Guide to domestic building renovation
There are many elements to domestic renovation, but one that is often overlooked is the internal fabric of the house. This is in fact one of the more fundamental aspects when thinking about improving homes and updating their condition to today’s modern standards of living.

That’s why British Gypsum has produced this leaflet to help guide you through some of the more common areas of renovation and provide you with the information to make the right decisions when choosing plasterboard and drylining materials.

To ease navigation, this guide is divided into key areas for improvement, including upgrading thermal insulation, fire performance, acoustic insulation and moisture resistance. You’ll also find out more information about the plasterboards in the reference tables from page 22 onwards.
All round solutions all around the house

Look for the icons to help you navigate through the guide...

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Acoustic insulation

To minimise sound transferring through and around the house, there are a variety of different measures that can be taken, depending on where the noise is coming from and what type of sound is causing the problem.

Noisy neighbours

Noisy neighbours can be a nuisance, but there are ways to reduce noise coming through separating walls. If the wall is a single brick, block or cavity construction, you can use one of the two following systems depending on the type of noise involved.

Mid-range frequencies

Where mid-range frequencies such as speech are a problem, the solution can be relatively simple.

Using the **GypLynner UNIVERSAL** system, insert a layer of 25mm Isover APR 1200 acoustic insulation between the lining channels and then fix two layers of 12.5mm Gyproc SoundBloc plasterboard to the studs. 15mm Gyproc SoundBloc can be used to further improve the acoustic performance.

The **GypLynner UNIVERSAL** system partially isolates the stud work from the masonry wall helping to achieve better acoustic insulation.

Fix 52mm Gyproc TriLine board to separating walls with Gyproc Sealant, using the **Drilyner RF** system on plastered walls or with Gyproc Dri-Wall Adhesive using the **Drilyner SI** system on unplastered walls.

Gyproc TriLine board is a plasterboard with mineral wool insulation on the reverse, which inhibits mid-range frequencies particularly well. Once the boards are in place, two Gyproc Nailable Plugs should be used per board to secondary fix to the masonry wall.

Low-range frequencies

Low frequency noise, such as that from surround sound systems, can be more difficult to tackle and requires a more detailed system to upgrade a brick or block separating wall.

To minimise sound transferring through and around the house, there are a variety of different measures that can be taken, depending on where the noise is coming from and what type of sound is causing the problem.
Creating and upgrading partitions and dividing space

When creating new partitions within existing rooms there are two simple ways to achieve the Building Regulations:

1. **Using Gypframe metal stud**
   Install Gypframe 70 S 50 °C’ Studs at 600mm centres (distance apart), lined with 12.5mm Gyproc SoundBloc on either side of the partition using the GypWall classic system.

2. **Using timber stud**
   Install non-load bearing 63mm x 38mm timber stud at 600mm centres with 15mm Gyproc SoundBloc on either side of the partition.

For installation details refer to the Installation Guide at www.british-gypsum.com

Internal walls

Reducing noise transferring between rooms, particularly bedroom and bathroom walls, can help make rooms feel more comfortable whilst also achieving Building Regulations standards.

Upgrading existing internal masonry partitions

To upgrade existing masonry walls, for example a 100mm medium density concrete block, fix one layer of 15mm Gyproc SoundBloc to both sides of the wall using Gyproc Dri-Wall Adhesive.

As with all constructions it is vitally important that joins around wall perimeters are sealed with Gyproc Sealant and surrounding or adjoining walls are also upgraded to prevent sound transferring through the weakest element of the construction.
Certain rooms in a house need extra protection from moisture generated through daily household activities, especially in bathrooms and kitchens. Particular attention should be paid to areas that accommodate sinks, showers and baths, as the likelihood of walls getting damp is much higher.

**Gypframe benefits over timber:**

**Less weight to carry**

- A typical 2.4m 70mm stud weighs 1.37kg, compared to an average 38mm X 63mm timber stud which weighs about 8.64kg. **That’s over 80% lighter.**

- And because it’s lighter, more can be handled at once in bulk, **saving time** on lugging heavy timber stud around the house or from site to site.

