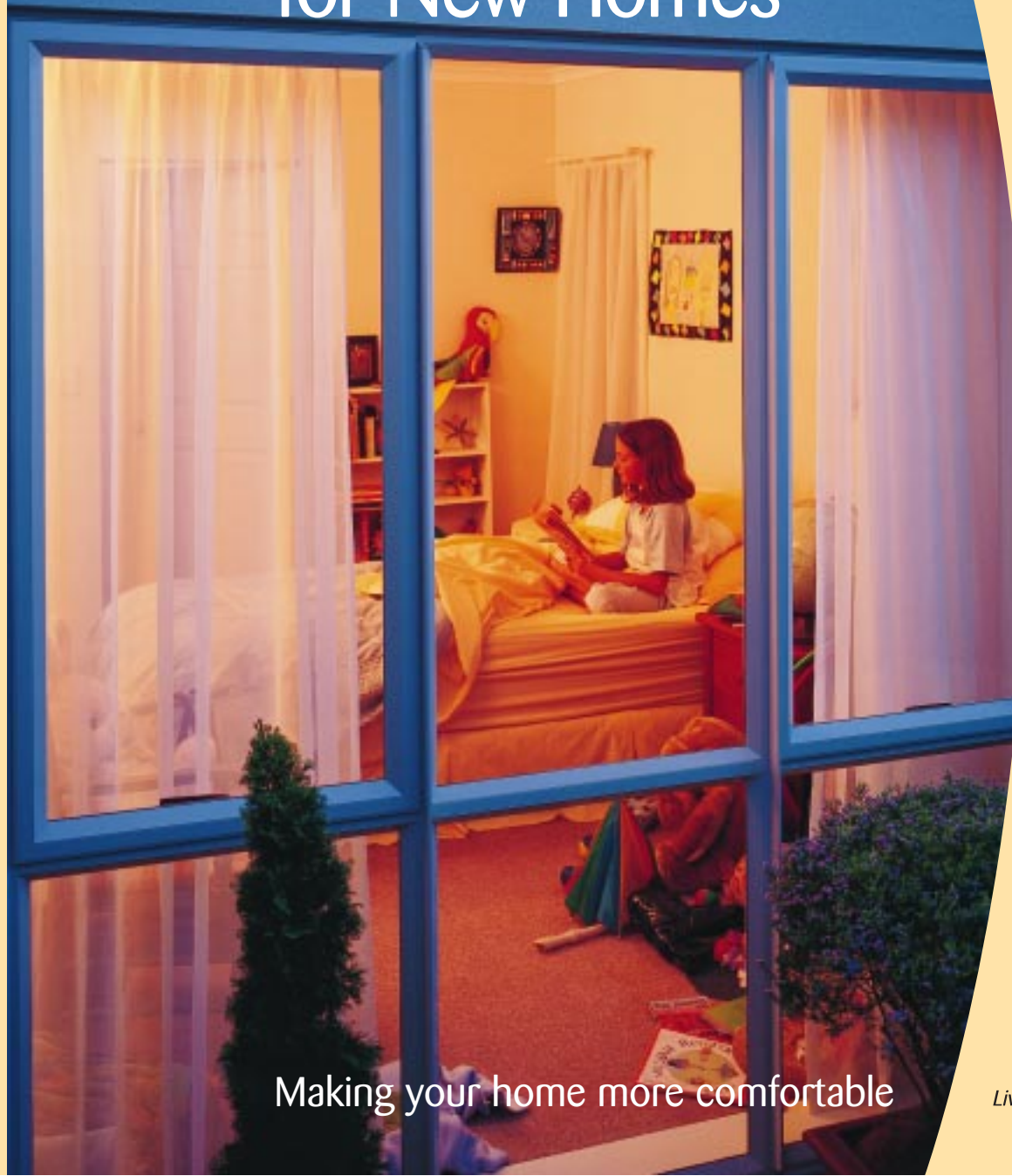


Gib Living Solutions[®] for New Homes



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October 2001

warmth & comfort peace & quiet

Gib Living Solutions® represent a holistic approach to interiors and the way we live in today's modern world.

They take account of issues such as ventilation, heating, noise control, dampness and condensation to help create a living environment that is quieter, more comfortable and healthier, as well as more durable and easier to maintain.

To achieve this, Gib® has worked closely with other leading building materials manufacturers whose products and systems have been tested and verified to perform to the highest standards.

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“As life in the outside world grows busier and noisier, the more we treasure the simple comforts of home...”



a healthier home

Breathe on a cold surface such as a window and you can see the condensation appear. Now consider this effect multiplied many thousands of times and you have some idea of the amount of moisture generated in a home every day, just by breathing. Then there's the steam from cooking, washing and showering.

Modern building methods make new homes almost airtight compared with homes of yesteryear, and so issues of ventilation and moisture control are more critical than ever before.

High levels of moisture or humidity in a home are not only unhealthy, they can also lead to mould and mildew problems. Research shows that over 45% of New Zealand homes suffer from these problems.

Warmth, comfort and energy efficiency

During the winter, a well-insulated home is comfortable for the occupants when the inside temperature is between 18 and 20 degrees Celsius.

In a poorly insulated home, the temperature needs to be at least around 2 degrees Celsius higher to maintain the same level of comfort. And even then, you may still need to wear a jersey to stay comfortable. The World Health Organisation recommends that household temperatures should not drop below 16 degrees Celsius.

That's why insulation and building wraps are so important in a new home.

While the New Zealand Building Code makes it mandatory to include insulation in a new home, the standards are minimums. Gib Living Solutions® specify a higher level of insulation, to ensure your home remains comfortable and your energy bills stay as low as possible.

Fresh air and moisture control

Ventilation is the only way to remove airborne moisture and help minimise the occurrence of mildew and mould on walls and ceilings, and dust mites and other allergens in carpets and furnishings.

To reduce the level of moisture in the air and maintain a healthy environment, your home should be ventilated in a way that ensures all the air is renewed at least once every two hours.

Window joinery with built in ventilation is an excellent option, or security catches that allow windows to remain partially open, will ensure that your home "breathes", even when you're not home.

Mechanical ventilation systems such as extractor fans in the bathroom and a rangehood in the kitchen are critical.

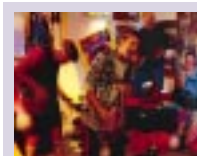
NOTE: Insulation helps reduce mould and mildew by reducing condensation where cold air meets hot air.

Make sure you get the home you want

While most designers and builders are familiar with Gib Living Solutions®, they will not always automatically include them in their plans. Make sure you discuss Gib Living Solutions® and your specific requirements with your designer and builder at the earliest possible stage.

Gib Living Solutions® at a glance

Gib Living Solutions® consist of a series of design and building recommendations to help you create a more comfortable living environment and interiors that will retain their good looks for longer.



Gib Quiet Zones®

Noise control for both interior and exterior noise, allowing homeowners to enjoy more peace and quiet.

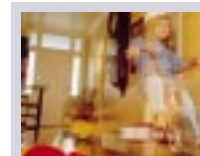
Page 4-5



Gib Dry Zones®

Solutions that provide extra protection against moisture damage in 'wet' areas such as bathrooms, laundries and kitchens.

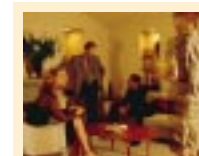
Page 6-7



Gib Tough Zones®

Provide superior protection from wear and tear and damage in high risk areas such as rumpus rooms, hallways and kids' bedrooms.

Page 8-9



Gib Feature Zones®

Solutions to enhance the style and appearance of feature areas such as the lounge and formal dining room.

Page 10-13



Gib® Building Essentials

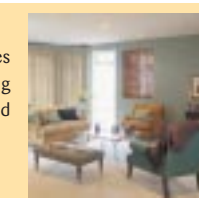
These are the "foundations" for Gib Living Solutions®, and include material requirements and best building practices to support each solution.

Page 22-23

A superior finish

Planning and fixing guidelines to help achieve great looking interiors that appear smooth and blemish free.

Page 10-13





SOLUTION:



Gib Quiet Zone®

Our lifestyles and living habits in New Zealand have undergone incredible change over the last decade.

We're busier than ever before, working longer hours. More of us are working or studying from home. Children are staying at home longer.

The homes and apartments we're building today need to be designed differently to reflect these changes.

For example, noise problems and privacy issues are now serious concerns for most people seeking a new home.

With infill housing, the increasing popularity of inner city living and the advent of more sophisticated in-home

entertainment and information technology, noise control is no longer just an option in a new home. It's a must.

How to block out noise

Noise control is a two-way street. Sometimes, you want to stop noise from other people and things from reaching you. Other times, you want to prevent the sound you're making or enjoying from disturbing the rest of the family.

A modern home should be designed to ensure that certain rooms can be isolated from the intrusion of unwanted noise. Similarly, you'll also want to consider which rooms will be common sources of noise that

the whole family may not want to hear. The laundry for instance. The kitchen too. No one wants to hear showers running or toilets flushing either. You'll probably want to include noise control in your home's entertainment area – for those times you don't all share the same tastes in music, videos or video games. It also makes sense to acoustically seal rooms where noise is generated, such as laundries, bathrooms and family rooms.

Different types of noise

INTERNAL NOISE

There are two types of internal noise. Impact noise and airborne noise. Make sure you discuss both of these types of noise with your designer, architect or builder.

Impact noise travels through the structure of the building and can be a problem anywhere a noise source is in contact with a wall or floor creating a vibration.

Common sources include plumbing, toilets, wall mounted washing machines and dryers and footfall.

