

Built by beer - powered by sewage! : Malcolm Bulpitt describes Fribourg's eco-friendly funicular

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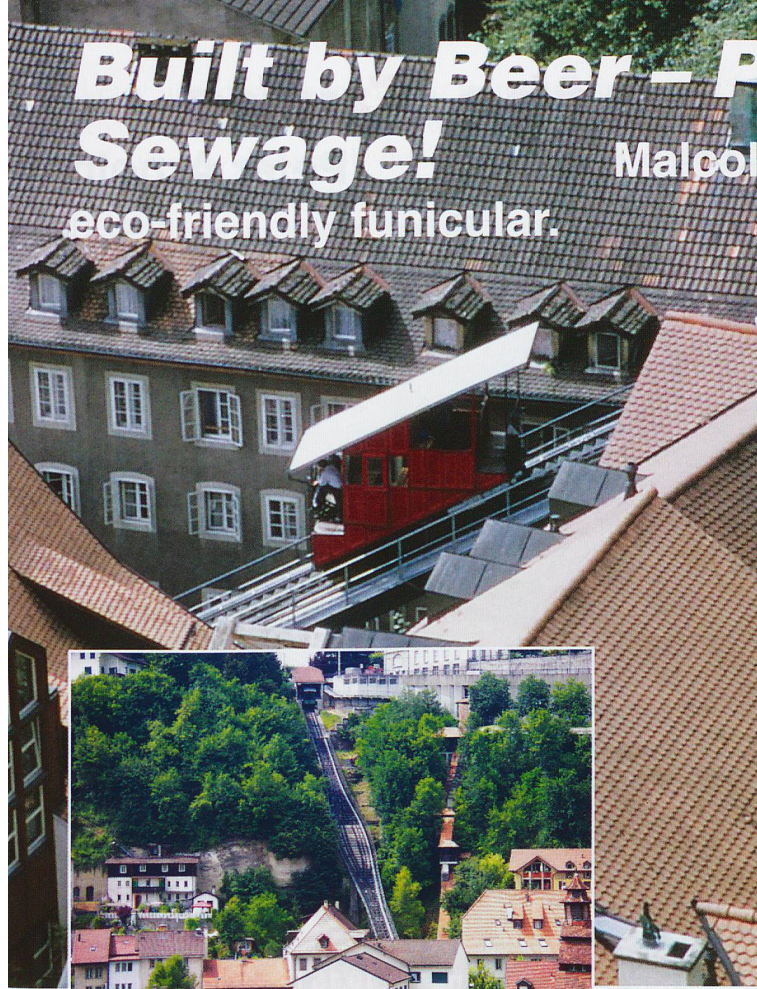
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Built by Beer – Powered by Sewage!

eco-friendly funicular.

Malcolm Bulpitt describes Fribourg's

Photos: Bryan Stone



The Swiss city of Fribourg grew up around the steep-sided valley of the La Sarine river. Originally confined to a narrow site surrounded on three sides by the river, it soon outgrew its location and spread to the flatter, higher ground that surrounded it, resulting in almost two separate communities separated by 60m high valley sides. In 1788 the now defunct Cardinal Brewery was founded in the Lowertown area of the city. In the 19thC the brewery moved to the higher part of the city with the result that many of its workers had to make the steep climb as they made their way to and from work. By the 1890s socially-minded brewery owner Paul Blancpain decided that he would commission and fund a funicular railway to link the two parts of the city, an operation that would have the added benefit of easing the journey to work for some of his employees. He obtained a Federal Concession in 1898 and the 121m long line was quickly completed, allowing opening on the 4th February the following year. The short line is single track with a central passing place where the two cars cross, and was constructed to the unusual gauge of 1200mm. Located in the middle of the running rails is a Riggenbach rack that is used by the operators when they are hand-braking the cars at the end of each trip. The whole system was renovated in 2014, including completely restoring the 20-passenger wooden cars back to their original 1899 condition, including using the original green livery, rather than the red livery they had carried after the Brewery handed the operation over to the municipality in 1965. In 1970 the operation was taken over by TPF (Transports Publics Fribourgeois SA) the Cantonal transport authority, which once planned to completely modernise the operation.

The modernising that did not take place has left Fribourg with a transport facility that is operated in a quite unusual, and probably unique, manner. The funicular is powered by the city's sewerage system. As with many early funiculars the one

in Fribourg was designed to operate on the water balance principle, similar to the one still operating between Lynton and Lynmouth in Devon, England. However, here the liquid used is not fresh water but is wastewater taken from the sewers. Both of the cars have large tanks under the cabin. If both the tanks are either empty or full the cars, linked together by a cable, are static and in balance. Empty the lower (No.1) car's tank and the then heavier top (No.2) car will start to descend the steep gradient – it is greater than 1 in 1 – hauling up car No.1 as it drops down the 60m height difference. When car No.1 reaches the top station it fills its tank with more wastewater before car No.2 at the bottom empties its load into a sewer for the operation to be repeated. No bills for external power generated from fossil fuels; no waste of hundreds of litres of clean water each trip; just a simple environmentally friendly way of moving people by using some of their waste products. The only possible downside is that despite taking all the obvious precautions to prevent contamination the funicular does emit a discernable odour, something that the locals are apparently proud of as they happily take the 2 minute ride between the two sections of the community. The slightly smelly service operates at approximately 6-minute intervals between 7am and 7pm, Monday to Saturday throughout the year, with slightly longer hours in mid-summer and shorter ones on Sundays and holidays. It currently carries some ¼ million passengers a year, down on its peak of almost 700,000 riders in the early 1960s. The fall being due to changed demographics in this part of the city and the introduction of a bus service to the lower part of the town. Prior to this the funicular had a monopoly of service. The funicular ride is still quicker than the bus and is preferred by many residents, as well as offering tourists a 'different' alternative. It starts its descent from the south side of the Place Georges Python, just a few minutes walk from the CFF/SBB station. 