**Simpler installation**

- Timber studs require accuracy with all measurements to allow them to fit perfectly into place. With Gypframe you don’t need the same level of accuracy, just mark off the line of measurement and simply cut with a pair of tin snips — simple!

- The studs are then literally twisted into the channels and because the metal has been rigidised, the chance of screw slippage is much less, making it **safer and easier to fix.**

**Overall performance**

Gypframe studs **won’t rot, warp or twist**, giving a better finished result that will stand the test of time.

Extra moisture protection can simply be achieved by installing Gyproc Moisture Resistant board using Gyproc Dri-Wall Adhesive or using Gyproc Drywall Screws to fix directly to stud walls.
Acoustic and moisture properties

When lining partition walls adjacent to bedrooms, for example if inserting an en-suite, there is also a requirement to reduce potential noise transferring through the walls.

Gyproc SoundBloc MR

Replace the Gyproc Moisture Resistant board with Gyproc SoundBloc MR (an acoustic board with moisture resistant properties) and install as before.

Finishing the surface

Gyproc Moisture Resistant and Gyproc SoundBloc MR can both be directly tiled over using tiles up to 12.5mm thick, with a maximum weight of 32kg/m². The tiles should be fixed using a suitable thin-bed adhesive, applied up to 3mm thick.

Where the design layout incorporates a part tiled and part flat wall, Thistle Board Finish plaster can be used to skim the boards. As both Gyproc Moisture Resistant and Gyproc SoundBloc MR contain moisture repellent additives, they must be pre-treated using a coat of ThistleBond-it to allow the plaster finish to adhere to the boards.

If tiling onto skimmed walls, the tiles should have a maximum weight of 20kg/m², but the plaster surface must be roughened beforehand to provide a key.

Gyproc WallBoard DUPLEX

Gyproc WallBoard DUPLEX is a standard board product with an additional vapour barrier on the reverse. The vapour barrier prevents vapour transferring through into the roof space. It is easily fixed to ceilings using Gyproc Drywall Screws.
In particular areas of the house, fire prevention measures are essential to give occupants more time to escape if a fire were to break out.

**Integral garages**

When building an extension above a garage space, Building Regulations specify that the garage ceiling and first room floor must achieve a minimum of 30 minutes fire resistance. There are also thermal and sound insulating properties required of the floor and ceiling to provide a comfortable living space in the above room.

Where the construction uses 200mm x 38mm softwood timber joists at 600mm centres (distance apart), roll 200mm Isover Space Saver Roll between the joists and then fix 15mm Gyproc FireLine to form the garage ceiling. A 22mm tongue and groove wood based flooring should be laid on top of the joists.

**Loft conversions**

**Gyproc FireLine**

This floor and ceiling system can also be used when converting loft spaces into liveable rooms in the roof, where the same fire, acoustic and thermal properties are required.

For installation details refer to the Installation Guide at www.british-gypsum.com
Thermal insulation

One of the key considerations in renovating a property is how to make it more energy efficient, not only to reduce fuel bills, but to also make the rooms more comfortable to live in. Cold houses or rooms can be a sign of inefficient insulation, so careful thought should go into improving the thermal insulation of the walls at an early stage.

**Gyproc ThermaLine SUPER**

Gyproc ThermaLine boards are a range of plasterboards with insulation laminated to the reverse side.

The boards can dramatically improve the thermal performance of external walls when installed correctly.

**Exterior walls**

**Cavity walls**

For a typical brick + cavity + brick construction, fix 70mm Gyproc ThermaLine **SUPER** using the **Drilyner TL** system. This system is very similar to the basic method of using Gyproc Dri-Wall Adhesive to fix the boards. Once the adhesive has set, install a secondary fixing using Gyproc Nailable Plugs.

This will provide a good level of insulation in extensions and is an excellent way of upgrading existing walls.

**Solid walls**

In a solid 215mm brick construction, use Gypframe metal studs in the **Gyplyner UNIVERSAL** system, along with 25mm Isover APR 1200 between studs and board with 70mm Gyproc ThermaLine **SUPER**.