Internal airborne noise travels through the air and includes sounds generated by speech, televisions, computers, stereos and telephones.

EXTERNAL NOISE

Reducing the amount of external noise that enters your home can be achieved through careful planning, choice of external cladding or glazing, landscaping and fencing. The measures you take will depend on where your place is located and the nature of the noise problems. Discuss these issues with your designer or architect.

How to reduce noise

From a design point of view, the two main ways of achieving noise control are:

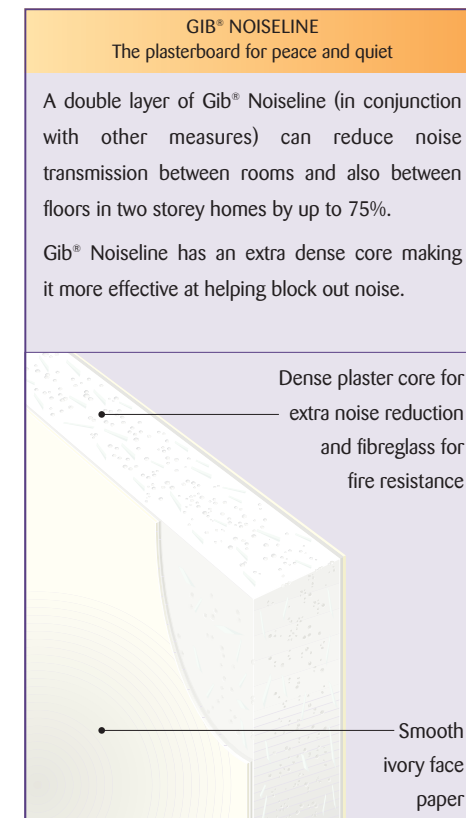
1. By creating Gib Quiet Zones® in rooms where noise is generated eg. toilet, family room. This reduces noise escaping and spreading throughout the house.
2. By creating Gib Quiet Zones® in rooms where you want to reduce the level of noise that enters them eg. study, bedroom.

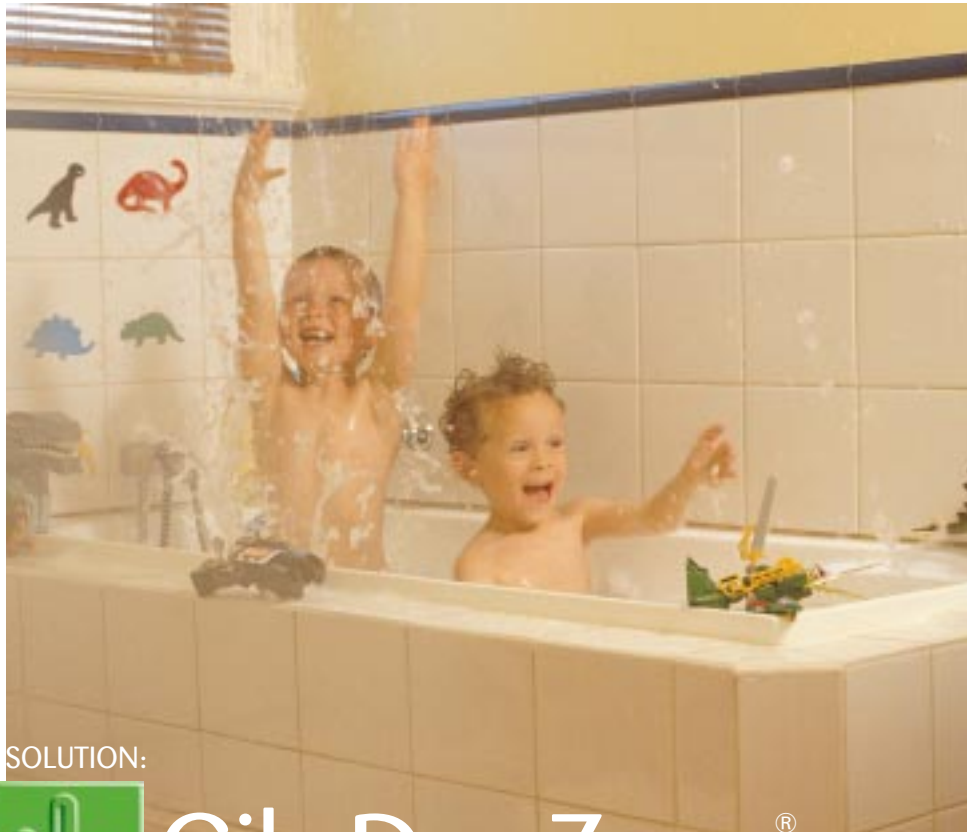
When installing a Gib Quiet Zone®, the whole room, including walls, floor, roof, ceiling, windows, vents and doors must be treated equally, otherwise any weak point will render the other measures less effective.

It is important that all flanking paths for noise through or around walls, ceilings and floors are treated. Examples of flanking paths are plumbing pipes, perimeter cracks, roof space cavities, windows and back-to-back powerpoints.

Specifications for a Gib Quiet Zone® appear on page 24.

IMPORTANT: Noise control is not sound proofing. With a Gib Quiet Zone®, noise can be reduced by up to 75%, but it will not be totally eliminated.





SOLUTION:



Gib Dry Zone®

Bathrooms, kitchens and laundries are susceptible to moisture damage and require special attention to ensure they stay dry, easy to clean and retain their serviceability and good looks as long as possible.

Mould and mildew stains, condensation, and flaking paint. Soggy wall linings, dry rot in framing. These problems are quite common in areas that are continually subject to steam, moisture build up or water spills – problems that can be prevented by incorporating a Gib Dry Zone® solution.

Kitchens and bathrooms are the rooms used most frequently in a home and are also generally the most costly to refurbish. So it's especially important to get the

basics right to avoid damage to expensive tile finishes, cabinets, vanities and fittings.

Getting the basics right

Gib® Aqualine has been developed for use in wet areas and contains special wax polymers in the core to help stop moisture from passing through the linings into the underlying framing where it can cause serious damage.

It provides an excellent base for paint or wallpaper finishes and a solid, stable backing for ceramic tiles. Shower walls or splash areas to be tiled should be first coated with a waterproof membrane for added protection from moisture and dampness.

Controlling steam and moisture

Good ventilation, heating and insulation are essential to minimize moisture build up which can ultimately lead to mould or mildew problems.

Steam will condense on cold surfaces, which is why good ventilation and heating are so critical. A fan heater makes bathrooms warm and more comfortable as well as helping reduce steam condensing on walls and ceilings.

Vented windows and an extractor fan in bathrooms and a rangehood in the kitchen will ensure steam and moisture are expelled outside. This in turn helps reduce cleaning time and greatly reduces the chance of mould and mildew.

Damp towels can contribute to moisture build up which is why you should make sure heated towel rails are specified for bathrooms and ensuites.

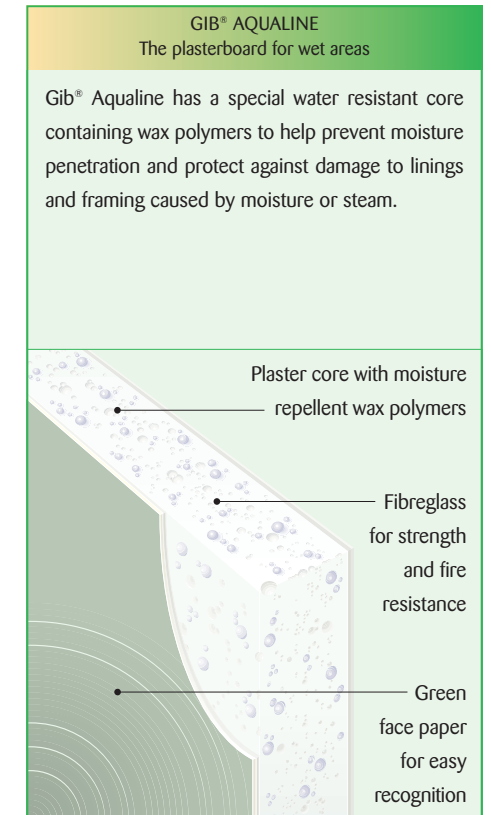
Specifications for a Gib Dry Zone® appear on page 26.



Cooking and dish washing generate a lot of steam and airborne moisture which can over time cause damage to wall linings. Gib® Aqualine provides added protection in kitchens where expensive tile finishes could be at risk.



The photograph shows what happens when Gib® Standard plasterboard (left) and Gib® Aqualine are soaked in coloured water. The core of the standard plasterboard has absorbed the water, while the core of Gib® Aqualine is relatively unaffected.





SOLUTION:



Gib Tough Zone®

You can't stop kids being kids.

Rough and tumble is part of growing up and invariably takes its toll on interiors. Scratches, dings and wear and tear are a fact of life with a young family.

But with a Gib Tough Zone®, you can avoid the worst of it and ensure your interiors keep looking good for longer.

It's a simple matter of planning carefully and specifying purpose designed products up front.

You'll benefit from less time and money spent on repairs, and ultimately, better resale for your home.

Areas that can typically suffer from the effects of

wear and tear include hallways, stairwells, family rooms, rumpus rooms, kids bedrooms and garages.

What is wear and tear

Marks caused by soles of shoes, pens, crayons, children playing and furniture rubbing against walls. Dents and scratches caused by vacuum cleaner, childrens' toys, furniture being moved about.

Built to take it

Gib® Toughline is much tougher than ordinary Gib® Standard plasterboard, so it can more easily take the knocks without showing the signs of wear and tear.

Corners of walls are particularly vulnerable to damage, which is why Gib Tough Zone® Solutions recommend using Gib® Goldline trims with a rounded profile.

