



VILLA M BERLIN, GERMANY

Villa M adds a contemporary, sculptural accent to the urban landscape of Berlin Grunewald. The building's unusual architectural form distinguishes it from neighbouring houses, while also complementing the elegance of the area.

BuroHappold Engineering was responsible for both the structural and MEP engineering on this project. Realising the sharp edges and sloping lines of the facade, and creating a structure with sufficient strength to support three storeys of floor to ceiling windows that open onto sweeping balconies, required imaginative and innovative engineering. Continuing the minimal aesthetic of the architect's vision within the villa also called for a clever and subtle approach to building services provision.

Sustainability was a key priority, both in securing low carbon materials and providing energy efficient building systems, as was providing flexible accommodation that could be adapted to suit a family's changing needs.

Our engineers developed a 3D BIM model to help calculate the complex geometry required to render the sloping walls of the facade. Using this model, we worked closely with the architect to produce detailed 2D production drawings that were followed by the contractor during construction. Undertaking this meticulous early work ensured both a smooth procurement process and accurate construction on site.

To meet the sustainability aspirations for this project we designed a bespoke automated building management system that keeps the building operating at maximum energy efficiency, which includes systems such as controlled ventilation and geothermal heating. In addition, all building materials were chosen for their durability and recyclability, and flexible floor plans allow the building to adapt to the changing needs of its users.

Working collaboratively with the wider project team, the BuroHappold team delivered a beautiful example of low energy living – which exceeds current EnEV requirements – on time and within budget.

ARCHITECT
GRAFT

DURATION
2014 - 2016

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BUROHAPPOLD
Structural engineering, MEP engineering,
site supervision