# Analysis St.Elisabeth

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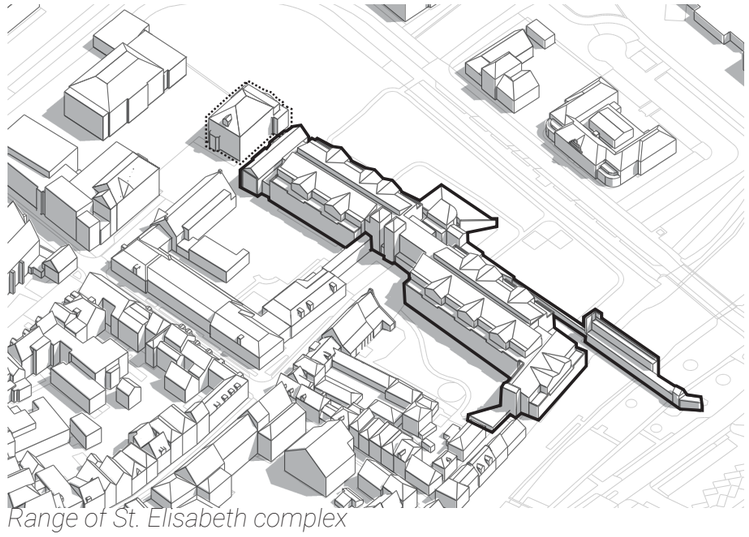
## General purpose

This book was made for the graduation studio from Heritage & Architecture (HA) of the TU Delft, as a start for the design process. We studied the St. Elisabeth building in three aspects: 1) Design analysis, 2) Cultural Value and 3) Building Technology.

The analysis is done by Xuan Li, Yinan Yu, Seunghan Yeum and Jorik van den Bos under supervision of Alexander de Ridder, Nicholas Clarke and Bas Gremmen.

## The range of St. Elisabeth complex

To understand St. Elisabeth elderly house ( Geweldigershoek 39, 7201 NC Zutphen) we grouped this elderly house with the St. Elisabeth Chapel and pastorie in the surrounding and site analysis.



*Range of St. Elisabeth complex*

After all, these three buildings have intimately developed with the city wall. But for the more detailed and extensive analysis, we only focused on the elderly housing combined with chapel and city wall.

## Observation-based research and analysis

The analysis of St. Elisabeth complex is including the architecture analysis, cultural value analysis, and technical analysis. For more in-depth analysis, we tried to integrate each analysis rather than divide them separately.

At first, we start our analysis by answering observation questions from the book 'Designing from Heritage' (Kuipers, M. & De Jonge, W., 2017). These questions hold a general framework for our analysis.

In the course of the process, we have adopted the well-known framework formulated by Steward Brand to structure our analysis of the tangible layers of the St. Elisabeth complex (Brand, 1994). Brand's framework makes the observer aware of the integral physical coherence of a building, as well as the different rates of change pre-defined layers go through.

Brand distinguishes six general-purpose layers for a building: Site, Structure, Skin, Services, Space Plan, and Stuff. However, we added three more subjects: Surrounding, Surfaces, and Spirit of place, to draw sufficient attention to them during the processes of observation and valuation. (Clarke, N., & Kuipers, M., 2017)


*'Designing from Heritage'* (Kuipers, M. & De Jonge, W., 2017)

| HERITAGE ANAMNESIS QUESTION EXAMPLES | |
|---|---|
| **Question** | **Aim/Supportive action** |
| What building/structure/heritage site are we looking at? | Collecting administrative and quantitative data. |
| What is its aspect and has this changed in the course of time? | Collecting visual and usage data and measures. |
| What is it made of and with what building techniques? | Collecting construction and material data. |
| What are its characteristics? | Collecting data on the current appearance of exterior and interior. |
| Does it show traces of damage? Where and what? | Collecting data on current technical performance. |

*Observation question example from 'Designing from Heritage'* (Kuipers, M. & De Jonge, W., 2017)

# Introduction-Working Method
## Working methods

### Eight chapters of Shearing layers

For more efficient analyses, we bundled the layers with a small amount of content to be analyzed. Also, we added a specific topic to some layer, which required additional explanation.

For instance, we added ‘Setting’ to ‘Surrounding layer’, and ‘Spatial composition’ to ‘Space Plans’. On the other hand, we combined ‘Services’ and ‘Stuffs’ together because these subjects did not warrant their own chapters.

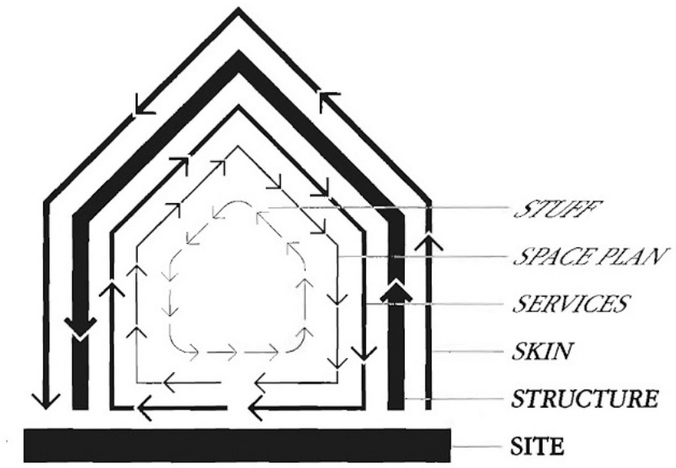
Generally, whole chapters are devoted to the architecture analysis and Cultural value analysis. However, we focused on technical analysis In the ‘Structure layer’ and ‘Skin layer’.

### Value matrix & Value assessment.

For the analysis of the intangible layers, we borrowed the concept of Rieglian values and added few more values. Alois Riegl formulated a dialectic system of essential heritage values; ‘Age value’ versus ‘Use value’, ‘Historical value’ versus ‘Newness value’, ‘Intential commemorative value’ versus ‘Non intended commemorative value’ and ‘(Relative) art value’ etc.

The Choice for Rieglian values is deemed applicable because they are independent from those terminologies usually found in the current (inter-) national legislation and codes for heritage protection and conservation (Kuipers, M. & De Jonge, W., 2017).

After handling the eight chapters of the shearing layers, we added the value matrix. Based on the value matrix and building scales of chrono-mapping, we evaluated the values of St. Elisabeth building (St. Elisabeth elderly house and Chapel). As a result, we have come to the dilemmas, opportunities, and obligations of the St. Elisabeth building.




*Steward Brands Shearing Layers Model (Brand, 1994)*

| 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** [+] | | | | | | | | | |

*Valuation matrix (*Kuipers, M. & De Jonge, W., 2017*)*

# Introduction-Story
## Background of the St. Elisabeth complex

### Elisabeth the Saint

Saint Elisabeth of Hungary (1207 - 1235) was the daughter of king Andrew II of Hungary and husband of king Ludwig. She was declared a saint by Pope Gregory IX in 1237. When floods and famine ravaged the lands of king Ludwig while he was in Italy, she took charge to take care of the people in need. She gave assets from the royal stock to the poor, such as food and clothing. Even some of the royal robes were given away (Catholic Online, 2017). Hence, Saint Elisabeth is associated with taking care for those in need.

### The new Saint Elisabeth guesthouse in Zutphen*

The traditional almshouses (for the poor and sick) that were spread around Zutphen were sold around 1825. In the Geweldigershoek, as a replacement an infirmary for sick people was built with 29 houses and a house for the health officer.

The revision of the Dutch constitution in 1848 granted the right of religious freedom. This meant that Catholics were allowed to publicly practice their religion for the first time since the reformation of the Netherlands.

Between 1855 and 1857 the infirmary husing was replaced by the St. Elisabeth institute, and a convent of nuns called the Zusters van de Liefde arrived from Tilburg. Between 1871 and 1878, the institute was extended with a new wing and a chapel. This complex was build against the old city wall.

The chapel can still be seen today, with an extension of the Catholic architect A. Th. van Elmpt from 1911. Unfortunately, it is unknown who the architect is from the original chapel.
In 1878 the Hubertus institute, an orphanage for girls named after pastor Huberts, was merged with the St. Elisabeth. For this an orphanage was added to the complex of the St. Elisabeth institute. The pastorie from 1842 was pastor Huberts original residence, but it has been more or less completely rebuilt by architect F.A. Ludewig in 1902 (van Aken, 1984).

### Further development

In the 1930's further building development occured in the environment: in 1934, the Catholic girlschool the Mariaschool was built on Tengnagelshoek and the pastorie was expanded. The Oude Watergracht was an old canal as part of the defensive walling system, but it was drained between 1900 and 1910 (G.J.Thieme, 1900) (Kadaster, 1910). In 1936 a recreationroom for the St. Elisabeth institute was built in the valley that used to be the Oude Watergracht, where by that time there were vegetable gardens.

In 1959, the St. Elisabeth institute was extended with a modernist south wing designed by architects G.K.Veeze and F.J.Twijnstra. It functioned as a nursing home for the elderly (Veeze, 1959). Additionally in 1980, new care dwellings were built along the Dieserstraat, which was administratively connected to the St. Elisabeth (Twijnstra, 1980). This was the last addition from Twijnstra.

### Break with tradition

The 1980's and 1990's marked the end of the Zusters van Liefde convent and the old St. Elisabeth complex. The Zusters van Liefde abolish the St. Elisabeth complex in 1984 (PA 1970 & Kloosterarchivaris, 2015). The short lived modernist building from Twijnstra & Veeze was demolished in 1991 together with the old St. Elisabeth complex. In its place came for newly designed building from A.G.M. Mensink (Hakeboom, 1991).

Although the new design seems to have some recurring elements from the previous St. Elisabeth complex, like a recreationroom extruding into the valley and the wings that are placed in a similar composition, the building is significantly bigger and unlike modernist buildings.
The application of round windows, towers, bright colors, variation in materialisation are typical for the post-modernist approach of the architect.

What remains are reminders of old traditions: the garden, the caring function of the St. Elisabeth complex and the defensive ruins of the old city wall, the Berkelpoort and the Oude Watergracht.

*(St. Elisabeth of Hungary', 2017)*

*(R.K. Bejaardentehuis St. Elisabeth, 2017)*

*(Wijgman, 1960 - 1985)*

* There was also an older guesthouse named after St. Elisabeth in Zutphen. Engelbert Kreynck and his sister in-law Jutte van der Voorst founded an almshouse in the Spiegelstraat of Zutphen in 1438, to take care for the poor and sick. In 1442 they decided to devote the almshouse to Saint Elisabeth, so that the almshouse was recognized as the St. Elisabeth guesthouse and would be lead by churchwarden from the Walburgischurch after their dead.

In 1625 the Saint Elisabeth Gasthuis fused with the Oude Gasthuis and moved to the Catharinaconvent in Nieuwstad (Wartena, 2017).

# Introduction-Architect
## The architects

St. Elisabeth: IAA Architects (Engineers & Architects assocation)
IAA Architects started as a fusion between one-man firm Sluijmer and technical consaltancy Sassen in 1968, inspired by the multi-disciplinary approach of architectural firms in the United States and Canada, called 'Sassen jr. en Sassen & Fokkema'.

Engineer Boelen Arend Sassen and architect Hans Sluijmer both graduated from the TU Delft. Sassen ran a firm with a few technical drawers and civil engineers, that consulted but also drew constructions. Hans Sluijmer is the son of Johannes Sluijmer. Johannes Sluijmer started of as a neo-gothic Catholic church architect, but moved to a regional style specific to Twente.

The firm was growing: at first the firm started to aquire civil engineering projects such as offices and storagespaces. In order to increase the architectural profile of the firm, a partnership started in 1969 with H. Wendrich (TU Delft). The partnership was called 'Raadgevend Ingenieurs en Architektengroep S.S.F.W.'. The firm kept growing in the 70's,  and was renamed to 'Ingenieurs en Architecten Associatie' or IAA to keep the the name short. A new firm was opened in Almelo in 1975, where the firm received projects for residential buildings.

Because of a lack of experience in residential buildings, the firm hired the young architect A.G.M. Mensink. After lay-offs in the 1980's, A.G.M. Mensink stayed in the firm and became a shareholder in 1982 (IAA-architecten, 2014). A.G.M. Mensink was the main architect for the current St. Elisabeth residence. A.G.M. Mensink kept working for the firm until 2007 (IAA-architecten, 2017).

Nowadays, the firm has branches in Delft and Amsterdam. The Almelo branch moved to Enschede. Their main focus is general, interior, landscape and urban architecture.

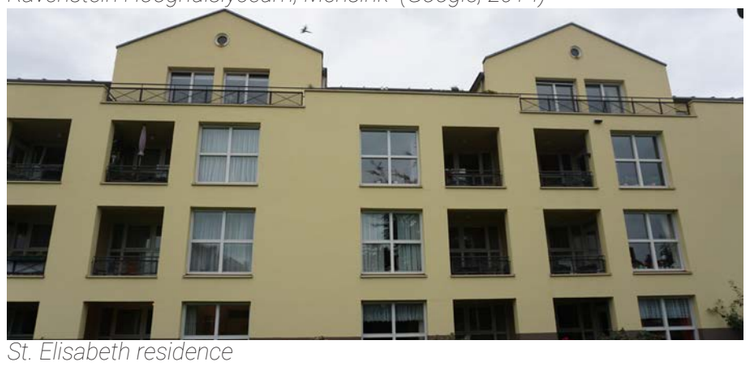
Chapel extension: A.T. Theodores van Elmpt

The original architect of the St. Elisabethschapel is unknown. However, the architect of the 1912 extension of the St. Elisabeth chapel was Antonius Theodores van Elmpt (1866 - 1935). He was born in Groningen as a member of a catholic family. He was also reponsible for the St. Anna school nearby.

Van Elmpt reflects his pragmatism in working with clients throughout his oeuvre, as he is able to design in different styles suited to the clients' wishes. Villa Vredenrust (Figure 9) with a lot of element from the Jugendstill movement and the Friesch-Groningse hypotheekbank (Figure 10) with a lot characteristics from the Amsterdam School movement shows this diversity, evolution and pragmatism in architecture styles. There are some characteristics which can be found throughout Elmpts oeuvre, two arches combined within a bigger arch, the use of stained glass, tableau of tiles and ornamentation in the use of masonry.

There is also extensive catholic symbolism in many of his architecture, as naturally mainly found in designs for the catholic community. The number three,is a returning element in his drawings while as Christian cross can be found at the top of the gable or in the partitioning of the windows in several of his designs. The façade of Sint Anna shows many of these characteristics, the windows are grouped in parts of three, stained glass is used above the entrance doors, a Christian cross is still visible at the top of the stepped gable, false arches are skillfully created as part of the facade while a tableau of tiles engraves the name of Sint Anna (Knibbeler, 2017).

*Ravenstein Hooghuislyceum, Mensink  (Google, 2014)*



*St. Elisabeth residence*

*Friesch Groningsche Hypotheekbank, van Elmpt*

*Front facade of the chapel extension façade, van Elmpt*

# Part 1 Architecture Analysis

# Introduction

## Eight chapters of Shearing layers

### Details of each layers.

Surrounding & Setting: This chapter covers the urban scales of analysis in the range of Klein Vatican. It includes public and private space, routine, landmarks and function of urban fabrics according to the Shearing layers of Brand.

Site: Site is the geographical setting, the urban location and the legally defined lot, whose boundaries and context outlast generations of ephemeral buildings. This chapter zooms to St. Elisabeth complex block. it covers from the volume chrono-mapping of complex to street profiles.

Skins (Exterior): Exterior surfaces now change every 20 years or so, to keep up with fashion or technology, or for wholesale repair. The Recent focus on energy costs has led to reengineered Skins that are air-tight and better- insulated. This chapter focus on the facade of the building. Exterior materials, window, balconies, and roofs are mentioned.

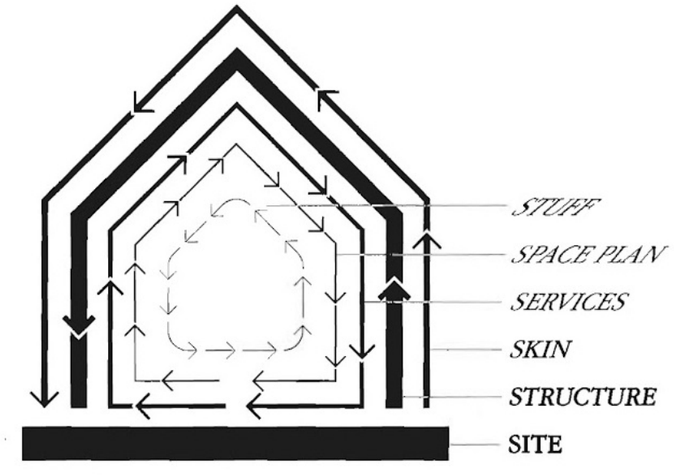
Structure: The foundation and load-bearing elements are perilous and expensive to change, so people don't. These are the building. Structural life ranges from 30 to 300 years. This chapter is about the building technology of St. Elisabeth building. Superstructure, structure type, load-bearing structure, details are analyzed in depth.

Space plan & Spatial composition: The interior layout-where walls, ceilings, floors, and doors go. Turbulent commercial space can change every 3 years or so; This chapter talks about the axis of the space, circulation, function of space, spatial composition and spatial experience.

Surfaces (Interior): This chapter is about the material of the interior space. The finishing of ceiling, walls, and floors are introduced.

Services & Stuffs: Services are the working guts of buildings : communications wiring, electrical wiring, plumbing, sprinkler system, HVAC (heating, ventilation, and air conditioning), and moving parts like elevators and escalators. They wear out or obsolesce every 7 to 15 years. Many buildings are demolished early if their outdated systems are too deeply embedded to replace easily. Stuffs is about the all the things that twitch around daily to monthly. This chapter reflects heatings system, water system, ventilation system and lighting system of the building.

Spirit of place: Identity of this building is explored in this chapter. Based on the observation and literature related to this place, we selected six identities; Defense, Productive green/ farm, Care, Religion, Tourism, and Education.




*Steward Brands Shearing Layers Model (Brand, 1994)*

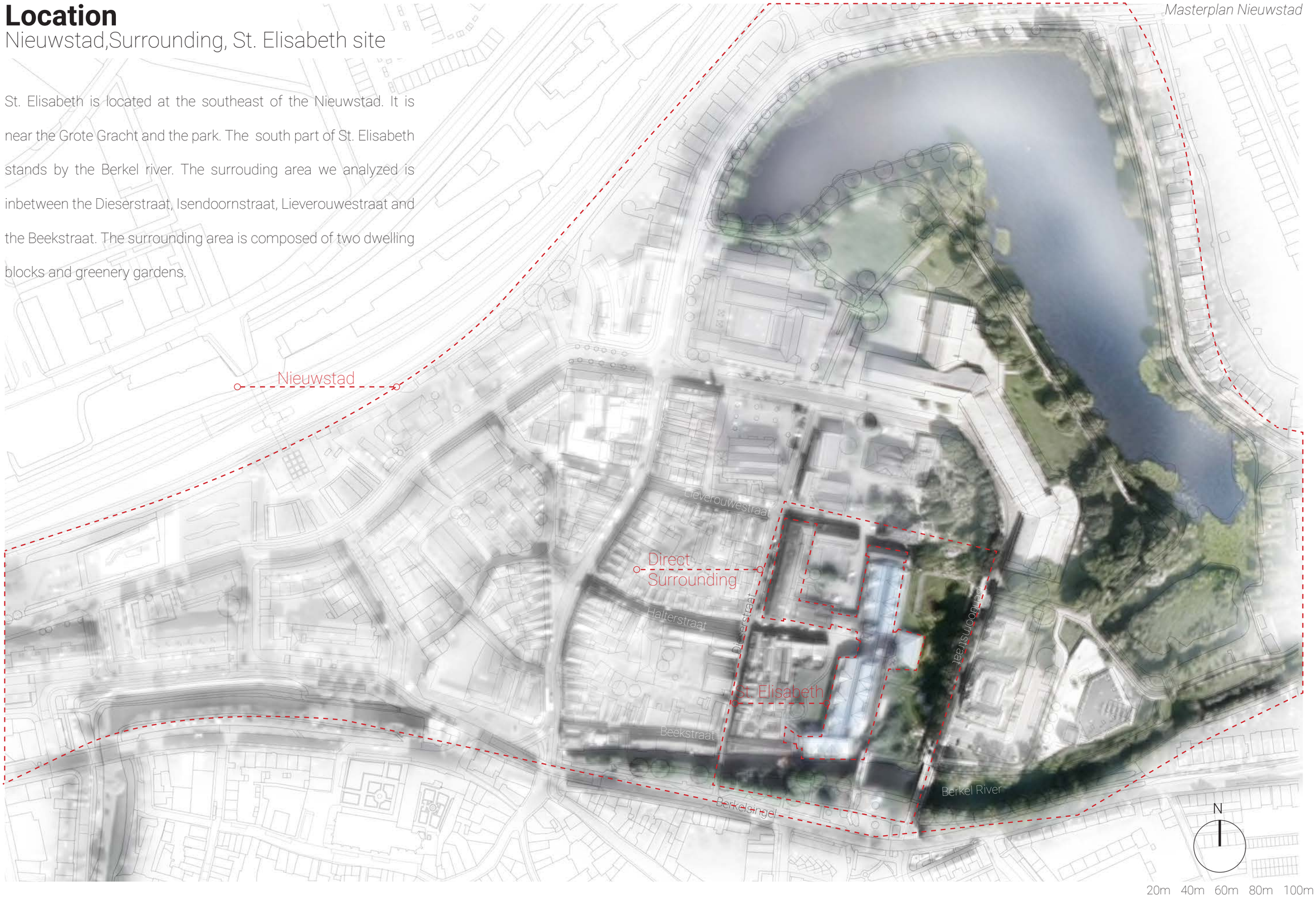
# 01 Surrounding & Setting

# Location

## Nieuwstad,Surrounding, St. Elisabeth site

St. Elisabeth is located at the southeast of the Nieuwstad. It is near the Grote Gracht and the park. The  south part of St. Elisabeth stands by the Berkel river. The surrouding area we analyzed is inbetween the Dieserstraat, Isendoornstraat, Lieverouwestraat and the Beekstraat. The surrounding area is composed of two dwelling blocks and greenery gardens.

*Masterplan Nieuwstad*



# Highlight Spots

Landmarks in surrounding and Nieuwstad

1 Berkelpoort

2 Luther's hofje

3 Synagogue

4 Pastorie

5 Nieuwstad church

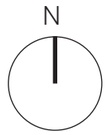
6 City wall relics

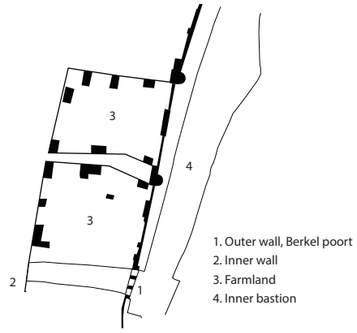
7 Spanish gate

8 Medieval tower

# Surrounding Chronomapping

Transformations of St. Elisabeth and surrounding



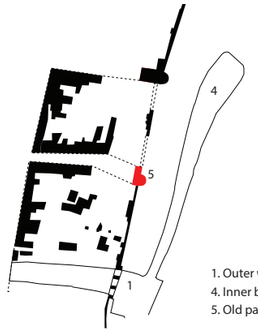




1. Outer wall, Berkel poort
2. Inner wall
3. Farmland
4. Inner bastion

1565-1649


*(Zutphen archieve, 16th century)*

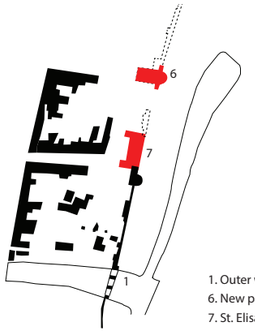
*(Zutphen archieve, 1649)*




1. Outer wall, Berkel poort
4. Inner bastion
5. Old pastorie

1795-1811

*(Zutphen archieve, 1811)*




1. Outer wall, Berkel poort
6. New pastorie
7. St. Elisabeth asylum

1863

*(Zutphen archieve, 1863)*

## Chronomapping introduction

The following diagrams show a timeline of St. Elisabeth and its surrounding transformations from 1565 to 1994. The pictures attached below are the sources and evidence of the indicated transformations. Through this chronomaping , we found out how the contours of the St. Elisabeth, the city wall, the water and the greenery space changed through time , relating to historical events.

*Outer wall and inner wall existed

*Courtywards were used as farmlands

*Inner bastion river existed

*Spanish army left Zutphen in 1591

*1672 - 1674: two years of occupation

*Zutphen was occupied for by the French between 1795 - 1815

*Outer wall was broken into three parts

*Innerwall disappeared

*Old pastorie was located

*Inner bastion river shrinked

*1830: Belgium separated from The Netherlands

*1848: Catholic equal under the law

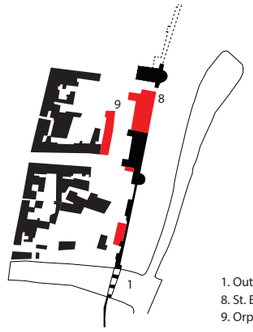
*New Pastorie was built in 1842

*St. Elisabeth asylum was built between 1855 and 1857

*(Sources:*
*Retrieved from http://erfgoedkloosterleven.nl*
*Retrieved from http://rijksmonumenten.nl*
*Retrieved from http://reliwiki.nl/index.php/Zutphen,_Geweldigershoek_39_-_Elisabeth )*

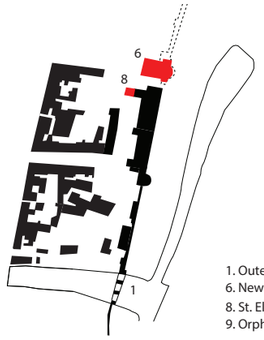
# Surrounding Chronomapping

## Transformations of St. Elisabeth and surrounding




1. Outer wall, Berkel poort
8. St. Elisabeth chapel
9. Orphanage

1871-1878




1. Outer wall, Berkel poort
6. New Pastorie
8. St. Elisabeth chapel additior
9. Orphanage

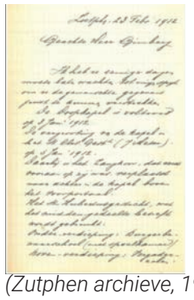
1902-1912


1. Outer wall, Berkel poort
10. St. Maria
11. Diagonal passage
12. Recreation room
13. Additional houses

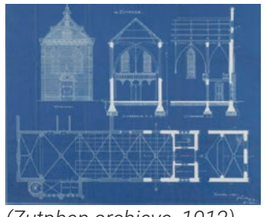
1934-1955


*(Zutphen archieve, 1878)*

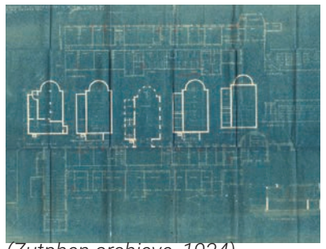

*(Zutphen archieve, 1902)*



*(Zutphen archieve, 1912)*

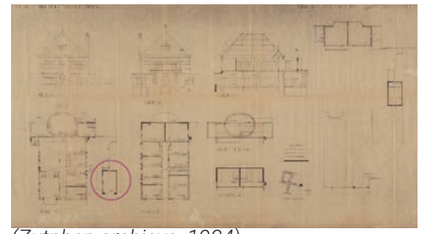


*(Zutphen archieve, 1912)*

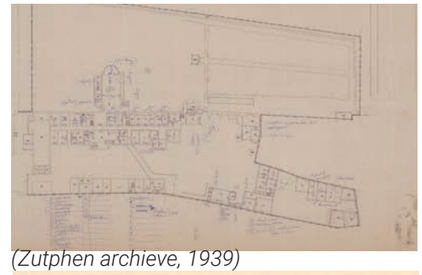


*(Zutphen archieve, 1934)*

*(Zutphen archieve, 1936)*



*(Zutphen archieve, 1934)*



*(Zutphen archieve, 1939)*


*(Zutphen archieve, 20th century)*

*St. Elisabeth building was expanded toward pastorie

*Chapel was built between 1871 and 1878

*Orphanage was built around 1878

*Patient from Hubertus moved to St. Elisabeth between 1878 and 1897.*(J.H.W. van Aken, unknown year)*

*Extensive renovation of the Pastorie, nearly rebuilt by F.A Ludewig in 1902

*Chapel was expanded in 1912

*Expansion Pastorie in 1934, extra space first floor

*Storage was added to the chapel in 1934

*Recreation room was added to the St. Elisabeth in 1936

*St. Maria building was built between 1936 and 1949

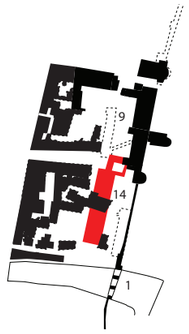
*Diagonal passage was built between orphanage and St. Elisabeth

*Inner bastion river disappeared

*Internal renovation St. Elisabeth (kitchen, rooms) between 1953 and 1955

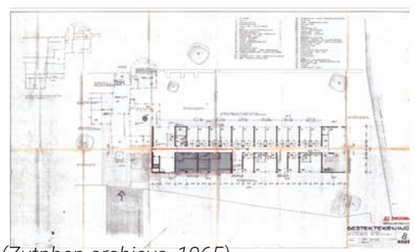
# Surrounding Chronomapping

## Transformations of St. Elisabeth and surrounding

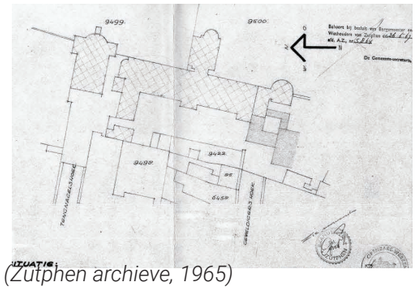



1. Outer wall, Berkel poort
9. Orphanage
14. St. Elisabeth south wing

1965-1979



(Zutphen archieve, 1965)



(Zutphen archieve, 1965)

*South wing was added around 1965

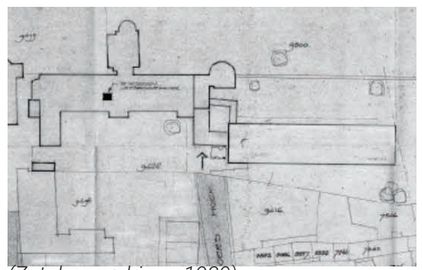
*Plot was organized between 1965 and 1980

*Diagonal passage and orphanage were demolished

*Zusters van Liefde (nuns) left St. Elisabeth in 1984

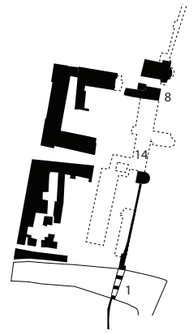

1. Outer wall, Berkel poort
14. St. Elisabeth south wing

1980



(Zutphen archieve, 1980)

(Historische atlas van Zutphen , unknown)




1. Outer wall, Berkel poort
8. St. Elisabeth chapel
14. St. Elisabeth care

1991

(Zutphen archieve, 1991)

(Zutphen archieve, 1991)

(Zutphen archieve, 1991)

*St. Elisabeth building was demolished in 1991


1. Outer wall, Berkel poort
8. St. Elisabeth chapel
15. New St. Elisabeth care

1993-1994

(Zutphen archieve, 1993)

(Zutphen archieve, 1994)

*New St. Elisabeth building was built in 1993

*Internal changes to new St. Elisabeth and dwellings along Dieserstraat in 1994

*Internal changes : seperation of floors between school and dwelling in 1994

# Function

Function distribution around St. Elisabeth

Elderly housing

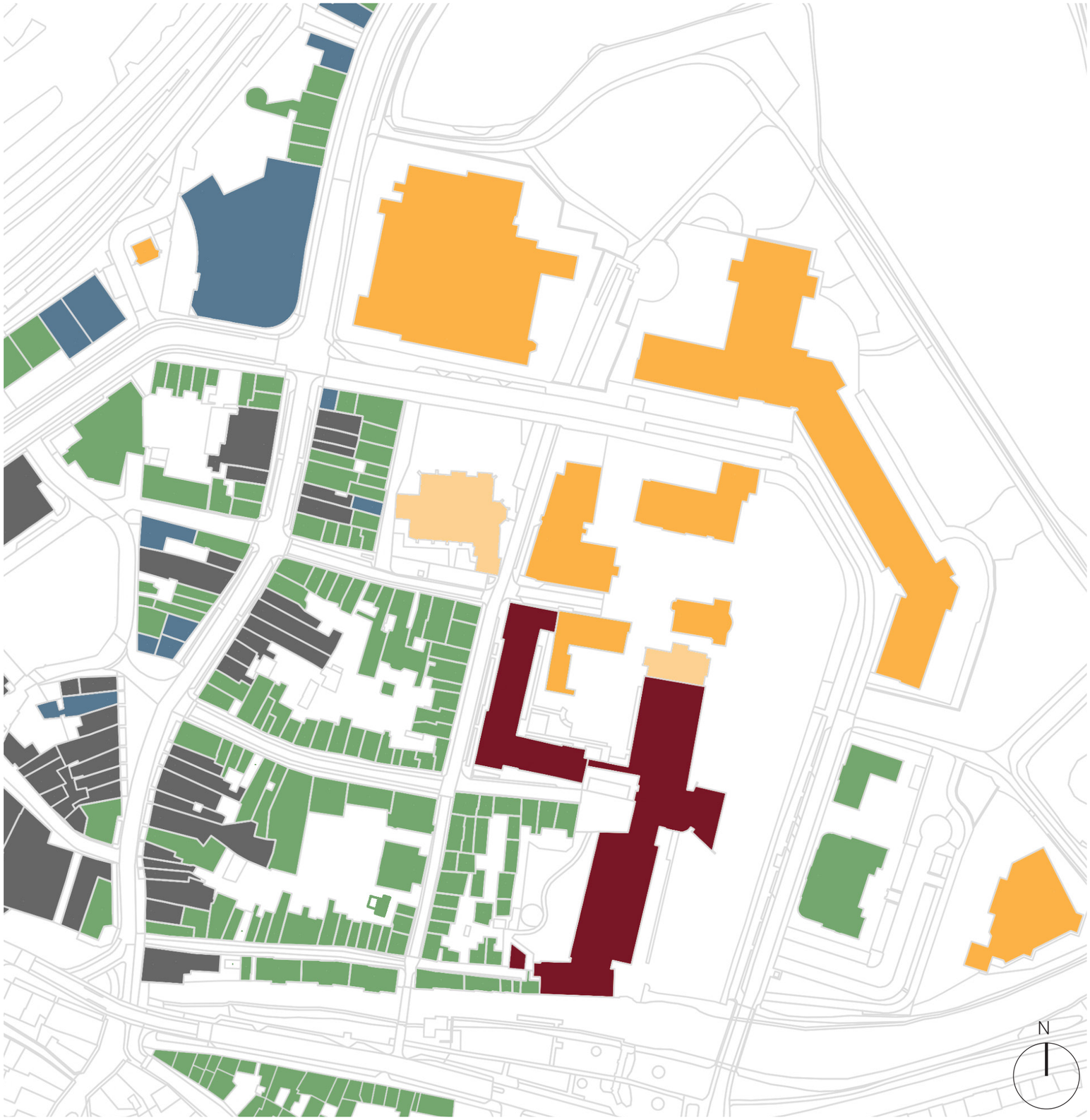
Commercial

Dewellings

Retailing

Education

Religious




## Different functions distribution

The St. Elisabeth functions as elderly housing. In this map it is shown that the main functions around the St. Elisabeth are educational , residential and religious functions. Schools are mostly located to the north of the St. Elisabeth. Dwellings are situated to the east of St. Elisabeth. One chapel is connected to the north wing of St. Elisabeth and the church is located at the northwest of St.Elisabeth.

# Greenery

A prominent charater of surrounding


1.Backyard of St.Elisabeth

2.Backyard of St.Elisabeth

3.Frontyard of St.Elisabeth

4.Frontyard of St.Elisabeth

5.Luther's hofje

6.Park

In both the direct surrounding and large surrounding, there are many green spaces. Compared with the city center area, the greenery is a prominent character of the city border here.

# Routing

Pedestrain routing of different users

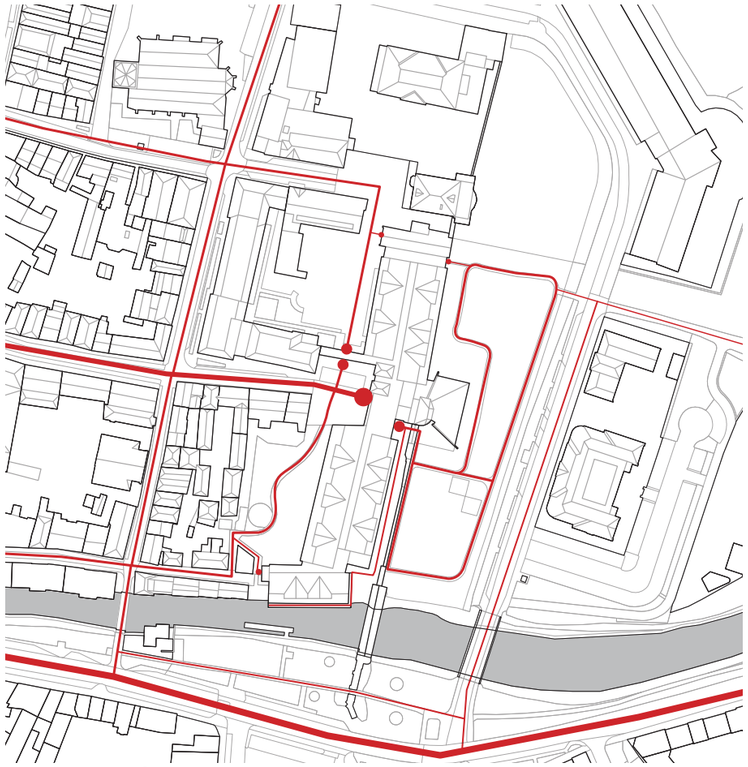
Routing

Boat routing

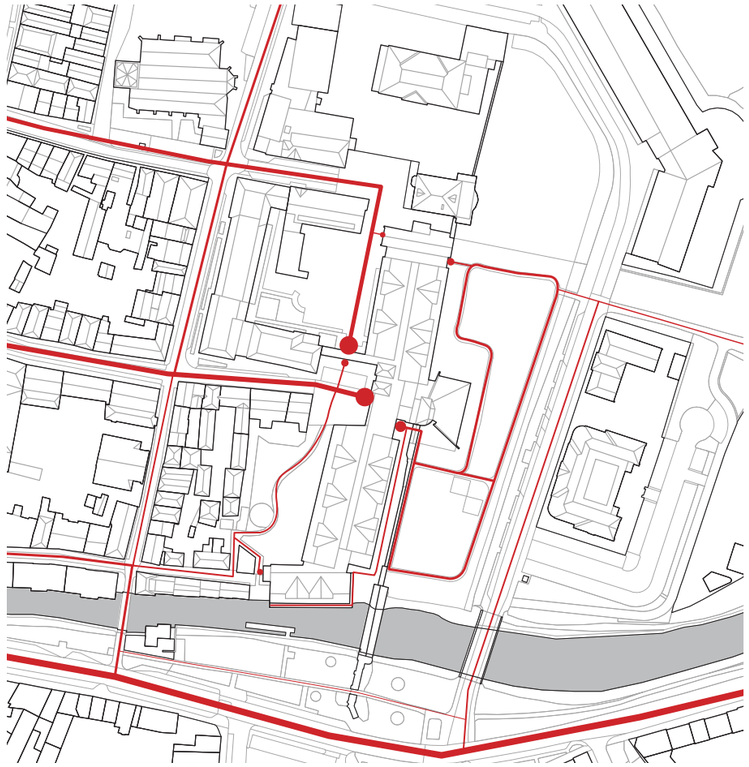
Entrance

River

N



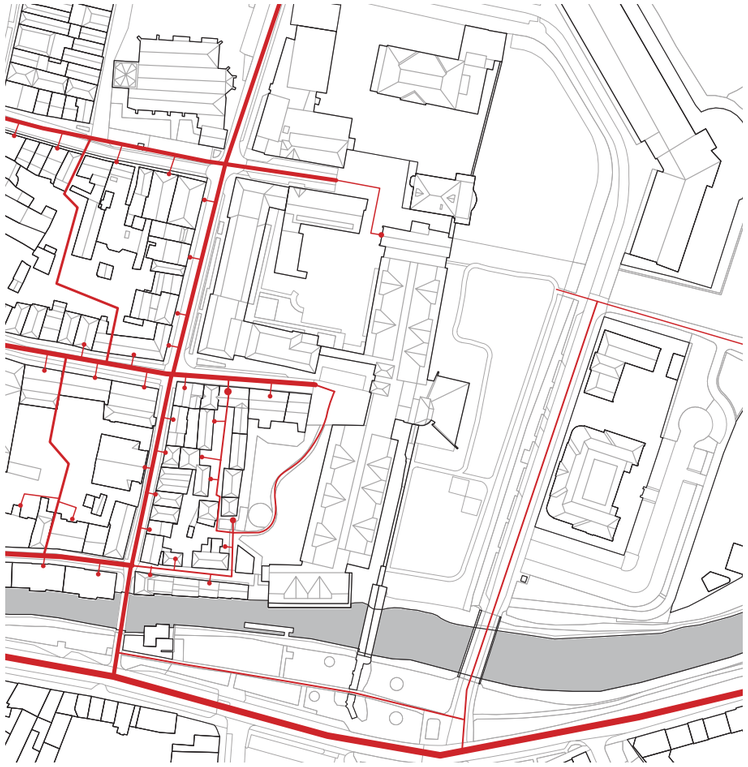
**1. Clients of St.Elisabeth**



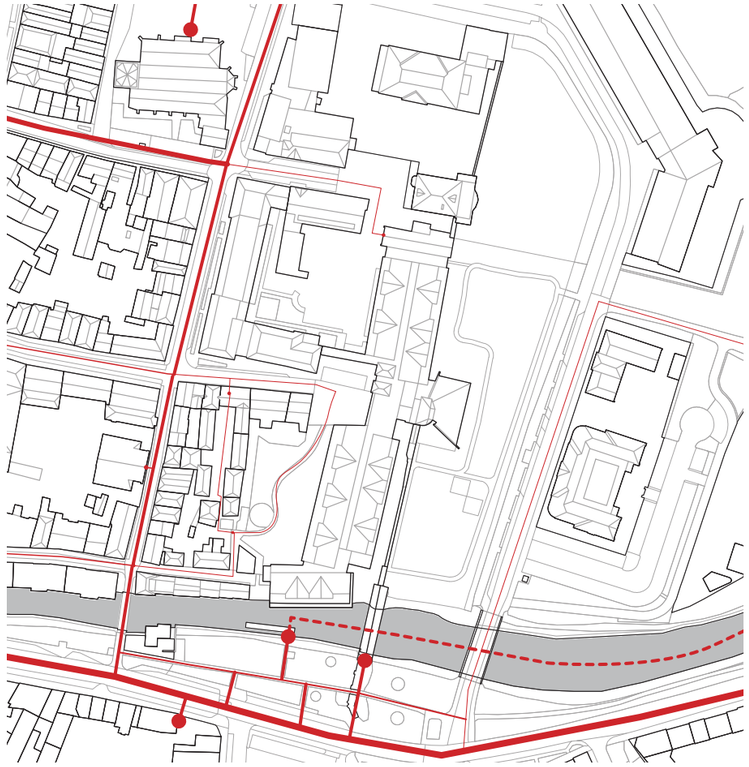
**2. Employees of St.Elisabeth**

## Different routings for different user pedestrains

These maps show the pedestrain routing of Clients, employees of St. Elisabeth, surrounding residents and tourists. The clients and employees of St. Elisabeth have similar routings, mainly on the Halterstraat and the paths of gardens.  The residents routing are mianly around the residential blocks. Some routings go across the inner courtyards. The travelers routing concentrated on the Rijkenhage and the Berkel river. Their routings closely relate with Berkelpoort, Berkel boat tour and the Newstad church. By comparing these routings of different people, we could also find which parts of the surrounding people mostly interact with.



**3. Residents of the surrounding**



**4. Visitors/ Travelers**

# Routing

Automotive vehicle routing of different users

Routing

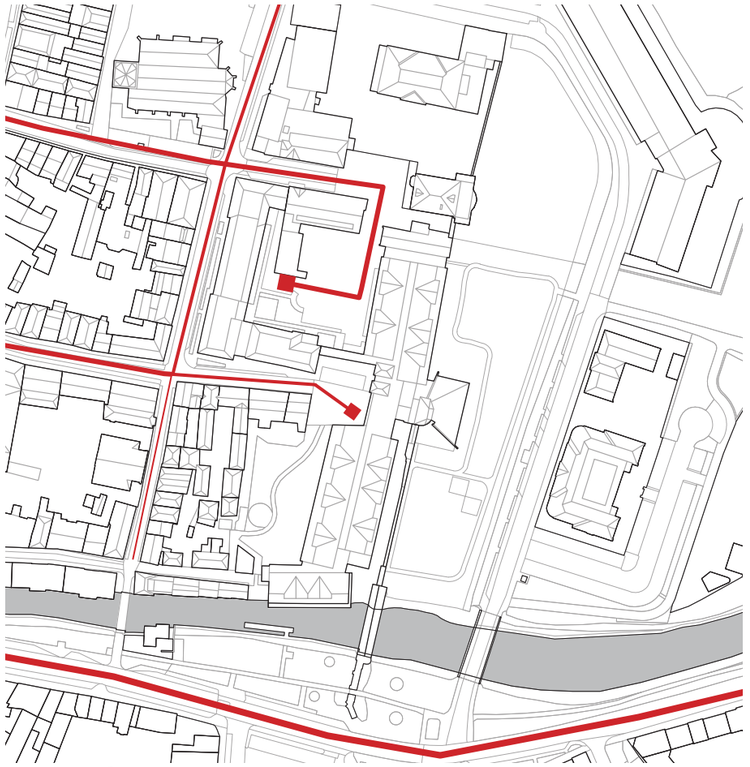
Parking

River

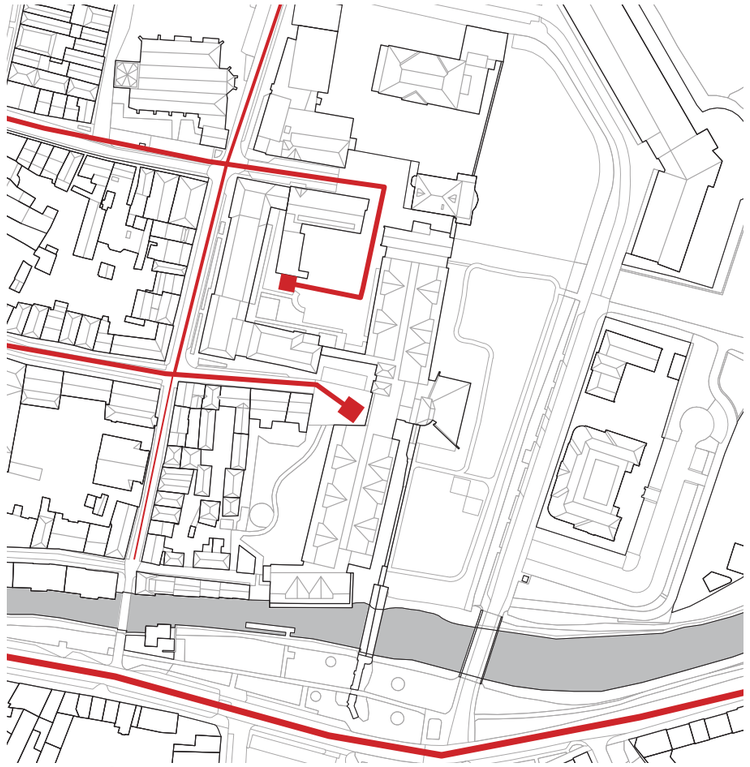
N

## Different routings for different user cars

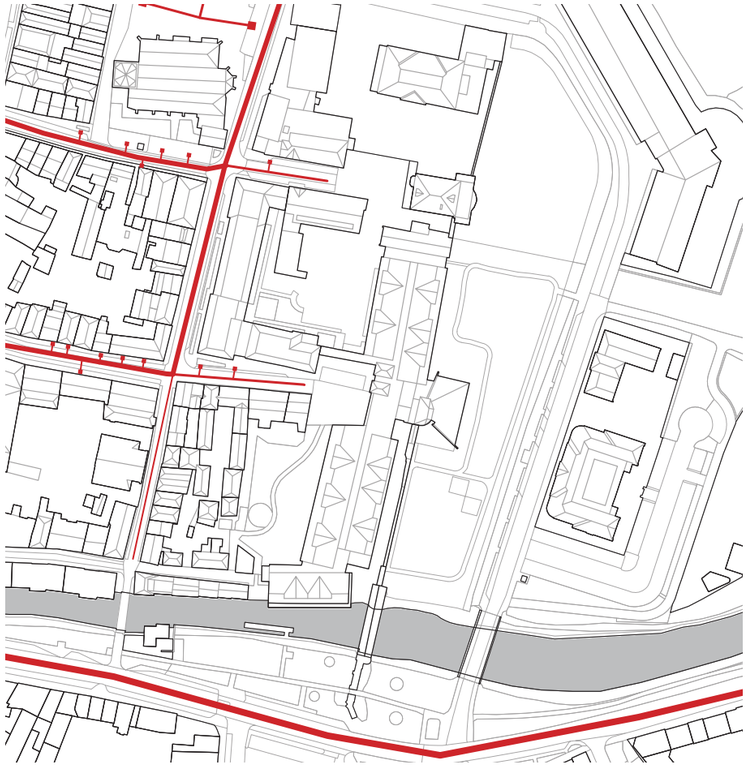
The clients and employees of St. Elisabeth mostly drive though the Halterstraat and the Lieverouwestraat and park at the parking lot in front of St. Elisabeth chapel. The pick- up service cars come from the Halterstraat and park at the main entrance of St. Elisabeth. There is a barrier gate at the end of Lieverouwestraa, so the surrounding residents and outside visitors do not enter the site of St. Elisabeth. The residents mostly park the car along the streets and the visitors mostly park the car at the parking lot in front of St. Jans church.



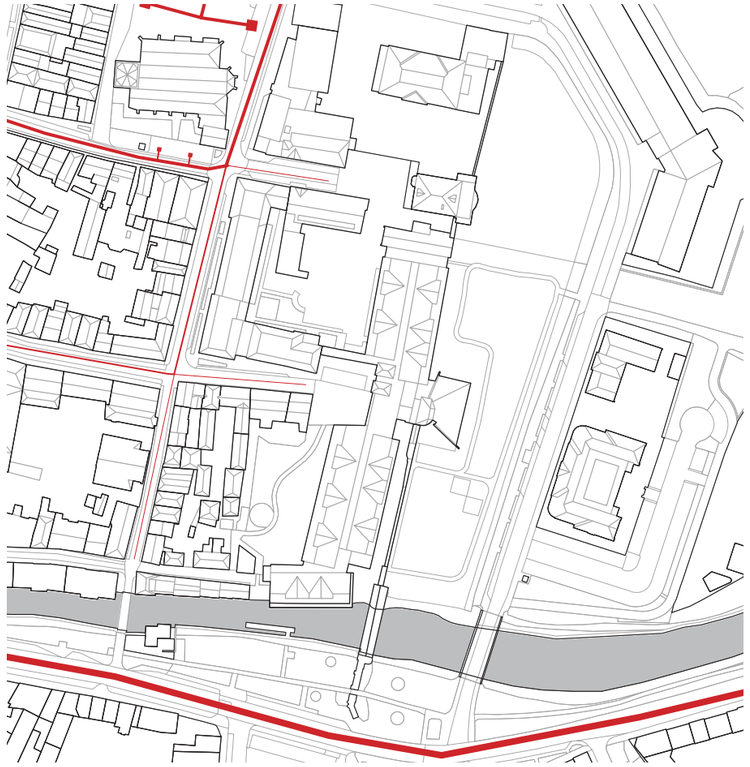
**1.Cars of  St.Elisabeth Clients**



**2.Cars of St.Elisabeth Employees (Pick-up service)**



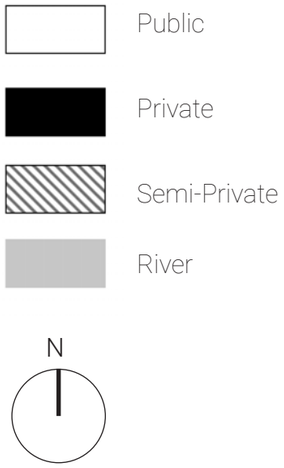
**3.Cars of the surrounding residents**



**4. Cars of Visitors/ Travelers**

# Public&Private

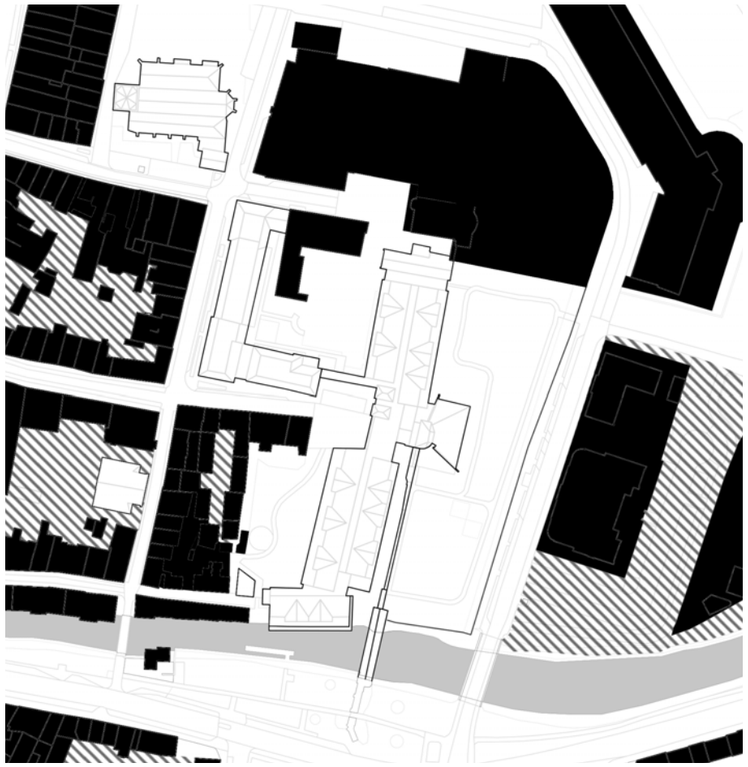
Noli maps of different user groups



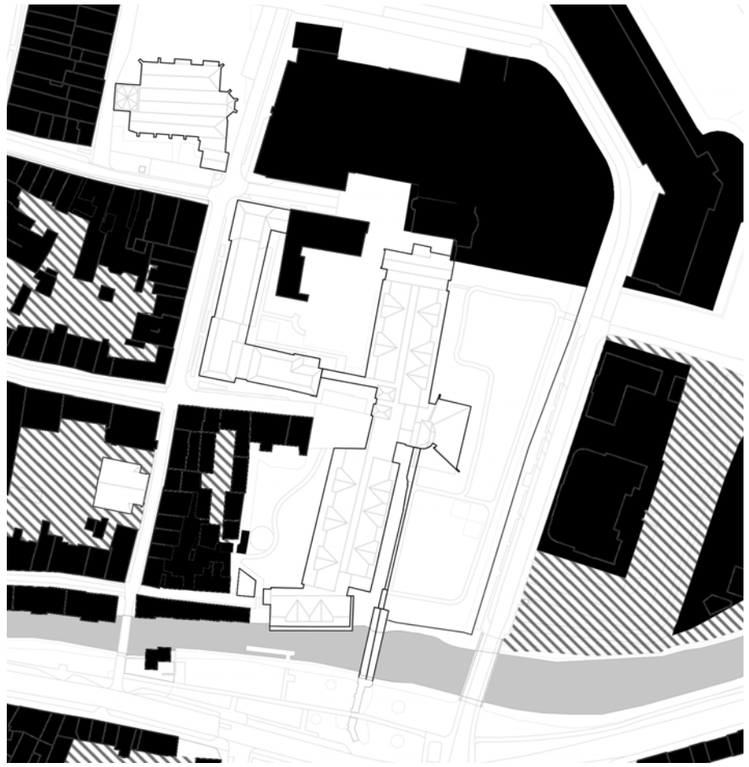

## Different publicity for different user groups

There are basically four user groups (Clients of St. Elisabeth, Employees of St. Elisabth, residents of the surrounding and the outside visitors or travelers) of the analyzed surrouding area of St. Elisabeth.

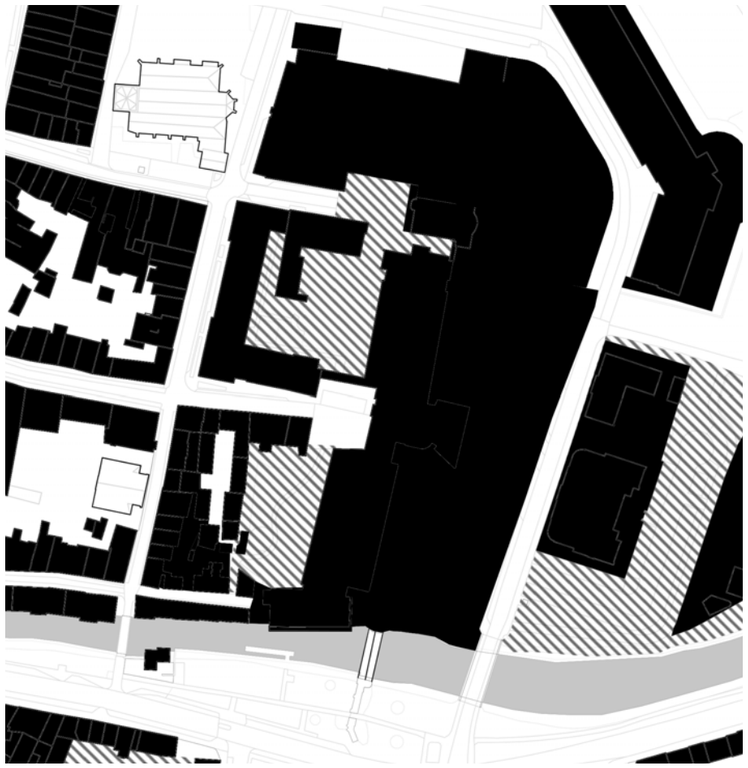
For each user group, the access to a certain space can be different. We define the space as public when the user has free and evident access to the space. Semi-public space is where a user can techically access but would rarely go, unless invated. Private space is where a user has no access and they do not go.



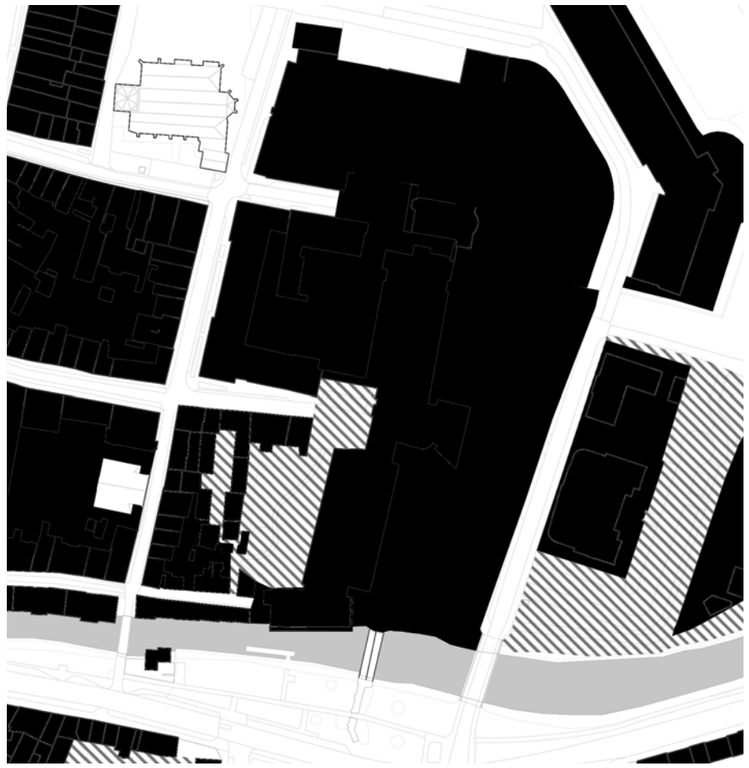
**1. Clients of St.Elisabeth**



**2. Employees of St.Elisabeth**



**3. Residents of the surrounding**



**4. Visitors/ Travelers**

# Conclusion

## Vital characteristics of the surrounding

### Long History

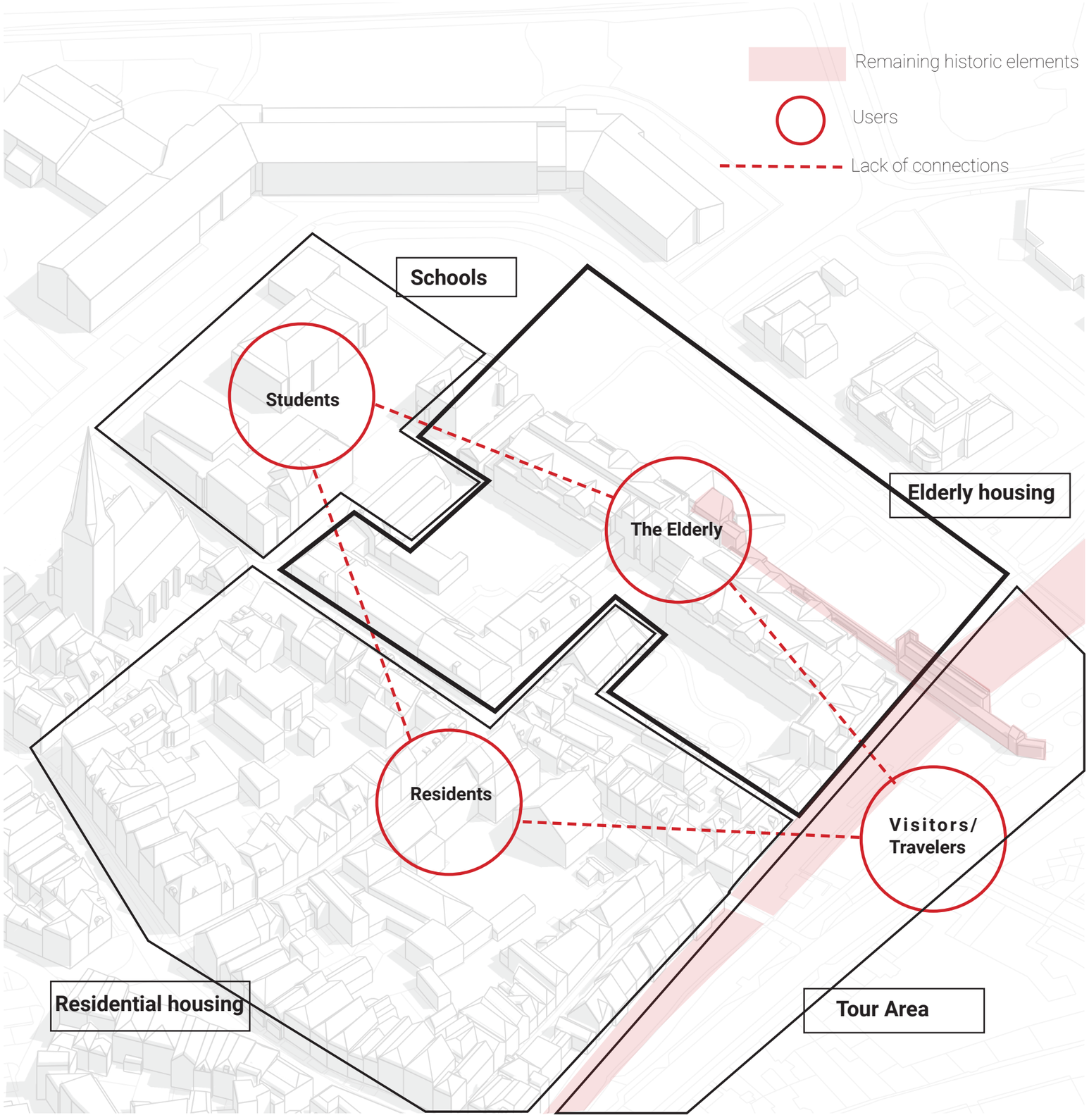
The surrounding of St. Elisabeth has a long history with the city border and rivers. It is located where the former city wall used to be. Although the surrounding has changed a lot, some parts of the ancient surroundings still exist today, such as Berkel river, the Berkelpoort.

