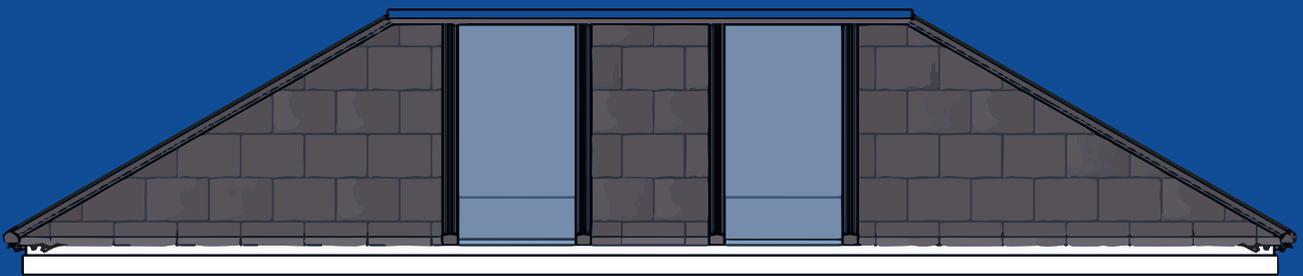


ULTIMATE SOLID ROOF BUYER'S GUIDE



**FOR REPLACEMENT AND NEW-BUILD PROJECTS
INCLUDING CONSERVATORIES, ORANGERIES AND EXTENSIONS**

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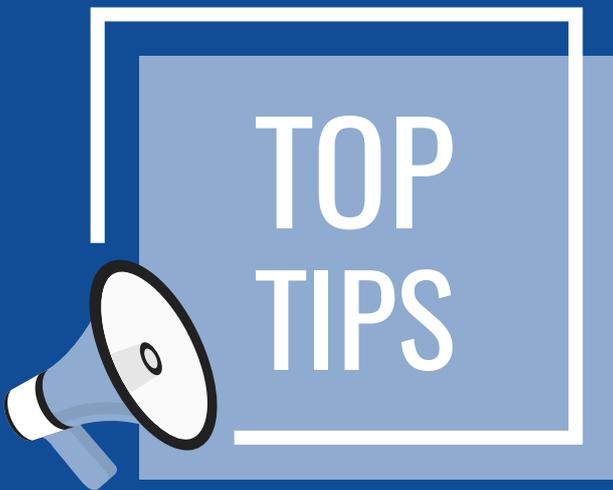
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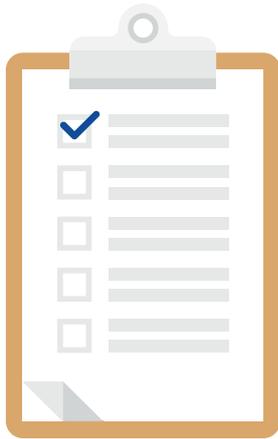


Where to Start...

An extension or conservatory with a tiled solid roof can be a fantastic addition to any home. It creates an additional, affordable living space that feels more like a permanent fixture that will stand the test of time. The added insulation from a solid tiled roof will keep the temperature in your room comfortably regulated and will even add value to your existing property.

Whether you're replacing an old glass or polycarbonate roof on an existing conservatory, or planning a brand-new extension to your home, there are a whole host of companies out there with varying solutions. It can be a daunting process!

This guide is designed to provide you with all the information and tips you need to make an informed decision on the right solid roof solution for your needs.

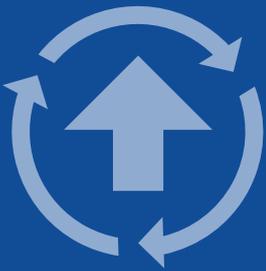


Top Tips Checklist

Before you read on, we've prepared a handy checklist of things to consider when you start out on your buying process:

- ✓ **Shop around.** Don't be pressured into making a decision on the spot. Seek at least three quotes from different companies to help you make an informed decision and look for accreditations, endorsements and reviews.
- ✓ **Visit a showroom.** You wouldn't buy a house without visiting it first, so why part with your cash without seeing your roof or extension in real life? See first-hand what your roof will look and feel like on your home before you buy.
- ✓ **Beware of low prices.** If one quote is much lower than the rest, then there's usually a reason why. Ask for more details about the roof construction. Investing in your home is a big decision and it's not always best to cut corners. Don't forget, reputable companies will generally offer flexible finance options available to help you spread the cost of your investment.
- ✓ **Always compare roof weight,** U-Values (heat loss), plus wind and snow load tolerances across quotes.
- ✓ **Don't forget** to 'design-in' performance glass panels within your solid roof, to ensure your new room is bright as well as warm and cosy.
- ✓ **Always ensure** your new purchase will be registered with your local authority or independent building control inspector and that you will receive a 'final building certificate', this is normally issued on completion following an inspection. You will need this if you ever sell your house.
- ✓ **Make sure you're covered.** Check your roof and the installation are both guaranteed and that the guarantees are insurance-backed to ensure a pay-out should the worst happen.

