

**VELUX®**

# A SIMPLY PERFECT HOUSE

Single Family House in Bottenwil, Switzerland





## A SIMPLY PERFECT HOUSE

In 2010 Velux launched a project dealing with the use of daylight in seven countries across Europe. Following a competition, seven houses were built, the one in Austria by the architect Juri Troy and his office. The "Sunlighthouse", as it is called - the first carbon neutral house in Austria - was broadly published and awarded.

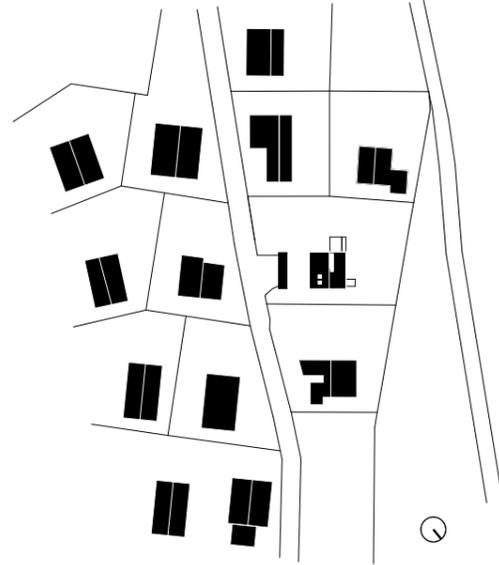
The future client has seen the project, and decided to appoint an Austrian office for his house in the Swiss canton of Aargau.

The challenges in this project were the same as in Mr. Troy's earlier work. He had to find solutions for a steep plot, where terrain should not be altered, while access from the street had to be provided, and deals with strict regulations on volume and form of the future house.

The answer to those complex requirements turned out to be a simple volume with symmetrical roof, opening to the landscape on each level, catching daylight from all possible sides - roof included.

The outer appearance is homogenous, with walls clad in white fir and roof in cedar shingles. The openings reveal the massive insulation, necessary for achieving a good energy balance.

When the outside temperatures drop below 14 degrees, the house, due to its Minergie P standard, has to rely on mechanical exchange of fresh air with heat recovery. In the warm season it is naturally ventilated.



"Both me and the client were interested in the topic of optimal use of daylight," says Juri Troy, pointing out his long-year interest in the topic and collaboration with Velux.







