Green Architecture Day 2007

Reducing Our Ecological Footprint

Principles and Case Studies

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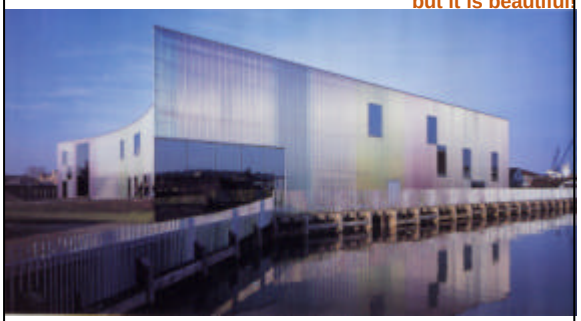
www.bbm-architects.co. uk

One Planet NOT Three!

Unfortunately this is Sustainable Design

This is not...

but it is beautiful!



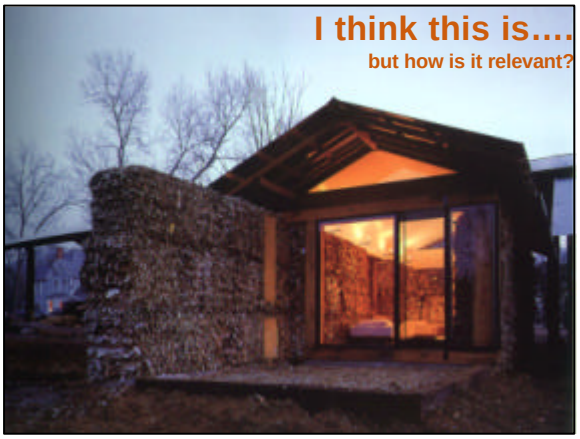
Is this?

Perhaps

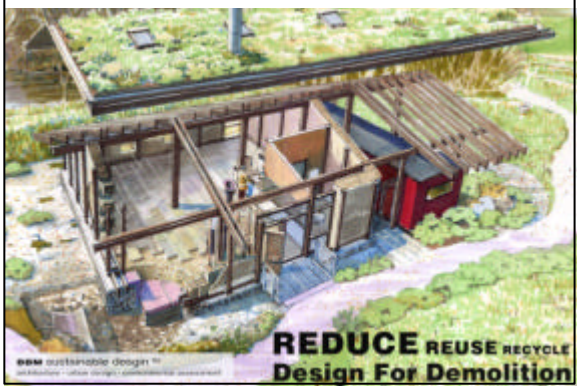
Perhaps

I think this is....

but how is it relevant?



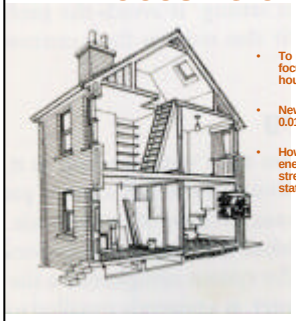
So in order of preference....



FOCUSING ON YOUR HOME

- Biggest yearly increase in energy consumption is found on our roads
- However approx 40% of all CO2 emissions are from our homes
- There are 20 million houses out there
- 60%-70% of them don't have adequate insulation
- 85% don't use low energy lightbulbs

FOCUSING ON YOUR HOME



- To make a real impact on CO2 emissions we must focus on improving energy efficiency of existing housing stock as well as the way we inhabit it.
- New homes are well insulated but account for only 0.01% of housing stock (each year)
- However if every home in the UK installed just one low energy light bulb, the energy used could light all our streetlights or we could switch off two nuclear power stations.

THE GOOD NEWS

- Everybody is talking about
  - saving energy
  - reducing waste & water consumption
  - buying good local food
  - cycling to work
- It's now a common lifestyle choice to go green
- However it saves lots money so it's not just a fad
  AND it will also help save our beautiful planet

THE GOOD NEWS

- Reusing existing buildings is VERY green
- Building new very green buildings normally has a bigger negative effect on the environment than reusing an existing building- if you consider the amount of energy and pollution that is created when a building is constructed

Case Study

SALFORD QUAYS

Urban Splash

Case Study

House + Studio Hove

Case Study

House + Studio Hove

What are we doing?

