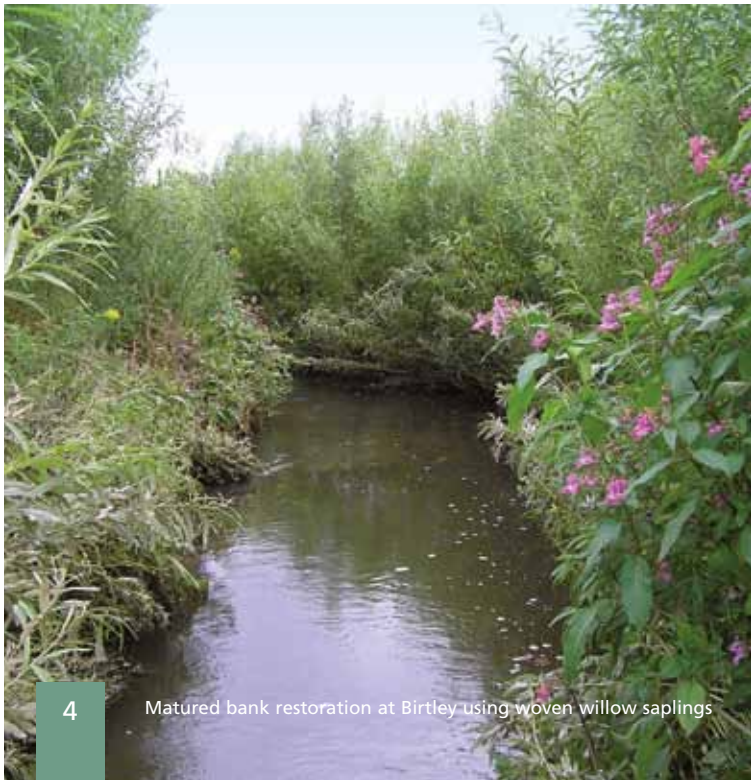
IBSTOCK BUILDING SUSTAINABILITY

Sustainability is a complex subject; many people think solely about energy consumption for manufacturing but this is only a small part of the overall picture. The Government's strategy approaches sustainability using four points:

- Social progress that meets the needs of everyone
- Maintenance of stable economic growth
- Protection of the environment
- Prudent use of natural resources

All must be present to demonstrate sustainability.



Matured bank restoration at Birtley using woven willow saplings

WHAT IS IBSTOCK DOING?

Wayside Arts Trail, Burnley (Photographer: Nigel Hillier)

IBSTOCK & SOCIAL PROGRESS

- Ibstock is unique amongst brickmakers, having 20 manufacturing sites across the UK. We are quite literally the 'national local supplier', able to deliver locally manufactured product to local construction sites.
- Our factories provide high levels of skilled and stable employment within their communities.
- We support local rural communities where we are probably the single largest employer in some areas of the country. 58% of our employees have more than 10 years of service with the average length of service in excess of 14 years.
- We support local suppliers by using labour and materials from local contractors wherever possible.
- We have an active corporate social responsibility programme which includes school visits and working with clay sculptors and artists.
- We sponsor many societies such as youth football teams and brass bands. We also support drug awareness programmes.
- We support Greensource (formally Action Aid) by recycling print and toner cartridges to the value of several thousand pounds per annum.
- Ibstock supports financially the Ibstock Cory Environmental Trust which distributes £450,000 per annum to community projects under the Landfill Tax Credit Scheme.

For more information visit **www.ibstock.com/sustainability**

IBSTOCK & MAINTENANCE OF STABLE ECONOMIC GROWTH

- We have an established policy of investment in high efficiency/low carbon technologies.
- In the past 10 years over £55 million has been invested in energy efficiency related projects.
- Ibstock publishes a 'warts and all' annual environment report on the internet and has done since 1999.
- We partner a variety of university research projects ranging from CO_2 sequestration to the development of alternative energy sources.

