

Recovery Insulation™ Ltd.

Co. No. 4616193

in partnership with *Schools & Homes Energy Education
Project Ltd./SOLAR-ACTIVE.*

Co No. 327 3416

Charity No.107 3347

MISSION STATEMENT

***“If you improve quality costs will go
down and value goes up”***

W.E. Deming

THE CHALLENGE TO SPECIFY A LOW CARBON INSULATION IN BUILDING CONSTRUCTION: NEW BUILD AND REFURBISHMENT



Are their economic & environmental impacts
(e.g. benefits) associated with what is
considered to be a low carbon insulation?

Low carbon insulation

How can we become sensitized to consider that a low carbon insulation is more energy saving when taking into account energy use in the supply chain?

Specifying insulation

We are often miss-informed that conventional insulation is cheap due to the scale and cost of raw material in the supply chain of their product but not informed of the highly energy intensive manufacturing process.

Specifying insulation

In the specification of a thermal insulation by e.g. quantity surveyors and homeowners what are the reasons why often they do not take into consideration the embodied energy used in the manufacturing supply chain?

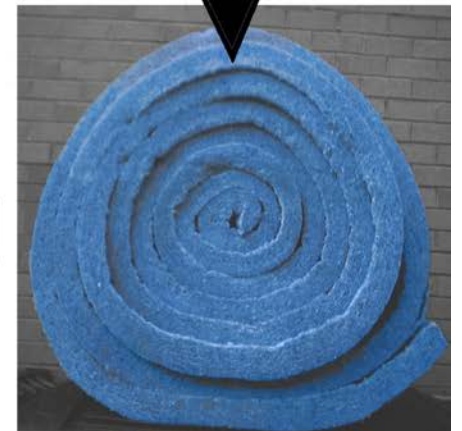
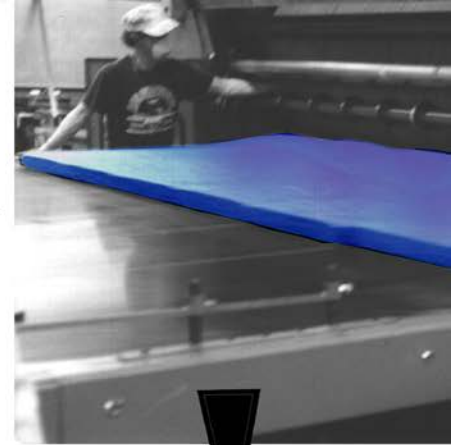
Why should we care about specifying
low carbon building products?

Inno-therm®/Metisse®

- A low carbon thermal/acoustic insulation
 - Manufactured from 85% recycled denim/cotton [85% is denim]
 - 3 jean's/m² for 100mm thickness
- 100 000 pairs of jeans are recycled/ month reducing textile waste sent to landfill

- No melamine or phenolic resins.
- Permeated with a safe, deep-absorbing fire – retardant and fungicides.
- Recycled cotton sourced and manufactured by EBS Le Relais Metisse.

