mpa British Precast

Annual Review 2016

Executive Director's Message

British Precast helps members by promoting the use of British made precast concrete. We support members in raising the bar of the industry thereby raising their own reputation. We protect the interests of members in technical standards and industry guidance. We deliver information and support to members operating their businesses. This annual review provides an overview of this activity which is undertaken with the support of members and in collaboration with partner bodies.

Over the last year there has been a steel crisis that has most recently escalated at Port Talbot. Government is supporting the UK steel industry through preferential procurement rules introduced in late 2015. We are working with the Crown Commercial Service to introduce similar rules to support UK precast manufacturers. The wider argument is that all clients should support domestic production and as part of this we promote BES 6001 because this responsible sourcing scheme provides a proxy for 'local' which can be specified.

The British Precast Raising the Bar initiative is a means to demonstrate commitment and achievements particularly in relation to both sustainability and health and safety. It is the umbrella for our sustainability charter, our health and safety charter and specific codes of practice. In 2014 we implemented mandatory sustainability audits and reporting alongside our already compulsory health and safety reporting. We also introduced mandatory audits for all factories with prestressing operations.

British Precast technical work relates to protecting the interests of the precast sector in relation to standards for constituent materials, and, working with MPA, also covers end-use design, concrete performance and sustainability. Product specific technical activity, particularly standards, is delivered through the relevant product association. We input into industry guidance, such as recent Environment Agency guidance on carbon footprinting to ensure members' interests are not compromised.

There is always something new for members to address. We still help members with CE marking, and the new issues of BIM and EPDs are featured in this annual review because of the challenges they are bringing and to show what help is at hand. There is much else that British Precast is doing for members and I invite you to take time to read this annual review, visit our new website and encourage colleagues to get involved in our committees and events.

Finally I take this opportunity to thank Andy Dix, our outgoing President after 3 years at the helm. He has championed the initiatives that have grown the reputation of our industry and his dynamic leadership in the area of health and safety will have a lasting impact. His successor as President is Matthew Clay of Forterra, with new vice President Mark Joel of Tarmac. I look forward to working with them, and all members in the coming year.

Contents

Health & Safety

The importance of this topic to British Precast is made clear by it being a condition of membership to be a signatory to the Health and Safety Charter. It is part of our overarching "Raising the Bar" philosophy which seeks to encourage and enable best practice in precast manufacturing.

To achieve best practice there are many initiatives that have been progressed in the last year under the oversight of the British Precast Health and Safety Steering Group. All members are welcome to attend or be corresponding participants of this group. We are grateful for the Health and Safety Executive's ongoing contribution to our meetings.

February 1st 2016 saw the introduction of new sentencing guidelines. These will significantly increase the fines following successful prosecutions under the Health & Safety at Work Act. It is evident that involvement in a trade association health and safety scheme is a good start in minimising any future fines to which a manufacturer might be subject to. A presentation on these new fines and what can be put in place now in your business to minimise future fines was made at our SHAD event last November and repeated at PRECAST2016.

SAFER BY SHARING

Members are encouraged to share their own initiatives as well as incidents and near misses to promote collective learning. This sharing occurs at meetings of the health and safety steering group, product associations and annual awards. It is also through incident alerts that anonymously report incidents, including near misses, and the corresponding key learnings. These incident alerts are available through the website, newsletters and a new SafePrecast.com website which has an associated APP.

SAFETY AND HEALTH AWARENESS DAYS (SHADs)

Site based SHAD days for operatives and supervisors have been hosted by Tarmac (July 2015) and FPMcCann (March 2016). We have welcomed over 100 delegates to each of these events where groups of 20 participate in activities at 5 different stations. The 5 topics can be addressed in tangible and practical ways because the events are held at member facilities. We are grateful to Tarmac and FPMcCann in hosting these events and running many of the training activities.

Leadership SHADs are held each November. A diary date for all members is November 24th when the next event will be held at the National Motorcycle Museum. The majority of members send senior representatives to this event to obtain the latest updates from industry and the HSE. In the most recent event a plausible factory scenario was described and then used throughout the day by different speakers to help 'make real' their presentations.

SAFER BY COMPETENCE

The HSE has made clear that a competent workforce is a safe workforce. A Safer by Competence framework was developed and first included in our Annual Review in 2014 and is on our website. It provides a timeframe for when different levels of employees should be engaged in a process of demonstrating competency and by when this should be complete.

Competency is not achieved only through training, and in fact might not require any training whatsoever. Competency is understanding and application of knowledge. The safer by competence scheme is about employers having a competent workforce and being able to demonstrate this. We are working with external training providers and providers of competency assessors to increase provision.

RESPIRABLE CRYSTALLINE SILICA

Respirable Crystalline Silica (RCS) is the subject of the European wide NEPSI work which we administer on behalf of members. We also have been working to minimise unnecessary escalation of RCS to a different European classification, and to minimise impact on members if this does come to pass.

SAFE TRANSPORT

Guidance on safe transport has been developed over the last year in several forms with us serving members' interests on the Building Products Delivery Working Group (BPDWG) whose guidance for palletised products is due in May 2016. The format of this is simple and pictorial. A small working group is developing similar guidance for non-palletised products. More broadly, MPA are finalising a Driver's Handbook. This will be a very detailed comprehensive document and help with company policies. At PRECAST2015 and PRECAST2016 we arranged for haulier companies to attend with vehicles and demonstrate load restraint, to progress the discussion on good practice in the industry.

CODES OF PRACTICE

Stressing: All members are required to have an annual audit for compliance with our stressing Code of Practice at each factory with stressing operations. The Precast Flooring Federation (PFF) have chosen to double this rate of audit. This has resulted in significant improvement in practice and operations.

Installation: The PFF has an installation code of practice and associated audits. ASPA is currently authoring their equivalent document.

Process: Precast/Cast Stone has particular production processes and these will be addressed in a new code of practice currently being authored with the HSE.

CHARGE – HSE COMMITTEE FOR MANUFACTURING SECTORS INCLUDING GLASS, CERAMICS AND CONCRETE

The HSE CHARGE strategy for the manufacturing sector of which we are a part, includes statistical data collection, sharing of incidents and the concept of Safer by Competence. The only one of these not covered above is statistical data. Our statistical data collection for 2015 shows a fall in LTIFR in 2 years from 12 to 7 across all of British Precast. Our 5 year target to 2018 is to have an LTIFR down to 4, but this is in the context of targetting zero harm.

Sustainability

In 2015 a combined production exceeding 15 million tonnes, were audited and covered by KPI data collection as part of the British Precast Sustainability Charter.

Our members continue to improve against the KPI baseline year of 2012 with at least one of our 2020 targets already achieved: Overall factory waste generation was reduced by 15% compared to 2012, of which only 0.72 kg per tonne of production was sent to landfill. Carbon emissions from precast factories are also going down as 12.87 kg CO_2 per tonne was recorded in 2014 compared to 14.22 kg CO_2/t in 2012. Energy consumption went down very slightly compared to the baseline year (1%). However, we also experienced some increase in a few of the indicators: for example, factory water consumption went up by 2%, compared to 2012.

