

Section 5: Bracing systems

**Table 4: Bracing tables for 7.5mm or 9mm Headline™**

System number	Bracing element length (mm)	Tied steps	Bracing details	RFD-2004 1996 rating in bracing units per square of element length	
				Wind	Carquake
HT1	1200 or more	Not required	Refer Figs 36 and 38 Holding clow (HD) bolts to concrete floor	100	80
HT2 HT3	900 - 1200 1200 or more	Required (refer Figs 42 or 46)	Refer Figs 37 and 39 HD bolts to concrete floor	90 115	100 100
HT4 HT5	1200 - 2400 2400 or more	Not required	Refer Fig. 39	120 130	110 120
HT6 HT7 HT8	900 - 1200 1200 - 2400 2400 or more	Not required	Refer Figs 40 and 41 HD bolts to concrete floor	100 115 120	80 90 100
HT9	600	Required (refer Fig. 43)	Refer Fig. 43	95	88
HT10	600	Required (refer Figs 47 and 48)	Refer Figs 44 and 45 HD bolts to concrete floor Deck bolts to timber floor	80	38
HT 11B	900 or more	Not required	Refer Fig. 50A and 50B Use heavy screw in joists Whisper Gib® Brackets on inside face Hardite™ on outside face	151	168
HT12B	900 or more	Not required	Refer Fig. 51A and 51B HD bolts to concrete floor Gib® Brackets on inside face Hardite™ on outside face	181	168
HT13B	2400 or more	Not required	Refer Fig. 52A and 52B Gib® Brackets on inside face Hardite™ on outside face	190	162
HT14B	2400 or more	Not required	Refer Fig. 53A and 53B HD bolts to concrete floor Gib® Brackets on inside face Hardite™ on outside face	190	162
HT15B	1200 or more (window panel)	Not required	Refer Figs 54A, 54B, 55 and 56 HD bolts/anchors affixed to floor Gib® Brackets on inside face Hardite™ on outside face	75	65
HT16B	3200 or more (window panel)	Not required	Refer Figs 54B, 54C, 55 and 56 Gib® Brackets on inside face Hardite™ on outside face	75	63
HT 17GB	2400 or more	Not required	Refer Fig. 55A and 55B 2.5mm Gib® Standard on inside face Hardite™ on outside face	780	114

This specification is used to install and determine the bracing ratings of Harditex™ 7.5mm and 9mm external wall bracing and claddings. Bracing ratings have all been determined by BRANZ testing and are suitable for use in conjunction with NZS 3904 Code of Practice for Light Timber Frame Construction Not Requiring Specific Design.

**Framing**

The Harditex™ bracing system is this brochure apply only to timber frame construction, and are not to be used for steel frame construction.

The timber framing must be in accordance with NZS 3904 Code of Practice for Light Timber Frame Buildings.

The studs must be spaced at 600mm maximum centres, between wall fixings at top and bottom plates with a maximum of 1800mm maximum centres.

**Fixing**

Harditex™ bracing sheets must be fixed vertically with all sheet edges on fixing. Sheet joints must be avoided at the corners of openings (except for expansion and control joints). Refer to page 15-17 for full details of control and expansion joints.

When bracing panels contain control and expansion joints the panels must be separated, for design purposes, into separate units each side of the joint.

To achieve the bracing ratings shown in Table 4, full-height sheets without joints must be used for walls up to 1000mm in height. When bracing walls exceed 1000mm in height, one sheet joint is permitted up to a maximum bracing element height of 4500mm. Jointing should be the horizontal direction if permitted in rules (to the maximum height jointing must be kept to the minimum, for example an 1800mm element length

must be a 1200mm- and 600mm-wide sheet or two 900mm-wide sheets.

Always ensure the sheet joint is on the centre line of the stud or rafter to achieve the bracing is detailed.

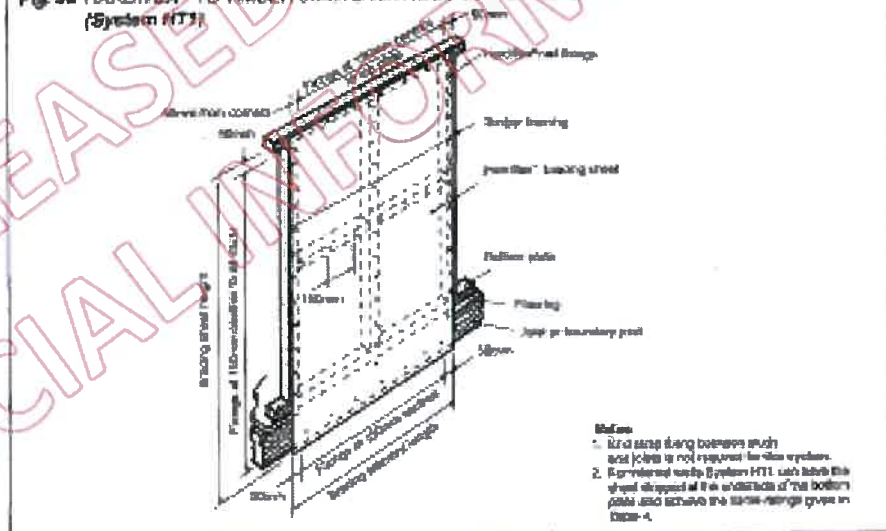
There is no limit to the length of bracing elements.

When end fixing straps are used, the strap and the holding screw heads/screw heads must be fixed to the end of each element length. When just HD bolts/screw heads are used they are required at the end of each element length.

When group rafter is used it must be at the end of each bracing sheet. When HD bolts/screw heads are required with group rafters they must be at the end of each sheet as shown in the section figure.

Fix all Harditex™ sheets to timber framing with 40 x 2.8mm 316

Fig. 38 HARDITEX™ TO TIMBER JOISTS WITHOUT END STRAPS (System HT1)



unobstructed Harditex™ nails. Nail at 150mm centres (or as specified in the diagram) to sheet edges and to intermediate bracing and nogg.

Nails must be driven a minimum of 12mm from the sheet edge and 50mm from corners. The sheets must be held fast against the framing during racking or relative slab movement.

Drive all nails flush with the Harditex™ sheet surface. Do not punch as this can weaken the nail holding.

Fix all Harditex™ sheets from the centre working towards the outside to avoid distortion.

Certain bracing applications require the use of end nogg. The end nogg must be retained into the framing behind the sheet. (Refer Table 4 and Figs 42, 45, 47 and 48)

**Bracing**

Harditex™ will provide bracing for buildings designed and constructed in accordance with NZS 3604 (NZS 3604 is cited in Approved Document (B) AS1 Clause 4.1.2)

For verification of this aspect of the product refer to BRANZ Approval Certificate No. 229, 1998 (Jensen Harditex™ Bracing System)

Harditex™ when used in the required bracing may also be used with the appropriate fixings as set out in Table 4. Refer also to Fig. 35 to 38 for Harditex™ sheet bracing details.

**Sheets stopped below top plate**  
Where bracing sheets are stopped below the level of the top plate refer to Fig. 49 for details.

