

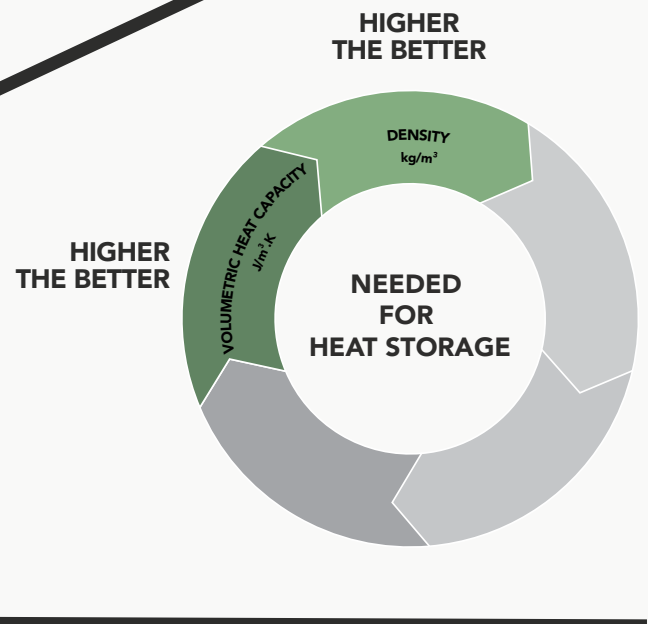
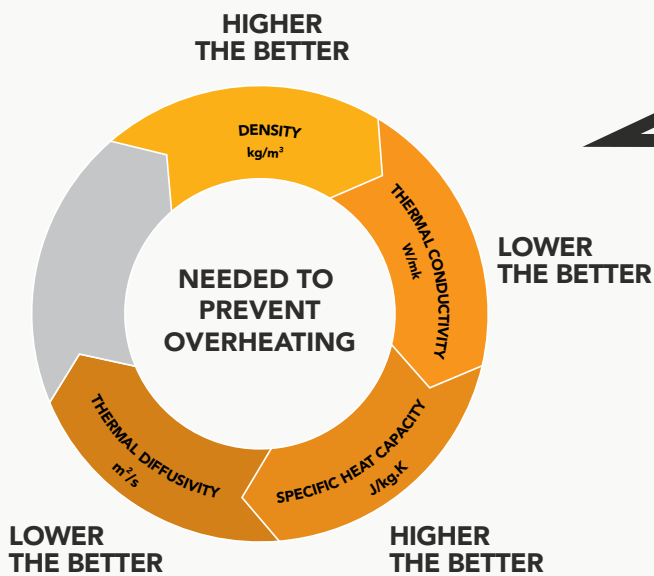
IMPLEMENTED ACROSS TWO SEPERATE ENVIRONMENTS USING DIFFERENT MATERIALS

EXTERNAL

Solution delivered by Wood Fibre as per Multiple Roles of Insulation

INTERNAL

Typical material would be concrete



GLOSSARY

Density kg/m^3

The mass per volume of a material - Higher the Better

Thermal Conductivity W/mK

The rate at which heat passes through a material
- Lower the Better

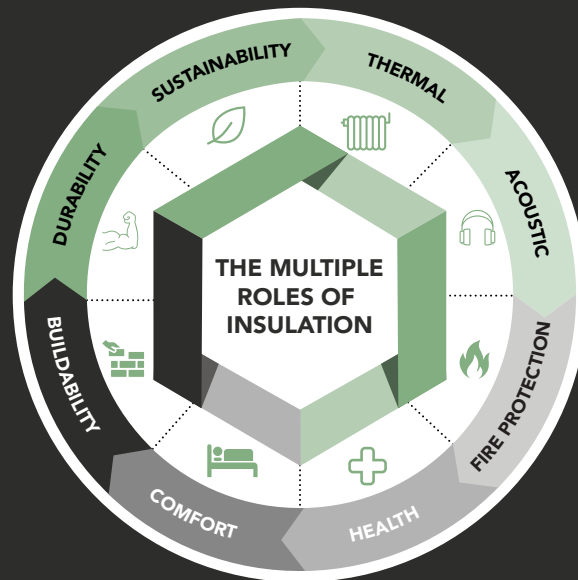
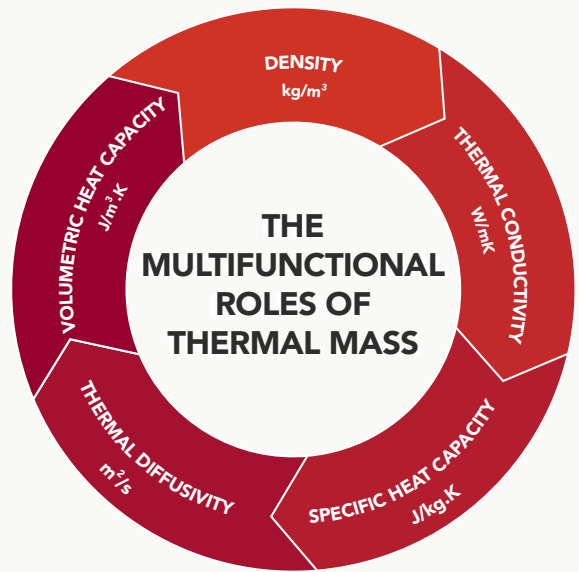
Specific Heat Capacity $J/kg.K$

How much heat can be stored in a material. Not how much heat it needs to change its temperature - Higher the Better

Thermal Diffusivity m^2/s

The rate of temperature spread through a material
- Lower the Better

Volumetric Heat Capacity $J/m^3.K$ - The ability of a volume of a substance to store heat while undergoing temperature change - Higher the Better



The solution: Insulation is about thermal performance and must have the following four in abundance:

1. High Density

For sound and overheating control.

2. Low Thermal Conductivity

To reduce heat loss and for more comfort

3. High Heat Storage

For temperature control

4. High Vapour diffusion

To deal with moisture