The softer contour of the bullnose profile helps protect against chipping.

Also recommended are solid timber architraves and skirting as well as solid core doors, to provide added durability. A special paint system is essential.

Plan smart

In planning your home, there are a number of things you can do to reduce wear and tear. For example, making doorways as wide as possible reduces the risk of damage when moving furniture.

If possible, choose furniture with rounded corners, which is less likely to damage walls.

And don't forget door stops – it's a common oversight.

Another thing worth considering, particularly in north facing rooms, is anti fade glass, which protects carpet, furnishings and finishes from the harmful effects of UV light.

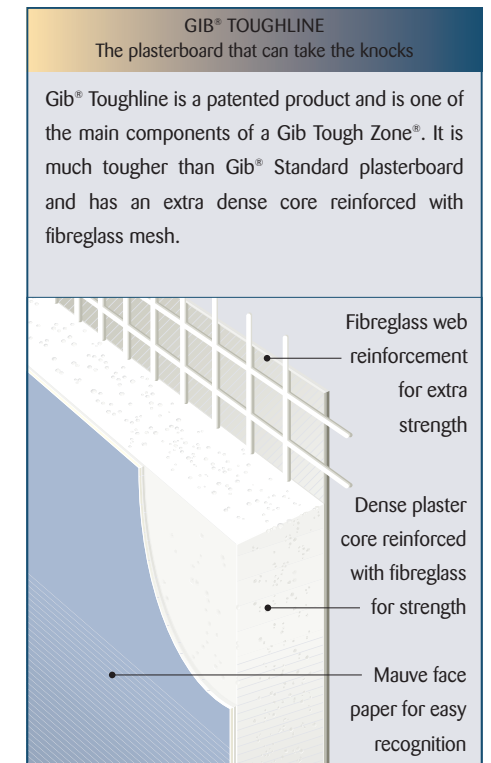
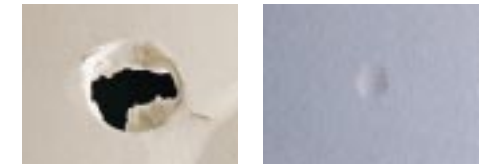
Specifications for a Gib Tough Zone® appear on page 28.



As many garages are multi-purpose areas sometimes used as workshops, hobby rooms, and for storage of equipment, they are usually subject to extra wear and tear. A Gib Tough Zone® solution provides added protection from scratches, dents and holes.



A metal ball weighing half a kilogram dropped from a height of 1.8 metres easily breaks through Gib® Standard plasterboard. With Gib® Toughline, there is only minor surface damage.





SOLUTION:



Gib Feature Zone®

The main living areas of a home are the rooms you live in most and share with family and friends.

These rooms tend to be larger, with greater surface areas, and are generally located to take maximum advantage of natural light, sun and views.

With these “show areas”, finish quality requires careful attention, particularly if harsh lighting is a factor or where walls or ceilings form a special feature, either by design or by colour. In these areas, Gib® Ultraline should be used as it has been specifically designed to help achieve a superior finish on walls and ceilings.

Gib® also has a range of designer trims and edge profiles

that allow you to customise feature areas to reflect your style.

For the ultimate in smooth finishes, skim coating is recommended. This involves covering the entire plasterboard surface with Gib® Smoothcoat, a special compound designed to even out any minor surface imperfections.

Getting the finish you want

Many factors can influence the final appearance of walls and ceilings in your home – lighting conditions, paint colour, paint type and even the underlying framing. Take account of all these factors at the earliest possible stage when planning your home.

The importance of lighting

No matter how smooth wall and ceiling linings appear, there are always some minor imperfections. These are either accentuated or diminished depending on the lighting conditions.

Indeed, lighting is one of the most critical factors in planning for stunning interiors. Windows positioned close to a wall and at the end of a room or hallway will tend to accentuate minor irregularities or imperfections in linings.

For example, when light strikes a surface at a shallow angle such as light that comes through windows close to a corner or a ceiling, it tends to greatly exaggerate any surface irregularities. This also happens with side lighting from surface-mounted lighting fixtures.

However, when the angle of light is more or less at right angles to a surface, imperfections are less obvious.

Similarly, some types of lighting (such as recessed downlights) can help enhance the surface finish appearance by channelling light downwards and not directly onto walls and ceilings.



fig. 1

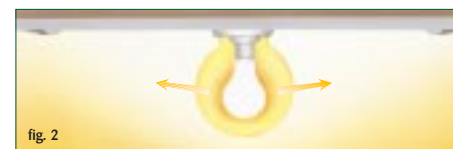


fig. 2

Recessed downlights (fig. 1) can help enhance the surface finish appearance whereas surface-mounted lights (fig. 2) may accentuate small imperfections.

Paint finishes and colour

Semi gloss, gloss, and even low sheen paints all reflect light and tend to accentuate even the smallest surface imperfection. On the other hand, flat paints tend to reflect light back in a diffused form and help disguise any surface irregularity.

Avoid gloss paints where you can. Even when the work is carried out by a highly skilled tradesperson, the end result may be disappointing.

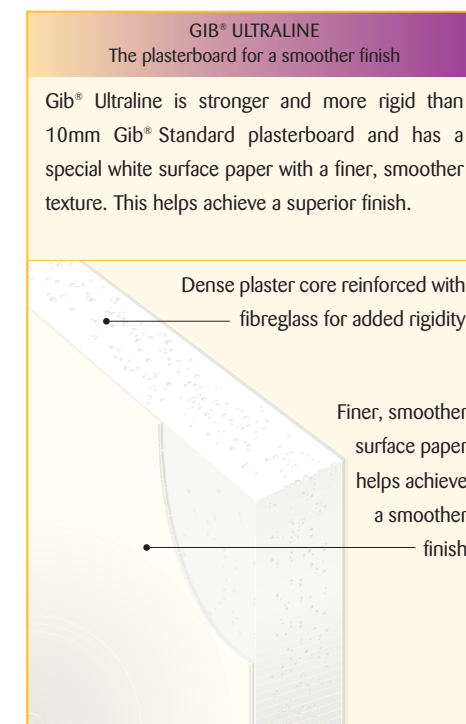
Dark colours also highlight the slightest imperfection, whereas light colours tend to soften the effect of any surface irregularities.

Gib Living Solutions® recommend specific paint systems from Resene. You can try out your colour scheme using the Resene virtual painting programme ie. Resene Ezypaint available on the Resene website, www.resene.co.nz

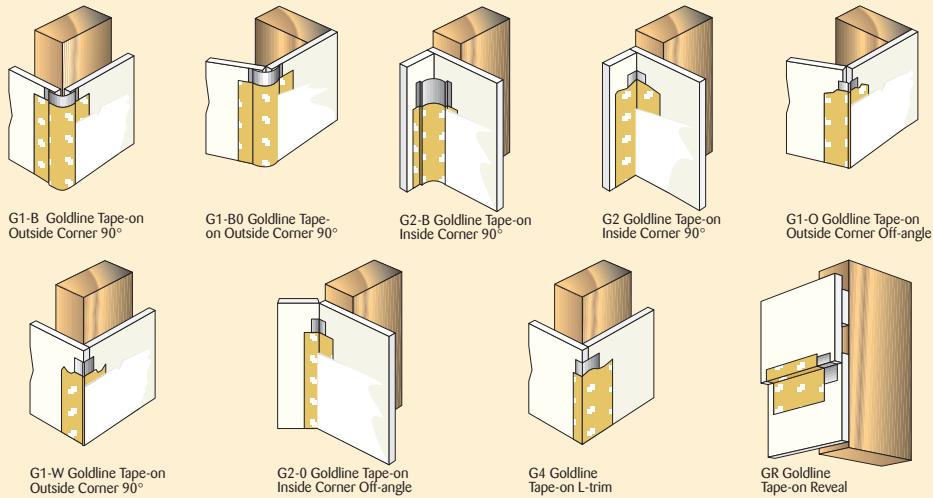
Smoother ceilings

To achieve a flat, uniform appearance on ceilings, Gib® Ultraline is recommended. It is more rigid than 10mm Gib® Standard plasterboard and has a special white surface paper with a finer, smoother texture.

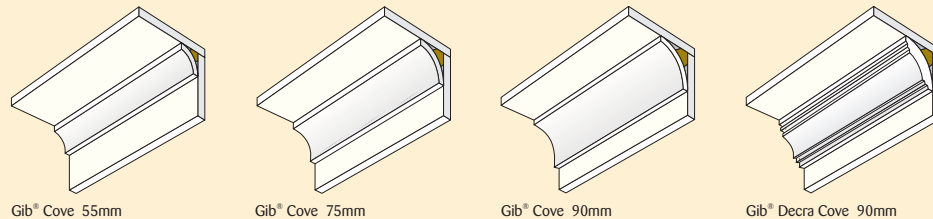
Specifications for a Gib Feature Zone® appear on page 30.