### Disconnection

Through the analysis of function, routing and publicity, we found that the surrounding areas are physically connected but the functions, routings and users actually have no connections. For example, the direct surrounding of St. Elisabeth is  public and open for the elderly but quite ambiguous for the surrounding residents. For the visitors and travelers, this area is more private. The mono functionality and ambiguous definition of public spaces leads to the disconnection between the old and other population groups.

### Remaining historic elements

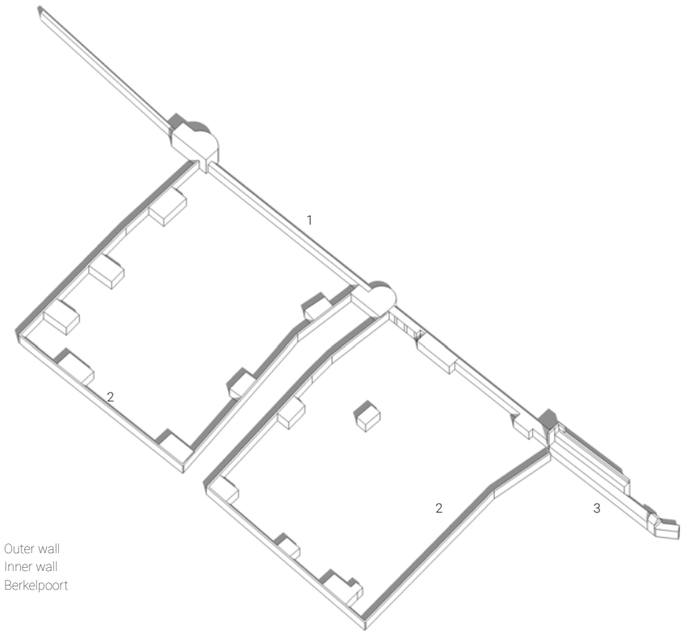
The historic heritage in the surrounding, like the Berkelpoort and city wall are advantages of this area. The green areas in surrounding area also provide development opportunities. Some of the the historic elements arehidden and unseen by the public.



# 02 Site

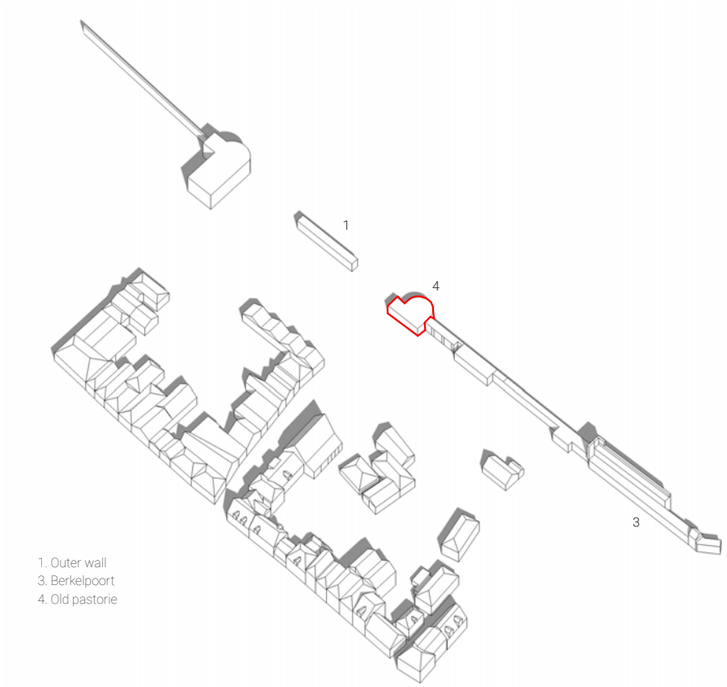
# Volume Chronomapping

City wall, St. Elisabeth, Pastorie



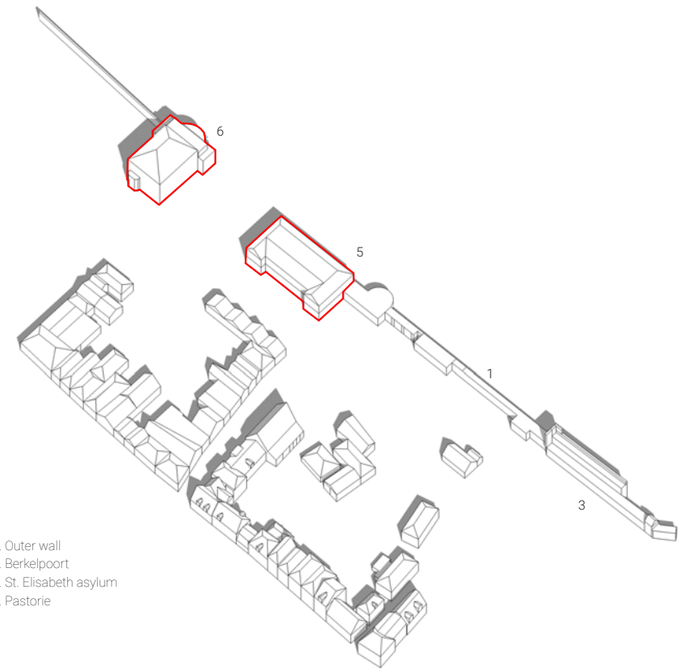

1. Outer wall
2. Inner wall
3. Berkelpoort

1565-1649




1. Outer wall
3. Berkelpoort
4. Old pastorie

1795-1811




1. Outer wall
3. Berkelpoort
5. St. Elisabeth asylum
6. Pastorie

1863

## Continuous outer city wall and enclosed inner walls

From 1565 to 1649, city walls were already situated in the analyzed setting. It was the border of Nieuwstad. There were some tower houses attached to the outer city wall at the end of the streets. The Berkelpoort on the river already existed. Besides the outer city wall, there were also enclosed inner city walls. The inner walls encompassed different plots of farmlands. Some small building blocks were attached to the inner walls.

## Broken city walls

From 1795 to 1811, the outer city wall was broken into three parts and the Inner wall disappeared. It might be due to the expansion of the medieval city. The farmland of the two plots disappeared and more building blocks were built. The old pastorie was located at the end of the Halterstraat. It was originally part of the city wall.

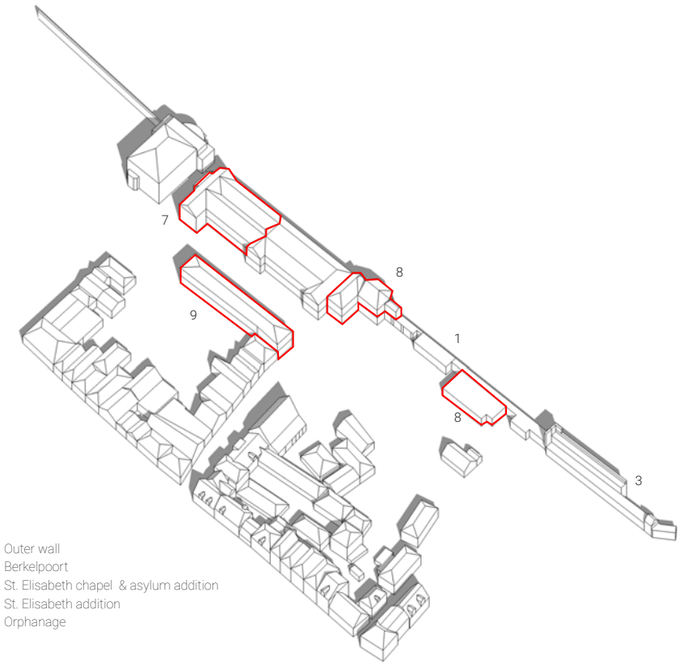
## First construction of St. Elisabeth

The old pastorie was abandoned and the new Pastorie was built in 1842. The nw pastorie was located at where formerly stood a tower house of the outer city wall. The St. Elisabeth asylum was built between 1855 and 1857. It was located next to the old pastorie. The asylum was a two-story high block with pitched roofs.

*(Sources: Retrieved from http://erfgoedkloosterleven.nl*
*Retrieved from http://rijksmonumenten.nl)*

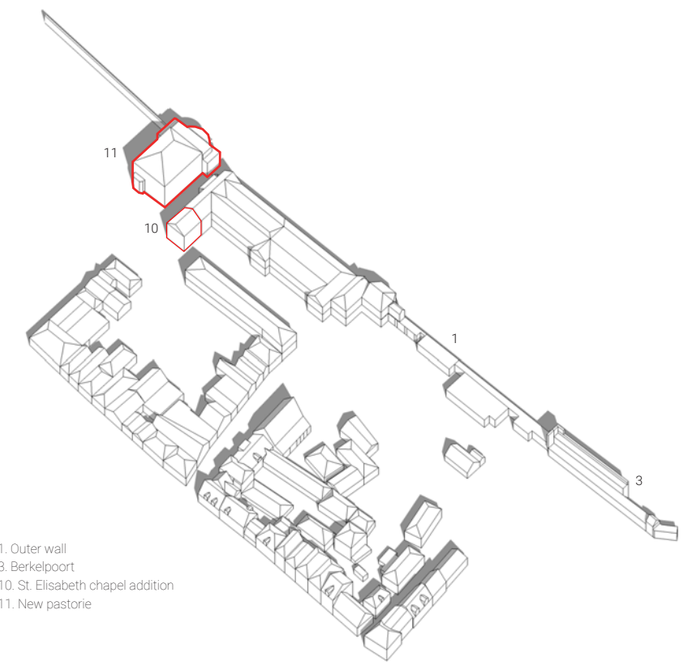
# Volume Chronomapping

City wall, St. Elisabeth, Pastorie



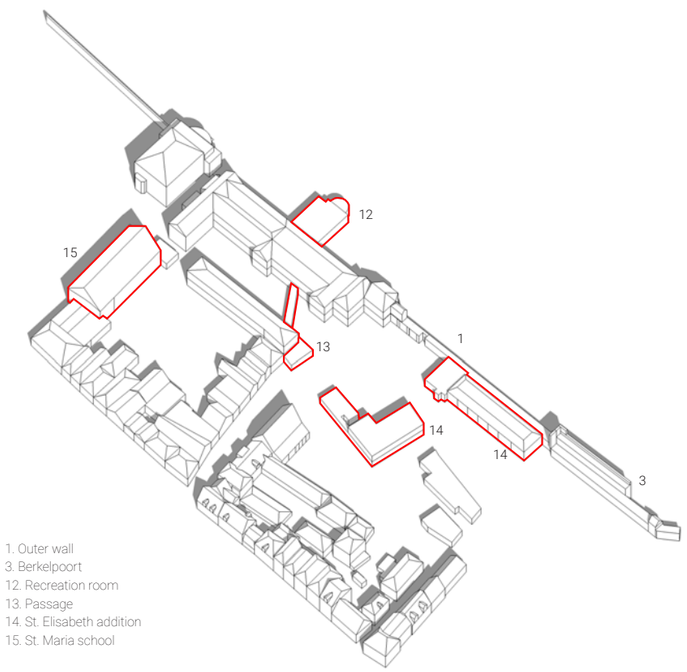

1. Outer wall
3. Berkelpoort
7. St. Elisabeth chapel & asylum addition
8. St. Elisabeth addition
9. Orphanage

1871-1878




1. Outer wall
3. Berkelpoort
10. St. Elisabeth chapel addition
11. New pastorie

1902-1912




1. Outer wall
3. Berkelpoort
12. Recreation room
13. Passage
14. St. Elisabeth addition
15. St. Maria school

1934-1955

## Additions to St. Elisabeth

There were several additions to St. Elisabeth from 1871 to 1878. A chapel was added to the north of the existing St. Elisabeth. A new addition building was attached inbetween the chapel and the existing building. There was also one addition at the south of the existing building. A tower house was added onto the original city wall. An orphanage located at the west of the St. Elisabeth was built around 1878.

## Additions to St.Elisabeth chapel

The new pastorie got an extensive renovation. It was nearly rebuilt by F.A Ludewig in 1902. The western part of the St. Elisabeth chapel was expanded in 1912.

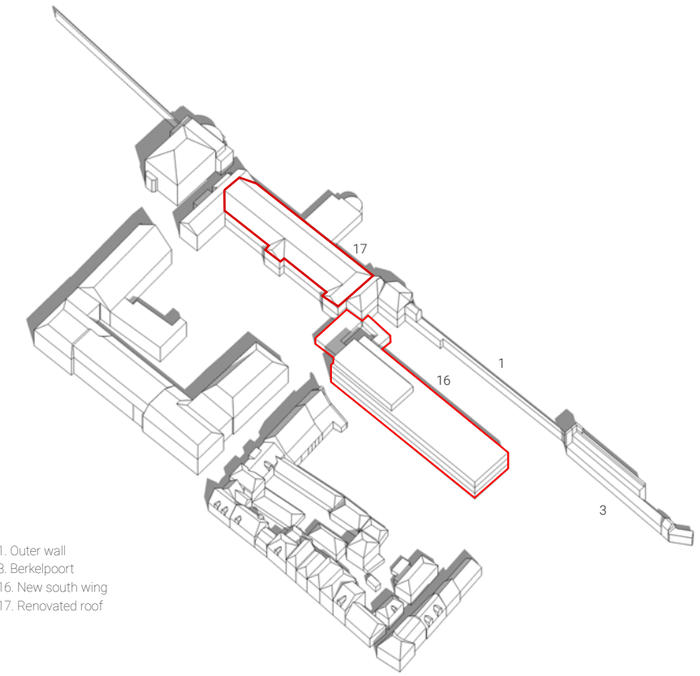
*(Sources: Retrieved from http://erfgoedkloosterleven.nl*
*Retrieved from http://rijksmonumenten.nl*

## Additions to St. Elisabeth

From 1934 to 1955, there were many additions to St. Elisabeth. A one-storied recreation room was added to the east side of the St. Elisabeth main building in 1935. A diagonal passage was built to link the main building with the orphanage. Two houses were added to the south of the main building. One addition was attached to the city wall. The St. Maria building was built between 1936 and 1949.

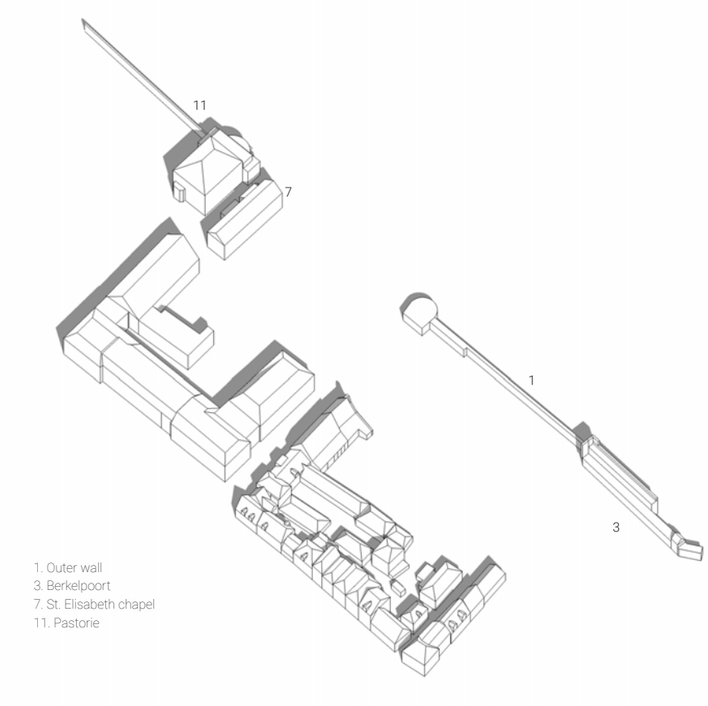
# Volume Chronomapping

City wall, St. Elisabeth, Pastorie



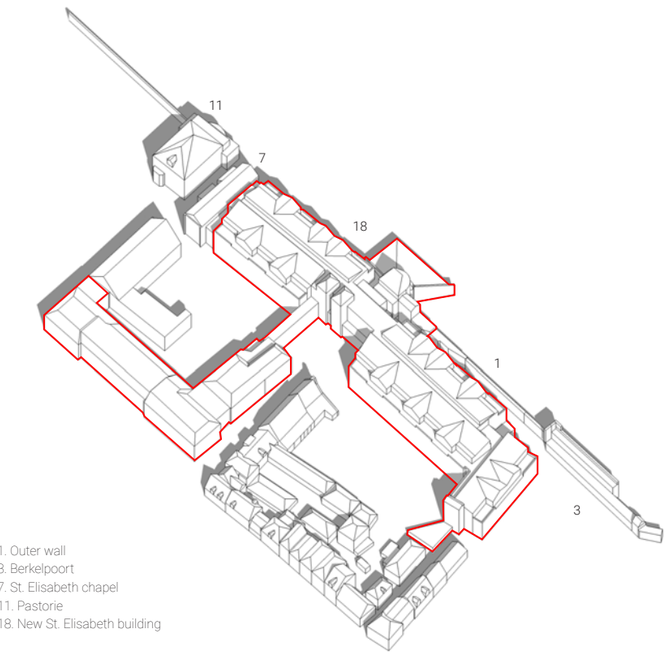

1. Outer wall
3. Berkelpoort
16. New south wing
17. Renovated roof

1965-1980




1. Outer wall
3. Berkelpoort
7. St. Elisabeth chapel
11. Pastorie

1991




1. Outer wall
3. Berkelpoort
7. St. Elisabeth chapel
11. Pastorie
18. New St. Elisabeth building

1993-1994

## New south wing addtion to St. Elisabeth

The diagonal passage and orphanage were demolished. The south wing was added around 1965. The south wing was three-storied high and partly had extra third floor. The south wing was linked with the main buiding through a one-storied enclosed block with a courtyard. The roof of the main building was renovated around 1980. The nearby plot along to the Dieserstraat was extensively reallocated between 1965 and 1980.

## Demolishment of the St. Elisabeth

In 1991, all the St. Elisabeth buildings were demolished. Only the St. Elisabeth chapel and the city wall remained.

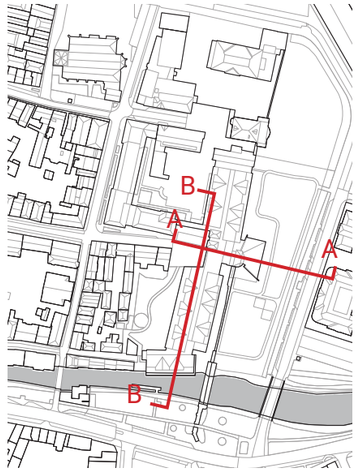
*(Sources: Retrieved from http://erfgoedkloosterleven.nl*
*Retrieved from http://rijksmonumenten.nl*

## Construcion of the new St. Elisabeth

From 1993 to 1994, a new St. Elisabeth building was constructed. The new building was four stories high. The north wing was connected with the existing St. Elisabeth chapel and the south wing was located very close to the remaining city wall. There was a new passage build to link the main building with the surrounding block. A one-story recreation room was attached to the east side of the new Elisabeth building.

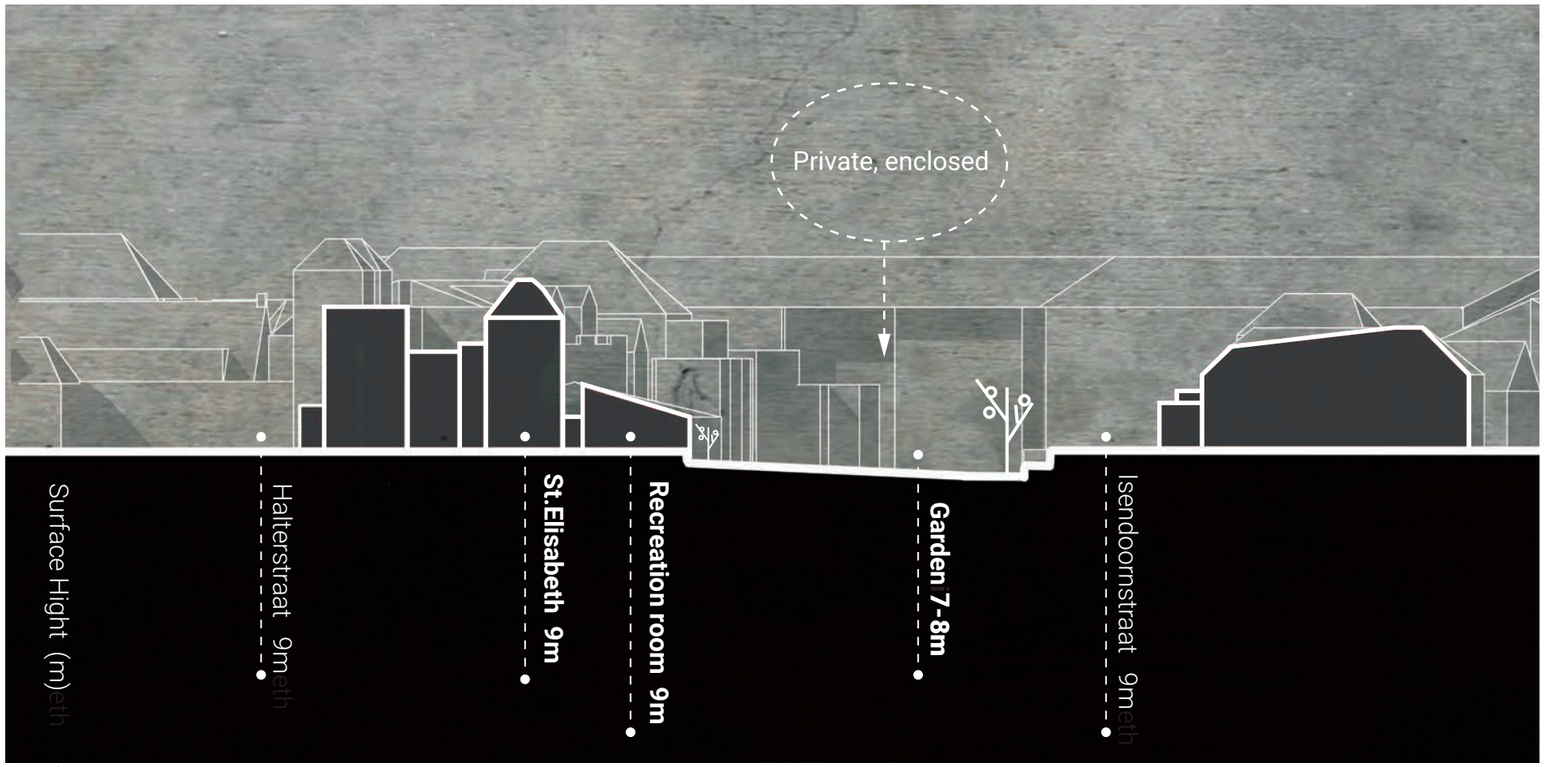
# Relationship with surrounding

## Site sections




Section A-A shows that the recreation room of the St. Elisabeth is a meter higher than the garden. This way people can get a panoramic view from the elevated recreation room. The ground level of the garden is lower than its surroundings. This contributes to the private atmosphere of garden.

Section B-B shows the relationship between the St. Elisabeth and Berkel river. The south wing of the St. Elisabeth has a water platform extending to the Berkel river surface.

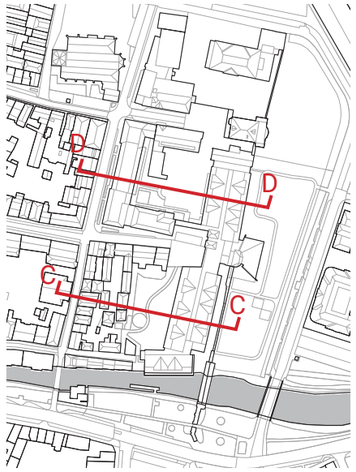



Section A-A


Section B-B

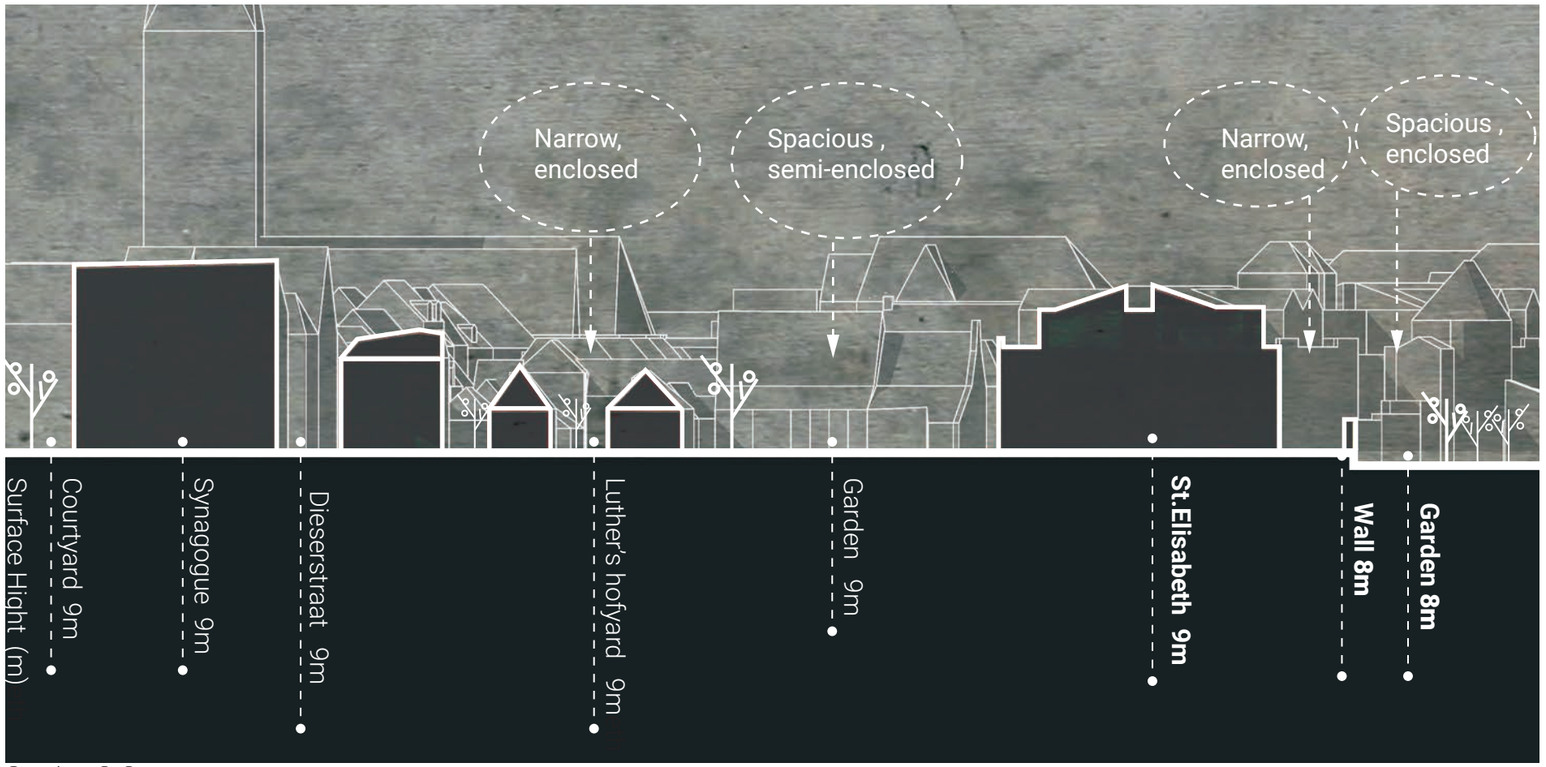
# Relationship with surrounding

## Site sections

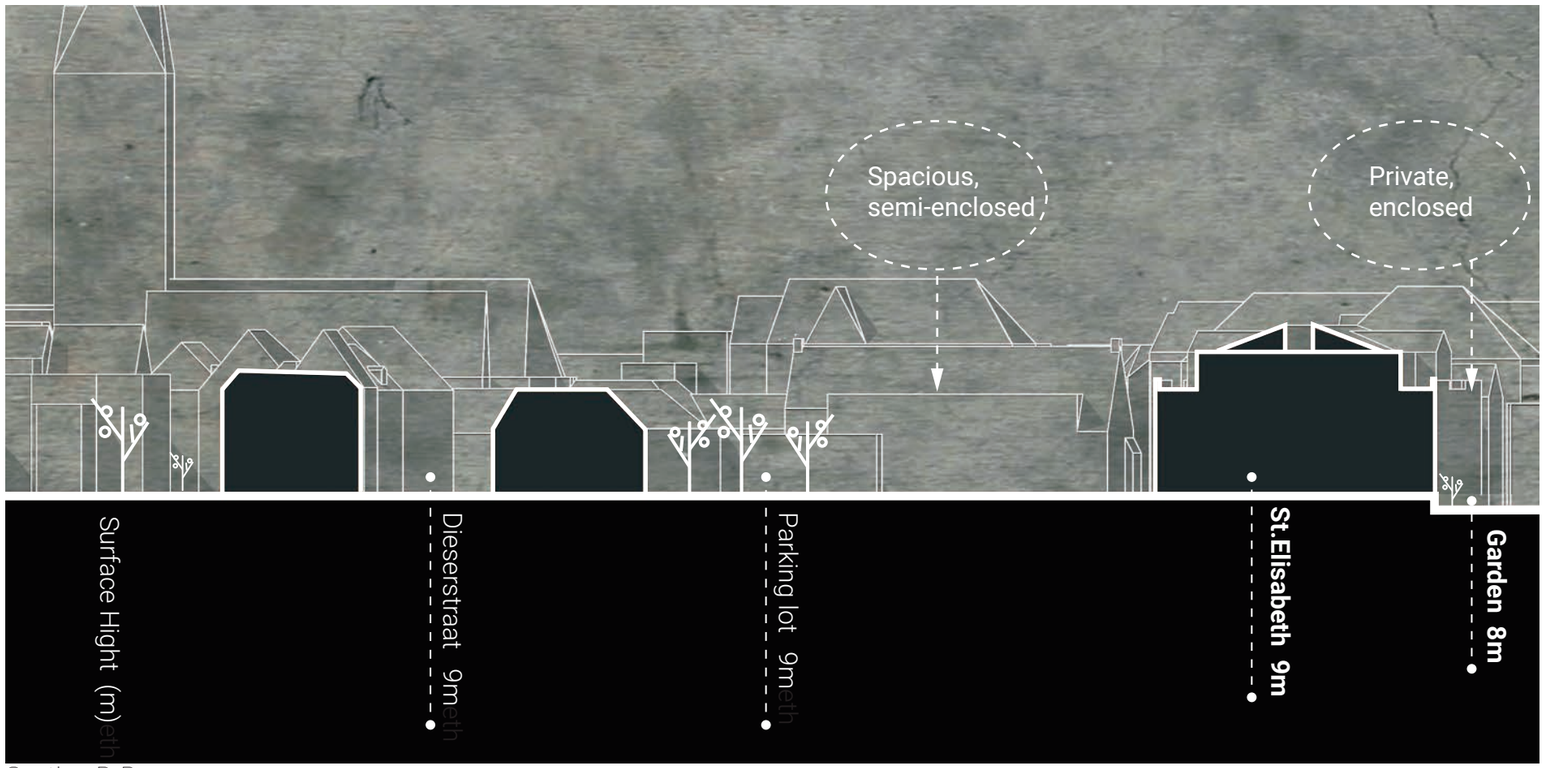



Section C-C shows the relationship between the St. Elisabeth north wing and the surrounding residential blocks. There are several gardens between the buildings seen from this section. The volume of St. Elisabeth building is much larger than surrounding dewellings as well as the city wall.

Section D-D shows the relationship between the St. Elisabeth south wing and surrounding dwellings. There is a large open space which is now used as parking lot.




Section C-C




Section D-D

# Spatial Relationship With the Wall

Transformations of spacial relationship

St. Elisabeth bird view before 1993 *(Historische atlas van Zutphen , unkown year )*

## Changing spatial relationships

Upon visiting the site, the space between the main building and the remaining city wall was found to be quite narrow . The main building gave an overwhelming impression, but from the old picture we found that this in-between space was different before the reconstruction in 1993. The old photo shows that the spatial relationship was different with the former 1965 south wing: the in-between space was larger and covered by a green lawn.

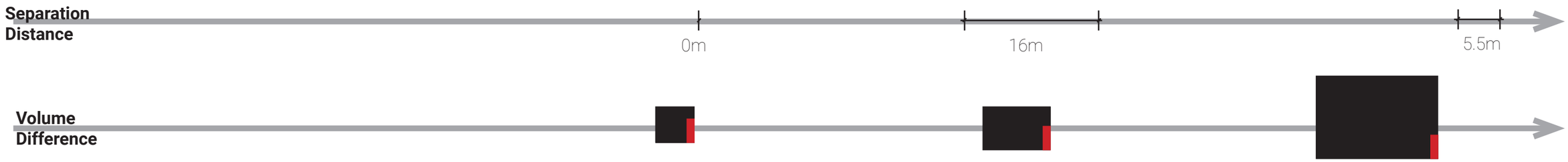
In the following page, the spatial relationship between the city wall and the main building changed in history is analyzed.

St. Elisabeth bird view in 2017
*(Google map , 2017 )*

The space between wall and building in 2017

# Spatial Relationship With the Wall

Transformations of spacial relationship





St. Elisabeth building (South wing)

City wall

## Spacial Distance

During 1871 to 1955, there was a building volume attached to the city wall. At 1965, a new volume was built 16 m from the wall. In 1993, the building was reconstructed, now being only 5.5 meters from to the wall.

## Volume Difference

The St. Elisabeth building had been through several expansions and reconstructions. Step by step, the volume of south wing grew which lead to an increasing volume contrast between the building and the wall.

## Quality

Compared the four prior spatial relationships between the wall and building, we can find the current space relationship is of bad quality. The distance is too narrow and the volumes have too much contrast.

# Conclusion
## Vital characters of the site

### Continuously changing through history

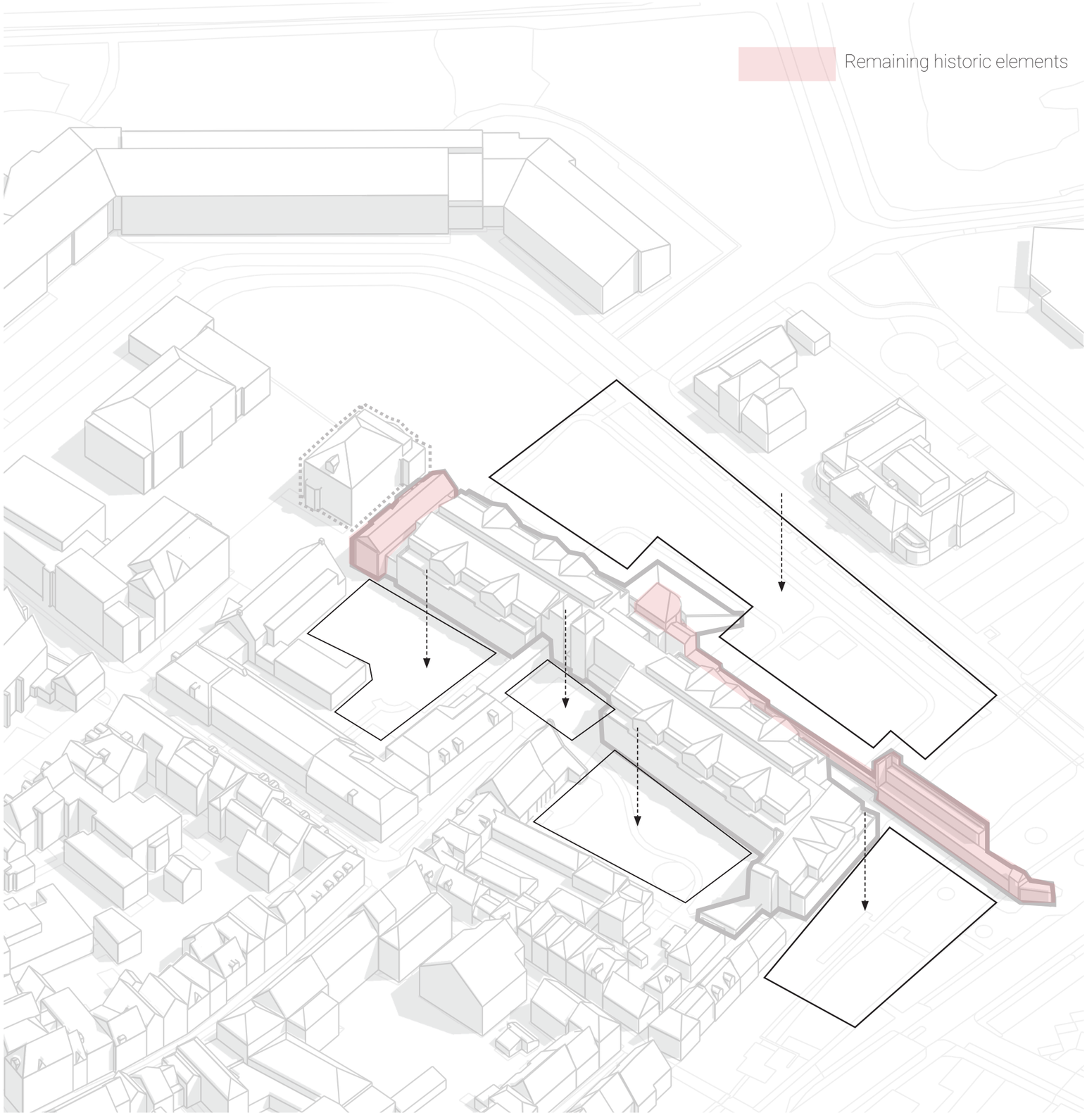
St. Elisabeth has been through several alterations , renovations and reconstructions. So the site changed continuously. The most inflential change was due to the reconstruction in 1993. The whole St. Elisabeth elderly housing was torn down and rebuilt in a larger volume.  However, the changes are not definitely good. Some changes leaded to a worse spacial relationship. Like the reconstruction in 1993 created a worse spacial relationship between the elderly housing and the city wall. The site may require a new change in the future.

### Remaining historic elements

In the site of St. Elisabeth, there are two important remaining historic elements, ie. the St. Elisabeth chapel and the  remaining city wall. But these the main buillding does not have a good spatial relationship with these historic elements.

### Site as a saperation of surroundings

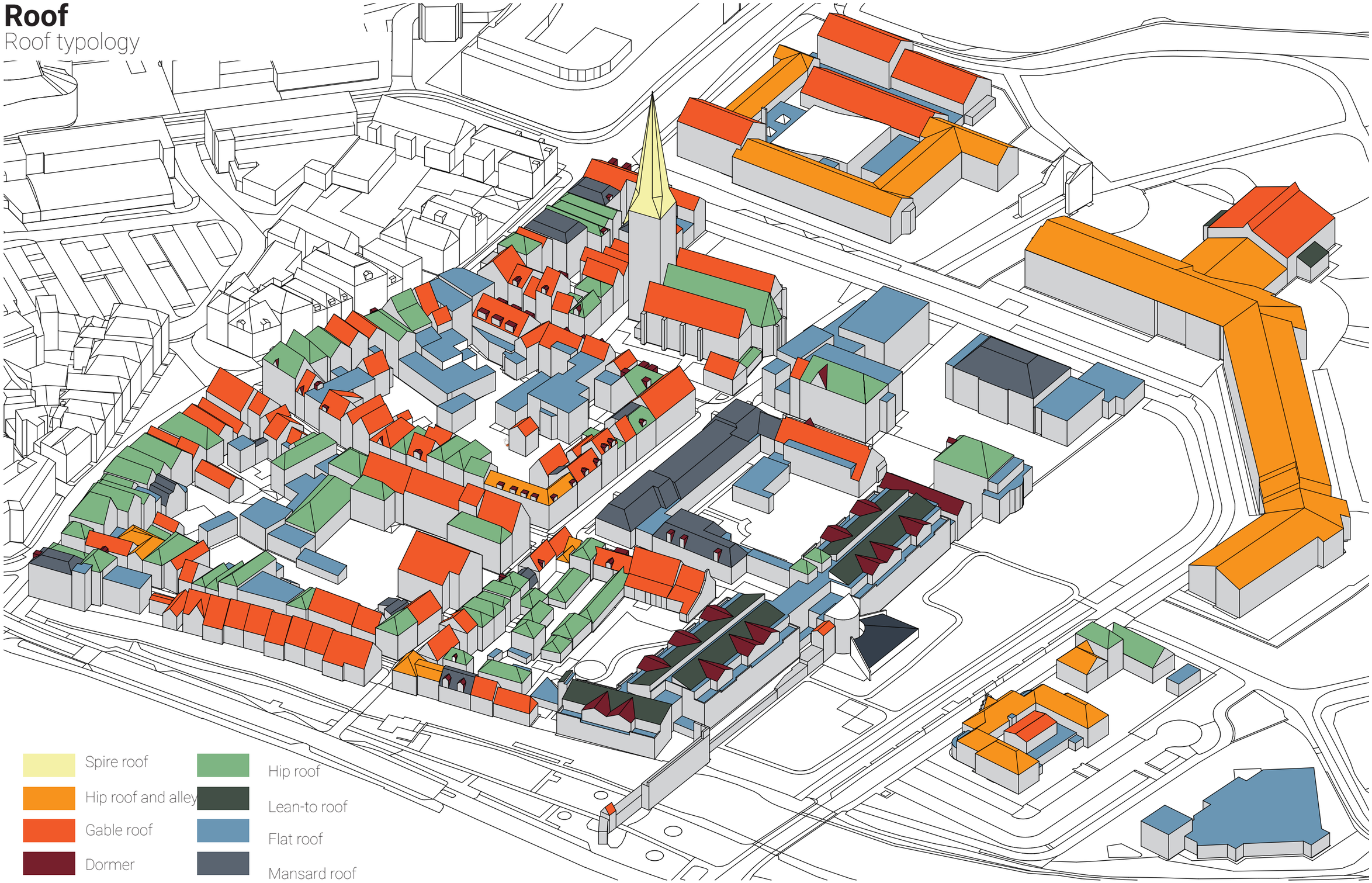
From analysis of the relationships between site and surroundings, we can find the the site actually separate the surroundings and lead to different characters and atmosphere of surroundings.



# 03 Skin (Exterior)

# Roof

Roof typology



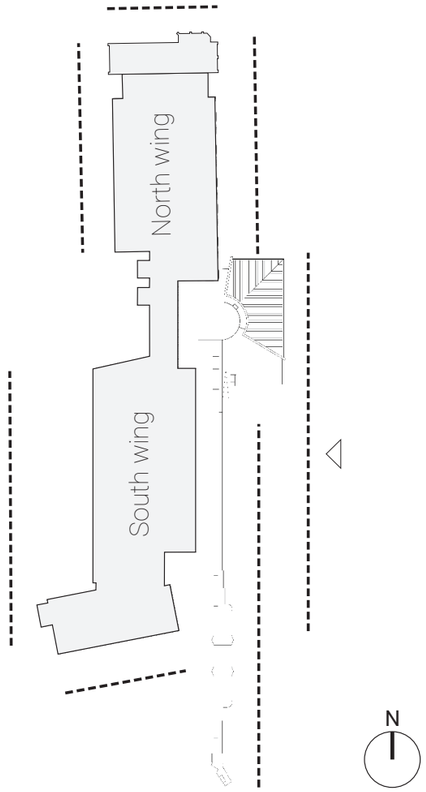



34

# Materiality of Envelope

St. Elisabeth was composed by several different volumes and in-between spaces, those volumes creates a diverse exterior performance in difference directions.

The two main materials in the facade are brick and concrete, but there are different manifestations such as finishing and pointing in each of the same materials.




Eastern facade of south wing

Yellow finishing

Brown finishing

Beige brick

Red brick for city wall

Steel plate roof

Blue wooden framework

White wooden framwork

Black tile roof

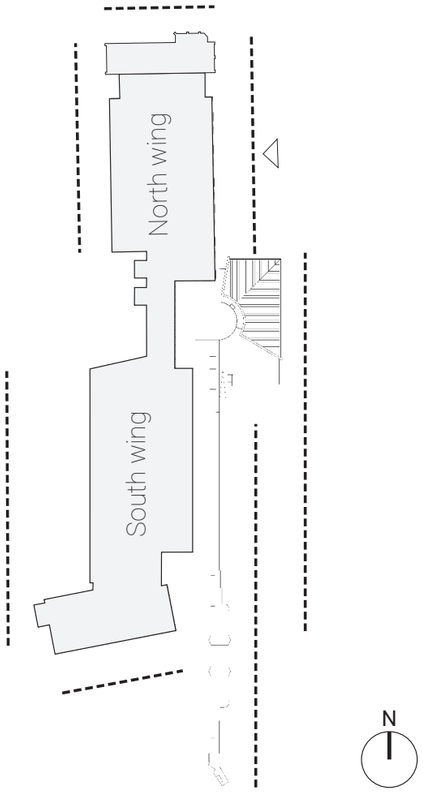


35

# Materiality of envelope

The ground level in esatern facade of north wing is 1.2 meters lower than the other sides, and this part of fundation is constructed by the same red brick as the one used in city wall.

Above red brick foundation, only yellow is used in concrete wall finishing. In the in-between space of nursing house and chapel, a peiod of light orange wall was built as transition from yellow finishing to red brick.




Eastern facade of north wing

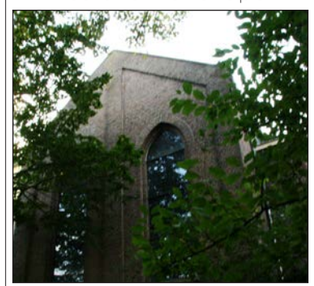
Yellow finishing

Red brick for fundation

Steel plate roof

Beige brick

Red brick for chapel



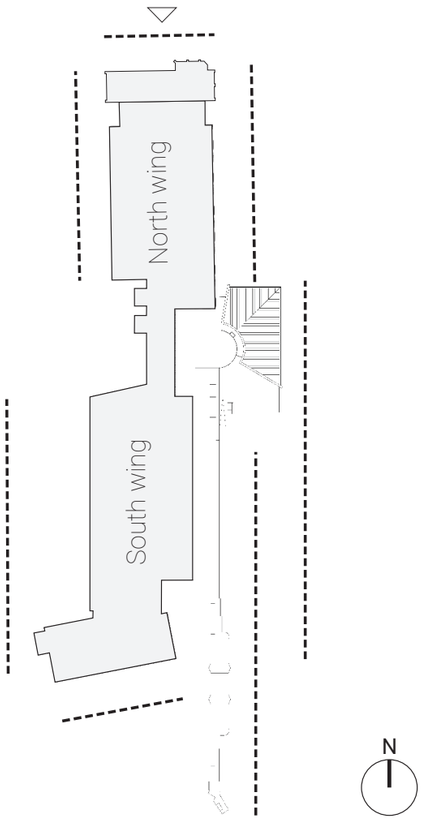
White wooden framwork

Blue wooden framework

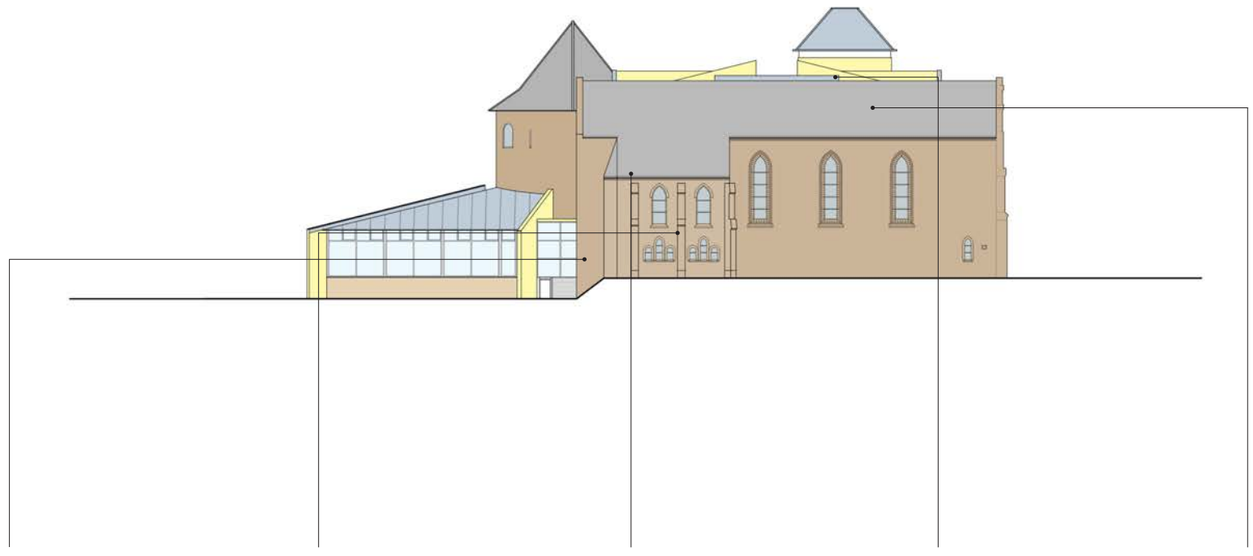
# Materiality of Envelope

Northern facade is covered mostly by the chapel, therefore the mian material of this facade is red brick. Only a little part of twin towers with yellow finishing can be seen in this direction.

Also an elevation difference is shown in this facade, the ground level of front part is 1.2 meters higher than rear part.



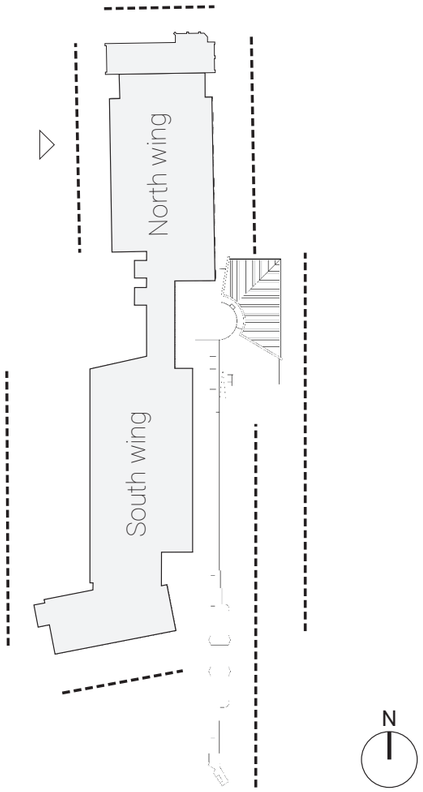

Northern facade of north wing



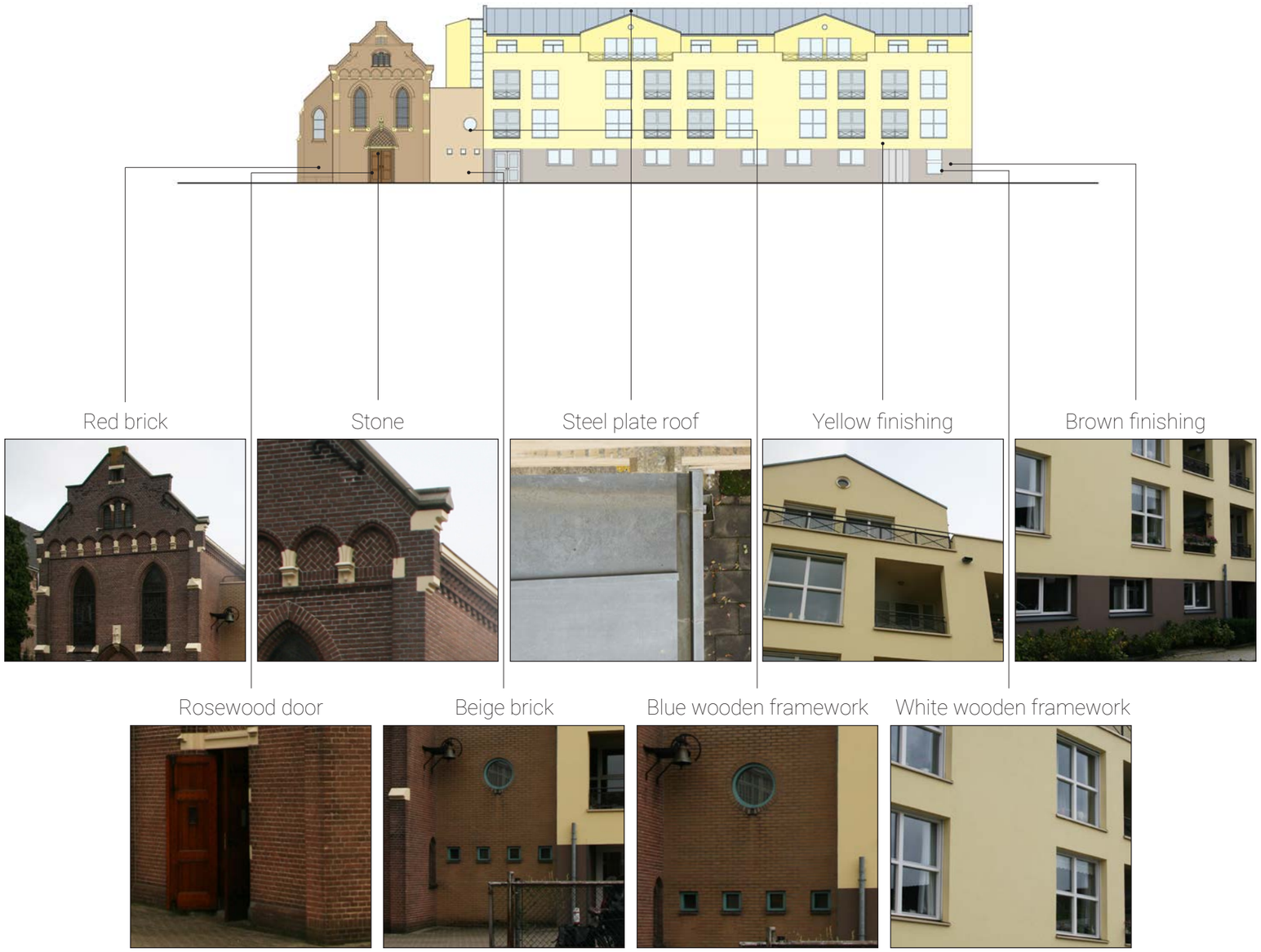

# Materiality of Envelope

Western facade  shows the conjunction and transition of chapel and nursing house, which also includes the main entrance of chapel and a secondary entrance of nursing house.

In this facade, the brown finishing line is up to the bottom of first floor, the same as the eastern facade of south wing.



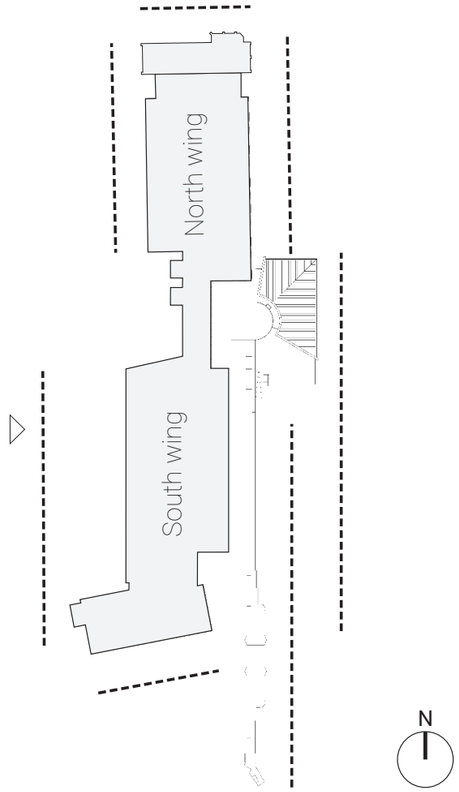

Western facade of north wing



# Materiality of Envelope

This is the main facade of the whole complex, it ranges from twin towers to the flank building in the riverbank, including the main and a secondary entrance.

The brown finishing line is up to the 1/2 of the ground floor level, which is different with the north wing.




Western facade of south wing

Beige brick

Yellow finishing

White finishing


Brown finishing

Steel plate roof

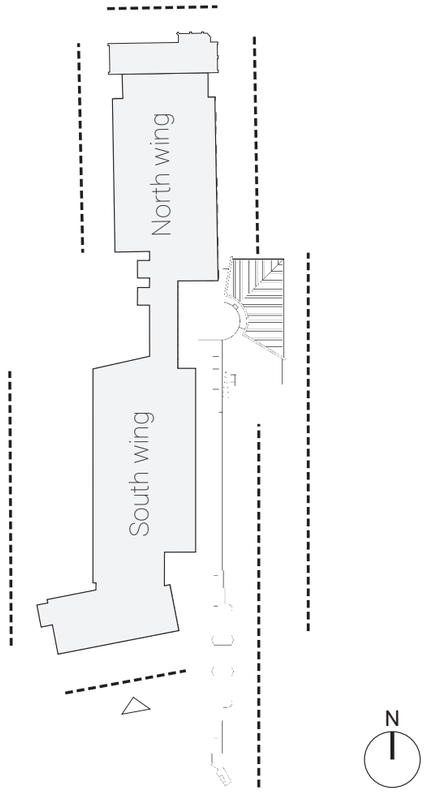

Blue wooden framework

White wooden framwork

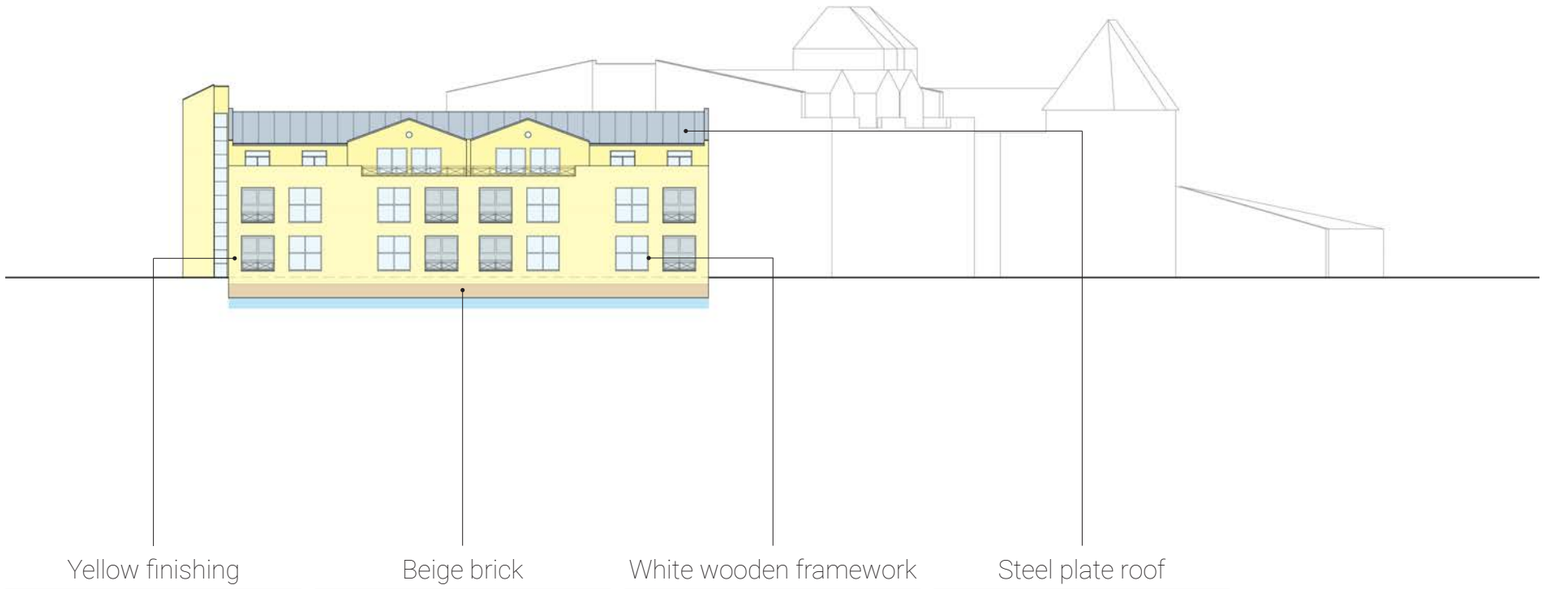
# Materiality of Envelope

This is facade is also frontage of flank building in the south wing, which is one floor level lower than the main building. Different with other sides, finishing above the ground level is only in yellow colour, until the foundation close to the river is constructed by brick which is also used in trasition space.





