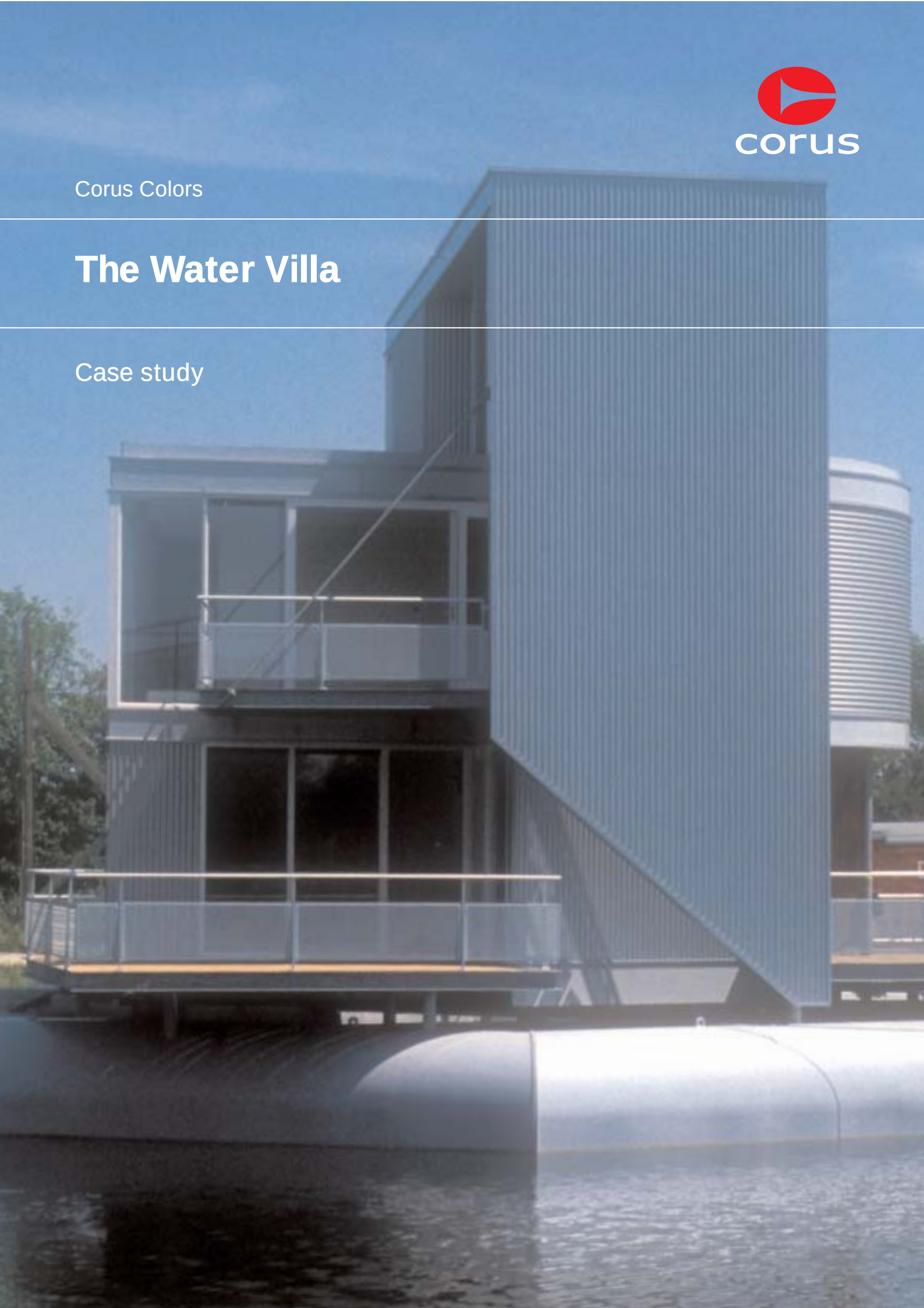
Corus Colors

The Water Villa

Case study



Case study
The Water Villa
Middelburg

Architect: Herman Herzberger Architectural Studio, Amsterdam
Contractor: Walcherse Bouw Unie (Heijmans)
Cladding contractor: Meyers Staalbouw
System manufacturer: SAB Profiel BV
System type: Built-up
Profile type: Sinusoidal

Colorcoat® product:
PVDF (walls)

Metallic Silver

The brief

Not all building projects are located on dry land and the Water Villa in the Netherlands is a classic example of how innovative architecture can be successful even in the most unusual locations. The Herman Herzberger Architectural studio has been working on the Water Villa Scheme for almost twenty years. The project is to replace houseboats, which are not terribly practical in design, and replace them with prototype dwellings that are able to withstand life on water for a long period of time. Herzberger has a simple formula: "too much boat, not enough house," and this is an imbalance he is keen to rectify. He has been working to perfect the ideal floating house and his first prototype is at De Veersche Poort in Middelburg. It is currently being used as an exhibition area but the intention is that Water Villas will exist in clusters, typically totalling 6. Floating houses are not uncommon in the Netherlands, and they are perceived as creating a vivid image of individual expression and innovation.

