

**Company:** CEMEX

**Location:** Bonnée, France

**Objective** Creation of a wetland with a pedagogical vocation and which provides a stopover place for the bird population and for the large mammals between the Val de Loire and the forest of Orléans.

**Context** Situated between the river Loire and the forest of Orléans, in France, the Valley of Bonnée is occupied by agricultural lands, forests and moors. The site is implemented next to a forest area identified as a ZNIEFF type I (natural area of ecological interest). Its main interest is the presence of Ospreys (*Pandion haliaetus*) and large ungulates.

- Site of 60 ha, in operation since 1980; 2 million tons of extracted aggregates
- Operated surface: 30 ha; restored surface: 22 ha; water surface: 15 to 17 ha according to the season

**Solution**

- Creation of 2 water planes which contribute to the diversification of the environment.
- Diversification of the contours of the banks which allows the creation of several different biotopes.
- Use of the fines coming from the washing of the extracted materials to restructure a steep plane which facilitates the access of the large mammals to one of the water planes.
- Maintenance of different types of siliceous and silico-calcareous grasslands; structuring of banks in steps.

**Result** According to a study made in 1993 by the IEA of Orléans, the water planes participate in the maintenance of the population of ungulates in the adjacent forests. In addition, the association of forests and ponds favors the appearance of sensitive species such as Osprey.

In 1996 an ecological expertise study, undertaken in the framework of a national research program on the wetlands generated by former aggregates operations, demonstrated the ecological interest of the site. This inventory was made up of: 138 vascular plant species, out of which 8 are rare species in the region; 22 species of nesting birds; 45 species, more or less regular, out of which 10 are listed in the Bird European Directive; 4 amphibians; 2 reptiles; 18 mammals.

In 2000, Les Naturalistes Orléanais updated the ornithological information and data about the site and pointed out the significant colonization made by wildlife in the same area.

The current wetland of 17 ha will be completed to include 43 ha by creating new environments of ecological interest and by opening an observatory of nature.

**Partners** CEMEX has established the quarry restoration project in partnership with the Institute of Applied Ecology (IEA) and the Naturalistes Orléanais. This partnership fits in the framework of the corporate partnership between CEMEX and BirdLife International.

