GTEK™

PREMIUM GYPSUM TECHNOLOGY

GTEK™ **PROTECT**

**INTERTENANCY WALL
FIRE & ACOUSTIC SOLUTIONS**

WHY GTEK™?

WITH OUR ALL-AUSTRALIAN GTEK™ RANGE OF INTERIOR LINING PRODUCTS, YOU BENEFIT FROM SUSTAINABLE, QUALITY-TESTED TECHNOLOGY, FULL BGC INTERIOR LINING SYSTEMS COMPATIBILITY AND OUR CLASS-LEADING SERVICE NETWORK.

▶ **TECHNOLOGY /** Light, modular GTEK™ technology eases installation for seamless results

▶ **SUSTAINABILITY / GECA certified:** sustainable manufacture means higher Green Star ratings for your building

▶ **AUSTRALIAN MADE / All-Australian:** closest available links between local manufacture and supply

▶ **SERVICE /** Vast distribution network assures best-in-class service delivery

▶ **QUALITY /** Independent testing accords with Australia's toughest build-quality accreditations

▶ **SYSTEMS /** Full compatibility with extensive BGC interior lining systems range

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GTEK™ **PROTECT**

The innovative GTEK™ Protect System is one of Australia's newest separating wall systems providing design flexibility, simple construction and outstanding acoustic performance.

BGC-2014
GECA 04-2011 v2
Panel Boards

The GTEK™ Protect System is a double wall system that incorporates fire-resistant GTEK™ Protect 25mm plasterboard panels within the wall cavity.

The GTEK™ Protect System has been tested and certified to meet a Fire Resistance Level (FRL) of 60/60/60 and acoustic performance up to and exceeding $R_W + C_{tr} = 50dB$.

What's good about The GTEK™ Protect System

▶ Quick and easy to construct.

▶ Service penetrations, such as switches, power points, light fittings and pipes are easy to install through the outer layers of the system.

▶ Internal wall linings are installed at the plastering stage as per normal construction sequence.

▶ No wet trades required.

▶ Mould resistant.

GTEK™ PREMIUM GYPSUM TECHNOLOGY

FIGURE 1 – ASSEMBLED SYSTEM

GTEK™ Fire 16mm

GTEK™ Protect 25mm

GTEK™ Fire 16mm

(Separation by GTEK™ Protect 25mm at eaves not shown for clarity)

FIGURE 2 – CONTINUOUS STEEL TRACKS FIXED BACK TO BACK

Continuous steel
GTEK™ Protect
J Tracks fixed back to back

GTEK™ Protect H Studs must be aligned and fully engaged
into top and bottom of steel tracks

HOW GTEK™ PROTECT WORKS

GTEK™ Protect is unlike a conventional fire rated wall system where fire resistant outer linings provide protection to the wall substrate. In the GTEK™ Protect System, the main fire barrier is within the wall cavity and is specifically designed to protect the structure on the opposite side of the fire. GTEK™ Protect 25mm depends on this structure for support in the event of the structure on the fire side collapsing or losing stability.

GTEK™ Protect Aluminium Clips are used to attach the GTEK™ Protect 25mm to the timber frames on both sides in order to ensure that the GTEK™ Protect 25mm is not damaged by the collapse of the structure on the fire side. As the clips on the fire side melt, GTEK™ Protect 25mm is disconnected from the collapsing structure and is supported by the clips and the structure on the protected side for the specified fire rating period.

Please note that steel clips must **not** be used in the GTEK™ Protect System as their use compromises the integrity of the GTEK™ Protect 25mm during the fire.

The inclusion of GTEK™ Sound 13mm or GTEK™ Total Plus 13mm provides additional options where the BCA requires $R_W + C_{tr} = 50dB$ acoustic rating.

This brochure covers timber framed GTEK™ Protect Systems. BGC Plasterboard can also advise on using the GTEK™ Protect System in steel framed buildings.

FIGURE 3 – BEFORE THE FIRE

GTEK™ Protect Aluminium Clips both sides of fire barrier

GTEK™ Protect 25mm
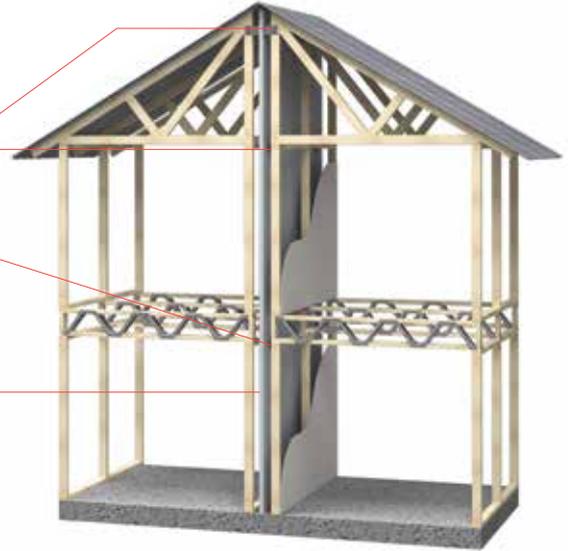
FIGURE 4 – DURING THE FIRE

GTEK™ Protect Aluminium Clips on the fire side melt
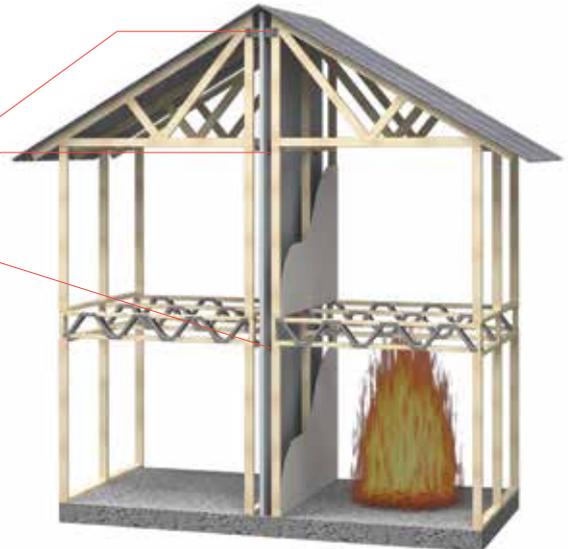
FIGURE 5 – AFTER THE FIRE

If building on the fire side of the GTEK™ Protect 25mm collapses, the fire barrier is held in place by the GTEK™ Protect Aluminium Clips on the other side.

Building on the other side is protected by the GTEK™ Protect 25mm.

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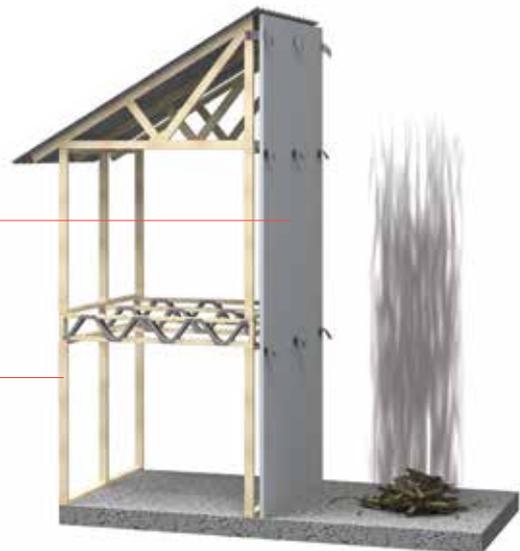
EARLY FIRE INDICES

GTEK™ Protect 25mm complies with AS 1530.3

- Ignitability Index   0
- Spread of Flame Index   0
- Heat Evolved Index   0
- Smoke Developed Index   3

GTEK™ Fire 16mm complies with AS 1530.3

- Ignitability Index   0
- Spread of Flame Index   0
- Heat Evolved Index   0
- Smoke Developed Index   1

FIRE RESISTANCE

Plasterboard is naturally fire resistant and is classified as non-combustible according to the Building Code of Australia (BCA) Section C1.12.

DIMENSIONAL STABILITY

Plasterboard is dimensionally stable when compared to other building materials. Two measures of dimensional stability are:

Thermal coefficient of linear expansion
(a) = 16.7 x 10-6 /˚C, measured unrestrained over the temperature range of 3˚C - 32˚C

Hygrometric coefficient of expansion
6.5 x 10-6 /%RH, measured unrestrained over the Relative Humidity (RH) range of 10% - 90%

THERMAL PROPERTIES

The R value of plasterboard is a measure of its thermal insulation ability. Higher numbers indicate a better insulator. The 'R' values for plasterboard are:

- 10mm plasterboard = 0.05Km2/W
- 13mm plasterboard = 0.05Km2/W
- 16mm plasterboard = 0.06Km2/W
- 25mm plasterboard = 0.08Km2/W

HANDLING AND STORAGE

GTEK™ Fire 16mm and GTEK™ Protect 25mm should be stacked flat, up off the ground and supported on level, equally spaced (max 450mm) gluts. Care should be taken to ensure edges are not damaged when handling.

GTEK™ Fire 16mm and GTEK™ Protect 25mm should be delivered to site immediately prior to installation to reduce the risk of damage.

As per AS/NZ2588 – The area to be lined or partitioned shall be protected from the weather and sufficiently dry to ensure that the fixed gypsum lining will not suffer subsequent deterioration due to moisture absorption.

GTEK™ Protect must be protected and covered over within 2 months of installation at framing stage.

GTEK™ PROTECT SYSTEM COMPONENTS – TABLE 1

GTEK™ Protect Components – supplied by BGC

GTEK™ Protect 25mm	3000 x 600 x 25mm 3600 x 600 x 25mm	
GTEK™ Fire 16mm	2400 x 1200 x 16mm 2700 x 1200 x 16mm 3000 x 1200 x 16mm 3600 x 1200 x 16mm	
GTEK™ H Stud	3000 x 25mm 3600 x 25mm	
GTEK™ J Track	3000 x 25mm	
GTEK™ Aluminium Clip		

GTEK™ Protect System – Other accessories required – not supplied by BGC

GTEK™ Fire Insulation		
Fire mastic	10L Tub	
Fire mastic	600ml Sausage	
6g x 25mm Type 'W' timber screws		
10g x 40mm Type 'L' laminating screws		
10g x 16mm Type 'D' Drill point wafer head screws		
10g x 30mm Type 'D' Drill point wafer head screws		
30mm galvanised nails		
90mm Glasswool insulation		

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DESIGN CONSIDERATIONS

FIRE

The GTEK™ Protect System has been fire tested at Exova Warringtonfire AUST Pty Ltd in VIC.

The GTEK™ Protect System provides Fire Resistance Levels (FRL) of 60/60/60. In the case of a fire, the structural adequacy and load bearing capacity is provided by the wall frame on the other side of the GTEK™ Protect 25mm.

As the primary fire barrier (the GTEK™ Protect 25mm panels) is located in the cavity between the frames, the system permits easy inclusion of services such as electrical and communications cables, water and waste pipes, as long as the primary barrier is not penetrated. In primary living areas, penetrations are acceptable in the outer layers. Service penetrations are allowed through the GTEK™ Protect 25mm in the roof space.

The following penetrations are all suitable in the outer linings and are not required to be fire rated:

▶ electrical, data, or communications cables passing through the linings into the cavity.
▶ baths, cabinets, vanities or shower bases.
▶ standard residential electrical switches and power points.
▶ galvanised steel, copper or plastic water or wastewater pipes of up to 50mm nominal diameter passing through the linings into the cavity.

For other penetrations contact BGC Plasterboard on 1300 652 242.

The following requirements are essential to maintain the fire-rating integrity and acoustic performance of the GTEK™ Protect System:

▶ Use only the specified GTEK™ Protect Aluminium Clips to attach the GTEK™ Protect H Studs to framing members. In the event of a fire, this aluminium clip is designed to melt to allow the framing members on the fire side to fall away leaving the GTEK™ Protect 25mm intact.
▶ Other than the clips, there should be no attachments to the GTEK™ Protect 25mm.
▶ There should be no penetrations through the GTEK™ Protect 25mm apart from approved penetrations in the roof space. Refer to a Building Surveyor for advice.

For design and installation requirements of internal plasterboard wall linings, refer to the GTEK™ Wall brochure.

FIGURE 6 – BASIC CONFIGURATION

90mm Glasswool as required for wall system sound insulation rating.

Note: To achieve $R_W 45$ or $R_W + C_{tr}$ 40 separation, insulation is required in the wall cavity on the opposite side of the pipe.

ACOUSTIC

The GTEK™ Protect System has been the subject of a series of acoustic tests at the CSIRO Acoustic Laboratory at Clayton, Victoria.