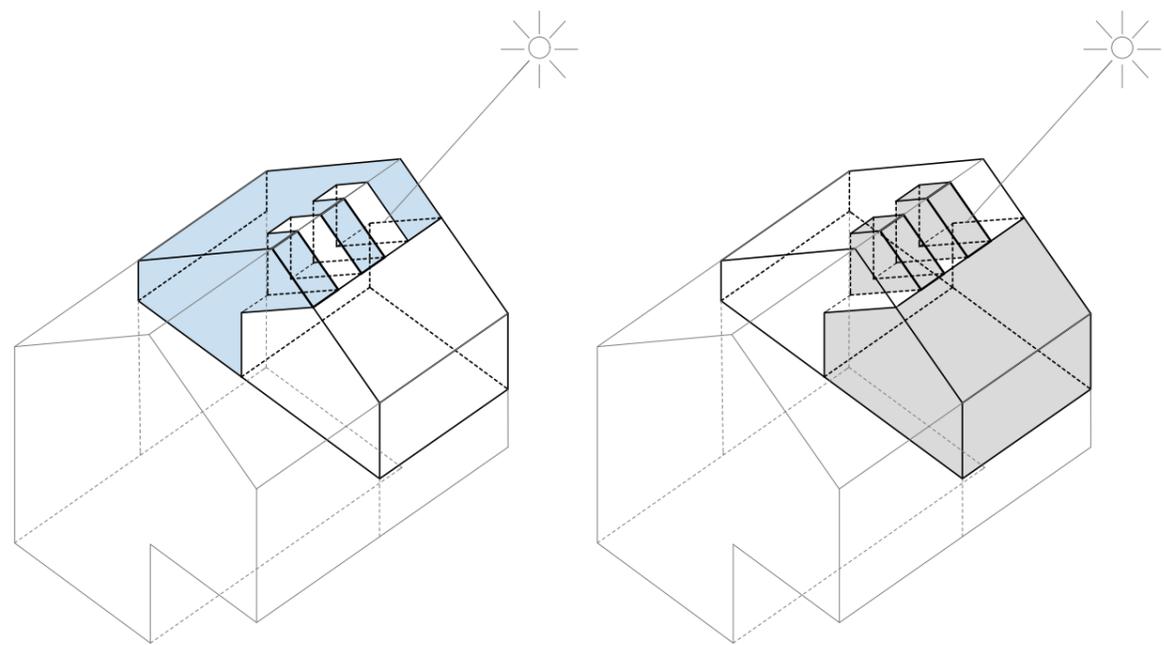
## STRAIGHT WAY

The house is accessed from the street through a long staircase, starting in the garage. Kids' rooms are on the first floor, on the second a large living room provides views to all sides. It's an open space, yet it's offering diverse cosy corners.

Although modest and straightforward, this house features some tiny everyday-life luxuries, like an outdoor kitchen or the worldwide first pizza oven with passive house certificate.

"The roof windows are crucial for natural ventilation. It's enough to open them together with the terrace doors on the lower level for the warm, stale air to go up. It's just the good old chimney effect. The lower side of the house is in the ground, it does not heat up much, so while airing the cold air is sucked up to the upper floors."



