
Datum St.Gallen, 19.02.2025
Vortrag EnergieTreff St.Gallen

NOUN GMBH
Zweierstrasse 106
8003 Zürich, Switzerland
Office +41 44 223 46 22
info@studionoun.ch
www.studionoun.ch

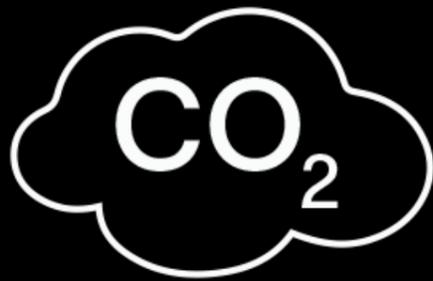
STUDIO NOUN:

« 4-FACH »

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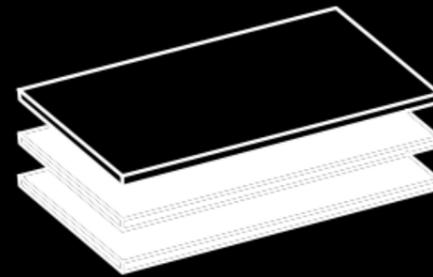
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Globale Auswirkungen der Bauindustrie



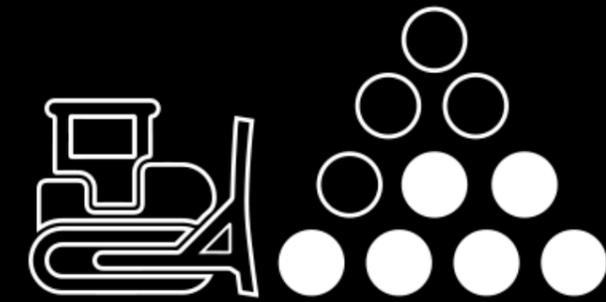
38%

CO² Emissions ⁽¹⁾



35%

Material consumption ⁽²⁾



50%

Waste ⁽³⁾

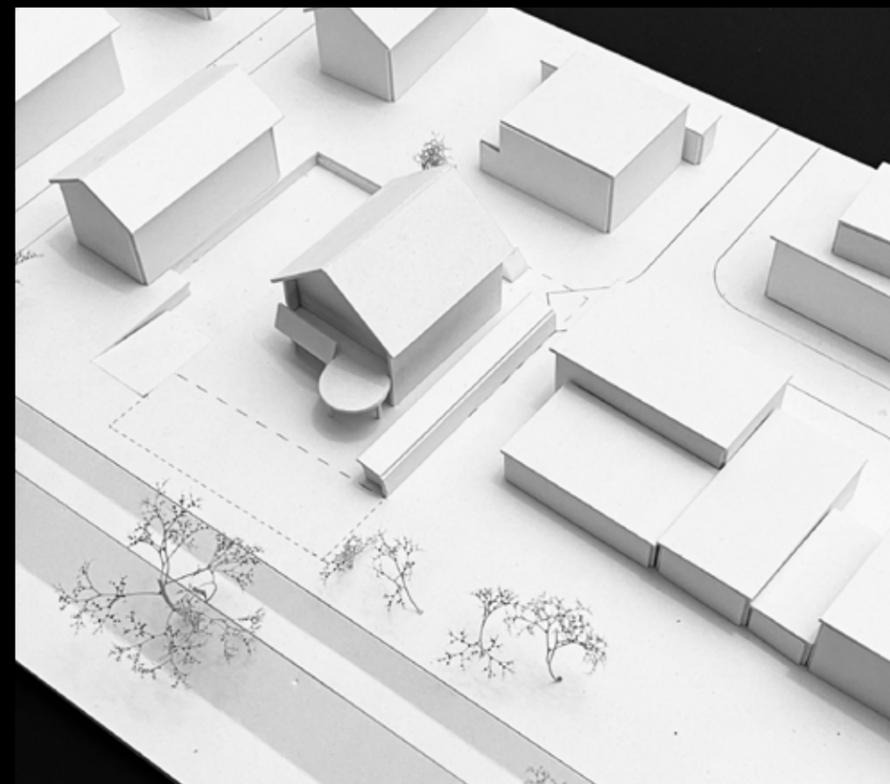
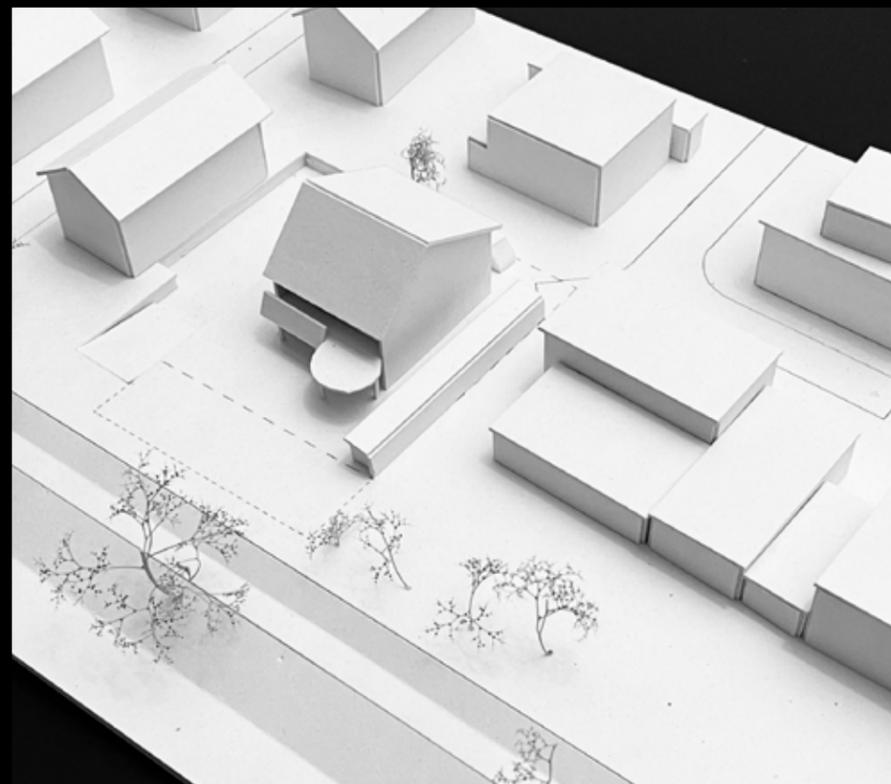
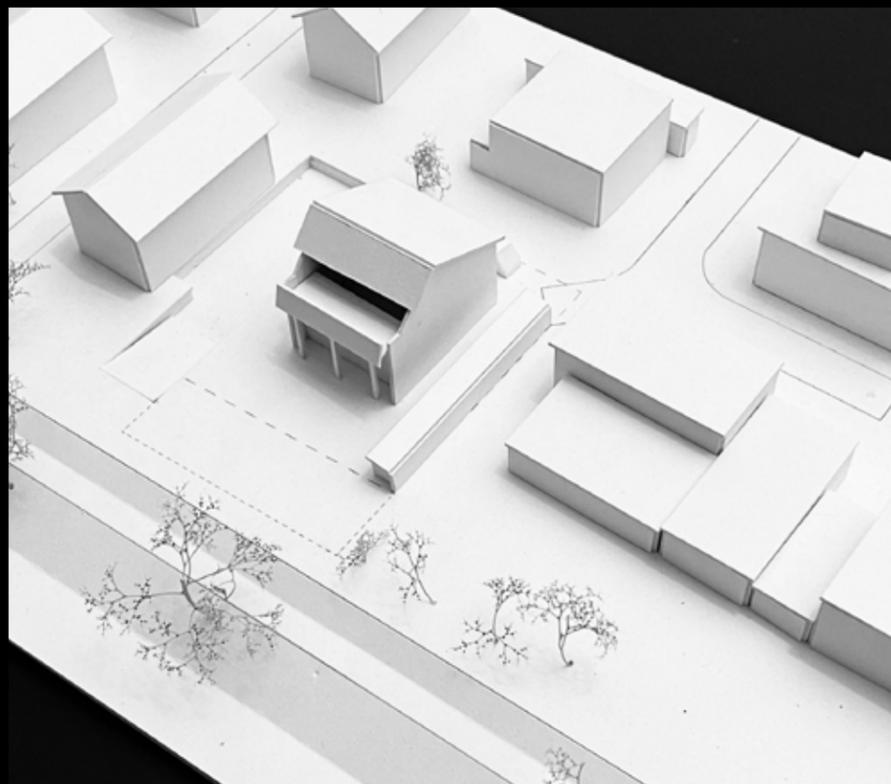
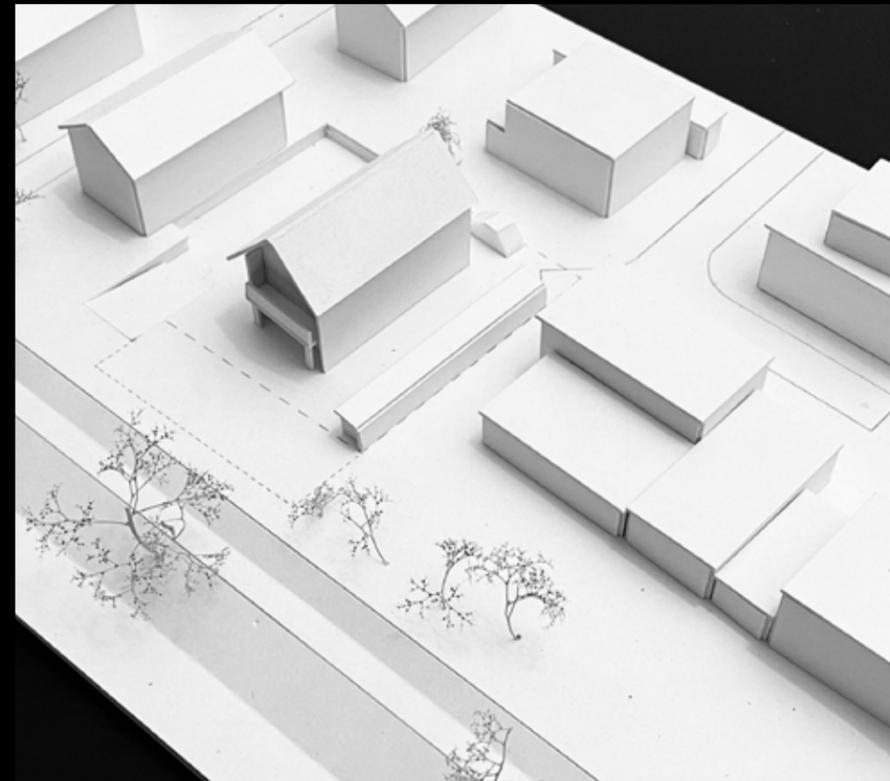
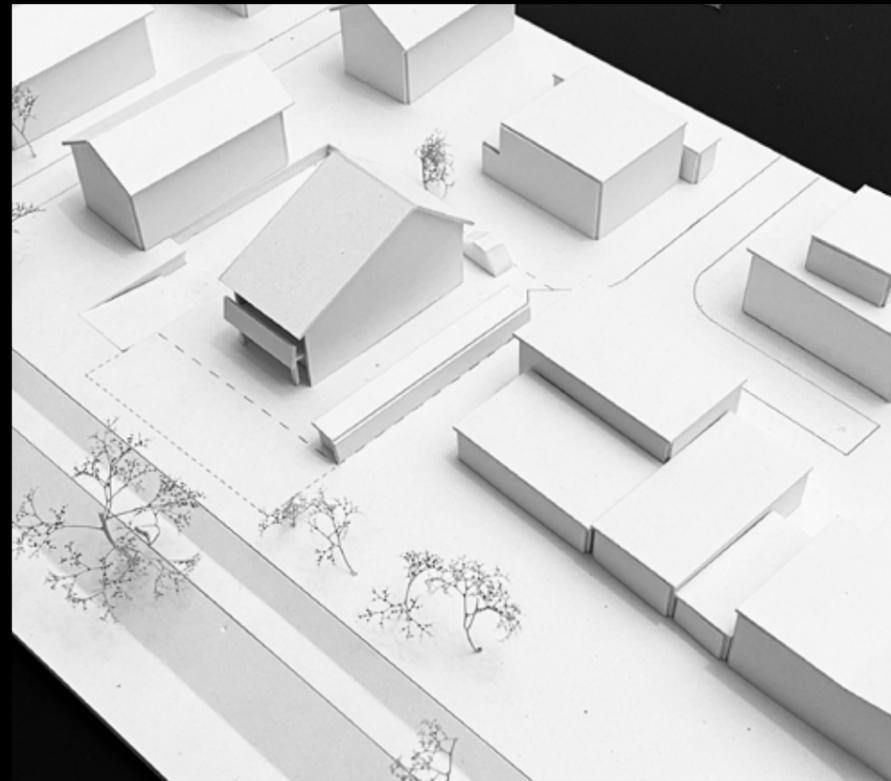
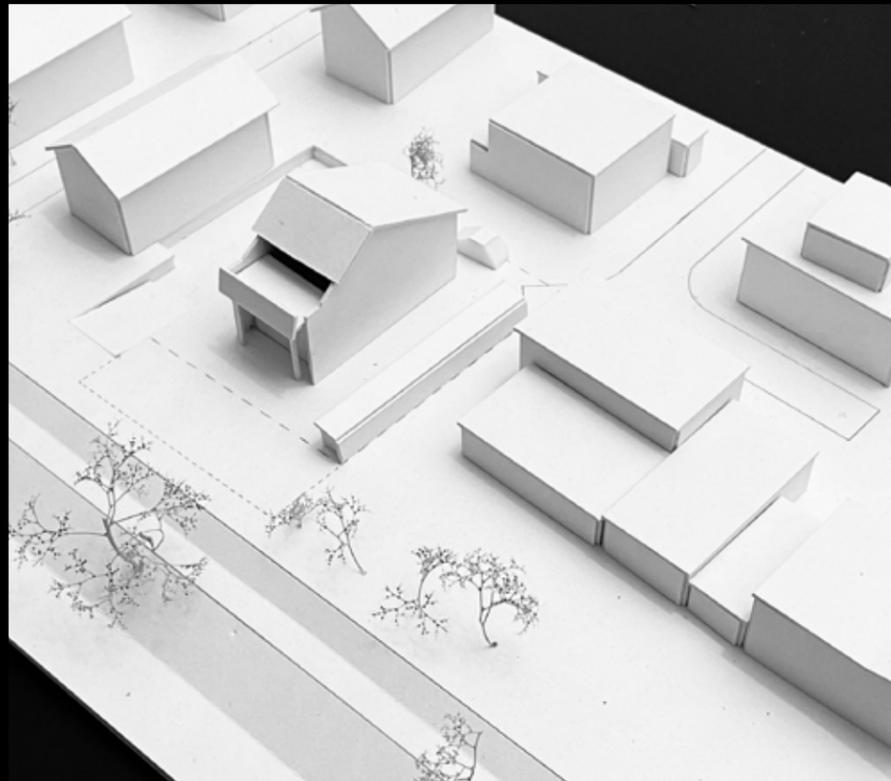
Sources: (1) United Nations Environment Programme, 2020 The Global Status Report for Buildings and Construction: <http://globalabc.org/index.php/our-work/tracking-progress-global-status-report> (2) United Nations Environment Programme (3) Willmott Dixon. (2010). The Impacts of Construction and the Built Environment. <https://www.willmottdixon.co.uk/asset/g462/download>

