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St Gallen's Ruckhaldetunnel

Christian Ammann

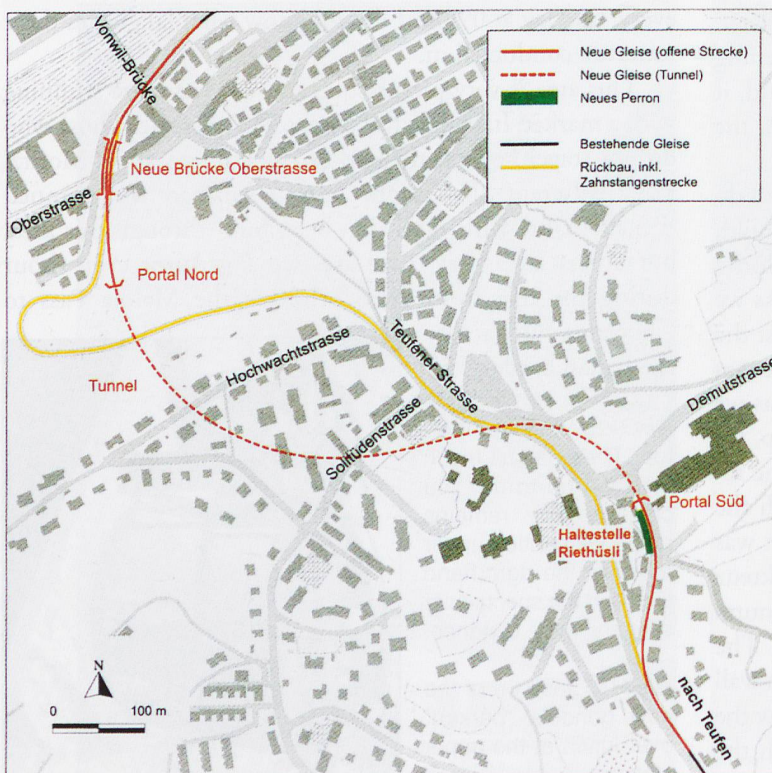


St. Barbara is the Patron Saint of all those who deal with explosives, including miners, so it was with an invocation of her blessing that the commencement of the work on the 725m long Ruckhaldetunnel was officially celebrated on the 31st August. In practice construction work had started on 11th July and by the end of August around 35 m of the southward drive existed from its northern portal. The first phase of the drill and blast construction method


through the mixed terrain of sandstone, 'molasses' and nagelfluh (a conglomerate), commenced on 3rd August with some 20-cubic metres of rock removed in the first blast. Two blasts daily are programmed. The northwards drive, starting in softer ground, will commence at Riethüsli – the south portal - before the end of this year. The cost of the tunnel, along with a new bridge over the Oberstrasse and other associated works, is programmed at CHF42m and will enable

the elimination of the last rack section on the AB's line between St. Gallen and Appenzell. The line in the tunnel will be quite steep at 8% (1:12.5), but being underground adhesion should not be a problem. The line speed is designed at 40kph. The Appenzellerbahn indicate that the opening of the tunnel will result in a standard eight-minute journey time between the passing place at Liebegg, and St Gallen and also allow a 15 minute interval service to be introduced between St Gallen and Appenzell. To achieve this increase in frequency the crossing station at Lustmühle is also being rebuilt (commencing April 2017) with longer tracks.

It is estimated that some 33,000 cubic metres of rock and spoil will be excavated during the construction phase of the scheme. Unfortunately this will all have to be removed by road, as an easy rail-removal solution was not possible to arrange. This volume of material corresponds to around 500TEU shipping containers. To line and seal the tunnel some 14,000 cubic-metres of 'shotcrete' (sprayed concrete) and 600t of reinforcing steel will be used. It is planned that the tunnel will advance around 4m/day



in solid rock, but only some 1.5m/day in soft ground where slower excavation methods are required. Blasting should be completed by the end of 2016 with the breakthrough coming in July 2017. As part of the scheme the removal of the existing rack railway bridge over the Oberstrasse will have to be undertaken after the old line goes out of service and the new one begins operation in April 2018, and this work is scheduled for October 2018. The entire tunnel project is planned for completion by the end of that month, with the new service coming into force from the December 2018 timetable change. In addition to the route realignment through the tunnel, a further scheme also involves major realignment and reconstruction of tracks to the west of St Gallen station on the site of the old freight facilities. Here there will be a major urban redevelopment project together with a new station and passing point. This will not be finally completed until 2022.

Viewing platforms are available at both the north and south portals, and guided tours of the sites will be available on the 1st and 3rd Saturdays of each month between April and October 2017. These will be between 13:30 and 15:30 with those interested in taking part registering via modernisierung@appenzellerbahnen.ch or Tel. 071 354 50 94. For groups of up to eight, individual tours at CHF100 are also offered. More information on this project is at www.modernisierung-ab.ch/. 



It beats flying! **Ron Smith**

As I have noted in my articles about the Rigibahnen it is a true public service railway and is not just there to take tourists up the mountain. Whilst waiting at Vitznau during a visit last spring, after the connecting lake ship docked, a crew member disembarked with a bird in a cage and quickly walked to the waiting train where it was deposited with the driver in the cab. The train set off up the mountain and after a while it stopped at one of the tiny little platforms that are provided en-route for the benefit of isolated houses, and especially the children from them who use the trains as their school bus. Waiting on the platform was a woman who collected the cage and its occupant and set off in the snow

to her home. There are not too many transport systems in the world that would offer that service. For a bird, on a cold snowy day, it obviously beats flying! 