

## **ABSTRACT**

The Flemish Centre for Best Available Techniques (BAT) is founded by the Flemish Government and is hosted by Vito. The BAT centre collects, evaluates and distributes information on environment friendly techniques. Moreover, it advises the Flemish authorities on how to translate this information into its environmental policy. Central in this translation is the concept "BAT" (Best Available Techniques). BAT corresponds to the techniques with the best environmental performance that can be introduced at a reasonable cost.

The objective of this study is to trace techniques that minimise environmental pollution caused by concrete mixing plants and the manufacturing of concrete products at a reasonable price. On the basis of the techniques selected as Best Available Techniques, recommendations concerning environmental permit legislation and promotion through investment support are presented to the Flemish Government.

Although concrete mixing plants and concrete products manufacturing plants have different end products, the production processes similar. Supply, storage and shipment of the raw materials, weighing and mixing of ingredients and supporting activities such as cleaning, maintenance and laboratory work are similar in both industries. Forming, modelling and finishing of concrete products are specific activities of the concrete products manufacturing industry, whereas truck transport of poured concrete to yards is linked to concrete mixing plants.

Emissions of cement and sand dust and noise nuisance are the most important environmental effects of both industries. The water consumption, discharge of waste water, soil contamination and energy consumption are also of concern. Ninety environmental techniques are discussed and BAT were selected. Examples are measures to reduce cement dust emission, waste water recovery, purification and reuse, the use of environmentally safe finishing products and the recycling of residues. Some techniques are only relevant for the reduction of local nuisance and hence are not sectoral BAT. Examples are the prevention of sand blowing and the containment of vibrating platforms.

On the basis of BAT, Vito recommends the Flemish authorities to consider permit conditions that prevent the discharge of process waste water into sewers and surface water.

The BAT selection was based on literature surveys, technical and socio-economic analyses, cost calculations, plant polls and discussions with industry experts, suppliers and specialists from (semi) public institutes. The formal consultation was organised by means of an advisory committee of which the composition is given in Annex 1.