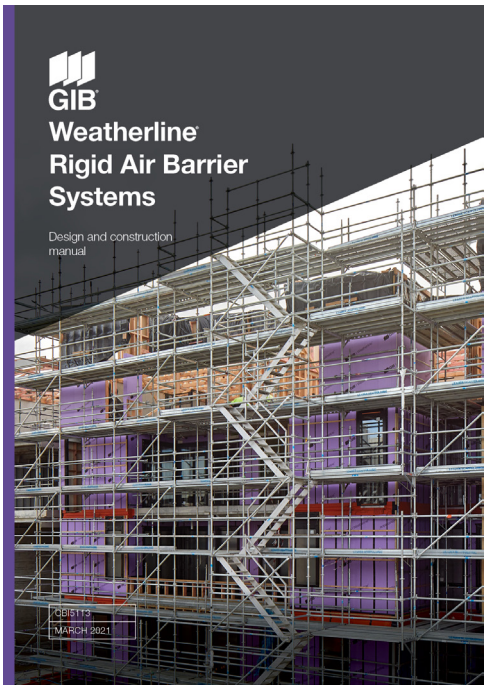
BRANZ Appraised

Appraisal No. 1048 (2025)

GIB WEATHERLINE® RIGID AIR BARRIER SYSTEMS



Appraisal No. 1048 (2025)

This Appraisal replaces BRANZ Appraisal No. 1048 (2018)

BRANZ Appraisals

Technical Assessments of products for building and construction.

Winstone Wallboards Ltd
PO Box 12 256
Penrose
Auckland 1642
Tel: 09 633 0100
Email: info@gib.co.nz
Web: www.gib.co.nz

BRANZ
1222 Moonshine Rd,
RD1, Porirua 5381
Private Bag 50 908
Porirua 5240,
New Zealand
Tel: 04 237 1170
branz.co.nz

Product

1.1 GIB Weatherline® is an exterior-grade, glass-fibre, fleece-wrapped, modified gypsum core sheet material for use as a rigid wall underlay and temporary weather-protecting sheathing. The product is also for use in wall bracing and fire-rated systems.

Scope

Buildings Up To 10 m High

2.1 GIB Weatherline® Rigid Air Barrier Systems have been appraised for use as a rigid wall underlay and temporary weather-protecting sheathing on buildings within the following scope:

- constructed with timber framing in accordance with the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; or,
- constructed with steel framing in accordance with the scope limitations of NASH Building Envelope Solutions; and,
- with wall claddings installed over an 18 mm minimum drained cavity; or,
- with masonry veneer in accordance with NZBC Acceptable Solution E2/AS1; and,
- situated in NZS 3604 Wind Zones up to, and including, Extra High; or,
- when used in conjunction with wall cladding systems suitable for use with maximum wind pressures for structural and weathertightness design of 2.5 kPa ultimate limit state (ULS).

Buildings Up To 25 m High

2.2 GIB Weatherline® Rigid Air Barrier Systems have also been appraised for use as a rigid wall underlay and temporary weather-protecting sheathing on buildings within the following scope:

- buildings with a building height not exceeding 25 m; and,
- constructed with timber or light-gauge steel framing complying with the NZBC; and,
- with inter-storey deflections designed for up to height/180 of horizontal in-plane movement during seismic service limit state (SLS) events (based on a 3 m inter-storey height); and,
- with wall claddings installed over a 18 mm minimum drained cavity; and,
- for use with maximum wind pressures for structural and weathertightness design of 2.5 kPa ULS for 10 mm thick sheet and up to 4 kPa ULS for 13 mm thick sheet, when used in conjunction with compliant wall cladding systems.

Bracing

2.3 GIB Weatherline® Rigid Air Barrier Systems have also been appraised for use as wall bracing systems for timber-framed buildings within the scope of NZS 3604.

Fire Resistance Rated (FRR) Construction

2.4 GIB Weatherline® Rigid Air Barrier Systems have also been appraised for use as non-loadbearing and loadbearing fire-rated wall systems for timber framing and non-loadbearing steel-framed construction. This Appraisal also covers the use of GIB Weatherline® for fire-rated soffits and fire protection of columns and beams.

