



Pedestrian flyover for Rv 13 at Bjørgum

Bjørgum Bridge is a roofed timber bridge which crosses the Istad River and National Road 13 at Bjørgum, 8 kilometres south of Vossavangen in Voss municipality. The bridge is part of a new system of pedestrian walkways designed to make access to schools safer and reduce the need for school buses. Before the development, there were walkways on both sides of Rv 13, with a crossing at road level which had poor visibility. The walkways have now been 'lifted up' to the new bridge, making it easy to use both the bridge and the new universally designed walkway system.

Aas-Jakobsen has acted as the lead consultant for the Norwegian Public Roads Administration for the construction plan and the construction work itself. The Norwegian Public Roads Administration designed the road system. Aas-Jakobsen worked with PLAN arkitekter AS on the development of the concept, and undertook the detailed design of the bridge.

The bridge's main load-bearing system consists of a timber arch braced with truss members which also support the roof. The two support walls converge on each other at an angle of 10 degrees. The timber deck is suspended from the roof beams on steel hangers. The guardrails are a stainless steel lattice fixed to tensioned wires which are fastened to the hangers. The span of the bridge is 38.3 metres, and the length and roadway width of the deck are 44.0 and 2.25 metres. All glued laminated timber is double-impregnated, with the lamellas being impregnated with Cu before assembly, and the assembled glued laminated beams then being lightly impregnated with creosote. The creosote impregnation is applied after all other processing of the glued laminated timber is complete. The glued laminated structure is processed and test-assembled in Moelven Limtre's plant, after which all the glued laminated timber is sent for creosote impregnation and final assembly at the bridge site.

The bridge is designed to have a 100 year lifespan, and all the details have been designed with this in mind. One of the main priorities was that water must be able to drain away, so that all the timber is able to dry out after it has been exposed to water/moisture. The structure is also protected by louvres at the sides, and the entire bridge is protected by a roof with a large overhang.

Bjørgum Bridge is a slim and elegant structure which has been received very positively by its users. The positive impression is reinforced by the virtually exclusive use of timber.

Project name:
Bjørgum Bridge

Project period:
2013-2015

Owner:
Statens vegvesen Region vest

Client:
Statens vegvesen Region vest

In brief:
Detailed design of timber bridge with roof

Project size:
Length of walkway: 44,0 m. Building cost: 4,7 MNOK.

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