

# MORE FROM LESS

## News from the UK precast concrete sustainability project

ISSUE 2

JULY 2005

### Introduction

This newsletter has been produced in support of the joint research project between the British Precast Concrete Federation and Loughborough University dedicated to developing a sector sustainability strategy for the UK precast concrete industry. Its purpose is to inform both the precast industry and other stakeholders of developments resulting from the research, ways in which contributions can be made and where further information can be obtained. It also contains a general update on sustainability activities in the precast concrete sector and beyond.

Please feel free to pass *More from Less* to colleagues. Your contributions to future issues are very welcome.

Ian Holton – Editor

### British Precast Sustainability Committee

This edition of *More from Less* focuses on the work of British Precast's Sustainability Committee.

### Role of the Committee

The British Precast Sustainability Committee began life in June 1999 as the Environment Committee. It was initiated at the same time as the Health & Safety Committee when it became clear that there was a need within British Precast for a way of dealing with cross cutting issues in these areas rather than having them dealt with piece-meal under the existing product associations.

The agenda of the Committee has developed over the six years of its life with early ones featuring very strongly on learning experiences to enable members to speak about incidents and accidents, which could provide lessons for all. This has now developed into the publication of **Environmental Alerts** where particularly relevant incidents are described in an anonymous format and published electronically as PDF documents, which members can print and use on notice boards, intranets etc.

Monitoring Members' progress towards environmental management certification to ISO 14001 has also been a significant topic of discussion, as have been fiscal and legal measures to encourage good practice.

Another important aspect of the Committee's role has been the development of the British Precast Environment Awards which for the first three years focused on Waste Minimisation. In 2005 the Awards have been broadened to a more general sustainability theme, which it is hoped will attract entries from the smaller companies in British Precast membership.

With the reinvention of the Committee in its sustainability guise in 2004, issues such as corporate social responsibility and community relations now fall within its scope and will inevitably feature strongly in its discussions.

The Committee also provides a forum for British Precast's two research engineers on sustainability, Hafiz Elhag and Ian Holton, to regularly present and discuss their research findings.

## The Chairman

The Committee is currently chaired by Dr Miles Watkins, Group Environmental Manager at Aggregate Industries plc. Miles sees the work of the Committee as being particularly valuable as not only does it allow the sharing of best practice ideas and provide opportunities to understand and avoid the pitfalls experienced by others but it also encourages competition through the awards and benchmarking activities, which in turn drives forward the sustainable development of the sector as a whole.

He says of the Committee: "We enjoy an excellent level of participation by companies large and small and there is a genuine buzz of enthusiasm about both the future of the sector and tackling the challenges that brings. We believe that concrete products have an essential role to play in delivering sustainable communities and the Committee is working to ensure the sector is best placed to fulfil that objective."

## The Secretary

The secretariat for the Committee is provided by British Precast. Director of Product Associations, Clive Budge, has recently handed over the role of secretary to British Precast's new Technical Manager, Colin Nessfield. Colin joined British Precast from Tarmac Central, where he held the position of Special Products Technical Sales Manager for the past 4 years. He is also Honorary Secretary of the Institute of Concrete Technology.

Colin's role as Secretary is to ensure the efficient management of the Committee's business. As well as arranging and taking minutes of meetings, this involves monitoring, distributing and collating responses to documents and information from Government, the Construction Products Association (CPA), the press and many other bodies. Colin also represents British Precast on the CPA's Technical and Sustainable Construction Committees, and on the BIBM Environment Commission.

## A member's view

Membership of the Committee is automatically open to all Full and Associate members of the British Precast Concrete Federation. Contact Colin Nessfield ([cdn@britishprecast.org](mailto:cdn@britishprecast.org)) for further details.

Regular Committee member Stuart Bell, Group Technical Director for Marshalls plc, gave the following view on the Sustainability Committee: "The Committee provides an excellent forum for representatives of the precast industry to develop a common approach to the numerous issues regarding sustainability that the industry faces. Of particular importance are the review, understanding and development of industry approaches to the ever increasing legislation that is being introduced regarding environmental performance, a vital part of sustainability. The merits of precast concrete as a sustainable material need to be widely publicised to ensure specifiers are fully aware of the benefits and the Sector Sustainability Strategy that is being developed under the guidance of the Committee will be a vital part of the positive message to specifiers."

## Next meeting

The next Sustainability Committee meeting will be held in conjunction with an industry workshop at Loughborough University on 7 September 2005, see page 6 for further details.

