



# Sustainability Matters 2018

The Precast Sector's Sustainability Performance Report (2017 Data)

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We are pleased to report the precast industry's Key Performance Indicators for 2017 set against our targets to 2020 and our previous KPI figures for 2012. Despite the recent expansion of our Charter scheme, we are well on track to achieve most of our sustainability targets, including our target to reduce carbon emissions by 20% and reduce waste to landfill by less than 0.5 kg per tonne.

Since we launched the Sustainability Charter Scheme in 2008, the precast sector has reduced manufacturing carbon emissions by 28%, mains water consumption by 30% and factory waste to landfill by well over 96%.

Our sustainability auditing programme, launched four years ago as part of our Raising-the-Bar initiative, covered over 50 companies last year.

Following the publication of 7 British Precast EPDs last year, most of our member companies' products are also now covered by generic precast products' EPDs. And with the publication of new standards and guidance for surveyors, architects and other professionals on how to account for embodied carbon, and the government's new balanced scorecard approach to procurement (published last year), the progress

we are making on all our sustainability targets could not have come at a better time.

There is today more appreciation and a better understanding of the efforts of the precast sector and precast manufacturers on carbon, recycling and responsible sourcing.

British Precast will continue to engage with other partners within the construction industry through initiatives such as the Sustainable Concrete Forum strategy and performance report, the Resource Efficiency Action Plan (REAP) and the Green Construction Board's (GCB's) Infrastructure Carbon Review .

**Andrew Minson**  
Executive Director

## PROGRESS TOWARDS 2020 TARGETS



Members of British Precast can use this data capture exercise and the targets set by the industry to help demonstrate conformance to the Responsible Sourcing of Materials standard BES 6001 with regards to stakeholder engagement, etc.

Third party certification auditors are welcome to contact British Precast to gain confirmation that annual KPI data has been supplied. Note: some data items can only be estimated due to legal or technical restrictions.

# Key Performance Indicators

*These indicators provide an overview of the impact of the precast sector on society and environment, and how that impact is managed. The figures reported here relate to the 2017 performance compared to the previous year (2016) and targets baseline year (2012). Notes are included to indicate whether the 2020 targets are being achieved.*

## COVERAGE

Data for 2017 covers 129 production units and approximately 15.1 million tonnes of product. Total production output for the industry in 2017 is estimated to be just under 22 million tonnes. It is estimated that data has been reported for approximately 68.6% of the year's production, compared with 77.5% coverage in 2016 and 51.2% in 2012 (baseline year). We expect this percentage to go up as more member sites submit data over the next few months. The following statistics have been calculated from the data supplied to date:

## PRODUCTIVITY

The companies reporting data employed 8,750 full-time equivalent staff in 2017. This was higher than last year (8,298) and the baseline year (6,585 in 2012). However it is still lower than the number employed in 2013 when we reported 9,139 full-time members of staff.

1,566 tonnes of concrete were produced per employee in 2017, compared to 1,524 tonnes per employee in 2012.

## RESPECT FOR PEOPLE & THEIR LOCAL ENVIRONMENT

40 sites (31%) operated formal local liaison schemes during 2017. This is compared to 45 sites (30.56%) in 2016 and 49 sites (40.5%) in 2012.

## RESOURCE USE – WATER

79.7 litres of mains water were used per tonne of precast produced in 2017. This is compared with 76.77 litres and 84.5 litres of mains water reported in 2014 and 2012 respectively. Ground water use per tonne of precast was around 41.8 litres compared to 46.8 litres/t in 2012. Water from other sources such as harvesting and recycling is not included in these figures. **Note: The sector is still on-track to achieve the 2020 target of 20% mains water reduction.**

## RESOURCE USE – WASTE

30.52 kg of waste was produced per tonne of concrete in 2017, of which only 0.8% was disposed to landfill, 37.6% was recycled on site and 61.2% recycled off site. The overall waste figure is 23% lower than in 2014. Waste to landfill was no more than 0.25 kg per tonne in 2015, compared to 0.3 kg/t in 2016 and 1.76 kg/t in 2012. **Note: Waste to landfill has been reduced by 1.5 kg/t since 2012. The sector has already achieved the 2020 target for waste to landfill.**

## QUALITY & SATISFACTION

14.44 million tonnes, or 96% of reported production (92% of sites) was covered by an ISO 9001 UKAS accredited quality management system. This is compared with 86% and 90% in 2016 and 2012 respectively. **Note: The sector has already achieved the 2020 targets for Quality Management Systems.**

## ENERGY, INCLUDING CLIMATE CHANGE

Factory energy consumption increased slightly to 53.68 kWh per tonne of precast produced in 2017. This is compared to 53 kWh/t and 50.6kWh/t in 2016 and 2012 respectively. However, up to 2.8% of energy used was from renewable resources not subject to Feed-In Tariffs. 48% of the factories' energy was from gas, 15% was from electricity and 28% from gas oil/diesel. Factory carbon emissions dropped slightly to 12.5 kg CO<sub>2</sub> per

tonne, compared to 12.9 kg CO<sub>2</sub>/t and 14.22 kg CO<sub>2</sub>/t reported in 2016 and 2012 respectively. 41.7% of production is now covered by ISO 50001 compared to 34.9% in the previous year.