British Precast continues to be the only construction product trade association committed to the Infrastructure Carbon Review (ICR) pledge: British Precast has pledged to help members drive down their carbon emissions by 20%, energy consumption by 10%, and overall factory waste by 10% (2012 baseline). British Precast is also a member of the ICR Carbon Practitioners Network and have participated in the development of the first construction related carbon management standard PAS 2080.

With eight generic precast products Environmental Product Declarations (EPD) to be published and a verified EPD calculator to be launched later this year, members of British Precast should be well equipped to address the challenge of embodied environmental impact. British Precast also continues to be active members of a number of groups and initiatives, including the Sustainable Concrete Forum's Sustainable Concrete Strategy, the Resource Efficiency Action Plan (REAP) initiative, and the European Concrete Platform (ECP).

British Precast is involved in research projects. For example the UCL microwave curing project which endeavours to reduce energy consumption and curing times is providing promising results. Product Associations within British Precast are also directly addressing the sustainability challenge and undertaking product specific activity with our support. After the BCA's box culverts' carbon footprint factsheet, ASPA produced three new carbon footprinting factsheets covering two types of architectural cladding in addition to structural precast. CPSA also continues to offer a number of CPDs covering sustainability issues such as carbon footprinting and SuDS.

SUSTAINABLE CONCRETE STRATEGY

British Precast's Sustainability Charter is part of a wider initiative run by the Sustainable Concrete Forum (SCF).

The Forum was set up in 2007 to manage and coordinate efforts carried out by 10 different sectors across the supply chain of concrete. The Forum oversees the data collection, reporting and benchmarking programme for a range of sustainability indicators; initiatives to reduce environmental impacts from transport and water use; and the communication of concrete credentials and how to use concrete to provide a sustainable built environment.

The 8th Concrete Industry Sustainability Performance report was launched at the industry's Concrete & Masonry Pavilion at Ecobuild in March. The report shows an overall improvement in a number of indicators.

The vision is for the UK concrete industry to be recognised as a leader in sustainable construction by taking a dynamic role in delivering a sustainable, zero carbon built environment in a socially, environmentally and economically responsible manner.

Environmental Product Declarations (EPDs)

Environmental Product Declarations (EPDs) are similar to carbon footprints, but include many environmental impacts and cover the whole life cycle of a product. In life cycle assessment (LCA) an EPD provides a standardized way of quantifying the embodied environmental impacts of a product or system.

The information declared includes data on the impacts of acquiring raw materials, energy use and efficiency, content of materials and chemical substances, emissions to air, soil and water and waste generation. Currently EPDs are voluntary, being driven by market demand, but may well become mandatory under the Construction Products Regulation (CPR). In the short-term this leads to marketing opportunities. In the medium-term designers, contractors and clients will increasingly demand EPDs.

EPDs can be generic, company-specific, plant-specific or even brand-specific depending on market/specifier expectations and cost-benefit considerations. They are business-to-business communications and are not consumer-oriented. Demand for EPDs will increase, driven initially by Government procurement requirements on public sector projects which use Building Information Modelling (BIM). BIM should ensure that building-level environmental impacts are quantified on a common/fair basis and will influence the final choice of materials to be used in construction projects. It is likely that such projects will require generic EPDs, as input to BIM, from 2017.

Nick Gorst receiving the official certification for Environmental Product Declaration (EPD) for British Precast from Burkhart Lehmann, Chairman of IBU.

Life cycle assessment (LCA)

LCA is a technique used to assess environmental impacts associated with all stages of a product's life, generally from-cradle-to-grave (but for some intermediate products, from cradle-to-gate) i.e. from raw materials extraction through materials processing, manufacture, distribution, use, repair and maintenance, and disposal or recycling. An EPD provides data on these impacts in a standardized way, allowing a fair comparison of products whilst minimizing a narrow/distorted perspective on environmental issues.

EPD Project

British Precast and BRMCA are collaborating on an EPD project overseen by a committee chaired by David Morrell (Marshalls PE International has been commissioned to deliver nine concrete product generic EPDs and a calculator and benchmarking tool. The phase 2 project is the use of the calculator tool by MPA on behalf of product groups to generate EPDs for further concrete products. Phase 3 is the use of the calculator tool by MPA to generate company-specific EPDs at commercially competitive rates with MPA membership discounts.

	PHASE 1	PHASE 2	PHASE 3
FUNDING	British Precast & BRMCA	Product Groups of British Precast & BRMCA	Companies
DELIVERY AGENT	PE International	British Precast	British Precast
OUTPUT	**Generic verified Product EPDs for:** 1. Ready mixed concrete 2. Aggregate blocks 3. Aerated blocks 4. Paving blocks 5. Concrete pipes 6. Precast floors 7. Box culverts 8. Architectural & structural concrete 9. Mortar **Calculator Tool**	EPDs for more specific products e.g. a 400 mm deep precast floor unit and a 200m deep floor unit. Product groups will choose if these are to be verified or not depending on what the market might demand.	EPDs for company specific products. The demand for these is heavily contingent on how much a product is considered to be a commodity and the market differentiation brand values of the producing company.

Building Information Modelling

The UK construction industry has reached the date (April 2016) set by UK government in 2011 to have collaborative 3D BIM - all project and asset information, documentation and data being electronic - for all government projects.

But what does this mean for members of British Precast? In the simplest terms, for now, it means communicating product and project information electronically, and hence is less of a challenge than it might first appear. However the BIM journey has only just begun and there are more significant challenges ahead.

For the last two years the BIM working group has been collaborating with the wider construction industry (see box out). Our efforts are to save members abortive work, deliver collective outputs where appropriate and demonstrate that our product sector is supporting digital construction.

Two particular aspects to report here are training and product data templates. Our BIM working group receive regular updates on what construction industry training provision is available and shares the needs of our part of the industry. In the coming year sessions targeted at the requirements of our members will be run.

Product Data Templates (PDTs)

Generic product data templates/sheets and objects will facilitate specification of precast and masonry products.

Product information for BIM exists in two distinct forms:

a) Geometric data, usually expressed as a 3-D model
b) Other non-geometric data in Excel spreadsheet known as a product data sheet.

The product data templates (PDTs) for different products are useful for both generic and company specific data. By establishing industry PDTs, member companies can avoid the need to invent their own, and avoid potential future re-work when an industry standard is developed.

A completed PDT is a product data sheet (PDS). The use of Excel spreadsheet software for PDT (and PDS) is widely accepted across construction, but the contents/ordering of a PDT is less clear. The NBS/RIBA Digital Toolkit launched in April 2015 did not provide a PDT unanimously accepted by the construction industry, as had been hoped, but a more recent initiative by the BIM Task Group is seeking to address this.

