

Hydraulic Engineering



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Water
Environment
Civil Engineering
Informatics
Energy
Architecture

In our specialist field of hydraulic engineering, we work on tasks relating to water management and hydraulic engineering.

In recent years, flood protection has become an important topic. In the design and implementation of inner-city flood protection measures, mobile protection elements are preferable to permanent elements (dikes, protective walls), since only the mobile elements enable the flood protection to be aesthetically integrated into the urban landscape. Björnsen Consulting Engineers has already assisted many endangered cities and communities on the Rhine and Moselle in the design and construction of mobile flood protection facilities. Retention areas, drainage systems, and permanent flood protection facilities complement our range of services in this field.

In the near-natural river development projects that we supervise, we combine nature conservation concerns with the technical and economic requirements of river management and modern society's demands for a life involving the element of water.

Classic hydraulic engineering planning for navigable waterways and harbors as well as weirs, dams, and hydropower plants complete the scope of our field of specialization.

Hydraulic engineering places complex demands on the planning engineer. The majority of tasks require a combination of technical expertise from the fields of geology, hydrology, ecology, hydraulics, geotechnics, and solid construction. Our interdisciplinary approach and many years of experience lead to goal-oriented solutions in accordance with each client's specific needs.

Services

- Flood retention basins and dams
- Levees, mobile flood protection elements and walls
- Protection of individual properties
- Pumping stations, drainage systems
- River rehabilitation and restoration
- Facilities for inland navigation: canals, locks, weirs, barrages
- Hydropower
- Hydrological expertise
- Hydraulic modeling
- Groundwater modeling

- 1 Water management and ecological river development of the Iller near Vöhringen
- 2 Permanent and mobile flood protection on the Rhine, Koblenz