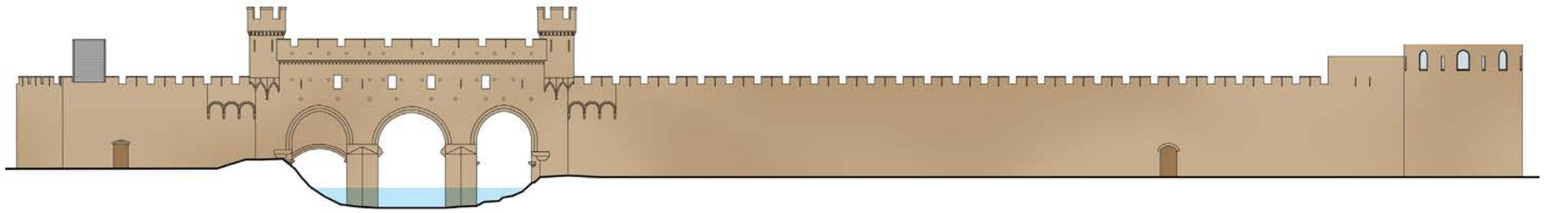

Southern facade of south wing (flank building)



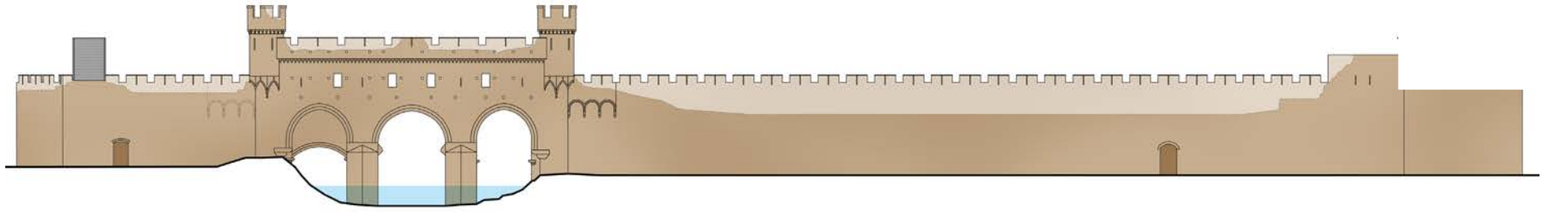

# Appearance of City wall

City wall was fisrtly built before 15th century as a part of outer city wall system, and because the gate went across the Berkel River in this site, hence this area is called Berkel poort.

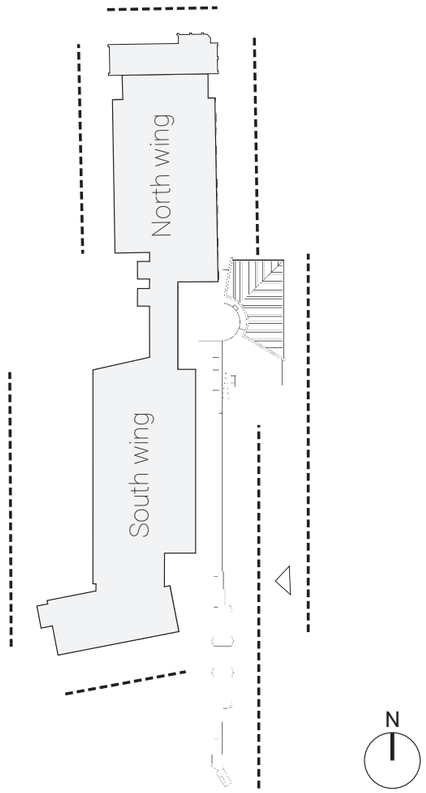
During the 19th century, most part of city wall was demolished, only this section was conserved untill now.

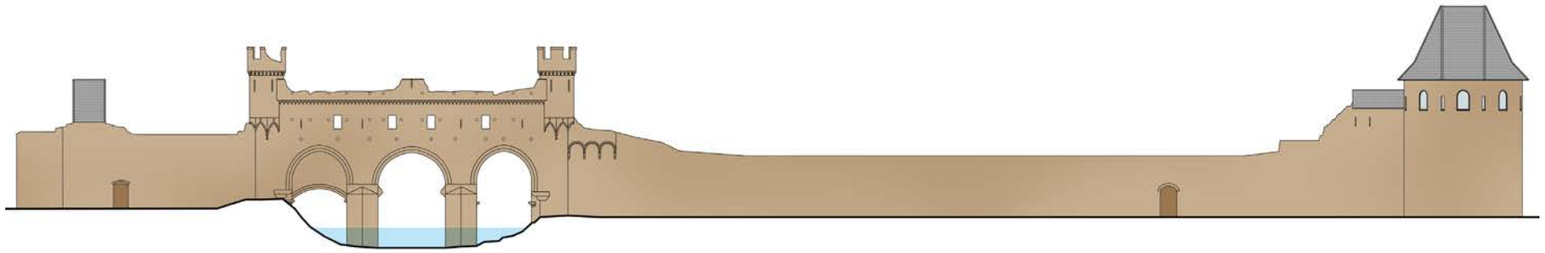


Original appearance



Damaged ratio



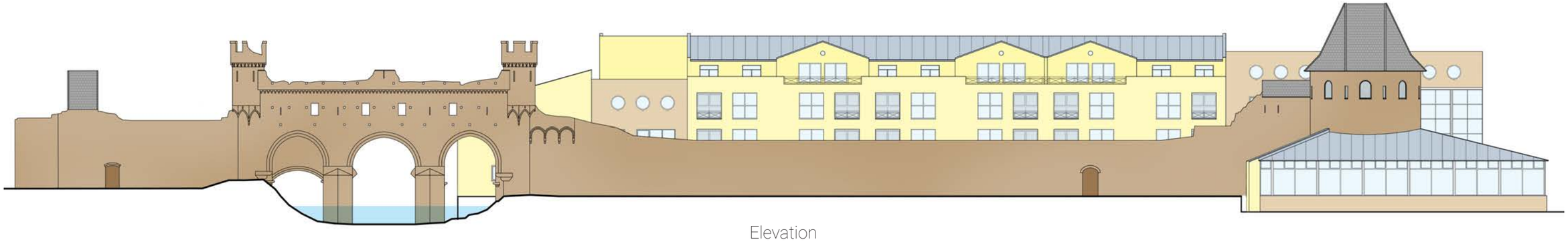
Current situation

# Appearance of City Wall

Overlapping ratio

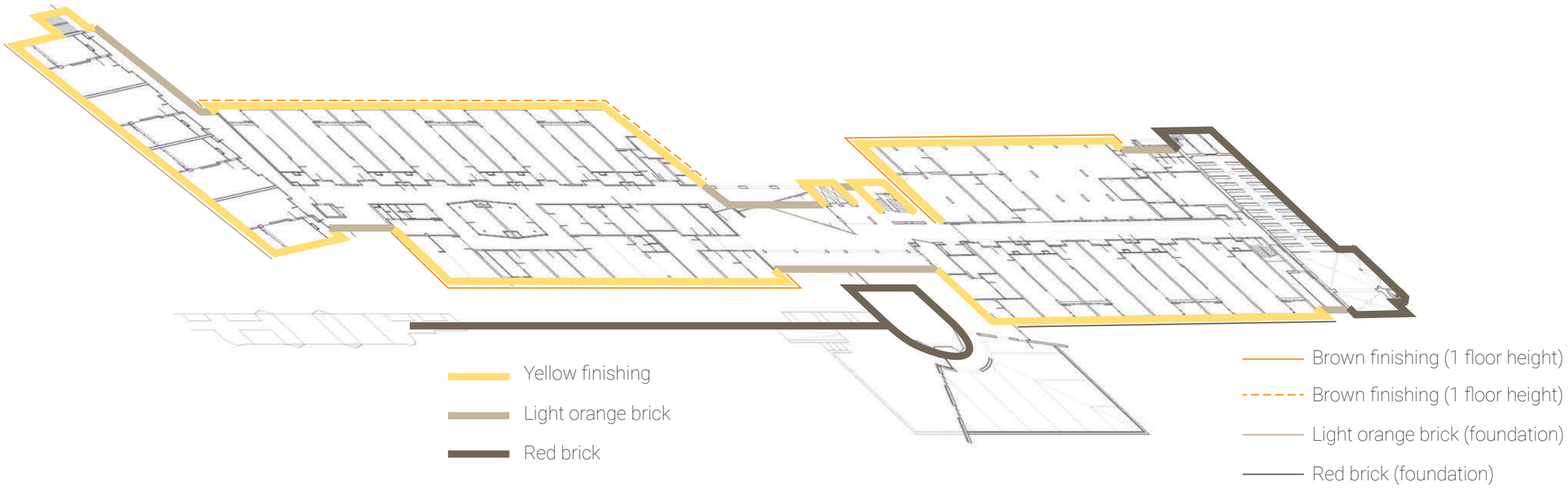


Current appearance of city wal and St. Elisabeth block



Elevation

# Colour circulation

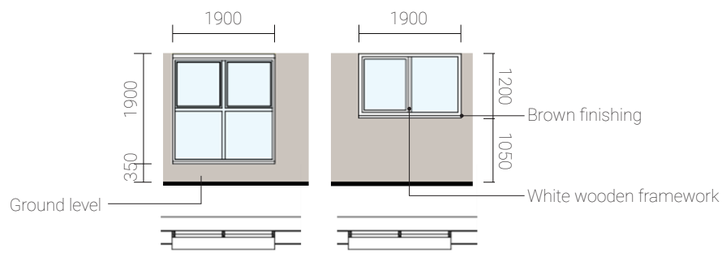



# Components of facade

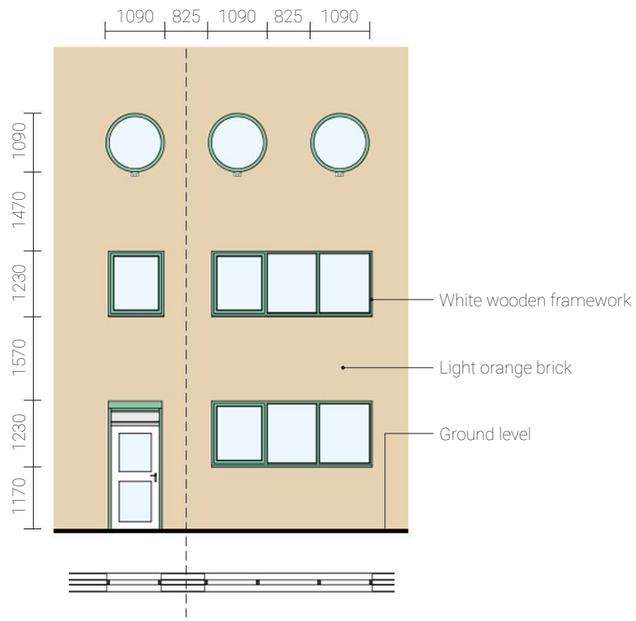
Windows and balconies are two important elements situated on the facade, in St. Elisabeth complex, a series of different windows together with different wall clading form diverse facade units.

In another side, those units make up the appearance of the elevation by logical arrangement, depending on the geomorphologic and environmental characteristics.

## Unit 2

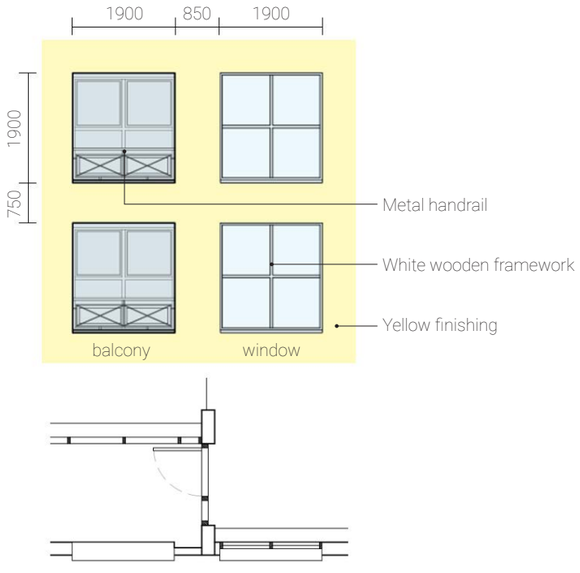



## Unit 4

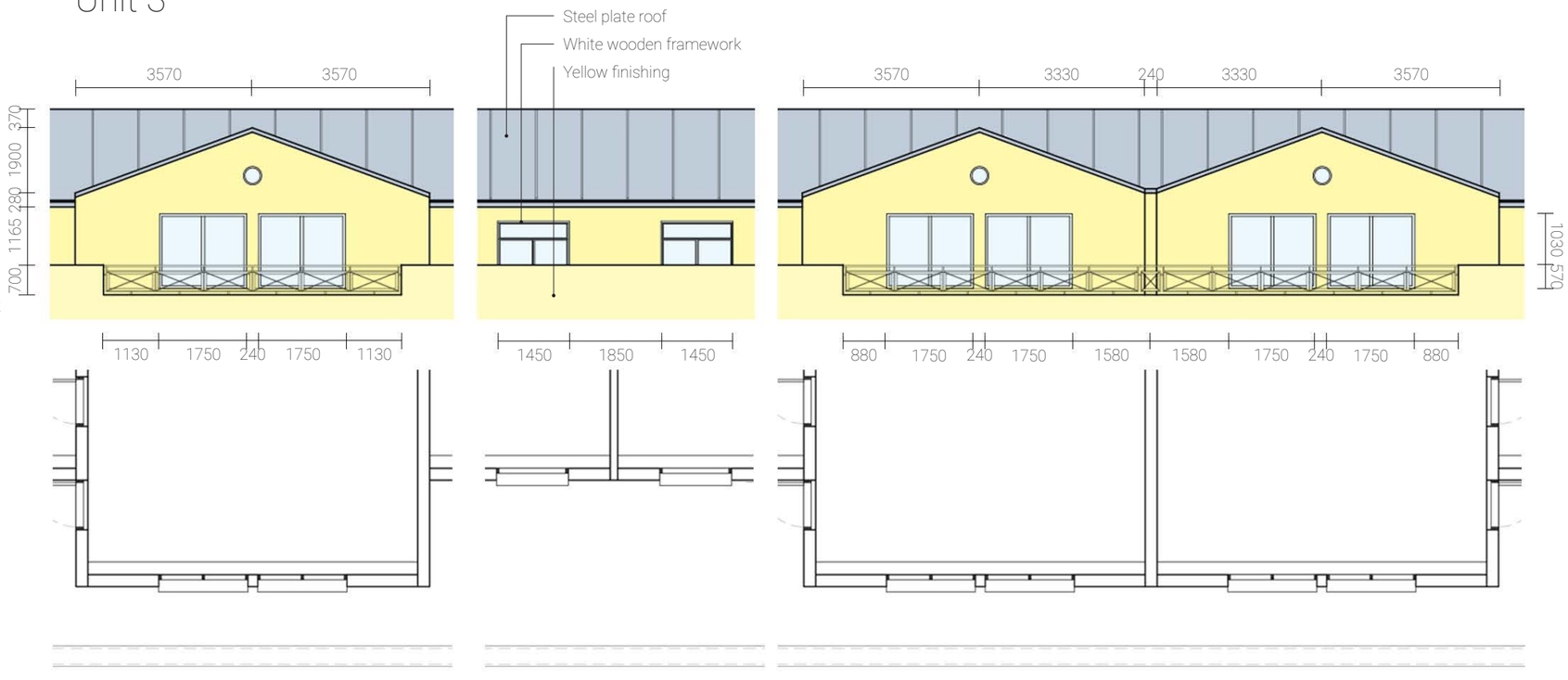





## Unit 1




## Unit 3



Eastern facade of south wing:

6 * Unit1

4 * Unit2

6 * Unit3

11 * Unit4

Eastern facade of north wing:

6 * Unit1

6 * Unit3

Western facade of north wing:

5 * Unit1

7 * Unit2

5 * Unit3

Western facade of south wing:

7 * Unit1

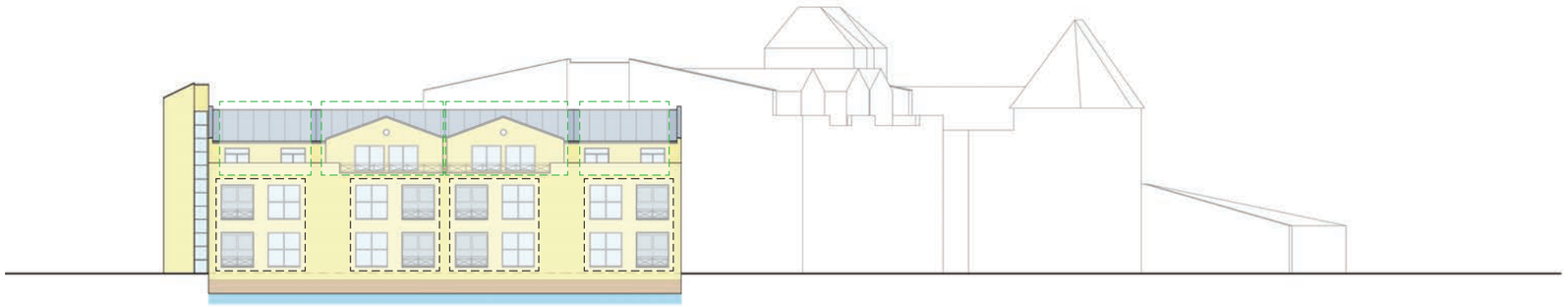
8 * Unit3

9 * Unit4

Southern facade of south wing (flank building):

4 * Unit1

4 * Unit3

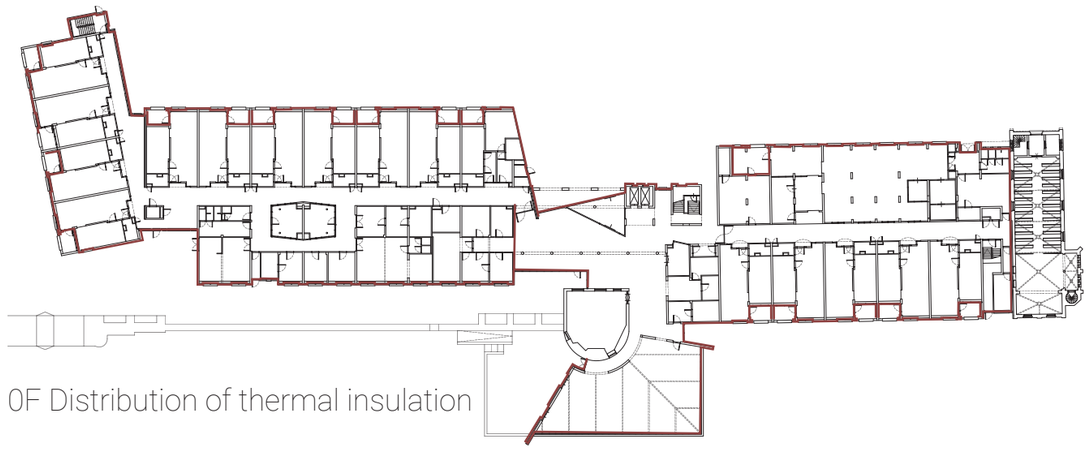




46

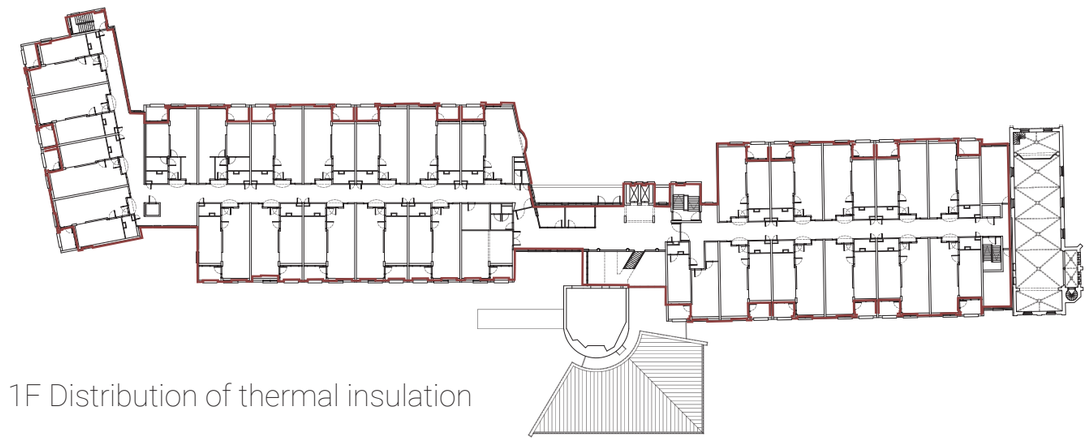
Other specific components

# Thermal line and detail

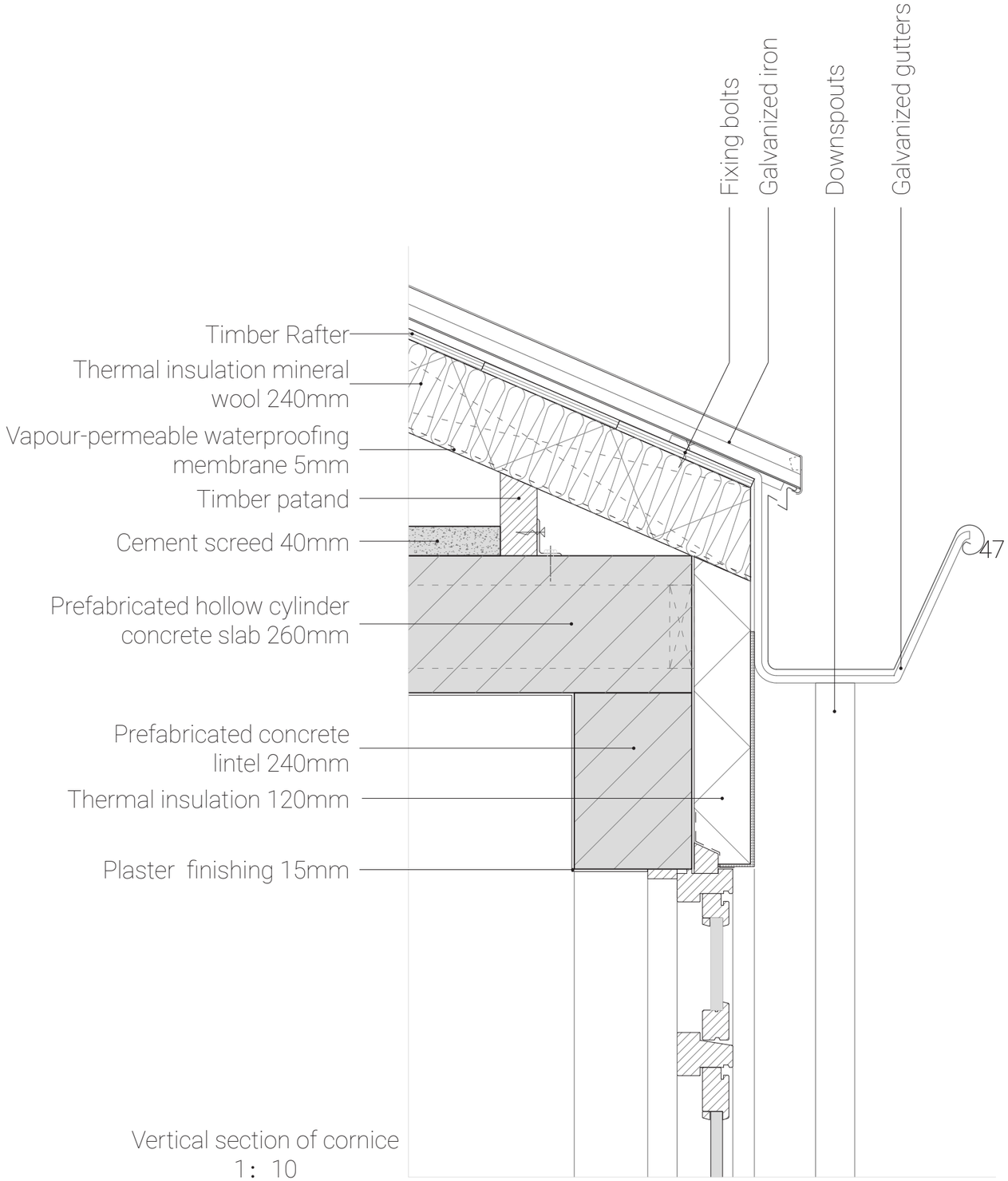


0F Distribution of thermal insulation

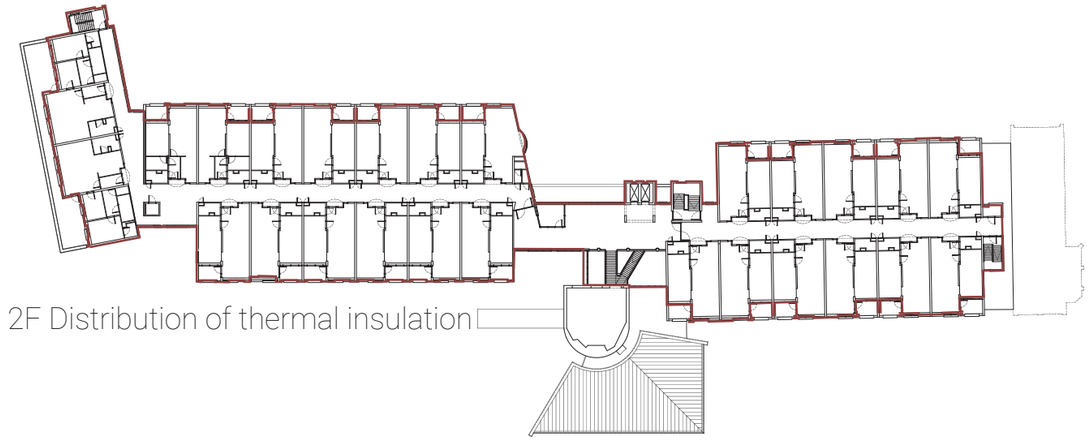




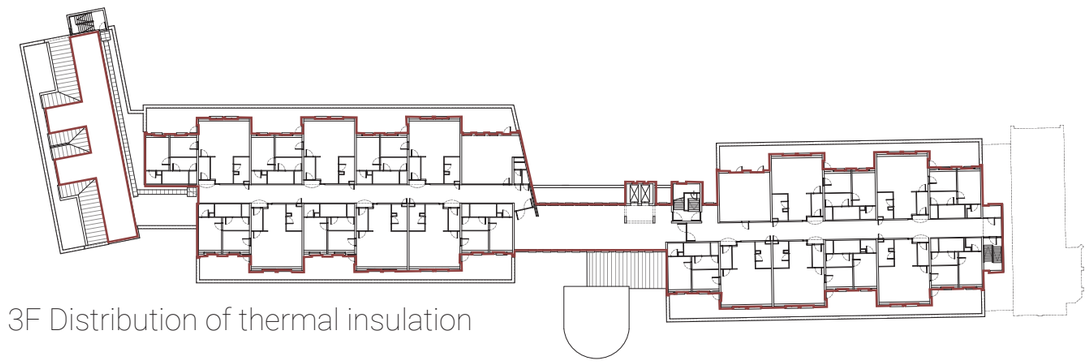
1F Distribution of thermal insulation



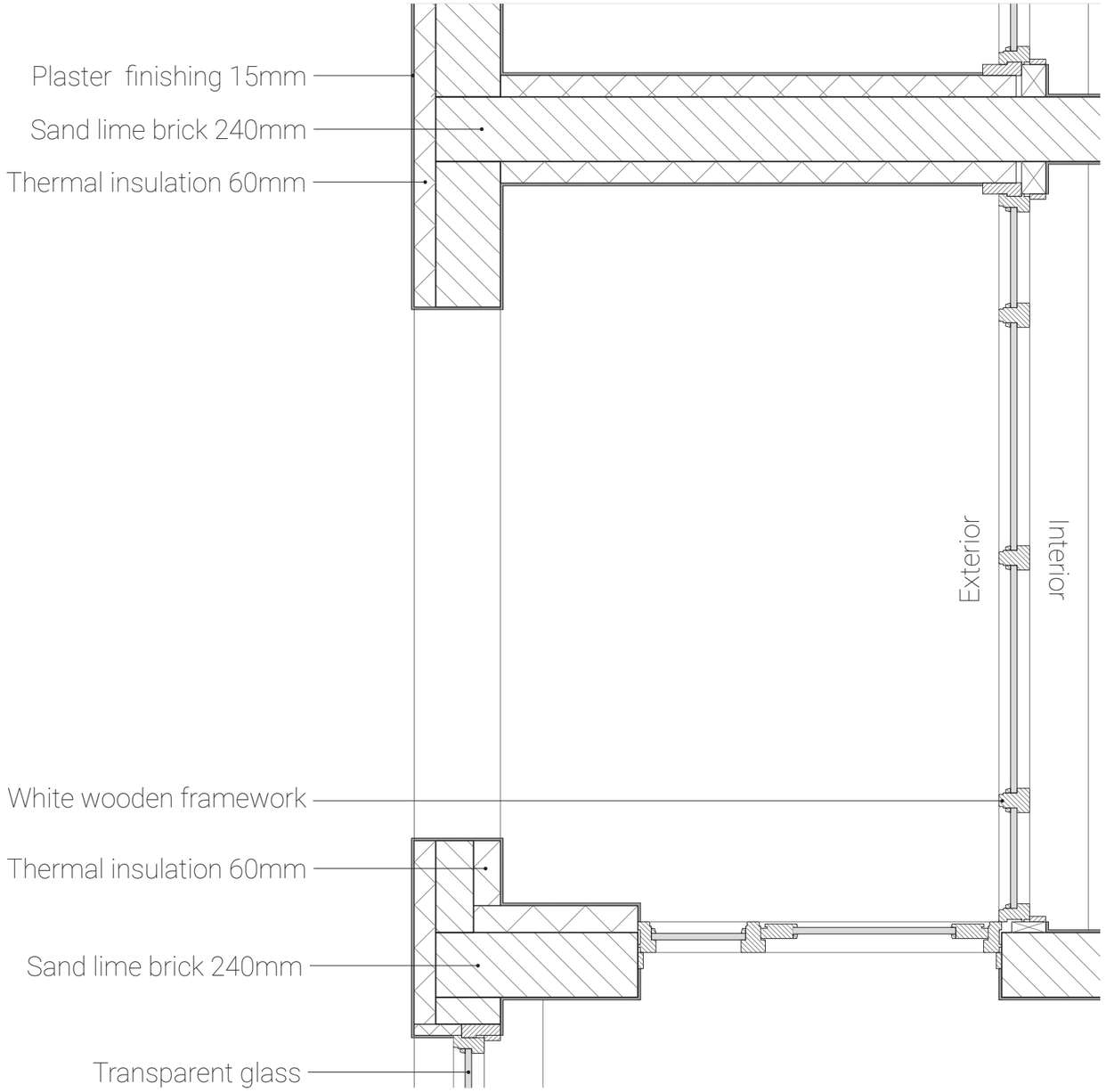

Vertical section of cornice
1：10



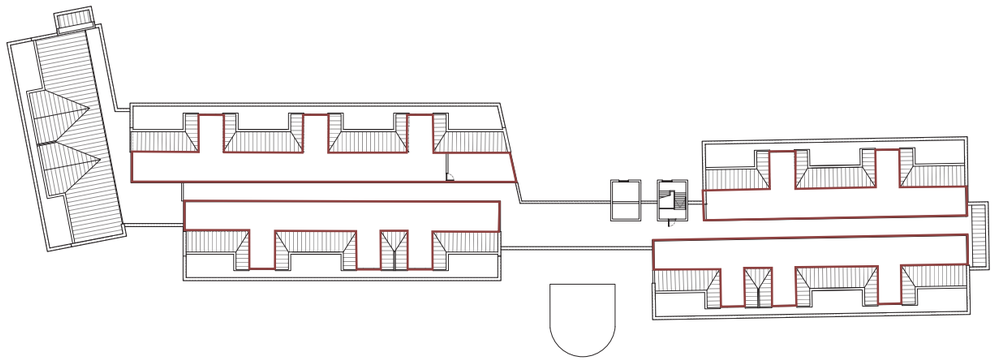
2F Distribution of thermal insulation



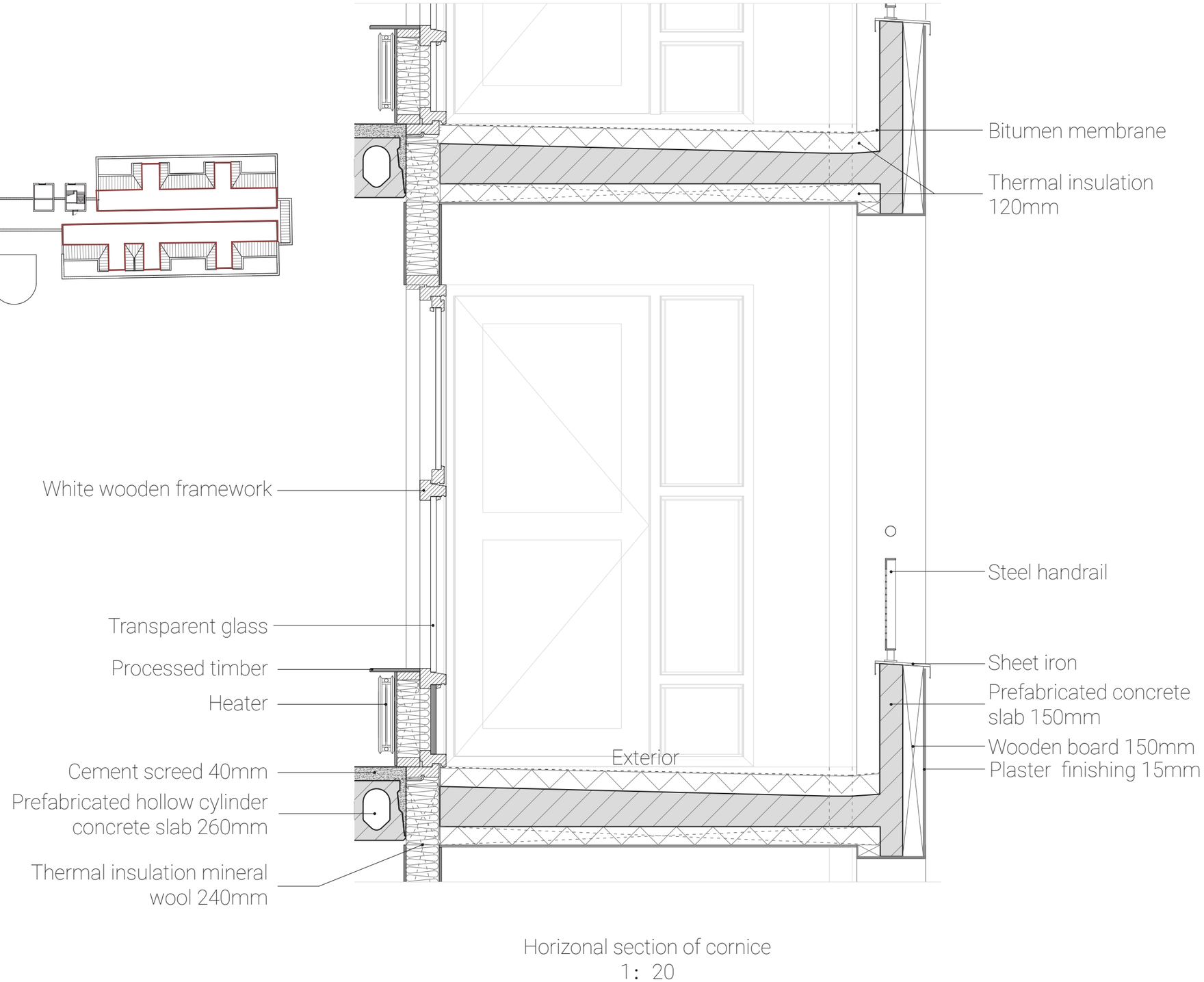
3F Distribution of thermal insulation




Vertical section of cornice
1：20



4F Distribution of thermal insulation




Horizonal section of cornice
1：20

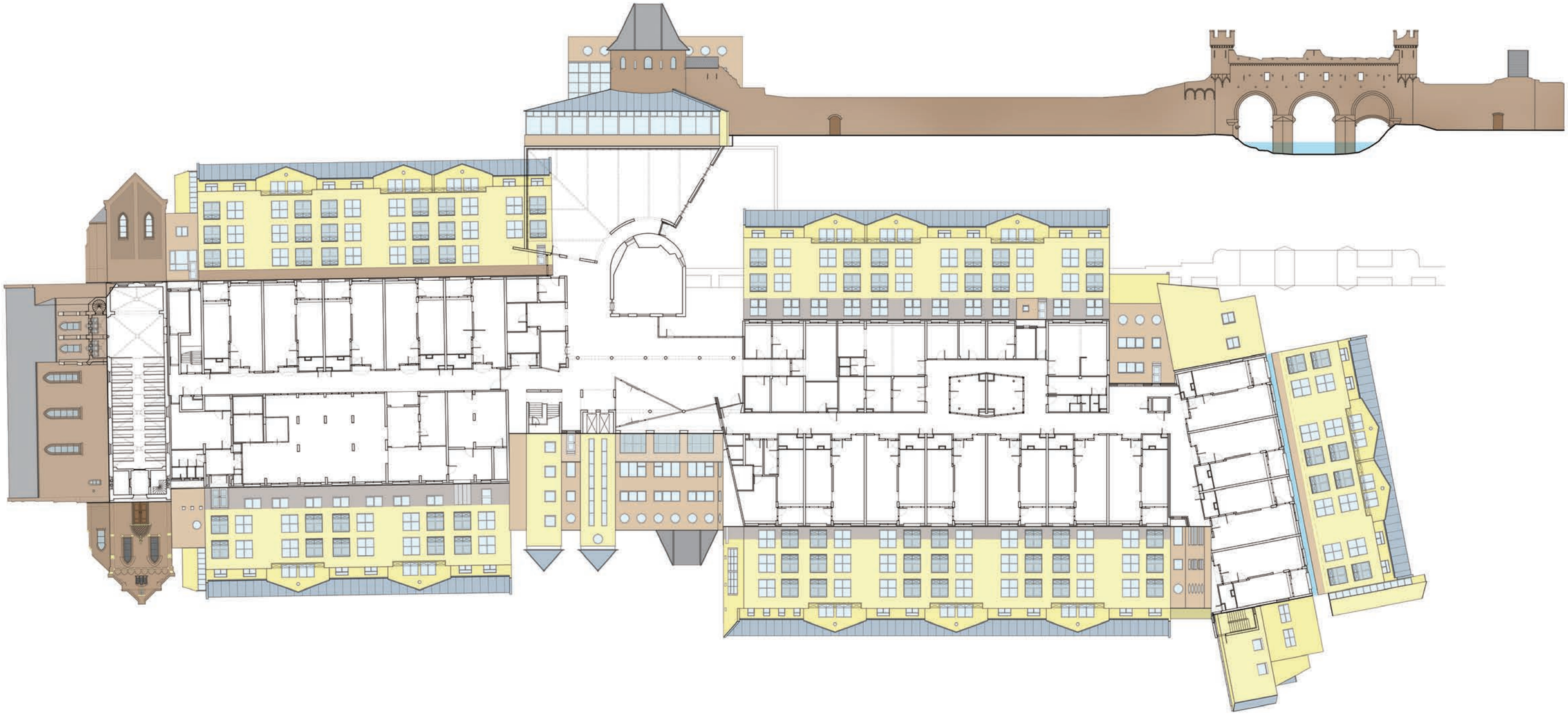
# Conclusion

We explored the exterior in three aspects: roof, façade and loggia.

Roof of St. Elisabeth building was shaped into the appearance mixing dormer, lean-to and flat roof in order to fit in the city pattern and skyline. Because the prototypes of these roofs can be easily observed in neighbourhood.

Meanwhile, the façade was designed in a rational way. Main vloume of the building was painted in yellow, but the trasition spaces which connect to red brick chapel and flank building were clad by beige brick, as well as the atrium in the center. Different volumes were coloured differently according to the palette of “yellow-beige-red”, but each façade was composed by a series of regular units and those units were kept in a logical porpotion.

Old people may not have the ability to go outside, hence loggias were arranged as an extension of exterior, it create in-between space on the facade. Although these loggias maintain the integrity of the facade, meanwhile bring the dilemma of ithermal nsulation arrangement.

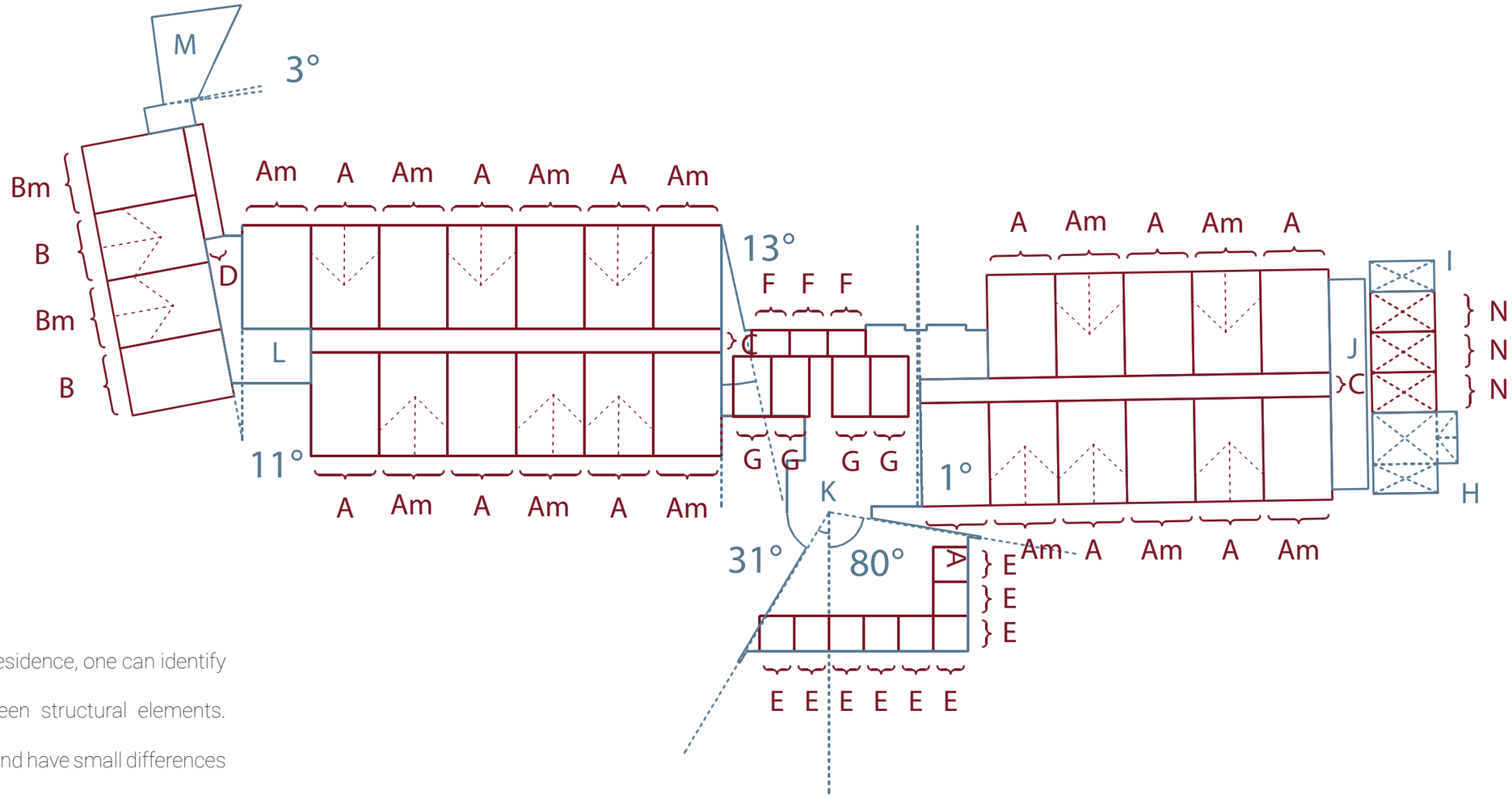


# 04 Structure

# Load bearing structure

Overview

*Floor plan with markings of the identified structural modules*






## Introduction

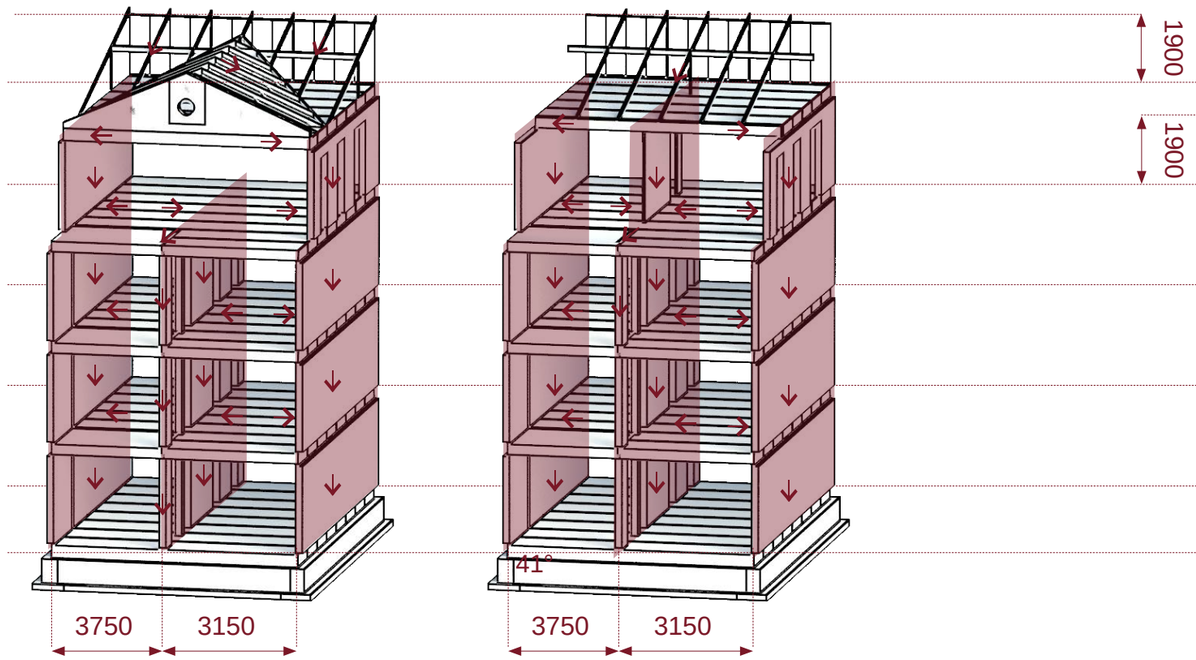
In both the chapel and the St. Elisabeth residence, one can identify modules with a specific spacing between structural elements. These modules can be mirrored, rotated and have small differences in the type and/or rotation of the individual elements. However, the spacing can be seen as a series of repetitions that occur at least twice in the building. That are marked in red letters.

There are also exceptions to this modular system. The spaces between the wings of the building are constructed under various angles and unique dimensions. These are marked in blue letters.

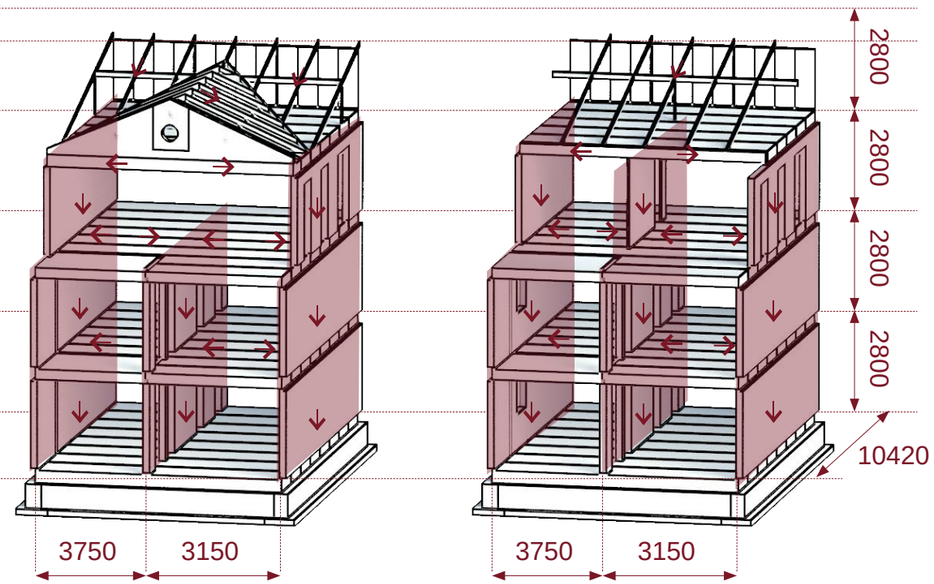
# Load bearing structure

A + B: Segments

A




B






A + B: Segments of the apartment wings

The largest section of the St. Elisabeth ensemble is made out of the apartmentwings. A and B could be regarded as subvariants, in which B-segment is the lower 3-story variant to the 4-story A-segment.

The spacing between the walls is composed of two centre-to-centre distances: one of 3750 mm and one of 3150 mm.

This type of spacing is applied so as to alternate between a mirrored segment and a non-mirrored segment.

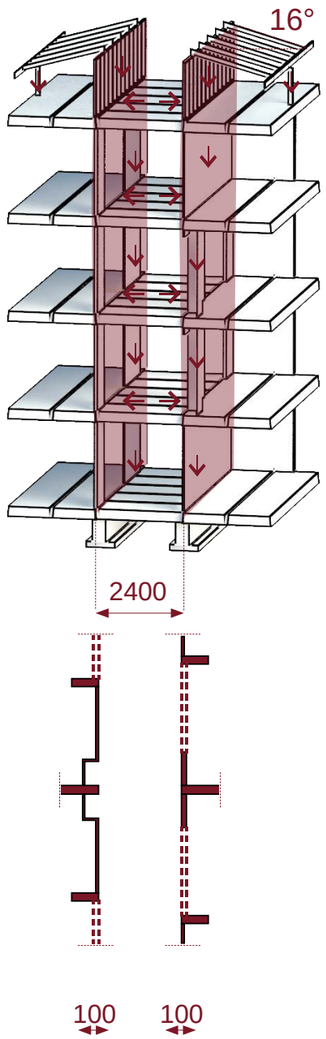
The load bearing walls are made of sand-lime brick and have a constant thickness, regardless of in which story they are placed.

The walls that carry 2 sides of floor are 240 mm thick, whereas the walls that carry only 1 floor are 150 mm thick.

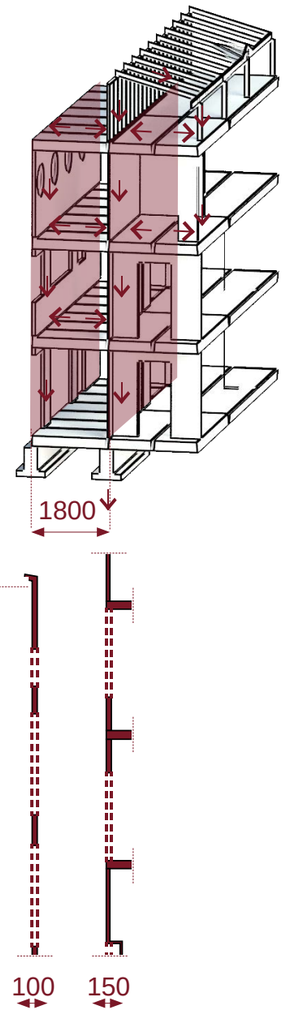
# Load bearing structure

Hallways and recreation room

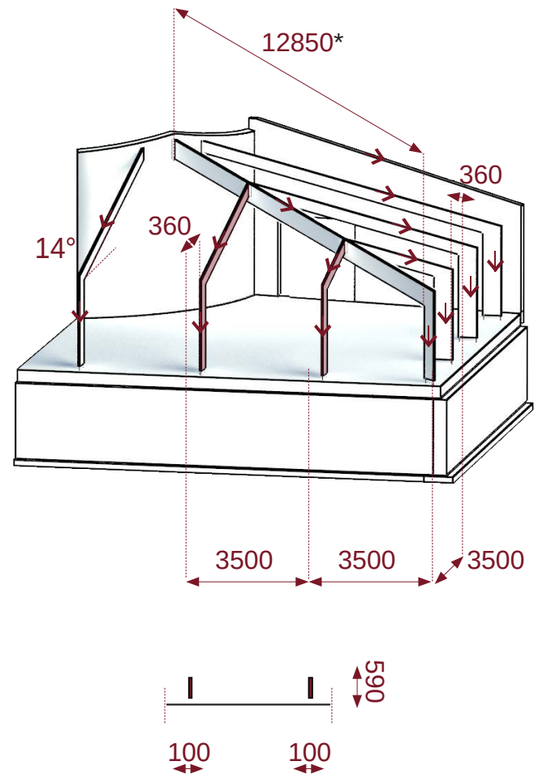
C




D




E




## Hallways

The hallways are situated between the wing segments. The floors are supported by the 100 mm thick sand-lime brick walls that run parallel to the hallway (i.e. the end walls of the apartments). Alternatively, steel lintels are used for the floor support at large openings in the wall.

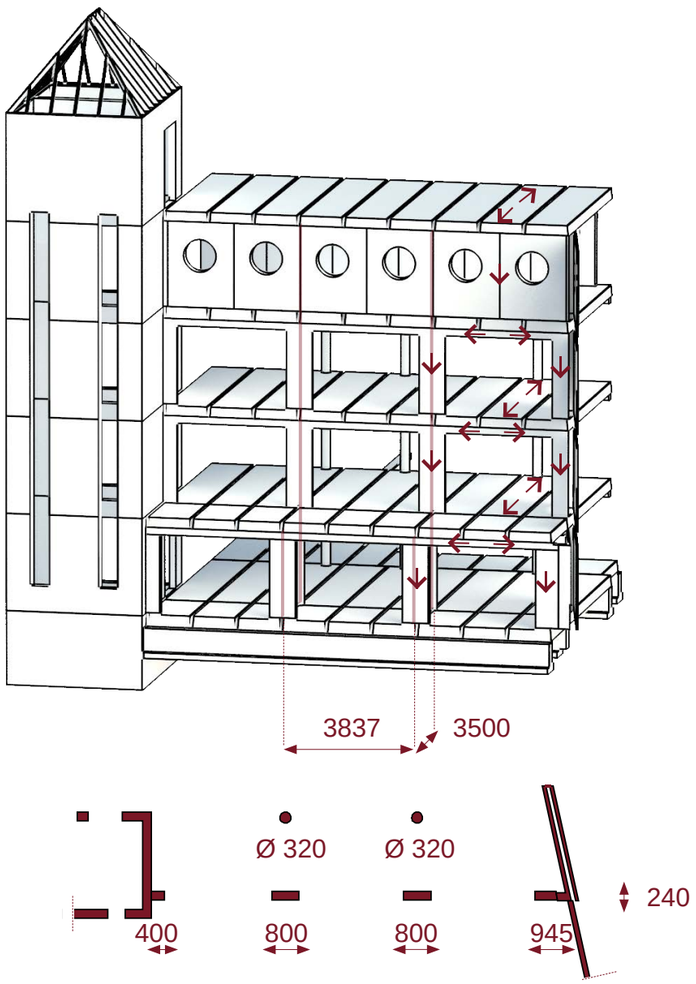
## Recreation room

The recreation room is situated below a 14-degrees sloped, pyramid-hipped roof supported by wooden frames, with a 100 x 590 mm profile . The frames run parallel to a 3500 x 3500 mm frame, and are supported on a circular wall on one side, or alternatively on a slighty larger diagional wooden frame.

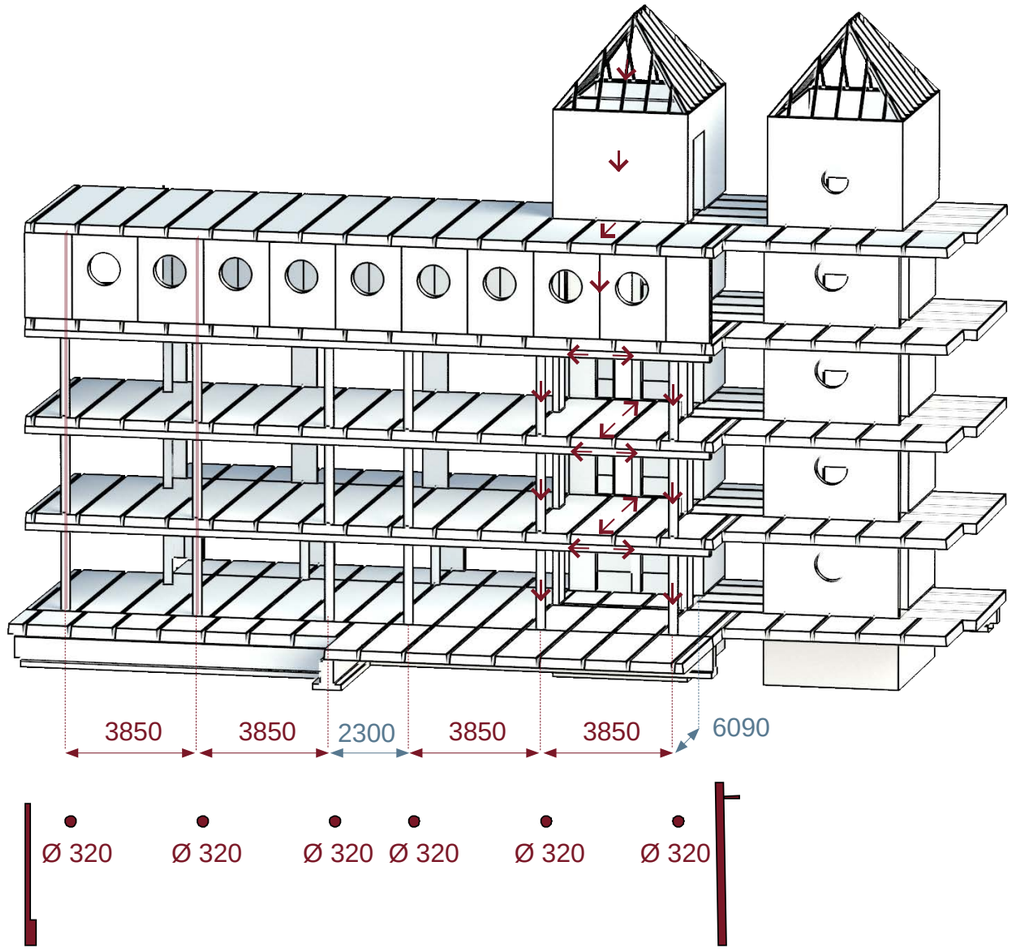
# Load bearing structure

Entrance and hall

F




G




## Entrance portico

The entrance is made of 3 equally spaced openings below a floor slab, that is supported by brick 800 x 240 mm columns with a 3837 mm center-to-center spacing. This structure continues on the successive floors. The left most column ends with its center (400 x 240) into the elevatorshaft, but the right most column ends into a diagional wall.

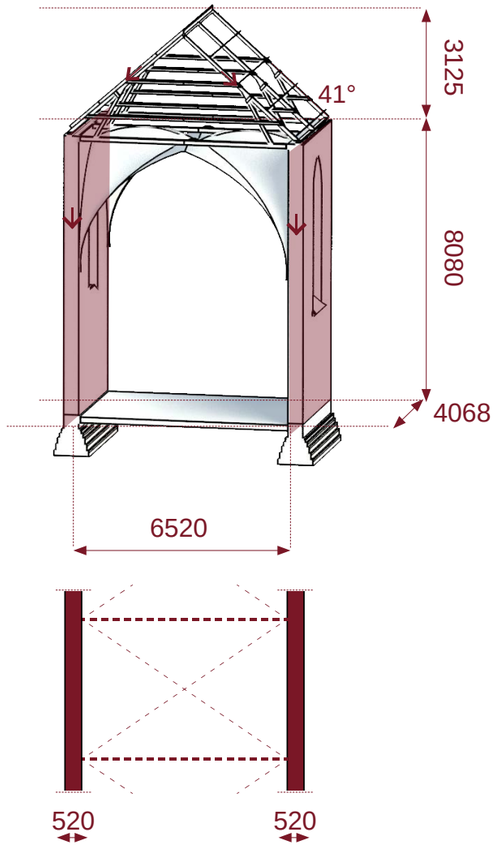
## Entrance hall

Module G describes the semi-regular spacing between the columns in the entrance hall. An open 3-story hallway runs through the hall, with the concrete horizontal beams running parallel to the hallway. The spacing occurs 4 times, but is interrupted in the middle by a spacing of 2300 mm. This marks a symmetric composition, with 2 'G' modules on every side.

# Load bearing structure

Chapel

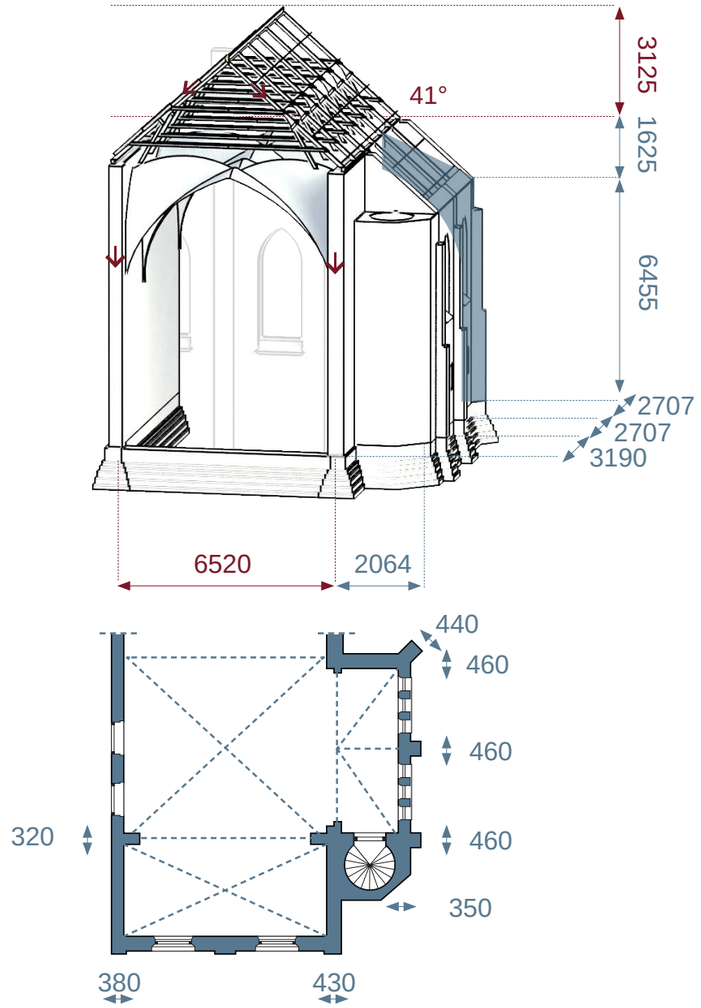
## N




### Nave segment

The chapel nave consists of 3 similar segments with centre-to-centre dimensions of 6520 x 4068 mm. The roof frames span between the two structural 520 mm thick walls and the cross-vault ceilings take care of the chapel's stability.

