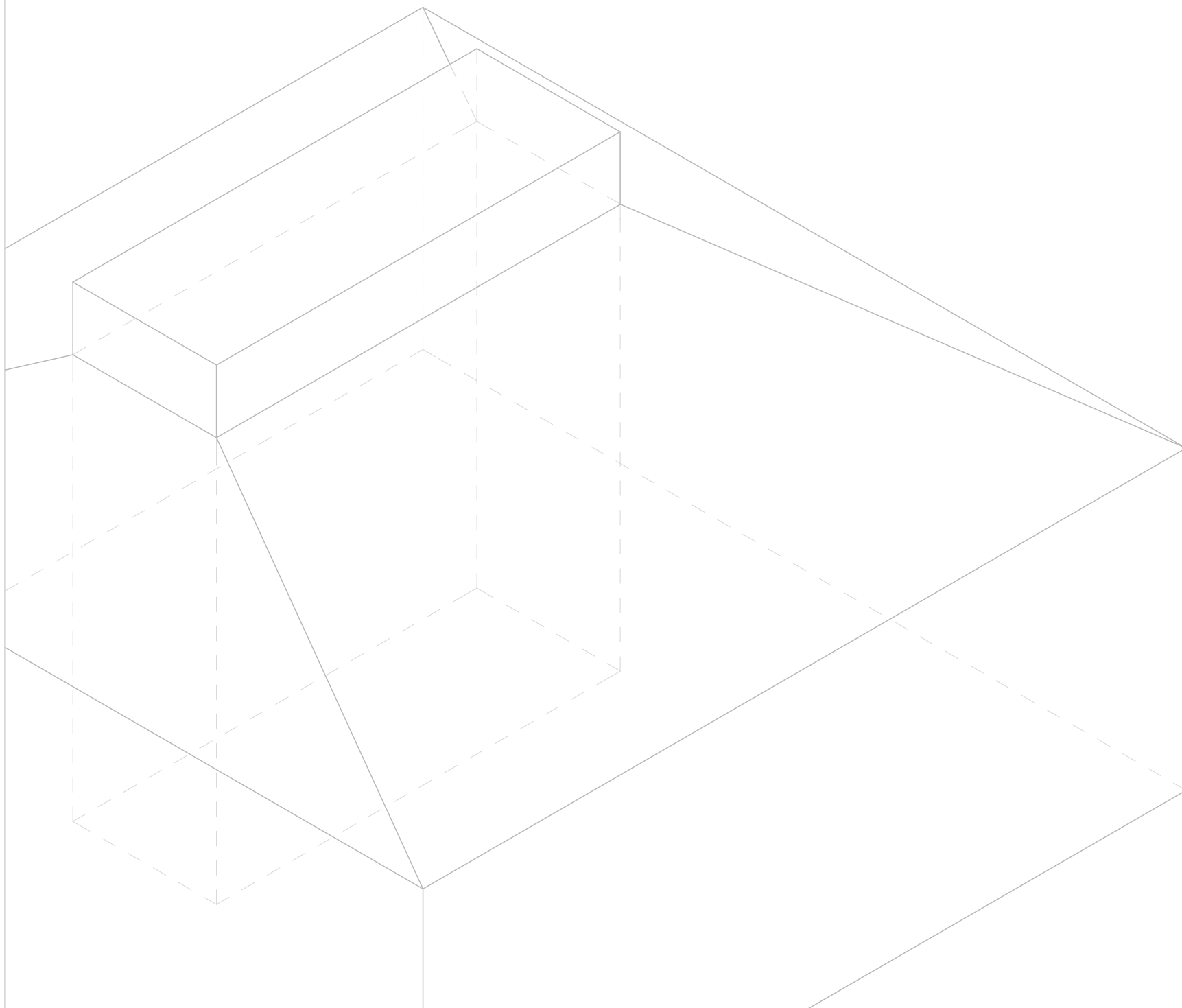


hom²E: detailing



group one

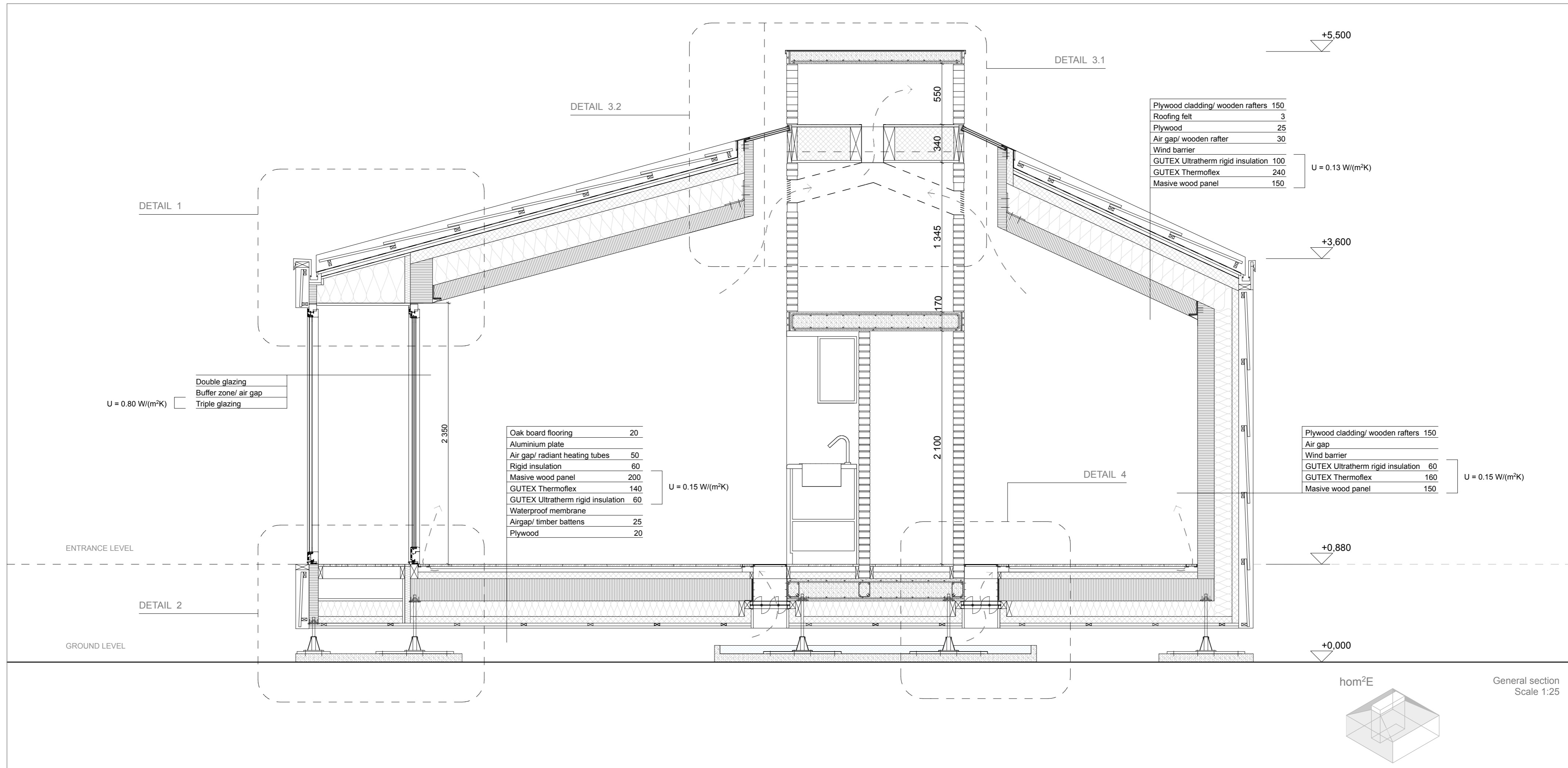
Arjun Basnet

Lin Du

Elisabeth Lilleby

Maria Coral Ness

Alise Plavina



| | |
|-----------------------------------|-----|
| Plywood cladding/ wooden rafters | 150 |
| Roofing felt | 3 |
| Plywood | 25 |
| Air gap/ wooden rafter | 30 |
| Wind barrier | |
| GUTEX Ultratherm rigid insulation | 100 |
| GUTEX Thermoflex | 240 |
| Masive wood panel | 150 |