Building Regulations

New Zealand Building Code (NZBC)

3.1 **In the opinion of BRANZ, GIB Weatherline® Rigid Air Barrier Systems, if used, designed, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet, or contribute to meeting the following provisions of the NZBC:**

Clause B1 STRUCTURE: Performance B1.3.1, B1.3.2 and B1.3.4. GIB Weatherline® Rigid Air Barrier Systems meet the requirements for loads arising from earthquake and wind [i.e. B1.3.3 (f) and (h)]. See Paragraphs 10.1–10.9.

Clause B2 DURABILITY: Performance B2.3.1 (a) not less than 50 years, B2.3.1 (b) 15 years and B2.3.2. GIB Weatherline® Rigid Air Barrier Systems meets these requirements. See Paragraph 11.1.

Clause C3 FIRE AFFECTING AREAS BEYOND THE SOURCE: Performance C3.5 and C3.7. When used as part of an external wall system, GIB Weatherline® Rigid Air Barrier Systems contributes to meeting these requirements. See Paragraphs 12.1-15.7.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. When used as part of the cladding system, GIB Weatherline® Rigid Air Barrier Systems contributes to meeting these requirements. See Paragraphs 16.1-16.3.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. GIB Weatherline® Rigid Air Barrier Systems meet this requirement.

Technical Specification

4.1 The following components are supplied by Winstone Wallboards Ltd:

Exterior

- **GIB Weatherline®** is an exterior-grade, glass-fibre, fleece-wrapped, modified gypsum core sheet material. The product is available in 10 mm and 13 mm thicknesses and a sheet width of 1,200 mm. Standard sheet lengths are 2,450, 2,750 and 3,000 mm for 10 mm thick sheets and 2,750 and 3,000 mm for 13 mm thick sheets. Custom sheet lengths are also available.
- **GIB® Grabber®** 41 mm x 6 g and 63 mm x 8 g ceramic-coated high-thread drywall screws, and 32 mm x 8 g and 47 mm x 8 g ceramic-coated drill point screws.
- **GIB Weatherline® Flashing Tape** is available in roll widths of 30, 60, 100, 150 and 200 mm, and a roll length of 30 m.
- **GIB Weatherline® Sill Tape** is available in roll widths of 150 and 200 mm, and a roll length of 20 m.
- **GIB Fire Soundseal®** supplied in 375 ml cartridges and 600 ml sausages.

Interior

- **10 and 13 mm thick GIB Fyreline®** is a paper-bound, gypsum-plaster core sheet lining material.
- **10 and 13 mm thick GIB® Standard, GIB Braceline®, GIB Noiseline®, GIB Aqualine®, GIB Ultraline®, GIB Toughline® and GIB Toughline® Aqua**.
- **GIB® Grabber®** 32 and 41 mm x 6 g high-thread drywall screws or 32 mm x 7 g GIB® Grabber® Dual Thread screws or 25 mm x 6g GIB® Grabber® Self Tapping Drywall screws.
- **GIBFix® Angle** 45 x 45 x 0.55 mm galvanised steel angle with a knurled surface. Supplied in lengths of 2.4 and 2.7 m.
- **Jointing tapes, compounds and finishing plasters** in accordance with the GIB® Site Guide.

- **GIB® Handibrac®** is a one-piece, 2 mm thick, galvanised-steel angle bracket approximately 95 mm high, 65 mm long and 54 mm wide. The bracket is supplied with five Type 17 screws 14 g x 35 mm.
- **Concrete floor end-stud hold-down** M12 x 150 mm minimum hot-dip galvanised bolts or proprietary anchor with a minimum characteristic pull-out strength of 15 kN, with a 50 x 50 x 3 mm hot-dip galvanised washer.

4.2 The following components are specified by Winstone Wallboards Ltd and supplied by others:

Cavity battens and fixings

- **Structural timber cavity battens** 45 x 18 mm, clear grade, finger-jointed radiata pine, minimum H3.1 treated timber.
- 75 x 3.15 mm hot-dip galvanised or stainless steel ring shank jolt head nails.
- 75 x 3.06 mm hot-dip galvanised or stainless steel ring shank D-head power-driven nails.

Penetration Seals

- **Pro Clima KAFLEX and ROFLEX Grommets** - refer to BRANZ Appraisal No. 953.

Bond Breaker Tape

- **Bond breaker tape** compatible with GIB Fire Soundseal® when used on inter-storey movement joints.

