"When we build, let us think that we build for ever."

John Ruskin — The Seven Lamps of Architecture 1849
quart into a pint pot?
The Building Regulations


Part L has been and will be under constant review in light of energy and sustainability issues.

Next Part L review due 2010 and 2013 and demand a 25% & 44% improvement respectively on 2006 Part L standards for Carbon Dioxide emissions, with the intention to achieve zero carbon buildings by 2016 in England.
Donovan Purcell – Pioneer in Stone Conservation
Integrated into our thinking and philosophy

- Conservation
- Restoration
- Preservation
- Regeneration
- Recycling
- Sustainability

Not New thinking!

- Holistic approach ISO 14001 – environmental certification
- not just what resources we use as a practice but also in our work.
ISO 14001 Environmental Certification

Office by Office – monitoring and benchmarking

- Analysis of Business Travel
- Waste Management
- Energy Consumption

Analysis of Business Travel Office by Office
One Planet Living

Globally, our Ecological Footprint is 30% larger than what the planet can regenerate... and climbing steadily.
Why ‘One Planet Living’?

• If everyone in the world lived like we do in the UK – we would need 3 planets to support our consumption.
• How many planets do we have to supply our needs?
One Planet Living

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In our Work

Purcell Miller Tritton Index of Sustainability (PIOS).

Our commitment to running an environmentally responsible business is demonstrated by our ISO 14001 Environmental Management System, which provides a framework for independent auditing of our progress towards clear targets.

The practice is also a member of the Green Register of Construction Professionals. Each Office has its own member.
In our Work

We aim to:

• Use renewable, sustainable and environmentally benign materials and technologies
• Reduce carbon dioxide emissions through energy conservation, ventilation control and the passive and active use of renewable energy;
• Use environmentally responsible suppliers, contractors and sub-consultants;
• Meet and, where possible, exceed environmental regulations;
• Deliver a healthy, comfortable and pleasurable internal environment for building occupants;
• Ensure that our buildings are properly managed so that they continue to function efficiently, minimising their environmental impact throughout their life
First principles of sustainable design

- Form
- Orientation and Insolation
- Wind Protection
- Embedding
- Zoning
- Latent Thermal Storage
- Free Night Cooling
- Light directing elements

Formally BREEAM assessment didn’t take into account these first principles in assessing buildings as they were tailored toward new build. There is now a new form of assessment BREEAM-IN-USE which can easily be applied to existing / historic buildings.
Some examples
Greatwater Boathouse – Hanworth Broad Norfolk - Artists Studio

- Constructed from three surviving brick vaults of a 19th C boathouse
- Green Oak Frame – locally sourced timber
- Thatched with Norfolk Reeds
- Composting Toilet draining to a reed bed
- Natural Wool Insulation
- Own borehole for fresh water
- Heated by a wood burning stove
132 Harley Street Grade II – BREEAM Excellent Rating reuse of listed building

- Georgian 1714 - 1830
- Dilapidated and redundant building – converted into a medical practice
- New drainage
- Efficient new central heating and central boiler plant
- Low energy lighting
- Power services
- Grey Water Recycling – rainwater harvesting
Blackburn Cathedral – Grade II*

- Combined Heat and power unit
- Underfloor heating System
- Controls system
- Biomass Boiler (Later Phases)

Overall, the CHP is designed to reduce energy consumption. It is anticipated that the Cathedral's energy use will be reduced by almost 30% - equating to a saving in the region of £15,000 per year.
Athenaeum Hotel, London

• Living Wall – Bio diversity – absorbing carbon dioxide and releasing oxygen, ‘a living lung’
• Replaced windows and increased insulation
Wiggenhall Manor – Grade II

- Bio diverse green roofing system using -
- Pre-grown Natural Mat plant layer to reduce internal cooling loads
- Sustainable Drainage by retaining rainfall and prolonging drainage run off
- Green Roof increases the membrane life and reduces maintenance costs
- Grey Water Recycling – rainwater harvesting
Broxbournebury – Grade II

- Natural air conditioning through the use of ground coupling
- Natural gradient of site exploited to bury extension below a living green roof
- Solar Hot Water Panels to meet 85% of the hot water requirements (on new build extension)
- Biomass Boiler
- Grey Water Recycling – rainwater harvesting
- Reed Bed Drainage
Bowood Estate, Hotel and Leisure – Grade I

- Georgian Country House set in Capability Brown Listed Landscape
- Biomass Boiler
- Reed Bed Drainage
- Sedum Roofs
- Eco Luxury – Marketable ideal
Coworth House Estate Surrey – New Spa

- Carbon negative timber structure and lime hemp wall construction
- Camomile, lavender and thyme living roof used for spa herbal treatments
- Minimal footprint – buries the building within the natural contours of the landscape
Shrubland Park Hotel Grade II*

- Carbon negative lime hemp wall construction
- Solar Hot Water
- Biomass Boiler
- Grey Water Recycling – rainwater harvesting
- Reed Bed Drainage
- 140 Code Level 6 affordable homes – enabling development
- Apprenticeship workshops with hostel accommodation
- Key worker housing
Parc Glynllifon – Gwynedd  Eco-luxury heritage hotel?

- Hydro electricity from river across front of hotel
- Biomass
- Solar Hot water heating
- Grey water recycling
established 1947

Bristol
Cambridge
Canterbury
Colchester
Edinburgh
Liverpool (Best Office Obviously)
London
Norwich
Oxford
Sheffield
York