

BUILDING HOMES FOR WILDLIFE

GLOBAL

HEIDELBERGCEMENT GROUP



OBJECTIVE

To find innovative ways of enhancing biodiversity through the use of our product, concrete.

CONTEXT

Concrete is one of the most widely used construction materials, with all major projects – whether for tunnels or bridges, office buildings or schools – using concrete in some form or another. Its durability and ability to be cast into nearly any shape or form means that its uses can be endless. At HeidelbergCement, through our partnership with nature conservation NGOs, we were quick to realise that concrete could also be used to further our biodiversity contributions, particularly for protected species within Europe. Two specific species expedited this line of research. Firstly in the Czech Republic nesting common terns (*Sterna hirundo*) were increasingly utilising floating wooden islands that were beginning to degrade, and secondly declining populations of yellow bellied toads (*Bombina variegata*) in Germany that require pioneer ponds with little to no vegetation.

SOLUTIONS

In the Czech Republic through our long-term partnership with the Czech Ornithological Society, a new prototype was developed for a durable floating tern island made from concrete. The raft was designed in a modular format so that units can be joined together making it flexible in terms of size and shape.

In Germany, understanding the ecological requirements of the European protected species, the yellow bellied toad, enabled the design and development of concrete ponds within one of our limestone quarries through a NABU led Quarry Life Award project. The ponds measure 100 x 60cm and 25cm deep, and have shallow ramps integrated into the corners to allow animals to move freely in and out of the water body.

The long lasting and cost effective attributes of concrete also make it an attractive building material for other species in need, for example reef dwelling animals in the Chesapeake Bay and sand martins (*Riparia riparia*) in the UK.



OUTCOMES

The design of the artificial concrete islands has proven to be very successful, with rapid colonization by the target species and a significant decrease in the management costs required to keep the habitat in an optimal state. In the Czech Republic approximately 15% of the country's common tern populations are now using the concrete islands installed at two of our extraction sites. Following the success, such islands are now also being used in Poland, and the concept has been spread across the whole of the HeidelbergCement Group.

The four concrete ponds cast and installed by HeidelbergCement Germany were quick to be colonized by the target toad species during the first year and successful breeding recorded with up to 25 yellow-bellied tadpoles observed in a single pond. Not only did the concrete ponds provide a home for this threatened species, but other animals noted utilizing the habitat

included European green toads (*Bufo viridis*), dragonfly larvae, backswimmers and other insect larvae.

Monitoring has yet to be undertaken of the success of the recent installation of the coral reef balls in Chesapeake Bay and sand martin bank in the UK.

Such habitats provide an innovative and exciting way of combining our product with actions for wildlife. To promote such actions across the whole of HeidelbergCement Group these case studies have been integrated into a new biodiversity handbook published in 2017.



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PARTNER

Research establishments, local nature organisations.

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