. Refer to Section 4 of this manual.

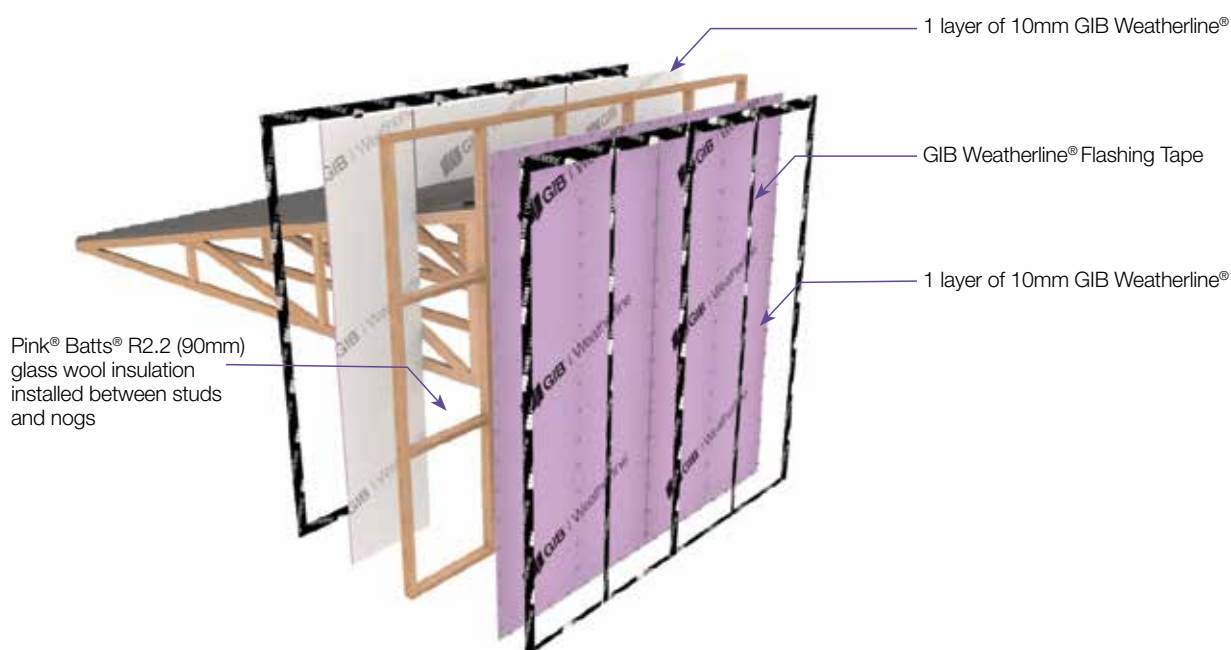
Two-way FRR – timber frame parapet and wing walls

Specification number	Performance	Specifications
GWTL 30b	FRR 30/30/30	Lining 1 x 10mm GIB Weatherline® both sides LB/NLB LB Wall thickness 110mm

GWTL 30b (FIXING OPTION A – GWTa PICTURED)



GWTL 30b (FIXING OPTION B – GWTb PICTURED)



Two-way FRR – timber frame parapet and wing walls

Specification number	Performance	Specifications
GWTL 60c	FRR 60/60/60	Lining 1 x 13mm GIB Weatherline® both sides LB/NLB LB Wall thickness 116mm

FRAMING

Stud size: 90mm minimum. Framing to comply with:

- NZBC B1 – Structure: AS1 Clause 3 – Timber (NZS 3604) or VM1 Clause 6 – Timber (NZS 3603).
- NZBC B2 – Durability: AS1 Clause 3.2 – Timber (NZS 3602).
- Studs at 600mm centres maximum.
- Nogs at 1350mm centres maximum.

Height as determined by NZS 3604 stud and top plate tables for load bearing walls.

INSULATION

Pink® Batts® R2.2 (90mm) glass wool insulation installed between the studs and nogs (higher R-value Pink® Batts® are acceptable).

EXTERIOR SHEATHING

1 layer of 13mm GIB Weatherline® sheet fixed vertically to both sides of the frame. Use full height sheets where possible. All sheet joints and edges must be formed over solid timber framing. Vertical sheet joints are touch fitted. Horizontal sheet joints must be formed with a 5mm gap between the sheet edges.

FASTENING THE SHEATHING

Fasteners

41mm x 6g GIB® Grabber® Ceramic Coated High Thread Screws.