British Precast PDTs

In the meantime we have developed version 1 product data templates (PDTs) for blocks, pipes, hollow core floors and T-Beams and these were launched at Ecobuild in March 2016. These have been coordinated with respective product groups of British Precast, so they meet the needs of specific products, whilst retaining consistency. They were launched for discussion by the wider construction products sector, designers and customers. They seek to provide a common framework for British Precast members so that there is not duplication of effort. They will also assist customers.

The British Precast PDTs have been placed on our website, publicised through an article in The Structural Engineer and provided to the BIM Task Group for their latest initiative noted above. The British Precast Steering Group will continue to develop the PDTs, including for other precast products, as well as identify other BIM activity on behalf of the membership.

BIM Steering Group

When working on any new strategy or process within a business it's always good to know that what you are doing is going to be of value to your customers. Delivering BIM in a business is no different and since the start of the British Precast BIM Steering Group it has been critical to ensure that what we are developing is in line with what industry expects or needs.

This process of collaboration, one of the key wider tenants of working digitally to the UK Government Level 2 mandate, has seen British Precast calling upon a wide range of resources to assist in disseminating the latest information and best practices on BIM, securing guest presenters and facilitators as well arranging demonstrations in order to provide help, advice and suggestions to their BIM Steering Group members. This has included working with:

- BIM4M2 (BIM for Manufacturers and Manufacturing) the creation of Product Data Templates for precast items.
- BIM4IUK (BIM for Infrastructure UK) examples of how BIM and precast can support infrastructure schemes.
- The NBS – talking classification, the Uniclass system as well as an overview of the BIM Toolkit.
- IStructE – how Structural Engineers are developing digital processes.
- CIBSE and the CPA – the development of precast specific Product Data Templates.

Trimble Solutions UK, providers of the Tekla suite of fabrication level design and analysis software, are proud to have been working with the British Precast BIM Steering Group. In many ways the BIM Level 2 'deadline' of April 2016 is in actual fact just a milestone along a much longer journey as the UK Construction industry moves from analogue to digital. The team here at Tekla look forward to supporting British Precast with the continuing challenges ahead.

Duncan Reed, Digital Construction Process Manager, Trimble Solutions

Technical

As the trade association representing precast concrete product manufacturers, British Precast remains best placed to undertake technical work in collaboration with, and on behalf of, our membership.

This work mainly revolves round British and European standards and building regulations - all of which British Precast is a stakeholder in by mandate. Specific technical work on particular products is addressed by their product associations, whereas overarching issues for all precast production, such as the impact of standards for constituent materials, are dealt with by British Precast.

Our links with BIBM, the Europe-wide Trade Association for precast concrete, and the work through British Standards shadow committees feed into European committees, strengthening our ability to influence changes to European standards.

Two further aspects of technical work are responding to technical enquiries and developing an understanding of competitor materials' offerings to enable appropriate responses such as government lobbying, influencing standards' committees and marketing. Despite tight resources, British Precast effectively conducts this work.

This is further enhanced by ensuring our work dovetails with that of The Concrete Centre on concrete performance and design, with Mineral Products Association on constituent materials and with the Construction Products Association on building regulations.

High-impact topics requiring significant investment of time in the past year have included work on Environmental Product Declarations Standards (EPDs), Responsible Sourcing Standards and Building Information Modelling (BIM).

Standards for EPDs will heavily impact on the future environmental competitiveness of our products, and will require significant ongoing effort and input. Responsible Sourcing Standards continue to develop and British Precast is working hard to ensure the positive benefits to our sector, gained over recent years, are maintained.

Understanding the implications of BIM on behalf of members and determining appropriate collective actions have been a key feature of the past year.

Technical input to standards and regulations results in changes which need to be communicated to members and their direct and indirect customers. Seminars and briefing notes for members are developed to ensure proposed technical changes can be incorporated into businesses in the most cost-effective manner. Investment of time, energy and money in technical guidance and technical support for contractors, clients and designers is worthwhile, as it facilitates understanding of how to use and specify precast products.

Our gratitude is extended to all our members who have helped with our technical work in the past year, and appreciation in anticipation of your future contributions.

Marketing

Concrete and masonry is long lasting, local and low carbon. British Precast members are industry leaders as signatories to both our Sustainability and Health and Safety charters. We communicate these messages directly and through product associations and The Concrete Centre.

Ecobuild 2016 was a great success.
The Concrete and Masonry Pavilion provided visitors with guidance and expertise. The busy High Performance Housing stand included live demonstrations and construction details.
Book a stand early for Ecobuild 2017!

The British Precast website has been relaunched with new underpinning software. Social media use is consistently on the rise and our Twitter account (***@British_Precast***) enables connection with notable figures in industry and the public.

We are developing the purpose of our annual Golf Day to be an opportunity for members to entertain clients and to communicate to these clients the benefits of choosing our members as their suppliers. The next event is on June 15th 2016.

Our annual PRECAST exhibition is a full day event in May and gives suppliers to the industry a fantastic chance to showcase their products and services to manufacturers, and for manufacturers to get key briefings and supplier updates all on a single day.

Our Annual Awards provide the vehicle to gather together and celebrate best practice across 4 categories. The short listed entries for 2016 are introduced in the following pages. We also continue with our annual Creativity in Concrete Award to raise the profile of British precast with designers.

The Creativity in Concrete Award 2015 was presented to Heatherwick Studio.

Heatherwick Studio is internationally recognised for its imaginative work in architecture, design, sculpture and urban infrastructure. It has a strong reputation for artistic thinking and is renowned for remarkable craftsmanship using diverse materials.

Projects such as the stunning Nanyang Learning Hub in Singapore and the forthcoming Zeitz Museum of Contemporary Art Africa (MOCAA) in Cape Town, South Africa demonstrate Heatherwick Studio's ability to explore extraordinary use of concrete.

For a list of previous winners visit ***www.BritishPrecast.org.***

Best Practice Awards 2016

Health & Safety Award: 2016 Shortlist

1 SAFE STRESSING - FORTERRA

Notwithstanding a high score on their mandatory safe stressing audit by British Precast, Forterra looked for other ways of improving safety during stressing operations, and came up with a number of further improvements worthy of consideration by companies engaged in similar activities.

Improvements to Safe systems of work, additional safeguards against potential problems and additional protection from wire slippages combined to produced even higher levels of Safety.

2 REDESIGN OF MOULD CARRIER CASINGS TO ALLOW SAFE REMOVAL OF POLES AND CARRIERS - BRETT LANDSCAPING & BUILDING PRODUCTS

This project addressed handling problems arising from the lifting and slinging of heavy pieces of equipment during maintenance.

Working in partnership with the machine manufacturer, Brett devised a modification enabling easier handling of smaller or lighter components, improving safety and reducing downtime.

The machine manufacturer now offers retro fitting on existing machines and is providing this as standard on new machines, and this has resulted in a world-wide safety improvement.

