



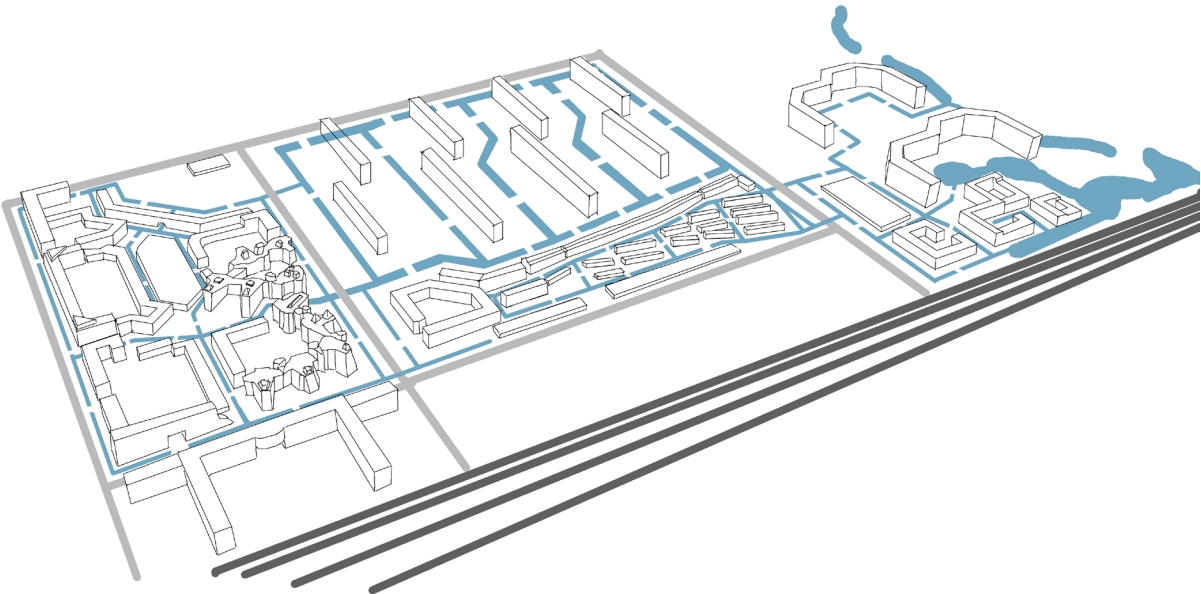
Ecology scénario

## - appendix 2 -

Scenario's and risk assessments (collective)



SCENARIO 1: CREATING AN 'AMSTERDAM' IDENTITY (CANELS)



SCENARIO 2: ALL FAUNA INCLUDED





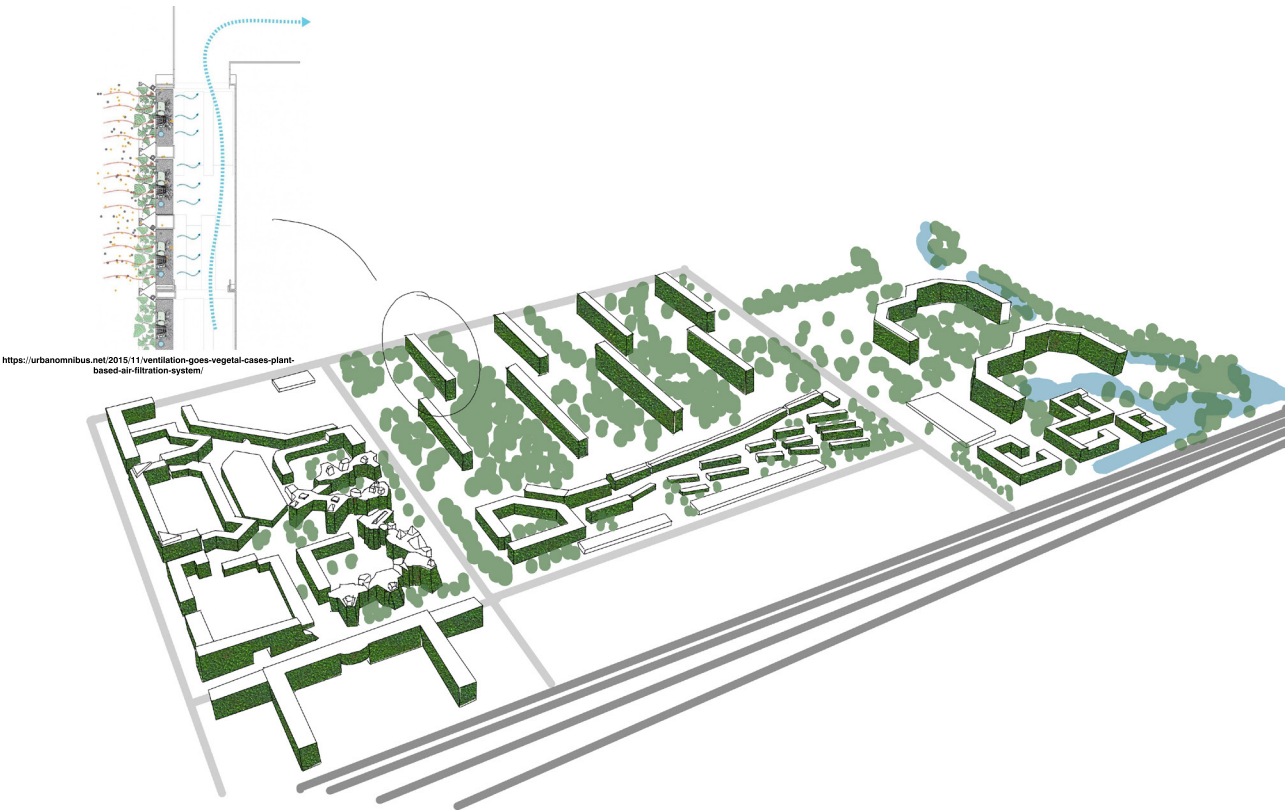
SCENARIO 3: WATER BUFFERS AS LANDSCAPE



8



SCENARIO 4: GREEN FACADES

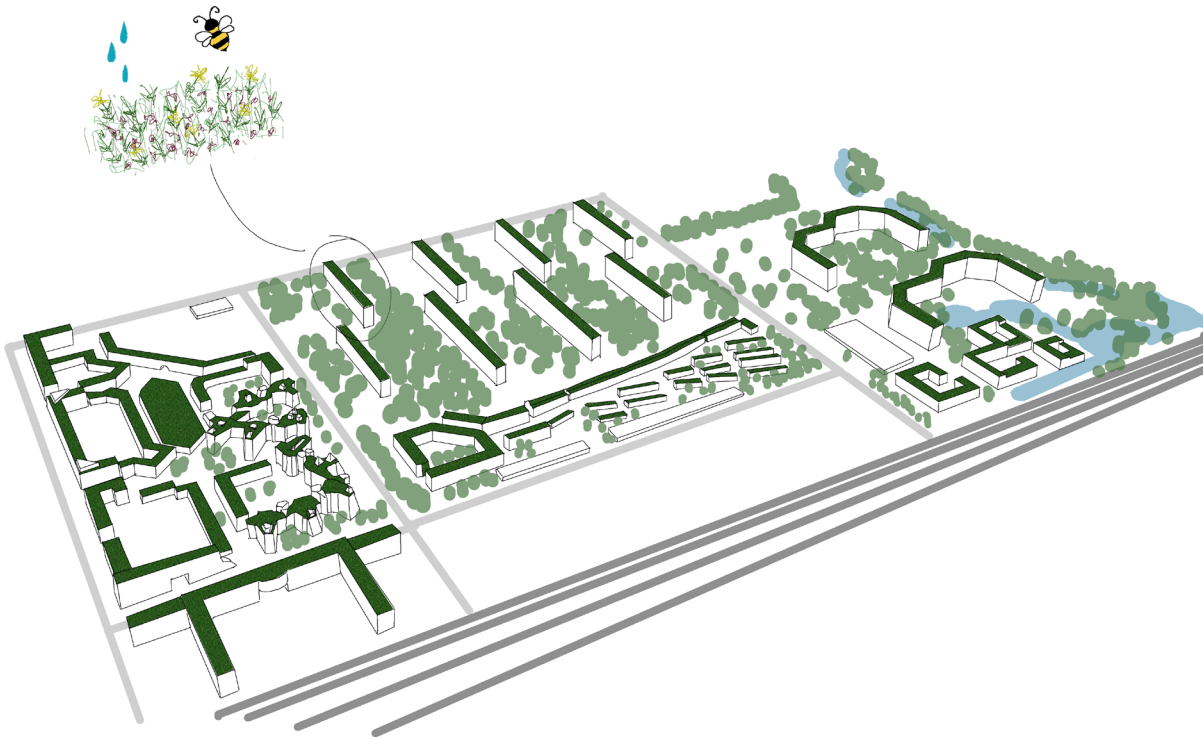


9

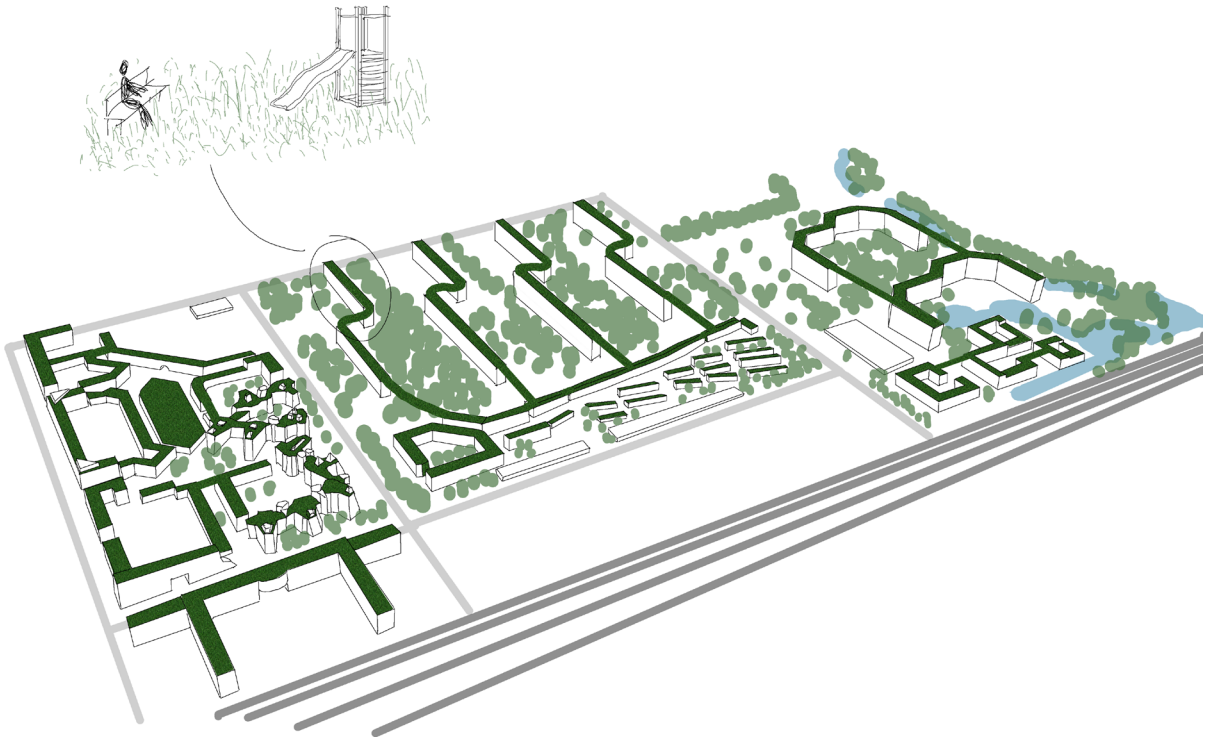




SCENARIO 5: GREEN ROOFS FOOR BIODIVERSITY

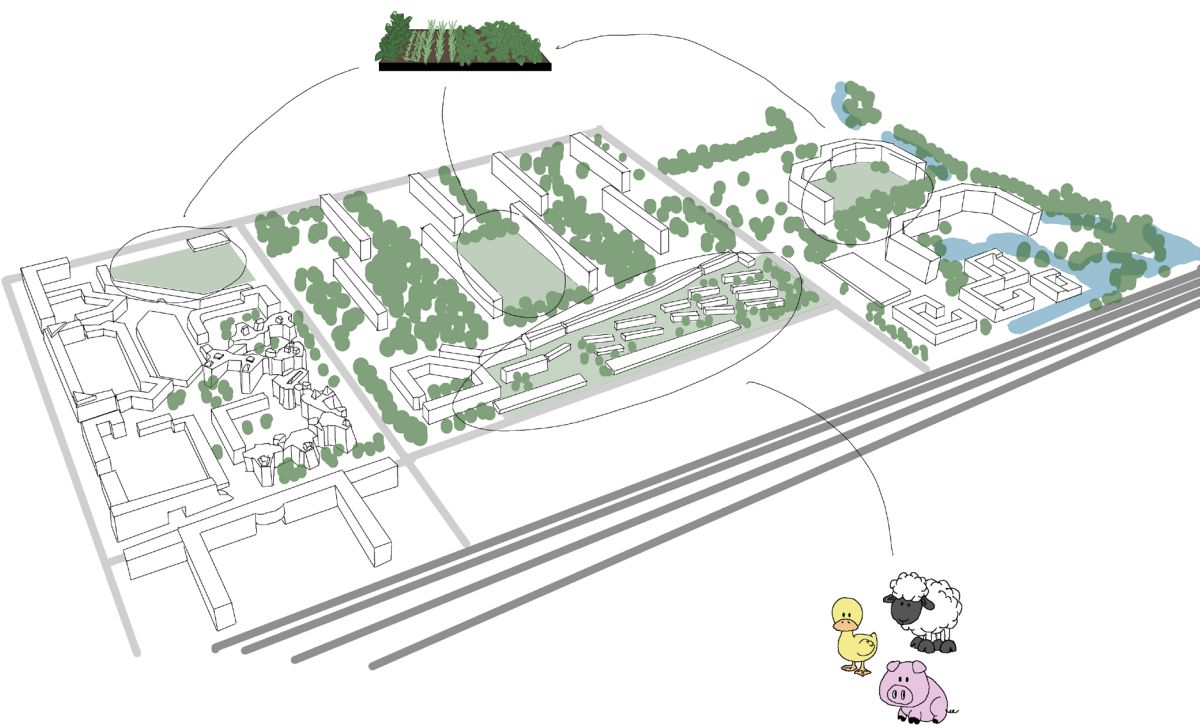


SCENARIO 6: GREEN ROOFS FOR SOCIAL ACTIVITY





SCENARIO 7: URBAN FARM



12

SCENARIO 8: ONLY GREENERY AS PAVEMENT

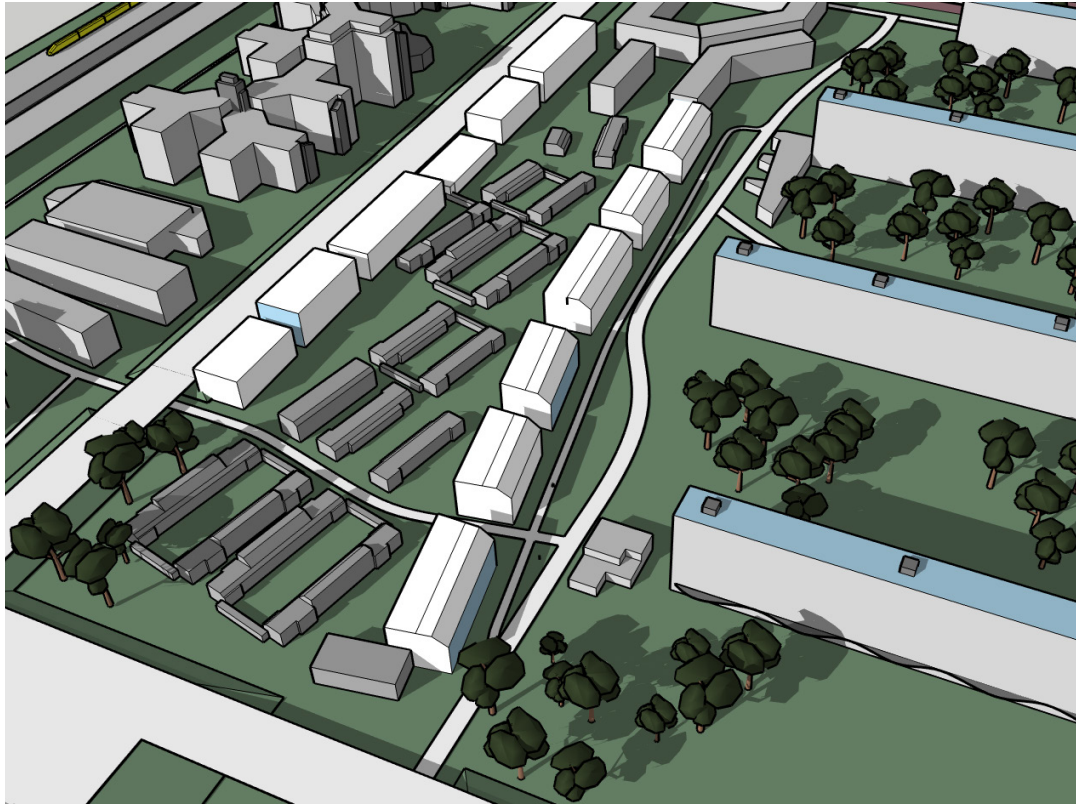


13

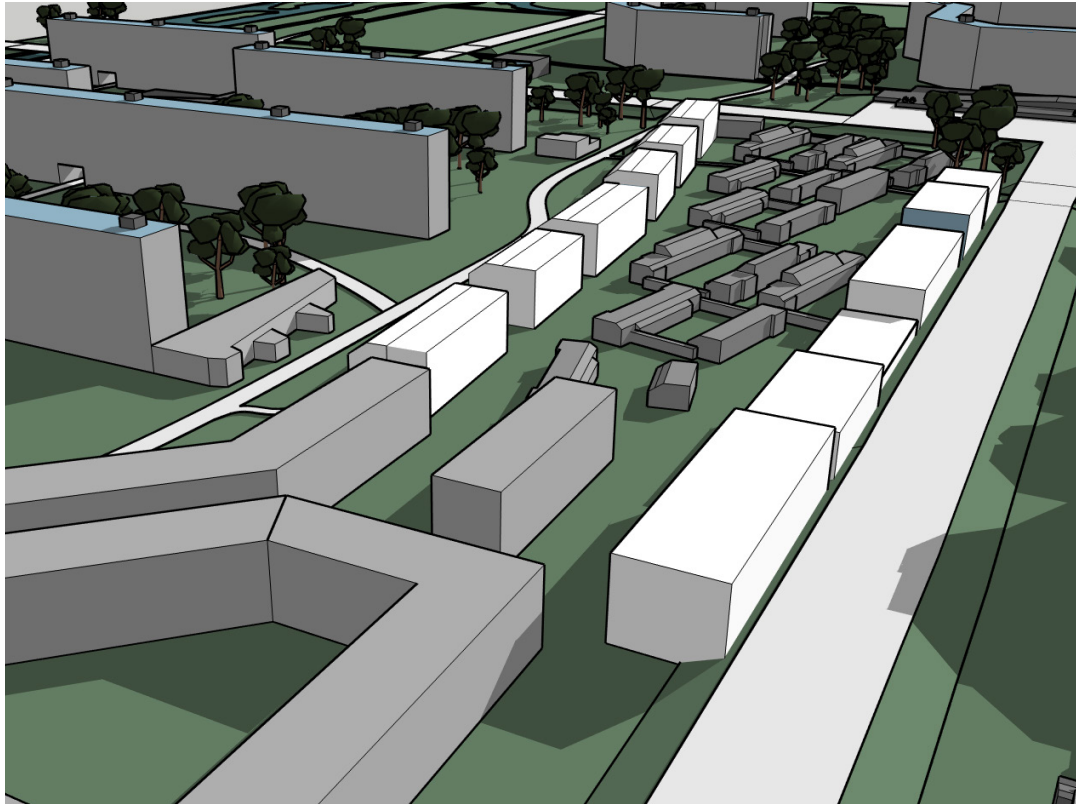




**SCENARIO 9: BREAKING UP HOPTILLE + REPLACING PARKING GARAGES WITH NEW DWELLINGS**



14



**BIRDS EYE VIEWS**



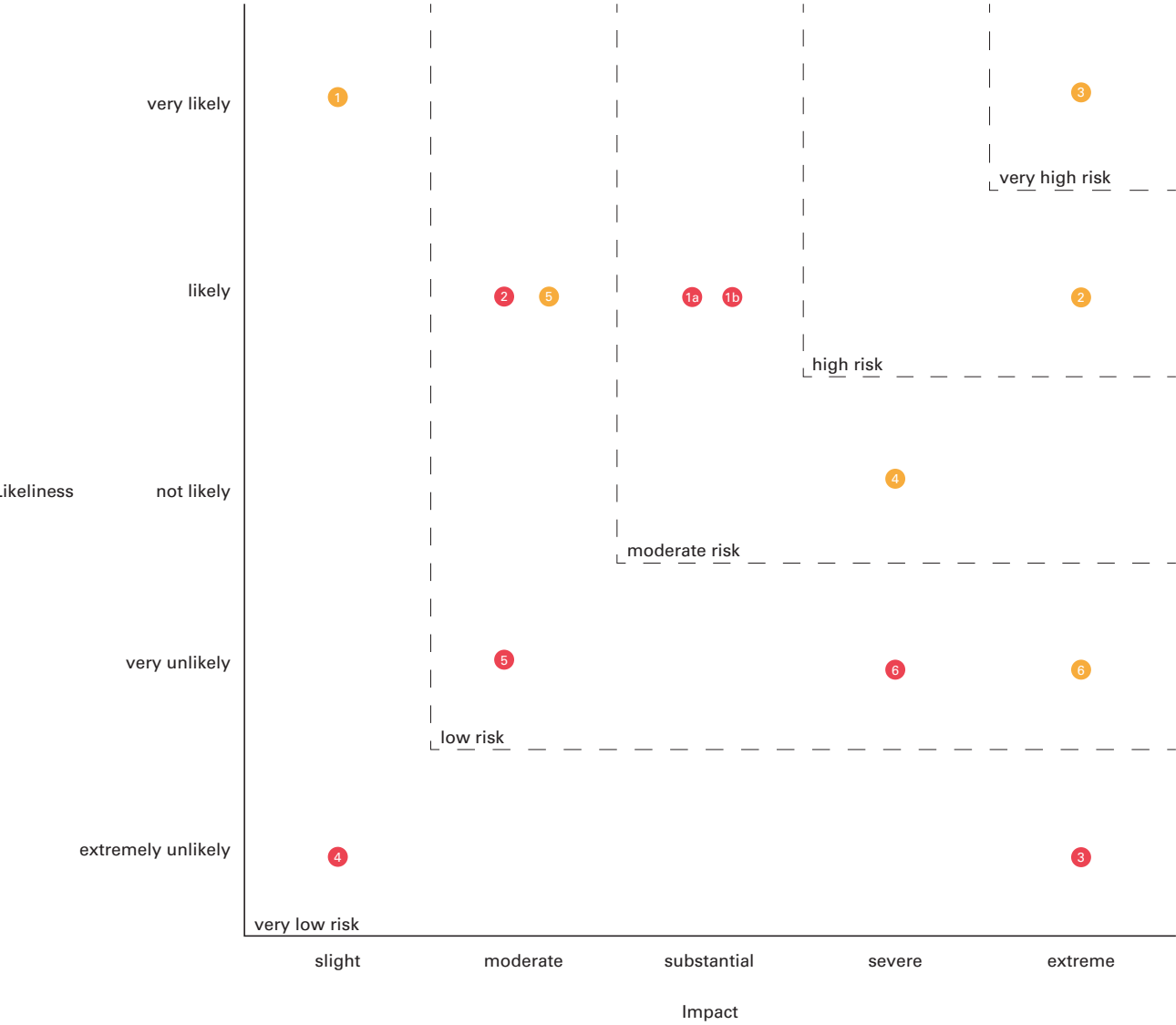
15



**EYE LEVEL PERSPECTIVES**



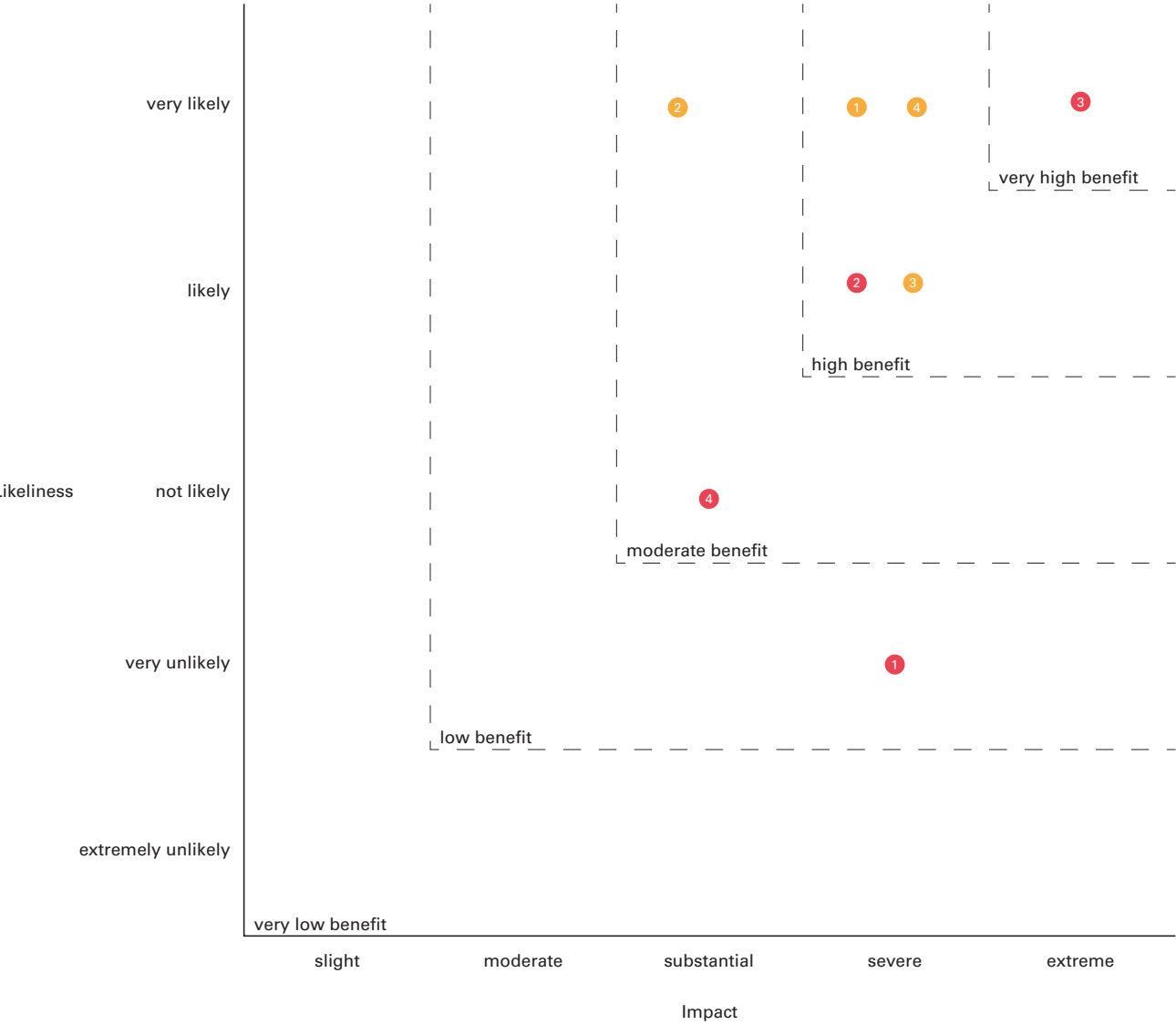
SCENARIO 9: RISK ASSESSMENT



BREAKING MID-RISE & TURN PARKING GARAGES INTO HOUSING

- Risks - breaking up mid-rise**
- 1. A. Change in apartment size - smaller
  - 1. B. Change in apartment size - larger
  - 2. Loss of cultural historic value (length)
  - 3. No improvement on services
  - 4. Loss of social cohesion
  - 5. New 'nooks'
  - 6. Less eyes on the street (less housing)
- Risks - parking garages**
- 1. More movement (more people in the area)
  - 2. High segment of new housing (new target group)
  - 3. Social disconnect between old & new
  - 4. Spatial/physical disconnect between old & new
  - 5. Increase in shadows
  - 6. More traffic, less parking (cars)