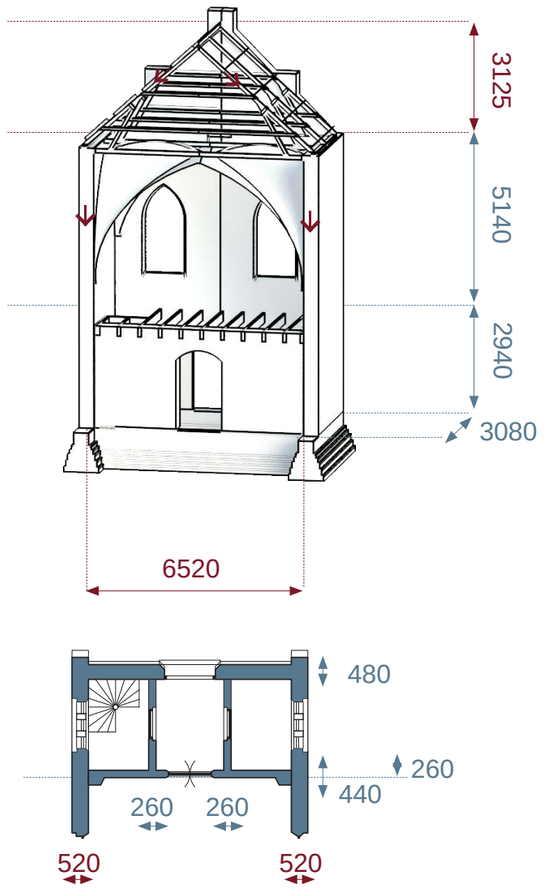
## H




### Chancel and North transept

The cross-vault ceiling above the chancel differs from the ones in the nave: this cross-vault is 1346 mm deeper than the standard 4048 mm. The transept has a 5-armed, vaulted dome ceiling, which  is supported by 3 buttresses on its outer shell. All the wall thicknesses in the chancel differ fromt the 520 mm thickness in the nave.

## I



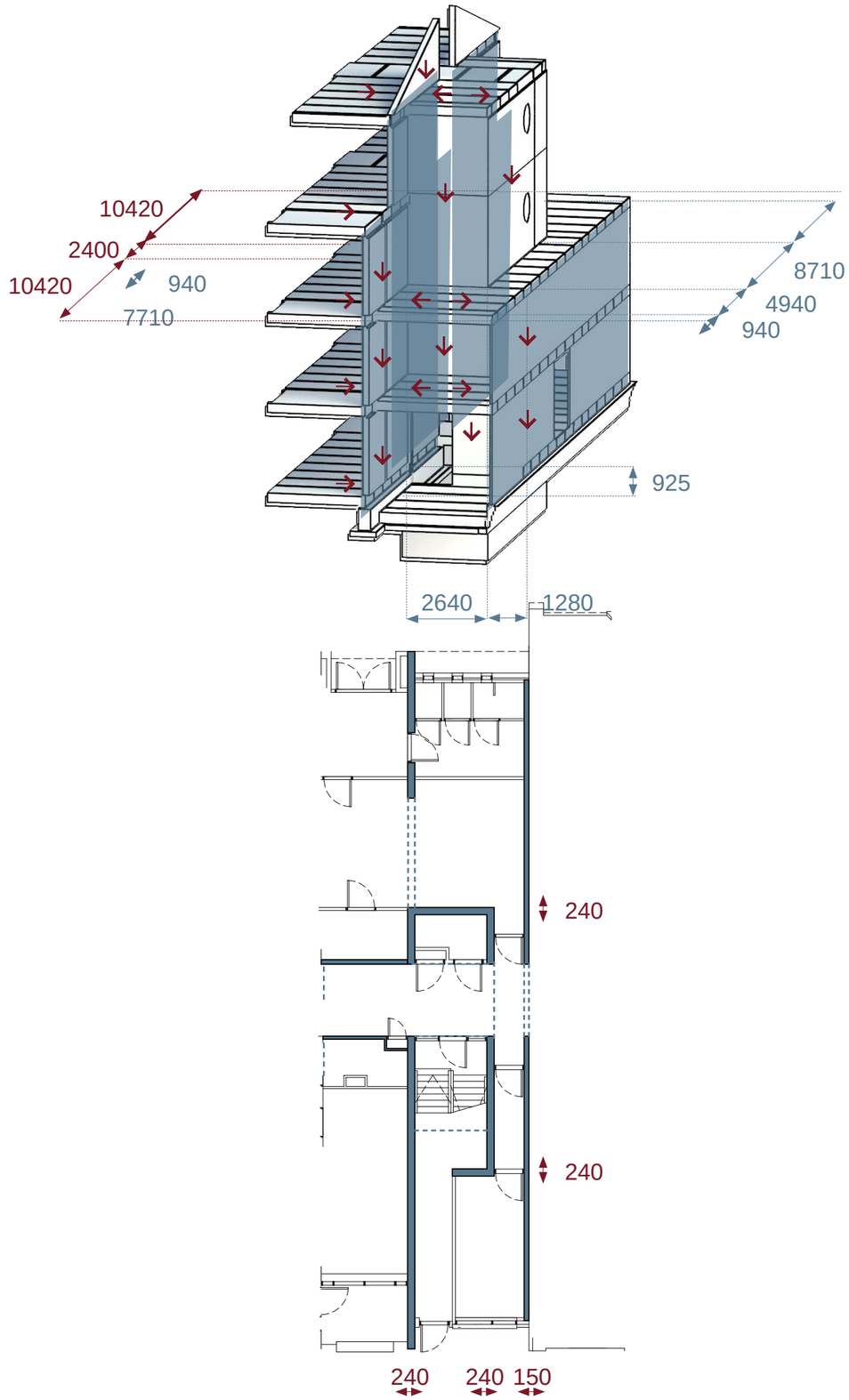

### Narthex extension

The 1912 extension of the chapel continues the 520 mm thick wall from the nave, but does not continue the modular vault depth of 4068 mm. The cross vault is 3080 mm deep and hangs over a choir platform, which is supported by a wooden joist floor on masonry walls.

# Load bearing structure

Transition chapel - St. Elisabeth residence

J




Transition chapel - St. Elisabeth residence

This transition is marked by a divergence of the A and B apartment modules. There is a 8710 x 2640 stairhouse shaft which is structurally split by the 2400 mm wide hallway. Both split parts serve as U-shaped stabilizers for the northern wing of the St. Elisabeth residence. The outer end of the stairhouse is 1280 mm apart from the center of the 150 mm separation wall with the chapel. The shaft ends 925 mm below the ground level, to level with the hallway to the garden.

The application of structural walls is consistent with the apartments segments of the building: sand-lime brick walls with 240 mm thickness for 2-sided floor support, 150 mm for single support.

# Load bearing structure

Transition north and south wing

# K

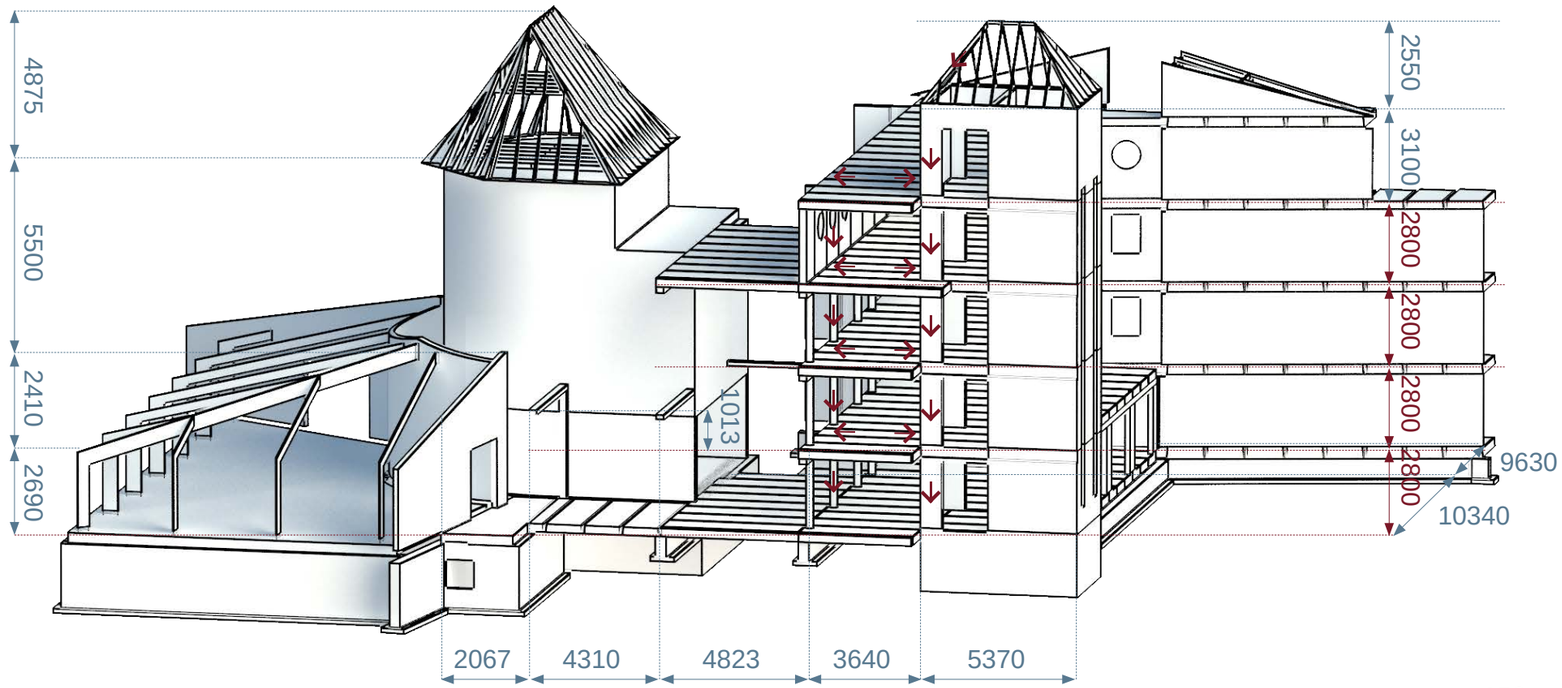
Transition north and south wing

The transition area, consisting of the juncture between the entrance hall, the hallway and the recreation room, is a collection of different structural systems.

Between the recreation room entrance and the main entrance, a set of 5 unique centre-to-centre dimensions can be found for the alignment of colonnades.

The most remarkable structural element is the old city wall itself. A new wall has been added to enclose the U-shaped remnants of the city wall. A set of walls for the recreation room are defined from the center point of the circular wall. This center point is also used as offset for the corner of the 3500 x 3500 mm grid.

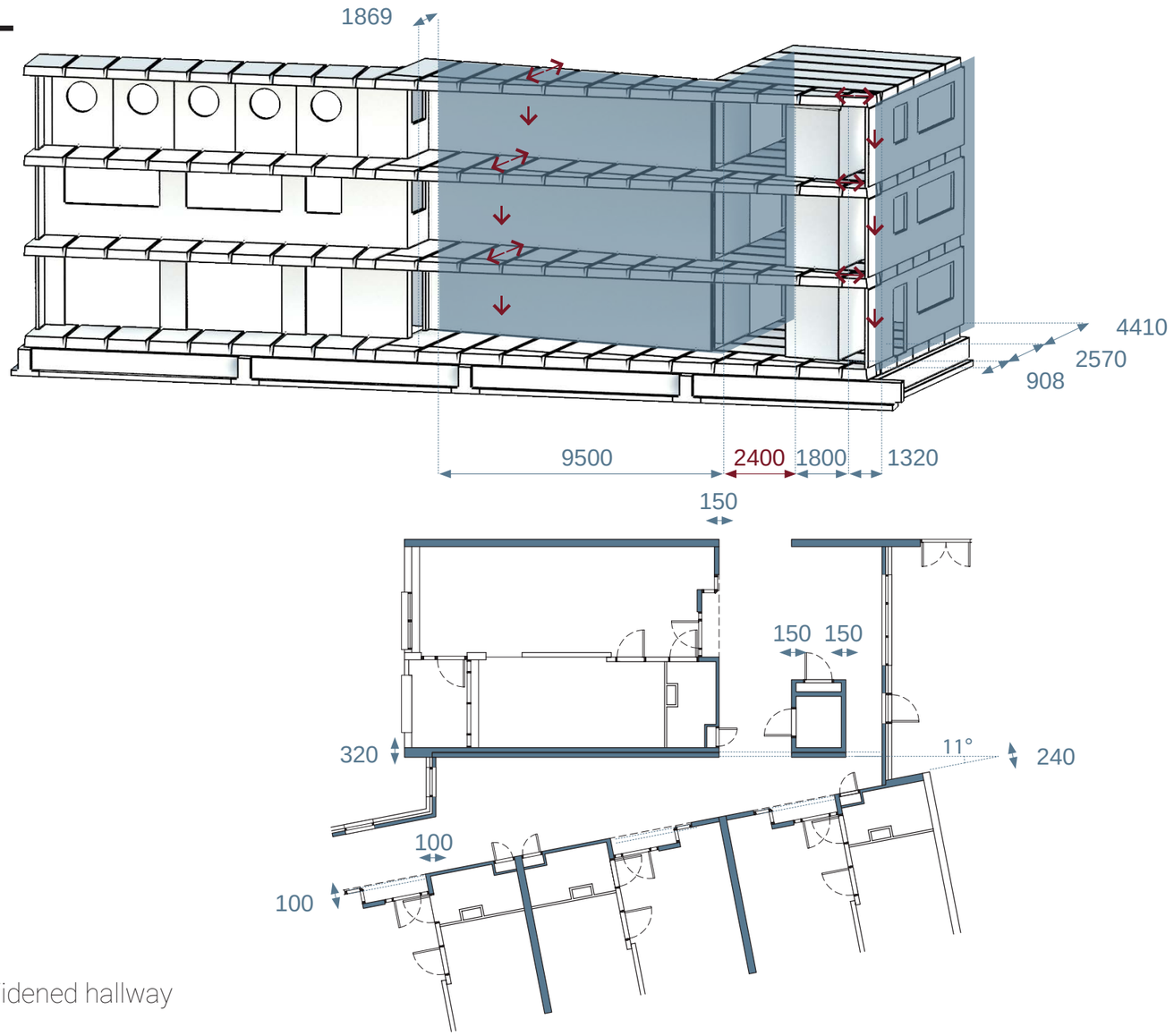
At chest height on the second floor, support beams run from the U-shaped tower to the rest of the building to support the atrium glazing.



# Load bearing structure

Transition south - Berkel wing and bicycle storage

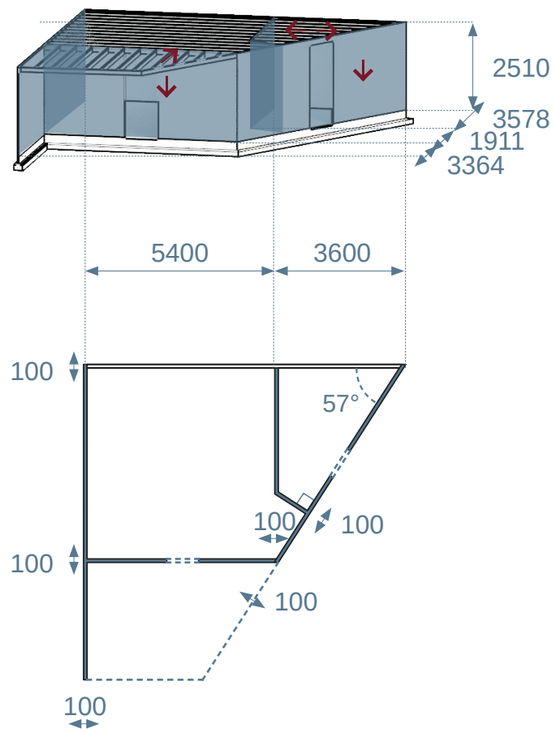
L




## Widened hallway

A widened 5520 x 7888 mm part of the hallway with a constructional shaft marks the junction between the Berkel and south wing. Differing from the 100 mm wall thickness to span the floors in other parts of the hallway, here the walls are 150 mm to support the widened span.

M




## Bicycle storage

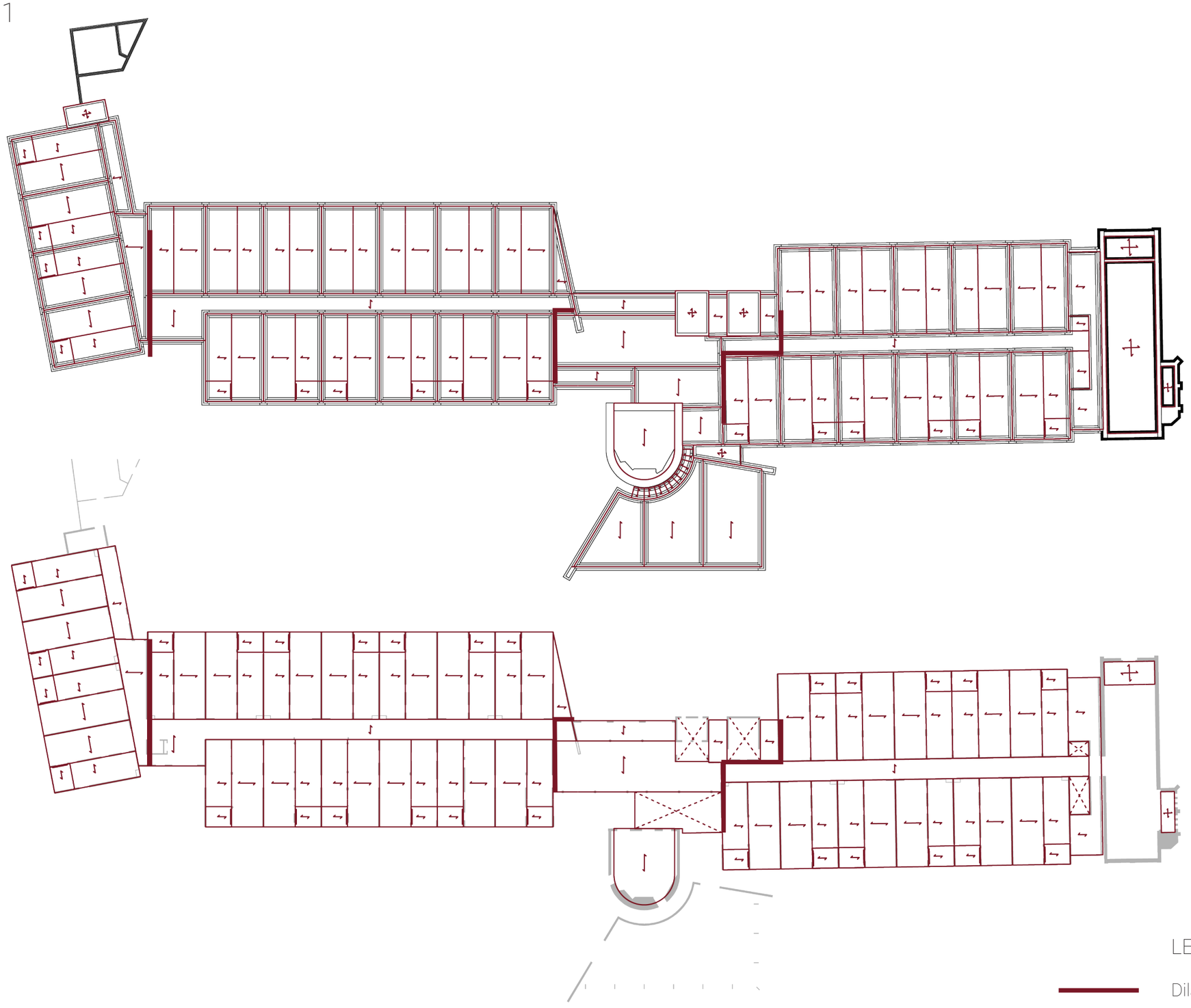
A simple bicycle storage is made with a wooden joist ceiling on top of 100 mm thick brick walls. Remarkable is the inner angle of 57 degrees inside the storage, creating a sharp outer edge, and the canopy where the wooden joist ceiling changes its direction.

# Floor strip direction

Ground floor & level 1

## Ground floor

## Level 1



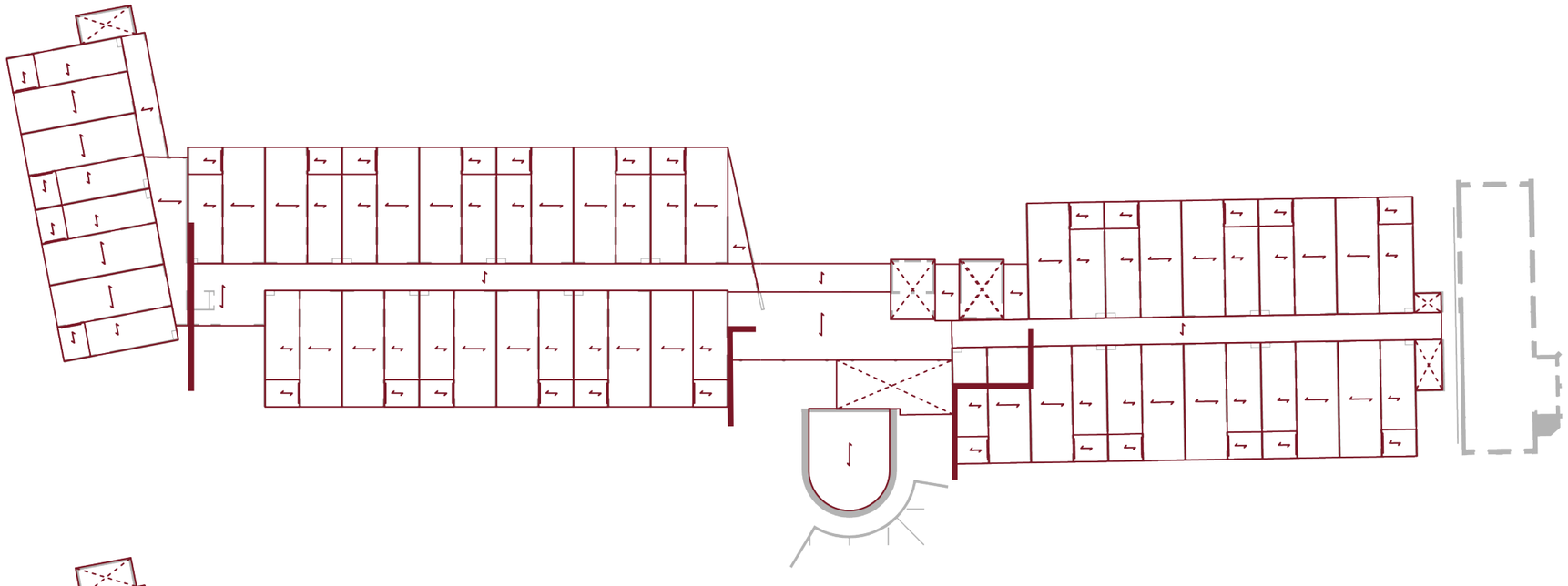
LEGEND

Dilatation

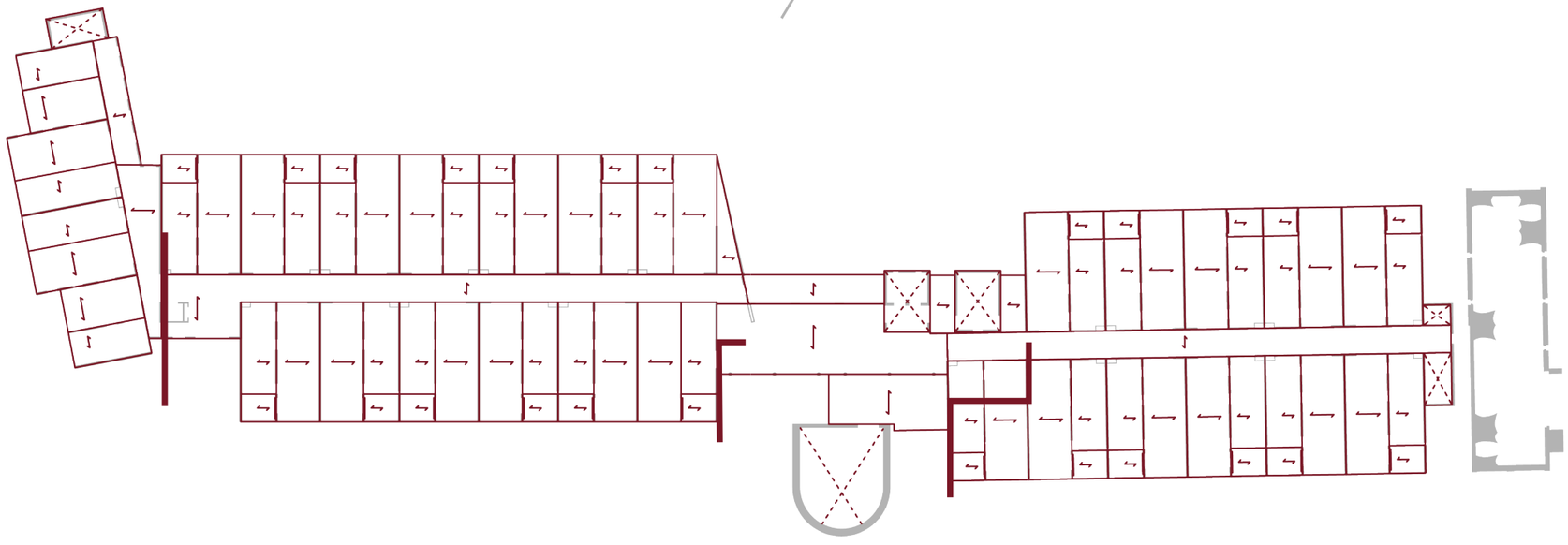
Walls at level + 1500 mm

# Floor strip direction
Ground level 2 & level 3

## Level 2



## Level 3



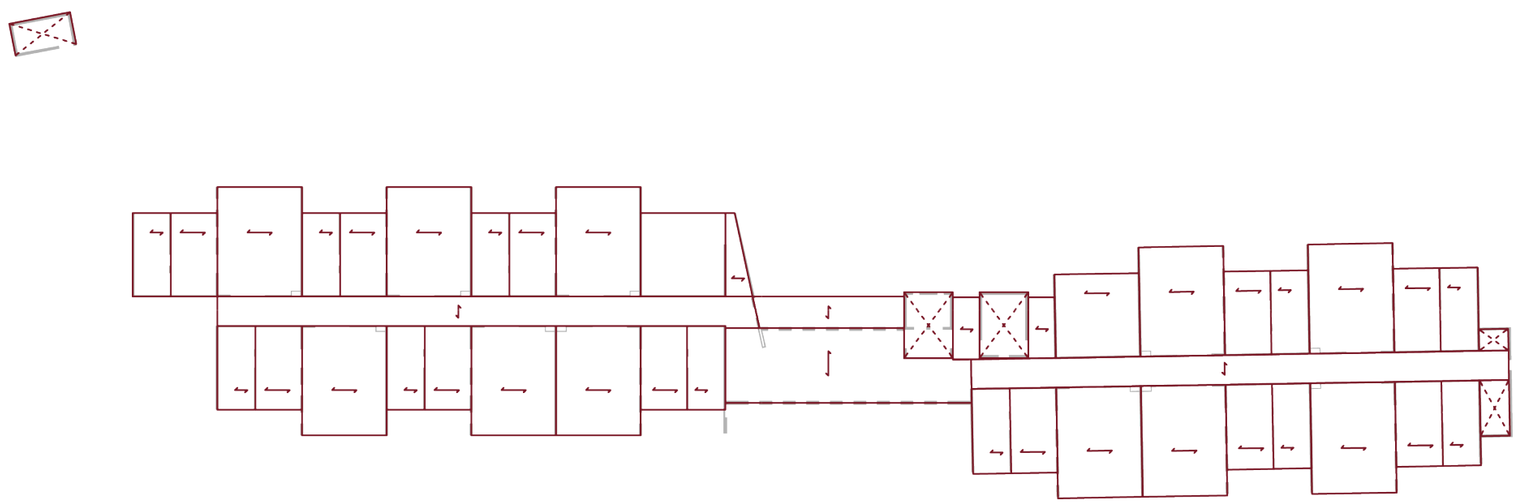
LEGEND

Dilatation

Walls at level + 1500 mm

# Floor strip direction
Roof

## Roof



LEGEND

Dilatation

Walls at level + 1500 mm

# Stability

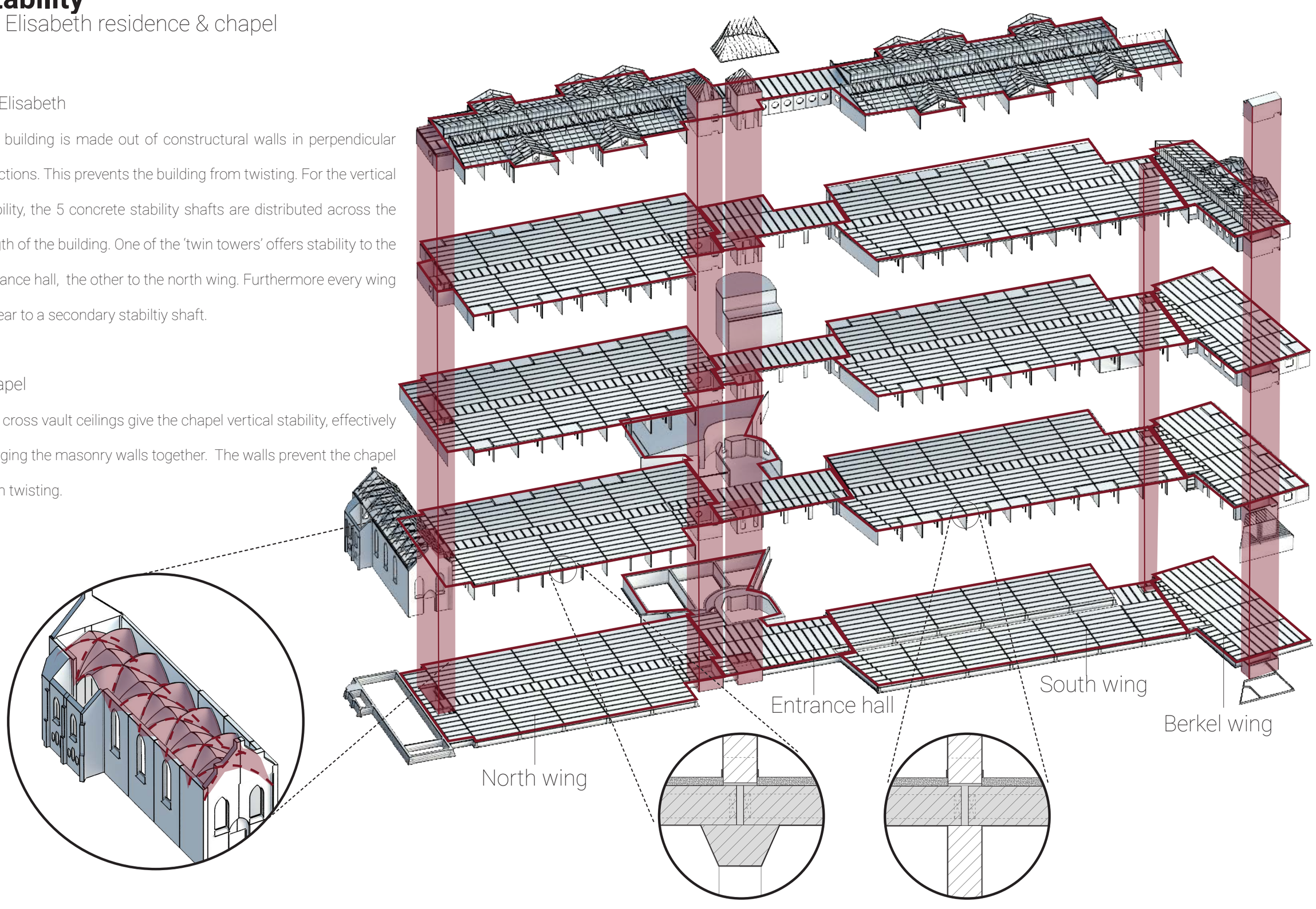
## St. Elisabeth residence & chapel

### St. Elisabeth

The building is made out of constructural walls in perpendicular directions. This prevents the building from twisting. For the vertical stability, the 5 concrete stability shafts are distributed across the length of the building. One of the 'twin towers' offers stability to the entrance hall,  the other to the north wing. Furthermore every wing is near to a secondary stabiltiy shaft.

### Chapel

The cross vault ceilings give the chapel vertical stability, effectively merging the masonry walls together.  The walls prevent the chapel from twisting.



# Materials

## Materialisation constructional elements
## St. Elisabeth residence

Foundation:

- prefabicated concrete foundation beams

Columns:

- prefabicated round concrete columns **Ø 320**

- prefabicated rectangular columns 240 x 865 mm

- brick columns 240 x 800 mm

Lintels:

- Prefabricated concrete, steel profiles, circular brick arches, straight running brick

Walls:

- sand-lime stone (100 mm, 150 mm, 240 mm)

- ceramic bricks (new: 210 x 100 x 50, Waalformat) (old: various)

Frames:

- wooden frames, 100 x 590 mm

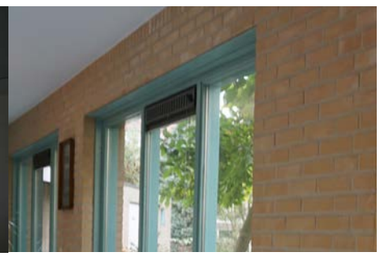
Floors:

- prefabicated concrete hollow-core slabs

Roof attics:

- spruce wood

*(Schoenmaker-Zeewuster, 1991)*



# Materials

## Materialisation constructional elements Chapel

Foundation:

- ceramic bricks

Walls:

- ceramic bricks

Lintels:

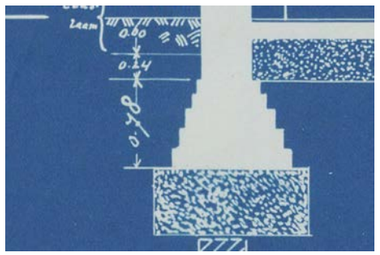
- ceramic point arched bricks, natural sandstone

Ceilings:

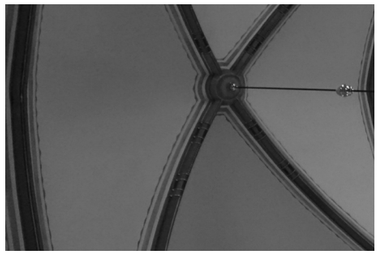
- ceramic bricks

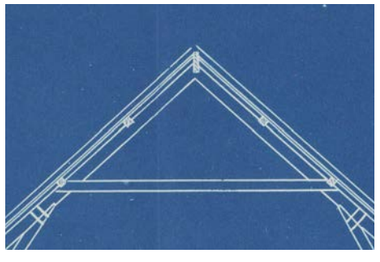
Roofs:

- wood



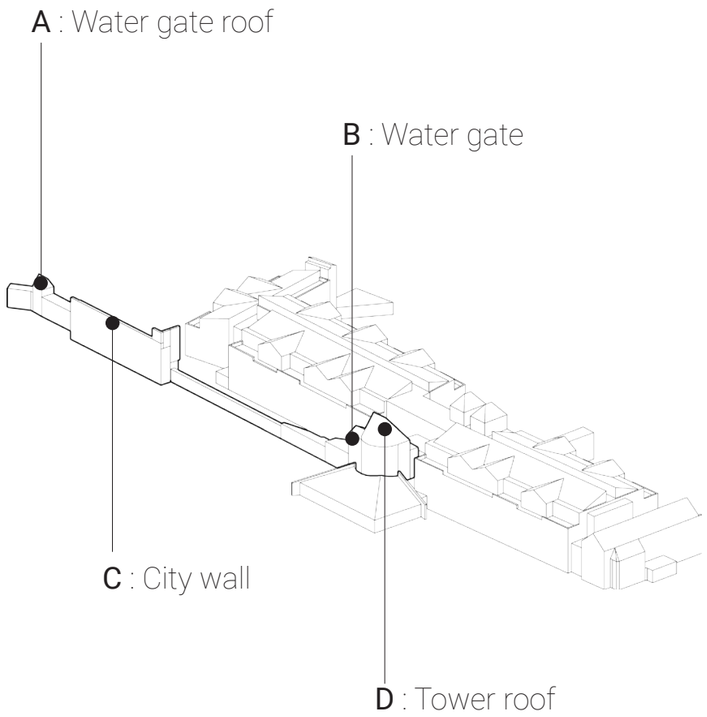

(van Elmpt, 1911)





(van Elmpt, 1911)

# Damages
## Damage of City wall




### Damage anlysis

These areas present mainly damages due to weathering effects and the passage of time. These structures were in general left with little to no maintenance and therefore present different kinds of biological growths. The humid location of these areas, near the Berkel river, and the scarce sunlight they receive due to surrounding buildings, make them ideal places for moss and algae growth, that will eventually result in the erosion of the material.


Damage type : Termite damage and biological growth_Decomposing wood

Hypothesis cause : Unmaintained wood & leaking roof

Possible solution : Replace damaged beams, assure water tightness


Damage type : Biological growth & erosion_Algae, moss & vegetation

Hypothesis cause : No maintainace & scarce sunlight

Possible solution : Brushing, washing or abrasive cleaning


Damage type : Biological growth_Algae

Hypothesis cause : Watter accumulation and scarce sunlight

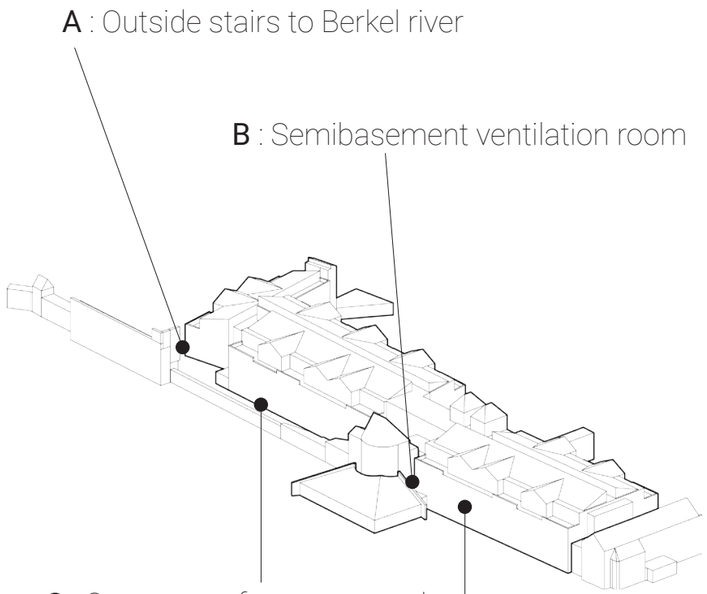
Possible solution : Brushing, washing or abrasive cleaning


Damage type : Biological growth_Algae and moss

Hypothesis cause : North orientation

Possible solution : Brushing, washing or abrasive cleaning

# Damages
## Damage of Elderly house




### Damage anlysis

In this area of the building, we can barely find any serious damages due to it only being from 1992 and having regular maintenance checks. However, we could find some problematic areas that could in the future develop into more serious damages. Measures taken in this area are mostly preventive.


Damage type : Biological growth_ Algae & moss

Hypothesis cause : Rain & scarce sunlight

Possible solution : Brushing, washing or abrasive cleaning


Damage type : Expanded wood, chaping paint & biological growth

Hypothesis cause : Exposure to climate & water infiltration

Possible solution : protect wood by other means, or exchange material




Damage type : Biological growth

Hypothesis cause : Humidity and direct contac with floor surface

Possible solution : Washing & protection of wall with a skirting board

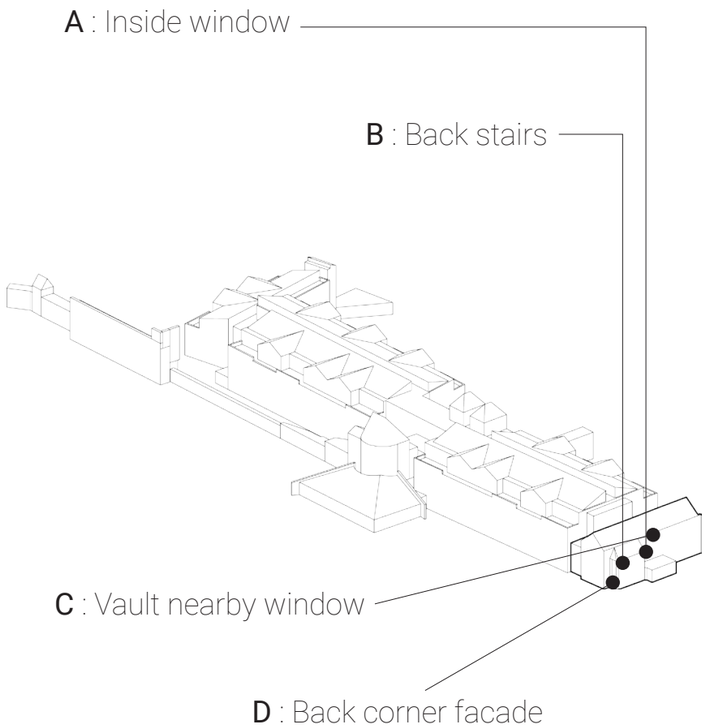

Damage type : Biological growth & slightly chapped paint

Hypothesis cause : Insuficient inclination of the windowsill & different material

Possible solution : Increase inclination to asure water disposal

# Damages of Chapel

Various damage type




## Damage anlysis

The damages present at the chapel are mostly related to humidity issues due to either condensation or water infiltration. The areas surrounding the windows present most of the damages, making it obvious that the window have some thermal conductivity issues, However, it requires highly cautious interventions due to the high cultural and historical value they have.


Damage type : Expanded & exfoliating plaster

Hypothesis cause : Humidity due to water condensation

Possible solution : Replace plaster & try to fix window thermal bridge


Damage type : Exfoliating plaster

Hypothesis cause : Humidity due to water infiltration

Possible solution : Replace plaster & assure water tightness


Damage type : Expanded & exfoliating plaster

Hypothesis cause : Humidity due to water condensation

Possible solution : Replace plaster


Damage type : Biological growth_ Algae

Hypothesis cause : Humidity and scarce sunlight

Possible solution : Brushing, washing, steaming or abrasive cleaning

# Conclusion
## Structure

The structure of the St. Elisabeth consists of a set of modular segments, but conceils this by use a high variation of different modules as well as rotating or mirroring them.

The main load bearing structure materialisation makes use of multiple materials: sand-lime brick stone walls with concrete lintels, or masonry walls with steel lintels.
There is a mixed use between planar and lineair elements, such as walls and columns. The different elements can be seen in every part of the building.

There is also an attempt to create symmetrical compositions in the structure, such as the assembly of the north and south-wing, with the tower of the recreation room as the central orientation point or the intercolumnation in the entrance hall.

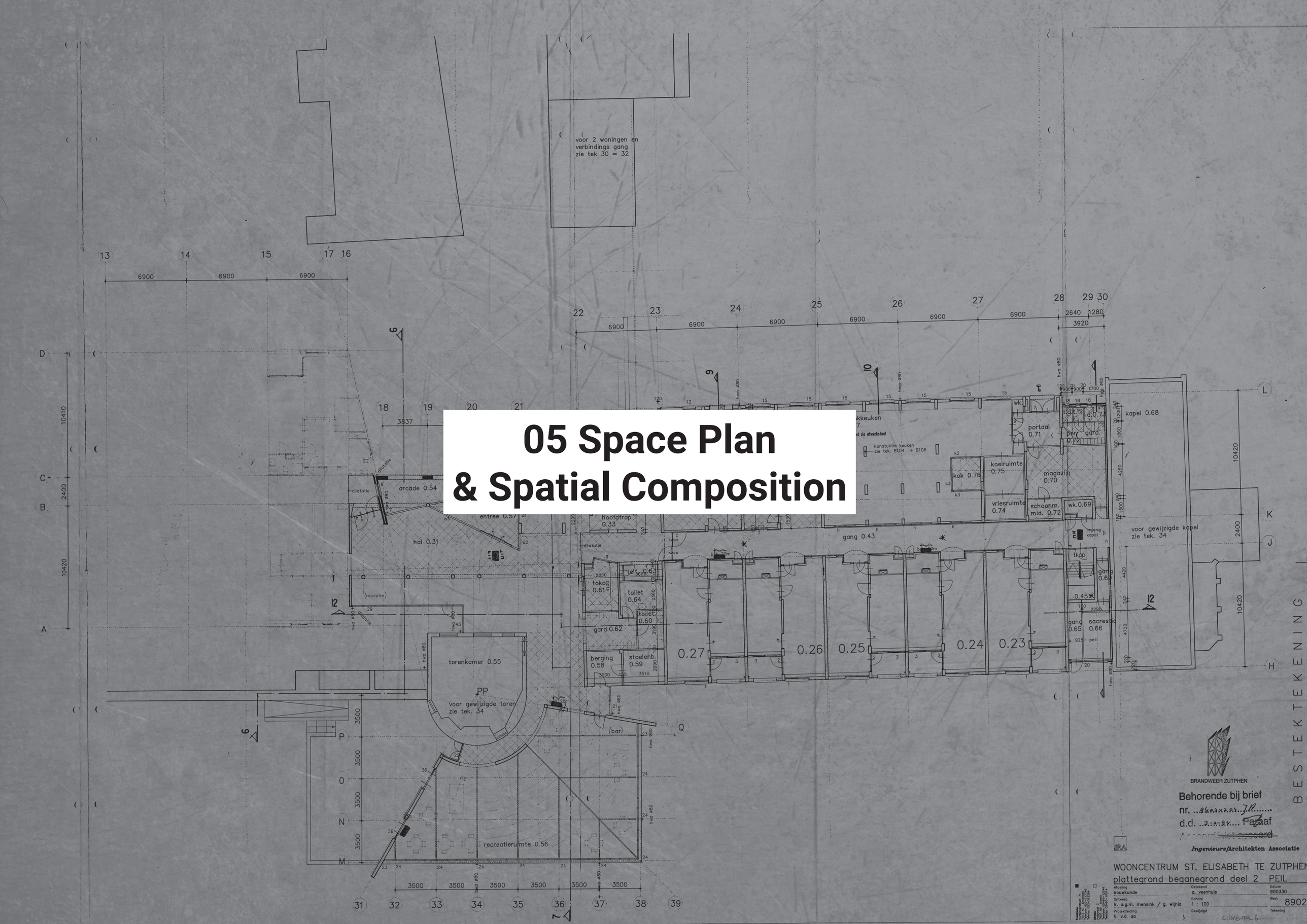
For stability, multiple prefabricated concrete shafts have been distributed along the wings of the building. The wings are separated by dilatations, so they require their own stability shafts.

The large exceptions for the modules in the St. Elisabeth are the transition areas between wings and the recreationroom.

The chapel is much more simple in its material and structural composition: here brick is used for the horizontal and vertical elements, as well as stability. Occassionally, natural stone is used to materialise the lintels but it is mainly used for ornamentation.

Just like in the St. Elisabeth residence, odd dimensions can be identified in the most important segments of the building, so as to identicate an exception to the rule.

# 05 Space Plan & Spatial Composition




BRANDWEER ZUTPHEN

Behorende bij brief
nr. ...
d.d. ...

*Ingenieurs/Architekten Associatie*

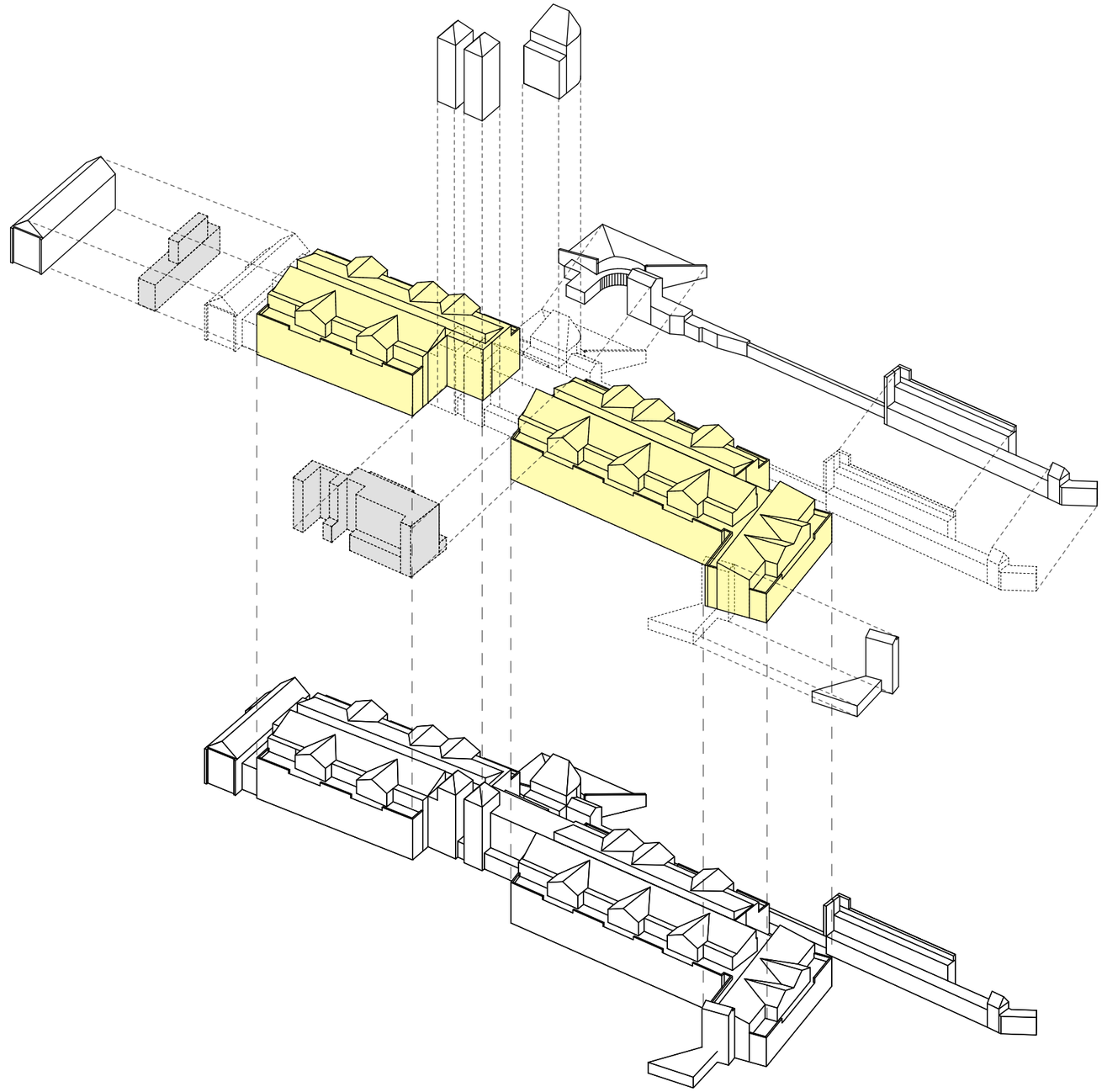
WOONCENTRUM ST. ELISABETH TE ZUTPHEN
plattegrond beganegrond deel 2 PEIL

| Afdeling | Getekend | Datum |
|---|---|---|
| bouwkunde | a. veenhuis | 900330 |
| Ontwerp | Schaal | Werk |
| ir. a.g.m. mensink / g. wijnia | 1 : 100 | 8902 |
| Projektleiding | Gewijzigd | Tekening |
| h. v.d. aa | | |

BESTEKTEKENING

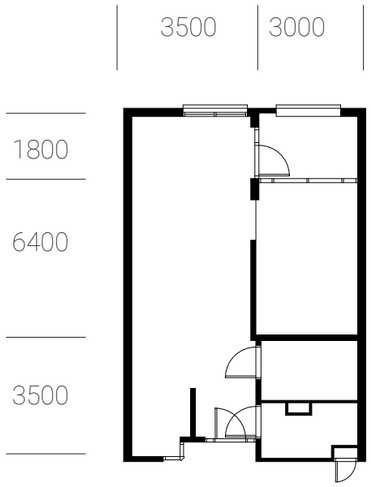
# Volume Composition
Combination of  fragemental volumes

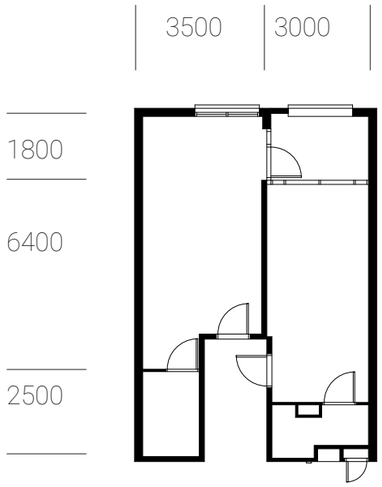
*Volume explosion diagram*

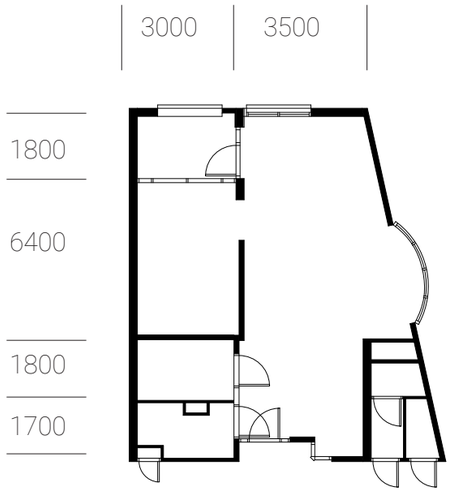


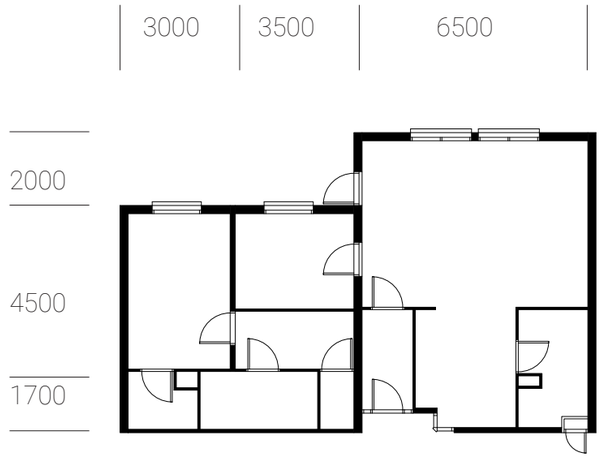
St. Elisabeth is composed of many fragmental volumes of different shapes and sizes. The two main volumes of elderly housing and the chapel are connected through  smaller connection volumes. Horizontally, there are a linear wall volume parallel to the main volumes. Vertically, three tower volumes are added to the central. This fragmental volume composition is an expression of post -modernism architecture. But this composition might lead to a visual mess and be an challenge for future transformation.

# Housing unit types
Four different types




Type A _ Individual housing unit

Individual housig unit is the standard unit of St. Elisabeth elderly house.

Type B _ Guest house unit

Guest house unit is located at the ground floor.

Type C _ Corner housing unit

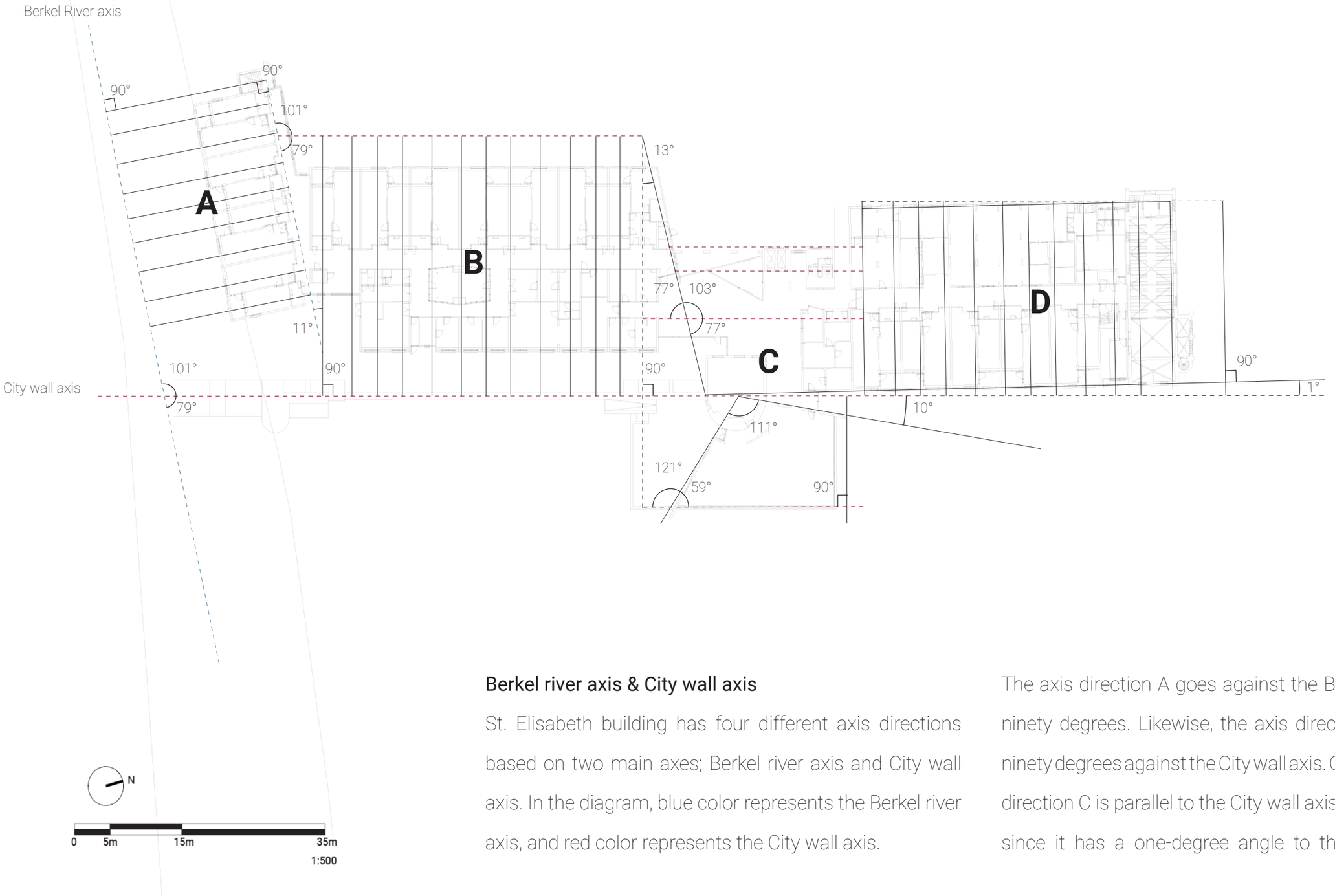
Corner housing unit is a special unit which is located at the corner

Type D _ Penthouse unit

Penthouse unit is located top of the floor. It is the biggist unit.

# Axis

Load-bearing axis & angle




### Berkel river axis & City wall axis

St. Elisabeth building has four different axis directions based on two main axes; Berkel river axis and City wall axis. In the diagram, blue color represents the Berkel river axis, and red color represents the City wall axis.

The axis direction A goes against the Berkel river axis in ninety degrees. Likewise, the axis direction B also goes ninety degrees against the City wall axis. On the other hand, direction C is parallel to the City wall axis. D is exceptional since it has a one-degree angle to the City wall axis.

# Axis

Four different axis

*Ground plan of A and its axis*

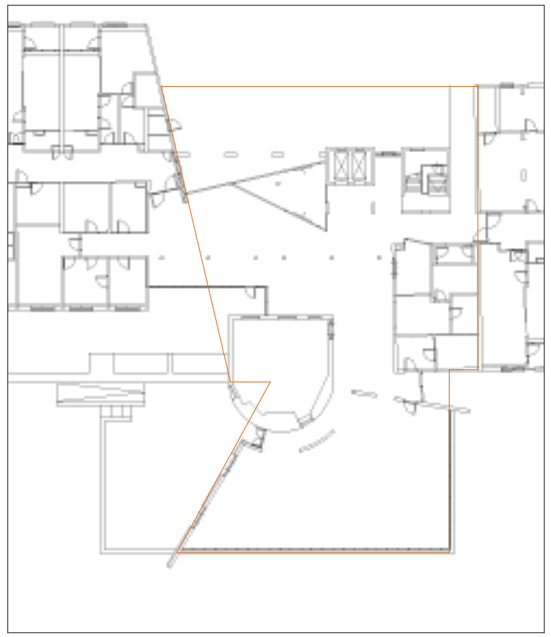
A

Part A includes individual elderly housing units. These units have river view along the Berkel river axis.

*Ground plan of B and its axis*

B

Part B includes individual elderly housing units, medical rooms, office and training rooms. The upper part of units has garden view.



*Ground plan of C and its axis*

C

Part C includes entrance hall, meeting room, restaurant and porch to back garden. The restaurant has a panoramic garden view.

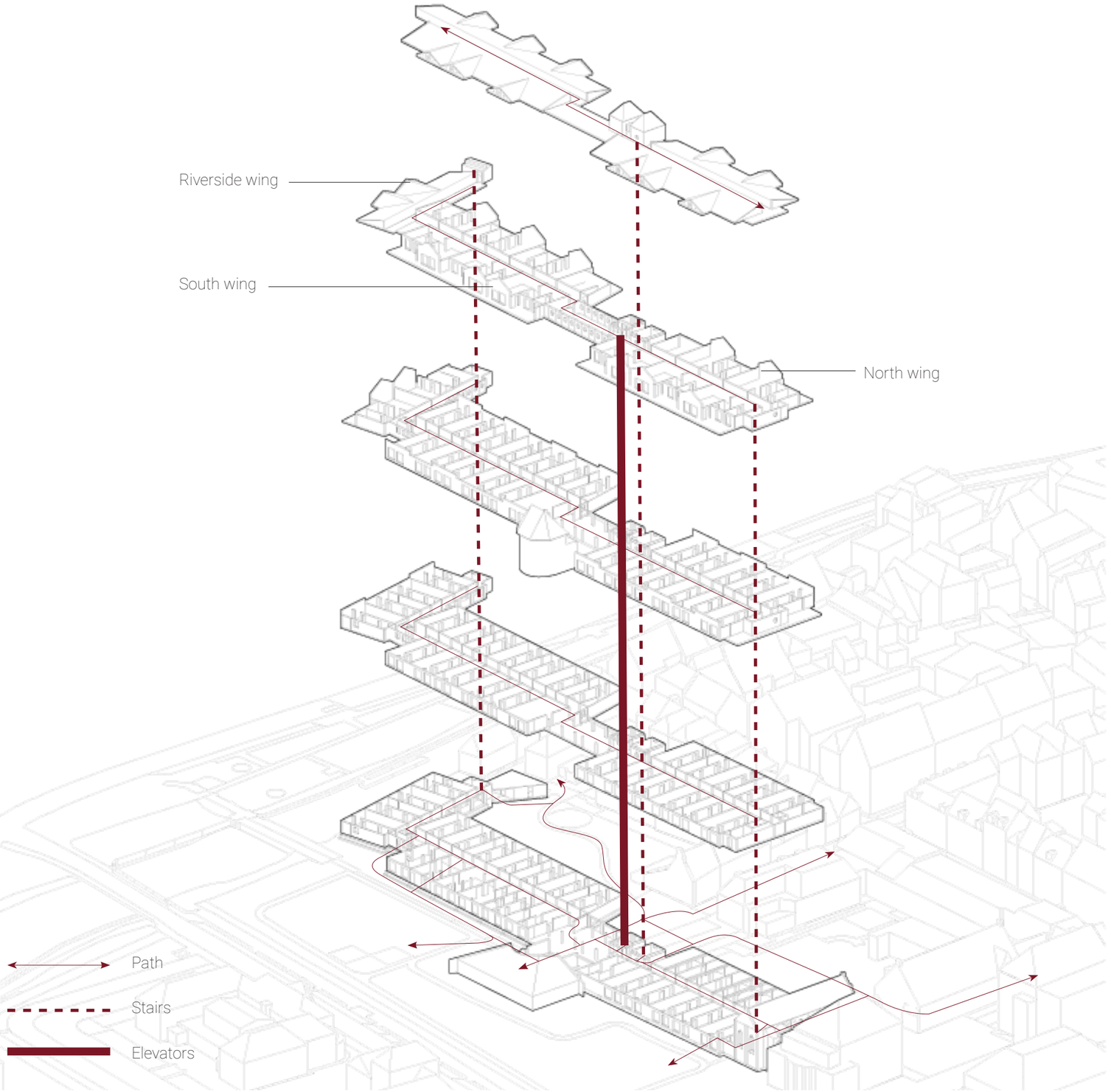
*Ground plan of D and its axis*

D

Part D includes the previous kitchen which is not used, individual elderly housing and chapel. Most of the functions in this units are not working.

