



RESEARCH PROJECT

ARCHAEO-METALLURGICAL INVESTIGATIONS IN THE MINING DISTRICT OF BRILON

Continuous excavations by the LWL-Archaeology for Westphalia in the former mining region around Brilon are unearthing numerous finds and features related to medieval mining and smelting. The region of the Brilon saddle in the eastern Sauerland was rich in various metals, especially iron (hematite), lead (galenite) and zinc (calamine). Thus, names such as the "Briloner Eisenberg" indicate iron mining. In the Buchholz near Brilon-Alme, silver-poor lead ore was exploited. To this day, there are field and place names that refer to the mining of the metals, such as "an der Bleikaule", "Bleiwäsche", or Brilon-Messinghausen. In the archaeometallurgical project, the related relics of medieval mining are investigated in order to understand the former processes.

In 2014-2015, an extensive High Medieval deserted site near Brilon-Alme was investigated on a large scale. In addition to numerous other proven production sites (lead metallurgy, forging activities), a pottery workshop with at least one potter's kiln as well as a waste pit, from which discarded misfires originated, could be proven. The complex dates to the late 12th or early 13th century. A large number of misfires (especially miniature vessels and bowls) showed glaze remains. This is one of the oldest medieval by-complexes with such remains. In a completed bachelor thesis (Fischer-Lechner) it was investigated whether the glaze was lead glaze and whether the lead additive was obtained from the neighboring silver-poor lead ore deposits of the Brilon saddle. It was found from the investigations that it is indeed lead-rich glaze residue, which appears yellowish-green due to tiny yellow crystals enclosed on the glaze surface. From the point of view of material analysis, it is not necessarily possible to distinguish between a deliberately produced glaze and an accidental product of lead smelting. However, certain analytical indications make it seem more plausible that these are accidental by-products of lead smelting.

Since May 2021, continuous excavations have been taking place in Brilon, Am Kirchloh on an area of 10,000 m², which meanwhile suggest intensive medieval mining activities. The complex was also dated to the 12th century by pottery. Pits, remains of metallurgical furnaces, waste heaps and areas of processing (punching places) were proven and documented by finds. From a metallurgical point of view, the metallurgical process chain is of particular interest here, which can be reconstructed by means of slags, furnace stones and metal remains. These finds are being investigated archaeometallurgically at the Deutsches Bergbau-Museum Bochum in order to identify which metals were processed in the furnaces. Metal inclusions in the slags are particularly revealing here. The analytical methods used at the Deutsches Bergbau-Museum Bochum and the Competence Center Archaeometry - Baden-Württemberg are: Polarized light microscopy on polished on and thin sections, SEM, portable XRF, XRD and lead isotopy.



Project Information

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