The building

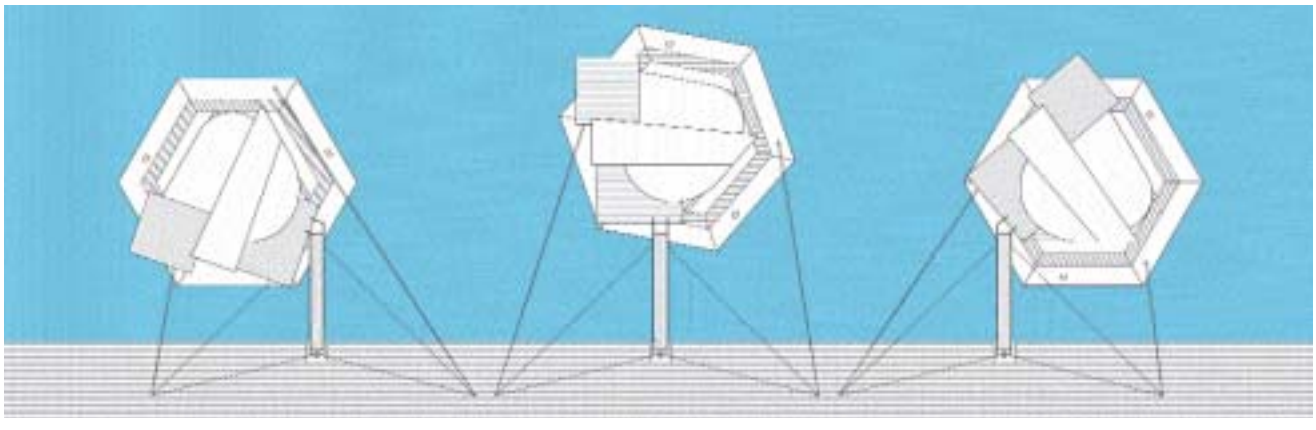
"The idea for a water villa dates from 1986," explains Patrick Fransen from the architectural studio. A design was chosen for a structure that made extensive use of pre-finished steel, both internally and externally, as opposed to the more conventional timber wall cladding. "The decision to use pre-finished steel cladding turned out to have many advantages," continues Fransen. "The round shape of the building was easier to construct from pre-finished steel than from timber." The structure is perched on a flotation system refined until it resembles the kind of system used for oil rig platforms. It consists of 6 D-Section steel hollow tubes about two metres in diameter with walls 10 mm thick. These enable the structure to float at exactly the desired level. The Water Villa can be rotated through 90° using a process involving two steering wheels and so can track either the sun or the shade.

Structural makeup

The demonstration house has been constructed on three storeys with a total floor area of 160 m^2. Structurally it consists of a steel frame with foam insulation and a built up cladding system, using Colorcoat® PVDF Metallic Silver. The colour reflects the water and makes the structure appear highly appealing. "We made a conscious decision to use *Colorcoat*," says Fransen. "Steel has the least association with floating houses." Because of the amount of steel used - steel frame cladding, fencing and floaters - it was critical to use a product was coated in a finish that would show the metal to its best and most striking advantage. Internally, the walls are also clad with pre-finished steel which can be decorated if required.

Due to the performance of the pre-finished steel cladding, endless maintenance is not necessary, an advantage that differentiates the steel Water Villa from typical houseboats which require a substantial amount of ongoing maintenance. According to Fransen: "we have been using Corus *Colorcoat* products for many years in our designs and will continue to do so. It is low maintenance, something that is essential for our floating houses. If timber was used, then the walls would need repainting every second year."

This is a highly unusual residential structure but one that makes optimum use of the materials used in construction from both a practical and aesthetic aspect. *Colorcoat* PVDF enhances the structure, adding elegance and grace to what could appear harsh and uninviting.



Top view: Water Villa rotation mechanism

Water Villa rotating