Fastener centres

300mm centres around sheet perimeter.

Place fasteners 12mm from bound sheet edges and 18mm from sheet ends and cut edges.

Single fasteners at 300mm centres to all intermediate studs.

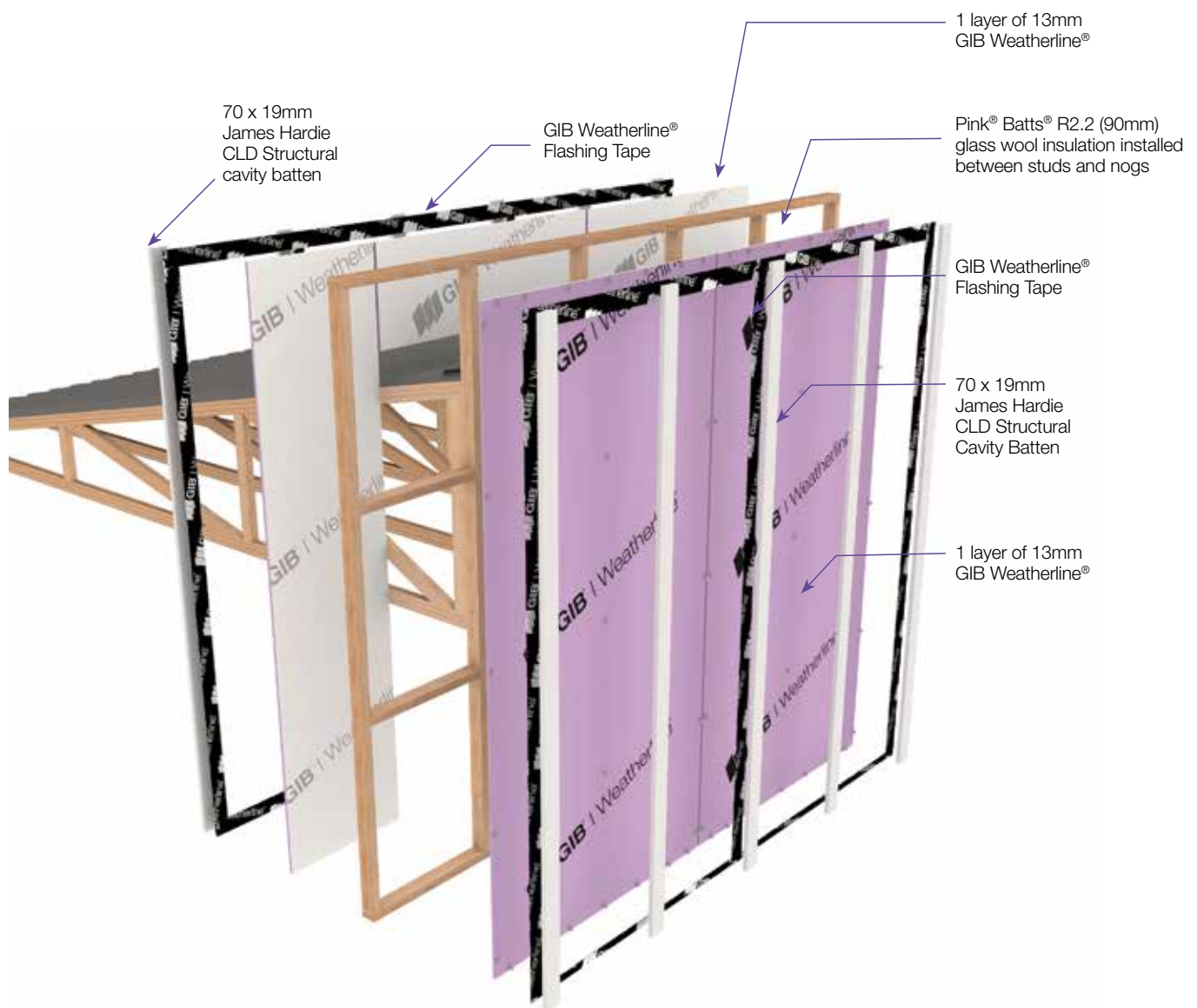
Fasten 70mm x 19mm James Hardie CLD structural cavity battens to all vertical framing in accordance with fixing option GWTa, as set out in Section 2 of this manual.

JOINTING

No plaster stopping is required, but all joints and screw fixings must be taped with GIB Weatherline® Flashing Tape. Flashing tape to mid-sheet vertical fasteners is not required when fasteners are covered with a structural cavity batten. Refer to Section 4 of this manual.