Acoustical estimates have been determined by Marshall Day Acoustics.

Small penetrations of linings in occupancy areas such as power points, switches, light fittings and pipes do not need to be acoustically sealed.

GTEK™ Protect 25mm base and internal lining junctions with floors must be sealed with an approved fire acoustic sealant.

The clear distance between the GTEK™ Protect 25mm and wall framing on both sides should not be less than 20mm nor more than 40mm.

All services should be run through the framing. Insulation thicker than the stud framing is allowed.

GTEK™ Fire 16mm laminated to the GTEK™ Protect 25mm should not come into contact with the stud or floor framing. It is recommended the gap between GTEK™ Protect 25mm and timber framing be increased to a minimum 25mm on the GTEK™ Fire side to ensure adequate clearance.

To maintain acoustic performance, service pipes must not be in contact with the GTEK™ Protect 25mm.

The GTEK™ System Protect complies with BCA requirements for 'discontinuous construction'.

DESIGN CONSIDERATIONS

ISOLATED SUPPORT FOR STAIRS

'BCA COMPLIANT, SOUND AND FIRE RATED TIMBER FRAMED CONSTRUCTION – Design and Construction Guide for Class 1a. Attached Buildings – Townhouses', states that impact sound from stair usage typically vibrates its way into separating walls, thus creating a greater likelihood of sound passing across the wall into attached dwellings. The recommended way to prevent this is by isolating the stair structure. Options include:

▶ Using the stringers to support the stairs, at each floor level, without intermediate support from the separating wall in between, ie free standing, or alternatively
▶ Using newel posts rather than the separating wall to support the stair structure
▶ Keeping the treads clear off the separating wall.

STRUCTURAL

MAXIMUM PERMISSIBLE HEIGHT

Height of the GTEK™ Protect System should not exceed 9 metres.

FIGURE 7 – MAXIMUM PERMISSIBLE HEIGHT

Ridge   Parapet

Maximum Height of GTEK™ Protect 25mm 9 metres continuous

CONTROL JOINTS

Where control joints are necessary in the outer layers as per AS2589, contact BGC Plasterboard on 1300 652 242 or www.gtekplasterboard.com.au for construction details.

WIND SPEED

The GTEK™ Protect System is suitable for wind classification N1 and N2 as determined by AS 4055, Wind loads for housing. For higher wind classifications BGC Plasterboard recommends temporary propping of GTEK™ Protect 25mm during construction until the building is enclosed. Propping details are to be designed by a suitably qualified Structural Engineer. Where the GTEK™ Protect System is proposed in cyclonic areas contact BGC Plasterboard for advice.

SUPPORT CLIP SEPARATION

Clips each side of the GTEK™ Protect 25mm must be spaced at no more than 3000mm vertically and 600mm horizontally.

FRAMING

Timber framing to be designed by a suitably qualified Structural Engineer to meet BCA requirements and relevant Australian Standards.

Note: Stud spacing not to exceed 600mm centres.

WET AREAS

In areas classified as Wet Areas in accordance with the BCA, the following linings should be used in lieu of the specified internal linings in order to achieve required fire and acoustic ratings:

WET AREA LININGS – TABLE 2

Specified Internal Lining	Wet Area Lining
10mm GTEK™ Wall	10mm GTEK™ Wet Area
2 x 10mm GTEK™ Wall	2 x 10mm GTEK™ Wet Area or 1 x 6mm BGC Duraliner™ Plus 1 x 10mm GTEK™ Wet Area
10mm GTEK™ Sound	13mm GTEK™ Wet Area
13mm GTEK™ Total Plus	13mm GTEK™ Fire and Wet Area or 1 x 6mm BGC Duraliner™ Plus 1 x 10mm GTEK™ Wet Area

MATERIALS

All materials are available from BGC Plasterboard and must be installed in accordance with current printed instructions. All materials should be stored clear of the ground and provided protection from damage and exposure to the elements.

LININGS FOR OCCUPANCY AREAS

Linings in the occupancy areas (including GTEK™ Fire and Wet Area specified in some GTEK™ Protect Wet Area Systems) do not need to be fire rated and are constructed using the normal installation and finishing methods outlined in the GTEK™ Wall & Ceiling Brochure. Base of linings must be acoustically sealed.

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GTEK™ PROTECT SYSTEMS

Side 1 – 1 x GTEK™ Wet Area 10mm
Side 2 – 1 x GTEK™ Wet Area 10mm

GTEK-PR25001

FRL	STUD DEPTH mm		70	90
	CAVITY INFILL		Rw/Rw+Ctr	
60/60/60	75mm Glasswool R1.8		57/39	61/44
	90mm Glasswool R2.5		57/39	61/44
	90mm Glasswool R2.7		58/40	62/45
	WALL THICKNESS mm		**225**	**265**

Side 1 – 1 x GTEK™ Sound 10mm
Side 2 – 1 x GTEK™ Sound 10mm

GTEK-PR25002

FRL	STUD DEPTH mm		70	90
	CAVITY INFILL		Rw/Rw+Ctr	
60/60/60	75mm Glasswool R1.8		62/43	66/51
	90mm Glasswool R2.5		62/43	66/51
	90mm Glasswool R2.7		63/44	67/52
	WALL THICKNESS mm		**225**	**265**

Side 1 – 1 x GTEK™ Wet Area 13mm
Side 2 – 1 x GTEK™ Wet Area 13mm

GTEK-PR25003

FRL	STUD DEPTH mm		70	90
	CAVITY INFILL		Rw/Rw+Ctr	
60/60/60	75mm Glasswool R1.8		62/44	67/51
	90mm Glasswool R2.5		62/44	67/51
	90mm Glasswool R2.7		63/45	68/52
	WALL THICKNESS mm		**231**	**271**

GTEK™ PROTECT SYSTEMS

Side 1 – 1 x GTEK™ Wall 13mm
Side 2 – 1 x GTEK™ Wall 13mm

GTEK-PR25004

FRL	STUD DEPTH mm	70	90
	CAVITY INFILL	Rw/Rw+Ctr	
60/60/60	75mm Glasswool R1.8	62/43	67/51
	90mm Glasswool R2.5	62/43	67/51
	90mm Glasswool R2.7	63/44	68/52
	WALL THICKNESS mm	**225**	**265**

Side 1 – 1 x BGC Duraliner Plus 6mm
Side 2 – 1 x BGC Duraliner Plus 6mm

GTEK-PR25005

FRL	STUD DEPTH mm	70	90
	CAVITY INFILL	Rw/Rw+Ctr	
60/60/60	75mm Glasswool R1.8	62/44	67/52
	90mm Glasswool R2.5	62/44	67/52
	90mm Glasswool R2.7	63/45	68/53
	WALL THICKNESS mm	**217**	**257**

Side 1 – 1 x GTEK™ Fire 13mm
Side 2 – 1 x GTEK™ Fire 13mm

GTEK-PR25006

FRL	STUD DEPTH mm	70	90
	CAVITY INFILL	Rw/Rw+Ctr	
60/60/60	75mm Glasswool R1.8	64/47	68/53
	90mm Glasswool R2.5	64/47	68/53
	90mm Glasswool R2.7	65/48	69/53
	WALL THICKNESS mm	**231**	**271**

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GTEK™ PROTECT SYSTEMS

Side 1 – 1 x GTEK™ Sound 13mm
Side 2 – 1 x GTEK™ Sound 13mm

GTEK-PR25007

FRL	STUD DEPTH mm	70	90
	CAVITY INFILL	Rw/Rw+Ctr	
60/60/60	75mm Glasswool R1.8	65/47	69/53
	90mm Glasswool R2.5	65/47	69/53
	90mm Glasswool R2.7	66/48	70/54
	WALL THICKNESS mm	231	271

Side 1 – 1 x GTEK™ Total Plus 13mm
Side 2 – 1 x GTEK™ Total Plus 13mm

GTEK-PR25008

FRL	STUD DEPTH mm	70	90
	CAVITY INFILL	Rw/Rw+Ctr	
60/60/60	75mm Glasswool R1.8	65/47	69/53
	90mm Glasswool R2.5	65/47	69/53
	90mm Glasswool R2.7	66/48	70/54
	WALL THICKNESS mm	231	271

Side 1 – 1 x GTEK™ Fire 16mm
Side 2 – 1 x GTEK™ Fire 16mm

GTEK-PR25009

FRL	STUD DEPTH mm	70	90
	CAVITY INFILL	Rw/Rw+Ctr	
60/60/60	75mm Glasswool R1.8	66/48	70/54
	90mm Glasswool R2.5	66/48	70/54
	90mm Glasswool R2.7	67/49	71/55
	WALL THICKNESS mm	237	277

GTEK™ PROTECT SYSTEMS

Side 1 – 1 x GTEK™ Fire and Wet Area 13mm
Side 2 – 1 x GTEK™ Fire and Wet Area 13mm

GTEK-PR25010

FRL	STUD DEPTH mm		70	90
	CAVITY INFILL		Rw/Rw+Ctr	
60/60/60	75mm Glasswool R1.8		65/48	69/54
	90mm Glasswool R2.5		65/48	69/54
	90mm Glasswool R2.7		66/49	70/55
	WALL THICKNESS mm		231	271

Side 1 – 2 x GTEK™ Wall 10mm
Side 2 – 2 x GTEK™ Wall 10mm

GTEK-PR25011

FRL	STUD DEPTH mm		70	90
	CAVITY INFILL		Rw/Rw+Ctr	
60/60/60	75mm Glasswool R1.8		66/48	70/55
	90mm Glasswool R2.5		66/48	70/55
	90mm Glasswool R2.7		67/49	71/56
	WALL THICKNESS mm		245	285

Side 1 – 1 x BGC Duraliner Plus 9mm
Side 2 – 1 x BGC Duraliner Plus 9mm

GTEK-PR25012

FRL	STUD DEPTH mm		70	90
	CAVITY INFILL		Rw/Rw+Ctr	
60/60/60	75mm Glasswool R1.8		67/50	71/55
	90mm Glasswool R2.5		67/50	71/55
	90mm Glasswool R2.7		68/51	72/56
	WALL THICKNESS mm		223	263

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GTEK™ PROTECT SYSTEMS

Side 1 – 1 x GTEK™ Sound 10mm
       1 x GTEK™ Wall 10mm
Side 2 – 1 x GTEK™ Sound 10mm
       1 x GTEK™ Wall 10mm

GTEK-PR25013

FRL	STUD DEPTH mm	70	90
	CAVITY INFILL	Rw/Rw+Ctr	
60/60/60	75mm Glasswool R1.8	67/53	71/56
	90mm Glasswool R2.5	67/53	71/56
	90mm Glasswool R2.7	68/54	72/57
	WALL THICKNESS mm	245	285

Side 1 – 1 x GTEK™ Wet Area 10mm
       1 x BGC Duraliner Plus 6mm
Side 2 – 1 x GTEK™ Wet Area 10mm
       1 x BGC Duraliner Plus 6mm

GTEK-PR25014

FRL	STUD DEPTH mm	70	90
	CAVITY INFILL	Rw/Rw+Ctr	
60/60/60	75mm Glasswool R1.8	69/54	72/57
	90mm Glasswool R2.5	69/54	72/57
	90mm Glasswool R2.7	70/55	73/58
	WALL THICKNESS mm	237	277

Side 1 – 2 x GTEK™ Wall 13mm
Side 2 – 2 x GTEK™ Wall 13mm

GTEK-PR25015

FRL	STUD DEPTH mm	70	90
	CAVITY INFILL	Rw/Rw+Ctr	
60/60/60	75mm Glasswool R1.8	70/55	73/59
	90mm Glasswool R2.5	70/55	73/59
	90mm Glasswool R2.7	71/55	74/60
	WALL THICKNESS mm	257	297

FIGURE 8 – TYPICAL FLOOR/WALL JUNCTION

Timber wall framing (back-to-back continuous top tracks. Horizontal joints in the GTEK™ Protect 25mm)