3 PROJECT TO IMPROVE HANDLING PRECAST PRODUCTS - LONGLEY CONCRETE

Longley Concrete instigated a supply chain initiative, which through the elimination of webbing slings improves lifting operations from production, through haulage, and on to the end user.

Identified through analysis of near miss incidents data, the use of vacuum lifters and lifting chains & anchors has improved safety levels, and has also resulted in increased efficiency, leading to significant cost savings for the business.

4 TOUCH SCREEN PORTAL - FP MCCANN

F P McCann has developed an innovative way of providing and processing information at shop floor level, through the use of a 'Touch Screen Portal' or 'kiosk' system.

The portal accesses an integrated safety management system which allows for real time monitoring of operations, integration of paper free maintenance systems and full Health and Safety information and reporting, linked into other company systems.

5 PATIO PROJECT PACKBUILD AUTOMATION - BRETT LANDSCAPING & BUILDING PRODUCTS

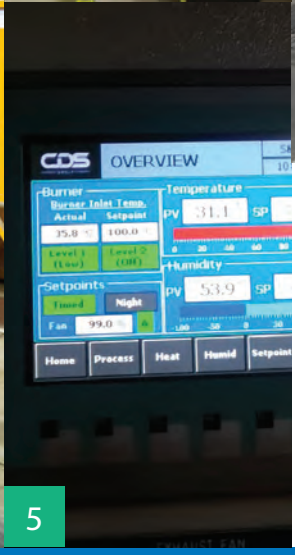
Brett Landscaping have developed automated pack building operations at the Pocklington Plant, where a high risk manual handling operation has been engineered out through the re-design and automation of the process.

Increased productivity, reduced risk to operators and flexibility of packing operations highlight, in response to customer demand, a combined improvement of real commercial value.

6 FACTORY IMPROVEMENT WORKS - STERLING SERVICES

Sterling Services have introduced improvements to an aging small factory site systematically and effectively, targeting both quality and housekeeping issues together.

The changes to the site resulted in significant improvements to site transport and employee welfare; which was in turn motivational to staff and led to an improved acceptance of health and safety procedures.



Sustainability Award: 2016 Shortlist *sponsored by GCP*

1 AQUAFLOW THERMAPAVE - FORMPAVE

The Aquaflow Thermapave system combineds a permeable paving SuDS solution with an underground ground source heat pump system which collects heat energy from the ground under the permeable paving installation and uses that heat for space heating and to heat hot water in buildings. Heat pumps have an average potential saving of over 60% compared to conventional building heating systems. The new system was patented by Formpave.

2 FAMILY OPEN DAY - FORTERRA

Forterra organised an Open Family Day on 3rd Oct 2015 where 3,000 people from staff and neighbouring community families were invited to a number of Forterra sites to learn more about the company and get to know the local site management teams in an informal setting. The event was also a chance for staff families to learn more about the company and get further assurance about the standards of their family members' workplace. The event was mainly inspired by Forterra's main key sustainability "stronger together" principle.

3 ELECTRONIC ENERGY ACTION PLAN INTEGRATION PROJECT - MARSHALLS

In 2015, Marshalls introduced an electronic system to allow operational sites to develop energy action plans within the software package already used for audit compliance. The project was fully implemented in 2015, being used on all 13 precast concrete sites in the UK. In 2015 it has helped identify just over 3.5 million kWh energy savings. This equates to 3.41% decrease in total fuel consumption. Its ease of use for operatives (through iPad and other means) contributed to its success. The system has helped Marshalls achieve ISO 50001 certification.

4 GREEN ELECTRICITY GENERATION - TECHRETE

Techrete was one of the first precast companies in the UK to be certified to ISO 50001 on Energy Management Systems. Following a feasibility study conducted in 2015, Techrete took the decision to invest in a 250kWh solar photovoltaic system for its factory in Brigg, North Lincs. The system was installed at the roof of the main production hall and is expected to supply 25.6% of Techrete's current factory electricity demand with significant carbon savings reaching up to 125 tonnes CO2 per annum and payback within 4.62 years.

5 WHITTLESEY BLOCK DRYER UPGRADE PROJECT - FORTERRA

Forterra Whittlesey block plant implemented a dryer upgrade project which involved installing a direct fire burner and control panel, giving them significant control of the temperature and fan speed. Forterra also installed insulation panels around the kiln area. All this contributed to an overall energy saving of 1.4%. A 10% saving in LPG consumption over the previous year was also reported despite an increase in production.

gcp applied technologies
GRACE CONSTRUCTION & PACKAGING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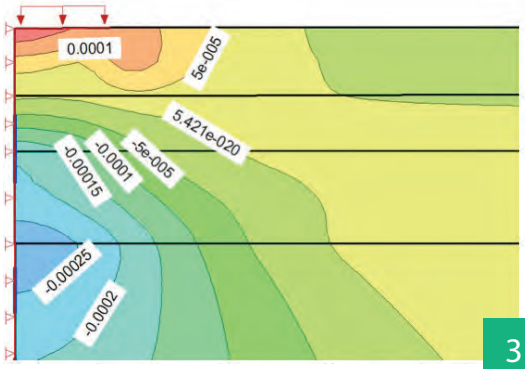

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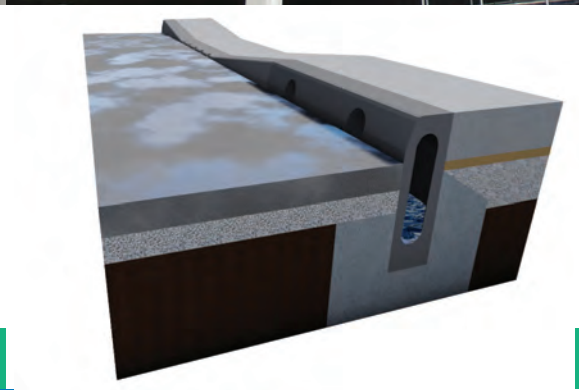
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Innovation Award: 2016 Shortlist *sponsored by Chryso UK*

1 ECO COUNTRYSIDE CYCLE KERB SUPPLIED TO TRANSPORT FOR LONDON CYCLE SUPER HIGHWAY BOW TO ALDGATE - CHARCON

The Cycle Super Highway 2 is a TfL project to make the route safer for cyclists and other road users. TfL and its contractor enlisted Charcon to propose a safe, sustainable solution. Following the deaths of two cyclists Charcon quickly developed a new cycle kerb segregation system. It replicates the aesthetics of natural granite but, using 82% recycled and secondary material content, offers a 33% carbon footprint reduction. The kerb is also much quicker to lay meaning that traffic disruption was reduced and that cycle lanes were opened to cyclists sooner.