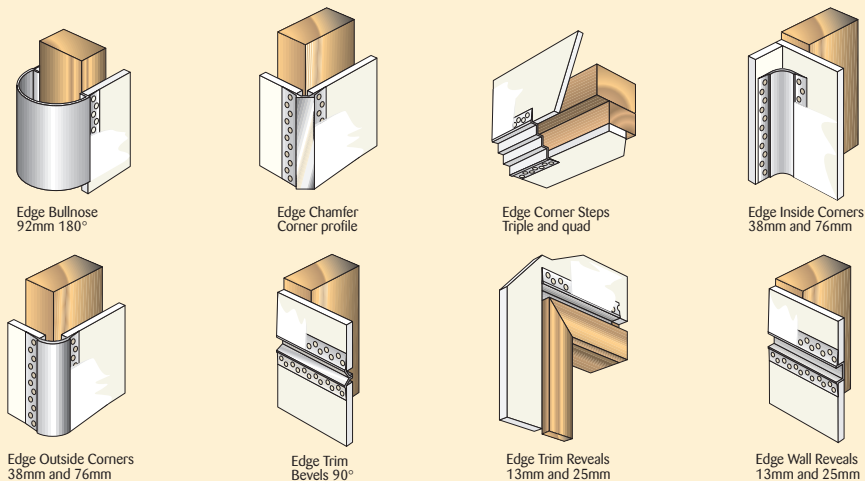
Gib® Goldline Trims



Gib® Cove



Gib® Edge – aluminium profiles

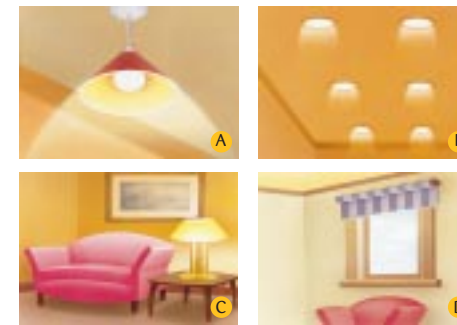


Average or harsh lighting?

No matter how smooth wall and ceiling linings appear, there are always some minor imperfections. These are accentuated under harsh lighting conditions or diminished under indirect or diffuse lighting conditions.

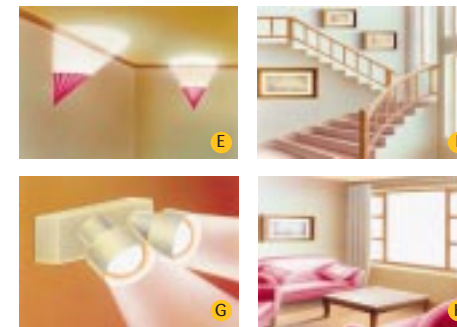
When planning your home, try and avoid harsh lighting conditions. In situations where this is not practical, you should consider skim coating the entire surface of the plasterboard linings. Avoid dark colours and gloss paints.

INDIRECT OR DIFFUSE LIGHTING CONDITIONS



- A Ceiling mounted hanging shade channels light downwards.
- B Recessed downlights channel light downwards.
- C Table lamp shade acts to reduce the amount of light.
- D South facing windows in contrast to north facing windows.

HARSH LIGHTING CONDITIONS



- E Wall mounted uplighting throws light directly onto the surface of walls and ceiling.
- F Numerous windows throw a large amount of light across walls and ceilings.
- G Wall or ceiling mounted spot lighting either directs light onto walls or provides task lighting.
- H Large north, east or west facing windows or glazed doors make for intense natural lighting conditions.

Framing issues

Gib® plasterboard linings are flexible and will reflect any deviation in the underlying framing.

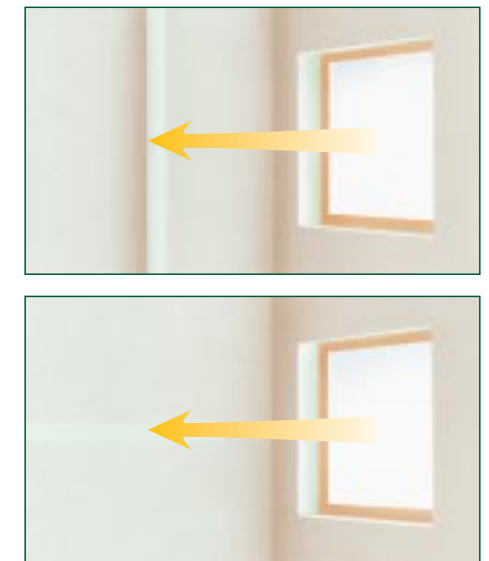
The timber framing must also be dry, otherwise it may shrink and twist as it dries and cause defects in the linings.

Gib Living Solutions® specify kiln dried machine graded framing timber such as Pinex Laserframe and Origin Timeframe or alternatively steel framing. It pays to double check to make sure your builder uses these materials.

Fixing the linings

Fixing Gib® plasterboard sheets horizontally instead of vertically on walls reduces the number of joints in the linings, helping to achieve a more uniform appearance.

Horizontal fixing also means that glancing light from adjacent windows shines along the joint, thus reducing the “shadowing” effect that is sometimes noticeable with vertical fixing (see diagram below).



The effect of light on vertical fixing (top) and horizontal fixing (bottom).

Room by room guide

This section of the book shows you which Gib Living Solutions® are desirable in different areas of your home. In some cases, you will want to combine solutions. For instance, bathrooms and toilets should ideally combine both Gib Quiet Zone® and Gib Dry Zone® solutions. With Gib Living Solutions®, you can tailor the environment of each room to suit. Where no specific ceiling solution is specified, ceilings should be lined with Gib® Ultraline.

Kitchen

COMMON PROBLEMS: A lot of steam and moisture is generated through activities such as cooking and dishwashing, making the major considerations in this zone moisture control, ease of cleaning and fire protection.

RECOMMENDATIONS: A Gib Dry Zone® solution including Gib® Aqualine for walls and ceilings, suitable ventilation and a rangehood. As Gib® Aqualine has a superior fire rating compared with Gib® Standard plasterboard, it offers additional fire protection as well as protection from moisture damage.

- 1 Fire resistant Gib® Aqualine on walls and ceiling
- 2 Rangehood
- 3 Fire resistant insulation eg. Pink™Batts®
- 4 Ceramic tiling over 13mm Gib® Aqualine
- 5 Windows eg. Rylock Innovations Joinery featuring GentleAir Passive ventilation system
- 6 Paint eg. Resene Zylone SpaceCote

 Dry Zone

Laundry

COMMON PROBLEMS: Protection from steam and moisture damage is a key consideration and depending on location, noise control may also be desirable.

RECOMMENDATIONS: Combination of Gib Quiet Zone® and Gib Dry Zone®. Make provision for wall mounting the dryer and ensure plumbing is as far away as possible from areas where peace and quiet is desired eg. on the outside walls. (Combining zones see page 31.)

  Dry/Quiet Zone



Toilet

COMMON PROBLEMS: Protection from moisture damage is a key consideration and depending on location, noise control may also be desirable.

RECOMMENDATIONS: Combination Gib Quiet Zone® and Gib Dry Zone® (see page 31).

  Dry/Quiet Zone

Bathroom

COMMON PROBLEMS: Protection from steam and moisture damage is especially important in bathrooms where expensive tile finishes, vanities and fittings could be at risk. Noise control is often desirable.

RECOMMENDATIONS: Combination of Gib Quiet Zone® and Gib Dry Zone®. Make sure you include a special waterproof membrane behind the tiles in the splash areas and shower, and a heated towel rail and extractor fan to help minimise moisture build up. (Combining zones see page 31.)

- 1 Gib® Aqualine on walls and the ceiling
- 2 Ceramic tiling over 13mm Gib® Aqualine with waterproof membrane
- 3 Safe heating eg. 1.5 kilowatt bathroom heater
- 4 Paint eg. Resene Zylone SpaceCote
- 5 Insulation eg. Pink™Batts®
- 6 Ventilated windows eg. Rylock Innovations Joinery
- 7 Extractor fan, minimum capacity 25 litres/sec
- 8 Safety glass eg. Pilkington Safety Glass

  Dry/Quiet Zone

Master Bedroom

COMMON PROBLEMS: To ensure privacy, you should avoid locating the master bedroom next to secondary bedrooms, or alternatively, position the ensuite or wardrobes in between to achieve maximum separation.

RECOMMENDATIONS: In planning your home, make sure you locate the master bedroom as far away as possible from noise sources such as TV room, kitchen, laundry, rumpus room, road traffic and neighbouring homes. Combination Gib Quiet Zone® and Gib Feature Zone®, including noise control door system and Pilkington Hush Glass windows. In two storey homes, a Gib Quiet Zone® ceiling system is recommended.

- 1 Double layer of Gib® Noiseline for ceilings and/or walls.
- 2 Insulation in walls and ceilings eg. Pink™Batts®
- 3 Windows eg. Rylock Innovations Joinery incorporating Pilkington Hush Glass
- 4 Paint eg. Resene Zylone SpaceCote
- 5 Noise control door

 Quiet Zone

Bedrooms

COMMON PROBLEMS: Noise, wear and tear. Ideally, Gib Quiet Zone® should be included in all bedrooms. However this may be done on a selective basis only if a bedroom is located close to a noise source. In children's bedrooms, you may wish to incorporate a Gib Tough Zone® solution.

RECOMMENDATIONS: A Gib Quiet Zone® incorporating Gib® Noiseline and other components as specified on page 24. An optional Gib Tough Zone® for children's bedrooms. (Combining zones see page 31.)

  Quiet/Tough Zone



Garage

COMMON PROBLEMS: Major considerations are toughness and durability. Fire resistance is also important as flammable materials are often stored in the garage.

As most garages are multi-purpose areas sometimes used as workshops, hobby rooms and for storage of equipment, they are usually subject to extra wear and tear.

RECOMMENDATIONS: A Gib Tough Zone® solution for walls and Gib® Ultraline for ceilings. If noise control is desired, substitute two sheets of Gib® Noiseline for two sheets of Gib® Toughline as per Gib Quiet Zone®.

Also recommended are solid core doors, solid timber trims and specific Resene paint systems to provide added protection from marks, scratches, dents and holes.



