



The Sixteen-Oak Barn

'Haphazard esthetics'

Traditionally, most farmhouses in the Meerij of 's-Hertogenbosch, a former administrative realm or bailiwick, have their separate parts such as living quarters, storage space and cowsheds integrated into a single building. Over time, however, these compact buildings frequently became too cramped to house all of these functions and a separate barn was added. These were usually built from locally available materials and largely followed the structural pattern of the farmhouses themselves.

In 2017 we were told that seven of the century-old oak trees in our yard were in bad shape. They had to be cut down. Instead of following the usual path and selling the trees to the paper industry, we decided to reinstate an ancient tradition. And so, by replacing a collage of obsolete shelters and sheds, we would, in line with our farm's monumental character, build a new barn with locally harvested materials employing traditional techniques. Besides a couple of oak tree trunks we obtained from the nearby Wamberg estate, there would be enough timber to construct the new barn from the trees we had to cut down.

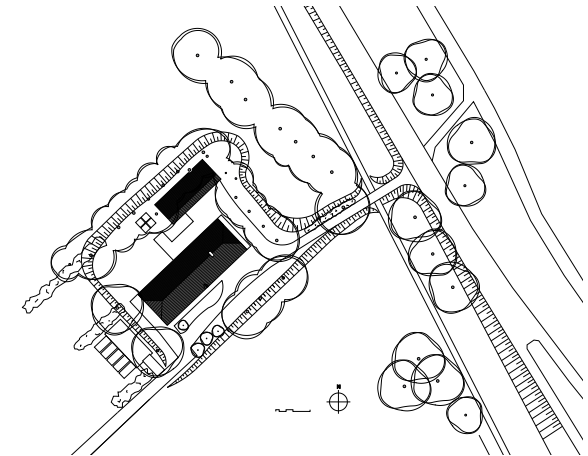
Our new transverse barn is constructed with four tie-bar couple trusses that are connected by longitudinal stringers topped by a roof supported by rafters. The roof has an asymmetrical geometry with a steep and a low pitched side. There are three spaces inside the barn: a

carport, a storage room and a workshop/meeting room for office use. The loft above the storage room is open to the workshop.

A mobile sawmill was brought to the yard and used to cut the fresh tree trunks into structural timber for the frames and roof as well as planks for the façades. For this we used the best quality wood from the trees' core sections and went in search of suitable uses for the remaining, less durable parts. Stanchions with bark were employed as slats to shield the glazing in the workshop and carport. Bark was mixed with concrete to construct the end walls so they would blend in with the wooded environment. Soft sapwood planks were used for concrete formwork to mould the imprint of fresh wood. Short lengths were cleaved and used as roofing shingles. The roughness of this cleaved timber ensures that this untreated roofing will last for decades. And finally, the rest was chopped and stacked for firewood in the barn's recessed north façade.

Untreated timber, concrete and glass have been intermingled in various ways. The irregular dimensions of the wood used to build the formwork resulted in far from perfect concrete surfaces. Remnants of the sapwood formwork became embedded in the concrete and tannic acid from the fresh timber left discolorations. Iron and steel inclusions in the trees, such as barbed wire and shrapnel, presumably dating from 1944, brought imperfections to the timber. These additional circumstances created an unexpected layer of traces in wood and concrete.

The barn's esthetics have been strongly influenced by coincidence. It lends this contemporary building a vital expression that merges old and new in a wonderful and extraordinary way.



