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OVERVIEW GREEN SPECIFICATION

Green specification should be part of an architectural practice's design philosophy, rather than a passive response to statutory requirements. Hattie Hartman and Felix Mara examine resources for green specification and look at three recently completed buildings.

Although architects use drawings to design and communicate, ultimately the medium in which they work is construction materials. These are the touchstones of an architect's style of work and design quality. But architects have less autonomy than other artists when they choose materials because of the constraints imposed by factors such as cost and performance, and the environmental profile of building products has become one of the greatest constraints on specification. How can architects integrate this complex subject into their workflow?

An increasing number of architects choose to specialise in green specification, making it the principal focus of their work and seeing it as an opportunity. Black Architecture, whose recently completed project for Catholic social justice charity CAFOD is our first case study, is one such practice. But most architects take a more generalist, all-round approach to specification.

Certification

For some building types, environmental awareness is no longer optional. Residential building projects must now comply with the



Left At Black Architecture's CAFOD office, external finishes include zinc rainscreen cladding, untreated English sweet chestnut cladding and glazed ceramic tiles
Right The reception wall has FSC-certified English sweet chestnut panelling

Online resources

A wealth of online tools can assist in green specification, but no single source is comprehensive.

www.bre.co.uk/greenguide BRE's generic rating system for green construction assemblies

www.capem.eu/capem/index.html

EU-funded project that uses lifecycle analysis to assess environmental and health impacts of materials

www.greenbooklive.com/index.jsp BRE online resource and gateway to environmental profiling which currently lists more than 700 products from 36 companies

www.greenspec.co.uk Around 400 products and growing, well-presented and easy to navigate; independent and architect-edited

ict.jrc.ec.europa.eu Everything you want to know about lifecycle assessment

www.oneplanetproducts.com BioRegional's database of approved products

www.seda.uk.net/dfcrb/index.htm Design and Detailing for Toxic Chemical Reduction in Buildings, useful guide from the Scottish Environmental Design Association

www.ska-rating.com RICS-supported online tool for green interior fit-out

www.stephengeorge.co.uk Building Materials and the Environment – recently published guide downloadable as a PDF

www.wolseleysbc.co.uk Builders merchant Wolseley's sustainable product line

Architects who feel out of touch with recent developments in environmental awareness may wish to consult a concise guide to the subject, such as Rough Guide to Sustainability by Brian Edwards (3rd ed), Chapter 6. The Green Building Bible, vol 1 and 2, is also a good reference.

Code for Sustainable Homes and school projects must be BREEAM-compliant. This is statutory. Assessors establish the level of compliance, using a points system, with a number of categories. Material specification is just one of these categories and it can be difficult for architects to gain points for this, especially where there are conflicts with other criteria for choosing materials, such as cost or aesthetics. Green specification should be part of an architect's design philosophy rather than a passive response to statutory requirements, and it is important for the members of a practice to agree their position among themselves and with their clients and consultants.

The greatest challenge for architects is wading through manufacturers' claims and the wide variety of certification schemes. To make matters more complicated, different environmental rating schemes apply in different markets, and there is no global standard. Richard Jackson, a partner at Davis Langdon Schumann Smith specification consultant, explains that 12.5 per cent of BREEAM points relate to materials, while 14 of LEED's 100 points

are for materials (v3, July 2009). Jackson notes that a typical low-carbon specification for a material such as blocks would address criteria such as lifespan (60 years), recycled content (80-90 per cent), the manufacturer's ISO 14001 accreditation and location of manufacturing.

Green guidance

The BRE Green Guide to Specification is an obvious starting point for UK architects, though it has frequently been criticised for lack of transparency of the data behind the ratings. To address this, BRE has written to the trade associations which represent manufacturers requesting that this information be made public for the Green Guide's generic ratings. This is a step in the right direction. The Centre for Low Impact Materials in Buildings (CLIMB) is a new BRE research initiative, which aims to shed light on this thorny subject by creating a web-based knowledge-sharing platform.

Ramon Arratia, sustainability director for InterfaceFLOR Europe, notes that there is no perfect certification scheme. 'If you want to do a proper job, you need to go to the



facts and do the maths,' he says. This means complex lifecycle assessment (LCA) methodology with full transparency of all ingredients and products needed to make, install, maintain and dispose of a product. Arratia prefers the German IBU's Environmental Product Declaration (EPD), which he feels will become accepted practice across Europe over the next five years. EPDs follow ISO 14025 LCA methodology and also use 'product category rules' that create a level playing field for comparing products in similar categories. Cost is another critical factor. Arratia explains that the cost of obtaining an EPD is between £1,500 and £5,000, significantly less than the BRE's environmental profiling, which ranges from £10,000 to £15,000.

The best way forward is for practices to develop in-house product lists that they have researched and vetted. Many practices are already well along this journey with in-house intranet libraries of sustainable products and materials updated by dedicated staff. Unfortunately, there is no shortcut for thorough and continual research in this rapidly evolving field.

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CASE STUDY 1 CAFOD OFFICE BUILDING, LONDON, BLACK ARCHITECTURE

Above Top-floor pavilion with construction-grade timber joists, FSC-approved plywood soffits and Marmoleum flooring

Right, top and bottom Exposed concrete soffits contain recycled aggregates. Paints are low-VOC and furniture is recyclable

Black Architecture's recently completed office building for charity CAFOD (Catholic Agency for Overseas Development) in Southwark, London, had an exacting brief: to exemplify values of social justice with a 'live simply' philosophy. This required the architect to address sustainability in the round, with a considered response to the social, economic and environmental aspects of the project. The five-storey building is organised around a central atrium with a stepped section that encourages social interaction en route to breakout spaces and meeting rooms. The atrium, which has automatically operated openings in the exterior envelope, provides passive stack ventilation most of the year.

Project architect Des O'Dwyer explains that materials for different parts of the building were specified according to their patterns of use. The main floors of the BREEAM Excellent-rated building have a concrete frame with water pipes embedded in the slabs, linked to a ground source heating and cooling system. In-situ flat slabs and glazed panels up to the underside of the slab maximise air flow and daylight. Due to the

proximity of Pugin's Grade I-listed St George's Cathedral, the front elevation is clad in stock London brick. A laying pattern incorporating irregular bricks rather than discarding them was agreed with the contractor to minimise waste.

By contrast, the rooftop pavilion is lightweight steel (chosen for long spans and a thin profile) and timber. Mechanical kit was located in a sub-basement to free the roof as a social space. The construction-grade timber (FSC-certified) is deliberately exposed to express the simplicity of materials. An aluminium frame glazing system (argon-filled double-glazing with a low E coating) was selected for its large sliding leaves and to reduce solar gain while maintaining high levels of light transmission. Flooring is cork tiles and the exterior is clad in sweet chestnut. Fully recycled kitchen units include worktops made from coffee cups, cupboard doors made from yoghurt pots and recycled timber frames. Green specification also extends to the furniture: tables are laminated bamboo.

This thorough approach to green specification is nothing new for Black Architecture. Prior to setting up his own



practice, director Paul Hinkin cut his teeth on Greenwich's energy-efficient Sainsbury's supermarket (which was shortlisted for the Stirling Prize in 2000) when at Chetwood Associates. Hinkin challenges his 11-person team to identify new materials and technologies. One Friday a month at lunchtime, each member of staff anonymously submits an image and description of a sustainable product or material. Everyone rates each product from nought to five in terms of usefulness, environmental performance and innovation. The presenter of the winning product must then carry out additional research and present the product back to the team the following month.

The practice is currently developing its own repertoire of approved products – the 'Black list' – which includes frequently specified products in three price ranges. The list so far includes about 10 product categories, such as carpet tiles, aerated taps, and low-flush toilets. The practice has developed a questionnaire for manufacturers to complete, which is then followed up with further research. Tony Duckworth, environmental designer at Black Architecture,



cautions that information on manufacturers' websites must not be taken at face value. For example, conforming to a certification standard does not necessarily mean that a particular certification has been obtained.

Duckworth and O'Dwyer say questioning and collaborating with manufacturers can drive innovation. At CAFOD, a bespoke system of embedded piping within the concrete slabs that was sourced from two manufacturers is now available off the shelf.

As operational energy loads are driven down by statutory requirements, the role of embodied energy will only increase. Sturgis Associates' recent report published by RICS, *Redefining Zero*, estimates that embodied energy could represent as much as 95 per cent of a building's carbon emissions within 10 years' time. The more architects scrutinise manufacturers' claims and demand products that meet rigorously considered sustainability requirements, the more likely the market is to respond. Black Architecture's CAFOD project sets a good precedent.

See a list of CAFOD suppliers at ajfootprint.com

IMAGES ON THIS SPREAD BY TIM SOAR



CASE STUDY 2 LEND LEASE HQ FIT-OUT, LONDON, FLETCHER PRIEST ARCHITECTS

The client, Lend Lease, wanted this project to embody environmentally sustainable development principles. It saw the project as an opportunity to test its new initiatives and create an office that would act as a catalyst for change. The concrete frame at ground-floor level is exposed to aid passive cooling and is a reminder that the building has been retrofitted. It has a bamboo-veneered wall. This fast-growing, hard-wearing material is applied to FSC (Forestry Stewardship Council) MDF. There are large recycling bins and motion-activated lighting.

Prior to this project there was no BREEAM rating tool for fit-out in the UK. The client appointed consulting engineer Hoare Lea to assess the building using bespoke BREEAM guidelines, and this has been used to formulate the BREEAM Offices fit-out design and procurement assessment in the UK. Prior to this assessment, most of the available data was for construction materials, rather than finishes, which are a key element of fit-out.

Folding wall partitions are lined with dark brown unfinished cork, which is a renewable,

sustainably harvested material. The meeting room walls are lined with felt fabric panels made from 100 per cent wool. The carpet tiles manufacturer is committed to minimising its global environmental impact and provides a recycling and recollecting scheme. The InterfaceFLOR Cool Carpet programme produces carbon-free carpets with 80 per cent recycled yarns made using 100 per cent green energy. The project also used recycling strategies that are not part of the BREEAM assessment, such as 95 per cent recyclable chairs.

