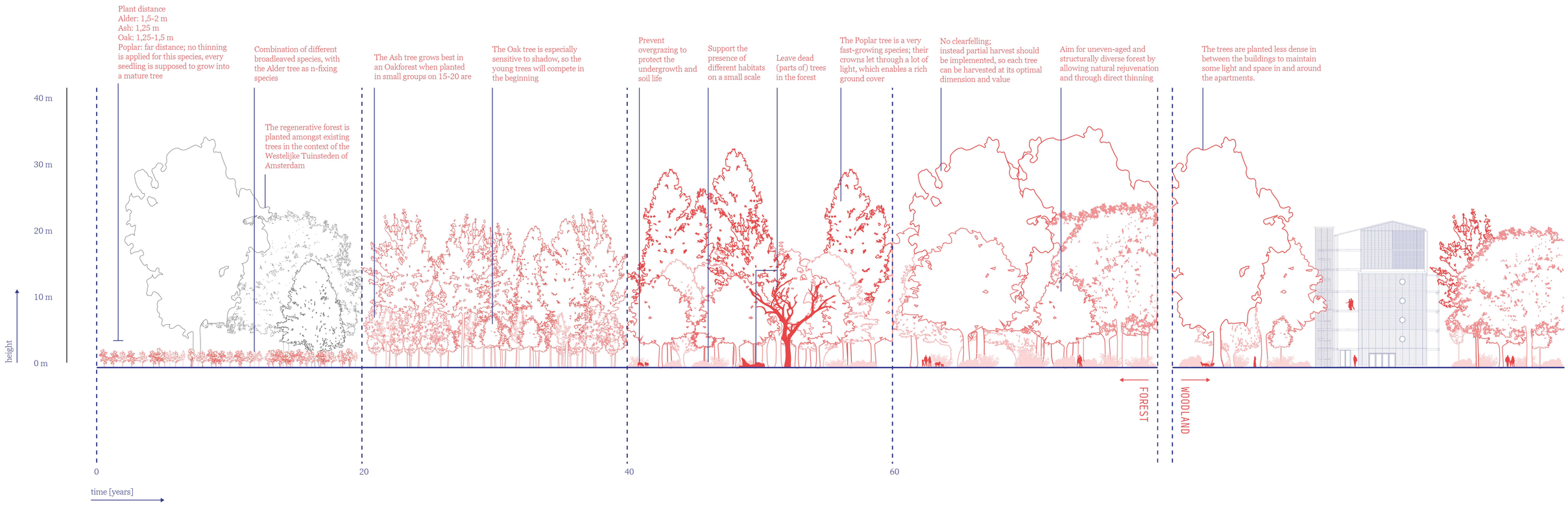
OIKOS

Regenerative Forest section



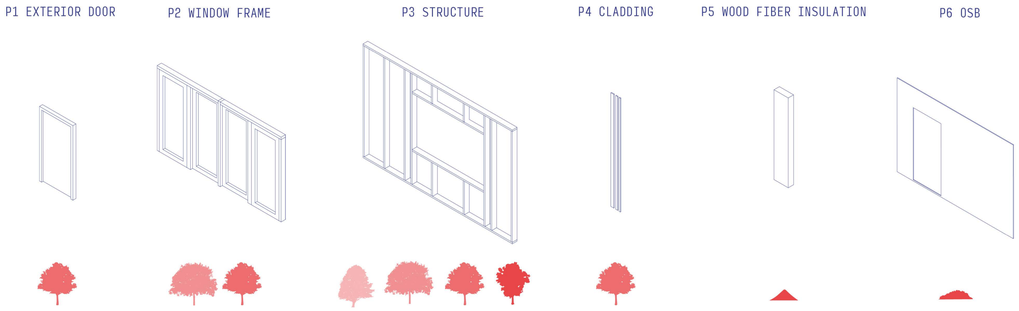
TREE TYPES

		COMPOSITION	POSSIBLE HARVEST*
Black Alder - *Alnus Glutinosa*		10%	0,6 m^3/ha/year
Ash - *Fraxinus excelsior*		5%	0,3 m^3/ha/year
Pedunculate Oak - *Quercus robur*		65%	3,5 m^3/ha/year
Poplar - *Populus*		20%	2 m^3/ha/year
			total = 6,4 m^3/ha/year

