

Johan Bouma | Participatory Churches  
P5 Processbook

# Colophon

## PARTICIPATORY CHURCHES

### A Participatory Design Approach to the Redesign of St. Dominicuskerk in Utrecht P5 Booklet

#### Institute

Technical University Delft  
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Zero Waste Church | AR3AH115  
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## **Table of Contents**

01	Preface	p 4
02	Introduction	p 5
03	Research	p 8
04	Case Study	p 14
05	Design Drafts	p 21
06	Final Design	p 30
07	Appendix	p 65

# 01

## Preface

In front of you lies a brief summary of my works produced for the Heritage - Zero Waste Church graduation studio. The works included in this summary are amongst others research findings, project analysis and the final design.

During my study career of approximately a decade, I have worked on various redevelopment projects at different levels. It is, above all, a contemporary societal problem. However, these experiences mainly focused on the technical aspects of the building; an aspect that personally suits me better. On the other hand, the emotional aspects were ignored. As a final challenge, before I end my student career, I once again dive into the unknown and focus on the involvement of people in the redevelopment of their surroundings. A topic that requires social skills, that I personally struggle with. The skills I acquired through this exercise will help me in my personal-, and professional life.

I would like to thank my tutors for guiding me through this learning experience and improving the results through critical questioning. I would also like to thank the actors who participated in the workshop that was required for my research. Finally, I would also like to thank the board of St Dominic's Church for allowing me to use their church as a theoretical case study.

**Johan Bouma**  
**Delft**  
**06 June 2023**

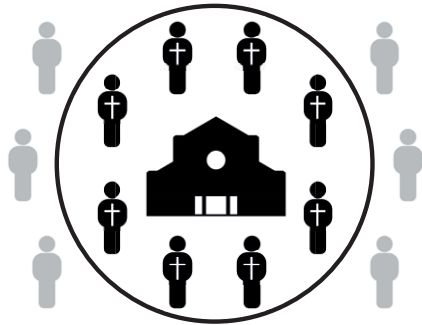
The easiest way to preserve existing buildings by simply utilizing them. Utilizing buildings results in a smaller likelihood that the building withers away in neglect and eventually is demolished. As a natural effect, the material value of the building is preserved. In short, “use it or lose it”. This is unfortunately not always possible. Changing functional requirements to which the existing building fails to adapt or the original function is ‘outlived’ by the building causes vacancy.

Religious buildings are an excellent contemporary example of the latter. These structures serve, among others, as ritual sites suited for a highly specific religious target group. Over the past few decades, since the 1970s, this group of religious practices have diminished due to secularisation; the descent towards a more earthly level. This does not help with the fact they’re remaining demographic of religious practitioners is ageing due to a shortage of newcomers. As a fateful result, the church is forced to scale down and close the doors of numerous church buildings, leaving the church building behind in vacancy.

This brings us to the question of what to do with these buildings and what is the exact value of these buildings. What and why should these structures in particular be preserved? The obvious answer to this question would of course be because of the religious and cultural values found within these structures. Religion has, after all, played a pivotal role in our society and is therefore deeply rooted in our culture. The story of the church is a story about us as a society.

## 02 Introduction

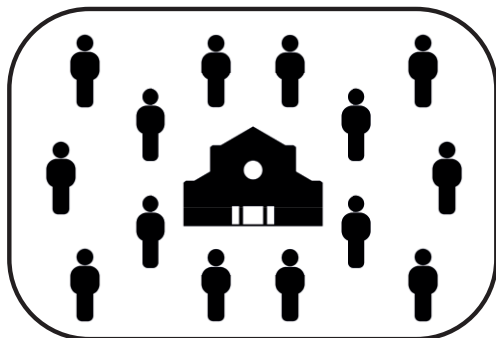




I believe that the value of these structures does not end there. Yes, churches are first and foremost religious spaces for rituals, bringing the individual closer to god. But either directly or indirectly, it brings the individual also to each other. The church serves as a gathering space for a certain community. The church is a social binder within a community.



With the disappearance of the religious community, the religious function and the social function of the church disappear. We see churches being transformed into dwellings, which is understandable due to the immense housing shortage that can be observed throughout The Netherlands.



But these functions merely attempt to fill up the empty spaces the church leaves behind without fully acknowledging the prior mentioned values of the church structure. This is a pity, especially in today's society in which it seems that we as individuals are growing distant from each other. Where are the social binders when you need them? The vacant church buildings pose a solution to the conundrum. Instead of serving as a social binder for a specific religious target group, it now can take on a new role within society as a social binder for the neighbourhood. The disappearance of the church should automatically be the end of the social function of the church building.

It is because of this reason I focused on the development of a community centre within the selected case study, St. Dominicus church in Utrecht. Doing so, the House of God is turned into a Home for the Neighbourhood. But, as things often are, is simply said than done. Churches are an object of emotion, and conflicting interests between stakeholders could complicate the process or bring it to a complete standstill.

Participation could be applied to prevent these conflicts from happening by identifying interests between stakeholders early on in the process. Besides this obvious benefit, the involvement of local residents during the decision-making processes allows local agency in the development of their own neighbourhood and further promoted the integration of local needs. This in turn prolongs the usability of the redeveloped building. This leads to the following research question:

**“How can participation assist in the preservation of the social function of religious heritage?”**

The best way to answer this research question is to conduct a participation workshop. I decided that locals would benefit the most if they could determine the program for the hypothetical community centre.



# 03

## Research

Before the participatory workshop could be conducted, it should be clear what this workshop entails exactly. Through case study analysis of various religious- and non-religious projects in which participation was applied, three overarching process stages could be identified. Each with its own methods and goals.

I. Orientation stage; in which overarching topics and goals are identified through qualitative methods such as on-site interviews and collective or individual brainstorming.

II. Identification stage; in which common and conflicting interests between the participants are identified through collaborative exercises such as consensus design.

III. Evaluation stage; in which the design is evaluated and the participants' agency is recognised, further solidifying the sense of participation and ownership.

These three overarching stages serve as the framework for my own participatory workshop. At first, the intentions were to conduct this workshop through the local residents of the case church to make the results as representative as possible. This was however not possible due to the request from the church board. Consequently, the workshop was conducted through actors with similar demography to represent the local residents. This of course altered the design input resulting from the workshop and limits the possible methods that could be applied during the workshop.

<b>Orientation</b>	Determine themes, goals, and topics	On-site interviews Observations Ind. / Col. brainstorming
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<b>Identification</b>	Identify conflicting and/or compatible interests	Cognitive mapping Consensus design
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<b>Evaluation</b>	Evaluate results and recognise participant's agency	Virtual reality Augmented reality Models & Slides Interviews
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During the individual brainstorming sessions, the acting participants were inquired to write down potential programs that they desire or expect to see in a community centre that is to be realized in their neighbourhood. To assist this process, generic themes were given such as sports-related programs, healthcare programs, cultural programs, etc.

The results from this individual brainstorming session were, as expected, varied. Some participants had an easier time generating ideas whereas other participants struggled. When the results were quantified, and measured according to how often certain themes or programs were mentioned, it becomes evident that social programs were most likely to be mentioned. Despite this, cultural programs are more likely to be agreed upon between participants because of the reoccurrence of specific functions such as a theatre.

## **03a Research**

### **Individual Braindroming Results**

# 03b Research

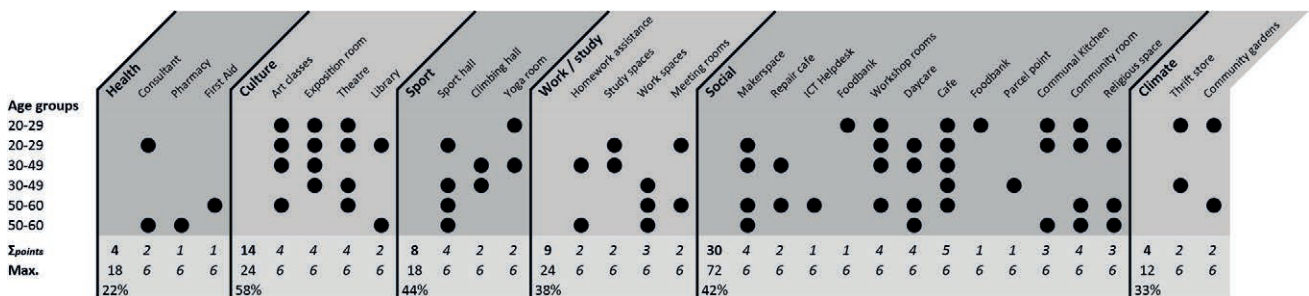
## Cognitive Mapping Results

The programs from the brainstorming session remain vague. It is likely that the programmatic definition of a function deviates between participants. Where one participant thinks of a brown café when writing down 'café', the other can think of a trendy coffee corner. Cognitive mapping helps in refining the programmatic definitions through writing and/or drafting. Each participant was inquired to select approximately four programs from their individual brainstorming session to further define.

Here too, some participants struggled with the visualisation of their selected programs and thus remained with a 'wish list' for their selected programs. Others on the other hand had an easier time and created abstract two-dimensional floorplans. Clearly, this method is easier to comprehend for a layman.

Despite the success of this assignment, it failed to develop specific spatial requirements for the selected programs. The participants have a limited understanding of the spaces they use, and can only relate to spaces they already know.

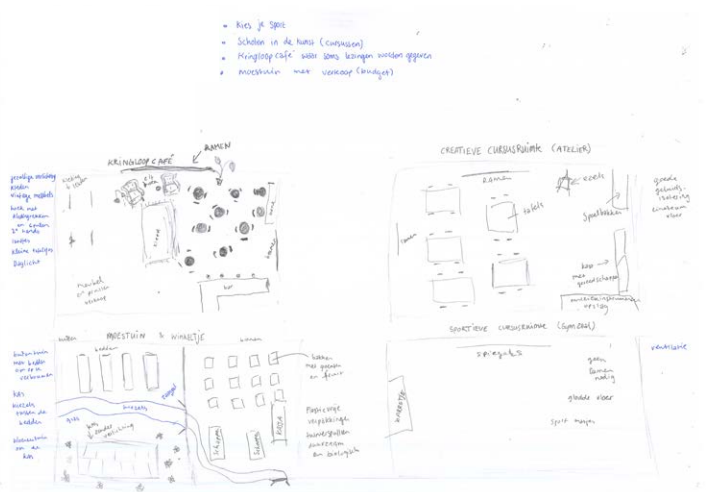
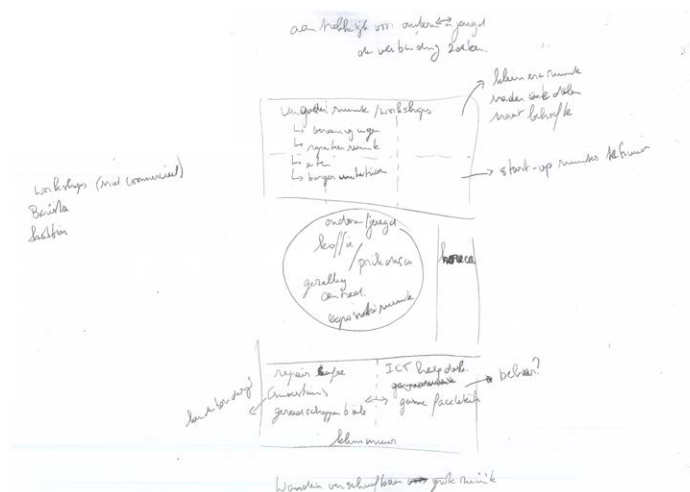
Interestingly, despite the failure to develop a list of spatial requirements, a clear preference between the participants was observed regarding the programs they chose. This preference becomes further evident during the consensus design assignment, in which participants put their programs together.



After the refinement of the programmatic requirements, the participants were paired up correlating with their age group for the consensus design. By forming these duos, preferences between age groups within the participating group could be identified.

All plans resulting from the consensus design assignment commonly shared a cultural program in the form of a theatre in the nave of the church. This correlates with the observation made from the individual brainstorming session, where cultural programs were most likely agreed upon between the acting participants. It is at the monastery, the polythetic part of the complex, where the plans deviate.

### 03c Research Consensus Design Results

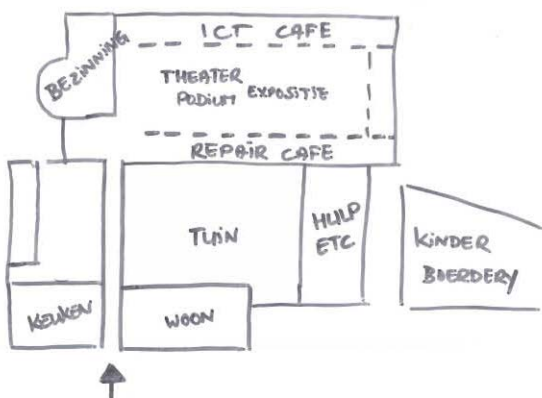
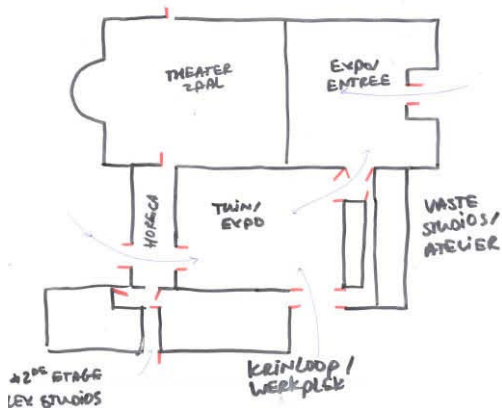


Age group A (20-29 years old) seems to mainly focus on social and environmental programs in their design. Collective workshop spaces were added in which different people can meet and the inner courtyard serves as a sustainable garden for the surrounding facilities.



Age group B (30-49 years old) on the other hand, focused more on economic and industrial programs such as working studios and open study spaces. Besides the program, their design suggests the desire to 'break' the monastery open towards the surrounding neighbourhood.

Age group C (50-60 years old) focused solely on the social programs within their design. Upon further questioning their decision-making, they expressed that they intended to create a common meeting ground for different age groups, and thus tried to integrate as many different social programs.



By comparing the three plans resulting from the consensus design assignment, and seeking similarities or conflicting ideas, a community centre program can be assembled. The community centre program is as follows:

*“Our community centre consists of a cultural spot within the neighbourhood in the shape of a theatre.*

*Around the inner courtyard, which serves as a collective and biodiverse space, various programs are integrated to attract different age groups within the neighbourhood. These functions are amongst others a café, flexible and open work/study spaces, and an arts & crafts atelier.*

*These functions together function as a living room for the neighbourhood. This living room must be accessible and should serve as a green and sustainable example for the neighbourhood.”*

## **03d Research**

### **Community Centre Program**



# 04

## Case Study

### St. Dominicus church Herman van Putten

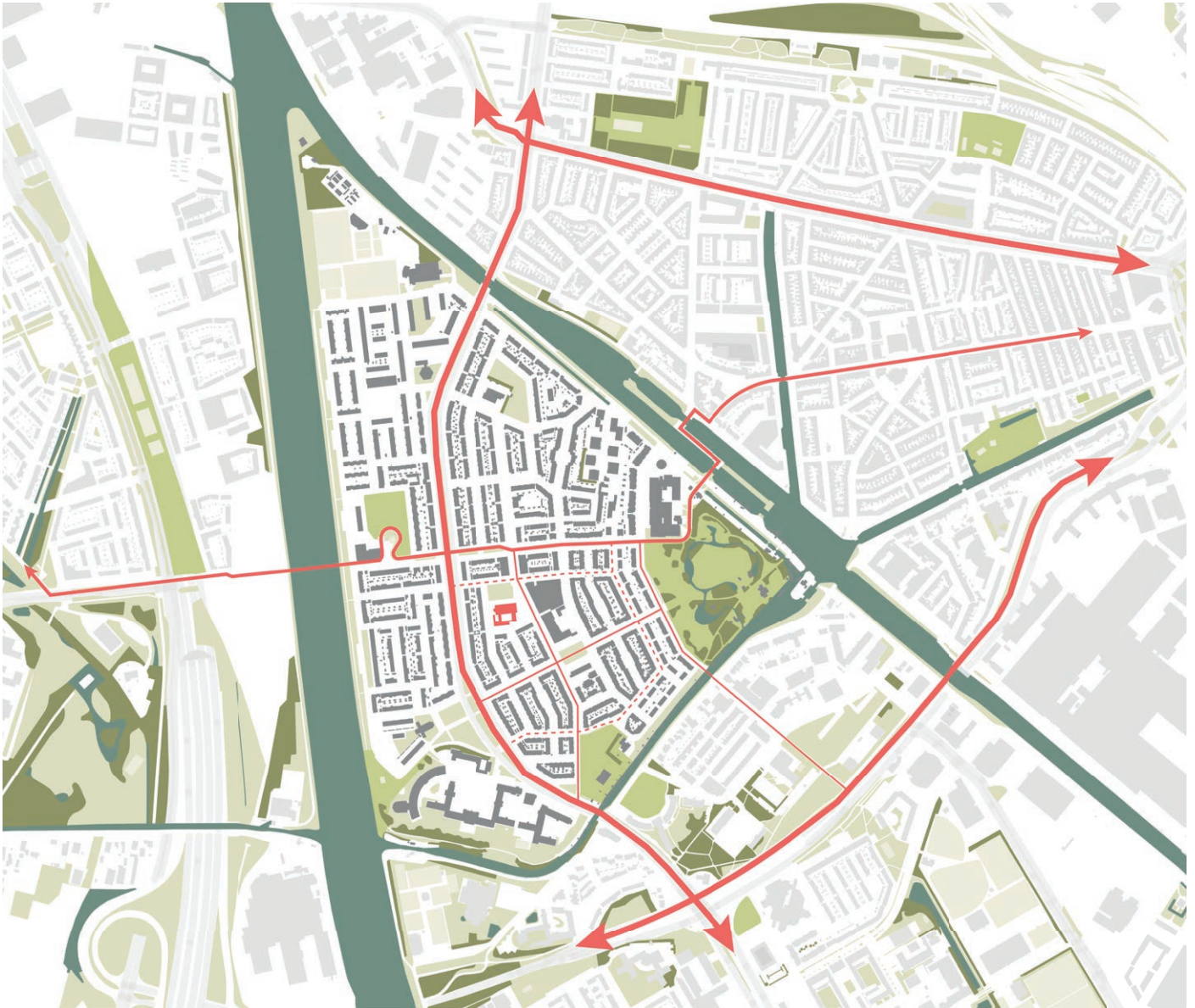
Utrecht  
Oog in Al  
1951

The St. Dominicus monastery was built in 1951 on behalf of the Dominican Brotherhood. The St. Dominicus is located in the Utrecht Neighbourhood of Oog in Al. The complex was designed by the Hilversum's church architect Herman van Putten (1905-1966). The monastery was built in an early example of the Bossche School style, identified by its strong resemblance with traditional Romanesque church architecture.

In 1961, ten years after finalization, the monastery was extended. The monastery both served as a church building and a monastery in the neighbourhood. In 1991, the Dominicans left the premise. Upon their departure, the monastery was absorbed by the church building.

The complex is constructed with natural materials; bricks, wood, natural stone pillars and ceramic tiles. Concrete is applied where it was deemed necessary, such as the floors, but mainly remains out of sight. This creates a strong and heavy object within the neighbourhood in Oog in Al, but also makes the building tectonic – it does not take much to understand how the structure works. The church complex is located on an isolated parcel, surrounded by a street. This sets the building apart from the other masses surrounding it. The parcel is filled to the brim with unkept green (due to lack of funding), creating a green oasis in the neighbourhood. This also in turn makes certain facades of the church obscured by the green.





Oog in Al is located between the old city centre of Utrecht and the newly developed centre of Leidsche Rijn. These two city centres are connected by a bicycle highway, that runs through the centre of Oog in Al. This makes Oog in Al easily accessible by bike. Furthermore, Oog in Al is well connected with various motorways and public transport systems.

## **04a Case Study**

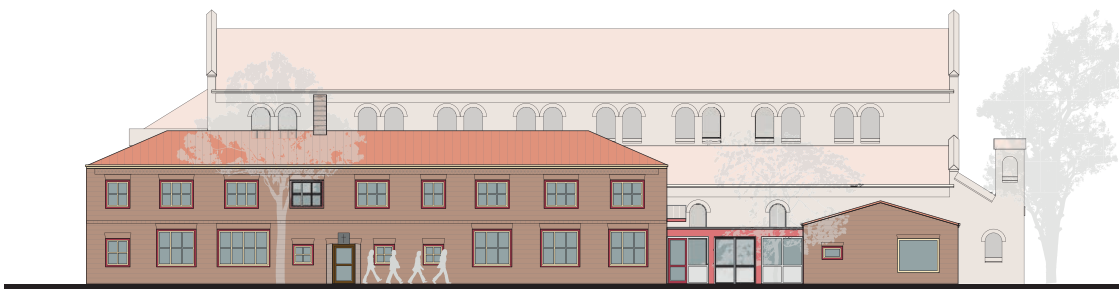
### **Facades**

The aesthetic appeal associated with the Bossche School architectural style is a monumental feature of its own. Its sober appearance contrasts with its surroundings, making the building a strong landmark in the neighbourhood. The materialization and the purity of material use in monumental features contribute to the internal and external experience of this church complex. The combination of concrete columns with the brick vaults leaves nothing to the imagination. The supporting structure and load-bearing forces are visibly expressed in the design. In addition, the brick is a contrast to the stained glass windows and the light wooden support beams.

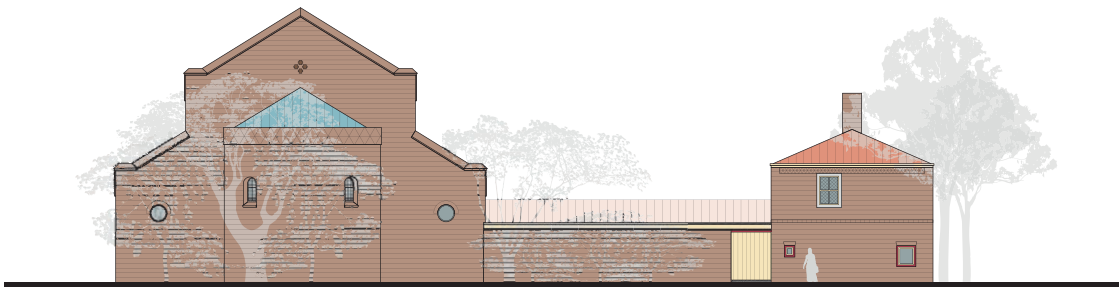




**East Facade**



**South Facade**



**West Facade**



**North Facade**

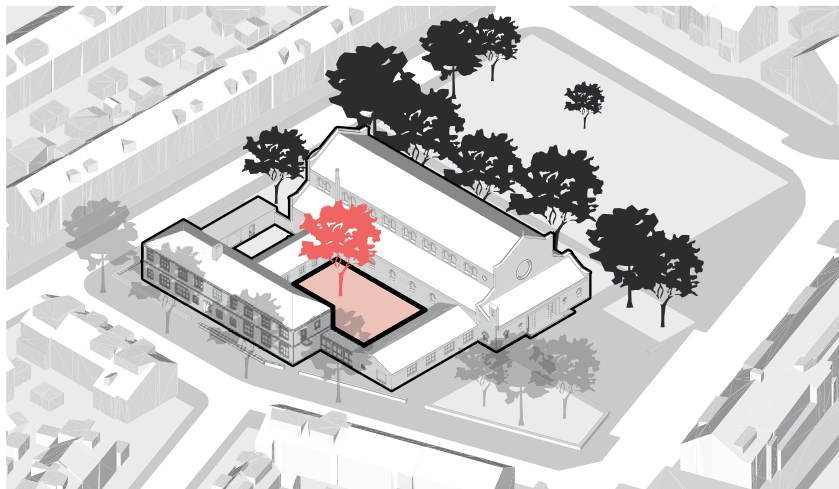
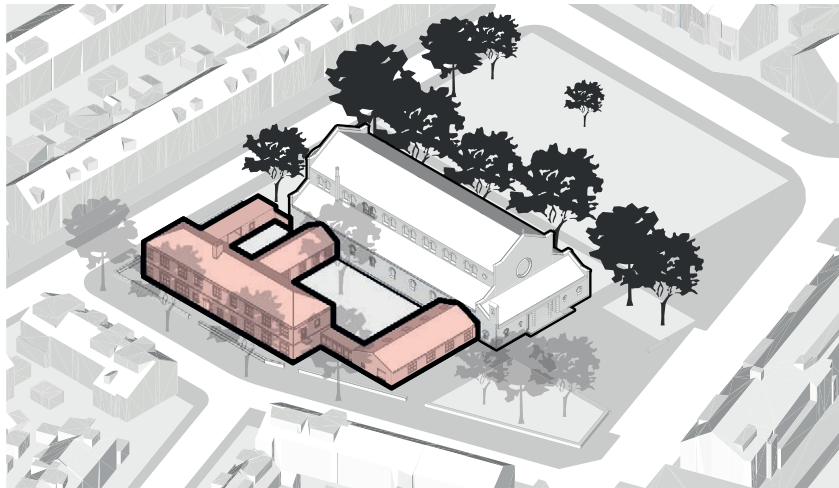
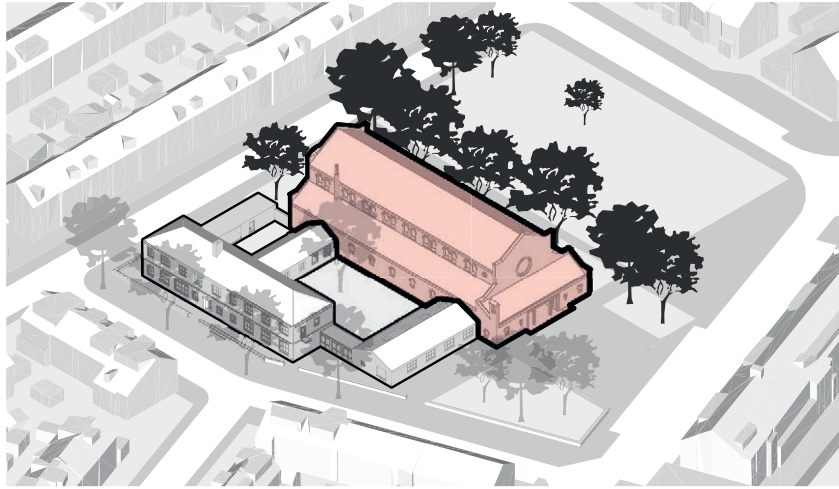
## **04b Case Study**

### **Split Identity**

The church complex can generally be divided into two contrasting identities. The nave, with its Godly scale and massive structure, reigns dominant in the assemblage. The rigid rhythm and closed nature of the nave make it a formal atmosphere.

