RAISING THE BAR INITIATIVE

It is now a mandatory requirement for all companies joining British Precast to sign up to the Precast Sustainability Charter. In order to help members keep track of their status under the Raising the Bar scheme and to highlight to clients, specifiers and customers the various management system credentials of members, British Precast maintains a microsite www.bpcfcharter.com

PRECAST SUSTAINABILITY CHARTER

The Sustainability Charter was launched on the 29th November 2007. Members were originally asked to make a voluntary commitment to the following requirements:

- Promote products that improve the quality and sustainability of the built environment
- Liaise effectively with local communities to foster mutual understanding and respect
- Manage all waste streams effectively and minimise waste disposal to landfill
- Measure, report and improve performance on sustainability issues
- Operate in an efficient and financially sustainable manner without compromising legal, quality or sustainability principles
- Operate to the highest ethical standards necessary to develop a skilled and competent workforce
- Operate in a responsible manner to protect employees, contractors and visitors
- Minimise pollution and emissions associated with production and transportation
- Recognise that competition encourages the development of more sustainable products and practices
- Use energy more effectively and reduce carbon footprints
- Use primary materials more efficiently and promote the use of secondary materials
- Use water more efficiently and minimise demands on mains water supplies

The precast industry was one of the first to complete a Resource Efficiency Action Plan (REAP) which looks at the entire supply chain of precast concrete and addresses resource efficiency at different stages beyond the precast factory gate. Measures are currently being introduced to integrate the REAP actions with the wider Sustainable Concrete Strategy. A copy of the Precast REAP can be found at the Sustainability Charter website www.bpcfcharter.com

The precast sector contributes to the concrete industry Sustainability Strategy and Roadmap to 2020, developed by the Sustainable Concrete Forum. More information on the industry sustainability strategy can be found at www.sustainableconcrete.org.uk

British Precast is working on Environmental Product Declaration (EPD) applications for a wide range of precast concrete products using the methodology recognised by CEN TC 350 standards (namely EN 15804). British Precast will work with the wider construction industry on supplying up-to-date and reliable embodied carbon data covering the main applications of precast concrete. British Precast is also exploring different means to support the precast concrete sector in adapting to the requirements of Building Information Modelling (BIM), notably in the development and supply of BIM enabled data and BIM objects.
These indicators provide an overview of the impact of the precast industry on society and environment, and how that impact is managed. The figures reported here relate to 2008 to 2013. Notes are included to indicate how performance has changed since 2008 and whether the 2020 targets are being achieved.

**OVERAGE**

Data for 2013 has been provided by 40 companies related to 115 production units and approximately 11.8 million tonnes of product. There are believed to be in the region of 600–700 precast production units in the UK and the total production output for the industry in 2013 is estimated to be around 18.8 million tonnes. It is estimated that data has been reported for approximately 64.3% of the year’s production, compared with 48.4% in 2012. The following statistics have been calculated from the data supplied.

**PRODUCTIVITY**

The companies reporting data in 2013 employed 3.8 full-time equivalent staff. This was higher than 3.76, 3.78, 6.58, and 6.56 in 2010, 2011 and 2012 respectively. But it was lower than in 2008 when around 8.88 full-time members of staff were employed.

1,482 tonnes of concrete was produced per employee in 2013, compared to 1,544 tonnes in 2012 and 1,589 tonnes in 2008.

**RESPECT FOR PEOPLE & THEIR LOCAL ENVIRONMENT**

48 (38.2%) sites operated formal local liaison schemes in 2013 compared to 56 (45.4%) sites in 2008. The percentage is roughly eight in eight.

**RESOURCE USE/WATER**

76.5 litres of mains water were used per tonne of concrete produced in 2013, compared with 80.8, 115.5, 89.4, 87.1 and 84.5 litres of mains water in 2008, 2009, 2010, 2011 and 2012 respectively. Ground water use per tonne of concrete was around 33.3 litres compared to 69.8 litres in 2012.

Water from other sources such as harvesting and recycling is not included in these figures.

Note: 9% reduction in mains water in 2013 compared to an industry target of 10% reduction by 2020.

**QUALITY & SATISFACTION**

10.5 M tonnes, or 91% of reported production (and 85.9% of sites covered), was covered by an ISO 9001 UKAS accredited quality management system or a recognised Manufacturer Quality Assurance Scheme in 2013, compared with 80%, 89.7%, 93.1%, 93.4% and 90.7% in 2008, 2009, 2010, 2011 and 2012 respectively.

**ENERGY INCLUDING CLIMATE CHANGE**

41.8 kWh of energy was used per tonne of concrete produced in 2013, of which 29.2% was gas, 23.5% was electricity and 21% was gas oil/diesel. This is the equivalent of 0.0319 tonnes of CO2 per tonne of concrete produced in 2012.

Note: Energy usage per tonne was reduced by 8.4% in 2013 compared to a target of 10% reduction by 2020.

**POLLUTION/EMISSIONS, INCLUDING TRANSPORT**

84.5% of reported production (around 71.7% of all sites) was covered by an ISO 14001 UKAS accredited environmental management system in 2013, compared with 76.8% in 2012. However, tonnage covered (39.9 M tonnes) were considerably higher compared to 2012 (8.86 M tonnes).

Note: 2020 target to increase coverage by Environmental Management Systems is yet to be achieved.

**HEALTH & SAFETY**

A maximum of 3,797 employees in the industry were covered by the Concrete Targets 2013 scheme in 2013. The estimated RIDDOR rate was per 10,000 employees. The percentage coverage is lower than the 98.5% in 2012 but the number of employees covered is over 1,000 higher. The percentage of employees covered by training remains higher than the 89.7% rate reported in 2008.

**RESOURCE USE/MATERIALS**

0.142 tonnes of cementsitious materials were used per tonne of precast produced in 2013, roughly consisting of 8% fly ash, 3.6% ground granulated blast furnace slag, 4.5% quicklime and 3.4% limestone. Overall replacement of Portland cement was almost 25% compared to 29% in 2012 and 20.8% in 2011.

Note: 2020 target of 25% alternative cement currently being achieved.

**COVERAGE**

It has been 7 years since our precast Sustainability Charter was launched, and 9 years since we published the first “Sustainability Matters”. However, this year is different as it has been by far the biggest for the Charter scheme. All of our 67 member companies have now joined the scheme and have committed to the sustainability principles laid out in the Charter. Achieving the 2020 targets for waste reduction, carbon and energy reduction, and coverage by environmental and quality management systems will not be an easy challenge, especially for companies joining the scheme recently. Nevertheless, our member companies are determined to beat those targets and some of the work we are currently doing with the Sustainable Concrete Strategy, on the Precast Resource Efficiency Action Plan (REAP) and Environmental Product Declarations (EPD) will help us to evaluate and share best practice among members. A few of our KPI’s last year were a little lower compared to 2012, though this is in part due to the fact that the number of companies submitted annual data. I’m confident that all of our members will rise to the challenge and meet industry targets by 2020.

Andrew Minson, Executive Director, British Precast and Precast Concrete Association