Ray Holden, associate director of Fletcher Priest, says: 'The design achieved the environmental ambitions of the project without compromising the quality.'

Features of the development include:

- bamboo panels made up of FSC flat bamboo veneer finish on FSC MDF;
- existing concrete soffit exposed, utilising concrete's thermal mass properties;
- DuPont's Zodiac quartz surface, which aims for zero waste and emissions; and
- toxin-absorbing planting that keeps the space clutter free, and is housed in pots commissioned from a Kent clay business.

Left Recyclable internal finishes include rubber flooring, InterfaceFLOR carpet tiles and

FSC-approved timber finished with organic lacquers
Below Biodiversity green roof
Right Larch cladding



CASE STUDY 3 BARTHOLOMEW ROAD MIXED DEVELOPMENT, LONDON, JESTICO + WHILES



This development comprises 54 studio apartments for students and commercial office space in a conservation area. The design successfully incorporates significant environmental measures, including the use of water-saving technologies and biomass heating, and materials have been carefully chosen for their environmental attributes.

These materials include:

- recycled-content materials with Sundeala recycled newspaper pinboards and Bike Dock Solutions recycled steel cycle stands;
- FSC-certified timber used throughout, including larch cladding, internal doors, garden fence, garden furniture;
- prefabricated products with UMS modular steel bedsits and GRP bathroom pods; and
- living wall and roof, native planting, Rockwool mineral-wool insulation and wood-pellet biomass boiler.

Sian Moxon of Jestico + Whiles writes: 'We developed a sustainability matrix and a project-specific sustainability plan to help staff consider all sustainable design options and discuss them with the project team. Every project is reviewed to ensure

sustainable design solutions have been implemented where possible.

'The sustainability plan is set up at the outset of every project. It is a checklist to prompt designers to address environmental issues and record the actions taken.

'The sustainability matrix is a tool to help staff research and incorporate sustainable design in their projects. It is divided into sections on energy, transport, pollution, materials and waste, water, land use and ecology, health and wellbeing, and management. Potential sustainable features are listed, along with their advantages and disadvantages, relevant weblinks, and case studies of Jestico + Whiles buildings.'

Key points to remember are:

- relevant product/supplier databases consulted;
- materials/products sourced locally;
- reclaimed/recycled products specified;
- BRE A-rated materials specified;
- low-VOC finishes specified;
- environmentally accredited suppliers specified; and
- Good Wood Guide consulted (FSC-certified timber specified).

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Cladding and curtain walling



Weber

weber.rend MT used on schools

weber.rend MT, a complete multi-coat meshcloth reinforced render finish system, is being used in an extensive new-build and refurbishment programme for schools by Aberdeen City Council – a project valued at £120 million.

www.netweber.co.uk



John Brash

Thermowood facade

John Brash has given the sports building at University College Plymouth St Mark and St John an eco-friendly and durable facade. The Thermowood cladding used is manufactured from Finnish-grown European Redwoods and has low sap and resin levels and will last up to five times longer than untreated wood.

www.johnbrash.co.uk



Trimo

5-in-1 total building solution

Planet Positive-accredited, Qbiss by Trimo is a cost-effective solution for your facades and a genuine alternative to rainscreens. Combining total functionality and aesthetics, it is the natural choice for all architectural and building applications. Qbiss by Trimo is available using Corus Colorcoat Prisma.

www.trimo.org.uk



Trimo

ArtMe – endless possibilities

ArtMe is a unique surface facade treatment for use with Trimo's Planet Positive-accredited Qbiss 5-in-1 facade system. It allows any design, brand, shape or logo to be imprinted on to the facade surface without affecting the thermal, fire protection or anti-corrosion properties.

www.trimo.org.uk



Stoakes Systems

Green glazing system

Kalwall translucent glazing was specified by Bond Bryan Architects for the Factory of the Future, the advanced research centre at Sheffield University. Highly insulating Kalwall is one of the greenest glazing systems because of its diffused daylighting energy-saving and its BREEAM 'Excellent' rating.

www.stoakes.co.uk



John Brash

Natural, sustainable cladding

John Brash timber cladding is durable, beautiful, sustainable, and provides a naturally protective and decorative building envelope. For every m³ of timber used instead of other building materials, 0.8 tonnes of CO₂ is saved. Notable projects include Jaguar Land Rover's new Coventry building and The Rock in Bury.

www.johnbrash.co.uk



Benchmark

Wood composite facades

Ceramic granite and wood composite facades from Benchmark were specified for the new £1.6 million Worcestershire County Cricket Club pavilion. The real wood veneers of the Wood Composite facades from Benchmark are sourced from sustainable forests, and protected with a resin finish.

www.kingspanbenchmark.com



Corus

Prefinished steel

Corus Colorcoat HPS200 Ultra is being used as part of Trisomet 333 System panels for Eddie Stobart's recycling plant in Widnes. The prefinished steel provides the unique 30 year Confidex Guarantee and is resistant to damage and the marine environment through its Galvalloy metallic substrate and thick film.

www.colorcoat-online.com



Levolux

Levolux solar-shading solution

The newly refurbished South Tower of the University of Derby's Kedleston Road site has been enhanced with a Levolux solar-shading solution, comprising four rows of 450mm-wide external timber fins, fixed to the structure using Levolux's new Trinita bracket, which reduces cold bridging.

www.levolux.com



Ceracasa

Groundbreaking vegetal facade

Lifewall by Tile of Spain member Ceracasa is a groundbreaking vegetal facade, created from 1m² panels on which vegetation can be placed. Developed by Emilio Llobat of Maqla Architects, Azahar Energy and Ceracasa, Lifewall enables architects and designers to create 'green' spaces in urban environments.

www.ceracasa.com



Marley Eternit

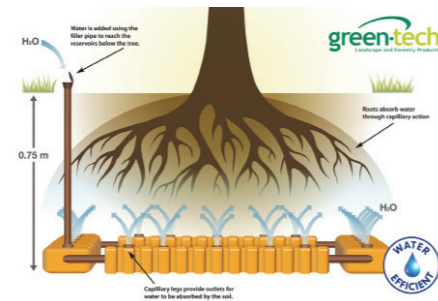
A+ fibre cement sheeting

Marley Eternit has welcomed the news that the BRE has awarded an A+ rating to fibre cement profiled sheeting in its Green Guide to Specification. The company is the only UK manufacturer of fibre cement profiled sheeting which therefore means it is the only product of its kind able to achieve an A+.

www.marleyeternit.co.uk

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Cladding and curtain walling
Colour, texture and furniture



Green-tech

Tree irrigation system

The Mona Plant System irrigates the roots of trees and plants upwards from each capillary leg, sending water, air and nutrients to exactly where they are needed – the roots. The system stores water underground and feeds the tree or plants when required, reducing the frequency of watering and conserving water.

www.green-tech.co.uk



Eluna

Recycled glass surfaces

Eluna is an exclusive recycled glass material for interior and exterior design. It is a robust and sustainable alternative to natural stone for a range of products, including work surfaces, splash-backs, vanity and counter tops, staircases, cladding, flooring and tiles. Eluna is also produced as a recycled glass brick.

www.eluna.org.uk



Dulux Trade

Light-reflecting paint

Dulux Trade Ecosure Light & Space is an energy-saving colour range that makes a room look and feel more spacious. Developed with independent sustainability NGO, Forum for the Future, Ecosure Light & Space uses unique Lumitec technology and optimised tinting recipes to reflect light.

www.duluxtrade.co.uk



Nurus

Office solutions

Nurus offers solutions for diverse work styles, functions and user needs with its U Too office systems (98 per cent recycled) and Me Too office chair (95 per cent recycled). Its Fe2 cabinet storage system is made from non-hazardous materials that also have a high recycling rate.

www.nurus.com

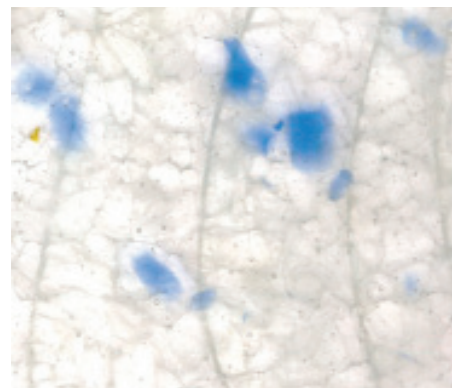


Keim Mineral Paints

Sustainable, toxin-free paints

Keim paints are a superior green product. With 100 per cent inorganic binders, fillers and natural earth oxide colour pigmentation, they're genuinely environmentally friendly. No odour, no fumes, hypoallergenic, fire resistant, non-combustible, no toxins, light reflective, breathable, no VOCs, no solvents.

www.keimpaints.co.uk



Becker Studio

Recycled glass tiles

Becker Studio offers an exclusive range of glass tiles crafted for interior and exterior applications – handmade from recycled glass. Versatile, unique and exceptionally attractive, they are ideal for a range of products including splash-backs, cladding, backlit surfaces and tiles.

www.beckerstudio.co.uk



Sundeala

Sheet material from newsprint

Sundeala manufactures sheet material from 100 per cent waste newsprint, which is used as 9mm-thick pinboard. Variations include a range of colours, bespoke sizes, fabric covered unframed or framed notice boards. 110 million newspapers are recycled annually to make Sundeala boards.

www.sundeala.co.uk



NCS Colour

NCS external colouring

External colouring is a process that needs inspiration and knowledge. NCS Exterior includes a comprehensive design knowledge guide, and 322 colours for facades and trim. Most colours can be made from inexpensive, sustainable and eco-friendly pigments. Light reflectance values (LRV) are included.

www.ncscolour.co.uk



Luvata

Luvata copper products

During 2008 and 2009, 97 per cent of Luvata's copper produced for architectural applications came from recycled material. Luvata's products cover green and blue pre-patinated living copper, pre-oxidised copper, and Brass and Nordic Royal – an alloy with a long-lasting golden colour.

www.luvata.com/architectural



Green-tech

Sustainable top soil

GT Green-Tree Top Soil is an award-winning top soil, manufactured by Green-tech using a blend of organic compost, processed green garden matter and overburdened sand from quarries, all products that would otherwise hit landfill. This fertile and organic-rich material has good water-retention properties.