GTEK™ Protect 25mm

GTEK™ plasterboard as specified

Flooring material

GTEK™ Ceiling

GTEK™ Protect H Stud restrained by clips fastened to wall plates on both sides

Provide additional layer of GTEK™ Fire 16mm screw laminated to GTEK™ Protect 25mm as specified
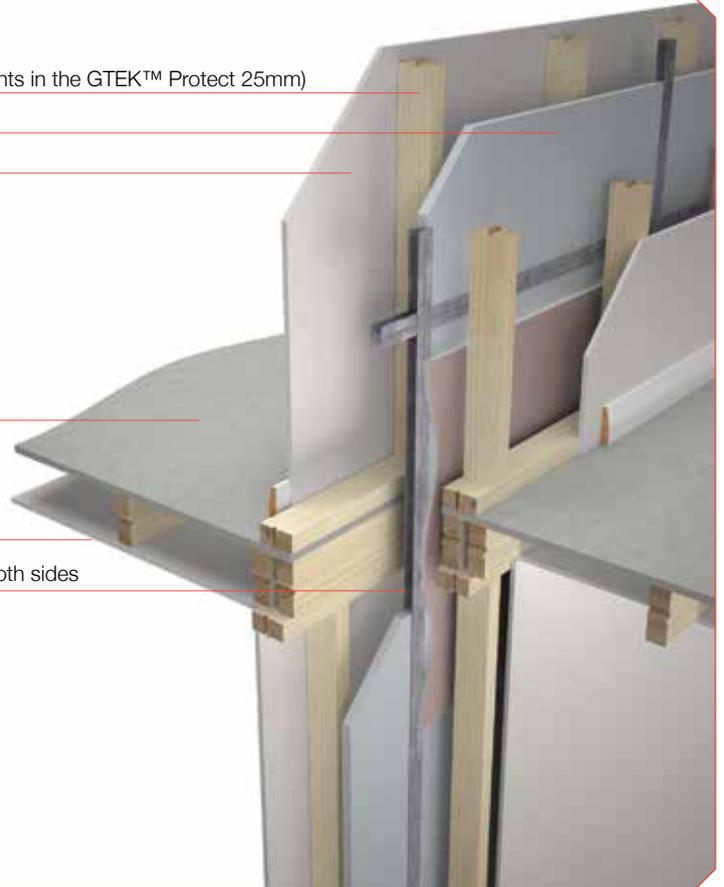
FIGURE 9 – TYPICAL ARRANGEMENT OF SERVICES

Minimum 10mm GTEK™ plasterboard both sides

90mm Glasswool insulation as required

GTEK™ Protect 25mm

Plumbing and electrical services within wall cavity do not require special treatment or fixtures to maintain fire rating. Seal for acoustic isolation.

Pipes may be installed through load bearing studs. They must be securely fastened to the wall frame and must not be in contact with the GTEK™ Protect 25mm

Continuous bottom track to bottom of GTEK™ Protect 25mm and GTEK™ Protect H Studs

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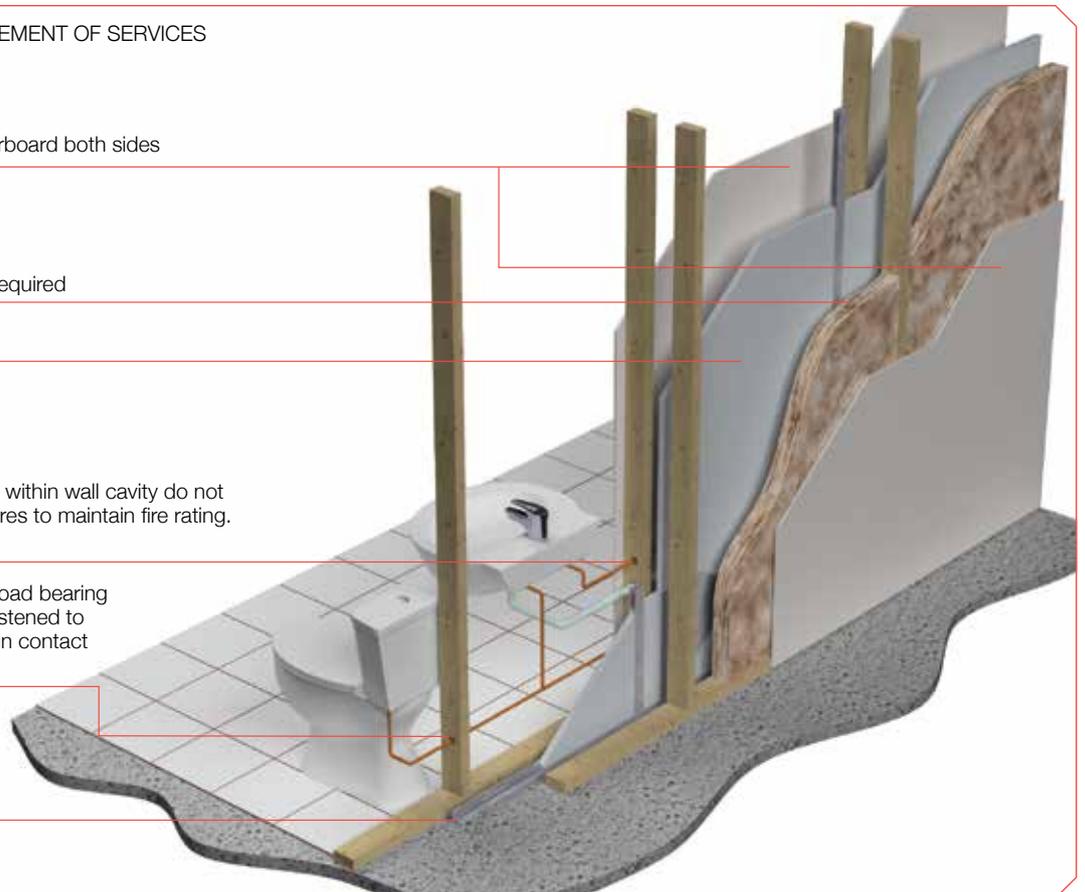
FIGURE 10 – CONCRETE BASE

Timber studs both sides

GTEK™ Protect 25mm

GTEK™ plasterboard as specified

90mm Glasswool as specified

Skirting as required

All gaps to be sealed with Firemastic sealant

Continuous GTEK™ Protect J Track.
Fasten to slab @ 600mm ctrs

Seal track with Firemastic sealant

Concrete Slab
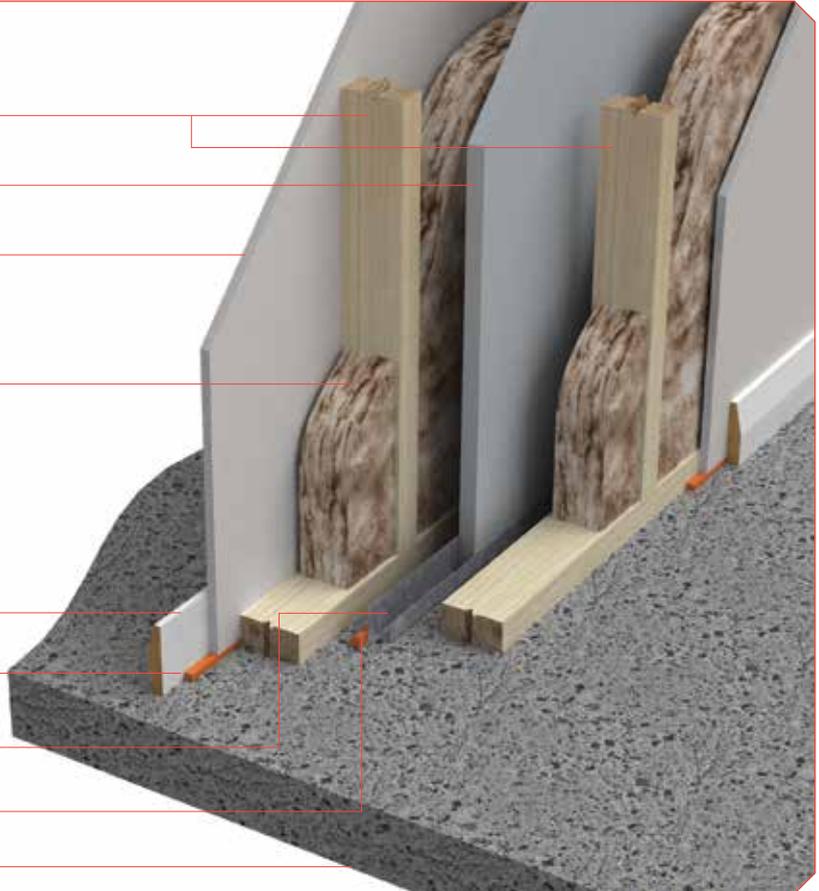
FIGURE 11 – MASONRY BASE

Timber studs both sides

20-40mm gap both sides (typical)

GTEK™ Protect 25mm

GTEK™ plasterboard as specified

90mm Glasswool as specified

Flooring

Skirting as required

All gaps to be sealed with Firemastic sealant

GTEK™ Protect Aluminium Clip @ each
GTEK™ Protect H Stud and max 3000mm vertically

Continuous GTEK™ Protect J Track.
Fasten to masonry @ 600mm ctrs

Seal track with Firemastic sealant

Continuous strip of GTEK™ Fire 16mm screw laminated
to GTEK™ Protect 25mm fixed @ 400mm x 400mm ctrs

Termite and moisture barrier as required

Concrete or masonry wall of equal FRL. Place top bricks frog
down and fill/parge all hollows under GTEK™ Protect J Track

FRL of brickwork to match FRL of GTEK™ Protect 25mm
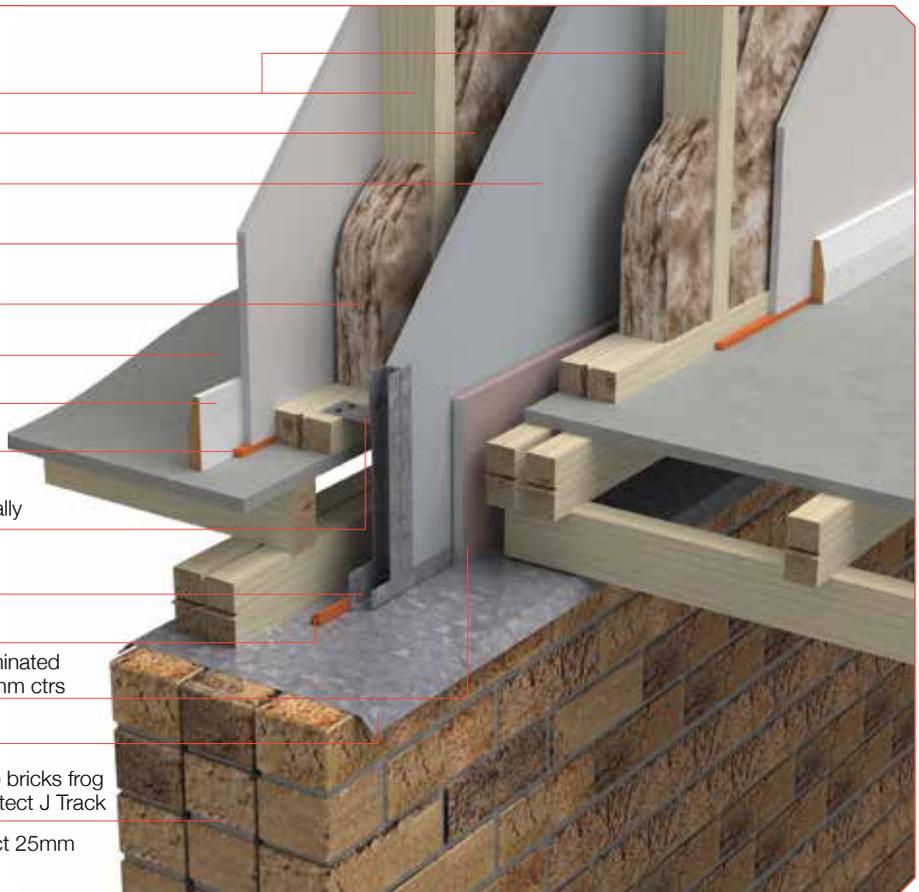
FIGURE 12 – STEP IN SLAB 1

20-40mm gap both sides

GTEK™ plasterboard as specified

Timber studs both sides

GTEK™ Protect 25mm

Seal track with Firemastic sealant

All gaps to be sealed with Firemastic sealant

Continuous GTEK™ Protect J Track fasten to slab
@ 600mm ctrs. Ensure fasteners have adequate edge distance

