

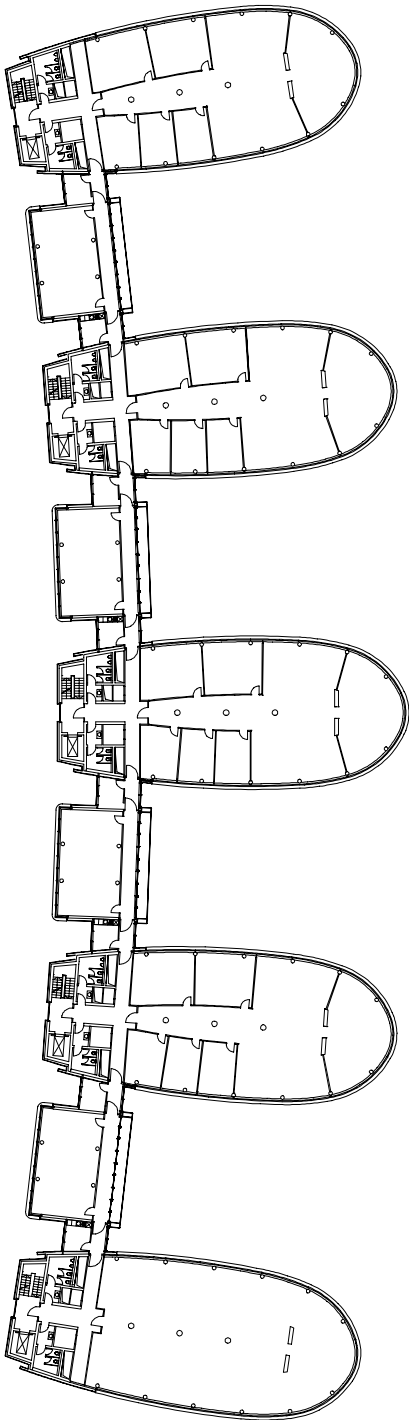


FIVE BOATS

Work on the water's edge – office building at Duisburg's inner harbor

The transformation of the 150 year old Duisburg wood harbor to one of the most attractive development areas in Germany began almost 20 years ago. The imposing storage and mill building was refurbished and converted based on a master plan from 1991 by Foster & Partners, London, the state development company, Treuhandstelle GmbH and Kaiser Bautechnik. One cultural attraction is the Küppersmühle mill building from 1909, which Basle-based architects Architekten Herzog & de Meuron converted to a museum of contemporary art. Numerous new buildings from renowned architecture offices have also been added, including a Jewish community centre by architects Zvi Hecker and a residential building by Auer + Weber + Partner, Steidle Schmitz and Ingenhoven Overdiek and Partners. A striking office building in a prominent position on a bend in the harbor basin has also been constructed: the Five Boats building by Grimshaw Architects, London, and Bahl + Partner, Hagen.

This architectural jewel is a modern, flexible office building for the constantly changing requirements of today's business world. The complete building, with an effective area of 23,500 square meters, is rented by the Novitas Vereinigte BKK health insurance company. Its architectural concept is particularly impressive. The two elementary assumptions for the draft were the reference to the water and the parity of all workplaces. The reference to the harbor area is emphasized by the form. The fan-shaped, transparent comb structure in the ground plan results in five boat-shaped, six-story building sections whose bow points to the harbor basin to the south east. All the workplaces on the 35 identical stories of the "boats" face the water, with a clear view of the harbor and the center of Duisburg. Circulation areas and ancillary rooms are joined by a section between the five building sections on the north-west side. These "monitors" create green spaces down to the water. Every office can be individually configured from a one-person to an open-plan office. The ground floor houses public areas such as the Novitas office and a restaurant.



“The prerequisite for successful planning of this building was smooth cooperation between the UK Grimshaw Architects office and us,” says Jürgen Bahl from Hagen architecture office Bahl + Partner. The Grimshaw/Bahl design team executed the early phases of the project in close cooperation. The complete execution phase was then handled by the Bahl + Partner office with Allplan from Nemetschek. Data exchange between the CAD systems Microstation and Nemetschek took place using the interfaces integrated within Allplan and via e-mail. The radial arrangement of the five building sections required a complex planning and drawing process, which was supported by the Allplan features such as rotation, turning or reflection. The project structure, for example the transition from draft and execution to detailed planning, was easily adapted to changing requirements. The design professionals were integrated in the planning phase early on, and as a result, aspects such as fire protection restrictions could be avoided in the building structure.

The offices can be ventilated easily via the windows and as a result, air conditioning systems were not required at all. Concrete core cooling in the ceilings also makes for a pleasant indoor climate. With the eye-catching corrugated aluminum facade, the building shines not just during the day; the reflective surface is also exploited at night: using a sophisticated light concept, developed with the Spectral-Gesellschaft für Lichttechnik mbH, which illuminates the five boats in different colors. Each of the connecting buildings – the “monitors” – are backlit across five stories. Countless light compositions are possible with the freely programmable LED technology. The 660 meter square facade was divided into 80 color fields, so that different light moods and color sequences can be projected. Five Boats offers an attractive workplaces by day, and becomes a prominent illuminated work of art by night.

Client: Five Boats GmbH & Co.KG

Architects:

Grimshaw Architects, London; Bahl + Partner, Hagen

General contractor: Bilfinger Berger AG, Essen

Structural engineers: LWS Ingenieurgesellschaft für Tragwerkplanung mbH, Duisburg

Building services:

PGH Planungsgemeinschaft Haustechnik, Düsseldorf