RESIDUAL PRODUCTS OF WOOD PROCESSING

- wood chips
- wood fibers

BUILDING PARTS & SUITABLE MATERIALS



ECOSYSTEM ORGANISMS**

Soil organic matter	The healthy, biodiverse soil of a regenerative forest contains many important organisms, like funghi, bacteria, nematodes, protozoa, insects, and earthworms.
Optional additional tree species	*Zachte Berk, Schietwilg, Zoete Kers, Esdoorn, Kraakwilg*
Birds	*Appelvink, Blauwborst, Boomklever, Boomkruiper, Fluiter, Groene Specht, Grote Bonte Specht, Keep, Kleine Bonte Specht, Matkop, Middelste Bonte Specht, Nachtegaal, Sijs, Vuurgoudhaan, Wielewaal, Zwarte Specht, Gekraagde Roodstaart, Grauwe Vliegenvanger, Wielewaal*
Sheep	Sheep live in the regenerative forest. Their presence and grazing contribute to the biodiversity, and the yearly **wool** that comes from them can be used locally for clothing or other products.
Shrub species	*Vlier, Vogelkers, Hazelaar, Eenstijlige Meidoorn, Kornoelje Liguster, Vuilboom, Lijsterbes, Grauwe Wilg, Hulst, Bergvlier*
Undergrowth	*Zwarte Bes, Aalbes, Framboos, Braam, Dauwbraam, Krent, Kamperfoelie, Draadzegge, Ijzerig Wollegras, Gulgaan, Glanzend Veenmos, Hoogveenveenmos, Karwaren, Kleine Veenbes, Koningswaren, Lzurierwilg, Lavendelhei, Moeraslathyrus, Moeraswolfsmelk, Paardenhaarzegge, Poelruit, Rood Veenmos, Rijsbes, Slank Wollegras, Slanke Zegge, Sterzegge, Stijf Veenmos, Stijve Zegge, Violet Veenmos, Wateraardbei, Waterdrieblad, Watervlolier, Wilde Gagel, Wrattig Veenmos, Aardbeiganzerik, Alpenheksenkruid, Besanjelier, Bittere Veldkers, Bosgeelster, Bosmuur, Bospaardenstaart, Bosweiderik, Dasiook, Driekantige Bies, Eenbes, Gele Monnikskap, Geveerd Dikkerfmos, Gewone Vogelmelk, Gladde Zegge, Grote Kevervorchis, Gulden Sleutelbloem, Hangende Zegge, Heelkruid, Klein Heksenkruid, Knikkend Nagelkruid, Kruidvlier, Kruisbloduvalstro, Maarts Viooltje, Moeraskruiskruid, Moerasstreepzaad, Moeraswolfsmelk, Muskuskruid, Peerbladig Goudveil, Reuzenpaardenstaart, Rivierkruiskruid, Schaafstro, Slangenlook, Slanke Sleutelbloem, Slanke Zegge, Spindotterbloem, Torenkruid, Verspreidbladig Goudveil, Welriekende Agrimonie, Wilde Kievitsbloem, Witte Rapunzel, Zomerklokje, Zwartblauwe Rapunzel*

*Approximately 50% of the harvested trunk can be used for qualitative beams and boards, the rest of the wood can be used for small interiors products for example, or it can be processed into chips or fibers. After the trees have reached the desired diameter, the wood can be sustainably harvested for building parts like beams or frames. The quantities of possible harvest are based on a maximum harvest of 80% of the increment every year.