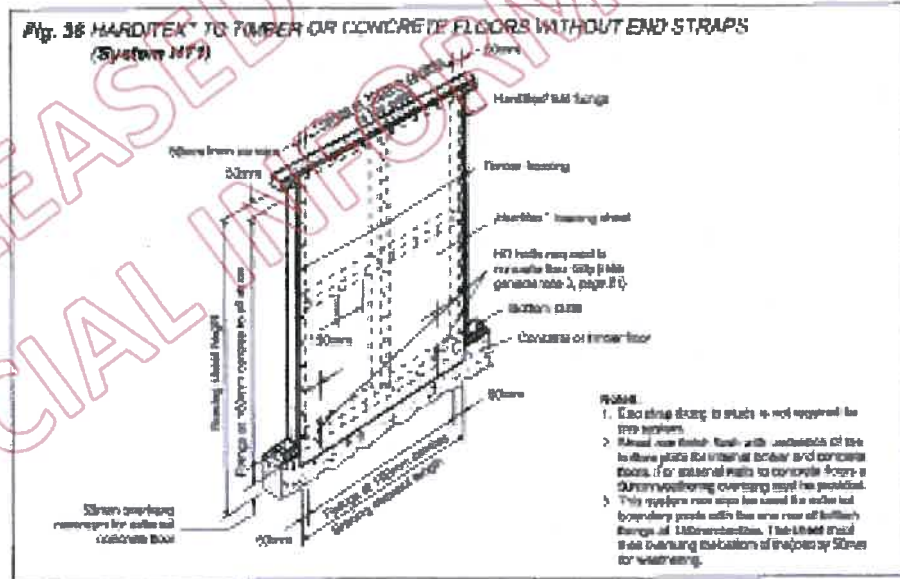
**Bracing panel height**  
Bracing panel height is normally

2400mm and all bracing ratings given in Table 4 are for this panel height.

When other heights are required refer to Clause K.7 NZS 3604. The maximum height for all these bracing panels is 4800mm.

**General notes for all bracing figures**

1. Where boundary joists are required they may be necessary members nailed to the ends of joists and must not be riggered between.
2. For the Harditex™ or Harditex™/Gib® Bracing ratings for all figures refer to Table 4.
3. Where holding down bolts are required the HD bolts must be M12 hot-dipped galvanneal with 50 x 50 x 3mm galvanized washers. Fix as shown in Fig. 4.17 NZS 3604.
4. All steel fixings to bracing panels must be JIS stainless steel to meet the 50-year durability requirements.



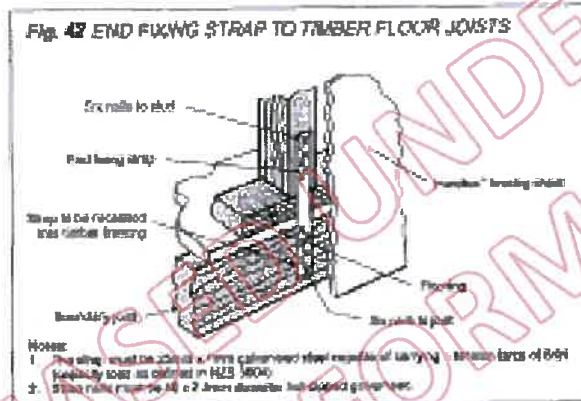
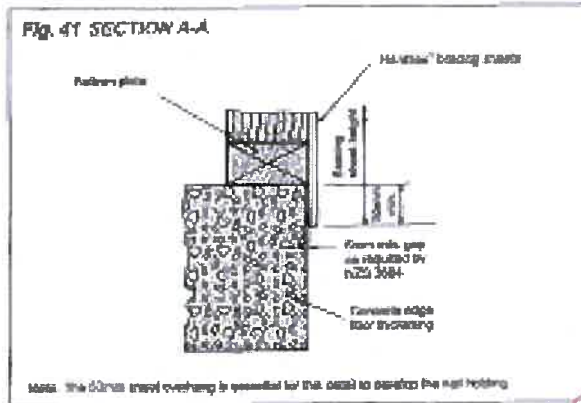
© Jensen Harditex Building Products

BRACING SYSTEMS



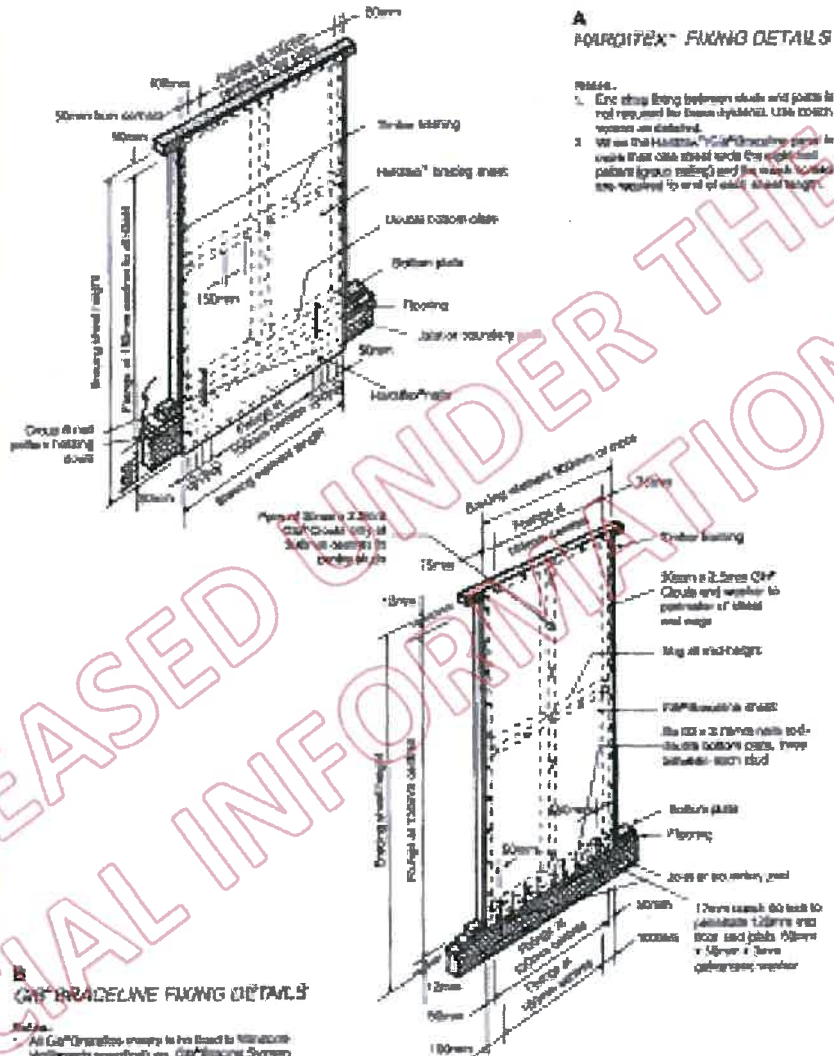






BRACING SYSTEMS

Fig. 89 HARDITEX™/GIB® BRACELINE GROUP FIXING DETAIL TO TAMBER JOISTS  
(Systems HT318)