The monastery, on the other hand, is executed more on a human scale. Consisting of multiple polyarchical masses, it is clear that this area is meant for God's people to dwell in and is, therefore, more informal.

In between the nave and the monastery, a small intimate green courtyard can be found. This court used to serve the Dominicans back when they occupied the monastery. However, since their departure, this courtyard lost its original function. Now it remains as an undefined space between the two identities.



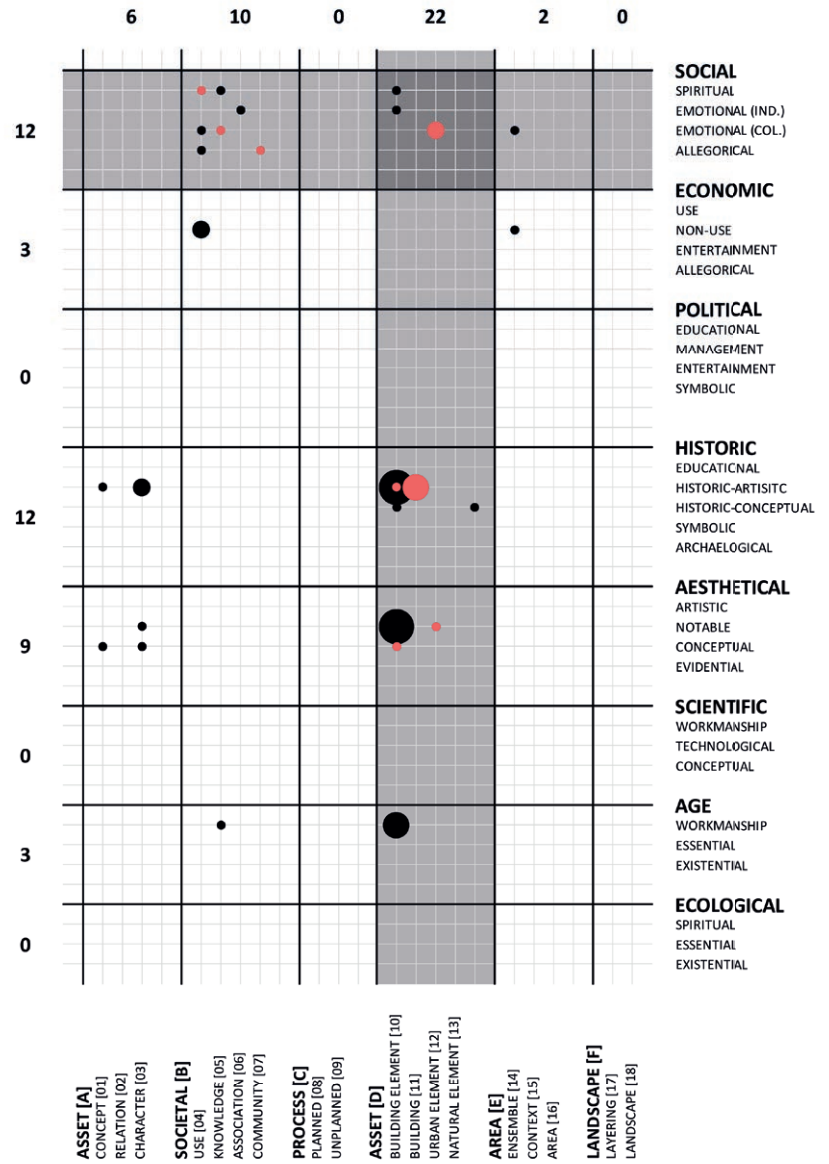
# 04b Case Study

## Value Assessment

Every building has its own set of values that gives the structure meaning. Going through different sources, ranging from municipal documents, newspaper articles and personal videos (broadcasted in response to the Covid-19 restrictions), several values regarding St. Dominicus could be mapped.

Noticeably, most values are tangible objects, such as building elements. Mainly historic and aesthetical objects are mentioned.

On the other hand, diluted from the analysed documents, people value the social aspect of the church building.



Prior to the final design, and the participatory workshop, various design studies took place ranging from programmatic opportunities to viable extensions.

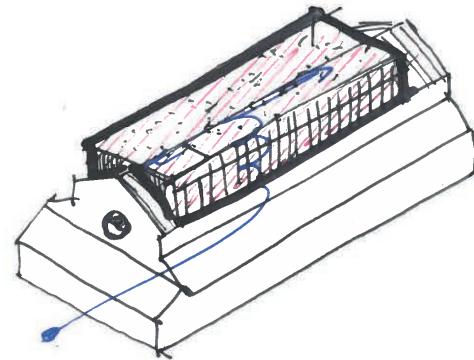
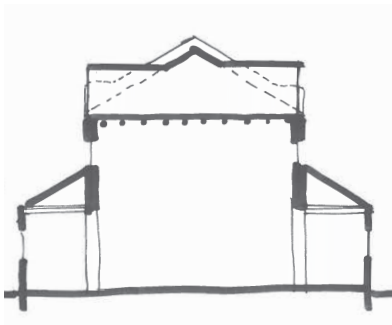
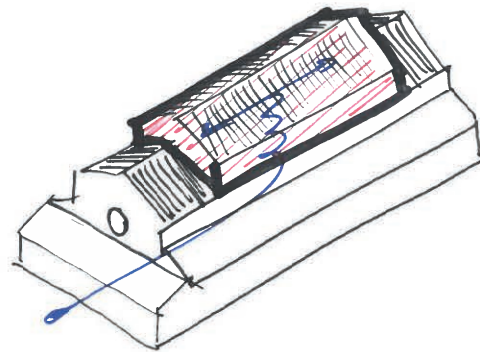
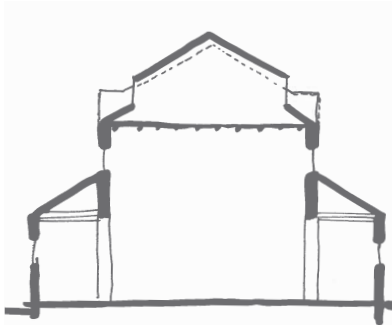
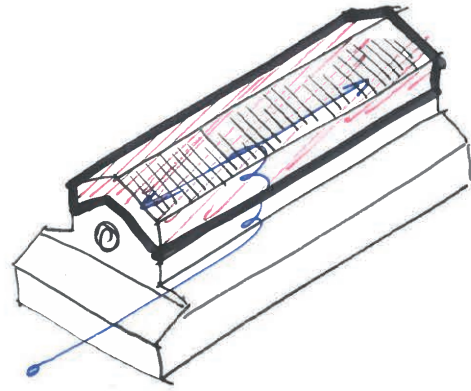
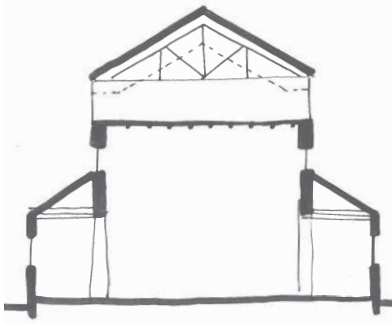
This period consists of many trials and errors. Some discoveries were not applied in the final design, others had a great influence on future decision-making.

At the beginning of the design process, there was no definite program for the community centre. Some ideas floated around, based on feasibility, but nothing too concrete. This is reflected in the design process, where interventions are tried lacking a strong concept.

These experiments, despite lacking an overarching idea, assisted in identifying challenges which had to be addressed in the final design, such as the internal circulation of the visitors. All these discoveries lead to the P2 design, where general design goals were set such as the accessible and social courtyard. But lacking a definite program, the design consisted of a multitude of smaller interventions instead of one strong concept.

# 05

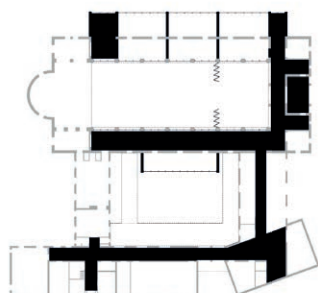
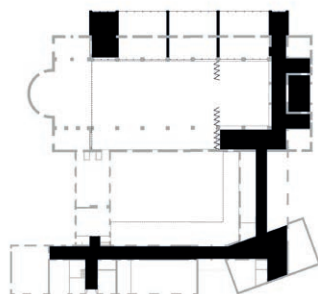
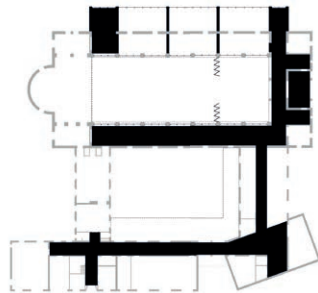
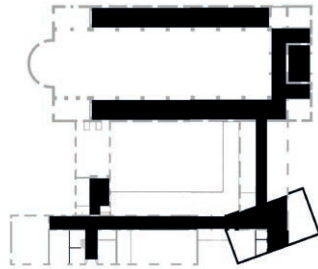
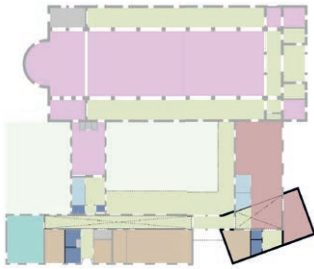
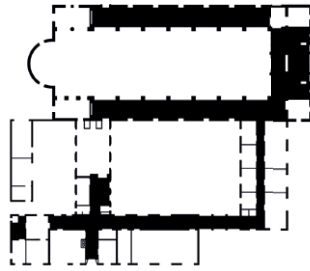
## Design Drafts



## 05a Design Drafts

### Mass extension Roof

Without a lot of thought, an extra mass on top of the nave was explored. This space could be used for work spaces and/or dancing spaces. A space on the roof, of course, would create an interesting space to experience from the inside. However, placing a rather monolithic mass on top of an already existing mass is daring, since it changes the scale and proportions of the existing building. How to create access to the roof without hindering the nave space is also a challenge. Because of this, it was decided to drop this idea.



## 05b Design Drafts

### Internal Routing and Circulation

A challenge identified through studies is the internal circulation of the existing structure. The axis of the existing remains very horizontal, with little to no connections. This makes sense considering the history and original function of the complex.

With this study, a new program was projected in the existing structure, and the routing is highlighted. Immediately, it is seen that the routing remains horizontal. How can the two structures, the nave and monastery, be weaved together with a singular intervention?

Furthermore, the nave was used as a big open space with working studios on the side. The studio spaces at the Werkspoorfabriek in Utrecht are a direct inspiration for this. However, by doing so, the internal and external experience of the nave is destroyed, and thus this idea was dropped.

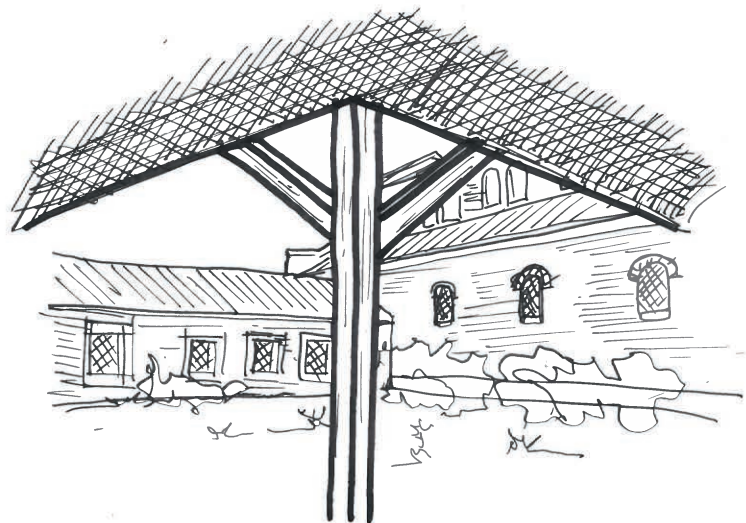
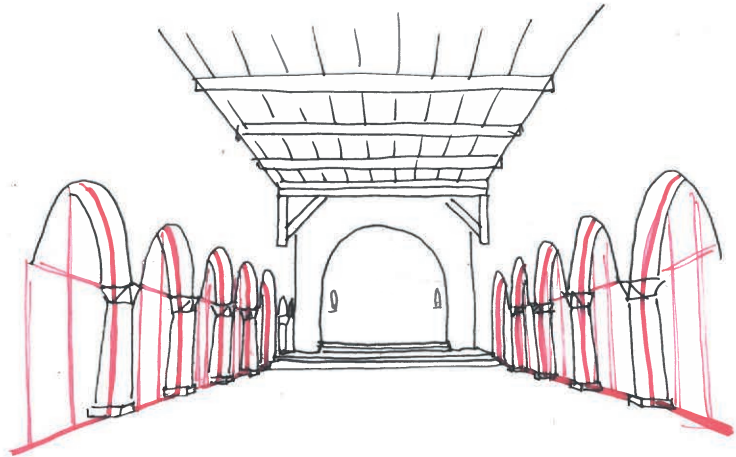
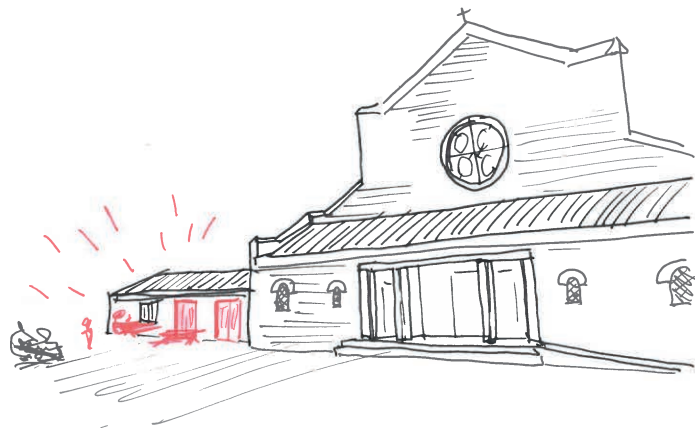
## 05c Design Drafts

### P2 Design Community Centre

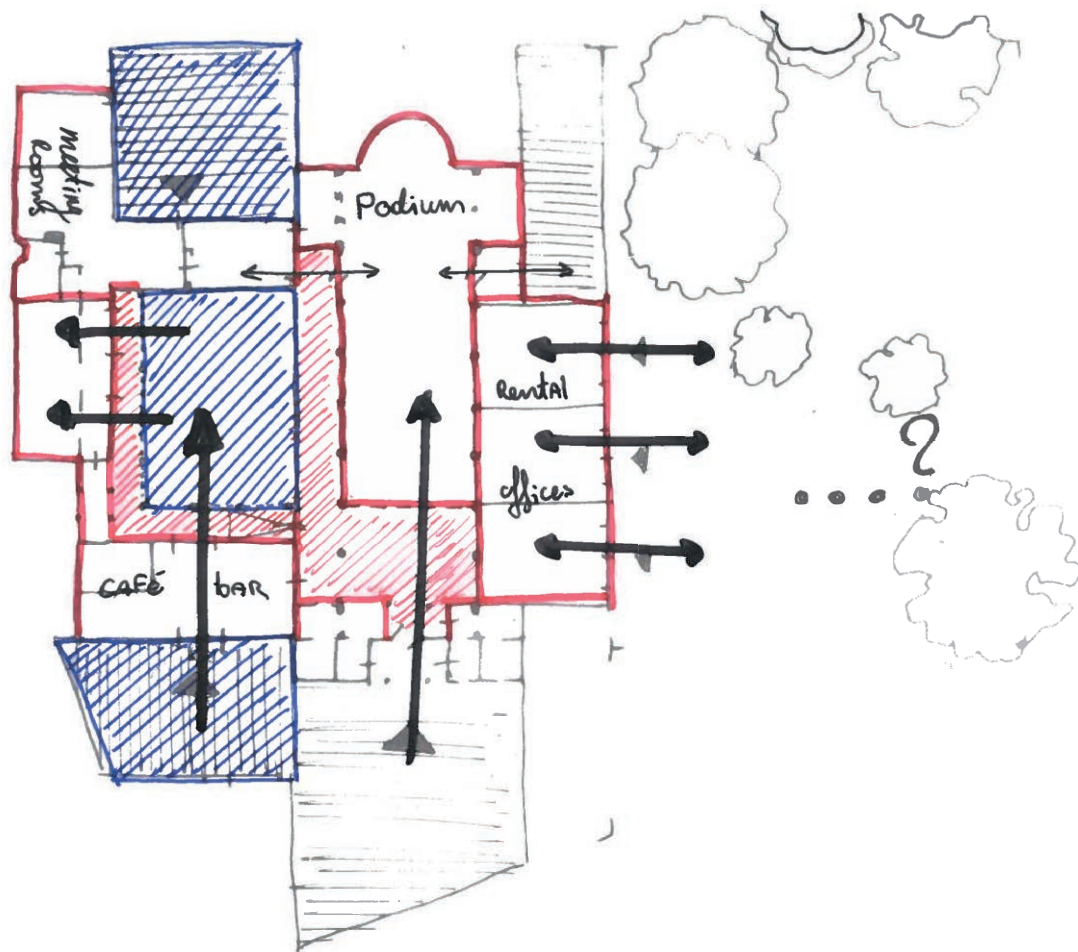
For the P2 presentation, a draft design was presented. Here, some design goals became clear. The annexe building, adjacent to the nave of the church, has the opportunity to serve as an informal gathering space for the community as a café.

The nave itself could be a working space, with a large flexible hall in the middle for various events.

The courtyard gains a direct route through the garden which makes the courtyard more accessible and functionally defined.

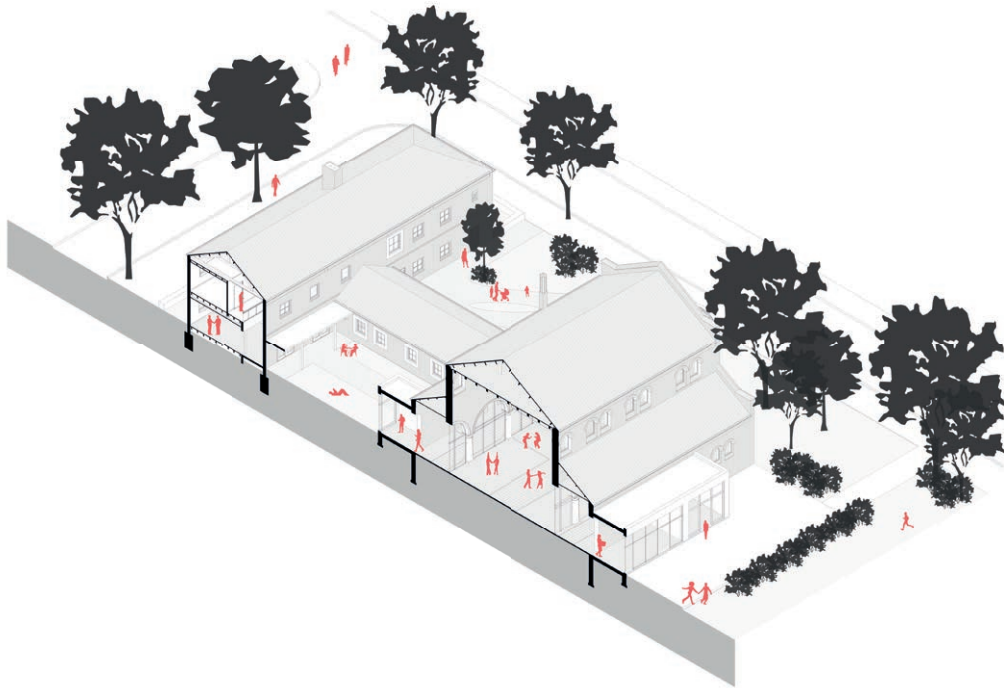






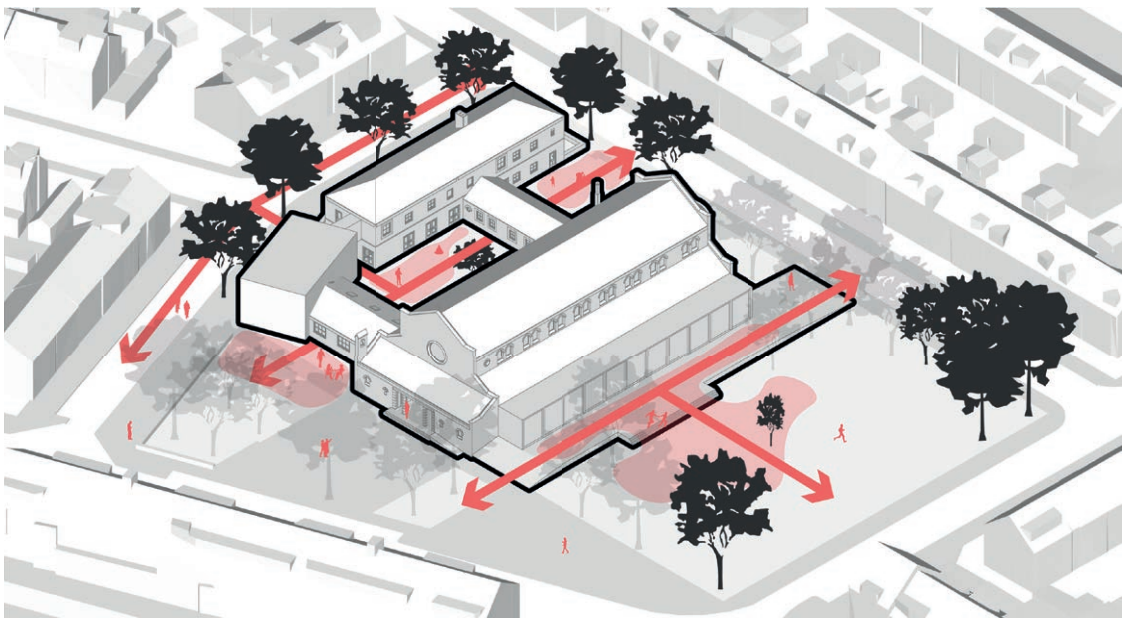
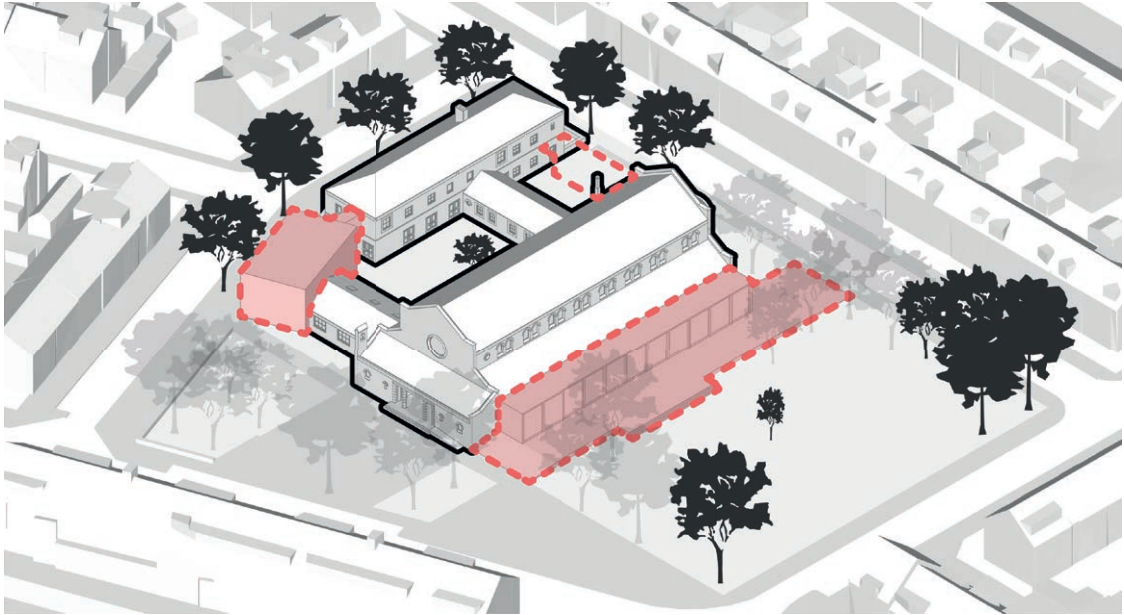
In Essence, a second route parallel to the nave is created toward the inner courtyard. The courtyard itself as a collective point in the complex, from which every space can be reached.