042 OLEANDERWEG

NEUBAU

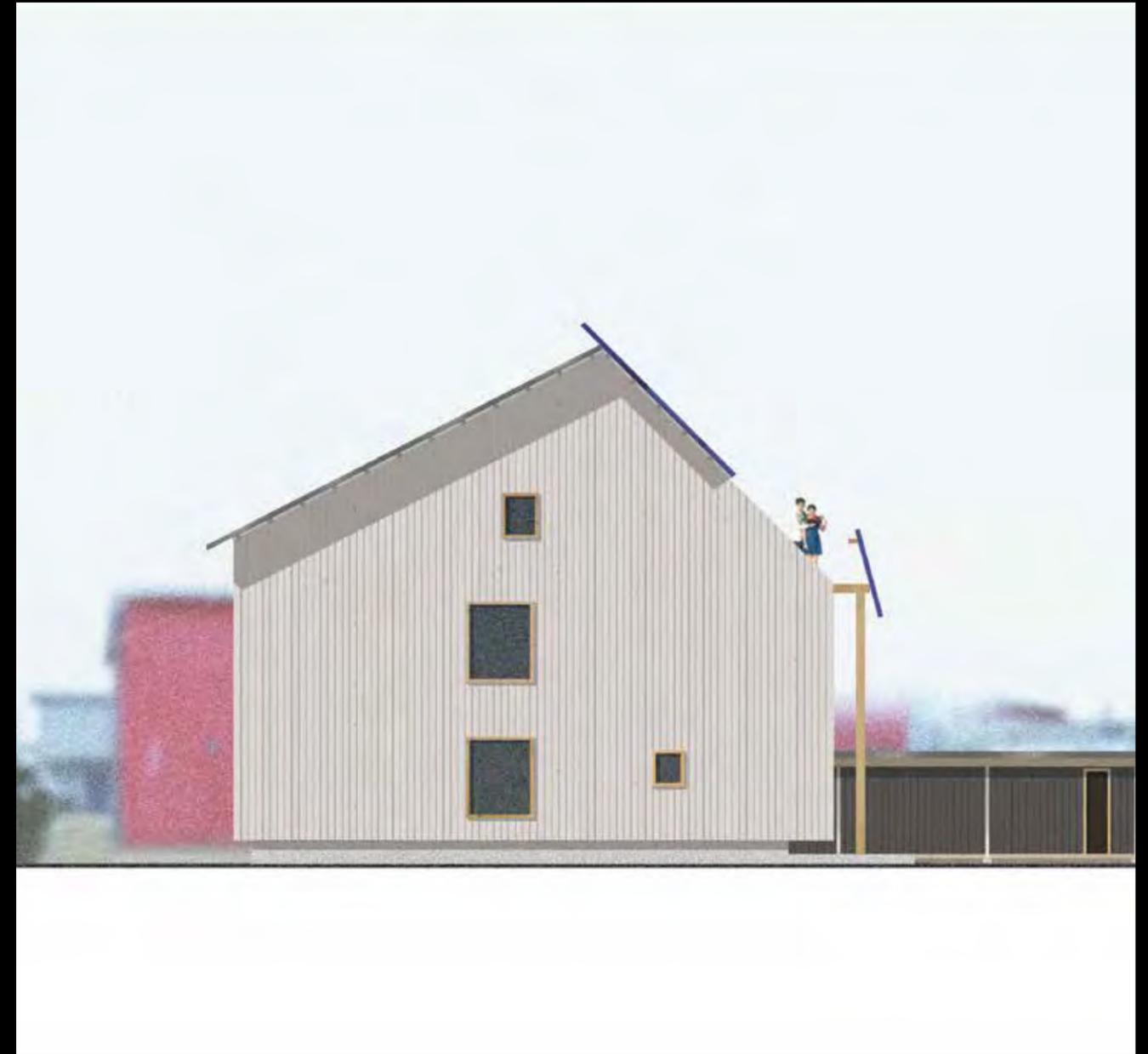
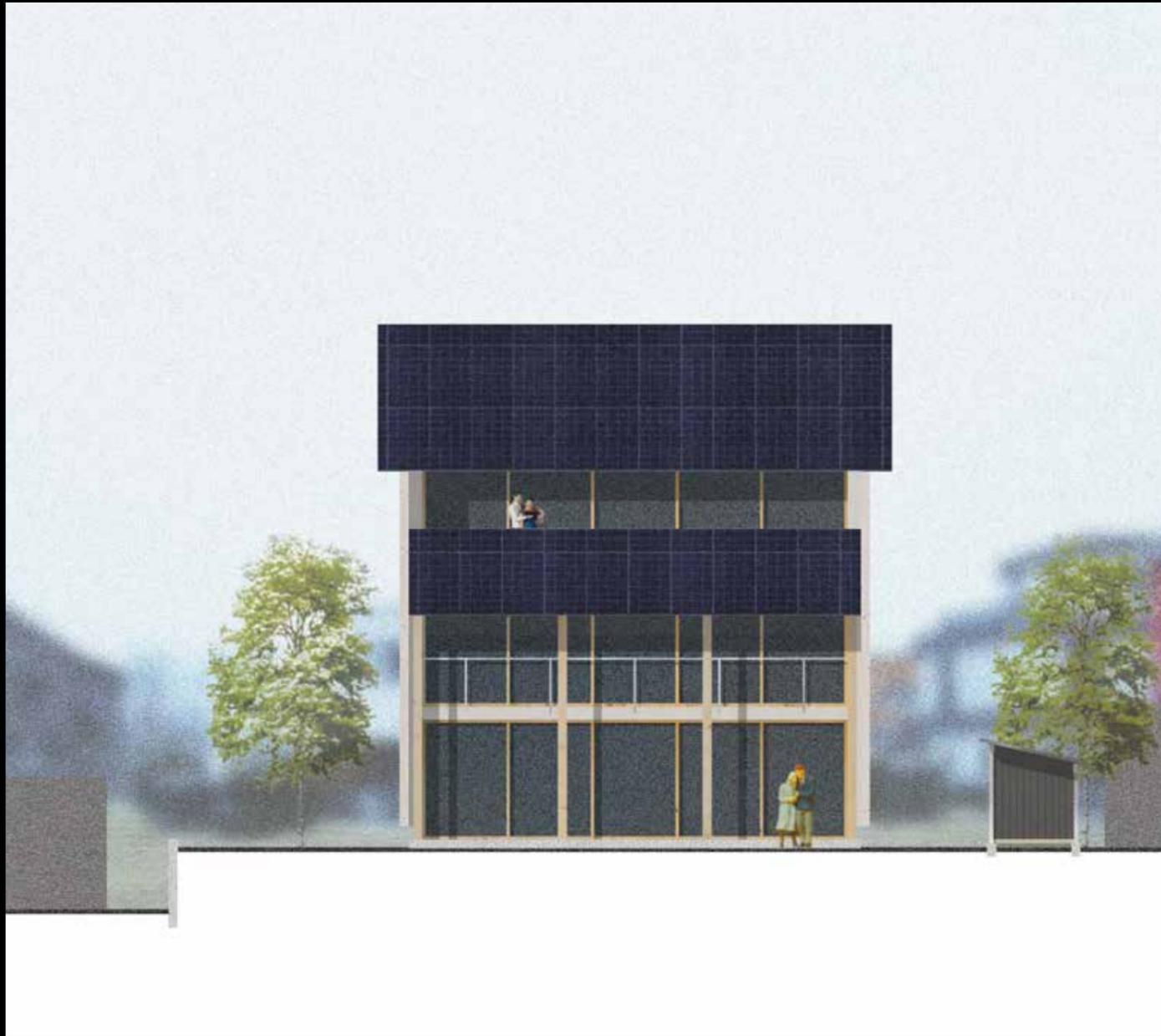
MEHRGENERATIONENHAUS