**A**  
HARDITEX™ FIXING DETAILS

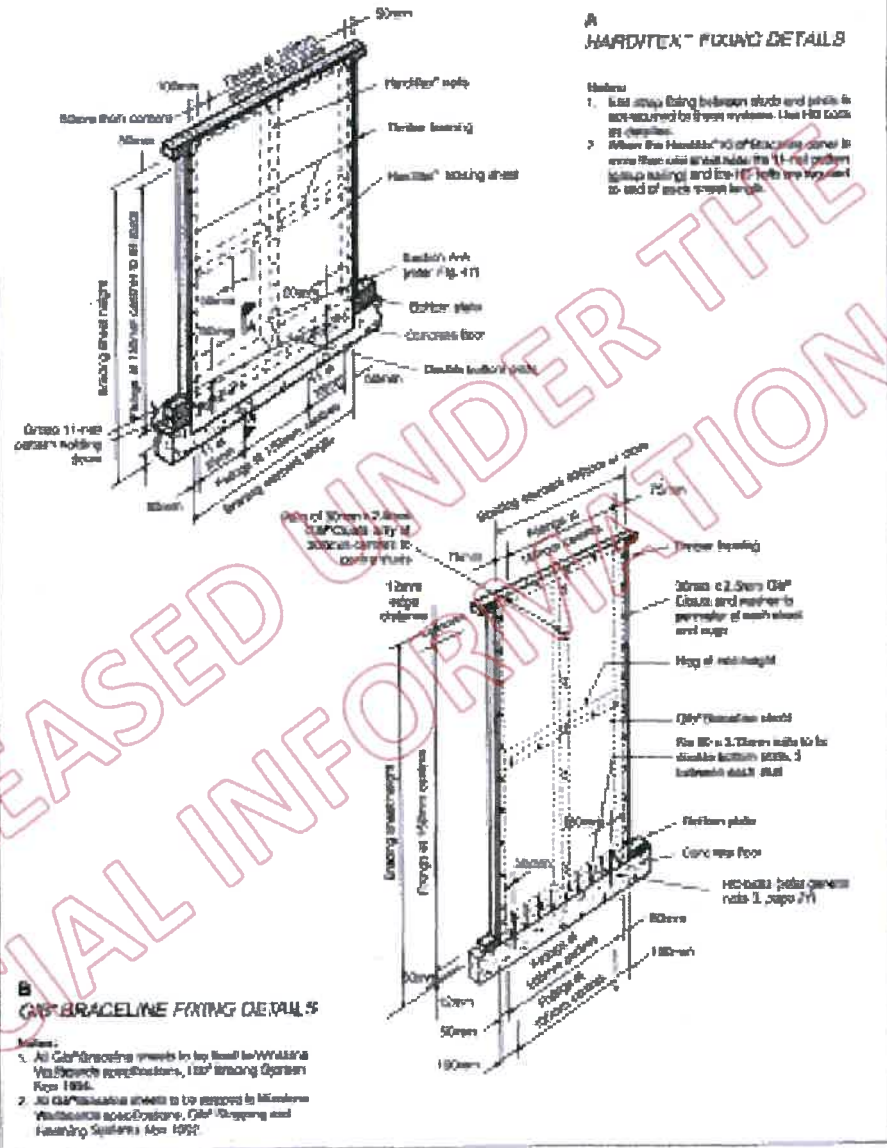
- Notes:
1. Eric stud being braced shall not be used in roof repair for Easysystems™ LITE™ EDRCH systems as detailed.
  2. Use the Harditex™/Gib® Bracing paper to ensure that studs are fixed to the right-hand pattern (shown facing) and the studs fixed are received to end of wall/ stud height.

**B**  
GIB® BRACELINE FIXING DETAILS

- Notes:
1. All GIB® Braceline sheets to be fixed to 150mm x 10mm x 3.5mm CHS, 17mm diameter each stud.
  2. All construction sheets to be trapped in 150mm x 10mm x 3.5mm CHS, 17mm diameter each stud.



Fig. 81 HARDITEX™ KRS® BRACELINE GROUP NAILING DETAIL ON CONCRETE FLOOR (System HTT2B)



BRACING SYSTEMS

RELEASED UNDER THE OFFICIAL INFORMATION ACT

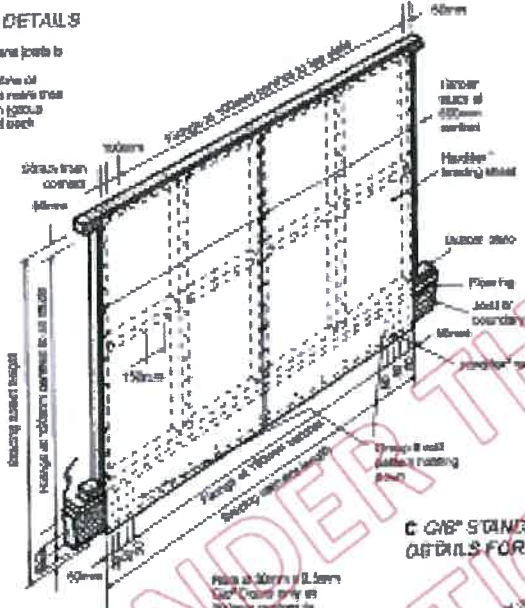


BRACING SYSTEMS

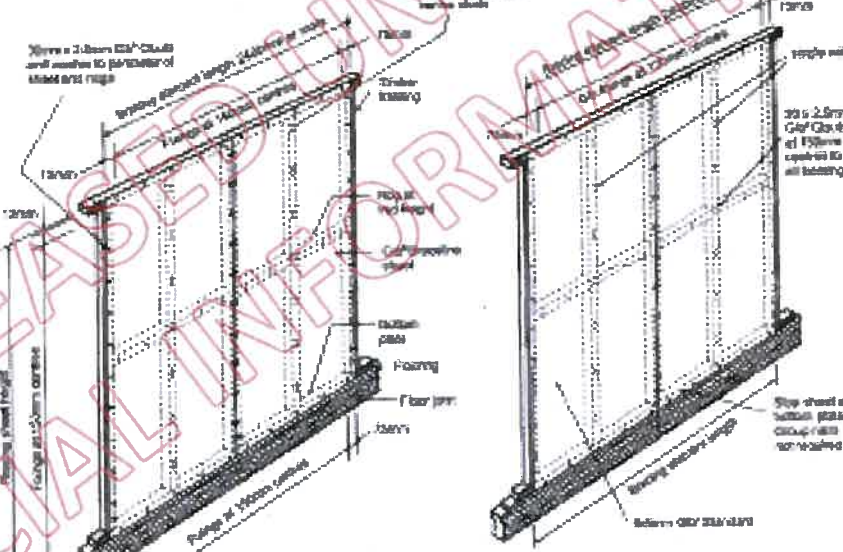
**Fig. 52 HARDITEX™ GIB® BRACELINE GROUP NAILING DETAIL TO TIMBER JOISTS (System HT138)  
HARDITEX™ GIB® STANDARD GROUP NAILING DETAIL TO TIMBER JOISTS (System HT1708)**

**A. HARDITEX™ FIXING DETAILS**

- Notes:**
1. End plate being between studs and joists is not required for these systems.
  2. Where the Harditex™ GIB® Standard or Harditex™ GIB® Standard panel is used, the 300mm edge-to-edge (stud spacing) is required at the end of each 2400mm element.