On the northern side of the nave, studios as created, creating a direct connection to the park that lies adjacent to the church building. The church should be opened up towards the neighbourhood instead of remaining closed off.



The extended mass on the south facade, making the monastery equal to the nave, and the added routing between the two complexes, make for a social breeding ground in the neighbourhood. The north facade, open to the adjacent park, is a place where larger gatherings could happen.

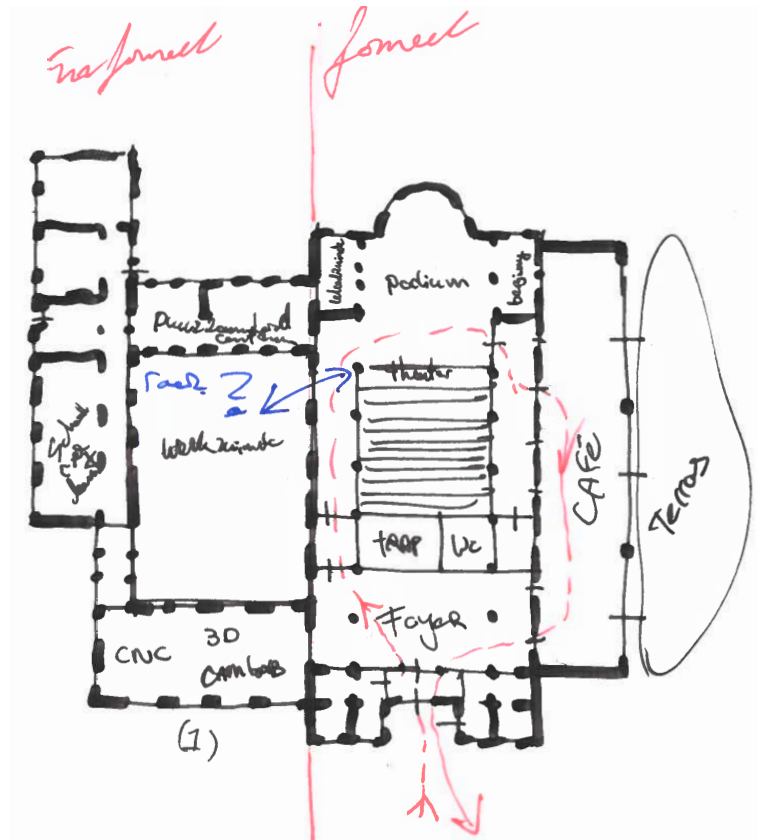
Multiple functions can be integrated into this design, best suited to the requirements of the neighbourhood. But, despite the nice ideas that lie behind the multiple interventions, an overarching concept is still missing.



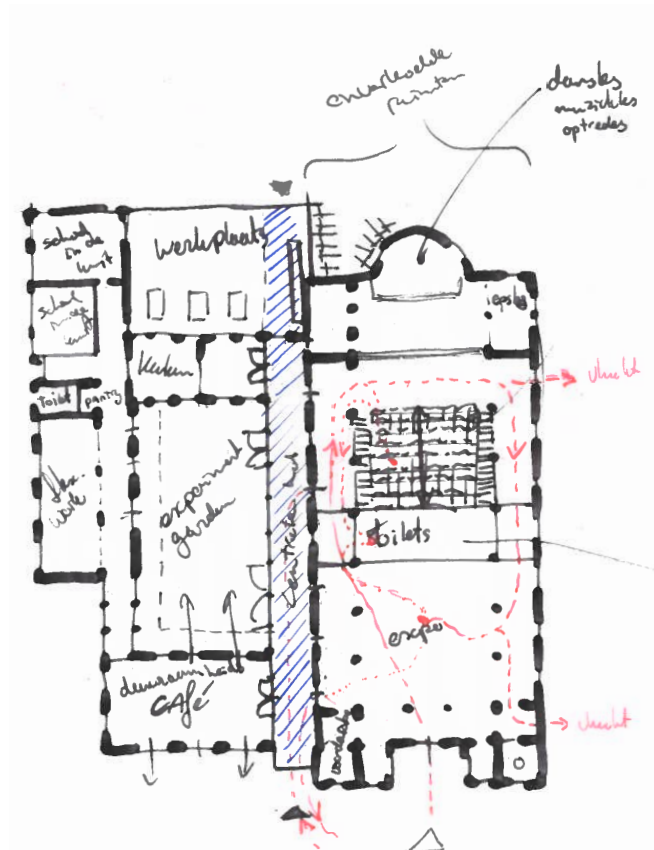
## 05d Design Drafts

### Towards the Final Design

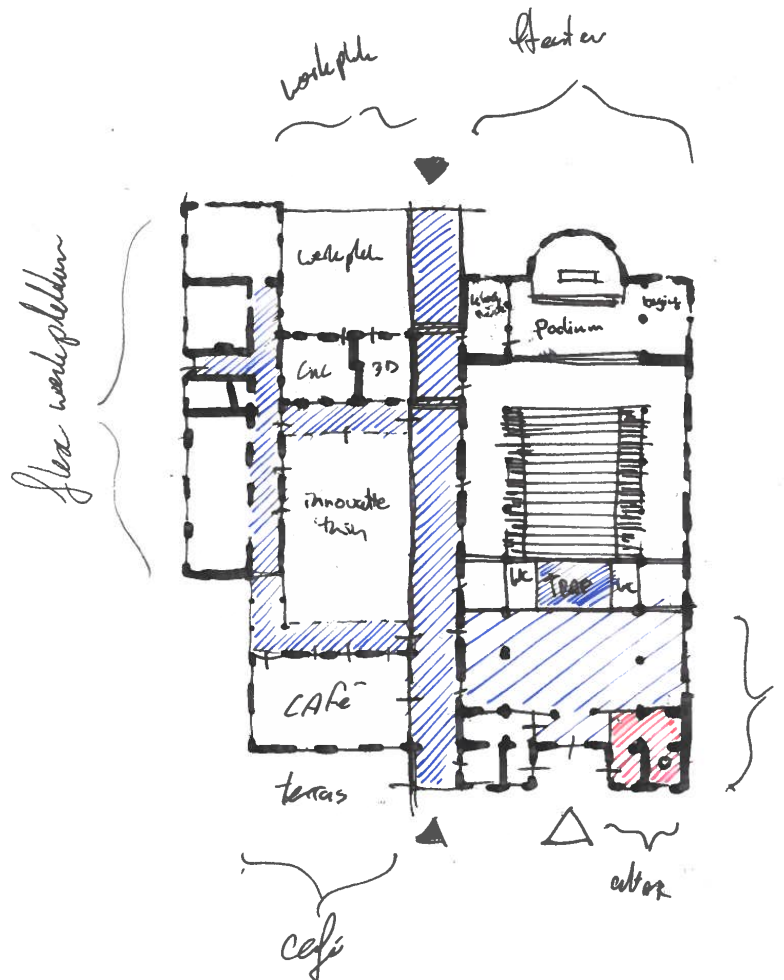
Post P2, A program became evident from the participatory workshop. Because of this, the design had to be revised. Studios in the nave were dropped to make place for new functions. The routing remained a topic of focus.



The two identities, the nave and monastery, could be divided into a corridor. This not only allows both masses to function separately but also created a new passageway towards the inside of the structure and courtyard.



The courtyard remains functionally undefined. By adding a route through the garden, the gardens could be accessed and used directly. This is, however, an internal solution and does not create a new passageway inside of the existing structure.



By combining the passageway and the internal routing, the following solution came forth as a result. A passageway that splits the nave and monastery apart and creates a new access towards the inner courtyard. Around the courtyard, various functions could be accessed.

# 06

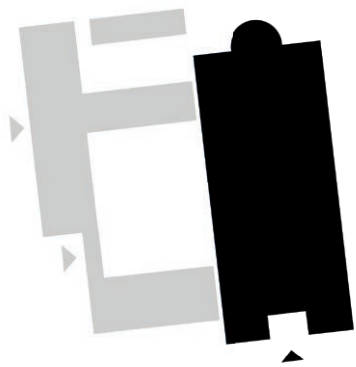
## Final Design

In brief, the existing church complex consists of two contrasting identities (1) that are cloistered with an unreachable and functionally undefined inner courtyard (2). Some of these characteristics are valued, such as the cloistered character of the building (3), despite it being in contrast to the requirements of the community centre, such as accessibility. Other characteristics have potential, such as the polyarchical nature of the monastery (4) building with a collective internal garden (5).

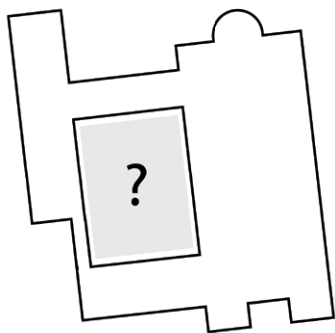
In the attempt to preserve the cloistered nature of the church complex, and to create a new passage towards the inner courtyard, the church is split in half, dividing the informal monastery with the formal nave functionally (6). This new passage allows both identities to function separately from each other, whilst also allowing a new pathway into the garden. Like a geode that is split in half, the gems on the inside are revealed.

This split also allows for a multitude of atmospheres. The formal nave is well suited for formal functions, like a theatre. Flexible and warm textiles contrast the rigid bricks of the church without compromising the formal and rigid atmosphere of the nave (7).

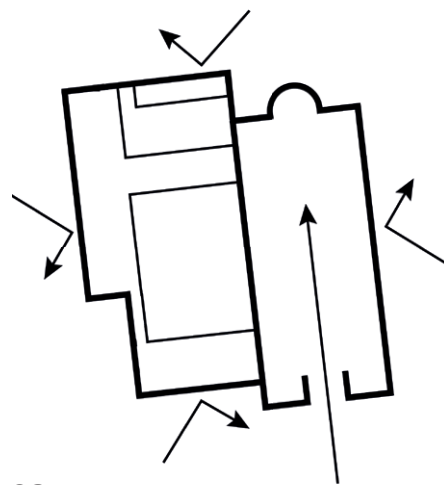
The monastery already is informal in contrast with the nave due to its polyarchical nature. This building could facilitate various functions and serve as a living room for the neighbourhood. A warm homely and intimate atmosphere is desired. Warm and moldable materials, such as wood, are used here to create a warm and welcoming atmosphere. This is where the people dwell (8).



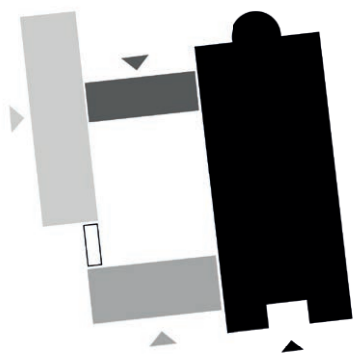
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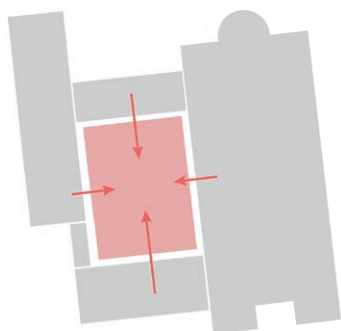
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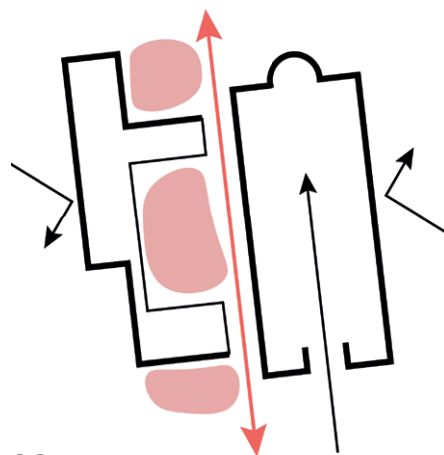
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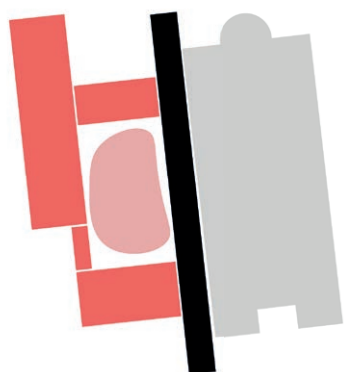
04



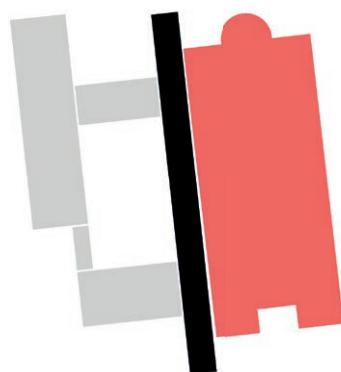
05



06



07



08

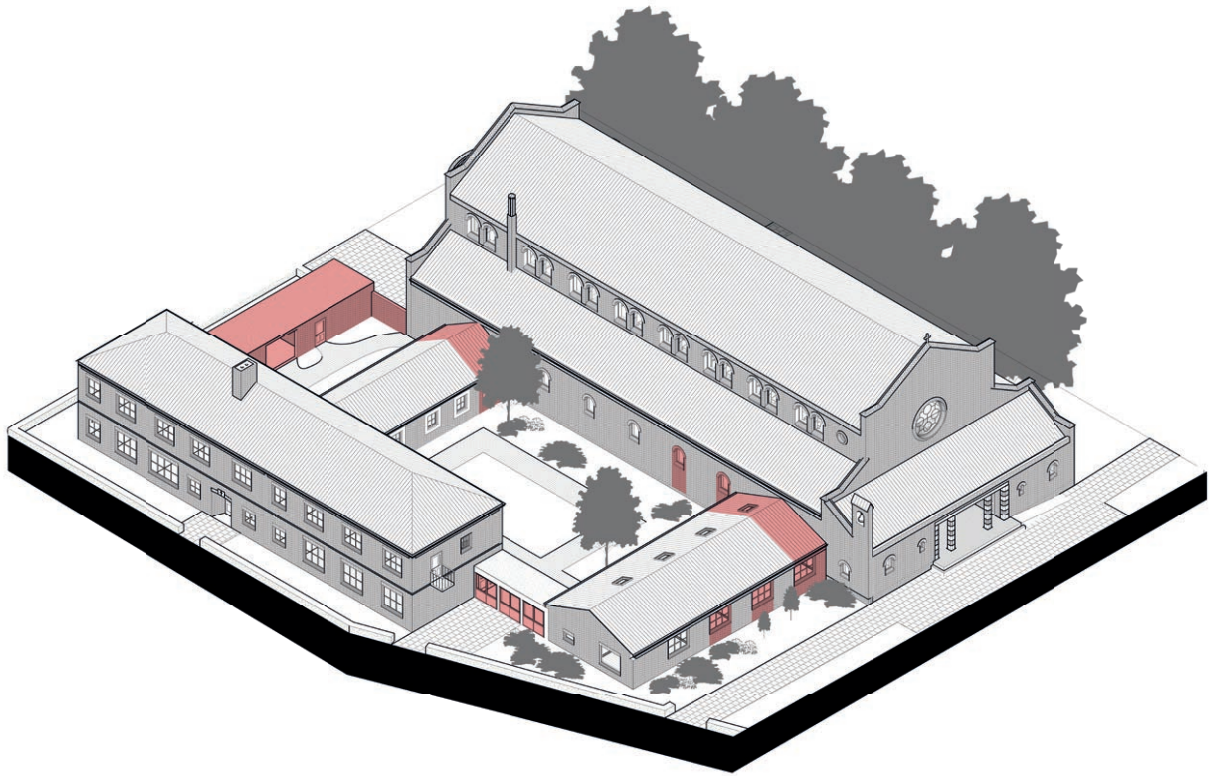
## **06a Final Design**

### **Dismantle & Addition**

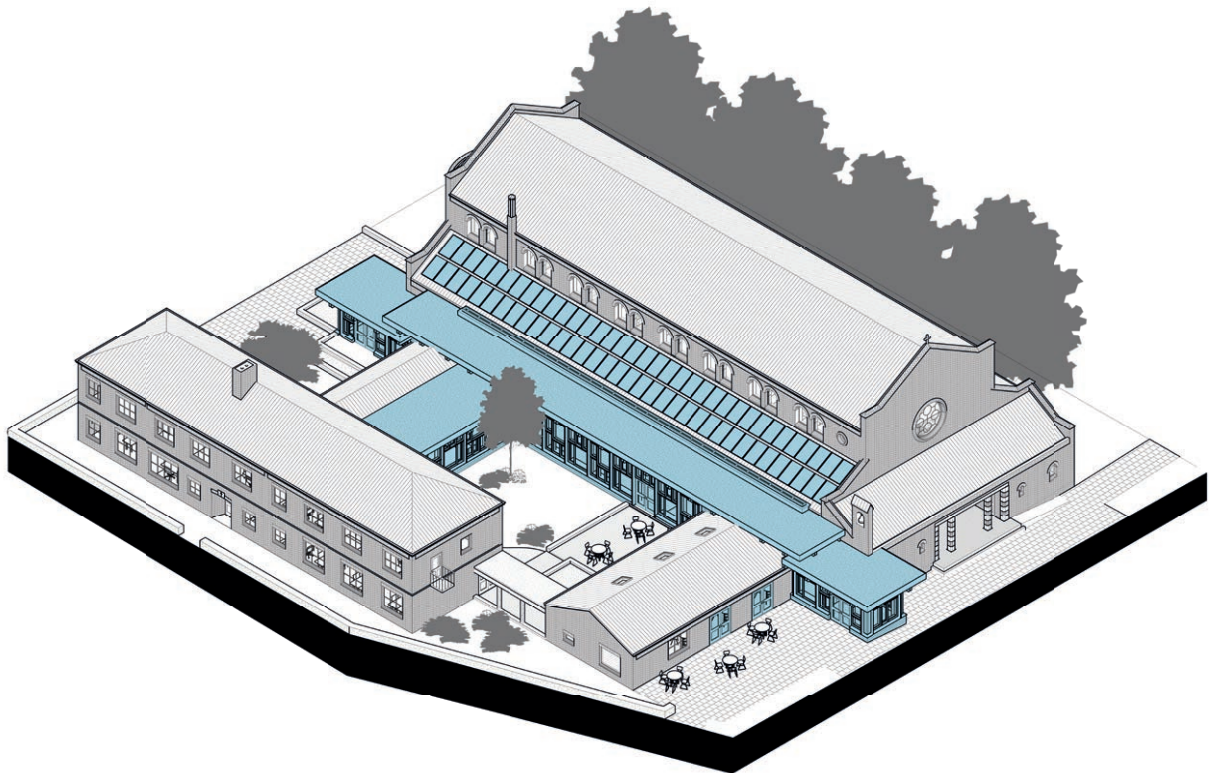
Internal walls are taken apart to create flexible spaces in preparation for the new functions. Brick exterior walls are dismantled and stored, alongside the roof tiles in case reparations are needed in the future. Church benches are used to make new furniture, such as new benches, bars, bar cabinets, etc.

In the new addition, halved concrete street tiles are dry stacked as parapets. Old wooden windows are collected from local window merchants, and repaired/restored and cut to size. The windows are then processed into a prefab element ready for assembly.