SCENARIO 9: BENEFIT ASSESSMENT



BREAKING MID-RISE & TURN PARKING GARAGES INTO HOUSING

- Benefits - breaking up mid-rise**
- 1. Space to create other functions
  - 2. Strengthening of social cohesion
  - 3. Improvement on service systems
  - 4. Increase in daylight
- Benefits - parking garagse**
- 1. Addition of housing
  - 2. More movement (more people in the area)
  - 3. Strengthening of social cohesion
  - 4. Space to create other functions



SCENARIO 9: TRANSLATION TO CULTURAL HISTORIC VALUES

BRAND +	RIEGL +	AGE value	HISTORICAL value	INTENTINAL COMMEMORATIVE value	NON INTENDED COMMEMORATIVE value	USE value	NEW-NESS value	(relative) ART value	RARITY value [+]	OTHER relevant values [+]
SURROUNDINGS / SETTING [+]										
SITE										
SKIN (exterior)										
STRUCTURE										
SPACE PLAN										
SURFACES (interior) [+]										
SERVICES										
STUFF										
SPIRIT of PLACE [+]										

Riegl and Brand (Kuipers & Jonge, 2017)

18

+

	ECOLOGICAL	SOCIAL	ECONOMIC				POLITICAL	OTHER VALUES
SITE	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U
SURROUNDINGS	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U
STUFF	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U
SURFACE	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U
AMENITIES	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U
SCALE	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U
TYPOLOGY	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U
SPACE	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U
STORY	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U
SOCIAL	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U
SERVICES	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U
VISION	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U
ATMOSPHERE	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U
PAST/PRESENT/FUTURE	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U	M O G U

Value Matrix: Stakeholder research

=

Values for x-axis

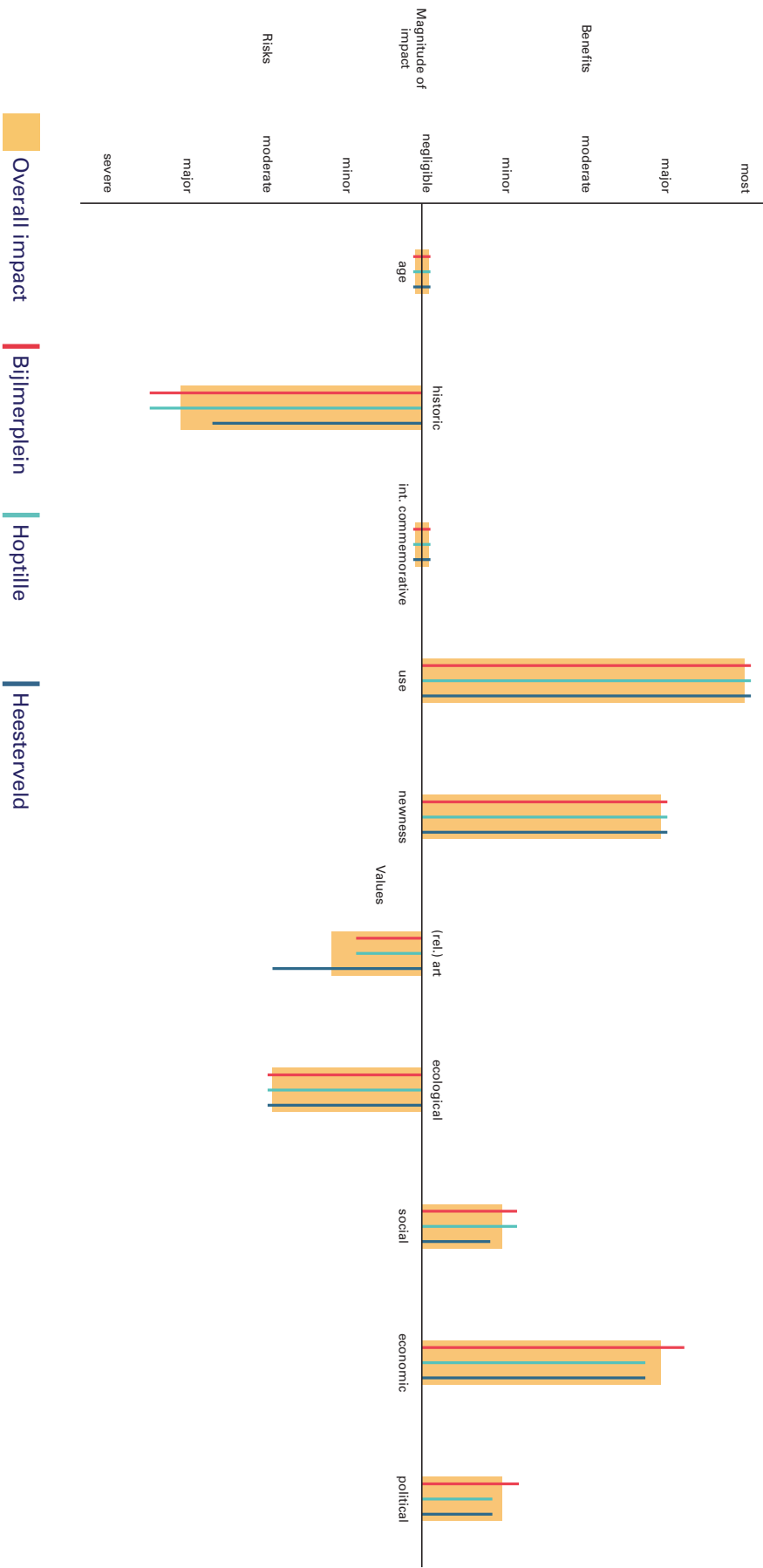
Magnitude of Negative Impacts				
Severe (-5)	Major (-4)	Moderate (-3)	Minor (-2)	Negligible (-1)
Very strong impact on the key characteristics of the cultural heritage property that convey OUV, and its setting	Highly significant impact on key characteristics of the cultural heritage property and its setting	Significant impact on the key characteristics of the cultural heritage property and its setting	Slightly significant impact on the key characteristics of the cultural heritage property and its setting	Insignificant impact on the key characteristics of the cultural heritage property and its setting
Magnitude of Beneficial Impacts				
Most (+5)	Major (+4)	Moderate (+3)	Minor (+2)	Negligible (+1)
Strong spatial and/or socio-cultural, and economic benefits for cultural heritage property and its setting	Highly significant spatial and/or socio-cultural, and economic benefits for cultural heritage property and its setting	Significant spatial and/or socio-cultural, and economic benefits for cultural heritage property and its setting	Slightly significant spatial and/or socio-cultural, and economic benefits for cultural heritage property and its setting	Insignificant spatial and/or socio-cultural, and economic benefits for cultural heritage property and its setting

Impact scale for y-axis (Seyedashrafi, 2017)

19



SCENARIO 9: DENSIFICATION IMPACT ON CULTURAL  
HISTORIC VALUES



BIBLIOGRAPHY - APPENDIX 2

Kuipers, M., & Jonge, W. de. (2017). *Designing from heritage: strategies for conservation and conversion*. TU Delft.

Seyedashrafi, B., Ravankhah, M., Weidner, S., & Schmidt, M. (2017). Applying heritage impact assessment to urban development: world heritage property of Masjed-e Jame of Isfahan in Iran. *Sustainable Cities and Society*, 31, 213-224.





Stadsarchief Amsterdams (1991)

## - appendix 3 -

### Building analysis

This appendix is an overview of analyses made of the mid-rise and low-rise buildings of Hoptille. It covers the urban scale to the details. This research was done by Marije de Ruijter, Nurhadi Nugraha, Stefan Lichtenveldt, Cornee Louwerens, Jonathan Verhoef, Rebwar Obeid, Sophie Vrisekoop, and Anneloes Tilman.

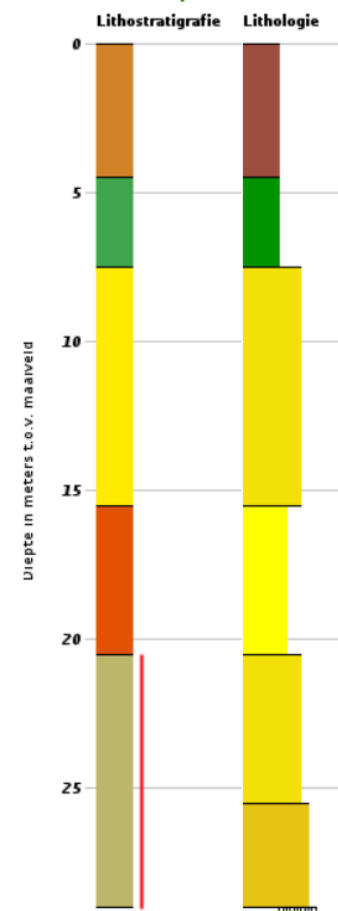
Besides collective research, individual information and drawings were also added.



SOIL SAMPLES HOPTILLE

From TNO. (n.d.) *Ondergrondgegevens*. DINOloket. <https://www.dinoloket.nl/ondergrondgegevens>.

Boormonsterprofiel

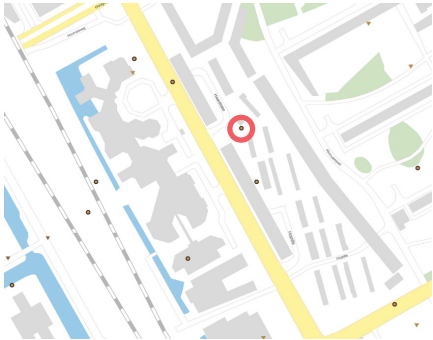


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Coördinaten : 125380 , 480340 (RD)  
Maaiveld: -3.00 m t.o.v. NAP  
Beschikbare informatie: Digitale opnamegegevens  
Beschrijfmethode: Onbekend  
Kwaliteit interpretatie: Gevalideerd in ondergrondmodel

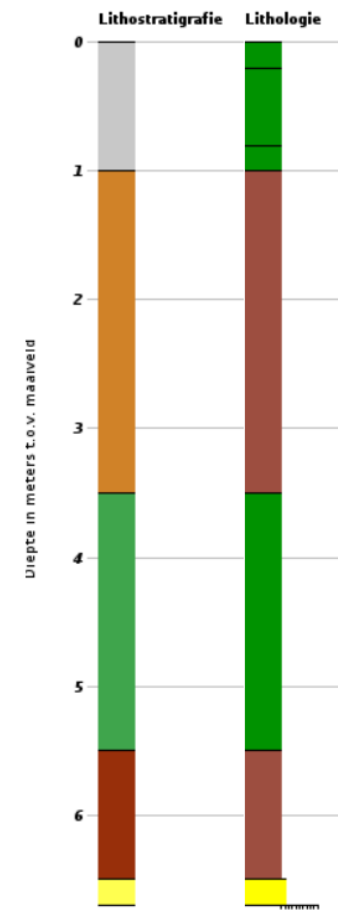
- Lithostratigrafie

  - NIHO
  - NAWO
  - BX
  - DRUI
  - UR
  - Gestuwd
- Lithologie

  - Klei
  - Zand fijne categorie
  - Zand midden categorie
  - Zand grove categorie
  - Veen



Boormonsterprofiel

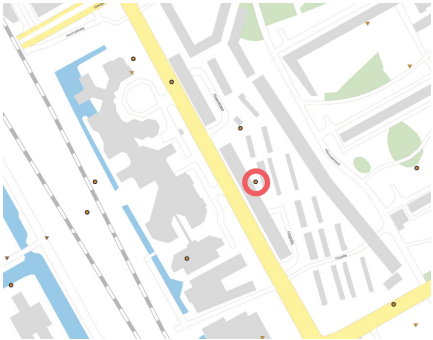


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Kwaliteit interpretatie: Geautomatiseerd toegekend

- Lithostratigrafie

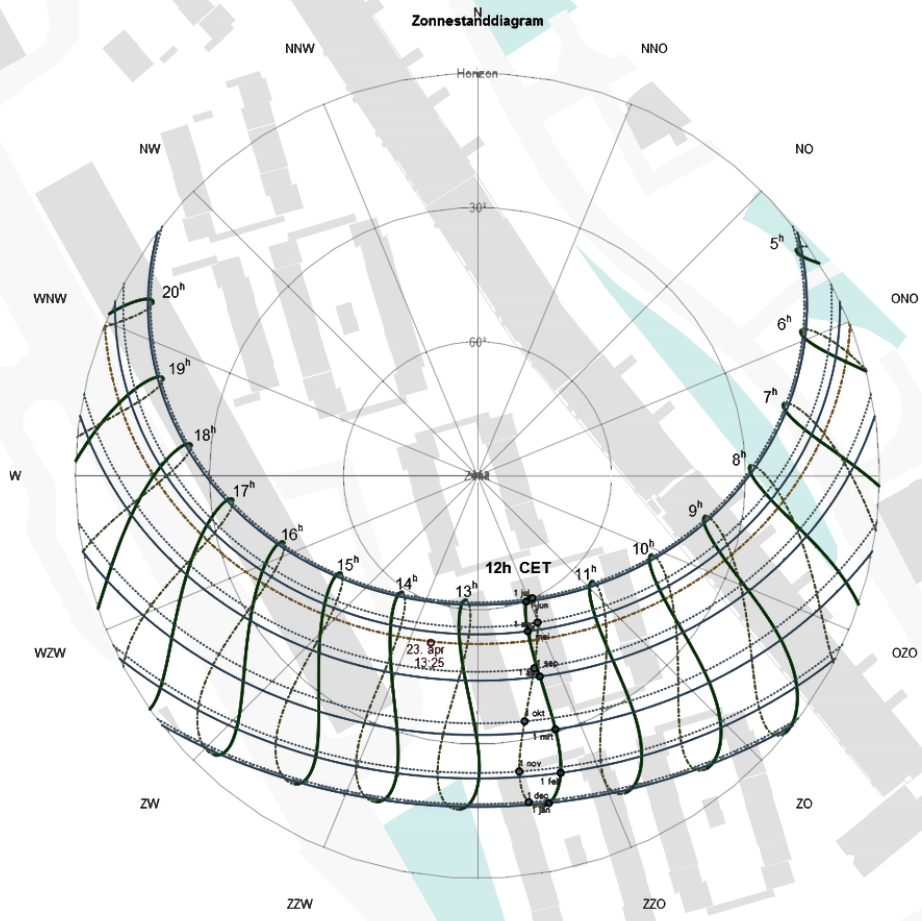
  - AAOP
  - NIHO
  - NAWO
  - NIBA
  - BXWI
- Lithologie

  - Klei
  - Zand fijne categorie
  - Veen



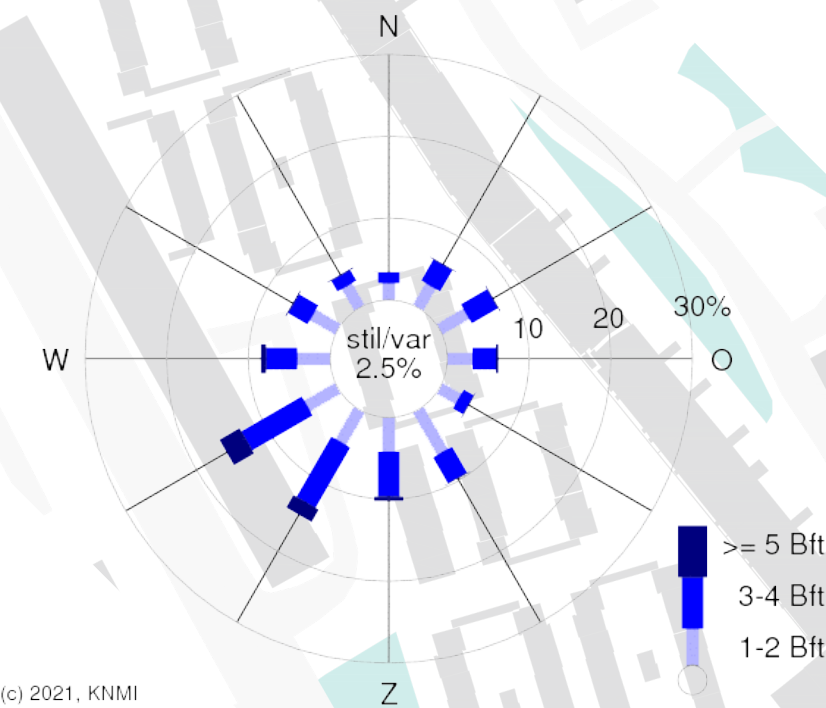


SUNPATH  
Barbarossa (2013)



WIND (FEB - JULY - NOV)  
KNMI (2021)

Windroos De Bilt, klimatologie februari

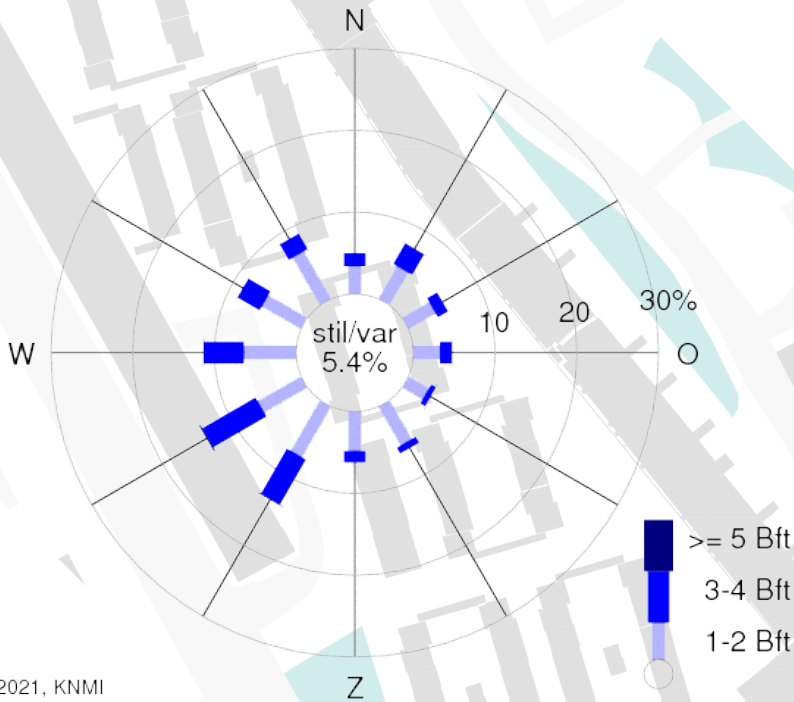




WIND (FEB - JULY - NOV)  
KNMI (2021)

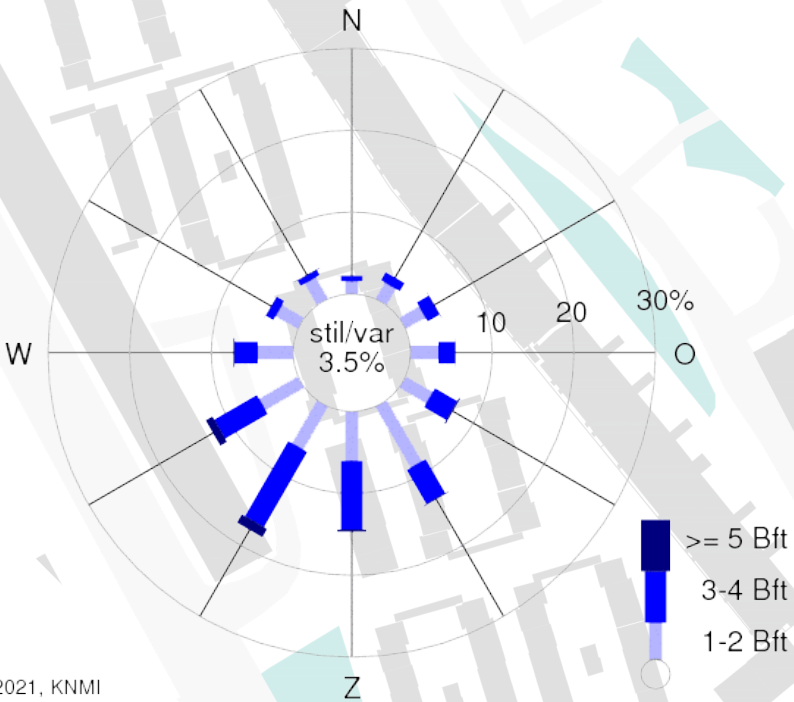
WIND (FEB - JULY - NOV)  
KNMI (2021)

Windroos De Bilt, klimatologie juli



(c) 2021, KNMI

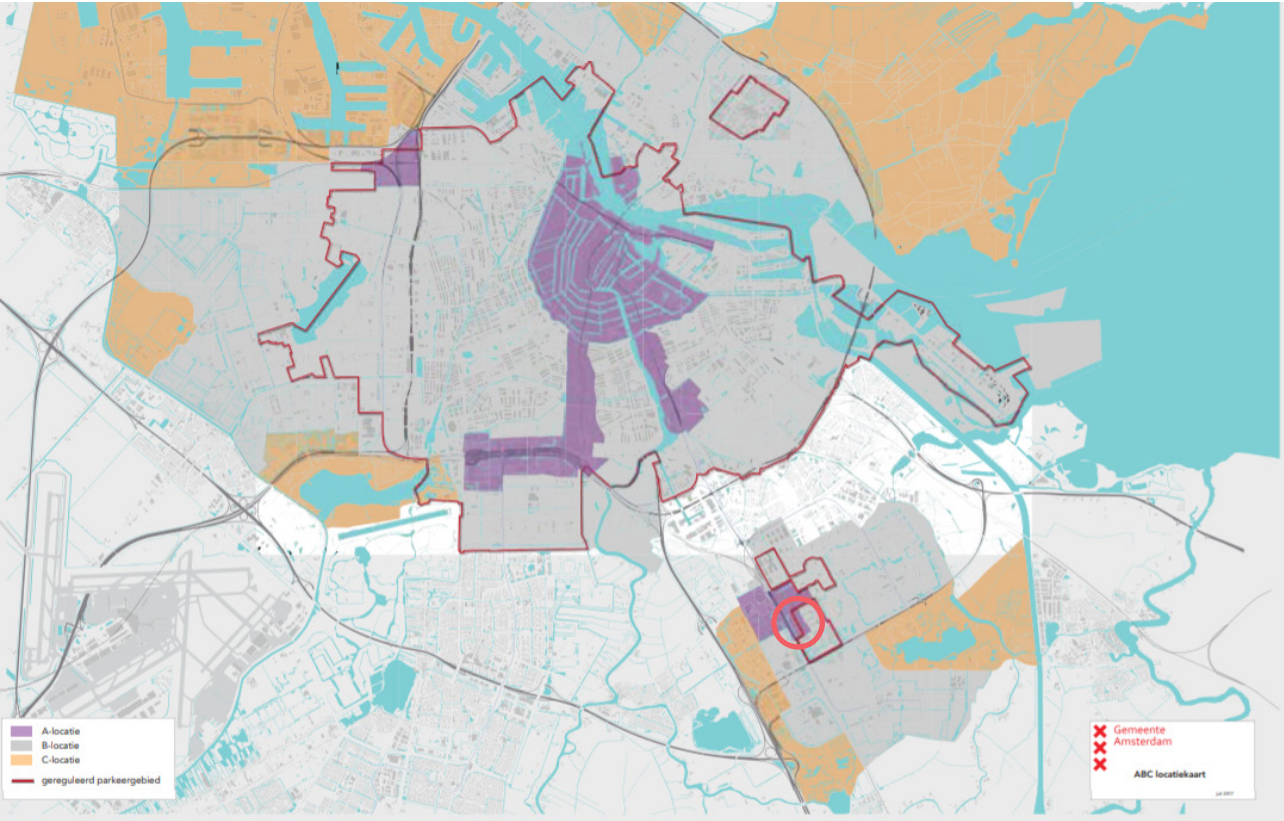
Windroos De Bilt, klimatologie november



(c) 2021, KNMI



PARKING IN HOPTILLE



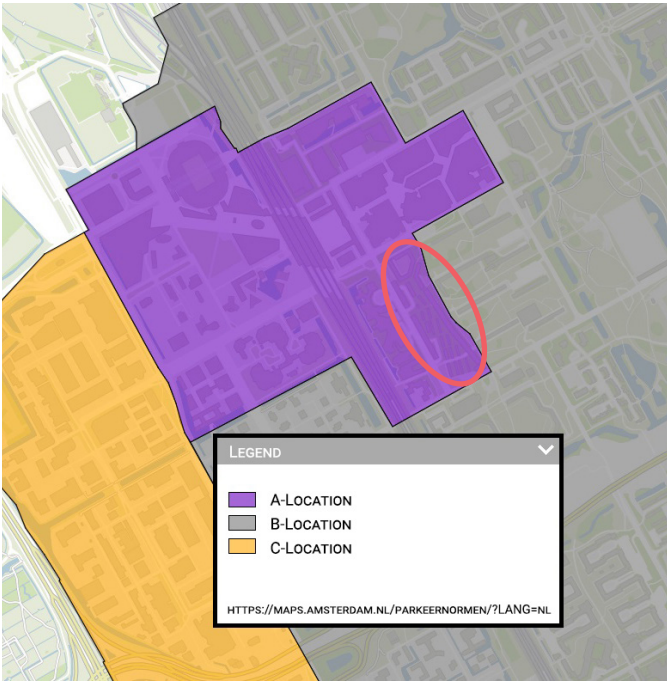
10

PARKING IN HOPTILLE

Amsterdam knows three kinds of parking zones, these zones are known as A, B and C zones. The better an area is accessible through public transport the higher the rating of the area is. The Hoptille street is in a A-Location as the Amsterdam Bijlmer Arena train and metro station is very closeby.