**Native species in the Netherlands

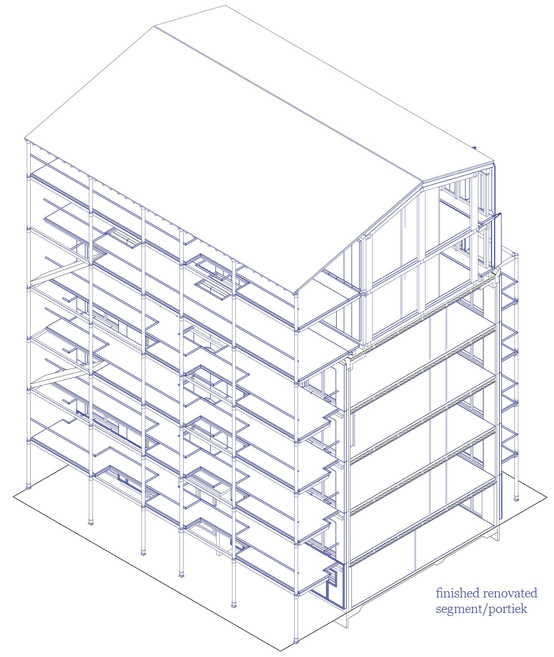
MATERIAL

From tree trunk to part to element

BUILDING SEGMENT

existing
segment/portiek

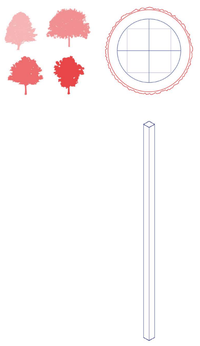
materials removed from
segment/portiek



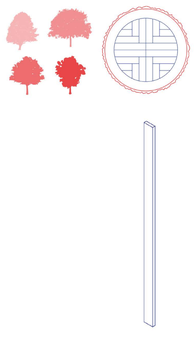
finished renovated
segment/portiek

BUILDING PARTS

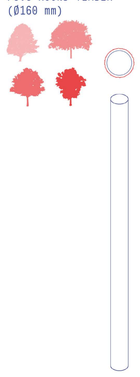
P3.1 STRUCTURAL BEAM
(±200x200 mm)



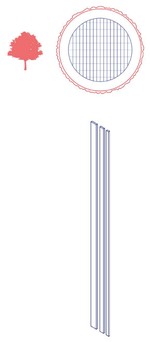
P3.2 STRUCTURAL BEAM
(±38x140 mm)



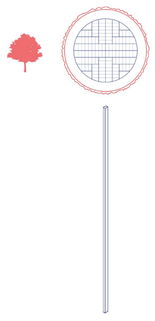
P3.3 ROUND TIMBER
(Ø160 mm)



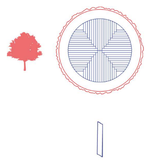
P4.1 CLADDING SLAT
(±18x50 mm)



P4.2 SMALL BEAM FOR CLADDING
(±28x45 mm)

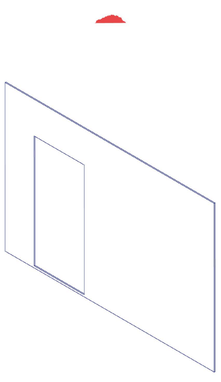


P4.3 CLADDING SHINGLE
(±360x120x1-8 mm)



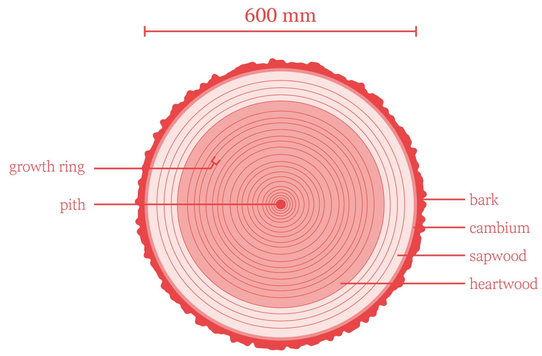
P5 WOOD FIBER INSULATION
(140-184 mm thick)

P6 OSB PANEL
(18 mm thick)