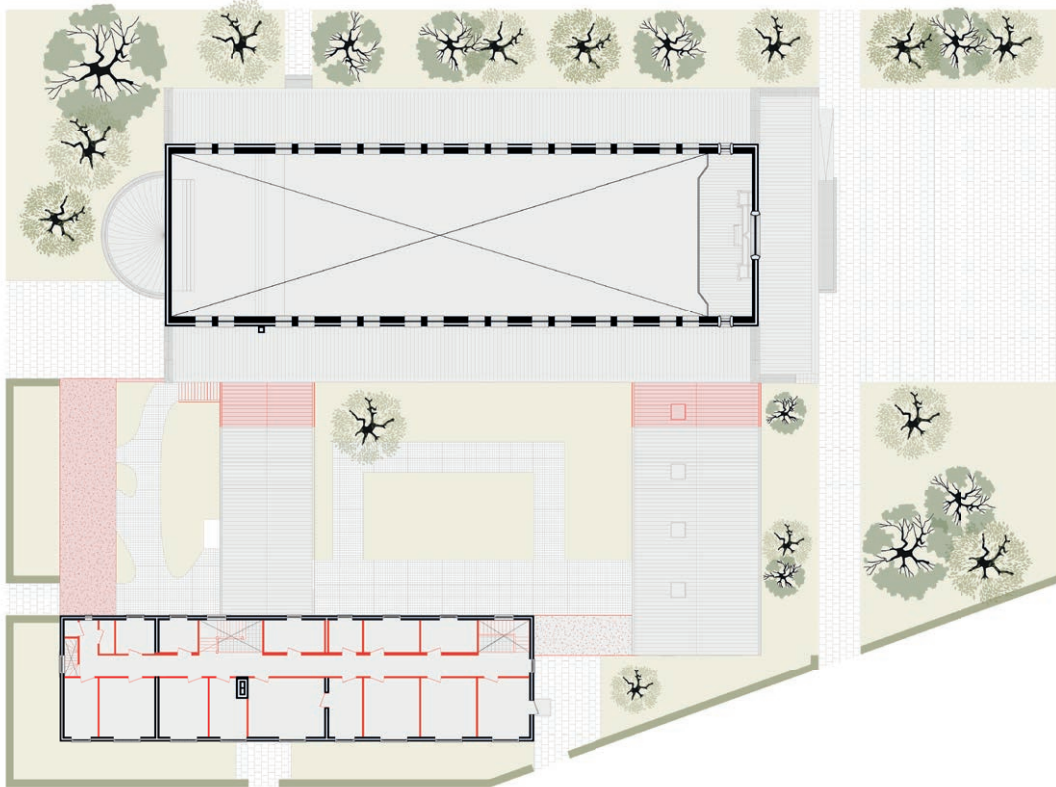




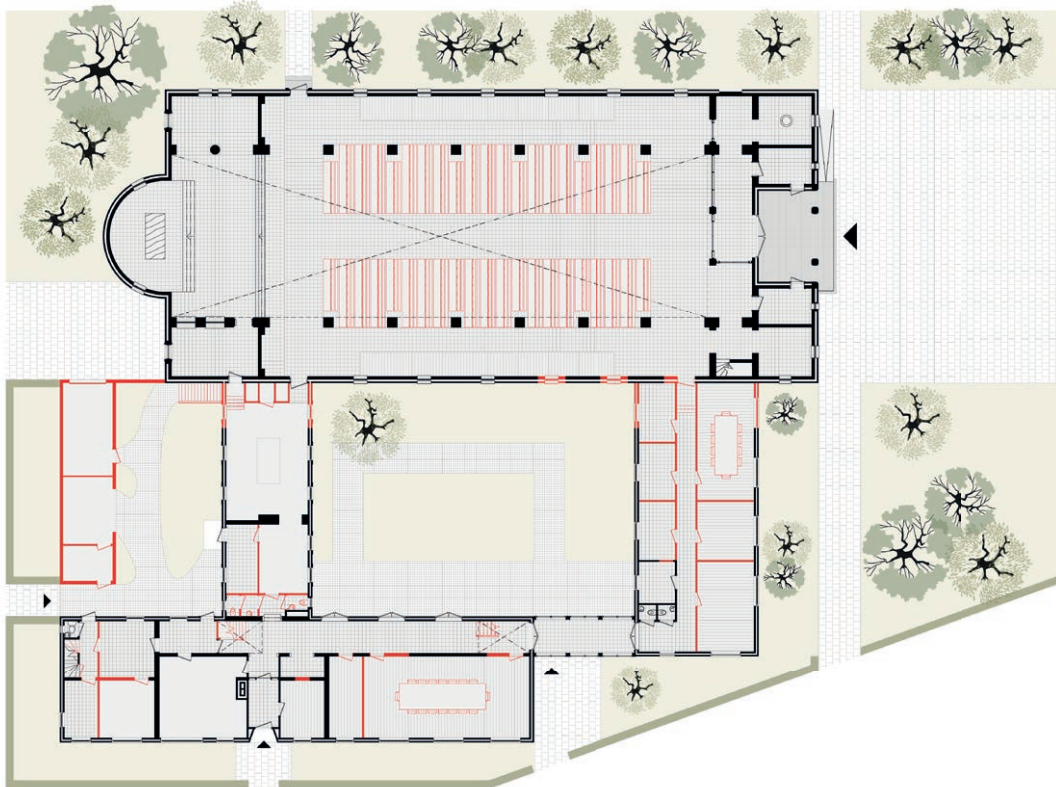
**Dismantle (Red)**



**Addition (Blue)**

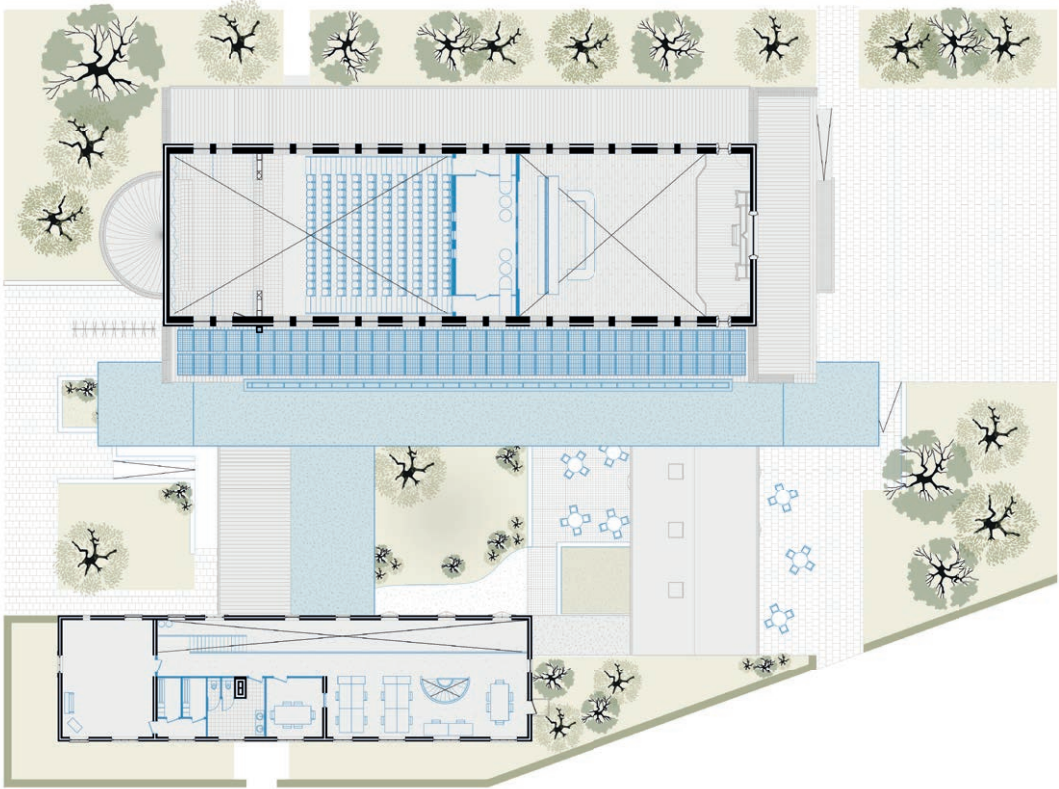


**Frist Floor Dismantle**

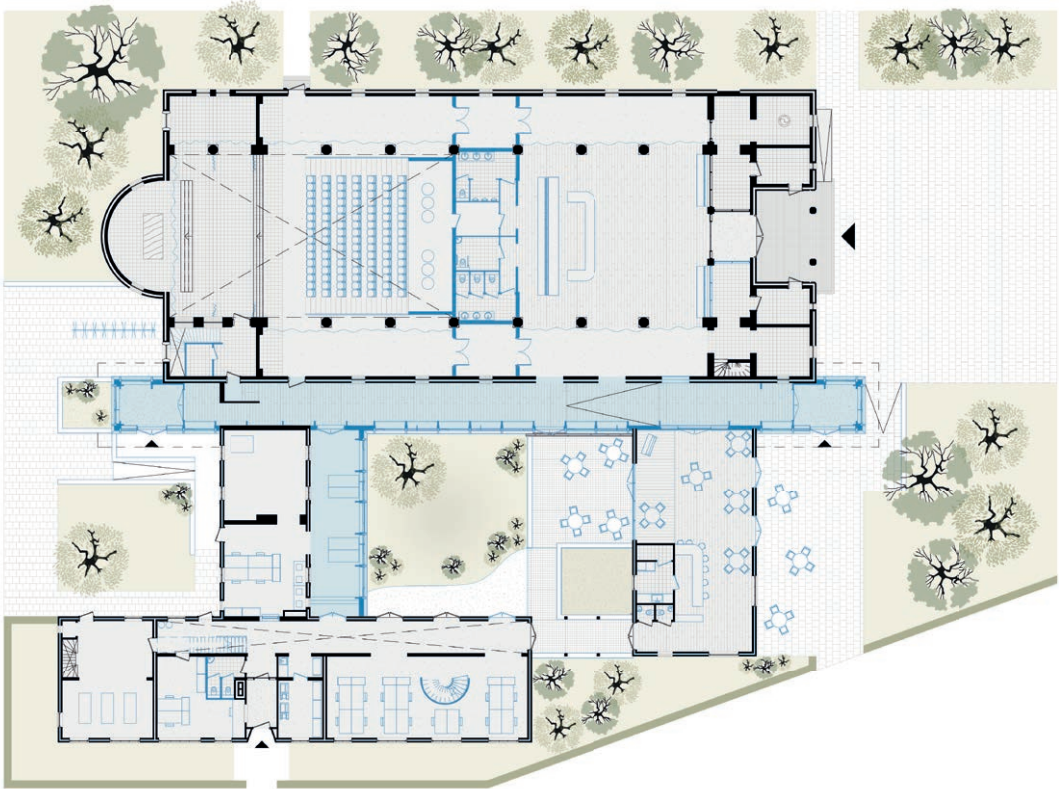


**Ground Floor Dismantle**



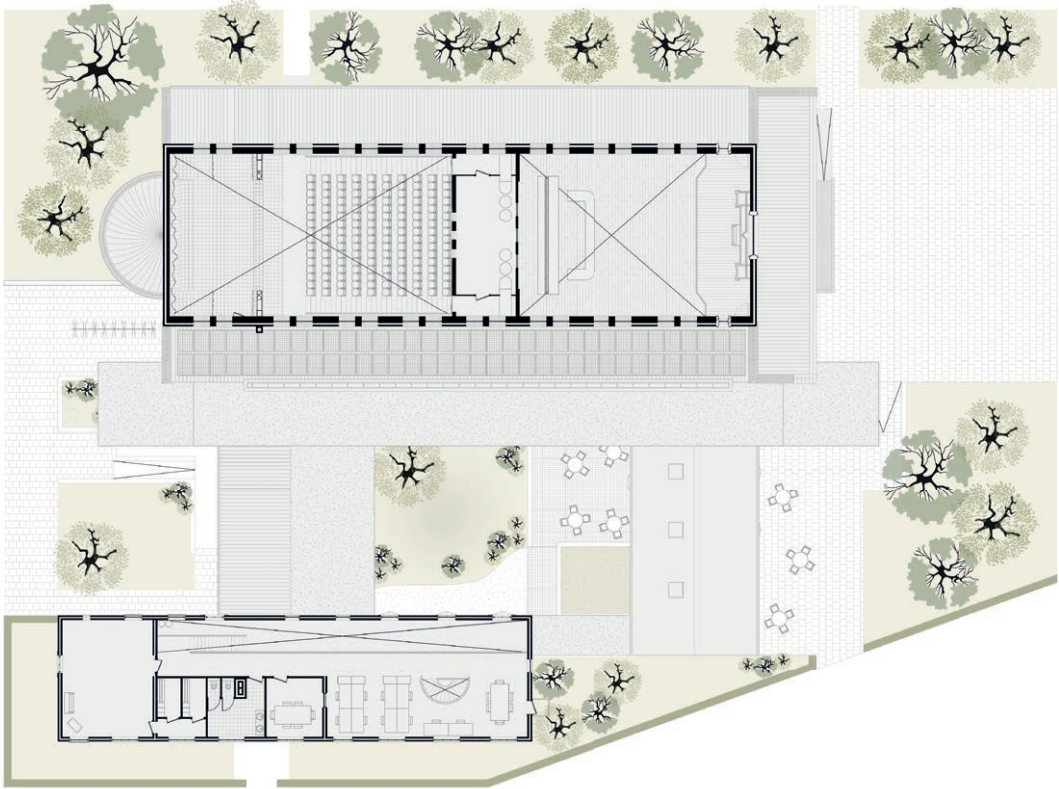


**Frist Floor Addition**

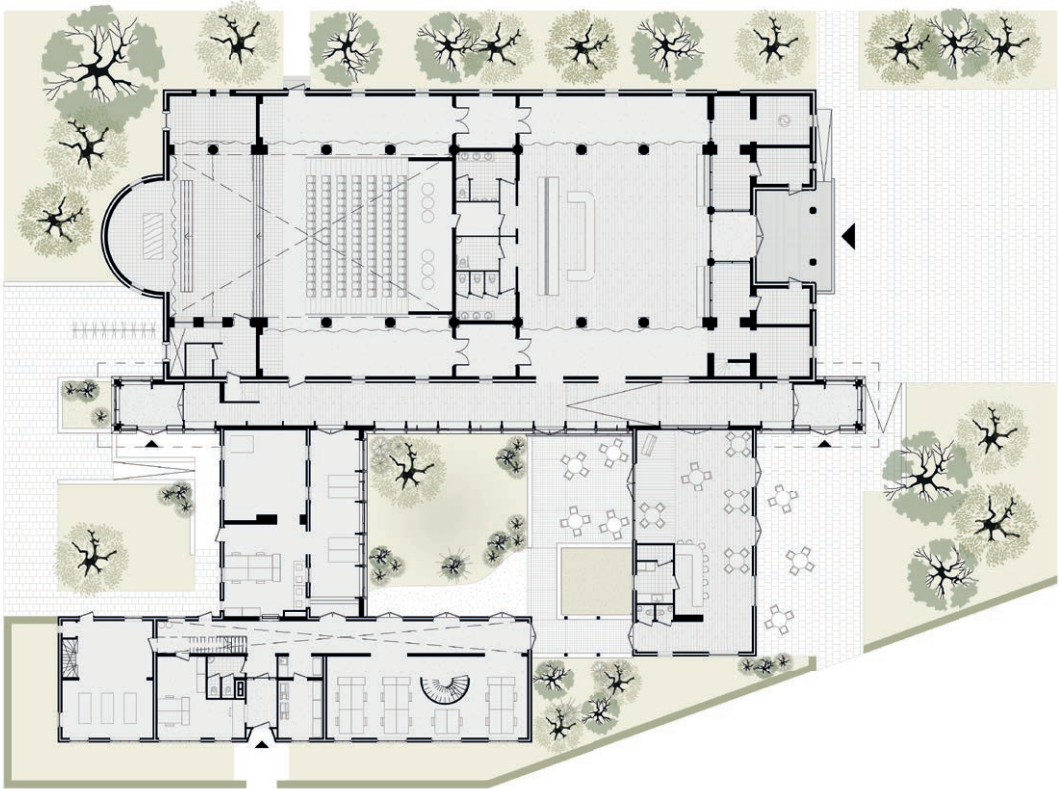


**Ground Floor Addition**



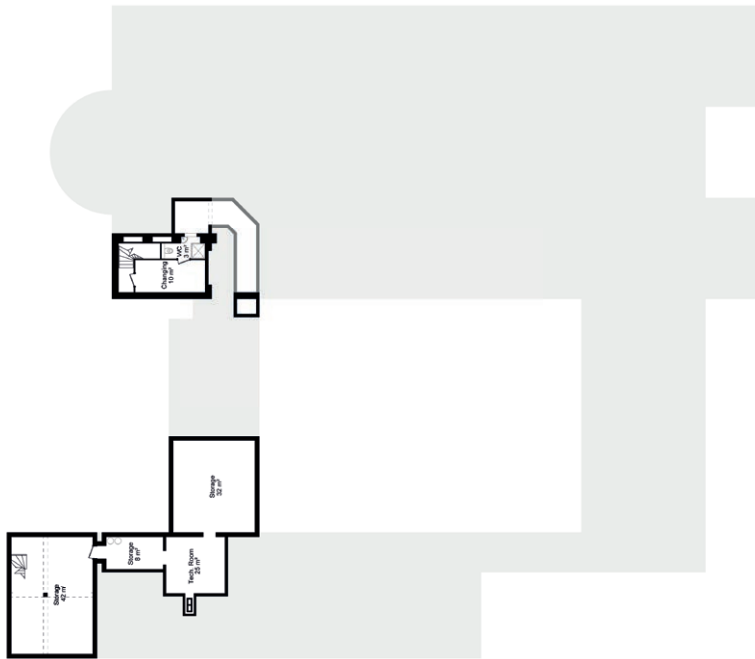


**Frist Floor New**



**Ground Floor New**





## Basement Floor New

The new floorplan consists, as stated before, of a newly added passageway between the nave and the monastery. In the nave, a cultural centre is created in the form of a foyer and theatre. The heavy brick walls contrasting the draping textiles create a formal atmosphere.

The monastery, on the other hand, is a polythetical collection of masses, surrounding a collective courtyard. This courtyard is made accessible by the newly added extension. Each mass has its own defined function and could in theory function on its own. However, the courtyard brings their functions together.

## 06b Final Design Final Floorplans

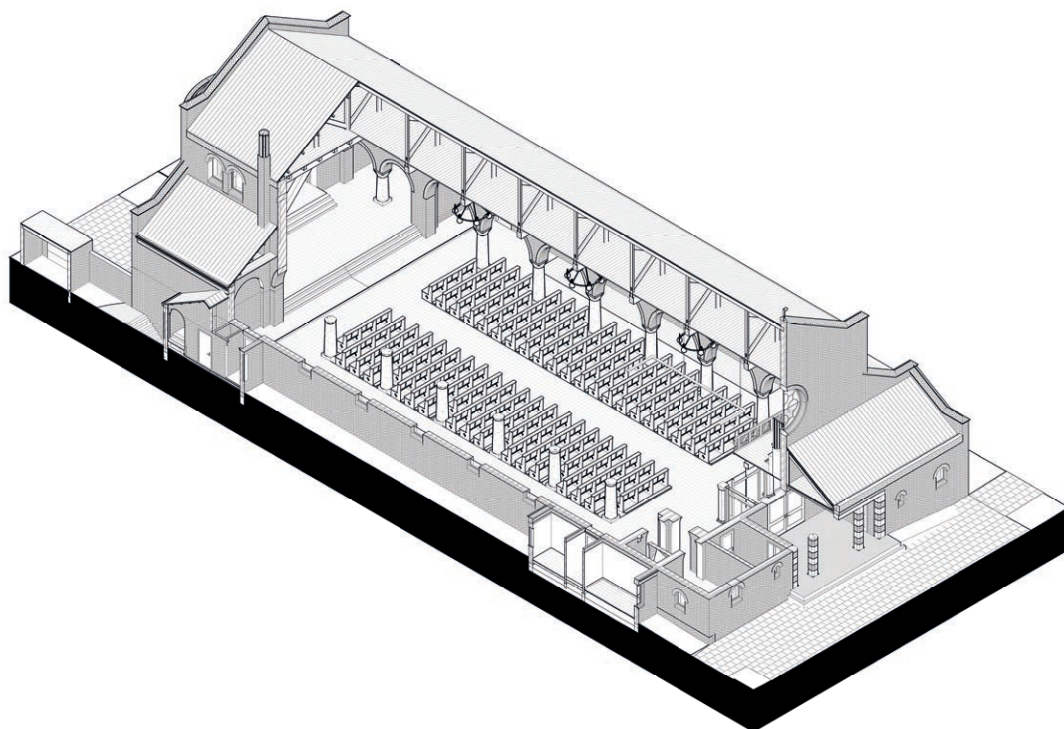
## 06c Final Design

### Cultural Centre

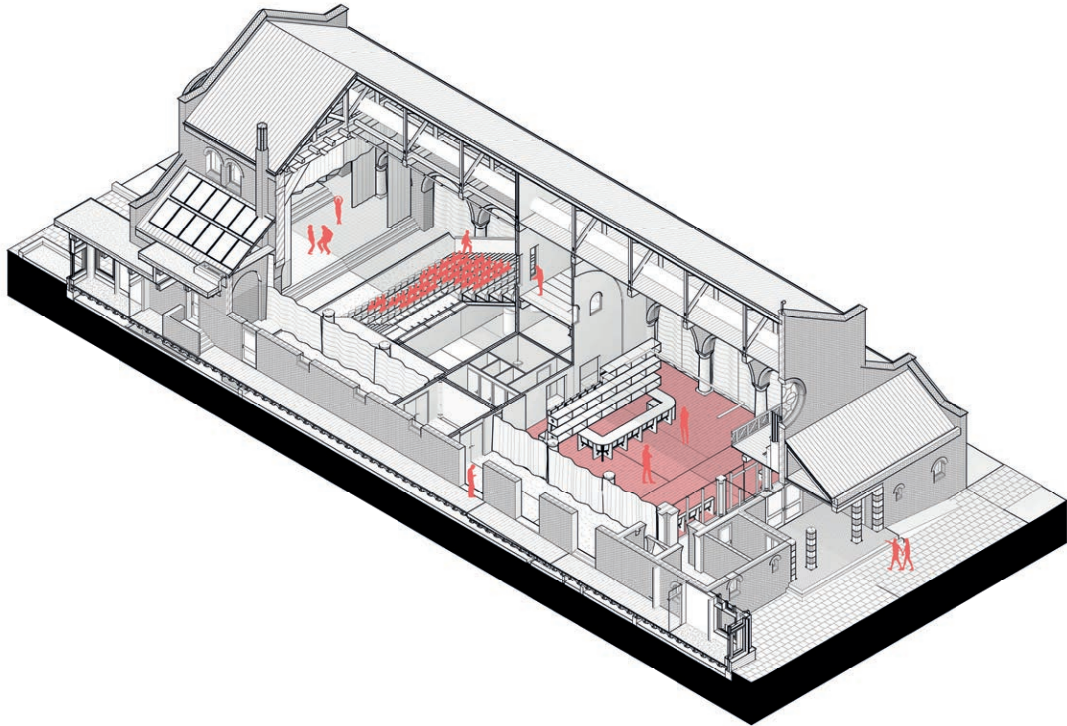
The existing nave is split in half with service spaces. By doing so, the imposing large space is divided into two smaller, more intimate spaces, without losing its formal atmosphere.

In the front part of the nave, a foyer is created where people can gather before entering the theatre. Expositions could be held also.

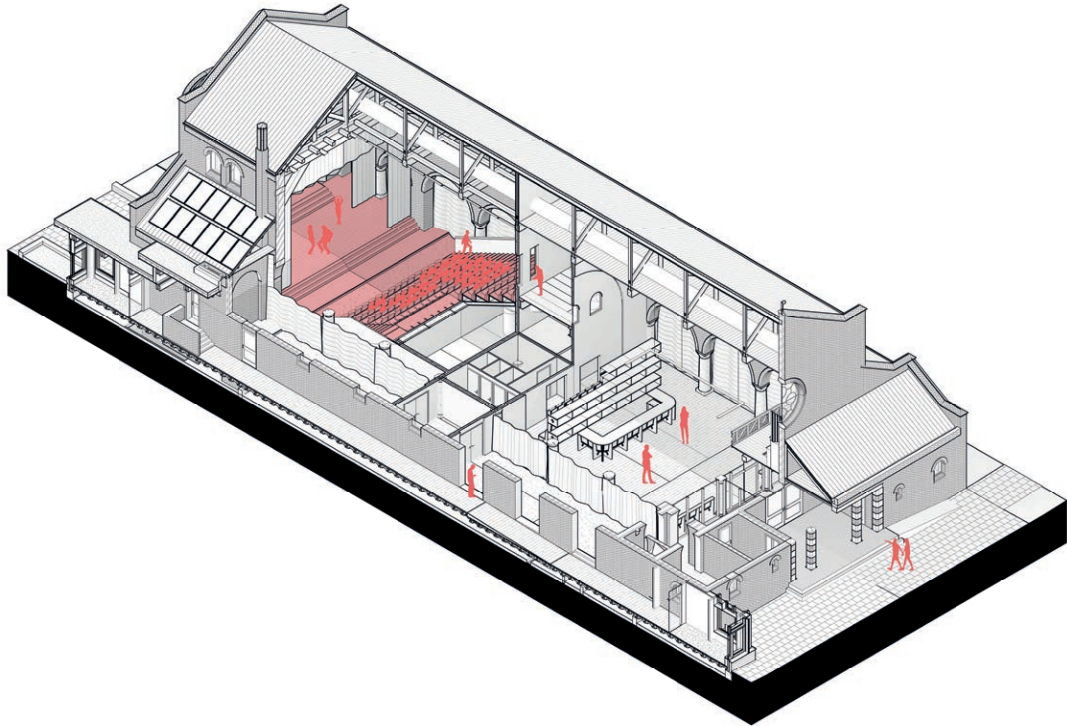
In the apse, a theatre is created with a slanted theatre tribune. The former altar becomes part of the podium decoration. It remains clear that this used to be a church.



### Existing Nave



**Foyer**



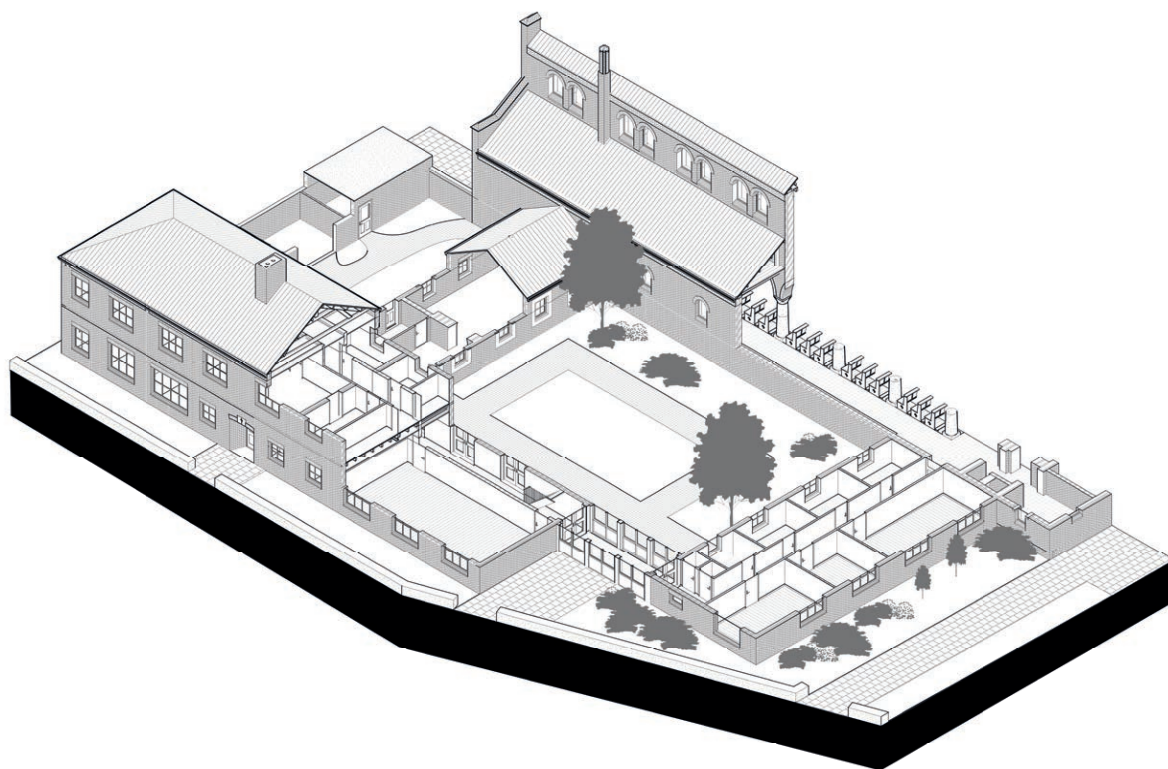
**Theatre**

## 06d Final Design

### Community Centre

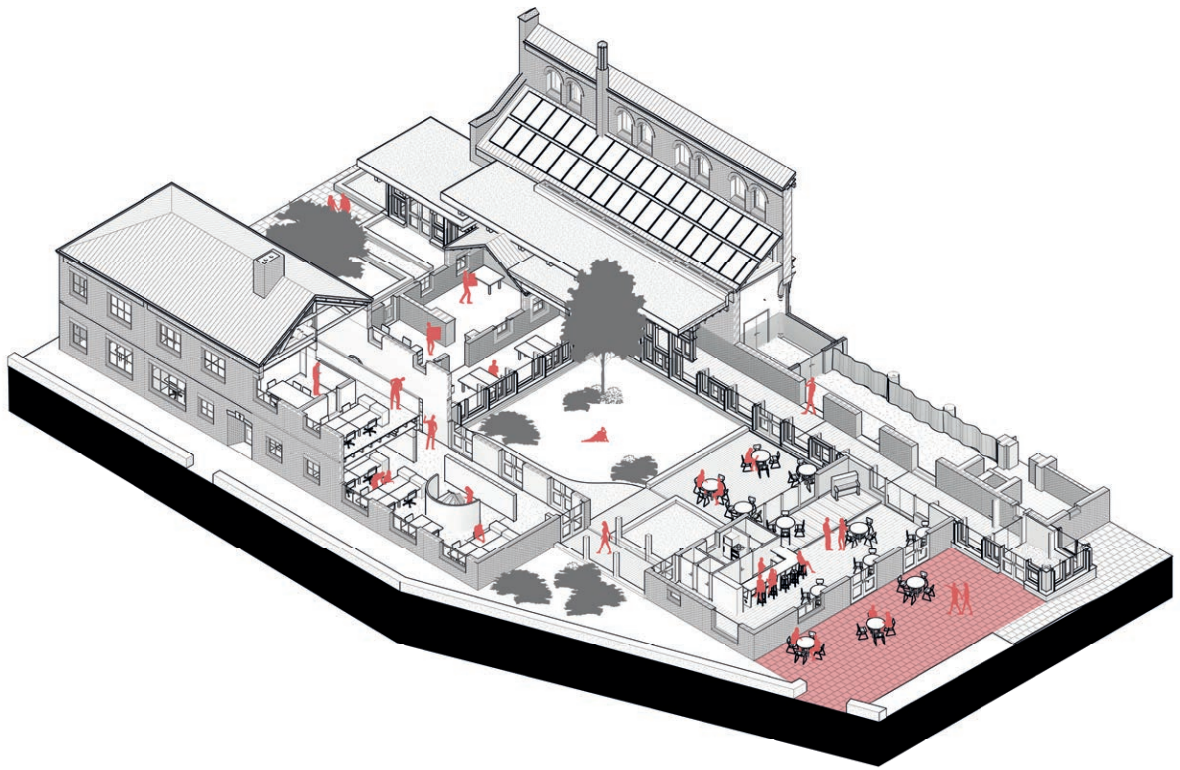
The monastery consists of a courtyard surrounded by various masses. The inner courtyard is made accessible by the newly added passageway. The various masses each gains their own function, such as a café, flexible workspaces and a maker space.