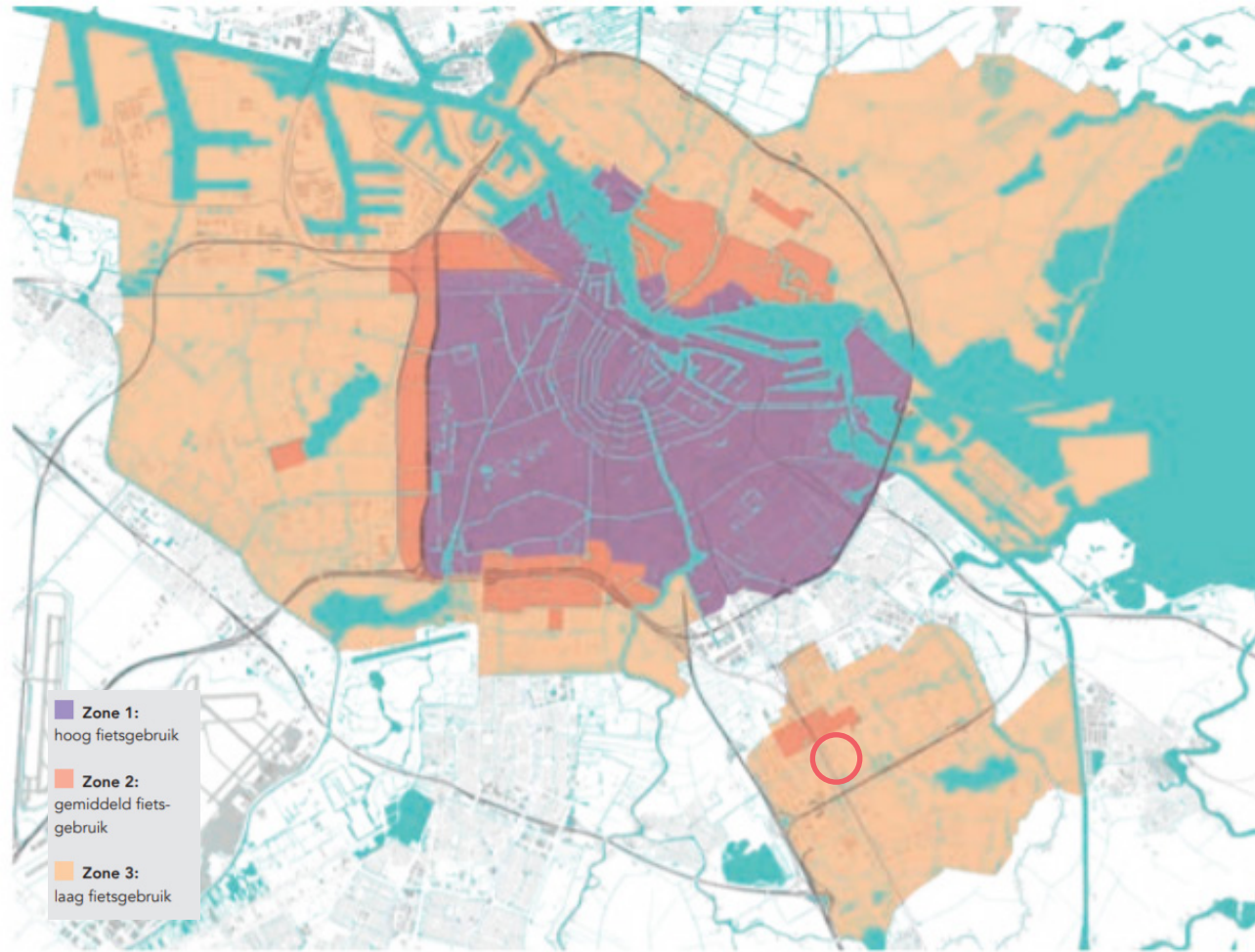
The set rules for A zones is that there is no minimum parking norm for all dwelling types. Therefore the minimum parking requirement in Hoptille is equal to 0 parking spots per dwelling. The maximum parking norm for all dwelling types is 1 parking spots per dwelling.

Residents also do not get a parking parking permit regardless of the dwelling type they live in (Gemeente Amsterdam, 2017; Nota Parkeernormen Auto).



Maps.amsterdam.nl (2021)  
Parking locations Zuidoost

11



Aantal geëiste en maximaal toegestane parkeerplaatsen per woning	A-locaties		B-locaties		C-locaties	
	Minimum parkeernorm	Maximum parkeernorm	Minimum parkeernorm	Maximum parkeernorm	Minimum parkeernorm	Maximum parkeernorm
<b>Vrije sector</b>						
-Woningen tot 30 m² bvo	geen	1	0,1 <sup>s</sup>	1		
-Woningen tussen 30 m² en 60 m² bvo	geen	1	0,3	1	maatwerk	maatwerk
-Woningen boven de 60 m² bvo	geen	1	0,6	1		
<b>Sociale- en middeldure huur</b>	geen	1	geen	1	maatwerk	maatwerk

§ 5.4 Parkeernorm bij nieuwbouwwoningen op A-locaties

- Een maximumparkeernorm van één parkeerplek per woning voor alle woningtypen, vrije sectorwoningen (koop en huur), middeldure- en sociale huurwoningen.
- Geen minimumparkeernorm voor alle woningtypen, vrije sectorwoningen (koop en huur), middeldure- en sociale huurwoningen. De minimumparkeereis is daarmee gelijk aan nul.
- Geen parkeervergunning voor bewoners bij nieuwbouw van alle woningtypen, vrije sectorwoningen (koop en huur), middeldure- en sociale huurwoningen.



Stadsdeel	Op straat (incl. bijzondere plaatsen)	In garages (openbaar en niet-openbaar)
Nieuw-West	59.000	37.000
Zuid	53.000	23.000
Zuidoost	26.000	38.000
Oost	33.000	28.000
Noord	44.000	12.000
West	31.000	10.000
Centrum	15.000	13.000
Westpoort	4.000	5.000
Totaal (433.000)	266.000	167.000

Autobezit per stadsdeel			
Stadsdeel	Gem. aantal auto's per huishouden 1 persoon	Gem. aantal auto's per huishouden ≥ 2 personen	Aantal geregistreerde auto's, excl. leaseauto's
Nieuw-West	0,43	0,82	40.800
Zuid	0,48	0,65	41.600
Zuidoost	0,30	0,59	29.400
Oost	0,39	0,71	33.400
Noord	0,33	0,81	28.500
West	0,18	0,55	32.800
Centrum	0,21	0,55	24.300
Westpoort	zie (Nieuw-) West	zie (Nieuw-) West	zie (Nieuw-) West
Gemiddelde	0,32	0,68	
Totaal		excl. leaseauto's: incl. leaseauto's:	230.700 248.000

Stadsdeel	Bestaande voorraad eind 2015	Toevoeging 2016 tot en met 2020	2021 e.v.
Centrum	54.000	± 500	
West	77.000	± 3.200	
Nieuw-West	64.000	± 6.400	
Zuid	78.000	± 2.100	
Oost	64.000	± 9.000	
Noord	41.000	± 6.000	
Zuidoost	39.000	± 2.700	
Amsterdam	417.000	± 30.000	Ruim 5.000 per jaar

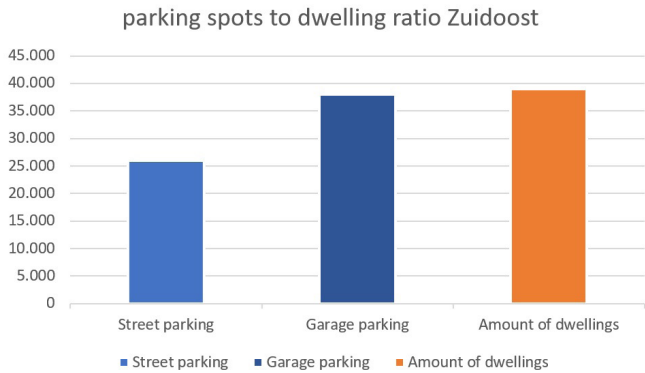
Oude normen	Centrum	Noord	West	Nieuw-West	Zuid	Zuidoost
Vrije-sectorwoningen	Geen minimum-norm Maximaal 0,5 pp/pw	Minimaal 1 pp/pw Geen maximum	Minimaal 0,6 pp/pw Maximaal 0,9 pp/pw	Minimaal 1 pp/pw Geen maximum	Minimaal 1 pp/pw Geen maximum	Minimaal 1 pp/pw Geen maximum
Sociale huurwoningen	Geen minimum-norm Maximaal 0,5 pp/pw	Minimaal 0,5 pp/pw Geen maximum	Minimaal 0,4 pp p/w Maximaal 0,6 pp/pw	Minimaal 0,7 pp/pw Geen maximum	Minimaal 0,7 pp/pw Geen maximum	Minimaal 0,5 pp/pw Geen maximum
Studentenwoningen	Geen minimum-norm Maximaal 0,5 pp/pw	Minimaal 0,1 pp p/w Geen maximum				

DATA

In Zuidoost the average amount of cars owned by 1 person households is 0,3. The average amount of cars owned by 2 or more person households is 0,59. The total amount of registered cars (excl. lease cars) is 29.400 in Zuidoost.

The amount of available parking spots on the street in Zuidoost is 26.000, the amount of available parking spots in parking garages is 38.000.

The amount of dwellings at the end of 2015 in Zuidoost is 39.000 with the expectation to see a growth of around 2.700 dwellings in the coming years up until 2020.



Gemeente Amsterdam (2017),  
Nota Parkeernormen Auto

PARKING VISION OF AMSTERDAM

The municipality of Amsterdam has multiple visions for the future. Some of the parking visions are describes as follows:

Parking: Less parking in the streets for a better public space with a higher traffic flow.

Bicycle: Extra bike parking and active enforcement of bike parking at busy locations.



Gemeente Amsterdam (2013),  
MobiliteitsAanpak Amsterdam 2030



BUILDING ORDER

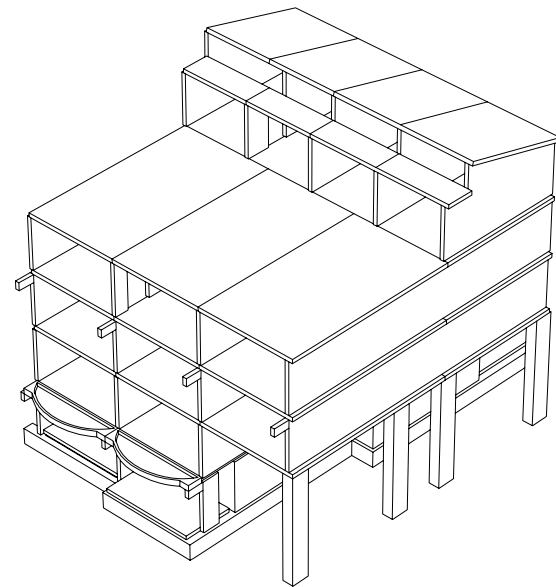
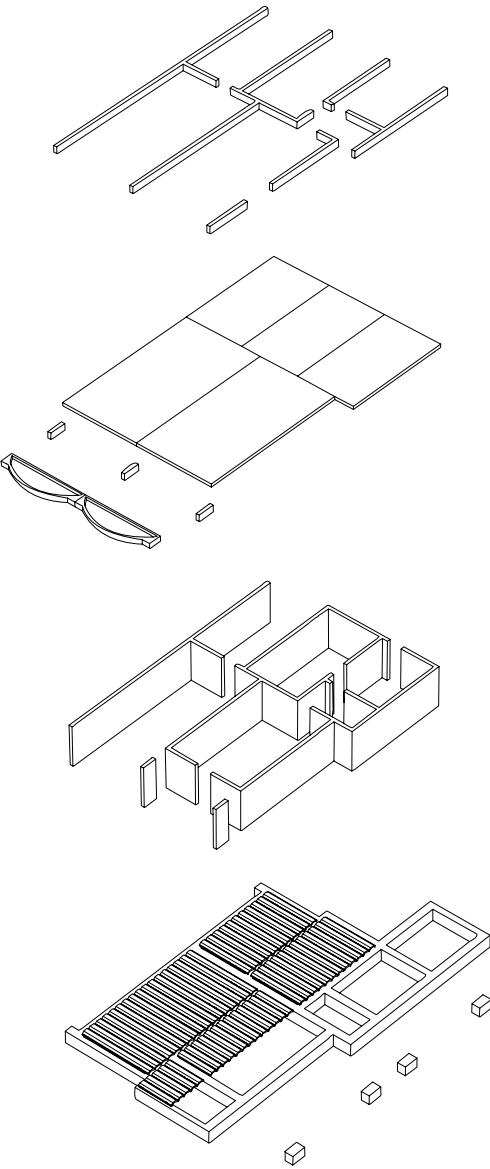
The building is constructed in concrete with several prefab concrete elements to support the cast of concrete. Prefab concrete elements also make up the facade structure of the building, with a brick cladding in front.

The piles are drilled first, after which concrete beams are placed/cast that support the wall structre of the building.

On these foundation beams concrete shell shaped panels (dutch: broodjesvloer) are placed alongside eachother which are then poured over with concrete. When the ground floor bearing walls are then cast on the beams, a temporary construction is placed inbetween to support the casting of the floors of the upper storey.

Prefab concrete slab floor elements are then positioned at height of the top of the walls. Spanning from wall to wall. To be cast together and make a solid construction. And this is repeated for all the other storeys. Balconies are prefabricated and rest on the consoles attached to the bearing walls.

14



Structure block C/D

Building order

VARIATIONS AND CONSTRUCTION DETAILS

Because of the variation in segments of the building organisation(see page 3) the concrete foundation also changes for each of these variations. The width of these beams is 500mm both in x and z direction. Except for the outermost z-beams that carry the groundfloor facades. These are only 300 mm.

The distance from core to core of the bearing walls is either 4800mm or 3600 mm depending on the side of the building. And the core of the walls in the z direction are 8950 and 6650mm from both facade-lines.

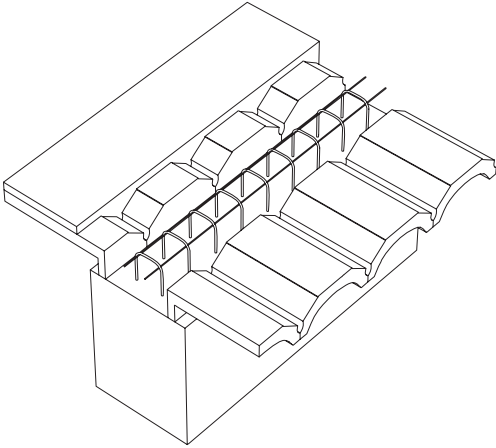
The width(z axis) of one variant(ABCD) is therefore 14400 mm. Floor to floor height of the building is 2800 mm. And the bearing walls themselves are 200 mm thick.

Both figures below are construction knots. The left being the ground level floor, and the right being the upper floors.

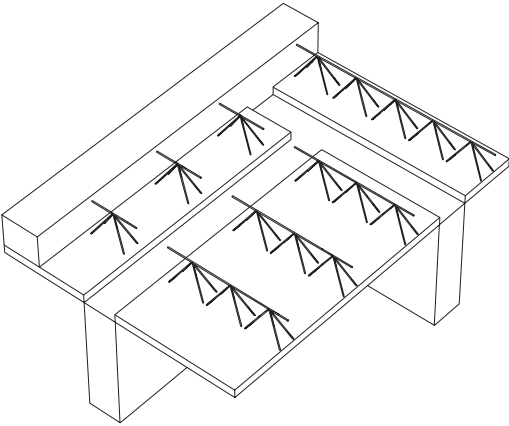
The left one is called a “broodjesvloer” construction in dutch and it consists of these half round shell shaped slabs with internal steel reinforcement. This is covered and connected with the adjoining concrete with a screed. The elements themselves have a with of 500 mm and a height of 180 to 200 mm. The screed can then range from 40-50 mm. Depending on the span. Because of this all the elements are placed in the z direction.

The right one shows a breedplaatvloerconstruction. With a prefab floor slabs reinforced with steel lattice girders. To be cast over later and joining the walls and floors into one solid construction.

15



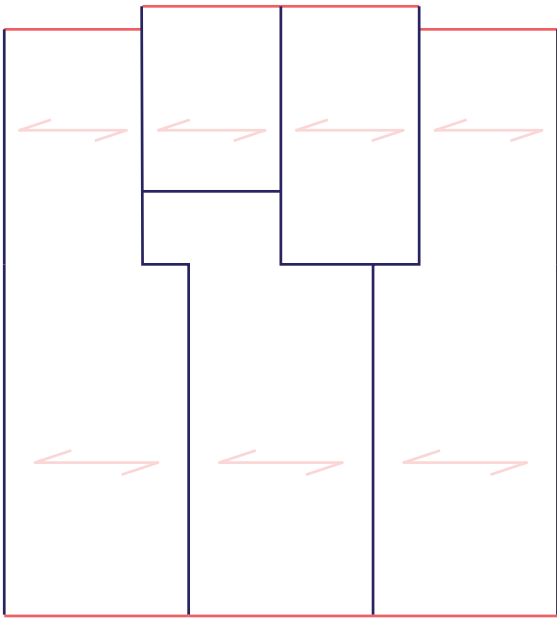
Block and beam floor



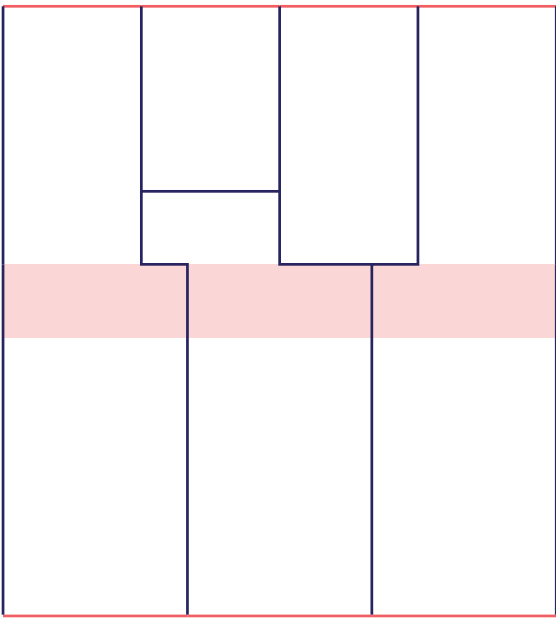
Wide plate floor



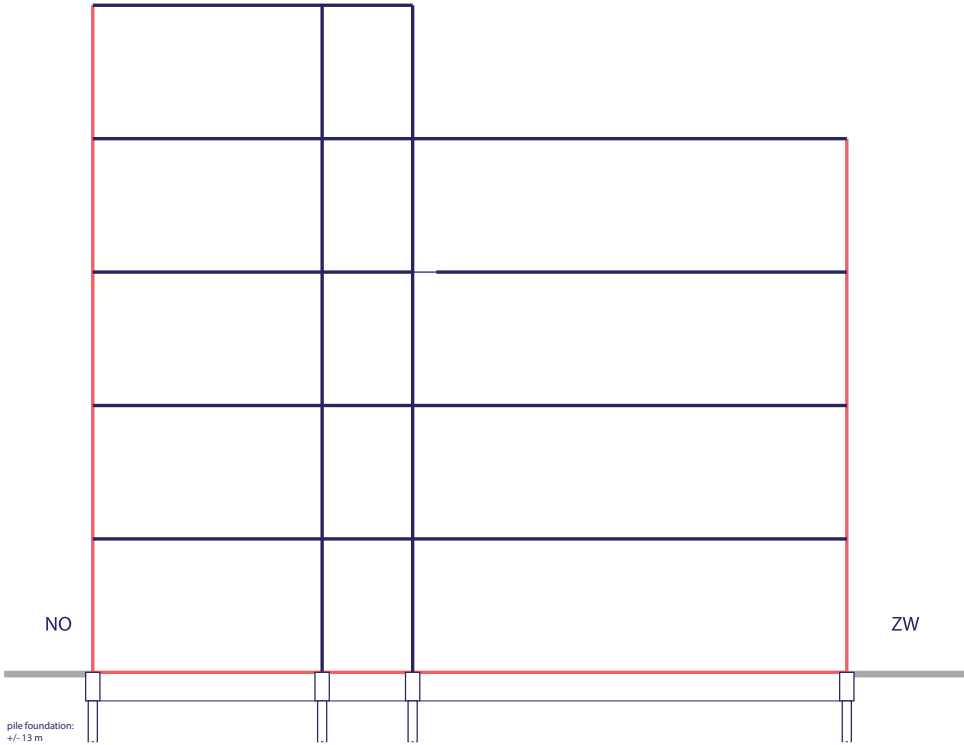
STRUCTURAL DIAGRAMS



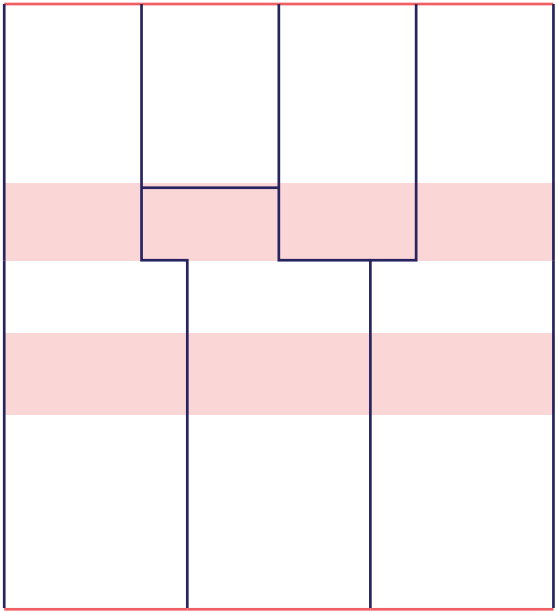
primary structure  
secondary structure



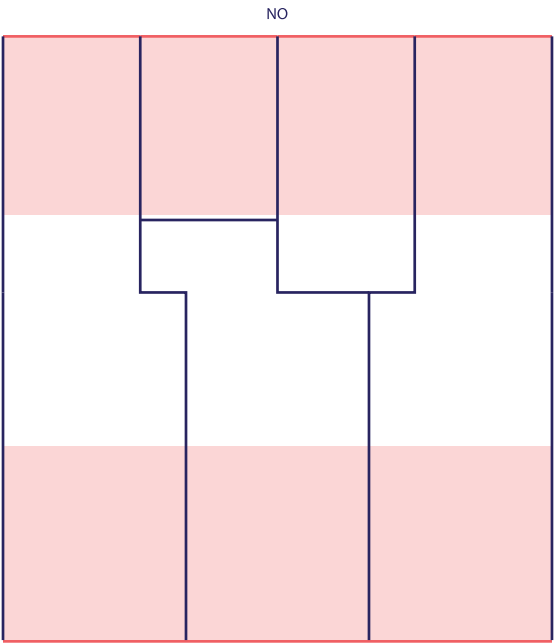
primary structure  
secondary structure  
main corridor and utilities



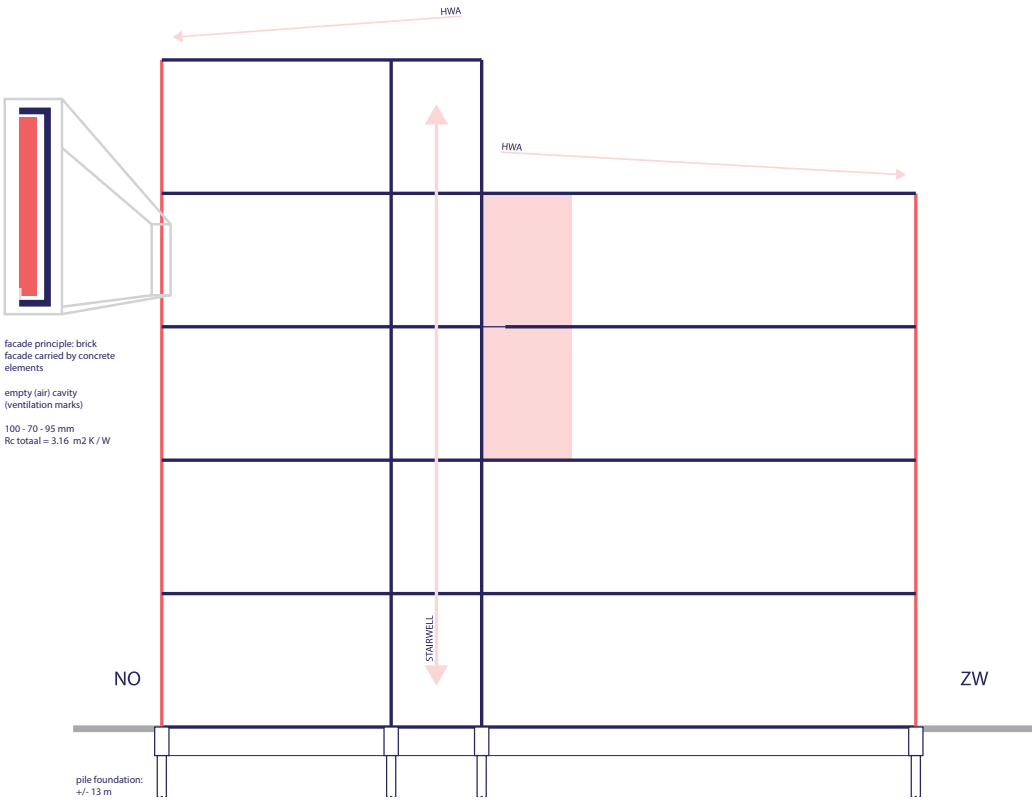
pre-fab concrete  
in situ concrete



primary structure  
secondary structure  
utilities



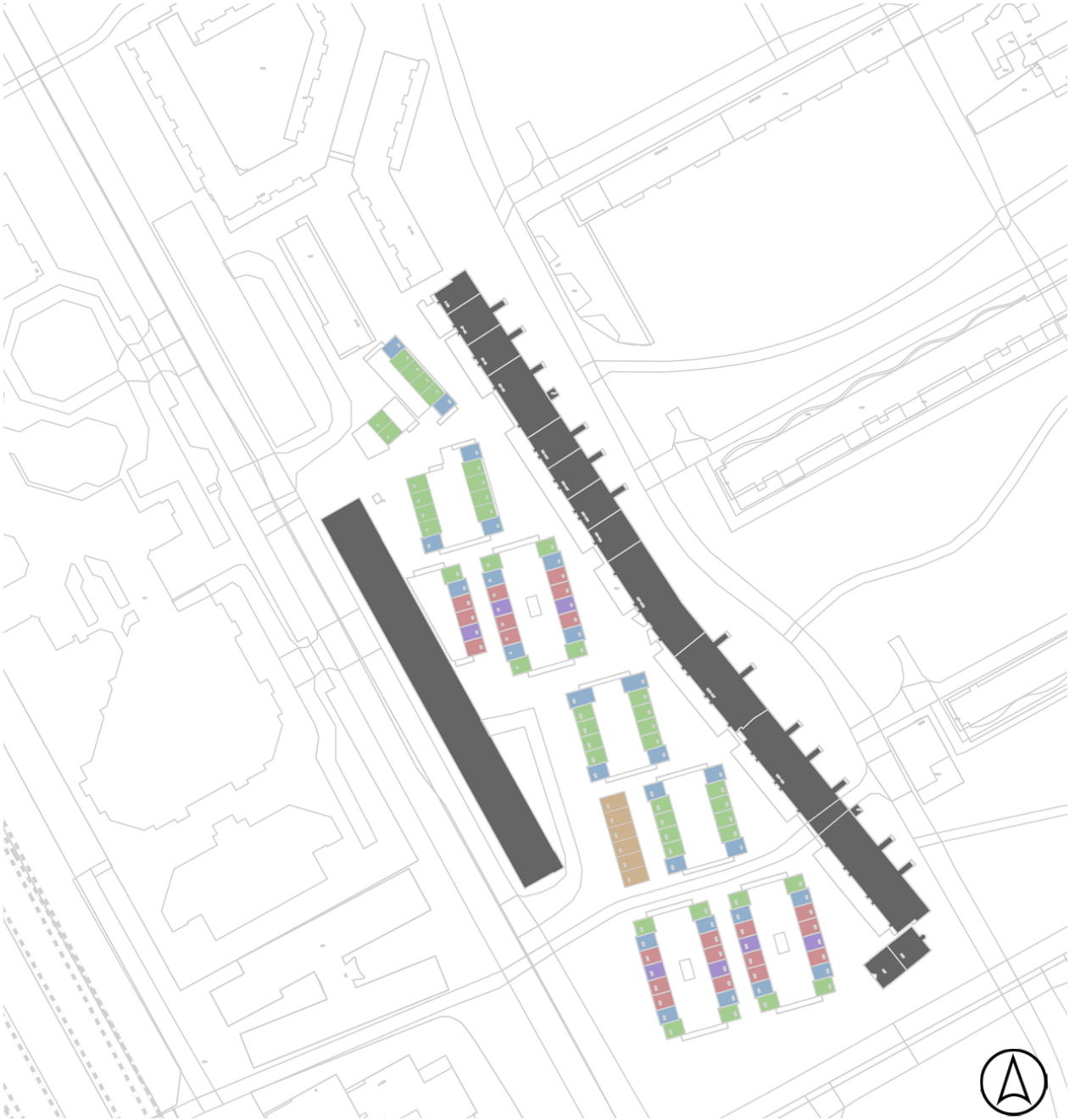
primary structure  
secondary structure  
living and sleeping areas