02.2022 - 11.2024





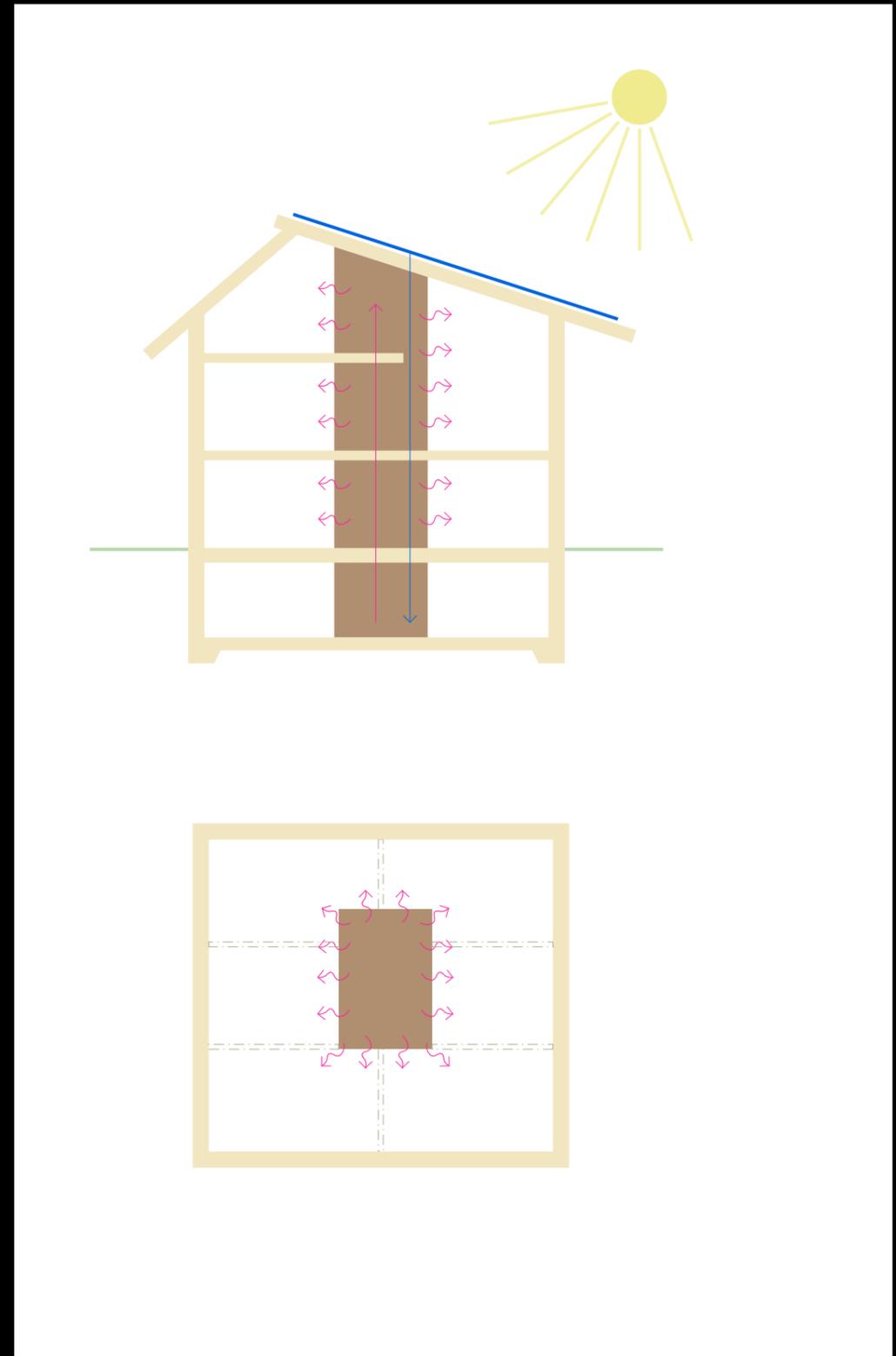
Konzeptmodell



Projektstand Studie



Projektstand Studie



ENERGIEVERBRAUCH

3/4 WÄRMEENERGIE

1/4 ELT ENERGIE

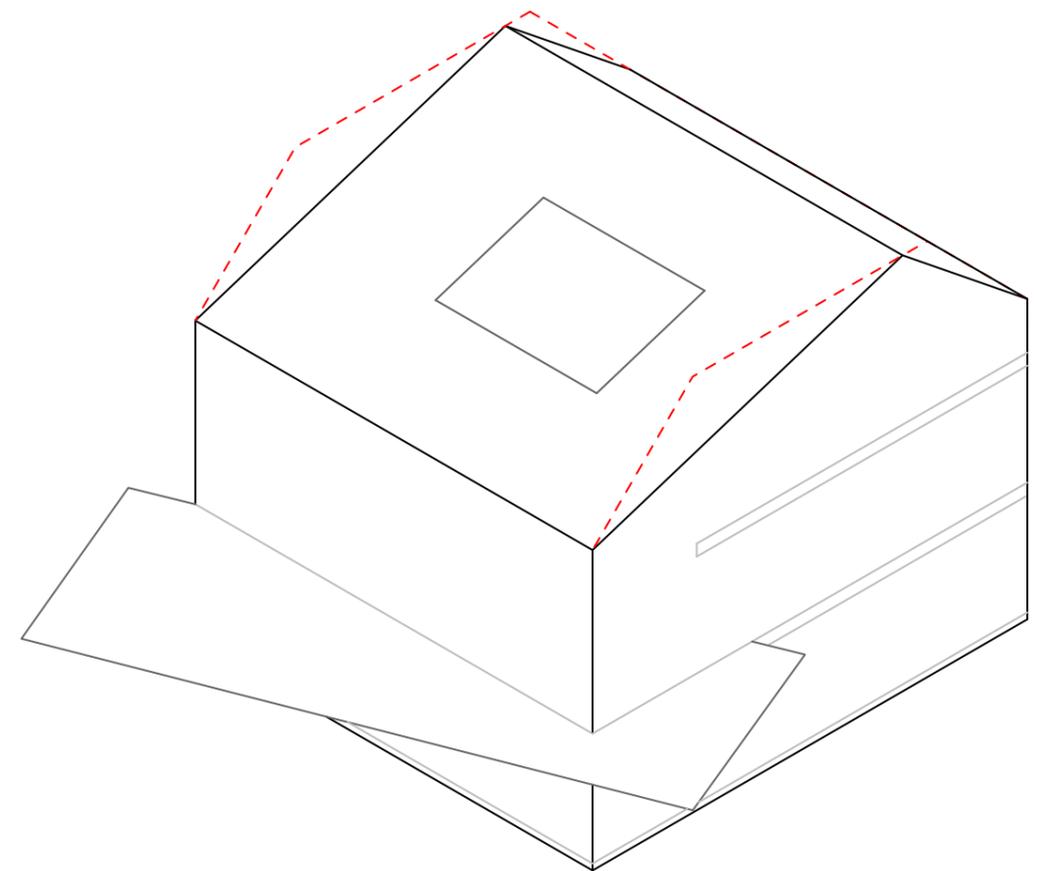
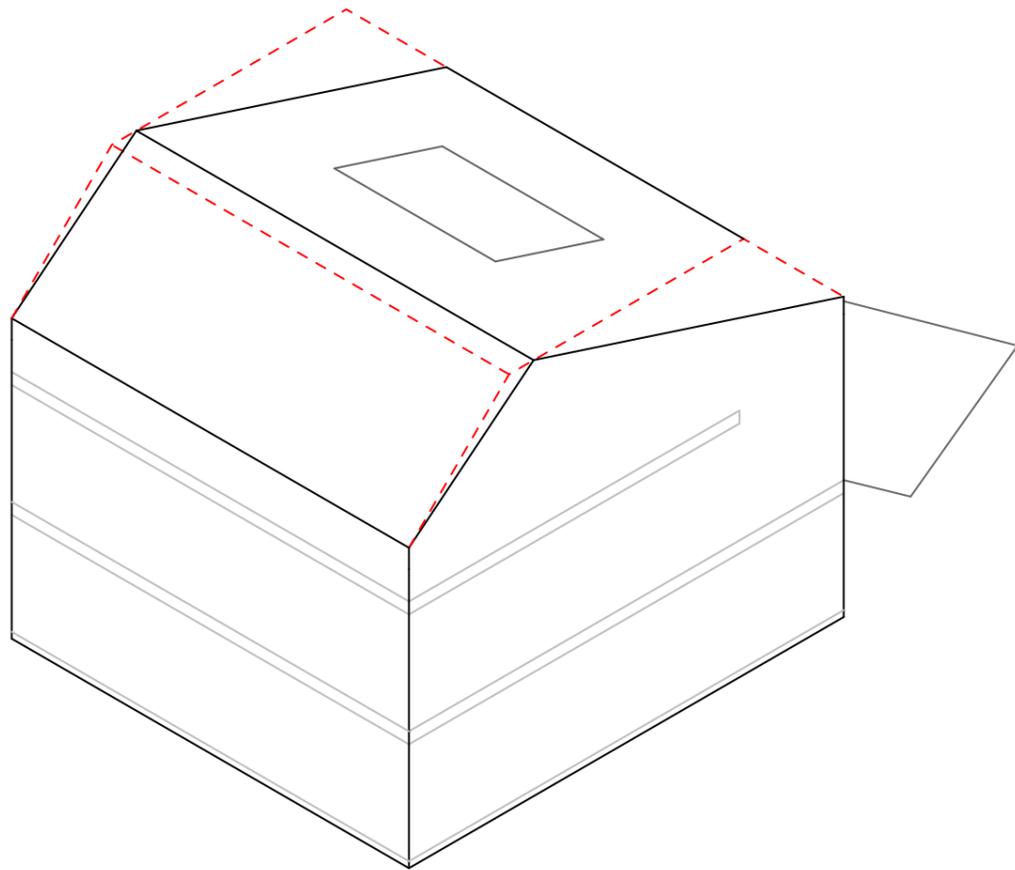
VORGABEN ENERGIEBERATUNG