## Sustainability Awards 2005

The aim of the award scheme is to reward excellence within the British Precast membership and to publicise the progress of the industry towards sustainability. Entries are judged against their sustainability benefits, innovatory approach, wider applicability and employee participation. For 2005, the awards will be sponsored by The Concrete Centre, and will be made on the basis of best site or factory specific entry and best company-wide entry.

The awards will be presented at the British Precast Best Practice Awards to be held at the Magna Science Adventure Centre, Sheffield, on 22 September 2005. Contact the events team ([awards@britishprecast.org](mailto:awards@britishprecast.org)) for further details.

## CPA Sustainable Construction Committee

The Construction Products Association (CPA) acts as a single, influential voice for the manufacturers and suppliers of construction products. Its Sustainable Construction Committee (SCC) works with industry and relevant Government and European departments to deliver sustainable construction in respect of the way companies in the construction products industry operate and through the products and materials they supply. Through participating in this committee, British Precast's own Sustainability Committee is kept up to date and can convey its member's views on such topics as environmental declarations, emissions trading, waste directives and legislation, and building regulations.

## European Legislation – “*Regulated and dangerous substances*”

The UK concrete industry is coordinating actions to monitor, anticipate and counter any moves in the European Commission to bring benign products such as concrete within the scope of future legislation. The precast industry in particular will be seeking, at the minimum, equivalent treatment to in-situ concrete. A briefing note will be published following an internal industry meeting on 26 July.

## Carbon Vision project

The Sustainability Committee provides a valuable link between the Members and the various sustainability related research projects that British Precast is invited to participate in. One such project, which has recently started, is the Carbon Vision project being led by Prof. Adisa Azapagic of Surrey University, and funded by the Carbon Trust and EPSRC. This 4-year project will develop a methodology for systematic life-cycle estimation of carbon inventories in different industrial sectors, including 'carbon footprints' and 'embodied carbon'. Going beyond the single-life approach which is the basis of most life-cycle assessment (LCA) models, will improve the validity and cross-comparability of LCAs across all building materials.

## BRE Green Guide

British Precast is participating in the current review of BRE's Green Guide to Specification through the Construction Products Association and individual Sustainability Committee members. The new guide is expected to be published in spring 2007.

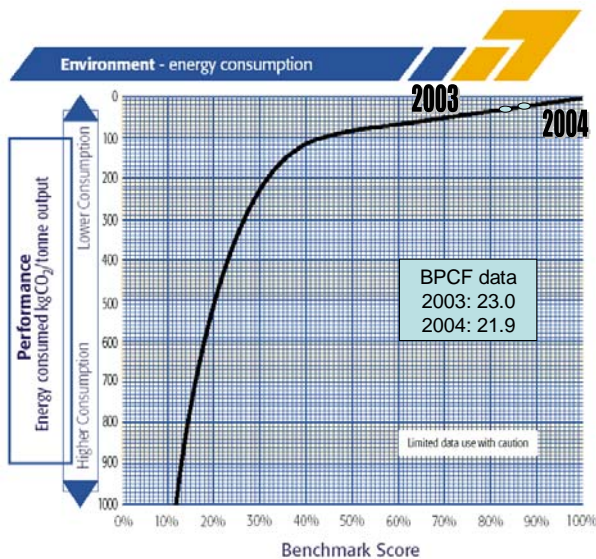
Martin Clarke says of the review: "It is vital that detailed input is made in the coming weeks at both Federation and company levels. The Green Guide and other BRE tools such as BREAM and Ecohomes are being updated simultaneously. They are expected to feature strongly in the Code for Sustainable Buildings that is currently being prepared by the Office of the Deputy Prime Minister for publication in 2006."

## Key Performance Indicators

Through the Sustainability Committee, British Precast compiles environmental performance data on behalf of the industry for submission to the Construction Products Association for inclusion in their annual Key Performance Indicator (KPI) exercise. This data is then used to benchmark the precast industry's performance against the whole construction products sector and identify targets for improvement.