primary structure  
secondary structure



LAY-OUT LOW-RISE BUILDINGS

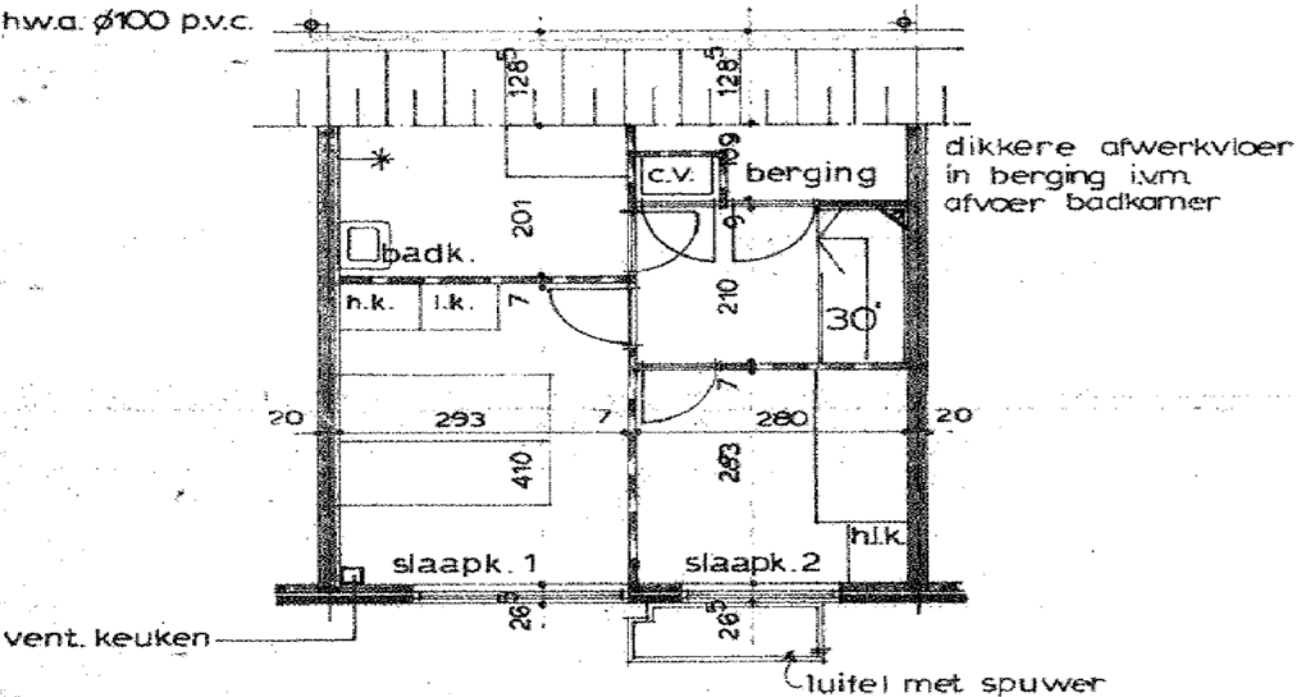


-  **43 Two story family houses with 3 rooms**
-  **26 Two story family houses with 4 rooms.**
-  **21 Three story family houses with 5 rooms.**
-  **7 Three story family houses with 6 rooms.**
-  **6 Three story atelier/resident units with 4 rooms.  
Now a daycare**



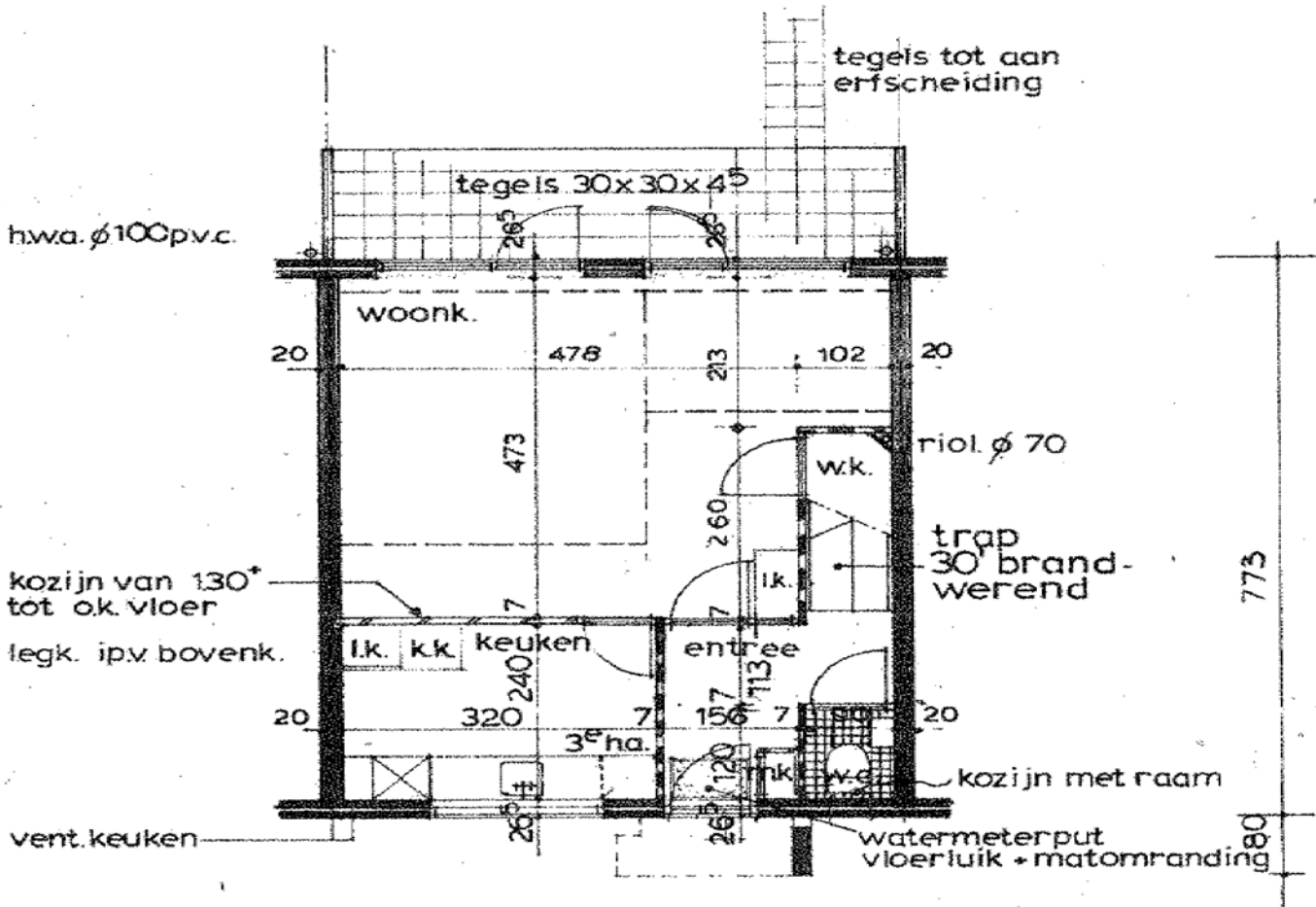
TWO STOREY HOMES

For both types, the ground level is the same. The differences are visible in plan on the first floor.



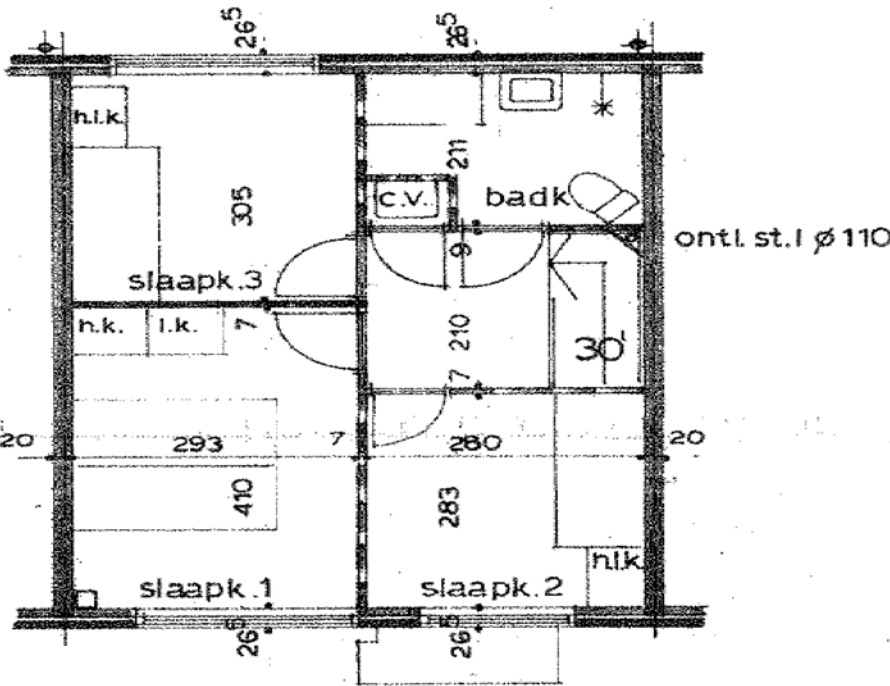
43 Two story family houses with 3 rooms

20



First floor

21

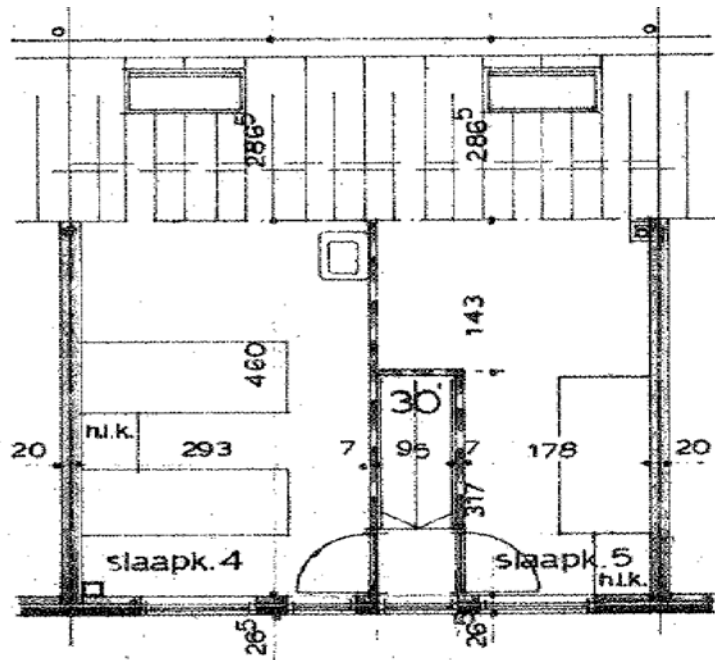


26 Two story family houses with 4 rooms.

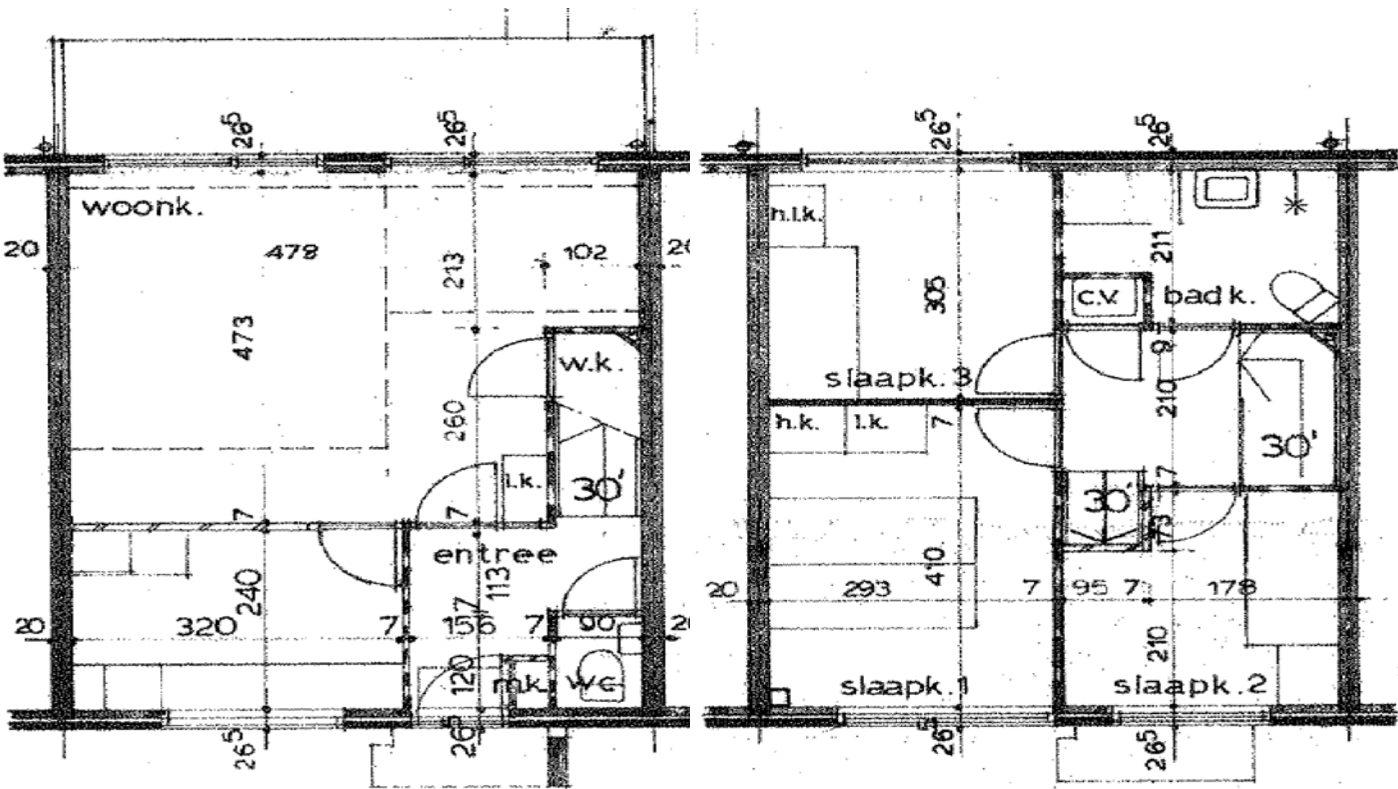


THREE STOREY HOMES

For both types, the ground level and the first floor are the same. The differences are visible in plan on the top floor. Also, variation is made in the facade compared to the two storey homes through the introduction of white bricks.

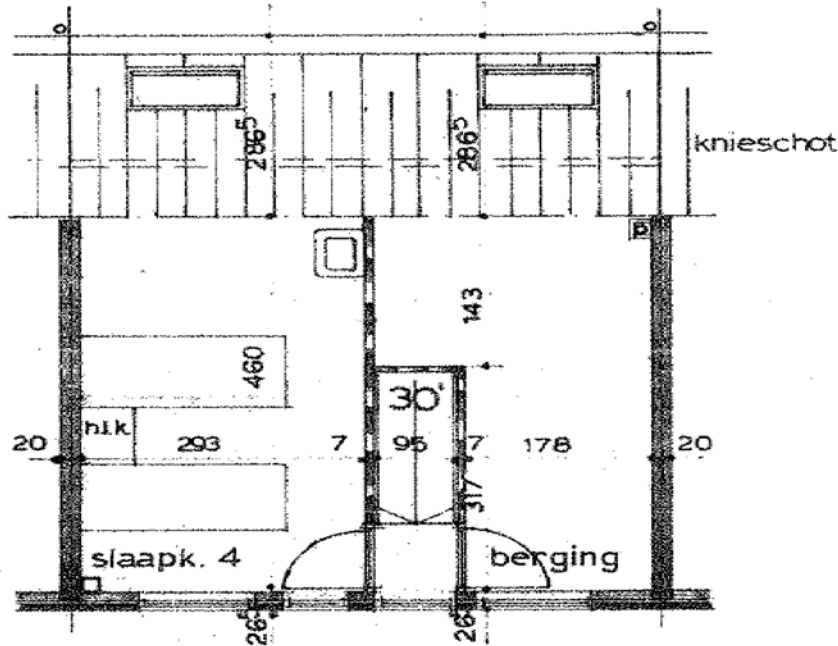


7 Three story family houses with 6 rooms.



First floor

Second floor



21 Three story family houses with 5 rooms.



BUILDING LAY-OUT MID-RISE

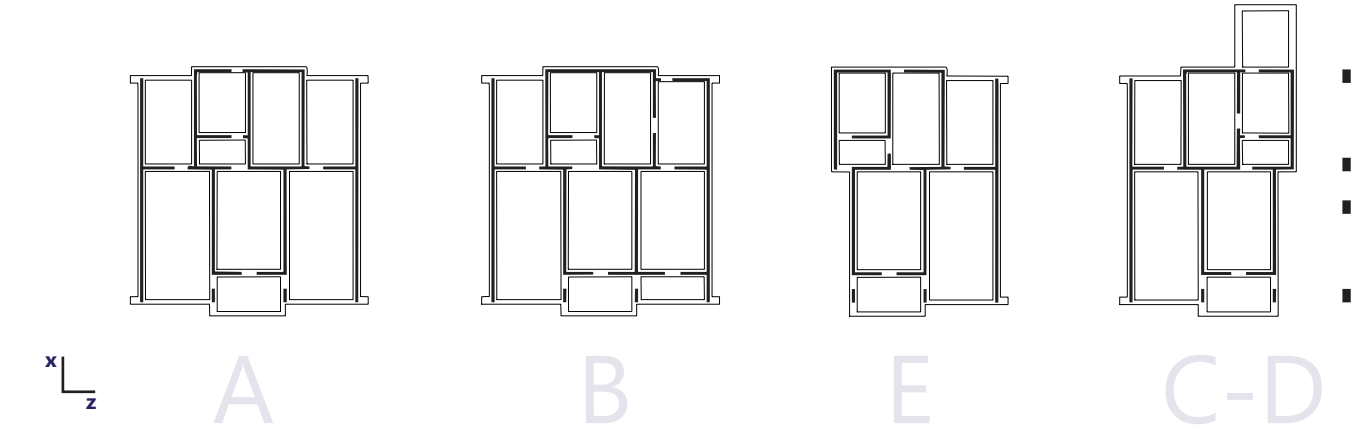
The Hoptille mid-rise building consists of a string of different building segments. A being the most prevalent. And B, C, D and E being altered versions to allow for vertical routing and also the underpasses.

Over time renovations have been made to the building. That made the accessibility less reliant on the inner street of the building. And dwellings have even been joint together and some also incorporated some segments of the(former) inner street.

The building has many maisonettes. Meaning that a dwelling extends over multiple floors. In the table below, in the right column it shows how many dwellings per building segment extend over multiple floors, example: 3(1-2) means 3 dwellings that are part of the first and second floor(bg meaning groundfloor).

Numbers - the building has 16.085 m2 total living area and garage space divided by 4.977 m2 ground space. Resulting in a 3.23 fsi.With a count of 244 dwellings. Averaging 60,5m2 living area per dwelling.

	Opp	aantallen
Segment (A)	60,3x2(bg) 60,7x2 - 85,5x1(1) 31x3 - 52x1 - 44,35x1(2) 63,45x1 - 31x1 - 40x1 - 22x2(3) 45 x2(4) total: <b>785.3 m2</b>	2(bg) 3(1-2) 2(2) 3(3-4) 2(3)  12 dwellings
Segment(B)	60,3x1 - 74x1(bg) 60,7x2 - 85,5x1(1) 85,6x1 - 62,5x1 - 31x1(2) 65,5x1 - 68,2x1 - 62,6x1(3) 44x1 - 22x2(4) total: <b>804.6 m2</b>	2(bg) 3(1-2) 3(3-4)  8 dwellings
Segment(C)	60,3x1(bg) 60,7x1 - 85,5x1(1) 31x3 - 21.5x1 - 52x1(2) 63,4x1 - 31x1 - 39.9x1 - 22x2(3) 44x1 - 22x2(4) total: <b>639.3 m2</b>	1(bg) 2(1-2) 3(2) 2(3) 3(3-4)  11 dwellings
Segment(D)	60,3x1(bg) 60,7x1 - 69x1(1) 31x3 - 21.5x1 - 44,5x1(2) 63,4x1 - 31x1 - 39.9x1 - 22x2(3) 44x1 - 22x2(4) total: <b>615.3m2</b>	1(bg) 2(1-2) 3(2) 2(3) 3(3-4)  11 dwellings
Segment(E)	60,3x1(bg) 60,7x1 - 69,6x1(1) 31x2 - 44,45x1(2) 31x2 - 22x2(3) 22x2(4) total: <b>447 m2</b>	1(bg) 2(1-2) 1(2) 2(3) 2(3-4)  8 dwellings
Garageboxes	62.1(ABC) of 47.8(D+E) m2	



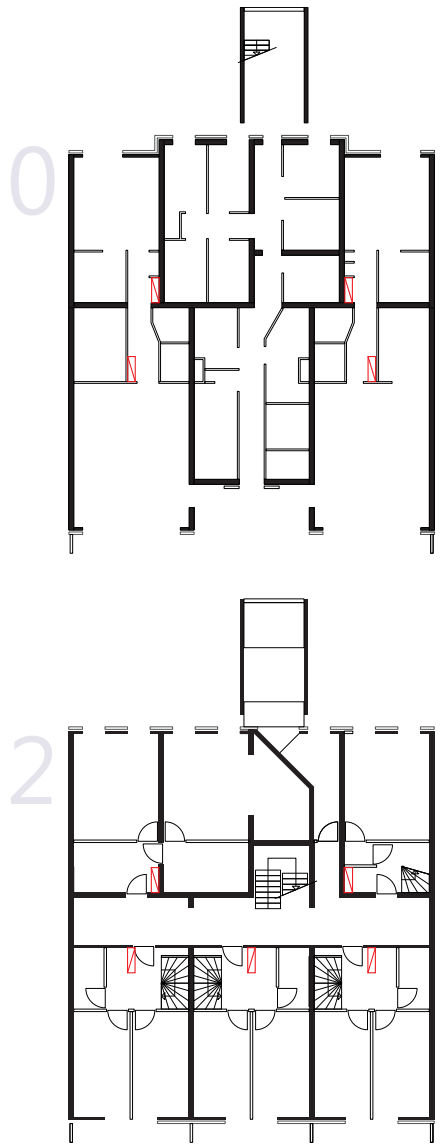


PLAN BLOCK A

These floorplans show the levels of segment A. With on the groundfloor garage space in the center and a dwelling on each side.

On the first floor there are three dwellings, where the middle dwelling possibly can be accessed through the outdoor staircase. The other two are accessed from the second floor. Like they were supposed to be originally. On the second floor, which is accessible through the staircase, the hallway connects with 5 dwellings. of which only 3 extend to the level below. On the third floor, which is accessible by taking the staircae from the second floor, the hallway connects to 5 dwellings. Of which only 3 extend to the fourth floor.

