



VELUX®

NEW LIFE IN AN OLD BARN

Refurbishment of a historical
building near Essen, Germany





A HOUSE IN A HOUSE

The Dortmannhof is an outstanding building: located on the grounds of the famous Zeche Zollverein, known for its cultural role and exceptional modern architecture, nevertheless from its construction in 1791 used for habitation and agricultural purposes. Meanwhile, one of the few of its type, combining apartments and barn, connected by a central entrance, under one roof.

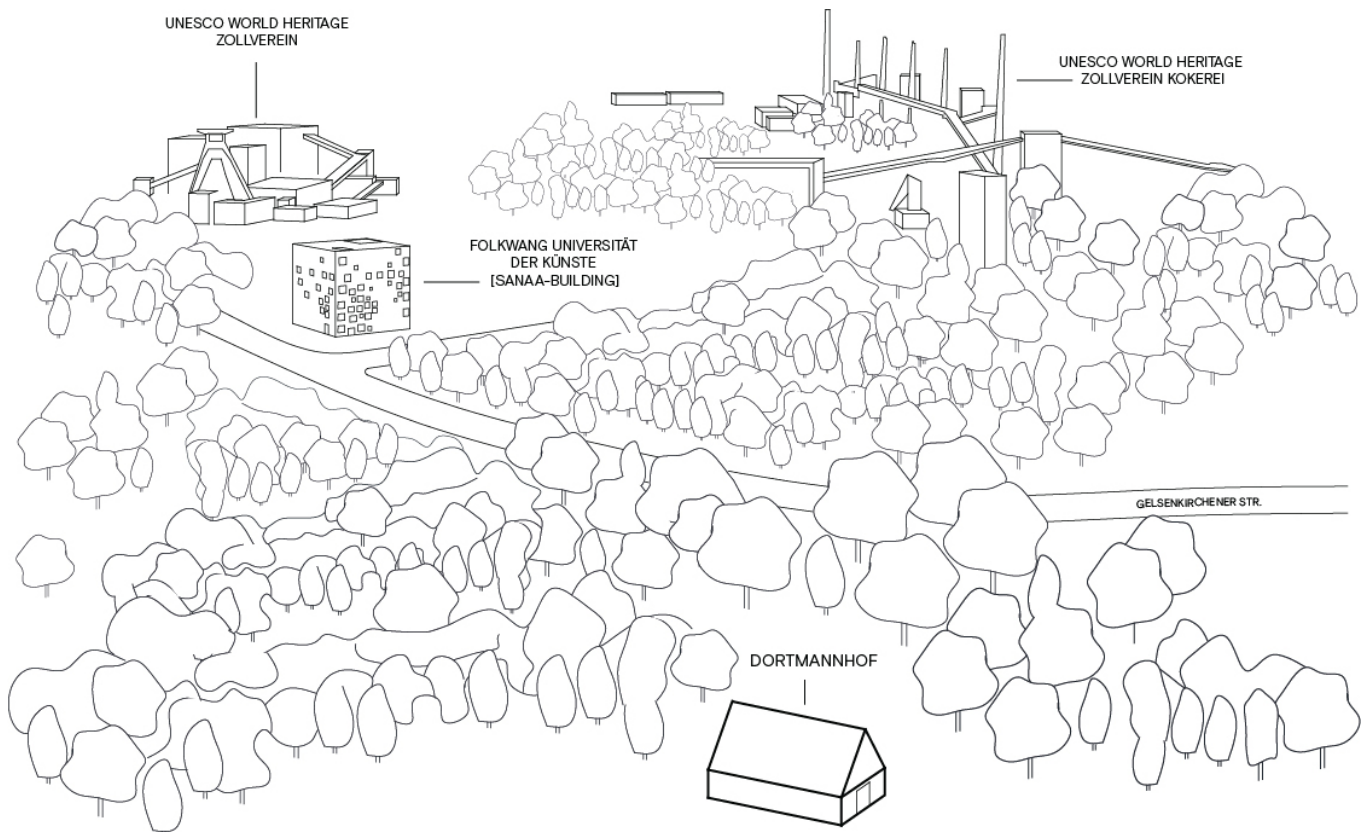
Two musicians fell in love with the building while looking for a place to live, play music and accommodate guests, and decided to fulfil their house dreams there. The task was not easy, as the entire volume stands under strict protection laws.