**Note: CO<sub>2</sub> emissions per tonne were reduced by 12.1% since 2012 but fossil fuel consumption was up by 3% since 2012. The sector is on track to achieve the 2020 targets for CO<sub>2</sub> emissions.**

## POLLUTION/EMISSIONS, INCLUDING TRANSPORT

91.4% of reported production tonnage (around 87.9% of all sites) was covered by an ISO 14001 or BS 8555 certified environmental management system in 2017. This is compared to 88.5% and 88.3% of reported production in 2016 and 2012 respectively.

**Note: The sector is on track to achieve the 2020 target for Environmental Management Systems coverage.**

For the ninth year, no environmental incidents (convictions) were recorded or reported to external regulatory authorities in 2017. Only one single incident was reported in 2008.

**Note: The 2020 target to maintain ZERO convictions is being achieved.**

Most companies in 2017 supplied transport data. Results show that the average lorry carried 19.46 tonnes of precast product per delivery. This is compared with averages of 19.88 and 17.45 tonnes in 2017 and 2012 respectively. The average delivery distance in 2017 was 110 km.

**Note: The 2015 target to improve the capture of transport data was successfully achieved.**

11.7 million tonnes, or 77.5% of reported production, were covered by BES 6001 certified Responsible Sourcing systems in 2015. This is the highest percentage reported by the scheme and compares favourably with 70.3% and 71.1% of reported production in 2017 and 2012 respectively. The percentage of sites covered by BES 6001 is around 67.4% of the total number of sites included.

**Note: The sector is on track to achieve the 2020 target for Responsible Sourcing coverage.**

## RESOURCE USE – MATERIALS

0.141 tonnes of cementitious materials were used per tonne of precast produced in 2017, roughly consisting of 8% fly ash, 3.4% ground granulated blastfurnace slag and 2% limestone fines. Overall replacement of Portland cement was around 18.1% in 2017 (23.8% if quicklime is included) compared to 14.0% and 18.8% in 2016 and 2012 respectively.

**Note: The sector is on track to achieve the 2020 target for alternative cement replacement.**

20.9% of aggregates used were of recycled or secondary origin compared to 21.8% and 20.3% in 2016 and 2012 respectively.

**Note: The 2020 Target of 25% recycled aggregates is yet to be achieved.**

## HEALTH & SAFETY

9.96 million tonnes, or 67.1%, of reported production was covered by an OHSAS 18001 UKAS certified health & safety management system in 2015, which is by far the highest coverage since the scheme started (compared to 58.16% in 2016 and 64.9% in 2012).

Our sector's LTIFR rate in 2017 was 6.66 per million hours compared to 6.62 in 2016 and 9.8 in 2012.

## EMPLOYMENT POLICIES INCLUDING TRAINING

97.12% of reported employees were covered by formal training and development policies in 2017. An average of 23.2 hours of training was provided per employee, which is almost double the 11.9 hours reported in baseline year 2012.

# Engagement in ICR, REAP, EPDs and other initiatives

As part of our Infrastructure Carbon Review (ICR) pledge and engagement with the industry, and through our current ICR Carbon Practitioners' Network, we supported and participated in the development of GCB's new "Carbon Management in infrastructure" E-Module, delivered through the Supply Chain School. At least one of our product associations is actively seeking implementation of PAS 2080 (The infrastructure Carbon Management standard).

Our current **Resource Efficiency Action Plan (REAP)** programme has recently been updated and will specifically target the post-gate stage within our products' life-cycle. A copy of our latest REAP report can be found at the British Precast website: <https://bit.ly/2Kt78Bo>

The precast sector continues to contribute to the concrete industry Sustainability Strategy and Roadmap to 2020. More information on the industry sustainability strategy can be found at [www.sustainableconcrete.org.uk](http://www.sustainableconcrete.org.uk).

Following the publication of seven generic **Environmental Product Declarations (EPDs)** covering all members' main precast products, our sector has become one of the first to be covered by verified and representative EPDs and carbon footprints. This year we will certify and publish more generic EPDs, covering more precast floor and wall solutions.



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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](http://www.britishprecast.org)

## British Precast

The Old Rectory, Main Street, Glenfield,  
Leicestershire LE3 8DG

Tel: 0116 232 5170

Email: [info@britishprecast.org](mailto:info@britishprecast.org)

Web: [www.britishprecast.org](http://www.britishprecast.org)

**Cover Image:** Use of concrete blocks (as shown) and aircrete blocks in traditional masonry homes deliver sustainable housing through resilience, excellent energy performance and use of local low carbon products.

 **British Precast**