

# Remediation of a former Industrial Area in Pottenstein/Germany including Deconstruction and Soil Exchange



BAUERUmweltgruppe

**Client:** Pottenstein City Council, Germany

**Engineering Design and Supervision:** BAURCONSULT, Hassfurt/Main

**Scope of Works:** Deconstruction of the Contaminated Built Volumes and Soil Exchange

**Contract Period:** November 2004 until March 2005



### Project

Apart from the deconstruction of the building substance the scope of works included the remediation of the contaminated soil. The location in the city centre and the adjacent property represented a special challenge. This made a specialised building and excavation pit protection necessary. Besides this the site is divided by a stream, the Puettlach.

### Remediation Site

The former business unit of the mechanical engineering company Klubert and Schmidt is located in the city centre of Pottenstein. For the revitalisation of the premises, which today are in the ownership of the Pottenstein City Council the area had to be remediated.

For the water resulting in the excavation pits a three levelled water purification plant was installed and operated on site. The extensive energy infrastructure, which had formerly been necessary for the commercial use, had to be back-built. For the consecutive use of the area 170 m of drains were newly installed.



*The screed loaded with petroleum-derived hydrocarbon was removed and the material was dumped on a disposal site afterwards.*



*The mineral built volumes were broken on site and after an analytic investigation and the appropriate declaration, depending upon lead content, were either used for back filling or dumped.*



*The existing buildings were cored before the deconstruction and hazardous and contaminated building materials were removed. Altogether 13,800 m<sup>3</sup> were backbuilt.*

### Result

The size of the buildings which had to be deconstructed varied from approx. 50 m<sup>2</sup> to 1,500 m<sup>2</sup> floor space. Altogether 13,800 m<sup>3</sup> room were deconstructed. Before the actual demolition took place the buildings were cored and carried back to the structural works.

Pollutant-loaded built volumes e.g. adhesives containing PAH, insulating materials made from artificial mineral fibers, mastic asphalt, wall paint loaded with lead, construction units containing asbestos etc. were dismantled, packed and disposed off separately under strict industrial safety measures. The deconstruction of the extension of a building proved to be extremely difficult, as it adjoined directly to a listed barn and the pertinent bridge over the Puettlach. This area was only accessible by means of an auxiliary construction over the stream.

From the base plates of the work areas 1 and 2 the screeds loaded with petroleum-derived hydrocarbon were removed, separated and re-used. The mineral built volumes were broken on site and after an analytic investigation and an appropriate declaration, depending upon lead content, were either used for back filling or dumped on a disposal site. Soil remediation took place at four pollutant bodies on the premises. Two pollutant bodies were remediated by means of excavation sheeting (back embodied carrier sheeting with wooden bracing) and soil exchange up to a depth of 4 m under top ground surface.