# Circulation
Vertical & horizontal movement flow

*Explode Diagram*

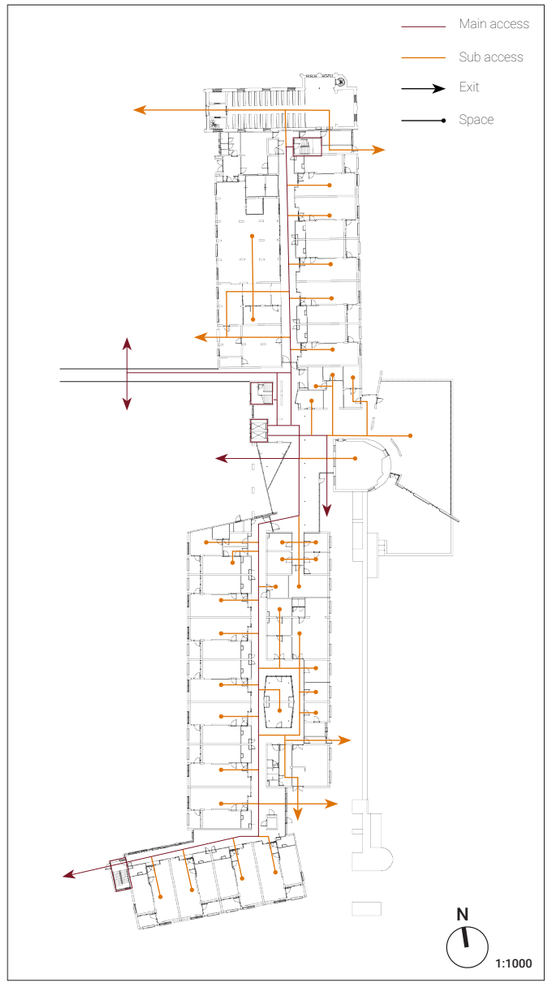


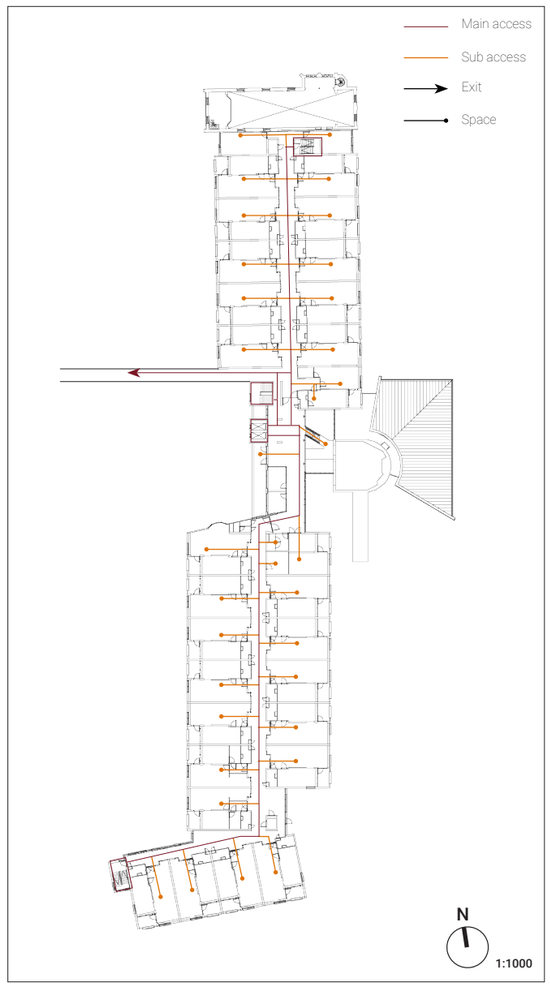

### Circulation of St. Elisabeth building

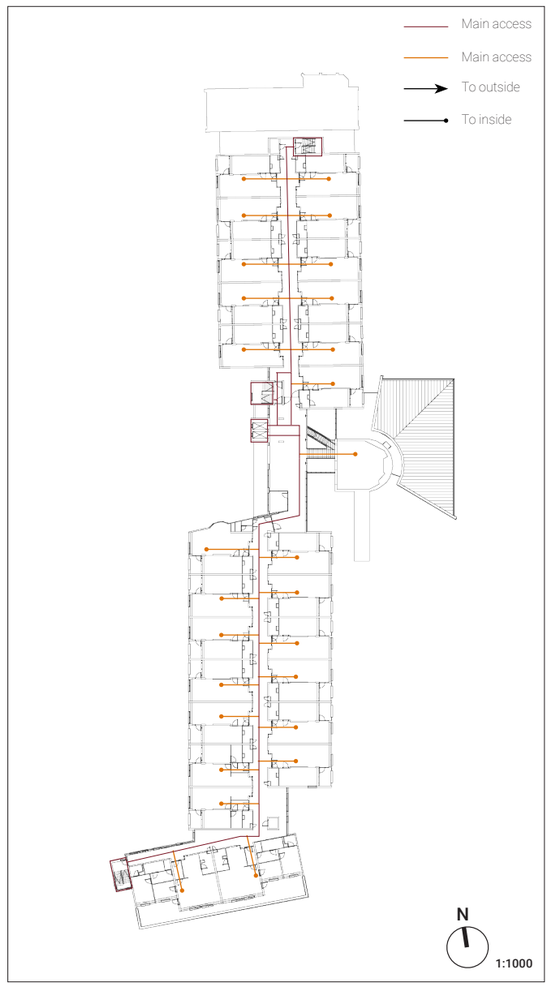
St. Elisabeth building has several entrances from the Nieuwstad, however, people mainly use the middle entrance. This four storied building has total three stairs (middle, north and south side) and two elevators (middle). Elevators connect to the third floor, and only middle stairs link to the roof. The door between the elderly house and chapel is usually closed. The building is composed of North wing, South wing and Riverside wing.

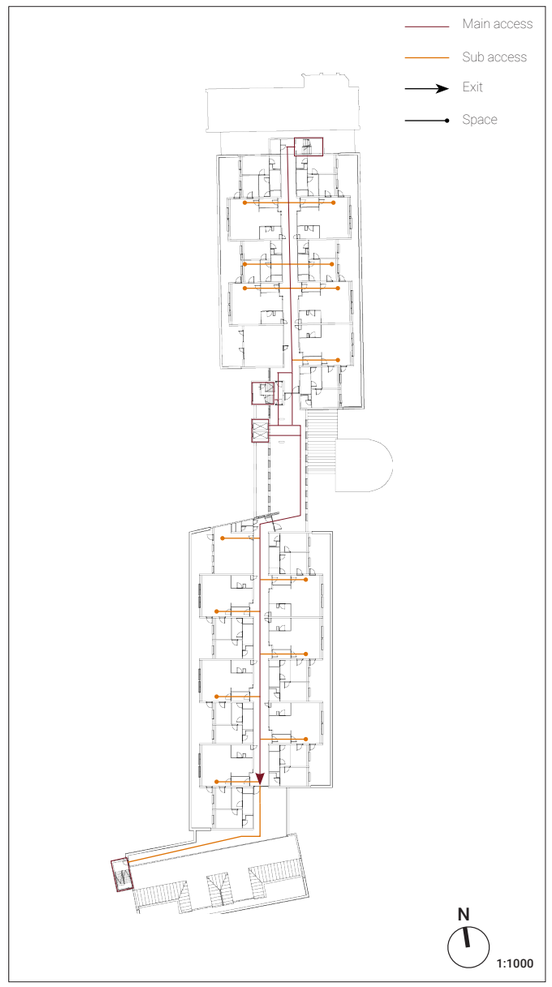
# Circulation

## Space plans of each floors






### Ground floor

The main entrance is located in the middle of the building. The passage connects to other building but it acts as an obstacle . Access to the backyard is concealed. The ground floor includes much public space.

### First floor

Elevator hall is located in the middle of the building. A diagonal staircase which connects to the tower is in the elevator hall. Neighboring rooms are arranged symmetrically. Double-loaded corridor type.

### Second floor

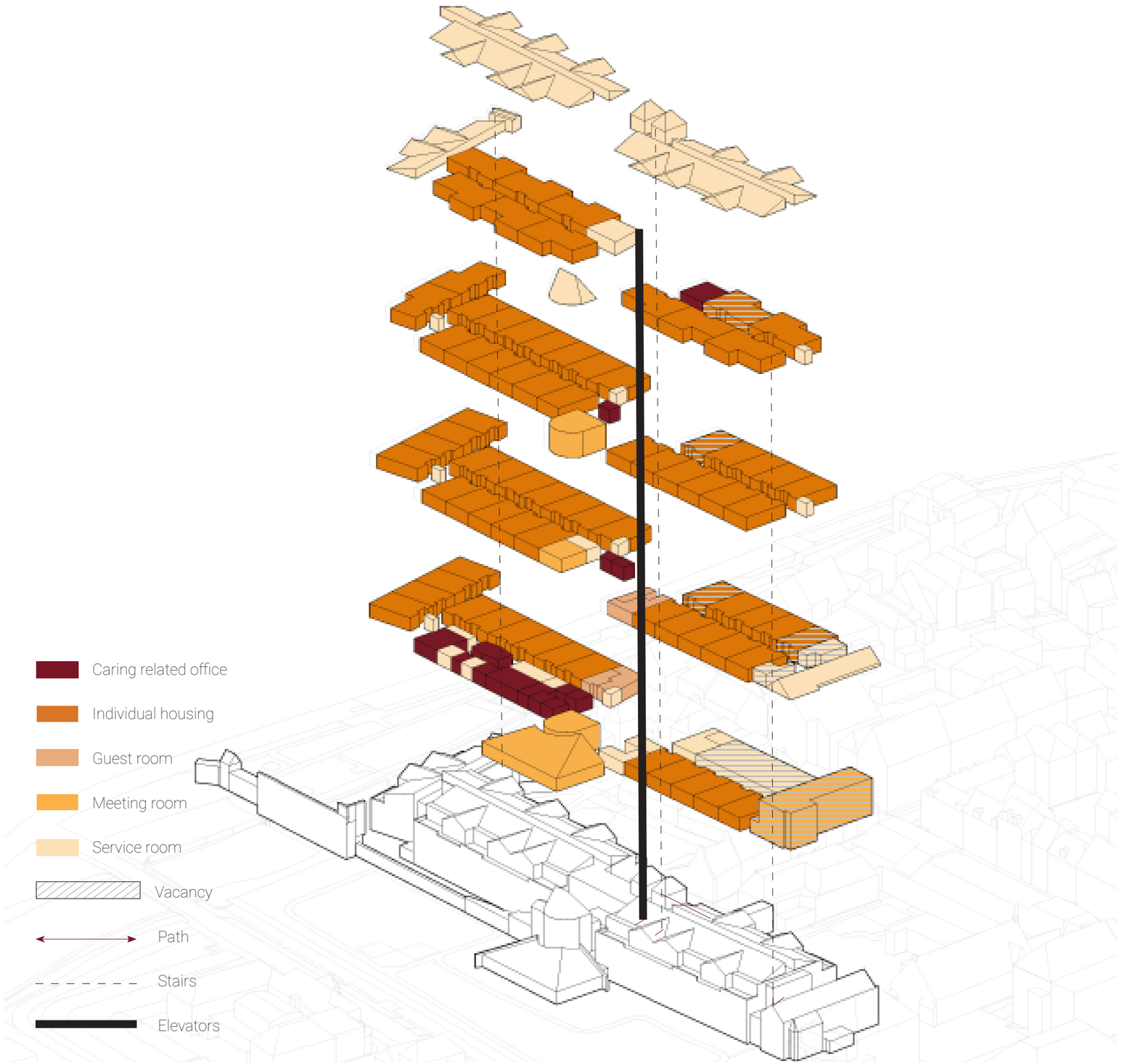
Elevator hall is located in the middle of the building. Penthouses are placed in the Riverside wing. A bridge which connects to the tower is in the elevator hall. Neighboring rooms are arranged symmetrically. Double-loaded corridor type.

### Third floor

Elevator hall is located in the middle of the building. Penthouses are placed in the North wing and South wing. Emergency exit to roof at the end of the south wing. Double-loaded corridor type.

# Function
Usage & vacancy

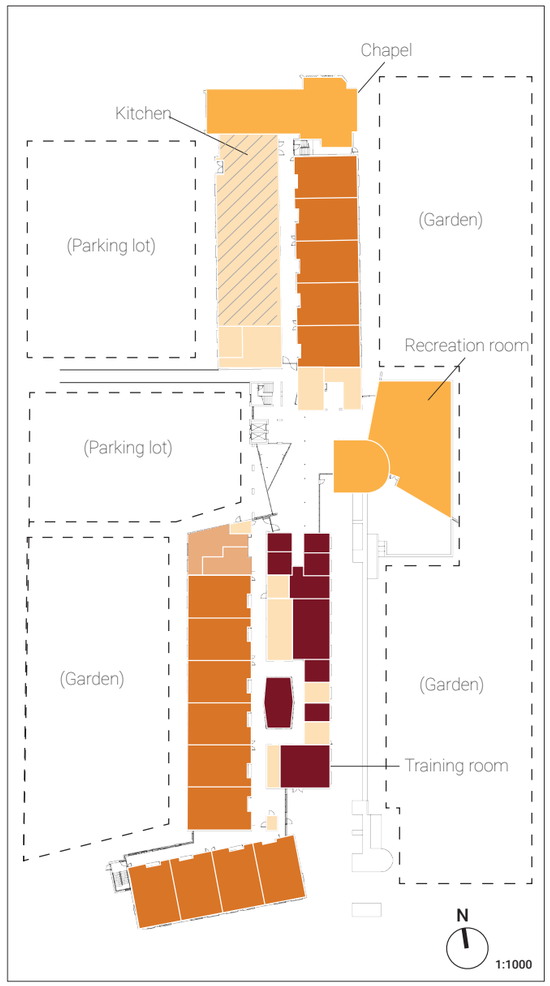
*Explode Diagram*




### Function of St. Elisabeth building

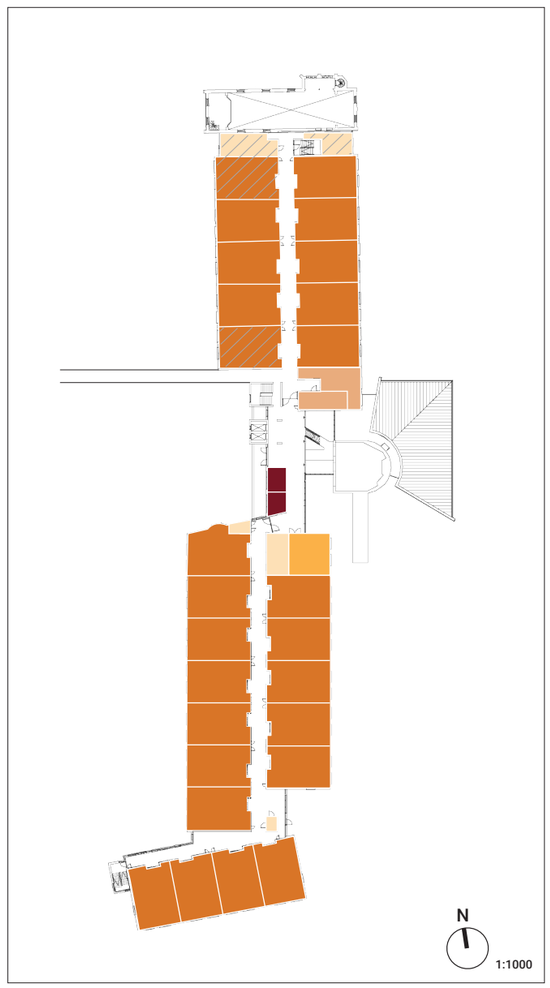
St. Elisabeth building has largely five different functions; caring related office, individual housing, guest room, meeting room, service room. For example, service rooms include kitchen, laundry room, restroom, and storages. Caring related offices include a training room, manage room, security, counseling and acupuncture room. Chapel and nearby spaces are vacant. Also, four rooms adjacent to the parking lot are empty.

# Function
## Function of each floors



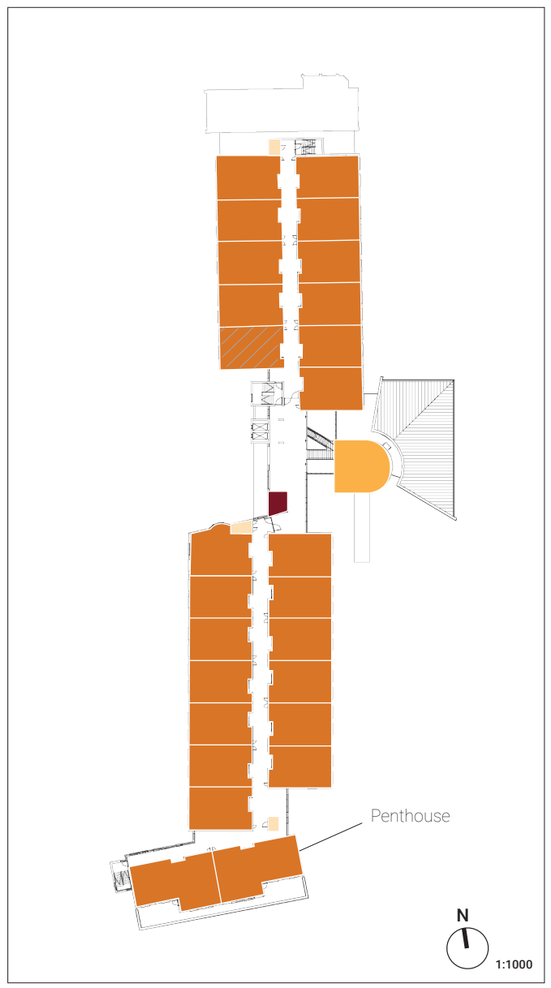

### Ground floor

- : 10 Caring related offices
- : 15 Individual housings
- : 2 Guest rooms
- : 3 Meeting rooms
- : 12 Service rooms
- Vacancy



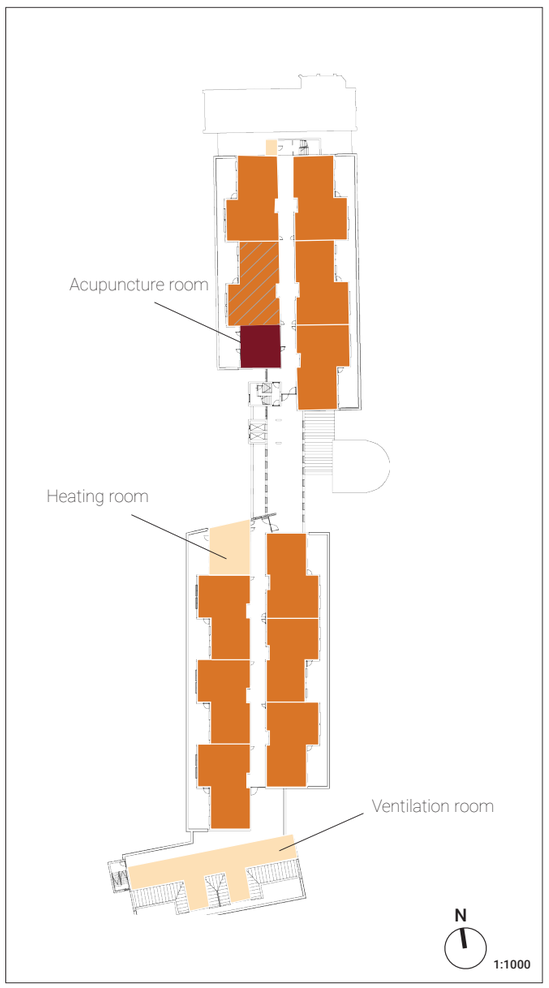

### First floor

- : 2 Caring related offices
- : 26 Individual housings
- : 2 Guest rooms
- : 1 Meeting room
- : 5 Service rooms
- Vacancy




### Second floor

- : 1 Caring related offices
- : 24 Individual housings, 2 penthouses
- : 1 Meeting room
- : 3 Service rooms
- Vacancy

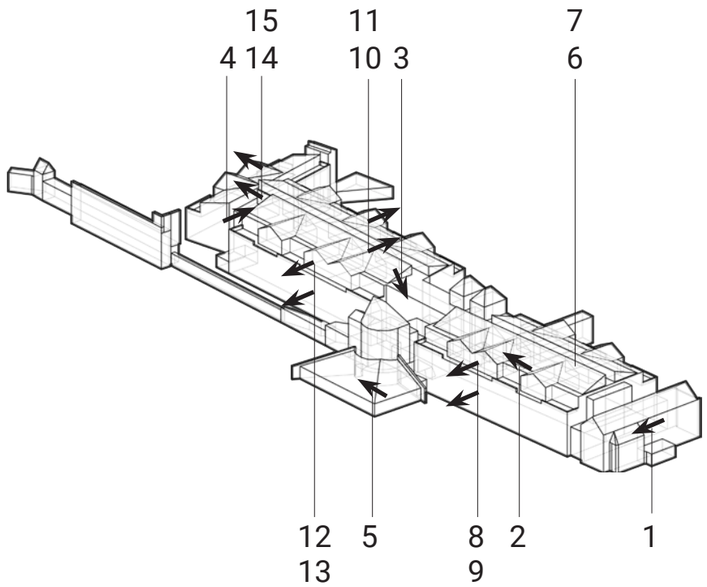


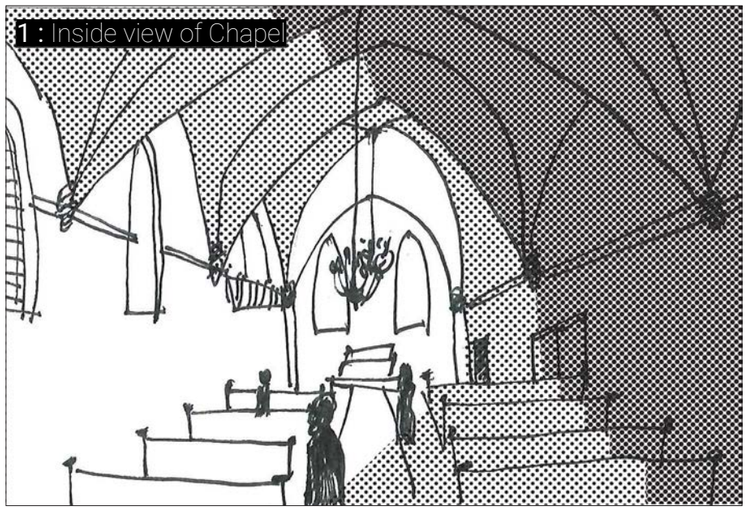

### Third floor

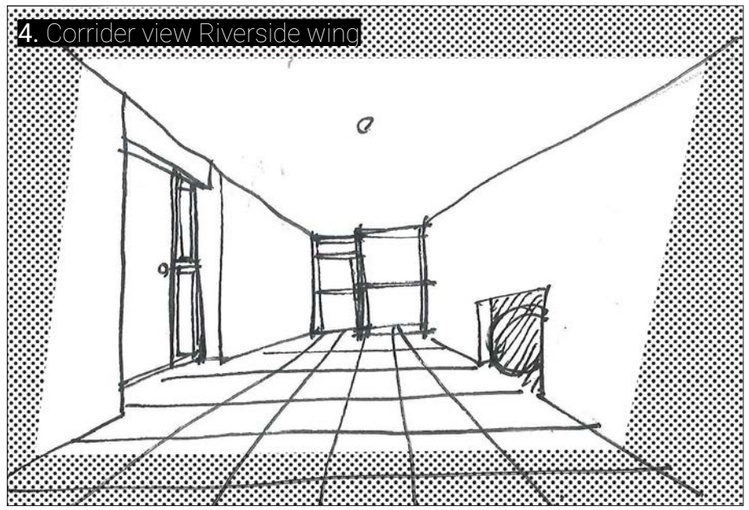
- : 1 Caring related offices
- : 11 Penthouses
- : 3 Service rooms
- Vacancy

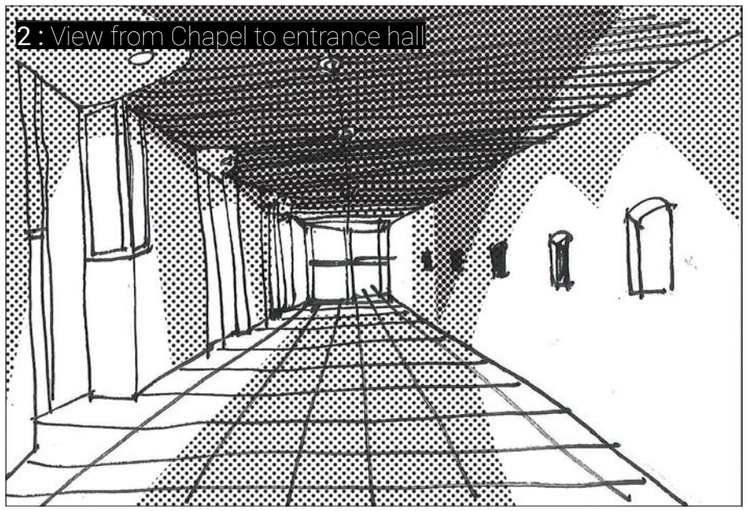
# Space experience

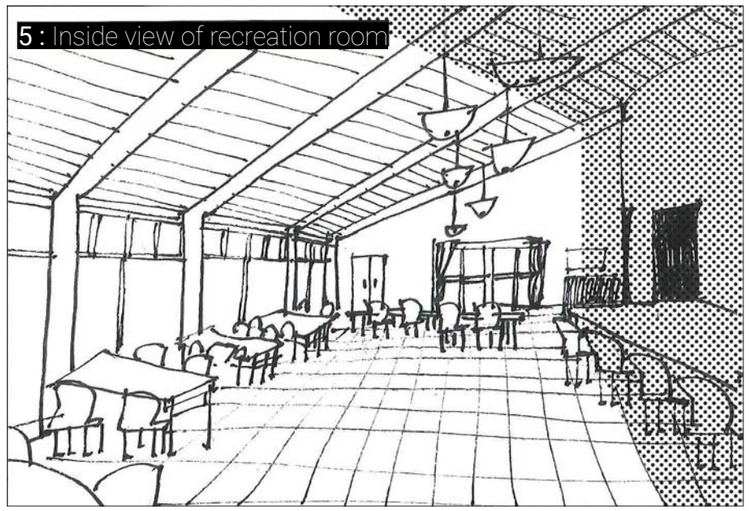
Relation between space

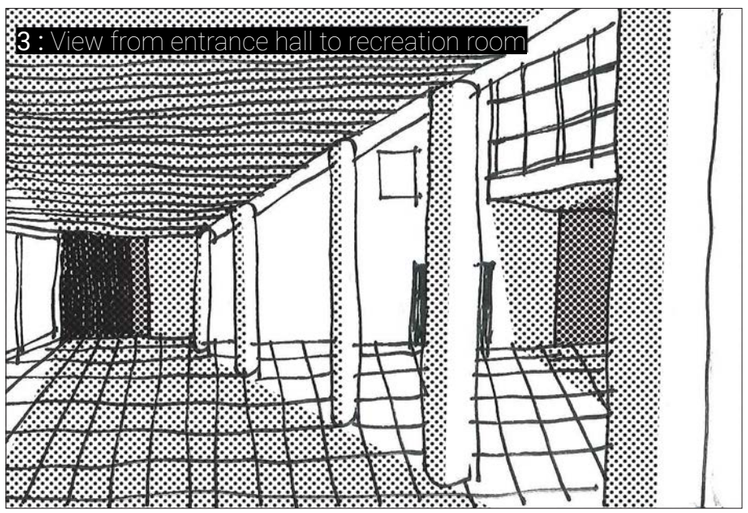


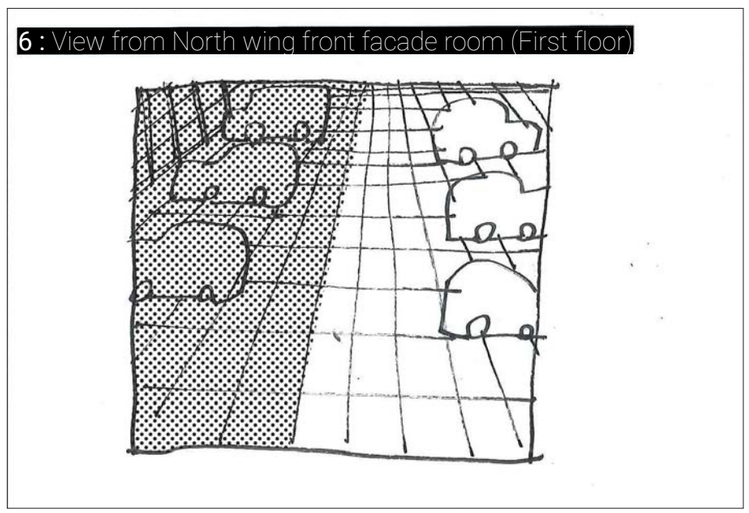



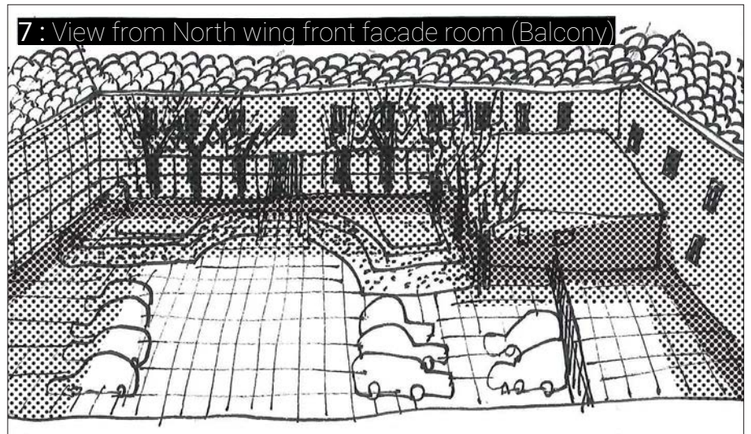



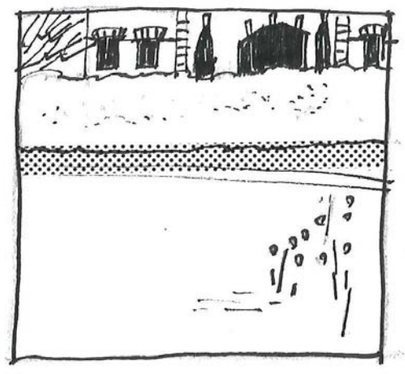

## Various space with diverse programs

St. Elisabeth building has various spaces with different spatial elements such as circular columns, rectangular columns, atrium, pavilion, U shape tower and old city wall etc. Each space has their own atmosphere and gives special spatial experience to users. Right images show fifteen different views from specific points. The change of lightness in a certain space makes the spatial experience more interesting.

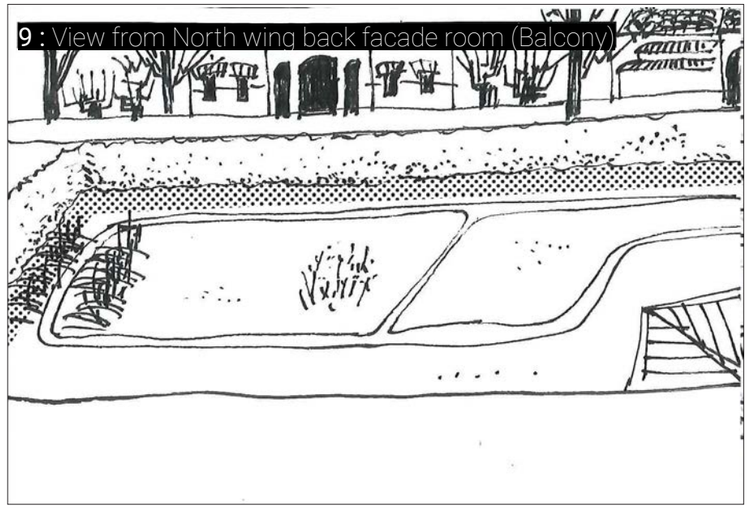
**7 :** View from North wing front facade room (Balcony)



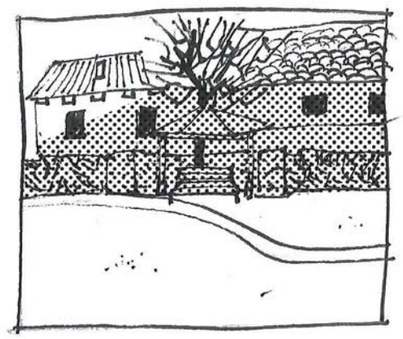
**8 :** View from North wing back facade room (First floor)



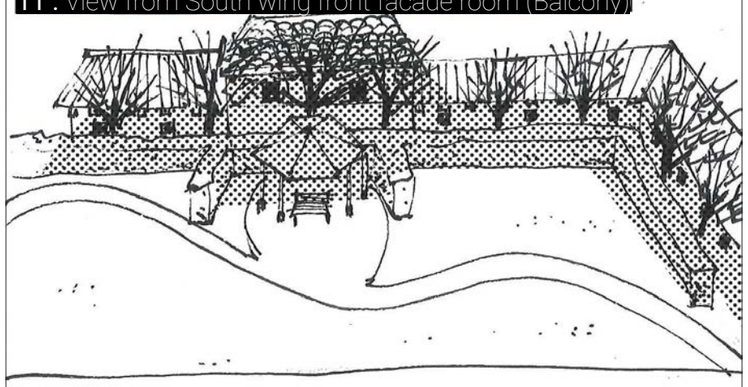
**9 :** View from North wing back facade room (Balcony)



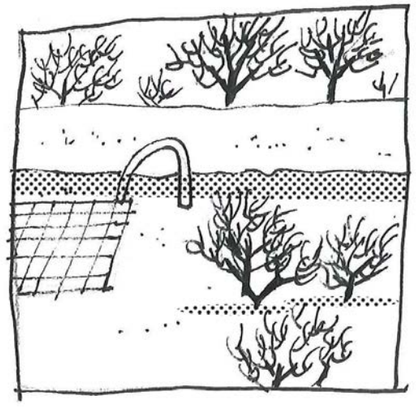
**10 :** View from South wing front facade room (First floor)



**11 :** View from South wing front facade room (Balcony)

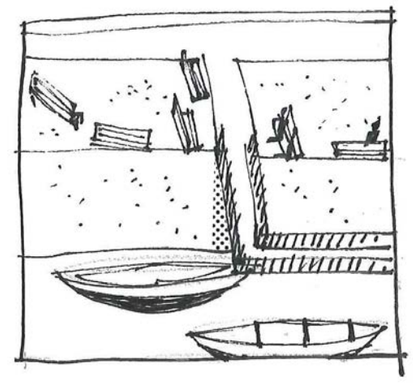


**12 :** View from South wing back facade room (First floor)



**13 :** View from South wing back facade room (Balcony)

**14 :** View from Riverside wing room (First floor)



**15 :** View from Riverside wing room (Balcony)

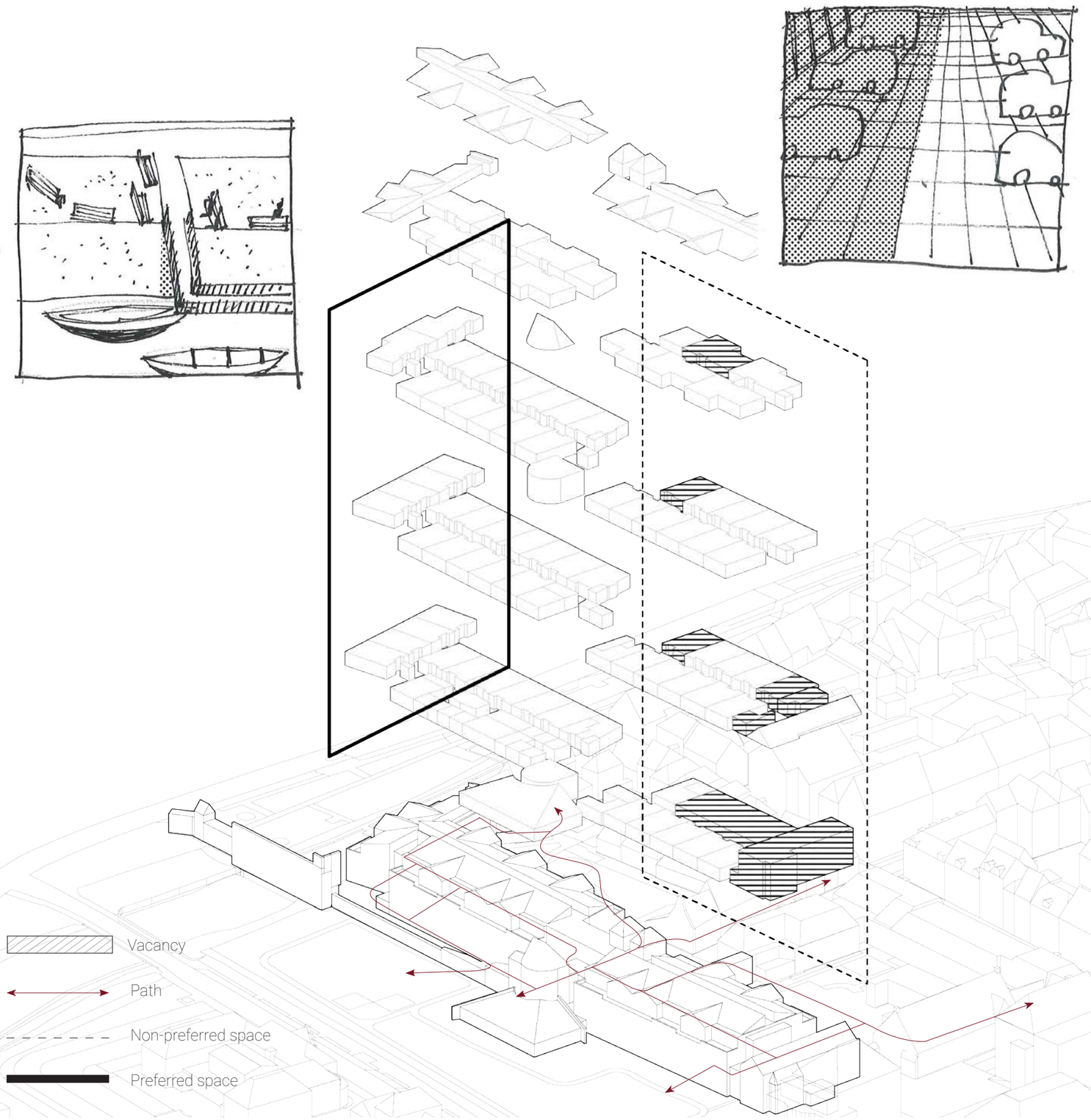
# Conclusion
## Space preference

### Preferred space & non-preferred space

It is not difficult to find the most preferred space and the least preferred space in the St. Elisabeth building. The most preferred space is the riverside wing where most of the residents want to live. The least preferred space is North wing front side, where is the suffering vacancy problem. Interestingly, the characteristics of these two spaces are clearly contrasted. The riverside wing is easy to access from the city center. Also it has a bright environment from the southbound direction. Also, it has an active and green environment from the Berkel river park.

On the other hand, the North-front wing is very shady from the northwestern direction surrounded by buildings everywhere. Since parking lot is located in front of the facade, the atmosphere is very stagnant. Futhurmore, the path through the Pastorie parking lot or the glass passage in the center makes it difficult to access. Through this, we can find the necessary conditions to improve the daily lives of the residents.

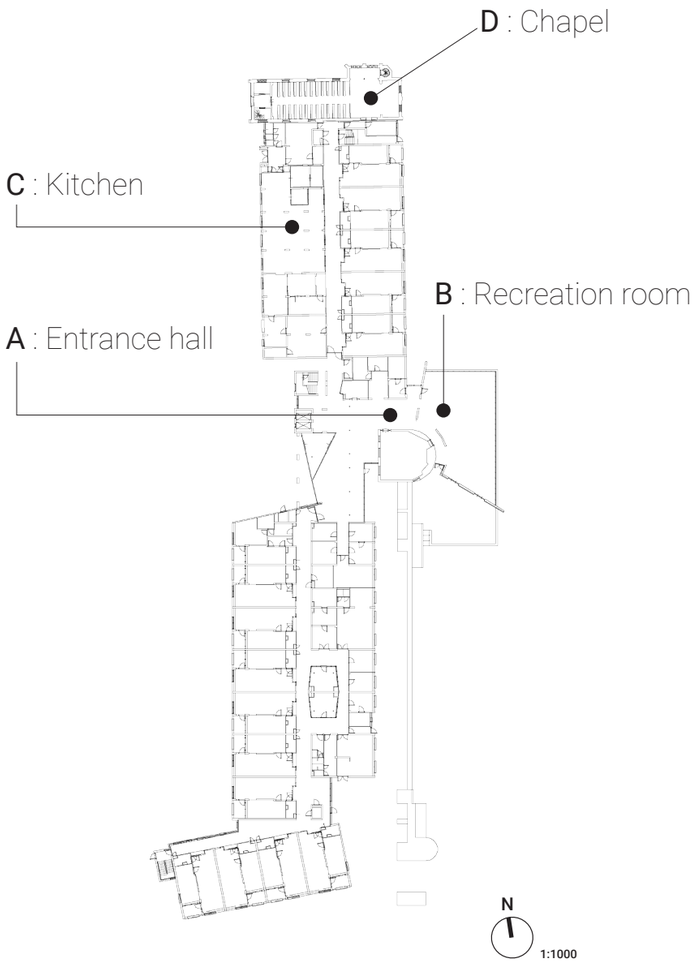
*Explode Diagram*



# 06 Surfaces (Interior)

# Materialisation

Material, color and tectures of ground floor







Ceiling finishing : White painted wooden slats

Wall finishing : Exposed brick wall & plastered wall with brown paint

Floor finishing : White terrazo tiles 20x20 cm


Ceiling finishing : White painted wooden slats

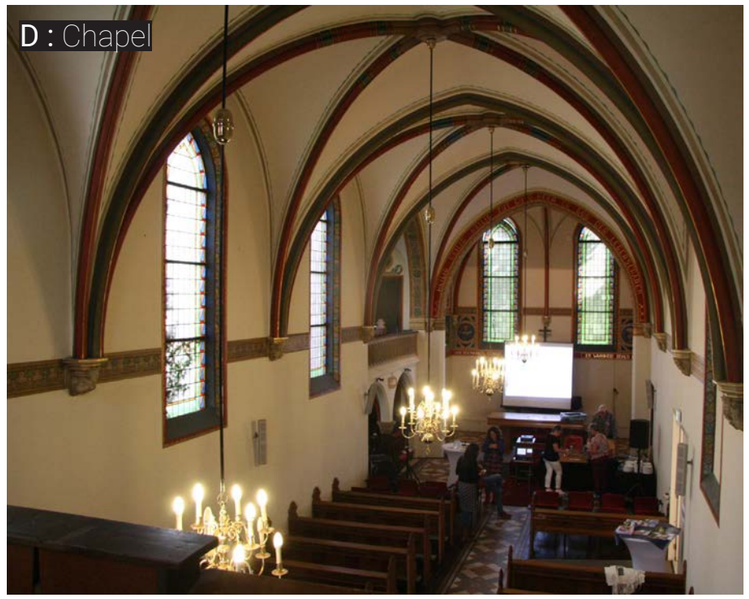
Wall finishing : Plastered wall with cream coloured paint

Floor finishing : White terrazo tiles 20x20 cm


Ceiling finishing : Gypsum board with white aluminium mounting system

Wall finishing : White glazed ceramic tile 15x15cm

Floor finishing : Grey porcelain stoneware tile 10x10cm

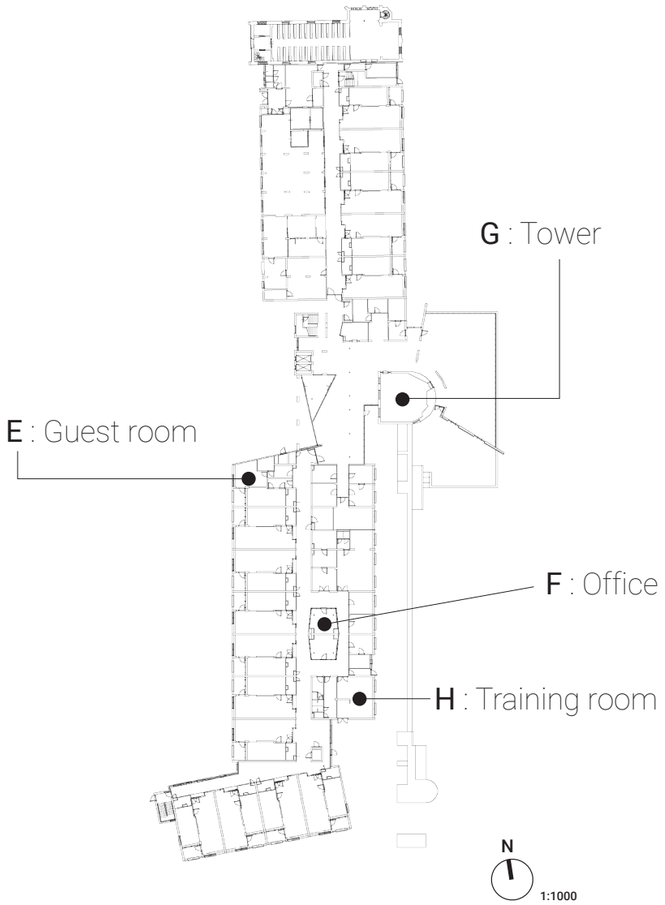


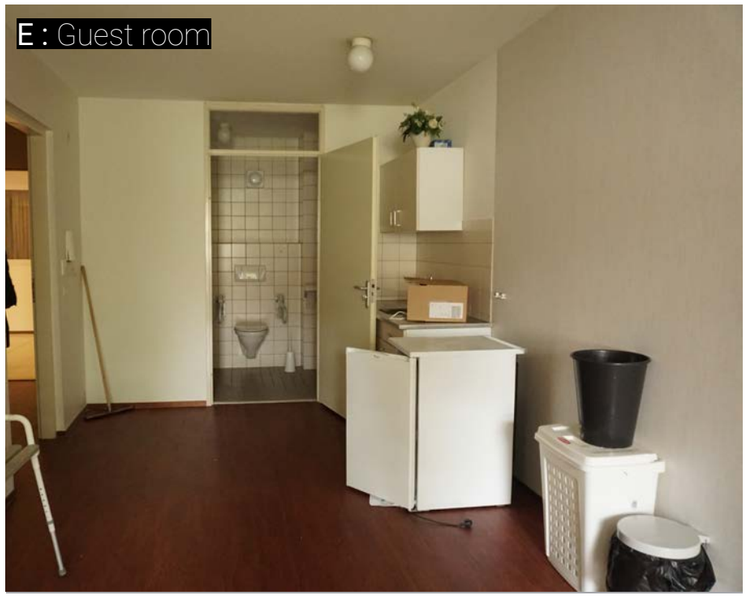

Ceiling & wall finishing : White plastered vaults & walls with green & red painted ribs. Ornamental detailed painting at the arches, window frames...

Floor finishing : Red, white and grey hydraulic tiles in geometric paterns

# Materialisation

Material, color and tectures of ground floor




Ceiling finishing : White plastered ceiling

Wall finishing : White plastered wall & white glazed ceramic tile 15x15cm

Floor finishing : Fake dark wood lynoleum flooring


Ceiling finishing : White painted wooden slats

Wall finishing : White plastered wall

Floor finishing : White terrazo tiles 20x20 cm


Ceiling finishing : White plastered ceiling

Wall finishing : White plastered wall

Floor finishing : Hardwood flooring

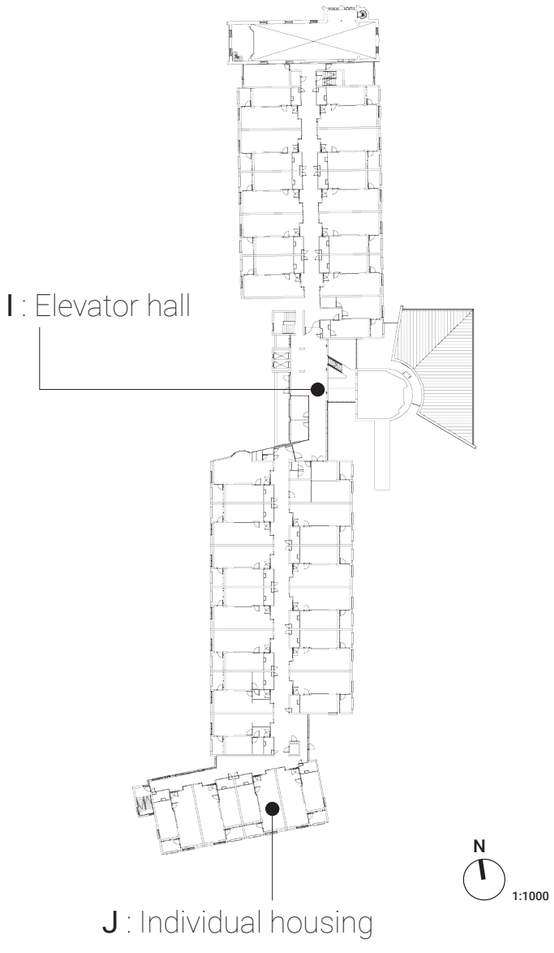

Ceiling finishing : White plastered ceiling with acustic boards

Wall finishing : White plastered wall

Floor finishing : Hardwood flooring

# Materialisation

## Material, color and tectures of First floor

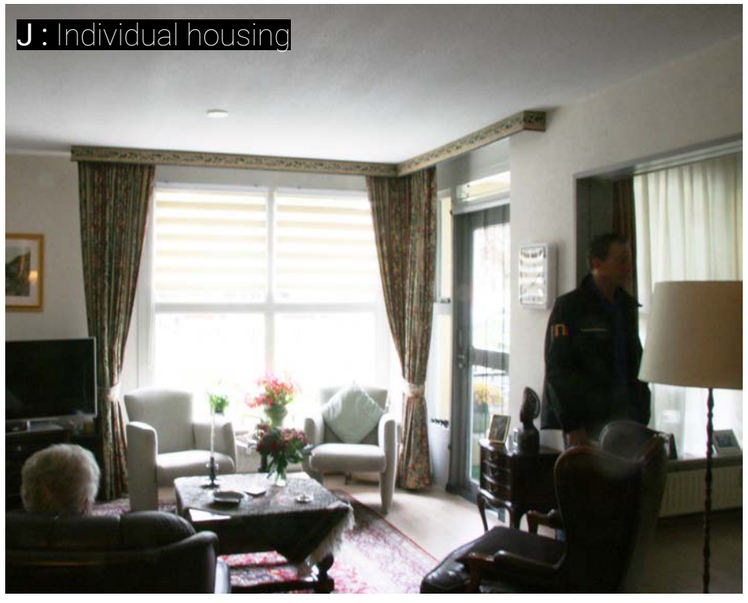




Ceiling finishing : White plastered ceiling

Wall finishing : White plastered wall & exposed yellow brick

Floor finishing : Blue & grey carpet

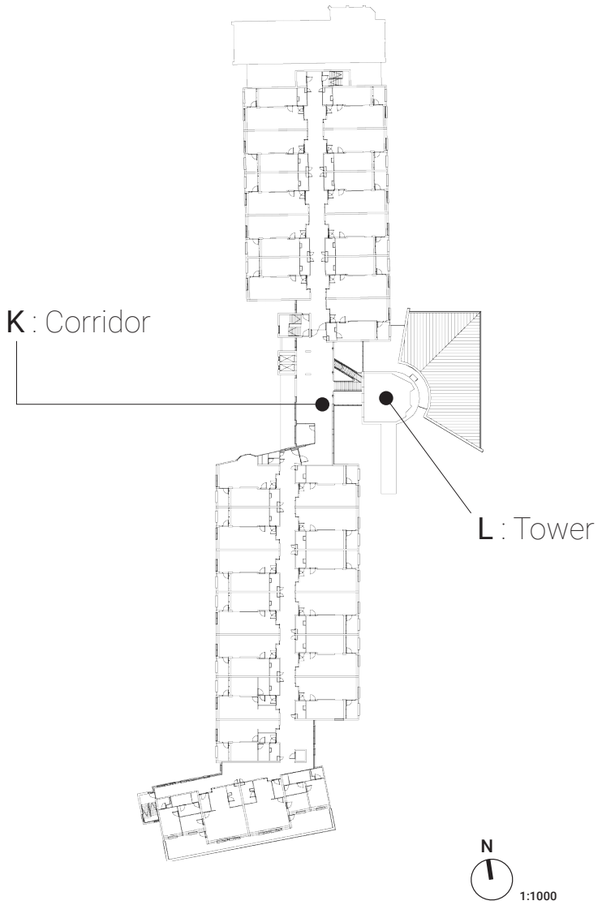



Ceiling finishing : White plastered ceiling

Wall finishing : Cream coloured plastered wall

Floor finishing : Fake light wood lynoleum flooring

## Material, color and tectures of second floor

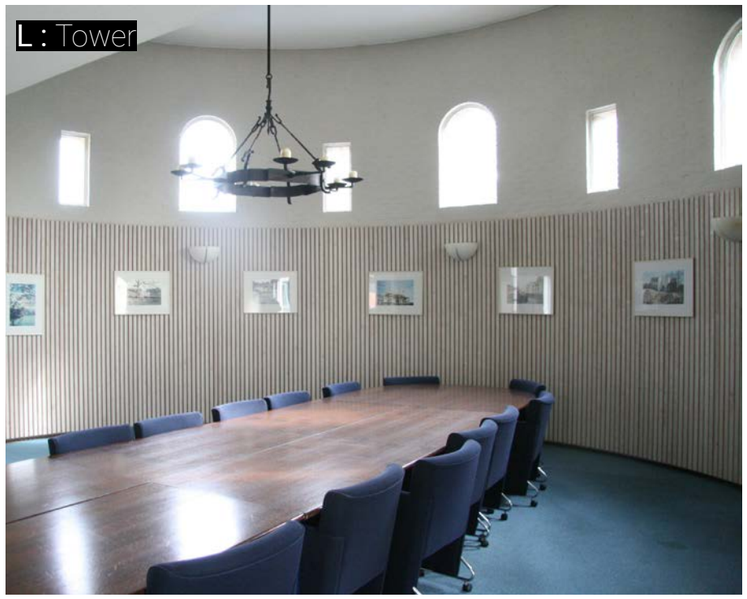


# Material, color and tectures of thrid floor


Ceiling finishing : White plastered ceiling

Wall finishing : White plastered wall

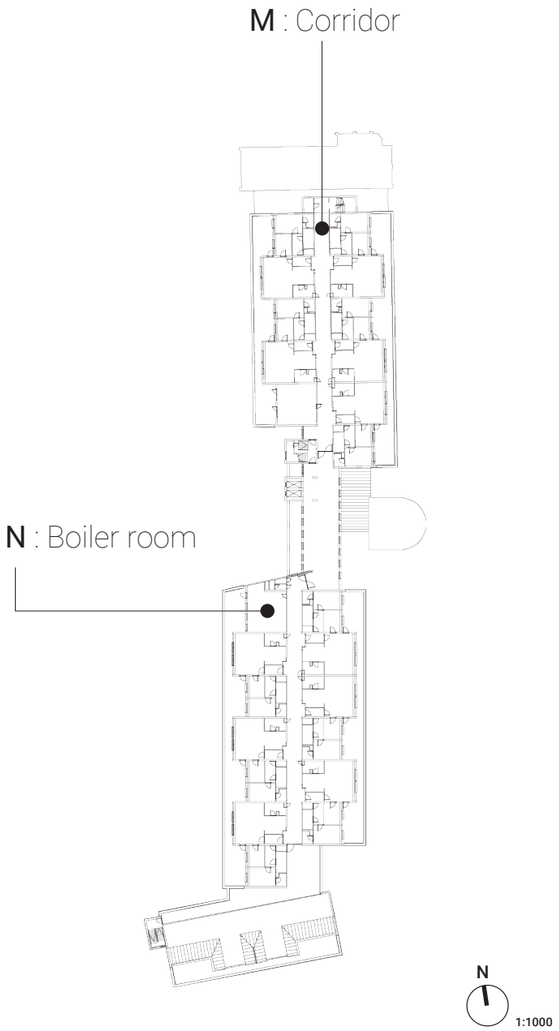
Floor finishing : Muted burgundy carpet




Ceiling finishing : White plastered ceiling

Wall finishing : Cream colour textured plastic paint & thin wooden slats base

Floor finishing : Petrol blue carpet





Ceiling finishing : White plastered ceiling

Wall finishing : White & yellow painted plastered wall

Floor finishing : Muted burgundy carpet




Ceiling finishing : Gypsum boards

Wall finishing : White plastered wall

Floor finishing : Concrete

# Conclusion

## Four different general types

### Four different general types of interior materials

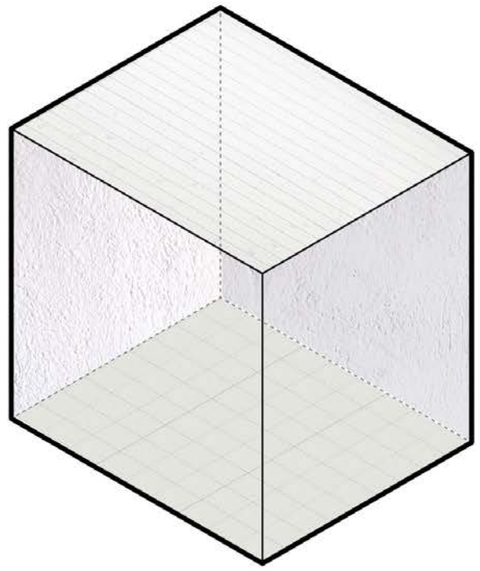
In General, St. Elisabeth building has four different types of interior materials: Space type A ,B, C and special space.

Space type A represents the entrance hall, ground floor corridor, recreation room and caring related offices etc. This type consists the white painted wooden slats ceiling, whitle plastered wall and white terrazo tiles floor.

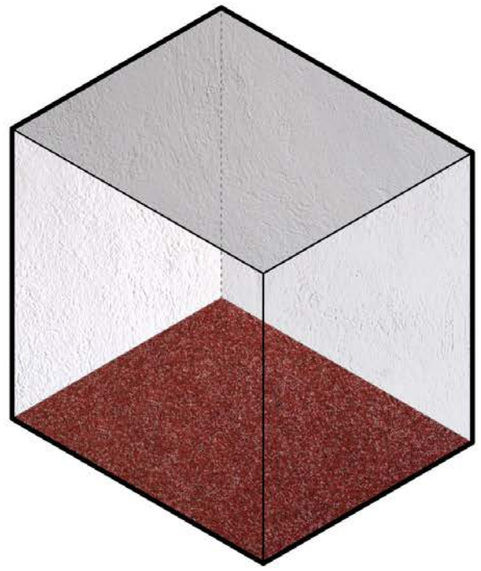
Space type B reflects corriders, offices, second floor tower meeting room and entrance hall starting from the first floor. it consists the white plastered ceiling & wall, and dark coloured carpet.

Space type C has the white plastered ceiling & wall, and Fake light wood lynoleum flooring. Individual housings and ground floor tower meeting rooms are belong to this type.

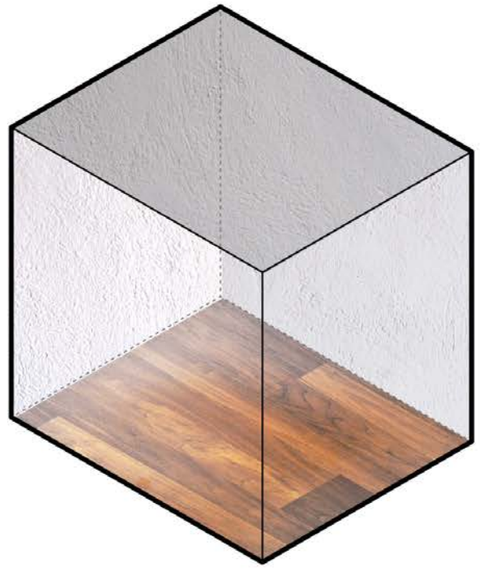
The Chapel is a special space type. It has he white plastered ceiling & wall and the red, white and grey hydraulic tiles in geometric paterns.