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Replacing your existing conservatory roof

Conservatories built more than 10 years ago will typically feature a polycarbonate or 'low performance' glass roof. If your conservatory roof has reached the end of its natural life and is looking worn, then it's time to upgrade it with a more insulated and comfortable tiled solid roof.

Polycarbonate is a low cost option but nowadays, its affordability is one of the only benefits. Solar control glazing has come on in leaps and bounds in recent years, but for the ultimate in thermal performance and aesthetics, a solid tiled roof is often the best option. Most people benefit from a proportional increase in house value due to the 'from conservatory to extension' conversion and therefore the benefit is not just having an all-year-round usable room, it's adding value to your future sale!

A solid roof allows you to enjoy your existing conservatory whilst creating a more cosy, 'room-like' feel with a modern internally-finished ceiling - bringing a new lease of life to your old conservatory.

Whilst conservatory roofs were originally designed specifically to work with glass or polycarbonate panels, they were never designed to accept high snow loads. By design, solid roofs need to be much more rigid in order to withstand greater loading and so the original structure should always be completely removed and replaced to avoid leaks, cracked plaster or structural failure.

Any old conservatory needs to have a roof that is lightweight so that the existing frames of your conservatory and base are not compromised. A reputable company will inspect your existing frames and base as part of 'best practice' and advise you of their condition and suitability to accept a new solid roof.

Beware of Clad overs

A Clad over roof is often sold as a conservatory roof improvement for thermal reasons. It can take many forms but never involves removing the old structure. This is not good practice because conservatory roofs are only designed for 'light loads' and not snow build-up which a well-insulated roof will allow. There are four different types of Clad over:

Internal Clad over: Adding an internal layer of insulation usually by attaching batons to the internal bars, packing with insulation and boarding over with plasterboard.

External Clad over: Timber batons or ply board is screwed to bars, glazing is seldom removed before imitation tiles are fitted to the timber batons. With little space for insulation the impact on thermal performance is the lowest of all these options.

External & internal Clad over: This is a combination of 1 & 2 below, although glazing may be removed first. Plastic internal cladding is often used on this product because the structure can be susceptible to moisture ingress and condensation.

Solid Panel Clad over: Existing glass is removed and solid panels are dropped in to replace them. With typical u-Values of 0.3 - 0.6, these are less thermally efficient than other products so do not comply with Building Regulations. There is also no internal finish as bars are still visible.



Clad Over Issues

- **Weight:** Clad over solutions can be too heavy for the existing frames as they use heavy timber, insulation materials and tiles. Any old conservatory needs to have a roof that is lightweight. The lightest solid roof systems weigh around 31KG/M.

Tip: Always ask your installer for the total unit weight of the new roof per Sq.M

- **Fire Safety:** By their very nature, 'clad-over' systems do not meet current fire safety regulations as they are never effectively fire tested as a complete roof structure, which is necessary to meet this part of building regulations. The original structure varies from job to job which means that only individual components could have been tested. Solid roofs must be classified as AC, AB or AA in accordance with BS476-3.

Tip: Ask to see the fire safety certificate of the entire roof system before you commit to the project.

- **Building Regulations:** Clad over systems do not generally get Building Regulation Approval due to their low thermal value or lack of structural integrity. Do not confuse this with planning permission which is often not necessary. You are required to notify Building Control if you are making a change to any structure (including replacing a glass or polycarbonate conservatory roof with a solid roof) their approval ensures your new roof is structurally sound.