Handling and Storage

5.1 Handling and storage of all materials supplied by Winstone Wallboards Ltd or the building contractor, whether on-site or off-site, is under the control of the building contractor. GIB Weatherline® sheets must be stacked flat, off the ground and supported on a level platform. They must be kept dry at all times either by storing under cover or providing waterproof covers to the stack. Care must be taken to avoid damage to edges, ends and surfaces. The sheets must always be carried on edge. Other accessories must be stored so they are kept clean, dry and undamaged.

Technical Literature

6.1 This Appraisal must be read in conjunction with:

- GIB Weatherline® Rigid Air Barrier Systems Specification and Installation Manual, March 2021.

6.2 All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

Design Information

General

7.1 GIB Weatherline® Rigid Air Barrier Systems are intended for use as a rigid wall underlay fixed over timber and light-gauge steel-framed walls to support the wind pressures, and to act as a secondary barrier to wind-driven rain.

7.2 The suitability of use of GIB Weatherline® Rigid Air Barrier Systems, when used with proprietary wall claddings, must be confirmed with the cladding system proprietor.

GIB Weatherline® Sheet Set Out

7.3 GIB Weatherline® sheets are installed vertically and must only be joined on framing. Horizontal sheet fixing is permitted, but not when bracing or fire-rated systems are specified. At the base of the wall, the sheathing must hang below the bottom plate a minimum of 15 mm, up to a maximum of 40 mm.

Movement Joints

7.4 The designer is responsible for designing movement joints to accommodate thermal and moisture movement in the structure and cladding. This may require movement joints to be incorporated in the GIB Weatherline®. Refer to BRANZ Bulletin Issue 531 Designing for thermal and moisture movement for further information.

Temporary Weather Protection

8.1 Commencing from installation, GIB Weatherline® Rigid Air Barrier Systems must not be exposed to the weather for more than 180 days.

8.2 GIB Weatherline® Rigid Air Barrier Systems may be used as a temporary weather protecting sheathing to allow construction to the building interior (e.g. lining of internal walls) to proceed before the wall cladding is installed. Winstone Wallboards Ltd recommend that the installation of insulation and linings to the external wall is only carried out once the wall cladding installation is complete and the building is weathertight.

8.3 To achieve temporary weathertightness to allow construction to the building interior to continue, all joints, and internal and external corners of GIB Weatherline® Rigid Air Barrier Systems must be sealed with GIB Weatherline® Flashing and Sill Tapes, the roof cladding and soffit linings must be installed, the flexible sill and jamb flashing tape system must be installed around the window and door openings, and the window and door joinery must be installed complete with head flashings and air seals.

8.4 The moisture content of the internal timber framing must not exceed the maximum moisture content specified by the internal lining system supplier at the time of installation of the insulation and internal lining.

Framing

Timber Treatment

9.1 Timber wall framing behind GIB Weatherline® Rigid Air Barrier Systems must be treated as required by NZBC Acceptable Solution B2/AS1.

Timber Framing

9.2 Timber framing must comply with NZS 3604 for buildings or parts of buildings within the scope limitations of NZS 3604. Buildings or parts of buildings outside the scope of NZS 3604 must be to a specific design in accordance with NZS 3603 and AS/NZS 1170. Where specific design is required, the framing must be of at least equivalent stiffness to the framing provisions of NZS 3604. Studs must be at maximum 400 mm or 600 mm centres depending on Wind Zone and sheet fixing option used. Noggings must be fitted flush between the studs at maximum 800 mm centres. *(Note: The timber framing must also be suitable for the selected wall cladding. Refer to the selected cladding system's Technical Literature for specific framing requirements.)*

9.3 Timber wall framing must be a minimum of 45 mm width where GIB Weatherline® sheets are to be joined.

Steel Framing

9.4 Light-gauge steel framing used in FRR walls must meet the requirements of NASH Building Envelope Solutions or be to a specific engineering design (SED).

Structure

Mass

10.1 The mass of GIB Weatherline® is approximately 9 kg/m² for the 10 mm thickness and 11.5 kg/m² for the 13 mm thickness at equilibrium moisture content. This mass must be added to the selected wall cladding system mass when determining the overall wall cladding mass.

Wind Zones/Wind Pressure

10.2 GIB Weatherline® Rigid Air Barrier Systems are suitable for use in all Wind Zones of NZS 3604 up to, and including, Extra High. The systems can also be used in SED buildings with wind pressures of up to 4 kPa. Refer to the Technical Literature for framing, fixing centres and requirements.