Hall/Stairway

COMMON PROBLEMS: High traffic areas are subject to a lot of wear and tear, so the major considerations are toughness and durability.

RECOMMENDATIONS: A Gib Tough Zone® solution for walls and Gib® Ultraline for ceilings

- 1 Gib® Toughline on walls
- 2 Gib® Ultraline on ceilings
- 3 Scratch resistant paint eg. Resene Zylone SpaceCote
- 4 Solid timber skirting boards eg. FWP Paynter Profiles
- 5 Safety glass eg. Pilkington Safety Glass



Home Office/Study

COMMON PROBLEMS: The major issue is noise control. In planning your home, take account of any potential exterior noise problems such as road traffic, neighbouring homes etc. and locate the study away from such noise sources.

The same applies to the interior layout. The study should be located away from noisy rooms such as the laundry, kitchen, TV room, rumpus room etc.

RECOMMENDATIONS: A Gib Quiet Zone® incorporating Gib® Noiseline, Pilkington Hush Glass windows, noise control interior door system.

- 1 Double layer of Gib® Noiseline on ceiling and walls
- 2 Insulation in walls eg. Pink™Batts®
- 3 Paint eg. Resene Zylone SpaceCote
- 4 Noise control door
- 5 Windows eg. Rylock Innovations Joinery incorporating Pilkington Hush Glass



Family/Rumpus Room

COMMON PROBLEMS: As both these rooms are high use areas, special attention should be given to the toughness and durability of linings, trims and surface finishes to provide extra protection from marks, scratches, dents or holes.

RECOMMENDATIONS: A Gib Tough Zone® incorporating Gib® Toughline for walls, solid core door, solid timber trims and specific Resene paint systems.

- 1 Gib® Toughline on walls
- 2 Gib® Ultraline on ceilings
- 3 Scratch resistant paint eg. Resene Zylone SpaceCote
- 4 Solid timber skirting boards eg. FWP Paynter Profiles
- 5 Safety glass eg. Pilkington Safety Glass



Tough Zone



Lounge/Dining

COMMON PROBLEMS: The major issues are appearance and finish quality.

RECOMMENDATIONS: To ensure wall and ceiling linings look smooth and blemish free, avoid harsh lighting conditions and choose lighter colours. A Gib Feature Zone® incorporating Gib® Ultraline for walls and ceilings with Gib® Cove, designer trims and/or edge profiles.

- 1 Gib® Ultraline on ceiling and walls
- 2 Paint eg. Resene Zylone SpaceCote
- 3 Gib® Cove for a designer appearance



Feature Zone



Gib Living Solutions® Building Essentials

The New Zealand Building code sets down minimum standards for residential construction. Recognising that these are minimums, Gib Living Solutions® specify a number of additional elements and upgrades to provide performance exceeding New Zealand Building Code requirements.

GIB LIVING SOLUTIONS® AND FIRE SAFETY

Gib® plasterboard has inherent fire resistant properties, and stops or slows down the spread of fire through walls and ceilings. The building wraps specified in Gib® Building Essentials also have fire retardant properties. Of course, the first line of defence is to have smoke detectors installed. Always make sure you have a fire extinguisher readily accessible.

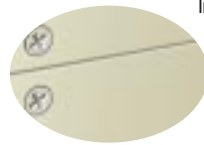
HEATING

Many New Zealand homes have inadequate heating. Keeping a home warm during the winter months will help reduce internal moisture levels and condensation, having a major effect on air quality and the overall living environment.

Efficient heating and higher R value insulation such as Pink™Batts® are the most effective combination to achieve optimal comfort levels cost effectively.

HORIZONTAL FIXING

Fixing the Gib® Plasterboard sheets horizontally to walls instead of vertically reduces the number of joints in the linings, and, combined with the screw/glue fixing method, help to achieve a consistent, uniform appearance.



BRACING

Most homes have bracing requirements that can be achieved through the use of Gib® Braceline plasterboard, which has specific bracing characteristics.

FRAMING

Timber framing that hasn't been kiln dried may contain large amounts of moisture. As the timber dries out over time, it tends to twist, shrink and buckle, which can cause cracks, nail pops and other problems in the plasterboard linings.

Use stable framing materials such as kiln dried machine graded Pinex Laserframe and Origin Timeframe, or steel framing eg. Gib® Rondo Steel Battens.



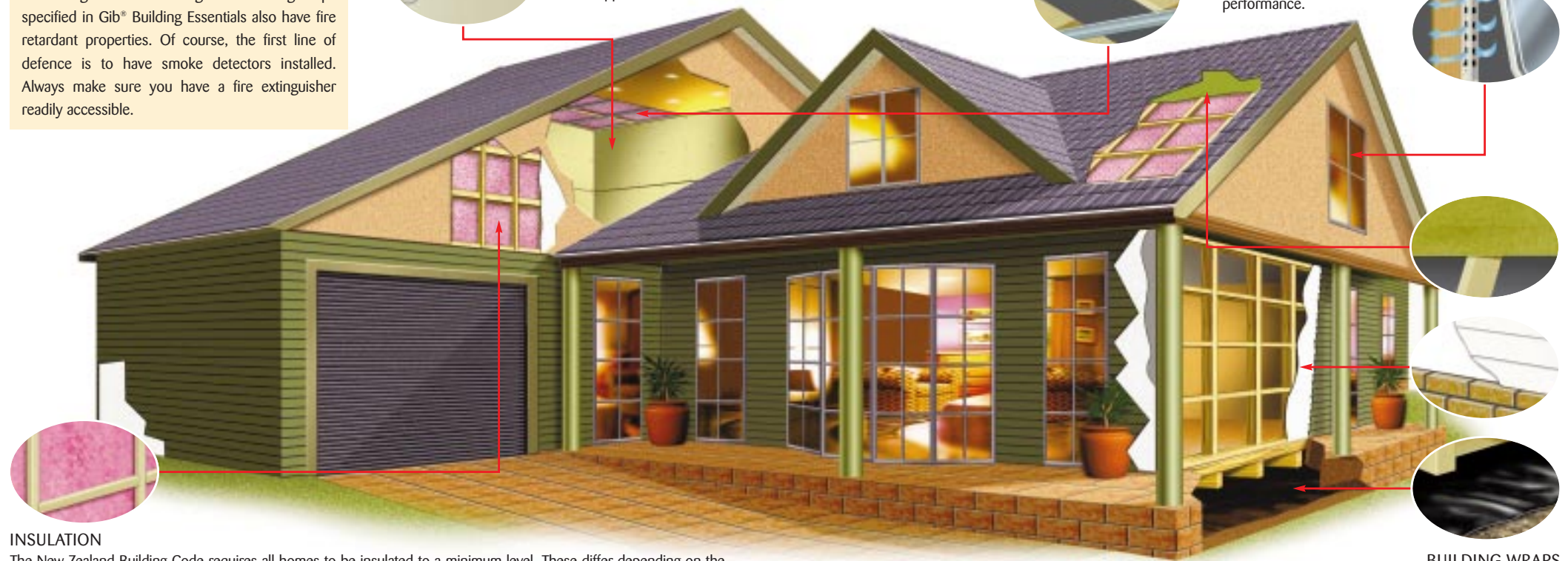
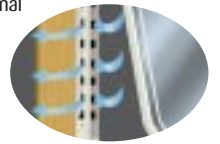
WINDOWS

Gib Living Solutions® require window joinery with built-in venting systems and condensation drains such as Rylock Innovations Joinery.

Homes require a minimum of half an air change per hour to maintain a healthy environment, and good ventilation is imperative to prevent condensation, dampness, mould and mildew.

Windows with built-in vents allow the house to breathe even when windows are closed. The condensation drain allows any moisture which does condense on windows to drain to the exterior.

In colder areas such as the central plateau in the North Island and all regions of the South Island, double glazing such as Pilkington Insulating Glass Units should be used for improved thermal performance.



INSULATION

The New Zealand Building Code requires all homes to be insulated to a minimum level. These differ depending on the region you live in. The effectiveness of the insulation is graded with an R value. For Gib Living Solutions®, we specify a higher R value than the building code in order to keep a home warmer in winter, cooler in summer, and to reduce heating costs eg Pink™Batts®. For more information about R values in your region contact Tasman Insulation (see page 33).

BUILDING WRAPS

To stop moisture and dampness entering a home, special concrete underlay, ground cover, roofing underlay and building papers are required. These include Gib® Framegard II and Gib® Antiblaze greencap and Gib® Antiblaze greenwrap.



What goes into a Gib Quiet Zone® solution

GIB® NOISELINE PLASTERBOARD

A specially developed lining with an extremely dense core that provides superior noise reduction performance compared with Gib® Standard plasterboard.

DOUBLE LAYERS ON WALLS

A Gib Quiet Zone® for internal walls has two layers of 10mm Gib® NoiseLine on one side of the wall and a single layer on the other side, with R1.8 bulk insulation in the cavity eg. Pink™Batts®.

The additional mass created by the extra layers and density of Gib® NoiseLine is the main reason why a Gib Quiet Zone® wall is so effective.

FLOOR/CEILING

A squeak free floor system eg. Silento Quiet Floor System or Timeframe I-Floor with Gib® Rondo Batts (fixed at max 450mm centres), Gib® Rondo Clip and Gib® NoiseLine will help minimise noise transmission between upstairs and downstairs rooms.

Carpet with a good quality underlay will reduce impact noise transmission (eg. footsteps on the floor above).

NOISE CONTROL DOORS

Doors with seals on three sides for carpeted floors and on four sides for hard surfaced floors.