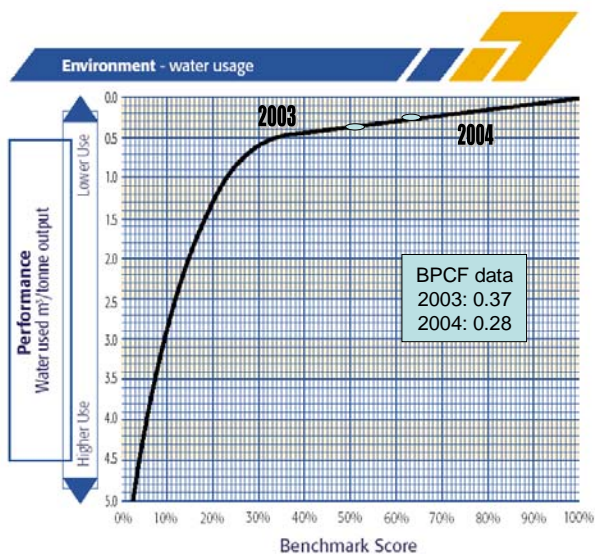
The latest data plotted on the charts below, shows an encouraging increase in environmental performance for the precast industry between 2003 and 2004. Although it is too early to establish any meaningful trends, there are indications that the environmental burden of the industry is reducing in most areas, but transport and packaging remain difficult topics owing to product characteristics and the demands of the customer. It is intended to update the charts annually and a call for data from the industry will be made in spring 2006.

Electronic copies of the charts can be obtained from Clive Budge ([cjb@britishprecast.org](mailto:cjb@britishprecast.org)) for those companies wishing to plot and compare their own performance against the wider precast industry.



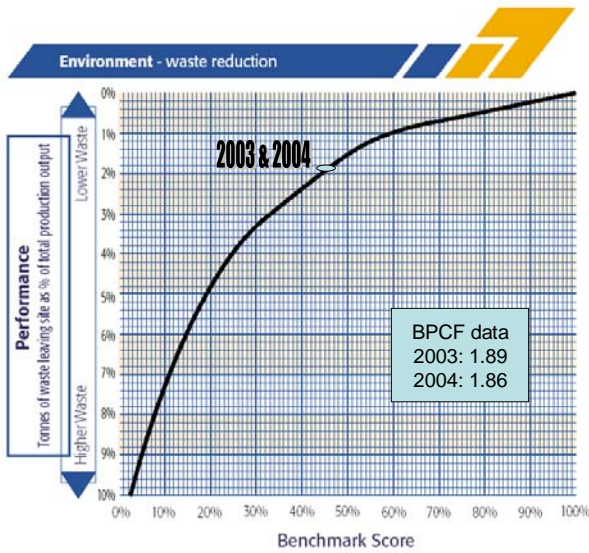
### Energy consumption

The industry is in the top quartile for low energy use and was able to make a further 5% reduction in consumption in 2004



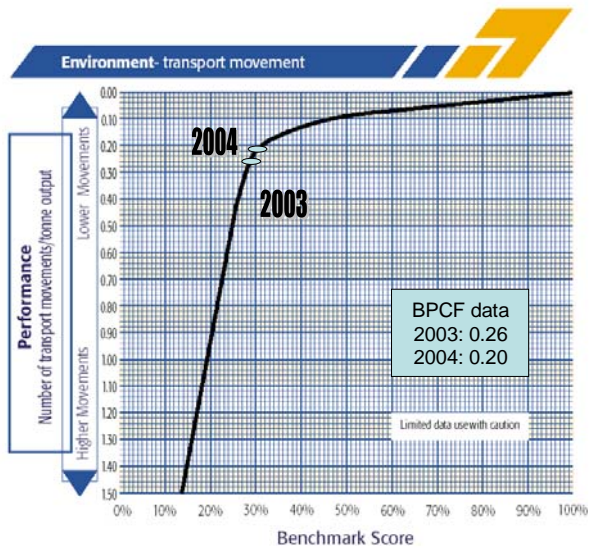
### Water usage

Use of water drawn from mains supplies dropped by 25% as an increasing number of factories recycle or use alternative water supplies



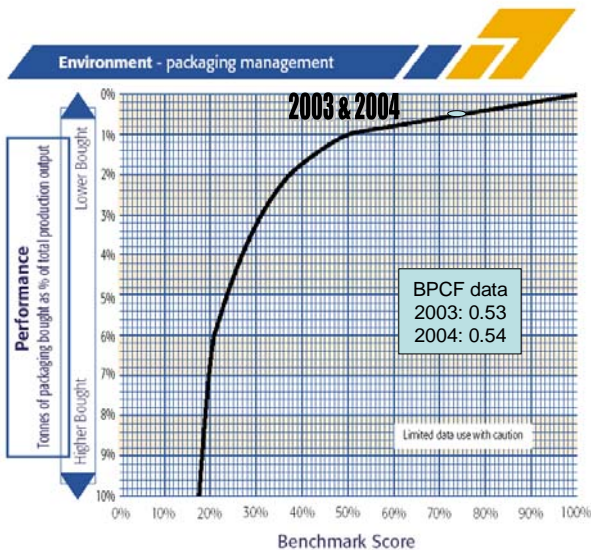
Waste reduction

The industry needs to improve its performance on waste as it still produces 20 tonnes for every 1,000 tonnes of production output