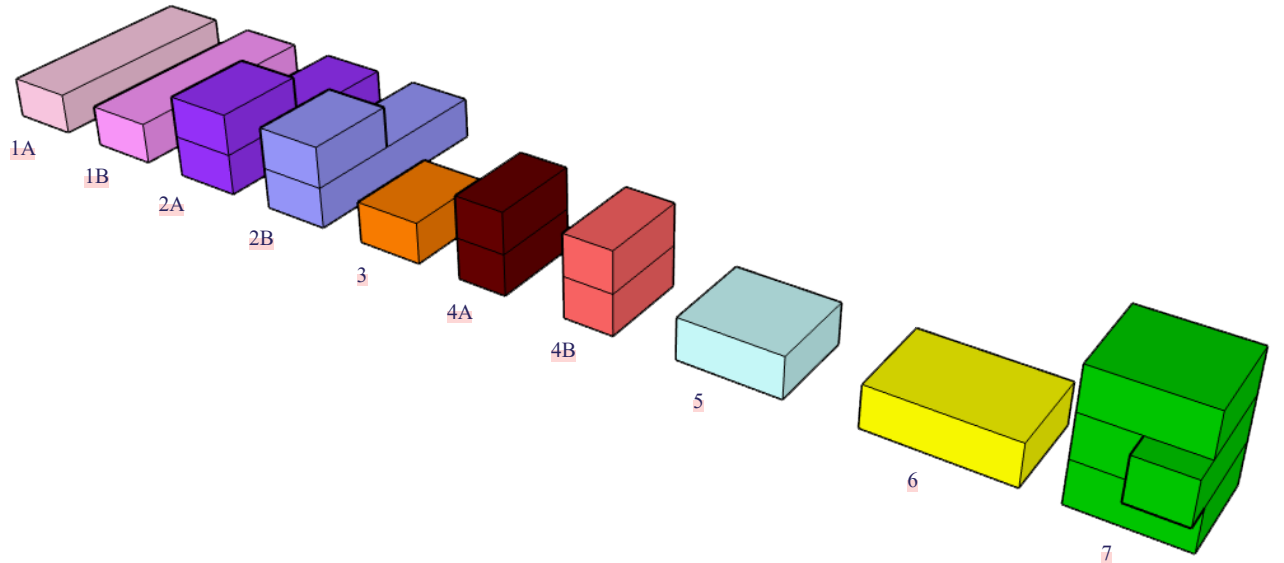
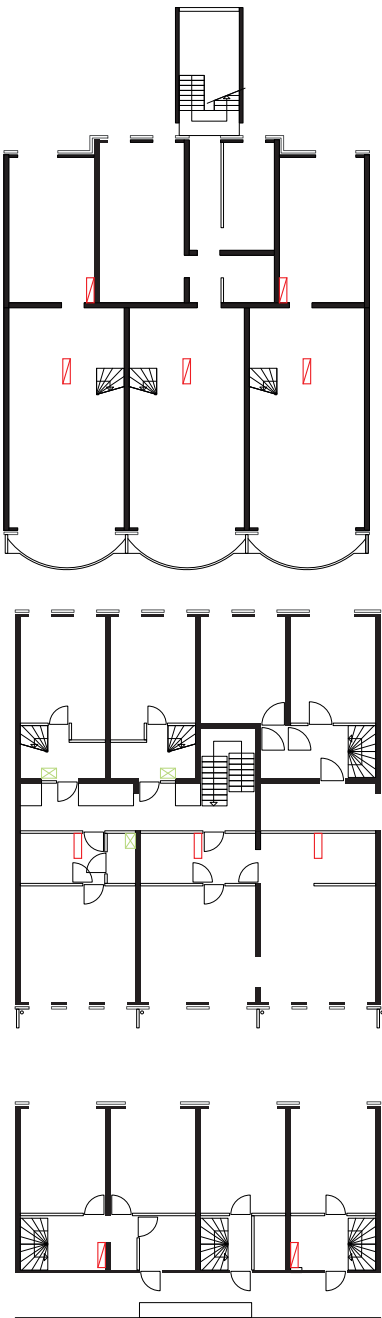
26



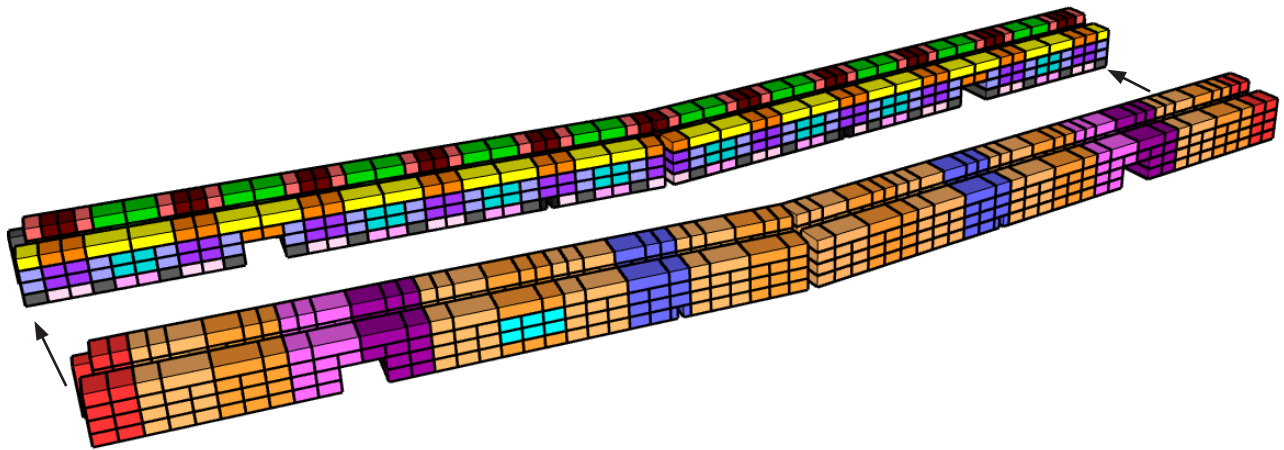
1

3

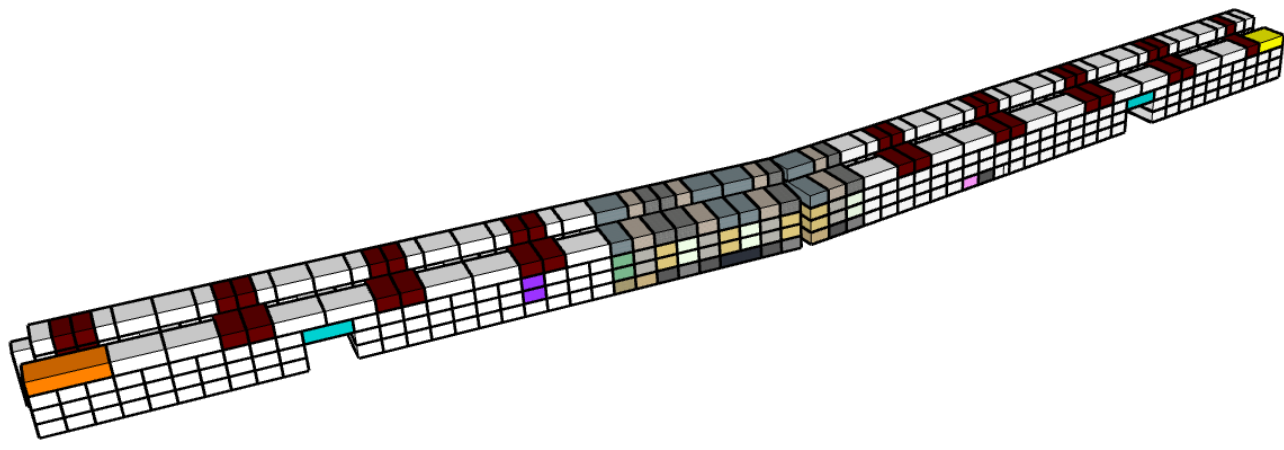
4



Dwelling types



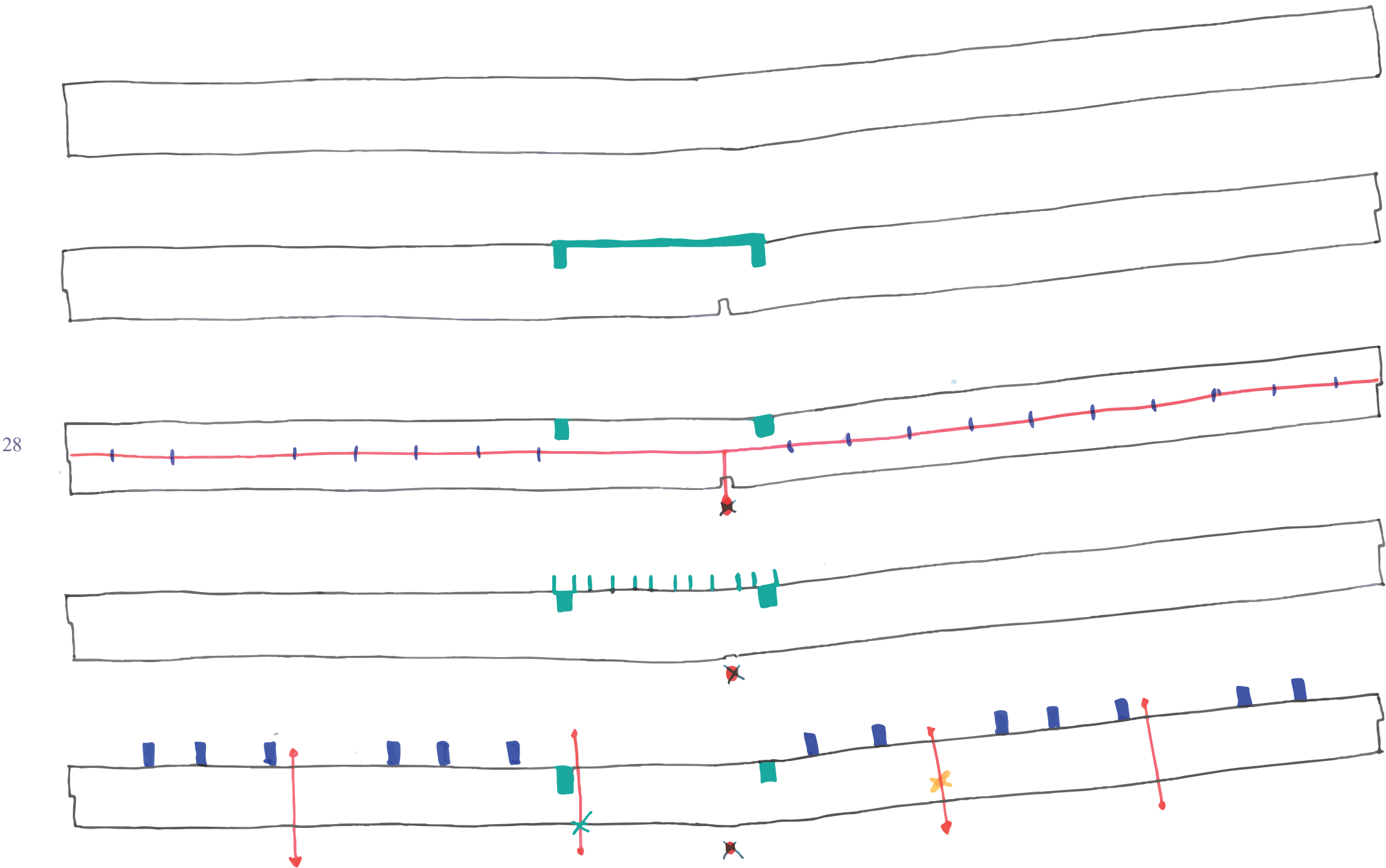
First division of blocks and appartments



Changes made to building (1993)



MID-RISE: CHANGES IN ACCESS SYSTEM

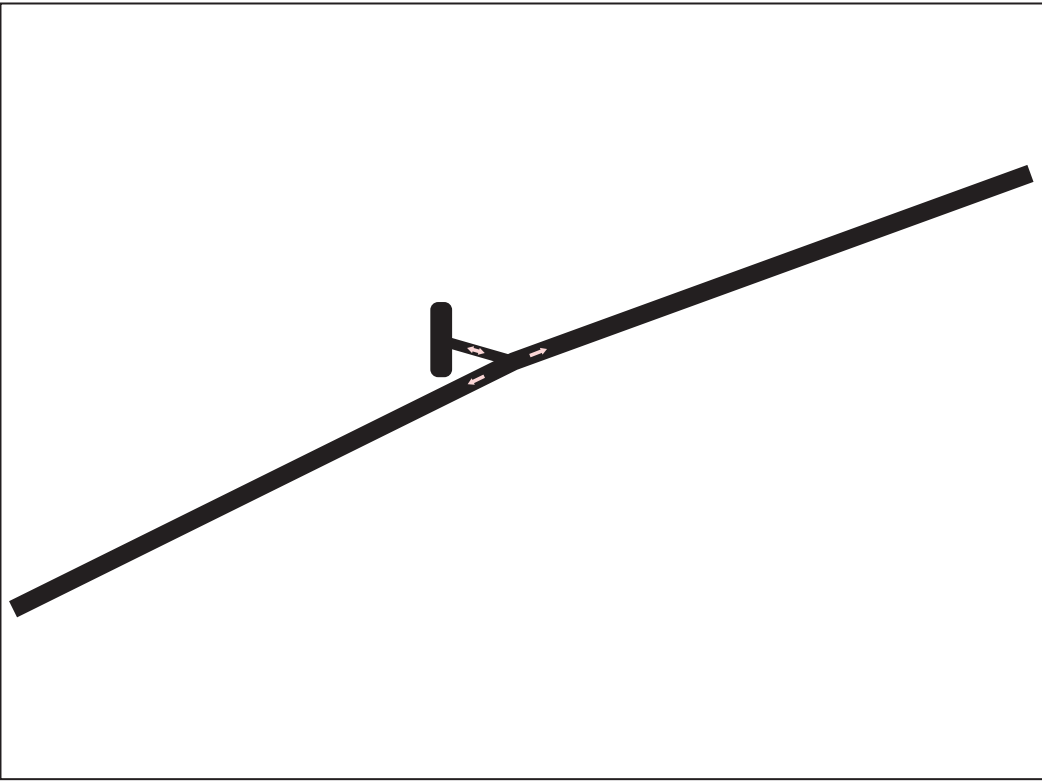


Legend

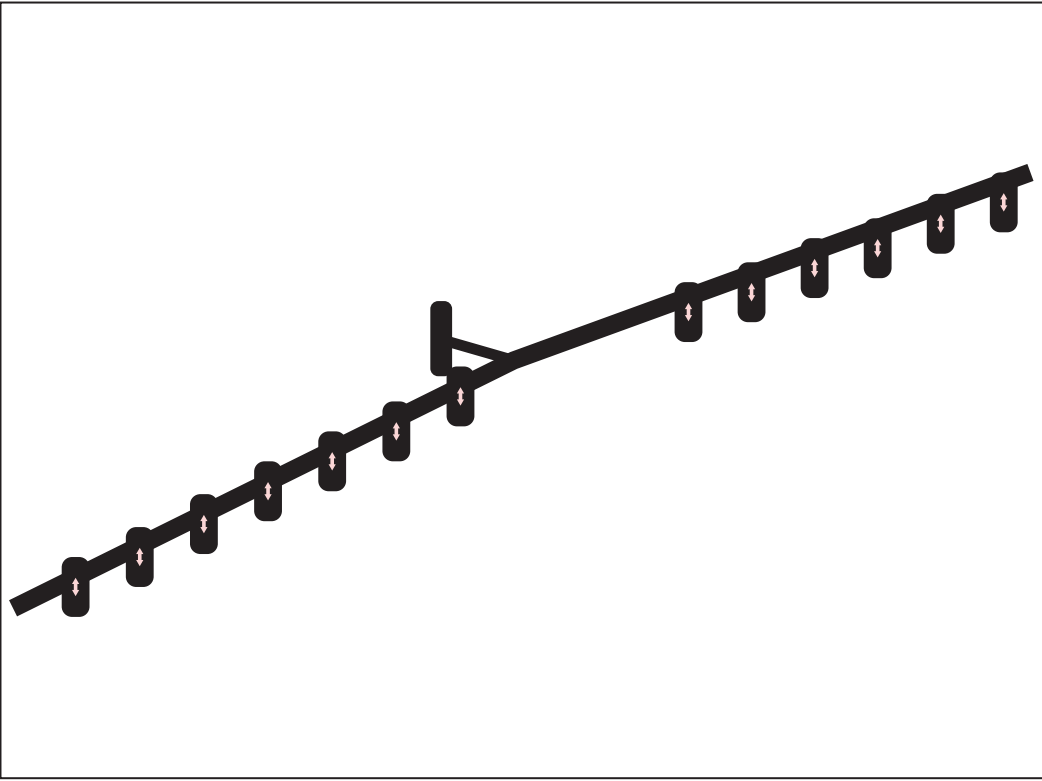
- 1980 - original acces system: 1 corridor
- 1984 - outer stairwells & blocking inner corridor
- 1993 - outer staircases and gallery & closing 1 underpass
- Unkown - closing 1 underpass



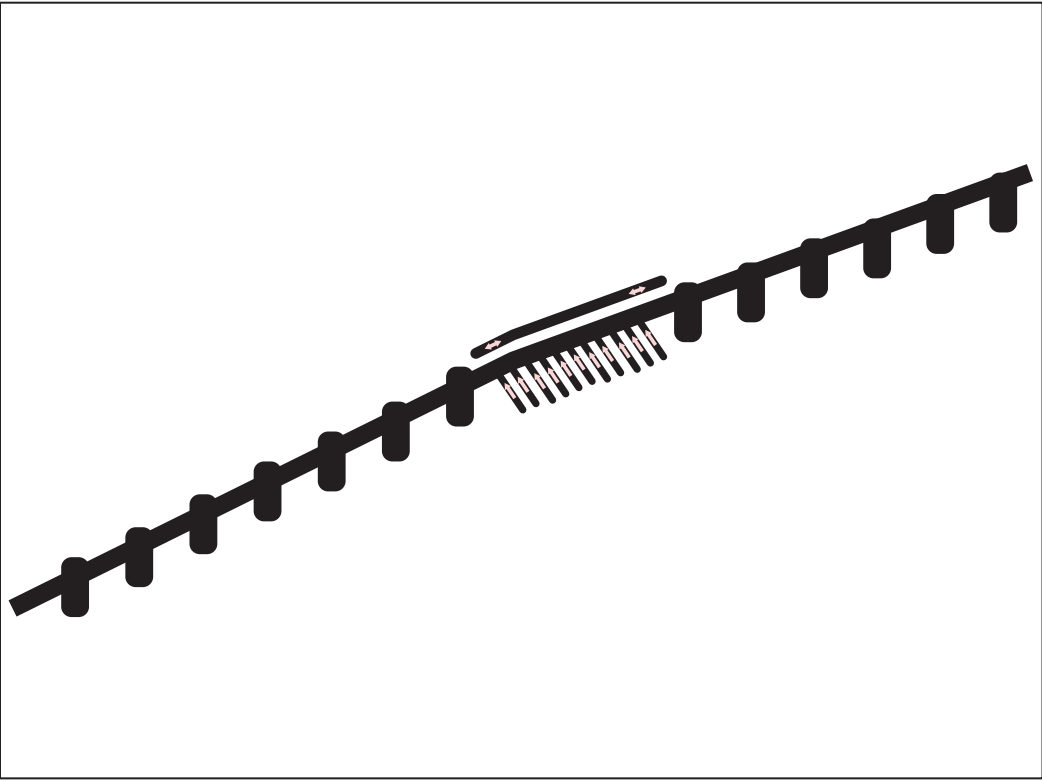
MID-RISE: CHANGES IN ACCESS SYSTEM



1980



1984



1993

MID-RISE: CHANGES IN FACADE DUE TO ACCESS SYSTEM



1980  
Randal Scobie (1982)



1984  
Stadsarchief Amsterdam / L.R.R. (n.d.)



1980  
Stadsarchief Amsterdams (1991)



Stadsarchief Amsterdams (n.d.)



1993  
Anneloes Tilman (2021)



2021  
Anneloes Tilman (2020)



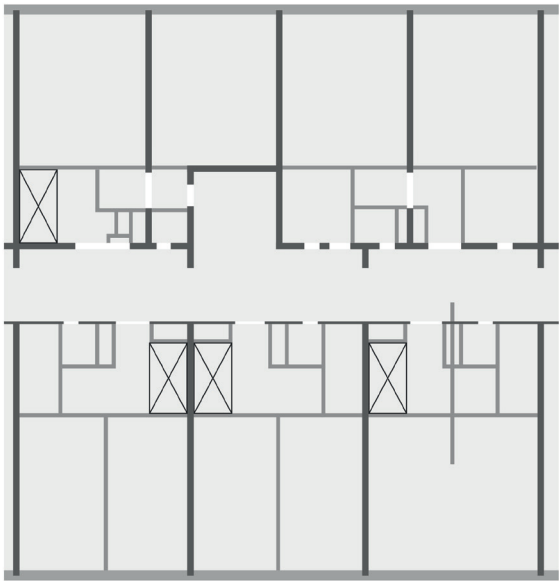
2021  
Anneloes Tilman (2021/2020)



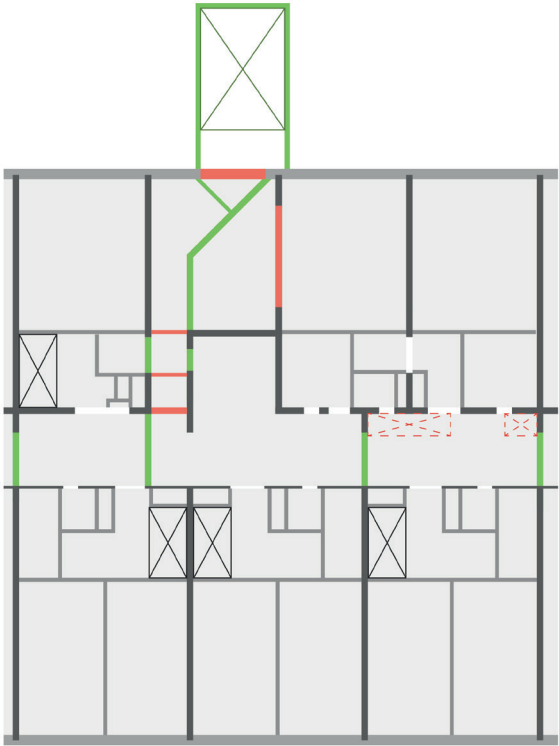


OVERVIEW CHANGES IN PLAN

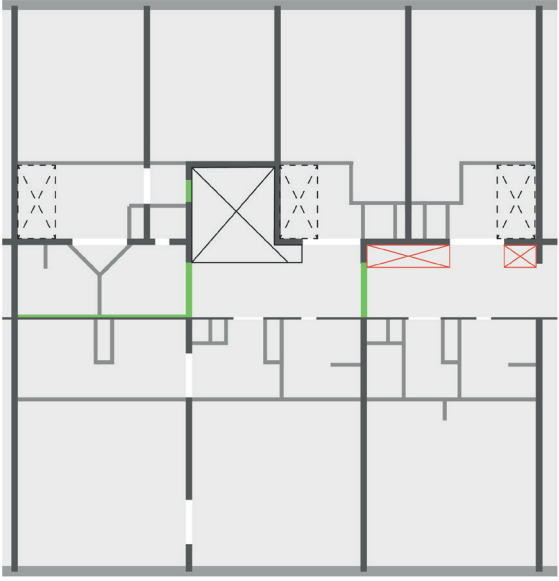
34



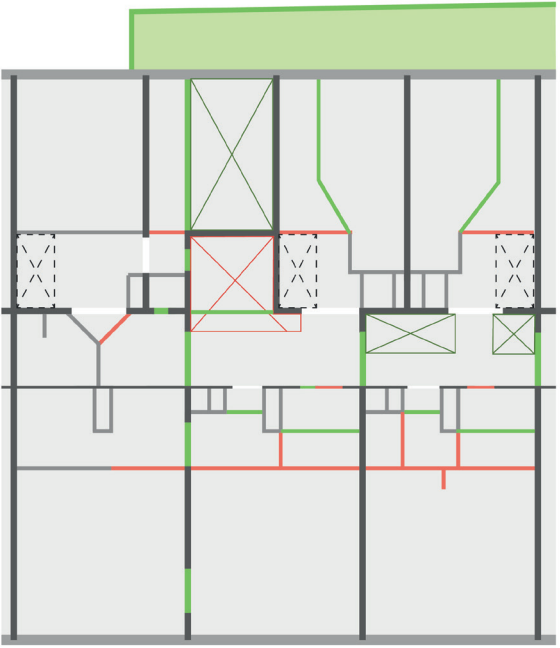
Second floor - 1980



Second floor - 1984



Third floor - 1984



Third floor - 1993

35



**FACADES MID-RISE**  
Taken by author, 03-01-2021



**FACADES LOW-RISE**  
Taken by author, 03-01-2021





**FACADES DETAILS MID-RISE**  
Taken by author, 03-01-2021



**FACADES DETAILS LOW-RISE**  
Taken by author, 03-01-2021





DETAILS - MID-RISE

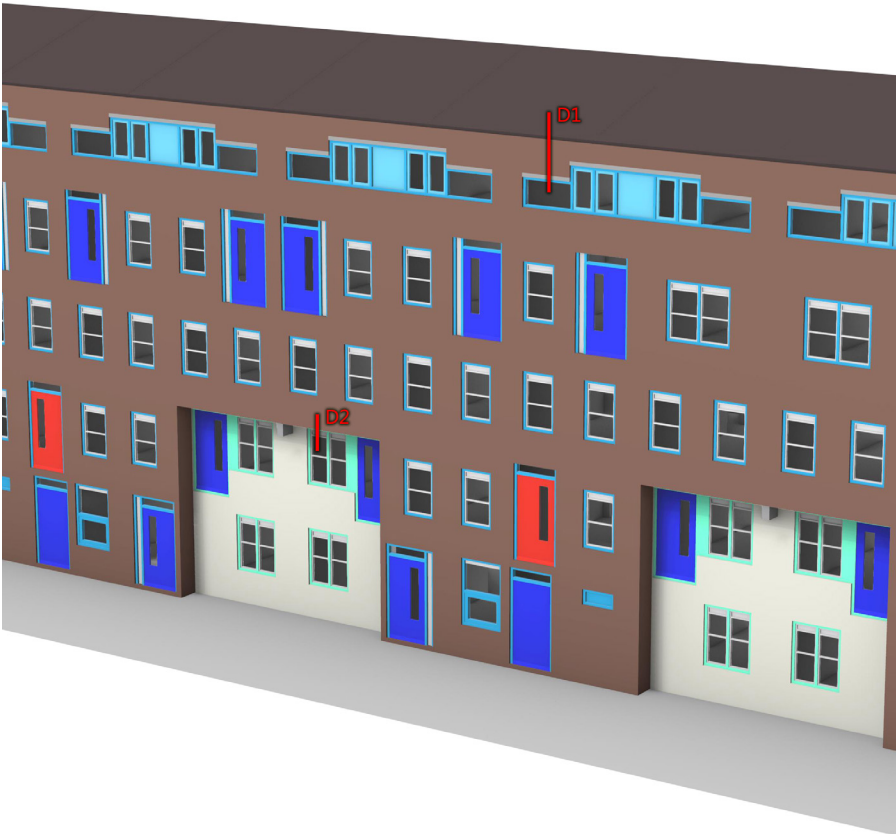
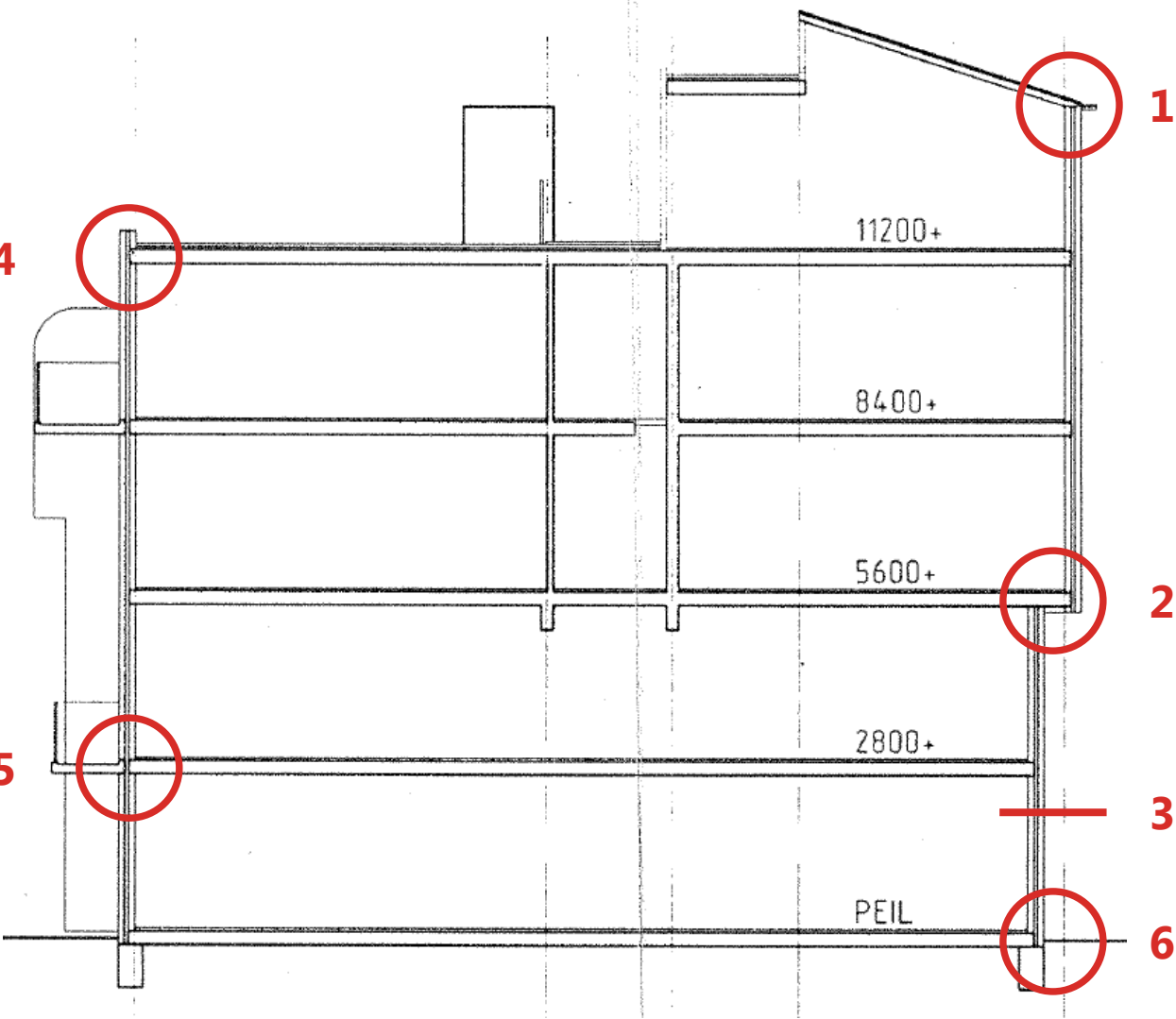
It is important to understand the current building well to the smallest scale; detail level. During the on site research phase, the poor technical performance of the mid-rise building was frequently mentioned. This analysis helps to identify these technical problems that can play a role in the renovation process. It can also provide insight into the cultural and historical value of the building.