2 INNOVATING PRECAST OPPORTUNITIES FROM INSITU FRAME DESIGNS - PCE LTD

PCE Ltd's approach to design using precast concrete enables it to offer clients an alternative to insitu concrete frames by:

- evaluating a project's structural frame and performance requirements;
- designing solutions, using BIM, that maximise the use of precast components;
- designing components to ensure easy, safe and fast manufacture, delivery and erection;
- incorporating PCE Ltd commodity products, such as the PCE GT floor units for clear span car parks.

The approach has resulted in a significant volume of precast concrete that otherwise would not have been required as the original designs utilised insitu concrete.

3 MARSHALLS NEW COMMERCIAL PAVEMENT DESIGN APPROACH - MARSHALLS

Marshalls new approach to structural design for commercial pavements pushes boundaries in three key areas:

- a design approach that supports the demands of modern trafficking by having eleven loading categories instead of six;
- a clearer understanding of pavement design make-ups for the commercial sector by placing all types (block, paving, setts and slabs) under one roof;
- a more simplified approach to pavement specification using software which creates 3-D pavement visualisation, CAD details and specification clauses for the customer.

4 MONO BEANY - MARSHALLS

Mono Beany is a combined kerb and drainage unit that is manufactured in 1m lengths.
During manufacture a complex shape polyethylene core acts as a piece of formwork to Marshalls' latest concrete technology. Once the unit is complete the polyethylene core forms an integral drainage element within each unit giving superb inlet and flow characteristics.

The one piece aspect to Mono Beany allows the user to install the combined kerb and drainage system quickly - a 42% increase in output is reported for one smart motorway scheme.

5 SAFETY LIGHT GATE, AUTO BLOCK MEASURING AND FIXED GUARDING - TARMAC

This safety project addressed operator interaction with conveyors in a block factory. The conveyors lacked comprehensive guarding and the control systems cut the control feed, but left power connected. Safety was addressed using light gate safety beams along with fixed guarding and an auto block measuring system. The new control system extends isolation to include power. Operators now check weigh the blocks and laser measure their height with no physical intervention. The proposed system is fully automatic, only requiring reset should the system be activated accidentally or through daily guard checking.

CHRYSO
CHEMICAL SOLUTIONS FOR THE CONSTRUCTION MATERIALS INDUSTRY

Project Award: 2016 Shortlist *sponsored by UK CARES*

1 CAPITAL SQUARE, CARDIFF - STERLING SERVICES

Sterling Services worked with Rio Architects to evolve a facade concept of discrete linear elements into a solution of 400 picture frame units of 3 sizes. This brought several advantages for all project stages. To ensure the acid etched units had colour consistency, aggregates from an area of the source quarry were stockpiled specifically for this project and were drawn down over the 6 month manufacturing period. Sterling services also addressed transport issues by designing bespoke steelwork box frames to increase carrying capacity. These were fitted to three lorries and reduced total vehicle miles, overcame site storage and vehicle access constraints and maximised erection speed.

2 M1 BARRIER: J15 TO J16 - DELTA BLOC UK

Delta Block UK, working with BAM Nuttall/ Morgan Sindall JV, provided 10km of precast barrier to replace expired steel barriers. This is the largest section of precast barrier on the UK network. All barriers are now required to be long lasting, robust concrete barriers, but Delta Block has championed the precast option and delivered cost and time savings, reduced disruptions and improved safety. The project has provided real data which supports the wider use of precast barriers on the smart motorway programme.

3 BAY CAMPUS, SWANSEA UNIVERSITY - AGGREGATE INDUSTRIES

Aggregate Industries more than satisfied their client Vinci Construction, who was responsible for Swansea University's new Bay Campus in delivering over 4000 tonnes of products in a 6 month period. Project Manager John Sheehan enthused "by working with AI from the outset we have benefitted from their technical abilities as well as products of the highest quality". AI put in place dedicated staff to meet the logistical challenge of delivering the volume and range of contemporary and eco-friendly paving and kerb products and ensure customer satisfaction. AI have won phase 2 of Bay Campus.

4 VOLKSWAGEN CAR SHOWROOM, SERVICE CENTRE, MSCP, LONDON - PCE LTD

PCE delivered a multi-functional building for Volkswagen over 5 floors delivering areas for a showroom, service centre, offices and car parking (7300m^2) to a busy congested London site. They worked with main contractor Longcross to win the project with an alternative tender by proposing a precast solution. This solution utilized innovative GT slabs, box units for stair/lift cores, removed a central row of columns, reduced lorry loads, reduced operatives on site, incorporated architectural circular white columns and delivered the project earlier. Furthermore, 3-D modelling during design and tight production control avoided clashes and erection delays. The project is a credit to PCE and their precast manufacturer suppliers, British Precast members: FP McCann, Evans Concrete, Banagher Precast and Ebor Concrete.

Product Associations

British Precast members are eligible to join relevant product associations which provide a forum to address issues for a product or range of products. Their activities over the last year are reviewed in the following pages.

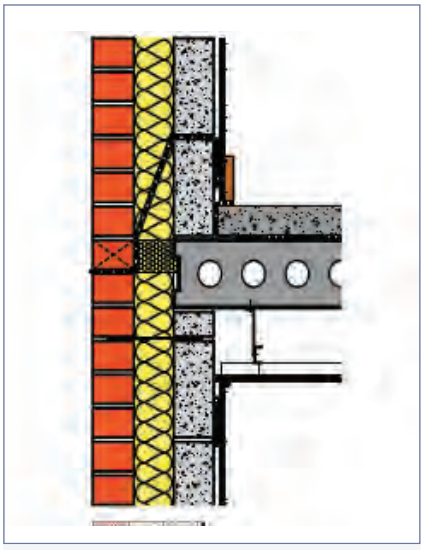
AIRCRETE PRODUCTS ASSOCIATION (APA)

The Aircrete Products Association (APA) operates through three committees; Principals, Marketing and Technical. Together, they work to promote the use of aircrete and ensure that the sector is leading technical developments.

APA work with Modern Masonry Alliance to promote masonry solutions in the UK market and were part of the high performance Housing stand at Ecobuild 2016 where a manufacturing video of aircrete was screened as well as full size examples of as-built thermal bridging details were installed. The APA website is regularly updated with the latest news and technical information and includes datasheets available for visitors to download, covering performance, applications and systems of aircrete use.

APA are members of the European Autoclaved Aerated Concrete Association (EAACA). The main focus of EEACA currently is the Energy Performance in Buildings Directive and the definition of nearly zero energy buildings, which comes into force at the end of 2020. In addition the 'circular economy' package requires further investigation after a number of draft Directives have been published.

The APA technical committee have completed work on thermal bridging details with construction details for solid wall with external insulation now live on the LABC website, alongside all other details. The committee have commissioned testing to respond to a threat arising from a German proposed amendment to Eurocode 6 relating to concentrated loads on walls. The committee chair, Cliff Fudge holds the chairmanship of the NHBC render task group which was formed following concern about render failures which are restricted to some proprietary renders and do not relate to the masonry substrate.



