

HYDRAULIC ENGINEERING |

ALTENBERG MONASTERY LANDSCAPE TRAIL

Hydraulic engineering

The Cistercian monasteries in Europe had an excellent hydraulic engineering system. Flowing water and control over this resource were central to life in the monasteries. The Order's hydraulic engineering had a lasting impact on the landscape and lasted for centuries. In some monasteries it has been preserved to this day, and in Altenberg, too, there are still clear traces.

The monks of the Cistercian order were very adept at using natural topographical features to realise their hydraulic engineering projects. With the help of an elaborate network of canals, ditches, reservoirs and ponds as well as irrigation and drainage systems, they transformed formerly inhospitable areas into fertile land. They diverted rivers, collected and dammed water, which was then used to irrigate fields and drive mills. They also developed modern techniques for draining swampy areas and draining off excess water. In this way they gained fertile land, and also counteracted the spread of disease.

Altenberg and water

The Cistercian monks sent from the French mother monastery of Morimond chose the location of Altenberg Monastery carefully. From Burg Berge, where they first settled, the brothers looked for a suitable location in the surrounding area. A decisive factor was the supply of fresh water, which here, where the Pfengstbach flows into the Dhünnaue, offered excellent conditions for the Cistercians' way of life and farming. The monks diverted the Pfengstbach stream with the help of a dam and thus gained dry ground for the construction of their abbey. Remains of this dam are still partly visible in the terrain.

To the east of the monastery, the Pfengstbach fed a system of originally up to seven fish ponds, which were mainly used to supply fish for human consumption. Of these, five ponds east of the cathedral are still preserved today and are used by an angling club.

There were several wells in the monastery complex for the order's drinking water supply; the monk Gaspar Jongelinus even reports in 1640 of eight well systems within Altenberg Abbey. They were fed by lead pipes from a nearby spring. The fresh spring water was considered particularly pure by the monks and was therefore also used for liturgical purposes, for example during mass or ritual ablutions. The source of this clear water was probably not far from Altenberg Abbey. Its exact location is unknown, but it is assumed to be on the Schmerzberg. Within the monastery complex, a canal, which can no longer be seen today, ran south of the convent buildings and brought useful water to the abbey. The latrines at the end of the dormitory were probably also connected to this canal. There was also a service water disposal system.

The monastery mills *intra muros* were also driven by water power. For this purpose, the monks created mill ponds and a mill canal that led the water of the Dhünn into the monastery complex. Today, the idealised millrace along the driveway is a reminder of this, but otherwise it has little in common with the historical model. The small pond at the entrance to the monastery complex was also rebuilt in modern times.

The Cistercian monks also knew how to counter the dangers of flooding in the Bergisches Land with hydraulic engineering measures: With the help of canals, dams, ditches and reservoirs, the brothers skilfully diverted the water and thus protected their monastery complex. After a devastating storm in the 14th century, they stepped up these efforts once again.

Kahnweiher

There was also once a large pond within the monastery walls, created by the Cistercian monks for fish farming and fed by the Pfengstbach stream. This pond, located to the east of Altenberg Cathedral, continued to exist until the 1930s. Today, the park and sports field of Haus Altenberg are located on its site.

Until it was drained, the pond was popular with the population and visitors alike. For the latter, boat trips were offered on the pond and the body of water adorned several picture postcards of Altenberg Cathedral at the time.