Transport movement

The size and weight of precast products makes transport a difficult area for improvement compared to some industries, but transport movements and the associated pollution and congestion are being reduced



Packing management

Packaging requirements vary with product type, but across the industry 5 tonnes of packaging are used for every 1,000 tonnes of production output

## Sustainability Project News

News from the UK precast concrete sustainability project is also available on the Sustainable Precast website [www.sustainableprecast.com](http://www.sustainableprecast.com) which has recently been updated and expanded.

### BIBM 2005 Congress

A visioning paper for the sector sustainability strategy was presented at the BIBM 2005 Congress in May, and was well received by delegates. The presentation showed how a strategy will help us to make our products more competitive in the arena of sustainable construction, make our businesses more efficient, effective and responsible in their operation, and gave examples of the progress the UK precast industry has already made towards sustainability. The paper is available to download at [www.britishprecast.org/sustainableprecast/downloads/BIBM-Congress2005-Extended-abs21.pdf](http://www.britishprecast.org/sustainableprecast/downloads/BIBM-Congress2005-Extended-abs21.pdf)

### Sustainable Precast Poster

A poster has been prepared about sustainability in the precast concrete industry for display on office and factory notice boards. It explains briefly what sustainability means to the precast industry and shows the progress the industry is already making towards improving its economic, social and environmental performance in respect of precast products and the way they are manufactured. Electronic copies can be downloaded free from the website, or laminated A1 size copies are available for £10 + p&p from [info@britishprecast.org](mailto:info@britishprecast.org).

### British Precast Annual Conference

British Precast Chief Executive Martin Clarke reiterated the Federation's commitment to the development and implementation of a sustainability strategy for the precast sector to the 120 delegates attending the Annual Conference on 4 May 2005. He said that significant progress was expected in the next 12 months, but stressed that this progress could not be made without support from the industry. Participation would be required in workshops, questionnaires, case studies and data collection exercises, and he proposed the appointment of a sustainability champion in every member company and each product group in order to provide a clear link to the sustainability project team (see below).

### Sustainability Champions

"In order to ensure that sustainability issues are fully addressed in the sector, we need full participation. Each member company needs to nominate a sustainability champion. They do not need to be an expert, simply a portal through which information can be exchanged. Policy developments in this area are going to have a dramatic effect on all members and we need to stay alert to ensure the continuing competitiveness of the sector. When you have appointed a sustainability champion in your company, please provide Ian Holton with their contact details ([ih@britishprecast.org](mailto:ih@britishprecast.org))."

Martin Clarke, British Precast

### Industry Workshop

A half-day workshop to openly discuss the opportunities and benefits that sustainability can bring to both precast products and precast manufacturing, will be held at Loughborough University on 7 September 2005. The workshop will be facilitated by Dr Jacqui Glass of Loughborough University and Ian Holton, and is open to all Full and Associate members. Contact Ian Holton ([ih@britishprecast.org](mailto:ih@britishprecast.org)) or visit [www.sustainableprecast.com](http://www.sustainableprecast.com) for further details.

## Industry Headlines

Sustainability related news headlines from the cement and concrete sector, and beyond.

### British Precast Environment Alerts

Two new environmental alerts have been released to BPCF members this year; EA5 on waste wooden mould disposal and EA6 on PFA silo spillages. Contact Colin Nessfield ([cdn@britishprecast.org](mailto:cdn@britishprecast.org)) for further details.

### Concrete Sustainability Forum

The Concrete Centre recently facilitated a meeting of representatives from cement and concrete industry trade associations and development organisations, with the purpose of forming a Concrete Sustainability Forum. British Precast gave its support to the Forum, since it is expected to play a key role in taking the sustainability agenda forward across the entire industry.

The Concrete Centre has also just launched a new Sustainability Award in association with The Concrete Society. Visit [www.concretecentre.com/PDF/Sustainability\\_Award\\_Entry\\_Form.pdf](http://www.concretecentre.com/PDF/Sustainability_Award_Entry_Form.pdf) for further details.