Aircrete block wall, Upper Floor, Detail CD 0030
All Details available from LABC website: ***www.labc.co.uk***

ARCHITECTURAL & STRUCTURAL PRECAST ASSOCIATION (ASPA)

ASPA has been very active over the last 12 months. The group continued its PR campaign with a wide range of articles and features at industry magazines and literature covering a wide range of office building, educational, multi-storey car park and infrastructure projects. A further issue of the main Association newsletter ASPANEWS is published in summer 2016.

Much progress was also achieved with ASPA's ongoing projects. Members of ASPA are developing the final and most crucial chapters of the Code of Practice (CoP) for Safe Installation of Structural and Architectural Precast, which merges two earlier Codes of Practice originally developed over 15 years ago. A workshop on cranage for members, installers and crane operators has been arranged to develop best practice in this critical area. The revision of the main architectural precast cladding standard BS 8297 has also progressed significantly with support and help from major organisations within the industry such as NHBC.

ASPA has recently published three carbon footprinting factsheets covering brick-faced/reconstituted Portland stone architectural cladding and structural precast. These were developed using some of the rules and principles set in PAS 2050. The next step for ASPA is to develop Environmental Product Declarations (EPDs) covering these same products. Work on this has already started and a result is expected within the next 12 months. ASPA members are also active in the work led by British Precast on Building Information Modelling (BIM). Work has already started on the first of ASPA's Product Data Templates (PDT), which are crucial for products' inclusion in BIM.

BOX CULVERT ASSOCIATION (BCA)

BCA represents the three member companies that produce UK manufactured EN 14844 compliant box culvert: Forterra, Milton Precast and F P McCann.

The BCA continued its rebranding drive with updating, revision and rebranding of all the Association's literature. The two technical notes on the introduction of Eurocodes are also expected to be reviewed ready for further revision and updating. All the documents will be publically available at BCA's new website: ***www.boxculvert.org.uk***

BCA's main project currently is a new guidance video demonstrating best practice in regards to the storage handling, transport and installation of box culvert systems. The development of the world's first Environmental Product Declarations (EPDs) for box culverts is another ongoing project which will complement the box culverts carbon footprinting factsheet launched in 2014.

BCA is developing further marketing activity to highlight the versatility and flexibility of box culverts and how it can be used to offer improved sustainable drainage systems and reduced environmental impact. BCA also have a responsibility to educate the civils sector about the design requirements of box culverts in accordance with Eurocodes and how a developer/ specifier can tell that his design and products comply with all standards and regulations (including CE Marking requirements).

CONCRETE BLOCK ASSOCIATION (CBA)

CBA represents the vast majority of all block manufacturers in the UK and provides technical and marketing benefits to members.

Access to CBA technical expertise is a significant benefit of membership. In addition a number of projects have been undertaken this year to benefit members. Three examples are: The CBA U-value calculator has been amended under a contract by BRE; 44 additional thermal bridging details have been added to the initial batch to create a comprehensive portfolio of calculated ψ-values and f-values all of which are freely available; CBA have commissioned a test programme on concentrated loads to counter a German proposal to amend Eurocode 6 which could lead to more conservative designs.

CBA members receive the Newsround; a bi-monthly newsletter with updates on its latest activities, and statistics on material prices, housing starts, concrete block sales and other areas. Also included are reports from the Technical Committee, the Modern Masonry Alliance and British Precast to keep members informed on all developments. CBA publishes a promotional magazine, CBA Update, annually for members to use internally and externally and a new website is launched in Spring 2016.

CBA had a major presence at Ecobuild 2016 as part of the High Performance Housing stand in the Concrete and Masonry Pavilion. The stand highlighted that masonry can be the basis of housing that meets and exceeds modern standards.

The Scotland Working Group addresses the lowest market share of masonry in housing in the UK, and in the last year three events have ensured designers and developers know the benefits of masonry.

A still from a concrete block fire test video shown at Ecobuild and now available at ***www.modernmasonry.co.uk***, with thanks to Plasmor.

CONCRETE PIPELINE SYSTEMS ASSOCIATION (CPSA)

CPSA ran two trade press advertising and PR campaigns throughout 2015, one relating to the installed cost saving benefits derived from structural/bedding design efficiencies of concrete pipes and the other relating to the asset lifetime benefits of precast concrete sustainable drainage (SuDS) solutions.

A new CPD module was created to complement the bedding design campaign, bringing the total to four seminars, all independently accredited by CIWEM and Construction CPD Certification Service.

CPSA continues to support the annual Water Industry Achievement Awards and is sponsoring the Sustainable Drainage and Flood Management award category for a second year. The industry's positioning within the SuDS market is enhanced with a number of sponsorship arrangements including CIRIA's SuDS Manual update, which concluded in November 2015 with the public launch at the House of Commons. Sponsorship continues with the Susdrain.org initiative and a new CIRIA project relating to the construction of SuDS.

CPSA has been shortlisted as a finalist in the Health & Safety (The Concrete Pipe Lifter) and Sustainability (Circular Precast Concrete Manhole Base System) award categories of the 2016 Ground Engineering Awards.

INTERPAVE

Interpave is the trade association for the precast concrete paving industry in the UK, representing the interests of its members who produce around 85% of the UK's precast concrete paving products. This includes concrete block paving, paving flags, kerbs, accessories and ancillary products used in the construction of hard landscape surfacing.

Many publications continue to be produced by Interpave in support of concrete block permeable paving, governmental guidelines and changes to legislation aimed at using Sustainable Drainage Systems (SuDS) to help prevent flooding - particularly important in view of ever-increasing flooding events across the country. Interpave has been working hard to provide the necessary changes to design and installation standards, as well as technical support, to ensure that the paving installation industry is well prepared to meet these changes. As part of its continued commitment to supporting the wider paving industry, Interpave produces regular e-bulletins to ensure that the latest information is available and publicised alongside our highly successful website which has a wide range of technical, advisory and supportive marketing information.

Interpave continues to work with the Health and Safety Executive (HSE) on a range of issues. This includes contributing to the working group set up to minimise risks associated with all forms of road construction, and to reduce operatives' exposure to potentially harmful operations that can arise in road construction and maintenance.

The association is currently working on further development of paving design and installation standards with BSI to ensure usability for both specifiers and installers alike. As national Government develops new legislation key publications and case studies are continuously updated to provide the latest guidance - particularly on permeable paving. The association actively engaged in the development of national standards for sustainable drainage, in support of the Flood and Water Management Act and ongoing legislative changes, helping to create the permeable paving chapter for the second edition of the CIRIA SuDS manual.

Being fully committed to the effective training of installers and improving the quality of installation of their products, Interpave members contributed to the development of the National Highways Sector Scheme for paving, NHSS 30 - The Quality Management of the Installation, Maintenance and Repair of Modular Paving; actively participating in the development of the scheme, documentation, training and assessment requirements, and the development of training guides.