Their search for innovative offices lead them to Sigurd Larsen, whos Danish "Roofhouse" – all focused from light from above – was internationally acclaimed and awarded.

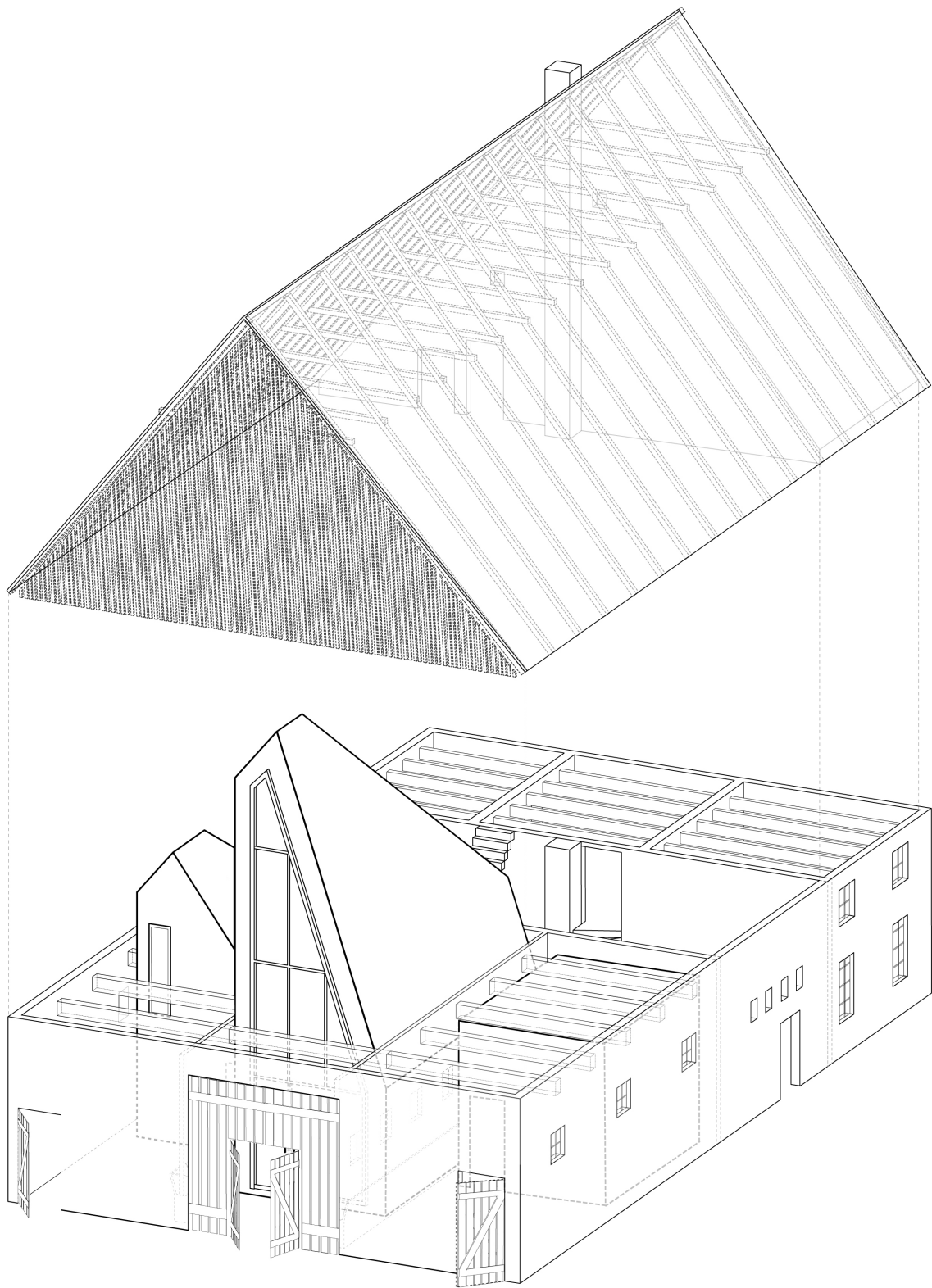
Sigurd Larsen and his 9-head team are active in various fields widely understood architecture, from furniture, through price-awarded houses up to urban design plans. In the Dortmannhof project, they could prove their know-how in all the fields mentioned above.

