

» Let's make 2019 the year that the construction industry starts working together and puts the health and well-being of occupants at the forefront of its aims «



SUPPORTING HEALTHY BUILDINGS

# What makes a 'HEALTHY' building?



## A building is healthy if it doesn't harm the environment or its occupants

- *Timber materials* are *truly sustainable*. From cradle to grave they are much more likely to fit into the goals of a true circular economy than man-made synthetic alternatives.
- The *world's forests* contain about 385 billion cubic metres of timber with an *additional 17 billion cubic metres growing each year*. Only 3.4 billion metres are currently harvested. Truly *sustainable forestry* can greatly enhance the utilisation of this incredible natural resource and ensure that it meets the needs for both this and future generations.

## A building is healthy if it enhances the well-being of its occupants

- Recent figures suggest that we spend over 90% of our time indoors. *Indoor air quality* therefore has a major impact on our health.
- *Timber insulations* help to control the internal environment of buildings. They keep cold out, buffer external heat, regulate moisture content and actively help to *promote* breathable and *healthy structures*.



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SUPPORTING HEALTHY BUILDINGS

# Launching the 'GREEN LEAF' campaign

**As part of its commitment to healthy buildings, STEICO is using Futurebuild 2019 to launch its 'GREEN LEAF CAMPAIGN'**

- Targeted at *all sections of the UK construction industry*, the 'GREEN LEAF CAMPAIGN' aims to highlight the positive impact that natural materials can have on the built environment and human health.

- We are therefore *asking all interested and concerned parties* to sign up to the campaign and commit to the promotion and use of natural materials. It doesn't matter if this involves small one off renovations or large scale residential or commercial developments, the principle remains the same.

- So why not *show your commitment* and help to revolutionise the buildings that we live in and the way that we build them.

*A collective challenge requires a collective solution.*

*Sign up to the campaign!*



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# SUPPORTING HEALTHY BUILDINGS

**THE 'GREEN LEAF CAMPAIGN'** allows you to commit to the construction of healthy buildings and the use of natural materials.



**COMMITTED TO HEALTHY BUILDINGS**

Use the **'GREEN LEAF'** and show you are committed to creating healthy buildings



**CREATING HEALTHY BUILDINGS**

If you already create healthy buildings then use the **'SILVER LEAF'** to promote this positive approach



**CREATING EXEMPLARY HEALTHY BUILDINGS**

If you create exemplary healthy buildings and they are at the core of your approach then use the **'GOLD LEAF'**

*Sign up to the campaign and help to support a healthier future*



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# What makes a healthy building? BREATHABILITY



**Breathability** is at the core of what makes a building healthy. Often referred to as '*permeability*' or '*vapour open construction*', this core functionality of the building fabric is its ability to deal with the negative effects of moisture in a natural way.

It rains in the UK: that we do know. In order to protect the occupier we create buildings focused on stopping the rain getting in. There's nothing wrong with that but *we also need to let moisture in the building get out*. The warm air in a building is rich in moisture and it is this moisture that can create mold and condensation issues and be the cause of associated health problems.

Buildings with a 'fabric first' approach are not afraid of moisture. They understand how it works and deal with it in a natural way.

*The internal side* of a wall or roof incorporates a vapour control layer which limits the amount of moisture that can enter the structure.

*The external side* is vapour open and ensures any moisture that does enter the structure can naturally migrate to the outside and evaporate away.

In addition to this fabric balance, the use of wood fibre ensures that any moisture in the structure can be stored at source and then migrated to the outside through *natural processes*.

## Natural – Simple – Healthy



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# What makes a healthy building? SUMMER HEAT PROTECTION



## HEAT PROTECTION

The main focus of insulation is to keep us warm. There's no disputing that and it's why the Building Regulations are primarily focused on U values. But what's your insulation doing during the warmer periods? The answer is probably nothing. What it should be doing is **protecting the occupier from excessive heat**.

We have all heard about how high temperatures can affect vulnerable groups in our society. *The fabric of our buildings can protect people against this heat stress* in a passive and natural way. Using the right materials, such as wood fibre, effectively slows down the passage of heat through the building fabric and stops it heating up the internal climate. This process is called 'heat decrement delay' or 'phase shifting'. The ideal 'phase shift' time is a minimum of 12 hours. This ensures that internal temperatures remain regulated and above all comfortable for the occupier.

Insulation should be chosen for its 'all year round' performance. Ideally they should have the ideal mix of:

- **High Density**
- **High Specific Heat capacity**
- **Low Thermal Conductivity**

When specifying the external wall fabric, think 'U value' **and** 'phase shift'.