www.green-tree.co.uk



Pli Design

Eco-friendly furniture

Pli Design is a creative agency that specialises in sustainable design and manufacturing. We offer consulting, product development and design services to companies that want to tap into our many years' experience. We produce furniture to the most exacting environmental standards and customer requirements.

www.plidesign.co.uk

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Colour, texture and furniture
Consultancy services and computing



3form Material Solutions

High design, low impact

3form is the leading manufacturer of eco-friendly materials for architectural use. Our high-design, low-impact, LEED-rated material platforms, Varia and Chroma, use 40 per cent recycled content. 3form's Full Circle programme is a design standard by which we create products that have a positive impact.

www.3form.eu



Feng Shui Agency

Natural design harmony

For advice on architectural or urban planning designs that 'avoid creating negative atmospheres and dysfunctional buildings or communities', contact Feng Shui Agency. The consultancy claims Feng Shui City Planning can help improve social interactions and economic welfare within the area.

www.fengshuiagency.com



plot IT

Go green with plot IT

At plot IT, we supply wide-format plotter and plan copier media that are recycled, and FSC, PEFC and ISO 14001 accredited. So if you produce drawings, why not make your entire design process green with certified medias from plot IT. Going green needn't cost more – you might be surprised by our low prices.

www.plot-it.co.uk

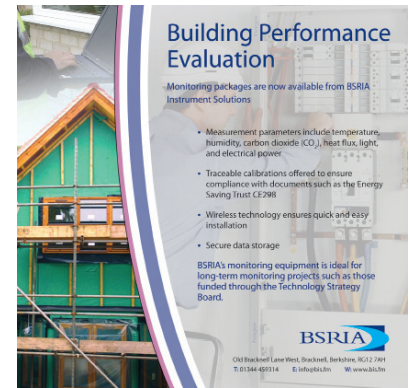


Applecore Designs

Building energy evaluations

EcoDesigner allows building design professionals to perform energy evaluation of BIM models and won the Environmental Product of the Year at the Construction Computing Awards. Geometric analysis and weather data gives carbon footprint and monthly energy balance evaluations.

www.applecoredesigns.co.uk



BSRIA

Existing building analysis

It's all very well using green products but are they really working? BSRIA analyses existing buildings to aid the briefing process for new facilities, help with whole-life costing, advise on design for usability, undertake energy studies and occupant satisfaction surveys and investigate problem buildings.

bsria@bsria.co.uk

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Consultancy services and computing
Doors and windows



Cadspec

Sustainable design software

Autodesk Ecotect Analysis is sustainable design and analysis software, providing a wide range of simulation and analysis functionality to improve building performance. Energy, water and carbon-emission analysis integrates with visualisation tools simulating performance within the context of its environment.

www.cadspec.co.uk



RSK Carter Ecological

Ecological consultants

RSK Carter Ecological is an experienced ecological consultancy, working with architects and developers to ensure projects run smoothly. We are known for giving solid advice on protected species, finding practical solutions, and advising on design of buildings and habitat to benefit biodiversity.

www.rskcarterecological.co.uk



Reynaers Aluminium

Unique window system

Airmax is a unique parallel-opening window system from Reynaers that provides consistent air flow around all four edges when open. It allows air to penetrate around its entire perimeter, facilitating highly efficient ventilation and increasing air flow by almost double compared to top-hung windows.

www.reynaers.co.uk



Winkhaus

Winkhaus Ecoframe

Ecoframe is a purpose-made, UK designed, 70mm outer frame that complements 44mm-thick composite or timber fire door sashes. Made from recycled materials, the door frame is designed for low maintenance and to work in conjunction with the Winkhaus range of multi-point locking systems.

www.winkhaus.co.uk

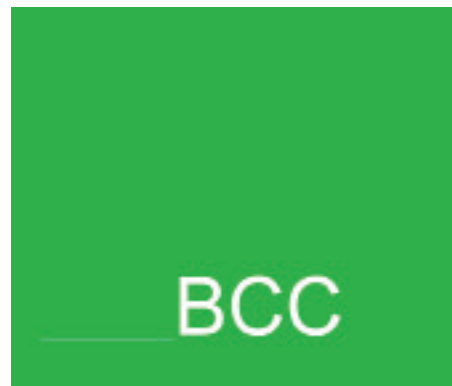


Claxton Blinds

Recyclable blinds

Claxton Blinds offer environmentally advantageous performance screen fabrics that are intended to be reclaimed and recycled at the end of a useful life and then reborn as a first-quality shade. The fabrics are proven to be antifungal and antimicrobial and do not emit measurable VOCs.

www.claxton-blinds.com

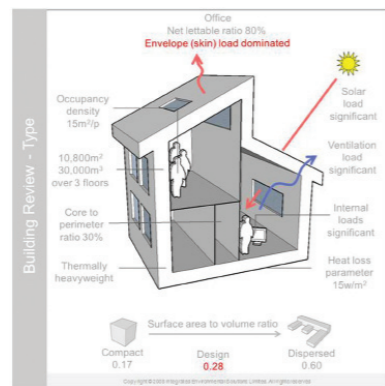


Building Cost Consultants

Eco-nomical solutions

We provide cost information on efficient green building concepts before and after construction. We are specialists in ensuring bespoke architecture and client aspirations are not sin-binned at the first hurdle. We are experienced in working with high expectations on a low budget.

www.bccqs.co.uk



Integrated Environmental Solutions

Early bio-climatic analysis

Use IES's new range of architectural analysis tools to test concept ideas against a wide range of metrics directly from SketchUp/Revit. Develop designs that use bio-climatic responsive architecture to reduce energy demands and utilise light, sun, shade and wind for passive systems.

www.iesve.com



Mumford & Wood

Period-style windows for refurb

A property refurbishment in one of London's most desirable addresses is now complete and offers private housing, retail units and commercial office space. Windows by Mumford & Wood, specialist manufacturer of period-style, high-performance windows and doors, have been specified for this project.

www.mumfordwood.com



Velfac

Velfac slim window profiles

Velfac designs CO₂ neutral buildings that strike a balance between energy use and production. Velfac windows use low-e double-glazed units with soft low-e coatings. Velfac's slim window profile increases the daylight up to 15 per cent into homes in comparison to a standard window.

www.velfac.co.uk



Safehinge

Aluminium finger protection

Safehinge provides durable integrated and retrofit finger protection for doors. Compared to regular replacement of plastic hinge covers, Safehinge ALU is installed once and lasts the life of the door. Aluminium is easily recycled at the end of the product's life and reduces landfill from broken plastic hinge covers.

www.safehinge.com/green



Sapa Building Systems

Broadcasting Place fenestration

Broadcasting Place in Leeds benefited from the fenestration system by Sapa Building Systems. A mixed-use development, Sapa's Dualframe Window Wall gave cost savings, slimmer sightlines and lower U-values. Elegance 52 SX structurally clamped curtain wall was used on larger areas.

www.sapabuildingsystems.co.uk

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Doors and windows
Flooring, stairs and lifts



Olsen Doors and Windows

Olsen eco solutions

Olsen Doors and Windows offers window and door solutions from some of the most energy-efficient factories in Scandinavia and Europe. One hundred per cent FSC-approved timber combined with triple or quadruple glazing provides an eco-friendly, energy-efficient solution to specifiers.

www.olsenuk.com

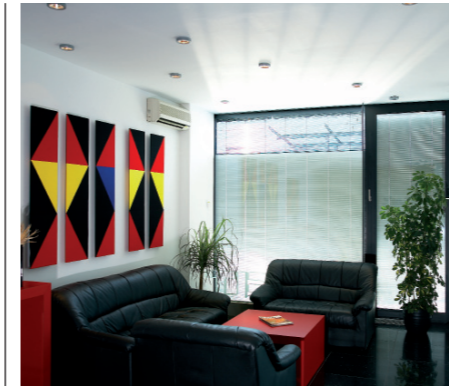


Häfele UK

Solar protection from Häfele

Part L2 regulations regarding the environmental impact of glazing state: 'For buildings other than dwellings, use of daylight is encouraged by relaxing the limitations on installed artificial lighting system efficiency.' Häfele UK's shutter systems shade large areas of glazing, protecting from heat loss/gain.

www.hafele.co.uk



ECKELT GLAS GmbH

Electrical louvre blinds

DLS Ecklite Evolution integrates two different electrically driven louvre blinds in the cavity: a concave section for active light directing and a convex section for efficient solar and glare control. The thermal insulation of up to $U_g = 0.6W/m^2k$ fulfils the requirements of passive energy housing.

www.eckelt.at

The **Wood Window Alliance**



The Wood Window Alliance

Low-carbon wood windows

New research by Imperial College London shows windows made to Wood Window Alliance (WWA) specifications have a minimum service life expectation of 60 years and a lower whole life cost than comparable PVC-U windows over 60, 80 and 100 years.

www.woodwindowalliance.com



Dorma UK

Dorma sets the standard

The low-energy swing door operator is the latest addition to Dorma's automatics portfolio. It features an integrated energy-saving mode function, which allows safety sensors to be switched to standby, minimising unnecessary power consumption. It is 40 per cent smaller by volume, resulting in a much lighter unit.

www.dormashow.com/ED100



Glass and Glazing Federation

Calculate your energy savings

The Glass and Glazing Federation (GGF) has developed an energy-saving calculator that allows you to calculate the savings that can be made when replacing old windows with new energy-efficient rated windows. The savings will be given in CO₂ emissions and the amount of money saved on fuel bills.

www.ggf.org.uk



Jewers Doors

New Swift doors

The new bi-fold Swift door from Jewers Doors is manufactured to minimise negative impact on the environment and reduce energy costs. Suitable for applications where rapid operation is required, the Swift is easy to install. More than 80 per cent of the door materials can be recycled.

www.jewersdoors.co.uk



Breathing Buildings

Natural ventilation equipment

Breathing Buildings supplied award-winning natural ventilation products and design consultancy services. Our mixing ventilation products deliver controlled natural ventilation with significant energy savings. We have expertise in modelling and testing novel designs for natural ventilation.