**C. GIB® STANDARD FIXING DETAILS FOR HT1708**

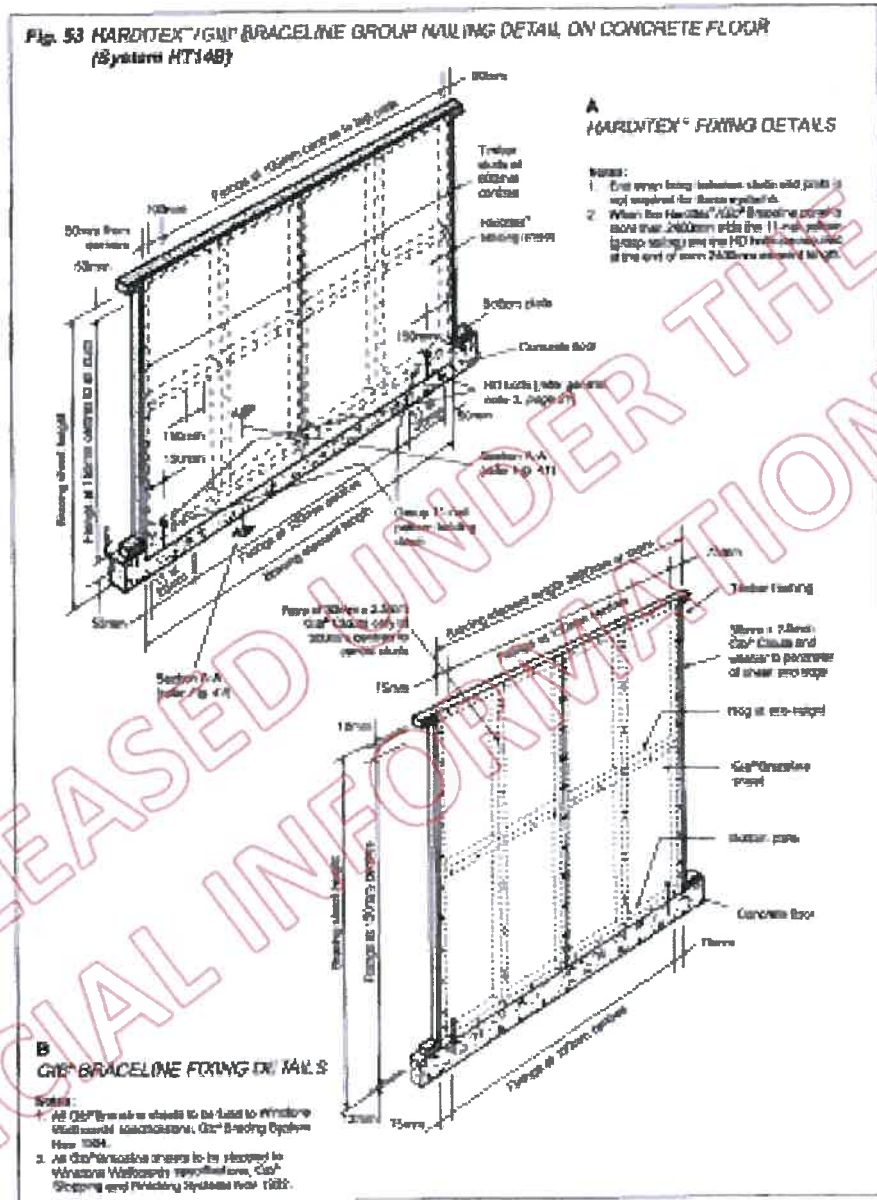


**B. GIB® BRACELINE FIXING DETAILS FOR HT138**

- Notes:**
1. All GIB® Braceline and GIB® Standard sheets to be fixed to Weyburn Millwork specifications. GIB® Bracing System may 1384.
  2. All GIB® Bracing and GIB® Standard sheets to be fixed to Weyburn Millwork specifications, and GIB® Standard Bracing and Fixing System may 1382.

© James Hardie Building Products

Fig. 53 HARDITEX™ GMP BRACELINE GROUP FIXING DETAIL ON CONCRETE FLOOR (System HT148)



BRACING SYSTEMS

RELEASED UNDER THE OFFICIAL INFORMATION ACT









Section 6: New Zealand Building Code compliance

**New Zealand Building Code (NZBC)**

Harditex™ must be used in accordance with this specification. It will then meet the relevant provisions of NZBC:

- Class:
- B1 Structure
  - B2 Durability
  - E2 External Materials
  - F2 Hazardous Building Material
- (Harditex™ is non-hazardous in terms of Class F2)

It will also contribute towards the provisions of B11 Energy Efficiency when the details in this specification are used. (Refer Fig 57)

**Durability**

The Harditex™ finish system meets the performance requirements of NZBC Class E2.1.1(a) of 50 years so long as the integrity of the surface coating system is maintained. This is particularly relevant to the performance of the fixing and jointing systems and when used as the finishing system.

Harditex™ should not be painted and covered within 1 month of finish.

In very severe coastal conditions in New Zealand (not-tipped galvanized nails and screws have a durability of 10 years). Therefore in these locations alternative such as stainless steel fittings must be used.

Very severe coastal conditions are defined as:

- Areas within 500 metres of sea beaches
- Areas within 200 metres of non-sea beaches

**NOTES:**

1. 500 metres is a guide, always refer to some coastal area risk spray map that extend north further than 500 metres. However, steel corrosion factors and

prevailing on-shore winds must be taken into consideration.

2. Areas of high thermal activity must also be regarded as very severe conditions.

To meet the 50-year bracing durability requirements, stainless-steel nails must be used for all bracing straps, 40mm and 50mm x 2.3mm 188 grade stainless-steel nails are available from a selection of James Hardie products.

**Serviceable life**

Harditex™ is not susceptible to long-term moisture damage and when the jointing, sealing, finishing and coating details are maintained the Harditex™ is expected to have a serviceable life of at least 50 years.

**BRANZ appraisal**

Harditex™ has passed the following BRANZ Appraisal Certificates:

- Mo 220 (1995) James Hardie Wall Bracing System
- No 243 (1995) Harditex™ - Exterior Substrate for Coating Systems

**Bracing systems**

Harditex™ 7.0mm and 9mm sheets are suitable when used as wall bracing in terms of NZS 3604. For full details

of the Harditex™ bracing system refer to page 19-21.

**Maintenance**

Regular maintenance of the various jointing and coating systems is essential to ensure water ingress is prevented over the life of the building. In particular the following will need careful attention to maintain a water-tight area:

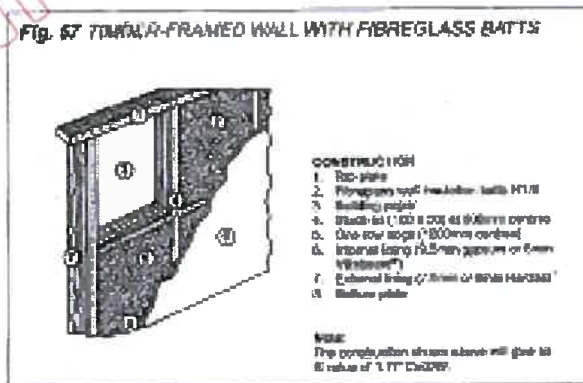
- PVC finishing and jointing
- Joint and Beysol water
- Surface coatings and any cracks at joints.

Regular maintenance is required to prevent the rapid decay in the New Zealand Building Code. Maintenance also has an effect on system performance, therefore it must be shown that regular maintenance has been carried out for product warranties to be upheld.

