

Overview

Sustainability is increasingly important in specifying products and systems. As manufacturing and construction are often perceived to make heavy demands on the environment, British Gypsum is committed to minimising its impact on valuable natural resources and driving sustainable development in the UK.

Delivering sustainable buildings relies on the balancing of social, environmental and economic objectives. Our sustainability programme highlights the importance of environmental management, it focuses on the conservation of the environment and natural resources through a managed programme of waste reduction, pollution prevention, energy efficiency and the manufacture of sustainable construction products and systems. Although environmental management is a key concern our programme also covers the social and economic pillars of sustainability.

In November 2008 British Gypsum became the first plaster and plasterboard manufacturer to achieve ISO 14001:2004 certification across all of our manufacturing and mining sites in the UK. The certification follows extensive external assessment by the British Standards Institute (BSI), reinforcing our policy of continuous improvement and ensuring that all of our operations work within well-defined environmental guidelines.

Environmental sustainability

Environmental Management - ISO 14001:2004

As part of our drive to continuously improve our performance, we have invested significant resource in developing environmental management systems certified to ISO 14001:2004.

In preparation for Integrated Pollution Prevention and Control regulations in 2006, we developed our environmental management systems to bring them in line with the internationally accepted ISO 14001 standard. In November 2008 British Gypsum became the first plaster and plasterboard manufacturer to achieve ISO 14001:2004 certification across all of its manufacturing and mining sites in the UK.

This certification emphasises the stringent environmental standards maintained across the business and will enable British Gypsum to support customers through the delivery of sustainable construction products as advocated by BREEAM, the Code for Sustainable Homes and the BRE Green Guide.

Part of British Gypsum's sustainability strategy is to optimise the use of recycled and reclaimed raw materials in the manufacture of products, designing them to minimise unnecessary waste, and to provide facilities to reclaim and recycle post-consumer waste.

Recycled content of plasterboard

British Gypsum gypsum-based plasterboards and ceiling products have a very high recycled content, as detailed below:

- The products are manufactured using gypsum sourced largely as synthetic DSG (desulphogypsum), a by-product of the flue gas desulphurisation process at coal-fired power stations.
- Plasterboard is a highly sustainable product - new plasterboard may have a recycled content of almost 100% and nearly all plasterboard is 100% recyclable after use. As a result, plasterboard often has the highest recycled content of any construction products in new buildings.
- Although the industry maximum for recycled plasterboard content is currently at 18% it is possible this figure will increase in the future as new recycling technology and techniques become available.
- The paper liners on our plasterboards are made from 97% recycled paper and cardboard.



Plasterboard recycling

British Gypsum pioneered post-consumer plasterboard waste recycling in the UK, with the launch of our fully integrated Plasterboard Recycling Service (PRS) in 2001.

- Over 96% of our on-site production waste is recovered back into the manufacturing process. The remaining element is disposed of via responsible routes, such as animal bedding and soil conditioning.
- Using specialist waste partners to process and separate contamination ensures that 100% of plasterboard waste delivered back to the two dedicated reclaim sites is recycled back into the product mix. We are currently responsible for recycling more than 75% of all plasterboard waste recycled into new plasterboard in the UK.
- British Gypsum works closely with customers to minimise contamination of plasterboard waste at source. During 2007, contamination in the form of screws / nails, wood, plastic, etc, accounted for less than 5% of total waste collected. Wherever possible this contamination material goes through other specified waste disposal routes, to avoid landfill.

The Building Research Establishment Environmental Assessment Method (BREEAM)

BREEAM is an established environmental assessment method for buildings. To date, over 65,000 buildings in the UK have been certified. It provides a robust, tried and tested means of rating the sustainability performance of a building and its environment in the following areas:

- Management
- Health and wellbeing
- Energy
- Transport
- Water
- Materials
- Waste
- Land use and ecology
- Pollution

Credits are awarded in each area corresponding to performance. These credits are then weighted and added together to produce a single, overall score. The building is then rated as follows:

BREEAM				
Pass	Good	Very good	Excellent	Outstanding

The following list shows which building types are covered by which BREEAM framework:

- BREEAM: Courts
- BREEAM: Education
- BREEAM: Healthcare
- BREEAM: Industrial - light industrial units, warehouses and workshops
- BREEAM: Offices
- BREEAM: Prisons
- BREEAM: Retail
- BREEAM: Multi-residential - sheltered homes, nursing homes, and student accommodation
- BREEAM: EcoHomes
- BREEAM: EcoHomes XB – existing buildings
- BREEAM: Bespoke - other buildings not already covered

In England a very good rating or better to BREEAM: Education is required for all government funded new-build primary schools valued at £500k or greater, and secondary schools at £2M or greater.