www.breathingbuildings.com



Verosol

Energy-saving roller blinds

Save energy with Verosol EnviroScreen roller blinds. EnviroScreen is PVC-free and has a thin layer of aluminium on the reverse of the fabric, which means EnviroScreen reduces thermal gains in the summer, reduces heat loss in the winter, controls glare and still preserves a view to the outside.

www.verosol.co.uk

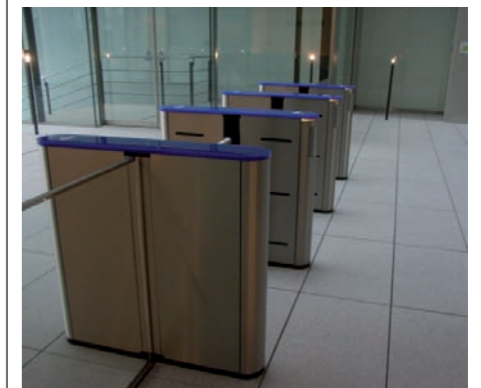


Kawneer

BRE A-rated window frames

A BRE Green Guide A-rated frame is the heart of the new, cost-effective AA540 series of windows, launched by leading architectural aluminium systems supplier Kawneer to meet the increasing demand for environmentally friendly and highly secure building products.

www.kawneer.co.uk



Integrated Design

Entrance Control range

The Fastlane Entrance Control range is designed to balance the aesthetic and security requirements of today's architects and modern building design. The range includes optical turnstiles, tripods, entrance gates, barrier arm optical turnstiles, speedgates, passgates and tailgate detection systems.

www.fastlane-turnstiles.com

08.10
GREEN
PRODUCT
DIRECTORY

Flooring, stairs and lifts



Desso

Desso EcoBase carpet

Desso aims to design all its products according to Cradle to Cradle principles by 2020. With the launch of EcoBase, a new carpet backing, Desso has achieved Cradle to Cradle Silver Certification for an entire carpet tile product. This product can be dismantled for easier re-use of components.

www.desso.com/businesscarpets



InterfaceFLOR

EPD for carpet tiles

Microtuft product Elevation II has an environmental product declaration (EPD) that states the facts about its environmental impact. Using 50 per cent less yarn than standard carpet tiles, it also boasts recycled content in its backing. Elevation II bridges the gap between carpet and hard surface.

www.interfaceflor.eu/letsbeclear



The Energy Saving Screed Co

100 per cent recycled Ecoscreed

The Ecoscreed Zero-Carbon Code 6 UFH system incorporates 100 per cent recycled Ecoscreed Code 6 Flowing Screed, together with high-density interlocking insulation board and five-layer PERT pipework. The system saves up to £2/m²/year and over one tonne of CO₂/m³ of screed laid.

www.ecoscreed.co.uk



Altro

Safety flooring

Altro XpressLay safety flooring is quick and easy to fit, is 100 per cent recyclable and, because there is no adhesive, post-consumer waste can be recycled at Altro's recycling facility. With a BRE generic A+ environmental rating, it can help clients achieve sustainability targets.

www.altro.com



CR Laurence of Europe

Taper-Loc glass balustrades

The Taper-Loc System is a revolutionary frameless glass balustrade system. It is 50 per cent faster to install than traditional alternatives and precision measured for quality. It accommodates 12mm-25.5mm-thick toughened or toughened-laminated glass and meets building code requirements.

www.crlaurence.co.uk



InterfaceFLOR

Recycled carpet tiles

Straightforward is a microtuft product that uses 50 per cent less yarn than standard carpet tiles, in addition to using recycled content in its face and backing. Like fellow microtuft product, Elevation II, Straightforward has an EPD that demonstrates its impact on the environment throughout its lifecycle.

www.interfaceflor.eu/letsbeclear



Porcelanosa

Par-ker ceramic parquet

An authentic wood appearance, but made from ceramic materials, Porcelanosa's Par-ker range is an eco alternative to natural wood, helping reduce the number of trees felled. Like hard-wearing ceramic tiles but with the appearance and warmth of wood flooring, this is a collection for interior and exterior use.

www.porcelanosa.co.uk



Upofloor

Eco-friendly contract floorings

Finnish flooring manufacturer Upofloor Oy has developed a new type of flooring for contract business, free from PVC, phthalates, chlorine, halogens and heavy metals. LifeLine floorings are a sustainable, safe choice for hospitals, schools and homes for the elderly, without compromising on performance.

www.lifelinefloorings.com



Formica Group

Responsible laminate sourcing

As the only UK manufacturer of high pressure laminate, the Formica Group recognises that sustainability is increasingly important in today's specification process. It uses paper from recycled sources and managed forests, and has completed a product Life Cycle Assessment in its 10 international plants.

www.formica.co.uk



Milliken Contract

Recycled-content carpet

Certified carbon-neutral Fixation from Milliken Contract combines an 85 per cent recycled content polyurethane cushion backing for enhanced underfoot comfort, sound absorption and durability with a hardwearing nylon fibre. Available in 40 colours, Fixation offers high performance at an everyday price.

www.millikencontract.co.uk



InstaCoustic

Peel & Stick underlays

InstaLay is a new range of environmentally friendly, fully recyclable, rubber crumb underlays that use an innovative Peel & Stick system, which eliminates the need for glue, nails or grippers and reduces installation times by over 50 per cent. InstaLay gives excellent acoustic and thermal performance.

www.instacoustic.co.uk

08.10
GREEN
PRODUCT
DIRECTORY

Flooring, stairs and lifts
Insulation and energy



Forbo

A-rated green floor covering

Flotex is a truly unique electrostatically flocked floor covering, which combines the properties of both textile and resilient flooring. The only flocked floor covering to have been assessed under the BREEAM scheme, Flotex achieves A/A+ in many key sectors.

www.forbo-flooring.co.uk



Forbo

Forbo's green commitment

Tessera and Westbond carpet tile ranges are renowned for aesthetic styling and outstanding performance, but Forbo's carpet tiles deliver environmentally too. An ultrasonic tile-cutting process reduces waste by 85 per cent compared to traditional press cutting methods. The remainder is sent for recycling.

www.forbo-flooring.co.uk



Nora

Ease your conscience with Nora

Nora Flooring Systems has over 60 years' experience of R&D and is the world's largest manufacturer of rubber floorings. The environmental accolades of Nora rubber floorcoverings are unsurpassed, while the products are PVC-free and have low toxicity and low VOC content.

www.nora.com



Strata Tiles

Hygienic, easy-clean surfaces

Hospitals, swimming pools and even London Underground stations all benefit from Strata Tiles' hygienic, easy-clean surfaces. With a special Hydrotect coating that kills bacteria, removes odours and does not require abrasive or chemical cleaning, it's no wonder architects demand our Super Green range.

www.stratatile.co.uk/eco



Mapei

CPD seminar tackles flooring

Mapei has added the 'Epoxy Resin and Cementitious Flooring' CPD seminar to its collection of RIBA-accredited presentations. The new CPD seminar provides architects and contractors with guidance on the specification of both high-performance functional and decorative floor coatings.

www.mapei.co.uk

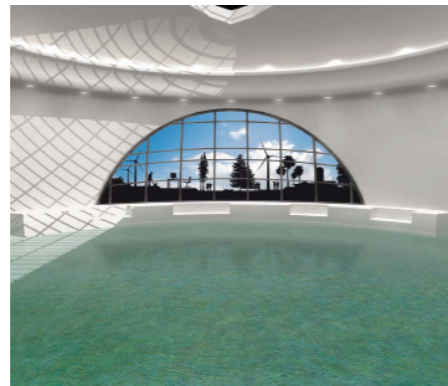


Forbo

Effective entrance systems

Entrance systems help protect all types of interior flooring finishes from unnecessary soiling and damage. Currently the only manufacturer to have BREEAM-assessed entrance-flooring products, both Nuway and Coral entrance systems from Forbo Flooring are manufactured using renewable electricity.

www.forbo-flooring.co.uk



Forbo

Sustainable linoleum

Marmoleum, Forbo's linoleum offering, is the sustainable flooring product of choice. Made from 97 per cent natural raw materials with an overall recycled content of 37 per cent, Marmoleum has been awarded the Nordic Swan and SMART labels, and is rated A+ in many key segments by the BREEAM scheme.

www.forbo-flooring.co.uk

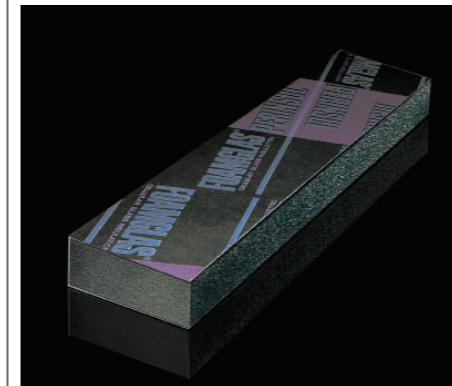


Forbo

Complete project vinyl offering

The complete Forbo project vinyl portfolio, designed with a number of different needs in mind, encompasses general purpose, slip-resistant, acoustic, static-control, design tiles and wetroom solutions. A founder member of Vinyl 2010, Forbo is a supporter of its goal to increase PVC recycling in Europe.

www.forbo-flooring.co.uk



Pittsburgh Corning

Foamglas cellular insulation

Pittsburgh Corning has added 215mm Foamglas Perinsul HL to its range of cellular glass insulation. Developed specifically to minimise thermal bridges at the junctions between floor, wall and roof, the new addition means the company now offers a complete set of sizes: 100mm, 140mm and 215mm.

www.foamglas.co.uk



Steico

Steico healthy building products

Steico is Europe's leading manufacturer of healthy wood-fibre insulation and construction products. High-performance and improved energy-efficiency are assured from Steico I-joists, laminated veneer lumber and flexible and rigid wood-fibre Steico insulation panels, helping achieve excellent U-values

www.steico.com



Dow Building Solutions

Below-slab insulation

Installing below-slab insulation helps create an envelope of continuous insulation that minimises heat loss, but few materials can perform in such a demanding environment. FLOORMATE 300-A from Dow Building Solutions resists moisture and is durable enough to be laid beneath floors.