The restrictions were much more challenging than in an average project, as the volume and facades had to remain intact. The limits on what was allowed were very rigid, the process – with lots of authorities involved – took over two years.

Local regulations allowed only for the addition of two little roof windows, no outside insulation, and no additional openings. The challenge has led to an exceptional, innovative solution, for both the architects and clients recognized the beauty of the historic building.









"I found the closed volume of the old house fascinating. The situation reminded me of an unbuilt project by Jørn Utzon for an underground Asger Jorn museum, where the light from the surface was gathered through onion-like forms. We are overground here – but as the outer skin of the building should have remained unaltered, the situation was kind of similar, although the forms we have chosen are very different."

Sigurd Larsen





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TWO TINY WINDOWS GIVE PLENTY OF LIGHT

The whole process was a challenge on many levels: finding solutions for fire regulations, dealing with the geometry of the existing structure, acoustics and last but not least – bringing light inside the volume.

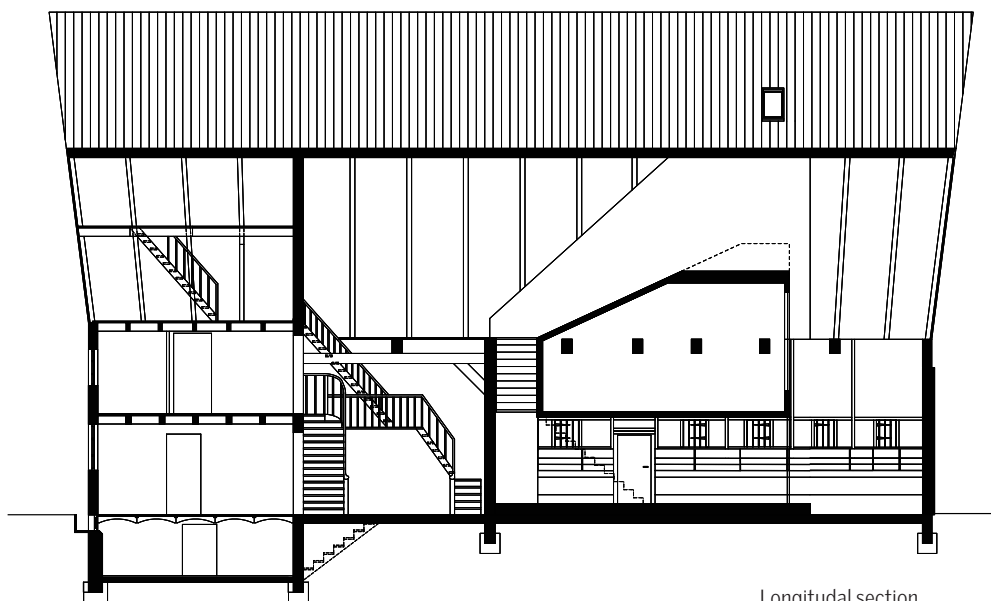
The architects did not insulate the entire volume, only the parts meant for habitation. The reasons for it were not entirely economic and ecological: this solution also allowed for keeping old, beautiful structures visible. As the original, beautiful dark stone flooring has been kept, the house is heated with a couple of traditional heaters. Thanks to modern windows the new part is warmer than the old one in the wintertime – while the stale, hot air is exhausted through the roof. The position of VELUX windows high in the volume ensures optimal air circulation. The interior of a closed volume is bathed in light – astonishingly coming from only two roof openings.

Designed volumes turned out to be a perfect solution for all the issues: no additional acoustic measures were needed in the music rooms, as no walls are parallel. The fire insulation issue was solved by adding fireproof Fermacell cladding on wooden construction.

Large, north-facing windows let some daylight into the house: the sun shines through the open façade structure, that also ensures proper air circulation, in old times crucial for hay drying. The rooms in the part previously used for habitation kept their historical appearance: the stairs and the door frames kept their old colour, wooden beams their patina.

"We are very aware of the role of sunlight in the buildings; we consider it an important part of our architecture. In Dortmundshof the morning sun shines straight into the building, submerging the interiors in a baroque-like golden glow, later during the day it turns blue."