**Maintenance definition**

- A regular check every 12 months to confirm there is no deterioration of any components
- Washdown of the painted surface every 12 months
- Re-coating of painted surfaces every 7 to 12 years

Fig. 67 TIMBER-FRAMED WALL WITH FIBREGLASS BATTS



- CONSTRUCTION**
1. 50x100mm
  2. Fibreglass wall batten (with 100mm)
  3. Building paper
  4. Mesh (100 x 200 @ 600mm centre)
  5. One row mesh (100mm centre)
  6. Internal fixing (50mm x 60mm x 60mm)
  7. External fixing (70mm x 60mm x 60mm)
  8. Surface plaster

**NOTE:**  
The complete detail above will give a R value of 1.17 (NZS 4234)

Fire-resistance rating and frame type	Minimum Harditex Ltd specification number	Fire-resistance ratings required
15/15/15 timber	GB70 15	One layer 9.5mm GIB® Standard each side frame
15/15/15 steel	GB96 15	One layer 12.5mm GIB® Standard each side frame
30/30/30 timber	GB70 30	One layer 9.5mm GIB® Pyraline each side frame
30/30/30 steel	GB96 30a	One layer 16mm GIB® Pyraline each side frame
60/60/60 timber	GB70 60	One layer 12.5mm GIB® Pyraline each side frame
60/60/60 steel	GB96 60a	One layer 16mm GIB® Pyraline each side frame

Note: To ensure the GIB® Pyraline is protected from the weather once erected the following is essential. Fit the Harditex™ building paper and Harditex™ immediately the GIB® Standard or GIB® Pyraline is erected. The Harditex™ must be coated promptly to stop any water ingress onto the GIB® Standard or GIB® Pyraline.

The time cycle will depend on the joint system used. Check with the joint manufacturer for the life expectancy of the system.

**Energy efficiency**

A timber-frame wall clad with 7.5mm or 9mm insulated Harditex™ (refer Fig 57) will exceed the 1.5°Cm<sup>2</sup>/W requirement of thermal resistance as cited by Acceptable Solution E2/AS1 and therefore the requirements of BS2476 Class E3 should be met in heating if adequate insulation is provided.

**Fire-resistance ratings (load bearing)**

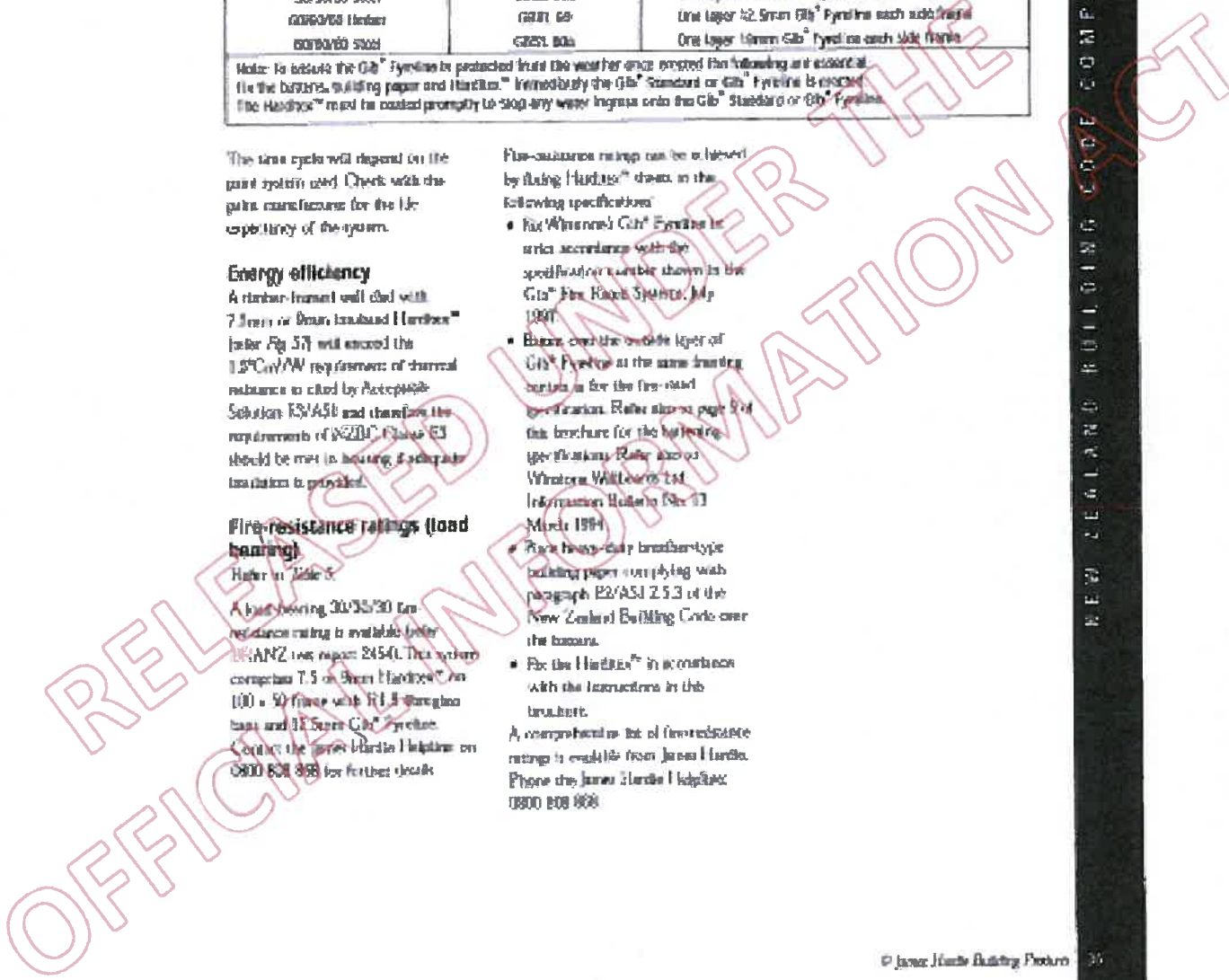
Refer to table 5.  
A load-bearing 30/30/30 fire-resistance rating is available with the ANZ 1000 system 24540. This system comprises 7.5 or 9mm Harditex™ on 100 x 50 frames with 11.4 strength batts and 12.5mm GIB® Pyraline. Contact the James Hardie Holdings on 0800 808 888 for further details.