In total, 6 details have been worked out on the most important nodes that together provide an overview of how the building is constructed. The 6 details provide a varied range of details; 3 of which are on the northeast facade, 3 on the southwest facade, from foundation to roof. It concerns 5 vertical details and 1 horizontal detail. The details are both original and from the renovation.

Every detail is provided with original drawings, a photo and textual explanation. It turns out that the original details do not always correspond to the current situation. For this reason, the details have been reinterpreted according to the most truthful scenario.

South-west facade

North-east facade



North-east facade



South-west facade



DETAIL 1: PITCHED ROOF

The detail shows the slanted roof components of the north-east facade of Hoptille. It has five storeys high on this side, thus the roof itself is barely seen from the ground level.

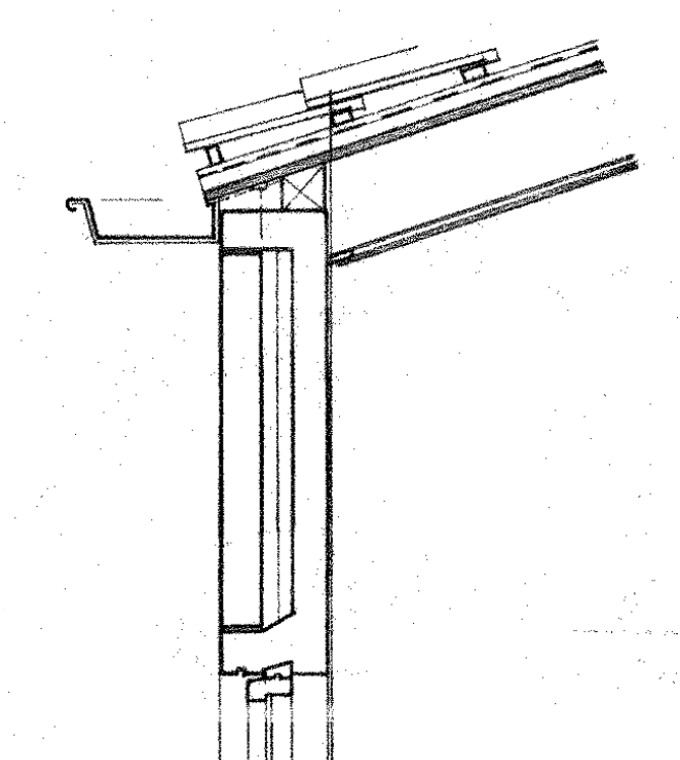
In general, the roof is steel structure with concrete roof tile. The steel structures seat in the prefabricated concrete wall in the main structure and prefab concrete in the facade. The 240mm I-beam profile has a span of 4,350mm. The rafters are made out of wood meanwhile the battens are steel hollows to support the concrete roof tile. From the original drawing of this detail, it did not indicate the presence of any roof insulation. So this raised concerns of heat loss and a cold bridge from the roof.

The facade in the fifth floor shares the same principle with other parts of the Hoptille’s facades. It has brick work as outer layer and cavity of 65mm followed by prefabricated concrete panel 100mm in which also becomes a cold bridge because of exposure to the outside just above the windows.

This detail is important to understand how these components are something to consider not only for the top-up intervention but also the energy performance of the renovation.

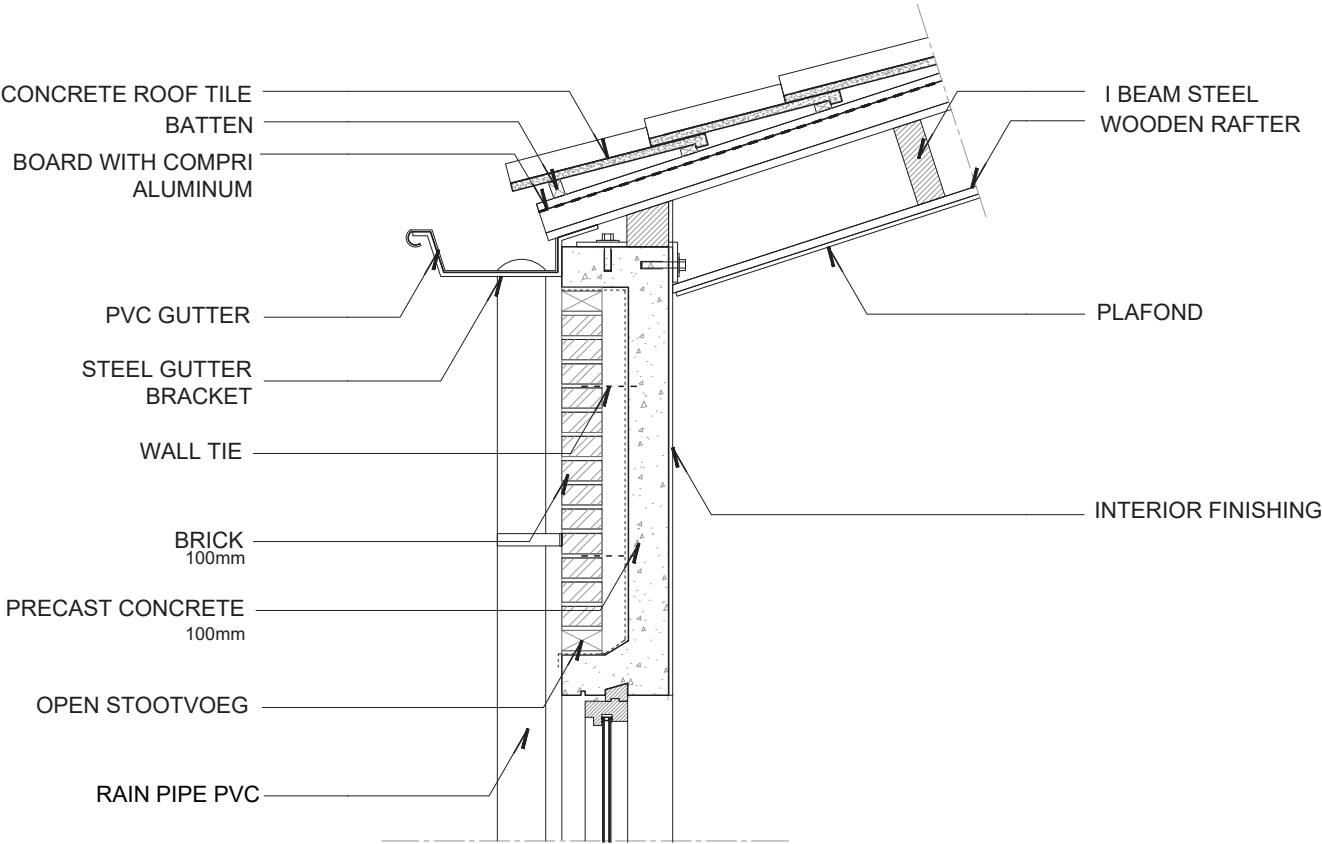


42



Existing drawing

43



New drawing

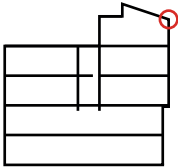


DETAIL 2: RECESSED FACADE

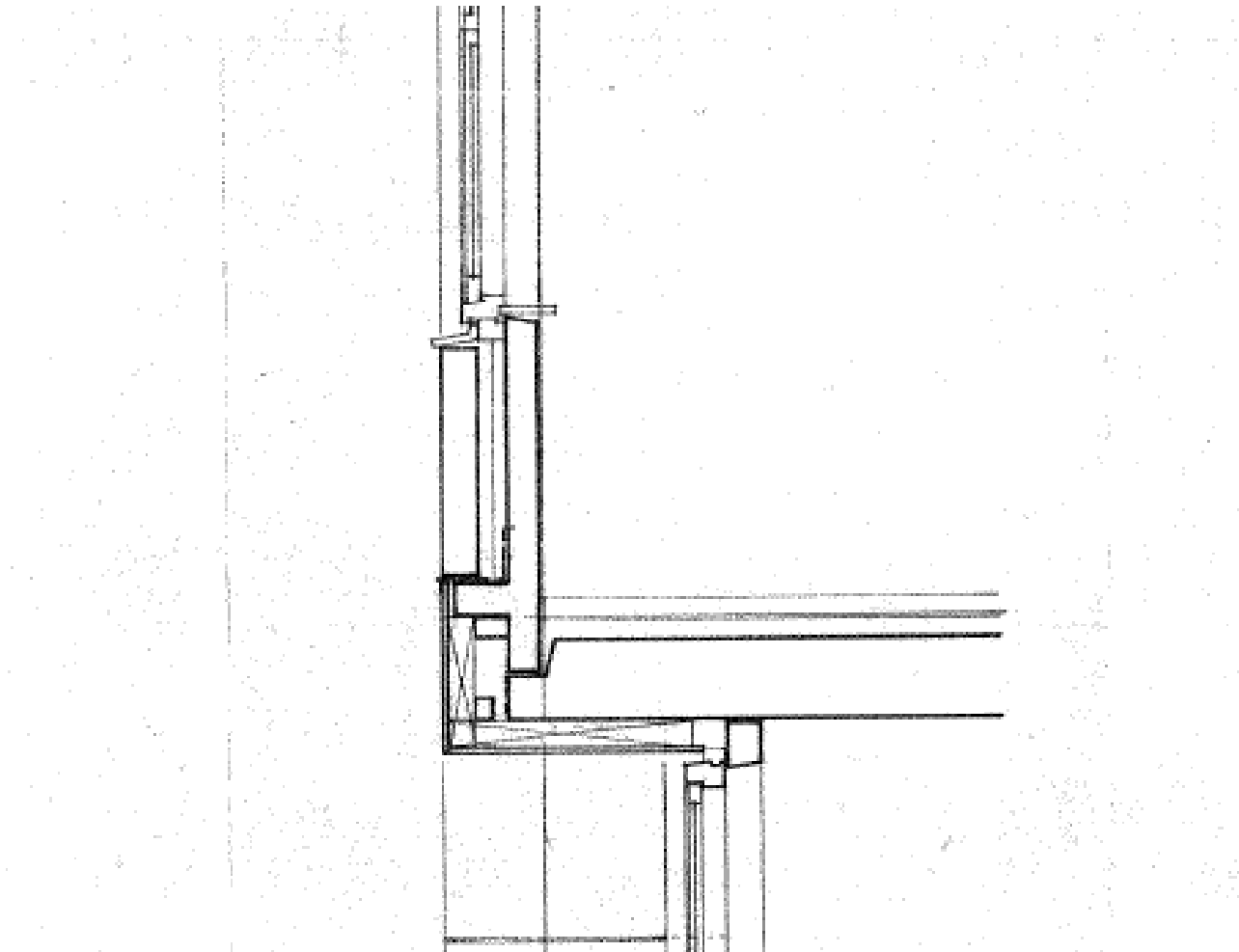
This detail concerns the recessed façade that repeats itself repeatedly on the north-east façade of Hoptille, which is the former rear of the building, but currently concerns the front. This place was chosen because it is an iconic and original element in this facade.

Like the rest of the building, the floor is a precast concrete slab with the corresponding finishes. The facade structure is also the same as the rest of the building; 100 mm brick exterior wall supported by a self-supporting concrete facade construction of 90 mm thick, with a cavity of 30 mm and 40 mm insulation in between. The original framework from 1980 is a wooden outer frame and an aluminum inner frame.

Considering the recessed facade, the detail differs from the original. The self-supporting facade was conceived in the original design by a wooden plate of approximately 500 mm high, but the plate is according to recent photos half as high. Secondly, this wooden plate would also be used on the bottom of the recessed facade. Ultimately, a fire-resistant and insulating wood wool cement board was chosen. Finally, the visible concrete facade construction takes on a different shape than originally conceived. The load-bearing facade element is located completely at the bottom instead of the 150 mm higher, aligned with the higher wooden plate. This has no consequences for the technical performance; both variants are a cold bridge.

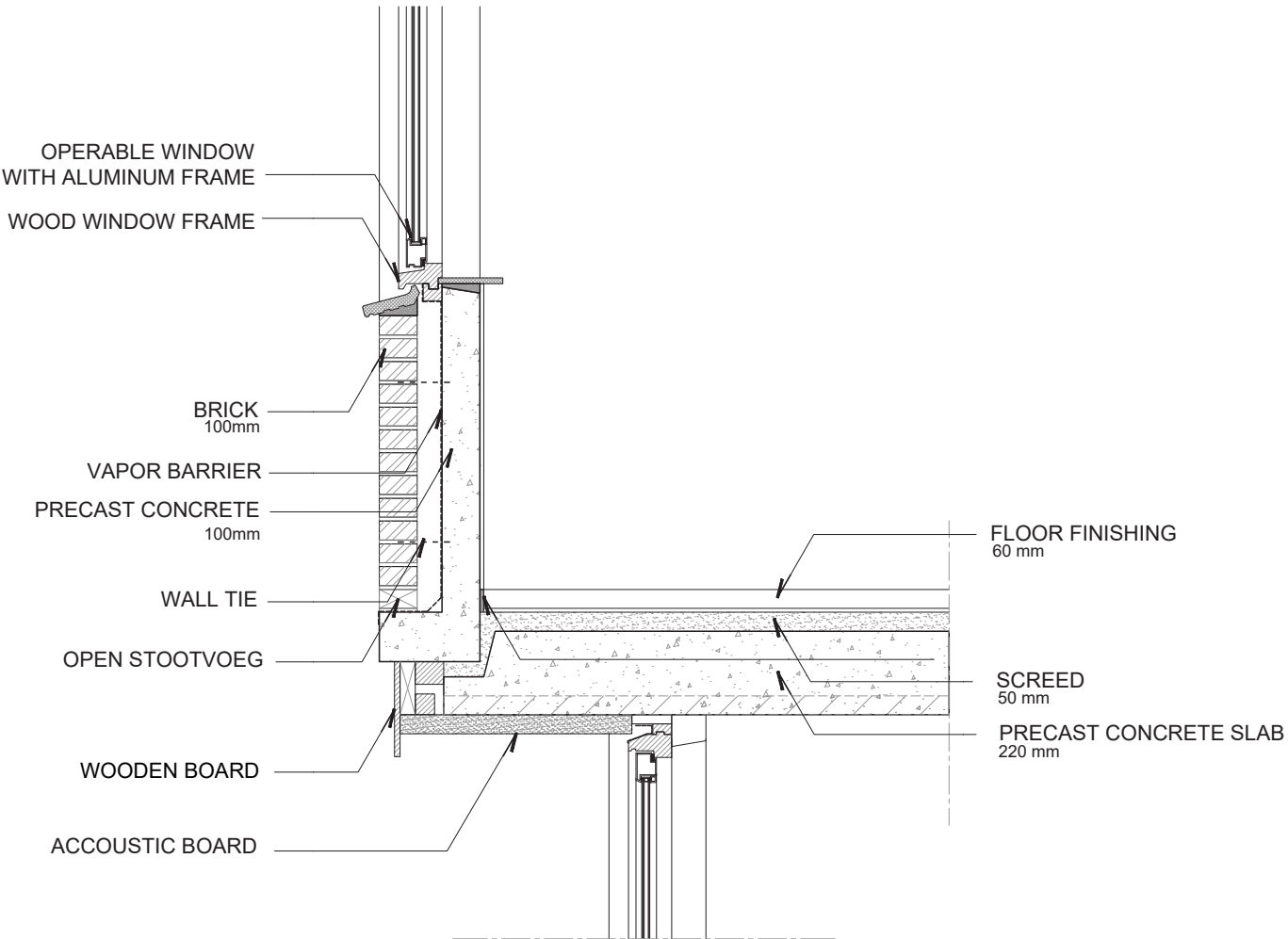


44



Existing drawing

45



New drawing

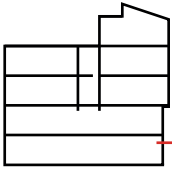


DETAIL 3: HORIZONTAL CONNECTION

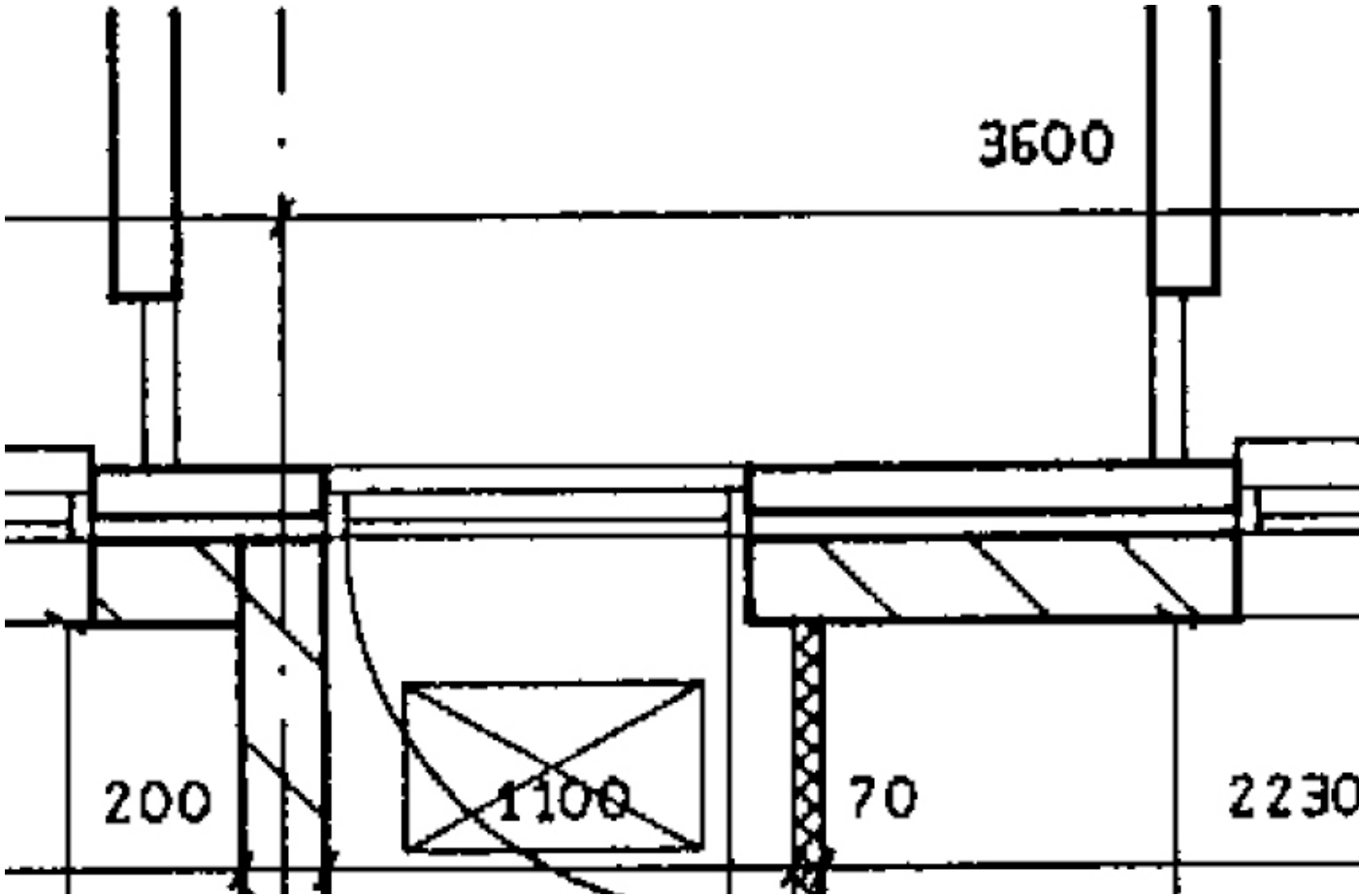
This detail concerns the recessed façade that repeats itself repeatedly on the north-east façade of Hoptille, which is the former rear of the building, but currently concerns the front. This place was chosen because it is an iconic and original element in this facade.

The facade structure is also the same as the rest of the building; 100 mm brick outer wall supported by a self-supporting concrete facade construction, or 90 mm thick, with a cavity of 30 mm and 40 mm insulation in between.

Given the floor plan drawing, not much has changed the original. The details show that not much has been done to insulate the house properly. The load-bearing wall is not insulated, which creates thermal bridges

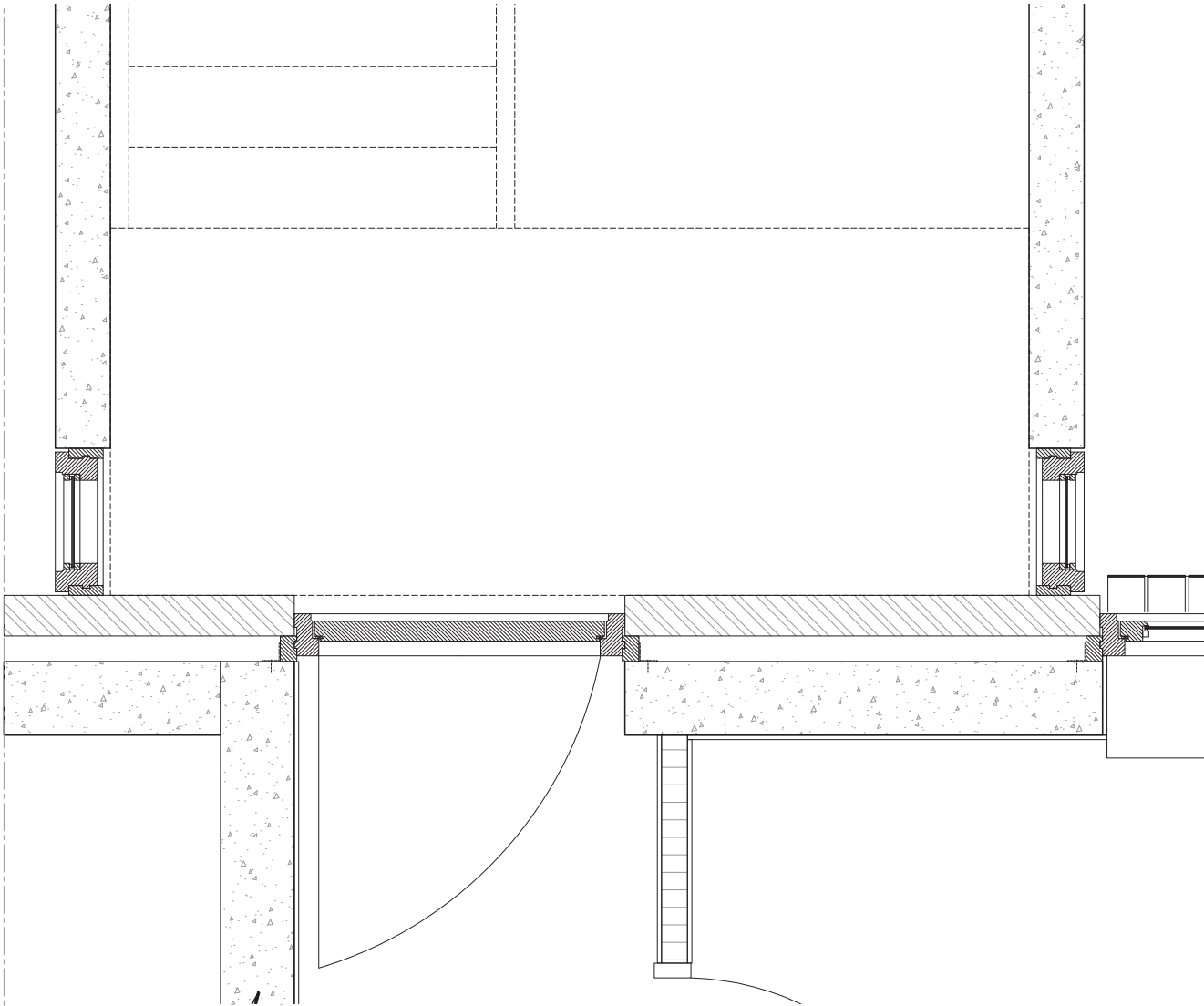


46



Existing drawing

47

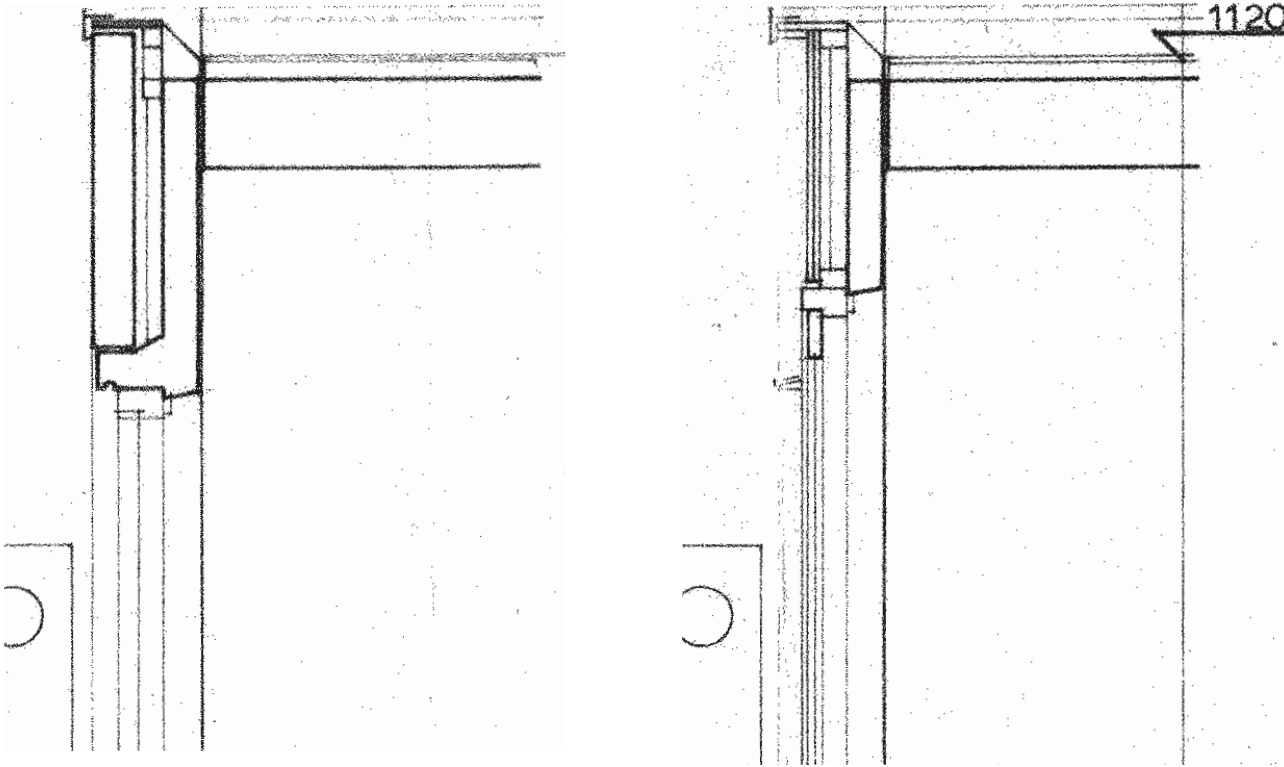
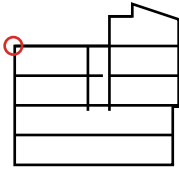


