

# New bicycle and pedestrian bridge over the old Aare river, Lyss

2016

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A new bridge in Lyss should be wider than the old one and passable for bicycles. Nevertheless, it will be supported by the existing abutments.

## The project

One of the numerous bridges connecting Lyss over the old Aare river to the recreational area in the Seeland region had reached the end of its service life. Among other things, rot had been detected in the wooden components because they were very close to the water. The specification for the new bridge near the Grien sports center was that it should not only be used as a pedestrian bridge, but also by cyclists. Compared to the previous crossing, the new bridge had to have a much wider roadway so that cyclists could cross without danger. Specifically, the previous bridge was only 1.80 meters wide, while the new one has a usable width of 2.40 meters.

## The challenge

The new bridge had to fit onto the foundation of the original crossing, so the support situation of the abutments had to be taken over. The new bridge was designed as a trough bridge. The primary structure consists of two glulam girders. The steel cross girders are attached to the primary girders from below with glued-in threaded rods. Thanks to this flexurally rigid connection, the primary girder is stabilized and cannot tilt. The longitudinal girders of the carriageway are made of larch laminated timber, the decking of oak. With the new bridge, there is more space between the water and the bridge than before - an advantage during floods. Previously, there was a risk of driftwood piling up, damaging the bridge and flooding the adjacent land.



On the way: the bridge was transported in one piece



The new bridge was mounted on the existing abutments



Sufficient space between the water surface and the bridge



Had to be replaced urgently: the old pedestrian bridge

### Construction Data

- BSH spruce (primary beam) 9 m<sup>3</sup>
- BSH Larch (primary beam) 2 m<sup>3</sup>
- Larch formwork 113 m<sup>2</sup>
- Oak planks roadway 43 m<sup>2</sup>

### Services of Timbatec

- SIA Phase 31 Preliminary design
- SIA Phase 32 Construction project
- SIA Phase 41 Tendering and comparison of offers
- SIA Phase 51 Implementation project
- SIA Phase 52 Execution

### Timber Construction Engineers

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### Client

Municipality of Lyss  
3250 Lyss

### Civil engineer

Ulrich Christen AG  
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### Timber constructor

Feldmann+Co. AG  
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