Fixings

10.3 GIB Weatherline® sheets can be fixed using two options:

- **Screw and batten fixing** - This fixing option uses screws and vertical structural timber cavity battens. This fixing option is suitable for sheet or horizontal plank-type claddings which are specified for fixing over either structural or non-structural vertical cavity battens. GIB Weatherline® sheets are fixed to studs at maximum 600 mm centres and to the top and bottom of the sheets at maximum 200 mm centres. *[Note: The use of timber cavity battens on buildings over 10 m in height will require that they are part of a wall cladding system meeting the requirements of Paragraph 5.8.4 of NZBC Acceptable Solution C/AS2.]*
- **Screw only** - This option has a more intensive screw fixing pattern. The GIB Weatherline® sheets are fixed to studs and at the top and bottom of the sheets at various centres depending on Wind Zone/Design Wind Pressure and stud spacing. Refer to Table 1 for NZS 3604 buildings and Tables 2 and 3 for SED buildings. This fixing option is also suitable for masonry veneer and vertical plank type claddings which specify horizontal ventilated cavity battens.

10.4 Depending on the performance required for the wall (e.g. bracing, fire resistance), the fixing centres must be closed up to the closest centres specified for all the relevant systems.

Table 1: Screw Only Fixing Centres - NZS 3604 Buildings

NZS 3604 Wind Zone	Stud Centres	
	400 mm	600 mm
Low	300 mm	200 mm
Medium	200 mm	150 mm
High	200 mm	100 mm
Very High	150 mm	SED
Extra High	100 mm	SED

Note: GIB Weatherline® sheets are fixed to studs at the fixing centres noted above and at 200 mm centres at the top and bottom of the sheets.

Table 2: Screw Only Fixing Centres - SED Buildings Using 10 mm GIB Weatherline® Sheets

ULS Design Wind Pressure (kPa)	Stud Centres	
	400 mm	600 mm
0.5	300 mm	300 mm
1.0	250 mm	150 mm
1.5	175 mm	100 mm
2.0	125 mm	SED
2.5	100 mm	SED

Note: GIB Weatherline® sheets are fixed to studs, and at the top and bottom of the sheets, at the fixing centres noted above. Refer to Technical Literature for fixing patterns when using two-layers of 10 mm GIB Weatherline® sheets.

Table 3: Screw Only Fixing Centres - SED Buildings Using 13 mm GIB Weatherline® Sheets

ULS Design Wind Pressure (kPa)	Stud Centres	
	400 mm	600 mm
0.5	300 mm	300 mm
1.0	300 mm	225 mm
1.5	250 mm	150 mm
2.0	200 mm	100 mm
2.5	150 mm	SED
3.0	125 mm	SED
3.5	100 mm	SED
4.0	100 mm	SED

Note: GIB Weatherline® sheets are fixed to studs, and at the top and bottom of the sheets, at the fixing centres noted above.

Cladding and Batten Fixing

10.5 Cladding fixings, including brick tie fixings, must be increased in length by the thickness of the GIB Weatherline® sheet to maintain the minimum timber framing penetration. Similarly, the fixings for cavity battens must be increased in length by the thickness of the GIB Weatherline® sheet. The batten fixings specified in Section 4 of this Appraisal take this required length increase into account.

Bracing

10.6 When used in accordance with this Appraisal and the Technical Literature, the 10 mm and 13 mm GIB Weatherline® Rigid Air Barrier Systems can be used to meet the wall bracing element requirements of NZS 3604, for timber-framed buildings not requiring specific design. The Technical Literature contains details of the construction of the various bracing systems and the bracing unit ratings achieved for each system The bracing units achieved (wind and earthquake) when using GIB Weatherline® Rigid Air Barrier Systems are given in Table 4. The GIB Weatherline® Rigid Air Barrier Systems Technical Literature provides comprehensive construction and panel hold-down details.

10.7 The bracing units are derived from the BRANZ Technical Paper P21 test method based on a wall height of 2.4 m. For any other wall height, the bracing rating can be calculated by multiplying the appropriate value by 2.4 and dividing by the wall height in metres, except that panels less than 1.8 m high must be rated as if they were 1.8 m high.