PRECAST FLOORING FEDERATION (PFF)

PFF promotes flooring products across all building sectors, focusing on key benefits such as precast flooring's excellent performance characteristics in terms of acoustics, fire, thermal mass and robustness, as well as speed of construction. In addition, PFF members provide health and safety, quality and sustainability benefits to their clients. The two specific areas for marketing activity are upper floors in housing and flooring on steel framed structures.

Members commit to comply with the Codes of Practice for both safe stressing and the safe installation of precast concrete flooring and associated components. This commitment provides a positive differentiator for PFF members working in a marketplace that increasingly recognises the importance of health and safety. In 2016 the PFF will review and update the Code of Practice for safe installation before going on to review the Code of Practice for safe stressing.

Technical work underpins much of the marketing activity but also addresses issues in product standards; building regulations; queries from designers, contractors, clients and building control; and guidance for designers. The data sheets on the PFF website are in the process of being updated, in particular to show how hollowcore and beam and block flooring can be used to meet the requirements of the Building Regulations. Work is also being done by Glasgow Caledonian University to determine thermal bridge parameters for precast concrete intermediate floors in homes constructed using masonry. Members continue to benefit from PFF's statistical service, which provides historical data comprising volume/tonnage/linear metre used of each product.

The benefits of precast flooring featured strongly in the High Performance Housing stand at Ecobuild 2016 in March. The display attracted great interest from architects, developers and building control surveyors, and highlighted our members. The benefits of squeak- free flooring which is fire resistant, offers thermal mass and acoustic separation warrants wider use for upper floors in housing. The speed of installation and thermal mass benefits of precast floors on steel frames continue to be the basis for a compelling case in other sectors.

British Precast product associations; the Aircrete Products Association, Concrete Block Association and the Precast Flooring Federation collaborated to build construction details for the High Performance Housing stand at Ecobuild 2016.

Affiliates

British Precast host affiliated groups who have a common interest in particular markets or aspects of installation.

INTERLAY

Interlay, the Association of Paving Installers, is the only independent trade association for concrete block paving and other modular paving installation contractors across the UK.

Interlay staff and members have over the past year, with support from Construction Skills, Interpave and other industry leads, contributed to the creation of the National Highways Sector Scheme (NHSS) 30. The scheme is aimed at improving the installation quality of modular paving. A dedicated online hub detailing the training and support available to installers is hosted and maintained by Interlay (***www.interlay.org.uk/nhss30***). The Highways Agency now requires the use of registered installers ahead of non-registered ones wherever they are available.

The National Highways Sector Scheme 30, 'The Quality Management of the Installation, Maintenance and Repair of Modular Paving', seeks to improve the installed quality of all types of modular paving including concrete blocks, flags, kerbs and ancillary products used in road construction. The Scheme aims to provide an industry benchmark, ensuring project processes are planned well and use properly trained and competent installers, verified by vocational qualifications and supported by the introduction of a CSCS card.

NHSS 30 focuses on continuous improvement, quality of installation and reduced ongoing costs for both clients and suppliers. To support this, a number of installation training manuals are being developed. The scheme was developed by a dedicated technical advisory committee which includes representatives from across the paving sector - including clients, contractors, manufacturers, suppliers, trade associations, training organisations and certification bodies, with Interlay providing the Secretariat and logistical support.

The Association continues to embrace new technologies with their multi-platform website supporting mobile and tablet technologies and we also have an active Twitter feed – follow us ***@Interlay1***.

Ongoing work at Interlay aims to raise awareness of the Association and increasing its membership base. To reflect members' increasing range of skills, Interlay amended the description of their activities to the broader 'Association of Paving Installers' in line with the development of the highways sector scheme and in support of the good installation of domestic paving; an area in which Interlay aims to improve standards in the future.

MODERN MASONRY ALLIANCE (MMA)

The vision of Modern Masonry Alliance is to maximise the market share of masonry construction.

The key messages are:

- Masonry construction is the best solution based on criteria of cost, time, quality, performance and sustainability.
- Comparison with timber and steel solutions, whether they be labelled "off-site" or " modern methods" shows masonry to be the best solution.
- The masonry sector has the required capacity to deliver the demand from the forecast increase in housing and is investing further.

Lobbying

There are 4 government departments with whom we have been engaged to positively influence the impact they have on material decision makers: BIS, DECC, DEFRA and DCLG. We have successfully lobbied BRE on their new Home Quality Mark and the recently disbanded Zero Carbon Hub on their overheating guidance. We continue to work with HBF and for example, had a Principals lunch in the autumn.

Marketing

In addition to events, advertising and PR, three specific initiatives of note are described below.

A new website has been launched with 100% new content to explain the benefits of masonry and the options available. It also provides an introduction and signpost to more detailed technical guidance.

A series of internal briefings are being published for members to widen the understanding of the technical benefits of masonry over timber. These will equip ambassadors for masonry over timber with key messages.

The MMA team were instrumental in working with members to deliver the High Performance Housing stand at Ecobuild.

New MMA brochure on why to choose masonry.

Mineral Products Association (MPA)

Since its formation in 2009 the Mineral Products Association (MPA) has established itself as the sectoral voice of the mineral products and quarrying industry representing over 480 companies throughout the UK including 11 international businesses and 470 independent SMEs. This 'family' of common interests relies on close working relationships with MPAs affiliated members in QPA Northern Ireland, MPA Scotland, British Precast, the British Association of Reinforcement and the Refined Bitumen Association.

A strength of the MPA model is the union of thinking and dialogue which enables a common approach to strategic issues to be taken whilst accommodating local approaches within the devolved administrations. Key issues such as Health & Safety, Resource use, Legislation and Regulation, Taxation, Technical Standards, Carbon Reduction, Biodiversity require a common response if the industry is to be recognised as being coherent, competent and contemporary. An increasing focus on the role and benefits of our products 'in use' has strengthened our narrative and helped us highlight the sustainability of what our members do. For a sector with an annual turnover of £21Bn to the UK economy each year with a GVA of £6.7Bn employing 80,000 people directly and supporting 3.3m in the supply chain, the construction industry's biggest supplier, it is important that we are well organised, engaged and delivering. As we improve our understanding of the significance of our sector we have to communicate that message effectively to key stakeholders using conventional publications, advocacy and social media.

Ensuring that we are evidence based and able to provide reliable and quality data and information covering all of our key issues is vital.

MPA is now developing its ambitions for 2025 to shape how the industry wants to be perceived and to do justice to a great industry which needs to be attractive to the brightest and best of the current and next generation of young people looking to invest their careers. We are living in an era where skills shortages are becoming increasingly evident and the presumption is that all work is inside and electronically based! This is an exciting agenda which affects all members to some degree across the UK. As the largest production industry in the UK involving 'all the talents' and 'all the sciences' we have so much to offer. Being ubiquitous, local, and covering so many disciplines how can we not be attractive!