The front and the back of the church each gains a transitional space towards the newly added passageway.

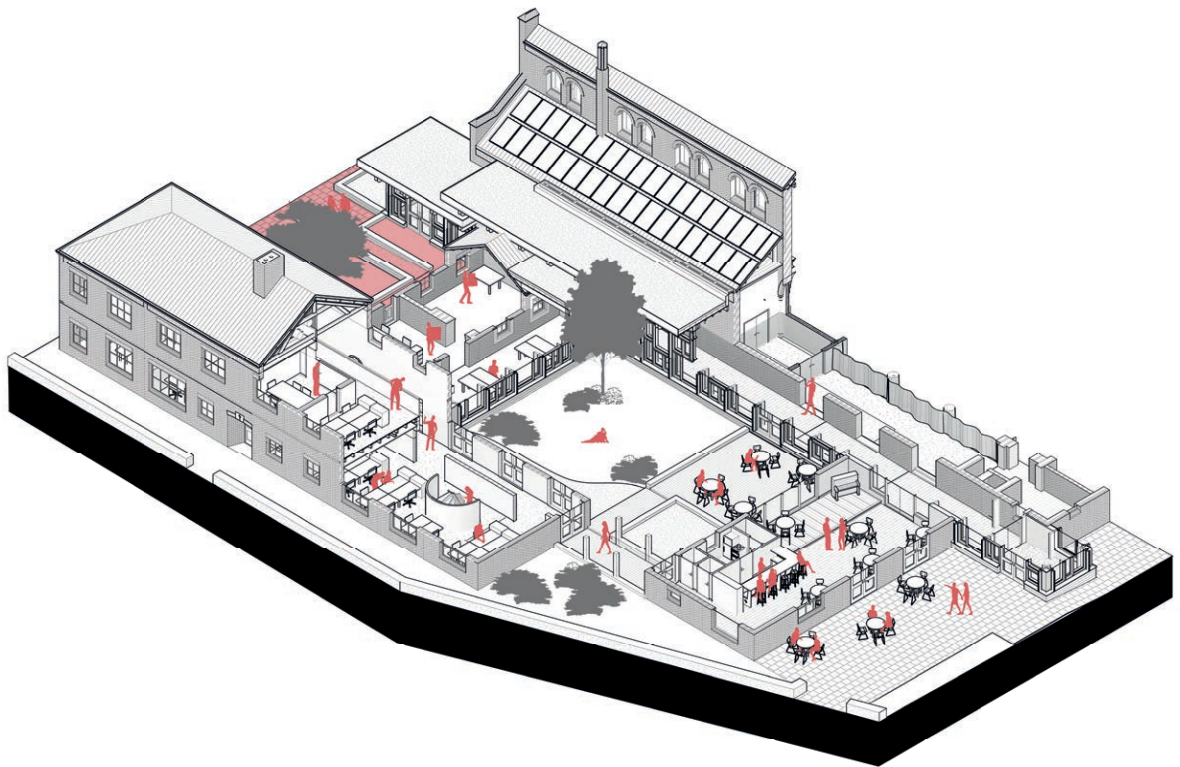


### Existing Monastery

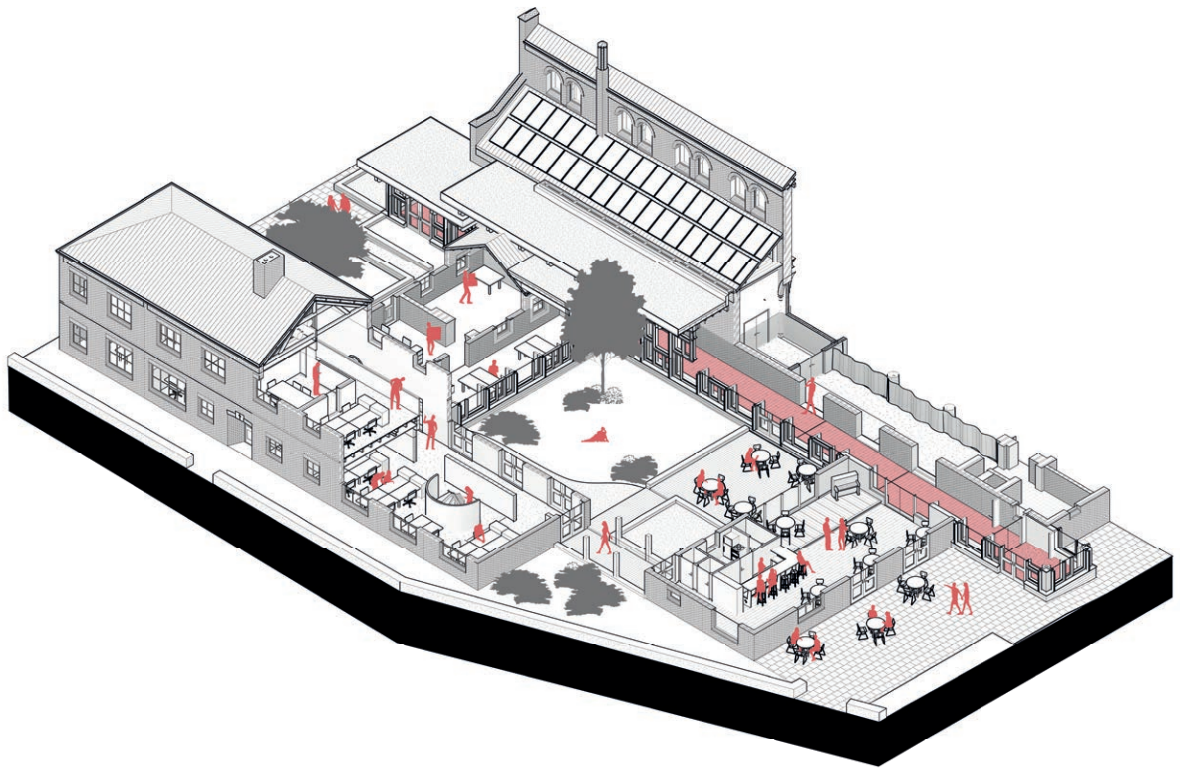




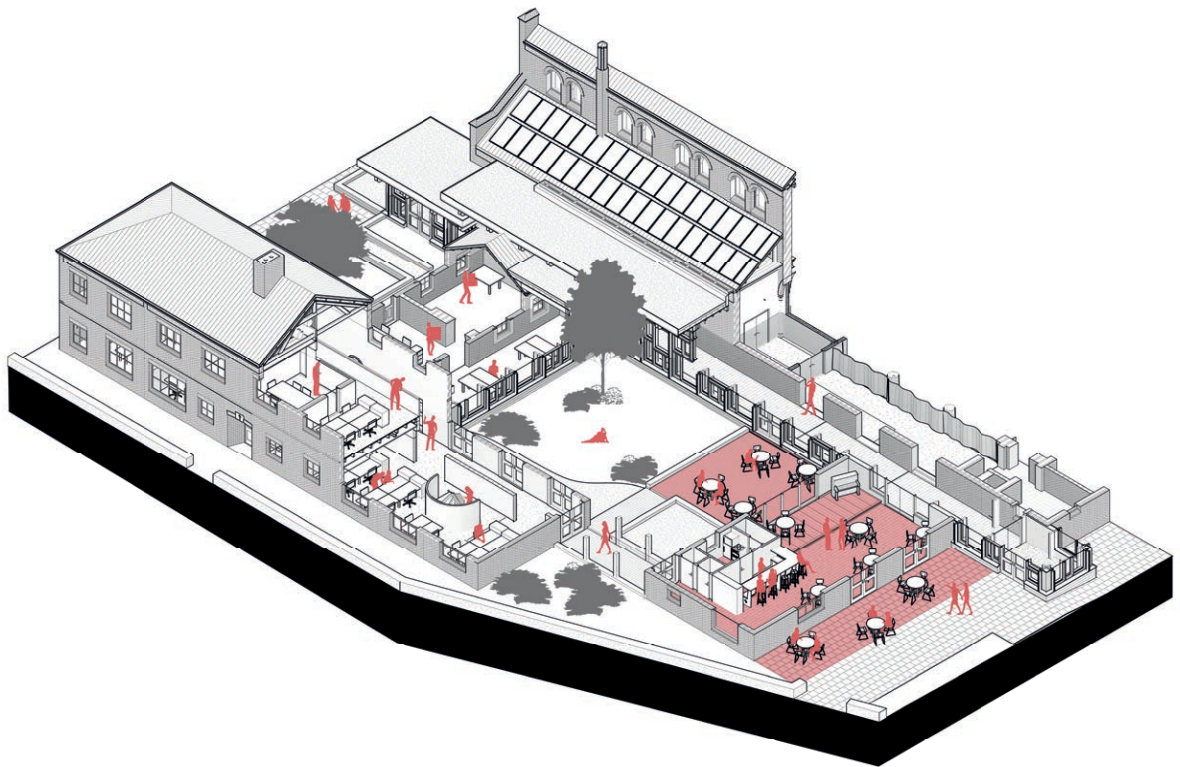
**East Transitioning Zone**



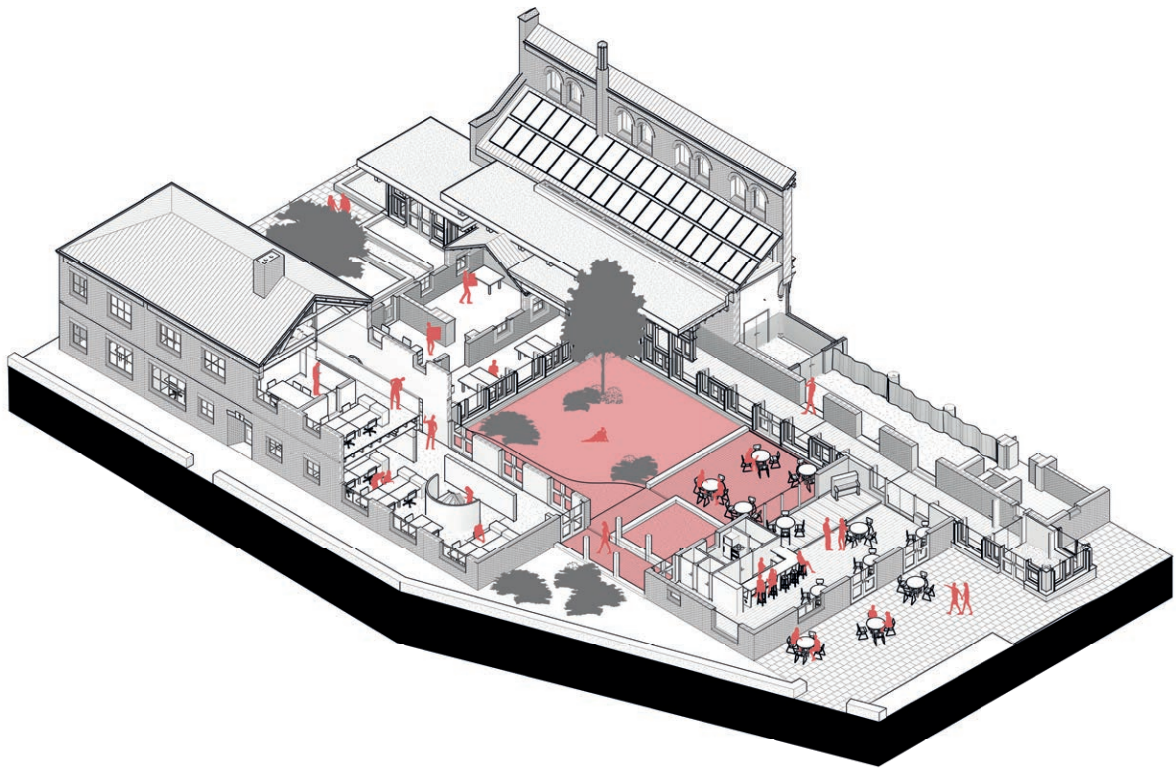
**West Transitioning Zone**



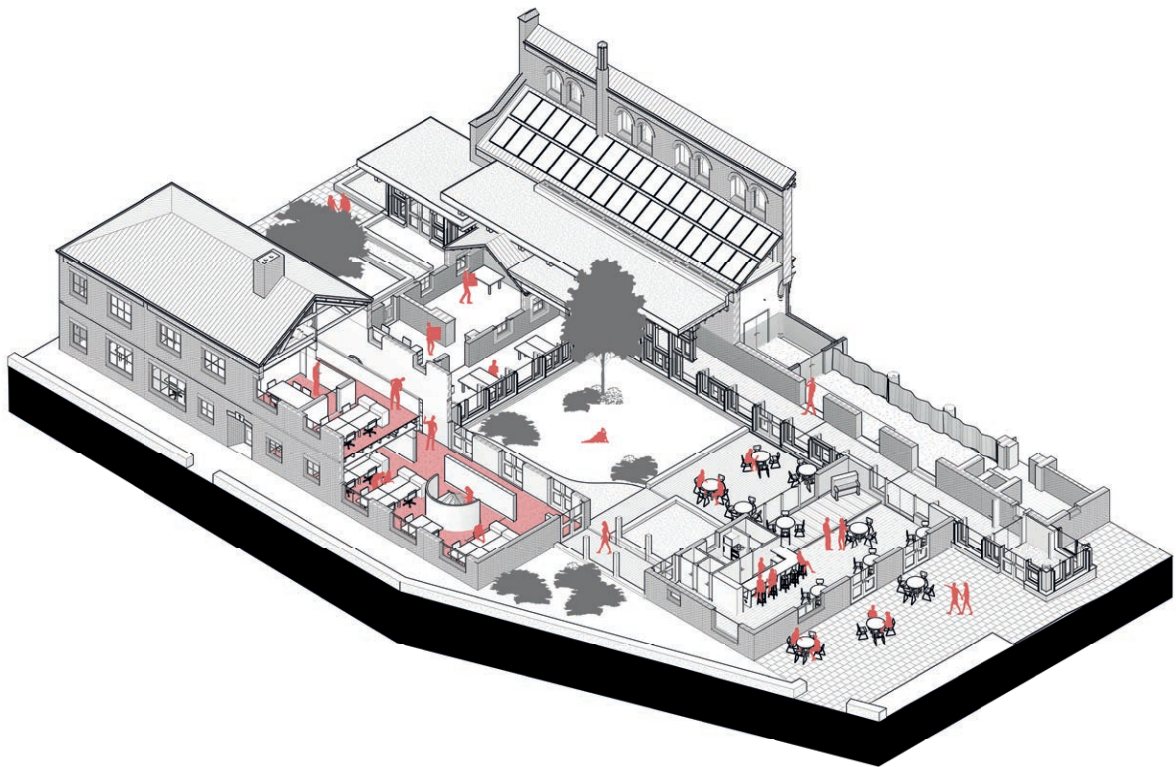
## Passageway



## Café



**Social Courtyard**



**Flexible Work/Study Space**

## 06e Final Design

### Facades

The facades of the existing church building remain largely unchanged. This is done intentionally, to preserve the monumental aesthetic of the church building.

However, a keen eye might notice a small addition to the outside of the facade, between the monastery and the nave. A passageway towards the core of the complex - the courtyard.



**East Internal Facade**



**South Internal Facade**



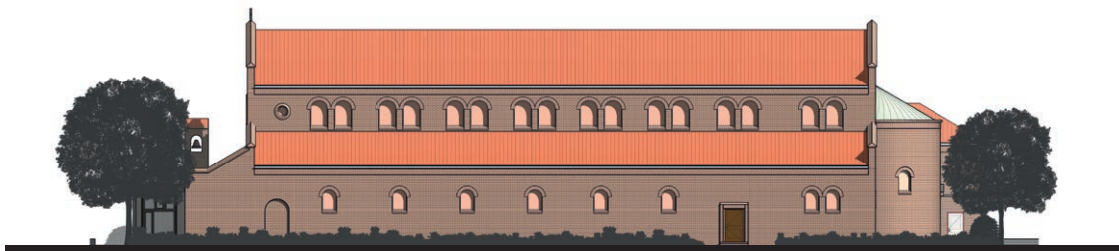
**East Facade**



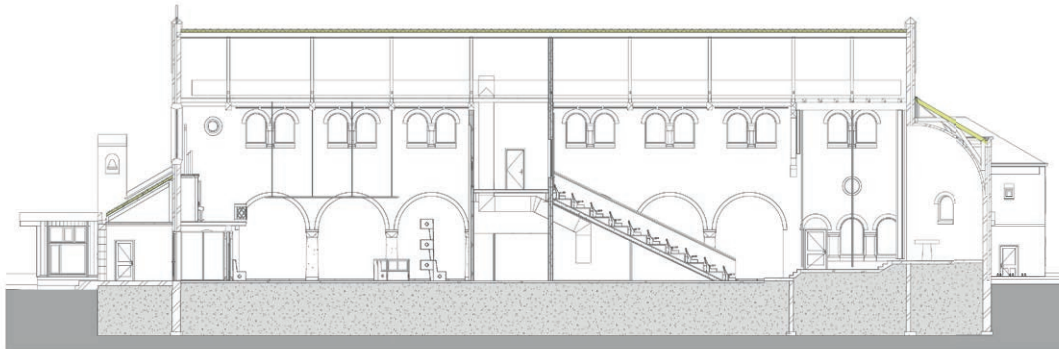
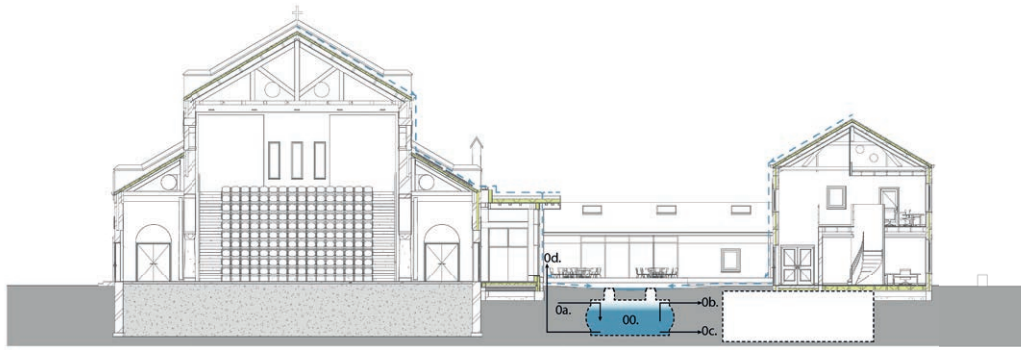
**South Facade**



**West Facade**



**North Facade**



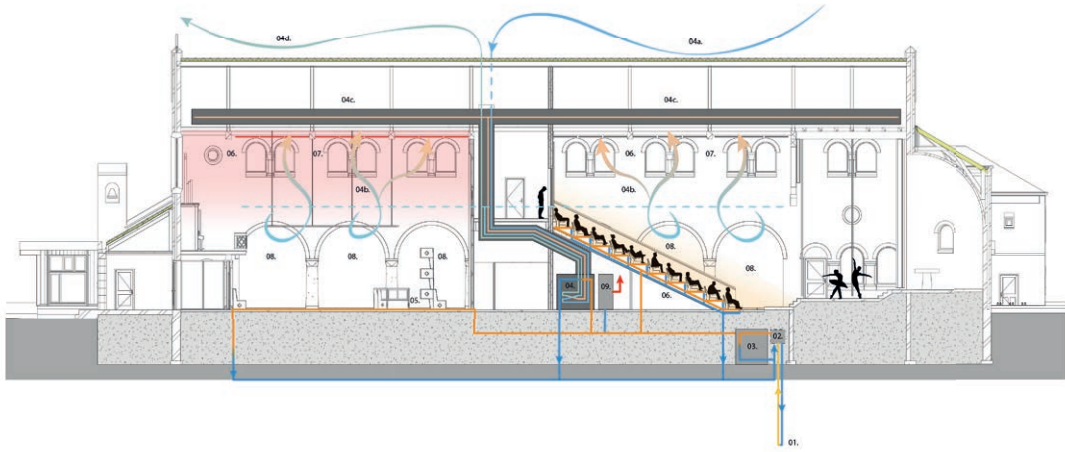
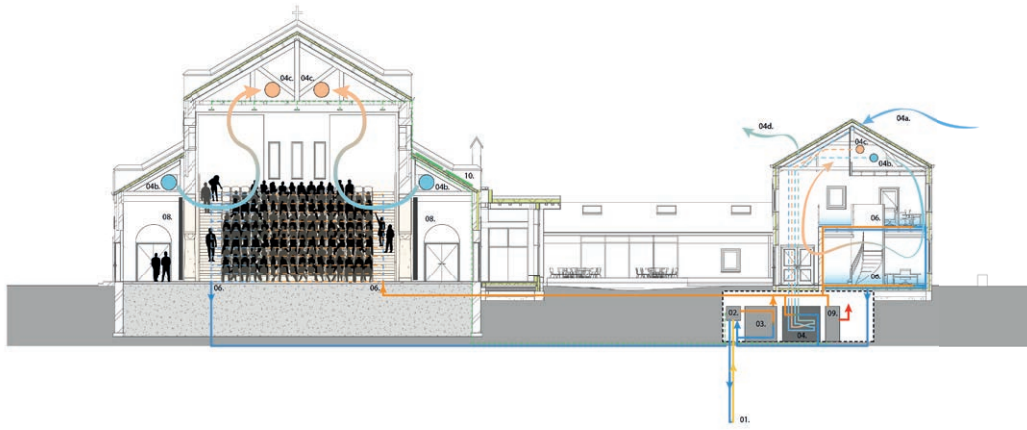
## Water Collection System

### 06f Final Design Climate

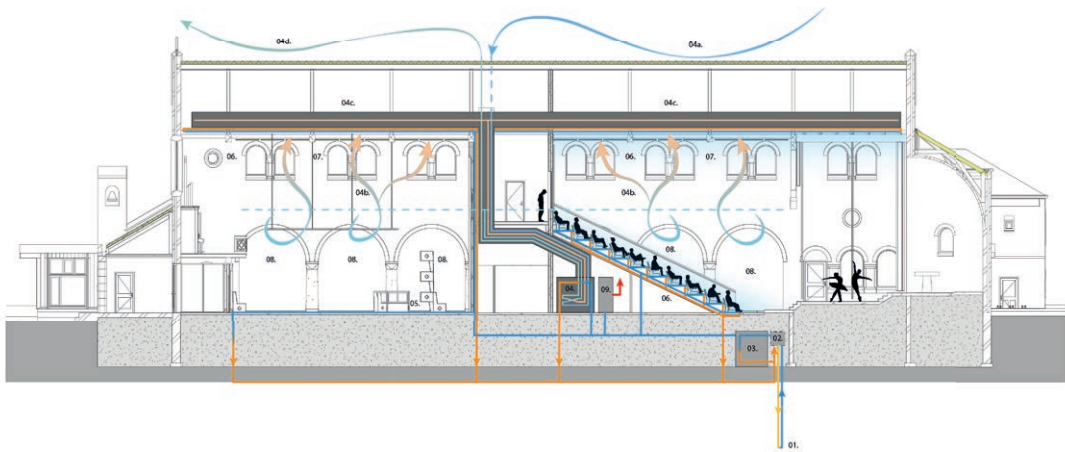
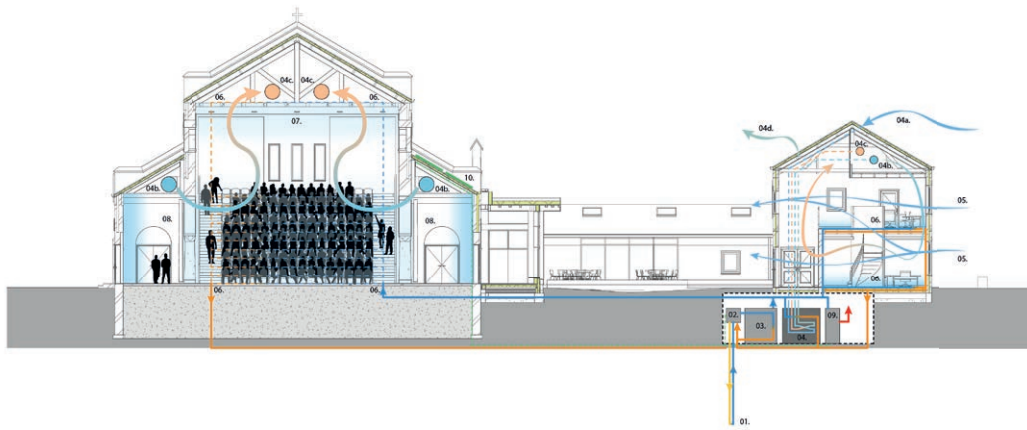
Through floor/ceiling heating/and cooling, the indoor temperatures are kept under control. Mechanical ventilation systems keep the indoor air breathable.