- Creating well insulated + sometimes well sealed buildings
- That sometimes reduce energy comsumption in use
- That often cause 'sick building syndrome'
- That do not consider the energy used + pollution created in construction
- Who is guilty?
- WE ALL ARE

What can we do?

- **Consider 'Designing for Demolition'**
- *Your building is a future material resource for others*
- **Consider levels of energy + pollution used when selecting materials**
- *Reducing the extent a material is processed reduces it embodied energy + pollution levels as well as the likelihood of in-built toxins*
- **Consider non-toxic materials**
- *To reduce the likelihood of 'sick building syndrome'*
- *To make construction and disposal safer + easier*

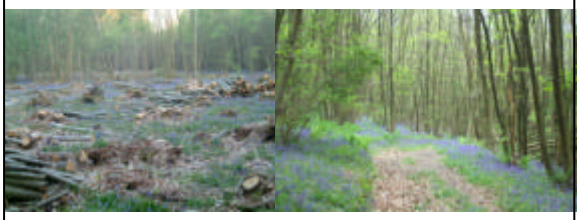
What else can we do?

- **SPECIFY LOCAL MATERIALS BECAUSE**

- *It reduces the amount of pollution created in transport*
- *They can 'weather' better in native environment*
- *They can create a sense of place: a local identity*
- *They can help generate local commerce*
- *In particular cases they can help support bio-diverse environments*

Sweet Chestnut:

The Process



Sweet Chestnut:

The Process

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Case Study No.1

Sparrowhouse Lewes

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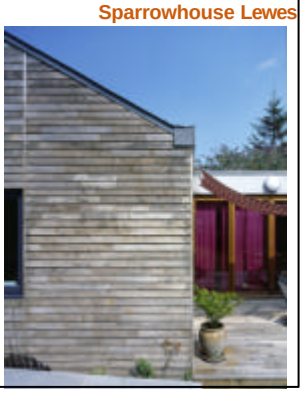

Case Study No.1

Sparrowhouse Lewes

Case Study No.1

Sparrowhouse Lewes

Case Study No.1

Sparrowhouse Lewes

Case Study No.2

New House + Studio Hove

Case Study No.2

New House + Studio Hove

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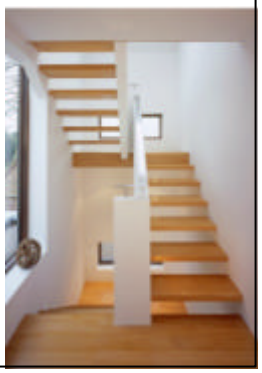
New House + Studio Hove



Case Study No.3

Extension to St.Pancras School

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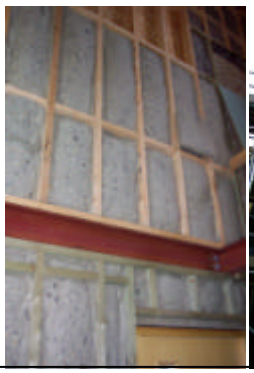

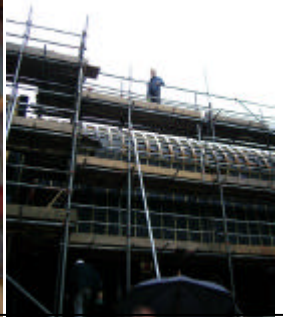

Case Study No.3
Extension to St.Pancras School


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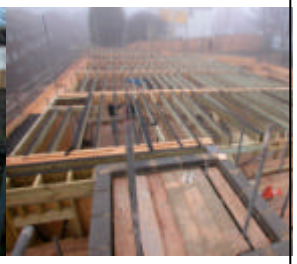
Case Study No.4
The Bridge


Case Study No.4
The Bridge

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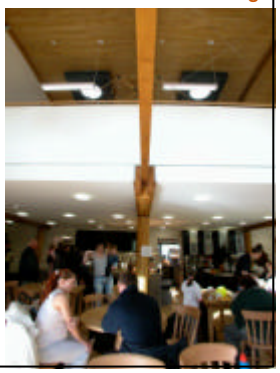