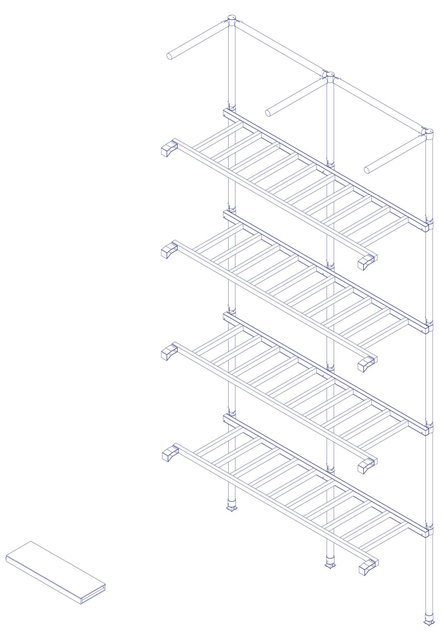


TREE TRUNK

Trees are usually harvested after the trunk has reached a diameter of 60 cm. Approximately 50% of the trunk remains as useable building parts after processing. Sapwood is the part of the tree that transports water and sap when the tree is still alive. This part of the tree contains more moisture; therefore it shrinks more when it dries than the heartwood of the tree, and it is more susceptible to fungus and woodworm. Thus, heartwood is a lot more suitable for woodwork than sapwood. If the sapwood is used for building parts, interior applications are desirable. The small pieces that remain after the wood processing can be applied in specific, fitting products (like interior cladding) or can be further processed into wood chips for the production of OSB.

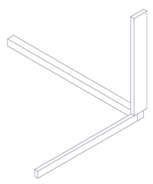


BUILDING ELEMENTS

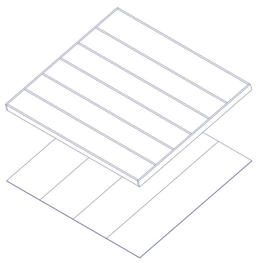


FLOOR FILL
made from P3.2, P5, P6

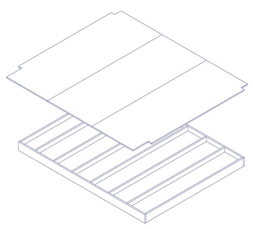
GALERY & BALCONY STRUCTURE
made from P3.1, P3.3 & steel joint elements



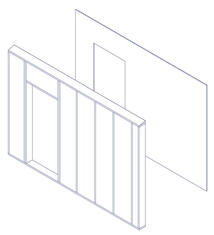
STRUCTURE ADDITIONAL STOREYS
made from P3.1



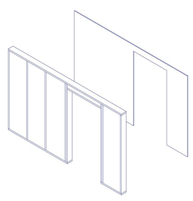
ROOF ADDITIONAL STOREYS
made from P3.2, P5, P6



FLOOR ADDITIONAL STOREYS
made from P3.2, P5, P6

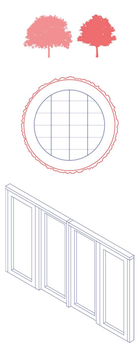


FAÇADE ADDITIONAL STOREYS
made from P3.2, P5, P6

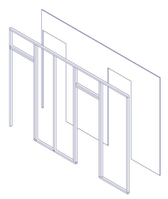


INSULATION EXISTING FAÇADE
made from P3.2, P5, P6

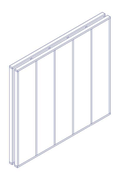
P1 EXTERIOR
DOOR



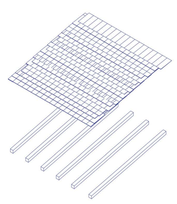
P2 WINDOW FRAME



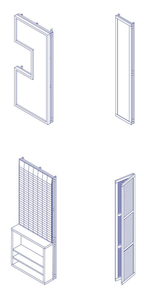
INTERIOR WALL
ADDITIONAL STOREYS
made from P3.2, P5, P6