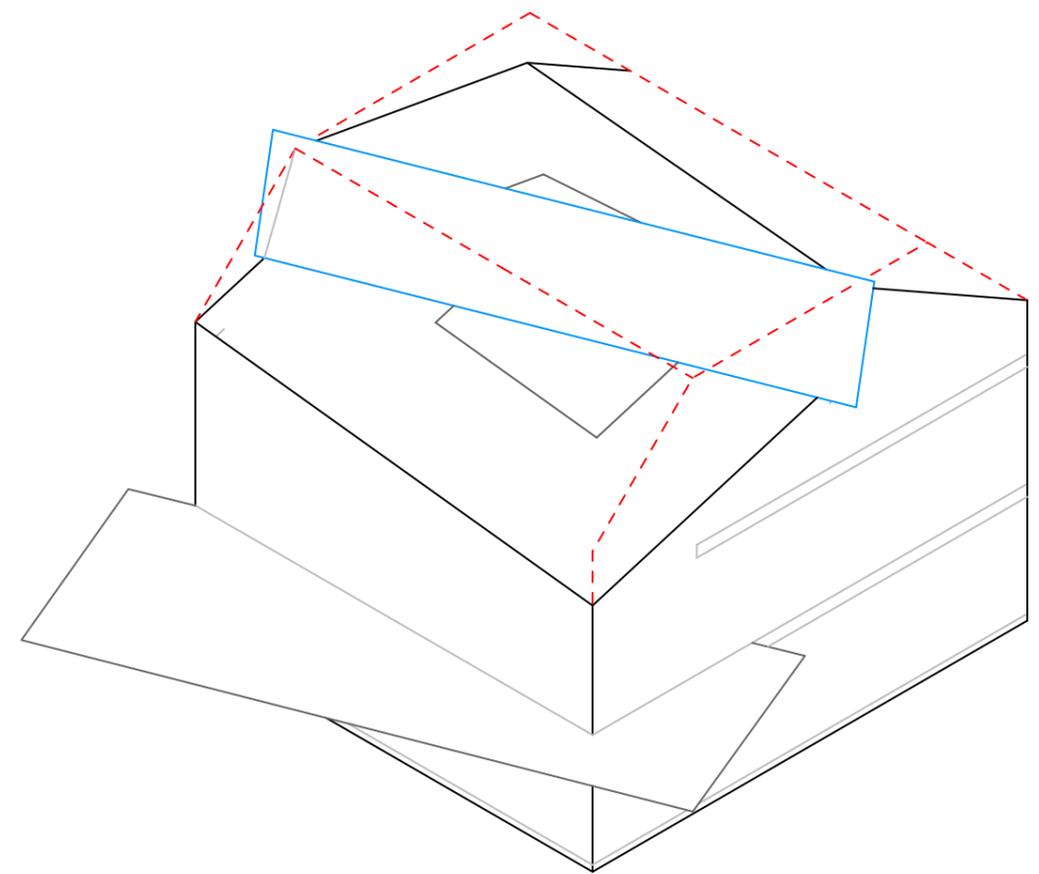
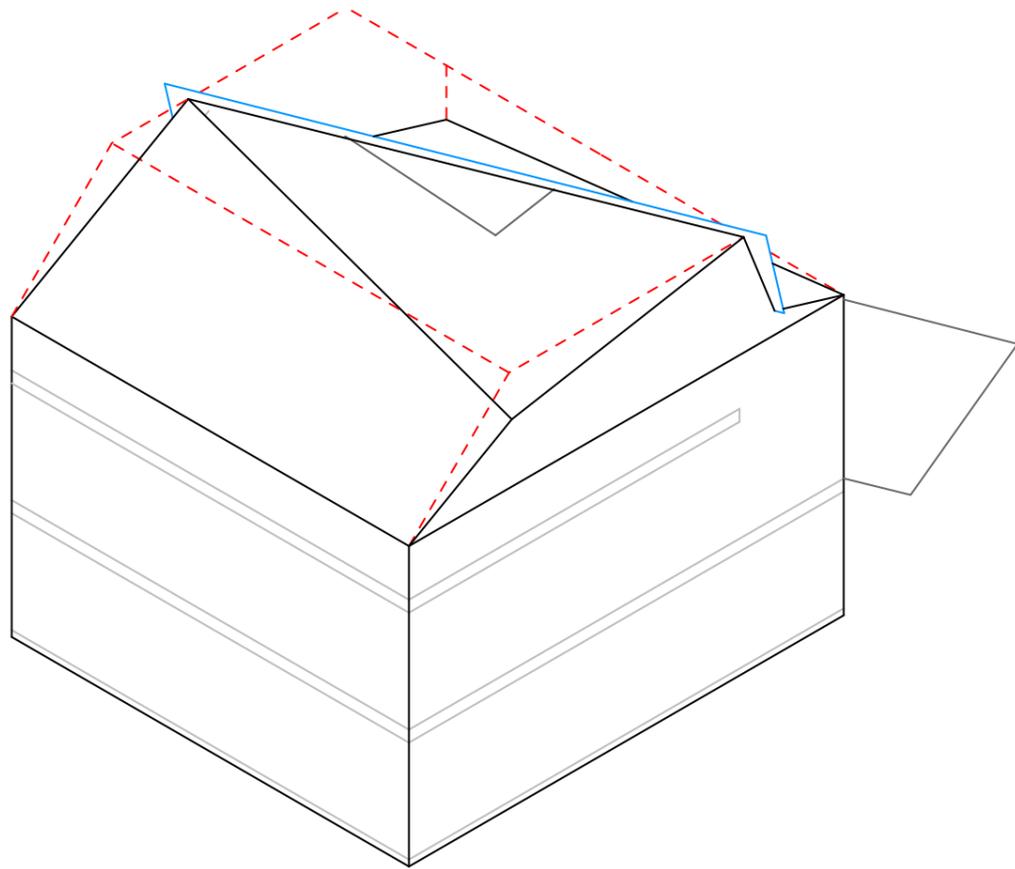
Ausrichtung gegen Süden (wenig Tolleranz)

Neigung der Kollektoren 70°

32m² Kollektorfläche

rechteckige Kollektorfläche (Standardelemente)



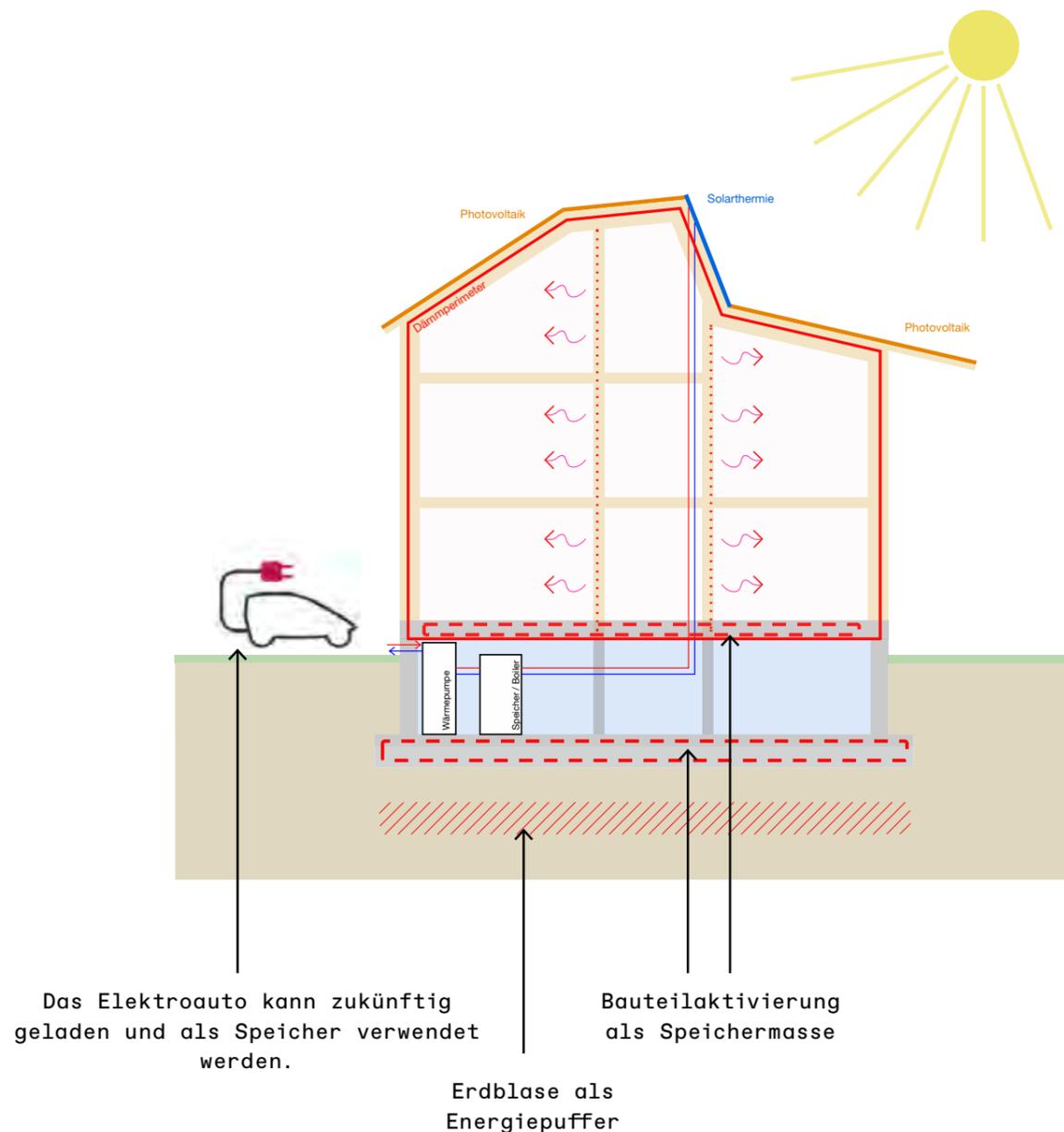
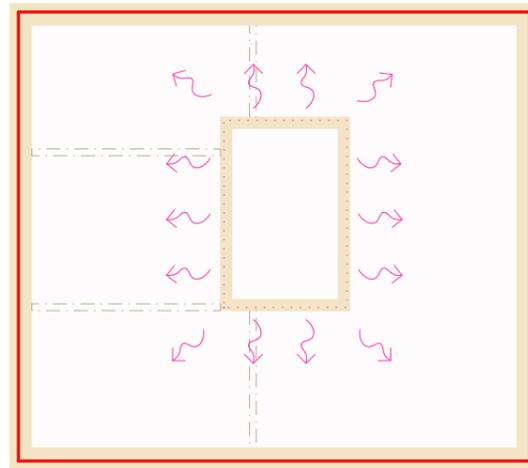