As MPA has grown it has developed a clear and shared agenda to protect its members' interests with an unambiguous, aligned and stronger voice. British Precast is a dynamic and active player in the MPA family and the views of its members add real value to the development of the industry and its relationships with key stakeholders. The union we are privileged to work with reflects the inherent diversity of its membership which when harnessed for the common good is a powerful force.

The service level agreement between MPA and British Precast is maturing and strengthening as the synergies are realised and the thinking integrated. It is an important and valuable relationship that we believe will go from strength to strength and long may it continue.

The Concrete Centre

The Concrete Centre provides material, design and construction guidance on the end-use of concrete and masonry and influences the design environment in which this guidance is used.

The primary role of The Concrete Centre is to enable concrete and masonry to be chosen by designers and specifiers. This includes representing the industry in the development of design codes and standards, such as Eurocode 2, and translating these changes into the latest best practice and training for designers.

The Concrete Centre guidance delivers the 'why' and 'how' of using concrete and masonry and this technical expertise has credibility across the industry. By offering expert advice on the full range of concrete and masonry solutions available, The Concrete Centre can positively influence specifiers to choose an optimum concrete and masonry solution for their project over alternative materials.

The Concrete Centre's vision is to make concrete and masonry the material of choice and protect and increase the use of concrete and masonry over alternative materials. To achieve this, The Concrete Centre uses its technical capability and marketing capacity to influence stakeholders making material choices such as engineers, architects, repeat clients, contractors and developers. In addition, The Concrete Centre works with organisations and stakeholders that influence material choice including non-government bodies such as BRE.

While individual companies may lack the capability and resources to influence material choice across this spectrum of professions, The Concrete Centre has the expertise and exists on behalf of, and for the benefit of, all in the concrete and masonry sector and the wider construction industry. During the last year, The Concrete Centre had thousands of face-to-face contacts with specifiers, offering expert advice in relation to their current and forthcoming projects.

The Concrete Centre does not work in isolation and, in the last year, collaborations have deepened. Most recently, collaborating with British Precast to deliver the Concrete and Masonry Pavilion at Ecobuild 2016. Exhibitors within the Pavilion included the Aircrete Products Association, Concrete Block Association, Mortar Industry Association, Precast Flooring Federation and UK CARES, among others. The Concrete Centre seminar theatre attracted large audiences of specifiers, contractors and clients to the pavilion, as well as hosting key industry events, such as the launch of the Concrete Industry Sustainability Performance Report, published by The Concrete Centre on behalf of the Sustainable Concrete Forum and the launch of Product Data templates and the EPD project.

Full Members List

ABM Precast Solutions	Decomo UK	Patersons of Greenoakhill
Acheson & Glover Precast	Delta Bloc UK	Plasmor
ACP (Concrete)	E & JW Glendinning	Premium Concrete Products
Aggregate Industries (UK)	Ebor Concretes	Quinn Building Products
Amber Precast	Elite Precast Concrete	Robeslee Concrete Company
Banagher Precast Concrete	Evans Concrete Products	S Morris
Barcon Systems	F P McCann	Sellite Blocks
Barnetts of Buglawton	Forterra Building Products	Skene Group Construction Services
Besblock	Forticrete	Stanton Bonna Concrete
Bison Manufacturing	H+H UK	Sterling Services
Blanc de Bierges	Hillhouse Quarry Group	Stocks Blocks
Breedon Aggregates Scotland	Interfuse	Stowell Concrete
Brett Landscaping & Building Products	Jordan Concrete	Supreme Concrete
Broome Bros	Laird Bros	Tarmac Building Products
CEMEX	Lignacite	Techrete
Charcon Construction Solutions	Litecast	Thakeham Tiles
Cheshire Concrete Products	Longley Concrete	Thomas Armstrong (Concrete Blocks)
Collier & Henry Concrete Floors	Marshalls plc	Thorp Precast
Cornish Concrete Products	Milton Precast	Townscape Products
CPM Group	Mona Precast	TT Concrete Products
Creagh Concrete Products	Naylor Concrete Products	WDL Concrete Products
Cross Concrete Flooring	Newlay Concrete	William Rainford (Holdings)

Associate Members List

Adomast Manufacturing	Hanson Cement	Precast Construction Technology
Advantage Precast	Havsco	Precast New Zealand Incorporated
BASF Construction Chemicals	Hendriks Precon B.V	Precast/Prestressed Concrete Institute
BDS Marketing Research	Hickman & Love (Tipton)	Pressvess
Besser Company	Hope Cement	Probst Handling Equipment
Bianchi Casseforme SRL	Howard Taylor Consultants	Progress Group
BRE	Huntsman Pigments	Prothious Engineering Services Pvt.
C & CA Cement and Concrete Associates	Hydronix	PUK
Canadian Precast Institute	Identification Technologies Scotland	Resiblock
Carbon8 Aggregates	Inter-Minerals	RFA-Tech
Caswick	Invisible Connections	Rocan Products
Cathay Industries	Isedio	Saint Gobain Weba, Leca
Cement and Concrete Association of New Zealand	J & P Building Systems	Search Consultancy
Cenin	Kingston University	Shuttlelift
Christeyns UK	KVM Industrimaskiner A/S	SIKA
Chryso UK	Lanxess	Simply Precast Accessories
Concrete Manufacturers Association - South Africa	Leading Edge Management	Spiroll Precast Services
Concrete Technology	Leeds Oil + Grease Co.	Strusoft UK
Conspare	Longrake Spar Co	T Grounds Associates
Construction Fixing Systems	Loughborough University	Tarmac Cement and Lime
Construx BUBA	Lytag	Tarmac Trading
Coote Engineering	Martek Industries	Trelleborg Pipe Seals
CPI Worldwide	Max Frank	Trimble Solutions (UK)
CSM Thermomass	Megasteel	UK Certification Authority for Reinforcing Steels
David Ball Group	Mentor Training Solutions	University College London
Doncaster College	Miers Construction Products	University of Brighton
Dundee College	Moulded Foams	University of Dundee
Ecoratio Europe B.V	N R Richards Associates	University of Nottingham
EKC Systems	National Precast Concrete Association Australia	University of Sheffield
Elematic OYJ	National Precast Concrete Association USA	University of Surrey
Elkem Materials	Natural Cement Distribution	University of Teesside
Erico Europe B.V.	Net-Temps	University of the West of England
Euro Accessories	Parex	University of the West of Scotland
Fosroc	Patterns and Moulds	Waldeck Engineering
Grace Construction Products	PCE	Yara UK
Graceland Fixing	Peikko UK	
GRS Bagging	PERI	
Halfen	Precast Concrete Structures	

The 2015 British Precast annual dinner.

British Precast is the trade association for precast concrete manufacturers and members of the supply chain.

British Precast is part of the Mineral Products Association, the trade association for the aggregates, asphalt, cement, concrete, dimension stone, lime, mortar and silica sand industries.

www.britishprecast.org

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