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Flood Protection River Worble, Worblaufen (BE): Spillway and River Restoration

Bauherr
Ittigen Municipality

Projektierung
IUB Engineering Ltd.

Zeitraum
1995–2016

Baukosten
CHF 9.1 million

Leistungen
- Variant study
- Construction project concept / Hydraulic engineering plan
- Modelling analysis
- Participation and preliminary assessment
- Adjustment of construction project / hydraulic engineering plan
- Tendering
- Project execution
- Construction management and supervision
- Commissioning

Beschreibung
The hydraulic engineering plan for the River Worble in Ittigen Municipality was developed together with the Consortium Partner. In this section the Worble has been largely channeled and partly culverted. Over the final 600 metres before flowing into the River Aare the floodwater holding capacity of the channel is insufficient. On the one hand the project involves renaturation and ecological upgrade of the existing fixed channel and flood relief with connected tunnel, which diverts flood peaks directly into the River Aare. Storation. The key component of the project is the new flood relief tunnel with an inner diameter of 2.50 metres which was installed using the micro-tunnelling method. At the intake in the event of flooding most of the water will flow into the tunnel (maximum 62 m3/s), the remaining discharge will flow through the new Worble channel. The significant difference in height is overcome by means of a pendulum ramp in the channel. At the outlet structure the intense energy of the water has to be converted in a stilling pool before being released into the River Aare. In the upper section of the River Worble measures are also in place to upgrade the existing channel and to build a new footpath and cycle path. Other special features included a cofferdam in the River Aare as an excavation pit closure for the outlet structure as well as the underpinning of a railway bridge foundati-