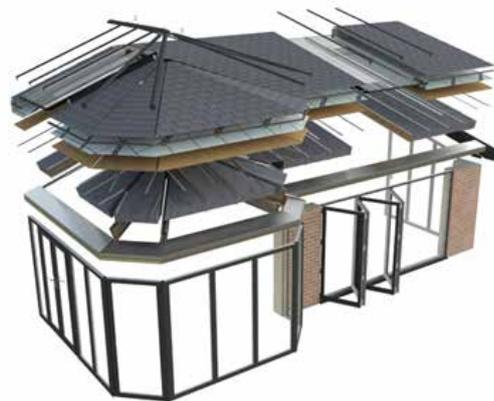
Tip: Check that local Building Control has been informed before the conversion starts. Obtain a Building Regulations 'Final' Certificate and file it in a safe place.

Replacement Roof Solutions

A real tiled roof system involves completely removing your old roof as opposed to fitting a new roof over the top of your existing roof which, as we've learned, can cause complications.

Replacement solid roof systems are typically prefabricated so that the installation process can be conducted quickly and efficiently, meaning minimum disruption is caused at your home. Each is bespoke to fit the style and measurements of your existing conservatory.

The roof system is comprised of a pre-engineered lightweight frame, insulating panels, insulated fire-grade plasterboard and exterior grade plywood and an impenetrable membrane. The roof can be finished from tiles of your choice, or solid panels to give you a more natural looking extension that blends with the look of your home.



How long does it take?

A tiled solid roof replacement can be installed within a few days with minimum disruption to your home.

Building Regulations

Gaining Building Regulations approval from your local authority means you can be sure that the system installed has been rigorously checked by a government approved building control inspector to ensure the roof is installed correctly and is structurally safe and thermally efficient.

You will also have peace of mind that should you come to sell the property in future, there won't be any issues with unauthorised works that may hold up the process.

Planning Permission

Planning permission is not needed to change your roof on an existing structure, but Buildings Regulation Control is a mandatory requirement, a property sale cannot be made without this.

How much does it cost?

You should expect to spend anything from £5,000 for a small conservatory roof, to £12,000 for a larger one. Don't forget, there are many ways to spread the cost of your new roof over monthly instalments to suit you.

Pennine Home Improvements has a handy finance calculator so you can explore the options.

Visit <https://www.penninehome.co.uk/finance/>

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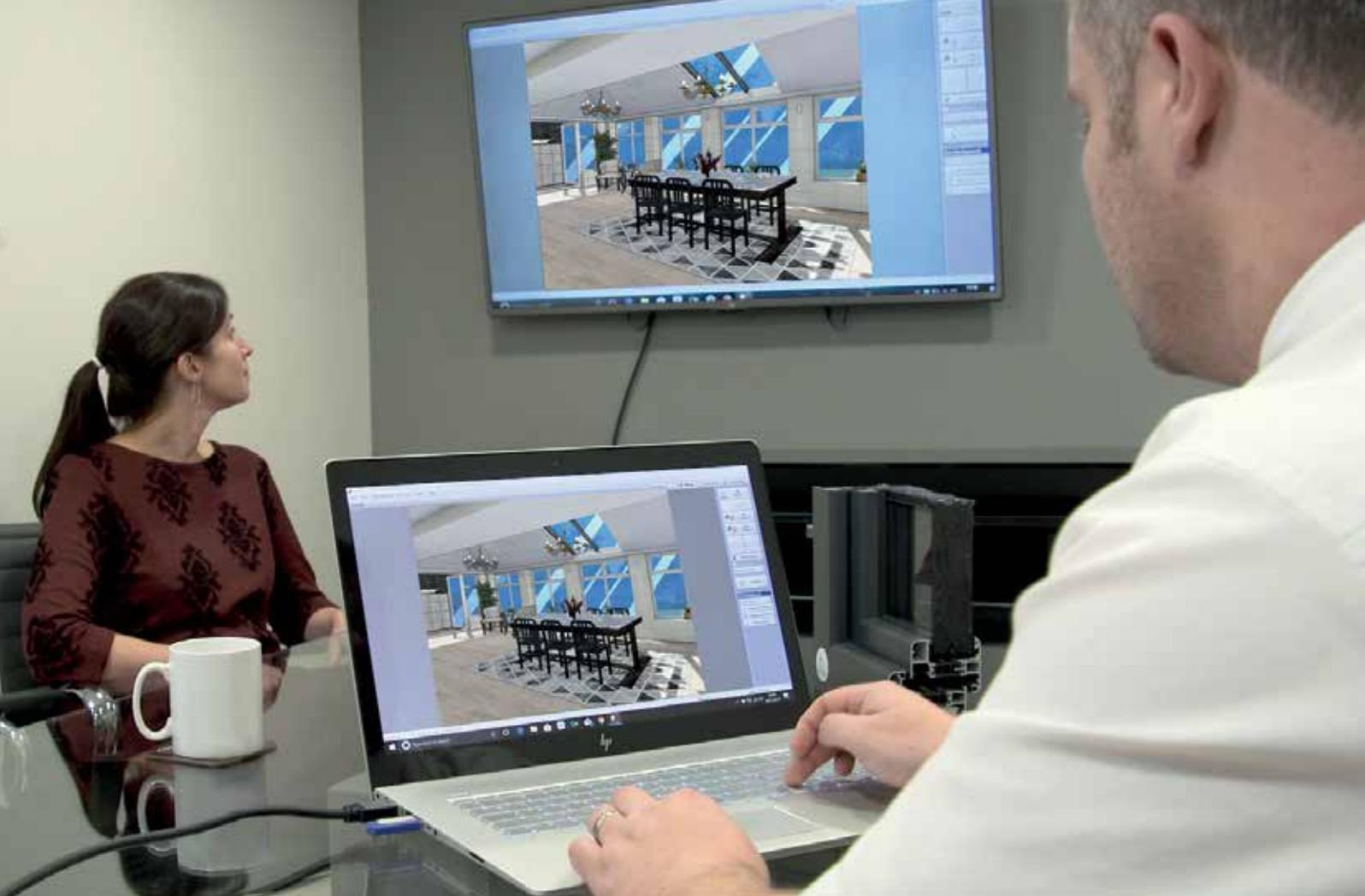
New-build Extensions