IBSTOCK & PROTECTION OF THE ENVIRONMENT

- All of our manufacturing units hold BES 6001 Responsible Sourcing 'very good'.
- All our manufacturing sites are independently verified and registered with CICS to ISO 14001, the International Environmental Management Standard, as well as ISO 9001 the International Quality Standard.
- Ibstock has won many awards for sustainability including:
  - The Sustainability Award at the 2004 Building Awards – the only manufacturer to win this prestigious award.
  - The 2006 CPIA Innovation Award for our approach to environmental management.
- On average our bricks travel only 62 miles from where they are manufactured to where they are used. This reduces traffic congestion and vehicle emissions.
- Ibstock undertakes pro-active research in environmental technology – Ibstock was winner of a 1999 Environmental Technology Best Practice Programme Award at the Leicester factory for a fluoride reduction technique.
- Continuous improvement techniques are applied to our processes with extensive benchmarking of key improvement indicators.
- We recover and send approximately 50,000 litres of spent lubricating oils for recycling every year.
- We recover and send over 150 tonnes of wood from scrap pallets for recycling every year.
- On average we plant 5,000 trees every year.
- We spend over £16,000 recovering packaging materials from the UK packaging stream every year.
- We recover and send for recycling approximately 1,300 tonnes of scrap metal every year.

Land restoration, Leicester

IBSTOCK AND PRUDENT USE OF NATURAL RESOURCES

- Ibstock operates some of the most energy efficient factories in Europe. The energy used to make our bricks has reduced year on year.
- Our bricks have a recycled content (12% on average) using secondary or waste materials. Typically our bricks include recycled materials to make the best use of our clays.
- All process waste up to the kiln firing stage is recycled.
- Water is recovered and recycled wherever possible. Some 120 million litres or over 40% of all process water used throughout Ibstock is recovered water.
- 13.6MW of electricity is generated from landfill gas, enough to power 17,000 homes without the use of fossil fuels.
- We source raw material with care, fully restore all our clay extraction sites and combine them with the creation of local amenities wherever possible.

THE CODE FOR SUSTAINABLE HOMES - BREEAM, BRE GREEN GUIDE and BES 6001

The Code for Sustainable Homes (CSH) has been introduced by the Government to drive a step-change in sustainable home building practice.

The CSH measures the sustainability of a home against design 'categories', rating the whole home as a complete package. One of these categories is 'materials' and their environmental impact.

BREEAM (BRE Environmental Assessment Method) assesses new buildings against a set criteria and provides an overall score which will fall within a band providing either a 'PASS, GOOD, VERY GOOD, EXCELLENT or OUTSTANDING' rating. Materials for BREEAM assessments are sourced through information obtained from BRE's 'Green Guide'.

External wall specifications, when assessed in conjunction with the BRE's Green Guide, are given a points rating. The 'Green Guide' lists ratings from A+ to E and CSH points awarded start at 3 for A+ down to 0 for E rated specifications.

All brick cladding specifications listed in the Green Guide achieve the highest 'A+' rating.

BES 6001 'Very Good' will give extra points to an assessment carried out under the Code for Sustainable Homes for anyone using Ibstock products.

IBSTOCK SOURCE • RESPONSIBLY
ISO 14001
BES 6001

click to view how we manufacture our bricks responsibly

eco-products

At Ibstock we have taken some of our environmental ideas and put them into action – creating a range of eco-products that can help meet the special environmental needs of a site – often now a requirement of the planning process. The importance of creating eco-habitats is now recognised in the Code for Sustainable Housing.

Eco-habitats for swifts

Swifts come to the UK for just a few months each summer from Central and Southern Africa. Despite legal protection their numbers are declining. Since Roman times they have been at home in traditional man-made buildings. However they find it increasingly difficult to find nest sites in modern or refurbished buildings due to the effective sealing of the eaves.

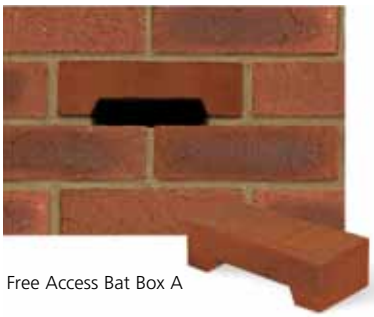
Swift Box

- Designed with the needs of the swift in mind
- Available in smooth red & smooth blue
- Discrete nesting box for location near eaves
- Ideal for new build and conservation work

Size	Total System Weight	Durability
326mm x 140mm	4.5kg/m²	Frost Resistant

Eco-habitats for bats

In the UK there are 17 species of bats, all of which are protected by law. Our range of bat boxes helps to encourage safe habitats for these remarkable mammals, allowing them to live in harmony with people.