In response to extreme droughts, water is collected in the courtyard and stored in a large water tank.

- 00 Submerged Water Tank
  - a. Water Inflow
  - b. Water Overflow
  - c. Toilet Water
  - b. Plant Irrigation
- 01 Thermal Storage (10~12 °C)
- 02 Heat Pump
- 03 Buffer Tank
- 04 Mech. Ventilation (Type D)
- 05 Nat. Ventilation (Type C)
- 06 Floor/Ceiling Cooling
- 06 Infrared Panel
- 07 Curtains
- 09 Electric Boiler
- 10 PV Panels



**Winter Climate**



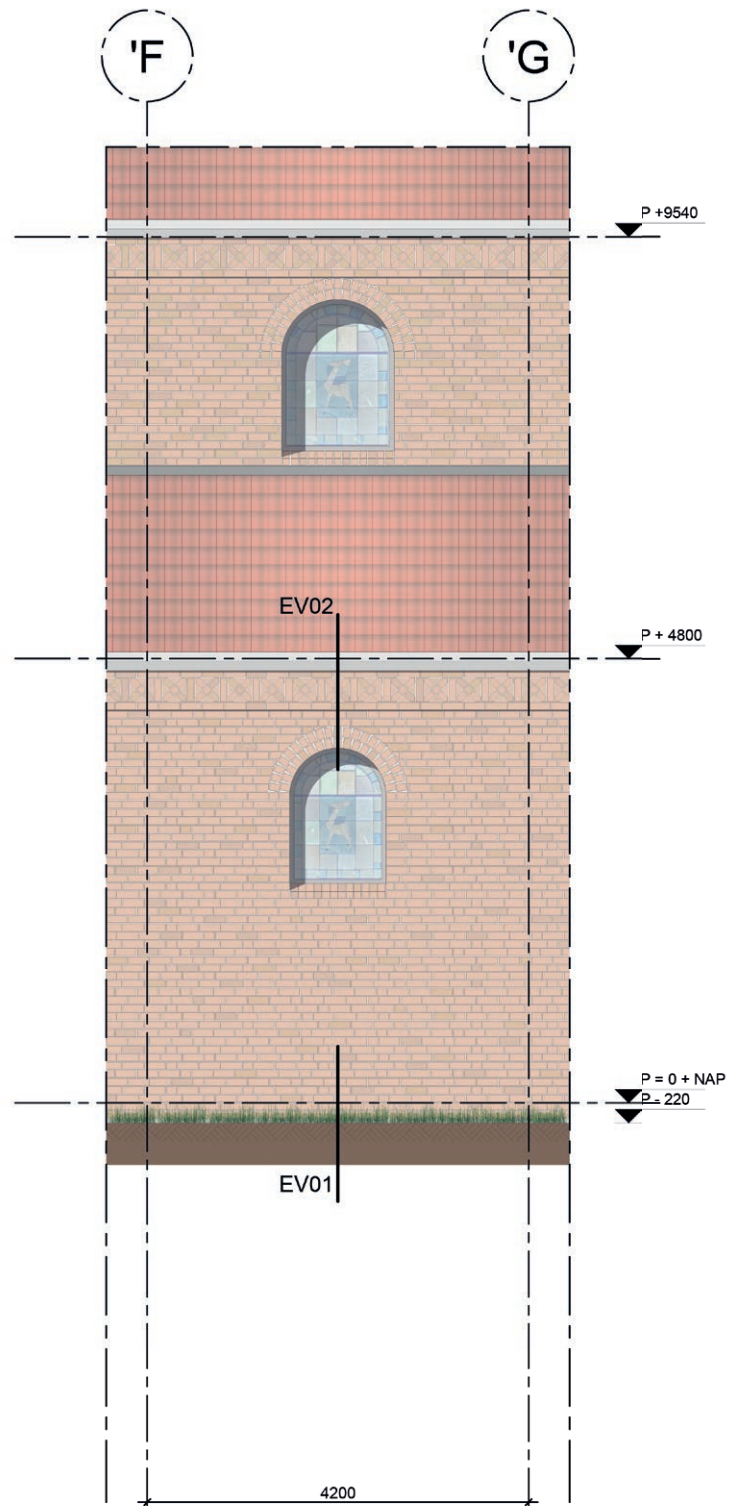
**Summer Climate**

## 06g Final Design

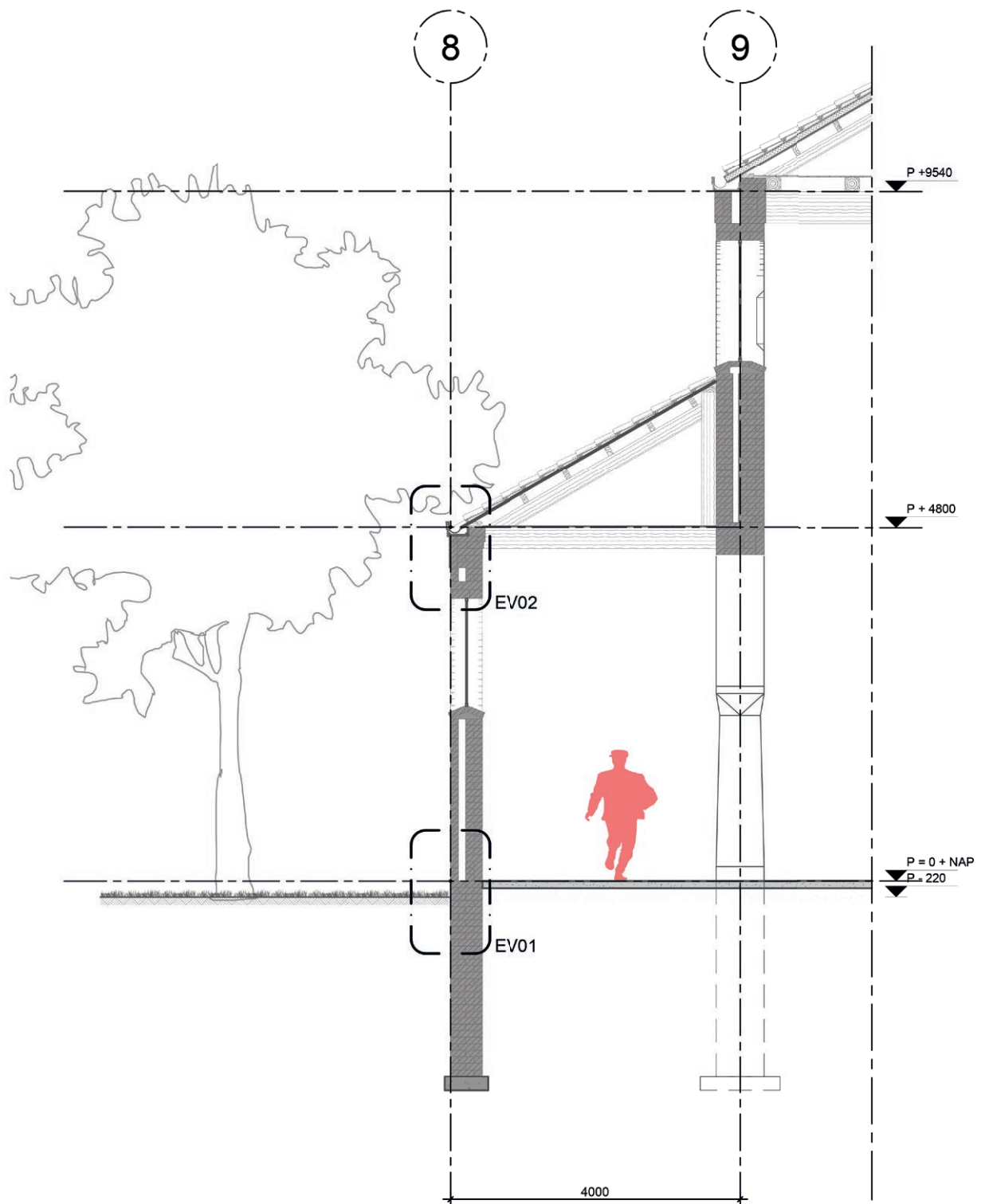
### Existing Façade Fragment

The existing façade consists of a thick brick wall with cavity and ceramic tiles. Small windows provide limited daylight into the nave space. From the outside, the façade appears closed off from its surroundings.

You cannot deny the degree of masonry art required for the details in the façade. Something that should be preserved and remain visible to the eye.







## 06h Final Design

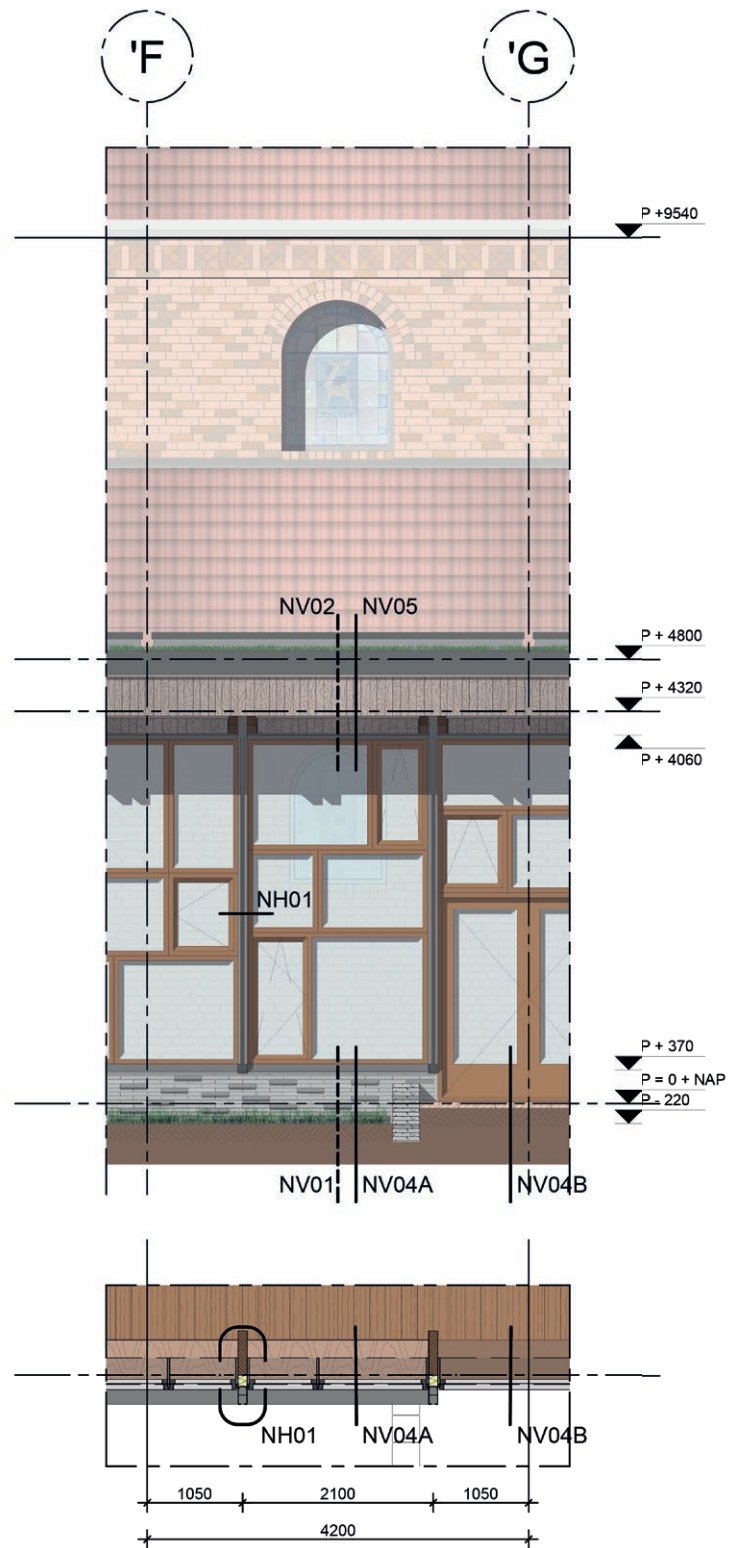
### New Facade Fragment

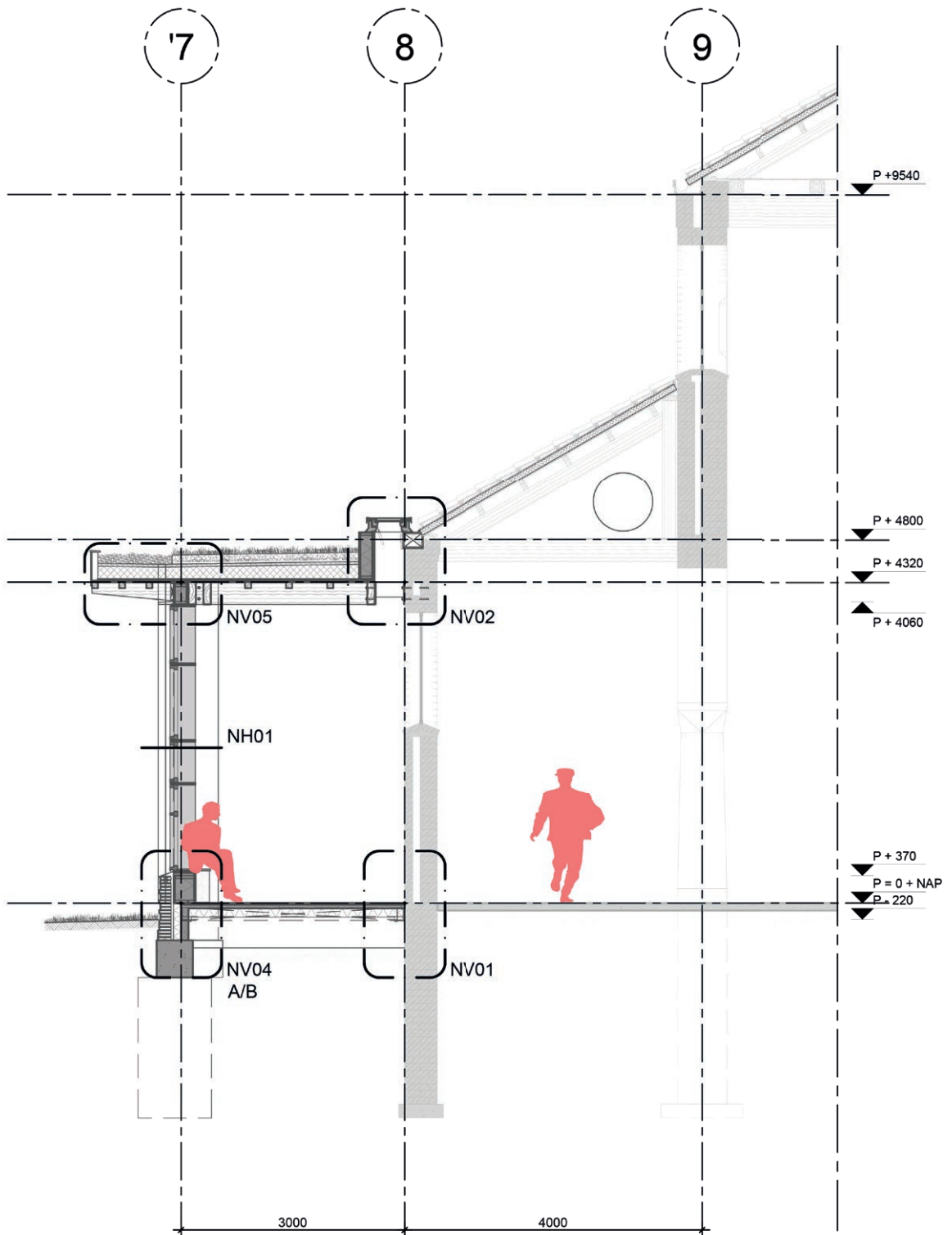
The new facade consists of wooden columns and beams, carefully placed between the existing grid. Each beech size is divided into two fields and moves one-half field to the side.

In between the columns of the new extension, re-used windows are used. These windows are repaired and cut to size in a factory hall before arriving at the construction site.

Because of the grid of the wooden columns and beams, and the windows with various dimensions, a strict yet playful transition space is created between the right nave and the informal monastery building.

The wood gives off a homely atmosphere, contrasting the brick wall of the former outer skin that remains visible and is highlighted by a skylight running parallel to the existing wall.





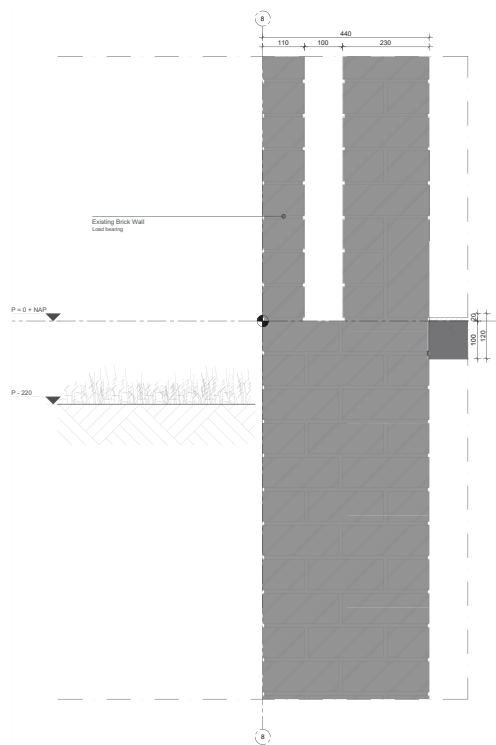
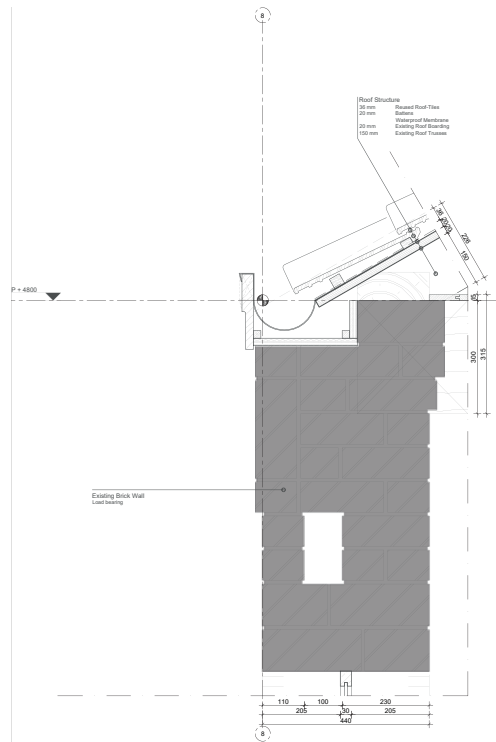
# 06i Final Design

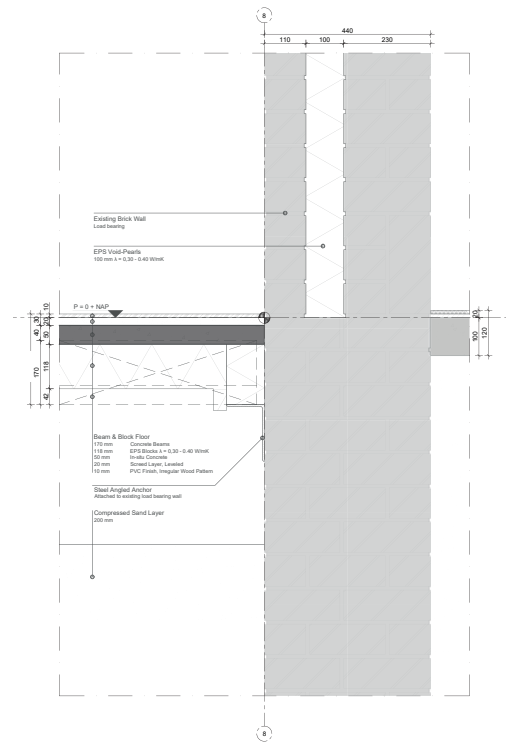
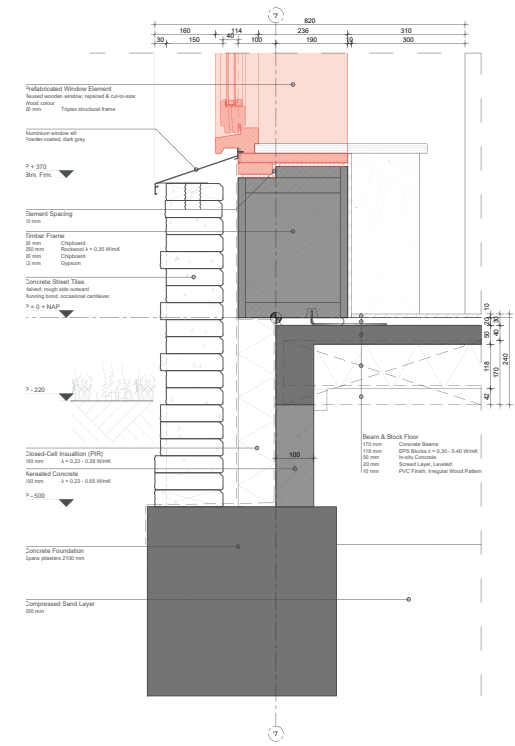
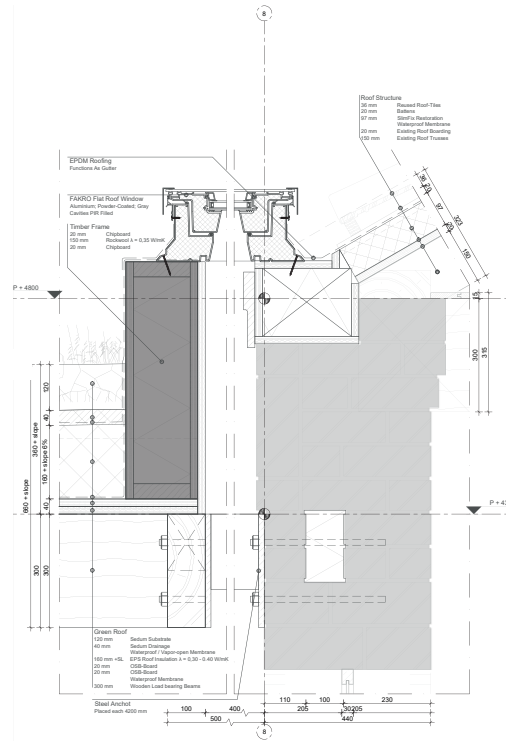
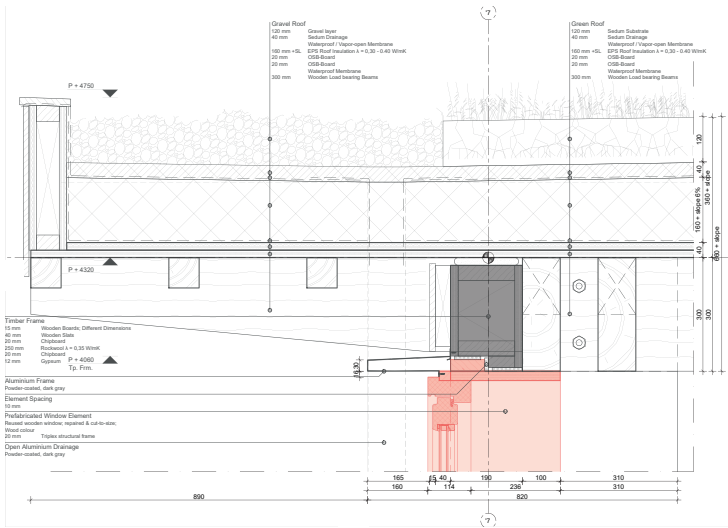
## Existing and New Details

The existing church facade remains visible in the new extension. a skylight in the roof highlights the masterful masonry of the existing structure.