Building a solid roof extension is one of the most popular home improvements homeowners undertake. It is a great way to add much-needed extra space (and value) without having to move house, but there is a lot to be considered to ensure your new extension meets your needs.

When it comes to choosing the right home improvement company for your project, it's not just about the price, it's about the quality of the products, professional installation and value for money.

They should ideally also have a dedicated project team to take care of your entire extension project from design, planning, building and installation. Some will even take care of planning permission and building regulations for you.





Designing your extension

Your home improvement company should work with you to help and advise you on the main design considerations, technical details and finishing touches to suit your lifestyle, your home and your budget.

Some companies can even create your extension for you in 3D before you buy, using state of the art virtual reality software, so you can imagine what it will look and feel like once it's part of your home.

Building Regulations

Most extensions of properties require approval under Building Regulations. There are a number of classes of new buildings or extensions of existing buildings that do not need Building Regulations approval. A professional home improvement company will send a surveyor, experienced in planning and building regulations, to advise you of the options and all the requirements needed for your extension.

A reputable home improvement company will arrange Planning Permission & Building Regulations for you by approaching the relevant local authority. It may be the case that all necessary criteria has already been met and obtaining planning permission is not necessary.

How long does it take?

Again, it is really difficult to estimate how long a particular build will take, dependent on planning requirements, and the complexity of the project. Please read our 'What happens next' guide for an indication of timeline.

Planning permission

An extension or addition to your house is considered to be permitted development, not requiring an application for planning permission, subject to certain conditions being met, typically these are:

1. The ground area covered by the extension and any other buildings within the boundary of the property, excluding the original house, is not more than half the total area of the property.
2. Any part of the extension is not higher than the highest part of the roof of the existing house.
3. The eaves of the extension are not higher than the eaves of the existing house.
4. Any part of the extension does not extend beyond any wall facing a road if it forms the principal or side elevation of the original house.
5. The eaves are no more than 3 metres in height if any part of the extension is within 2 metres of the property boundary.
6. The materials used in exterior work, except in the case of a conservatory, are of similar appearance to the existing house.
7. An upper floor window on a side elevation within 15 metres of a boundary with another house is obscure glazed; and is non-opening unless the parts which can be opened are more than 1.7 metres above the floor of the room in which the window is installed.
8. A side extension does not exceed 4 metres in height or be wider than half the width of the original house.
9. In a single storey extension
 - the extension does not extend beyond the rear wall of the original house by more than 4 metres for a detached house or 3 metres for any other type of house;
 - the height of the extension does not exceed 4 metres;
 - no part of the extension is within 3.5 metres of any property boundary with a road opposite the rear wall of the house.
10. In an extension with more than one storey
 - the extension does not extend beyond the rear wall of the original house by more than 3 metres;
 - no part of the extension is within 7 metres of the property boundary opposite the rear wall of the house;
 - the roof pitch of the enlargement is as far as practicable the same as that of the original house.
11. If you live in a house within a conservation area, World Heritage Site, area of outstanding natural beauty or National Park-
 - no part of the exterior of the house is clad with stone, artificial stone, pebbledash, render, timber, plastic or tiles;
 - the extension is not more than 1 storey or 4 metres in height;
 - no part of the extension extends beyond a principal or side elevation of the original house.