Sigurd Larsen



Longitudinal section



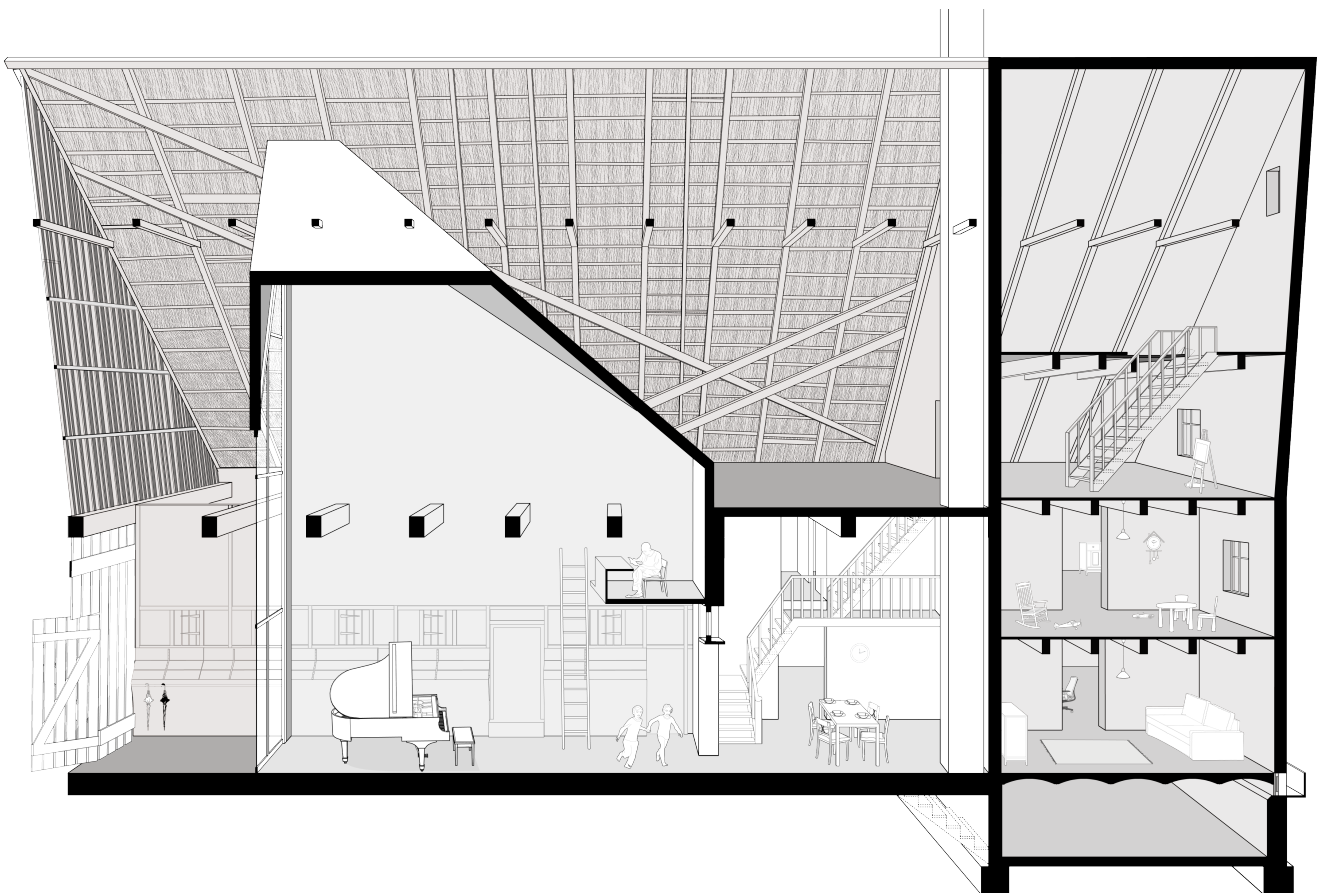
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WORKING AND LIVING

The project resembles a miniature village inside the historical volume: the courtyards and patios between the volumes allow for a multitude of ways between the spaces, enlarging the living area in warmer months. The clients needed a music room with space for a small audience, an apartment as well as a separate unit for guests.