Two-way FRR – timber frame parapet and wing walls

Specification number	Performance	Specifications
GWTL 60c	FRR 60/60/60	Lining 1 x 13mm GIB Weatherline® both sides LB/NLB LB Wall thickness 116mm



Environmental noise

Combined with our range of internal linings, GIB Weatherline® Rigid Air Barrier Systems contribute to quieter indoor spaces by reducing the transmission of environmental noise effectively.

The design information in this section is general in nature and only applicable to locations with normal levels of environmental noise. Specific acoustic design advice should be sought for locations with more extreme levels of environmental noise. These locations include the inner city in close proximity to bars and clubs, or next to roads, railway lines or industrial installations.

The ability of building materials to resist the transmission of sound is dependent on their density, thickness and stiffness. Generally speaking, materials that are light and stiff are poor sound insulators because they allow sound at certain frequencies to transmit efficiently. Heavyweight external cladding materials are more effective sound insulators than lightweight external cladding materials.

The ability of an external wall to reduce the transmission of environmental noise is often controlled by the number and size of the window openings in the wall. The smaller the window the better as it is often the weakest path for the transmission of noise. Laminated glazing using a PMMA interlayer provides about a 3dB improvement over float glass of a similar thickness.

Acoustic performance of timber frame external walls

EXTERNAL WALLS INCORPORATING 10MM GIB WEATHERLINE® RIGID AIR BARRIER SYSTEMS

System Type	Components		Acoustic performance of wall only (STC)	Acoustic performance of wall with allowance for window and roof flanking losses (D2m,nT,w)
	Internal lining	External cladding		
Standard	1 1 x 10mm GIB® Standard plasterboard	Timber weatherboard	43	29 dB
		Fibre cement weatherboard	49	30 dB
		Brick veneer	58	31 dB
		Profiled metal	42	28 dB
	2 1 x 13mm GIB Fyrelime®	Timber weatherboard	44	29 dB
		Fibre cement weatherboard	50	31 dB
		Brick veneer	56	31 dB
		Profiled metal	46	29 dB
Superior	3 2 x 10mm GIB Braceline® GIB Noiseline®	Timber weatherboard	47	31 dB
		Fibre cement weatherboard	53	31 dB
		Brick veneer	60	31 dB
		Profiled metal	50	31 dB
	4 2 x 13mm GIB Braceline® GIB Noiseline®	Timber weatherboard	48	31 dB
		Fibre cement weatherboard	53	31 dB
		Brick veneer	59	31 dB
		Profiled metal	53	31 dB

EXTERNAL WALLS INCORPORATING 13MM GIB WEATHERLINE® RIGID AIR BARRIER SYSTEMS

System Type	Components		Acoustic performance of wall only (STC)	Acoustic performance of wall with allowance for window and roof flanking losses (D2m,nT,w)
	Internal lining	External cladding		
Standard	1 1 x 10mm GIB® Standard plasterboard	Timber weatherboard	44	29 dB
		Fibre cement weatherboard	49	30 dB
		Brick veneer	58	31 dB
		Profiled metal	43	28 dB
	2 1 x 13mm GIB Fyrelime®	Timber weatherboard	45	30 dB
		Fibre cement weatherboard	50	31 dB
		Brick veneer	58	31 dB
		Profiled metal	46	29 dB
Superior	3 2 x 10mm GIB Braceline® GIB Noiseline®	Timber weatherboard	48	31 dB
		Fibre cement weatherboard	53	31 dB
		Brick veneer	60	31 dB
		Profiled metal	50	31 dB
	4 2 x 13mm GIB Braceline® GIB Noiseline®	Timber weatherboard	49	31 dB
		Fibre cement weatherboard	53	31 dB
		Brick veneer	59	31 dB
		Profiled metal	53	31 dB

Cutting sheets and holes

Score and snap method

Position the GIB Weatherline® sheet with the purple face upwards. Mark the cut line on the sheet as required. Firmly hold a straight edge along the line to be cut and cut along the straight edge, through the face of the sheet into the core, with a utility knife.

Break the sheet core by snapping the sheet back along the cut line.

Turn the sheet over and cut along the back liner to complete the cut.

Cutting out openings

Openings can be marked and cut out either prior to installing GIB Weatherline® sheets or after the sheets are fixed in place. Create a small nail hole in each corner then use a pencil to mark out the edges of the opening. Use the score and snap method or a handsaw to cut along the marked lines. Ensure cut out edges are smoothed off and free of dust to allow a good bond when flashing tapes are applied.