fk1mail@dow.com

08.10 GREEN PRODUCT DIRECTORY

Insulation and energy



Natural Building Technologies

Pavaflex wood-fibre insulation

Natural Building Technologies' Pavaflex insulation is made from sustainable wood fibre. Supplied as an easy-to-handle insulating batt, Pavaflex delivers thermal and acoustic insulation for lofts, walls and floors. Fully breathable, the insulation ensures a building is able to self-regulate moisture levels.

www.natural-building.co.uk



VPhase

VPhase voltage optimisation

VPhase is a domestic voltage-optimisation device that delivers money and energy savings, without requiring a change in electricity supplier. By reducing and stabilising the incoming voltage, the device ensures many electrical appliances use less electricity and cost less to run.

www.vphase.co.uk

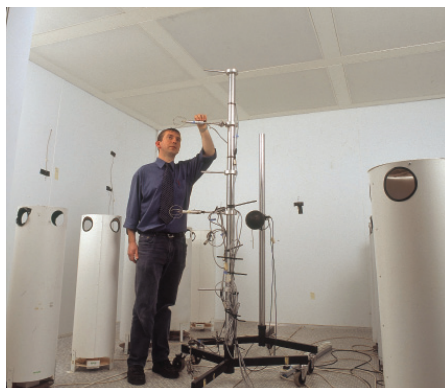


IQ Glass

Glazing can be green

IQ Glass has a portfolio of super-efficient glass and glazing systems. IQ Heated Glass is a fully transparent glass heating system that can be combined with IQ Glass S.I. glazing, which offers 0.58 U-value performance. This minimal solution can include photovoltaic cells for a carbon neutral solution.

www.iqglass.co.uk

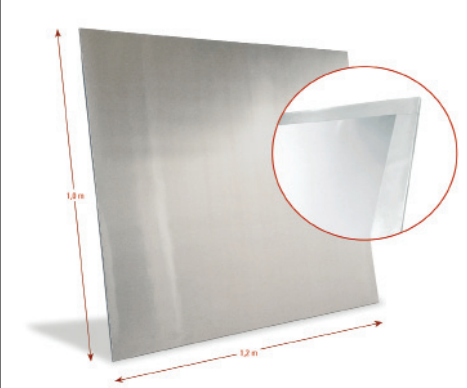


BSRIA

BSRIA heat-pump testing

BSRIA is an independent UKAS-accredited laboratory for testing heat pumps to EN14511 for certification and grant schemes. Manufacturers can have their product tested at BSRIA for thermal performance, power consumption, and noise, during product development or for standard compliance.

www.bsria.co.uk



DuPont Building Innovations

New generation of thermal mass

DuPont Energain presents a thermal mass solution for lightweight building structures such as timber frames, which are often subject to high temperature peaks internally. A study run by Lyon University shows that 5mm of Energain behaves like 20-40mm of concrete, depending on temperature.

www.energain.co.uk

08.10 GREEN PRODUCT DIRECTORY

Insulation and energy



Alumasc

Cork insulation from Alumasc

Alumasc's cork insulation has been specified for the refurbishment of 54 Cussins properties managed by Aspire Housing in Staffordshire. Cork panels were used with Alumasc's Switherm system, increasing energy efficiency levels. Cork has an A+ rating in BRE's Green Guide to Specification.

www.alumasc-exteriors.co.uk



ModCell

ModCell super-insulation

ModCell is one of the first products making large-scale, carbon-negative building a reality. ModCell uses the insulation qualities of straw bales to form prefabricated panels, allowing super-insulated, high-performance, low-energy buildings to use renewable materials, requiring up to 85 per cent less heating.

www.modcell.co.uk



Icynene

Soft-foam insulation

Icynene's water-blown, soft-foam insulation, which gives off no harmful emissions, is a proven pathway to energy efficiency and reducing CO₂ emissions. The product is popular with design professionals, enabling them to explore geometry and space without compromising performance.

www.icynene.com



Drilcorp

Drilcorp exceeds expectations

Drilcorp is at the forefront of delivery in the ground source heating/cooling sector. Its geothermal heating division is led by experts who plan, install and commission systems at the highest level. Drilcorp completes prestigious projects such as Queen Anne's Gate in London (*above*) within budget.

www.drilcorp.com



ECKELT GLAS GmbH

Glass that heats and cools

GLASSXcrystal combines the characteristics of phase-change materials with self-regulating solar control in highly insulating, energy saving double-glazing. Clean solar energy heats rooms to a comfortable 26-28°C. GLASSXcrystal uniformly radiates the stored energy in a controlled way into the room.

www.eckelt.at

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Off-Grid Energy

Off-Grid power solutions

Energy Cube is a hybrid micro-power station, an off-loadable, ready-to-go power plant comprising a generator, batteries and inverters. Energy Cube reduces dependence on diesel generators by 80 per cent, with similar savings in fuel consumption, servicing costs and emissions.

www.off-gridenergy.co.uk



BSRIA

Publications and training

BSRIA provides training courses and webinars on topics such as understanding BREEAM, airtightness and Part L and F. We publish guidance on heat pumps, other renewables, ventilation and many other topics to help you design low-carbon buildings. Books can be purchased from our website.

www.bsria.co.uk



Your environment. It's the nature of our business.

Saint-Gobain Isover

Sustainable insulation

- Thermal, acoustic and fire-safe insulation solutions
- Suitable for roofs, walls and floors
- Excellent environmental credentials with up to 86 per cent recycled content, and zero ODP and zero GWP product ratings

www.isover.co.uk



Weber

weber.therm insulation

Innovative external wall insulation (EWI) systems make a real difference to the thermal improvement and external redecoration of solid wall and non-traditional buildings. Weber, manufacturer of industrial mortar products, is leading the way in EWI systems that are transforming hard-to-heat homes.

www.netweber.co.uk



Baxi-SenerTec UK

Dachs micro-CHP

The Dachs unit from Baxi-SenerTec UK is the first choice in micro-combined heat and power. Suitable for a variety of applications, the Dachs simultaneously generates both electricity and heat close to the point of use, consequently offering impressive carbon savings of 20-30 per cent.

www.baxi-senertec.co.uk



Potterton Commercial

Potterton presents GEOflo

The GEOflo ground-source heat pump from Potterton Commercial has a best-of-class output of 21.3kW and COP of 4.7, achieving outstanding levels of efficiency when used with a low-temperature heat load (such as underfloor heating), or when used for space heating or pre-heating cold water.

www.pottertoncommercial.co.uk

08.10 GREEN PRODUCT DIRECTORY

Insulation and energy



Vaillant

Energy-efficient heating

With over 135 years' experience, Vaillant has set the standards in the heating market, creating products that revolutionised the industry and leading the field in renewable technology. Our products boast the highest energy-efficiency ratings and lowest emissions, and have a reputation for quality.

www.vaillant.co.uk



Ecological Building Systems UK

Intelligent airtight sealing

The Pro Clima range of intelligent airtight sealing solutions is distributed in the UK and Ireland by Ecological Building Systems. The system features Intello Plus, an intelligent airtight humidity variable vapour control membrane, as well as tapes, glues and seals for every conceivable airtight junction.

www.ecologicalbuildingsystems.com



Knauf Insulation

New name in insulation

Knauf Insulation's core glass and rock mineral wool range has now been unified under a single name – Earthwool. Replacing Knauf Insulation's Crown and Rocksilks brands, Earthwool represents the ultimate solution for any application, while offering superior levels of sustainability.

www.earthwool.com



Zehnder Comfosystems

Indoor climate solutions

Zehnder Comfosystems offers a range of low-energy, whole-house comfort solutions including a unique ground-source heat pump system, PassivHaus-certified mechanical ventilation and heat recovery units and a collection of pre-cooling/heating options. It balances energy efficiency with comfort.

www.comfosystems.uk



quietrevolution

Vertical axis wind turbines

quietrevolution's vertical axis wind turbines offer a different wind technology solution. The triple-bladed, helical-shaped turbines can be roof or ground-mounted and their compact design allows for installations at the point of energy demand. The qr5 is quiet in operation and has an advanced safety system in place.

www.quietrevolution.com

08.10
GREEN
PRODUCT
DIRECTORY

Kitchens and bathrooms



N&C Nicobond

Low-carbon tile adhesive

N&C Nicobond introduces Nicobond EcoFlex, the first carbon-neutral tile adhesive. A fast-setting, single-part, waterproof product with high flexibility, for interior and exterior use. This product is a part of the offsetting program aimed to lower CO₂ emissions and is made from recycled packaging.

www.ncdirect.co.uk



N&C Phlexicare

Carbon Neutral Shower pack

N&C Phlexicare have created the Carbon Neutral Shower pack, which supports a carbon offsetting program designed to benefit the environment through delivering reliable emission reductions. The shower packs use a combination of recycled and recyclable material in their production and packaging.

www.ncdirect.co.uk



Twyford Bathrooms

Twyford's wise use of water

Twyford Bathrooms' portfolio of water-saving products includes 30 combinations of WC featuring its patented Flushwise technology. Twyford is the first sanitaryware producer to receive the Waterwise Marque in recognition of water-using products that highlight water efficiency or reduce water wastage.

www.twyfordbathrooms.com



VitrA

Water-saving WC cisterns

Bathroom products manufacturer VitrA has a progressive water-conservation policy that underpins its water usage and containment designs. The WC cistern combination flushes with only 2.5/4 litres of water and was the world's first to flush with four litres in compliance with EU Standard (EN997).

www.vitra.co.uk

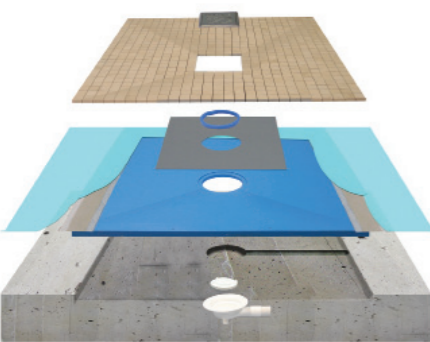


Ecocamel

Ecocamel showerhead

The Ecocamel aerated showerhead is designed to save water and energy, cutting costs, reducing carbon emissions and helping meet government sustainability targets. So effective is the handset that it pays for itself in just eight weeks. Visit the Ecocamel website to see the full range of water and energy services.