Penetrations for Services in Bracing Elements

10.8 Holes up to 100 x 100 mm positioned no closer than 200 mm to the edge of a sheet or to another hole, may be allowed for services in GIB Weatherline® Rigid Air Barrier Systems without affecting the bracing rating of the panel. These penetrations are subject to specific fire engineering design where these penetrations occur in FRR walls. The penetration will also need to be flashed to make the penetration weathertight to meet NZBC Performance Clause E2.3.2.

Inter-storey Deflection

10.9 GIB Weatherline® Rigid Air Barrier Systems are able to accommodate inter-storey deflections. When installed in accordance with the detail contained in the Technical Literature, GIB Weatherline® Rigid Air Barrier Systems are capable of withstanding SLS deflections of up to height/180.

Table 4: GIB Weatherline® Bracing Systems

Bracing System	Minimum Bracing Element Length	Lining/Sheathing Requirements	Other Requirements	NZS 3604 Bracing Rating (BU/m)	
				Wind	Earthquake
GSW-N	0.4	Internal: Any 10 or 13 mm GIB® plasterboard External: 10 or 13 mm GIB Weatherline®	None	85	75
	1.2			95	85
GSW-H	0.4	Internal: Any 10 or 13 mm GIB® plasterboard External: 10 or 13 mm GIB Weatherline®	Panel hold-downs	90	85
	1.2			130*	110
W-H	0.4	Internal: None External: 10 or 13 mm GIB Weatherline®		105	100
	1.2			125*	105
BLW-H	0.4	Internal: 10 or 13 mm GIB® Braceline GIB® Noiseline External: 10 or 13 mm GIB Weatherline®		105	115
	1.2			150*	145*

Note: Where lining/sheathings are specified on both faces, each face must be fastened as a bracing element.

** Timber floors – A limit of 120 BU/m applies to NZS 3604 timber floors.*

Durability

11.1 GIB Weatherline® Rigid Air Barrier Systems meet code compliance with NZBC Clause B2.3.1 (a) not less than 50 years, when used for bracing or fire-rated systems where the cladding durability requirement or expected serviceable life is not less than 50 years, e.g. behind masonry veneer, and code compliance with NZBC Clause B2.3.1 (b) 15 years where the cladding durability requirement is 15 years.

Serviceable Life

11.2 Provided it is not exposed to the weather or ultraviolet (UV) light for a total of more than 180 days, and provided the exterior cladding is maintained in accordance with the cladding manufacturer's instructions and the cladding remains weather-resistant, GIB Weatherline® Rigid Air Barrier Systems are expected to have a serviceable life of at least 50 years.

11.3 To achieve a 50 year serviceable life in all exposure zones, GIB® Grabber® ceramic coated high thread drywall screws must be protected with either GIB Weatherline® Flashing Tape, GIB Weatherline® Sill Tape or a structural cavity batten.

11.4 Microclimatic conditions, including geothermal hot spots, industrial contamination and corrosive atmospheres, and contamination from agricultural chemicals or fertilisers can convert mildly corrosive atmosphere into aggressive environments for fasteners. The fixing of GIB Weatherline® sheets in areas subject to microclimatic conditions requires specific design in accordance with NZS 3604, Paragraph 4.2.4, and is outside the scope of this Appraisal.

Maintenance

11.5 GIB Weatherline® Rigid Air Barrier Systems will not normally require maintenance. However, if damage occurs to the cladding or lining protecting the GIB Weatherline® Rigid Air Barrier System or to the GIB Weatherline® Rigid Air Barrier System itself, the repairs or replacement must be carried out to ensure the integrity of the rigid wall underlay system.

Prevention of Fire Occurring

12.1 GIB Weatherline® is considered a non-combustible material and need not be separated from heat sources such as fireplaces, heating appliances and chimneys. However, when used in conjunction with, or attached to heat sensitive materials, the heat sensitive materials must be separated from heat sources. Part 7 of NZBC Acceptable Solution C/AS1 and NZBC Acceptable Solution C/AS2 provide methods for separation and protection of combustible materials from heat sources.

Fire Separations

Fire Resistance Ratings

13.1 GIB Weatherline® Rigid Air Barrier Systems can be used for loadbearing and non-loadbearing walls to form FRR separations with an FRR of 30/30/30 or 60/60/60 when constructed in accordance with the Technical Literature.

