



## Benefits of Traditional Buildings

Old and historic masonry buildings were usually built using a solid wall construction (i.e. no cavity walls). Within the Cotswolds, traditional buildings were generally constructed from stone, although sometimes brick and timber were also used. This type of construction is normally dated to pre-1919, however there are some exceptions to this rule. After 1919, cavity wall construction became the norm due to the loss of traditional craftsmen and a need to build new housing after the First World War.

### How does traditional construction differ from cavity wall construction?

**Traditional construction** is characterised by being **breathable** and using natural materials such as stone and lime. Typically, these materials are sourced locally/on site, which gives areas their distinctive building character. Traditional buildings are often constructed from stone (although they can also be timber framed, brick, or earth), and rely on the thickness of the walls and an ability to allow moisture to evaporate. It is normal for these buildings to absorb low levels of moisture from the ground or rain and then to release it back into the atmosphere when conditions become drier. To help to protect the buildings from the weather and reduce the impact of rain (particularly wind driven rain), the traditional buildings often had a lime render, plaster or limewash applied (inside and outside).

When the building is well-maintained, the building is very unlikely to feel damp or cold and will have a healthy internal environment. However, when it is not well maintained, or inappropriate materials used (such as cement, damp-proof courses, dry-lining or synthetic paints), then problems such as damp and mould can occur because this prevents the moisture from evaporating out of the building. Please see the [Maintenance](#) page for further information.

Cavity wall construction is formed from two masonry walls with an airspace in between. This type of construction is not breathable. Instead, it behaves more like a waterproof coat – it prevents moisture coming into and leaving the building. If any moisture gets in between the

two masonry walls, then it will drain out of the air space (cavity). This construction type is generally characterised by the use of impervious materials such as concrete blockwork (breezeblocks), cement render and damp-proof courses.

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Traditional buildings are inherently sustainable if they are well maintained, used and heated in a way which is compatible with how they were built. In many cases, these buildings have been around for hundreds of years (modern buildings in contrast are designed to last less than 100 years), and they use materials which are locally sourced and naturally occurring, for example timber, clay and lime. Other reasons why a traditional building is inherently sustainable are:

- At the end of the building's life many of the materials can be re-used or are biodegradable.
- Thick walls means that in the summer the building is less likely to get too hot or **overheat**. This reduces the need for energy to cool the building.
- Many traditional buildings have a high **thermal mass**, which means that once they have been heated, they will slowly release this heat, therefore staying at a comfortable temperature for longer.

Therefore, it is important for the environment that we look after our traditional buildings as replacing them or letting them get into disrepair will have a negative impact on the environment.

## Embodied Carbon

**Embodied carbon** is the total amount of greenhouse gasses generated through the life of the building – this includes those produced whilst building it. The amount will vary between buildings, however, those built before the industrial revolution are likely to have lower embodied carbon than anything built after this point, especially buildings built after the Second World War. This is because materials were not transported very far, the materials were naturally occurring and because of how the building materials were made.

When a traditional building is demolished, this embodied carbon is lost and released back into the atmosphere. This will contribute to climate change. However, if we look after and keep our traditional buildings, then we reduce the emissions released into the atmosphere.

## Further information

[Historic Buildings and Sustainability](#) in the Essex Design Guide provides a very useful summary on this topic, including diagrams.

The Tywi Centre has produced an easy to read and short guide traditional buildings which provides a helpful introduction to the way they are built and some of the common problems experienced by homeowners. This is called [Understanding Traditional Buildings](#).

For more information about what it means for a building to be breathable, please see The Alliance for Sustainable Building Products [An Introduction to Breathability](#).