Fire-resistance ratings can be achieved by fitting Harditex™ cladd in the following specifications:

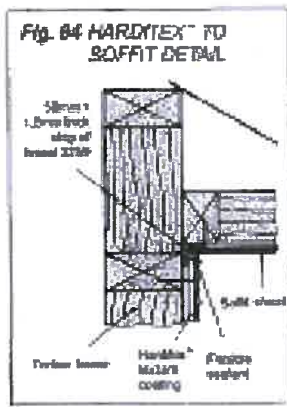
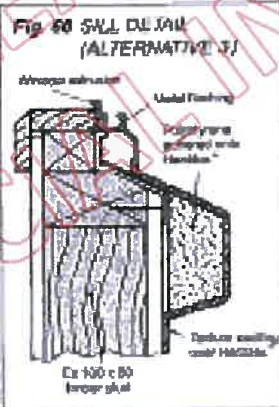
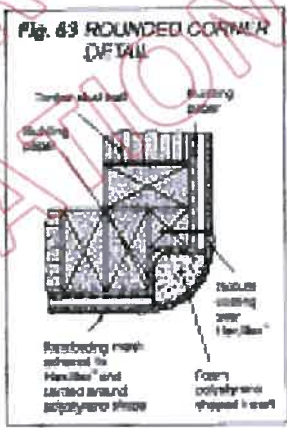
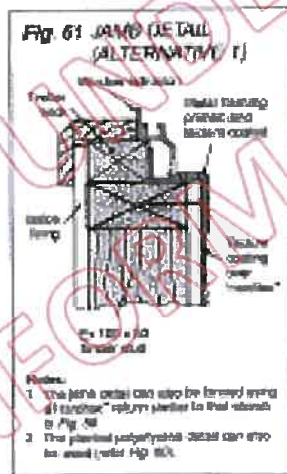
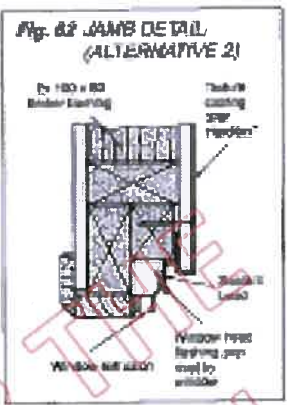
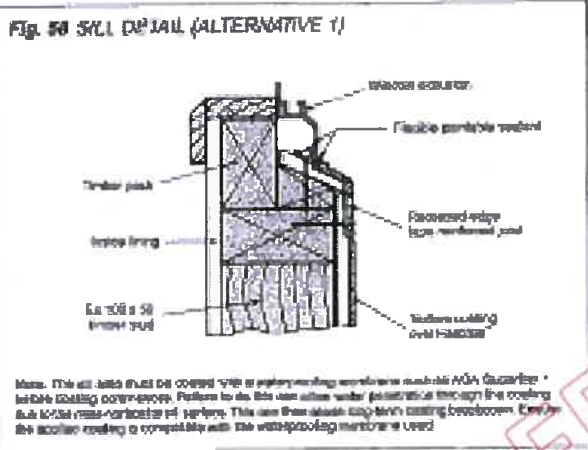
- For Windows: GIB® Pyraline in strict accordance with the specification number shown in the GIB® Fire Rated Systems, May 1991.
- Batten over the outside layer of GIB® Pyraline at the same framing centres as for the fire-rated specification. Refer also to page 9 of this brochure for the full fire rating specifications. Refer also to Windows Wallboards Ltd Information Bulletin No. 11 March 1994.
- Place heavy-duty breather-type building paper complying with paragraph E2/AS1 2.5.3 of the New Zealand Building Code over the battens.
- For the Harditex™ in accordance with the instructions in this brochure.

A comprehensive list of fire-resistance ratings is available from James Hardie. Phone the James Hardie Helpline: 0800 808 888.

NEW ZEALAND BUILDING CODE COMPLIANCE



FINISHING THE SYSTEM









FINISHING THE SYSTEM

Harditex™ jointing and coating systems		
<p>The following organisations have authorised the listing of their names as independent providers of products and services which may be used in conjunction with Harditex™ and Harditex™ Premium. These organisations will provide contact details of their authorised jointing and coating applicators throughout New Zealand.</p> <p>Providing the Harditex™ and/or Harditex™ Premium is installed in full accordance with the current published Harditex™ technical literature then these businesses should provide a warranty covering the jointing and surface coating of the system.</p> <p>James Hardie Building Products warrants the Harditex™ and Harditex™ Premium products provided these have been installed in full accordance with the current published Harditex™ literature.</p>		
COMPANY	JOINTING SYSTEMS	COATING SYSTEMS
<p>Ematic Ltd Wellington (04) 681 8045 Auckland (09) 278 8762</p>	<p>Flexipaste and Taping Paste Taping Paste and Liquid</p>	<ul style="list-style-type: none"> <li>- Eskine</li> <li>- FlexForm</li> <li>- Grapato and Colabratato</li> <li>- External Silk</li> <li>- FlexForm</li> </ul>
<p>Ersson Plasters Ltd Wellington (04) 531 0600</p>	<p>Jointflex</p>	<ul style="list-style-type: none"> <li>- Silstone</li> <li>- Fluidon 5</li> </ul>
<p>Hapler Industries Ltd Auckland (09) 529 2829</p>	<p>SJ Jointing Systems</p>	<ul style="list-style-type: none"> <li>- Flexcrete</li> </ul>
<p>Depux Industries Ltd Dunedin (03) 578 0214</p>	<p>Chemcrete Superflex 2</p>	<ul style="list-style-type: none"> <li>- Chemcrete Sprayers 6</li> <li>- Chemcrete Access</li> <li>- Chemcrete Covers</li> </ul>
<p>Hitchins Coatings Ltd Auckland (09) 360 1243</p>	<p>Ferracell 680 Gap Filler and Ferracell 685 Hardener Compound</p>	<ul style="list-style-type: none"> <li>- Ferracell Varnish</li> <li>- Ferracell 672 Topcoat</li> </ul>
<p>Coastaltek Coatings Auckland (09) 839 3308</p>	<p>Armaflex Filler</p>	<ul style="list-style-type: none"> <li>- Armaflex Flexible Oil Spill</li> <li>- Armaflex Primer</li> <li>- Armaflex Insulation Joint</li> </ul>
<p>Plaster Systems Ltd Auckland (09) 444 9440</p>	<p>Multiple Multiple Plaster and Filler and Multiple Finishing Compound</p>	<ul style="list-style-type: none"> <li>- Multiple Plaster and Multiple Substrate Finish</li> <li>- Crystal Spunge</li> <li>- Coloured Spunge</li> <li>- Penetrating Acrylic Primer</li> <li>- Multiple Rescrete</li> </ul>
<p>Coastal Coatings Ltd Tauranga (07) 478 3284</p>	<p>Acrylic Texture Plaster</p>	<ul style="list-style-type: none"> <li>- Acrylics Texture Coat followed by 3 coats Duluxone Seral Fines Acrylic</li> </ul>
<p>Alchemis Ltd Auckland (09) 274 6862</p>	<p>Alchemis Aquafill</p>	<ul style="list-style-type: none"> <li>- Alchemis Aquaflex Protection followed by 2 coats Alchemis Body Coat</li> </ul>
<p>Special Plasters Auckland (09) 378 5976</p>	<p>Flexcrete 500 Jointing Coat</p>	<ul style="list-style-type: none"> <li>- Flexcrete followed by one Cold Colour Trend III Build colour</li> <li>- 7 coats Silphide</li> </ul>
<p>Ultraflex Textures Coatings Ltd Dunedin Auckland (09) 426 2242</p>	<p>Ultraflex Smooth Patch</p>	<ul style="list-style-type: none"> <li>- Ultraflex Smooth coat followed by Ultraflex Res coat</li> </ul>
<p>ACE Plaster (NZ) Ltd Wellington (04) 558 4752</p>	<p>Acce Patch 500</p>	<ul style="list-style-type: none"> <li>- Acce Patch 501</li> <li>- Acce Top Intermediate 351</li> <li>- Acce Shield 355</li> <li>- Acce-Clash 358</li> </ul>
<p>Acum Acrylics (Synocrete Holdings Ltd) Tauranga (07) 578 5347</p>	<p>Synocrete jointing compound</p>	<ul style="list-style-type: none"> <li>- Synocrete acrylic pigmented texture system</li> </ul>
<p>Granocrete Waihi PL Ltd (009) 858 4006</p>	<p>Granocrete HI and Granocrete Smooth</p>	<ul style="list-style-type: none"> <li>- Granocrete decorative finishstone</li> <li>- Granocrete</li> <li>- Granopanel</li> </ul>
<p>Levee A Co (09) 232 7045</p>	<p>Flexcrete</p>	<ul style="list-style-type: none"> <li>- Levee Elastomerik, Texture Coat Fing, Medium or Coarse</li> </ul>

