

Sustainable Business Breakfast

Sustainable Buildings

Brighton, 27th November 2014

**Sustainable
Business
Network**



**GreenGrowth
PLATFORM**



University of Brighton

HIGHER EDUCATION

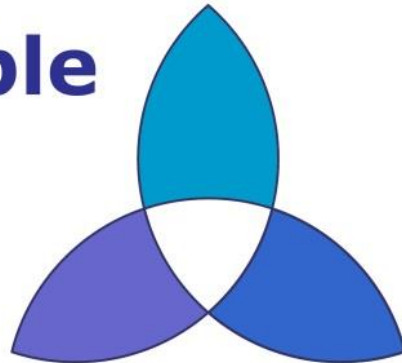
FUNDING COUNCIL

FOR ENGLAND

hefce

Working in partnership...

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What's coming up?

08:30 Welcome

Rowan Wallis, Sustainable Business Partnership CIC

08:35 Best Practice Case Study

Elizabeth Hughes, The Keep

09:55 Heat Loss and Thermal Imaging

Mark Colyer, ScanTherm

09:15 Round-the-Tables

09:30 Networking & Refreshments

[keep] sustainable

In partnership



The Keep

A partnership project in the Moulsecoomb area of Brighton

- East Sussex County Council
 - Brighton & Hove City Council
 - University of Sussex
 - Sussex Family History Group
-
- Architects: Atkins
 - Contractor: Kier Longley
 - Project Manager and Employer's Agent: Faithful+Gould
 - Quantity Surveyors: Robinson Low Francis



Sustaining the archives

- Space for collections and future growth
- Over 10 miles of shelving
- Safe and secure storage
- Correct environmental conditions
- No windows
- Air quality controlled
- Security and fire protection
- Very thick walls for energy efficiency
- British Standard for Archives BS 5454



THE COLLECTIONS: 900 YEARS OF HISTORY

- Over 6 miles of archives and resources documenting the lives of people, places and events from across the community
- Written records, maps and plans, photographs, films, prints and drawings, oral histories, digital and electronic archives
- Collections of local, national and international significance



Above: Battle Abbey Charter, circa 1101

Longevity and flexibility

Investing in the building to reduce running costs

BREEAM Excellent

Photo-voltaic panels for electricity generation

Solar water heating

Green roofs

Biomass boiler for heating

Thermal insulation

Rainwater harvesting

Maximisation of daylighting



- Insulation values at 20% better than Approved Document 'L2'
- Use of Class A & A+ materials from the 'Green Guide to Specification'
- Air Tightness and U values
 - cavity and insulation (Class A+ rated by the BRE Green Guide) to achieve 'U' Value of 0.20 W/m²K or better
 - air permeability no more than 2 air changes per hour within the Repositories (ie 0.3m³/m²/hr @ 50 pascals or better).

Living roofs

All People Block roofs with indigenous grassland mix “green” roof coverings, intended to:

- enhance the biodiversity of the site
- provide evaporative cooling to reduce solar heat gains internally
- oxygenate the air close to staff rooms
- increase the life expectancy of the waterproofing roof membrane
- create a living green carpet when viewed from a distance



- Rainwater harvesting for toilet flushing & hand held irrigation systems
- Photovoltaic cells – approx 44,000kWh pa
- Biomass boiler for principal heating
 - in an Energy Centre with other servicing facilities remote from The Keep building





Maximisation of daylighting

- The Reading Rooms planned to maximise day lighting and frame views to a green landscape beyond
- high performance glazing & internal blinds to limit heat loss, control solar penetration & glare and to modify incoming ultra violet wavelengths
- Supplemented by roof lights, to achieving an appropriately day lit space without the need for artificial lighting during the hours of day light





External environment

- The remnant Woodland area of the Westlain Belt (NE edge of site) removed and replaced with new Mixed Species Native Woodland planting areas.
- Native Woodland planting area running along the SW edge, along the northern edge of the area of Public Open Space
- Butterfly bank
- Bat boxes

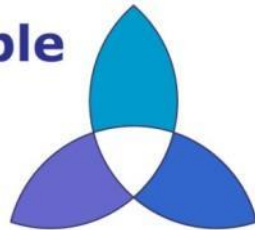
BREEAM Excellent

- Predicted electricity consumption – 0.06kWh/m²
- Predicted fossil fuel consumption – 31.2kWh/m²
- Predicted renewable energy generation – 34.0kWh/m² (pv cells 6.29kWh/m²; solar thermal 0.95kWh/m²; biomass 29.72kWh/m²)
- Predicted water use – 1.5m³/person/year
- 54% predicted water use to be provided by rainwater harvesting

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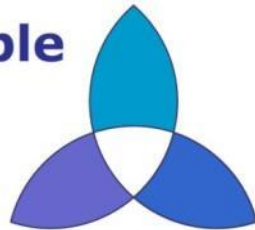
Thermal Imaging Demonstration

- by ScanTherm

Round-the-Tables

Business intros...

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Unlocking business potential

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4 SERVICE AREAS

1-2-1 BUSINESS SUPPORT

**BUSINESS EVENTS AND
OPPORTUNITIES**

**INNOVATION, RESEARCH AND
DEVELOPMENT**

SKILLS AND TRAINING

www.greengrowthplatform.co.uk

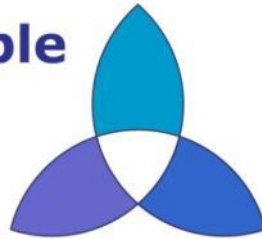
Join us again...

Lewes, 29th January

Case Study from
Glyndebourne

www.sustainablebusiness.org.uk

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