The extension is made of concrete foundations, timber frame elements, concrete tile parapet, re-used cedar cladding and re-used windows.

Re-used windows are repaired and cut to size on an off-site location. After the panels are finished, they are transported to the construction site and installed (highlighted in red).





Cedar



Re-used Windows

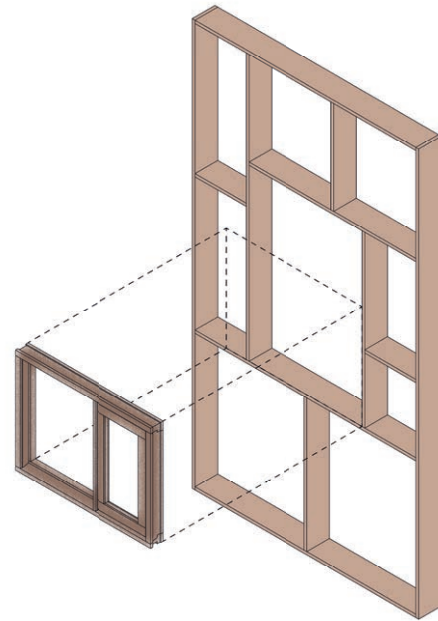


Concrete Tiles (Halved)

## 06j Final Design

### Pre-fab window element

As mentioned before, existing windows are used in the new extension. Window paint is removed by sandpapering, and the frames are cut to size.



00

00 Re-used windows does not fit the given grid.

01 Re-used windows are taken apart; paint is removed through sandpapering.

02 Spaces are removed when required for the new dimensions or wood is rotten.

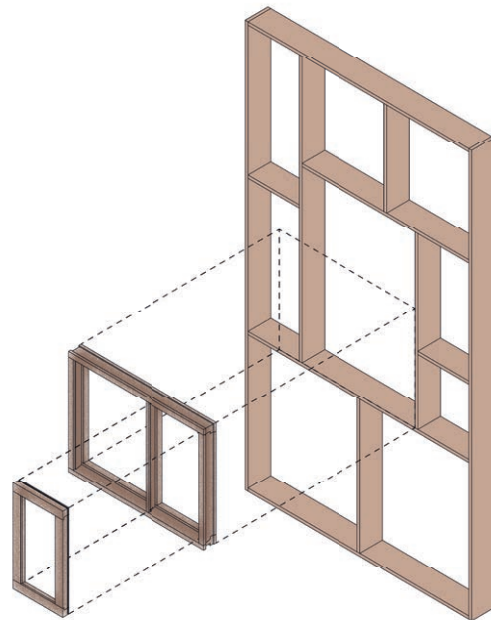
03 Width fits, height does not.

04 Frame is cut in half to make room for new parts.

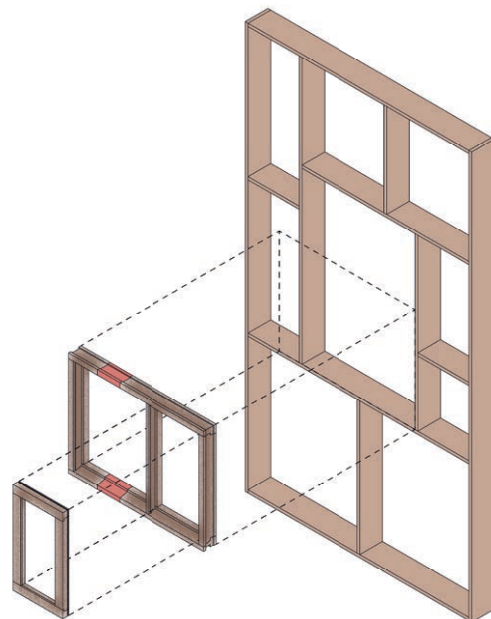
05 New wood is added to attain desirable height. Wood is made out of Frake wood and does not have to be processed.

06 Window now fits the given grid.

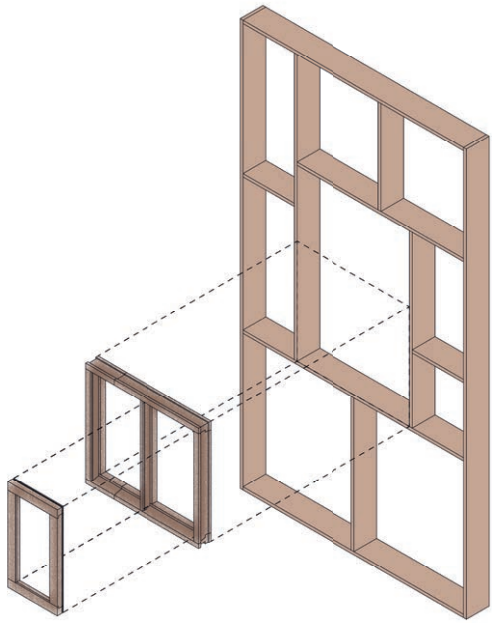
07& 08 Frame consists of re-used windows. Remaining paint areas and places where wood is removed/added remain visible.



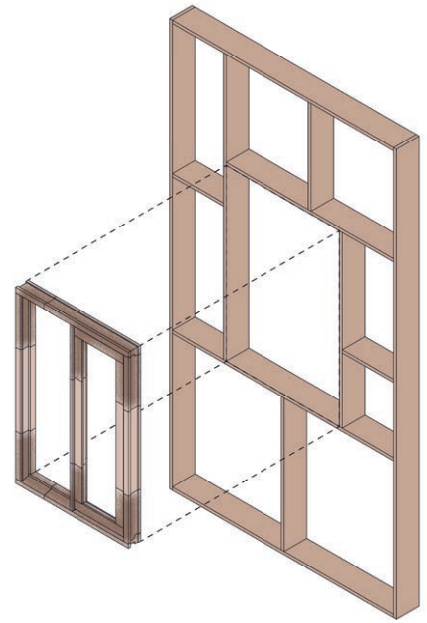
01



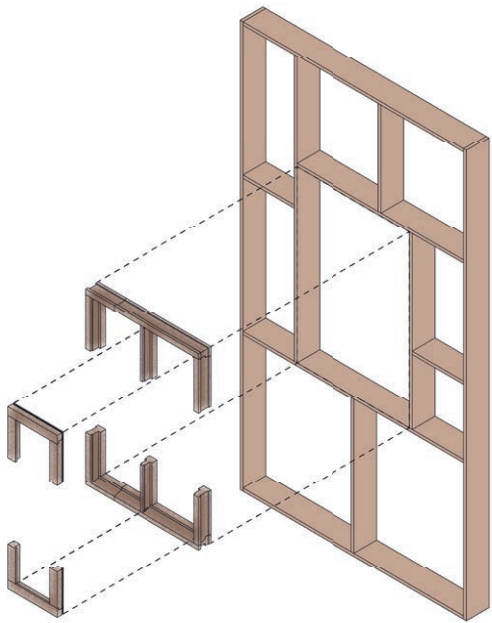
02



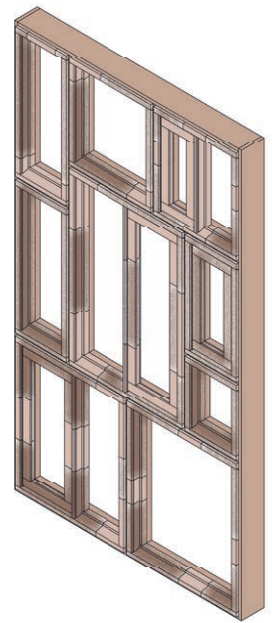
04



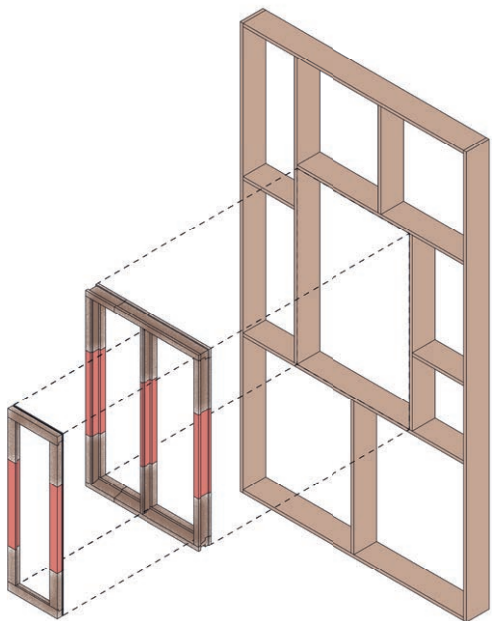
07



05



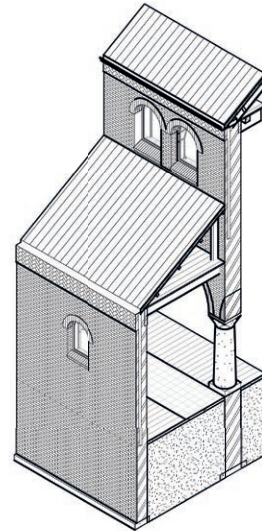
08



06

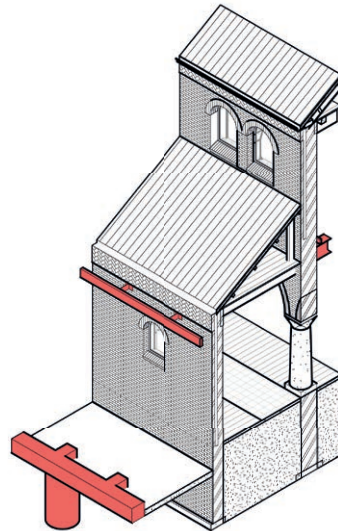
## 06k Final Design Construction

The following diagrams showcase the construction sequence of the newly added passageway between that nave and the monastery.

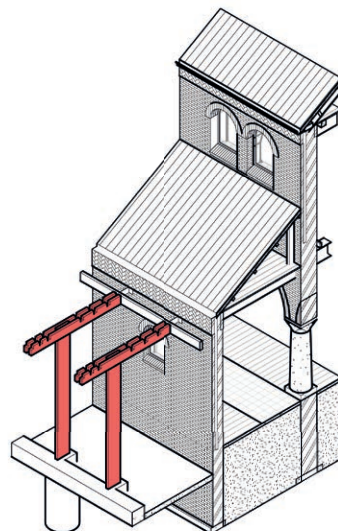


00

- 00 Existing structure
- 01 Foundations and wood/steel connections are added
- 02 Wooden beams and columns are added.
- 03 Perpendicular roof and floor beams are added.
- 04 Flooring and insulation is added.
- 05 Pre-fab window element is added.
- 06 Concrete tiles and cedar cladding is added.

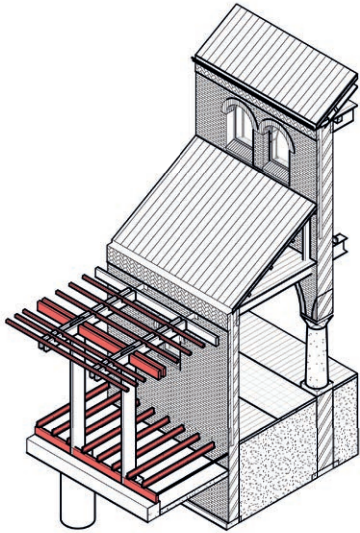


01

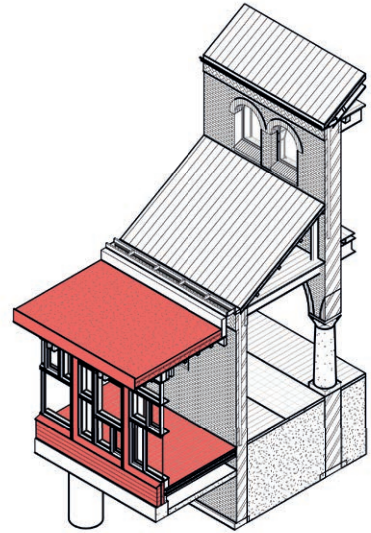


02

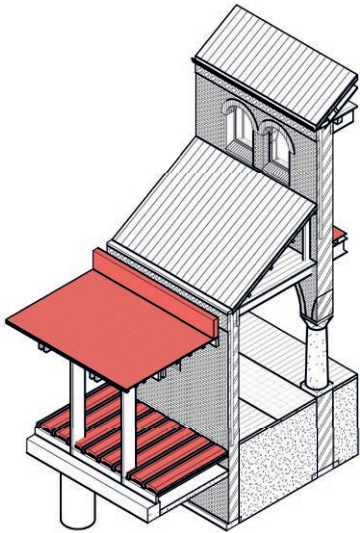




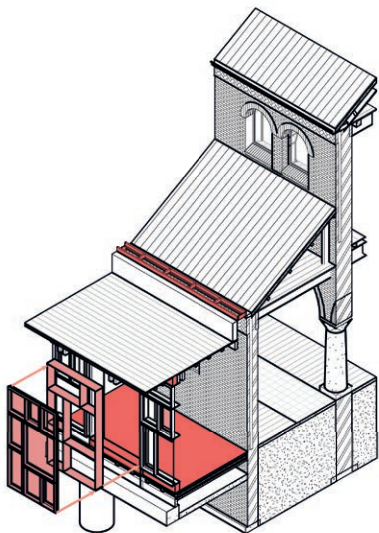
04



07



05



06

## 06l Final Design

### Renders Before and After

The main entrance of the existing church remains monumental in the neighbourhood. Little interventions can be seen from this perspective.

Before



After



Before



After



Likewise, the west facade, the storage that cloistered the structure is removed to create a green and welcoming transitioning space towards the community centre.

Before



After



Before



After



The inner courtyard is transformed from an undefined green space to a defined green meeting ground for different neighbourhood residents.

The front end of the nave is used as the foyer. The nave is split in half, replacing the imposing space with a more intimate atmosphere. The brick arches with curtain draping still retain the formal setting of the former.

Before



After



Before

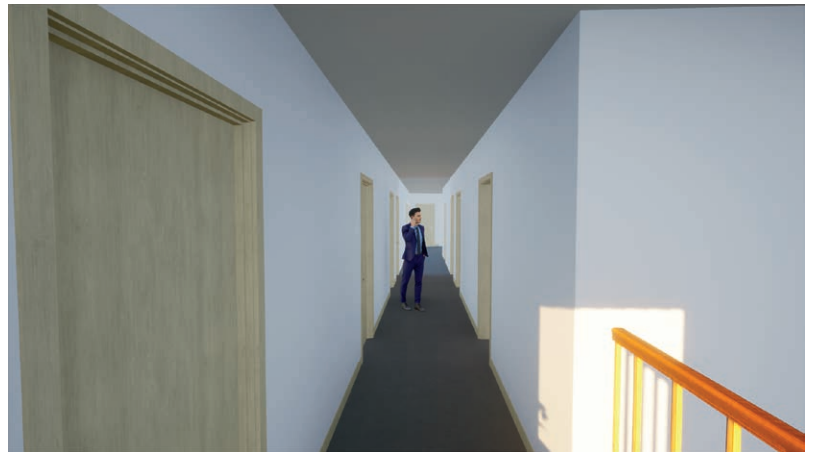


After



The small residential rooms of the former monastery are transformed into an open work/study environment. Red carpet dampens the sounds of people walking, leaving the workers undisturbed.

Before



After



The existing annex building will be transformed into a cafe. The internal non-bearing walls will be removed, giving way to a large open space. A small stage acts as a small stepping stone to the courtyard garden and also allows for small events.

After



The passageway is created out of wooden beams and columns. The rigid grid and playful window fields create an interesting and informal space to reside in. The skylight parallel to the existing church wall highlights the masonry mastery of the church building.

After



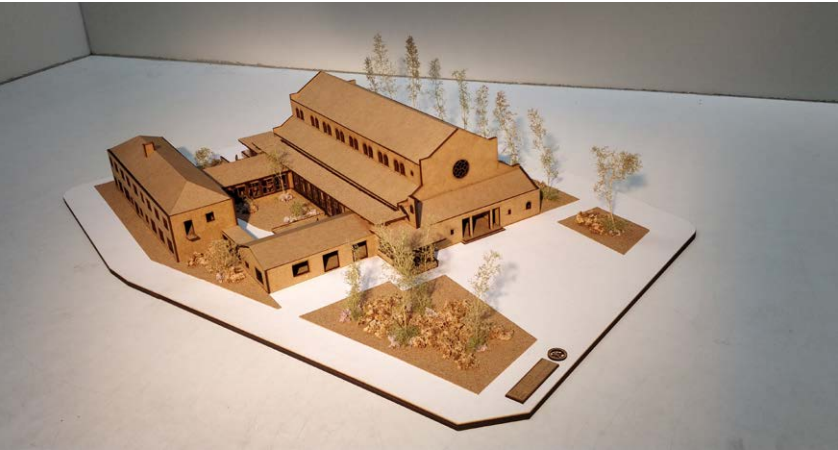
Likewise, the maker space is a warm environment where creativity can blossom. All whilst retaining sight of the green courtyard in the middle of the community centre.

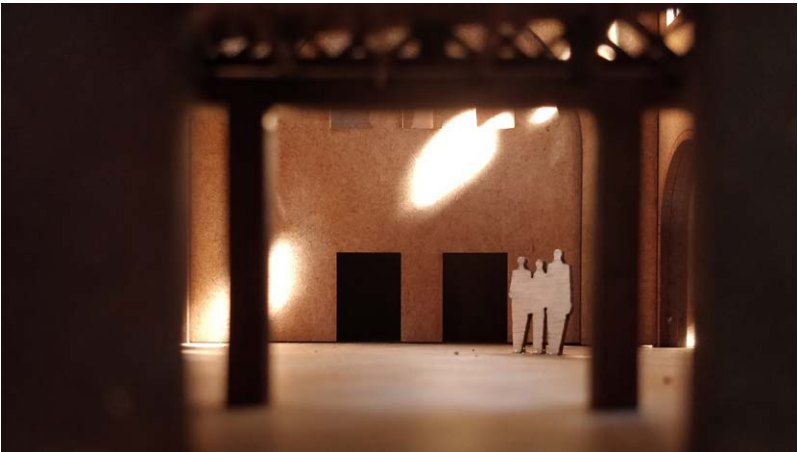
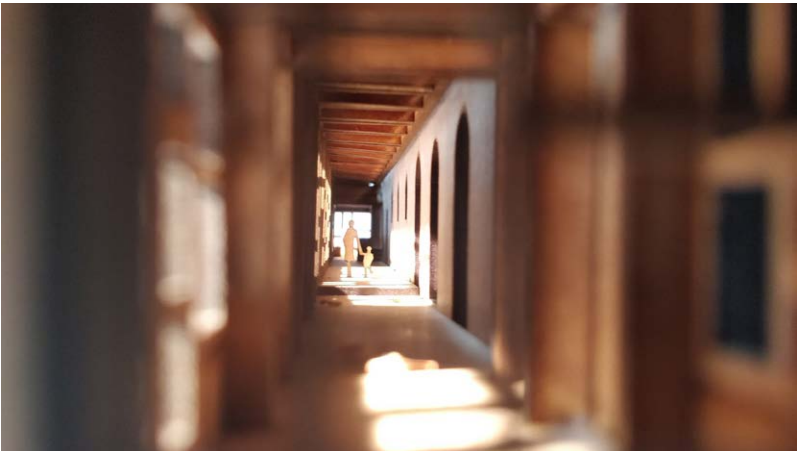
After



# 06m Final Design

Model

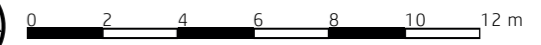
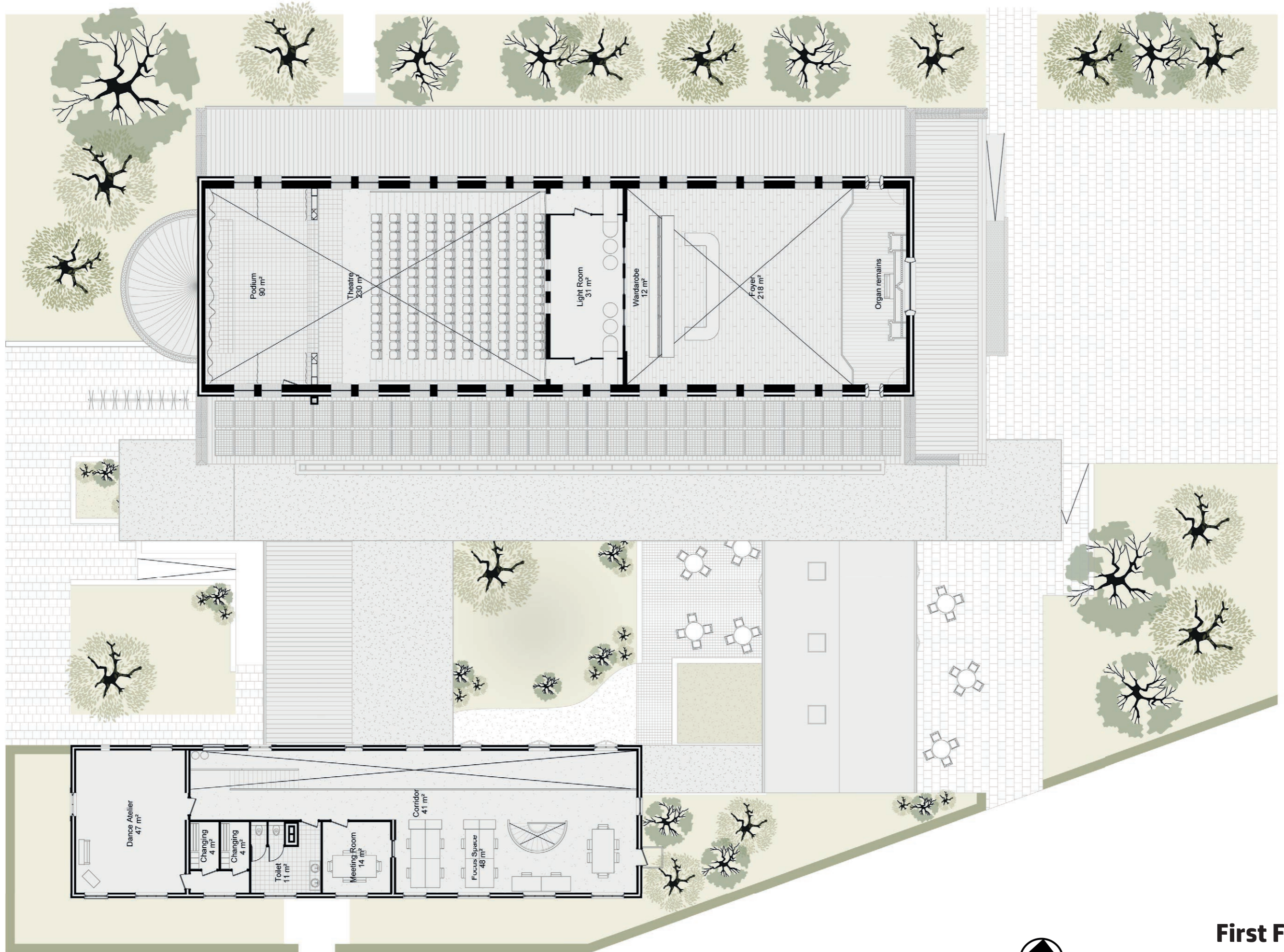