U = 0.13 W/(m²K)

| | |
|-----------------------------------|-----|
| Oak board flooring | 20 |
| Aluminium plate | |
| Air gap/ radiant heating tubes | 50 |
| Rigid insulation | 60 |
| Masive wood panel | 200 |
| GUTEX Thermoflex | 140 |
| GUTEX Ultratherm rigid insulation | 60 |
| Waterproof membrane | |
| Airgap/ timber battens | 25 |
| Plywood | 20 |

U = 0.15 W/(m²K)

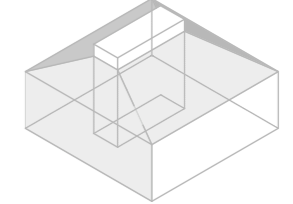
| | |
|-----------------------------------|-----|
| Plywood cladding/ wooden rafters | 150 |
| Air gap | |
| Wind barrier | |
| GUTEX Ultratherm rigid insulation | 60 |
| GUTEX Thermoflex | 160 |
| Masive wood panel | 150 |

U = 0.15 W/(m²K)

U = 0.80 W/(m²K)

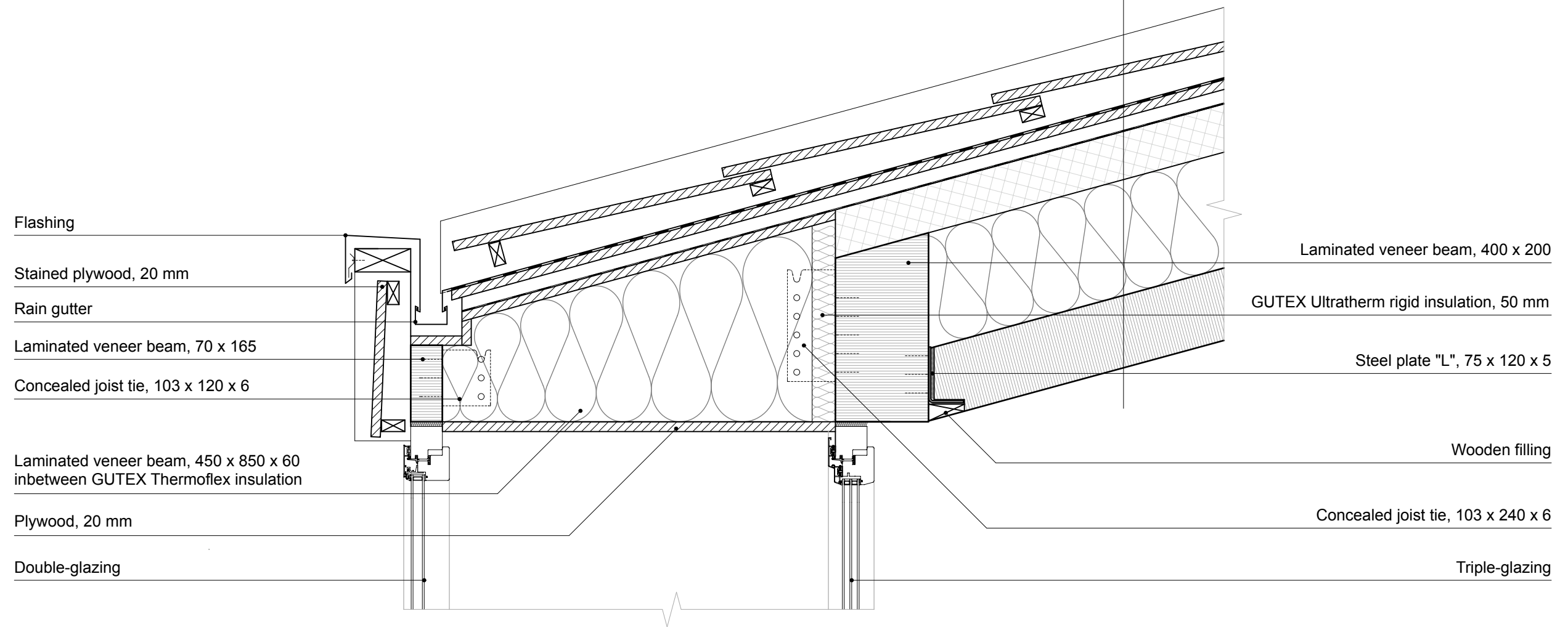
| | |
|----------------------|--|
| Double glazing | |
| Buffer zone/ air gap | |
| Triple glazing | |

hom²E



General section
Scale 1:25

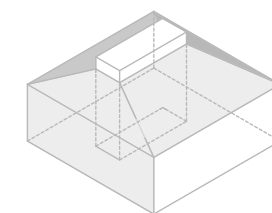
| | |
|--|-----|
| Wooden rafters/ stained plywood cladding | 150 |
| Roofing felt | 3 |
| Plywood | 25 |
| Air gap/ wooden rafter | 30 |
| Wind barrier | |
| GUTEX Ultratherm rigid insulation | 100 |
| GUTEX Thermoflex | 240 |
| Masive wood panel | 150 |



Flashing
 Stained plywood, 20 mm
 Rain gutter
 Laminated veneer beam, 70 x 165
 Concealed joist tie, 103 x 120 x 6
 Laminated veneer beam, 450 x 850 x 60
 inbetween GUTEX Thermoflex insulation
 Plywood, 20 mm
 Double-glazing

Laminated veneer beam, 400 x 200
 GUTEX Ultratherm rigid insulation, 50 mm
 Steel plate "L", 75 x 120 x 5
 Wooden filling
 Concealed joist tie, 103 x 240 x 6
 Triple-glazing