© James Hardie Building Products

RELEASED UNDER THE  
OFFICIAL INFORMATION ACT

## Appendix J - Cost Schedule

Tyburnia Ave Remedial Works

ESTIMATE OF COST FOR  
 REMEDIAL WORKS FOR UNITS B, C,D & E  
 7 TYBURNIA AVENUE, MT ROSKILL, AUCKLAND

ITEM	DESCRIPTION	QUANTITY	UNIT	TOTAL	
				RATE	AMOUNT
<b><u>DEMOLITION</u></b>					
1	Demolition and removal items are included under the relevant elements, as applicable			Note	
<b><u>ROOF &amp; PARAPETS</u></b>					
2	Remove parapet cap flashing	85	m	8.00	680.00
3	Remove apron flashing	98	m	6.00	588.00
4	Remove Harditex cladding and building paper from back of parapet	22	m <sup>2</sup>	35.00	770.00
5	100 x 50mm treated timber plate to form new parapet	24	m	20.00	480.00
6	Treated timber battens to form drainage cavity	22	m <sup>2</sup>	35.00	770.00
7	Trea timber with "Framesaver"		Sum		500.00
8	"Monotek" fibre cement cladding on building paper to parapets in narrow widths	22	m <sup>2</sup>	160.00	3,520.00
9	Colorsteel parapet cap flashing 450mm girth	85	m	50.00	4,250.00
10	Colorsteel apron flashing 350mm girth	98	m	40.00	3,920.00
11	Three coats of acrylic paint on fibre cement cladding	22	m <sup>2</sup>	25.00	550.00
<b><u>EXTERNAL WALLS</u></b>					
12	Window reveals are included under windows & doors			Note	
13	Remove textured fibre cement cladding including building paper	550	m <sup>2</sup>	30.00	16,500.00
14	Remove fibreglass insulation	550	m <sup>2</sup>	3.50	1,925.00
15	Remove rainwater head and set aside for re-use	2	No.	25.00	50.00
16	Remove downpipes and set aside for re-use	16	No.	20.00	320.00
17	Remove fascia or barge board	60	m	5.00	300.00
18	Remove eaves gutter and set aside for re-use	45	m	8.00	360.00

Page 1

Tyburnia Ave Remedial Works

ITEM	DESCRIPTION	QUANTITY	UNIT	TOTAL	
				RATE	AMOUNT
19	Remove rotten timber wall framing (Provisional)	110	m2	5.00	550.00
20	Remove Gibraltar board & trim	200	m2	15.00	3,000.00
21	100 x 50mm treated timber wall framing (Provisional)	110	m2	80.00	8,800.00
22	Treated timber battens to form drainage cavity	550	m2	30.00	16,500.00
23	Treat timber with "Framesaver"		Sum		1,500.00
24	Fibreglass insulation	550	m2	14.00	7,700.00
25	"Monotek" fibre cement cladding on building paper	550	m2	145.00	79,750.00
26	Gibraltar board wall linings & trim	200	m2	48.00	9,600.00
27	Treated timber fascia or barge board	60	m	35.00	2,100.00
28	Refix existing rainwater gutter	45	m	15.00	675.00
29	Refix downpipes	16	No.	25.00	400.00
30	Refix rainwater head	2	No.	30.00	60.00
31	Three coats of acrylic paint on fibre cement cladding	550	m2	25.00	13,750.00
32	Two coats of acrylic paint on Gibraltar board walls and trim	450	m2	20.00	9,000.00
<b><u>WINDOWS &amp; EXTERNAL DOORS</u></b>					
33	Windows and external doors are powdercoated aluminium, single glazed, including hardware etc. Unless noted otherwise windows and doors are to be stored on site		Note		
34	Remove window or door unit	48	No.	80.00	3,840.00
35	Remove double automatic opening garage door & frame	4	No.	150.00	600.00
36	Timber reveal liner to suit increased width	250	m	25.00	6,250.00
37	Refix window or door unit	48	No.	200.00	9,600.00
38	Refix garage door frame	4	No.	250.00	1,000.00
39	Paint two coats of semi-gloss paint on reveal liner	250	m	5.00	1,250.00
<b><u>FLASHINGS</u></b>					
40	Flashings are aluminium and rates shall include for all sealants and the like as required		Note		
41	Window & door head flashings	85	m	32.00	2,720.00
42	Window sill flashing	65	m	32.00	2,080.00



Tyburnia Ave Remedial Works

ITEM	DESCRIPTION	QUANTITY	UNIT	TOTAL	
				RATE	AMOUNT
43	Window & door jamb flashing	145	m	36.00	5,220.00
<b><u>FLOORS &amp; FINISHES</u></b>					
44	Remove carpet & store for re-use	130	m2	15.00	1,950.00
45	Remove damaged particle board flooring	50	m2	20.00	1,000.00
46	Remove damaged floor framing	50	m2	50.00	2,500.00
47	150 x 50mm treated timber floor framing including trimmers etc	50	m2	90.00	4,500.00
48	Treat existing framing with 'Framesaver'		Sum		300.00
49	20mm Particle board flooring	50	m2	75.00	3,750.00
50	Relay existing carpet on new underlay include for cleaning	130	m2	40.00	5,200.00
<b><u>CEILINGS</u></b>					
51	Remove Gibraltar board ceiling and trim on strapping	80	m2	20.00	1,600.00
52	Gibraltar board on strapping, include for trim	80	m2	85.00	6,800.00
53	Paint two coats of acrylic paint on new & existing ceilings	180	m2	20.00	3,600.00
<b><u>FIXTURES &amp; FITTINGS</u></b>					
54	Allow for the provisional sum of <u>\$5,000.00</u> for the removal and re-fixing of sundry fixtures and fittings		Sum		5,000.00
<b><u>ELECTRICAL</u></b>					
55	Allow for the removal and re-fixing of light and power outlets and switches and the like		Sum		2,000.00
56	Allow for the removal and re-fixing of internal and external light fittings, automatic garage door opener etc		Sum		1,500.00
<b><u>EXTERNAL WORKS</u></b>					
57	Allow for the provisional sum of <u>\$10,000.00</u> for adjustments to pavement levels, landscaping replacement and the like		Sum		10,000.00
<b><u>RE - BUILDING DECKS &amp; BALUSTRADES</u></b>					
58	Remove beam	24	m	7.00	168.00
59	Remove textured fibre cement cladding including building paper	70	m2	30.00	2,100.00
60	Demolish balustrade wall	30	m2	40.00	1,200.00
61	Demolish double stud party division wall including fireproofing	10	m2	80.00	800.00
62	Demolish deck framing	38	m2	50.00	1,900.00