www.ecocamel.com



N&C Phlexicare

N&C Premier shower deck

The N&C Premier shower deck is the solution for a total-level access wet floor showering area. It is a self-supporting base made from 50 per cent recycled materials and is 100 per cent recyclable. It can be vinylled or tiled on with built-in gradients for water removal and can be cut to length up to 60mm.

www.ncdirect.co.uk



Vola

Iconic, water-saving taps

The iconic Vola HV1 tap, designed in 1968 by Arne Jacobsen, is still being chosen today by young architects. Made from the best quality material, the taps last for generations. Visit Vola's London Studio to compare demonstration models of the HV1 and its various flow rates (5l/m, 3.5l/m, 1.9l/m).

www.vola.com



Lovair

Lovair Sensor Taps

With reduction of water consumption now a high priority in all types of buildings, Lovair Sensor Taps offer significant water savings, as they turn off as soon as the user removes their hands from the sensing range. This electronic technology limits water wastage and the taps are an elegant addition to washrooms.

www.lovair.co.uk



Hansgrohe

Water-saving showers

Hansgrohe demonstrates that no compromise in design or quality is required in order to save water, with its stylish range of water-saving showers, taps and thermostatic mixers. The Crometta 85 Green shower uses just six litres of water per minute while still providing great shower performance.

www.hansgrohe.co.uk



Roca

Ground-breaking design

Roca, the global bathroom brand, uses technological advances to manufacture products that reduce water and energy consumption. Recently Roca launched the award-winning W+W, an all-in-one washbasin and WC that incorporates 'water-re-use' technology, saving water by up to 25 per cent.

www.roca.com



Siemens

Siemens: unique technology

Leading appliance manufacturer Siemens has harnessed unique Zeolith technology to produce the fastest triple A-rated dishwasher in the world. Thanks to this renewable energy-recovery system, the SN66T052GB is quieter, more capacious and more energy-efficient than any other dishwasher currently available.

www.siemens-home.co.uk

08.10
GREEN
PRODUCT
DIRECTORY

Kitchens and bathrooms
Lighting, signage and building services



Miele

Environmental excellence

Miele appliances set the standard in eco-friendly product innovation. Environmental excellence is assured with best-in-class energy and water consumption, from appliances including the W1945 EcoFeedback washing machine with energy-reporting function and the energy-efficient EcoLine vacuum cleaner.

www.miele.co.uk



W Sitch & Company

Restoring antique lights

The restoration of an antique light to its former glory is a core part of our business and by-steps the consumption of fuels and materials in the manufacturing process. With 11 generations of experience and a five-storey town house full of antiques to choose from, W Sitch & Company is well placed to assist.

www.wswitch.co.uk



Elstead Lighting

Energy-efficient outdoor lamps

Elstead Lighting, manufacturer and supplier of a wide lighting collection, has launched a range of energy-efficient luminaires that meet the Part L Building Regulations on new buildings. Using a variety of lamp sources, these products not only save energy but the lamps last longer than conventional lamps.

www.elstead-lighting.co.uk



Deltalight

Architectural lighting

Deltalight offers an extensive lighting collection for interior and exterior use, including an 'eco' range. The company also provides a complementary lighting design and technical information service, with the capacity to provide lighting calculations and project visualisations.

www.deltalight.co.uk



Project First Engineering

Low-carbon refrigeration

Leading UK refrigeration company Project First Engineering is committed to delivering cutting-edge low-carbon refrigeration and air-conditioning systems to UK supermarkets. Project First Engineering supplies high-quality, commercially priced CO₂ products, giving customers a genuine HFC alternative.

www.project1st.com



Paviom

Futuristic exterior lighting

The first product launch from new exterior lighting company Paviom is the distinctive and futuristic Lofoot family – a unique range of lighting modules. Designed by Jason Thawley, the range provides an energy-efficient and low-carbon footprint lighting solution that is 90 per cent recyclable.

www.paviom.com



GE Lighting

GE's retrofit LED lamp

The 4W GU10 LED from GE Lighting is the first retrofit LED lamp to gain approval by the Energy Saving Trust's product certification scheme. Allowing energy savings of 80 per cent, the lamp is GE Lighting's commitment to groundbreaking technology with reduced environmental impact.

www.gelighting.com/eu



iGuzzini

New LED catalogue

There is an ever-growing need to moderate the use of traditional energy sources. Lighting has to contribute to energy savings while maintaining the same efficiency. LED technology can meet this challenge, so iGuzzini has launched a catalogue focused purely on internal and external LED lighting.

info@iguzzini.co.uk

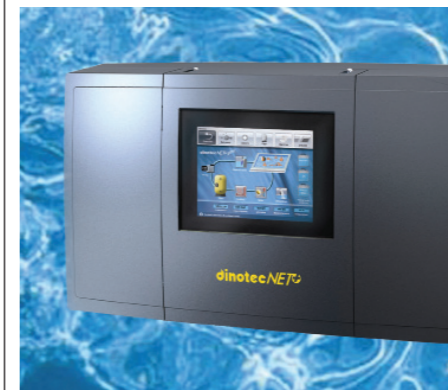


Chelsom

Low-energy lighting

Chelsom manufactures low-energy lighting including chandeliers, table lamps, public area lighting, bathroom lighting, period lighting and bespoke design. Chelsom also specialises in restoring antique lighting, refurbishing the fittings with low-energy light sources wherever possible.

www.chelsom.co.uk



Gaffey Technical Services

Management control system

NET+ and NET+ Ready integrate all pool plant-room controls into one management control system that: automatically adjusts output for optimum efficiency; is easier and more economical to install than multiple control panels; reduces energy consumption and emissions; and can be accessed remotely.

info@gaffey.co.uk



Shopkit Group

Display and signage systems

Shopkit systems are designed for all building sectors. They are versatile and strong, with a large standard range and virtually unlimited special items. Shopkit products are made from recycled raw materials, with high-quality engineering and finishing that enables elements to be used again and again.

www.shopkit.com

08.10 GREEN PRODUCT DIRECTORY

Lighting, signage and building services
Masonry



Sutcliffe Play

User-powered music system

Our environmentally friendly Youth Shelter has an added feature that allows users to play music through Bluetooth connectivity. The optional lighting and music pack incorporates a kinetically powered Bluetooth music player and LCD lights. Users power the system themselves by a set of crank handles.

www.sutcliffeplay.co.uk



Walter Miles Building Services

'Live simple' building

The brief was to create a user-friendly building with a 'live simple' philosophy. The design minimises the need for mechanical and electrical systems and uses exposed thermal mass, solar shading, natural ventilation, ground source heat pump, rainwater harvesting and photovoltaic technology.

www.waltermiles.co.uk



Reclaimed Bricks

Characterful, sustainable bricks

Reclaimed Bricks supplies bricks that have acquired character over the years in and around the North West. The team handpicks only the finest bricks, cleaning them by hand in the Manchester depot, providing a sustainable solution for clients ranging from builders, architects and residential customers.

www.reclaimedbricks.com

The BRE Green Guide rates external walls using brickwork A+
— you can't get better than that



Brick Development Association

Brick's environmental ratings

The BRE's Green Guide to Specification has assigned the highest possible A+ accreditation to every external wall that contained brickwork. Using a UK typical brick weight of 2.4-2.5kg the CO₂/year is no greater than 25kg of CO₂ per year over 150 years for a typical two storey end-of-terrace property.

www.brick.org.uk



UK Quality Ash Association

Pulverised fuel ash

With a history of use dating back more than 50 years, pulverised fuel ash and furnace bottom ash are by-products of coal-fired power stations and are widely used in construction to reduce the environmental impact of concrete, roads, soil stabilisation, fill, grouts and blocks/bricks.

www.ukqaa.org.uk

08.10 GREEN PRODUCT DIRECTORY

Masonry
Roofing and drainage



Aggregate Industries

Breathing new Life into asphalt

Life is a revolutionary sustainable, foamed mix process that provides the engineering performance of hot mix asphalt but can be produced and laid at reduced temperatures. Life asphalt technology provides up to an impressive 45 per cent reduction in carbon emissions per tonne.

www.aggregate.com



Aggregate Industries

Eco landscaping range

The Eco range of kerbs, flags and block paving has been developed to maximise resource productivity, minimising waste and optimising renewable materials. Raw materials are selected for their environmental benefits, including up to 82 per cent recycled or reclaimed materials.

www.aggregate.com

ecostock™
the future of brick



Hanson UK

Sustainable stock brick

The Hanson Ecostock range offers 16 soft-mud bricks combining high-aesthetic appeal with low-carbon credentials. Available nationally, the range offers a variety of finishes. It comprises thrown and pressed bricks in colours from plain reds and buffs to bricks that give an aged, reclaimed look.

www.hanson.com/uk/bricks



Ibstock Brick

SUDS-compliant brick pavers

Ibstock has launched a new range of brick pavers for drives and patios that are SUDS (Sustainable Urban Drainage Systems) compliant, allowing rainwater to run off. Ibstock's new SUDS pavers are designed for suitable permeable aggregate substrate. This design is compliant with new legislation.

www.ibstock.com



Redland

Tile-specific PV options

Redland is the first company to offer housing specifiers a fully integrated PV solution for slate, profile tile and plain tile roofs. Redland's second-generation Solar PV Tile brings five roof-tile-specific PV options to the market, each developed to match one of Redland's tile ranges for the housebuilding market.

www.monier.co.uk



Aggregate Industries

A-rated architectural masonry

EnviroMasonry contains over 65 per cent reclaimed/recycled materials and was the first architectural masonry product to have a BRE 'Green Guide to Specification' A-rating when used as a cavity wall solution. EnviroMasonry is available in fairfaced, textured, split and polished finishes, and 10 attractive shades.

www.aggregate.com



Aggregate Industries

Building blocks of the future

Enviroblock is a new generation of environmentally engineered building blocks produced from at least 80 per cent secondary/recycled materials. Raw materials are specifically selected for their environmental performance and the units comply with all European and UK technical standards.

