

Mitigating the impact of the highway E314 crossing the National Park Hoge Kempen (Province of Limburg, Flanders, Belgium).

Jorg Lambrechts, Arcadis Belgium (j.lambrechts@arcadisbelgium.be)

In March 2006, the opening conference on the first Belgian National Park (NP), named 'High Campine', was held. This National Park includes some 5000 ha of heath land and woods, holding important populations of Smooth snake (*Coronella autriaca*), Natterjack toad (*Bufo calamita*) and Moor frog (*Rana arvalis*). These species are listed in the European Habitat directive and are very sensitive to fragmentation by roads.

Some of the most interesting heath lands are former mining areas. They were reshaped by the local mining company at the time their activities ceased, following recommendations by the Flemish government. Indeed, the after use for this area was destined as nature development.

Arcadis functioned as intermediate agent between the two parties and conducted several EIA's (Environmental Impact Assessment), which included detailed studies on the fauna and vegetation in the mining areas as well as nature development in the after use.

The highway E314 cuts through the NP from west (Brussels) to east (Aken), setting a serious problem to the populations of amphibians and reptiles, amongst others.

The Flemish government already implemented some important defragmentation measures:

- 2 bridges have been closed for motorized traffic and have been transformed towards 'ecoveloducts';
- 1 large ecoduct 'KIKBEEK' has been built;
- 1 tunnel has been transformed to ecotunnel (closed for motorized traffic);

The ecoduct Kikbeek, the second built Flemish ecoduct, has been intensively monitored by Arcadis, in 2007 and 2009. The results were astonishing: almost all of the target species were recorded, usually in large numbers.

However for a complete defragmentation, one more move is desirable. A large 'ecovalley' underneath the E314 would realise a much better defragmentation, especially for species linked to wet habitats.

Therefore, cooperation between the Flemish government and mining company Sibelco, streamlined by Arcadis, is once more necessary. The first studies concerning the feasibility have already been executed.

Raw materials will be mined underneath the high way. Afterwards, the two quarries will be connected and moreover the ideal baseline will be prepared by the company so wet and dry heath land can develop optimally. These types of vegetation will also be developed in the after use for the quarries. A win win for economical benefit and ecological surplus value is the main goal.