DIVISION WALL
ADDITIONAL STOREYS
made from P3.2, P5, P6



ROOF CLADDING
made from P4.2, P4.3



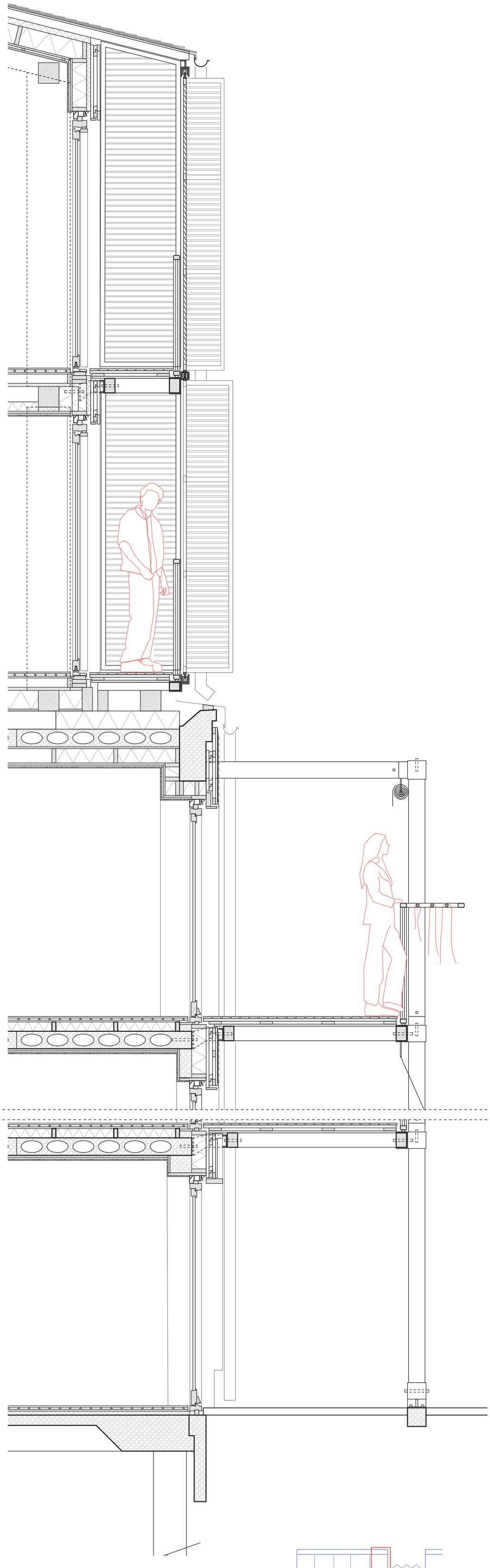
FAÇADE CLADDING
made from P4.1, P4.2, P4.3

WOOD QUANTITY [m³]

											all building parts
per segment	4,7	21,8	18,3	89	82,1	1,9	7,3	83,2	15,3	57,7	**381,3**
per flat	28,2	130,8	109,8	534	492,6	11,4	43,8	499,2	91,8	346,2	**2287,8**
total (3 flats)	84,6	392,4	329,4	1602	1477,8	34,2	131,4	1497,6	275,4	1038,6	**6863,4**