www.aggregate.com



Wienerberger

Sustainable solutions

Wienerberger offers customers sustainable solutions. Many products incorporate MARSS content and some contribute extra points towards the Code for Sustainable Homes, including responsibly-sourced facing bricks, and the Porothersm clay block walling system.

www.wienerberger.co.uk



Vital Earth

Vital Earth roof media

Peat-free compost manufacturer Vital Earth, whose products are made from recycled garden waste, has launched two roof media – Sedum Roof and Meadow Roof. Both provide stability, good drainage, robust growth and strong root action. Alternative mixes can also be prepared.

www.thegreengardener.com



Alumasc

ZinCo green roof for retail store

A ZinCo green roof from Alumasc has helped the new Oakham Co-op become one of the most energy-efficient retail stores in the country. The ZinCo green roof is planted with local species to create a wildlife habitat and it is anticipated that the building will emit just 40kg/m² of CO₂ a year.

www.alumascgreenroof.co.uk



Swish Building Products

Recycled rainwater system

Swish Building Products' low-maintenance, low CO₂ recycled PVC rainwater system has been used to see how far retrofitting could take a Manchester semi-detached Victorian property towards carbon neutrality. The scheme has achieved an 80 per cent cut in the property's CO₂ emissions.

www.swishbp.co.uk

08.10
GREEN
PRODUCT
DIRECTORY

Roofing and drainage



Axter

Outstanding green roofs

Axter has the expertise and design flexibility to create outstanding green roofs on new and refurbishment projects. Axter produces bespoke design specifications covering all aspects of waterproofing and insulation, water management and hard and soft surfacing. Long-term guarantees complete the service.

www.axter.co.uk



Victaulic

Sustainable pipe-joining system

Infrastructure plays a big role in sustainable design and Victaulic mechanical pipe-joining systems offer cradle-to-cradle advantages. Manufactured from 90 per cent recycled parts, they are an effective alternative to hotworks that can be installed rapidly using hand tools, reducing emissions and energy consumption.

www.victaulic.com



Kalzip

Solar solution for Energus

Kalzip aluminium roofing including Kalzip AluPlusSolar sheets have been installed on the Energus Centre of Excellence in Cumbria. AluPlusSolar is a lightweight and fully integrated renewable power generation source, which uses a thin-film PV laminate that's factory-bonded on to Kalzip.

www.kalzip.com



Fakro

In-roof solar thermal panels

Fakro's SKW in-roof solar thermal panels can be used as modules with roof windows of the same size. Systems can provide 70 per cent of hot water needs using panels as light as 21kg. Low-iron, toughened prismatic panes use a copper absorber sheet and glycol solution to feed a dual-core cylinder with heat exchanger.

www.fakro.co.uk



VM Zinc

Zinc in lasting, subtle colours

The increasing use of VM Zinc's range of zinc roofing and cladding systems owes much to their lasting appearance, sustainability and low maintenance requirements. Pre-weathered colours such as grey Quartz-Zinc, black Anthro-Zinc and subtle Pigmento shades of green, red and blue mean enormous diversity.

vmzinc.uk@umicore.com



Stabilizer

Sustainable surfaces

Stabilizer is a non-toxic, vegetable-based, hydrocarbon-free natural binder. Stabilizer UK creates sustainable, free-draining footpaths, hard-standings and open spaces. Graded aggregates, Stabilizer and water – all clean, non-polluting materials – combine to form durable, naturally coloured surfaces.

info@stabilizeruk.com



Sahtas Terracotta

Handmade clay roof tiles

With over 30 million tiles sold in the past decade, and firmly established as the roof tile of choice by discerning specifiers, Sahtas Terracotta, manufacturer of Ashbury handmade clay roof tiles, has broadened its range to include new colours and blends for 2010.

www.sahtas.com



Stormsaver

Save water with Stormsaver

Stormsaver, designer and manufacturer of rainwater harvesting systems, offers cost-effective commercial and domestic systems designed to reduce mains water usage and carbon emissions. Stormsaver's systems enable architects and developers to create BREEAM 'Excellent' rated homes.

www.stormsaver.com



Kalzip

Low U-value roof for CO₂Zero

Kalzip's new dual-insulation roof system achieves low U-values and has been installed on the CO₂Zero-LiveWork building, Bristol. This system is cost effective and utilises the combined benefits of two complementary types of insulation materials – Kalzip Insulation Plus and Kalzip Insulation 23-

www.kalzip.com



Marigold Industrial

Eco-friendly gloves

This new series of four eco-friendly gloves is manufactured using a water based process and non-solvent based PU. The Puretough P Series exhibits excellent water and oil-repellent properties and is phthalate, silicone and formaldehyde free. The gloves cover cut protection from level one to five.

www.marigold-industrial.com



ICB

Sustainable roofing systems

ICB (International Construction Bureau) is one of Britain's leading suppliers of sustainable roofing systems. It supplies Diadem Green Roof Systems, Solyndra Solar photovoltaic panels, Alwitra Single-ply roofing membranes and Alwitra Electric photovoltaic membrane (Evalon Solar).

www.icb.uk.com

08.10 GREEN PRODUCT DIRECTORY

Roofing and drainage



Flag-Soprema

Green roof diversity

Flag-Soprema's 'Optigreen' brochure contains extensive technical information on green roofs, from preliminary roof inspection and structural assessment to ultimate planting and aftercare. Substrate and root barrier protection, irrigation, drainage, wind uplift and erosion are covered for nine green-roof solutions.

www.flag-soprema.co.uk



Klober

Klober controls air leakage

Klober's brochure 'Taking Control of Air Leakage' explains how to develop an effective roofing airtightness strategy. It covers building fabric air permeability, Building Regulations, BREEAM and reduction of CO₂ emissions using roofing accessories such as permeable membranes and vapour control layers.

klober@yourresponse.co.uk

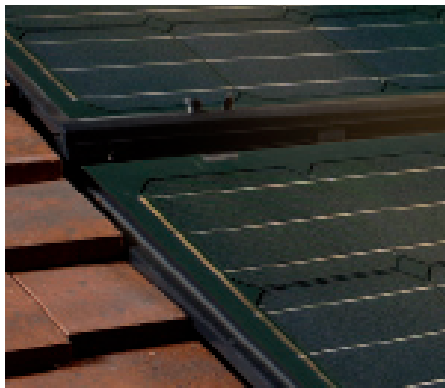


Eco Foundations

Soil-mixing solutions

Eco Foundations' deep soil-mixing solutions, including mass stabilisation and auger soil mixing, improve soft soils by mixing cementitious binder into clay, peat, mud or dredged sediments. Applications include ground strengthening, flood protection, road construction and building foundations.

www.eco-foundations.co.uk



Imerys Rooftiles

Natural clay roofing tiles

Imerys Rooftiles is one of the world's leading manufacturers of natural, sustainable clay roofing tiles. Its range of over 60 models in a variety of sizes, formats, textures and colours is made in tileries conforming to ISO 14001-awarded for excellence in ecological management.

www.imerys-rooftiles.com



Blackdown Horticultural Consultants

Green roof for eco-building

The Extensive Nature Mat Green Roof System from Blackdown Horticultural Consultants has been installed at the Centre for Disability Studies in Essex, helping the pioneering project become England's first ever building to achieve both PassivHaus and BREEAM 'Excellent' ratings.

www.greenroof.co.uk

08.10
GREEN
PRODUCT
DIRECTORY

Roofing and drainage
Timber



Icopal

Eco-Activ roofing range

Icopal has launched its new Eco-Activ roofing range, which comprises a selection of products designed to provide architects and specifiers with versatile solutions to support the reduction of CO₂ and other air pollutants from the environment.

www.icopal.co.uk



The Rooflight Company

Neo Frameless rooflights

You create designs that perform and look great from every angle – so do we. You don't believe that all projects should look the same and we don't believe that all rooflights should either. The Neo Frameless range offers rooflighting solutions to complement your designs, regardless of their context.

www.therooflightcompany.co.uk



James Jones & Sons

FSC-certified I-joists

UK-manufactured, FSC-certified JJI-Joists are the sustainable choice for highly insulated floors, walls and roof structures. Recent developments provide greater flexibility for running large MVHR services through the web. JJI-Joists are a long-spanning lightweight and versatile solution.

www.jji-joists.co.uk



Sundog Energy

Photovoltaic specialist

Sundog Energy designs, supplies and installs solar PV systems, and has uncompromising standards for quality, service and technical excellence. Sundog Energy operates throughout the UK, providing PV systems for domestic and multiple housing schemes and large commercial and public sector projects.

www.sundog-energy.co.uk

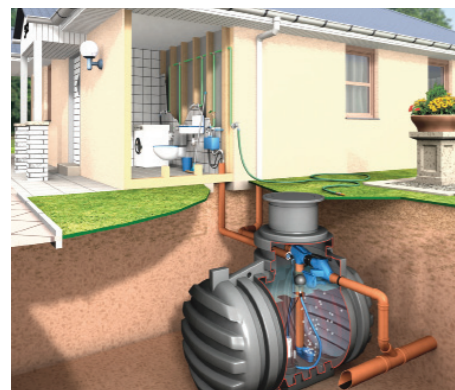


Marley Eternit

Fibre cement sheeting

Farmscape fibre cement sheeting from Marley Eternit is widely used on agricultural and equestrian buildings. Tests show that Farmscape is able to resist external fire exposure. As fibre cement sheets have no metallic content they can provide a stable owner with a life expectancy of up to 50 years.

www.marleyeternit.co.uk



Combined Harvesters

Rainwater management

We design, advise, manufacture and wholesale all aspects of rainwater harvesting and stormwater management. New classroom facilities are available along with a showroom and trade counter. We manufacture the British-designed Raincatcher system of direct-feed and gravity-fed systems.

www.combinedharvesters.co.uk



SmartPly

Smart OSB answer to plywood

SmartPly OSB (oriented strand board) doesn't delaminate, has no knots, voids or other structural defects, and is an alternative to plywood. SmartPly OSB is FSC-certified, making it ideal for flooring, roofing, wall sheathing and site hoarding on projects with high sustainability requirements.