Hole forming

- Hole saw:
Mark the centre of the hole on the sheet and pre-drill a pilot hole. Cut the hole to the correct diameter with a circular hole saw fitted to a drill.
- Handheld saw or jigsaw:
Mark the diameter of the hole to be cut on the face of the sheet, pre-drill a pilot hole on the cut line and cut it out with a hand held keyhole saw or a jig-saw.

Repairing a damaged sheet

Minor damage to the external surface of a sheet (where the face liner has been damaged and the core exposed) can be repaired with the application of suitably sized sections of 100mm or 60mm GIB Weatherline® Flashing Tape.

More extensive damage will require the replacement of the damaged section with a patch of GIB Weatherline® sheet cut to size and GIB Weatherline® Flashing Tape applied to all horizontal and vertical joints formed by the patch.

Damage to sheets in a bracing or fire system require a minimum of 300mm strip to be replaced and all edges formed over solid framing and sealed with GIB Weatherline® Flashing Tape.

Maintenance

GIB Weatherline® Rigid Air Barrier Systems will not normally require maintenance. However, if damage occurs to the installed system prior to the installation of the exterior cladding system, this damage must be repaired.

If the exterior cladding system installed over GIB Weatherline® Rigid Air Barrier Systems is damaged, repairs or replacement should be carried out immediately to ensure the GIB Weatherline® Rigid Air Barrier System is completely protected from the elements.

Cladding system installation

The building's exterior drained and vented cavity cladding system must be installed as soon as possible and no more than 90 days following the installation of GIB Weatherline® sheets.

The drained and vented cavity cladding system must comply with all requirements of the NZBC and all relevant NZ Standards and must be installed with the relevant manufacturer's current details and specifications.

For GIB Weatherline® Rigid Air Barrier Systems GWTa and GWTb, cladding fastener lengths must be increased by a minimum of 10 or 13mm (dependent on the thickness of the GIB Weatherline® sheet), to ensure the required fastener framing penetration and pull out loadings are achieved.

Refer to the relevant manufacturer's details and specifications for specific cladding fastener and fixing requirements.

Sustainability and environment

Winstone Wallboards Ltd is committed to protecting the environment. Environmental matters are integrated into all our business activities:

- Our operations strive to exceed all environmental regulatory requirements at all times.
- Protection of the environment is a day to day responsibility that we must all accept.
- We allocate management time and resources to address relevant environmental issues and continuously improve our activities in that area.
- We will achieve our standards through positive action, employee involvement and constant communication with our neighbours, local authorities and customers.

It is our objective to minimise on-site waste when designing and/or installing GIB® Systems. GIB Weatherline® sheet offcuts, if separated from other building materials, can be readily recycled.

For larger projects, waste can be diverted to compost manufacturers who grind up the GIB Weatherline® sheet and use it for compost. For smaller projects, the GIB Weatherline® sheet offcuts can be ground up and spread around the building site.

There are no special requirements for the disposal of waste.

Technical terminology

Acoustic

Concerned with sound or the sense of hearing, including how sound behaves within a room, between rooms or between rooms and the outside environment.

Air barrier

A layer fitted to the external envelope that is designed to prevent the flow of air into and out of the interior of a building.

Cavity cladding system

The exterior weather resistant surface of a building wall that incorporates a drained and vented cavity.

CLD

Ceramic Low Density.

D_{2m,nT,w}

Metric used to express the difference between the outdoor noise level at 2 metres from a façade and the indoor noise level, by considering the transmission loss through all sound transmission paths (e.g. glazing, roof, eaves, etc). It is a single number value which expresses the performance of the whole façade. In theory, subtracting the D_{2m,nT,w} of a façade from any given noise level at 2 metres from that façade will give you the internal noise level. "D" stands for noise level difference; "2m" means the external level this metric is applied to is at 2 metres from the façade; "nT" means the internal space is normalised to a reference reverberation time of 0.5 seconds; "w" means the D_{2m,nT} spectrum is weighted against a reference curve to give a single value.

dB

An abbreviation for decibel. A decibel is the unit of measure for sound pressure level. A decibel is a tenth of a Bel.

Environmental noise

Sound from the outside environment that is unwanted by the listener.

External wall

Any vertical exterior face of a building consisting of primary and/or secondary elements intended to provide protection against the outdoor environment.