## Natural – Simple – Healthy

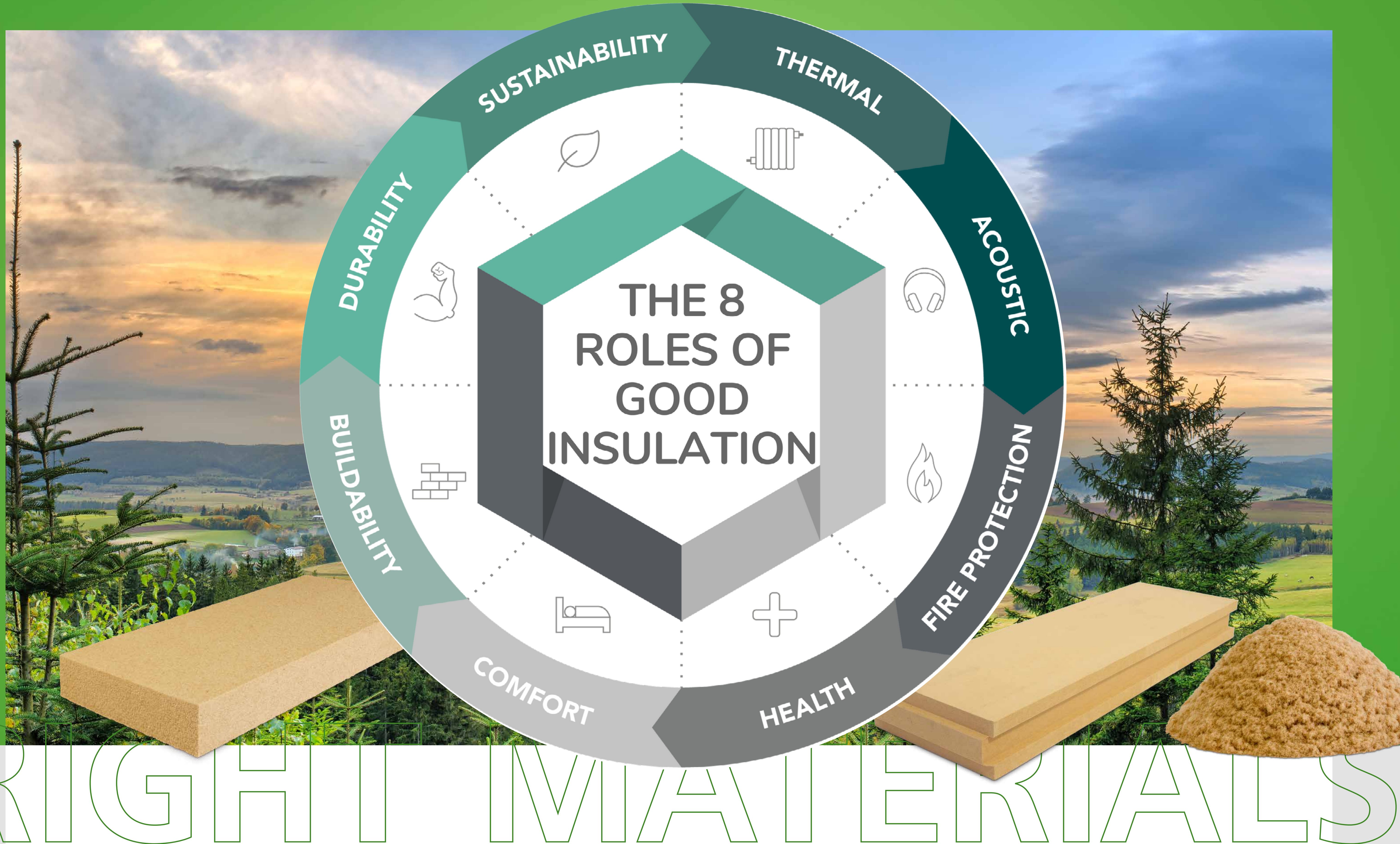


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# What makes a healthy building? THE RIGHT MATERIALS



Insulations play a multi-functional role within the building fabric.

*There are 8 key roles to consider when specifying material.*

**THERMAL** – Thermal performance describes how well a structure responds to changes in external temperature

**ACOUSTIC** – Varying densities within the wall fabric ensure the best acoustic performance

**FIRE PROTECTION** – The building fabric should provide fire safety above and beyond the required levels

**HEALTH** – The health of the installer and the homeowner should be a major factor in the materials used

**COMFORT** – Insulation provides comfort by moderating the effects of the external environment

**BUILDABILITY** – Ease of installation and weathering impact are key

**DURABILITY** – A building should have the capacity to resist decay or degradation

**SUSTAINABILITY** – Impact on our environment should be limited wherever possible

## Natural – Simple – Healthy



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