Concrete slab to engineer's design
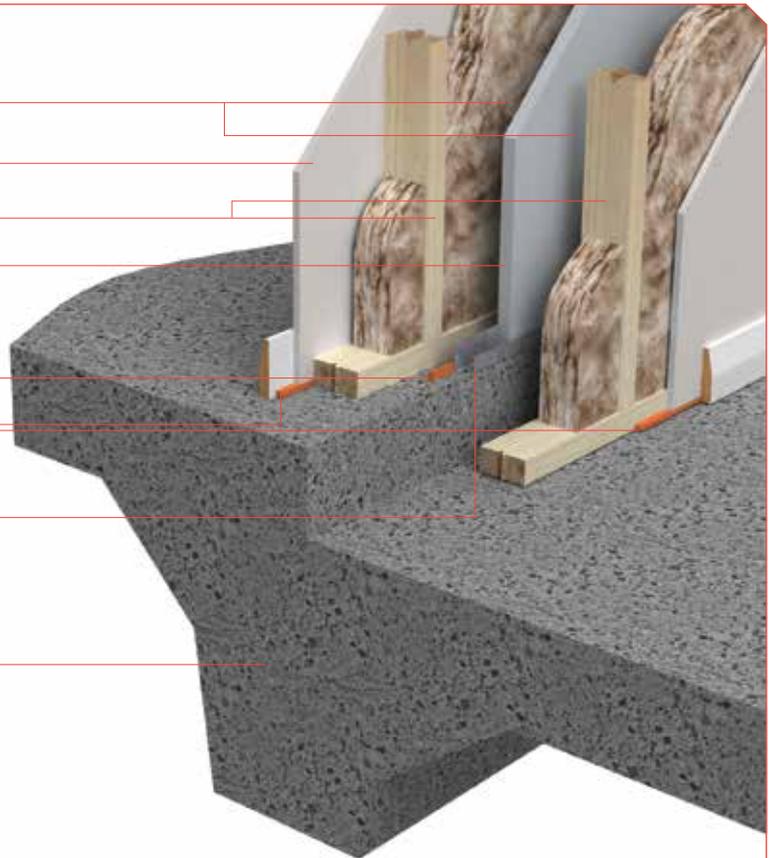
FIGURE 13 – STEP IN SLAB 2

GTEK™ Protect 25mm

20-40mm gap both sides

GTEK™ plasterboard as specified

GTEK™ Protect Aluminium Clip required if vertical support
of GTEK™ Protect 25mm exceeds 3000mm

Firemastic sealant

Timber studs both sides

90mm Glasswool as specified

All gaps to be sealed with Firemastic sealant

Continuous GTEK™ Protect J Track fasten to slab @ 600mm ctrs.
Ensure fasteners have adequate edge distance

Seal track with Firemastic sealant

Concrete slab to engineer's design

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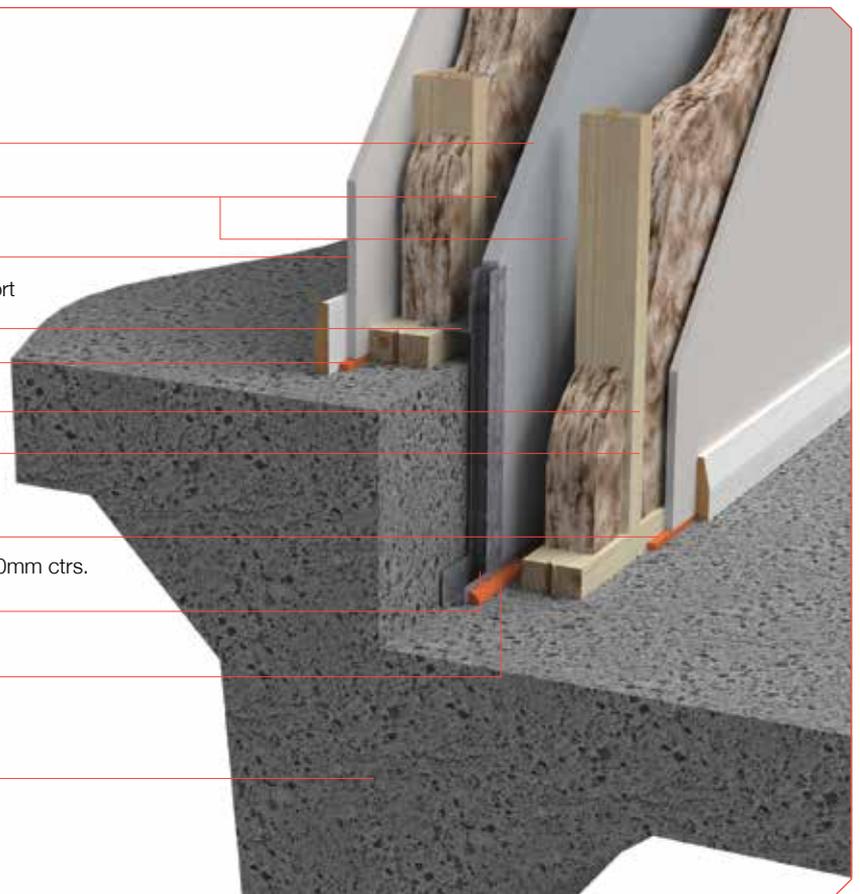
FIGURE 14 – TYPICAL FLOOR/WALL JUNCTION 1

20-40mm gap each side

GTEK™ Protect 25mm and GTEK™ Protect H Studs

Continuous top and bottom track. Fasten together with 10 gauge screws @ 600mm max ctrs

Where no trimmers or end blocks exist between floor joists, screw laminate an additional layer of GTEK™ Fire 16mm @ floor levels extending 150mm, above floor and below ceiling. Fixings @ 400mm x 400mm ctrs

Flooring

Skirting as required

All gaps to be sealed with Firemastic sealant

Floor joist

GTEK™ Ceiling plasterboard as specified

GTEK™ Protect Aluminium Clips @ each stud

GTEK™ plasterboard as specified both sides

90mm Glasswool as specified

Timber studs

Notes: 1) Floors may be staggered to meet design requirements.
2) Floor joists can be of any type and can run parallel or perpendicular to GTEK™ Protect 25mm
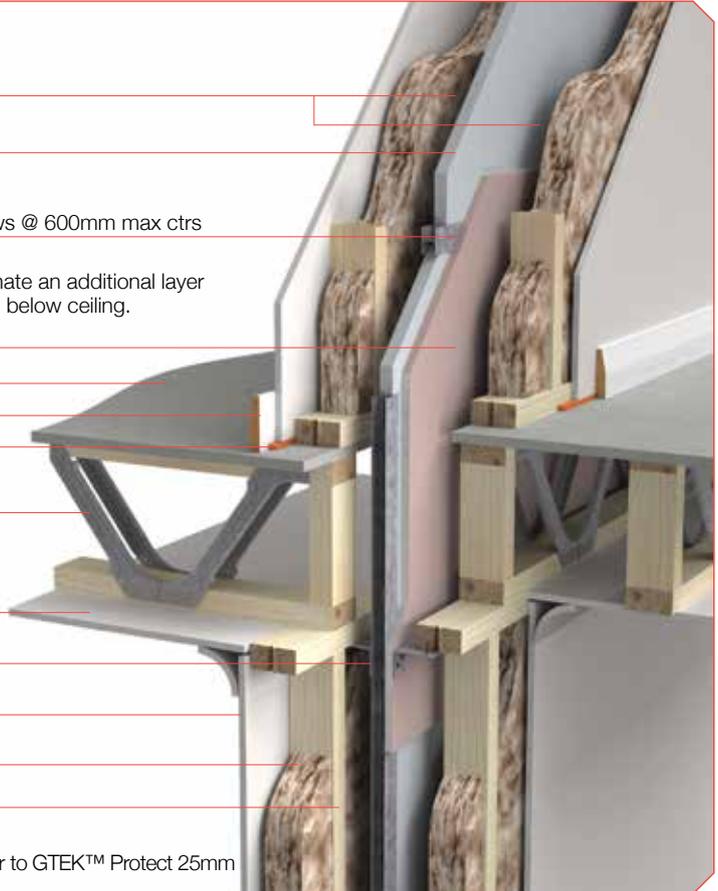
FIGURE 15 – TYPICAL FLOOR/WALL JUNCTION 2

Additional GTEK™ Fire 16mm at floor/roof junction

GTEK™ Protect 25mm

Roof or floor (floor shown for illustrative purposes)

Where GTEK™ Protect 25mm horizontal joint exceeds 600mm and no greater than 1500mm vertically from a GTEK™ Protect 25mm Aluminium Clip, laminate additional GTEK™ Fire 16mm as indicated @ 400mm x 400mm ctrs with 10g x 38mm Type L laminating screws

Continuous top and bottom track fasten together with 10 gauge screws @ 600mm ctrs

GTEK™ plasterboard as specified

Position of posi-strut or timber floor is for illustrative purposes only

GTEK™ Protect Aluminium Clips

Additional GTEK™ Fire 16mm at floor junction

Timber studs
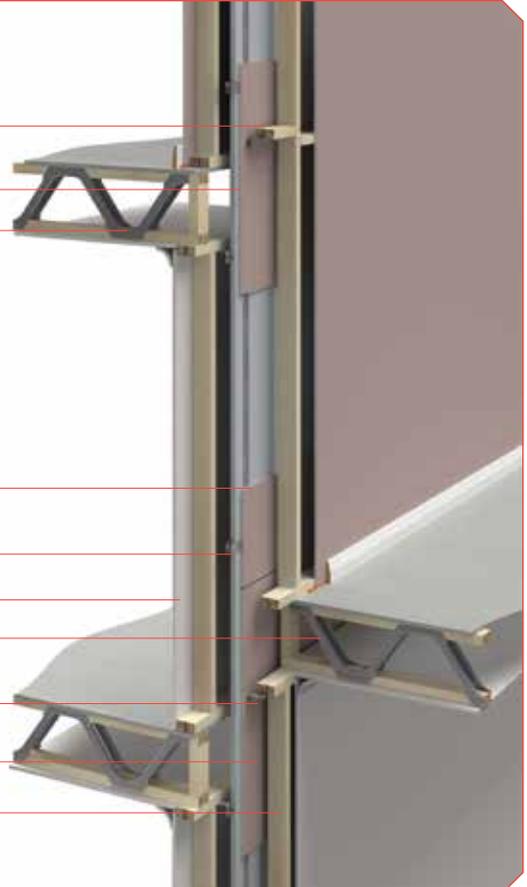
FIGURE 16 – PITCHED ROOF - WALL/ROOF

Non-combustible roofing

Roof battens

Roof framing

Continuous compressed GTEK™ Protect Fire Insulation between battens and over capping

Allow gap for frame shrinkage and roof movement

Continuous capping ex GTEK™ Protect J Track

Additional layer of GTEK™ Fire 16mm laminated to GTEK™ Protect 25mm with 10g x 38mm laminating screws @ 400mm x 400mm max ctrs (roof space only)

Provide timber packing where distance of truss face to GTEK™ Protect 25mm does not provide adequate fixing of aluminium clip

90mm Glasswool extending 600mm both sides (required for flanking sound control) not required if average height of roof space above ceiling is greater than 600mm (thermal insulation as utilised to achieve system thermal performance is acceptable for flanking sound control)

600mm 90mm Glasswool

Opposing GTEK™ Protect Aluminium Clips at each GTEK™ Protect H Stud

GTEK™ plasterboard as specified both sides

90mm Glasswool to one/both sides as specified to achieve acoustic rating

Timber studs

GTEK™ Protect 25mm
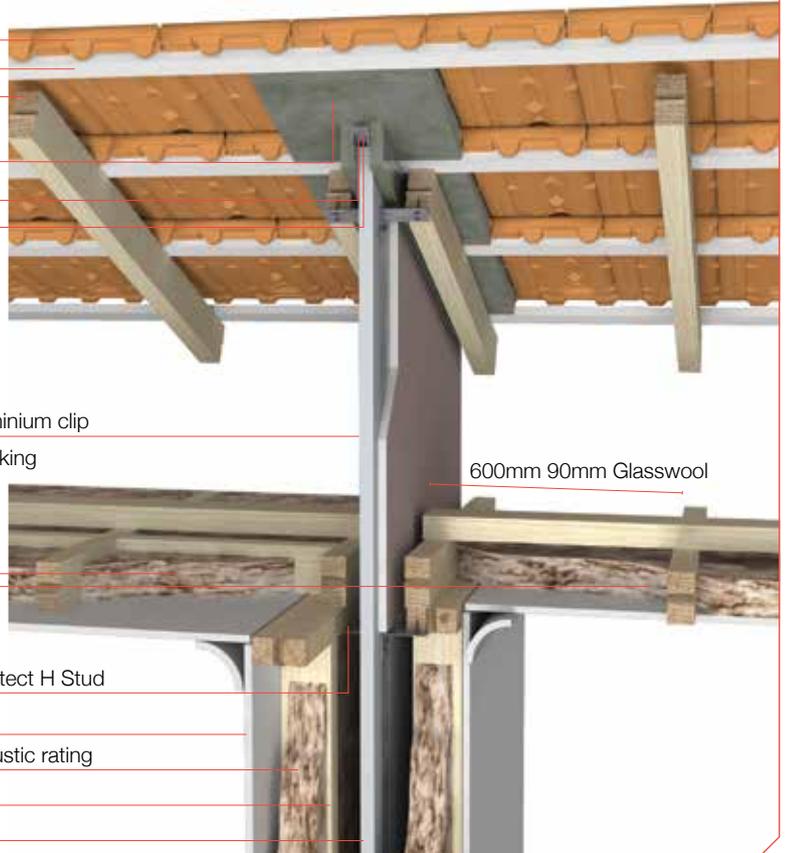
FIGURE 17 – FLAT ROOF - WALL/ROOF

