

## Abstract

### *Reestablishment of natural hydrology in Gribskov and St. Dyrehave. A pilot project on areas affected by storm damage.*

In January of 2005, a series of areas affected by storm damage arose in the Danish forests, including Gribskov and St. Dyrehave. It primarily affected common, which was placed in low-laying areas, and for that reason was overturned. The low-laying areas affected by storm damage have historically been wetlands, which emerges from old maps of Gribskov and St. Dyrehave (*Kvartermesterkort from 1857*). In order to optimize the conventional forestry in the many low-laying wetlands, a project of digging ditches was launched around 1870, which resulted in a reduction in the water level in Gribskov and St. Dyrehave, and in the Danish forest areas in general. The digging of ditches has resulted in 526 kilometers of ditches in Gribskov, alone.

The ditches have resulted in an impoverishment of the natural dynamics and biodiversity in the forests. In accordance with the strategy of the Danish Forest and Nature Agency concerning nature forest, including the habitation directive, the biodiversity convention and certification of the forests belonging to the state, the objective is now to produce more natural dynamics, including natural hydrology and biodiversity.

In this context, the Forest and natureboard, in North Zealand, wishes to reestablish natural hydrology, on the areas affected by storm damage, that arose in Gribskov and St. Dyrehave in 2005. This will be carried out by closing 12 kilometers of ditches in its full length, and it is anticipated that 62 hectares of wetlands will be reestablished, spread across the two areas of interest.

As a result of this pilot project, it has turned out, that the municipalities, among others, have to waive the rules in the environment provisions, before the ditches can be closed. Furthermore, it is necessary to take into consideration other issues in relation to protected types of nature, Natura 2000, streams, species, past memories, urban plants and the neighbours of the forest. All these parameters have to go through a feasibility analysis in relation to the closing of the ditches, if the ditches are anticipated to affect them.

Among other things, this pilot project concludes that an application for exemption has to be worked out, including feasibility estimations of the surrounding environment, before the Danish Forest and Nature Agency can reestablish natural hydrology in the areas affected by storm damage.

It is the municipalities, the Danish Forest and Nature Agency in Haraldsgade and partly the Kulturarvsstyrelsen that are trying the project of ditch closing, meaning that it is these instances that have to give an exemption before the project can be carried through in practice. In connection with the exemption of approval, the case officers are allowed to raise conditions, which the applicant (SNS, North Zealand) has to meet in order for the exemption to be valid.

It is also concluded, that the closing of ditches is a highly useful instrument to gain a richer nature impact and a more dynamic forest ecosystem in Gribskov and St. Dyrehave. This report is build around the process surrounding the pilot project "Natural hydrology" at SNS, Northern Zealand. The purpose of the report is to provide an inspiration and help to other forest managers in similar ditch closing projects in Danish forests.