site plan with new barn tucked in among the trees



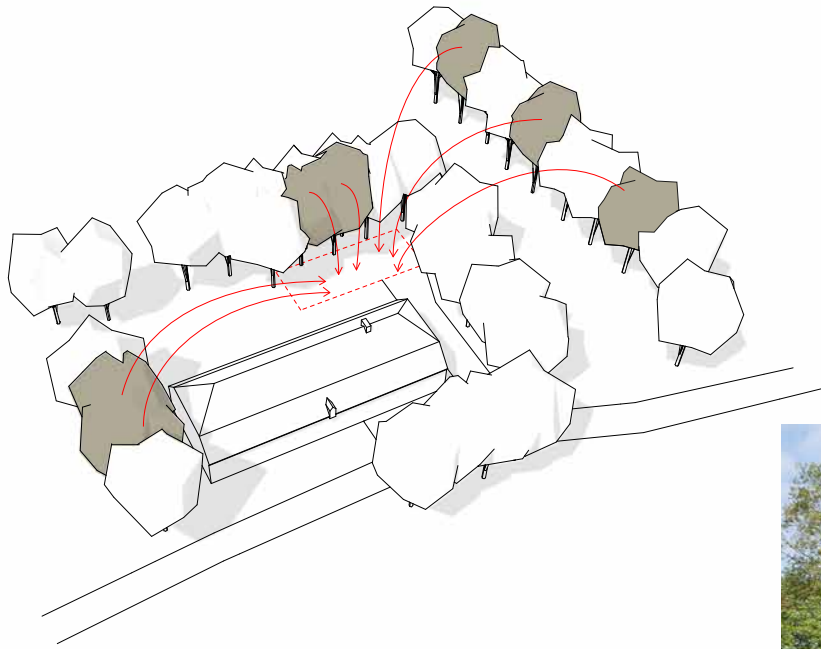
obsolete collage of shelters and sheds

Private
Barn
Wamberg 5, Berlicum, The Netherlands

Client:
HILBERINKBOSCH architecten

May 2017 - January 2018

Architects: Annemarijken Hilberink, Geert Bosch
Collaborators: Frenske Wijnen
Contractor: Zandenbouw, Aarle-Rixtel
Photography: René de Wit, Hilberinkbosch (process)



seven oaks to be cut down



trees were cut down with great precision



the harvest



Brabant Hout's mobile saw mill cut up the trees in our own yard





top: squared trunks - bottom: tiebar coupletruss

top: 'construction kit' with parts of frames - bottom: roofing shingles



11 Shingles



1 Columns



2 Stringers



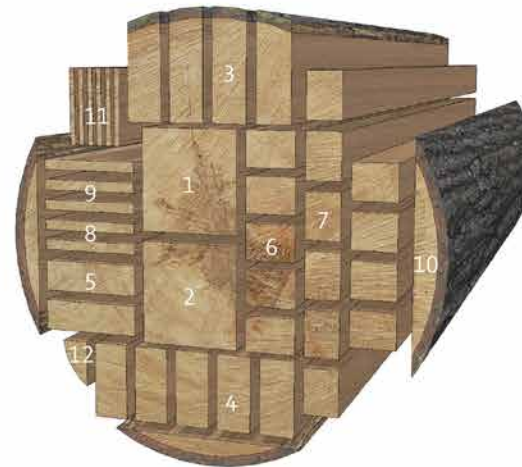
3 Slats



8 Roofing boards



9 Cladding



6 Rafters



10 Formwork



5 Strair steps



12 Firewood



4 Braces



7 Glazing bars

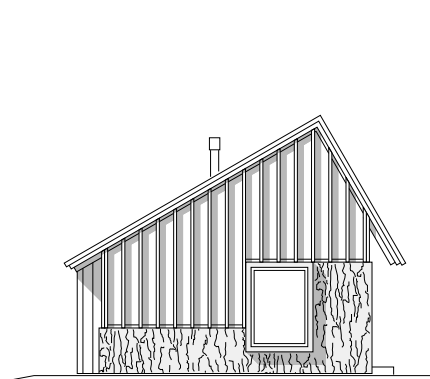


the spatial relation between the old farmhouse and the new barn

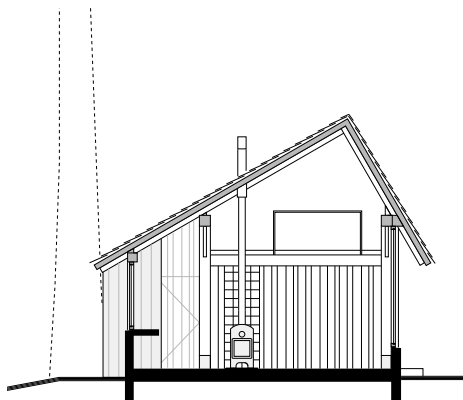




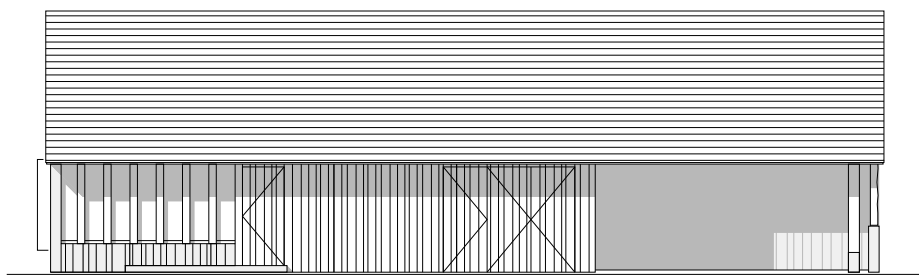
old nut tree with barked concrete end wall



