Renovation Lower Schwand Bridge, Rüschegg BE

2000

On behalf of the Civil Engineering Office of the Canton of Bern, the task was to assess the condition of the Lower Schwand Bridge, to prepare a rehabilitation concept and to supervise the rehabilitation on site. Furthermore, the 133-year-old bridge was to be largely preserved and integrated into its surroundings.

The project

During the rehabilitation in August / September 2000, the entire substructure (carriageway, cross and longitudinal girders, supports) was renewed within 3 weeks. During this time, motorized traffic was diverted and a temporary footbridge was installed on the outside of the bridge for pedestrians and cyclists.

The construction method

The damaged oak bottom chord supports, longitudinal and transverse beams, and wind bracing were replaced. In addition, the longitudinal and transverse girders were covered with Sarnafil foil strips. Thickened and interlocking oak planks with a rough surface were chosen as the roadway structure. The transition from the bridge to the road is formed by cobblestones on both sides. The heavily weathered sandstone was completely replaced, while the less stressed ones were reworked down to the smooth base. Subsequently, the sandstone was coated with a water-repellent paint.
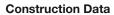
Detail

Detail

Bottom view

Side view

Construction Data
- Year of manufacture: 1867
- Weight limit. 10 to
- Support system: double suspension with 4 bays
- Span: 19 m
- Width: 4.30 m
- Height: 4.10 m

Services of Timbatec
- Assessment
- Remediation Concept
- Statics & Construction
- Tendering
- construction management

Stone masonry
Messerli Christian AG
3608 Thun

Timber construction engineer / local construction management
ARGE Fritz Allenbach und Timbatec GmbH
3612 Steffisburg

Client
Civil Engineering Office of the Canton of Bern, Obering. Kreis II
3011 Bern

Assembly work in wood
Stettler Zimmerei GmbH
3132 Riggisberg

Surfacing and construction work
Schmid Werner AG
3132 Riggisberg