Control of Internal Fire and Smoke Spread

Structural Stability During Fire

14.1 For buildings within the scope of NZBC Acceptable Solution C/AS2, Paragraph 4.3 provides details on the requirements for primary building elements that structurally support a FRR separation.

Fire Affecting Areas Beyond the Fire Source

Horizontal Fire Spread

15.1 Where the external wall is not protected by a sprinkler system or separated from the relevant boundary as required by NZBC Acceptable Solutions C/AS1 or NZBC Acceptable Solution C/AS2, GIB Weatherline® Rigid Air Barrier Systems will need to be installed as a fire separation with the required FRR.

Vertical Fire Spread - Buildings 10 m in Height or Less

15.2 NZBC Functional Requirement C3.2 identifies that external vertical fire spread to upper floors only needs be considered for buildings with a building height greater than 10 m.

Vertical Fire Spread - Buildings Greater than 10 m in Height

15.3 GIB Weatherline® Rigid Air Barrier Systems can form part of an external wall cladding system designed to meet vertical fire spread requirements. This has not been assessed by BRANZ and is outside the scope of this Appraisal. Specific fire engineering design is required for each building over 10 m in height to ensure the external cladding system will meet the requirements of NZBC Acceptable Solution C/AS2, Section 5.8 or NZBC Verification Method C/VM2, Section 4.6. Refer to Table 5 for information provided to support the specific fire engineering design.

External Cladding Systems

15.4 GIB Weatherline® Rigid Air Barrier Systems achieve a Type A classification, and is therefore suitable for use on external walls in accordance with NZBC Acceptable Solutions C/AS1, Table 5.3.1.1 and NZBC Acceptable Solution C/AS2, Section 5.8.

15.5 The components listed in Table 1 form a part of the GIB Weatherline® Rigid Air Barrier Systems and have been tested or assessed and achieved the following results and classifications.

Table 5: Components of the GIB Weatherline® Rigid Air Barrier Systems

Component	Test Method	Result
GIB Weatherline®	BE EN 13501	A1 (non-combustible)
GIB Weatherline®	ISO 5660.1	Type A

15.6 The specific fire engineering design for the building must include specific detailing at each floor level to meet the requirements for cavity barriers as specified in NZBC Acceptable Solution C/AS2, Paragraph 5.8.5.

15.7 Refer to NZBC Acceptable Solutions C/AS1, NZBC Acceptable Solution C/AS2 and NZBC Verification Method C/VM2 for FRR, control of external fire spread and vertical fire spread requirements for external walls.

External Moisture

16.1 GIB Weatherline® Rigid Air Barrier Systems must be used behind claddings that meet the performance requirements of NZBC Clause E2.

16.2 GIB Weatherline® Rigid Air Barrier Systems, when installed in accordance with the Technical Literature and this Appraisal, will contribute to the total wall cladding system's compliance with NZBC Clause E2.

16.3 GIB Weatherline® Rigid Air Barrier Systems are suitable for use under wall claddings as an alternative to the rigid wall underlay specified in NZBC Acceptable Solution E2/AS1, Table 23 on timber-framed buildings, except that direct-fixed claddings must not be installed over the GIB Weatherline® Rigid Air Barrier System. Refer to Table 6 for GIB Weatherline® Rigid Air Barrier Systems NZBC Acceptable Solution E2/AS1, Table 23 properties.

Table 6: NZBC Acceptable Solution E2/AS1, Table 23 Properties

NZBC E2/AS1, Table 23 Rigid Wall Underlay Properties	Property Performance Requirement	GIB Weatherline® Rigid Air Barrier Systems Actual Property Performance
Vapour Resistance	≤ 7 MN s/g	≤ 0.8 MN s/g
Water Resistance	≥ 20 mm	Pass

Installation Information

Installation Skill Level Requirements

17.1 All design and building work must be carried out in accordance with the GIB Weatherline® Rigid Air Barrier System's Technical Literature and this Appraisal by competent and experienced tradespeople conversant with rigid air barriers. Where the work involves Restricted Building Work (RBW) this must be completed by, or under the supervision of, a Licensed Building Practitioner (LBP) with the relevant Licence Class.

System Installation

GIB Weatherline® Rigid Air Barrier System Installation

18.1 GIB Weatherline® Rigid Air Barrier Systems may be cut by scoring and snapping, hand guillotine, hand or power saw. Holes and cut-outs may be formed by drilling a number of holes around the perimeter of the opening required and tapping out the centre with a hammer, or by using a hole saw.