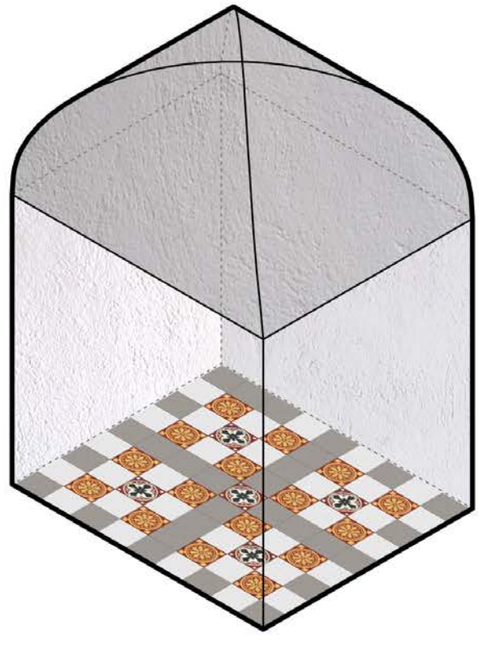
Space type A



Space type B



Space type C

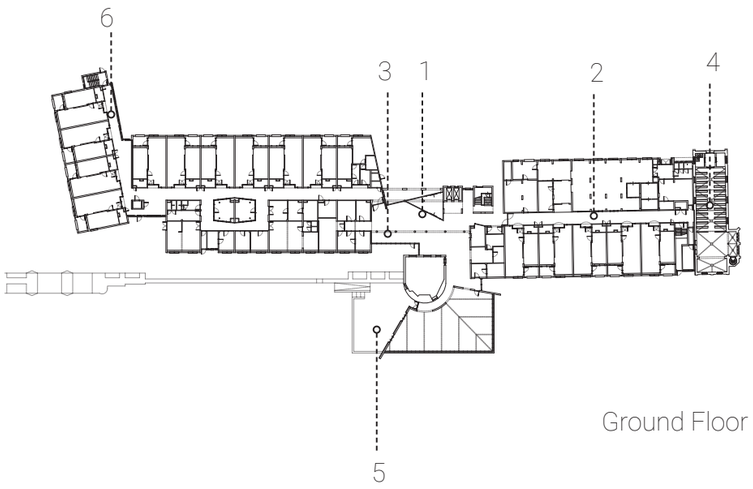


Special space

# 07 Services & Stuff

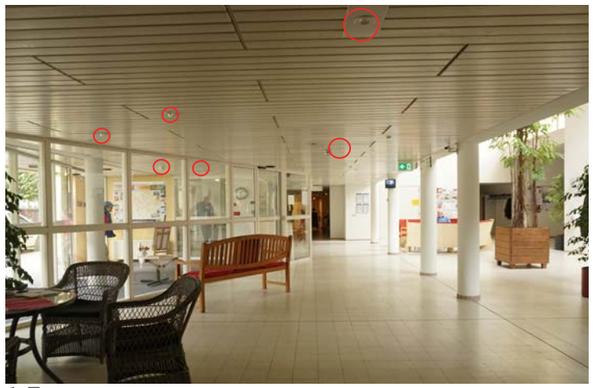
# Lighting
## Natural light and artificial lighting






Ground Floor

Artificial lighting



1 Entrance

2 Corridor to chapel

3 Reception

4 Chapel

5 Recreation room

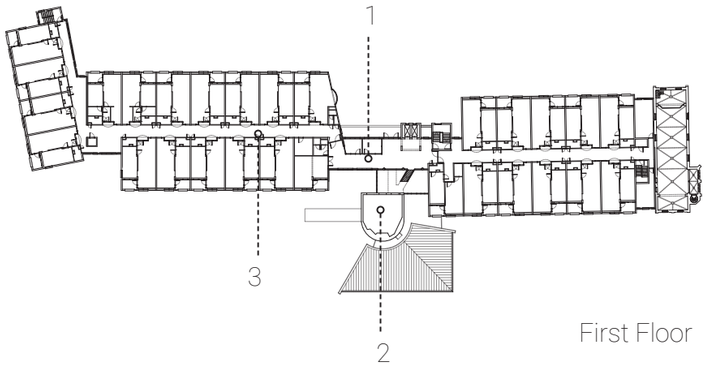
6 South wing corridor

### Different atmosphere created by lighting

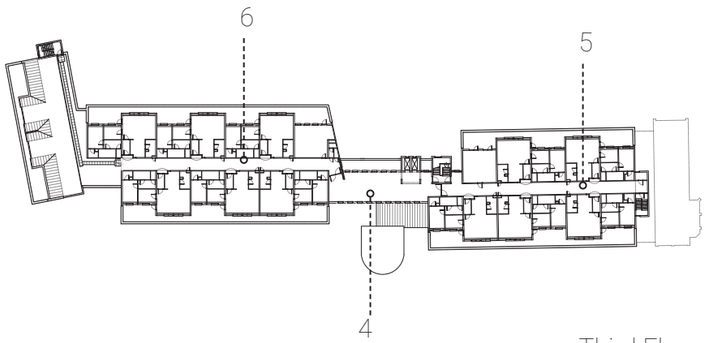
In St. Elisabeth, natural light and artificial lighting create different atmosphere at different locations. At the entrance atrium, the day light is abundant and create a bright atmosphere. At the corridor which links to chapel, the dark orange artificial light create a more holy atmosphere. In the chapel, the high windows and chandeliers create a religious atmosphere.

# Lighting
Natural light and artificial lighting






First Floor

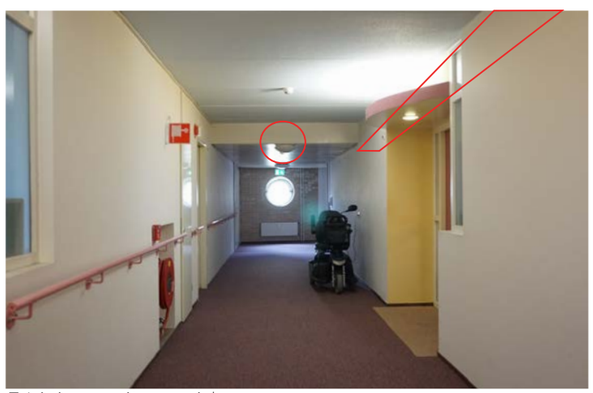



Third Floor

Artificial lighting

1 Library corridor

3 Living unit corridor



5 Living unit corridor

2 Meeting room

4 Game room

6 Living unit corridor

# Ventilation system

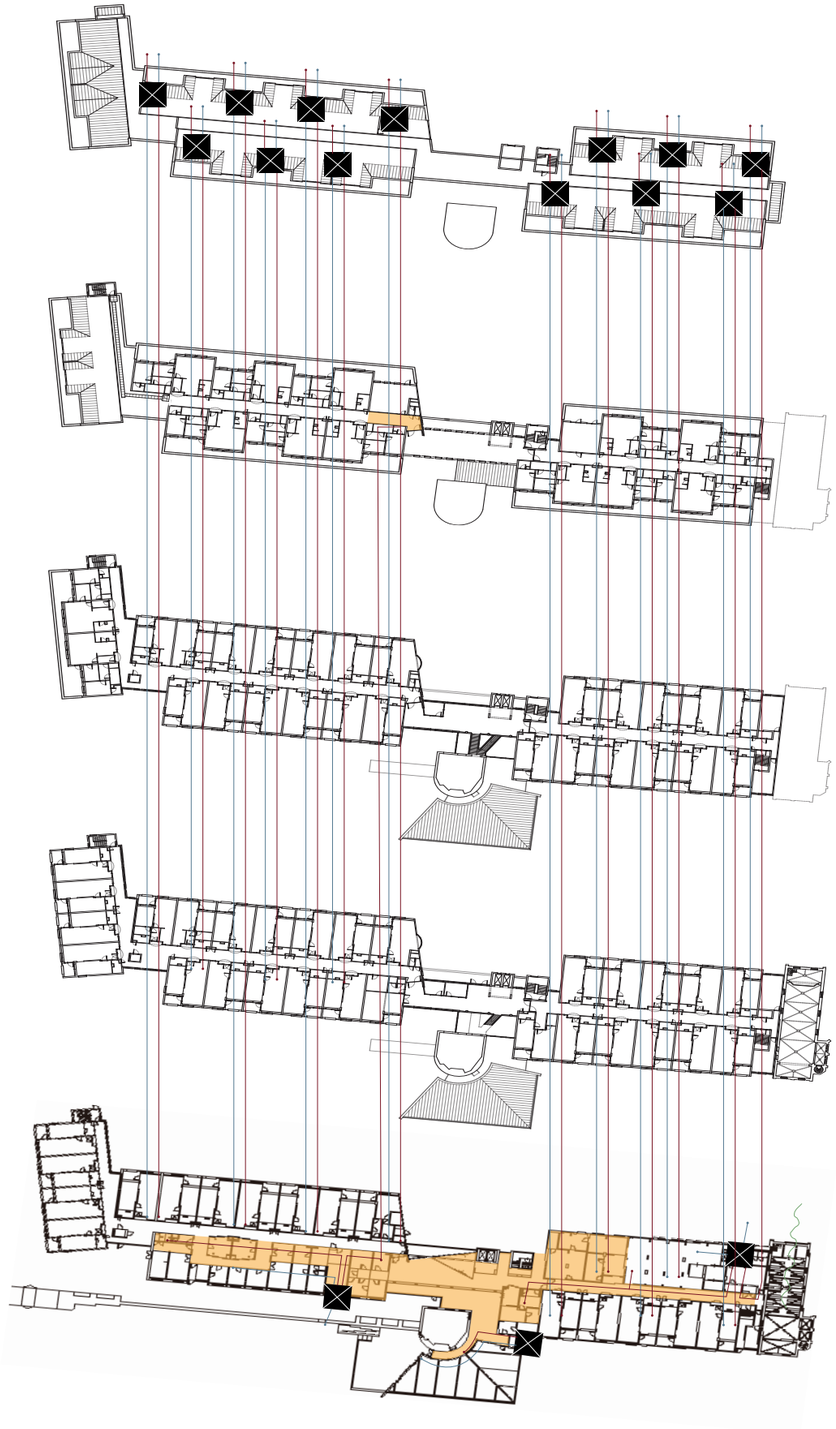
## Mechnical ventilatiron & natural ventilation

(Inside of the ventilation room on the roof)

(Ventilator for low ceiling space)

(The view of the ventilation room on backyard with Jorik)

(Space between recreation room and tower)



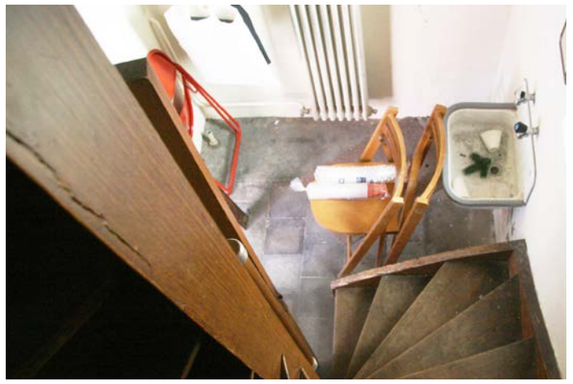

### Four different ventilation types.

St. Elisabeth building has four different ventilation types: Vertical ventilation type for individual housings, Horizontal and vertical ventilation type for low ceiling areas, Individual ventilation system for recreation room and natural ventilation for the Chapel.

# Water elements

## Restrooms, laundry rooms and kitchens

(The view of the toilet in the guestroom)



(Unused sink in the Chepel)

### Water elements of St. Elisabeth

St. Elisabeth building has five categories of water elements. First element is a private restroom which is evenly distributed. Second element is a shared restroom. This element is mainly arranged on the ground floor. Thrid element is a kitchen, and the last element is a laundry room. Beside the shared restroom, the rest of elements are tied together sharing a same shaft.

Clean water

grey water

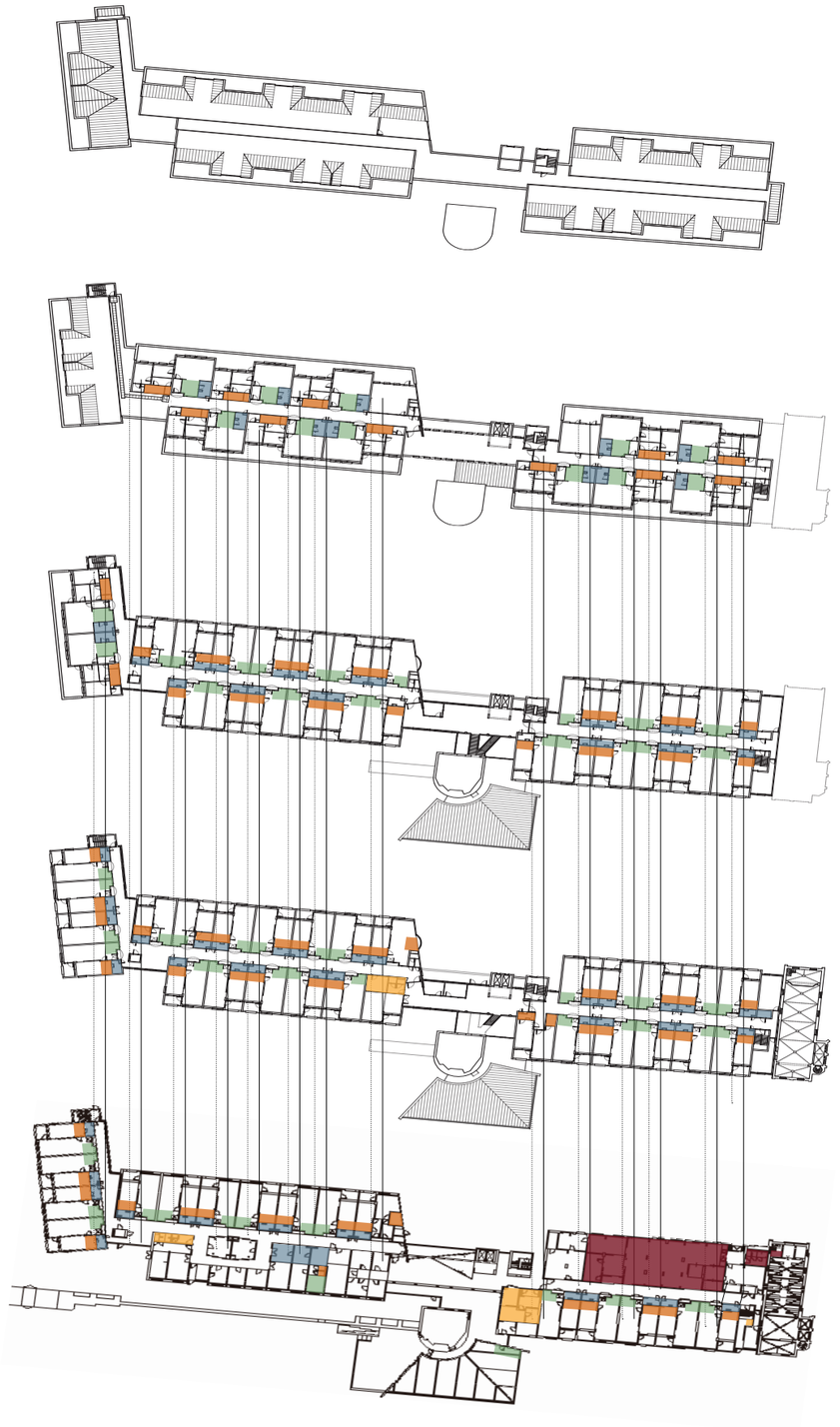
Unused water element

Private restroom

Shared restroom

Kitchen

Laundry room



# Stuff
## Furnitures


lamp in the extention of tower


furniture in the old tower


chair in entrance


chairs

As St. Elisabeth was built in 1992, it doesn't have many old stuffs. Thus, most of the stuff are new pieces of furnitures. Especially in public rooms as the front entrance and restaurant, there are plenty types of furniture made out of wooden or leather,etc in many colors. Most of them fits the space. But the table in the extension of the old tower, they don't have a correspondence with the plan of the room. Nevertheless, the chandelier fits the old feeling of the historical place.


sofa and chairs


chair in recreation

# Conclusion
## Usage & vacancy

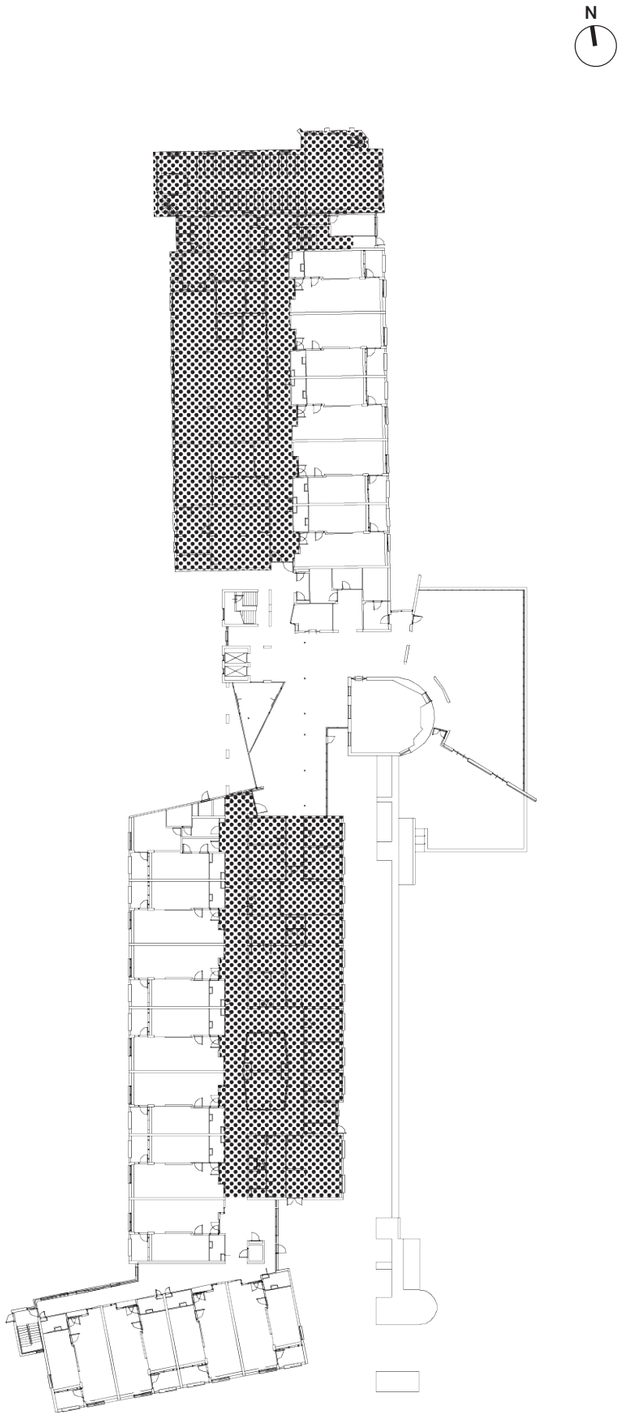
### Unbalance between Elderly house and Chapel

Built in 1993, the elderly house has relatively new building facility than the chapel which is built in 1878. This caused an imbalance in the spatial environment between two buildings.  Thus, It is imperative to introduce quality control devices including proper ventilation and light in order to revitalize the stagnant church space.

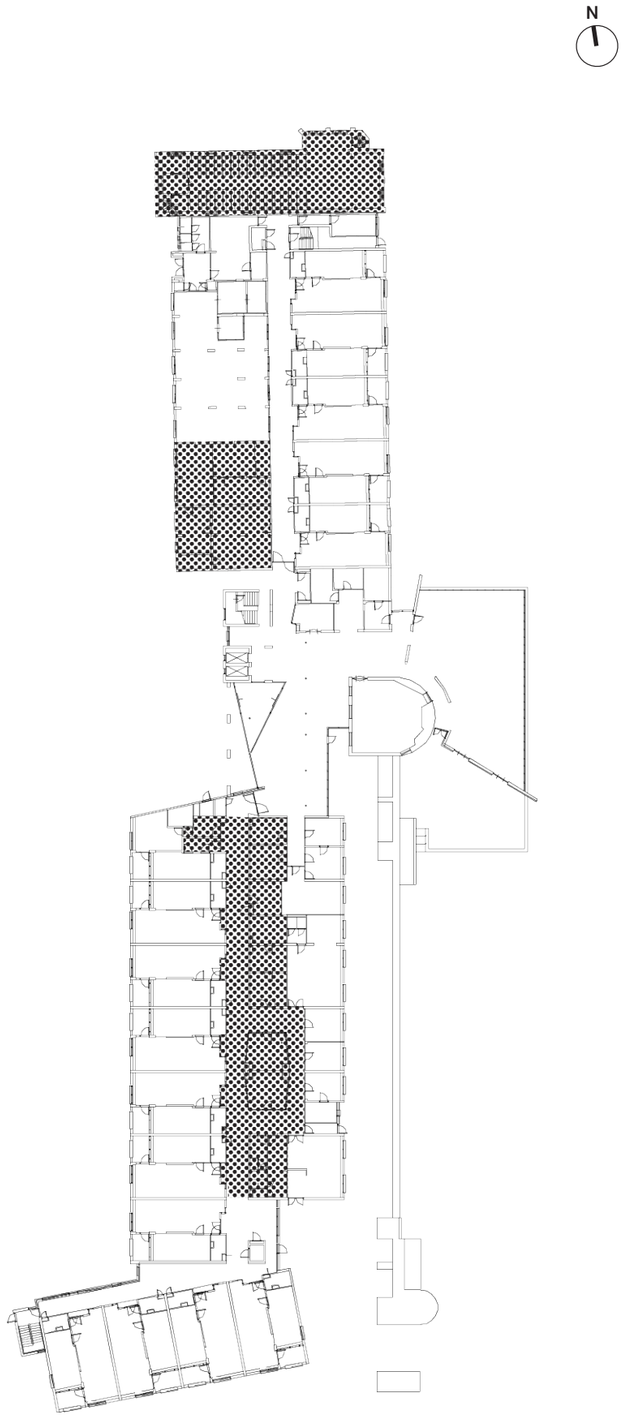
### Suatainable space quality control

Using energy efficient and high performance equipment is important for increasing space quality. However,  what is more important is to use the natural energy as much as possible to prevent unnecessary energy use.

Some parts of St. Elisabeth building are dark during the daytime and badly ventilated. Thus, It is often necessary to turn on the light in daytime, and the ventilator is frequently turned on at any time. In this aspect,  It is difficult to call St. Elisabeth building as a sustainabe building.




*Shady area*




*Poorly ventilated area*

# 08 Spirit of Place

# Site Spirits Collage

Defense, religion, care, green, tour

*Collage by Xuan*

# Site Spirit - Defense

City wall, Enclosed atmosphere



The city wall was an important element in the city hostory of Zutphen. At 15th century, the city walls defined the boarder of Nieuwstad. It was also a  defense line together with outside fortifications. In 1846, the city wall began to be demolished due to the city expansion. With the construction of St. Elisabeth, parts of the wall was demolished or restored later. The physical remainings were quite different from medieval time when the wall had defense function. But we can still have a strong experience of the city wall at St. Elisabeth and its surroundings. The Berkelpoort, the remianed city wall ,the tower house and the brick foundation surface of St. Elisabeth north wing constitute a continuous trace line of former defense wall. It create a enclosed space feeling which can clealy experienced in the back garden of St. Elisabeth.

City wall

City wall view

Gate

City wall

Berkelpoort

City wall bricks integrated with facade

City wall bricks of interior wall

# Site Spirit- Religion

Church, Chapel, Care



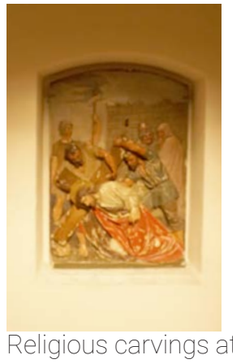
The elderly housing is named as ‘St. Elisabeth’ and it indicates the catholic background. Elisabeth was the patron of the charity , Hungary, hospitals, nurses, bakers, brides, lace makers, countesses, dying children, outcasts, beggars, desperate people, widows, orphans and widowers, and of the Third Order of St. Francis. In the Netherlands and Flanders , many sickness and nursing homes were named after her. (Jennifer Gregory, 2016) The St. Elisabeth was founded by catholic church to give assistance to catholic believers at the beginning. But nowadays, it was used for elderly care regardless of religious faith. However, except for the name, the St. Elisabeth chapel which connected to the elderly housing, the St. Janschurch in the surrounding still give a religious experience today.

St. Janskerk

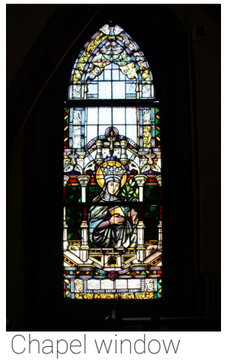
Interior of St. Janskerk

Interior of St. Elisabeth chapel


Name billboard



Religious carvings at the corridor wall



Chapel window

St. Elisabeth chapel

# Site Spirit- Care

Elderly housing, the elderly people,
Quite atmosphere

The site has always been used for caring or nursing since 1855. Although the physical building of St. Elisabeth went through many alterations or reconstructions, the care function never changed. The caring function came with the catholic background (see in the former page). The poor or the elderly catholic believers were taken care by the nuns in history. Now the elderly people are taken care by professional institution. We can see elderly people taking walks, walking dogs , chatting or doing group games at St. Elisabeth and the surrounding. The atmosphere here is quite and peaceful.

The elderly at St. Elisabeth

The elderly at St. Elisabeth *(Zutphen archive, 1991)*

Wheel chairs at hallway of St. Elisabeth

The elderly at St. Elisabeth

The elderly at recreation room *(Zutphen archive, 1993)*

# Site Spirit- Productive Green

Farm, Garden

Greenery is another prominent character of the site. At 16th century, there were productive farm beside the city wall in site. The farm gradually disappeared and became the green garden of St. Elisabeth. Nowadays, there are still some small vegetable farm grown by the elderly people at the back garden of St. Elisabeth. The gardens of St. Elisabeth have a relatively quite atmosphere.

Medieval farm (*The Medieval Seasons, 1995)*

Vegetable farm

Front garden

Front garden

Back garden

Back garden

# New Site Spirit- Tour

Landmarks, Boat tour, Visitors

Tourism is a new site spirit which developes in recent years. The boat tours at the Berkel river attract many visitors. The Berkel gate which locates very near the St. Elisabeth also becomes  a visiting spot due to its rarity. In the surrounding of St. Elisabeth, the St. Jans church , Luther's hofje are also possible visiting places.  As shown in a map of recommended travel routing of Zutphen, there were routing along the southbank of Berkel river which is near the St. Elisabeth. However, many of theses special views or historical heritages do not have a good accessibility now.

Boat tour deck


Boat tour

Visitors at city wall

Visitors at church

Visitors at hofje


Travel routing map

# Conclusion

Diverse and hidden site spirits



## Diverse and hidden site spirits

We concluded five site spirits of St. Elisabeth. Some of the spirits are related with the historic background, such as ‘ defense’, ‘riligion’, ‘care’, ‘productive green’. Some are new spirits such as the ‘ tourism’. For some spirits, people may still experience them through the tangible subjects such as the traces of city wall or the gardens at the site. But most of them are obsecure and unseen by the public.

# 09 General Conclusions of Eight layers

# Conclusions
Conclusions of eight layers

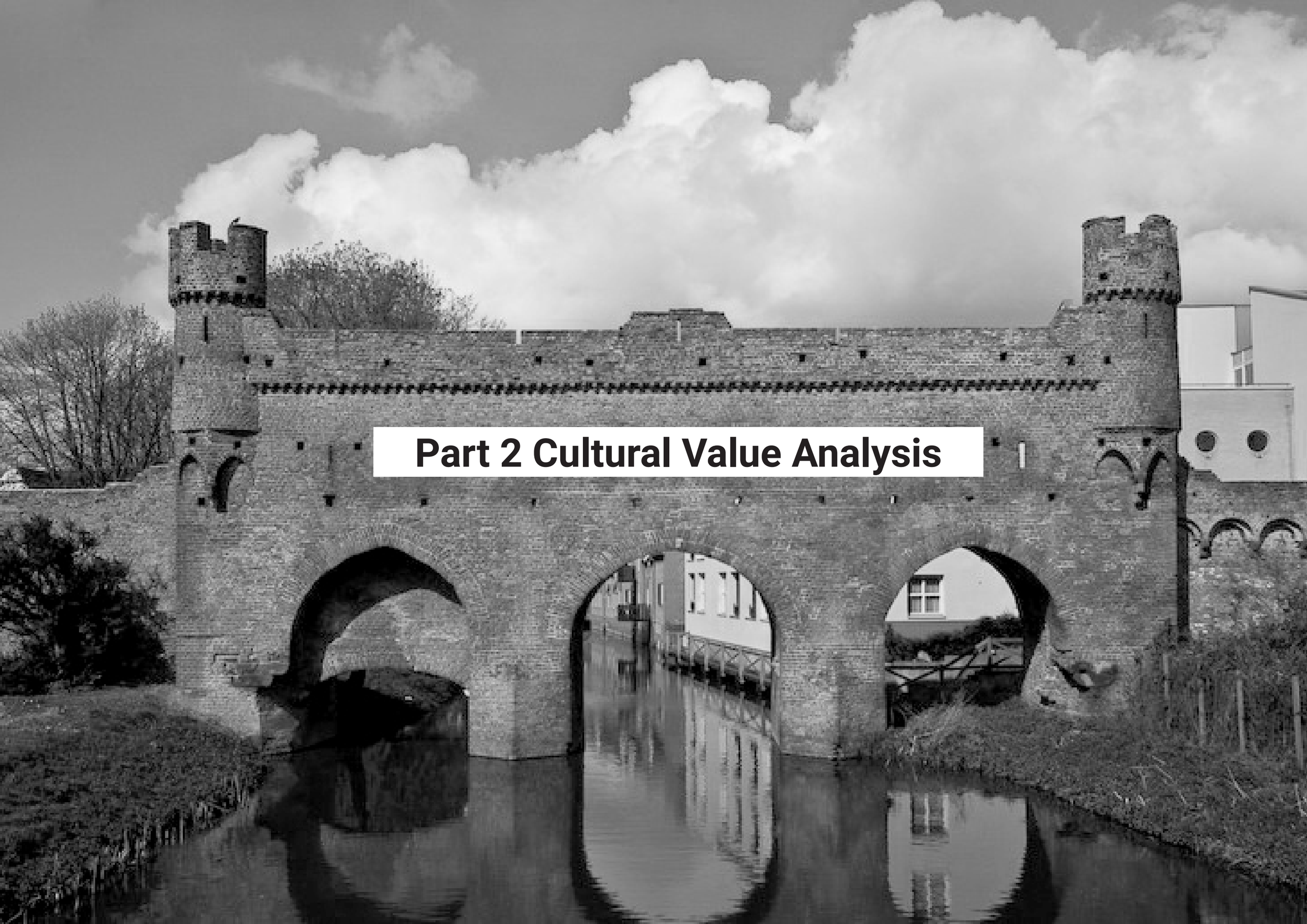


A base for culture value analysis and future design

We get seperate conclusions of each layer chapter. When we put these conclusions together, we also find some chapters should be connected with each other. For example, Site Spirit is related with the Surrounding & Setting, Site and Skin etc.

These conclusions from architecture analysis could also be the basis and reasoning for culture value analysis which will be illustrated in the next chapter. The data and conclusions might also be the base for our starting points for redesign.

| | Conclusions | | |
|---|---|---|---|
| **Surrounding & Setting** | **- Surrounding with a long history**<br>The surrounding of the St. Elisabeth is the city border of Nieuwstad. It has a long history dating back to 16th century. Some parts of the ancient surroundings still exist today. | **- Disconnection of surrounding**<br>Although the surroundings are physically connected with St. Elisabeth, the functions, routings, and users are segregated | **- Remaining historic elements**<br>Some historic elements of the surrounding and setting still exist, such as the Berkel river, the Berkelpoort.<br>- Greenery as prominent character of surrounding |
| **Site** | **- Continuously changing site**<br>St. Elisabeth has been through several alterations, renovations, and reconstructions. So the site changed continuously. | **- Site as a separation of the direct surroundings**<br>We can find that the site is actually separate from the direct surroundings and leads to different characteristics and atmosphere. | - **Remaining historic elements**<br>There are two important remaining historic elements in site which are the St. Elisabeth chapel and the remaining city wall. |
| **Skin** | **-Roof**<br>The roof of the St. Elisabeth building was shaped by dormers, lean-to and flat roofs in order to fit in the city pattern and skyline. | **-Facade**<br>The facade was designed in a rational way. Different volumes were colored differently according to the palette of "yellow-beige-red". | **- Postmodernist expression of facade**<br>Although postmodernism is a relatively new architectural style, it is the latest historical layers in a time-layered buiding ensemble (chapel, wall, St. Elisabeth) |
| **Structure** | **-Modular segments**<br>The structure of the St. Elisabeth consists of a set of modular segments, but conceils this by use a high variation of different modules as well as rotating or mirroring them. | **-Symmetrical compositions**<br>There is a noticable attempt to create a symmetrical composition in the structure. | **-Stability**<br>Multiple prefabricated concrete shafts have been distributed along the wings of the building. The wings are separated by dilatations, so they require their own stability shafts. |
| **Spaceplan &Spacial Composition** | **-Preferred space & non-preferred space**<br>We find that the most preferred space is the riverside wing where most of the residents want to live. The least preferred space is North wing front side, which suffers from a vacancy problem.<br>Furthermore, the path through the pastorie's parking lot or the glass passage in the center makes it difficult to access. Through this, we can find the necessary conditions to improve the daily lives of the residents. | | **- A fragmental volume composition**<br>St. Elisabeth is composed of many fragmental volumes of different shapes and sizes. This might be the expressions of the post-modernism architecture. |
| **Surfaces** | - **Four different general types of interior materials**<br>In general, the St. Elisabeth building has four different types of interior materials: Space type A ,B, C and a special space.<br>Space type A consists the white painted wooden slats ceiling, white plastered wall, and white terrazzo tiles floor. Type B consists the white plastered ceiling & wall, and dark colored carpet.<br>Space type C has the white plastered ceiling & wall, and fake light wood lynoleum flooring. The Chapel is a special space type which has hydraulic tiles in geometric patterns. | | |
| **Services & Stuff** | **-Different atmosphere created by lighting**<br>In the St. Elisabeth, natural light and artificial lighting create different atmospheres at different locations. | **-Unbalance between Elderly house and Chapel**<br>The elderly house has relatively new building facility than the chapel which is built. | **-Suatainable space quality control**<br>For some parts of St. Elisabeth, it is often necessary to turn on the light in daytime. It is difficult to call St. Elisabeth building as a sustainabe building. |
| **Site Spirit** | - **Diverse site spirits**<br>We have identified five site spirits, namely 'defense', 'religion', 'care', 'productive green' and 'tour'. | - **Hidden site spirits**<br>Some of the five site spirits can be experienced when they are associated with the historical remains, but most of the site spirits are hidden nowadays as they are intangible The physical remainings are hidden behind the St. Elisabeth. | |



# Part 2 Cultural Value Analysis

# Introduction

Value of St, Elisabeth building.

## Four steps for analytical mapping

This Chapter consists of four steps; Chrono-mapping, filling in the value matrix, marking the significance and defining dilemmas.

### First step: Chronomapping

It aims at developing insight into the genesis of the heritage site, its evolution and status quo by 'mapping' how, when and where the building was constructed and has since evolved to its present state. The aim is to compile a referenced recording of the heritage site that can serve as the reliable source of information as to what is actually there in terms of location and materials and their chronologies. (Kuipers, M. & De Jonge, W., 2017)

### Second step: Value matrix

The second step in the investigation procedure implies a site-specific identification and classification of typical features that can be distinguished in and around the heritage site in terms of construction, architecture and socio-cultural history. This is an extension of the process of anamnesis discussed in the previous Eight chapters of Shearing layers but selects not only those aspects of importance to the cultural-historical value of a place but also intangible values of Riegl. The aim is to create a clearly structured and illustrated document that, like a map, will give a qualitative insight into the place and specificity of the particular heritage values of the investigated building or site.

The value matrix has two axes. The first axis of this matrix, largely based on Brand's shearing layers and it represents the built artifact. The other axis refers to core heritage values derived from Riegl's dialectic value set. By filling the boxes of this matrix where relevant with text and images, and leaving non-relevant relationships blank, values are identified and related to tangible and intangible layers. (Kuipers, M. & De Jonge, W., 2017)

### Third step: Value Assessment (Marking the significance)

It involves a qualitative interpretation of the identified features and a critical review of the related heritage values. It aims at a substantiated differentiation in the levels of significance of both the general and the crucial heritage qualities as summarized in the previous steps of chrono-mapping and value matrix. The intention of this step is to clearly mark the highest priorities for conservation, based on present heritage values and not aligned to future design ambitions.

The level of significance are indicated on the value matrix and plan and facade by use of the 'traffic light' color; red, yellow, green. The red colour demands extreme caution because of a high historic value, often due to the presence of original components and materials, or elements that reflect the original design concept very strongly; Yellow calls for proceeding with caution, often because there may be historical assets at stake that could not be investigated sufficiently or because valuable modifications from a later phase have been identified; green indicates components of indifferent value, usually later additions or sections that have been radically altered. (Kuipers, M. & De Jonge, W., 2017)

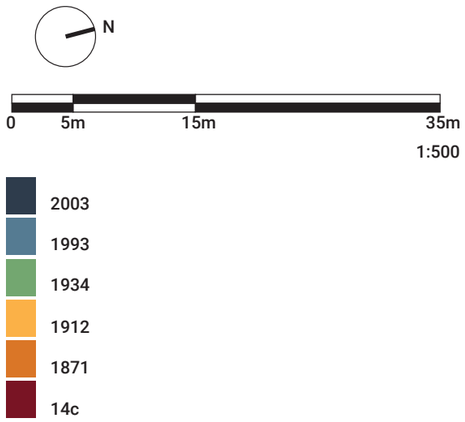
### Fourth step: Defining Dilemmas

The last step of the investigation procedure shows the dilemmas, opportunities, and obligations that need to be taken into account when preparing a strategy for adaptive reuse and (partial) conservation. (Kuipers, M. & De Jonge, W., 2017)

# 01 Chronomapping

# Building Chronomapping

St. Elisabeth, City wall, Chapel





Ground Floor Plan

The St. Elisabeth is composed of three parts, the elderly housing, the city wall and the chapel. The first parts of the city wall were built in 14th century. The chapel was first built in 1871. The elderly housing was completely rebuilt in 1993. An educational nursing home was added to the southeast corner in 2003.

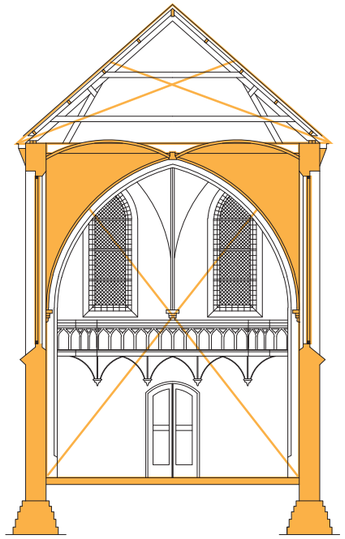
# Building Chronomapping
Chapel

1934

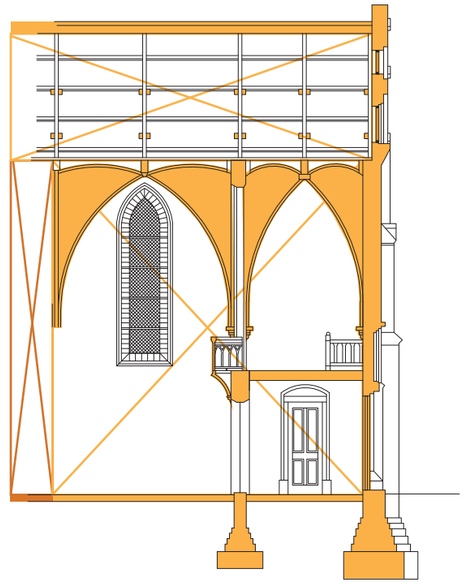
1912

1871

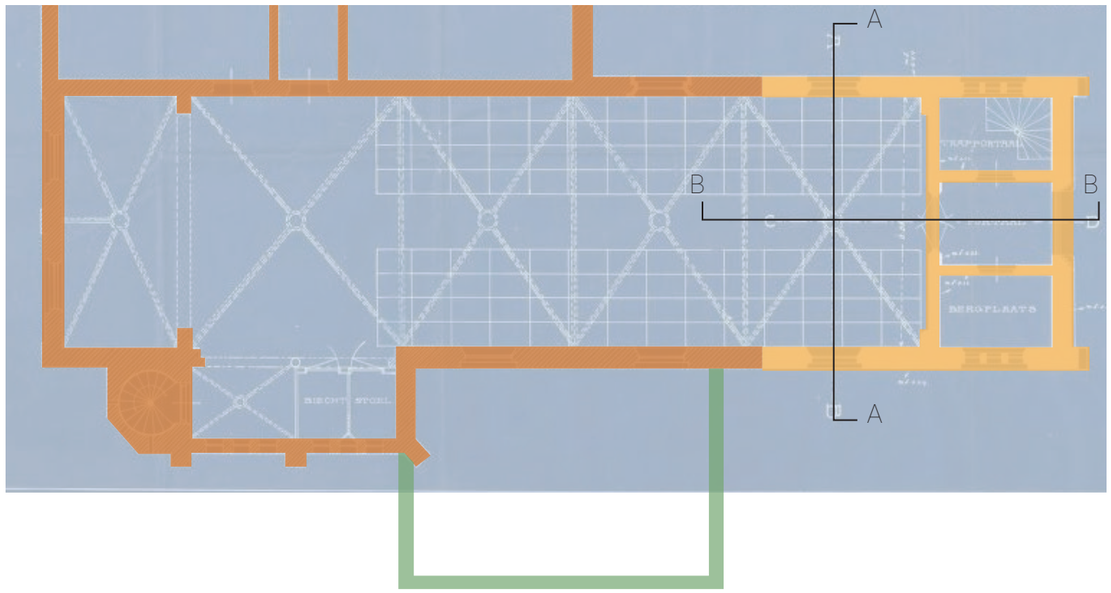
The St. Elisabeth chapel is composed of three building phases. The western part was built in 1871. The eastern part was an extension at 1912. The whole roof was also renovated in 1912. In 1934, a car garage was added to the north facade of the chapel.



Section A-A



Section B-B

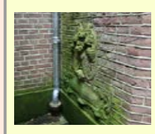
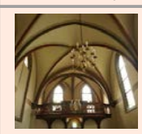
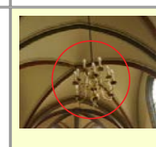



Chapel Ground Floor Plan

# 02 Value Matrix &Value Assessment

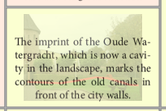
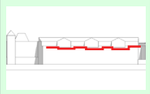
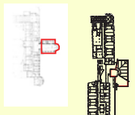
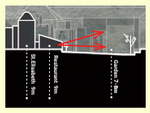
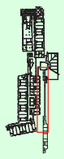
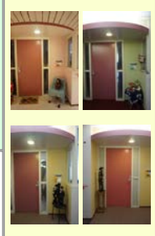
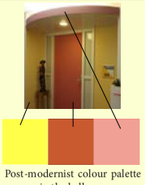
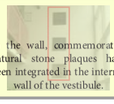
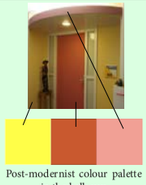
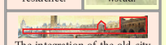
# Value Matrix - Chapel

Indifferent Value
Medium Value
High Value

| | Age Value | Historical Value | Intentional Commemorative Value | Unintentional Commemorative Value | Use Value | Social Value | Art Value | Rarity Value | Other Values |
|---|---|---|---|---|---|---|---|---|---|
| **Surroundings/ Settings** |  Foundation of the city wall behind the pastorie<br>  The eastern part of the chapel was built in the 1870's. |  St. Maria School<br>Foundation of the city wall behind the pastorie<br>  The pastorie | | |  The private parking lot in front of the chapel | |  Pavement |  The proxomity of trees to the chapel. | |
| **Site** | |  Car garage connected to the chapel<br>  Religious function of site | | | | | | | |
| **Skin (exterior)** |  The front façade from 1902<br>  The façade stone on the back of the chapel |  The front façade from 1902, with buttresses, point-arched windows and arcades, is typical for the neo-gothic style that Catholic revival architects used in church designs. |  The façade stone on the back of the chapel | | |  Space is used for multiple purposes, such as weddings but also seminars and lectures. This provide a social communication. |  The façade stone on the back of the chapel | | |
| **Structure** |  The vaulted ceilings and buttresses |  The vaulted ceilings and buttresses are part of obsolete, yet inventive techniques of constructing ceilings which is rarely used anymore. | | | | | | | |
| **Space Plan** | | | | |  Connection with the St. Elisabeth residence<br>  Space is used for multiple purposes, such as weddings but also seminars and lectures. | |  The volume, the composition of the space are appreciative. | | |
| **Surfaces (interior)** |  Point-arched, high windows |  Point-arched, high windows | | | | |  Frescoes<br>  Floortiles<br>  The stained glass windows are adorned with detailed drawings of biblical figures. | | |
| **Services** | | | | |  Chandeliers/lighting | | | | |
| **Stuff** | | | | |  Chandeliers<br>  The benches<br>  The electric organ | | |  Chandeliers | |
| **Spirit of Place** | |  The chapel is the most substantial reminder of the historical religious nature of the St. Elisabeth. | | |  The chapel is the most substantial reminder of the historical religious nature of the St. Elisabeth. | | | | |

# Value Matrix - St. Elisabeth Elderly Housing

Indifferent Value
Medium Value
High Value

| | Age Value | Historical Value | Intentional Commemorative Value | Unintentional Commemorative Value | Use Value | Social Value | Art Value | Rarity Value | Other Values |
|---|---|---|---|---|---|---|---|---|---|
| **Surroundings/ Settings** |  The remains of the old city wall , Berkelpoort, Luthers hofje, Pastorie |  The remaining citywall show the defense hitory<br>  Berkelpoort and Berkel river. | | |  Boat tours.<br>  View from St. Elisabeth.<br>  L u t h e r ' s courtyard.<br>  Parking lot at the entrance. |  The social value of Luther's courtyard. |  Pavement<br>  The view of the city silhouette from the rooftops. |  Space between city wall and building.<br>  Berkel Gate. | |
| **Site** |  The chapel from the 1870's. |  This site was always used for care and religious function<br>  The imprint of the Oude Watergracht, which is now a cavity in the landscape, marks the contours of the old canals in front of the city walls. |  The twin towers on the western façade of the St. Elisabeth are a reference to the towers of Zutphen's city wall. | | |  The Oude Watergracht has made room for a garden, which is the only private outdoor facility for most of the St. Elisabeth residents. | | | |
| **Skin (exterior)** |  Parts of the city wall that are integrated into the skin of the St. Elisabeth. |  Post-modernist colour palettes in the façades. |  The brick façades of the U-Tower.<br>  The roof of the U-Tower. |  The parapets of the St. Elisabeth residence resemble very stretched out crenellations of old city wall. | | |  Post-modernist colour palettes in the façades | | |
| **Structure** | | Irregular dimensions in structure: rejection of modernism.<br>Twin towers: typical post-modernist expression.<br>  The structure of the new eastern tower is largely based on the foundation contours of the old city wall. | | | | |  The twin towers are typical expressions of the post-modernist building style. | | |
| **Space Plan** | |  The space of the Tower room is based on that of the old tower. |  The current recreation room commemorates older the recreation room | |  The restaurant with glass façades is slightly lifted above the garden, which offers a panoramic view. |  The restaurant with panoramic view is a main gathering place for the elderly. It has social value | |  Space between city wall and building |  The interior 'porches' have different colors and decorations. It adds to the identity and experience of the hallways. |
| **Surfaces (interior)** |  Parts of the old city wall that can be seen inside the restaurant of the St. Elisabeth. |  Post-modernist colour palette in the hallways |  Sculpture on the wall tell the story of religion<br>  In the wall, commemorative natural stone plaques have been integrated in the internal wall of the vestibule. | | | |  Post-modernist colour palette in the hallways | | |
| **Services** | | | | | | | | | |
| **Stuff** |  Many of the inhabitants own old furniture, but is private ownership. The public parts of the building have no particularly old furniture. | |  Pictures on the wall tell the story of various residents | | | | | | |
| **Spirit of Place** |  A tradition of care has been passed on from the old infirmary, to the nuns of Zusters van Liefde, to the current St. Elisabeth residence. | The name 'St. Elisabeth' reminds of the Catholic origins of the residence.<br>Allotments remind of the monkhood in medieval Nieuwstad.<br>  The integration of the old city wall towers in the design is a reminder of the former defensive function of its surroundings. |  Lectures are given in the restaurant about the history of the region and birthplaces of the inhabitants. | | Care and nursing function<br>Allotments<br> Tourism is a new site spirit | | | | |

# Landscape Value Assessment

Garden, Courtyard, River

Parking lot at the entrance has use value.
_Mideum value

Parking lot at the entrance has use value.
_Mideum value

Luther's courtyard (1850) has social and historic value.
_Mideum value

South front garden
_Indifferent value

Space between city wall and building
_Indifferent value



The proxomity of trees to the Pastorie
_Indifferent value



Foundation of the city wall behind the pastorie
_High value



Connection wall to Pastorie (1871)
_High value



The Oude Watergracht has made space for
a back garden since 1930 , which functioned as
a resting place for the residents.
_Medium value



Berkel river has historical value. Furthurmore,
boat tour adds economical value here.
_High value

N

0 10m 30m 70m

1:1000

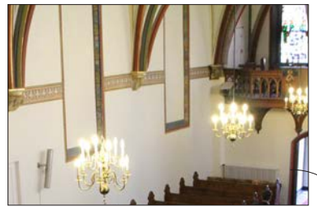
Indifferent Value

Medium Value

High Value

# Building Value Assessment
## Ground Floor

Kitchen is not used any more
_Indifferent value



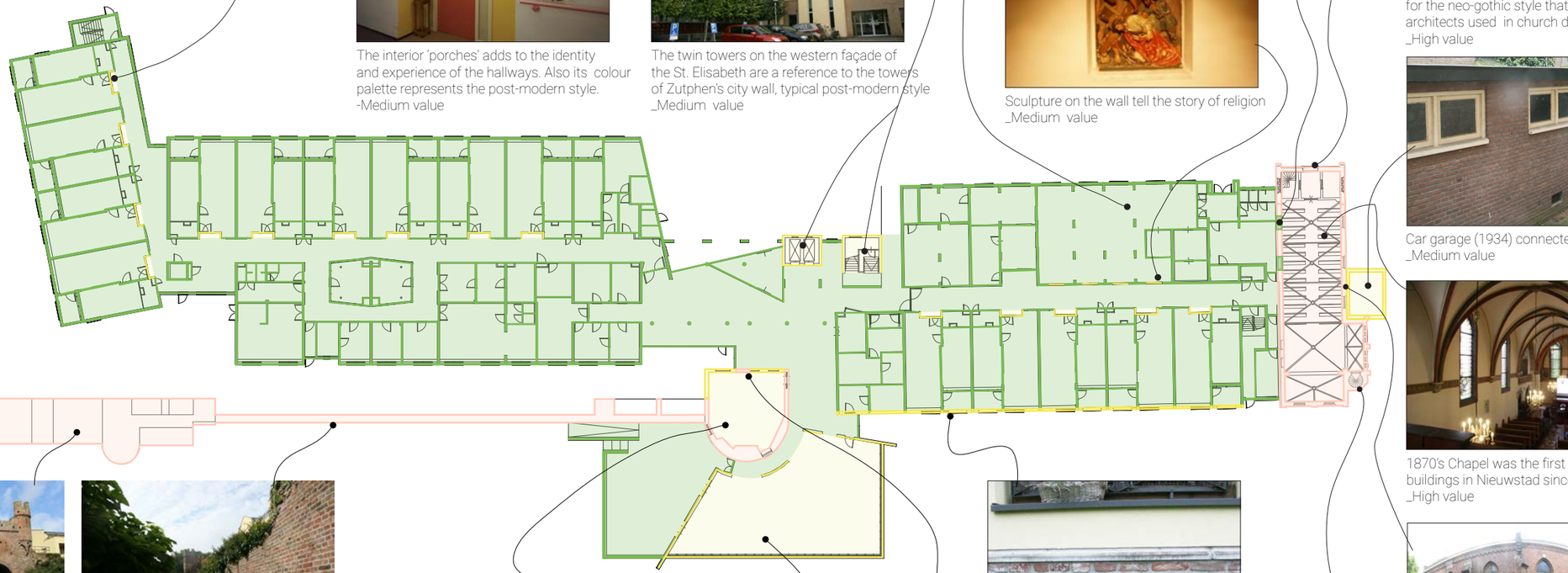
Two windows are blocked.
_Indifferent value

Sculpture on the wall tell the story of religion
_Medium value

The front façade from 1902, with buttresses, point-arched windows and arcades, is typical for the neo-gothic style that Catholic revival architects used in church designs.
_High value

The interior 'porches' adds to the identity and experience of the hallways. Also its colour palette represents the post-modern style.
-Medium value

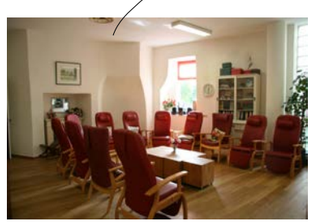
The twin towers on the western façade of the St. Elisabeth are a reference to the towers of Zutphen's city wall, typical post-modern style
_Medium value



Berkelpoort _ High value



Citywall _ High value



The space of the Tower room is based on that of the old tower.
_Medium value

The current recreation room commemorates previous recreation room before reconstruction, and its panoramic view has social value.
_Medium value



Parts of the city wall are integrated into the skin of the St. Elisabeth during the reconstruction.
_Medium value

In the wall, commemorative natural stone plaques have been integrated in the internal wall of the vestibule.
_High value

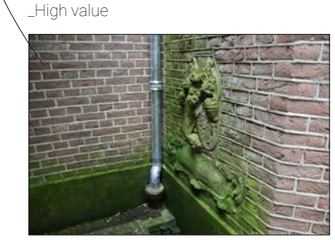


Car garage (1934) connected to the chape
_Medium value



1870's Chapel was the first religious Catholic buildings in Nieuwstad since the reformation.
_High value

The east part of the Chapel was built in 1870's
_High value



The commemorate stone of the chapel
_High value

| |
|---|
| Indifferent Value |
| Medium Value |
| High Value |

5m 10m 15m 20m 25m

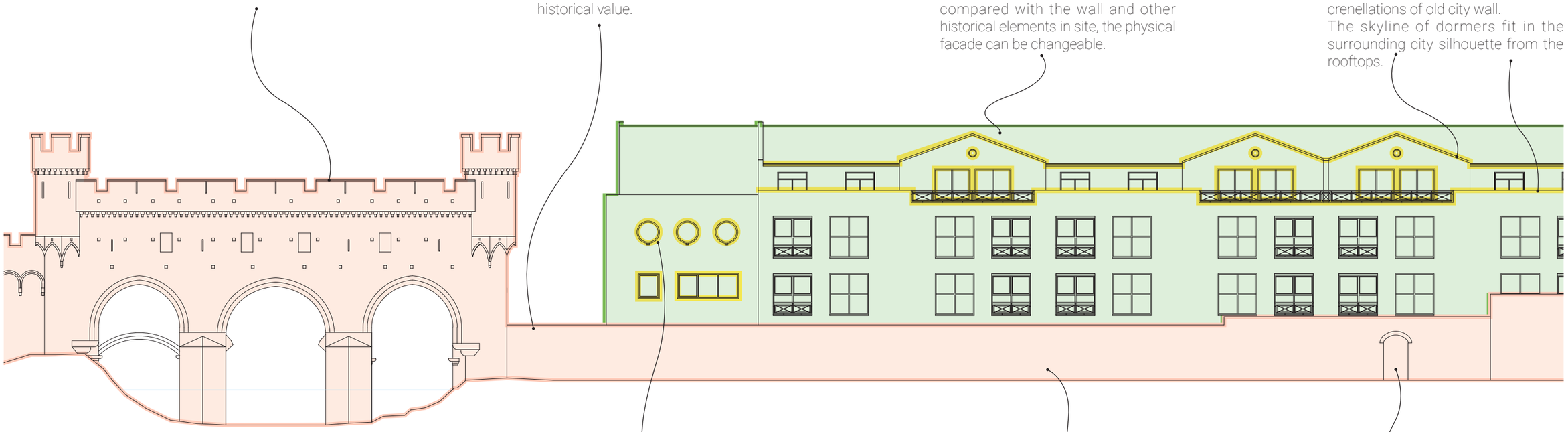
# Building Value Assessment
East facade

Berkelpoort has high age value and historical value.

The remained city wall linked with Berkelpoort has high age value and historical value.

The post-modern yellow facade has medium historical value. But compared with the wall and other historical elements in site, the physical facade can be changeable.

The parapets of the St. Elisabeth residence resemble very stretched out crenellations of old city wall.
The skyline of dormers fit in the surrounding city silhouette from the rooftops.



East Facade Elevation

| |
|---|
| Indifferent Value |
| Medium Value |
| High Value |

Windows of different shapes and sizes on the facade are prominent post mordernism architectural expressions.

The remained city wall linked with Berkelpoort and the wall tower has high age value and historical value.

The historic wooden gate now is closed and hidden in bushes.

2m 4m 6m 8m 10m

This wall pavillion was a reconstructed one.Though the age value is low, it provides good view of the remaining city wall.

This upper floors and roof of the wall tower house were reconstructed. It still has a commemorative value.

The post-modern yellow facade has medium historical value. But cpmpared with the wall and other historical elements in site, the physical facade can be changeable.

The back facade of the chapel was built in 1871. It has high age value and historical value.

The restaurant with glass façades is slightly lifted above the garden, which offers a panoramic view.

The restaurant with panoramic view is a main gathering place for the elderly. It has social value

Parts of the city wall that are integrated into the skin of the St. Elisabeth. Although it was a reconstruction, the material might be the original brick and it indicates the traces of old city wall. It has medium age and historical value.

2m 4m 6m 8m 10m

# Value Assessment
West facade

The front facade of St. Elisabeth chapel has high age value and historical value.

The twin towers on the western façade of the St. Elisabeth are a reference to the towers of Zutphen's city wall. They are also a prominent characters of post modernism architecture.

West Facade Elevation

| |
|---|
| Indifferent Value |
| Medium Value |
| High Value |

Windows of different shapes and sizes on the facade are prominent post mordernism architectural expressions.

2m 4m 6m 8m 10m

The parapets of the St. Elisabeth residence resemble very stretched out crenellations of old city wall.
The skyline of dormers fit in the surrounding city silhouette from the rooftops.

The post-modern yellow facade has medium historical value. But compared with the wall and other historical elements in site, the physical facade can be changeable.

The back facade of the chapel was built in 1871. It has high age value and historical value.

Windows of different shapes and sizes on the facade are prominent post mordernism architectural expressions.

2m 4m 6m 8m 10m


# 03 Reflections

Dilemmas,Opportunity and Obligation

# Defining Dilemmas
## Dilemma, Opportunity, Obligation

In an attempt to expose the complexity of this area, we use the keywords Dilemma, Opportunity and Obligation. During the analysis, various dilemmas, opportunities and obligations were identified.: this scheme describes our findings and recommendations.

### Keywords

Dilemma: Hard to access, constantly changing, the facade of Chapel between the Elderly house, rigid structure, dark pockets, vacant, passage between Chapel, central glass passage, poor insulation of Chapel window, two blocked stained glass windows, St. Elisabeth Chapel and the remaining city wall



Opportunity: Tour program, linked to the lake park, flexible transformations, post-modernism style, irregular spacing, space environment of the Chapel, space next to the old walls, old bricks, the religious furniture of the Chapel, the spirits of the site and to create a new spirit of the site.

Obligation : Privacy and safety, the relationship between tourist, The old city wall and tower, the relationship between elderly housing and the wall, the skin of Chapel, old foundation, parking lot plan, bright and active view, stained glass windows, old bricks, commemorative stones, to make the site spirits experienced and to preserve the site spirits.

| | Dilemma | Opportunity | Obligation |
|---|---|---|---|
| **Surrounding & Setting** | -The St. Elisabeth complex is located at the edge of the Nieuwstad & Berkel river, visually opened to the boat tourists. However, it is **hard to access** the complex because of many obstacles such as fences, river and bypass alleyways. | -Historic city wall and boat **tour program** have a high economic potential power. These elements can create a more active atmosphere in and around the complex.<br>-If the fence between the schools is removed, the backyard can be **linked to the lake park** to provide a new local leisure | -Since St. Elisabeth building is the housing for the elderly people, their **privacy and safety** should be guaranteed.<br>-The **relationship between tourist** and residents should be carefully considered. |
| **Site** | - The site was **constantly changing** due to the reconstructions of St. Elisabeth but the function stayed the same. | - The changing character of the site also means a possibility of more **flexible transformations** in the future. | - **The old city wall and tower** in the site should be preserved.<br>- The **relationship between the elderly housing and the wall** should be improved in the future. |
| **Skin** | - **The facade of Chapel between the Elderly house** is fully covered to make a passage between two buildings which is currently used as storages. As a result, it blocked the sunlight into the Chapel. | -The skin of St. Elisabeth elderly house represents the **post-modernism style**. It thickens the city layers of time in Zutphen. | -Due to the age value of Chapel, **the skin of Chapel** must be preserved. |
| **Structure** | - The **rigid structure** of the St. Elisabeth building restricts the new programs.<br>- The close spacing between structural walls creates **dark pockets** inside the apartments. | - The **irregular spacing** of structural elements, like the load-bearing walls, could be used to imitate the irregular morphology of the old buildings in its surrounding. | - The **old foundations**, which is used in the current building structure, needs to be preserved for they are the remains of the city wall. |
| **Spaceplan &Spacial Composition** | -Some of the north wing front spaces are **vacant** because of the poor accessibility, parking lot view, and shaded environment.<br>-The **passage between the Chapel** and the Elderly house is not used properly and it degrades the space quality of the Chapel.<br>-The **central glass passage** interferes with the urban circulation | - If the **space environment of the Chapel** is improved with the new program, it is likely to be an attractive space<br>-**Space next to the old walls** has a unique atmosphere that can be transformed into a romantic space | - **The parking lot plan** must be included for the elderly people who cannot walk comfortably.<br>- **The bright and active view** should be provided for the elderly people who spend most of the day in the room. |
| **Surfaces** | - The **poor insulation of Chapel window** causes a lot of damages, However, it is hard to change the window because of its artistic value. | -The historic environment of **old bricks** from the city wall and Chapel can be utilized to make an attractive space. | - **The stained glass window** of the Chapel should be preserved.<br>- **The old bricks** of city wall also must be retained for future generations. |
| **Services & Stuff** | - **Two stained glass windows** are blocked by the passage to the elderly house.<br>-**The sculptures** in the corridor to the Chapel evokes a religious atmosphere which is not practised as much anymore. | - **The chairs, windows, and sculptures of the Chapel** are objects that invoke a connection present and past. | - **Commemorative stones** in the entrance hall of the Elderly house and at the corner of the Chapel should be conserved. |
| **Site Spirit** | - **St. Elisabeth chapel** is not used for religious functions anymore. The religious spirit is hardly experienced today.<br>- **The remaining city wall** is hidden in the back garden now. The defense spirit is hardly experienced by the public. | - We can bring back **the spirits of site** to attract tourists and local people and reactivate this area.<br>- We can also **create new spirit of site** for this area as some of the existing spirits are not very strong and settled. | - We should offer possibilities **to make the site spirits experienced** by the public.<br>- We should **preserve the site spirits** which represent the history of this area. |

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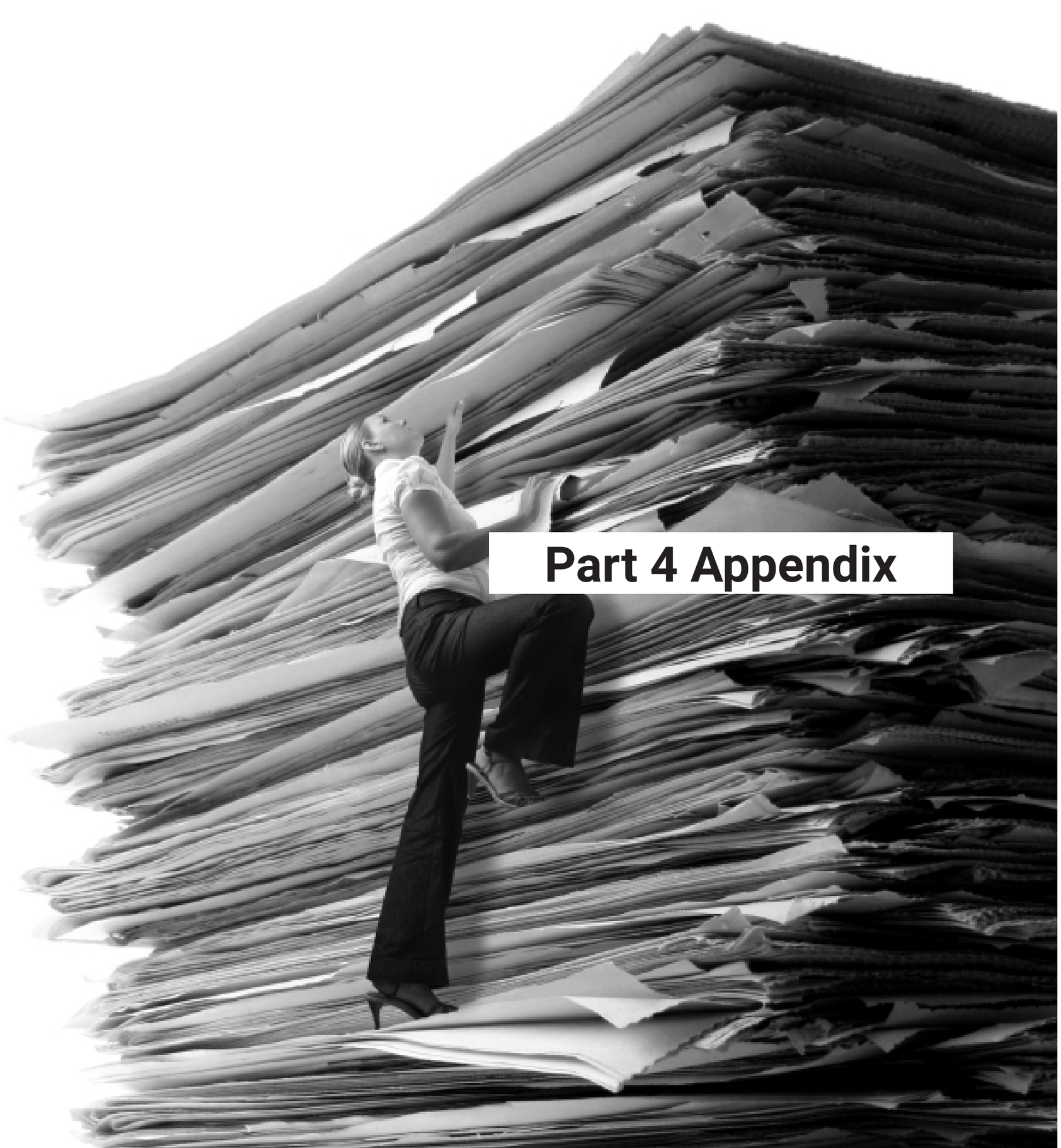


# Part 4 Appendix

# 01 Observation of St. Elisabeth

# Surrounding & Setting

## Guiding questions when investigating site and setting

Q1 : What is the current urban or landscape context of the site? Is it dense, rural, planned or unplanned, flat or hilly?