Tyburnia Ave Remedial Works

ITEM	DESCRIPTION	QUANTITY	UNIT	TOTAL	
				RATE	AMOUNT
63	Remove plywood decking	38	m2	25.00	950.00
64	Remove fibre cement soffit lining on strapping	10	m2	20.00	200.00
65	Remove balustrade wall capping	30	m	8.00	240.00
66	Remove handrail and set aside for re-use	30	m	10.00	300.00
67	Remove party wall cap flashing	4	m	8.00	32.00
68	Remove deck tiles and membrane	38	m2	25.00	950.00
69	200 x 100mm treated timber beam	24	m	50.00	1,200.00
70	100 x 50mm treated timber wall framing	30	m2	75.00	2,250.00
71	Double 100 x 50mm treated timber wall framing, include for fire rated linings both sides	0	m2	220.00	2,200.00
72	Treated timber battens to form drainage cavity	70	m2	30.00	2,100.00
73	"Monotek" fibre cement cladding on building paper	70	m2	145.00	10,150.00
74	150 x 50mm treated timber balcony floor framing, include for trimmers etc	38	m2	80.00	3,040.00
75	20mm treated plywood decking	38	m2	75.00	2,850.00
76	Fibre cement soffit lining on strapping	10	m2	65.00	650.00
77	Treated timber balustrade capping	30	m	35.00	1,050.00
78	Refix handrail on brackets, include for length adjustment as necessary	30	m	40.00	1,200.00
79	Kwila or equal decking on batten	38	m2	200.00	7,600.00
80	Membrane deck covering, include for upstands etc	38	m2	150.00	5,700.00
81	Colorsteel cap flashing 450mm girth	4	m	50.00	200.00
82	Colorsteel balustrade cap flashing 250mm girth	30	m	35.00	1,050.00
83	Paint three coats of acrylic paint on fibre cement cladding	80	m2	25.00	2,000.00
<b>GENERAL</b>					
84	Allow for scaffolding		Sum		18,000.00
85	Allow for rubbish removal		Sum		8,000.00
86	Allow for temporary propping and supports		Sum		4,000.00
87	Temporary protection and covering		Sum		5,000.00
88	Supervision		Sum		12,000.00

Tyburnia Ave Remedial Works

ITEM	DESCRIPTION	QUANTITY	UNIT	TOTAL	
				RATE	AMOUNT
89	Inspection and testing		Sum		2,000.00
90	Other Preliminary and General items insurances etc		Sum		7,500.00
					<u>379,708.00</u>
85	Contractors Margin		10%		37,970.80
					<u>417,678.80</u>
86	Professional and Consent fees				55,000.00
87	Contingencies				70,000.00
					<u>542,678.80</u>
88	Goods and Services Tax		12.50%		67,834.85
					<u>610,513.65</u>
90	Temporary Accomodation Costs				10,000.00
					<u>620,513.65</u>
	<b><u>TOTAL (INCLUSIVE OF G.S.T)</u></b>				<b><u>620,513.65</u></b>

RELEASED UNDER THE OFFICIAL INFORMATION ACT



Tyburnia Ave Remedial Works

ITEM	DESCRIPTION	QUANTITY	UNIT	TOTAL	
				RATE	AMOUNT
<b>ESTIMATED COST FOR COMMON PROPERTY (AS ELEVATION PROVIDED)</b>					
<b>FOR</b>					
<b>7 TYBURNIA AVENUE, MT ROSKILL, AUCKLAND</b>					
<b>NOTE:</b>					
Cost is part of overall Remedial Work Estimate					
	External Walls & Balustrades				29,000.00
	External Doors				1,500.00
	Flashings				1,400.00
	Electrical				600.00
	Preliminary & General costs				4,000.00
	Margin, fees, contingencies etc				9,000.00
					45,500.00
	Goods & Services Tax 12.5%				5,687.50
	<b><u>TOTAL (INCLUSIVE OF G.S.T.)</u></b>				51,187.50
	<b><u>50% OF TOTAL</u></b>				25,593.75

RELEASED UNDER THE OFFICIAL INFORMATION ACT

Note: Excluded items - Professional fees / Legal fees / Temporary accommodation Storage of personal items and Relocation costs

**Appendix K**

Connell Wagner: Opinion

**2 Pages**

RELEASED UNDER THE  
OFFICIAL INFORMATION ACT

## Appendix K – Connell Wagner: Opinion

**Connell Wagner**

### Weathertight Services Group

Claim No:

Description: 7 Tyburnia Ave, Mt Roskill, AUCKLAND

Site Legal Description: Lot 2 DP 56162

Unit Description - Legal: Units on Unit Plan DP 204595

Physical Address: 7 Tyburnia Ave, Mt Roskill, AUCKLAND

This unit plan comprises 5 principal units (Units A – E), 4 accessory units (AU1 – AU4), and common property. We comment on the location of the unit boundaries in relation to the external structure for each principal unit as follows. We note that there are no sections on the plan face, and insufficient details to determine the location of the roof in relation to the upper level of the unit and common property. This could only be confirmed by a field survey.

#### Unit A:

The boundaries of Unit A extend around a wooden fence. Therefore the external walls of both the house and the garage are entirely within the unit boundaries.

#### Unit B:

The front boundary of Unit B (eastern elevation) follows the midline of the external wall, therefore the outer half of this wall is within Common Property. Along the southern elevation, Unit B adjoins Unit C and the unit boundary is at the midline of this wall. On the western and northern elevations, the unit boundary is at the midline of the wall. The outer half of the external walls are within AU 1.

#### Unit C:

The front boundary of Unit C (eastern elevation) follows the midline of the external wall, therefore the outer half of this wall is within Common Property. Along the northern elevation, Unit C adjoins Unit B and the unit boundary is at the midline of this wall. On the western and southern elevations, the unit boundary is at the midline of the wall. The outer half of the external walls are within AU 2.

#### Unit D:

The front boundary of Unit D (eastern elevation) follows the midline of the external wall, therefore the outer half of this wall is within Common Property. Along the southern elevation, Unit D adjoins Unit E and the unit boundary is at the midline of this wall. On the western and northern elevations, the unit boundary is at the midline of the wall. The outer half of the external walls are within AU 3.

#### Unit E:

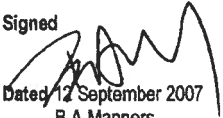
The front boundary of Unit E (eastern elevation) follows the midline of the external wall, therefore the outer half of this wall is within Common Property. Along the northern elevation, Unit E adjoins Unit D and the unit boundary is at the midline of this wall. On the western and southern elevations, the unit boundary is at the midline of the wall. The outer half of the external walls are within AU 4.

#### Disclaimer:

We note that this opinion is reliant solely on the information contained on the unit plan of survey, DP 204595, without any knowledge or understanding of the site or buildings other than as provided on the said plan of survey.



This opinion is also a general opinion on the unit plan of survey. Should more specific points of reference be required, or be of interest, please contact the under signed writer.

Report Prepared By:  
Signed   
Dated 12 September 2007  
B A Manners  
MNZIS  
Principal  
Connell Wagner

RELEASED UNDER THE  
OFFICIAL INFORMATION ACT