Max 25mm gap between underside of roofing and GTEK™ Protect 25mm

Continuous capping ex GTEK™ Protect 25mm J Track

Non-combustible roofing

600mm 90mm Glasswool

200mm

Opposing GTEK™ Protect Aluminium Clips @ each stud

GTEK™ Protect Fire Insulation

90mm Glasswool extending 600mm both sides (required for flanking sound control) not required if average height of roof above ceiling is greater than 600mm (thermal insulation as utilised to achieve system thermal performance is acceptable for flanking sound control)

GTEK™ plasterboard as specified

GTEK™ Protect 25mm

GTEK™ plasterboard as specified both sides

20-40mm gap each side

90mm Glasswool to one/both sides as specified to achieve acoustic rating

GTEK™

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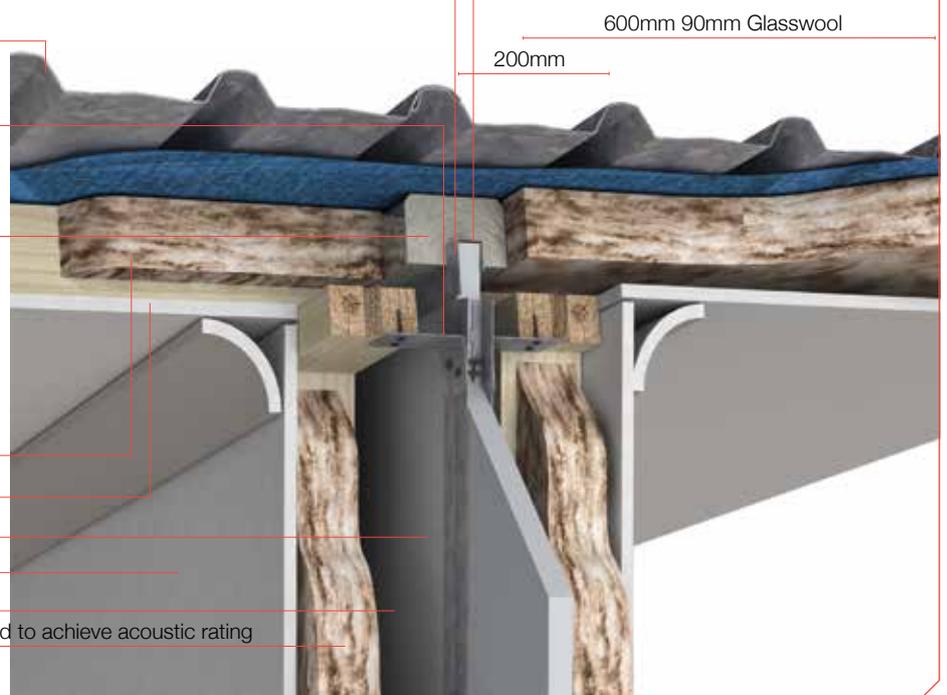
FIGURE 18 – ROOF PARAPET

Continuous capping ex GTEK™ Protect J Track

GTEK™ Protect Fire Insulation

Corrosion resistant metal parapet capping

Opposing GTEK™ Protect Aluminium Clips
@ each GTEK™ Protect H Stud

External cladding and sarking as required

Non-combustible roofing

Box gutter

Roof framing

Additional layer of GTEK™ Fire 16mm laminated to
GTEK™ Protect 25mm with type 'L' 10 x 38 laminating
screws @ 400mm x 400mm max ctrs - extending above
and below ceiling as shown

Top plate

GTEK™ Ceiling

GTEK™ plasterboard as specified both sides

90mm Glasswool

Timber studs

GTEK™ Protect 25mm
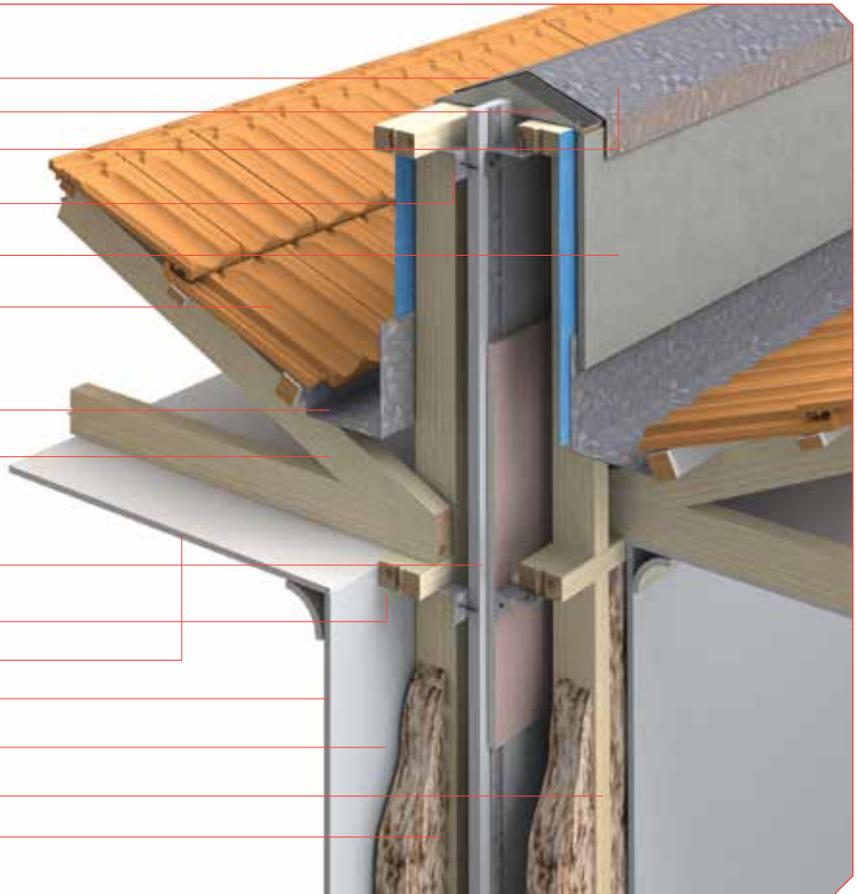
FIGURE 19 – BOX GUTTER

Non-combustible roofing

GTEK™ Protect Fire Insulation

Continuous capping ex GTEK™ Protect J Track

GTEK™ Ceiling

25mm gap between underside of gutter and GTEK™ Protect 25mm

90mm Glasswool extending 600mm both sides required for sound control
(thermal insulation as utilised to achieve system thermal performance is
acceptable for flanking sound control)

GTEK™ plasterboard as specified both sides

90mm Glasswool as specified

Opposing GTEK™ Protect Aluminium Clips @ each GTEK™ Protect stud

GTEK™ Protect 25mm

Timber studs

FIGURE 20 – EAVE CLOSURE

Roofing, sarking and battens

GTEK™ Protect Fire Insulation

Continuous capping track min 1200mm back span

GTEK™ Protect J Tracks

GTEK™ Protect J Track

GTEK™ Protect Aluminium Clip

Fascia

Fire mastic Sealant

Eave lining. Provide control joint at GTEK™ Protect 25mm location

GTEK™ Protect 25mm and one layer GTEK™ Fire 16mm laminated together in eave space @ 400mm x 400mm ctrs

GTEK™ Fire Insulation

Brick veneer

FIGURE 21 – GTEK™ PROTECT SYSTEM TO BOUNDARY WALL-DOUBLE STOREY TO SINGLE STORY

10mm GTEK™ plasterboard as specified

Cladding to Architect's details. Batten to suit external cladding

GTEK™ Fire and Wet Area 16mm

Load bearing timber studs @ max 600mm ctrs

Skirting as required

All gaps to be sealed with Firemastic sealant

Continuous compressed GTEK™ Fire Insulation

Continuous capping ex GTEK™ Protect J Track

Sarking

GTEK™ Ceiling

20-40mm gap both sides

GTEK™ plasterboard as specified

GTEK™ Protect 25mm

90mm Glasswool as specified

Roofing as required

Box gutter

Flashing as specified
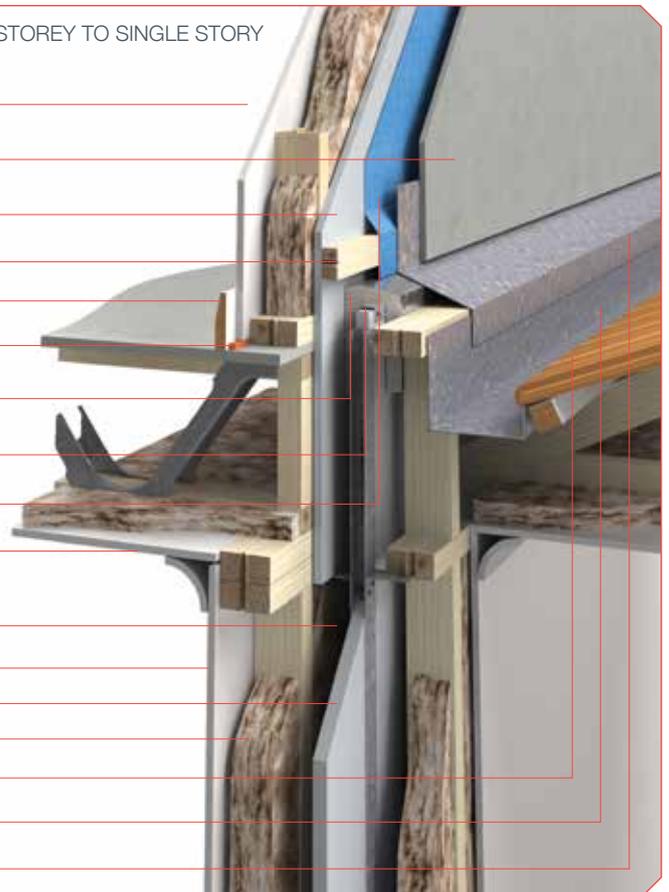
Note: FRL 60/60/60 for upper storey external wall fire rating is from outside only.