FAZIT SIMULATION

Simulation Kuster Partner: 32m² Solarthermie

Simulation G.Keckeis: 28m² Solarthermie

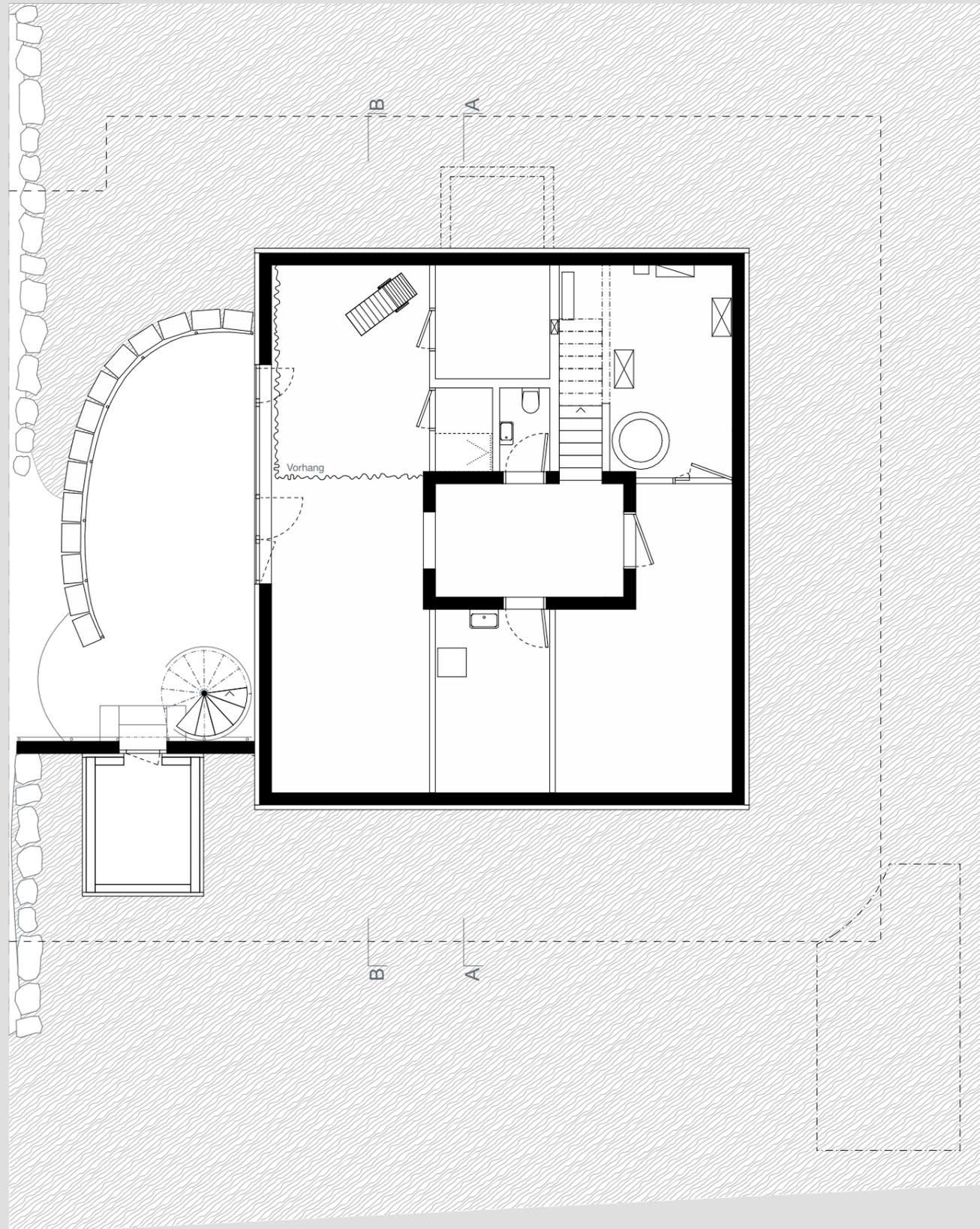


→ 1/3 der im Sommer gewonnenen Energie wird direkt verbraucht

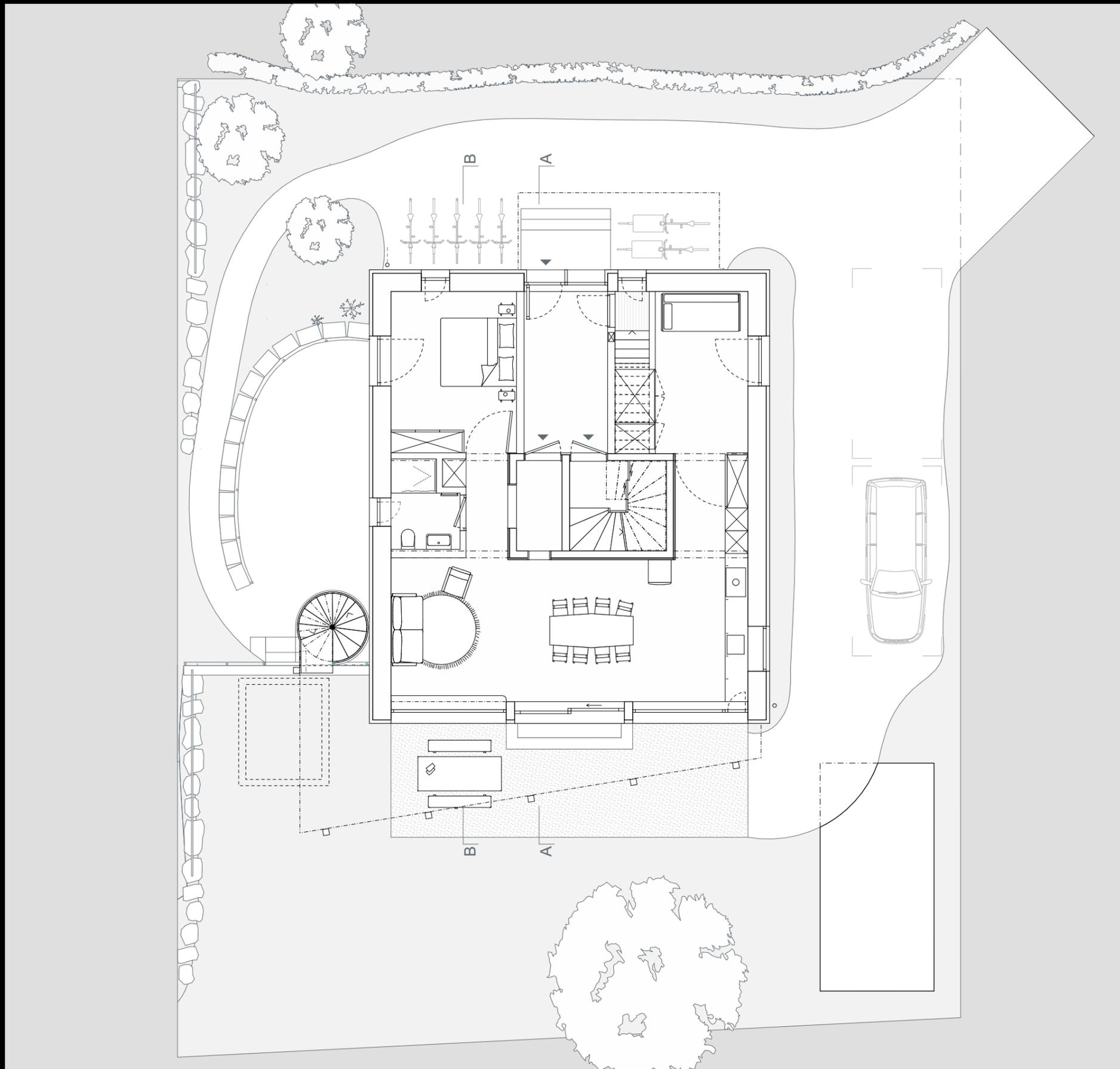
→ 2/3 der im Sommer gewonnenen Energie wird in der Bodenplatte gespeichert
Diese Energie wird im Winter benutzt um das Wasser auf Niedertemperatur zu bringen

→ Die zusätzliche Wärmepumpe deckt das Energiedelta ab, welches für die Erzeugung des Warmwassers benötigt wird.

