

# Strategic solutions for defragmentation of a very dense area

Anne Martine Kruidering

e-mail: [a.m.kruidering@arcadis.nl](mailto:a.m.kruidering@arcadis.nl)

Arcadis  
Postbox 673  
7300 AR Apeldoorn  
The Netherlands

Keywords: Defragmentation, strategic solutions, impact of recreation, ecoducts, ecological network

The Utrechtse Heuvelrug is a forested area in the Netherlands that is highly fragmented by roads, buildings, military installations and recreational areas. This area provides important habitat for different species of woodland and heathland ecosystems and harbors a refuge for some of the Netherlands rare species.

The challenge comes from the need to address multiple habitat defragmentation issues for a single area. Different strategies exist to develop solutions and different government agencies and authorities must work together to break the landscape barriers and restore permeability. In order to connect fragmented areas it is necessary to build six overpasses on highways and railroads, defragmenting the barrier effect of at least twelve regional roads, and take additional measures along multiple local/community roads. At the same time, the ecological network must be reinforced with conservation zoning for recreational and developed areas; otherwise the ecological capacity of the landscape would be insufficient and the measures taken would become inadequate. The poster presentation will illustrate strategies for just a few of the defragmentation solutions in the Utrechtse Heuvelrug region. The examples contain:

- a case study concerning the zoning of recreation in the proximity of an ecoduct. Within a distance of 500 meters of an ecoduct that is going to be built in the next few years, there are two campgrounds and a dense network of recreational paths. In this study the impact of recreation is studied and boundary conditions of the land use are identified;
- An exchange of urban and nature areas and the development of air base Soesterberg. This airbase is recently abandoned and turned over to the regional government. Redeveloping this area means a great opportunity to develop ecological corridors and restore the ecological network;
- Several mitigation measures. In the years to come six large ecoducts and several small over- and underpasses are going to be built. The poster presentation shows some examples and the connections between all of the measures. It also shows some of the first results.