FIGURE 22 – GTEK™ PROTECT SYSTEM TO BOUNDARY WALL

GTEK™ plasterboard

GTEK™ Protect 25mm (20-40mm gap both sides)

Opposing GTEK™ Protect Aluminium Clips at each GTEK™ Protect H Stud

90mm Glasswool as required

GTEK™ Protect Fire Insulation min 200mm both sides of GTEK™ Protect 25mm

Batten to suit external cladding

GTEK™ Fire & Wet Area 16mm

GTEK™ Protect J Track

Backing angle

Weather sealant

External cladding as specified

1 GTEK™ Protect System

2 BGC Boundary Wall
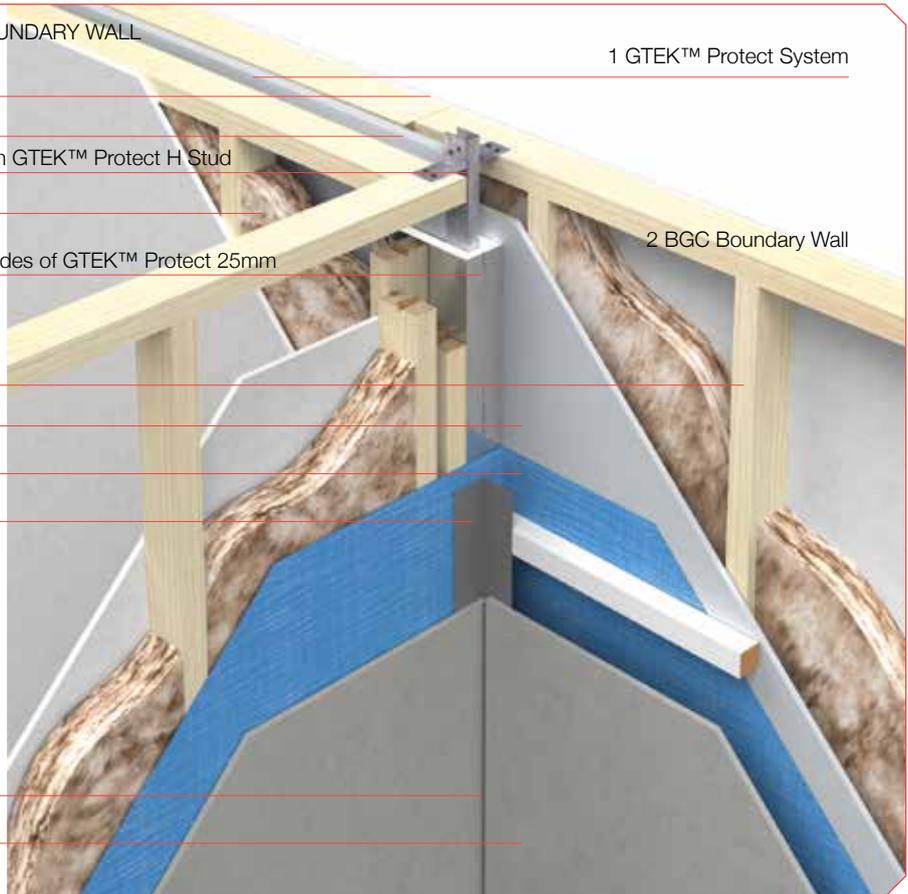
FIGURE 23 – BRICK VENEER WALL 1

Opposing GTEK™ Protect Aluminium Clips @ each GTEK™ Protect H Stud

GTEK™ plasterboard as specified both sides

GTEK™ Protect H Stud

20-40mm gap each side

GTEK™ Protect 25mm

90mm Glasswool to one/both sides as specified to achieve required acousic rating

Continuous GTEK™ Protect J Track fastened at top and bottom

Continuous compressed GTEK™ Fire Insulation 200mm wide

Sarking covers GTEK™ Fire Insulation

Continuous 90mm Glasswool insulation to extend 600mm from junction both sides of GTEK™ Protect 25mm for flanking sound control (thermal insulation as utilised to achieve system thermal performance is acceptable for flanking sound control)

Maximum 40mm gap between brickwork and panel

Control joint opposite GTEK™ Protect 25mm

Brick veneer cladding
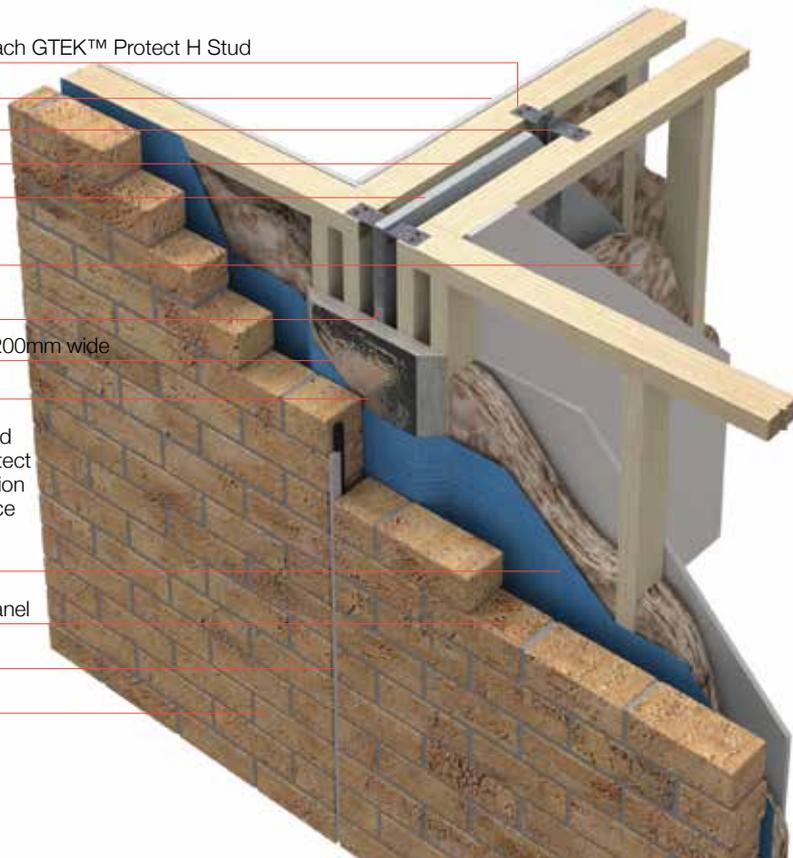
FIGURE 24 – BRICK VENEER WALL

GTEK™ plasterboard as specified both sides

Opposing GTEK™ Protect Aluminium Clips at each GTEK™ Protect H Stud

GTEK™ Protect 25mm

20-40mm gap each side

90mm Glasswool to one/both sides as specified to achieve required acoustic rating

Continuous end track

Sarking

Articulation joint fire sealant with backing

200mm min GTEK™ Protect Fire Insulation

Brick veneer cladding
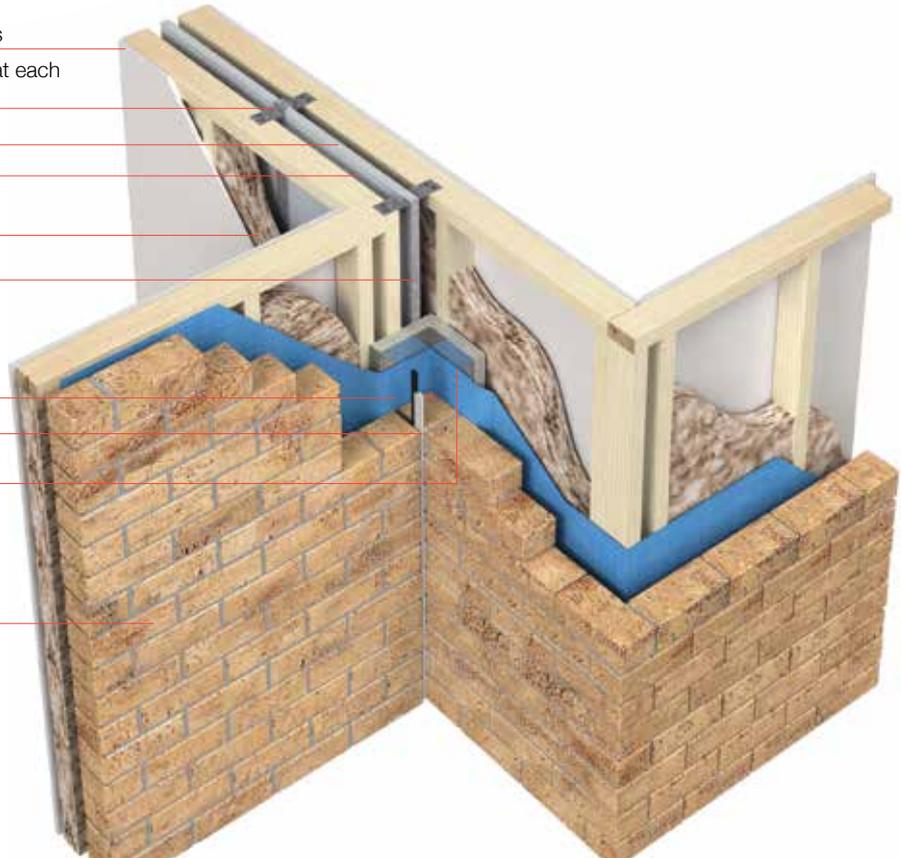
FIGURE 25 – CLAD WALL

GTEK™ Protect 25mm

Opposing GTEK™ Protect Aluminium Clips

Continuous bead of acoustic sealant or closed cell acoustic foam to capping track (seal all gaps)

Continuous GTEK™ Protect J Track to end of GTEK™ Protect 25mm

External cladding as specified

20-40 mm gap each side

Sarking as required

Exterior sealant

GTEK™ Protect H Stud

Opposing GTEK™ Protect Aluminium Clips @ each GTEK™ Protect H Stud

Continuous 90mm Glasswool extend 600mm from junction both sides of GTEK™ Protect 25mm for flanking sound control (thermal 90mm Glasswool as utilised to achieve system thermal performance is acceptable for flanking sound control)

90mm Glasswool to one/both sides as specified to achieve required acoustic rating

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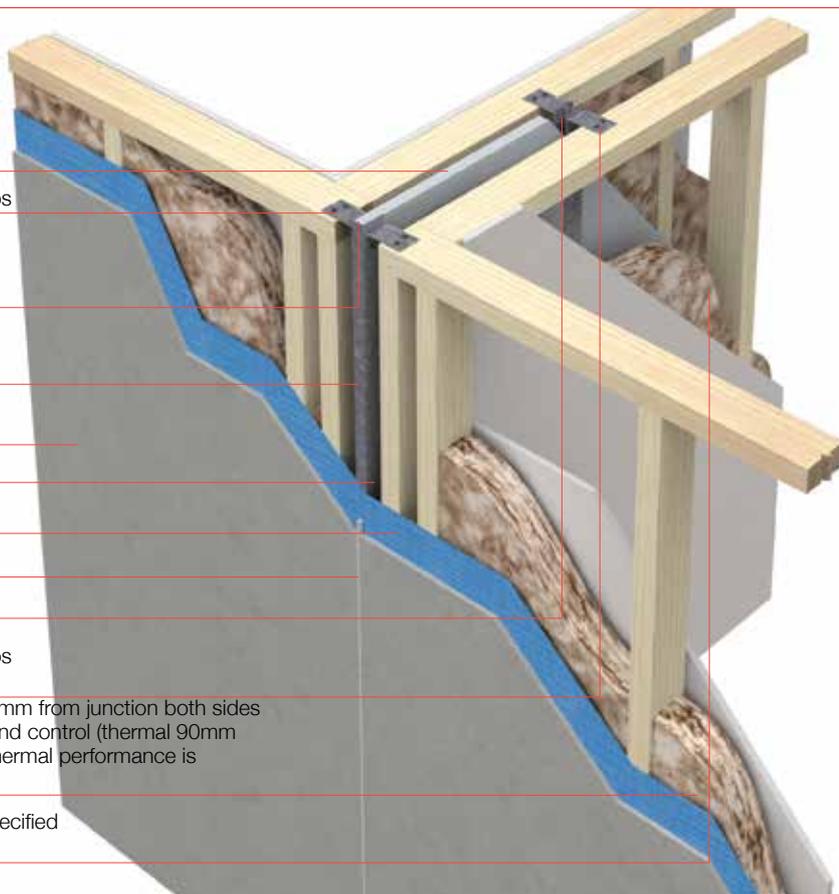
FIGURE 26 – 4-WAY INTERSECTING WALL

GTEK™ Protect 25mm

Timber studs wall framing

Screw GTEK™ Protect J Tracks together @ 600mm max ctrs and150mm max from ends

GTEK™ Protect Aluminium Clips attached to top or bottom plate and to'H' stud on both sides

20-40mm gap both sides typical

90mm Glasswool as specified

GTEK™ plasterboard as specified
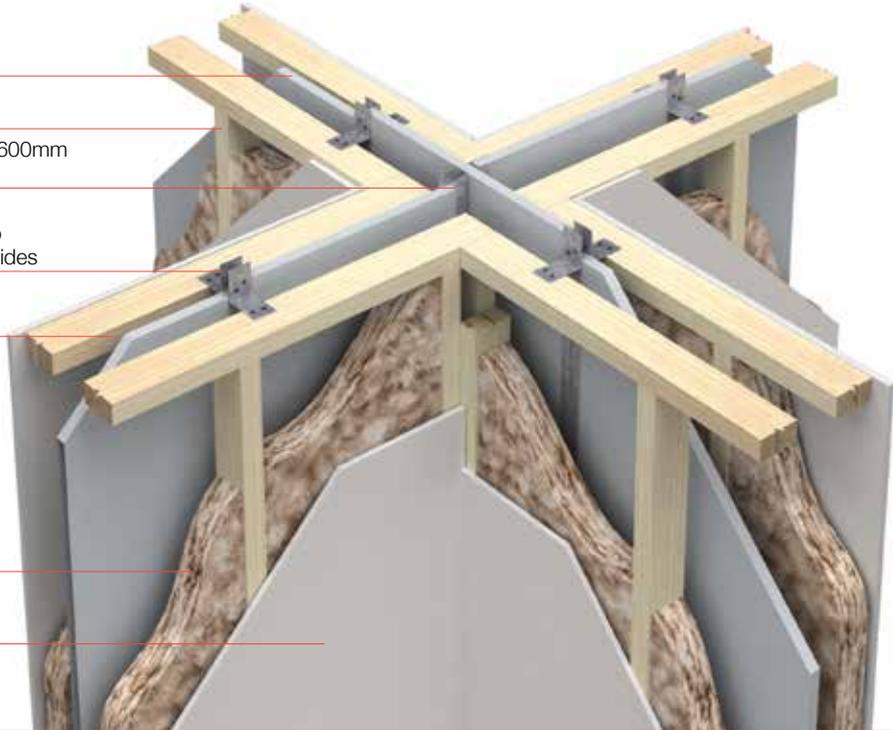
FIGURE 27 – TYPICAL CORNER

