

## CZECH REPUBLIC

# Water management

### Location

Bahna I

### Programming period

2014 – 2020

### Priority

P4 – Ecosystems  
management

### Measure

M08 - Investments in  
forest areas

### Funding (CZK)

Total budget 4 026 831.44  
EAFRD 1 518 325.00  
National/Reg. 1 548 999.00  
Private 959 507.44

### Project duration

2017 – 2017

### Project promoter

Vojenské lesy a statky ČR s.p.

### Contact

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### Website

[www.vls.cz/novinky/370](http://www.vls.cz/novinky/370)

The construction of two small water basins that minimise the risk of floods and offer a habitat that promotes biodiversity.

## Summary

The area of intervention is located in the protected area of natural water accumulation Brdy, which is also a Protected Landscape Area. On the site the precipitation water is naturally accumulated which causes floods. Thus action was needed to protect the surrounding settlements. At the same time, it was necessary to retain and control the water in the landscape in order to preserve biodiversity.



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The project consisted in the construction of a couple of small water basins with an earth-fill dam and functional objects such as bottom outlets and emergency spillways. The capacity of the lower basin at the normal level is 5 675 m<sup>3</sup> and the upper basin of 12 240 m<sup>3</sup>. The building plots are accessible by local roads and paved paths.

## Results

Overall, the function of the two small basins is irreplaceable in the Brdy landscape.

The two basins enhance the retention and accumulation of water and thus have reduced the risk of floods.

The basins have reduced high water occurrences and have formed a new landscape feature that has a positive contribution in biodiversity. They provide a living space for many groups and species of animals - mammals, birds, amphibians, fish, reptiles, molluscs, insects and plants.

The construction also increased public awareness about the Brdy area, thus it increased the interest of the public for the area as a touristic destination with an emphasis on the environment.

## Context

The area of intervention, called Bahna I which was also a military area in the past, is located in the Protected Area of Natural Water Accumulation Brdy, which is also a Protected Landscape Area. On the site the precipitation water is naturally accumulated causing floods and action was needed to protect the surrounding settlements. At the same time, it was necessary to retain and control the water in the landscape in order to preserve biodiversity.

## Objectives

The aim of this project was to improve water retention in order to reduce the risk of floods, while securing and improving the function of the landscape in preserving biodiversity.

## Activities

The project consisted in the construction of small water basins with an earth-fill dam and functional objects such as bottom outlets and emergency spillways. The capacity of the lower basin at the normal level is 5 675 m<sup>3</sup> and the upper basin of 12 240 m<sup>3</sup>. The building plots are accessible by local roads and paved paths.

The preparatory works were performed at the beginning of 2016 and the construction works were carried out in 2017. The construction of both the basins took four months.

During the preparatory phase, all woody plants were cut down in the area intended for the basins and dams. Subsequently, the layer of earth with roots was removed. Also, the bottom and the banks of the basin were shaped.

During the construction phase, the bottom outlet, the earth-fill dam and the emergency spillway were built and the body of the lower and upper basins were reinforced.

At the final stage, the area surrounding the construction site was landscaped.



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## Main results

Overall, the function of the two small basins is irreplaceable in the Brdy landscape.

The two basins enhance the retention and accumulation of water and thus reduced the risk of floods.

The basins reduced high water occurrences and have formed a new landscape feature that has a positive contribution in biodiversity. These water bodies act as a natural biotope that allows the natural development of aquatic and water-bound biocoenosis. In other words, they provide a living space for many groups and species of animals - mammals, birds, amphibians, fish, reptiles, molluscs, insects and plants, e.g. beetles (*Motacilla flava*), *Haliaeetus albicilla*, *Scolopax rusticola*. The construction enables also the creation of a habitat for the *Austropotamobius torrentium*, which is very common in Brdy. Brdy is the richest locality with its occurrence in the Czech Republic.

The construction also increased public awareness about the Brdy area and promoted the area as a touristic destination with an emphasis on the environment.

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## Additional sources of information

n/a