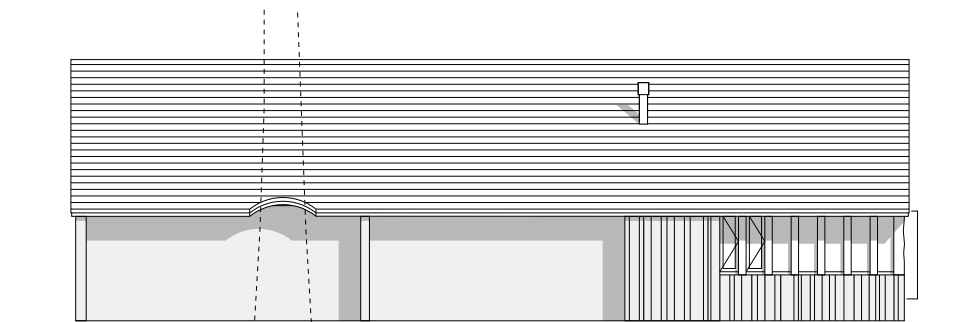
elevation workshop



section workshop



elevation facing farm

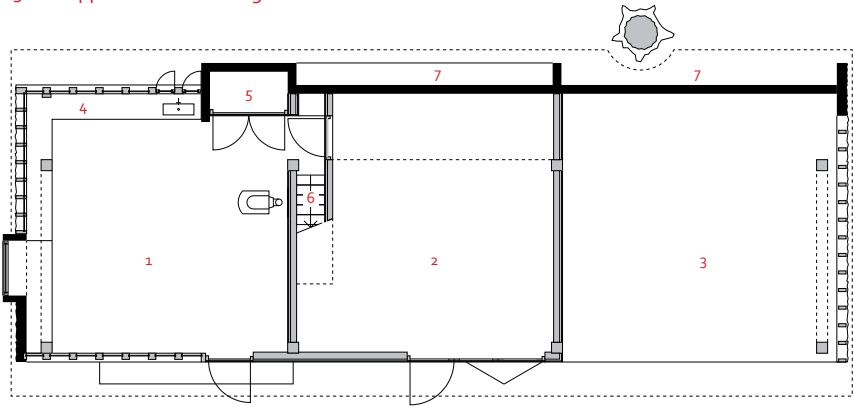


elevation facing fields

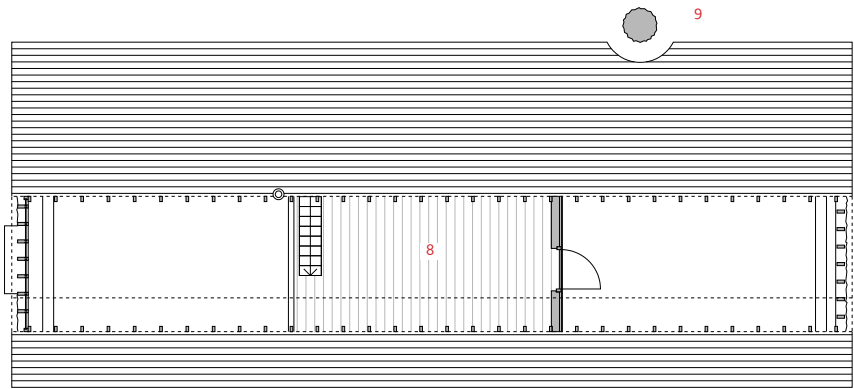


LEGEND

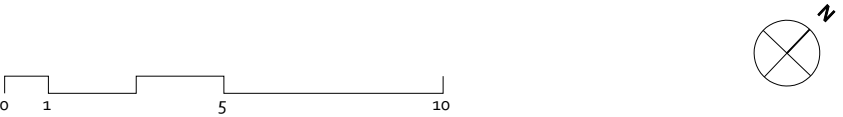
- 1 workshop
- 2 storage
- 3 carport
- 4 working top
- 5 closet
- 6 stairs to loft
- 7 firewood in recess
- 8 loft floor
- 9 wrapped around existing oak



plan ground floor



plan top floor



elevation farm side



view from the carport



vertical slats create a diaphanous enclosure of the carport



façade facing the fields with workshop on the right and firewood store on the left, tannic acid has left beautiful traces on the concrete



façade of workshop cum meeting room in oak, concrete and glass



concrete worktop showing view out to Wamberg estate



a concrete wood burner heats the workshop cum meeting room



the wall behind the wood burner conceals the stairs to the loft, the oak interior presents a total environment of imperfection in oak



view to workshop from loft, the narrow staircase and rhythm of the rafters ensure a stunning spatial experience



transparent walls present a maximum experience of the landscape



a glass slit in the loft floor allows daylight into the storeroom below



oak components in stringers, rafters, truss and wall



oak elements in cladding and roofing; iron traces in wood, woodprint in concrete and 'barked concrete,



façade on field side has a gap in the foundation and roof to accommodate one of the existing oak trees; a subtle design accent





transparent façades do not obstruct the view of the landscape



the workshop is like a tim machine, the sun's path can be followed throughout the day, the space has a strong relation to the surrounding landscape