How much does it cost?

There are a huge range of options and variables when it comes to solid roof extensions which make it very difficult to give an accurate price range. A lot depends on the foundations required, the size, roof type and accessories you choose, so you really will need to explore your options with an advisor.

As a guide, you could expect to pay anything from £15,000 for a small extension, and considerably more for the biggest and most luxurious single-story extensions. Don't forget, there are many ways to spread the cost of your new roof or brand new extension over monthly instalments to suit you.

*Pennine Home Improvements has a handy finance calculator so you can explore the options.
Visit <https://www.penninehome.co.uk/finance/>*

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Roof Options



Tile Options

There are a huge variety of tile and roof options out in the marketplace to help you achieve the right look for your home. At Pennine, we have 4 roof tile options for you to choose from in a range of stylish colours to really compliment your home.

- Modern Tile
- Modern Slate
- Traditional Tile
- Traditional Slate

Modern Tile

Using some of the most advanced materials on the market, modern roof tiles are sleek, smart and incredibly simple to install. This look works particularly well with modern and contemporary properties. When it comes to choosing a finish you have the option of green, red, charcoal, ebony and umber.



Modern Slate

There's no question that traditional slate tiles look spectacularly good when properly and regularly maintained, but when tiles start to become broken and cracked over time you can have a hard job keeping on top of it. Lightweight slate shares all the aesthetic hallmarks of traditional slate tiles, blending perfectly with the look and feel of your existing property. Our modern slate has the additional benefit of being able to handle much greater wear and tear over time without cracking or breaking, making it much easier to maintain. Colours include stone, plum, pewter grey, brick red and black.



Traditional Tile

If your home has more of a contemporary styling, but you still want to achieve a 'true' extension look, then traditional slate tiles are the best option. The sleek, minimalist design oozes sophistication for a smooth finish that will add real value.

Traditional Slate

For homes with more of a conventional appearance, opt for traditional slate tiles for a luxurious feel. Available in a range of colours from your local builders merchants - your builder should obtain the closest available match before construction starts.





Aluminium-look panels

For an uber-modern look, you can opt for urban grey aluminium-look panels which are constructed from insulated composite. Offering excellent insulation, these panels can be combined with flat glass panels to achieve a hybrid between solid and glass roof and look great on more modern pitched extensions.

Flat Roof

You also have the option of a flat roof extension or replacement roof which will be covered with a heavy-duty waterproof membrane. Flat roofs are a great alternative for more contemporary extensions or conversions.

There are several options out there for different membranes so be sure to check any quotes you receive are for a like-for-like solution.

A simple checklist is shown below:

Roof Membrane Options					
Covering	Cost	Quality	Installation Method	Tools required	Guarantees
GRP (Glass Reinforced Plastic)	£££	+++	This is a specialist skill requiring specialist tools (e.g. moisture scanners) must be fitted when dry		20-25 years
EPDM (Ethylene Propylene Diene Monomer)	££	++	Sheets are glued together and can be installed by fitting teams	Paint rollers, seam roller, paint brush	20 years
PVC Membranes	£	+	Sheets are heat welded together	Hot air welding equipment	20-25 years



GRP



EPDM



PVC

All three options are compatible with our flat roof solution at Pennine.



Flat or Vaulted Ceiling

Choose from a flat, traditional ceiling to match your existing rooms, or choose a dramatic vaulted option to add extra height and a real sense of space.

A reputable home improvement company should be able to advise on which ceiling type will work best for you, which may determine the roof type you choose. The finer details will bring life and personality to your new extension – so during the design phase, make sure you also consider how you'd like to integrate heaters, fans and even sound systems to make the space your own.

Lighting creates the ambience in any room and with so many different styles available, the possibilities really are endless. When you're planning your new roof or extension, give some thought to the style of lighting you'd like to include.

Velux Windows

If you want to add extra light and ventilation, then Velux windows are a fabulous addition to any solid roof. All Velux windows are made from laminated glass for added protection against outside noise (including rain) and can open and close to circulate fresh air throughout your home. Hot air rises, so being able to ventilate your roof also allows you to manage your indoor temperature to a comfortable level all year round.