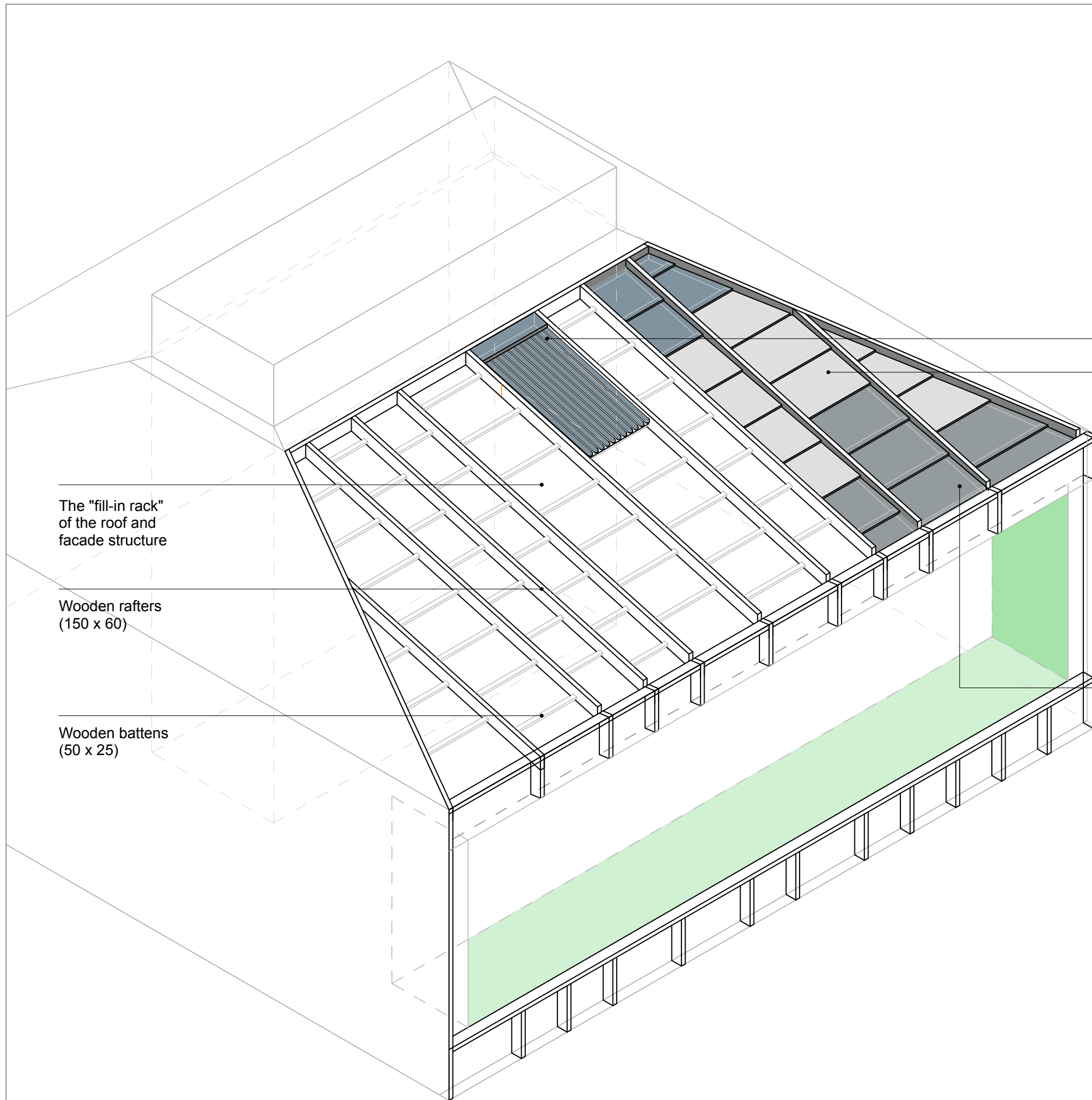
hom²E



DETAIL 1

Sunspace roofing detail
 Scale 1:10

Arjun Basnet
 Alise Plavina



Viessman Vitosol 300-T Solar collector



Overlapping stained plywood cladding panels (650 x 600, 650 x 900) within a pine wood frame



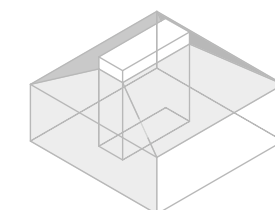
House K, Tham & Videgård Architects

Plywood cladding panels can be replaced by thin film solar panels of analogous sizes, and fixed on the "fill-in" structure of the roof and facade



Solar Decathlon 2009, Team Germany

hom²E

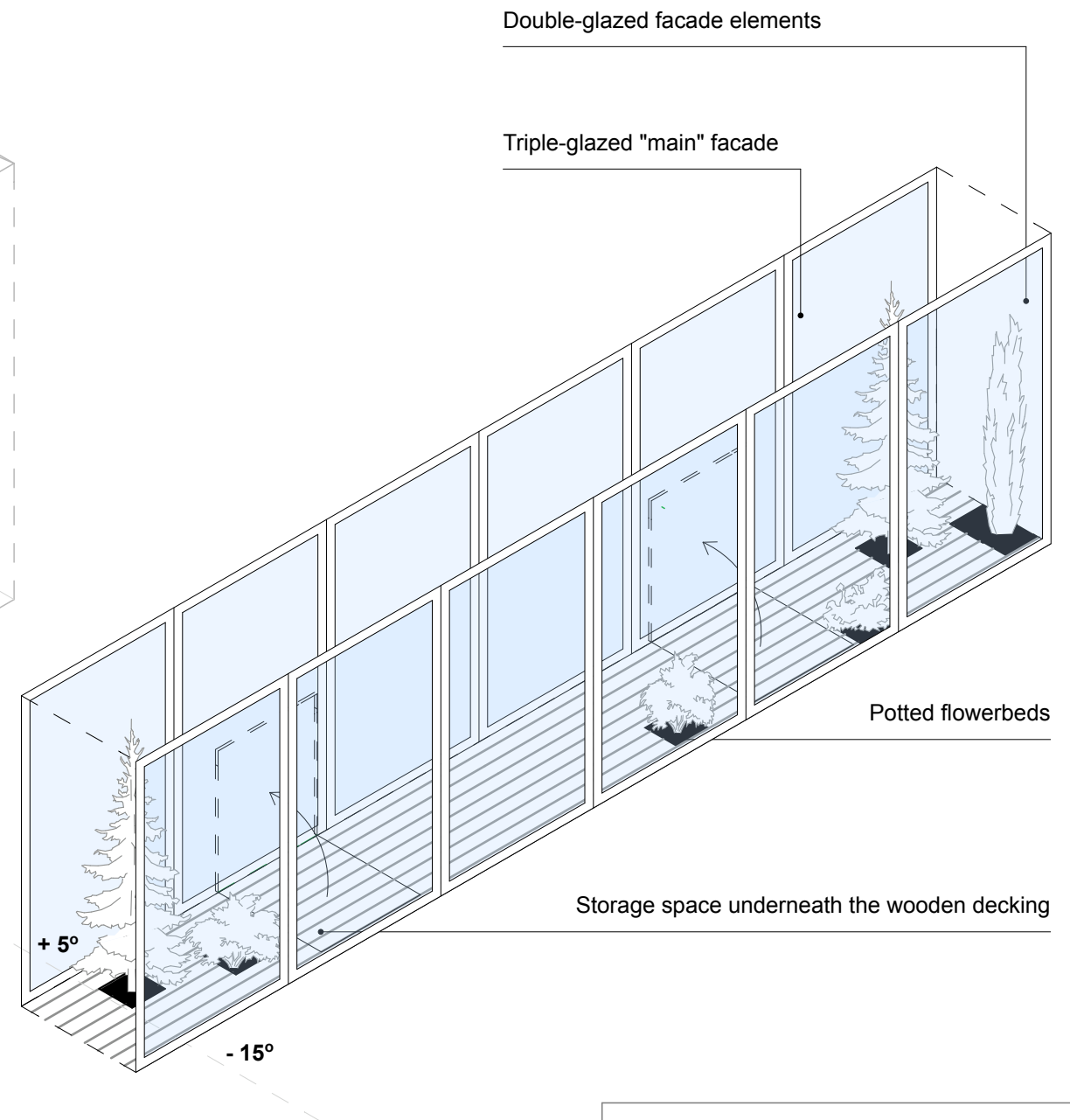
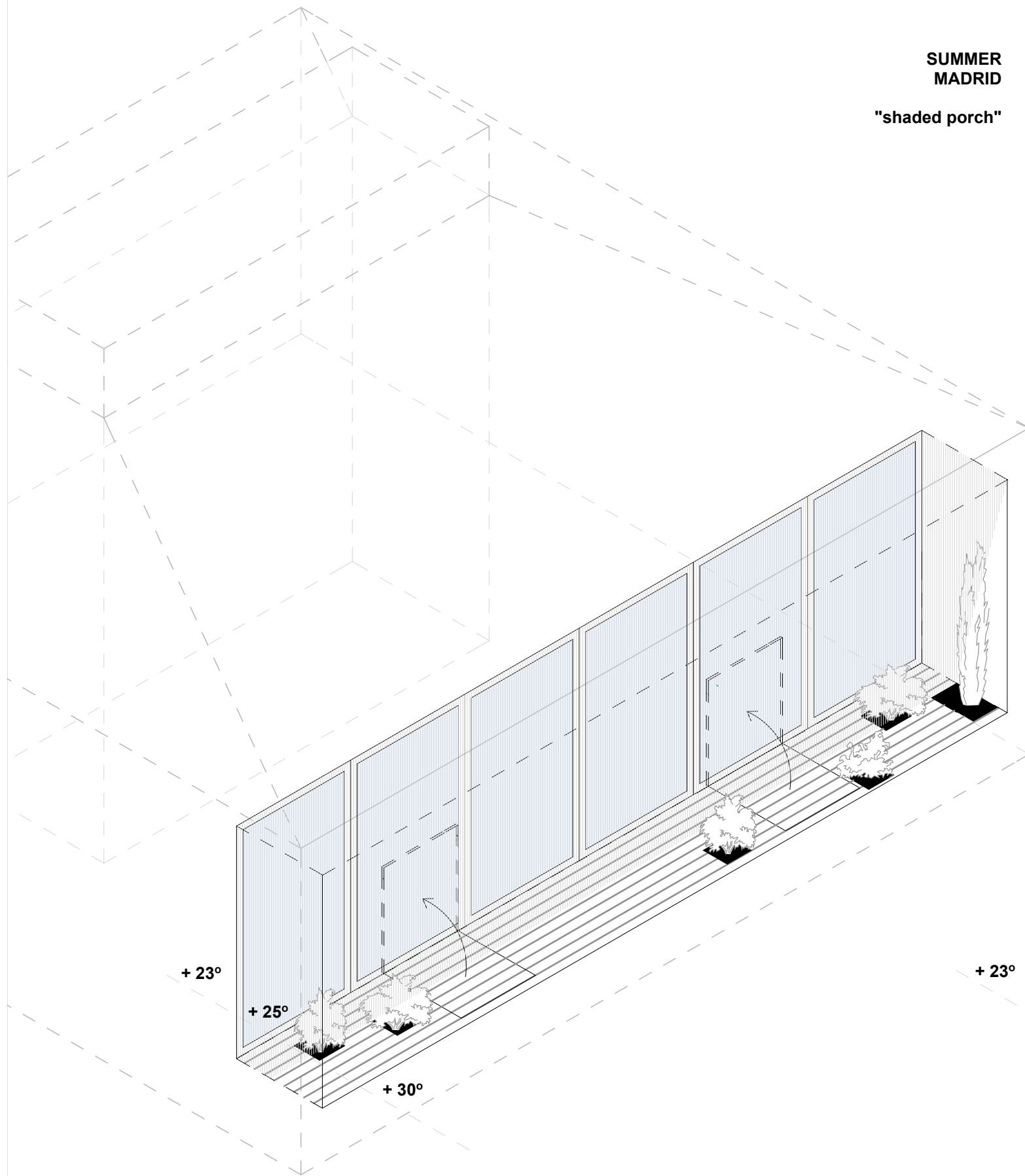