vertical section

horizontal section



1 : 20
west elevation

vertical section

D.5

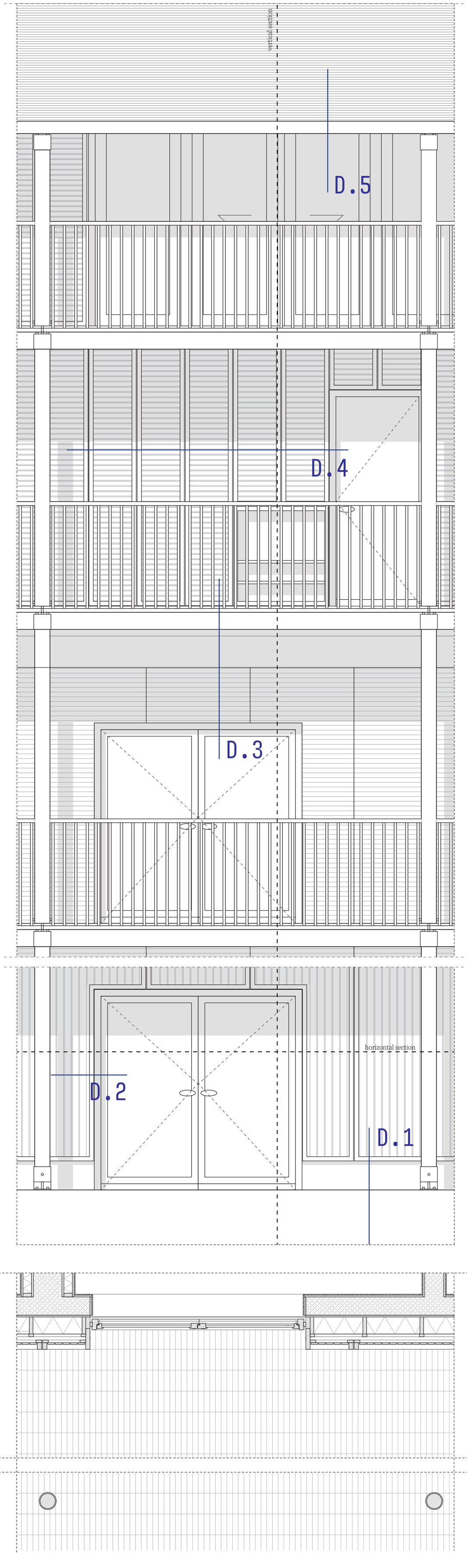
D.4

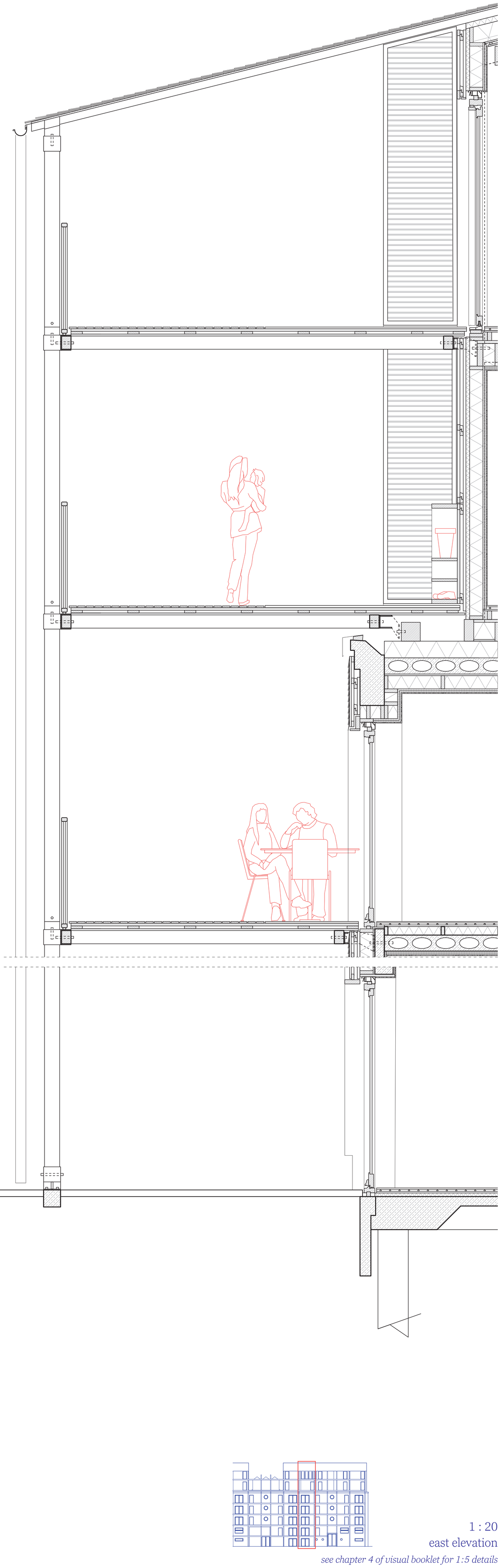
D.3

