

Rhaetian Railways in the Albula/Bernina Landscapes



At the beginning of July 2008, the World Heritage Committee of UNESCO added the Albula and Bernina Lines of the Rhaetian Railway to their world heritage list. The Rhaetian Railway is only the third railway in the world to be considered “universally outstanding” by UNESCO. The “Rhaetian Railway in the Albula/Bernina Landscapes“ is a masterwork that developed through the synergy of politics, the economy, technology, culture and nature. The two unique rail lines blend harmoniously into the enchanting landscape with spectacular constructions such as viaducts and spiral tunnels.

Over 122 beautiful kilometres from Thusis via St. Moritz to Tirano, the line crosses 196 bridges, goes through 55 tunnels and passes through 20 towns and villages. At the steepest part – without the help of rack and pinion technology – it progresses along a gradient of 70‰. The railway infrastructure, which is now about 100 years old, is still authentic and in good condition. From a cultural point of view, these railway lines link not only German-, Romansh- and Italian-speaking areas, but open up access to culturally significant historic sites – and this in a region very rich in architecture. As regards nature, the Albula and Bernina Lines, with their embedding in the high mountain landscape that now seems almost a given, are an outstanding model and provide a magnificent panorama: from the wild, romantic Albula Valley into the light, airy Engadin, from the famous tourist centre of St. Moritz through the glacier world of the Bernina to the Mediterranean Valtellina. The high Alpine station at Ospizio Bernina (2253 metres above sea-level) is only 90 minutes’ travel from typically Italian Tirano (429 metres). The “Rhaetian Railway in the Albula/Bernina Landscapes“ has got to be the most beautiful linking of North and South there is – providing a unique experience of the Alps.

The candidature dossier entitled “Rhaetian Railway in the Albula/Bernina Landscapes” was submitted in December 2006 to the Paris office of UNESCO in Paris, and examined in the spring of 2008 by ICOMOS, the International Council on Monuments and Sites, which gave it a positive evaluation. The World Heritage Committee, on which the 21 signatory states to the World Heritage Convention of 1972 are represented, finally decided in July 2008 to support the inclusion of the Albula-Bernina Railway in the list of World Heritage Sites.

A pioneering work of engineering of unique character

The “Rhaetian Railway in the Albula/Bernina Landscapes” constitutes, as established in the initial line of reasoning, a pioneering work of modern civil engineering and architectural construction of the beginning of the 20th century, “based on a unique interplay of nature, culture and technology”. The second line of reasoning is that the RhB is a unique example of a railway that has managed to integrate harmoniously into a high mountain region. This happy symbiosis between landscape and railway did not come about by chance however; it was the result of careful forward planning, the fortuitous availability of certain technical innovations and careful consideration of the terrain.

A World Heritage Site of universal worth

The “Rhaetian Railway in the Albula/Bernina Landscapes” is a masterpiece based on a complex interplay of politics, commerce, technology, culture and nature. On a political level, the building of the railway created links across the culturally and linguistically diverse Swiss canton of Graubünden, while helping to reinforce the region’s sense of identity across the north-south divide of the Alps. In commercial terms, the Albula Line proved to be an important factor in the development of the once overwhelmingly agricultural Engadin region, helping to turn it into a modern tourist destination as soon as the railway guaranteed all-year-round access to the high valley area. From a technological point of view, the Albula and Bernina Lines are of both historical and technical interest, given the early adoption, as their driving force, of what was then cutting-edge electrical power. The cultural contribution made by these railway lines is not only to link the region’s German-, Romansh- and Italian-speaking areas, but also to provide access to a series of culturally and historically important places – via a line that includes several man-made structures of great significance in their own right. With respect to nature, the artful blending of the Albula/Bernina Line into its high Alpine setting is a model of its type.

Achieved by actually adding something to the fragmented topography

One particular attraction of the Albula and Bernina Lines lies in the differing designs of the two railway lines. They fully complement each other, while at the same time functioning as a single unit.

The Albula Line is an exquisitely-executed masterpiece of the civil engineer’s art, dating from the golden age of railways. The railway, which is classed as a main line despite its narrow gauge, is characterised by a large number and wide variety of long, tall, stone-built viaducts and technically complex, in places interlaced, tunnels, including the long Scheitel Tunnel, all with highly-valued architectural features.

The innovative creativity invested in the construction of the Bernina railway went beyond the techniques used to build the superstructure and lay the lines to include a then-novel source of motive power. The construction at the turn of the twentieth century of a power station in the Bernina region meant that the railway could be electrified right from the design stage, allowing it to tackle inclines of up to seventy millimetres per metre.

Railway infrastructure still in its original state

The landscape through which the Albula-Bernina Line runs was already regarded as extraordinarily beautiful at the time of the railway’s construction. The careful blending of the railway infrastructure into the surrounding landscape was given great importance, as was the desire – on the Bernina Line above all – to ensure that passengers would experience, to the fullest extent possible, the majestic views on offer. From the wildly romantic valley of Albulatal, through dark tunnels and on into the light-bathed region of Engadin; from the cosmopolitan tourist resort of St. Moritz via the high-altitude glaciers of Bernina to the Mediterranean-like climate of Veltlin; all the diversity of the Alps can be experienced in a single train-journey. The Albula/Bernina landscape, along with the features that characterise it, is extraordinarily well-preserved, as is the infrastructure of the railway that passes through it. This really is a unique point, as the railway continues to give the full service that it has always provided over the last century, carrying goods and passengers according to its daily timetable and offering travellers what must be the most pleasurable way of crossing the Alps from north to south and vice versa.

UNESCO and the Albula-Bernina Railway World Heritage Site

As the name suggests, the UNESCO World Heritage listing entitled “Rhaetian Railway in the Albula/Bernina Landscapes” includes not only the railway line itself, but also the countryside through which it passes. At the same time, a distinction is made between the “core zone”, which corresponds to the actual railway, and the “buffer zones” that provide its cultural and natural setting. The Albula Line, from Thusis to St. Moritz, and the Bernina Line, from St. Moritz to Tirano, between them constitute the 122-kilometre length of railway that provides the “thin red line” running through the World Heritage site. This red line does not run straight across the Alps, but tends rather to loop and detour along the way. Outstanding landmarks include the succession of tunnels on the Albula Line and the famous Circular Viaduct at Brusio, which carries the Bernina Line. The Bernina Line of the Rhaetian Railway includes a total of 52 bridges and 13 tunnels and cuttings, while the Albula Line runs over 144 bridges and through 42 tunnels and cuttings. In doing so, the line passes through a total of 19 Swiss local regions and the Italian town of Tirano.

The cultural value of the Albula and Bernina Line lies not only in the century-old infrastructure of the railway itself, but also in the interplay between track and surrounding landscape. The core zone is thus surrounded by buffer zones, which provide the landscape element of the World Heritage experience. Three buffer zones are defined in this respect. The qualified buffer zone, which is adjacent to the core zone, contains significant and valuable cultural sites that are classed as being of national importance, along with outstanding natural features. The immediate buffer zone includes all those areas that are adjacent to the core zone, but which are not classed as being part of the qualified buffer zone. This zone includes residential properties of more recent construction and small commercial and industrial areas. The distant buffer zone covers all the remaining landscape that can be seen from the railway.