## **Expanded Clay**

## sustainable production

Expanded clay is produced from naturally and abundantly available clay. The clay is extracted, pre-treated and introduced to rotary kilns. These kilns are heated to temperatures up to 1,150 °C and this process transforms the clay into various sized lightweight aggregates with a hard ceramic shell and a porous core.

To produce expanded clay high temperatures are necessary and the production is therefore energy intensive. However, it is also resource efficient at the same time with a yield of five cubic metres expanded clay from just one cubic metre of clay.

The clay is extracted from clay pits normally located close to the plants, thus keeping haulage costs and carbon emissions to a minimum. By considering biodiversity issues at the planning stage as well as during and after extraction we can ensure protection of habitats. The clay pits are restored and rehabilitated to both preserve biodiversity and create new natural habitats.

Once transported to the plant the clay is pretreated and processed in rotary kilns. After passing through the kiln the now expanded clay is cooled. A correct cooling process is essential to ensure a high-quality product. It also significantly improves the energy performance. As the hot clay cools, cold air is warmed and this heated air is used to dry, heat and expand the clay in the kiln.

Energy represents a significant part of the production cost of expanded clay. Over the

last few decades the industry has considerably reduced energy consumption and today all European plants use state of the art technology.

All European expanded clay plants are operated in compliance with the European Industrial Emissions Directive. The industry is focussing on continuous improvements and aims to use the best available technology.

"Just 1m<sup>3</sup> of natural and abundant clay can produce 5m<sup>3</sup> of high quality, efficient and competitive construction material "

## FROM 1m<sup>3</sup> CLAY TO 5m<sup>3</sup> EXPANDED CLAY