New drawing

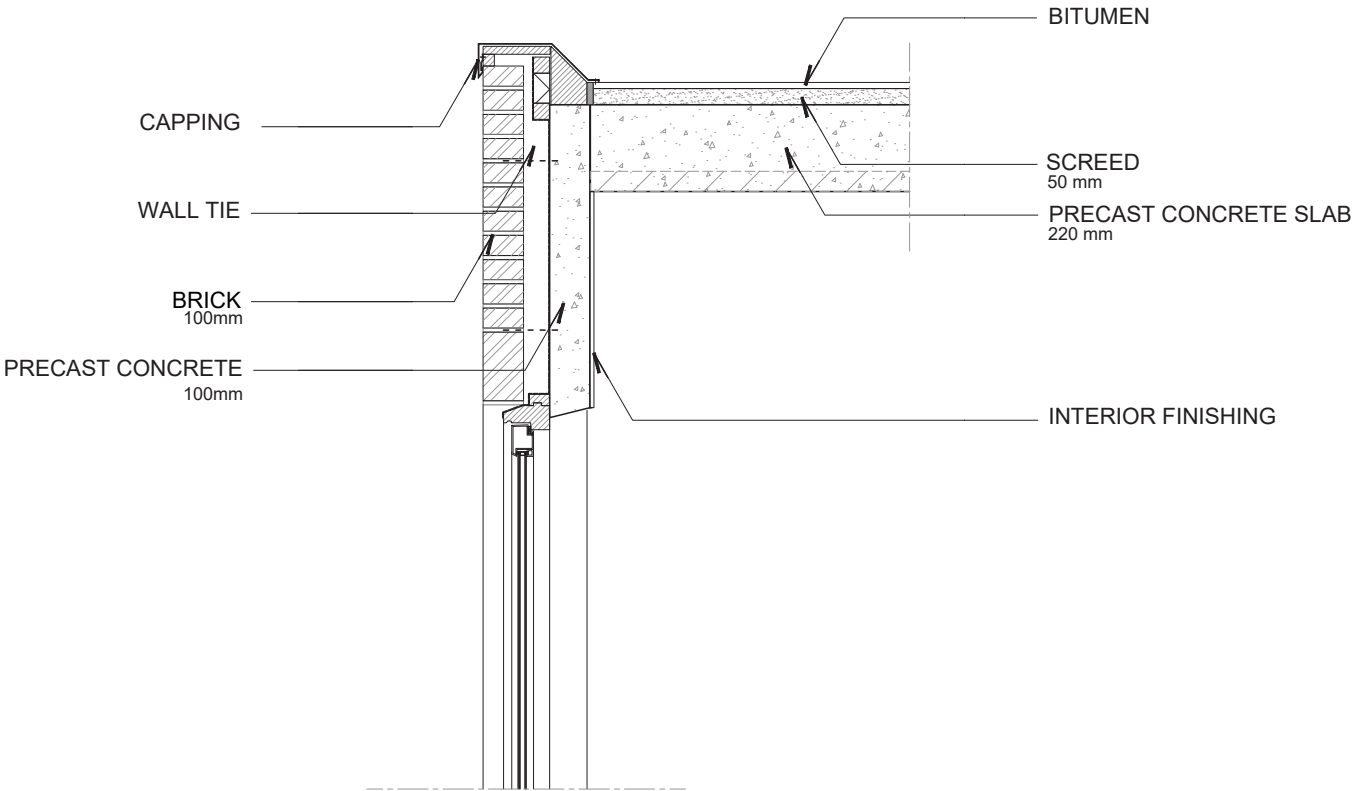


DETAIL 4: FLAT ROOF

This detail shows the connection of the roof to the facade on the south-west side of the building. Originally this detail had 2 variations, one with brickwork and one with panels as the facade exterior finish. This last variant however, is not present in the mid-rise building of Hoptille. While comparing the brickwork detail with the pictures of the facade it turned out that there was one major difference in the two. The detail shows that the final facade should show a concrete strip right above the windows on this floor, when looking at the picture it becomes clear that this has been changed in the process. The updated detail shows how we suspect that the current facade is built.



Existing drawing



New drawing



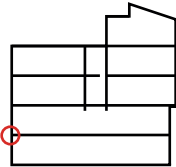
DETAIL 5: BALCONY/FLOOR, 1ST FLOOR

The floor of the building is made with prefab floor slabs reinforced with steel lattice girders. Which is then poured over with concrete to create a firm structure with the load bearing walls. And finished with a concrete screed.

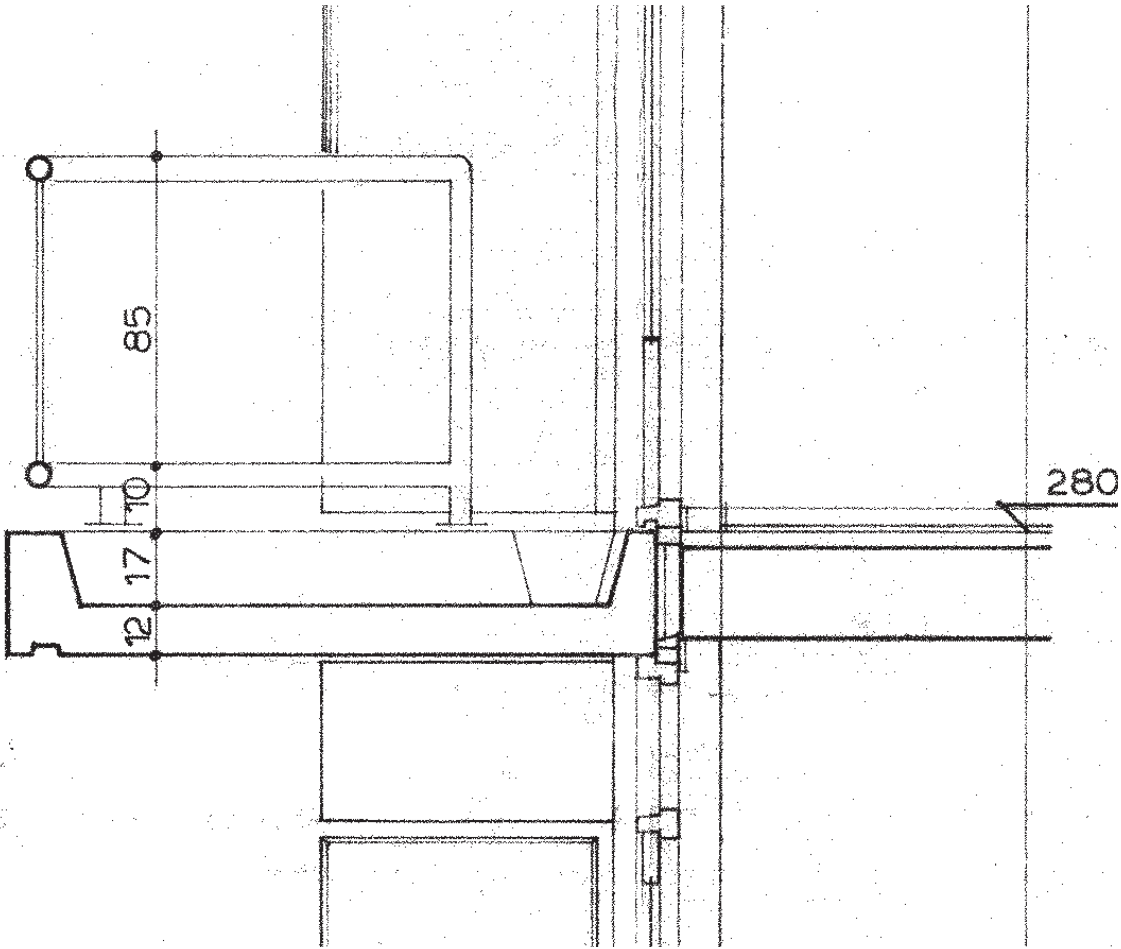
The facade is made of wood window frames spanning from floor to floor. And the balcony is made of prefab elements, resting on the consoles sticking outside the facade. These consoles are connected to the bearing walls and thus puncture the thermal line of the facade.

The balconies themselves must have some way of draining rainwater near the facade side, since there is no visible path to drain that surface on the front side. The drain pipes in some cases even go through the interior of the building.

The balcony is finished with a hollow pipe, cast iron balustrade. Painted white. And between the balconies hang vertical concrete elements. Connected to the balconies with steel anchors on the top and bottom of these elements. They are meant as visual barriers between neighbours, and as aesthetic elements.

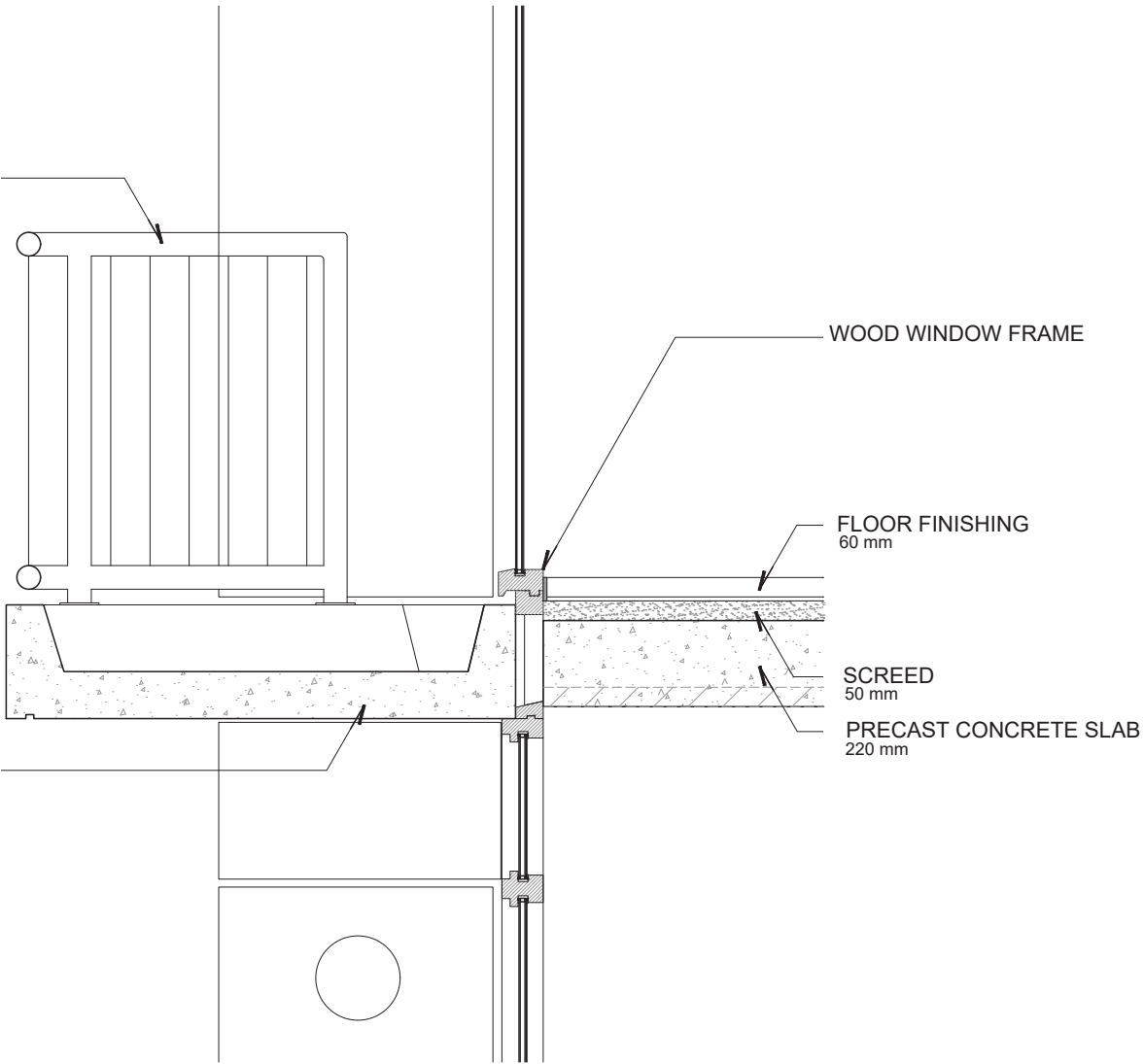


50



Existing drawing

51



New drawing

DETAIL 6: GROUND FLOOR

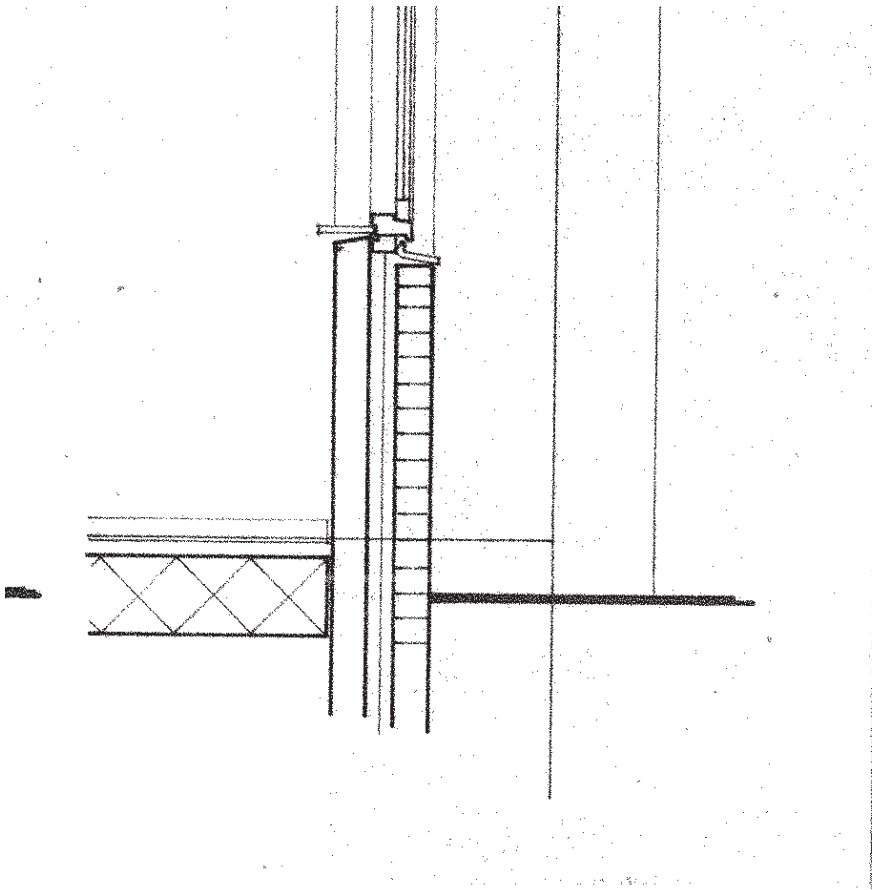
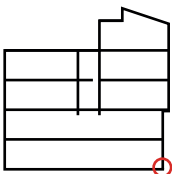
This detail shows the connection between the ground floor and the facade on the north-east side of the building. This detail of the foundation is similar for the entire ground floor, with the exception of the width of the precast concrete slab and the height of the opening in the wall.

The original drawing does not show the detail as it has been constructed. Some features are not shown on the drawing, such as the ventilation shaft, as shown in the photograph, which is used to ventilate the crawl space beneath the building.

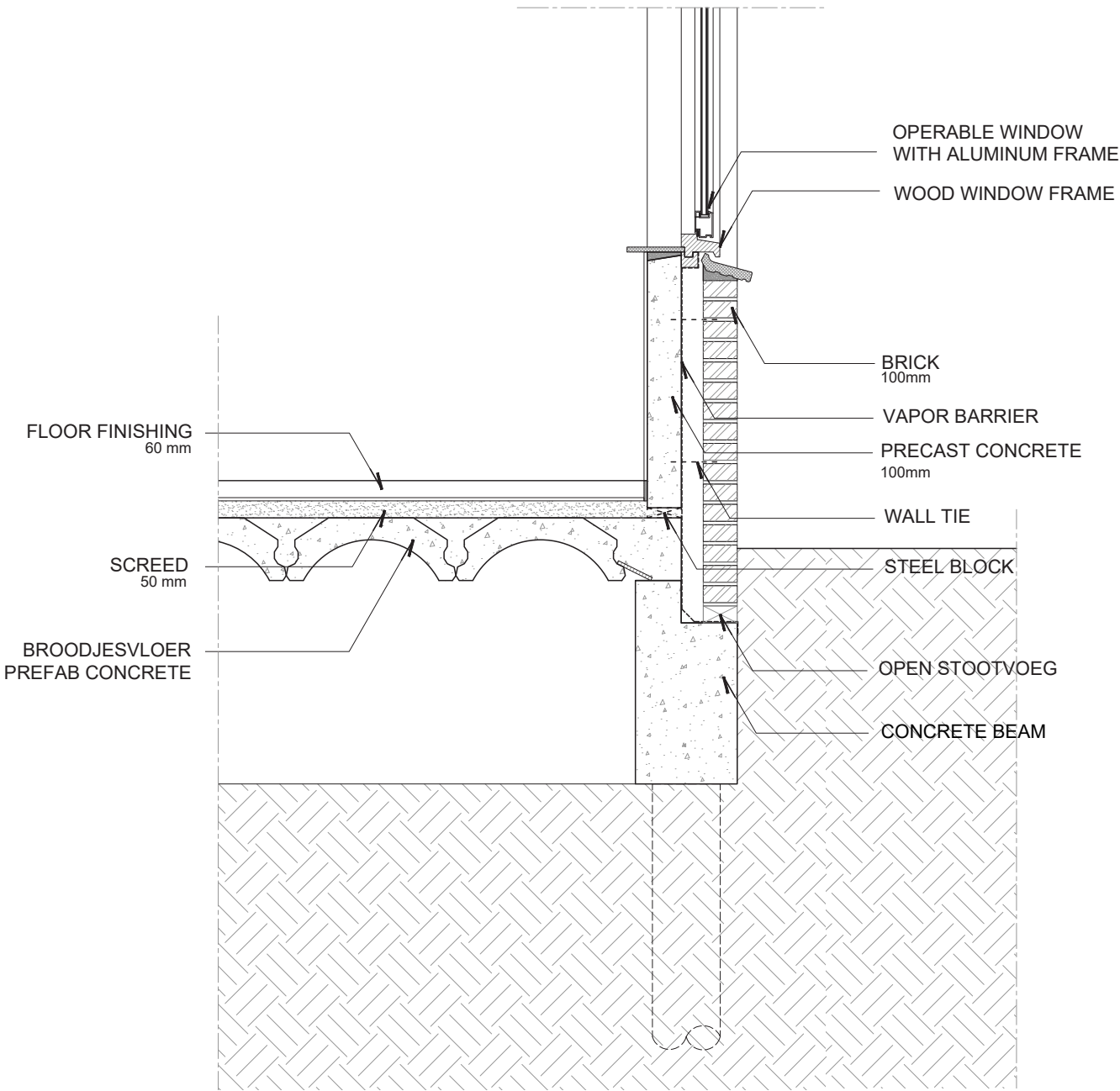
Furthermore, the original drawing does not

show the actual connection between the facade and the ground floor, as the drawing is quite abstract. A standard drawing supplied by the contractor creates a better understanding of the connection, even though the facade in this drawing does not match the facade of the building.

The beam and block floor is placed parallel to the facade, the gaps between the slabs filled with in-situ concrete. The floor rests directly on the foundation, as does the brick facade. The brick facade is kept in place by wall ties connected to the precast concrete wall slabs, with a cavity in between the brick and concrete.