This provides the correct level of performance for new extensions. Where upgrading existing solid walls, 60mm Gyproc ThermaLine **SUPER** can be used instead, unless you prefer a higher level of thermal insulation.

In Scotland the Building Regulations require a slightly higher level of thermal insulation to be achieved for both cavity and solid walls. Therefore change the Isover APR 1200 to a 50mm thickness.
Gyproc ThermaLine **PLUS** is an ideal wall lining when used in the **Gplyner iwl** system, as it provides thermal insulation as well as a vapour control barrier to reduce condensation forming behind the lining.

There are a range of sizes from 27mm to 48mm, with the thickest providing the highest level of thermal insulation.

**Window reveals**

Where exterior walls are being lined with Gyproc ThermaLine laminates, window reveals can often be the weak point as space is usually too tight to accommodate most thermal boards.

27mm Gyproc ThermaLine **PLUS** is a relatively thin laminate that can be used all around the window reveal to upgrade the level of thermal insulation, so remember to include this in the project.

**Basements and cellars**

Rooms beneath the ground can be tricky to treat, as moisture can come in through the surrounding ground, or condensation can form on the inside if the room has been tanked.

The **Gplyner iwl** (Independent Wall Lining) system is built away from the existing walls and can often be suitable for use in underground rooms. The system is fixed to the floor, ceiling and adjacent walls to support the framework.

Where some tanking methods are used, any penetration of the seal will downgrade its performance and form weak points. Therefore specialist advice must be sought before any drylining materials are installed below ground level.

**Loft conversions**

When converting loft spaces into liveable rooms in the roof, the thermal insulation needs to be moved from the loft floor to the ceiling, to keep the room comfortably warm during cold periods.

Install 100mm Isover Frame Batt 35 in-between the softwood rafters, and then board over with 70mm Gyproc ThermaLine **SUPER** on side walls and the ceiling. This should help satisfy Building Regulations.

35mm Gyproc ThermaLine **PLUS** can be used as an alternative lining for side walls, achieving a lower, but acceptable U-value.

For installation details refer to the Installation Guide at www.british-gypsum.com
Glasroc F MULTIBOARD is a versatile glass-reinforced board with multiple properties and so is useful in a variety of situations.

**Impact protection**

In busy areas of a home, such as hallways and stairways, walls can get knocked and damaged over time.

Gyproc DuraLine

To help prolong and maintain walls in these areas fix 15mm Gyproc DuraLine plasterboard to give greater impact resistance.

**Boiler cupboards**

Glasroc F MULTIBOARD can be used to line walls adjacent to boilers as the board is non-combustible and has a higher level of heat resistance.

**Soffit linings**

Due to its moisture resistance, Glasroc F MULTIBOARD can also be used in semi-exposed situations, such as eaves, soffit linings and carport under-linings.

**Curved partitions**

Finally, if you want to add a bit of flair to a room, 6mm Glasroc F MULTIBOARD can be used to create curved partitions when installed using the GypWall curve system.

For installation details refer to the Installation Guide at www.british-gypsum.com
In the following tables you’ll find more information on how to recognize the plasterboards mentioned in the guide, including their dimensions.

Don’t forget to refer back to the relevant sections for installation details to achieve stated performances.