ACOUSTIC GLASS WINDOWS

Consisting of two layers of glass laminated together with a special noise reducing resin, Pilkington Hush Glass is much more effective at shutting out noise than standard glass.

ACOUSTIC SEALANT

Gib® Soundseal acoustic sealant is used to seal all air gaps around the perimeter of walls and ceilings as well as around electrical fittings, windows and doors.

INSULATION

The provision of bulk insulation in the wall and ceiling cavity, such as Pink™Batts® will reduce the transmission of noise.

PAINT RECOMMENDATIONS

WALLS: 1 coat acrylic primer eg. Gib® Sealer or Resene Broadwall Acrylic Sealer + 2 coats acrylic paint eg. Resene Zylone Sheen (satin).

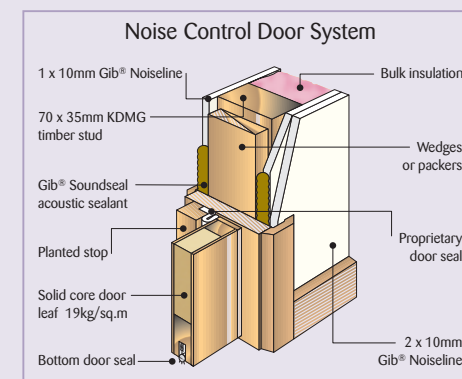
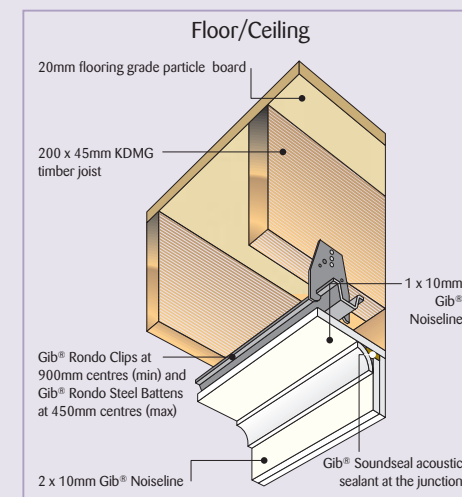
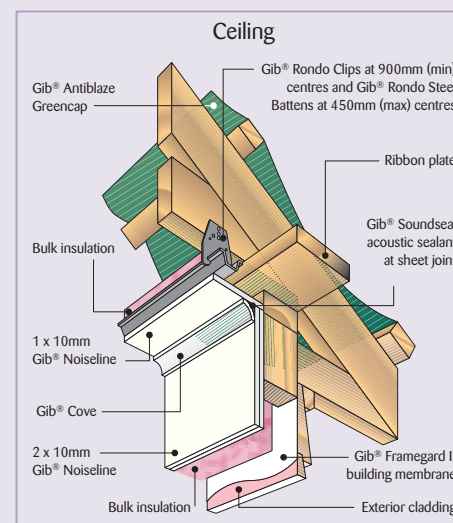
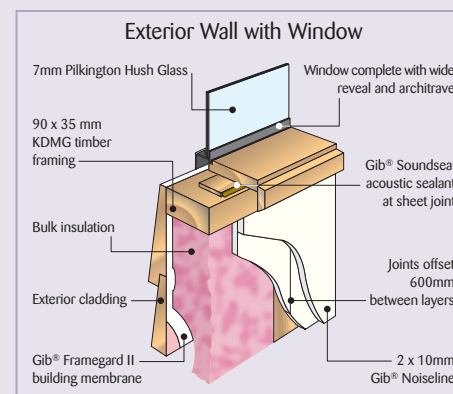
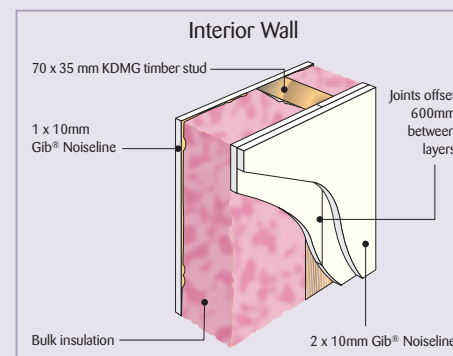
CEILING: 1 coat acrylic primer eg. Gib® Sealer or Resene Broadwall Acrylic Sealer + 2 coats acrylic paint eg. Resene Zylone 20 (flat).

UPGRADE OPTIONS

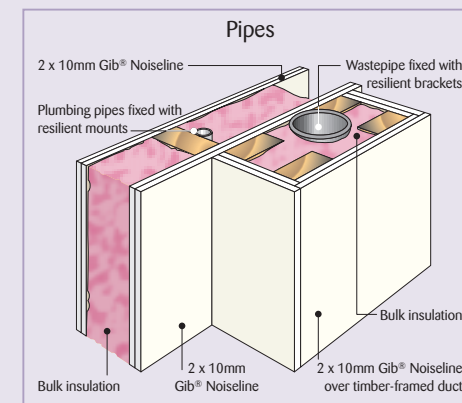
Quiet Zone upgrade options are available. Please contact the Gib® Project Support Team on 0800 442 4663 or refer to the Gib Living Solutions® Technical Guide for specifications.

DESIGN CONSIDERATIONS

- Noise control is not sound proofing. With a properly designed and installed Gib Quiet Zone® noise can be reduced by up to 75%, but will not be totally eliminated.
- For a particular room, the whole building envelope, including walls, floors, roofs, ceilings, windows, vents and doors must be treated equally, otherwise any weak point will render the other measures ineffective.
- It is important that all flanking paths are considered eg. plumbing pipes, roof space/ceiling cavities, perimeter cracks, windows, doors, and powerpoints.
- Take account of exterior noise sources such as road traffic, trains or neighbouring homes. Locate bedrooms and main living rooms as far as possible from the noise source.
- Your choice of exterior cladding can play a significant part in determining the amount of exterior noise you hear inside your home.
- Incorporate a Gib Quiet Zone® ceiling in any area where upstairs noise could interfere with downstairs living. Carpet and a good quality foam underlay can greatly reduce footfall noise transmission from upstairs.
- Downlights must be avoided in a Gib Quiet Zone® ceiling as they can transfer noise from room to room.
- Bedrooms should be located as far away as possible from noisy rooms such as the laundry, kitchen, TV room, rumpus room etc.
- Avoid having power outlets and light switches back to back as they can transfer noise from room to room.
- Soft furnishings and heavy curtain fabric absorb sound and will help you achieve a more comfortable acoustic atmosphere.
- Use soft, insulating mountings for appliances such as the dishwasher, washing machine etc.



NOTE: Specify wider door jambs for 3 layer Gib Quiet Zone® internal walls



What goes into a Gib Dry Zone® solution

GIB® AQUALINE PLASTERBOARD

Gib® Aqualine has been developed for use in wet areas such as bathrooms, kitchens, toilets and laundries. Compared with Gib® Standard plasterboard, it gives superior protection against damage to linings and framing caused by moisture or steam.

It provides an excellent base for paint and wallpaper finishes and a solid, stable backing for ceramic tiles.

10mm or 13mm Gib® Aqualine fixed horizontally must be used for painted areas.

13mm Gib® Aqualine fixed horizontally must be used for tiled areas.

For the ceiling, either 10mm Gib® Aqualine fixed at max 450mm centres or 13mm Gib® Aqualine fixed at 600mm centres is recommended.

VENTILATION, HEATING AND INSULATION

Good ventilation, heating and insulation are essential in bathrooms, ensuites and laundries to minimise moisture build-up and condensation on walls and ceilings.

Steam from baths and showers will condense on cold surfaces. Adequate heating and insulation (such as Pink™Batts®) can stop this from happening, while vented windows and an extraction fan ensure steam and moisture are expelled outside.

WINDOWS

Windows with built-in vents and condensation channels such as Rylock Innovations Joinery are specified in Gib® Building Essentials (see page 23). They are especially important in bathrooms, laundries and kitchens to help prevent moisture build-up and dampness.

BATHROOM HEATING

A minimum of 1.5kw fan heater makes bathrooms warm and more comfortable as well as helping prevent steam condensing on walls and ceilings.

Damp towels are a contributing factor to moisture build-up, which is why heated towel rails are specified for bathrooms.

BATHROOM EXTRACTOR FANS

These must be vented to the exterior and not just through the ceiling into the roof cavity. Fans must be capable of extracting 25 litres per second.

FLOORING

Bathrooms, ensuites and laundries must have an emergency drain in the floor in case of accidental overflow. Use an increased moisture resistant flooring substrate eg. FWP Green Tongue Pynefloor.

CERAMIC TILES AND WATERPOOF MEMBRANES

All shower walls or splash areas to be tiled are first coated with a waterproof membrane as added protection from moisture and dampness.

PAINT RECOMMENDATIONS

WALLS: 1 coat alkyl primer eg. Resene Sureseal + 2 coats water based enamel paint eg. Resene Lustacryl (semi-gloss) or Zylone SpaceCote (low sheen).

CEILING: 1 coat alkyl primer eg. Resene Sureseal + 2 coats water based enamel paint eg. Resene Lustacryl (semi-gloss) or Zylone SpaceCote (low sheen).

KITCHEN RANGEHOOD

This helps eliminate steam and cooking odours and must be vented to the exterior rather than through the ceiling into the roof cavity.