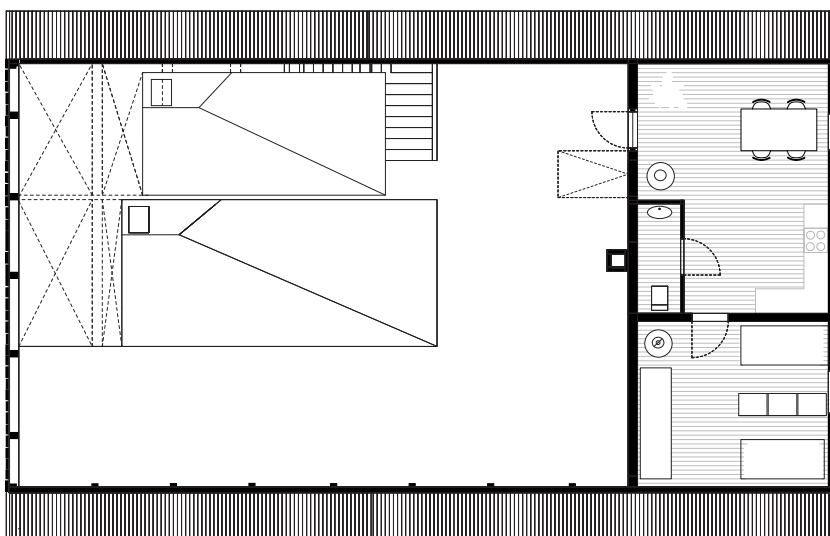
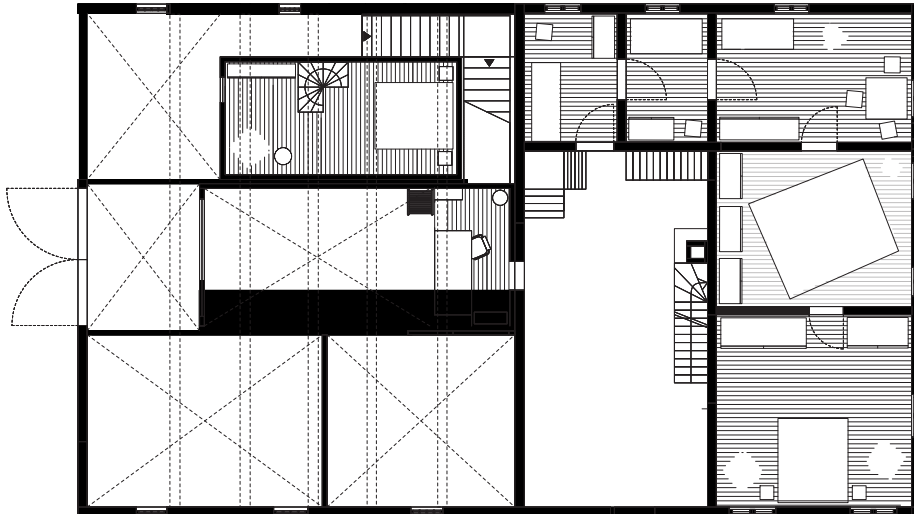
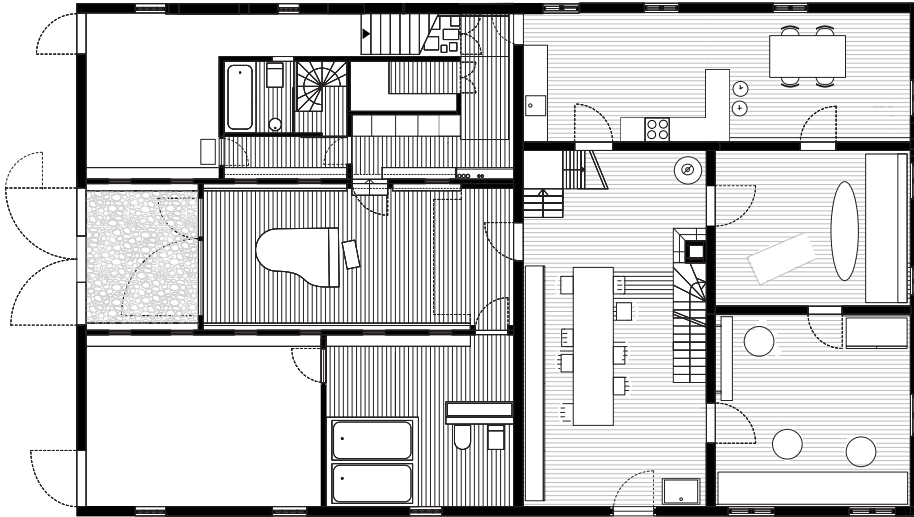
A labyrinth-like structure of the house, with all its shortcuts, was kept. The barn and haystack were replaced with striking, new rooms, yet many ancient elements – even feeding troughs were kept and integrated into the walls.