18.2 The sheet fixings must be positioned a minimum of 12 mm from bound sheet edges and 18 mm from cut edges. The fixing must be driven at right angles to the sheet until the head finishes flush with the sheet surface.

18.3 GIB Weatherline® sheets must be dry prior to installation.

18.4 Prior to fixing GIB Weatherline® sheets, a check must be made to ensure all sheet edges will be supported by framing.

18.5 GIB Weatherline® sheets must be fixed to the framing with fixings as specified in Paragraph 4.1 and Tables 1-3. The maximum fixing centres must be as specified in the Technical Literature. Depending on the performance required for the wall (e.g. bracing, fire resistance), the fixing centres must be closed up to the closest centres specified for all the relevant systems.

18.6 Sheets at inter-storey floor levels on multi-storey timber-framed buildings must have a minimum 10 mm gap between the sheet ends to allow for shrinkage of the framing, as detailed in the Technical Literature. Where facade fire spread is a design requirement, the gap between sheets must be filled with a continuous bead of GIB Fire Soundseal® over a bond breaker tape and covered with GIB Weatherline® Flashing Tape. Horizontal sheet joints that are located at positions other than at inter-story floor levels, are installed touch fitted and must be supported over horizontal framing.

18.7 Holes or gaps around service penetrations must be made weathertight by using GIB Weatherline® Flashing or Sill Tape, or with Pro Clima KAFLEX or ROFLEX Grommets. Any small damaged areas of GIB Weatherline® sheet can be repaired by covering with joint sealing tape following the details in the Technical Literature.

Joint Sealing Tape Installation

18.8 All vertical and horizontal sheet joints, internal and external corners, and exposed screws (except where they will be covered by a vertical cavity batten e.g. intermediate studs) must be covered with GIB Weatherline® Flashing Tape. The GIB Weatherline® Flashing Tape must be installed as soon as practical to avoid sheet wetting. The manufacturer's instructions regarding the application temperatures for the joint sealing tapes must be followed. The GIB Weatherline® sheets must be dry before flashing tape and batten installation. They must also be cleaned of dust and other surface contaminants prior the application of the joint sealing tape to ensure adequate adhesion is achieved.

Window Tape Installation

18.9 GIB Weatherline® Sill Tape must be installed to the sill of window and door openings. The head and jambs of window and door openings must be covered with GIB Weatherline® Flashing Tape. Attention must be paid to ensure all exposed timber wall framing in the opening is protected. This requirement does not apply where Altus Smartfit® window and door joinery is used. Refer to BRANZ Appraisal No. 868.

Batten Installation

18.10 Where required, structural cavity battens must be fixed in accordance with the Technical Literature.

18.11 Vertical cavity battens must be discontinuous over inter-storey sheet joints to allow for movement.

Internal Linings and Insulation

18.12 Internal linings and insulation must be installed in accordance with the relevant manufacturer's instructions.

Cladding Installation

18.13 Claddings must have control joints or be designed to accommodate movement at inter-storey sheet joint location.

Inspections

18.14 The Technical Literature must be referred to during the inspection of GIB Weatherline® Rigid Air Barrier Systems installation.

Health and Safety

19.1 Dust resulting from the sanding of internal linings, jointing or finishing compounds may be a respiratory irritant, therefore the use of suitable respiratory protection is recommended. Where sealants, insulation and other materials are used, the instructions of the manufacturer must be followed.

Basis of Appraisal

The following is a summary of the technical investigations carried out:

Tests

20.1 Bracing tests were carried out by Winstone Wallboards Ltd in accordance with BRANZ Technical Paper P21 to determine the performance of GIB Weatherline® Rigid Air Barrier Systems when the building is subjected to lateral wind or earthquake loading. The test facilities of Winstone Wallboards Ltd, their procedures and the test results have been reviewed by BRANZ and found to be satisfactory.

20.2 Testing has been carried out at an external laboratory to determine the face load pressure resistance and temporary weathertightness performance of GIB Weatherline® Rigid Air Barrier Systems. The laboratory facilities, their procedures and the test results have been reviewed by BRANZ and found to be satisfactory.

20.3 BRANZ has completed testing to evaluate the suitability of fixing brick ties over GIB Weatherline® sheet.

20.4 The resistance of GIB Weatherline® Rigid Air Barrier Systems to water vapour transmission and resistance to water penetration in accordance with NZS 2295 has been completed by BRANZ.