<table>
<thead>
<tr>
<th>Plasterboard</th>
<th>Performance</th>
<th>Suitability</th>
<th>Board identification</th>
<th>Width mm</th>
<th>Length mm</th>
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<tbody>
<tr>
<td>Gyproc TriLine</td>
<td></td>
<td>For mid-frequency acoustic insulation combined with thermal insulation.</td>
<td>Face: ivory paper liner Reverse: yellow glass mineral wool</td>
<td>52mm board</td>
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<td>12.5mm board</td>
<td>1200 2400 2700 3000</td>
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<td>Gyproc SoundBloc</td>
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<td>To be used in areas for improved acoustic insulation, such as between bedrooms.</td>
<td>Face: blue paper liner Reverse: brown paper liner</td>
<td>15mm board</td>
<td>1200 2400 2700 3000</td>
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<tr>
<td>Gyproc Moisture Resistant</td>
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<td>Suitable on bathroom and kitchen walls, and other areas where there is intermittent contact with water.</td>
<td>Face: green paper liner Reverse: green paper liner</td>
<td>12.5mm board</td>
<td>1200 2400 2700 3000</td>
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<td>Gyproc SoundBloc MR</td>
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<td>Ideal in rooms where both acoustic insulation and a moisture resistance are required, such as bathrooms adjacent to bedrooms.</td>
<td>Face: blue paper liner Reverse: green paper liner</td>
<td>12.5mm board</td>
<td>1200 2400 2700</td>
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<td>15mm board</td>
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<td>Gyproc WallBoard duplex</td>
<td></td>
<td>For use in areas where water vapour can accumulate, such as bathrooms.</td>
<td>Face: ivory paper liner Reverse: metalised film liner</td>
<td>12.5mm board</td>
<td>900 1800</td>
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<tr>
<td>Gyproc FireLine</td>
<td></td>
<td>Can provide high performance fire resistance when used in British Gypsum partitions.</td>
<td>Face: pink paper liner Reverse: brown paper liner</td>
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<tr>
<td>Gyproc ThermaLine BASIC</td>
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<td>For low-level upgrades in thermal insulation.</td>
<td>Face: ivory paper liner Reverse: white expanded polystyrene</td>
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<tr>
<td>Gyproc ThermaLine PLUS</td>
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<td>For mid-high level upgrades in thermal insulation when fixed in British Gypsum systems. Also contains a vapour control layer to reduce condensation. 48mm is laminated to 12.5mm Gyproc WallBoard.</td>
<td>Face: ivory paper liner Reverse: orange extruded polystyrene</td>
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<tr>
<td>Gyproc ThermaLine SUPER</td>
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<td>Ideal where substantial upgrades in thermal insulation are required when fixed in British Gypsum systems. It also contains a vapour control layer to reduce condensation.</td>
<td>Face: ivory paper liner Reverse: brown phenolic foam</td>
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<th>Board identification</th>
<th>Width mm</th>
<th>Length mm</th>
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<tbody>
<tr>
<td>Gyproc DuraLine</td>
<td></td>
<td>For extra impact protection in heavy use and busy areas.</td>
<td>Face: ivory paper liner Reverse: brown paper liner</td>
<td>1200</td>
<td>2400 3000</td>
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<tr>
<td>Glasroc F MULTIBOARD</td>
<td></td>
<td>The enhanced properties of the board allow it to be used in curved applications and where increased fire and moisture protection are required, such as boiler cupboards or soffit linings.</td>
<td>White board with no paper liner</td>
<td>1200</td>
<td>2400 3000</td>
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<tr>
<td>Gyproc WallBoard</td>
<td></td>
<td>For use in areas where standard requirements are specified.</td>
<td>Face: ivory paper liner Reverse: brown paper liner</td>
<td>1200</td>
<td>2400 2700</td>
</tr>
<tr>
<td>Gyproc HandiBoard</td>
<td></td>
<td>In tight spaces where a smaller board is easier to manoeuvre. The board length is also compatible with 16” and 24” joist centres.</td>
<td>Face: ivory paper liner Reverse: brown paper liner</td>
<td>600</td>
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<tr>
<th>Board identification</th>
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We’ll keep you informed on the latest plaster and drylining product and system developments suitable for use in refurbishment, to help make your jobs trouble-free, and keep you ahead of the game!

Just fill out your details below, tick the relevant boxes and send to the freepost address overleaf, no stamp required.

Name
Position
Company
Address
Postcode
Email

What is your main activity?
[ ] Builder  [ ] Dryliner  [ ] Plasterer  [ ] DIY
[ ] Other (please state)

In which area do you spend most of your time?
[ ] New build  [ ] Repair and maintenance
[ ] Other (please state)

Where did you find this guide?
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[ ] British Gypsum website  [ ] From a colleague/friend
[ ] Other (please state)