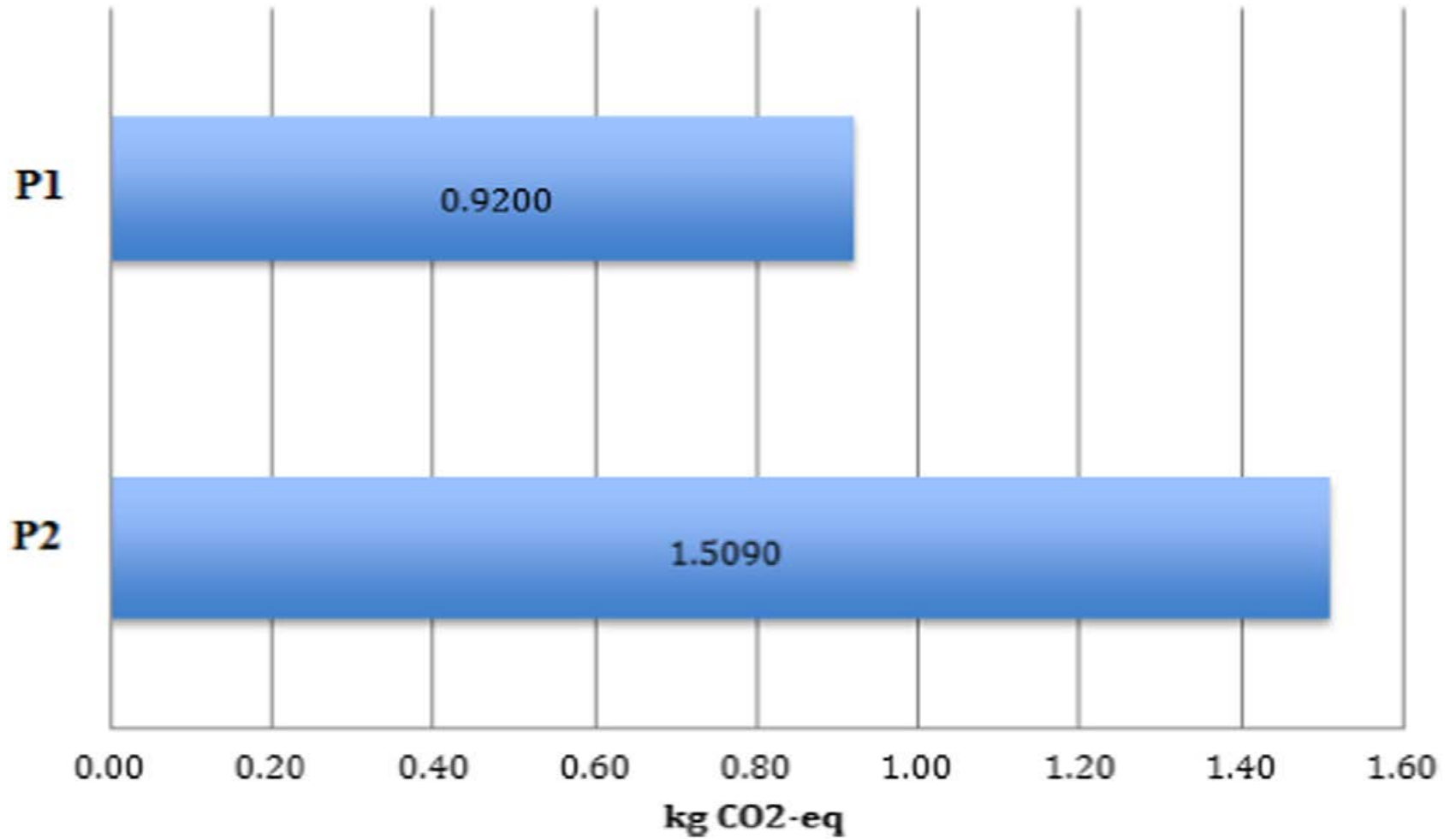
MANUFACTURING PROCESS



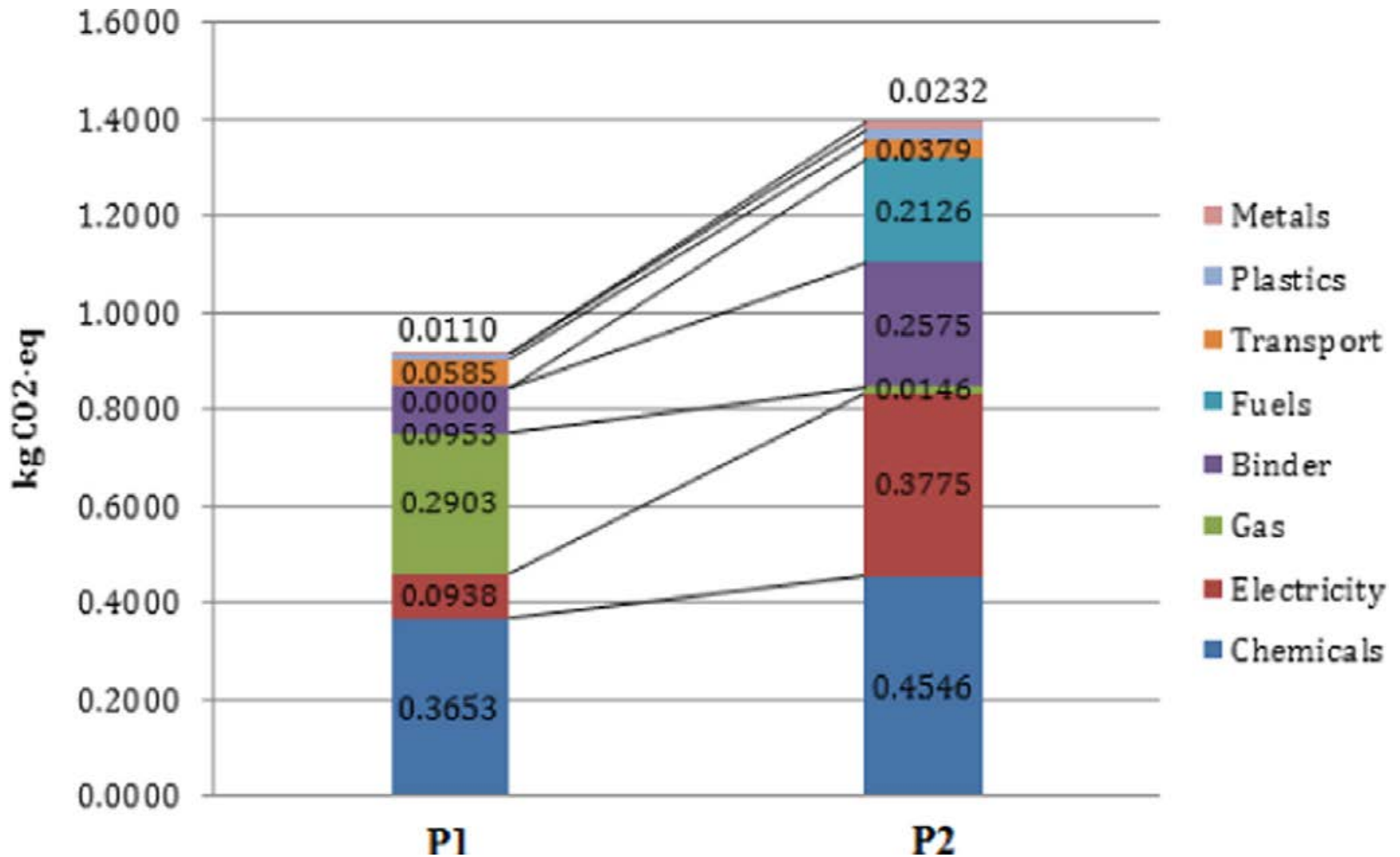
Circular Economy

- An insulation product that speaks to the Circular Economy
- Additional social value
- Excellent thermal and acoustic properties
- Combined with the ease of use
- Reducing wastes and environmental impacts,
- Achieving improvements in resource productivity and eco-efficiency

Comparative levels of emissions by P1 and P2 supply chains.



Breakdown of carbon emissions hotspots in P1 and P2 supply chains.



INNO-THERM lamda value of 0.039 W/mK
for both **20 kg/m³** and **25 kg/m³**
density products.

Translates into a typical U-value for
240mm depth of material = **0.16 W/ m²K**

R value - $.24/0.039 = 6.15$

U value – $1/6.15 = 0.16$



*“With INNO - THERM we have found a product that happily answers four of our objectives as the product is manufactured in the UK, creating employment opportunities and producing an environmentally friendly insulation. In fact as **INNO - THERM has slightly better thermal properties we were able to reduce the timber stud sizes, which in turn offset some of the cost while still achieving very good U – values.**”*

Nick James – White Design Architects

whitedesign

- Inno-therm installed BY NBC for acoustic application [45 Kg/m³] with a high sound absorption (= 0.95) and the acoustic fading is 42 dB.

“We used INNO - THERM because of it’s environmental credentials. It was a breathable product which was cheaper than other naturally based insulation materials, while proving suitable for the application. The recycled content was also a factor which we saw as favourable. While it had not been used a great deal over here we felt that its track record across the pond was sufficient.” Gil Schalom-Mark Stewart Architects



msarchitects

LOW CARBON BUILDING PROJECTS

- 1. South Yorkshire Energy Centre, Sheffield
- 2. Genesis Eco-Building – Somerset College of Design & Technology
- 3. Torfaen (South Wales) Eco Building
- 4. Hemphill Hall, Nottingham (a listed building refurbishment)
- 5. The Materials and Engineering Research Institute [MERI], Sheffield 'eco-house' project.
- 6. [Barnsley College Think Low Carbon \(TLC\) Centre](#)
- 7. Bradford Enterprise Park in conjunction with Modcell
- 8. Eve Saint Lauren Oxford St. refurbishment
- 9. Cultybraggan Camp, Hut 1, Comrie, Perthshire
- 10. Castle Hill School, North Yorkshire – **straw bale**

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