Free Access Bat Box A

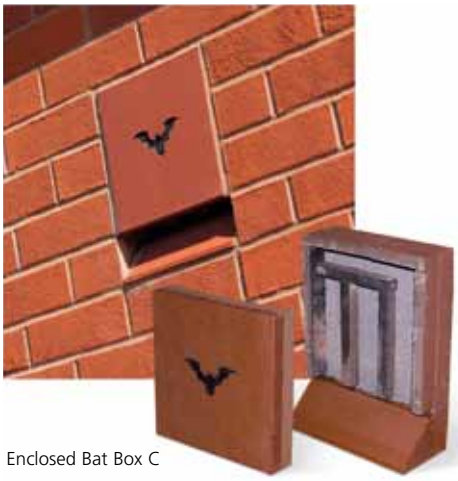
Free Access Bat Box

- Discrete single bat brick
- Easy to install
- Allows bats to create a natural home habitat within the cavity of the building

Enclosed Bat Box B

Enclosed Bat Box (B & C)

- Designed specifically for the pipistrelle bat
- Available in all brick types
- Attractive motif (option C only)
- Discrete home for bats
- Various sizes
- Several roosting zones are created inside the box
- Bats are contained within the bat box itself
- Maintenance free with entrance at the base
- Ideal for new build & conservation work



Enclosed Bat Box C

	Sizes	Durability
Eco Habitats for Bats - Technical Data: A	215mm x 65mm	F2 S2 - Frost Resistant Low Soluble Salts
Eco Habitats for Bats - Technical Data: B	215mm x 215mm or 215mm x 290mm	F2 S2 - Frost Resistant Low Soluble Salts
Eco Habitats for Bats - Technical Data: C	215mm x 215mm or 215mm x 290mm	F2 S2 - Frost Resistant Low Soluble Salts

CoolVault® - add thermal mass where it matters

For beautiful ceilings with an environmental benefit

Natural clay has great thermal mass properties. It absorbs excess heat in hot conditions and releases it gradually as temperatures fall, helping maintain a comfortable internal temperature.

- Manufactured in the UK using over 90% recycled clay
- Adds thermal mass to even lightweight construction
- Suited for use with underfloor heating systems
- Can help reduce the amount of conventional heating or cooling that a building may require
- Available in natural cream or terracotta, the naturally reflective surface requires no decoration

Coolvault® stays warm longer, cools down slower.

Ecoterre® Earth Bricks

Ecoterre® is a range of unfired clay bricks suitable for most internal non load-bearing applications. Unfired clay bricks have excellent sustainability credentials – low energy input, very low waste and high recyclability and Ecoterre® is manufactured in the UK. When incorporated into a building they give thermal mass and acoustic insulation, inhibit condensation and regulate the relative humidity of the atmosphere.

Ecoterre® is available in two sizes and with a smooth finish if required. The earth bricks have been developed to provide an excellent bond with appropriate plaster or mortar to the surfaces. Please note that perforation patterns may vary.

Earth Brick-Standard

Earth Brick-Large

	Code	Size	Durabilty	Configuration	Compressive Strength	Dry Weight	Density
Earth Brick-Standard	EB3590	220mm x 105mm x 67mm	F0	Vertically perforated	3.8 N/mm²	3.0 Kg	1940 Kg/m³
Earth Brick-Large	EC3590	220mm x 105mm x 133mm	F0	Vertically perforated	2.9 N/mm²	6.0 Kg	1940 Kg/m³

Handling & Storage

Only forklift trucks should be used to unload the pallets and the movement of unfired clay bricks should be kept to a minimum. Store in a dry location on the original pallet and ventilate to avoid condensation. They should be stacked no more than two packs high.

Laying

It is recommended that moderately hydraulic lime mortar or clay based mortars should be used to lay the bricks.

Finishes

Unfired clay brickwork can be finished with a variety of breathable materials including clay and lime plasters, clay boards, some paints and limewashes. Only highly vapour permeable paints should be used.

Fixings

Unfired clay bricks will generally only require standard fixings for secondary works such as plumbing, electrics and joinery. Ordinary masonry plugs and screws are suitable for most applications - a list of approved products is available on request or on our website.