DETAIL 1

Building skin "fill-in" principle
Scale 1:50

SUMMER
MADRID
"shaded porch"

WINTER
TRONDHEIM
"temperature buffer zone"



Double-glazed facade elements

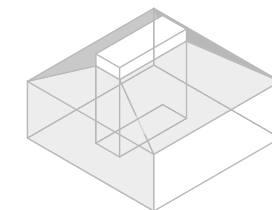
Triple-glazed "main" facade

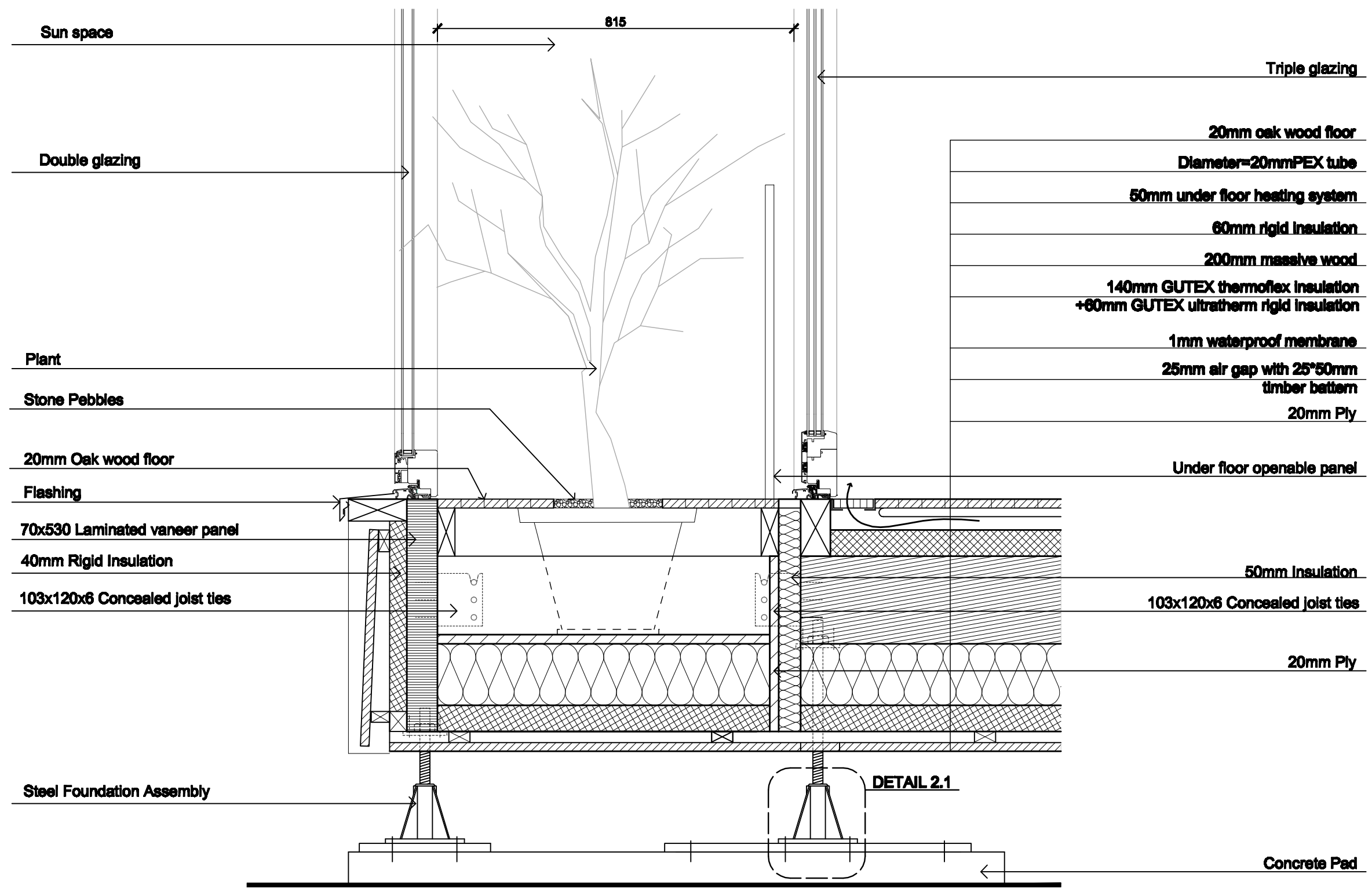
Potted flowerbeds