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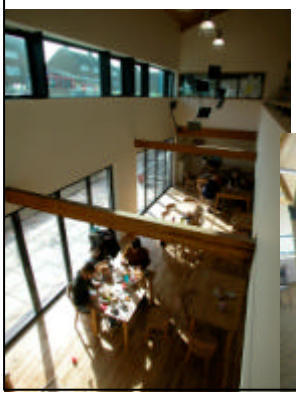

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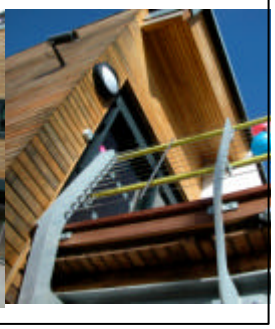

Case Study No.4

The Bridge

Case Study No.5

Creative Media Centre

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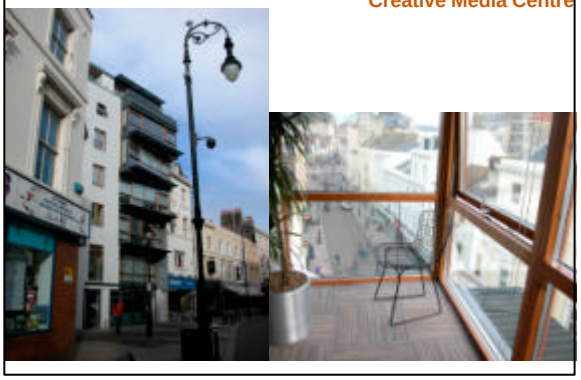

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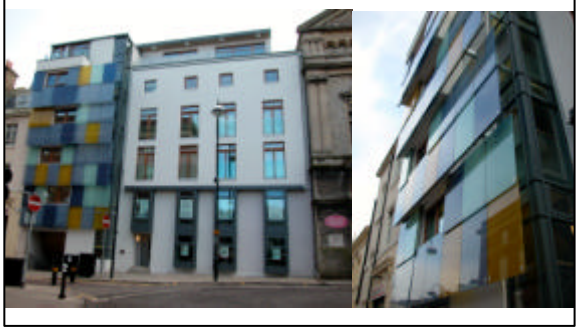

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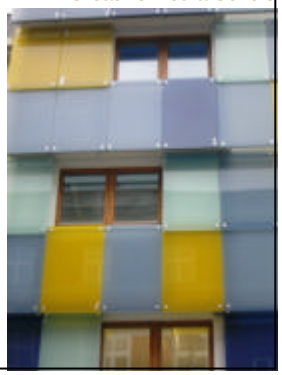

Contact sheet

Low Impact Materials

Coppiced Sweet Chestnut Cladding/Glue-Lam structures/ joinery supplied byInwood Developments tel: 01825 872150

Wood-Fibre ground floor insulation, Clay Plaster, Recycled Building Papersby Construction Resourcestel: 0207 4502211

Lime Render + Wood-fibre Insulation System, Flax or Recycled Cotton & Hemp Quilt Insulation by Natural Building Technologies tel: 01844 338338

Sedum Roof + Rubber Single Ply Membrane byPrelasti (AAC Waterproofing) on 01248 421955

Double Glazed Windows (Sparrowhouse/ StPancras / The Bridge)- Rationel Windows (UK) Ltdtel: 01869 248181

Treble Glazed Windows Creative Media Centre 2- Swedish Window Company

Folding/ Sliding Doors- Solarlux Systems Ltdtel: 01924 204444 orID - Systems tel: 01603 408804

External Solar Blinds to Creative Media Centre 2 byLuxaflex tel; 01293 851010

Paints - Ecos Organic Paints (Sparrowhouse) tel: 01524 858978 + Biofa by Villa Natura (St.Pancras School) tel: 01273 685800

Natural Ventilation + Light Source at The Bridge- Suncatcher by Monodraught tel: 01494 897700