Existing drawing



New drawing



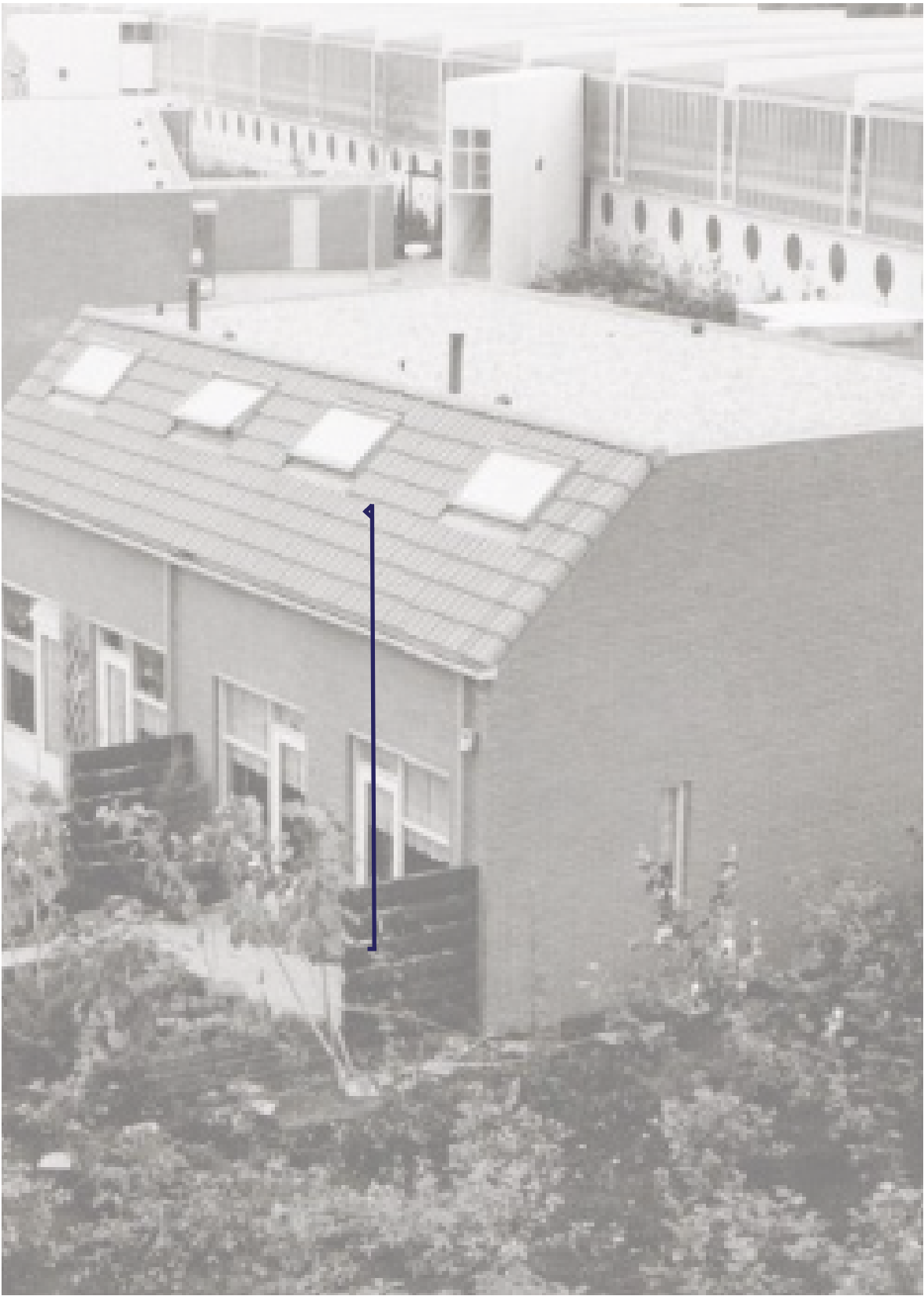
DETAILS LOW-RISE

54



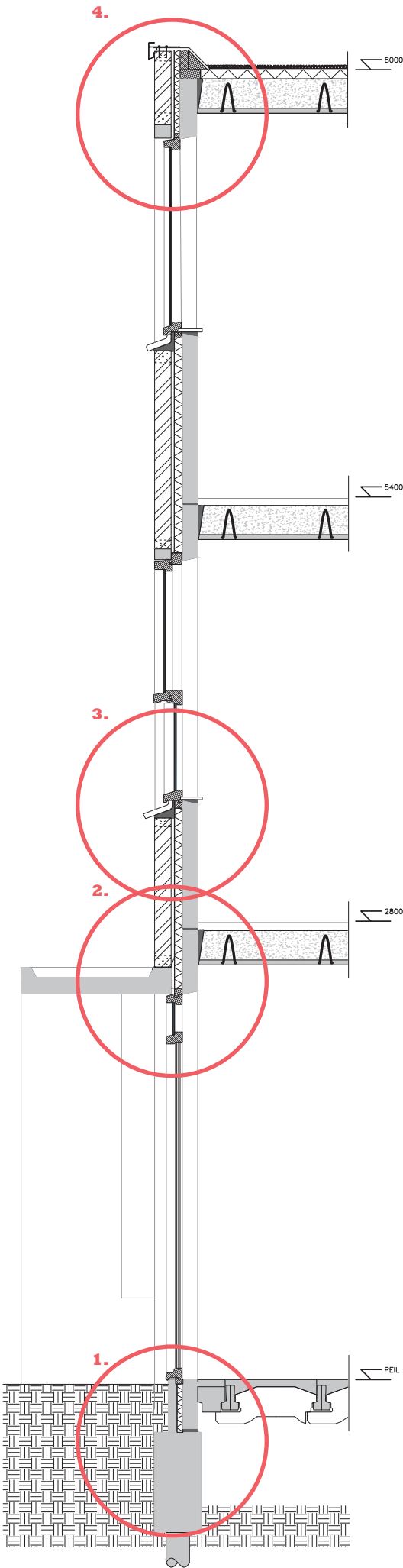
front facade

55

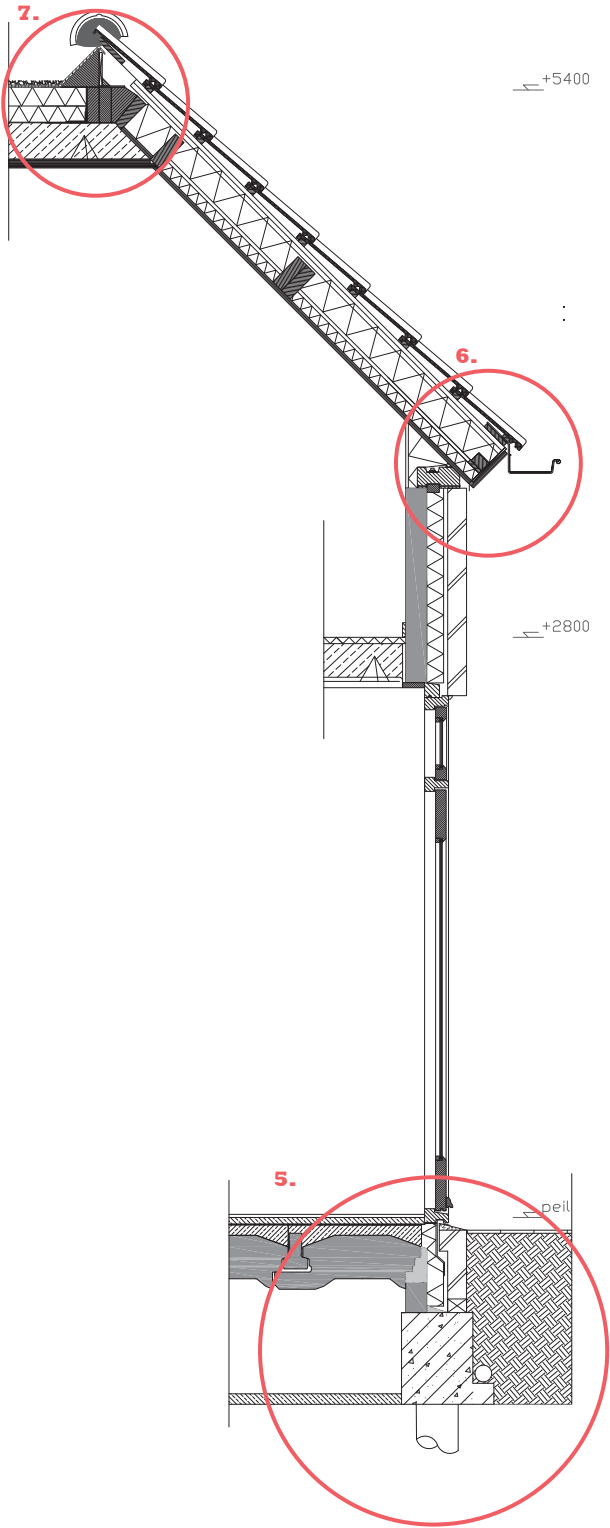


back facade

FACADE SECTION FRONT

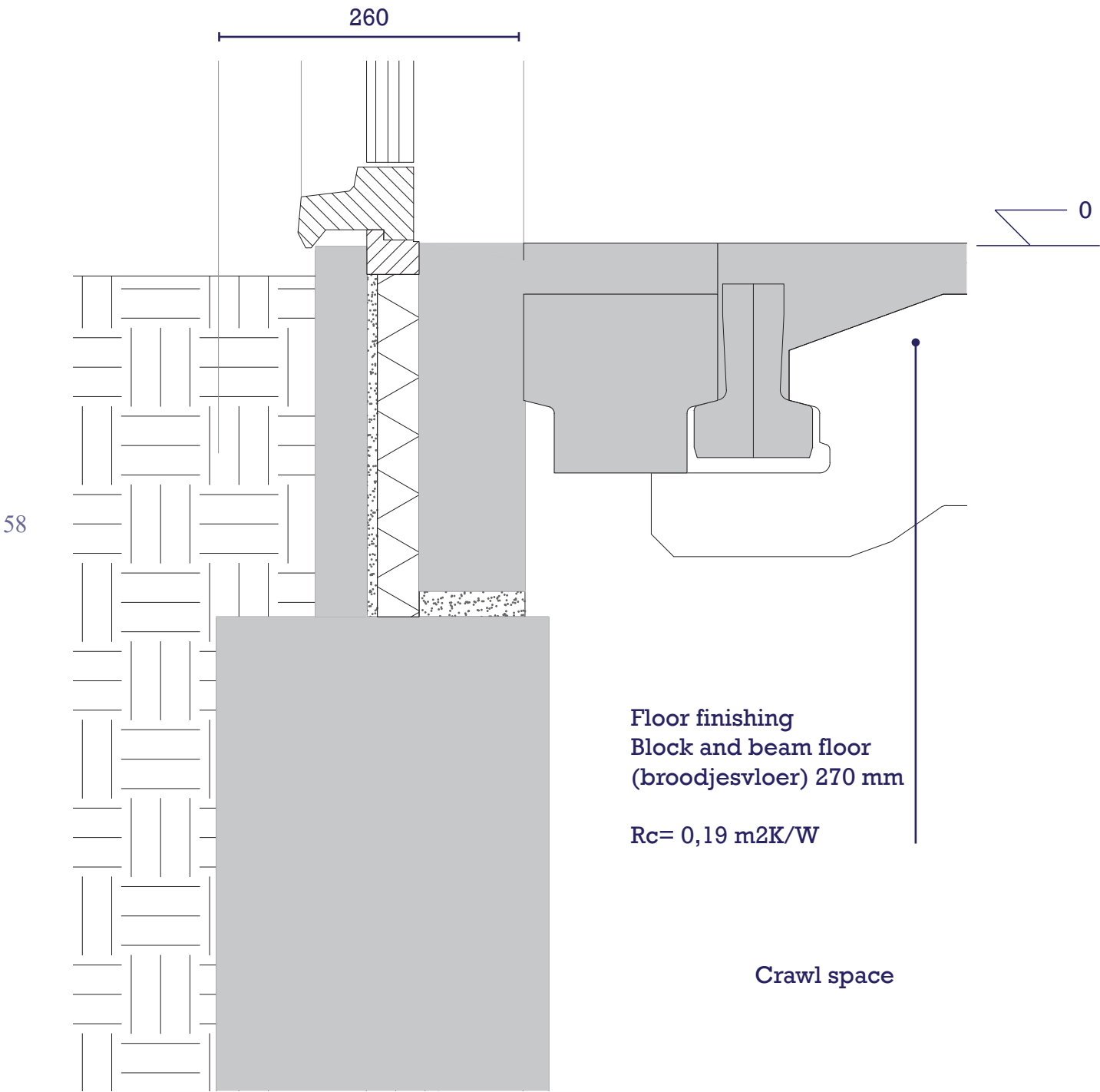


FACADE SECTION BACK

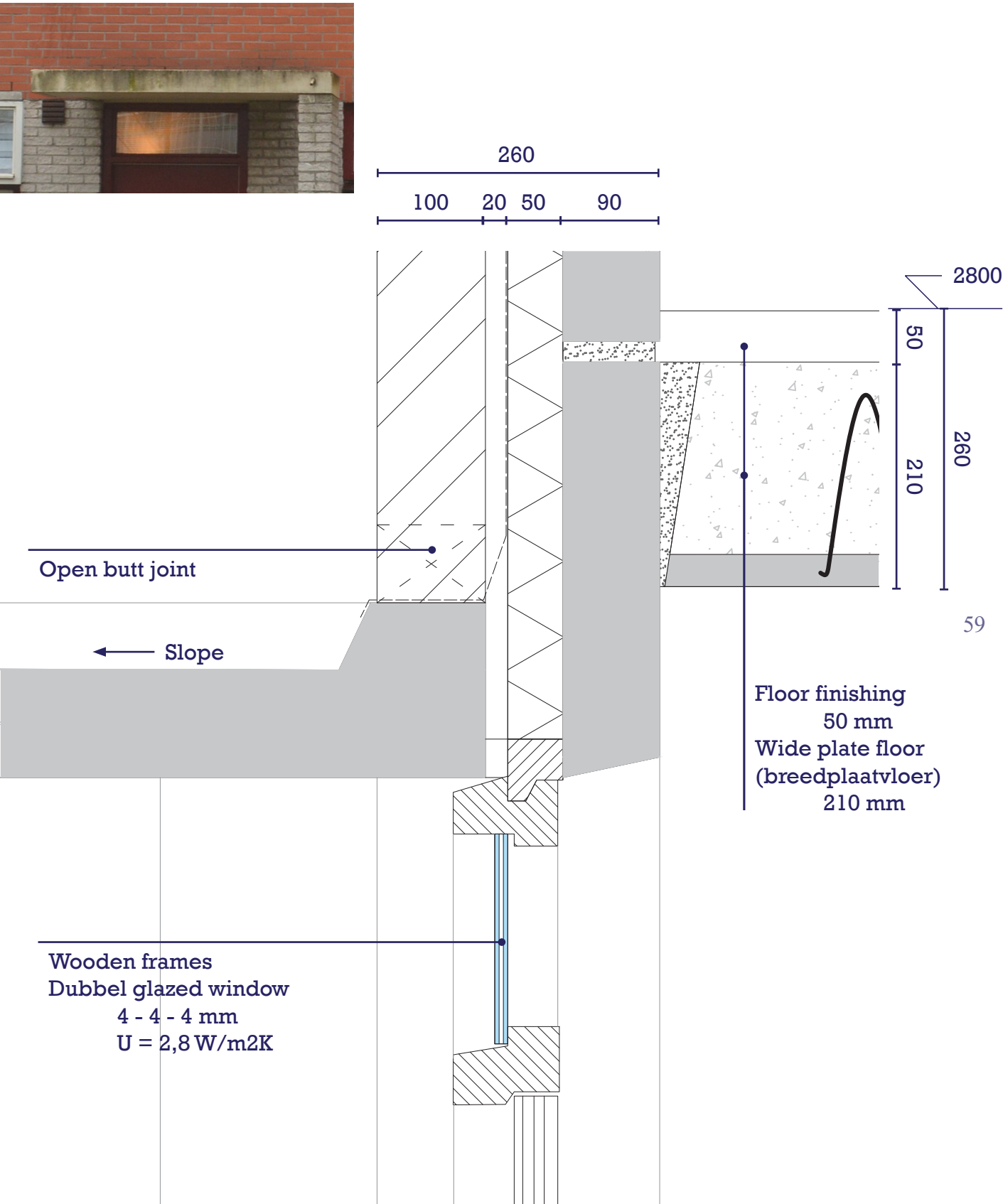




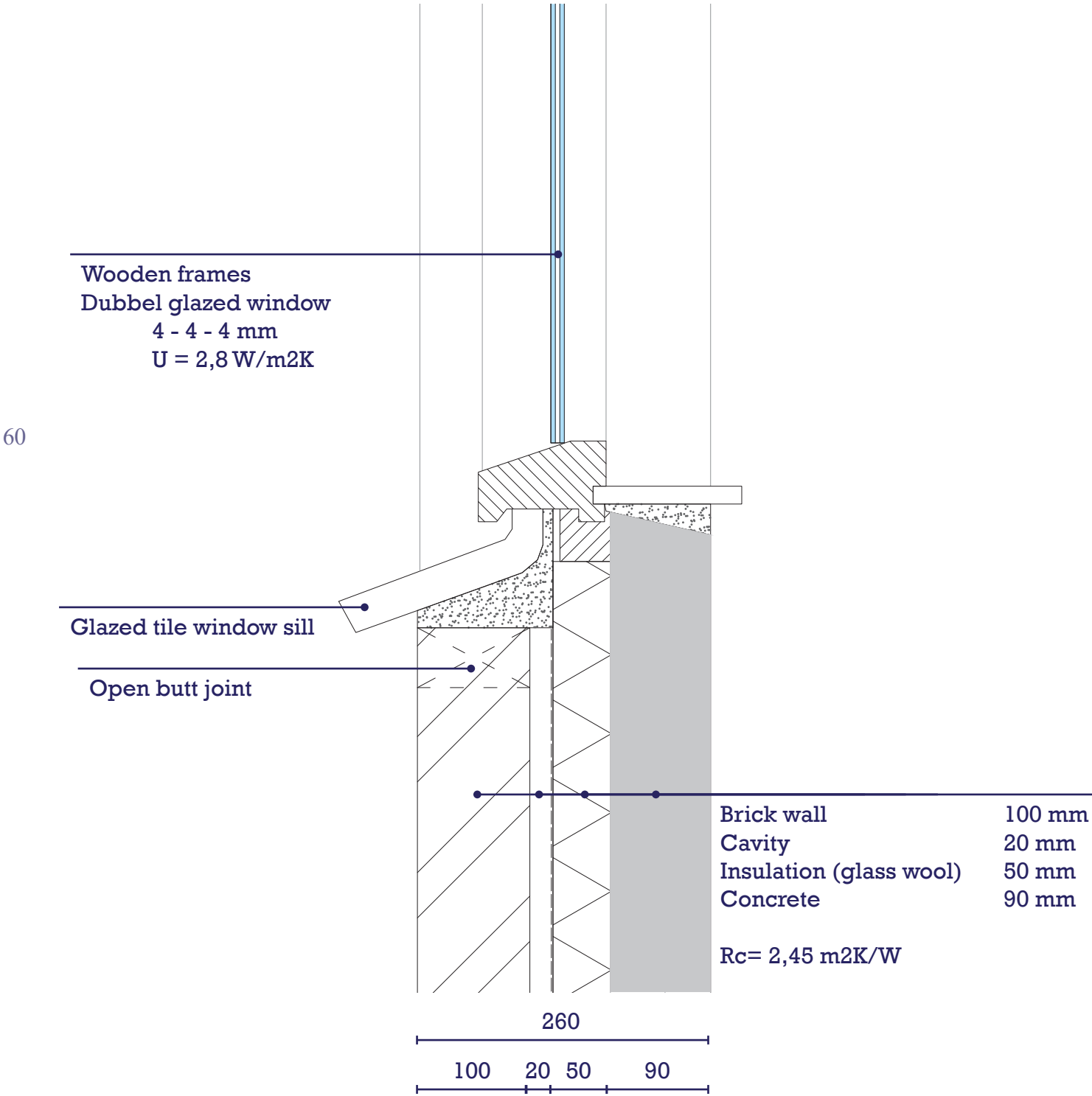
DETAIL 1: GROUND LEVEL (1:5)



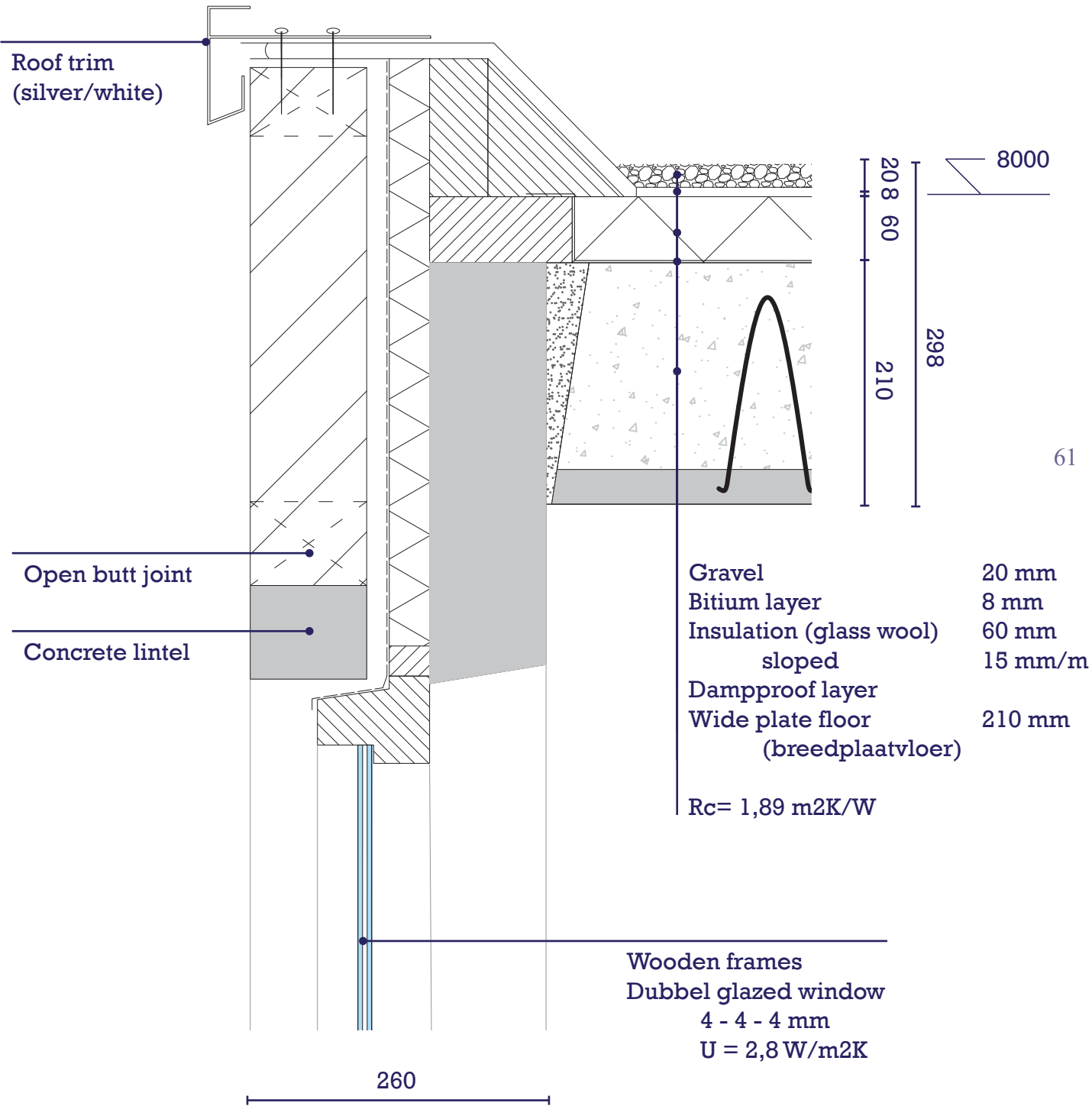
DETAIL 2: OVERHANG AND FIRST FLOOR (1:5)



DETAIL 3: WINDOW BOTTOM (1:5)

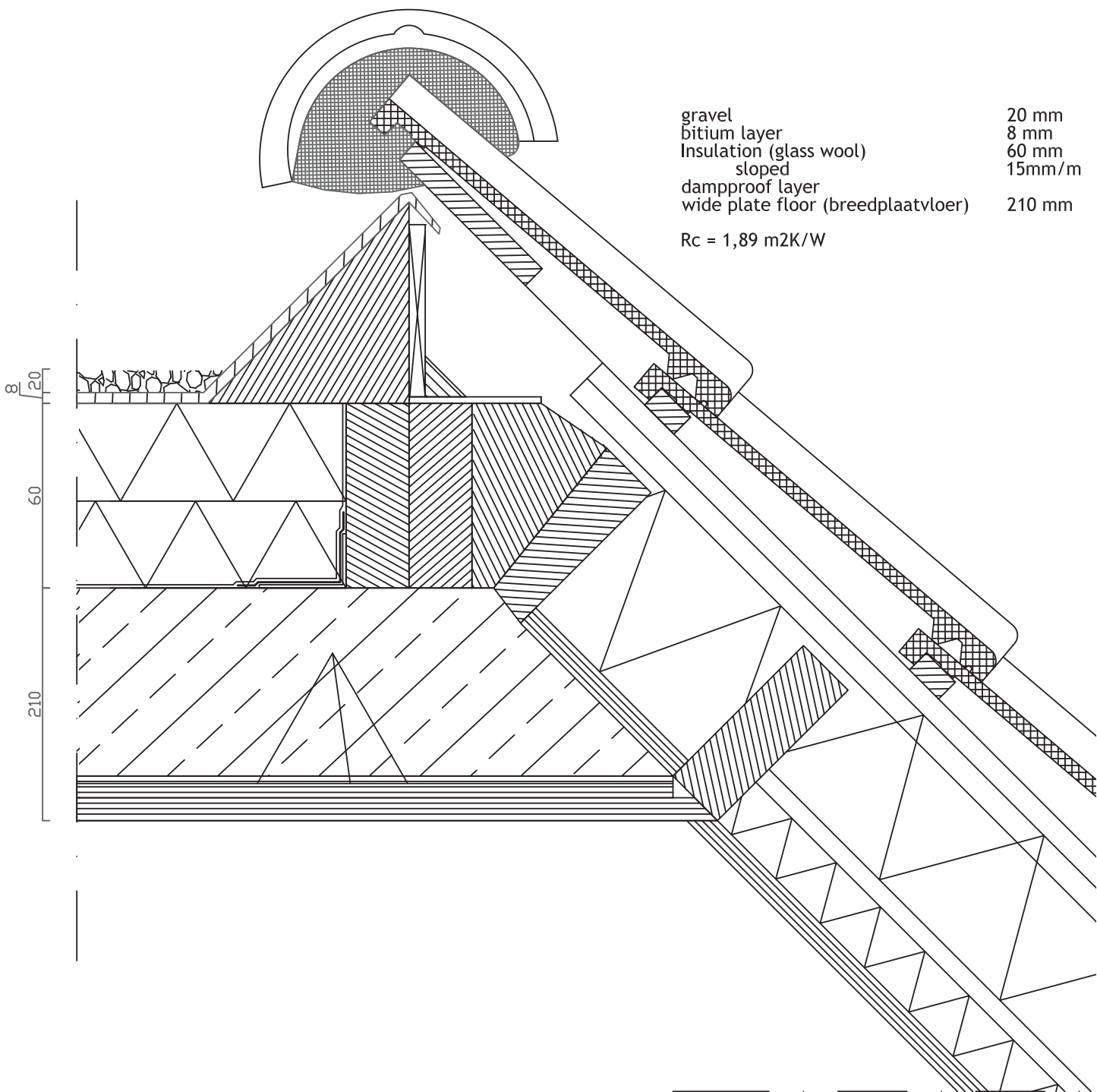


DETAIL 4: FLAT ROOF (1:5)

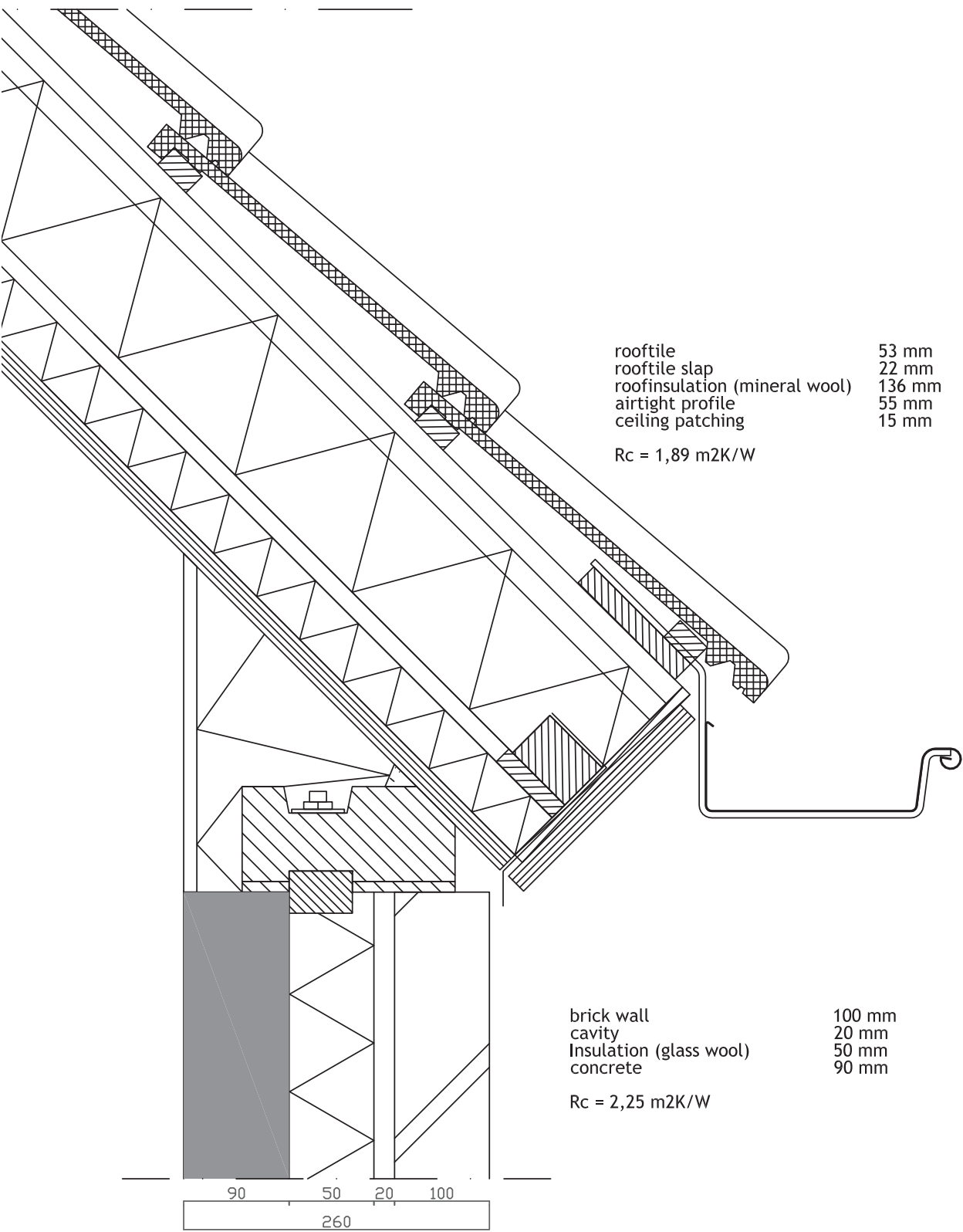




DETAIL 5: SLANTED ROOFTOP (1:5)



DETAIL 6: SLANTED ROOF BOTTOM (1:5)



DETAIL 7: GROUND LEVEL (1:5)