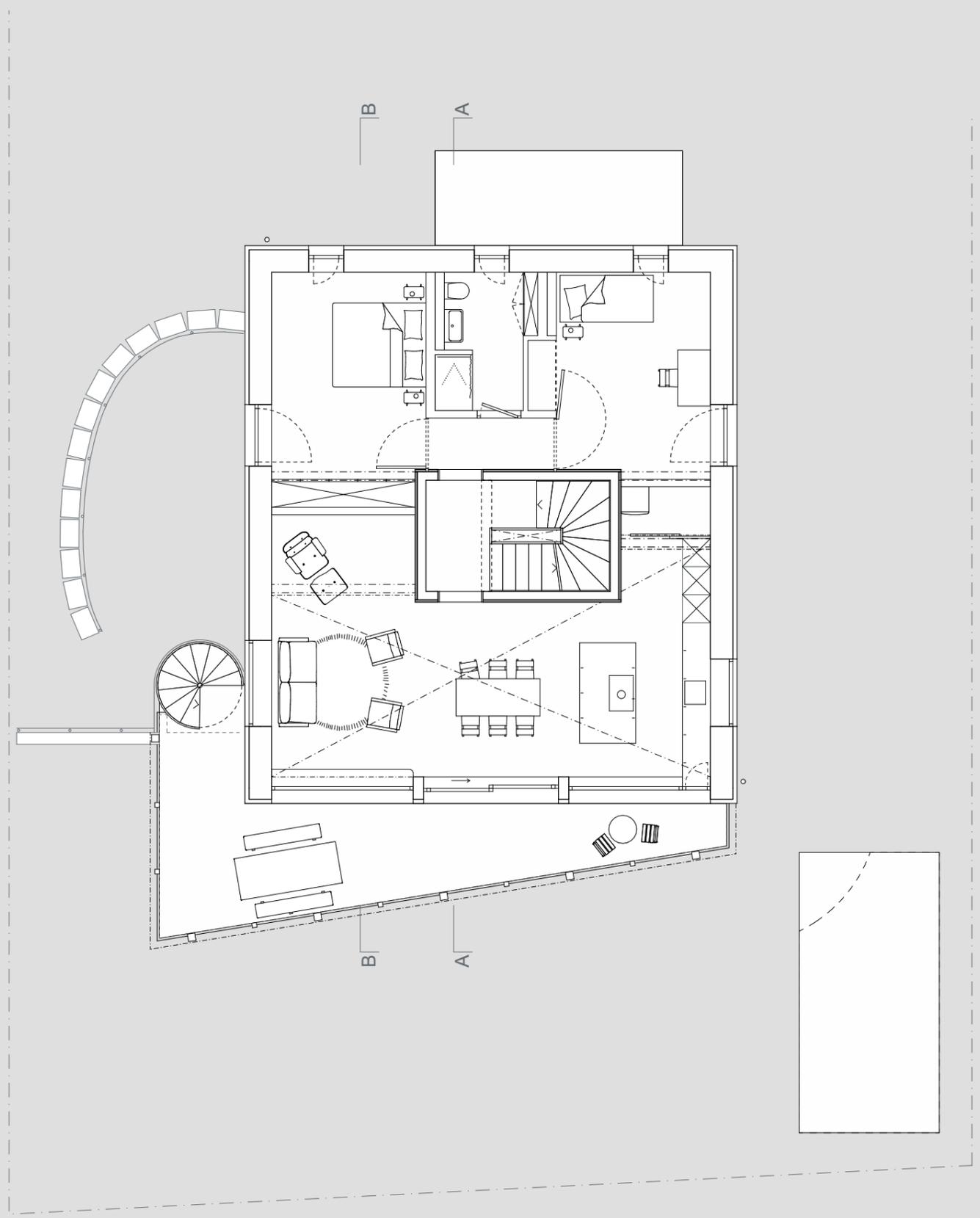
PROJEKT



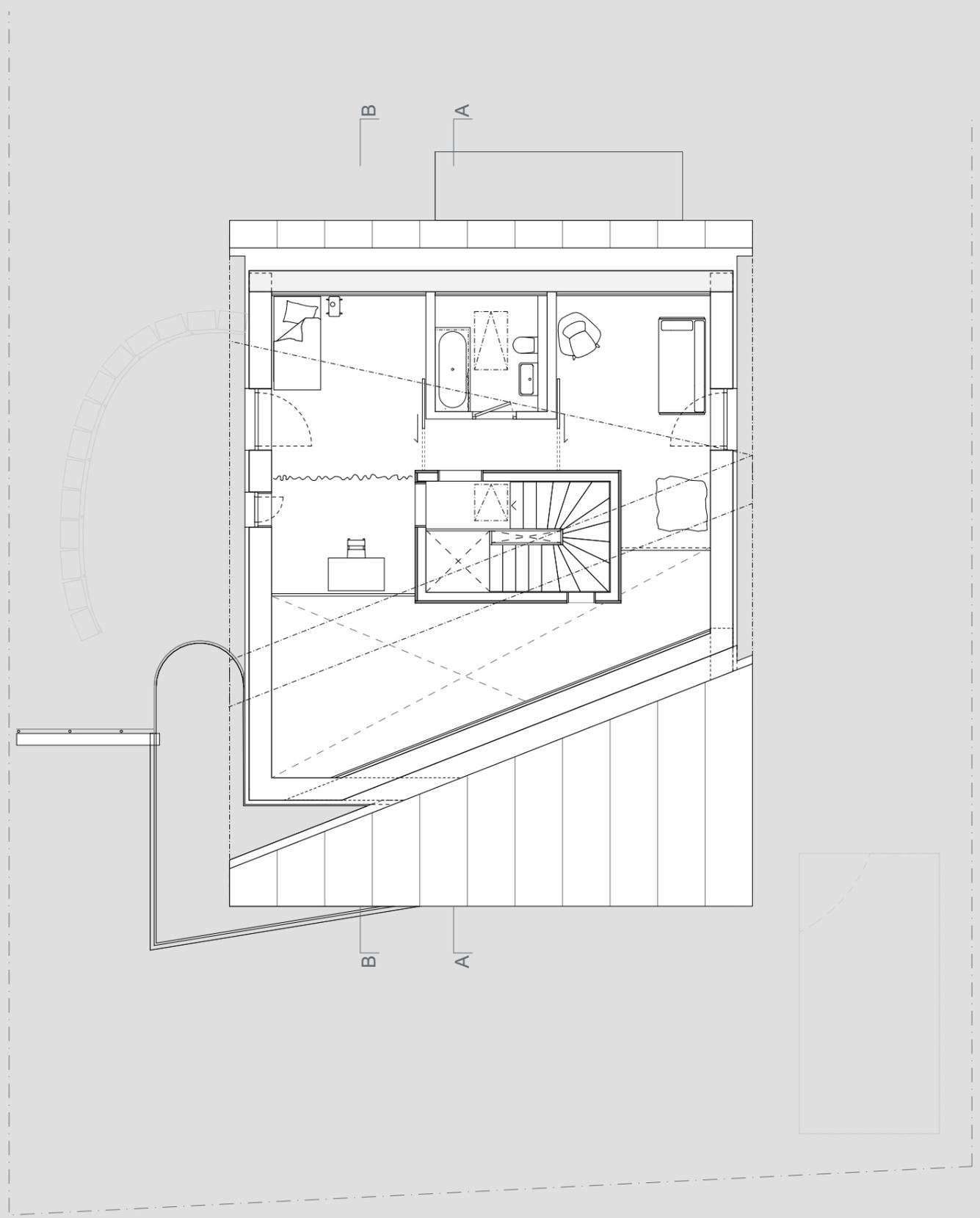
Untergeschoss



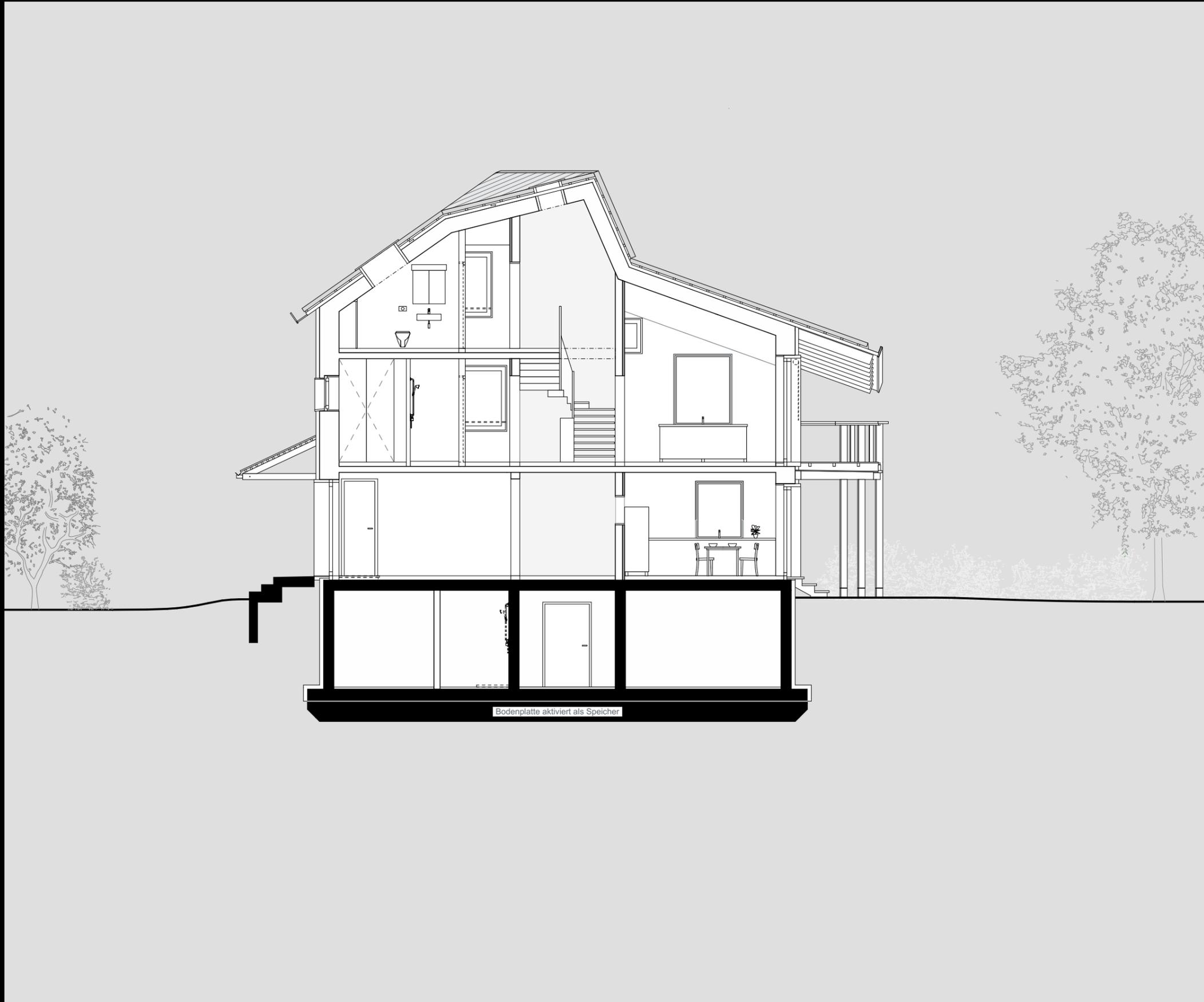
Erdgeschoss



Obergeschoss



Dachgeschoss



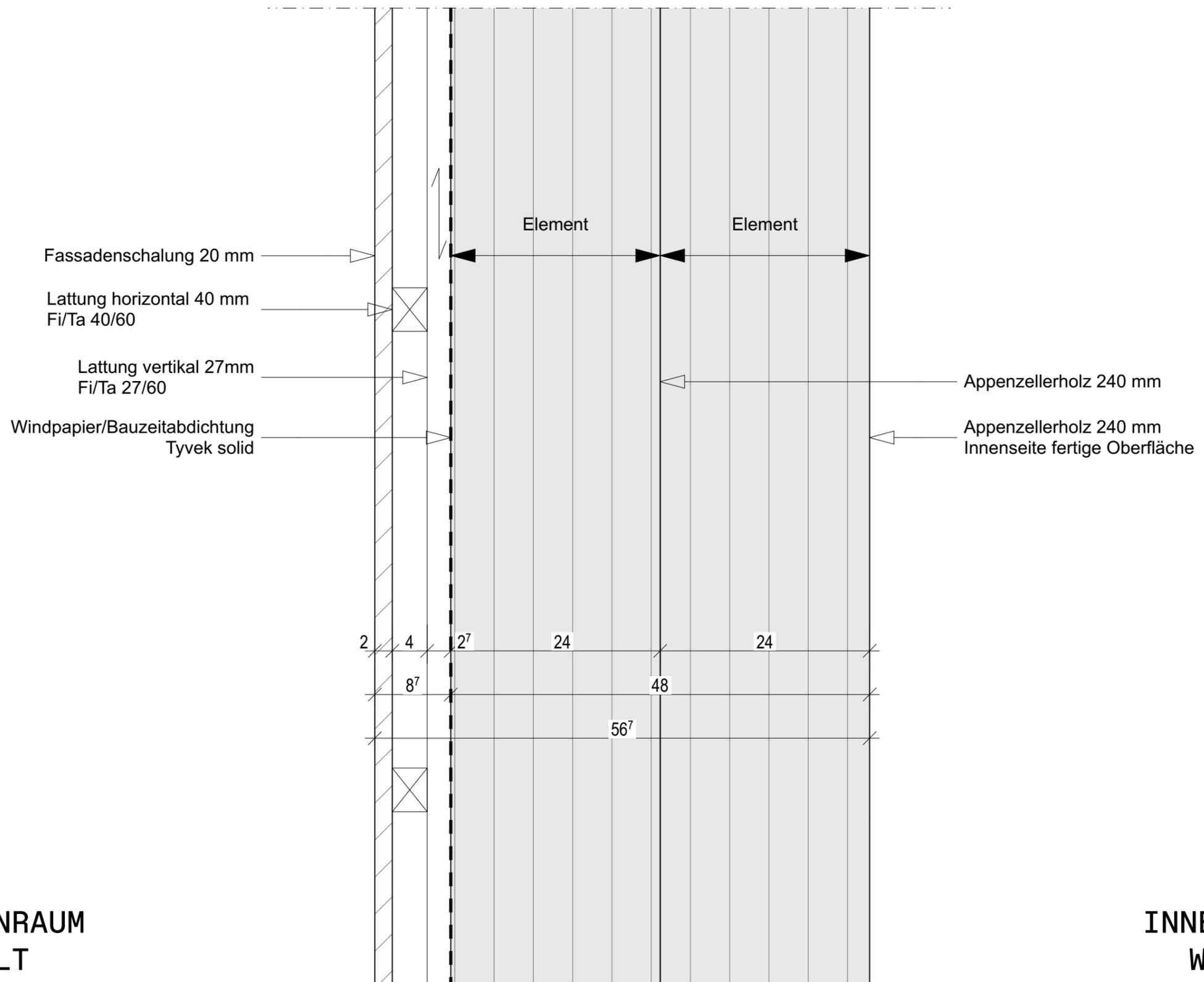
Schnitt

