VALLEIPARK ALKEN

Alken

The implementation study of phase 5 "Green-blue network" in which the current sports and recreation area is converted into a full-fledged valley park.

Status
2025 - 2026

Services:
Civil Engineering

Sectors:
Civil works: Bridges

Client:
NV STADSBADER

Architect:
Buur

Construction budget: 9,500,000 EUR

BM ENGINEERING GROUP

In Alken, the existing sports and recreation area is being transformed into a green-blue landscape park. The Kleine and Grote Herk watercourses are once again given space to flow above ground, while the area becomes a green meeting place with recreation for young and old. BM Engineering Group was responsible for the various civil engineering structures of the new valley park. A versatile assignment in which we deploy our civil expertise to optimize the public space.

Seven bridges

One of the most important components of the project is the construction of seven new bridges connecting the different zones of the park.

BM Engineering Group designed three concrete bridges and four steel bridges. Some bridges are intended exclusively for pedestrians and cyclists, while others are also designed for service vehicles. As a result, they differ in span, width, geometry, and load capacity. BM Engineering Group was responsible for the design of the foundations, pile foundations, abutments, and bridge decks of each bridge. The bearing devices were then developed by a specialized partner based on the calculated reaction forces and expected expansions.

Retaining walls and secant piles

For the development of the Laagdorp zone, we designed retaining walls that accommodate the height differences in the terrain. In addition, a secant pile wall totaling 95 meters in length serves multiple functions: it forms the foundation for the bridges, acts as a retaining structure, and supports the widening of the riverbed needed to allow the Herk to meander again.

During the tendering phase, there were still three separate paved fountains; now there will be one organically shaped fountain of 265 m² with a concrete volume of nearly 130 m³. For this new water experience square, we developed a concept with a base slab and a topping structure. The square was not allowed to contain expansion joints. A challenge, because temperature fluctuations can cause stresses in continuous structures of such size that can lead to cracking and water infiltration. Nevertheless, we succeeded in engineering a durable solution with attention to the aesthetics of the design.

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