

Flood Protection and Revitalisation of the Floodplain Selhofen-Zopfe, Left Bank of the River Aare

Client

Civil Engineering Office Bern Canton, OIK II

Consultant

IUB Engineering AG in
 an engineering consortium

Construction period

2014–2016

Construction costs

CHF 7.6 million

Scope of services

Detailed project
 Tendering
 Project execution, incl. construction supervision

Description

Flood protection on the left bank of the River Aare in the communities Belp and Kehrsatz was comprehensively rehabilitated over a length of 2.4 km from Auguet bridge to the mouth of the River Gürbe. The River Aare was widened at Selhofen-Zopfe as part of floodplain revitalisation work. The measures are part of the project: "Flood Protection and Floodplain Revitalisation of the River Aare/mouth of the River Grube".

The River Giesse flowing behind the Aare Dam was diverted, the new course was structured and secured and the Giesse Dam was backfilled along a length of 1,150m. New ponds were created for amphibians.

Around 1.2 km of the River Aare was widened by up to 200 m to enable revitalisation of the floodplain in Selhofen-Zopfe and development of a new gravelscape and wetlands.

A new 2.3 km long flood defence dam was built and the level of the existing Aare Dam was raised. 800m of the Aare Dam was strengthened against erosion in the event of overload.

As protection for the Aare Dam the existing concrete structures were removed and replaced by natural stone groynes. To increase flow and structural diversity three micro-groynes were constructed which in addition to upgrading the River Aare along the entire river bed also improve the dynamics on the inner bank and reduce the load on the bank protection along the cut bank.

Main technical data

- Length of the R. Aare section: 2.4 km
- New course of the River Giesse: 1,400 m
- Removal of concrete (groynes, controls): 13,000 m³
- Riprap: 23,000 t
- Embankment material: Approx. 30,000 m³

- Dam works: Approx. 77,000 m³
- Construction of new Aare Dam: 1,200 m
- Construction of new Giesse Dam: 1,150m
- Construction of new groynes: 26 pcs.
- Micro-groynes: 3 pcs.
- Excavation / removal: Approx. 47,000 m³