REALISIERUNG





AUSSENRAUM
KALT



INNENRAUM
WARM



TW-Fix 4000

APPENZELLER HOLZ
NATÜRLICHER ELEMENTBAU VON A BIS Z

techno
wood

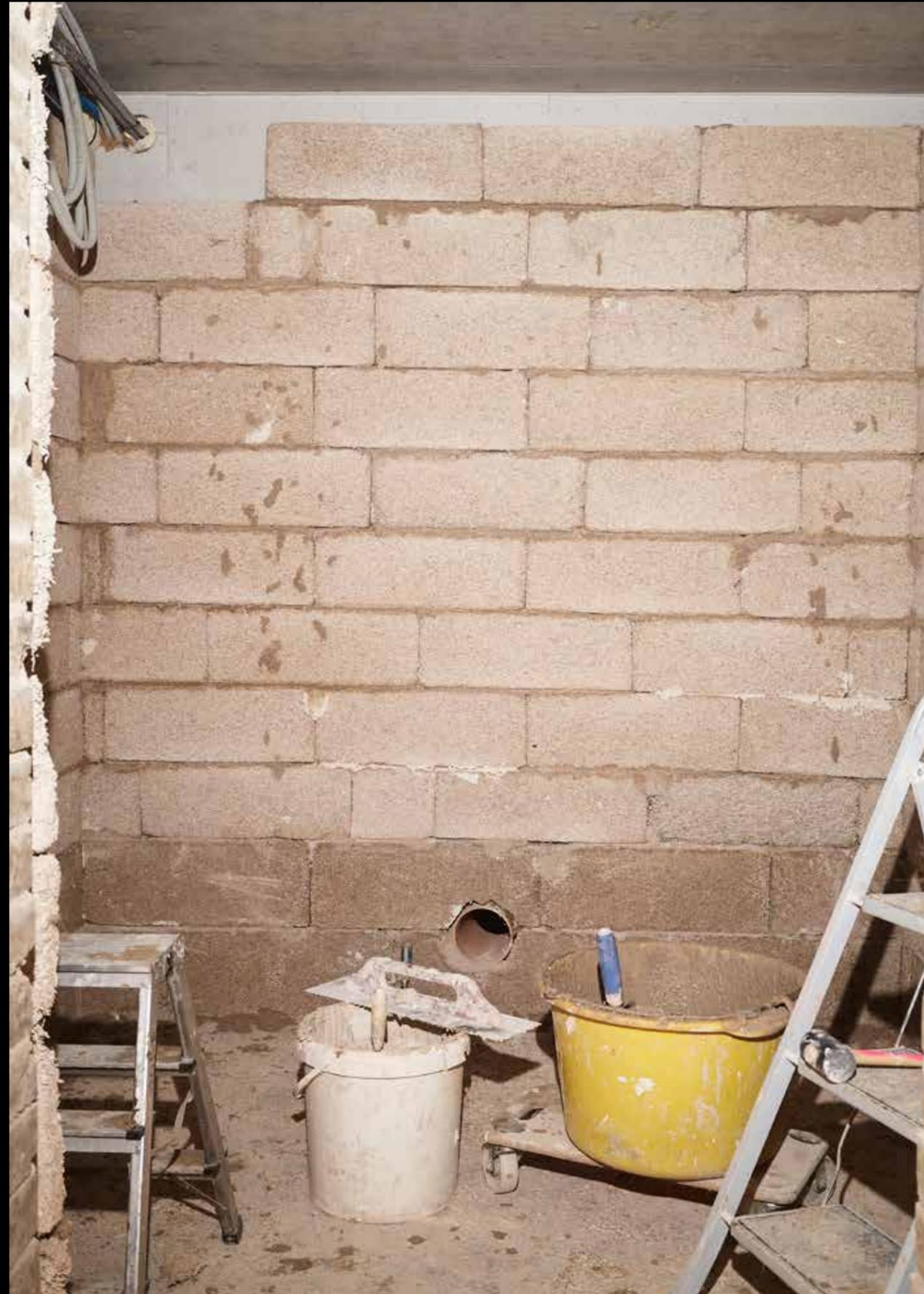




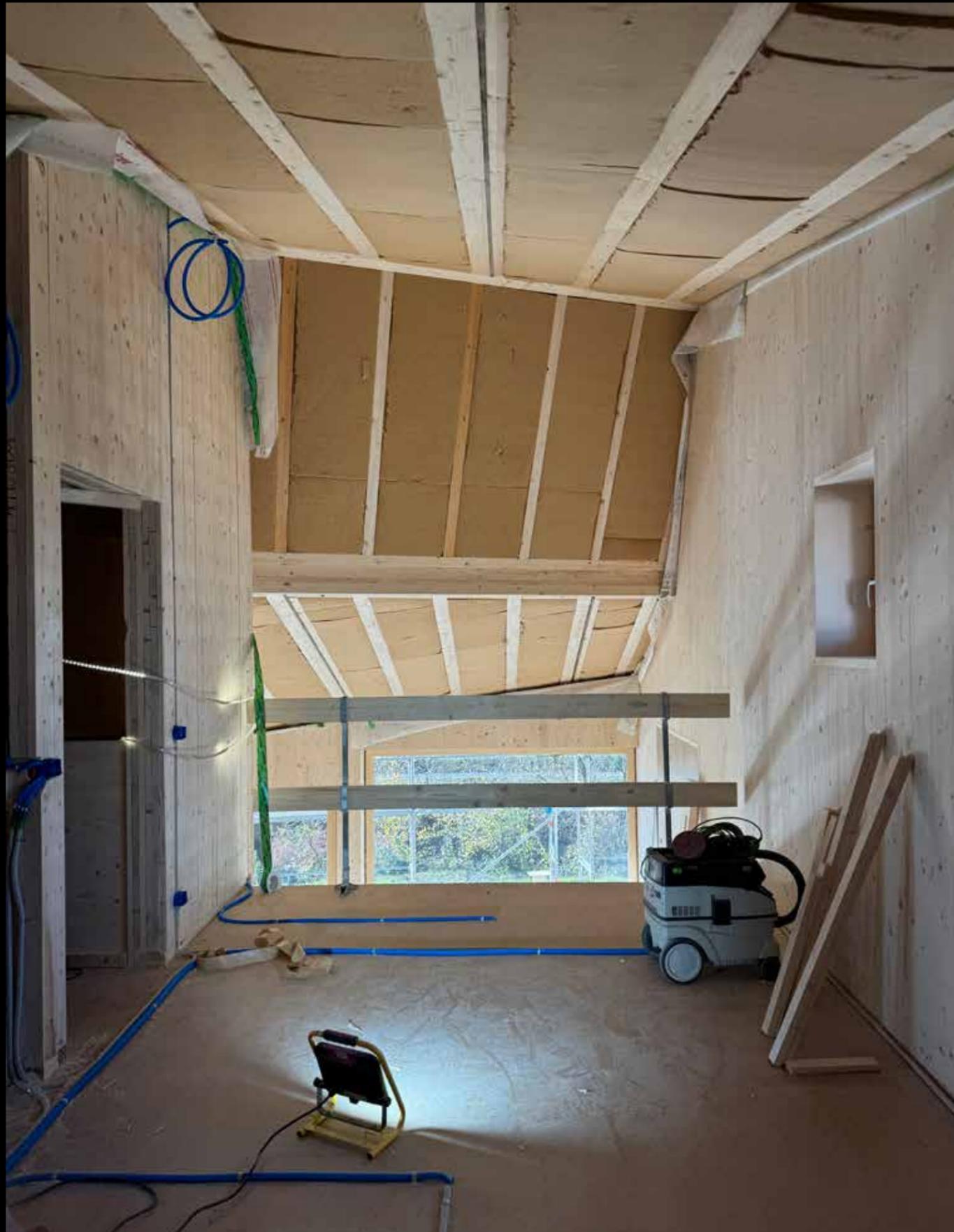








