



Green Interiors & Finishes

Materials
(40) Finishes
Decoration

Healthy alternatives to common products

- Plastics alternatives
- Non petro-chemical
- PVC alternatives in floor, wall, ceiling finishes and services
- Linoleum not PVC vinyl
- Chemical and toxin free materials
- Natural, vegetable, mineral, traditional
- Formaldehyde free products
- Low VOC finishes and adhesives



**Natural
ingredient
Paints
Stains
Oils
Waxes
Polishes
Sealers**

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Clay Boards Reed & Clay Clay finishes

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**Clay finishes absorb
moisture, smells
EMF radiation**

**Mineral based paint
Chemical reaction
with background
100 year life
Good colour retention**



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What is Green Construction?

- Energy Saving?
 - Yes, but that's only a small part of it
- Long Life Durability?
 - This is important: Green short life materials are not helpful
- Proper Materials used correctly?
 - BSI KM, BBA, ETA, CE
 - Yes but there are other ways

What constitutes Green Construction materials?

- Natural
- Healthy
- Environment-friendly
- Grower, Extractor, Manufacturer, Constructor, Occupant, Demolisher, Recycler friendly

What constitutes Green Construction materials?

- Traditional (tried tested, durable economical, local, available)
- Sustainable in their manufacture
 - Managed Forest products
 - Wood, Paper
- Reused or Recycled materials

What constitutes Green Construction materials?

- Avoidance of non-renewables
 - Petro-chemical
 - oil based
 - plastics
- ZODP Ozone-friendly
 - CFC, HCFC & HFC free
- Low Greenhouse Gas potential

What constitutes Green Construction materials?

- Low embodied energy
- Energy and water saving systems and appliances using sustainable power sources

Thermal Insulation



Newspaper
Flax
Hemp
Sheep's wool
Cellulose



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Timber Structure,
Curtain Walling,
Doors and Boarding,
Minimise cold bridges
Less condensation
Natural sustainable
material
Mostly recycled
timber

Visitors Centre, Café, Retail: Earth Centre Doncaster Architect: Dr Bill Dunster

EVT Enhanced Vapour Transfer



Hygroscopic insulation
maintain their performance
even when wet
Vapour and water released
when conditions permit
No need for Vapour Barrier VB
Use vapour permeable
construction
5:1 ratio vr inside:outside
Air Tightness Layer ATL

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Thick walls



We have a preoccupation with thin walls
Which drives the demand for energy intensive man-made petrochemical derived CFC HCFC HFC foamed plastic
O₃ Ozone Depletion
Greenhouse Gas Potential

Cellulose Fibre



Optimum:

**300-600 mm. deep compound
rafters with Cellulose fibre
insulation**

**High density and
high thermal mass
cellulose fibre insulation
boards in walls and floors**

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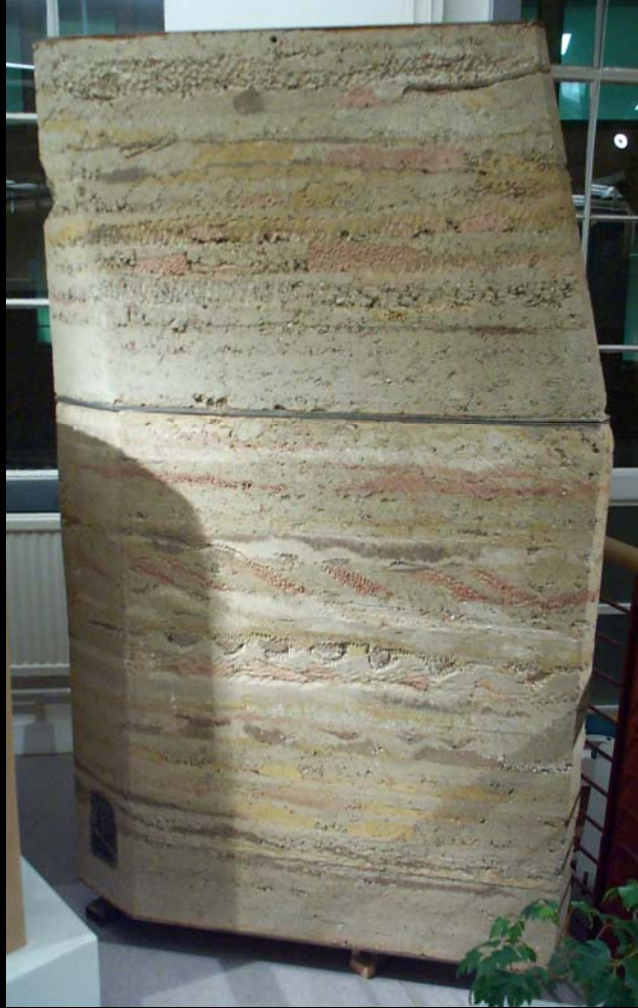
Thermal Mass



Thermal mass:
High thermal mass cellulose fibre insulation boards in walls and floors
Acoustic unfired clay bricks in floor construction or fired honeycomb blocks in walls and floors adds thermal mass



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Rammed Earth for thermal mass