www.smartply.com



Andrews Water Heaters

Solar-thermal water heating

SOLARflo is Andrews' complete, ready-to-fit solar-thermal water-heating solution for commercial applications and is part of an impressive portfolio of low to zero-carbon technologies. The package includes high-quality glazed flat plate or evacuated tube collectors, pump station and control unit.

www.andrewswaterheaters.co.uk

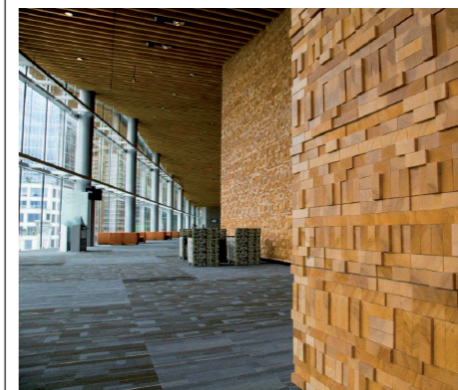


Finnforest

Finnforest eco-efficient timber

Finnforest delivers a range of eco-efficient engineered timber building solutions for the design and construction of sustainable residential and commercial buildings. Using engineered timber products – Kerto, Glulam and Thermowood – Finnforest invests in developing systems and software.

www.finnforest.co.uk



Forestry Innovation Investment

Canadian wood directory

An extensive directory of companies manufacturing or selling British Columbia-certified wood products. Naturallywood.com is a resource for facts about British Columbia, Canada, as a leading global supplier of wood and paper products from sustainably managed forests.

www.naturallywood.com/aj



Medite

MDF for the 21st century

With over 30 years of expertise, innovation and investment, Medite MDF products are the benchmark for quality, consistency and performance. Medite products are FSC-certified and CARB 2-compliant, and include Medite Premier, Plus (extra-smooth), MR (moisture resistant) and FR (flame retardant).

www.medite-europe.com

08.10
GREEN
PRODUCT
DIRECTORY

Timber
Walls, ceilings and partitions

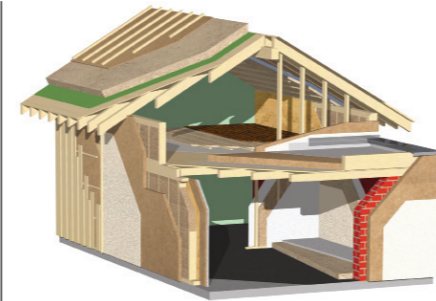


AHEC

Species guide from AHEC

The Species Guide from AHEC (American Hardwood Export Council) provides the information architects, specifiers, manufacturers and end users need in a simple and easily accessible format. It details the properties of 20 species and is available to order or download for free from the website.

www.americanhardwood.org



Ecological Building Systems UK

Gutex wood fibreboards

The Gutex range of wood fibreboard insulation is ideal for new-builds and refurbishments, and can be used internally or externally to increase insulation levels and energy efficiency. Gutex has produced insulating fibreboard for over 75 years, distributed by Ecological Building Systems.

www.ecologicalbuildingsystems.com

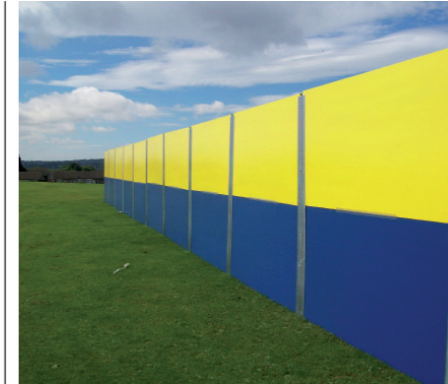


Armstrong Ceilings

Armstrong's 150th birthday

Armstrong Ceilings is celebrating its 150th anniversary and the pioneering recycling of more than 100 tonnes of new ceilings through its end-of-life and off-cut recycling programmes. The latter has been a success at University Hospital Birmingham, and is being employed on other hospital projects.

www.armstrong-ceilings.co.uk/environment



Hoard-It

Hoard-It hoarding system

Hoard-It is a revolutionary hoarding system using PEFC boards. It reduces manual handling and excavation, minimising risk of injury and service strikes. Hoard-It is supplied pre-painted, or branded using images printed directly onto Foto-ply boards. Winners of Building & Engineering Award 2009.

www.hoard-it.co.uk



Heradesign

Eco-friendly acoustic systems

Heradesign stands for versatile, high-class acoustic systems based on wood wool for ceilings and walls that excel in design and character. Wood, magnesite and water are the main components of the Heradesign acoustic solutions – acoustics and design with a clear, 'green' conscience.

www.heradesign.com



KLH UK

Solid timber structures

KLH UK is a specialist solid timber supplier providing consultation, design, manufacture, supply and erection services. We are passionate about the development of sustainable construction in the UK. We work with you to deliver effective and sustainable structural solutions for your buildings.

www.klhuk.com



BCL Timber Projects

Bamboo walls and ceilings

The most sustainable building material in the world now comes in a panelised solution for walls and ceilings. Bamboo is a carbon-neutral, FSC-certified material with a five-year growth cycle (compared to timber's 25-50 years). It is low-cost, highly impact-resistant and comes in a range of natural colours.

www.bcltimberprojects.co.uk



GripSure

Anti-slip timber decking

Normal timber decking becomes slippery and lethal underfoot. Banish slippery decking by installing GripSure non-slip decking. We use high-quality FSC-certified timber from Northern Europe and offer a bespoke cutting service. Twenty-four colours are available with two or three anti-slip inserts.

www.gripsure.co.uk

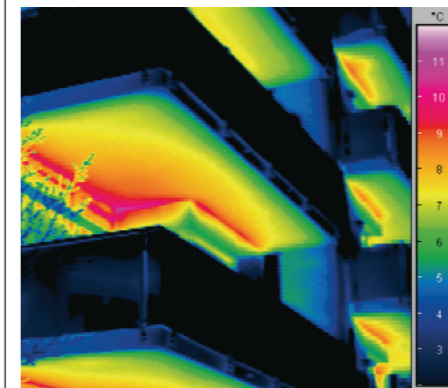


MMA Architectural System

Green wall systems

MMA's high-quality stainless-steel green wall systems deliver aesthetic benefits and help improve a building's thermal efficiency, reduce energy consumption and costs, and reduce carbon footprint. Proven in projects across the UK, MMA's green wall solutions include planting and irrigation schemes.

www.jakob.co.uk

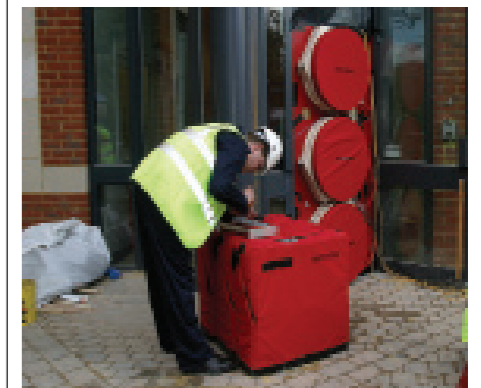


Schöck

Combating thermal bridging

One of the most effective solutions to combating thermal bridging in connective areas is the Isokorb range of thermal break modules from Schöck. The products are the only thermal break solutions to allow connections between concrete-to-concrete, concrete-to-steel and steel-to-steel.

www.schoeck.co.uk



BSRIA

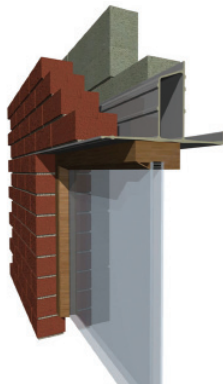
Advice on airtightness

BSRIA provides consultancy and testing services, and advice on the best design details to meet the required airtightness. We are members of ATTMA and registered BINDT testers, and our certificates are recognised by all Building Control officers. Training and guidance can be downloaded from our website.

www.bsria.co.uk/airtightness

08.10 GREEN PRODUCT DIRECTORY

Walls, ceilings and partitions



Material Edge

Cold-bridging the gap

The Litel is the only BBA-approved loadbearing glass-reinforced plastic cavity lintel. Where traditional steel-and-concrete lintels conduct heat and act as thermal bridges between the outside and the inside of the building, The Litel provides a more energy-efficient alternative.

www.litel.co.uk

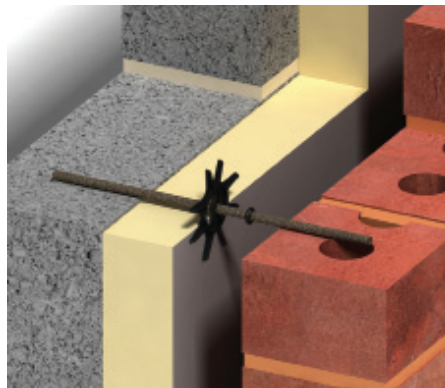


SAS International

Integrated cooling system

SAS's integrated service modules elegantly combine electrical and mechanical systems such as cooling, ventilation and lighting. This design-led cooling system, compatible with ground sourcing and free cooling technologies, is a flexible, low-energy choice for new-build and refurbishment projects.

www.sasint.co.uk



Ancon Building Products

Basalt fibre wall ties

Ancon's range of low thermal conductivity wall ties minimises heat loss through thermal bridging and improves the energy efficiency of masonry cavity walls. The range includes the new BBA-approved Ancon TeploTie, manufactured from basalt fibres.

www.ancon.co.uk/lowconductor



Stoakes Systems

Energy-efficient Kalwall

Asda's first eco-friendly store in Bootle is 40 per cent more energy-efficient and emits 50 per cent less carbon dioxide than a standard new-build store. Designed by Aedas, it features large areas of highly insulating Kalwall, the translucent glazing system with a BREEAM 'Excellent' rating.

www.stoakes.co.uk



Clayworks

Clay internal walling

Clayworks manufacture an internal walling system of unfired clay blocks, basecoat plaster and pigmented topcoat plaster, which provides thermal mass, natural temperature and humidity regulation. It carries minimal embodied energy and environmental imposition and is manufactured in Cornwall.

www.clay-works.com