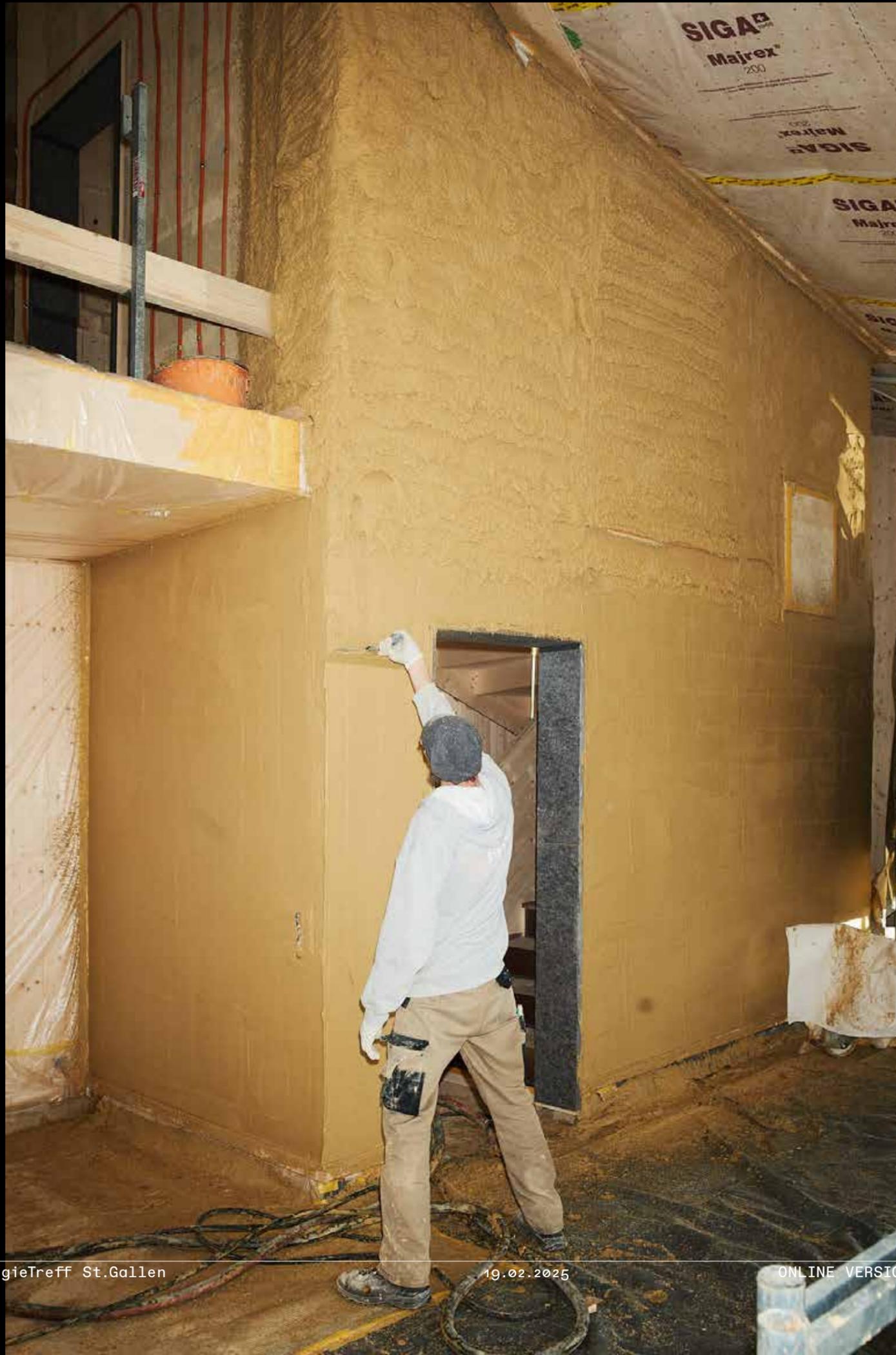






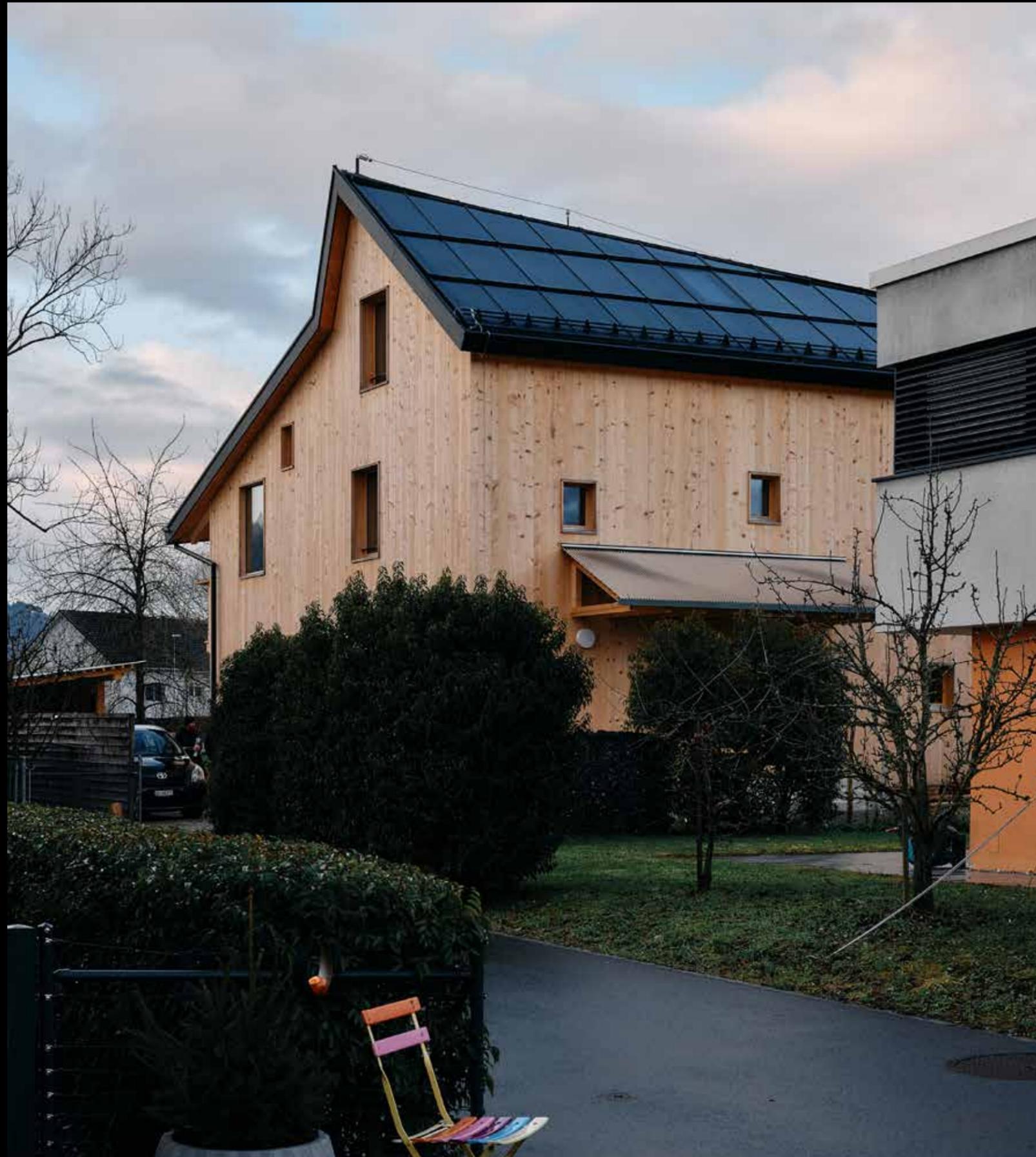








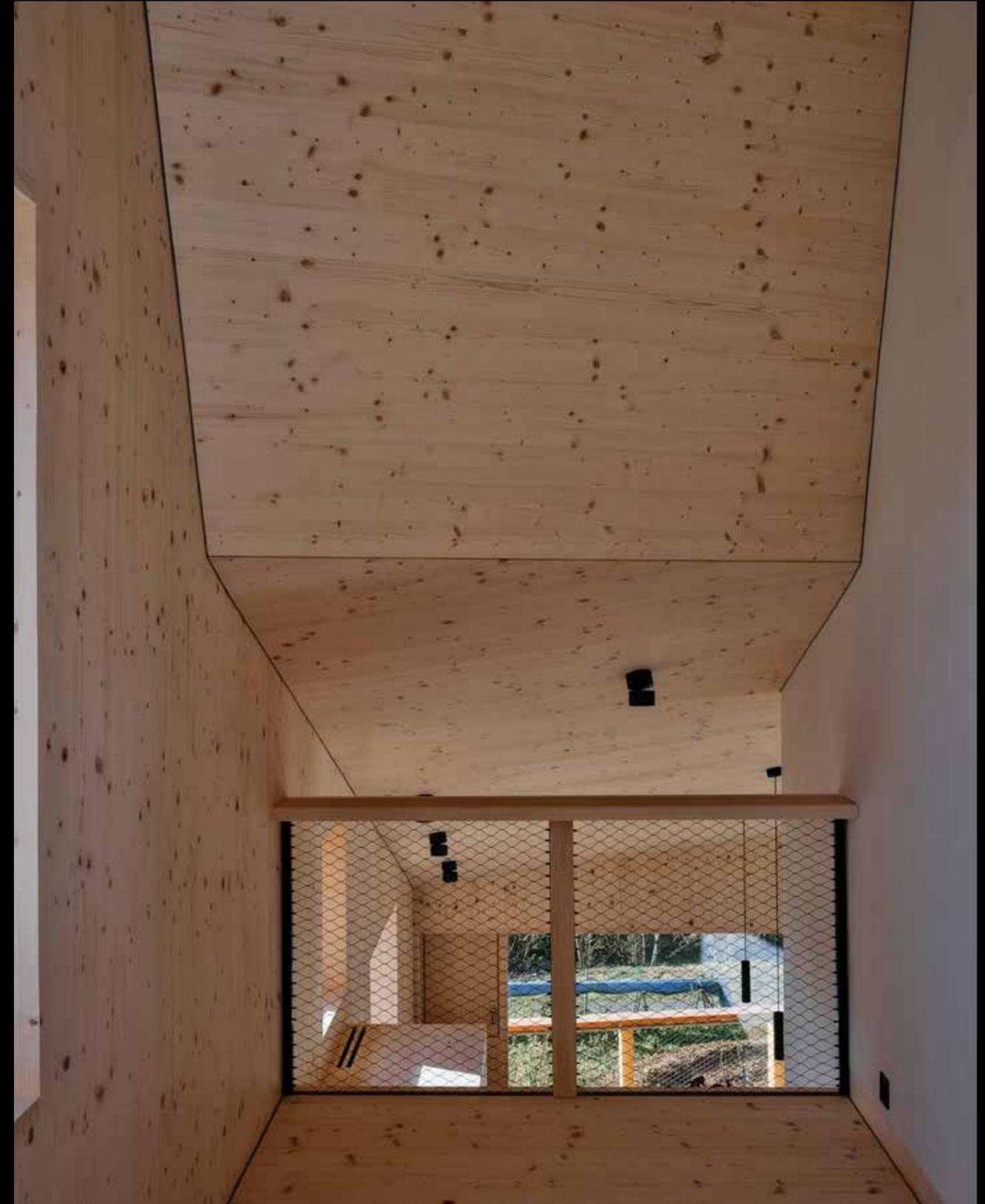










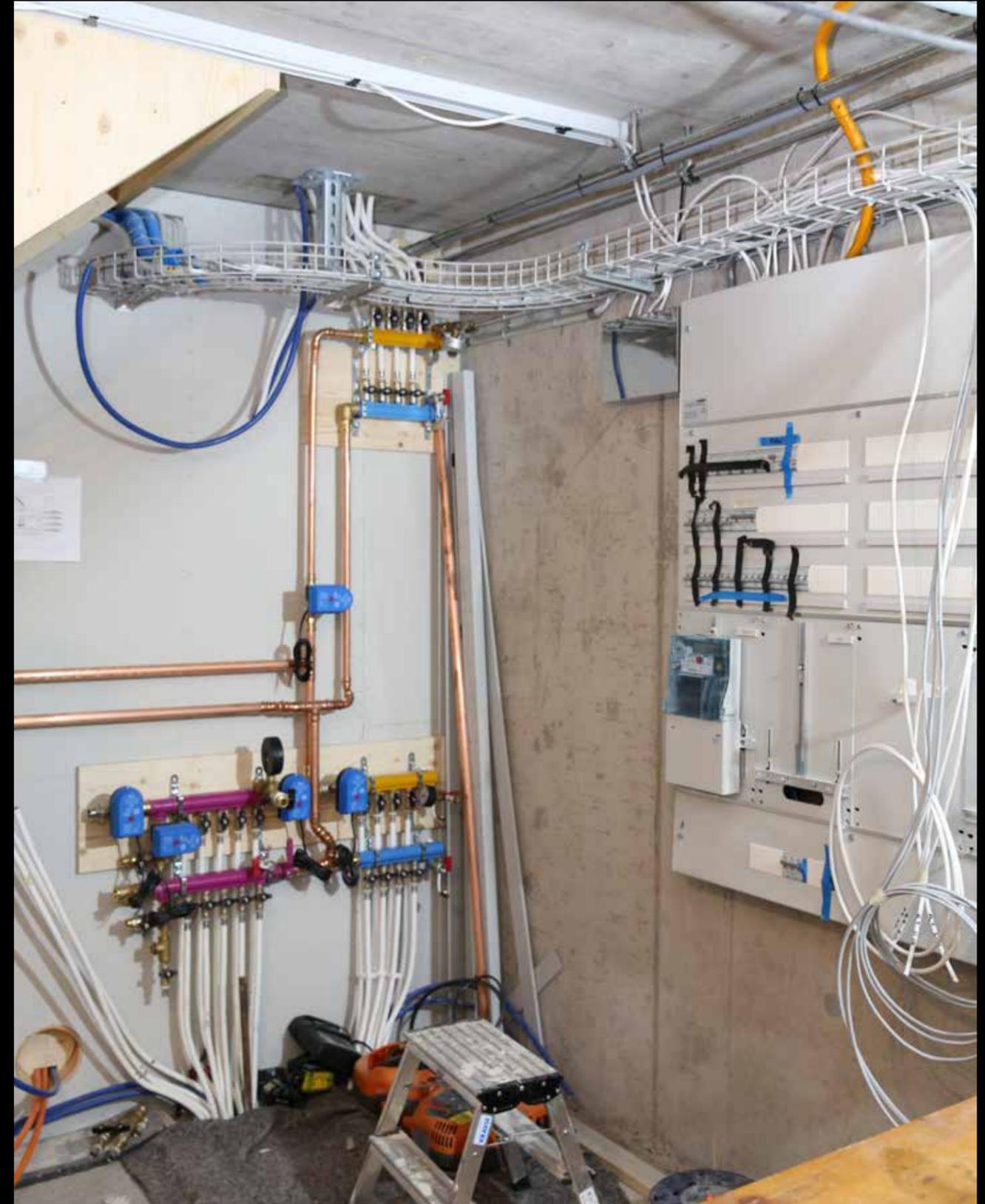












SUSTAINABLE STRATEGIES FOR HUMAN- CENTERED ARCHITECTURE