

# CHOOSING MATERIALS FOR PERIOD RENOVATIONS

**Anamika Talwaria** investigates how to upgrade your heritage property

**W**hen it comes to bringing an older home into the 21st century, you probably want to improve performance while keeping attractive period features intact. A big part of this is respecting the character of the original property by ensuring your material choices sit seamlessly in the building fabric. Older properties were often built with local, natural products – so you should try to replace like-for-like. However, this isn't always possible or practical.

Here, I'm going to explore which materials could work well for your renovation – from insulation and render, through to windows and rainwater goods.

## Upgrading the fabric

Walls in older homes are designed to breathe – so they draw moisture in and then allow it to evaporate in a balanced cycle. So, specifying permeable materials is crucial to maintaining this ecosystem. "It's often better to use natural insulation up against the wall and cover this with a steel mesh," says Matt Aitkenhead, managing director at Stonewood Builders. "This enhances thermal performance and keeps the wonky character of the wall!" Materials like sheep's wool, woodfibre, hemp, cellulose and cork are hygroscopic – so they'll absorb and release moisture while maintaining their insulation value.

Natural spray insulations, like Corksol's Spraycork, can be applied directly to external or internal walls with minimal wall build up – and it's through-coloured so acts as the final finish on the outside. "The application method means you lower the chances of thermal bridging, too, as you can spray the insulation right up to window reveals," says Joff Ward, MD at Corksol. Using natural, breathable materials helps maintain a healthy living environment, as you're preventing condensation and damp from building up.

You could use modern, rigid insulation boards, but you must leave an air gap of around 5mm so that the original wall can still breathe and perform as it was meant to (compromising performance). Place the boards too close and they'll absorb moisture from the wall and trap it, which can cause damp and mould. This route will typically be



Above: Stonewood Builders were behind this sympathetic refurbishment of a period property. Left: Natural insulations, like Thermafleece, are ideal for upgrading a period property as they wick away the moisture and keep a healthy environment indoors. Far left: Corksol's spray insulation provides a breathable thermal and acoustic barrier

cheaper but it will leave you with an inauthentic but easy-to-decorate smooth surface. Just bear in mind this will mean losing some of the character of your period property.

Up in the attic, insulation boards can work, so long as you ensure there's a breathable membrane between them and the roof. "If you insulate too tightly and don't allow for ventilation, you can end up with condensation building up behind the boards, rotting the rafters," says Matt. In serious cases, this can result in structural failures. Natural options like Thermafleece sheep's wool can help mitigate this risk.

Warm floors are key to feeling comfortable in your home, which is why we love underfloor heating so much. But floors in heritage homes tend to be inherently cold and draughty. Luckily, suspended floors can be insulated fairly easily – just drape a breathable membrane between the timber joists and fill the spaces with natural cellulose.

Solid floors are a bit trickier. "Avoid the urge to use a cementitious screed as this will push moisture to the walls and lead to rising damp," says Matt. "Instead, foam glass



Natural plasters like lime and clay-based ones are your best bet to maintain the balance of moisture as this allows the walls to breathe. "Consider using lime-based paints, too – though this will need more coats and time than modern emulsions," says Matt. Conversely, modern vapour-closed plasters and paints will seal moisture in the wall and can result in damp issues and bubbles forming. Limewash paints can be a cost-effective way to get the mottled look, and modern versions come in a variety of colours.

## Windows

Where possible, it's better to repair surviving original windows, rather than ripping them out and starting fresh. The wooden frames used for properties built prior to the 20th century are usually high quality and very durable but have been neglected over time – a competent joiner should be able to tell you if they're salvageable. Metal units are notorious for thermal bridging, and in some cases you won't be able to replace single glazed windows for double glazed – ie in a listed building – but secondary glazing can normally be installed inside to keep the warmth in.

If you've got poorly performing plastic units, then replacing these with modern timber, metal or PVCu ones that have been designed for heritage homes is a good option. "Our timber alternatives look like flush wooden frames, keeping the property's charm intact, but with barely any maintenance and exceptional thermal and acoustic properties," says Jo Trotman at The Residence Collection. The Rooflight Company's Amy Cole adds that "the aesthetics of original Victorian cast iron skylights can be achieved without sacrificing on energy efficiency." Their Conservation Rooflight has been designed specifically with heritage homes in mind.

## Roofing & rainwater goods

Making changes to your roof could require planning permission, so check with your local council first. "If the structure itself is questionable, it's worth replacing," says David Sherry from Dreadnought Tiles. Look for broken tiles or water ingress in your attic and make sure the timber battens aren't bowing as this could mean a new roof entirely. When it comes to finishes, there's myriad materials out there. "Take the time of building into account," says David. "Very old homes will have been topped with local clay; while concrete tiles were introduced in the 1920s." It's important to select a material that blends with your house and the local vernacular, too.

Faulty gutters can be the cause of many damp issues, so it's important to identify and rectify these. If you're installing a new drainage system, Anthony Hitchman from Rainclear says that "it's best to replicate original materials wherever possible, but modern alternatives like aluminium in place of cast iron can maintain the heritage look."

## HOW FAR SHOULD YOU GO?

Refurbishing a period property authentically can be expensive and time consuming. For example, three coats of lime plaster might cost you £80 per m<sup>2</sup> and weeks of drying time, versus £30 per m<sup>2</sup> for a modern product. If you decide to use typical paint on top, this seals in moisture, leading to bubbles forming underneath – meaning you have to redecorate much sooner than if you used a breathable product.

Set out a realistic budget and plan a contingency – and be aware that if you have problems caused by existing alterations, it could cost a lot to fix this before you even get started on your own upgrades. "Seek specialist advice and get a variety of quotes so that you can have some kind of cost-certainty," says Matt from Stonewood Builders. "In particular, it's critical to get an asbestos survey before you start."

**Above:**  
Architectural  
Bronze Casements  
supplied stunning  
heritage look  
windows to this  
thatched property

aggregate with a lime-based mortar is a breathable method that allows moisture to escape. Plus, you can still embed UFH into it for a cosy ambient temperature." It's more time-consuming to dry out, and expensive to lay, but will help you avoid structural issues by allowing the house to breathe as it was designed to.

## Mortar, render & plaster

If you need to repoint or re-render any damaged walls, try to match the materials already there as closely as possible. A lime mortar mix is much more suitable than cement. "If you use harder, modern materials, moisture will seep into your original bricks or stones, with nowhere to go," says Matt. "This can result in cracks as the materials expand – the water needs to go somewhere."

Lime putty products are among the best options here, and can be bought mixed and ready for use. Hot-mixed mortar needs to be blended on site (which does need a little consideration from a health and safety perspective) but it's easy to work with and performs really well.

"If you've got a particularly attractive exterior, like original stonework, you might not want to alter the appearance too much," says Joff. "However, if you're planning on using external wall insulation anyway, something like Spraycork is through-coloured, so can double up as the render finish." It also offers the textured wall effect that's a staple of many period homes, so you keep that character.

## CONTACTS

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