A1 : Rural, Front gardens are flat but back garden has 1m gap

Q2 : What kinds of buildings, landmarks, water elements or public spaces define the main features of the area?

A2 : Elisabeth chapel, Three gardens (Two front; north and south, one back), Old city wall with tower and watergate, Berkel river, Maria school, Luthers hofje

Q3 : What construction period, styles, state of conservation/repair of surrounding buildings are relevant to mention?

A3 : Old city wall from 14 century. Luthers hofje was built around 1850, Neo-Gothic style of chapel was built between 1871 and 1878, Maria school was built between 1936 and 1949.



Q4 : What can be noted about open spaces and vegetation in the broader context around the plot including trees, greenery, shrubs and flowerbeds? Are they planned or unplanned?

A4 : Two front and one back gardens on site_Planned

Lake park with old trees (100m)_Planned

Abandoned back yard behind pastorie (100m)_Unplanned

Berkel river park (100m)_Planned

Q5 : What are distinctive views of or from the site? Are they historically defined and directed towards particular landmarks or trees and will they be sustained in the short term?

A5 : Remains of city wall,

Towers (one from history, two as landmarks)

Historic roofs of Nieuwstad

Q6 : Is the site listed or is it located close to listed buildings and what is the site's role in this contextural relation?

A6 : Edge between city and fortification

The City wall is enrolled as a military object.

St. Elisabeth Chapel, Maria school as a monument

*Front yard(south) of St. Elisabeth*

*Back garden of St. Elisabeth*

*Berkek River*

*Old city wall with tower*

*Maria school (left building)*

*Luthers hofje*

*Berkel river park*

*Lake park*

*Abandoned yard in front Pastorie*

*Old trees between Lake park*

Q7 : Which nearby community facilities, such as churches, schools, shopping malls or parking facilities are relevant for the site?

A7 : St. Elisabeth Chapel (Not used),
High school (Confliction, fence)
Two Parking place in the front yard

Q8 : What facilities are available with which to access the site - think here of pedestrian walkways, cycling routes, parking lot, public transportation, stations, stops and shelters - and what is the type of the pavement of the access road?

A8 : Pedestrian walkway, parking lot, train station
Brick pavement.

Q9 : How do people move to and from the site and how is the traffic organized around it?

A9 : By foot, bike and bus from a dead end street. Poor logistics for bus.

Q10 : Are there any invisible irritants that affect the site like noise, smell, smoke and pollution to note?

A10 : Noise from students at night

Q11 : Are there any elements in the surroundings that have a negative visual impact on the views of or from the site, like electricity or telephone cables and drainage pipe?

A11 : Fence surrounding the backside of the garden

Q12 : What elements are located surround the main building on the property, of instance a pavilion, shed, sundial, etc?

A12 : Pavilion around tower, Passage in the middle of Elderly house

Q13 : Is there a distinctive garden layout and what are its characteristic feacture? Think here of nothing not only its structure and stlye but also vegetaton, greenery, treem vases, sculptures, pond, bridges, paving, and follies.

A13 : Enclosed linear back garden along the wall.
Enclosed square front gardens


*St. Elisabeth Chapel*


*Inside of Chapel*


*Fences between highschool*


*Highschool behind Elderly house*


*Parking lot infront main entrance*


*Parking lot between Maria.*


*Main access to Building*


*Main access from Building*

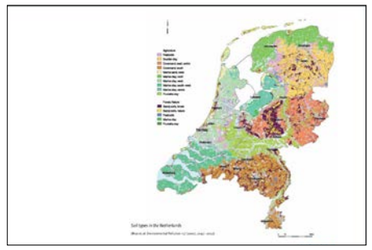

*Passage in the front facade*


*Pavilion in the back facade*

# Site
## Guiding questions for the soil-site relation

Q14 : What is the geological composition of the subsurface of the entire site?

A14 : Coversand,east,centre



(Brus et.al., 2009)

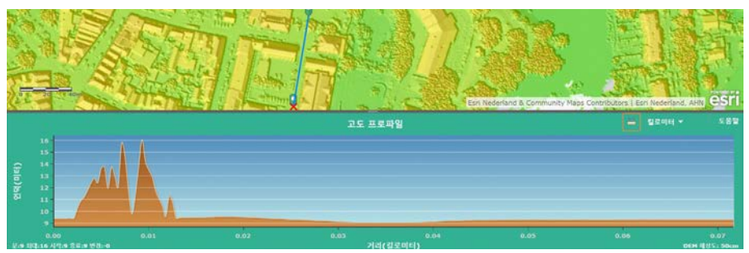
Oude Watergracht

Q15 : Are there any indications of current or past water flows or bodies on the site? What are they and where do or did they run?

A15 : Yes, In 1925, there was small branch pond. It was located in the backyard. (Oude Watergracht)

Q16 : What is the know level of the site, measured in neters below or above sea level?

A16 : 9m above sea level

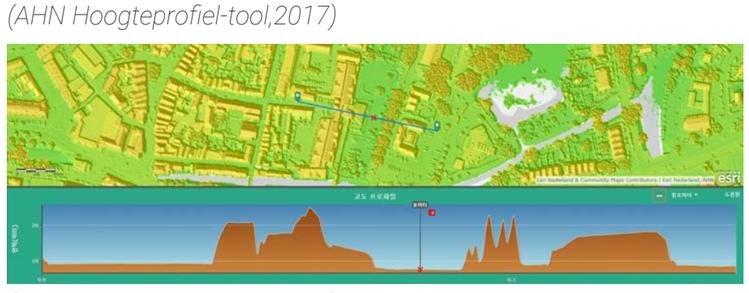



(AHN Hoogteprofiel-tool,2017)



Q17 : Is the site flat, (partly-) flattened, or does it slope? if so, what is the estimated angle of the slope?

A17 : Backyard is 1m~2m lower than side areas. (15 degree)



(AHN Hoogteprofiel-tool,2017)

Q18 : What can be observed about paths, pavement, stairs and such like on the plot and their location?

A18 : Gray brick pavement, no outer stairs

Gray brick pavement (North)

Gray brick pavement (South)

Q19 : Are there any gardens, flowerbeds, trees, orchards and alike on the plot? what can you notice and where are they?

A19. Brick pavement, no outer stairs

Three gardens (two front yards and back yards)

Q20 : Are there any signs or risks of flooding, earthquakes or other geological process?

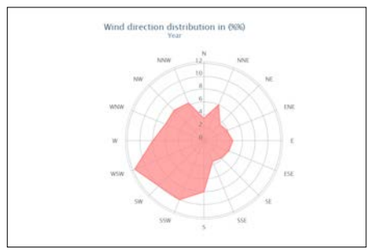
A20. No.

Back garden with citywall

One of front gardens (North)

Q21 : What is the main orientation of the plot in terms of wind directions and what are the prevailaing winds?

A21 : WSW (annual wind direction between 7am-7pm) at 13 km/h




*(windfinder.com, 2017)*

Q22 : What is the course of the sun in summer and winter in relation to the site and the building?

A22 : Sun path image (Left : August, Right : January)


*(sunearthtools.com, 2017)*


*(sunearthtools.com, 2017)*

Q23 : Where are the shady and sunny parts of the site to be found, depending on the season/time of the day?

A23 : Shadow test Image up : August (7am,10am,1pm,4pm,7pm)

Shadow test Image down : January (7am,10am,1pm,4pm,7pm)

Q24 : What climatological issues of wind, rain, snow and alike are relevant for this site?

A24 : 89% Humidity, Rain : Average annual precipitation is 878mm

February is the direst, December is wettest

*Light and shadow test in august*

Q25 : Are there possible risks of increased weathering due to extant or planned neighbouring building; what and where?

A25 : No

*Light and shadow test in january*


*(weather-and-climate.com,2017)*

Q26 : What are the current and previous administrative designations of the site location or address?

A26 : Province of Gelderland

Q27 : What is the geographical setting of the site in the urban or cultural landscape?

A27 : Located above the Berkel river as a historic city

Q28 : Are the site's boundaries marked by any visible features such as walls, fences, hedges, ditches - including the access gates and paving - and what materials and size do they have?

A28 : South boundaries : Berkel river, East and north boundaries are marked by fence and bushes (1m of fence, max 10m of trees), West boundaries : End of street with brick paving.



Q29 : How is the building positioned in relation to the street edge, noting distance and angles?

A29 : Building is perpendicularly positioned at the end of the street. Main entrance is 20m apart from the street.

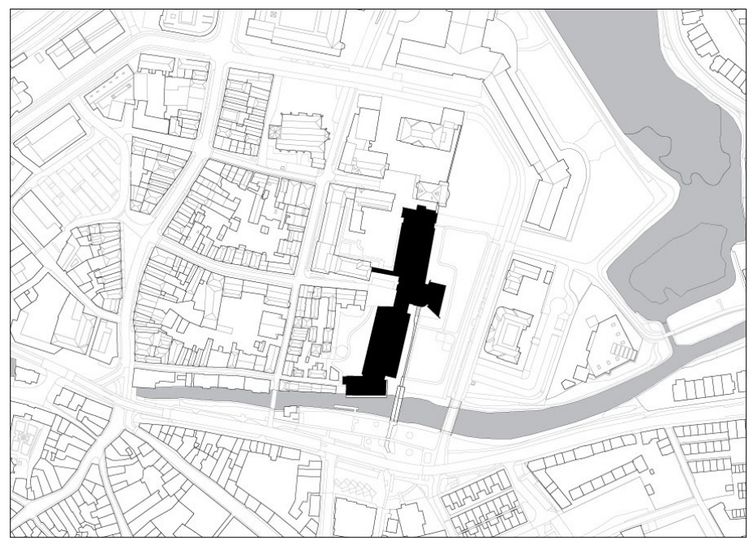
*Berkel River with water gate*

*Water gate*

*North boundary*

*East boundary*

*West boundary*



*Street relation of Pastorie*

# Skin
## Leading questions when inspecting the skin

Q30 : What is the nature of the skin? Is it a screen, a finshed surface, a bare surface, a hybrid or something else?

A30 : Elderly house : Finished surface

Chapel : Bare surface

Q31 : What kinds of materials and colours have been applied to which components?

A31 : Elderly house : Yellow & brown painted plaster, brown Brick

Chapel : Brown brick and gray stone

Q32 : What types of finishings have been used and what are their texture?

A32 : Elderly house : Yellow & brown paint, brick

Chapel : Brown brick and gray stone

*Plaster and Brick facade (Front)*

*Plaster and Brick facade (Back)*

*Brick finish (Front facade)*

*Brick finish (Back facade)*



Q34 : Are there any traces of changes, scars, or sign of weathering and if so, what kind, where, etc.?

A34 : Old and new part of city wall, extension of chapel, sign of weathings ae mostly in the Chapel and citywall

Q35 : Where is the main entrance and how is it made and articulated, or indicated?

A35 : Elderly house : Middle of the building, extruded outward

Chapel : Middle of the building, Through the door

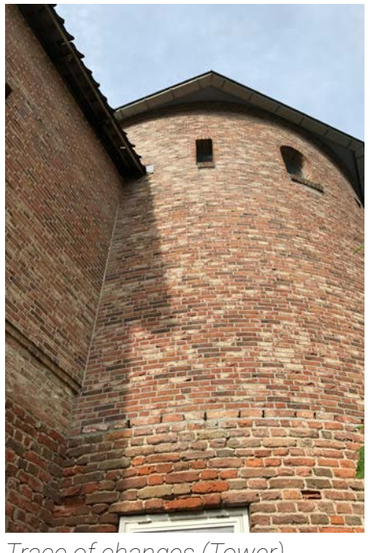
Q36 : What can we note about the windows, their type, flazing frames, placing, etc.?

A36 : Elderly house : Circle, square, rectangle windows, float glass

Chapel : Arch shaped stained glass windows

*Coloured plaster finish*

*Extension of Chapel, weathering*



*Trace of changes (Tower)*

*Main entrance*

*Various window types*

Q37 : Are there any protrusions such as balconies, loggias or similar elements through the skin or attached to it? Note their place, number and details.

A37 : There are Inner protrusion and roof top balconies in Elderly house. (Front-north: 15, front-south : 29 / South : 12 / back-north : 56, bac-south : 44 / total : 100)

Q38 : What kind of roof shape and covering is present? Are their any indications in changes in this over time?

A38 : Gable roof, Elderly house didn't change since it rebuilt in 1993. Chapel was expaned in 1911.

Q39 : Are there any chimneys, gutters, external pipes, skylights, widow's walks, spires, eaves, et cetera and, if so, where are they, what form do they have and how nany of them are there?

A39: Two chimneys from the kitchen (Not used anymore) next to chapel, Gutters on the roof



Q40 : Are there other architectural or constructional features worthy of mention? what are they, where are they, and what are their noteworthy details?

A40: Two towers front (17m) and old tower with partial restoration of upper part.

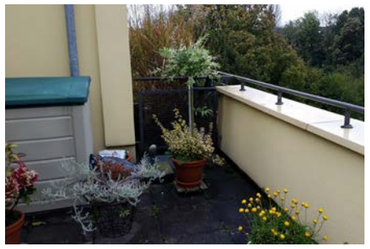
Q41 : Are there any ornaments/works of art/commemorative stones/sign? If so, where and of what materials are they made?

A41: No

Q42 : Are there other skin-related observations to note down?

A42: No

*Inner protrusion balcony*



*Roof top balcony*

*Birdeye view of St. Elisabeth building*

*Chimneys (Not used)*

*Gutters on the roof*

*Restored part of tower*

*Back facade view*

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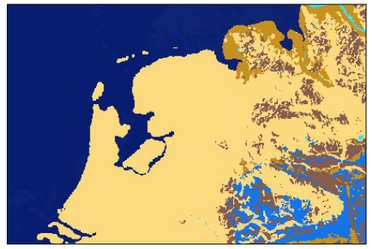
# Structure

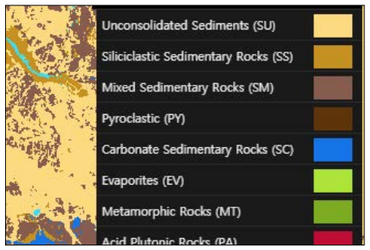
## Guiding questions for the structure-soil relation

Q43 : What is the geological composition of the soil in which the foundations are embedded?

A43 : Unconsolidated sediments (SU)



*(University of Hamburg, 2017)*




*(University of Hamburg, 2017)*

Q44 : What is known about the possible preparation of site before construction? Did this have any relationship to load-bearing capacity of the subsurface?

A44 : They dug the sand ground and put foundation.

Elderly house : Foundation height is different between the pavilion and elderly houses. / Chapel : Foundation height is differenct.

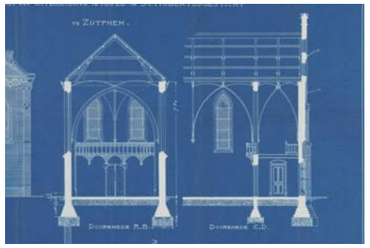
*Foundation of building (Outside)*

*Foundation of building (Inside)*

Q45 : What type of foundations - piles, slabs, other; materials, quantity, formats - were applied; how is it connected?

A45 : Elderly house : Slabs footing for the shaft (concrete), Strip footing for other part (Concrete) / Chapel : Strip footing (bricks)

*Addition to city wall*



*(Archive Zutphen, 1911)*

*Addition to water gate*

Q46 : Are there any visible signs that repairs, additions or other interventions have been undertaken to augment the structure's stability?

A46 :Addition of a new building on top of city wall, addition to water gate for accessibility and structural stability

*Detail of city wall addition*

*Detail of water gate addition*

Q47 : Does the structure consist of load-bearing walls, skeleton frames or a combination thereof?

A47 : Elderly house : Combination of load bearing walls and skeleton frames, Chapel : Load bearing walls

Q48 : Are the load-bearing walls solid, or are they constructed as cavity walls? How thick are they?

A48 : The load bearing walls are solid and vary from 26 to 30 cm in thickness

Q49 : What type of skeleton-frame is used, if any, and is it visible in the facade, as is the case timber-framing?

A49 : Wooden structure in the pavilion (restaurant) is made visible, although it is painted.



Q50 : What aspects of the form and size of columns, beams, floors, ceilings, vaults, arches, buttresses and alike are noteworthy?

A50 : Elderly house : Round and rectangular columns are used interchangeably, Chapel : Vaults are used for ceiling structure

Q51 : How are they various structural members connected?

A51 : Elderly house : With rebar for the concrete parts

Chapel : Mechanical connection between bricks and stone.

Q52 : Is their any indication of construction periods and/or later additions for strenthening the construction? if so, where are they located?

A52 : Additions are indicated by a break in the structural pattern in the parts of the nursing training room and bike storage in Elderly house

Q53 : Are there any signs of subsiding or technical shortcomings in the load-bearing walls or structural fram, and if so, where?

A53 : No.

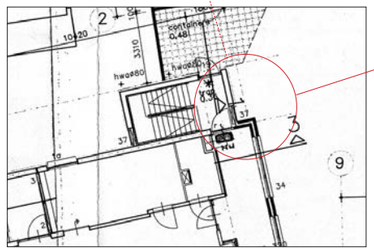
Q54 : Are there other aspects of form or its condition to mention?

A54 : Mixed usage

(Archive Zutphen, 1994)

Skeleton frames (Pavilion)

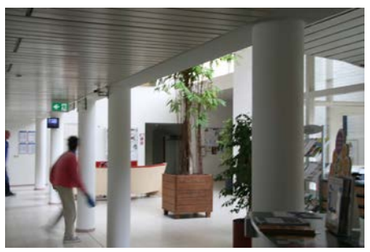
Load bearing walls (Chapel)



(Archive Zutphen, 1994)

Load bearing wall (Elderly house)

Wooden structure in the pavilion



Main entrance hall with columns

Mechanical connection (Chapel)

Nursing training room addition

Q55 : What elements of the load-bearing structure are visible in the inner spaces and what is their effect on the spatial experience? Is this visible presence intentional or not?

A55 : Elderly house : Column (Circle, rectangle shape), city wall.

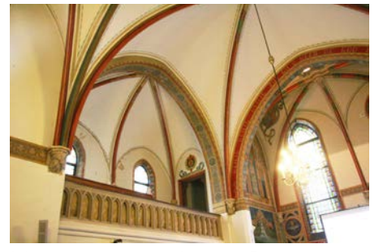
Chapel : Vault structure.

*Columns in the Elderly house*


*City wall in the Elderly house*

Q56 : What is the largest span of the largest space inside the building (approximate measures of length, width and height in meters)? In how far is the largest span defined by the limits of the load-bearing capacity of the structure appiled at the time of construction? Where is this structure located?

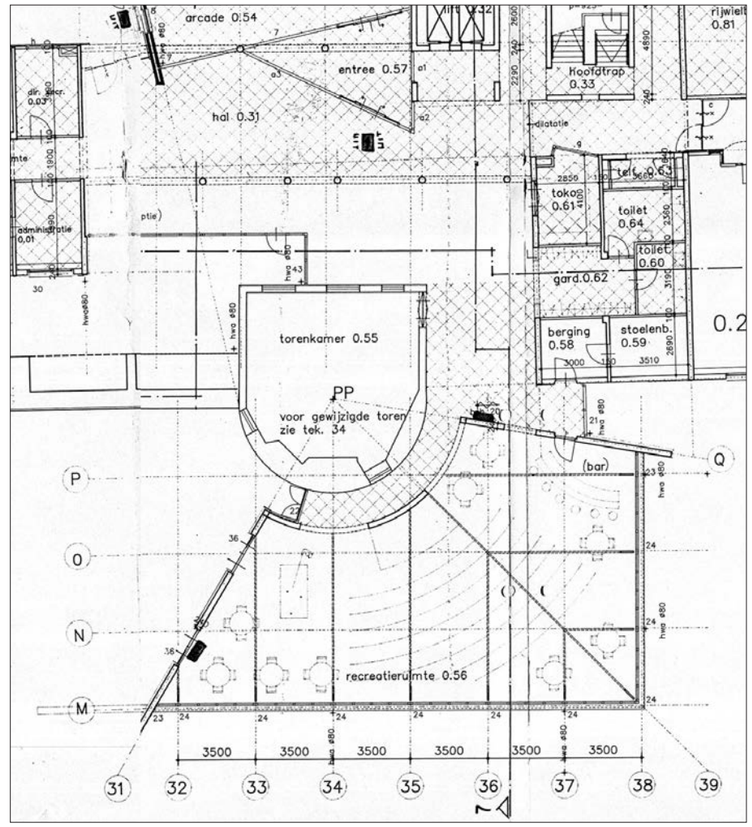
A56 : The largest span is made by a diagonal wooden beam in the restaurant. It is 28,5 * 46,5 = 1325,25 cm = 13,25 m long.



*Vault structure in the Chapel*

Q57 : Are there other technical aspect about the strcture-space relationship to note?

A57 : No




*(Archive Zutphen, 1994)*

# Space plan & Spatial composition

## Relevant spatial arrangement questions

Q58 : How many spatially distinct areas and spaces, storeys, stairs and elevators shafts can be seen?

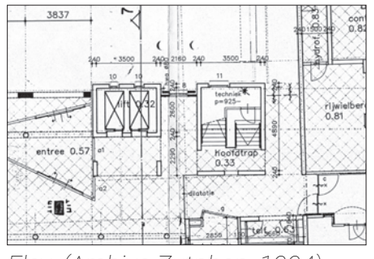
A58 : 4 distinct areas : Chapel, housing area (South & North wings), communal area, garden

Elderly house : 4 stories, 4 stairs (1 from first floor) , 2 elevators shafts / Chapel : 2 staris

*Stairs (Archive Zutphen, 1994)*

Q59 : What are, roughly, the proportions and size of the rooms

A59 : Elderly house : 4m*10m




*Elev. (Archive Zutphen, 1994)*

*Two elevators*

Q60 : Is the spatial arrangement of rooms based on a specific grid of proportions? if so what are its defining dimensions and how is this manifested in the space?

A60 : Elderly house : Along the city wall and Berkel river.

Chapel : Perpendicular to the city wall



Q61 : How is the current distribution of rooms, halls, stairs, elevator and similar connecting elements horizontally and vertically spatially organized?

A61 : Elderly house : Hall is in the center, two wings on both sides. Elevators are in the hall, stairs are in the center and both sides. Additional stair in the first floor

Chapel : Stairs are located at the opposite edge.

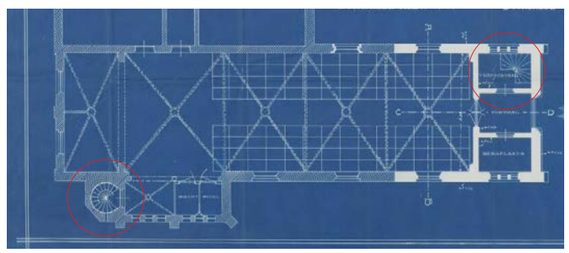
*Center stairs in Elderly house*

*First floor stairs in Elderly house*

Q62 : How does the current spatial arrangement respond to daylight access?

A62 : Elderly house : Evenly distributed (East facing space)

Chapel : Only front and back facade get enough daylight.



*Stairs (Archive Zutphen, 1911)*

Q63 : Are the partition walls purpose-designed? Do they form part of a subdivision system, and, if so, which? Are they fixed to the structure or free standing? Are they original or from a later period?

A63 : Elderly house : Partition walls are designed for deviding the programs. Some partition walls are part of the load bearing structure / Chapel : Partition walls are designed for deviding the programs. They are fixed to the structure. Some of them are added or removed from a later period.

*Rectangular stairs in Chapel*

*Daylight access*

Q64 : What kinds of finishing have been applied on the partition walls? What materials, colours, textures and so forth have been utilised?

A64 : Mostly plaster, applied both roughly and smoothly. Colored mostly white.

Chapel : Plaster, applied smoothly. Yellow and white

*Partition wall (Elderly house)*

*Partition wall (Chapel)*

Q65 : With what materials are the floors finished? Were they laid in special patterns? What is the character of their surface: e.g. smooth or rough, coloured or plain? The same for question should be applied to ceilings, doors, windows, doors, lintels, et cetera.

A65 : Elderly house

Floor : normal grid pattern, white, ceramic tiles, carpet

Ceiling : timber strips, acoustic panels, plaster

Door : wood with window frames

Window : wooden sills

Lintel : brick

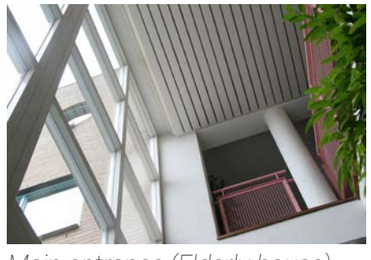
Chapel

Floor : Patterned ceramic tiles

Ceiling : Painted stone vault and white plaster finishing

Door : Brown wood with window frames

Window : Rought brown brick frames



*Main entrance (Elderly house)*

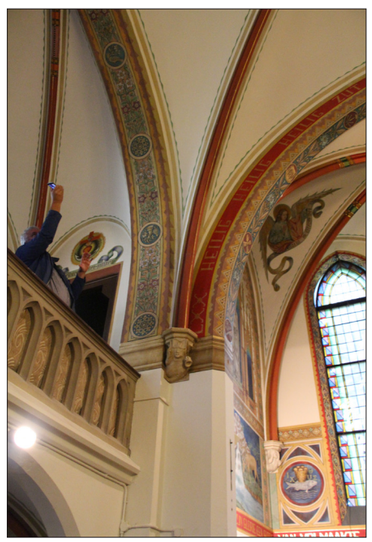
*Ground floor (Elderly house)*

*Corridor (Elderly house)*

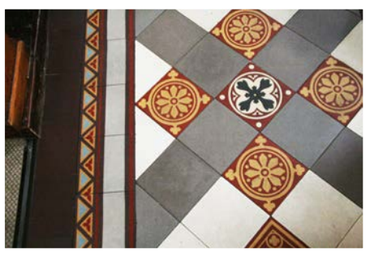
*Ground ceiling (Elderly house)*

Q66 : Are there any decorations or art works? Where are they located, what kind of art do they represent? What materials are they made of, by whom were they created and when?

A66 : Elderly house : Commemorative stones in the wall (natural stone/marble) / Chapel : fresco, memorial stones



*Interior view of Chapel*



*Floor of Chapel*

*Window of Chapel*

Q67 : What other aspects need to be noted in relation to the Space plan in the current situation?

A67 : No

Q68 : How is the interior layout oriented towords the street? For instance, is the main access located in the middle, or at the side, et cetera?

A68 : Elderly house : Main access located in the middle

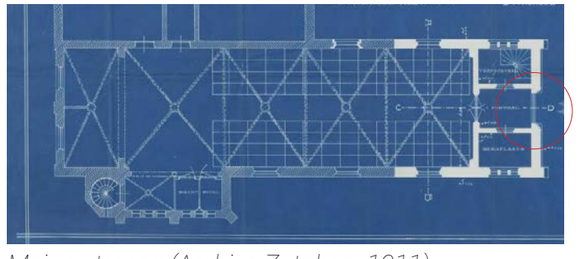
Chapel : Main access located in the middle

*Main entrance (Archive Zutphen, 1994)*

Q69 : How is access to the interior spatially organised, for instance through an external stairs, a hall, entrance doors?

A69 : Elderly house : Through the central hall

Chapel : Through the porch



*Main entrance (Archive Zutphen, 1911)*

Q70 : How does the internal layout relate to the immediate sourroundings, including gardens atria and so forth?

A70 : Elderly house : Hall with diverse ceiling height, two gardens City wall tower is included inside / Chapel : perpendicular to the city wall, detour route to back garden.

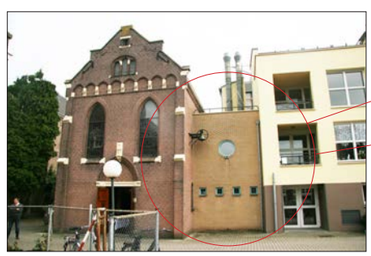
*Entrance hall (Elderly house)*

*Porch (Chapel)*



Q71 : Are there other relevant relations between exterior and interior layout in the current situation?

A71 : Three windows of Chapel were sealed due to the connecting space where is no longer used.



*Abandoned middle back yard*

*Side back yard in private use*

# Surface

## Questions related to substance, outer skin and interior surfaces

Q72 : What materials have been utilised to construct the main superstructure, be this outer walls or skeleton-framed?

A72 : Elderly house : Sand-lime bricks, concrete columns and floors, Wooden frame structure for roof.

Chapel : Bricks and stone, wooden frame structure for roof

Q73 : Does the main structure accomodate a curtain wall or does it serve as the outer skin?

A73 : Elderly house : Curtain wall is used in entrance hall

Chapel : Curtain wall is not used.

Q74 : Is the material of which the main structure is made exposed or bar /uncovered on the exterior and if so, what is its texture?

A74 : Elderly house : Not exposed, always painted/finished

Chapel : Vault is exposed and painted

Q75 : What materials were employed for the columns, beams, floors, ceilings, vaults, buttresses, arches et cetera?

A75 : Elderly house : Columns, beams, floors, ceilings : concrete

Chapel : Valults, floor : stone, roof beams : wood

Q76 : Are there any signs of repair, weathering, corrosion, cracks or technical shortcomings in the superstructure? where is it?

A76 : Elderly house : Weathering in the citywall

Chapel : Weathering in the outside wall

Q77 : Which colours applied to the supurstructure can be distinguished on the exterior?

A77 : Elderly house : Yellow, brown, gray

Chapel : Whitel stone, brown brick.

Q78 : What are the main finishes and colours of the supporting elements of the superstructure on the inside?

A78 : Elderly house : White, pink paint

Chapel : White, colorful fresco, brown wood.

Q79 : Are there other aspects regarding interior materials to note?

A79 : Visible wooden timber frames in the pavilion (Elderly house)

*Entrance hall (Curtain hall)*

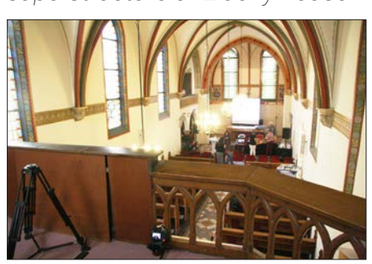
*View from outside (Curtain wall)*

*First floor of tower*

*superstructure of Elderly house*

*superstructure of Elderly house*

*Roof structure of Elderly house*



*Interior view of Chapel*


*(Archive Zutphen, 1911)*

Q80 : What kind of heating systems have been applied: central, distributed, individual, open fire, non, or something else?

A80 : Elderly house : Central, for each vertical string of stacked dwellings / Chapel : Central heating (Different to Elderly house)

Q81 : Which aspects and elements of the heating system are visible - think of stoves, radiators, convectors, fireplaces, chimneys such like. Where are they located and what are they made of?

A81 : Aluminum (White) Radiator : Located at the porch, each room, Chapel

Q82 : What kind of ventilation systems are in use : natural, mechanical, collective, individual, none, or any other? What parts are visible, what are they made of and how, and where are they located?

A82 : Elderly house : Mechanical, in the walls of the hallways, kitchen and bathroom

Chapel : Natural ventilation

Q83 : What technical service elements - elevators, escalators, sprinkler installations, control panels, tubes, sliding rails and such like - of the first stage/s of occupation are still present? Where are they and what are they made of? Note their brand and date of manufacture, if these are indicated.

A83 : Elderly house : Elevators (ednl) , control panels, tubes are still in the building. Standard fire hoses (ajax) distributed in the hallways.

Chapel : Electric control panels (Brusche Elektrotechniek), tubes for radiator, standard fire hoses are newly placed with current standard.

Q84 : What historical water-related service elements - such as toilets, baths, sinks - are present? where are they located? Are they branded?

A84 : Elderly house : All water related servicve elements are still present / Chapel : No


*Central heating system*


*Heating device of Elderly house*

*Heating device of Elderly house*


*Electric device of Chapel*


*Electric device of Chapel*


*Ventilating system*


*Ventilating system*


*Ventilating system*


*Radiator*


*Ventilating system*

# Service
## Guiding questions when observing the services layer

Q85 : Are there any traces of changes or scars, signs of weathering?

If so, what kind, where, et cetera?

A85 : Elderly house : Moss, polluted trespa on the roof, city wall

Chapel : Outside walls, near the window, ceiling

*Weathing of city wall*

*Weathing of city wall*

Q86 : What is the type and location of inspection devices for the public services, including gas, electricity and water meter?

A86 : Elerly house : Inspection devices: Wolter & Dros: common electricity panels in the strucutral shafts (accessible from hallway) – van Empel: inspection of the Remeha water boiler – Grundfos, Siemens: inspection for supply devices of radiator

Chapel : Inspection devices : Brusche Elektrotechniek : Individual electricity panels in the connecting building to Elderly house

*Water gate*

*Roof of tower*

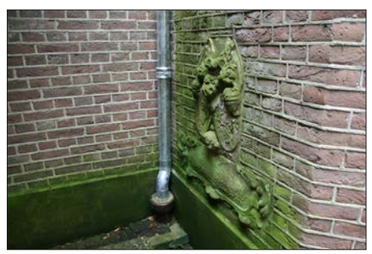
Q87 : Are there other services-related observations to note?

A87 : Special services for the elderly



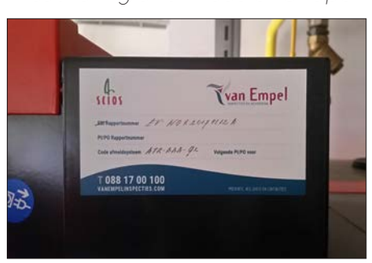
*Weathing of Chapel outside wall*

*Cracks of Chapel*



*Weathering and moss of Chapel*


*Inspection device*




*Inspection device*

*Inspection device*

# Interior

## Guiding questions for the furnishings of a heritage interior

Q88 : Are there - particularly in case of public or religious buildings - any curtains, tapestries, rugs, draped wall hangings such like, that were specially made for the place?

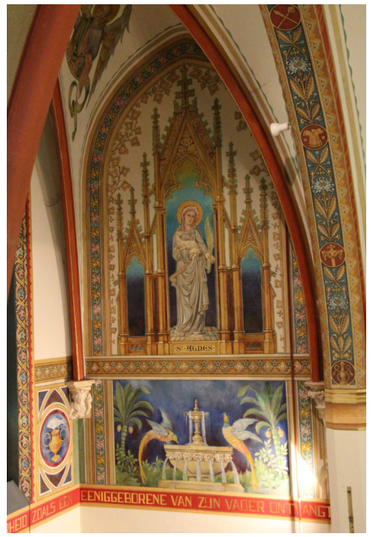
A88 : No

Q89 : Which are these, where are they placed, what materials were they made of and what colours were used?

A89 : No

Q90 : Are there any other typical elements such as mirror, lamp fittings or paintings that provide a special heritage character to the interior to be noted? Which are these, where are they located and what materials and colours were used?

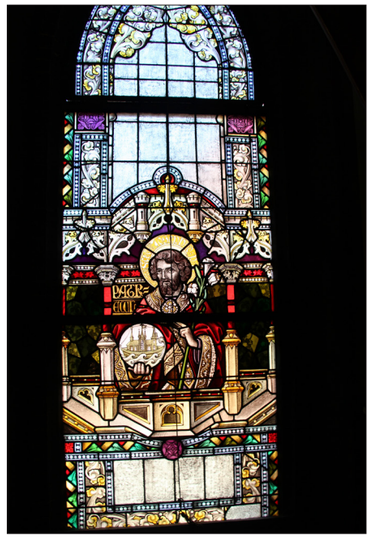
A90 : Stained glass windows (red, green, yellow, blue, purple and pink etc.), stone vault ornament (Red, blue, brown, gold etc.) and mural in the chapel



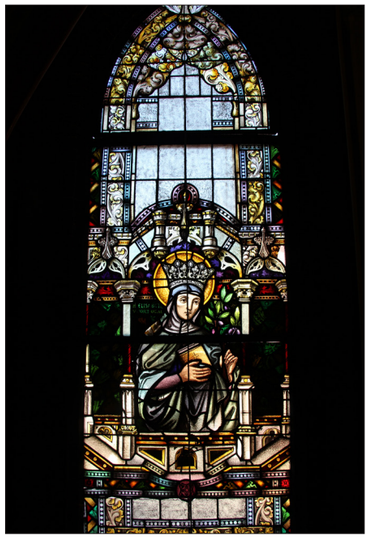

*Fresco of Chapel*

*Mural of Chapel*

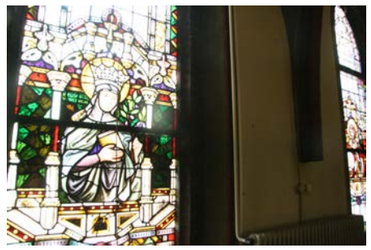

*Mural of Chapel*



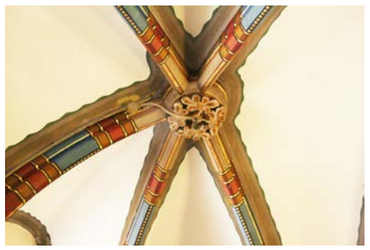
*Stained glass window*



*Stained glass window*



*Stained glass window*



*Stone vault ornament*

Q91 : Are there any tables, chairs, beds, desks, cupboards and clocks that were specially made for the place? Note that these are often encountered in (semi)public buildings.

A91 : *Not in the St. Elisabeth, but in the chapel (Chairs and talbes)*

*Chairs in the Chapel*

*Table in the Chapel*

Q92 : Which are these, where are they placed and are they fuctioning?

A92 : Chairs, table in the chapel, used for special event

*Special event in Chapel*

Q93 : What materials are they made of and what are their colours?

A93 : Dark Wood

Q94 : Are there any inscriptions to note, and if so where are they located?

A94 : Elderly house : Commemorative stone in the entrance hall

Chapel : Commemorative sculpture at the back side of the chapel

*Commemorative stone*

*Commemorative stone*

Q95 : What other distinctive movable objects that have a historical relation with the place, such as machines are worthy of mention? Are they inscribed and what are their type, location, materials, and colours?

A95 : No

# Site spirit
## Questions guiding investigations into spirit of place

Q96 : What intangible characteristics reflect the Spirit of Place?

A96 : Elderly house : *The care function of the building*

Chapel : Religious function

Q97 : Can the heritage place be typified as a 'sacred place' and if so, why, or why not, or why not anymore.

A97 : Elderly house : It was, but not anymore, because nuns left

Chapel : It was,but not anymore, because it lost its function

Q98 : Does the heritage place have a history and forms that are defined by religious practices or by (semi-)public functions?

A98 : Used to be functioned as religion related building ; St Elisabeth was home for Catholics and they used chapel. Not anymore

Q99 : Is the heritage place still in use for worship and ceremonies? When and how often do these take place?

A99 : No

Q100 : What other usages are relevant to the identity of the place?

A100 : Training room for nursing, chapel for weddings and parties, restaurant, garden farm for vegetation.

Q101 : What can be stated about privacy, public access, safety and comfort?

A101 : It is very privacy and enclosed building which is hard to comfortably access into the building.

Q102 : How can the spatial experience in terms of scale, distance, openness, alternation of light and darkness, rhythm, et cetera, be described when walking around and through the building?

A102 : It has a huge scale combining various programs such as housing, chapel, city wall and even other building. But it has low openness level. The route between chapel to St. Elisabeth has an intense alternation of light and darkness.

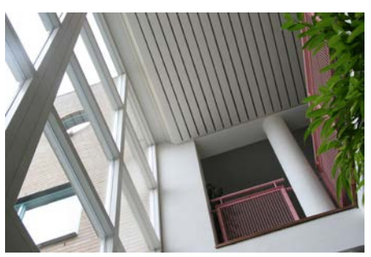
Q103 : What feelings and emotions does the heritage place evoke?

A103 : Calm and quite

*Birdeye view of Pastorie*


*(http://matrozenkoorapeldoorn.nl, 2014)*

*Transition place (Dark)*



*Entrance hall (Bright)*

Q104 : In addition to the observations made for the Site and Space Plan, what visual relations are can be noted for the charcter of the place?

A104 : *Remains of city wall, Chapel*

Q105 : Are there any sounds and smells to note that are essential qualities of the heritage building, and if so, which are they?

A105 : *Old kitchen smells like food, nursery training room smells musty*

Q106 : Are there any nicknames known for the heritage building, and if so which? What associations do these evoke?

A106 : *'St. Elisabeth'. Invoke assocoation with complex of 'saint' buildings in the area*

Q107 : Are there other aspects to mention in relation to the identity of the place?

A107 : *No*


# 02 Observation & Chronomapping of Pastorie

# Surrounding and Setting

## Guiding questions when investigating site and setting

Q1 : What is the current urban or landscape context of the site? Is it dense, rural, planned or unplanned, flat or hilly?

A1 : Rural, Front yard is flat but back yard has 1m gap

Q2 : What kinds of buildings, landmarks, water elements or public spaces define the main features of the area?

A2 : Elisabeth chapel, St. John's church

Q3 : What construction period, styles, state of conservation/repair of surrounding buildings are relevant to mention?

A3 : Neo-Gothic style of chapel, Maria school, St. Joseph and St. Anna schools were built between 1936 to 1949

Q4 : What can be noted about open spaces and vegetation in the broader context around the plot including trees, greenery, shrubs and flowerbeds? Are they planned or unplanned?

A4 : Unplanned and uncontrolled backyard garden.

Q5 : What are distinctive views of or from the site? Are they historically defined and directed towards particular landmarks or trees and will they be sustaned in the short term?

A5 : Remains of city wall tower,  Historic roofs of Nieuwstad, St. Elisabeth chapel , Maria school, St. Joseph school, and St, Anna school.

Q6 : Is the site listed or is it located close to listed buildings and what is the site's role in this contextural relation?

A6 : Edge between city and fortification. The City wall is enrolled as a military object. Also, Pastorie, St. Elisabeth Chapel, St Joseph, St. Anna and Maria school as a monument

*Front yard of Pastorie*

*Back yard of Pastorie_Remains*

*St. Elisabeth chapel*

*St. John's church*

*St. Anna school*

*St. Joseph school*

*Unplanned backyard*

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Q7 : Which nearby community facilities, such as churches, schools, shopping malls or parking facilities are relevant for the site?

A7 : St. Elisabeth Chapel and St. John's church (Not used), St. Anna school, St. Joseph school abd parking place in the front yard.

Q8 : What facilities are available with which to access the site - think here of pedestrian walkways, cycling routes, parking lot, public transportation, stations, stops and shelters - and what is the type of the pavement of the access road?

A8 : Car-pedestrian mixted use road, private parking lot in front of Pastorie, 6min wallk from the train station and gray brick pavement. with diverse pattern.

*Private parking lot*

*Stone pavement*

Q9 : How do people move to and from the site and how is the traffic organized around it?

A9 : By car (limited), bike or walk

Q10 : Are there any invisible irritants that affect the site like noise, smell, smoke and pollution to note?

A10 : Noise from the student at night

-

-

Q11 : Are there any elements in the surroundings that have a negative visual impact on the views of or from the site, like electricity or telephone cables and drainage pipe?

A11 : Fence surrounding the front side of the building

-

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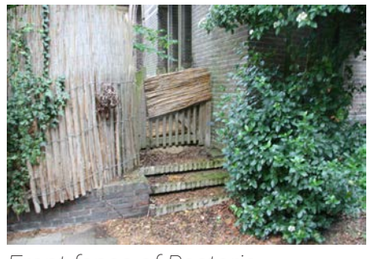
Q12 : What elements are located surround the main building on the property, of instance a pavilion, shed, sundial, etc?

A12 : Shed between Pastorie and Chapel



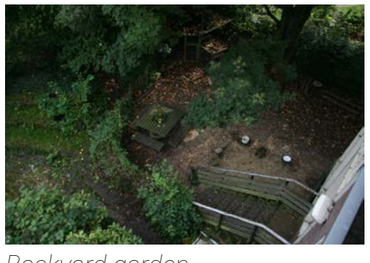
*Front fence of Pastorie*


*Fence between St.Joseph*

Q13 : Is there a distinctive garden layout and what are its characteristic feacture? Think here of nothing not only its structure and stlye but also vegetaton, greenery, treem vases, sculptures, pond, bridges, paving, and follies.

A13 : Edge of garden is defined by remains of citywall , base of old tower and building boundary. Natural and unplanned style of garden. chicken coop, square outdoor table and benchs.

*Shed next to Chapel*



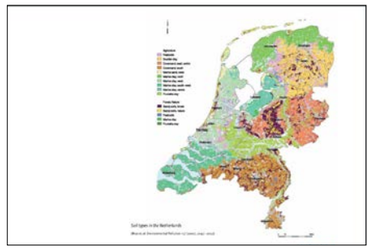
*Backyard garden*

# Site_Soil

## Guiding questions for the soil-site relation

Q14 : What is the geological composition of the subsurface of the entire site?

A14 : Coversand,east,centre



*(Brus et.al., 2009)*

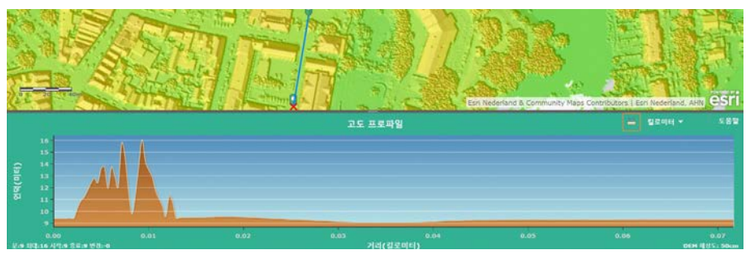
*Oude Watergracht*

Q15 : Are there any indications of current or past water flows or bodies on the site? What are they and where do or did they run?

A15 : Yes, In 1925, there was small branch pond. It was located in the backyard. (Oude Watergracht)

Q16 : What is the know level of the site, measured in neters below or above sea level?

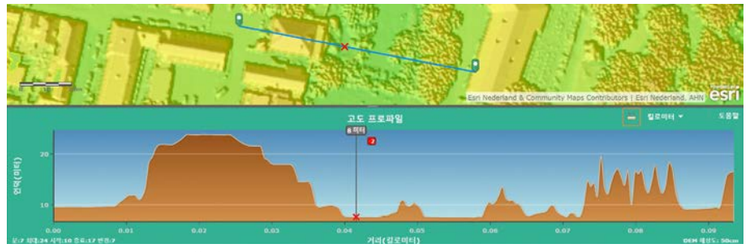
A16 : 9m above sea level




*(AHN Hoogteprofiel-tool,2017)*

Q17 : Is the site flat, (partly-) flattened, or does it slope? if so, what is the estimated angle of the slope?

A17 : Backyard is 2m lower than side areas. (15 degree)



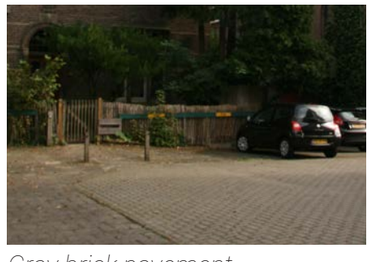

*(AHN Hoogteprofiel-tool,2017)*

Q18 : What can be observed about paths, pavement, stairs and such like on the plot and their location?

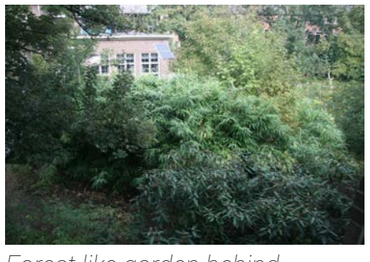
A18 : Gray brick pavement, no outer stairs

Q19 : Are there any gardens, flowerbeds, trees, orchards and alike on the plot? what can you notice and where are they?

A19. Uncontrolled forest like garden behind, One huge tree in the frontyard.



*Gray brick pavement*



*Forest like garden behind.*

Q20 : Are there any signs or risks of flooding, earthquakes or other geological process?

A20. No.

*A huge tree in the frontyard.*

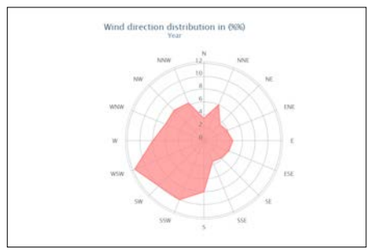
-

# Site_Sun

Informing questions for the observation of the climatological conditions and their impact

Q21 : What is the main orientation of the plot in terms of wind directions and what are the prevailaing winds?

A21 : WSW (annual wind direction between 7am-7pm) at 13 km/h




*(windfinder.com, 2017)*

Q22 : What is the course of the sun in summer and winter in relation to the site and the building?

A22 : Sun path image (Left : August, Right : January)


*(sunearthtools.com, 2017)*


*(sunearthtools.com, 2017)*

Q23 : Where are the shady and sunny parts of the site to be found, depending on the season/time of the day?

A23 : Shadow test Image up : August (7am,10am,1pm,4pm,7pm)

Shadow test Image down : January (7am,10am,1pm,4pm,7pm)

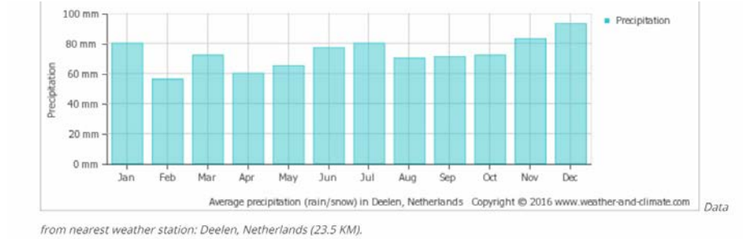
*Light and shadow test in august*

*Light and shadow test in january*

Q24 : What climatological issues of wind, rain, snow and alike are relevant for this site?

A24 : 89% Humidity, Rain : Average annual precipitation is 878mm

February is the direst, December is wettest




*(weather-and-climate.com,2017)*

Q25 : Are there possible risks of increased weathering due to extant or planned neighbouring building; what and where?

A25 : No

# Site_Street

Relevant questions when observing the street

Q26 : What are the current and previous administrative designations of the site location or address?

A26 : Province of Gelderland

*Berkel River*

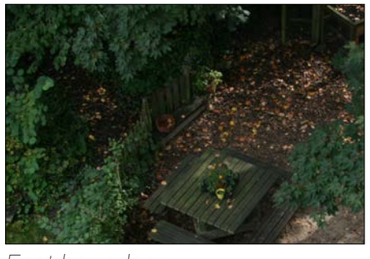
Q27 : What is the geographical setting of the site in the urban or cultural landscape?

A27 : Located above the Berkel river as a historic city

Q28 : Are the site's boundaries marked by any visible features such as walls, fences, hedges, ditches - including the access gates and paving - and what materials and size do they have?

A28 : East & South boundaries are marked by fence and bushes (1m of fence, max 10m of trees). West boundary : End of street with brick paving. North boundary is maked by fences.

*South boundary*



*East boundary*

Q29 : How is the building positioned in relation to the street edge, noting distance and angles?

A29 : Building is perpendicularly positioned at the end of the street. Main entrance is 22m apart from the street.

*Street relation of Pastorie*

# Skin (Exterior)

## Leading questions when inspecting the skin

Q30 : What is the nature of the skin? Is it a screen, a finshed surface, a bare surface, a hybrid or something else?

A30 : Brick bare surface

Q31 : What kinds of materials and colours have been applied to which components?

A31 : Bricks for facade and structure, stones for window decoration.

Q32 : What types of finishings have been used and what are their texture?

A32 : Front facade :Brown brick and grey brick(horizontal line) and grey stone,

Back facade : Timber  with white paint, glass, brown brick and plaster on top.



Q34 : Are there any traces of changes, scars, or sign of weathering and if so, what kind, where, etc.?

A34 : Remains of old tower, weathered bricks on the facade, replacement of old bricks (front facade, wall between chapel)

Q35 : Where is the main entrance and how is it made and articulated, or indicated?

A35 : Center of front facade : Main entrance to ground floor

Center of south facade above stairs : Main entrance to above floors

Q36 : What can we note about the windows, their type, flazing frames, placing, etc.?

A36 : Five bay window, rectangular window sets.

*Brick facade (Front)*

*Stone window decoration*

*Finisings of Pastorie*

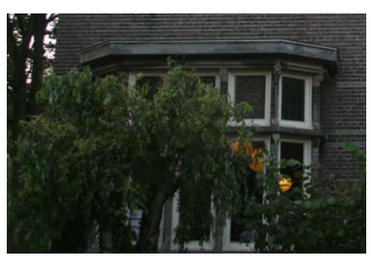
*Replacement of bricks (facade)*

*Connecting wall to Chaple*

*Back facade*

*Main entrance to ground floor*

*Main entrance to above floors*



*Five bay window*

*Rectangular window sets*

Q37 : Are there any protrusions such as balconies, loggias or similar elements through the skin or attached to it? Note their place, number and details.

A37 : A circular balcony in the back facade. Roof top on below floor

*Circular Balcony*

*(Archive Zutphen, 1934)*

Q38 : What kind of roof shape and covering is present? Are their any indications in changes in this over time?

A38 : Black roof tiles, hip shape roof, first floor was extended with flat roof.

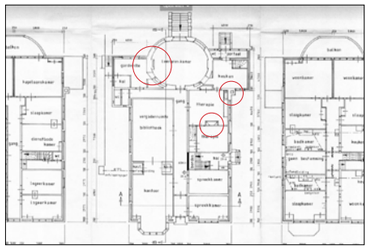
*Shpae of roof*

*A dormer of Pastorie*

Q39 : Are there any chimneys, gutters, external pipes, skylights, widow's walks, spires, eaves, et cetera and, if so, where are they, what form do they have and how nany of them are there?

A39: Three Chimneys : One form the inside, two from the side wall. Eaves gutters around the roof, am external pipe in the back facade, one dormer each at the front and back roof.

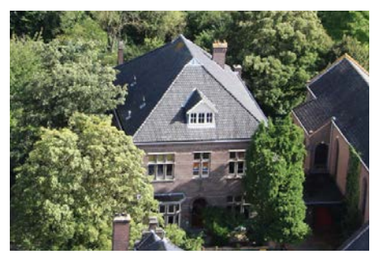
*One of chimneys*



*(Archive Zutphen, 1994)*

Q40 : Are there other architectural or constructional features worthy of mention? what are they, where are they, and what are their noteworthy details?

A40: Round back facade was inspired by the shape of previous Pastorie on the city wall tower.

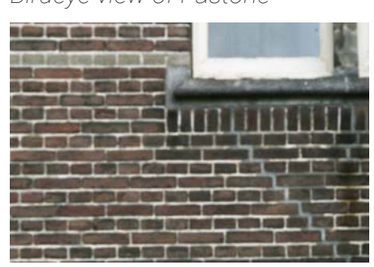


*Birdeye view of Pastorie*

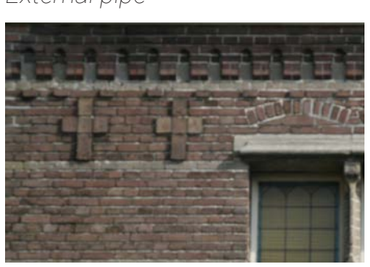
*External pipe*

Q41 : Are there any ornaments/works of art/commemorative stones/sign? If so, where and of what materials are they made?

A41: Ornament above the front door made by stone, cross ornament below the roof made by brown bricks.



*Ornament above the front door*



*Cross ornament below the roof*

Q42 : Are there other skin-related observations to note down?

A42: No

# Structure_Soil and foundation

## Guiding questions for the structure-soil relation

Q43 : What is the geological composition of the soil in which the foundations are embedded?

A43 : Unconsolidated sediments (SU)

Q44 : What is known about the possible preparation of site before construction? Did this have any relation ship to load-bearing capacity of the subsurface?

A44 : ???

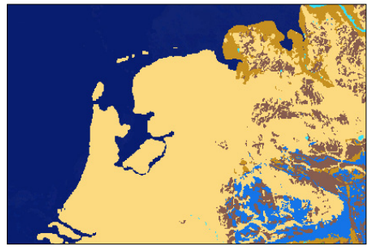
Q45 : What type of foundations - piles, slabs, other; materials, quantity, formats - were applied; how is it connected?

A45 : Piles???

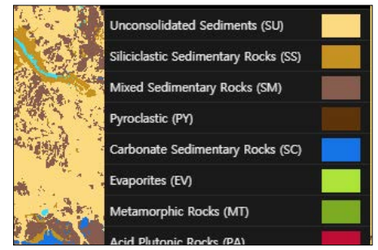


Q46 : Are there any visible signs that repairs, additions or other interventions have been undertaken to augment the structure's stability?

A46 : No



*(University of Hamburg, 2017)*




*(University of Hamburg, 2017)*

*Front facade view of Pastorie*

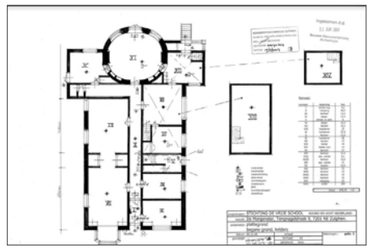
*Back facade view of Pastorie*

# Structure_Form and state

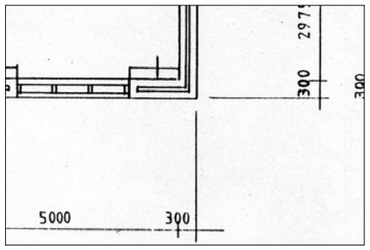
## Questions when studying form and state

Q47 : Does the structure consist of load-bearing walls, skeleton frames or a combination thereof?

A47 : Combination of load-bearing wall system and timber frame structure (beam and roof)



*(Archive Zutphen, 2007)*




*(Archive Zutphen, 1994)*

Q48 : Are the load-bearing walls solid, or are they constructed as cavity walls? How thick are they?

A48 : 300mm cavity wall : double layer brick walls

*Load bearing brick wall*

*Timber fram back porch*

Q49 : What type of skeleton-frame is used, if any, and is it visible in the facade, as is the case timber-framing?

A49 : Only Timber frame used in the back facade porch is visible. Many frame structre is not visible from outside.

Q50 : What aspects of the form and size of columns, beams, floors, ceilings, vaults, arches, buttresses and alike are noteworthy?

A50 : Rectangular timber beam, pink rectangular carpet floors, rectangular whitle ceilings (Size of beam? Ceiling fiinishing?)

*Wooden beam*

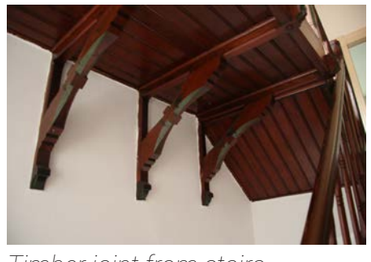
*White ceiling*

Q51 : How are they various structural members connected?

A51 : Mechanical joint or volted joint

Q52 : Is their any indication of construction periods and/or later additions for strenthening the construction? if so, where are they located?

A52 : Extensive renovation of the Pastorie, nearly rebuilt by F.A Ludewig in 1902, There are additions in the first but that was not for strenthening.



*Timber joint from stairs*

*Carpet finishing floor*

Q53 : Are there any signs of subsiding or technical shortcomings in the load-bearing walls or structural fram, and if so, where?

