

New Albula Tunnel : Bergün resident, and SRS member, Werner Haas has supplied some background information to the construction of this new tunnel

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New Albula Tunnel

Bergün resident, and SRS Member, Werner Haas has supplied some background information to the construction of this new tunnel.

Photos: Bryan Stone

The new Albula tunnel was a choice, made in 2010, to build anew, rather than renovate the old 5864m tunnel built in 1907, as the cost of CHF345m was only 12-15% above the renovation cost of the old tunnel. The potential upheaval to the train service (at least 4 trains every hour - and more programmed) by rebuilding, and its basic shortcomings with concern for future safety, tipped the scale. The new tunnel runs parallel to, and 30m away, from the old line. The old tunnel will become an escape route with 12 connecting tunnel links, each with a safety compartment with slightly raised air pressure. The new single track will be set in concrete and rated at 120kph, whilst power will be supplied by a roof mounted conductor rail. There will be two block sections that will greatly facilitate train planning. Completion scheduled for 2021 will allow rebuilding of the old tunnel with a roadway and provision for other services.

The new tunnel follows the same route between Spinas and Preda as the old, but there is an extra complication. These high mountain valleys, and the RhB itself between Thusis and Tirano, are now on the UNESCO Heritage list, a notable and proud distinction that obliges all parties to preserve this World Heritage for the future. It can be imagined that this makes serious demands on the tunnel project. For example significant historic buildings had to be moved for later restoration as before and the tunnel portals were agreed with Graubünden's Historic Monument's Authority. Much more complex is that temporary changes in the landscape must be restored. Even topsoil must come back, as must plants and insects in their

former habitat. The large, impressive works sites, for example the one at Preda with its exhibition, will disappear all together once work is complete. Spoil from the excavation has become a raw material, being used as much as possible on site to supply aggregates for concrete, with the excess being sold on commercially.

Three construction-related RhB train services operate April to November:

1. The 'Albula Sprinter' shuttles some eight times daily with materials between Spinas and Preda, with their gravel and cement works.
2. The 'Albula Shuttle' runs twice daily to supply the construction sites with the building materials currently required. Construction and building materials from third parties are first delivered to one of eight RhB freight stations and taken by rail to the depot in Samedan for onward distribution by this service. Lack of space prevents on-site storage in Spinas and Preda.
3. The 'Grischa Sprinter' removes spoil and gravel to other RhB track works sites, and to freight stations for other users.

These special services can be observed by travellers on the Albula route, where they can see the RhB's three oldest Ge4/4s which were re-activated to cover these demanding tasks.

Finally, the Albula is not an easy place to work. Unstable rock, both in the Preda and Spinas work zones, demanded a special technique. The known fault zone "Raibler Rauhewacke", some 1200 to 1300m from Preda, required its so-called 'liquid rock' to be frozen prior to boring commencing, a task demanding elaborate preparation. This section stretches for some 50m and presented perhaps the worst problems. Freezing started in May and should be completed by the end of 2016. The known fault on the Spinas side was overcome in September 2016.

Bryan Stone adds:

On 6th October as your Swiss News Editor, my wife Johanna and I were guests of Werner Haas in Bergün and Preda to see the tunnel site and gain some impressions. In November work will stop for the winter, resuming in April (it is cold and snowy at 1800m), so a further visit will be made in May 2017. Werner is one of the RhB's official site guides and, as other visitors to the Preda site (and the Bergün museum) have also learned, is a fountain of ideas and background knowledge. Lunch in the Bergün Railway Museum is also good value and fun when in the area. 