"The historic building is comprised of several entrances and internal connections which allowed for various farming activities to occur simultaneously. These features have been retained, allowing family life, creativity and work to coexist in a similar spirit."

Sigurd Larsen



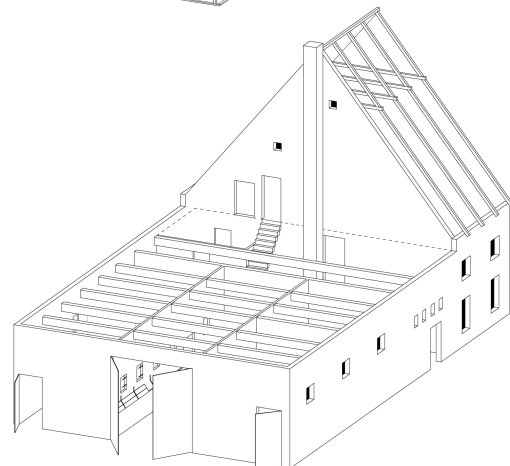
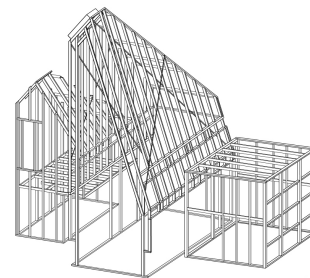
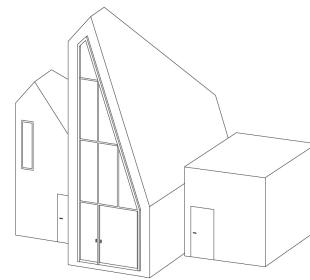
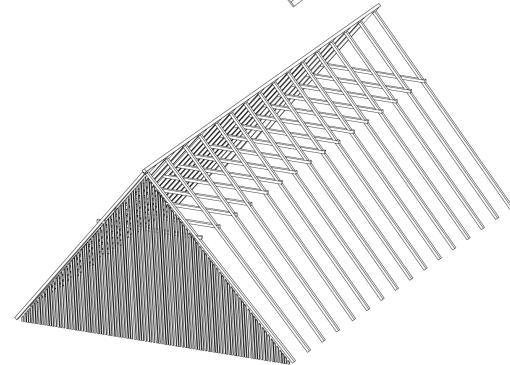
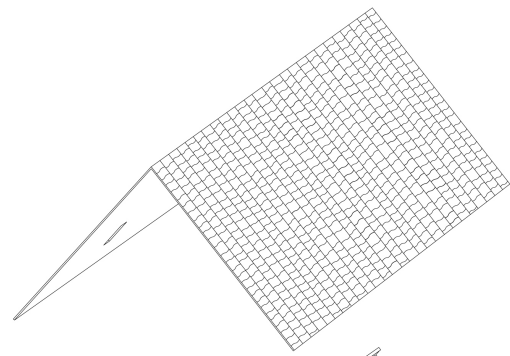


Floorplans: ground floor, first floor and attic.



"All new internal additions to the house were constructed as oversized inhabitable furniture which can be removed to restore the building's historical appearance from 1791."

Sigurd Larsen



Axonometric exploded view.
A precise and expressive volume reaches up to the roof, ending in two openings, there the VELUX windows are placed. Although rather small in proportion to the volume, they are crucial in creating a unique atmosphere indoors.





PROJECT DATA

Year: Dortmundshof 1791, internal extension completed 2020
Location: Essen, Germany
Architecture: Sigurd Larsen Architekten GmbH, Berlin
Area: 350 m²
Photos: Christian Flatscher



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