horizontal section

D.2

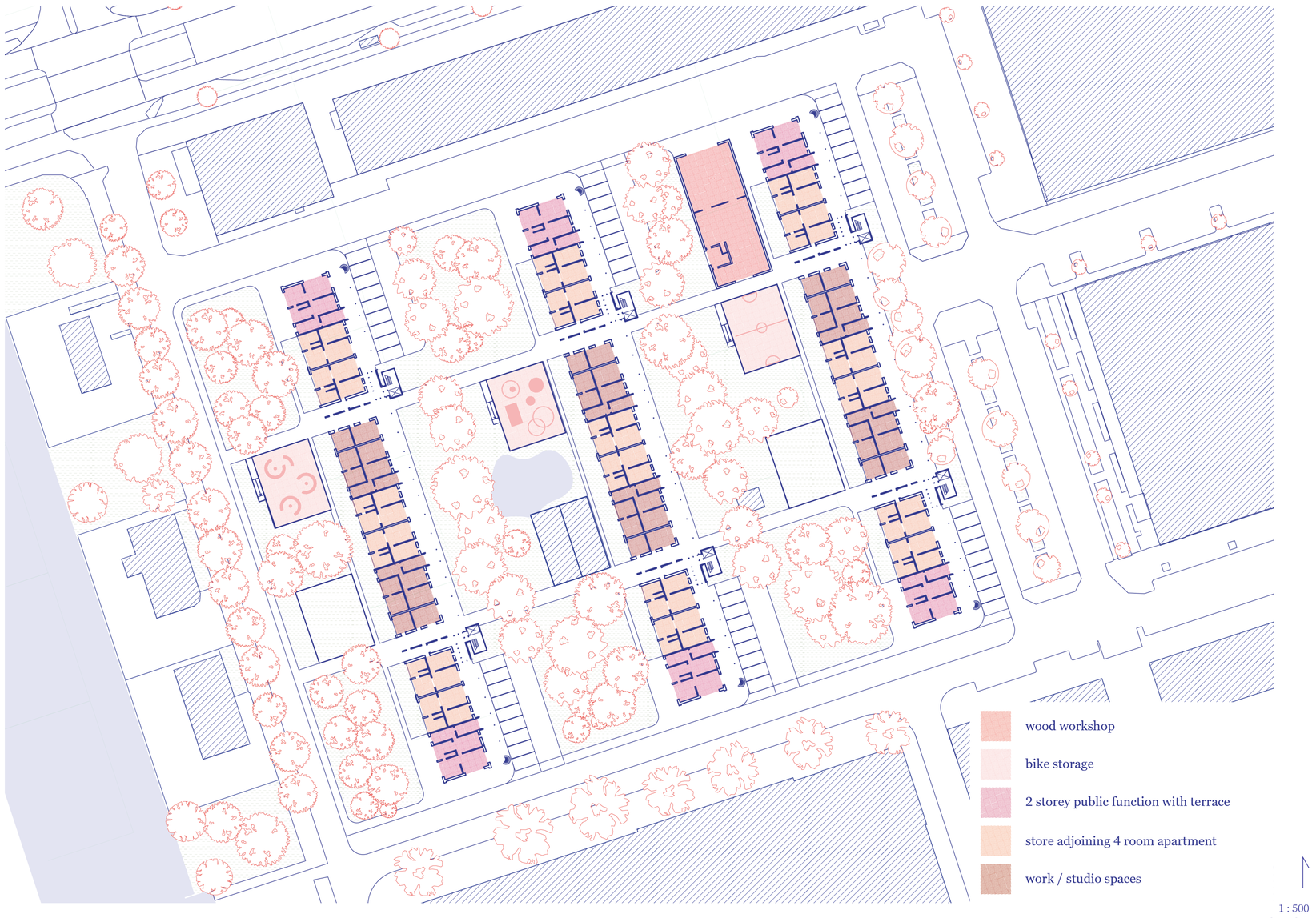
D.1





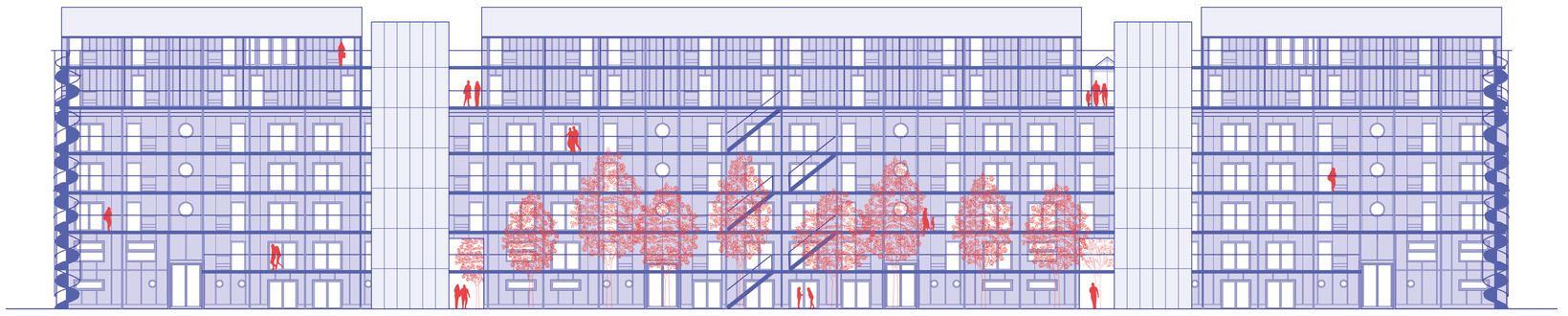
1 : 20
east elevation

see chapter 4 of visual booklet for 1:5 details