Storage space underneath the wooden decking

hom²E

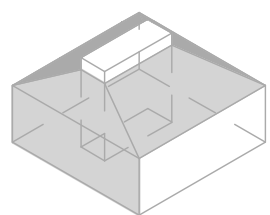
Sunspace seasonal scheme
Scale 1:50





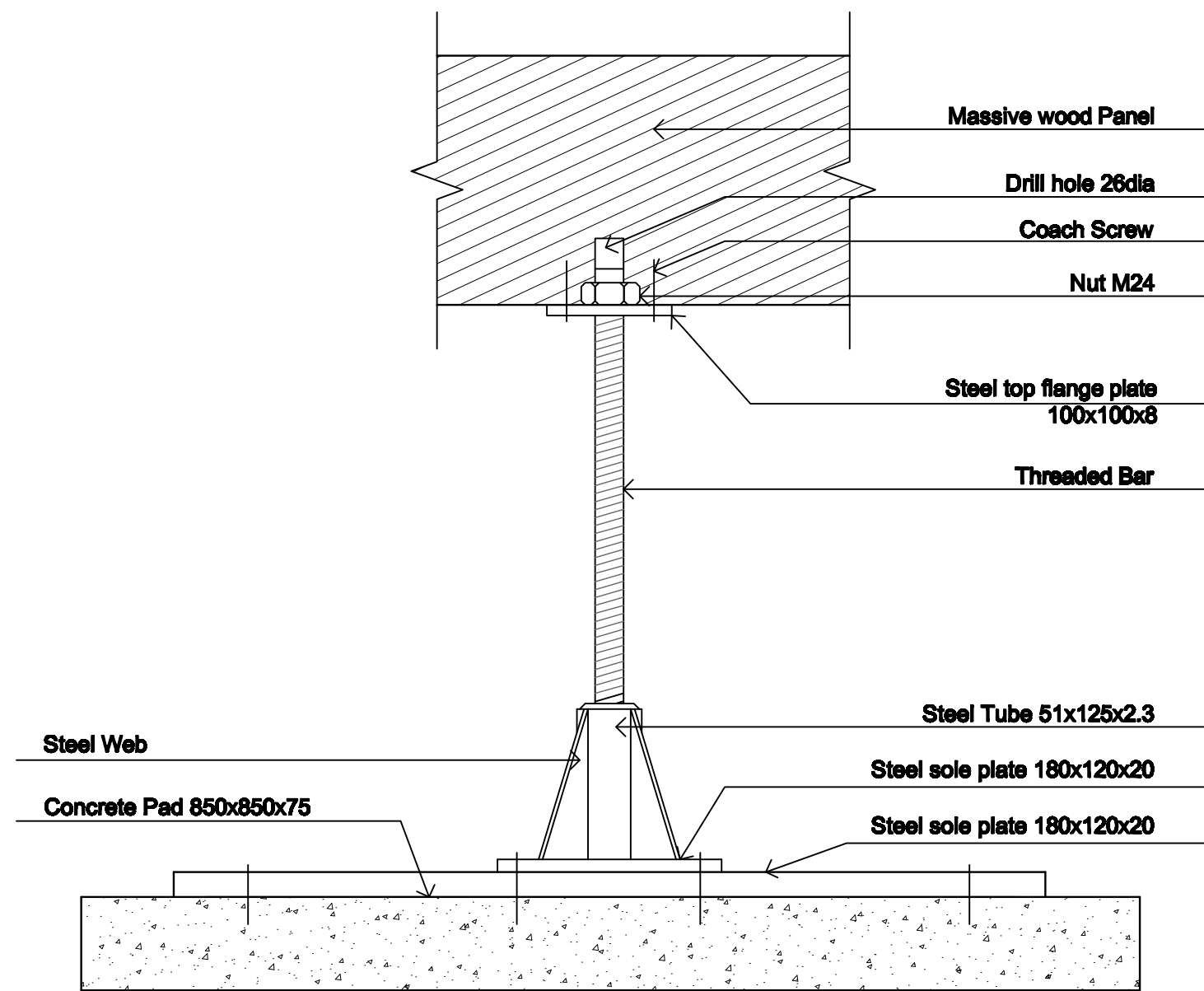
SUN-SPACE FLOOR DETAIL 2
Scale 1:10

hom²E



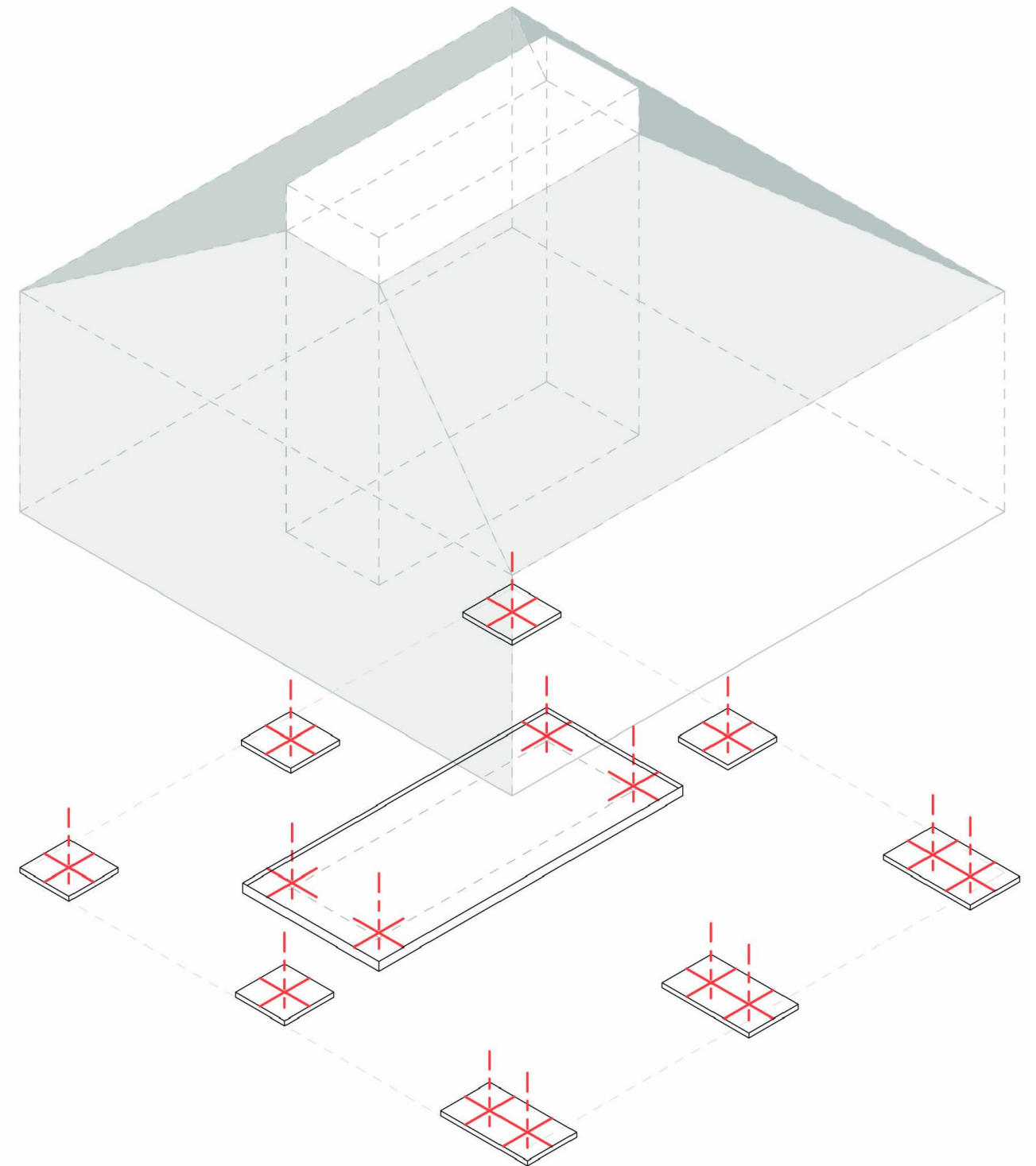
DETAIL 2
Sunspace floor detail
Scale 1:10