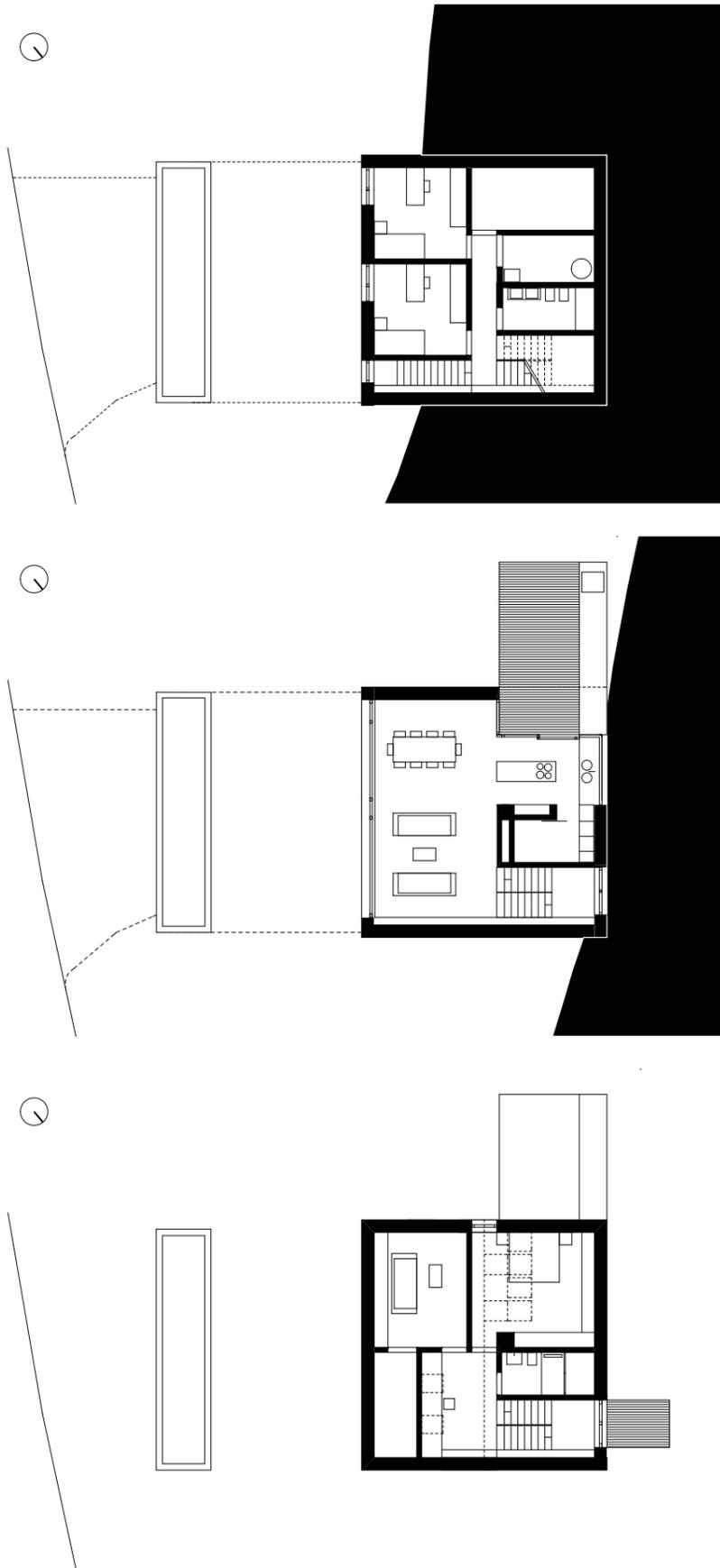


The upper floor, dedicated entirely to the adults, features a large bedroom, a bathroom with sauna, guest- and working room. All roof windows, oriented towards north, provide smooth daylight and fresh air to the rooms beneath. This was possible thanks to a smart trick of the architect: he invented deep shafts, connecting the guest room to the openings on the opposite roof pitch. Diffused northern light creates a nice contrast with working area, bathed in midday sun rays.

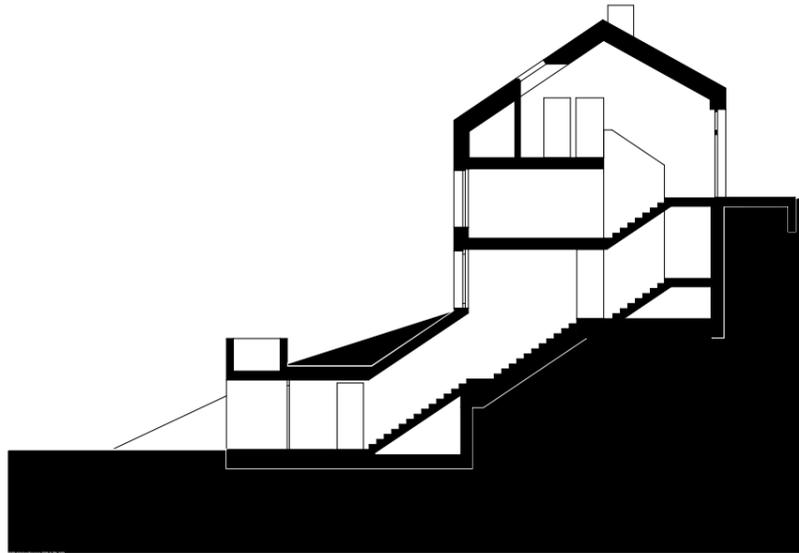




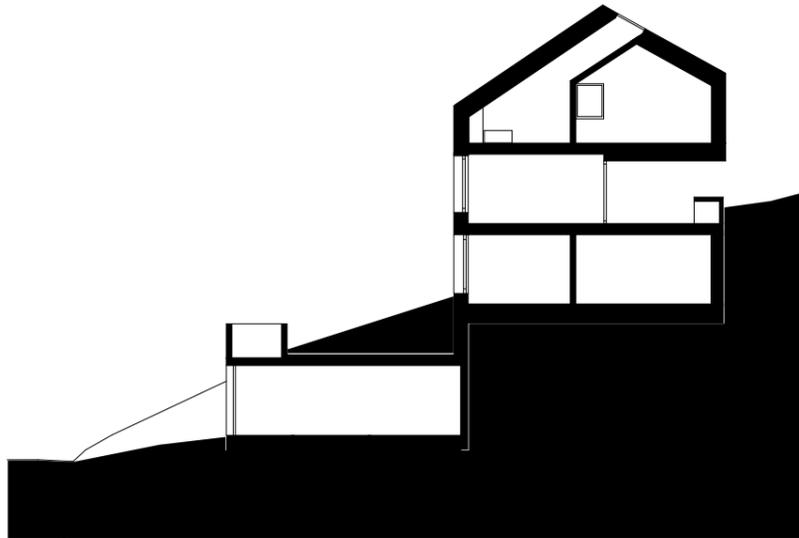
Floorplans of levels 0, 1 and 2. Due to the steep site the house the first floor is partially burried in the slope. The main entrance leads from the street level, via garage floor and a long stairway to the living space.



Section through the staircase connecting the house with the street



Section through the garage. On the attic floor a window on the northern roof side lights up a room in the southern side of the house.









## PROJECT DATA

Project: single family house  
Location: Bottenwil AG, Switzerland  
Design: Juri Troy architects  
Client: private  
Time: August 2017  
Photos: Jürg Zimmermann

VELUX A/S  
Ådalsvej 99  
DK-2970 Hørsholm  
Tel. +45 45 16 40 00  
www.velux.com

*Bringing light to life*™

**VELUX®**