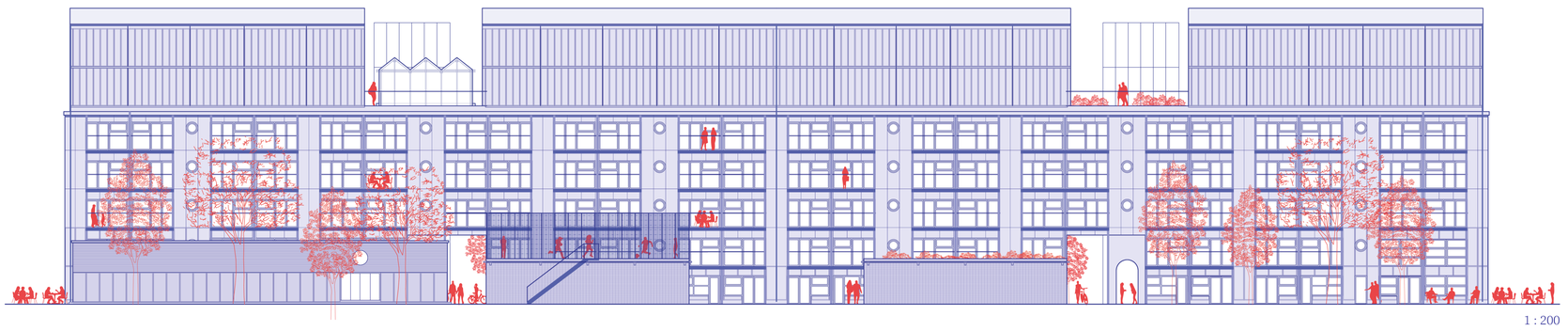


1 : 500
urban plan

1 : 300
section



1 : 200
east elevation



1 : 200
west elevation

1 : 100
east elevation segment