Arjun Basnet
Alise Plavina

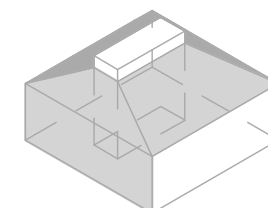


FOUNDATION ASSEMBLY DETAIL 2.1

Scale 1:5



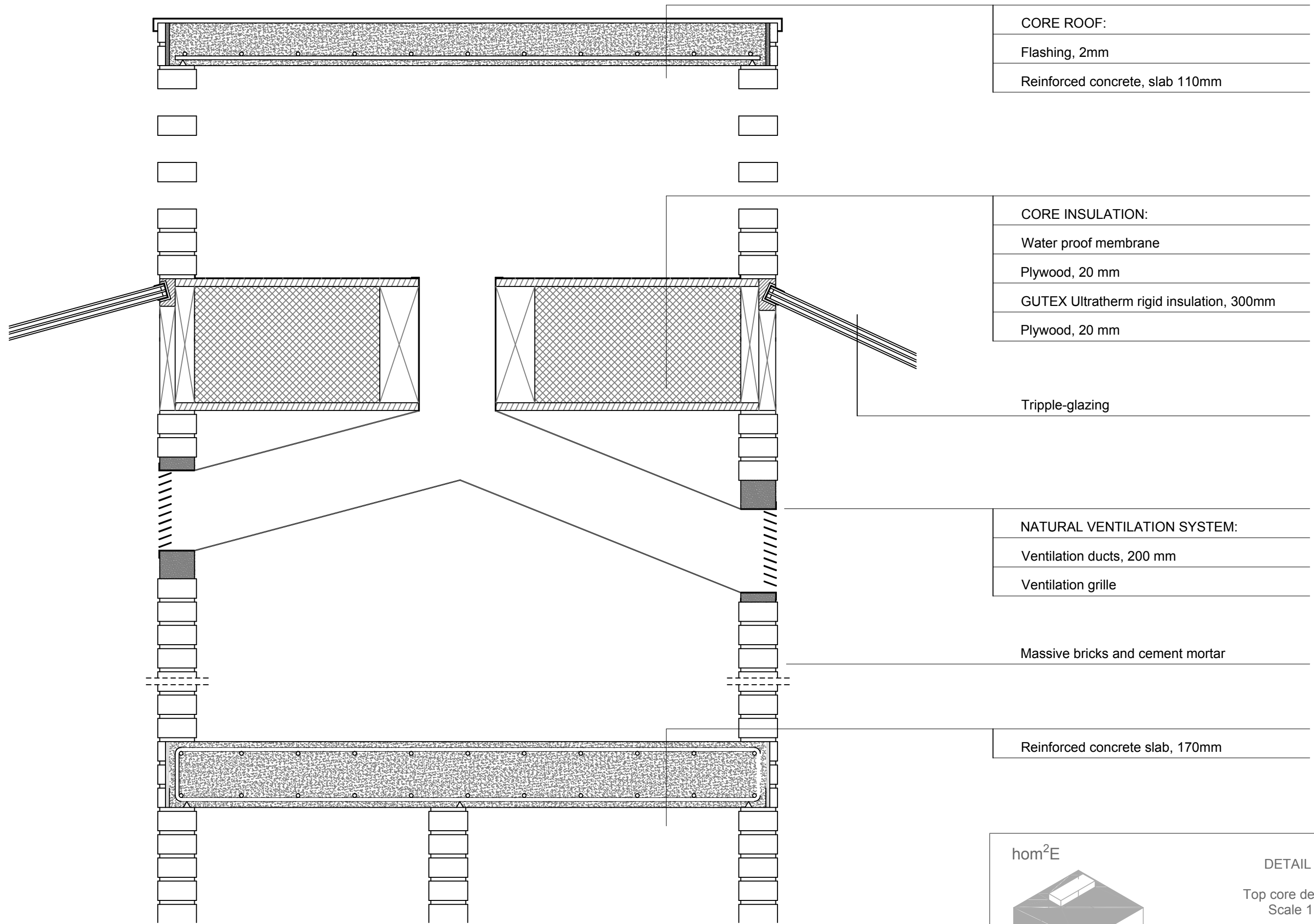
hom²E



DETAIL 2.1

Foundation details

Arjun Basnet
Alise Plavina



CORE ROOF:
 Flashing, 2mm
 Reinforced concrete, slab 110mm

CORE INSULATION:
 Water proof membrane
 Plywood, 20 mm
 GUTEX Ultratherm rigid insulation, 300mm
 Plywood, 20 mm