### Sustainable Development Strategy for Aggregates

The Quarry Products Association (QPA) has recently published a document which sets out the key stages in the evolution of a sustainable development strategy for aggregates and quarry products, and commits them to producing an annual report on their progress later this year. The document is available to download at [www.qpa.org/pdf/sust\\_devA4.pdf](http://www.qpa.org/pdf/sust_devA4.pdf)

### Progress at BCA

The British Cement Association (BCA) has now published its 2005 edition of 'Performance – A corporate responsibility report for the UK cement industry'. The report can be downloaded from [www.cementindustry.co.uk](http://www.cementindustry.co.uk).

Martin Clarke recently attended a stakeholder workshop facilitated by Forum for the Future, to discuss the role of cement in a sustainable society.

### UK Government Sustainable Development Strategy

Following a stakeholder consultation exercise in 2004, the Government published its new sustainable development strategy for the UK, "Securing the Future", in March. The strategy contains:

- a new integrated vision building on the 1999 strategy – with stronger international and societal dimensions;
- five principles – with a more explicit focus on environmental limits;
- four agreed priorities – sustainable consumption and production, climate change, natural resource protection and sustainable communities, and
- a new indicator set, which is more outcome focussed, with commitments to look at new indicators such as on wellbeing.

The strategy document is available to download at [www.sustainable-development.gov.uk/publications/uk-strategy/uk-strategy-2005.htm](http://www.sustainable-development.gov.uk/publications/uk-strategy/uk-strategy-2005.htm)

The new Strategic Framework document, "One future – different paths", was also launched at the same time. This document sets out the common challenges and goals in sustainable development, shared between the UK government and the devolved administrations of Scotland, Wales and

Northern Ireland. It is available to download at [www.sustainable-development.gov.uk/publications/uk-strategy/framework-for-sd.htm](http://www.sustainable-development.gov.uk/publications/uk-strategy/framework-for-sd.htm)

A review of the Government's strategy for Sustainable Construction has now been announced on 7<sup>th</sup> July. This is expected to be complete and published by spring 2006. Key elements in the strategy are expected to be improving health and safety, and on-site waste minimisation. British Precast has already informally discussed the review with the DTI and will be making direct representations.

### British Precast at Ecobuild – May 2005

British Precast was a major sponsor of the first Ecobuild Conference and Exhibition held on 24 and 25 May at the OE2 Conference Centre in London. This conference is likely to become one of the leading events for those with an interest in to the design and building of a sustainable future, with over 1,500 speakers and delegates attending over the two days representing professionals involved in aspects of strategy, policy, design, planning, financing and development and maintenance of houses and public and commercial buildings.

Delegates attending the conference session on 21<sup>st</sup> century precast concrete learnt of concrete's growing contribution to sustainability. Martin Clarke of British Precast described some of the precast industry's many innovative and creative solutions, and how these were linked to sustainability. Tom de Saulles of The Concrete Centre explained that as temperature increase there will be a growing need to control internal building temperatures, and demonstrated how concrete with its high thermal mass provides a sustainable solution. Bob Harris of Earthdome described concrete's contribution to London's first domestic thermal mass buildings to be heated from the ground.

British Precast will be supporting Ecobuild 2006 to be held in London at Earl's Court 2 on 21-23 February. Anyone interested in speaking on concrete at the event should contact Martin Clarke ([mac@britishprecast.org](mailto:mac@britishprecast.org)), or visit [www.ecobuild.co.uk](http://www.ecobuild.co.uk) for further details.

### Thermal Mass publication from The Concrete Centre

The Concrete Centre launched its new publication 'Thermal Mass – A concrete solution for the changing climate', to coincide with author Tom de Saulles presentation at Ecobuild. This publication outlines the application of techniques designed to exploit the thermal mass of cast in situ and precast concrete and provides a range of referenced sources to aid further reading. It is available to download at [www.concretecentre.com](http://www.concretecentre.com).

### BRE secures Waste Minimisation bid from DTI – British Precast to partner

The Building Research Establishment (BRE) have recently secured 50% funding from the Department of Trade and Industry (DTI) for a £1.7M pan-industry project, the aim of which is to reduce waste and resource use across the whole life cycle of any given product. The project objectives relate to researching the viability of modifying product design, manufacture, packaging/distribution, application, maintenance and end of life management to maximise resource efficiency. Participating industries from the materials sector include concrete, plastics, composites and wood, with British Precast representing the concrete sector. The project is expected to start in autumn 2005, with completion scheduled for spring 2008.

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