



*Rely on it.*

# Architectural freedom of design

RENOLIT ALKORPLAN Solar



# Lightweight but very strong mounting profile

## CHALLENGE

*Straight lines, maximum light and a unique, remarkable design. This is how independent architect Lieze Vandael saw her own home. Due to the numerous voids and imposing windows up to 9 meters high, a traditional construction method was certainly not an option. A suitable alternative had to be found. Moreover, Lieze Vandael wanted to see the elegant, minimalist architectural style with straight lines envelop the building: a roof and façade finish in the same material - preferably timber - and moreover, seamlessly blending into each other. To have the building completely wrapped in wood.*

*Definitely a real challenge! A neat and watertight connection between roof and façade is not an easy job at all. Besides, timber is never completely waterproof. So, the challenge for Lieze Vandael was to combine the roof and the façade into one uniform surface, ensuring a perfectly watertight roof.*

## SOLUTION

Architect Vandael wanted to step away from the traditional light-frame wood structure, and opted for an alternative mass timber construction: a load-bearing construction formed from tongue and groove stacked solid wood beams. After all, this type of construction creates a lot of possibilities and is, besides, a more durable and ecological solution.

For the exterior finish of the building the architect chose thermowood Ayous, a knot-free, clear-grade exotic hardwood providing excellent durability. The façade was finished with thermowood in a traditional way. Finishing the roof, however, was a more complex task. Cladding a roof with timber, particularly a highly sloped roof poses a substantial risk. How to achieve a watertight roof?

## Innovative profile

The architect found the right solution within the **RENOLIT** range: **RENOLIT ALKORPLAN** roofing membrane combined with the innovative **RENOLIT ALKORPLAN Solar** profile as a carrier system for securing timber planking.

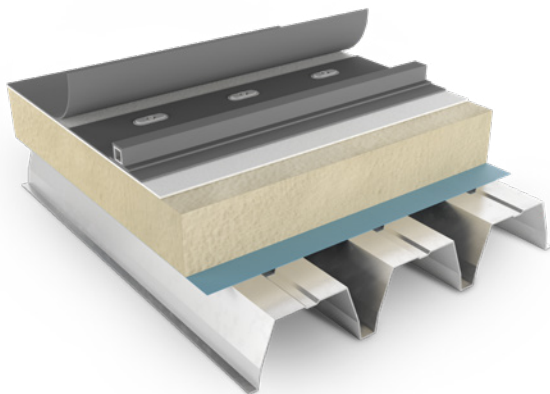
The house of the architect has a traditional warm roof build-up consisting of a timber substrate, a vapour control layer, 14 cm of PUR insulation, and finally a **RENOLIT ALKORPLAN** waterproofing membrane. The major advantage of this PVC-P roofing product is that it is completely watertight but still vapour permeable, which is an important asset in the case of timber constructions. To maintain a perfectly tight, seamless transition between roof and façade, the **RENOLIT ALKORPLAN** roofing membrane ensures a completely waterproof structure underneath the exterior finish. Also the gutter was made waterproof with PVC and remains hidden.

## Watertight and secure

Once a roof is watertight, it's advisable not to take the slightest risk, particularly by the attachment of exterior finishes. This is why the **RENOLIT ALKORPLAN Solar** carrier system is really ingenious. Hot air welding is used to weld the PVC-P **RENOLIT ALKORPLAN Solar** profile, complete with aluminium box section, to **RENOLIT ALKORPLAN** roofing membrane for a fully integrated finish. This is the system's major strength! The top of the aluminium box section inside the synthetic profile is used as a base to mechanically fasten the substructure for the exterior finish – in this case thermowood Ayous planking. Result: a 100% waterproof timber roof!

The masterpiece of architect Lieze Vandael with the seamless join between roof and façade is undoubtedly an eye catcher and an excellent reference for **RENOLIT ALKORPLAN Solar**.





Originally designed for installing solar panels, **RENOLIT ALKORPLAN Solar**, is actually a surprisingly versatile solution. The smart features of this system can also be seen in alternative applications for the exterior finishes on buildings. For example, the lightweight profiles can be used as supports for shingles, aluminium composite panels, timber planking or even trellises for greenery. Several applications, with very attractive results, demonstrate the various creative possibilities: each and every building is given a designer touch with the guarantee of perfect water tightness.



#### ARCHITECT'S RESIDENCE

- Ellikom (Peer), Belgium
- Architect: Lieze Vandael
- Roof contractor: Tony Kuypers, Maasmechelen

#### PRODUCTS

- Mass timber construction
- RENOLIT ALKORPLAN 35276  
1,5 mm, charcoal - 159 m<sup>2</sup>
- RENOLIT ALKORPLAN Solar profiles - 345 lm
- Thermowood Ayous exterior finish