Flat Glass Panels/Skylights

A stylish and more cost-effective alternative to Velux windows, flat glass panels can span full-length of your roof for maximum light and sit flush against your roof for a cleaner finish. You can even incorporate multiple panels to create a hybrid between solid and glass roof which then achieves the best of both worlds: natural light combined with the warmth of an insulated solid roof.

Roof Lanterns

For a fabulous, dramatic finish to your flat roof, a roof lantern will add height and light to your room. A perfect option for larger extensions.



Finishing Touches

There are a variety of decorative finishes you can choose to add style to the external appearance of your new roof, including a decorative cornice, soffits and fascias to compliment your look.

Also en trend at the moment are asymmetrical designs for modern flat roof extensions. Speak to your home improvement company about the right combination of finishing touches for your property.



Fascia options.



Different size Soffit options.

Sizing, Shapes and Guidelines

Each roof type will have its own guidelines and restrictions with regard sizing, but the vast majority of existing conservatory structures can be catered for with a good solid roof system. Maximum widths will depend on the style of roof you choose, a reputable company will advice you on the best type of roof for your application.

Likewise, the projection (or depth) of your extension, depending on your roof choice, can range from 3 to 8 metres on average.

Certain roof types will also have a minimum pitch (or angle) which your home improvement company will be happy to explain in more detail to help you choose the right roof for your size and design requirements.

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Things to Consider

Warranty

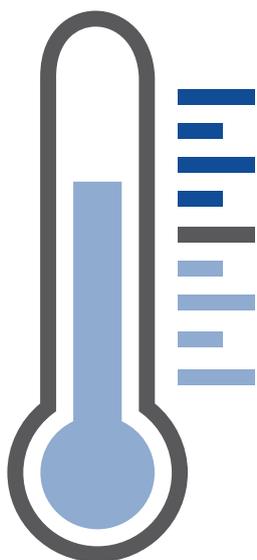
Not all roofs are guaranteed, and not all guarantees are backed up with an Insurance provider.

Ask to see full details of any guarantee offered on your replacement roof or extension, including any exclusions.

Tip: Always ask for proof that your product has an insurance backed guarantee (IBG) for at least 10 years.

Building Standards

When you're building a new extension, you want peace of mind that your structure will be thoroughly inspected at the relevant 'key stages' and on final completion to ensure each detail has been completed to a high standard. Ask to see a copy of your chosen company's published Building Standards Manual which should be available upon request.



Thermal Efficiency

The best, and most widely used, measure of thermal efficiency in construction is U-Value. Put simply, a U-Value is the measure of how effective a material is as an insulator (its thermal transmittance). The unit of measurement is W/m^2k , and the better insulated the roof, the lower its U-Value will be.

Each roof type will vary, but you can expect a high-quality solid roof system to achieve a U-Value of between $0.18W/m^2k$ and $0.13W/m^2k$. The U-Value will also be influenced by the number of roof windows or roof lanterns you include.

Fire Rating

For your complete peace of mind, ensure you ask about the fire rating of your new roof. Some roof manufacturers test the individual components of the roof (eg tiles) in isolation, whilst others will test the full roof.

There are two specifications that need to be addressed – the penetration of flame and the spread of flame. Combined, fire safety tests should give the roof an overall rating of two prefixes in accordance with BS476-3:2004.

The first prefix relates to the penetration and dictates that roofs within 6m of any boundary must be classified as 'A'. The second prefix relates to the spread of flame and roofs within 6m of any boundary must be classified as 'A, B or C'. Therefore if the roof being installed is within 6m of the boundary a test certificate confirming an AC rating should be available for the roof to be compliant with building regulations.

Ask to see the test certificate for both A and C to confirm compliance and ensure that the entire roof structure has been tested, not the individual components. B-roof is the European equivalent of the AC rating that is required for UK Building Regulations.

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Next Steps

Now you are fully armed with all the information you need to start exploring the right solid roof options for you, remember – enjoy it! You're one step closer to the extra space you've dreamed of.

Whether you're revitalising your existing conservatory, or building a brand-new extension, this really is an exciting step that will add value to your home and improve your quality of life.

Choose your home improvement company wisely, look for recommendations online, and don't be afraid to ask questions. And if you need any impartial advice, the team at Pennine will be only too happy to help.



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