For further information, refer to the **WHITE BOOK Education sector guide**, available to download from www.british-gypsum.com

In April 2007 Ecohomes was replaced by the Code for Sustainable Homes for the assessment of new housing in England. EcoHomes 2006 will continue to be used for refurbished housing in England and for all housing in Scotland and Wales.

The Code For Sustainable Homes (the Code)

The Code was introduced to drive a step-change in sustainable home building practice. It is a means of driving continuous improvement, greater innovation and exemplary achievement in sustainable home building.

The Code is a standard for key elements of design and construction which affect the sustainability of a new home. It is set to become the single national standard for sustainable homes, used by home designers and builders as a guide to development, and by home-buyers to assist in their choice of home.

The Code measures the sustainability of a home against design categories in the following areas:

- Energy and CO₂ Emissions
- Water
- Materials
- Surface water run off
- Waste
- Pollution
- Health and wellbeing
- Management
- Ecology



Recycling plasterboard waste

Credits are awarded in each area corresponding to performance. These credits are then weighted and added together to produce a single, overall score.

The Code uses a sustainability rating system – indicated by 'stars', to communicate the overall sustainability performance of a home. A home can achieve a sustainability rating from one star (★) to six stars (★★★★★★) depending on the extent to which it has achieved Code standards. The code states that one star is the entry level, a step above the level of Building Regulations, and six stars is the highest level, reflecting exemplar development in sustainability terms.

From 1st May 2008 it became mandatory to provide a rating against the Code for new-build homes, ensuring that all buyers are given clear information about the sustainability of their new home.

However, this new requirement does not make it mandatory to build a Code home or to have each new home assessed against the Code.

In England and Wales, code level 3 is required for all government funded social housing.

For information please refer to **HomeSpec**, available to download from www.british-gypsum.com

Assessments are carried out by independent organisations that are licensed and trained by the BRE. For each assessment, the assessor will produce a report detailing the development's performance against each of the criteria and its overall BREEAM or Code rating. Upon satisfactory completion of the assessment, the client is presented with a certificate that confirms the development's BREEAM or Code performance.

To achieve good performances in an efficient manner, the BRE recommends that an experienced and suitably qualified sustainability professional familiar with BREEAM or the Code is employed to work in advance of the BREEAM assessor. This involvement should occur at an early stage in the design process.

Further guidance on how British Gypsum products, systems and services can help in gaining additional credit(s) is available from the British Gypsum Drywall Academy.

To contact a licensed BREEAM assessor visit www.breeam.org/assessors

Green Guide

The UK Gypsum Products Development Association (GPDA) has co-ordinated the assessment of gypsum-based drylining products by the Building Research Establishment (BRE) as part of the Green Guide to Specification, launched in 2008.

"The Green Guide to Specification is an easy-to-use publication, providing guidance for specifiers, designers and their clients on the relative environmental impacts of over 250 elemental specifications for roofs, walls, floors etc"

As stated on the BRE website the Green Guide can be accessed by visiting the website at www.thegreenguide.org.uk

The GPDA and the BRE have generated data for drylining products, described within the Green Guide as components. These components are grouped together into elements, each of which represents a particular system solution for given sector applications, e.g. schools and hospitals, and are rated in terms of sustainability performance by means of a proprietary calculation method developed by the BRE. It is central to British Gypsum's product development strategy that all relevant systems listed

within the Green Guide will achieve the highest possible sustainability performance rating.

Designers and specifiers seeking current ratings information should refer to the Green Guide website, which is being continuously developed and updated, to reflect sector and system development. British Gypsum's sustainability strategy means that, over time, ratings specific to British Gypsum's products will be subject to continuous improvement.



British Gypsum Sherburn works