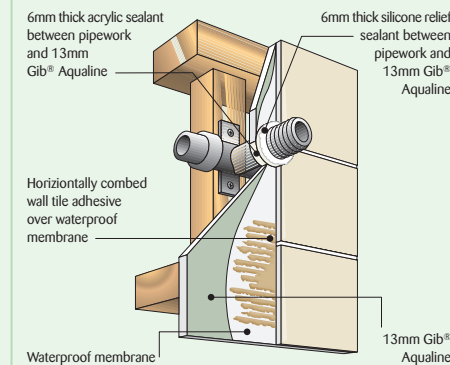
FIRE PROTECTION

Gib® Aqualine has been developed as a combined fire protection/wet area lining system, and is ideal in kitchens where the risk of fire is much greater than other areas of the home or apartment.

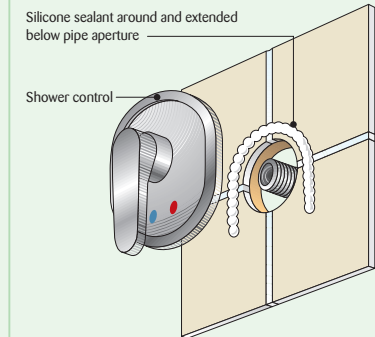
CLOTHES DRIER

In a typical day, a clothes drier can generate as much as 5 litres of moisture. It is important to remove this moisture from the inside of your home or apartment. Make sure the drier is vented to the exterior.

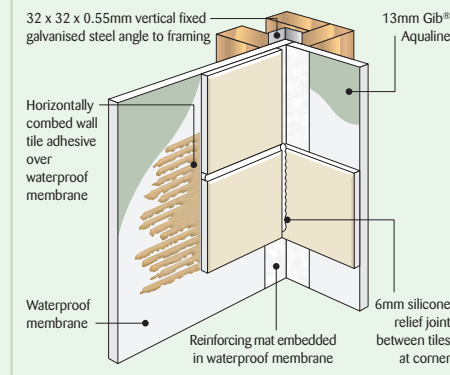
Jointing and Sealing around Plumbing Penetration



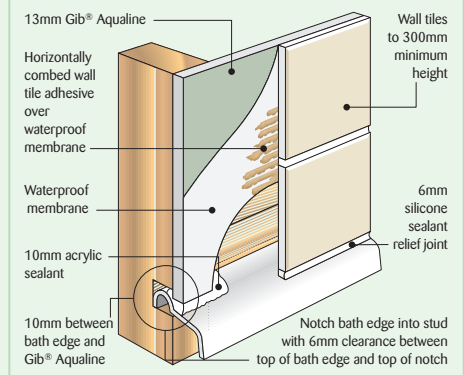
Silicone Bead around Shower Mixer



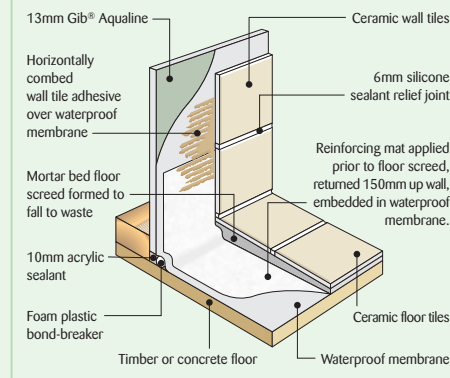
Shower Internal Corner



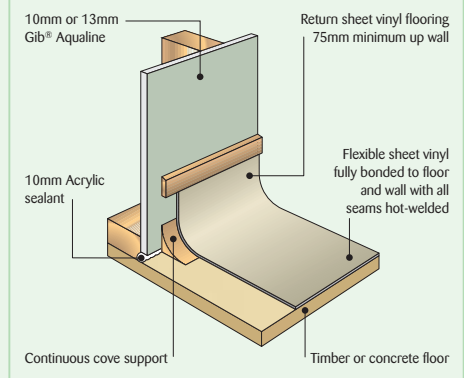
Bath to Wall Junction



Corner of Base of Shower



Coved Vinyl Floor Wall Junction



What goes into a Gib Tough Zone® solution

GIB® TOUGHLINE PLASTERBOARD

Provides greater resistance to surface damage such as scratches, dents and holes.

Gib Tough Zone® Solutions for domestic application specify 10mm Gib® Toughline. However, Gib® Toughline is also available in a thicker variant (13mm) which is approximately 150% tougher than Gib® Standard plasterboard. The thicker variant is ideal in domestic situations where extra strength and toughness are required eg rental accommodation.

Gib® Toughline's extra strength is due to the special high density core, which is reinforced with a continuous fibreglass mesh.

SPECIAL CORNER TREATMENTS

Use Gib® Goldline bullnose trims rather than sharp corners. The softer contours of the bullnose profile make chipping of damage prone corners less likely.

STOPPING COMPOUNDS

Some stopping compounds are harder than others so it is important to use a good quality stopping system as specified in the diagrams on the facing page.

PAINT RECOMMENDATIONS

A scratch resistant paint system is one of the most important parts of the solution.

WALLS: 1 coat acrylic primer eg. Gib® Sealer or Resene Broadwall Acrylic Sealer + 2 coats water based enamel paint eg. Resene Lustacryl (semi-gloss) or Zylone SpaceCote (low sheen).

CEILINGS: 1 coat acrylic primer eg. Gib® Sealer or Resene Broadwall Acrylic Sealer + 2 coats acrylic paint eg. Resene Zylone 20 (flat).

SOLID TIMBER TRIMS

Solid timber architraves and skirtings provide added durability eg. FWP Paynter Profiles.

SOLID CORE DOORS

Doors typically take a battering in rooms or areas where there is a lot of activity. Solid core doors (rather than the more common hollow core doors) offer greater resistance to impact.

DOOR STOPS

A simple item that is often overlooked, door stops are a must to prevent door handles denting or breaking through wall linings.

TOUGHENED SAFETY GLASS

Pilkington Smart Glass solutions provide the option of Toughened Safety Glass for added protection from accidental breakage, and laminated Antifade glass which also protects from UV light.

WINDOWS

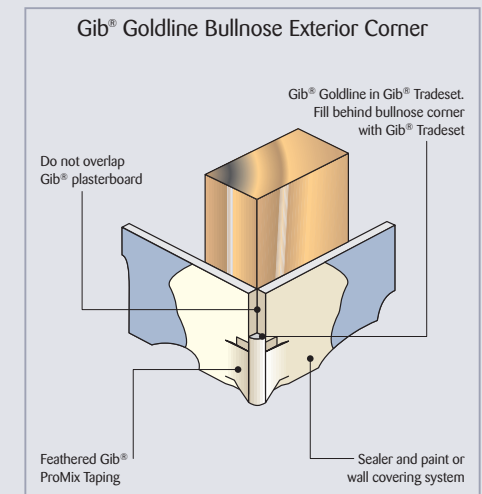
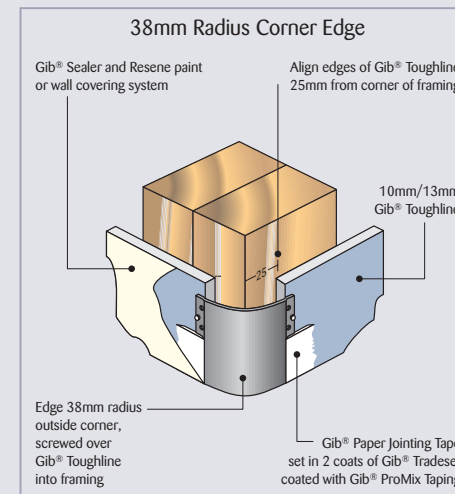
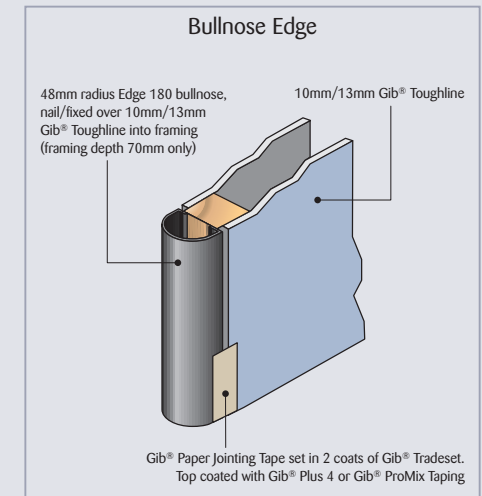
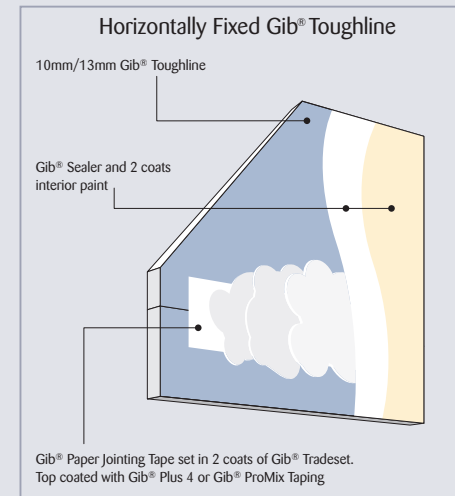
Rylock Innovations Joinery can be fitted with Pacific Hardwood timber reveals which gives greater protection against general wear and tear.

FLOOR COVERINGS

Gib Tough Zone® solutions also provide guidelines on grades of carpet, tiles and vinyl which are suitable for areas subject to added wear and tear. Use a heavy duty grade wool carpet or domestic class 22 vinyl.

DESIGN CONSIDERATIONS

- Make doorways as wide as possible and consider using kick plates if necessary for added protection.
- In designing Gib Tough Zones®, avoid unnecessary corners and plan to round off any square edges.
- Choose furniture with rounded corners. Soft furniture is less likely to cause damage to walls.



What goes into a Gib Feature Zone® solution

GIB® ULTRALINE PLASTERBOARD

Gib® Ultraline is more solid and rigid than Gib® Standard plasterboard and also features a surface paper with a finer, smoother texture for improved finish quality.