Screw GTEK™ Protect J Tracks together @ 600mm max ctrs and 150mm max from ends

Continuous GTEK™ Protect J Track

GTEK™ Protect Aluminium Clip to frame or clip at floor level

GTEK™ Protect Aluminium Clip attached to GTEK™ Protect H Stud on both sides

Timber stud wall framing

GTEK™ Protect 25mm

20-40 mm gap both sides typical

Refer to systems for lining and insulation
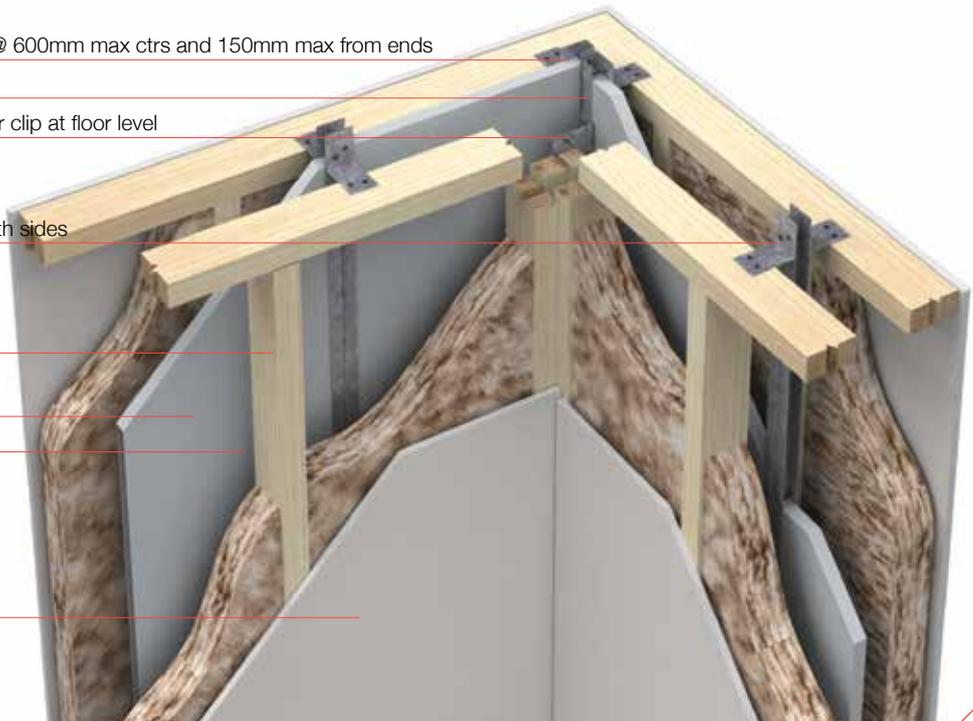
FIGURE 28 – INTERNAL WALL

Opposing GTEK™ Protect Aluminium Clips
@ each GTEK™ Protect H Stud

90mm Glasswool as specified

Non fire-rated wall

GTEK™ Protect 25mm
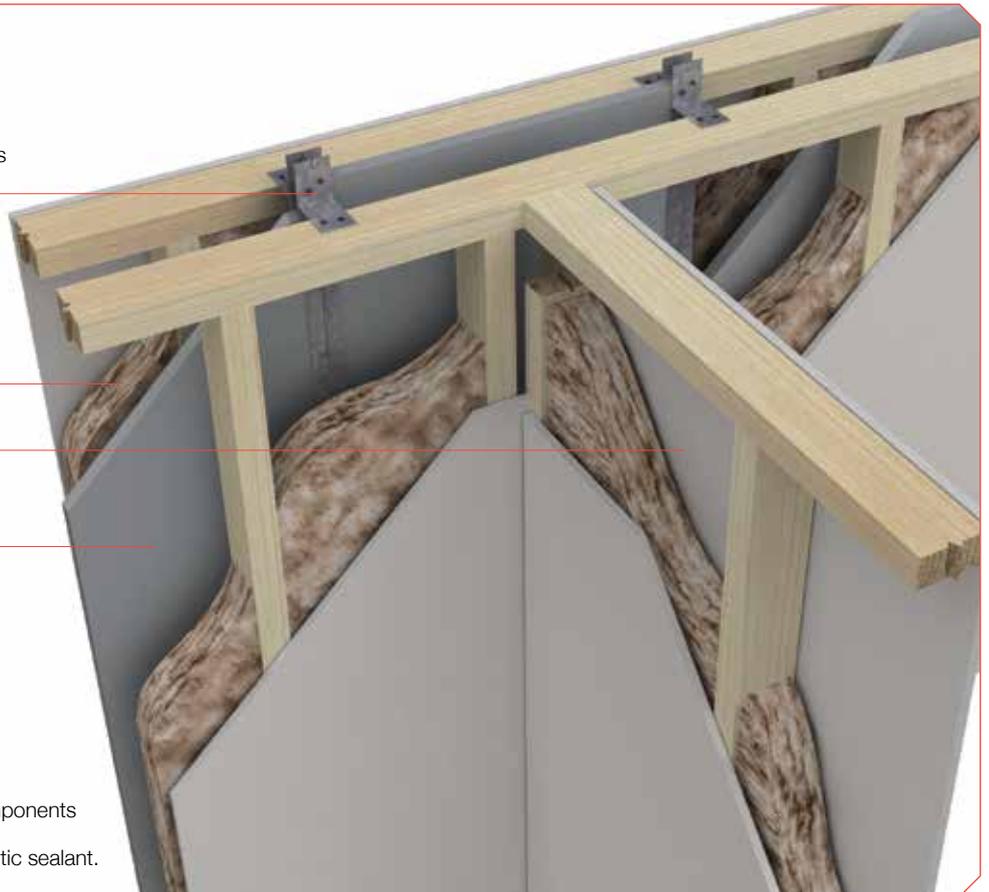
Notes:
1) Refer to GTEK™ Protect Systems Components
   table for insulation and wall linings.
2) Ensure all gaps are sealed with Firemastic sealant.

FIGURE 29 – WALL PENETRATIONS

Provide trimmers as required for services

Stud bracket for power point (GPO)

Power point (GPO)

Wet area sealant around PVC pipe (max 65mm dia)
10mm max (gap sealant)

20-40mm gap both sides typical

Wet area sealant around all plumbing penetrations (10mm max gap sealant)
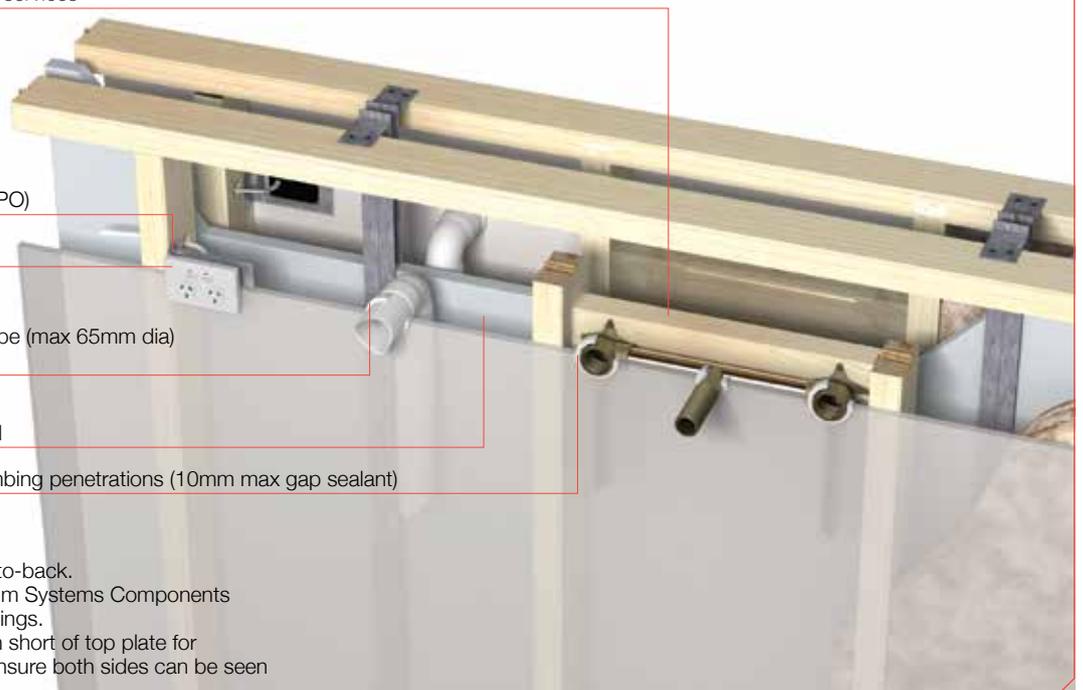
Notes:
1) All penetrations can be back-to-back.
2) Refer to GTEK™ Protect 25mm Systems Components
   table for insulation and wall linings.
3) GTEK™ Protect 25mm shown short of top plate for
   illustration purposes only to ensure both sides can be seen

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FIGURE 30 – UPVC PIPE PENETRATION AT ROOF SPACE

GTEK™ Protect 25mm

GTEK™ Fire 16mm

Fire collar as per AS 1530.4

uPVC pipe 100mm diameter

150mm min framing
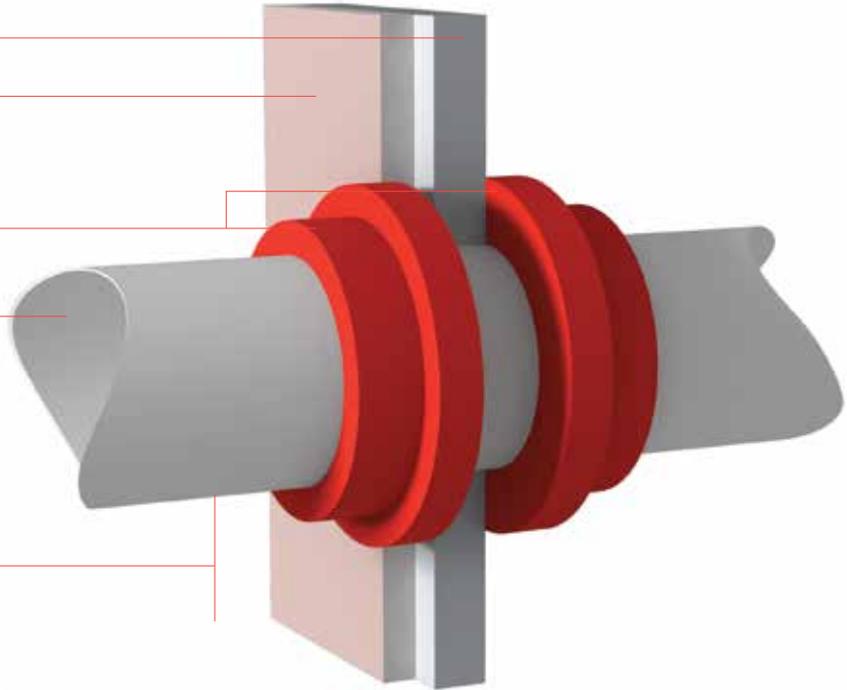
Note: Designer/Builder to obtain approval from Building Surveyor prior to installation.