20.5 GIB Weatherline® has been tested in accordance with ISO 5660.1 and achieved a Type A classification. Testing was carried out in accordance with NZBC Acceptable Solution C/AS1, Appendix E, Section E.5.1 and NZBC Acceptable Solution C/AS2, Appendix C, Section C7.1.

20.6 GIB Weatherline® Rigid Air Barrier Systems have been tested to AS 1530.4 in accordance with NZBC Acceptable Solution C/AS1, Appendix E, Paragraph E3.1.1 a) and NZBC Acceptable Solution C/AS2, Appendix C, Paragraph C5.1.1 a) and achieved FRR as detailed in Paragraph 13.1.

Other Investigations

21.1 Structural, fire and durability opinions have been given by BRANZ technical experts.

21.2 Non-combustibility testing to ISO 1182 were completed by CSIRO and were reviewed by BRANZ Fire Engineers. An opinion on the classification of the product in accordance with BS EN 13501 has been provided.

21.3 BRANZ expert opinion on NZBC Clause E2 code compliance for GIB Weatherline® Rigid Air Barrier Systems was based on evaluation of all details within the scope and as stated within this Appraisal. The details contained within the Technical Literature have been reviewed, and an opinion has been given by BRANZ technical experts that the system will meet the performance levels of NZBC Acceptable Solution E2/AS1 for rigid sheathings.

21.4 Site inspections were carried out by BRANZ to assess the practicability of installation.

21.5 The Technical Literature for GIB Weatherline® Rigid Air Barrier Systems has been examined by BRANZ and found to be satisfactory.

Quality

22.1 The manufacture of GIB Weatherline® Rigid Air Barrier Systems has been examined by BRANZ, including methods adopted for quality control. Details regarding the composition of the materials used were obtained by BRANZ and found to be satisfactory.

22.2 The quality of materials, components and accessories supplied by Winstone Wallboards Ltd is the responsibility of Winstone Wallboards Ltd. The quality control system of the Winstone Wallboards Ltd has been assessed and registered as meeting the requirements of ISO 9001.

22.3 Quality of installation on-site of components and accessories supplied by Winstone Wallboards Ltd and the building contractor is the responsibility of the installer.

22.4 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of the framing systems, flashings, joint seal tapes and flexible sill and jamb tape systems in accordance with the instructions of Winstone Wallboards Ltd.

Sources of Information

- AS 1530.4:2005 Fire-resistance of elements of building construction.
- AS/NZS 1170:2002 Structural design action – General principles.
- AS/NZS 3837:1998 Method of test for heat and smoke release rates for materials and properties using an oxygen consumption calorimeter.
- BRANZ Bulletin Issue 531 Designing for thermal and moisture movement.
- BS EN 13501 Fire classification of construction products and building elements Part 1: 2018 Classification using test data from reaction to fire tests.
- ISO 1182:2010 Reaction to fire tests for products - Non-combustibility test.
- ISO 5660.1:2002 Heat release rate (cone calorimeter method).
- NASH Building Envelope Solutions: 2019 Light steel-framed buildings.
- NZS 2295:2006 Pliable, permeable building underlays.
- NZS 3603:1993 Timber structures standard.
- NZS 3604:2011 Timber-framed buildings.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.

BRANZ

In the opinion of BRANZ, GIB Weatherline® Rigid Air Barrier Systems are fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided they are used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to Winstone Wallboards Ltd, and is valid until further notice, subject to the Conditions of Appraisal.

Conditions of Appraisal

1. This Appraisal:
   a) relates only to the product as described herein;
   b) must be read, considered and used in full together with the Technical Literature;
   c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
   d) is copyright of BRANZ.
2. Winstone Wallboards Ltd:
   a) continues to have the product reviewed by BRANZ;
   b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
   c) abides by the BRANZ Appraisals Services Terms and Conditions;
   d) warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
3. BRANZ makes no representation or warranty as to:
   a) the nature of individual examples of, batches of, or individual installations of the product, including methods and quality of work;
   b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
   c) any guarantee or warranty offered by Winstone Wallboards Ltd.
4. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to Winstone Wallboards Ltd or any third party.

For BRANZ

Claire Falck
Chief Executive

Date of Issue:
14 April 2025