It comes in extra long sheets so that the length of a ceiling or wall can be covered in one sheet resulting in fewer joints.

HORIZONTAL FIXING

In most cases, fixing Gib® plasterboard on walls horizontally instead of vertically helps contribute to a smoother, more uniform appearance.

With horizontal fixing, there is only one joint which is below eye level.

GIB® COVE

Provides attractive junctions where ceilings and walls meet and reduces the likelihood of cracks appearing.

EDGE AND CORNER TREATMENTS

The two main types of edge and corner treatments are Gib® Goldline trims and Edge trims.

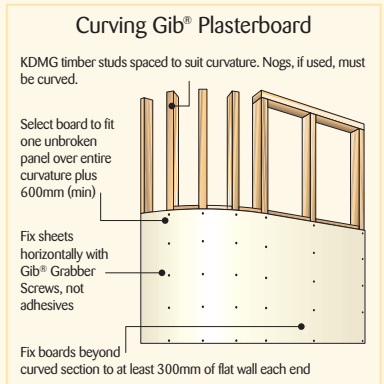
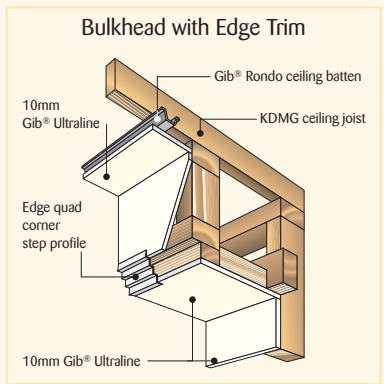
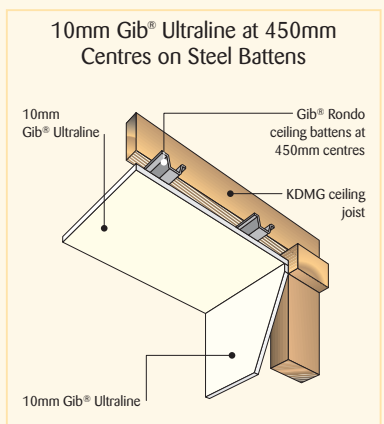
Edge trims are aluminium profiles that can be used in either walls or ceilings to create any number of special design effects, including reveals, accented junctions, stepped corners or bevelled edges.

Gib® Goldline trims are used to improve the strength and finished appearance of interior linings, and are available in a wide range of profiles to suit, including bullnose, cove, inner and outer corners, shadow line trim and internal and external offset trim.

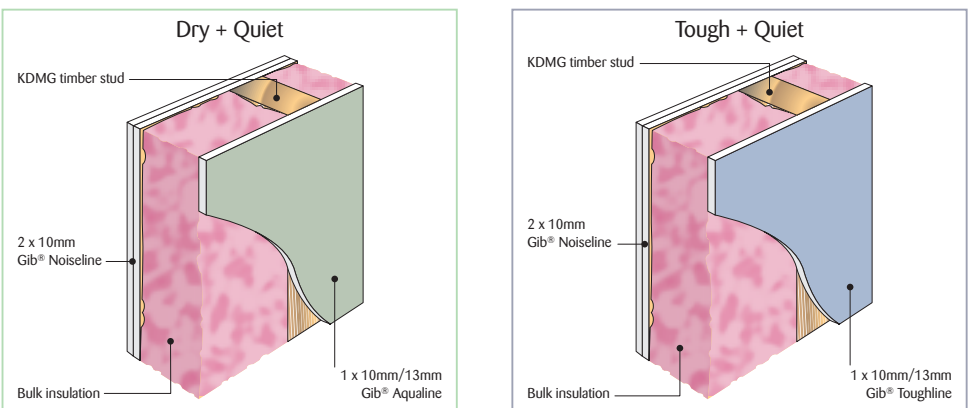
PAINT RECOMMENDATIONS

WALLS: 1 coat acrylic primer eg. Gib® Sealer or Resene Broadwall Acrylic Sealer + 2 coats acrylic paint eg. Resene Zylone Sheen (satin).

CEILINGS: 1 coat acrylic primer eg. Gib® Sealer or Resene Broadwall Acrylic Sealer + 2 coats acrylic paint eg. Resene Zylone 20 (flat).



NB: Not for use with Gib® Toughline, Gib® Braceline and Gib® Noiseline.



Choosing the right board for the right zone

The correct choice of Gib® plasterboard is essential for your Gib® Zone to perform correctly. Below is a table showing the appropriate board for use in each zone and details the properties and benefits of each board at a glance.

GIB DRY ZONE®

BENEFITS: Provides superior protection from steam and moisture damage.

USES: Bathroom, ensuite, toilet, kitchen and laundry.

PROPERTIES: Gib® Aqualine contains special wax polymers to help prevent water absorption. Fire rated.

FIRE RATED	GIB® AQUALINE		10mm TE		FIRE RATED	GIB® AQUALINE		10mm TE	
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GIB QUIET ZONE®

BENEFITS: Use two layers to reduce noise entering rooms and between floors. More solid walls and ceilings.

USES: Bedrooms, study and TV room. In bathroom and toilet, use combination of Gib® Aqualine/Gib® Noiseline.

PROPERTIES: Gib® Noiseline is stronger and more rigid than Gib® Standard. High density core. Fire Rated.

GIB® NOISELINE		10mm TE		GIB® NOISELINE		10mm TE	
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GIB TOUGH ZONE®

BENEFITS: Improved durability and greater resistance to damage.

USES: Stairway, hall, rumpus, garage and childrens' bedrooms.

PROPERTIES: Gib® Toughline is much tougher than Gib® Standard. High density with fibreglass mesh reinforcing in core.

GIB® TOUGHLINE		10mm TE		GIB® TOUGHLINE		10mm TE	
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GIB FEATURE ZONE®

BENEFITS: Smoother looking walls and ceilings.

USES: Ceilings and walls in feature areas eg. entrance way, lounge, master bedroom.

PROPERTIES: Gib® Ultraline is more solid and rigid than Gib® Standard. Smoother surface paper.

GIB® ULTRALINE		10mm TE		GIB® ULTRALINE		10mm TE	
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Important Information – Please read and understand this section.

GIB LIVING SOLUTIONS*

Gib Living Solutions* have been designed by Winstone Wallboards Limited to achieve more desirable living conditions for home owners and apartment buyers by addressing a number of different building issues, such as moisture and noise control, wear and tear, and interior finishing.

GIB* AND OTHER PRODUCTS

Gib Living Solutions* incorporate different Gib* products, which are manufactured by Winstone Wallboards Limited and are distributed nationwide by authorised building merchants.

Winstone Wallboards Limited has a range of Gib* branded jointing compounds, adhesives, fixing and other drywall products. It is recommended that these Gib* branded products are used with Gib* plasterboard systems. They have been specifically developed or chosen by Winstone Wallboards Limited for their compatibility with Gib* plasterboard systems.

Instructions on how to achieve the Gib Living Solutions* for new homes are contained in the Gib Living Solutions* Site Guide. Instructions on how to handle, store, use, install, fix and maintain Gib* products are available from Winstone Wallboards Limited. These instructions must be followed if Gib Living Solutions* are to achieve their performance levels.

Winstone Wallboards Limited will accept no liability for Gib Living Solutions* or Gib* products if current instructions on handling, storage, use, installation, fixing and maintenance have not been followed. Winstone Wallboards Limited will accept no liability for components manufactured by other manufacturers. Nothing in this paragraph will affect any rights under the Consumer Guarantees Act 1993.

GIB* NAMES

The names Gib*, Gib* Ultraline, Gib* Toughline, Gib* Noiseline, Gib* Braceline, Gib* Aqualine, Gib* Soundseal, Gib* Smoothcoat, Gib* Plus 4, Gib* Goldline, Gib* Cove, Gib* Resilient Rail, Gib* Antiblaze Greenwrap, Gib* Antiblaze Greencap, Gib* Framegard II, Gib* DPC, Gib* Rondo Steel Battens, Gib Living Solutions*, Gib Dry Zones*, Gib Quiet Zones*, Gib Tough Zones* and Gib Feature Zones* are all trademarks of Winstone Wallboards Limited.

Who should you turn to for advice?

NEW ZEALAND INSTITUTE OF ARCHITECTS

09 623 6080

www.nzia.co.nz

BUILDING RESEARCH ASSOCIATION OF NEW ZEALAND (BRANZ)

0900 59090

www.branz.org.nz

REGISTERED MASTER BUILDERS FEDERATION

0800 269 119

www.masterbuilder.org.nz

NEW ZEALAND CERTIFIED BUILDERS ASSOCIATION

0800 222 845

www.certified.co.nz

TERRITORIAL AUTHORITY/ COUNCIL IN YOUR AREA

For building certifiers in your area see Building Inspection and Certification in the Yellow Pages

Gib Living Solutions® Partners

Gib Living Solutions* have been designed to achieve more desirable living conditions by bringing together a range of different materials, design concepts and the best building practices.

To achieve this, we have worked closely with other building industry leaders to ensure that all products and materials in our solutions achieve the highest possible performance standards. Other manufacturers make alternative components, but these have not been tested by Winstone Wallboards Limited.

By using the specified components and building practices detailed in this guide, you can be confident that the desired performance levels will be achieved.

GIB* PROJECT SUPPORT – CALL FREE

0800 442 4663

FREE FACSIMILE

0800 229 222

E-MAIL

projectsupport@gib.co.nz

INTERNET WEBSITE

www.gib.co.nz

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