FIGURE 31 – POWER CABLES PENETRATIONS AT ROOF SPACE

GTEK™ Protect 25mm

GTEK™ Fire 16mm

150mm (min) additional layer of GTEK™ Fire 16mm around services
(can be applied to either side of wall)

50mm x 19mm IBS strip

PVC insulated power cable (D1 group)

Fire rated acrylic sealant

150mm min framing
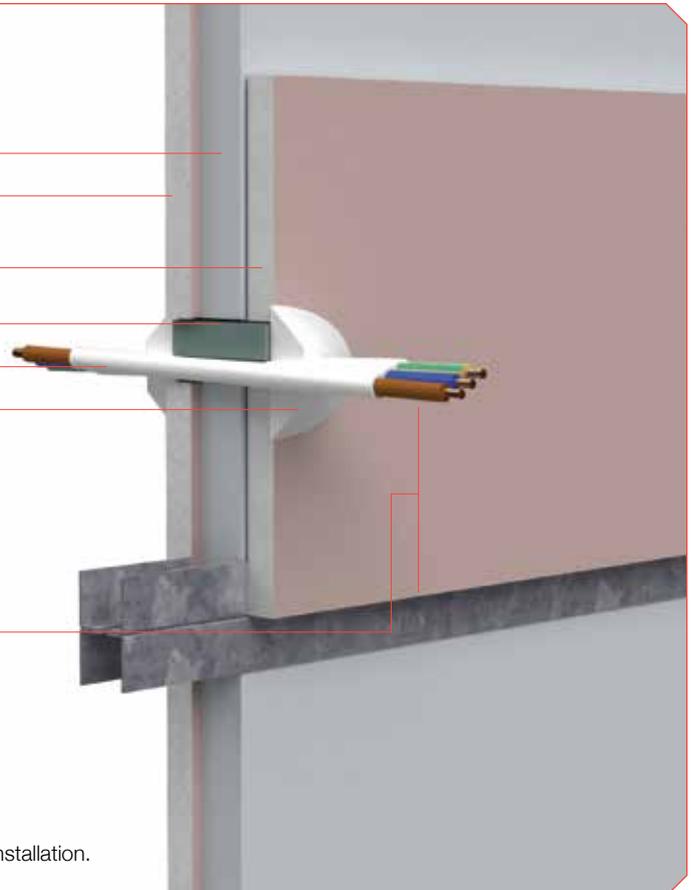
Note: Designer/Builder to obtain approval from Building Surveyor prior to installation.

FIGURE 32 – COPPER PIPE PENETRATION AT ROOF SPACE

GTEK™ Protect 25mm

GTEK™ Fire 16mm

150mm (min) additional layer of GTEK™ Fire 16mm around services
(can be applied to either side of wall)

Fire rated acrylic sealant (50mm)

32mm-150mm dia copper pipe. Thickness 0.91mm-2.03mm

150mm min from framing

GTEK™ Protect H Stud

Note: Designer/Builder to obtain approval from Building Surveyor prior to installation.
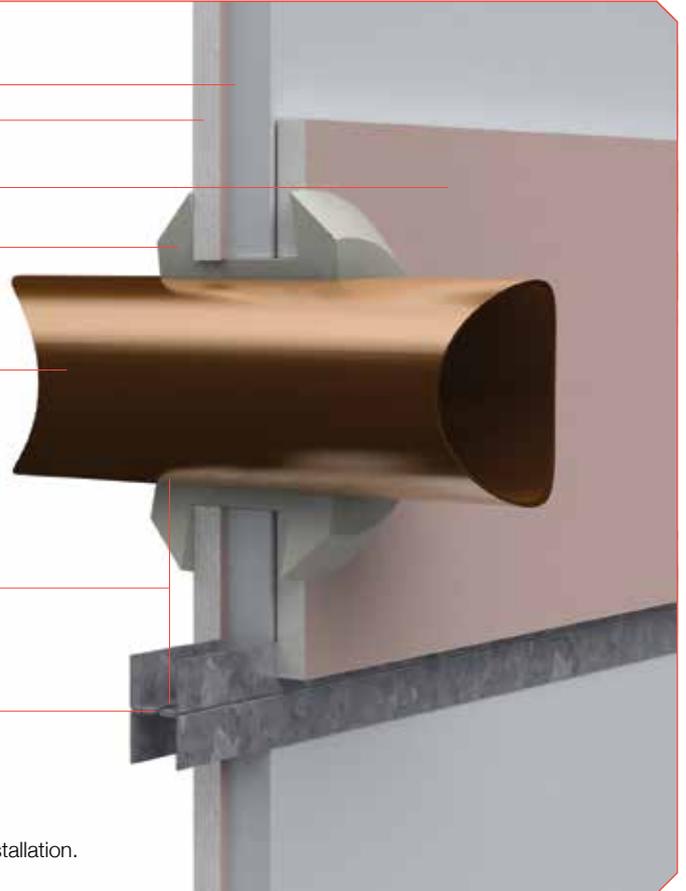
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NOTES

NOTES

At BGC we care about the environment and now have a range of GECA Certified Plasterboard Products available. As part of our commitment to sustainability we are offering our Environmentally Certified GTEK™ range at no extra cost to you. So now you save money whilst together we save the environment.

BGC-2014
GECA 04-2011 v2
Panel Boards
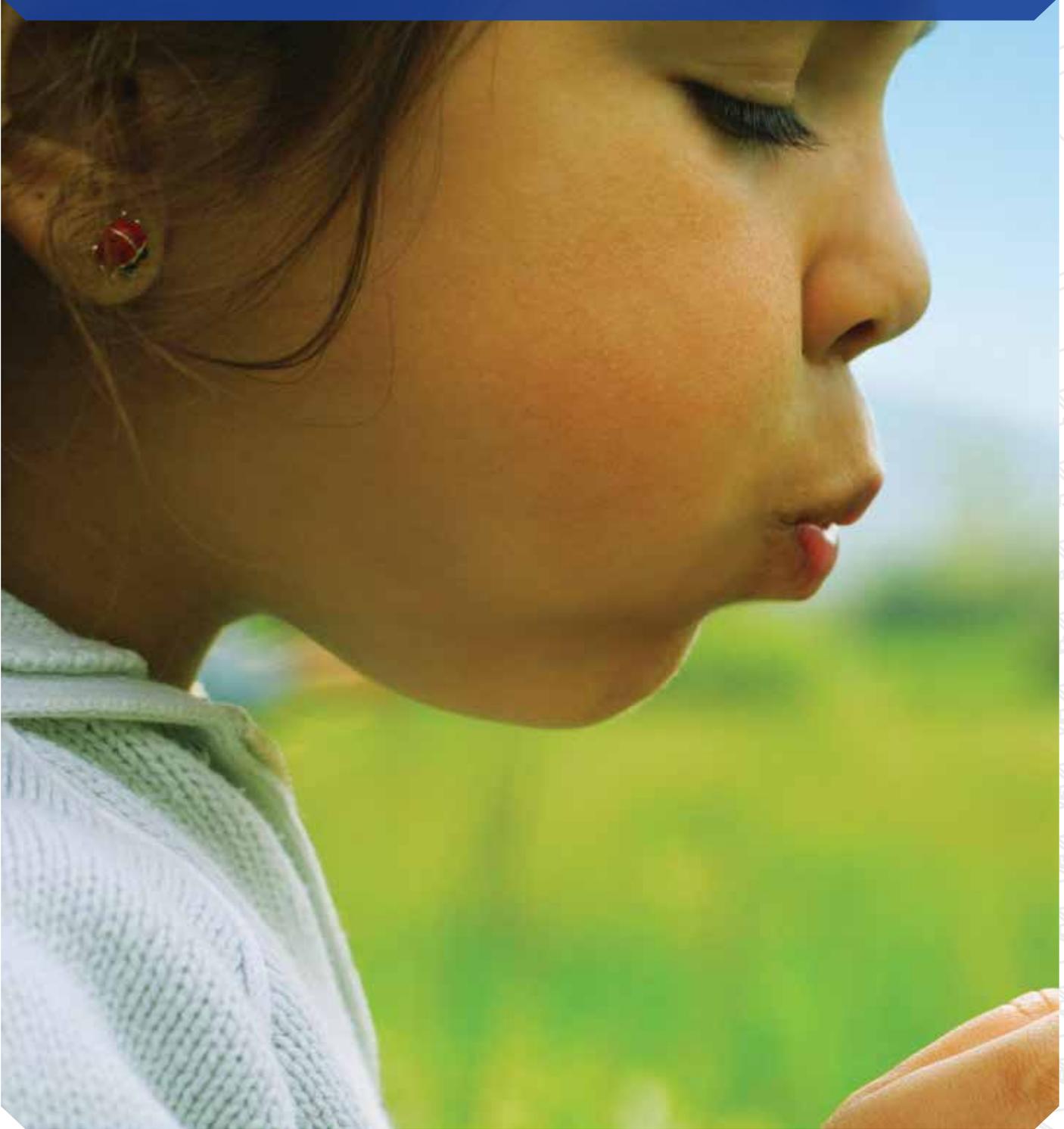
BGC Plasterboard shares the general community concern for the environment and seeks to reduce its environmental footprint in all aspects of its operations. That means you can specify GTEK™ to help create you next green star rated home or project.

We use up to 15% recycled gypsum in our boards and we use 100% recycled paper lining front and back.

BGC Plasterboard has set prudent environmental targets for waste minimisation and energy and water use, and is an active participant in environmental reporting through the Energy Efficiency, Waterwise and Emissions reporting programs.

Through strict quality control systems, production waste is minimised and wastage is recycled back into new plasterboard.

Good Environmental Choice Australia is an environmental labelling program which aims to provide consumers with the knowledge that the product they are purchasing has met certain environmental performance standards which have been developed and assessed in line with International labelling standards.

Scientifically recognised benchmarks for environmental performance have been developed against which products and services are assessed and evaluated to determine whether the product or service should be awarded the Good Environmental Choice Label. GECA certification is recognised by the Green Building Council of Australia and may assist in achieving up to 3 Green Star points.

GTEK™ products have been certified by GECA which means that the products and their manufacturing environment have been evaluated and deemed to comply with the strict guidelines set by GECA

We're proud to wear the Good Environmental Choice label, it shows our products and manufacturing environment comply with GECA's strict guidelines.

Now 'Building it better with BGC' also means building a cleaner and more sustainable environment.

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BGC STOCKIST,
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TELEPHONE
07 3271 1711

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TELEPHONE
03 9392 9444

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Certified System™
Quality
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ENVIRONMENTAL CHOICE AUSTRALIA
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Panel Boards

▶ **GTEK™ Wall** is an interior wall lining system where cost effectiveness and economy of effort is crucial.

▶ **GTEK™ Curve** flexible plasterboard enables the creative execution of curves on interior walls and ceilings.

▶ **GTEK™ Ceiling** is a 10mm plasterboard sheet designed specifically for ceiling use where joists are at 600mm.

▶ **GTEK™ Cornice** adds exciting finishing touches to interior wall and ceiling joints in new builds and renovations.

▶ **GTEK™ Fire** is used in fire-rated systems, consisting of single or multiple layers of board.

▶ **GTEK™ Fire & Wet Area** is designed for use in wet areas governed by fire resistance limitations (FRLs).

▶ **GTEK™ Wet Area** is water-resistant plasterboard for walls in such wet areas as bathrooms, laundries, toilets and cleaning rooms.

▶ **GTEK™ Sound** is high-density plasterboard specifically designed to reduce unwanted noise detectable through walls and ceilings.

▶ **GTEK™ Impact** is ideal for high-traffic areas where walls are subjected to regular stress.

▶ **GTEK™ Total Plus** offers market-leading fire, water, sound and impact resistance, together with GECA certification in recognition of high percentages of recycled materials.

▶ **GTEK™ Protect** System is one of Australia's newest separating wall systems providing design flexibility,simple construction and outstanding acoustic performance.

We warrant that our products are free from defects caused by faulty manufacture or materials for a period of 15 years from the date of purchase. If you acquire any defective products, we will repair or replace them, supply equivalent replacement products or refund the purchase price within 30 days of receiving a valid claim subject to product inspection and confirmation of the existence of a defect by BGC. We will bear the cost of any such repair, replacement or refund.

This warranty is given by:

BGC PLASTERBOARD PTY LTD
Ground Floor, 290 Bushmead Rd,
Hazelmere, WA 6055 Phone: (08) 9374 2900
Fax: (08) 9374 2901

To claim under this warranty, you must provide proof of purchase as a consumer and make a written claim (including any costs of claiming) to us at the address specified above within 30 days after the defect was reasonably apparent, or if the defect was reasonably apparent prior to installation, the claim must be made prior to installation. You may not claim under this warranty for loss or damage caused by:

▶ faulty or incorrect installation by non-BGC installers (BGC's installation procedures are at **gtekplasterboard.com.au**);

▶ failure to comply with the Building Code of Australia or any   applicable legislation, regulations approvals and standards;

▶ products not made or supplied by BGC;

▶ abnormal use of the product; or

▶ normal wear and tear.

The benefits available under this warranty are in addition to other rights and remedies of the consumer under the law. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

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