A53 : No.

Q54 : Are there other aspects of form or its condition to mention?

A54 : No.

-

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# Structure_Space

## Guiding questions for the structure-space relationship

Q55 : What elements of the load-bearing structure are visible in the inner spaces and what is their effect on the spatial experience? Is this visible presence intentional or not?

A55 : Beams on the stairs landing is visible. It makes warm wooden atmosphere together with timber stairs. It is intentionally designed to give a high ceiling in the narrow space for evacuation.

*Ceiling of stair landing*

-

Q56 : What is the largest span of the largest space inside the building (approximate measures of length, width and height in meters)? In how far is the largest span defined by the limits of the load-bearing capacity of the structure appiled at the time of construction? Where is this structure located?

A56 : Circular space of Pastorie is around 7m length, 5m width, 4200m height. It is located at the back facade. Moderate span size with the thickness of circular load-bearing wall.

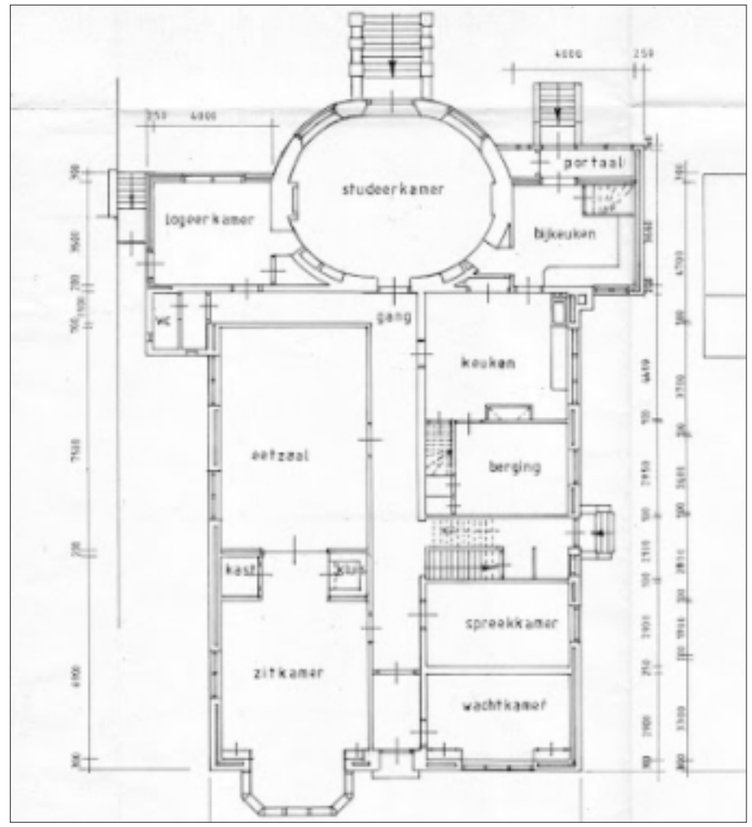
*Stair landing space*

-



Q57 : Are there other technical aspect about the strcture-space relationship to note?

A57 : No




*(Archive Zutphen, 1994)*

# Space plan_Spatial arrangements

## Relevant spatial arrangement questions

Q58 : How many spatially distinct areas and spaces, storeys, stairs and elevators shafts can be seen?

A58 : Three distinct areas; ground floor (day-care center), first floor (Institute), attic (storage), three storeys building including attic, One main inner stairs and four partial outside stairs, no elevator.

Q59 : What are, roughly, the proportions and size of the rooms

A59 : 5m * 3.3m~6.9m

Q60 : Is the spatial arrangement of rooms based on a specific grid of proportions? if so what are its defining dimensions and how is this manifested in the space?

A60 : T shape grid line, strict vertical grid and flexible horizontal grid.

Q61 : How is the current distribution of rooms, halls, stairs, elevator and similar connecting elements horizontally and vertically spatially organized?

A61 : Rooms are arranged symetrically from the central corridor. The main inner stair is inserted from the middle of right side.

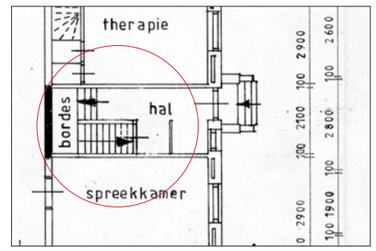
Q62 : How does the current spatial arrangement respond to daylight access?

A62 : Only front and back facade get enough daylight. South facade is covered by the shadow of chapel.

Q63 : Are the partition walls purpose-designed? Do they form part of a subdivision system, and, if so, which? Are they fixed to the structure or free standing? Are they original or from a later period?

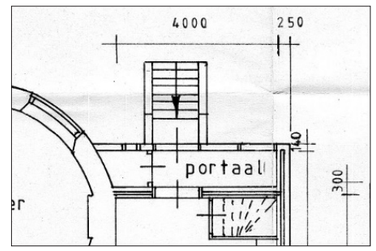
A63 : Partition walls are designed for deviding the programs. They are fixed to the structure. Some of them are added or removed from a later period.

*Main inner stairs*

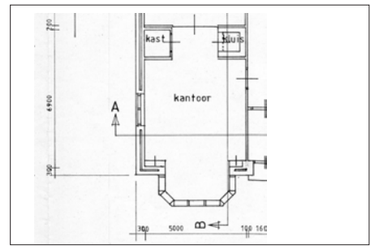



*(Archive Zutphen, 1994)*

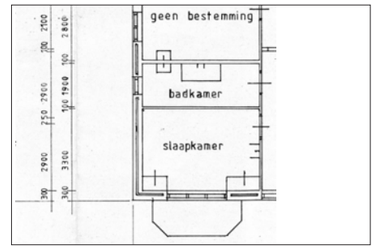
*One of outside partial stairs*



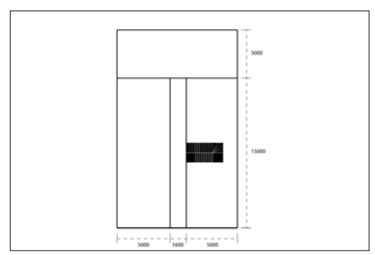

*(Archive Zutphen, 1994)*




*(Archive Zutphen, 1994)*



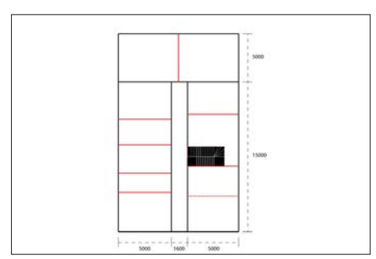

*(Archive Zutphen, 1994)*



*Grid of Pastorie*

*View from the corridor*

*Daylight access*



*Original, removed partition walls.*

Q64 : What kinds of finishing have been applied on the partition walls? What materials, colours, textures and so forth have been utilised?

A64 : Wood, white plaster on top of it. rough wooden texture

Q65 : With what materials are the floors finished? Were they laid in special patterns? What is the character of their surface: e.g. smooth or rough, coloured or plain? The same for question should be applied to ceilings, doors, windows, doors, lintels, et cetera.

A65 : Floor : pink carpet.

Ceiling : timber strips, wooden panels, white plaster

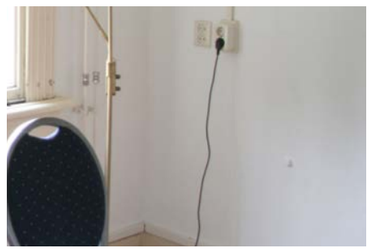
Door : white painted timber door

Window : wooden sills with white paint

Lintel : Stone

Q66 : Are there any decorations or art works? Where are they located, what kind of art do they represent? What materials are they made of, by whom were they created and when?

A66 : Religious cross ornament on the stairs, made of timber in 1994. Stairs connected to the attic was built in 1902.



*Partition wall*

*Ceiling*

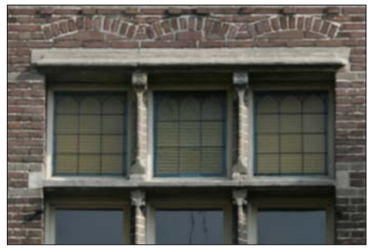
*Window*

*Floors*



Q67 : What other aspects need to be noted in relation to the Space plan in the current situation?

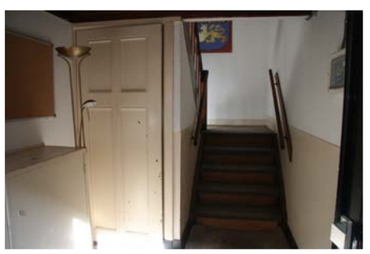
A67 : Attic is not used anymore.



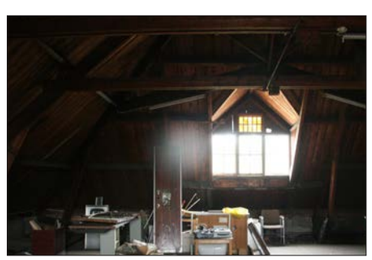
*Lintel*

*Door*

*Ornament on the stiar*



*View of the main stairs.*



*Attic*

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# Space plan_Space plan and street and immediate surroundings

Guiding questions when interrogating the space plan, street and the immediate surroundings

Q68 : How is the interior layout oriented towords the street? For instance, is the main access located in the middle, or at the side, et cetera?

A68 : It has two main access, one for gound floor and the other for the above floors. One is located in the middle of front facade, the other is located in the middle of side.

Q69 : How is access to the interior spatially organised, for instance through an external stairs, a hall, entrance doors?

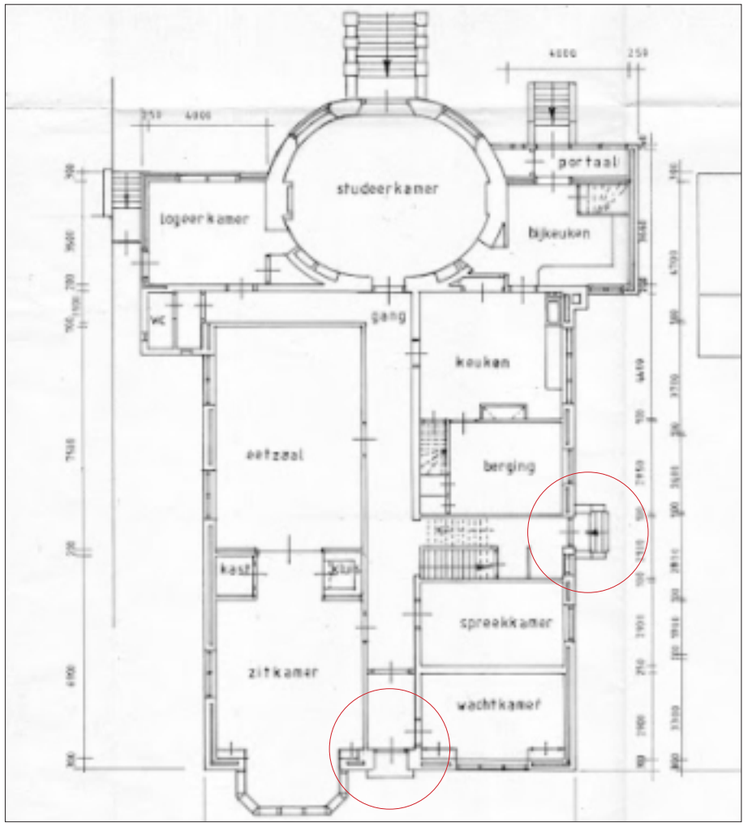
A69 : Entrance door with external stairs. Side main entrance has inner stairs after the entrance door.

Q70 : How does the internal layout relate to the immediate sourroundings, including gardens atria and so forth?

A70 : One private front yard and two back yards (Middle, side). Middle back yard is not used. Narrow alley between Pastorie side main entrance and Chapel.

Q71 : Are there other relevant relations between exterior and interior layout in the current situation?

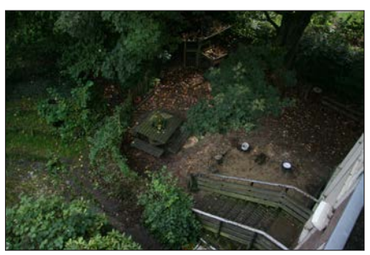
A71 : No




*(Archive Zutphen, 1994)* *Two main access*

*Front main access door* *Side main access door*

*Abandoned middle back yard*



*Side back yard in private use*

# Surfaces(Interior)_Substance, outer skin and interior surfaces

Questions related to substance, outer skin and interior surfaces

Q72 : What materials have been utilised to construct the main superstructure, be this outer walls or skeleton-framed?

A72 : Bricks load-bearing wall, timber roof structure and beam

Q73 : Does the main structure accomodate a curtain wall or odes it serve as the outer skin?

A73 : Curtain wall is not used

Q74 : Is the material of which the main structure is made exposed or bar /uncovered on the exterior and if so, what is its texture?

A74 : Brick is the main load-bearing structure and it is exposed giving rough texture of the building.



Q75 : What materials were employed for the columns, beams, floors, ceilings, vaults, buttresses, arches et cetera?

A75 : Beams, floors, ceiling : Timber

Q76 : Are there any signs of repair, weathering, corrosion, cracks or technical shortcomings in the superstructure? where is it?

A76 : I can find weathering of bricks from the facade.

Q77 : Which colours applied to the supurstructure can be distinguished on the exterior?

A77 : Brown and gray brick colour

Q78 : What are the main finishes and colours of the supporting elements of the superstructure on the inside?

A78 : Timber panel with white plaster on it.

Q79 : Are there other aspects regarding interior materials to note?

A79 : Wooden frams of back porch

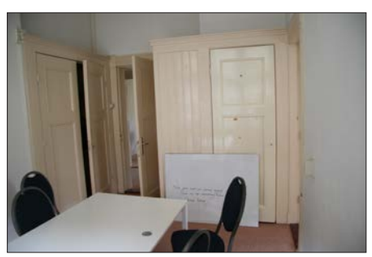
*Exposed main structure*

*Texture of outer surface*

*Timber beam*

*Timber Floor and ceiling*

*Exterior of Pastorie*



*Interior view (Room)*

*Interior view (Stairs)*

# Services
## Guiding questions when observing the services layer

Q80 : What kind of heating systems have been applied: central, distributed, individual, open fire, non, or something else?

A80 : ???

Q81 : Which aspects and elements of the heating system are visible - think of stoves, radiators, convectors, fireplaces, chimneys such like. Where are they located and what are they made of?

A81 : Aluminum (White) radiators in each room, fireplaces and chimneys in the circular space in the backside.

Q82 : What kind of ventilation systems are in use : natural, mechanical, collective, individual, none, or any other? What parts are visible, what are they made of and how, and where are they located?

A82 : Natural ventilation from window

Q83 : What technical service elements - elevators, escalators, sprinkler installations, control panels, tubes, sliding rails and such like - of the first stage/s of occupation are still present? Where are they and what are they made of? Note their brand and date of manufacture, if these are indicated.

A83 : There is no techihical service elements such as elevators, escalators, sprinkler installations, control panels, tubes, sliding rails.

Q84 : What historical water-related service elements - such as toilets, baths, sinks - are present? where are they located? Are they branded?

A84 : There is no historical water-related elements.

*Radiator*

*Radiator*

*Boiler???????????????????*

*Fireplace*

*Ventilation*

*Kitchen water elements*

*Toilet water elements*

*Kitchen water elements*

*Toilet water elements*

*Kitchen water elements*

Q85 : Are there any traces of changes or scars, signs of weathering? If so, what kind, where, et cetera?

A85 : Weathering of external pipe and materials. poor conditons of attic stairs and floor.

Q86 : What is the type and location of inspection devices for the public services, including gas, electricity and water meter?

A86 : ????

Q87 : Are there other services-related observations to note?

A87 : No

*Back facade*

*Attic stairs*

*Attic*

*Inspection device*

*Inspection device*

*Inspection device*

*Inspection device*

# Stuff_Furnishings and of a heritage interior

## Guiding questions for the furnishings of a heritage interior

Q88 : Are there - particularly in case of public or religious buildings - any curtains, tapestries, rugs, draped wall hangings such like, that were specially made for the place?

A88 : There are rugs on the first floors

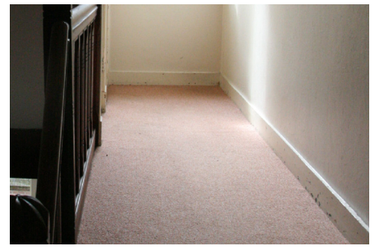
Q89 : Which are these, where are they placed, what materials were they made of and what colours were used?

A89 : Dark pink rugs on the first floors made of wool

Q90 : Are there any other typical elements such as mirror, lamp fittings or paintings that provide a special heritage character to the interior to be noted? Which are these, where are they located and what materials and colours were used?

A90 : Cross shape of stairs structure and its ornaments imply previous use of religious building. Cherry brown woods are used for this.

Unique colour pattern of upper windows.



*Rugs on the first floor*

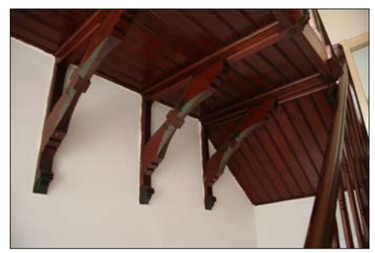
*Rugs on the first floor*

*Rugs on the first floor*

*Rugs on the first floor*

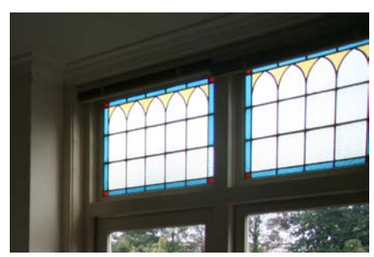
*Rugs on the ground floor*

*Rugs on the ground floor*

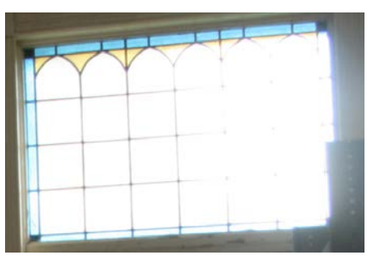


*Stair structure ornaments*

*Stair structure ornaments*



*Unique patterns of windows*



*Unique patterns of windows*

# Stuff_furniture of a heritage interior

## Leading questions for the furniture of a heritage interior

Q91 : Are there any tables, chairs, beds, desks, cupboards and clocks that were specially made for the place? Note that these are often encountered in (semi)public buildings.

A91 : *Built-in closets, shoe shelf and bookshelves are specially designed for this building.*

*Built-in closets*

*Built-in closets*

Q92 : Which are these, where are they placed and are they fuctioning?

A92 : They are located in the rooms and mostly functioning properly.

*Built-in closets*

Q93 : What materials are they made of and what are their colours?

A93 : Made of wood with white paint.

*Bookshelf*

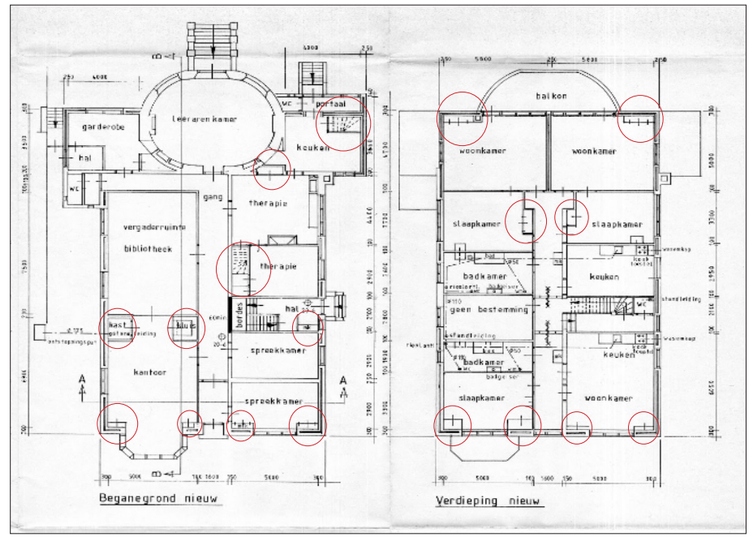
Q94 : Are there any inscriptions to note, and if so where are they located?

A94 : Scribbles on the front entrance wall by children.



Q95 : What other distinctive movable objects that have a historical relation with the place, such as machines are worthy of mention? Are they inscribed and what are their type, location, materials, and colours?

A95 : No




*Location of built-in furnitures*

*Scribbles on the wall*

-

# Spirit of Place

## Questions guiding investigations into spirit of place

Q96 : What intangible characteristics reflect the Spirit of Place?

A96 : *Previous function as a pastorie. Religious spirit.*

Q97 : Can the heritage place be typified as a 'sacred place' and if so, why, or why not, or why not anymore.

A97 : It was a 'sacred place because It used to be a house for priest and pastor. However, it lost its sacred function.

Q98 : Does the heritage place have a history and forms that are defined by religious practices or by (semi-)public functions?

A98 : Used to be functioned as religion related building as a pastorie. Not anymore

Q99 : Is the heritage place still in use for worship and ceremonies? When and how often do these take place?

A99 : No

Q100 : What other usages are relevant to the identity of the place?

A100 : Day care center, seminar room for education

Q101 : What can be stated about privacy, public access, safety and comfort?

A101 : It is very privacy and enclosed building which is hard to comfortably access into the building.

Q102 : How can the spatial experience in terms of scale, distance, openness, alternation of light and darkness, rhythm, et cetera, be described when walking around and through the building?

A102 : It is very closed and hided building. At first it seemed abandoned building. Building is surrounded by tall trees and chapel which makes dark and shady environment.

Q103 : What feelings and emotions does the heritage place evoke?

A103 : Dark and quite

*Birdeye view of Pastorie*

*View of Pastorie*

*View of Pastorie*

Q104 : In addition to the observations made for the Site and Space Plan, what visual relations are can be noted for the charcter of the place?

A104 : *Forest like green backyard, remain of old tower.*

Q105 : Are there any sounds and smells to note that are essential qualities of the heritage building, and if so, which are they?

A105 : *Children's giggling sound, tree smell*

Q106 : Are there any nicknames known for the heritage building, and if so which? What associations do these evoke?

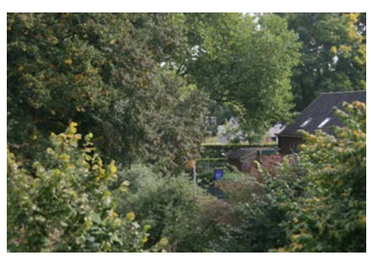
A106 : *Building is still called as a 'Pastorie' even though it lost its function in 1993. Also, this area is called as Klein vaticaan.*

Q107 : Are there other aspects to mention in relation to the identity of the place?

A107 : *No*

*Remains of old tower*

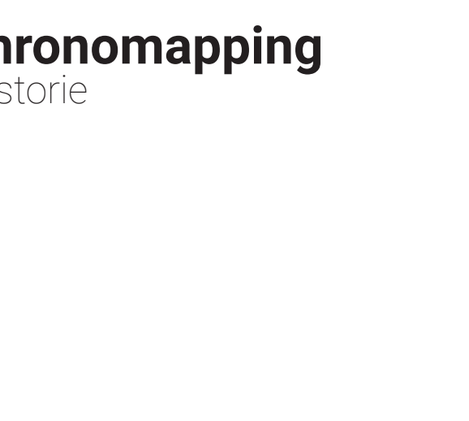
*Forest like backyard*

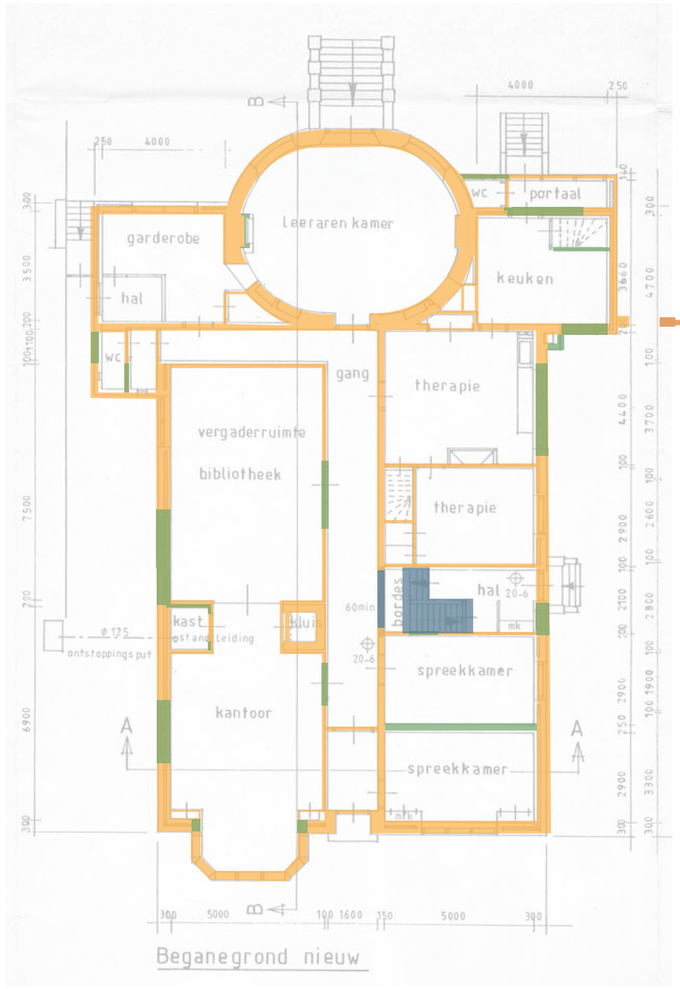


*Forest like backyard* -

# Chronomapping
Pastorie







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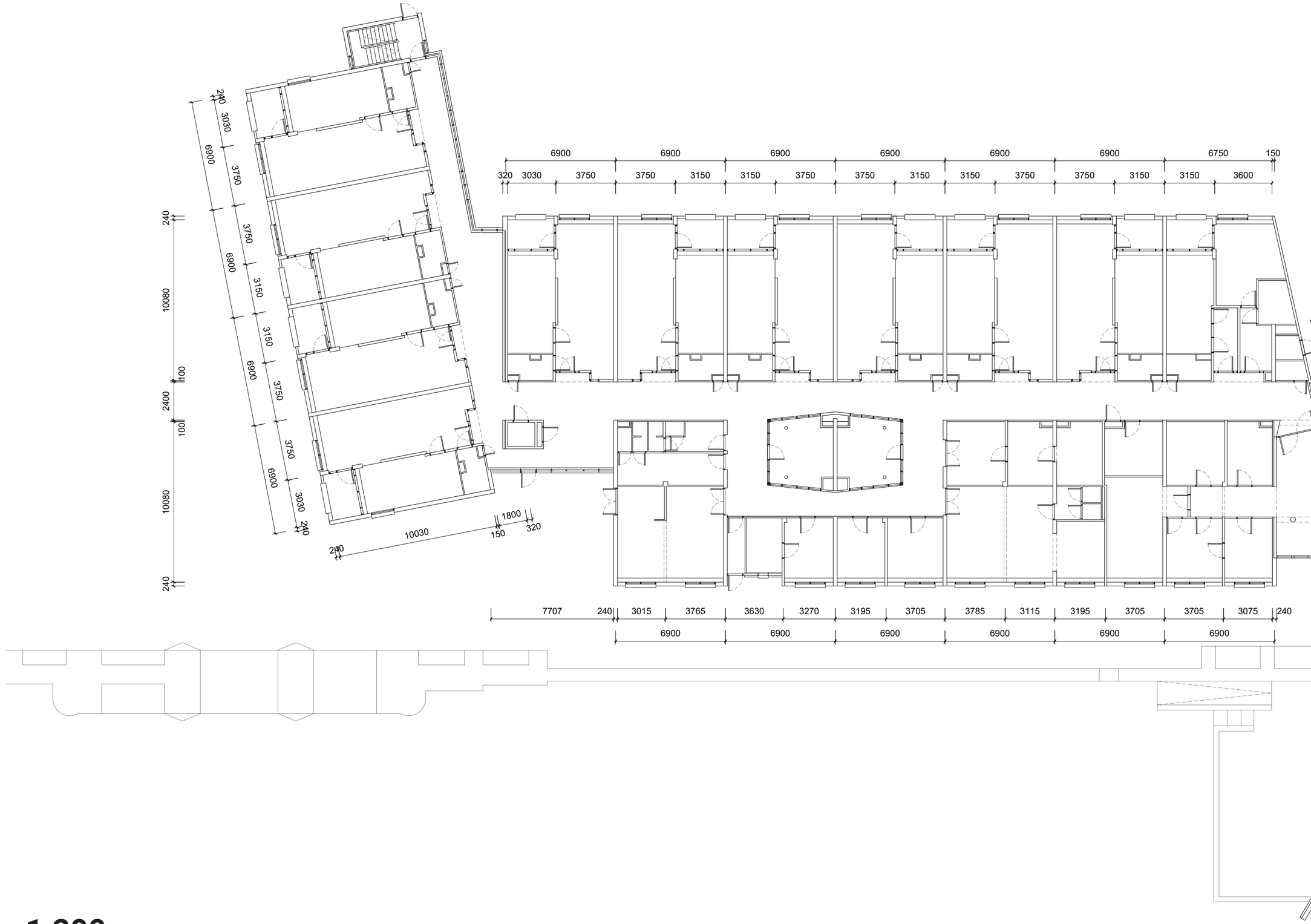
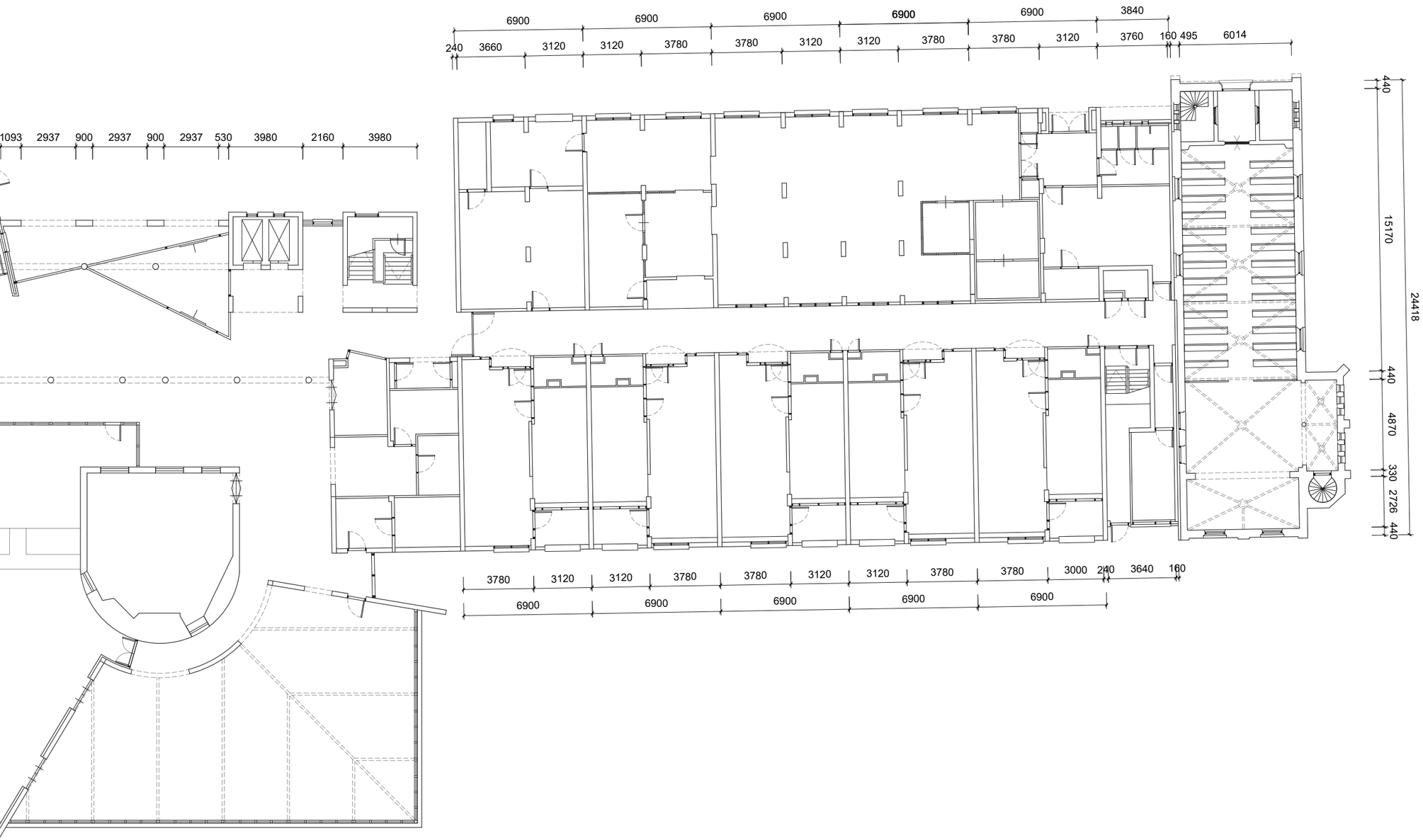
# 03 Building Plan Atlas




# Ground Floor 1:200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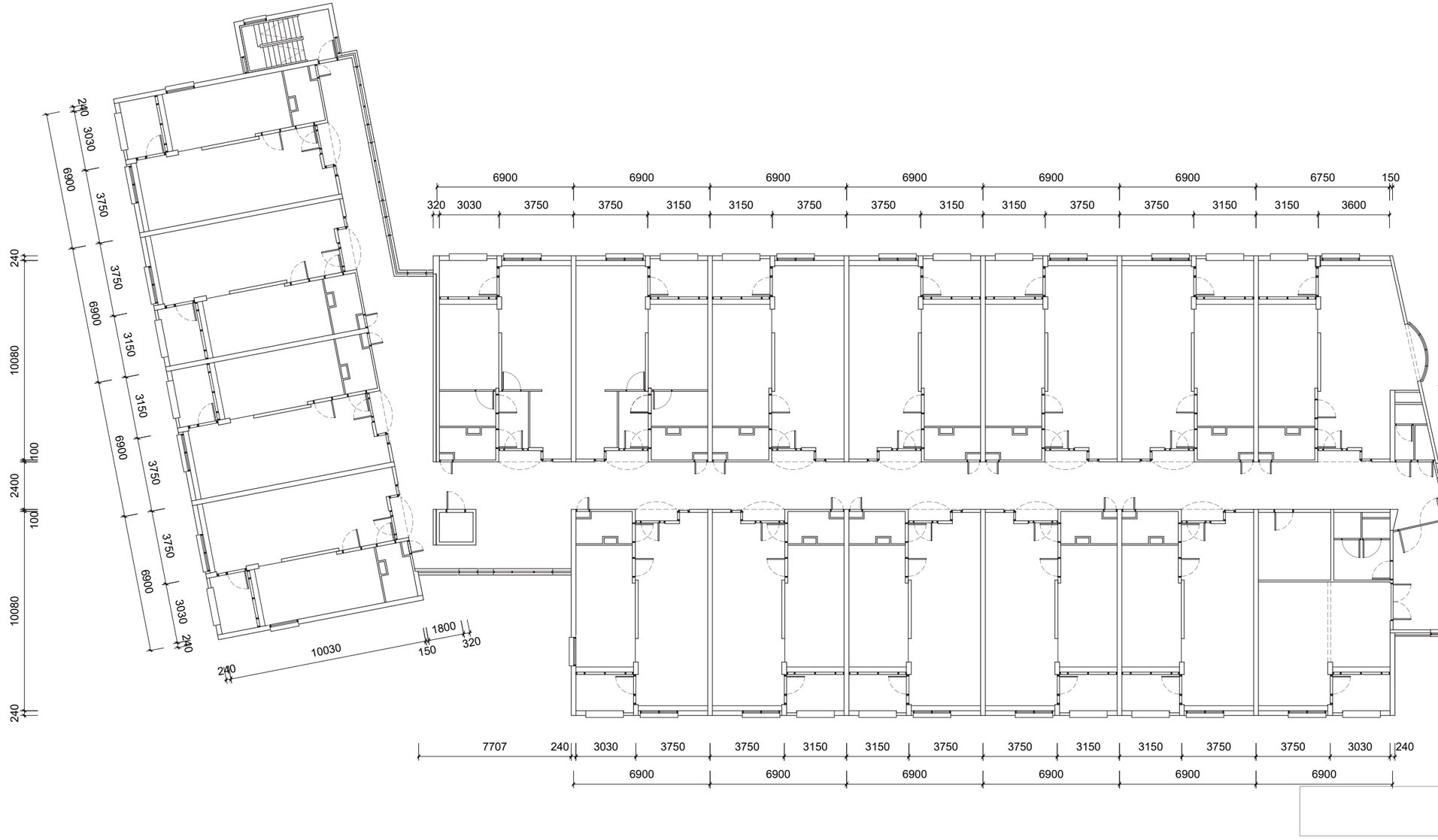
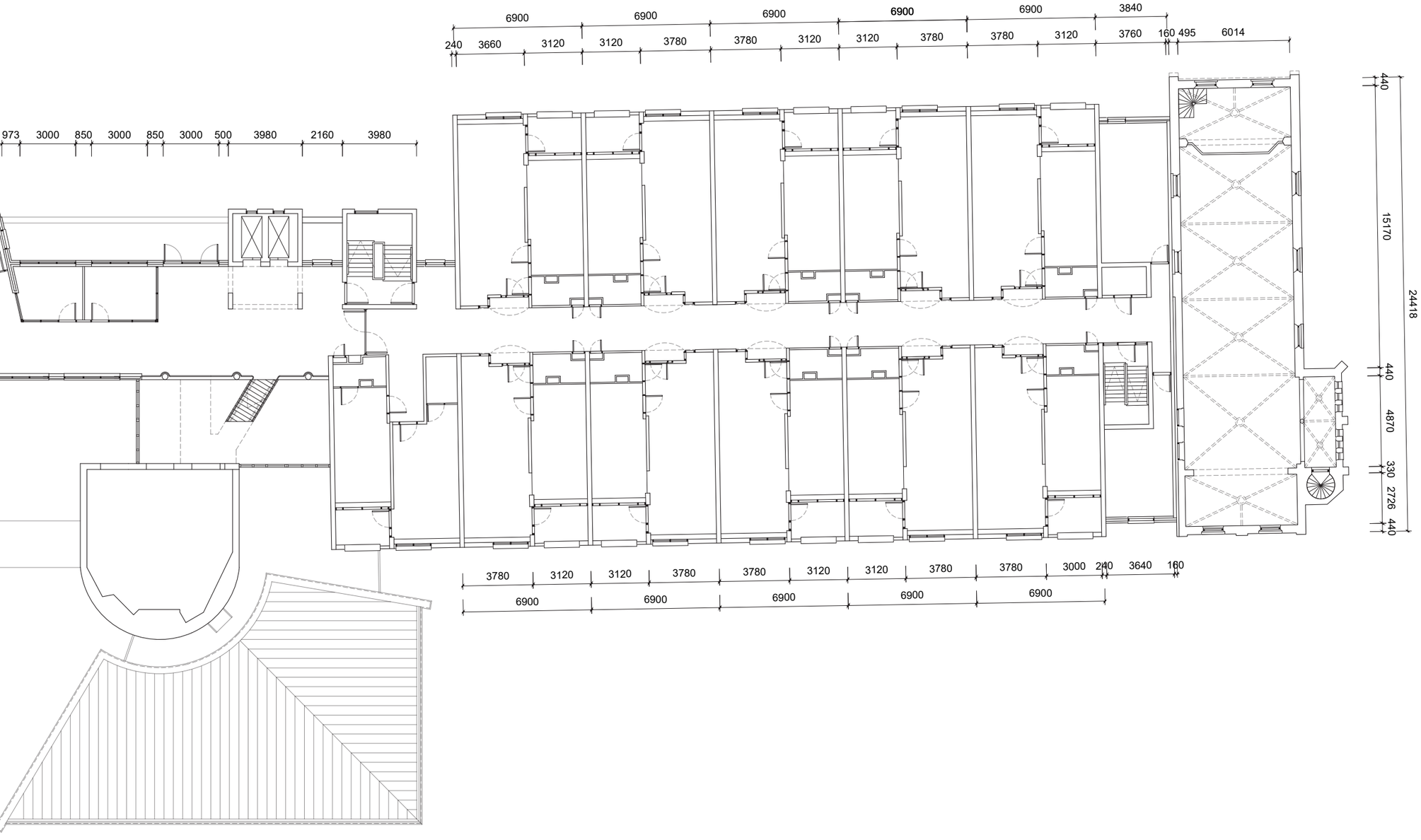



# First Floor 1:200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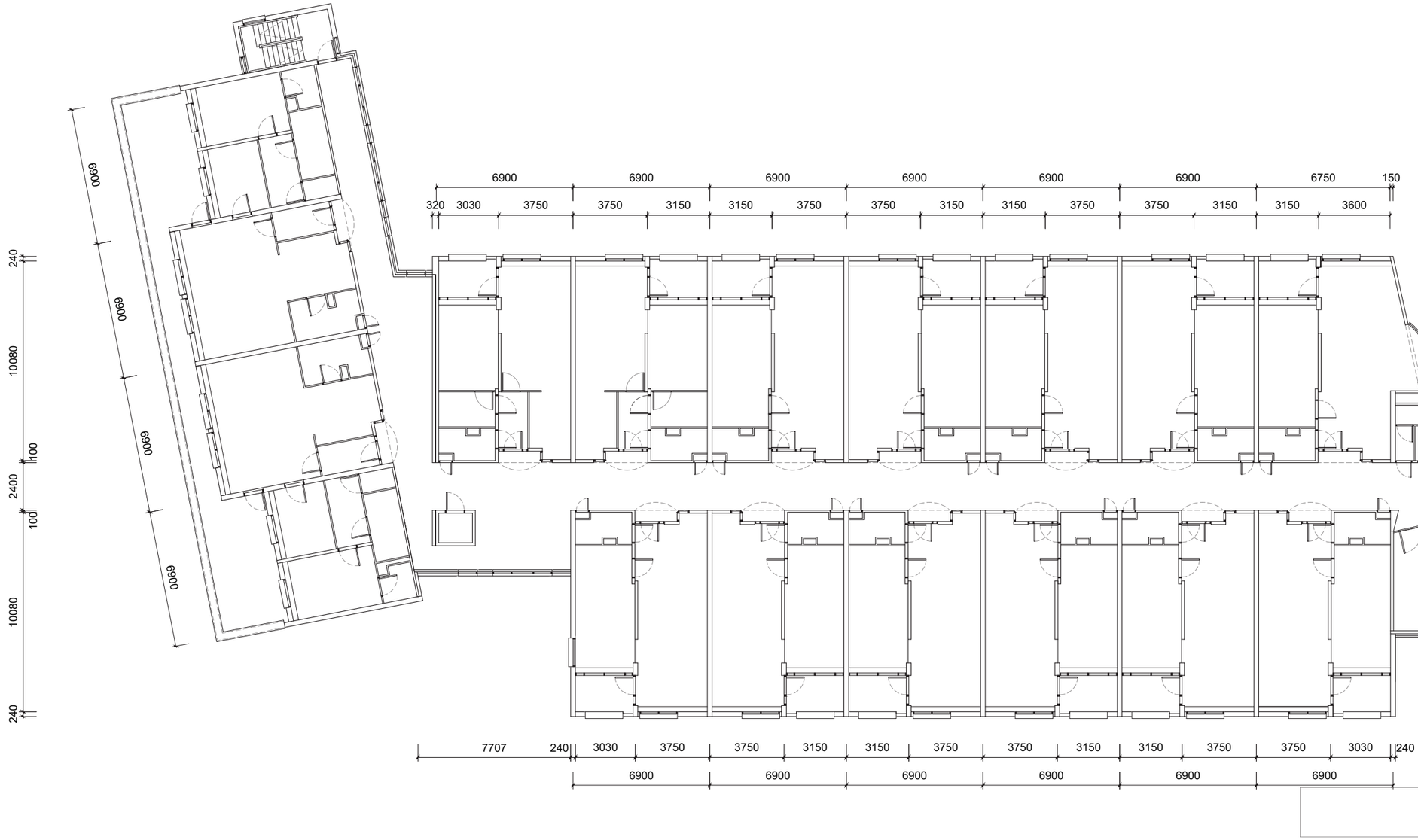
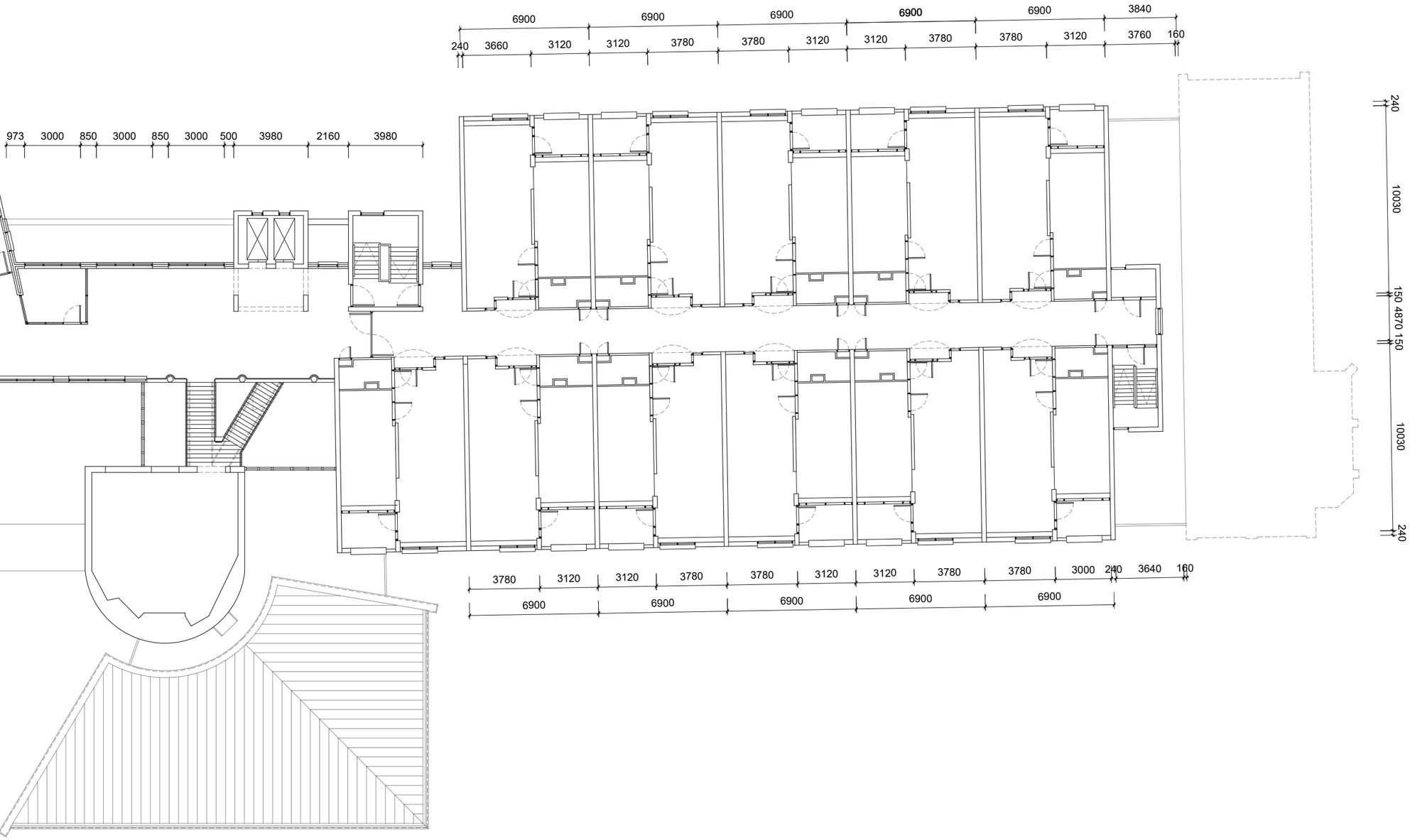



# Second Floor 1:200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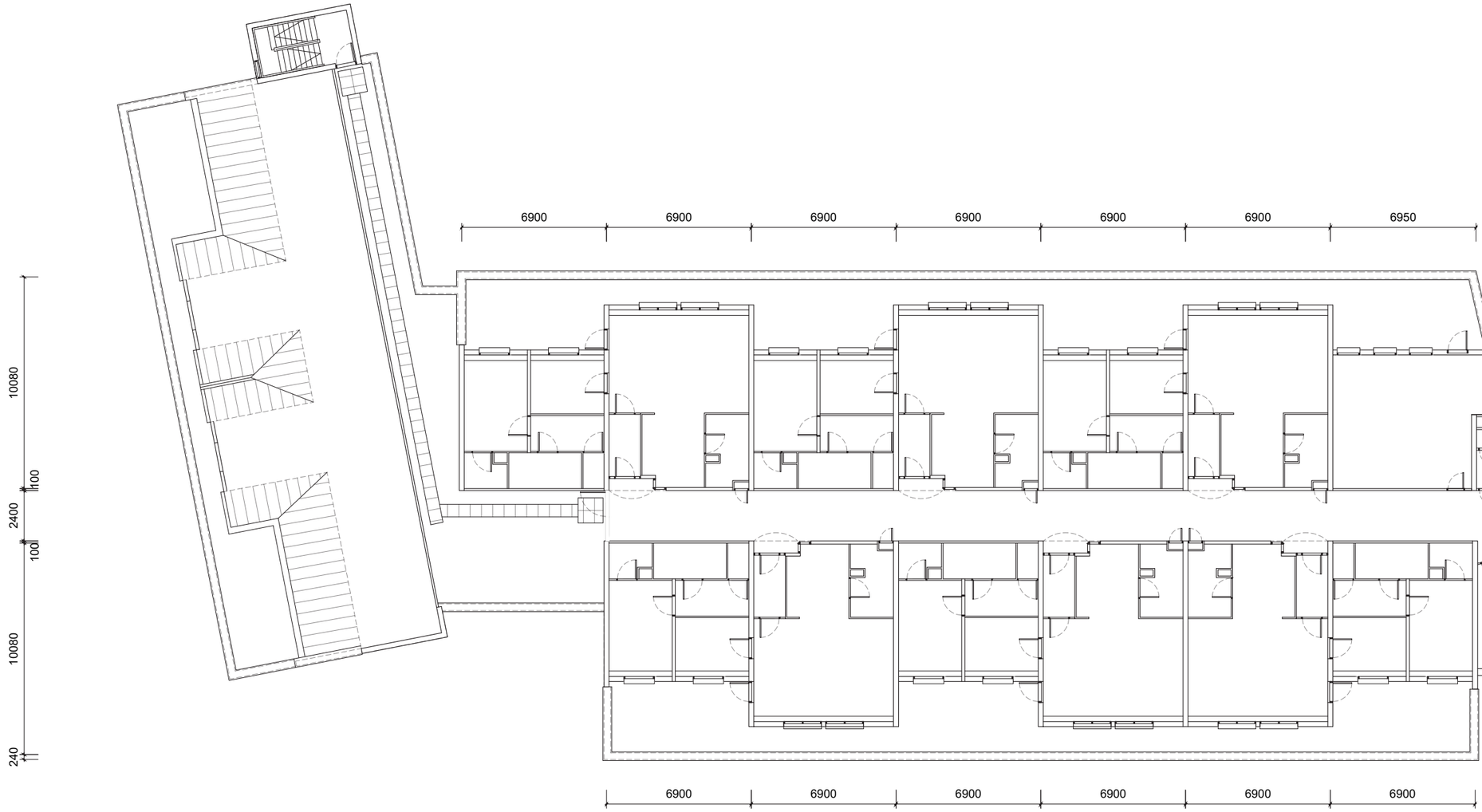
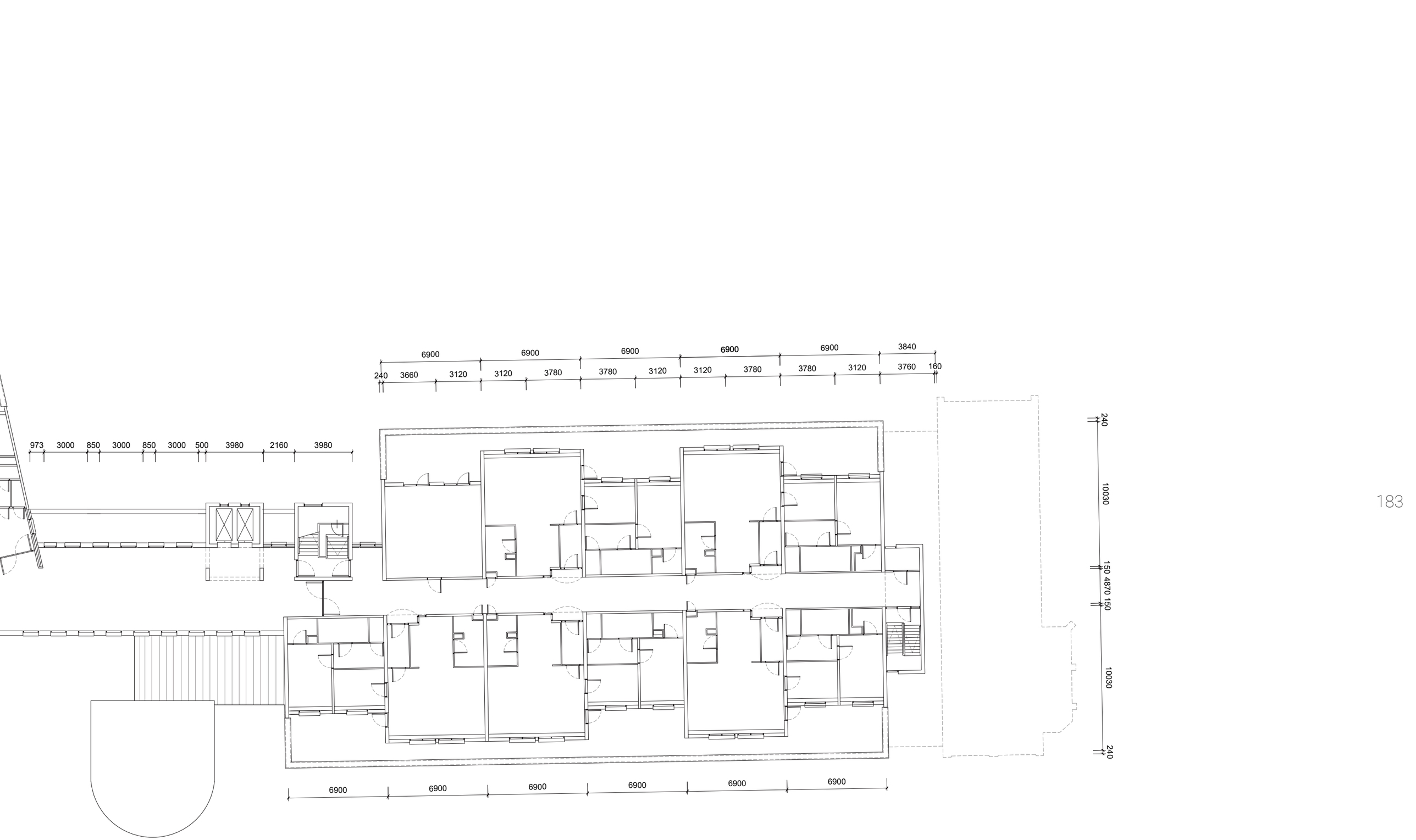



# Third Floor 1:200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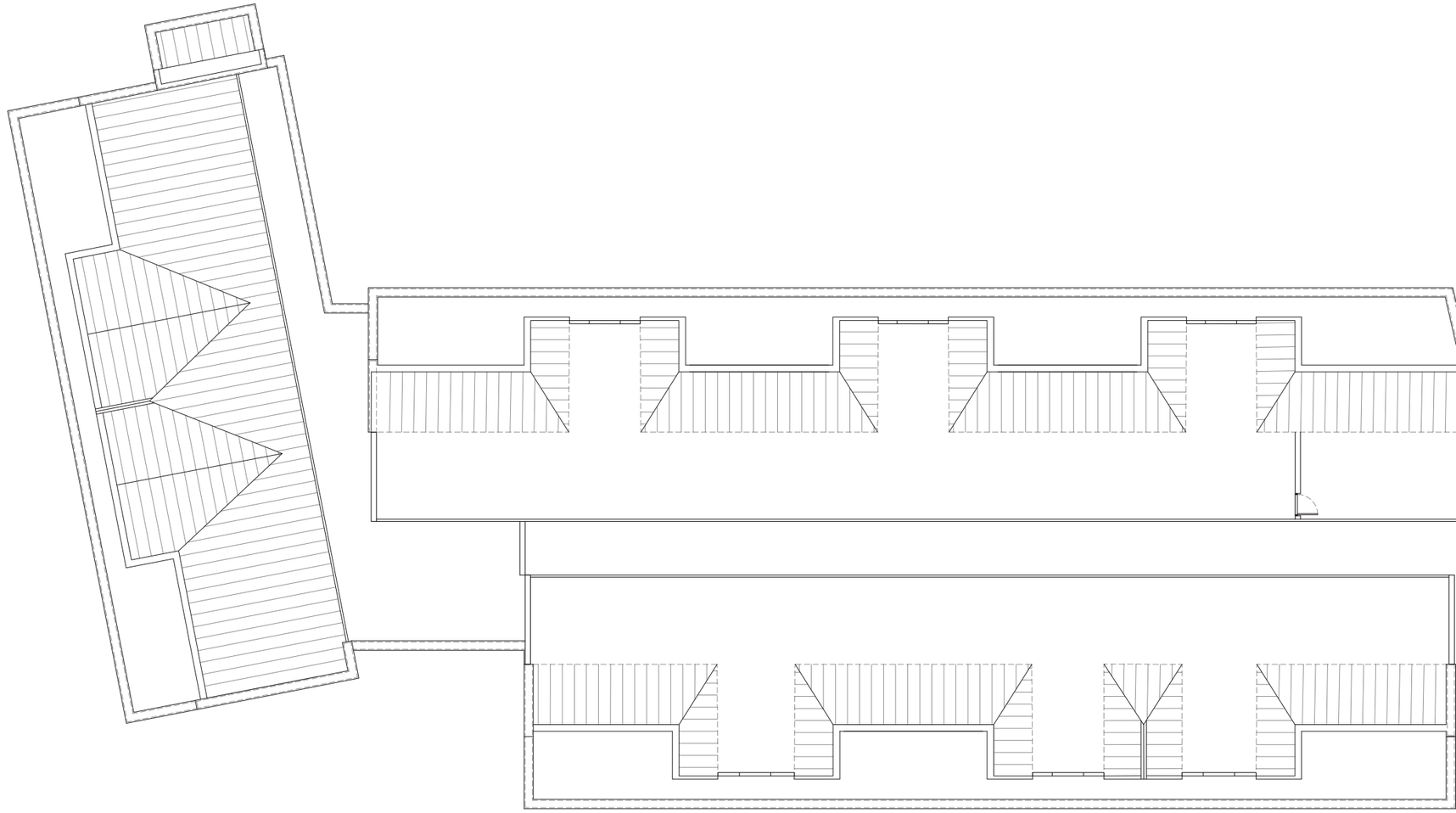
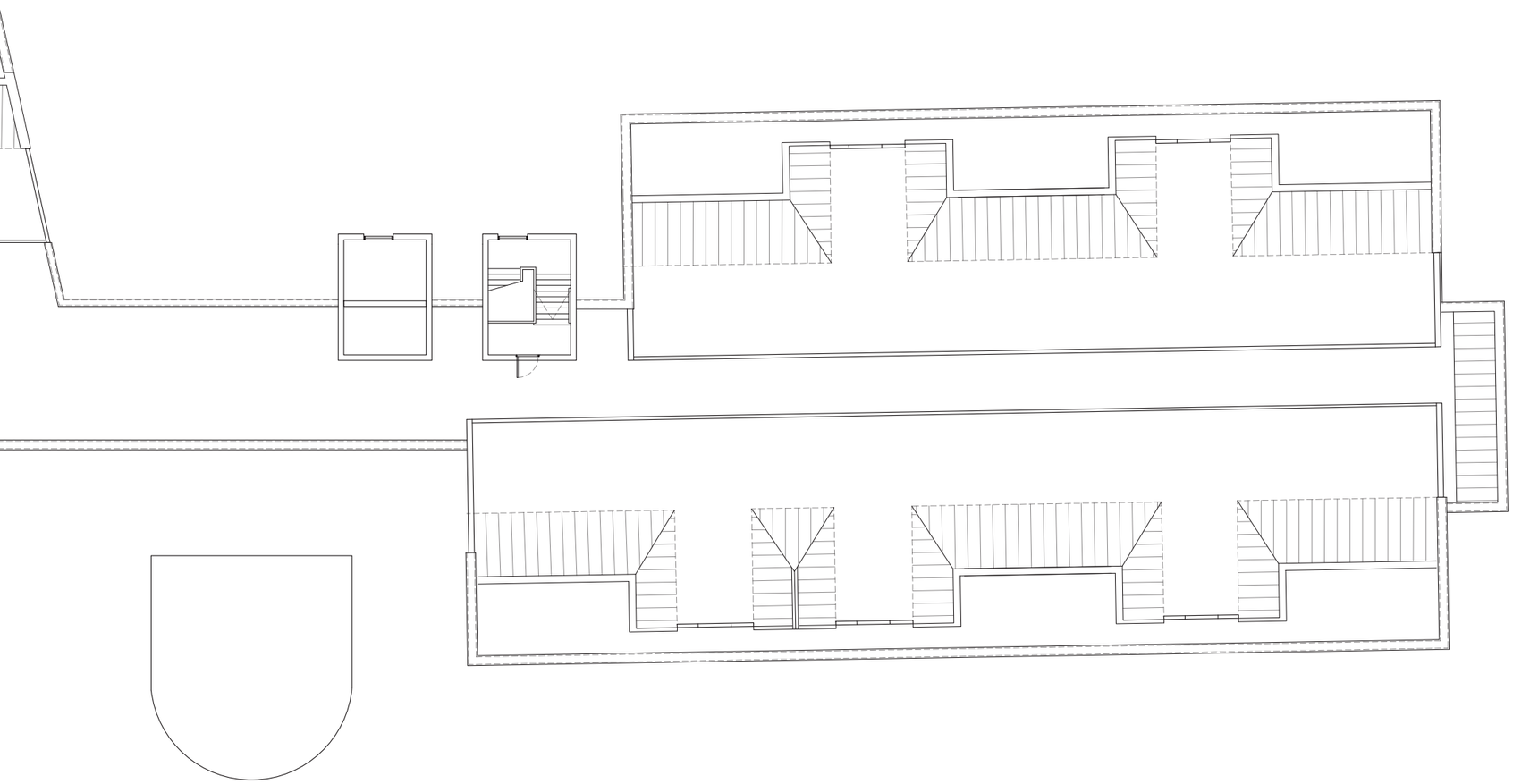


## Roof Plan 1:200



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Speical Thanks to Arnold Rehorst