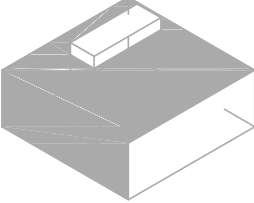
Tripple-glazing

NATURAL VENTILATION SYSTEM:
 Ventilation ducts, 200 mm
 Ventilation grille

Massive bricks and cement mortar

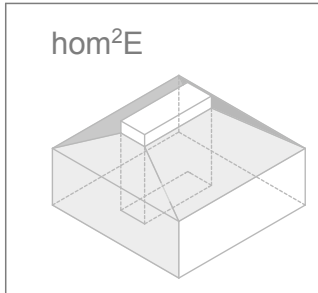
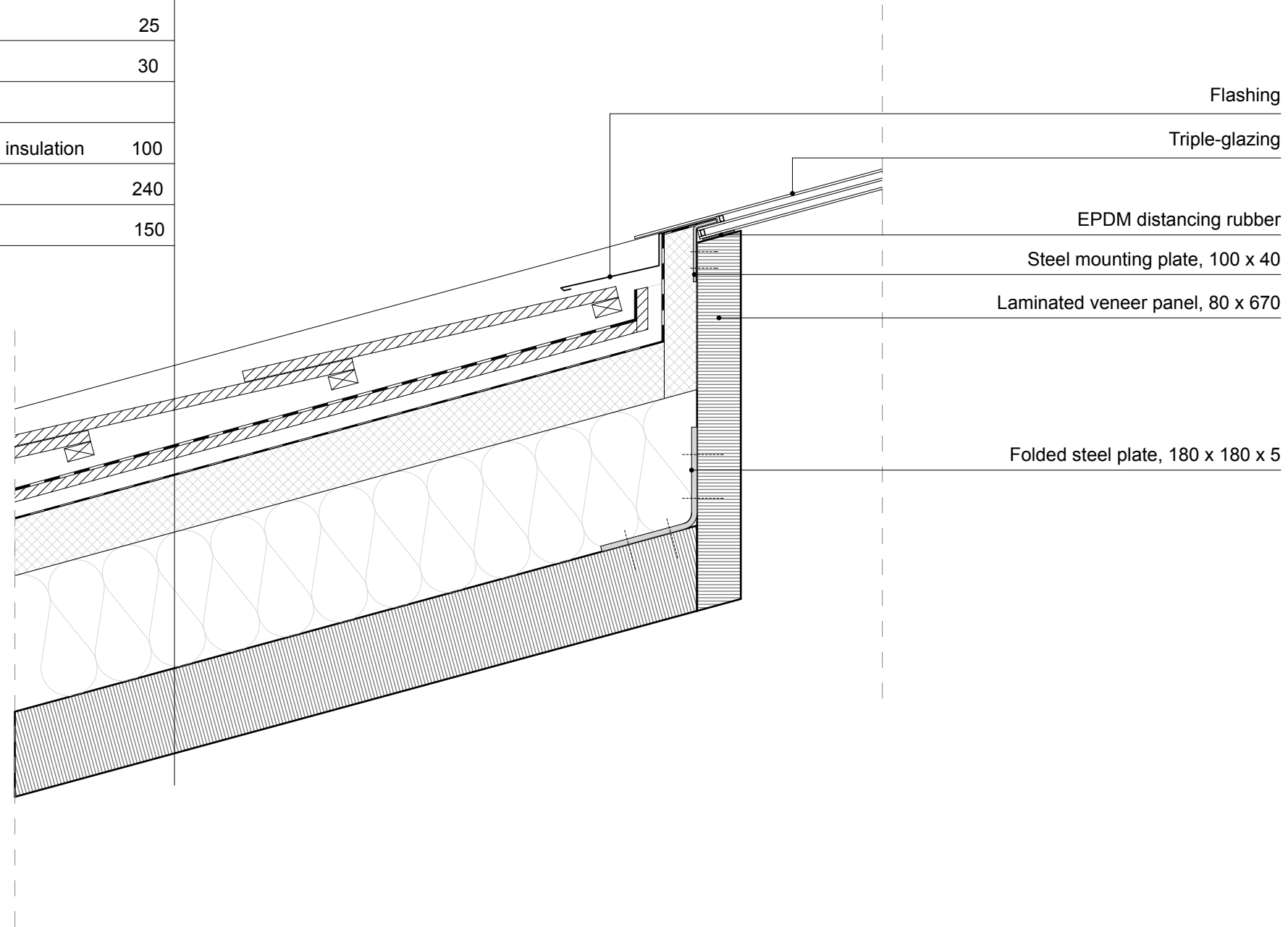
Reinforced concrete slab, 170mm

hom²E

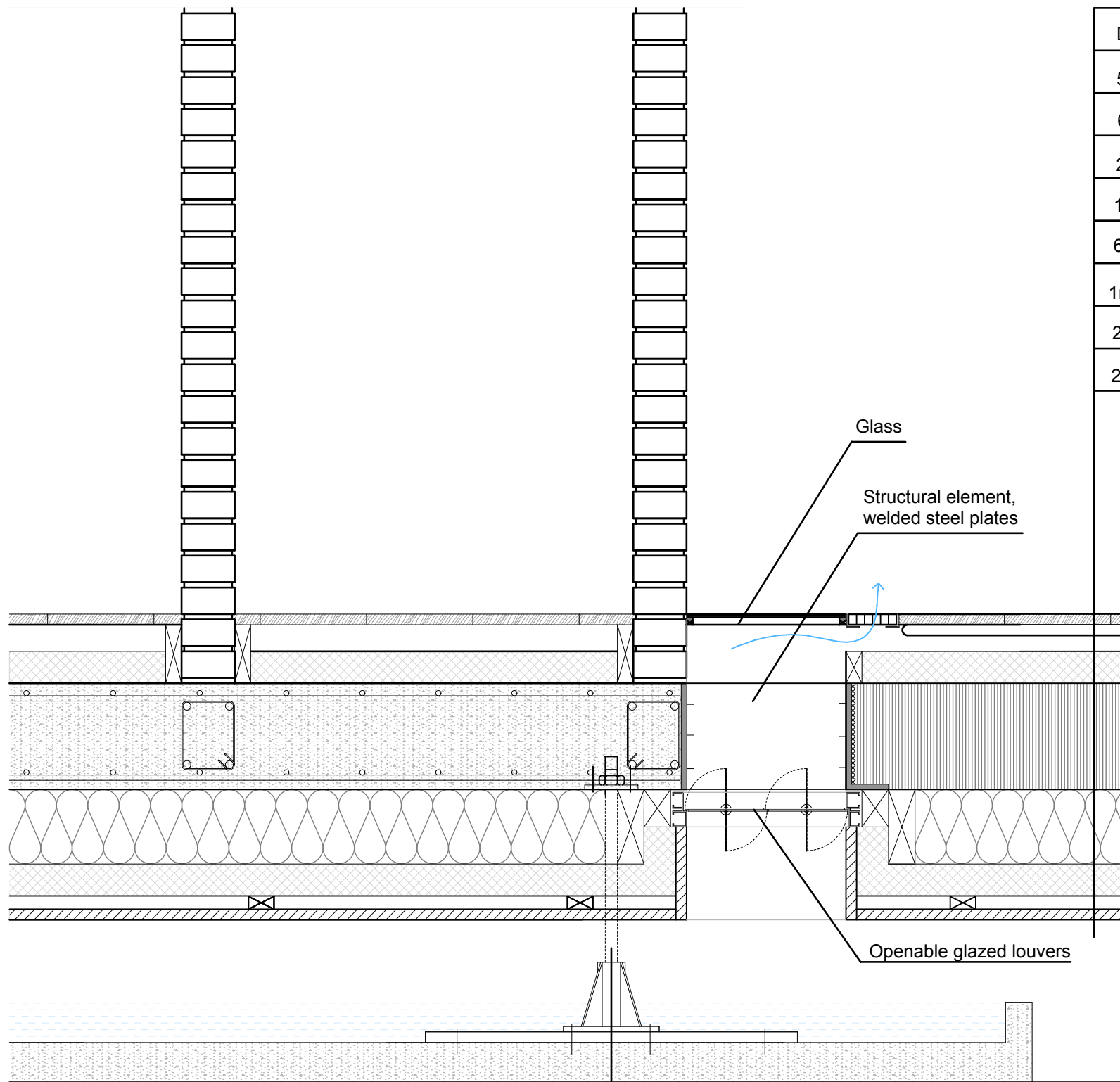


DETAIL 3.1
 Top core detail
 Scale 1:10
 Maria Coral Ness

| | |
|-----------------------------------|-----|
| Wooden rafters/ stained plywood | 150 |
| Roofing felt | 3 |
| Plywood | 25 |
| Air gap/ wooden rafter | 30 |
| Wind barrier | |
| GUTEX Ultratherm rigid insulation | 100 |
| GUTEX Thermoflex | 240 |
| Massive wood panel | 150 |



DETAIL 3.1
 Roof window detail
 Scale 1:10
 Elisabeth Lilleby



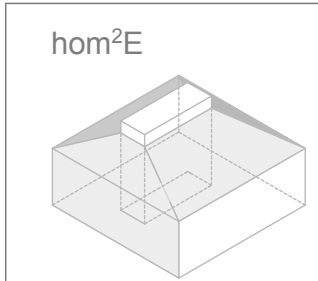
- 20mm oak wood floor
- Diameter=20mmPEX tube
- 50mm under floor heating system
- 60mm rigid insulation
- 200mm massive wood
- 140mm GUTEX Thermoflex
- 60mm GUTEX Ultratherm rigid insulation
- 1mm waterproof membrane
- 25mm air gap with 25*50mm timber batten
- 20mm plywood

Glass

Structural element,
welded steel plates

Openable glazed louvers

- Threaded Bar
- Steel tube 51x2.3x125
- Steel sole plate 180x120x10
- Steel base plate 700x700x20
- 75mm concrete pad