Flexible wall underlay

A building paper or synthetic material used as part of a wall cladding system to assist the control of moisture by ensuring moisture which occasionally penetrates the wall cladding is directed back to the exterior of the building.

FRR

Fire Resistance Rating.

LB

Load bearing. Indicates the building element being referred to can resist a structural load.

NLB

Non-load bearing. Indicates the building element being referred to cannot resist a structural load.

NZBC

New Zealand Building Code.

Parapet wall

A wall that extends above the level of the roof cladding.

PMMA

Polymethyl Methacrylate. Used as an interlayer in laminated glass panels.

Primary drainage plane

The outside weather resistant surface of roof or cavity wall cladding and the back of such cladding.

Rigid air barrier

A layer of rigid sheathing fitted to the external side of the exterior wall framing, which is designed to prevent the flow of air into and out of the interior of a building. When used in conjunction with a drained cavity it can also provide a tertiary drainage plane behind the wall cladding.

Roof underlay

A building paper, synthetic material or rigid sheathing used on the underside of a roof cladding system to assist the control of moisture by ensuring moisture which occasionally penetrates the roof cladding is directed back to the exterior of the building.

Secondary drainage plane

An additional surface, that sits behind the drained and vented cavity cladding, capable of resisting external moisture penetration.

Skirt roof

A roof between storeys of a building.

Sound

A travelling vibration through an elastic medium that may be detected by a hearing system.

STC

Sound Transmission Class.

Structural cavity batten

A vertical packing member used to create a drained cavity as part of a cladding system and that also provides sufficient strength to act as a substrate for the wall cladding to be fixed to.

Temporary weathertight exterior

An external building surface able to be exposed to the elements for up to 90 days.

Wall cladding

The weather resistant exterior surface of a building.

Wall underlay

A building paper, synthetic material or rigid sheathing used as part of a wall cladding system to assist the control of moisture by ensuring moisture which occasionally penetrates the wall cladding is directed back to the exterior of the building.

Weathertight

A state where water is prevented from entering and accumulating behind cladding in amounts that can cause undue dampness or damage to the building elements.

Wind zone

Categorisation of wind force experienced on a particular site as determined in NZS 3604, Section 5.

Wing wall

A wall that projects beyond the plane of the external wall.

GIB Weatherline® Rigid Air Barrier Systems, February 2019

LIMITATIONS

Winstone Wallboards Ltd accepts no liability if the GIB Weatherline® Rigid Air Barrier Systems and junction details are not installed in strict accordance with instructions contained within this publication.

Where reference in this document is made to 10mm and 13mm GIB Weatherline® sheets the actual manufactured sheet thickness may be 9.5–10mm or 12.5mm–13mm.

USE ONLY THE CURRENT SPECIFICATION

This publication may be superseded by a new publication. Winstone Wallboards accepts no liability for reliance upon publications that have been superseded. You should check the GIB® website to ensure you are using the current publication. If you are unsure whether this is the current publication, simply call the GIB® Helpline on 0800 100 442.

SUBSTITUTION

GIB Weatherline® Rigid Air Barrier Systems have been specifically designed and tested to achieve the stated performance levels. To maintain the GIB® Product and System Warranty, all system components detailed in this publication must be used when specifying and installing GIB Weatherline® Rigid Air Barrier Systems.

TRADEMARKS

The names GIB®, GIB Fyreline®, GIB Ultraline®, GIB Toughline®, GIB Braceline®, GIB Noiseline®, GIB Aqualine®, GIB Weatherline®, GIB Tradeset®, GIB Plus 4®, GIB-Cove®, GIB Lite Blue®, GIBFix®, GIB® Quiet Stud®, GIB Rail®, GIB Barrierline®, GIB Fire Soundseal®, GIB Clip®, the colour mauve for GIB Toughline®, the colour blue for GIB Braceline®, GIB Noiseline®, the colour pink for GIB Fyreline®, the colour green for GIB Aqualine®, the colour purple for GIB Weatherline® and the shield device are registered trademarks of Fletcher Building Holdings Limited.

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COUNTRY OF ORIGIN

We make GIB Weatherline® in New Zealand*, for New Zealand conditions, giving you 100% certainty.

*Note: GIB Weatherline® may be manufactured to Winstone Wallboards' specific specification by a reputable overseas manufacturer.

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gib.co.nz

OR CALL THE GIB® HELPLINE

0800 100 442