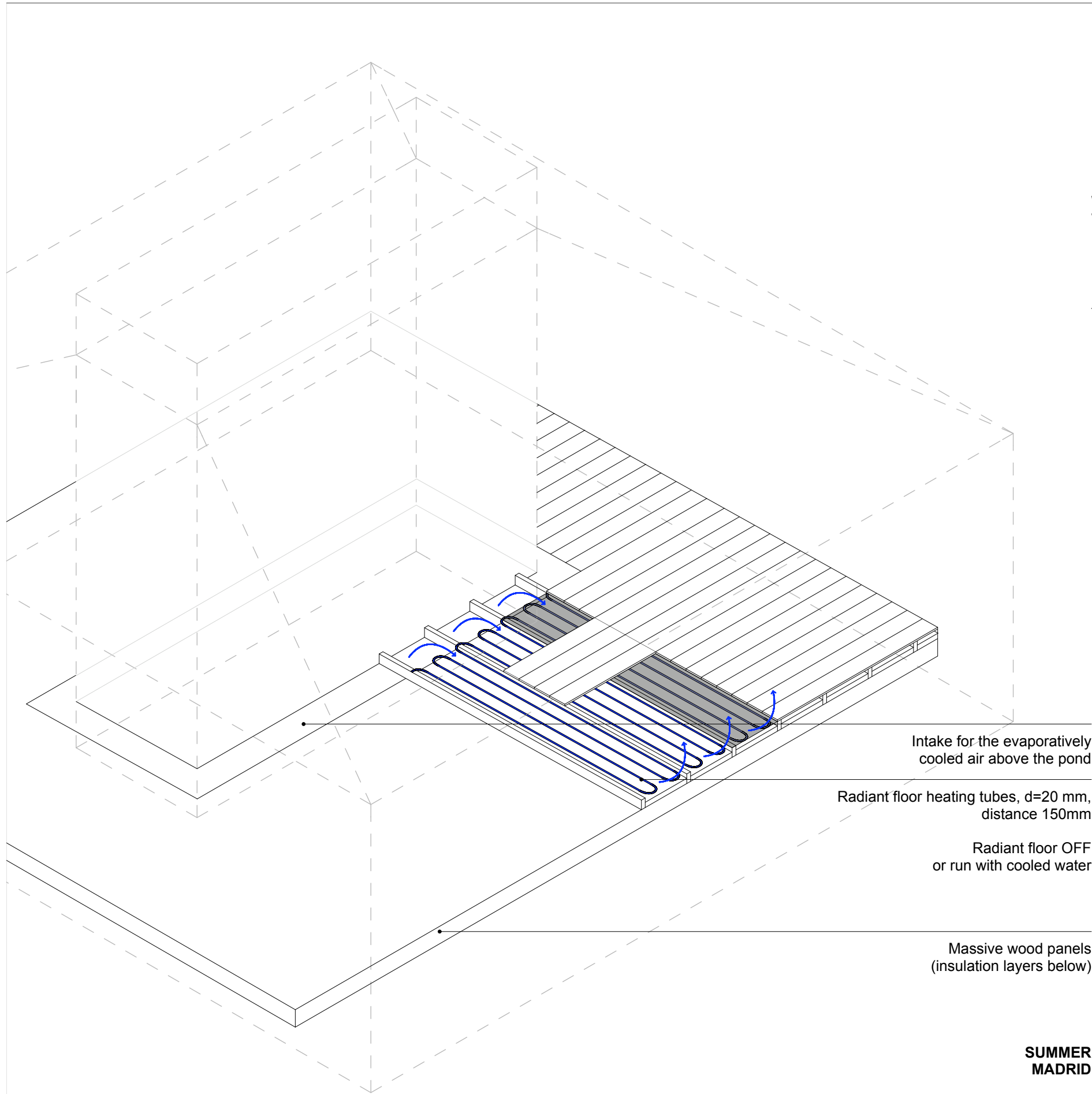


DETAIL 4

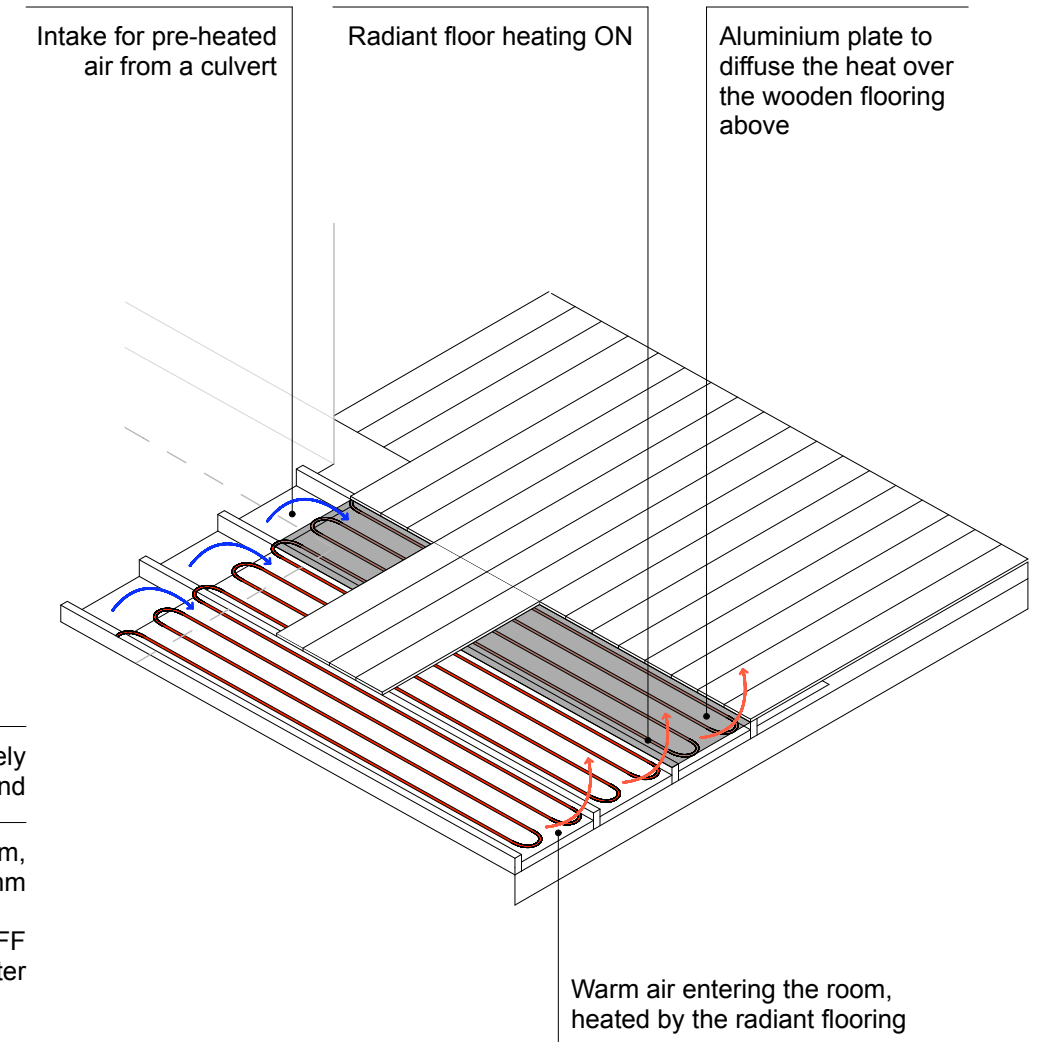
Core flooring detail

Scale 1:10

Lin Du



WINTER TRONDHEIM



SUMMER MADRID

hom²E

Radiant floor heating scheme
Scale 1:50