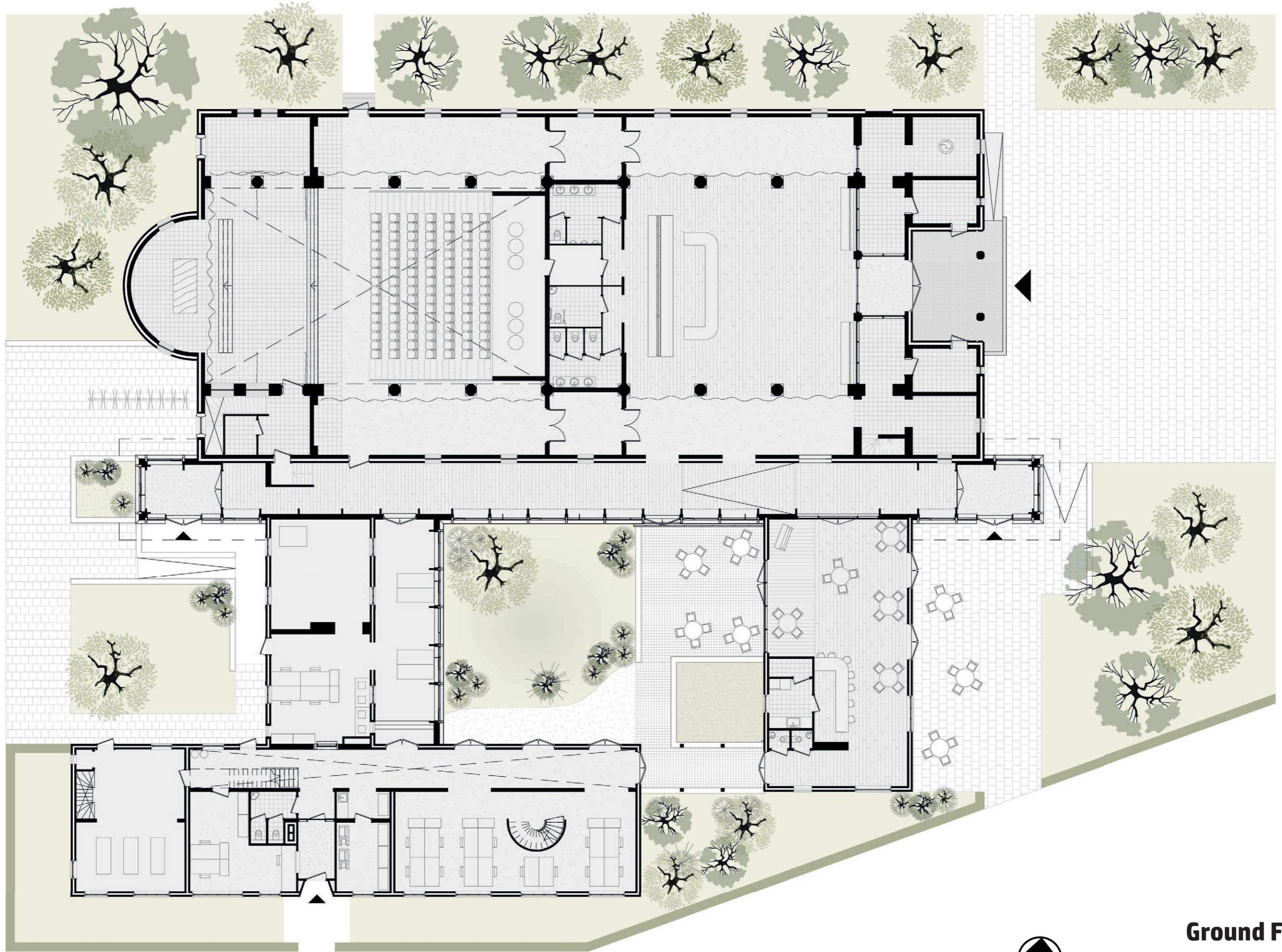
## **07 Appendix**

- 01 First Floor
- 02 Ground Floor
- 03 Basement floor
  
- 04 East- South Facades
- 05 Internal Facades
- 06 West- North Facades
  
- 07 Existing Detail V01
- 08 Existing Detail V02
  
- 09 New Detail V01
- 10 New detail V02
- 11 New Detail V03
- 12 New Detail V04
- 13 New Detail H01



1:200

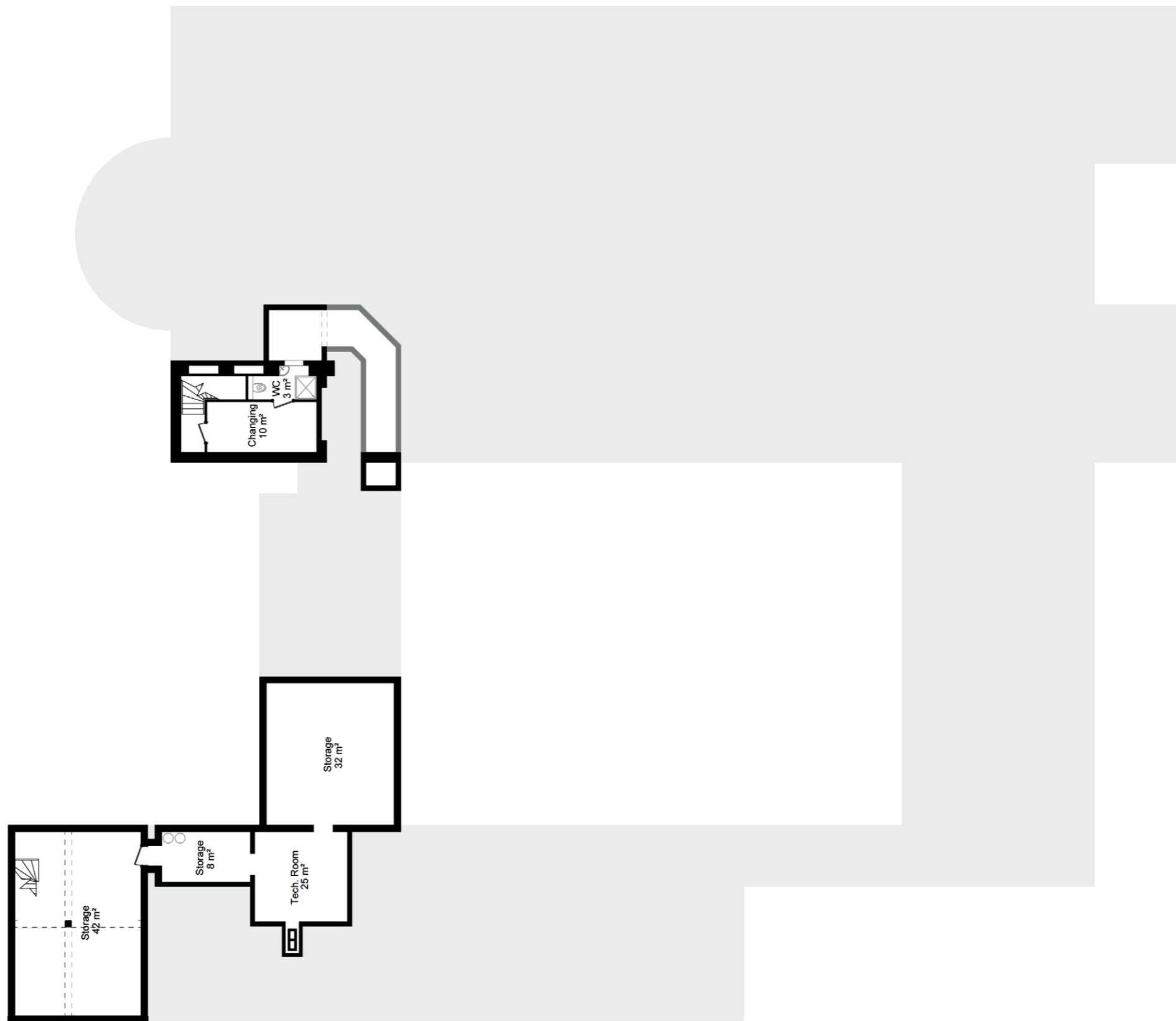
**First Floor**



0 2 4 6 8 10 12 m

**Ground Floor**

1:200



### Basement Floor





**East / South Facade**

0 2 4 6 8 10 12 m

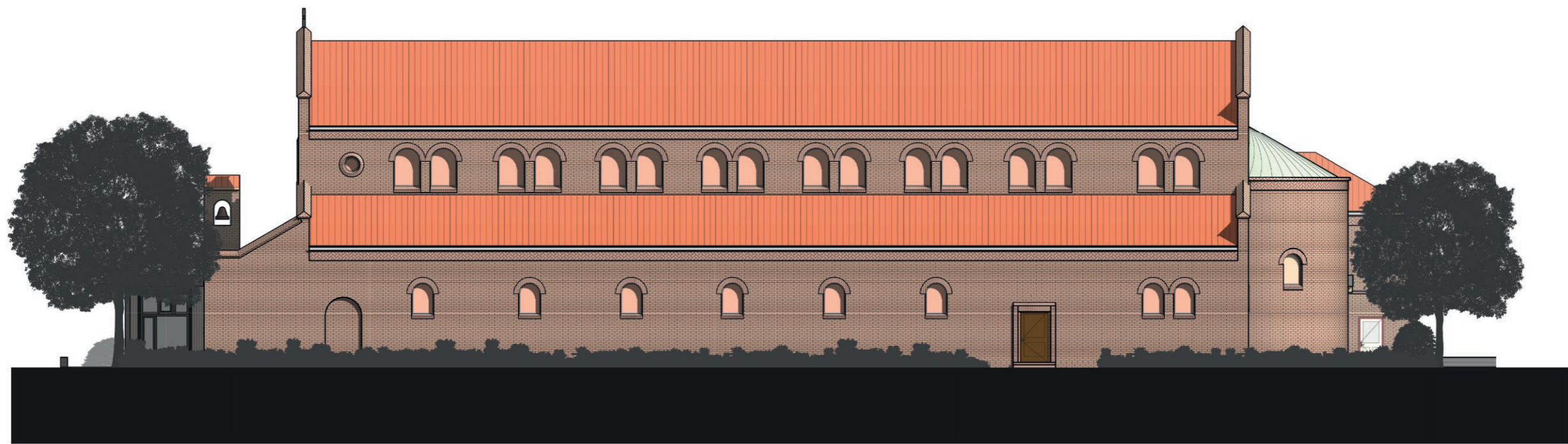
1:200



**Internal Facade**

0 2 4 6 8 10 12 m

1:200



**North / West Facade**

0 2 4 6 8 10 12 m

1:200

8

110  
100  
440  
230

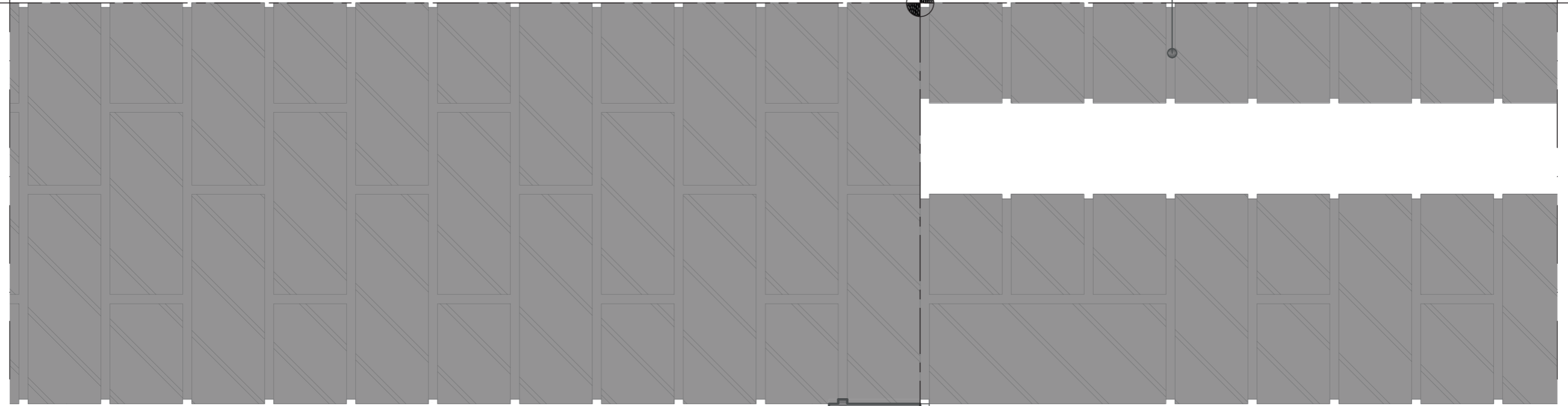
Existing Brick Wall  
Load bearing

P = 0 + NAP

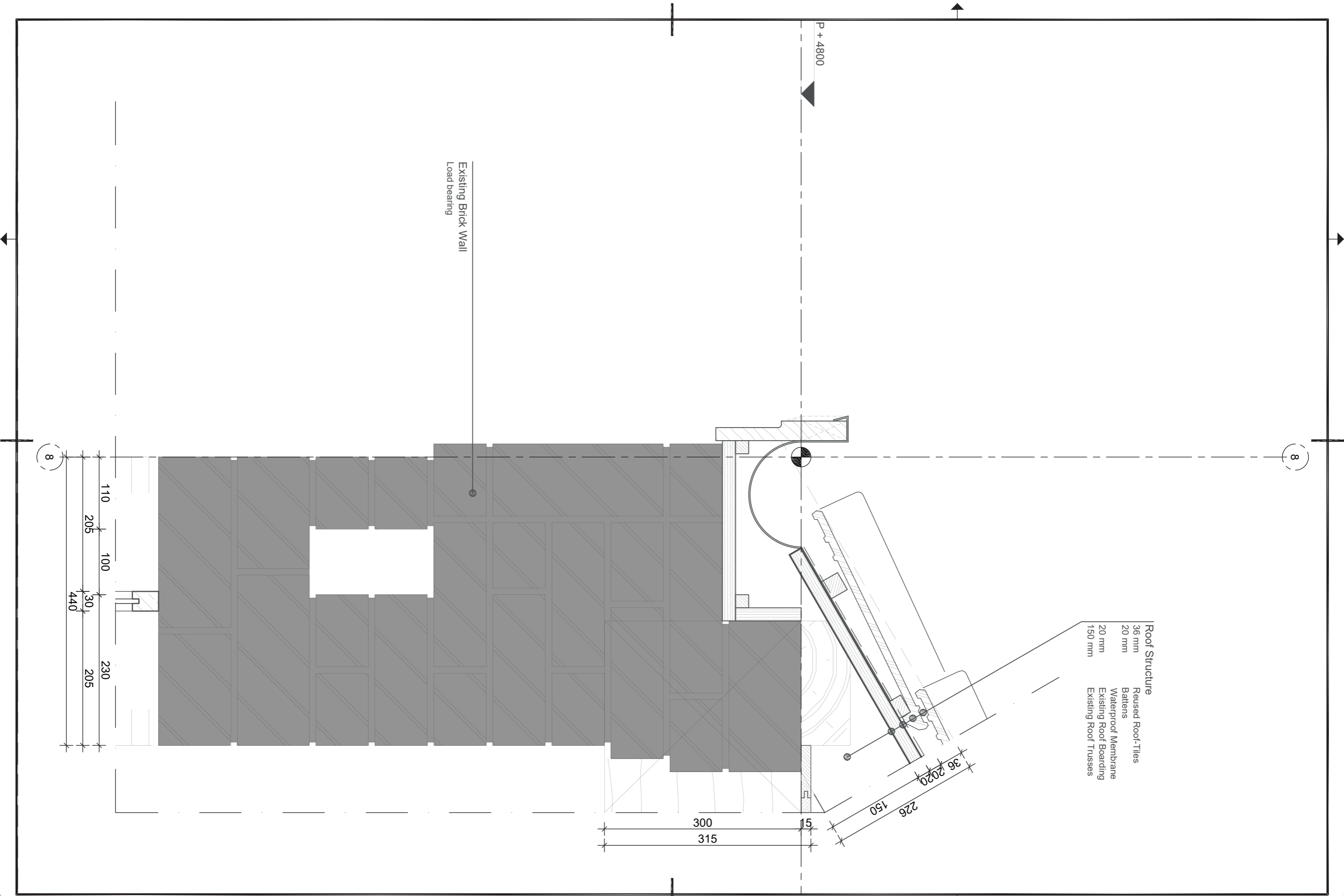
P - 220

100 20  
120

8







Existing Brick Wall  
Load bearing

P + 4800

- Roof Structure
- 36 mm Reused Roof-Tiles
- 20 mm Battens
- 20 mm Waterproof Membrane
- 150 mm Existing Roof Boarding
- Existing Roof Trusses

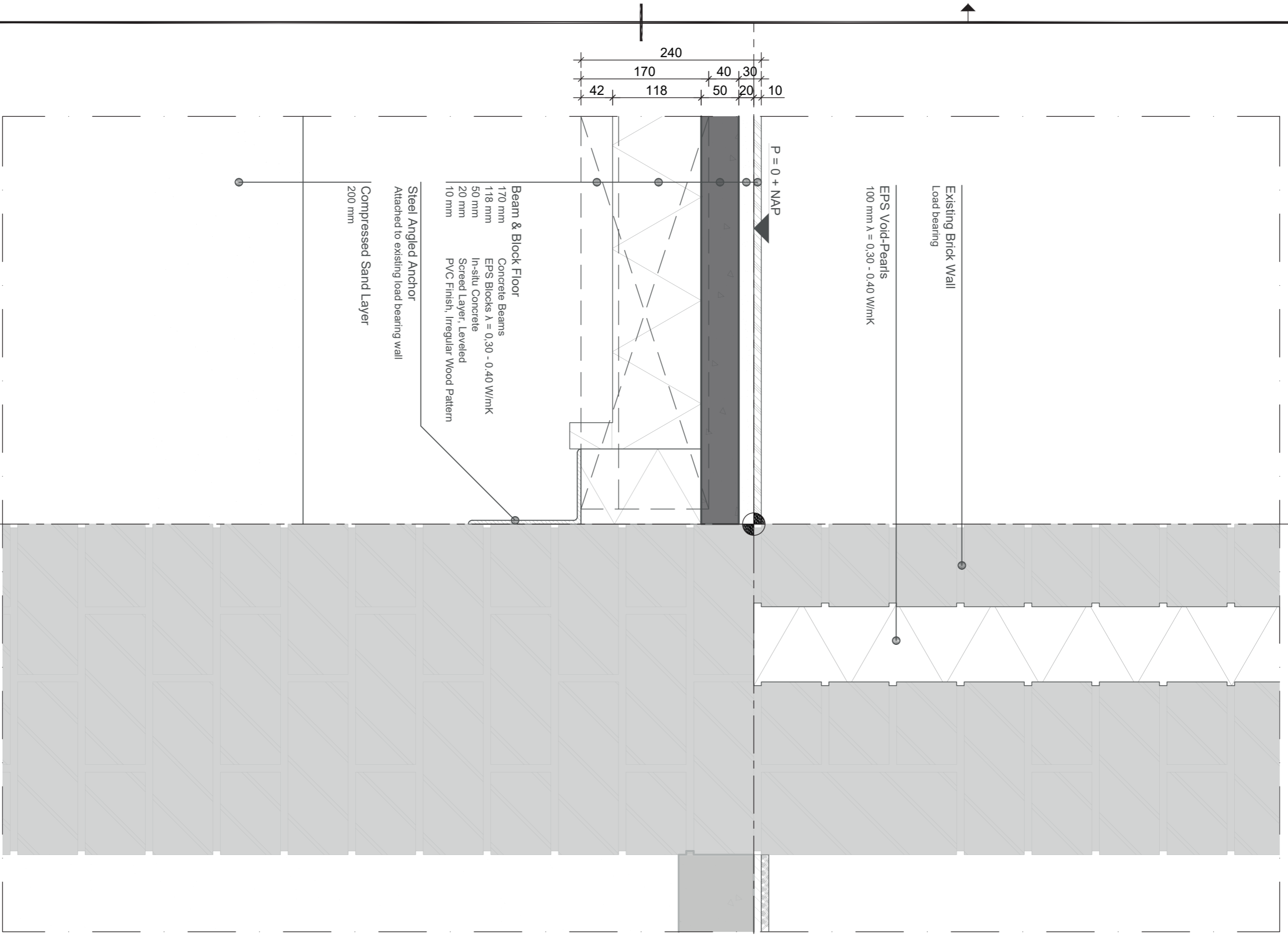
110  
205  
100  
30  
440  
230  
205

300  
315

36  
20  
20  
150  
226

8

8



Existing Brick Wall  
Load bearing

EPS Void-Pearls  
100 mm  $\lambda = 0,30 - 0,40$  W/mK

P = 0 + NAP

Beam & Block Floor  
 Concrete Beams  
170 mm  
 EPS Blocks  $\lambda = 0,30 - 0,40$  W/mK  
118 mm  
 In-situ Concrete  
50 mm  
 Screed Layer, Levelled  
20 mm  
 PVC Finish, Irregular Wood Pattern  
10 mm

Steel Angled Anchor  
Attached to existing load bearing wall

Compressed Sand Layer  
200 mm

240  
 170 40 30  
 42 118 50 20 10

110 100 440 230

100 20 120

8

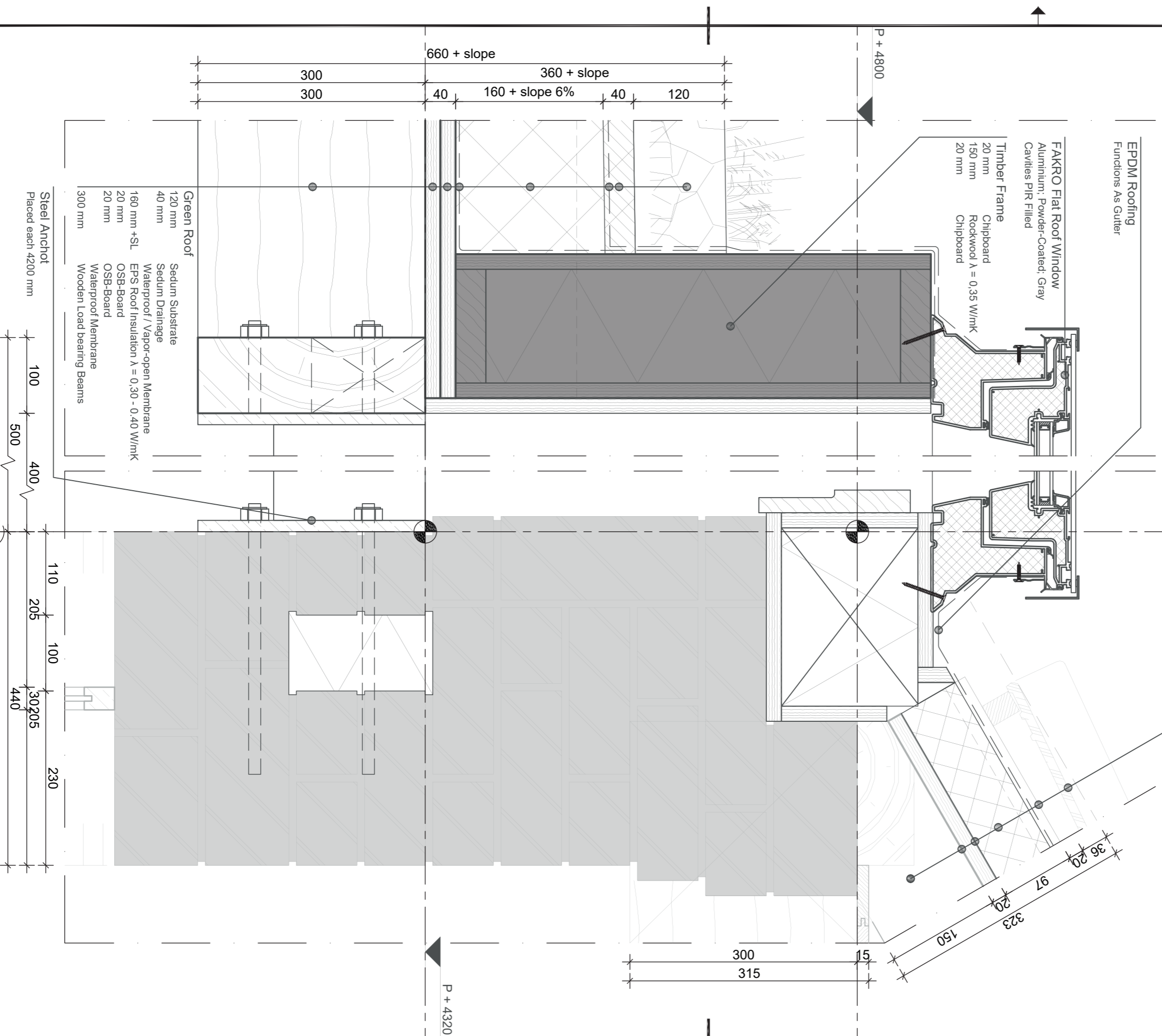
8

EPDM Roofing  
Functions As Gutter

FAKRO Flat Roof Window  
Aluminium; Powder-Coated; Gray  
Cavities PIR Filled

Timber Frame  
20 mm Chipboard  
150 mm Rockwool  $\lambda = 0,35$  W/m $\cdot$ mK  
20 mm Chipboard

Roof Structure  
Reused Roof-Tiles  
36 mm Batts  
20 mm SlimFix Restoration  
97 mm Waterproof Membrane  
Existing Roof Boarding  
150 mm Existing Roof Trusses



P + 4320

P + 4800

8

8

30 | 160 | 150 | 40 | 114 | 114 | 100 | 100 | 236 | 190 | 10 | 310 | 300

**Prefabricated Window Element**  
 Reused wooden window; repaired & cut-to-size;  
 Wood colour  
 20 mm  
 Triplex structural frame

Aluminium window sill  
 Powder-coated, dark gray

P + 370  
 Btn. Frm.

Element Spacing  
 10 mm

**Timber Frame**  
 20 mm Chipboard  
 250 mm Rockwool  $\lambda = 0,35$  W/mk  
 20 mm Chipboard  
 12 mm Gypsum

**Concrete Street Tiles**  
 Halved; rough side outward  
 Running bond, occasional cantilever  
 P = 0 + NAP

P - 220

**Closed-Cell Insulation (PIR)**  
 100 mm  
 $\lambda = 0,22 - 0,28$  W/mk

**Aerated Concrete**  
 100 mm  
 $\lambda = 0,22 - 0,65$  W/mk  
 P - 500

**Concrete Foundation**  
 Spans pilasters 2100 mm

**Compressed Sand Layer**  
 200 mm

(7)

820

236

190

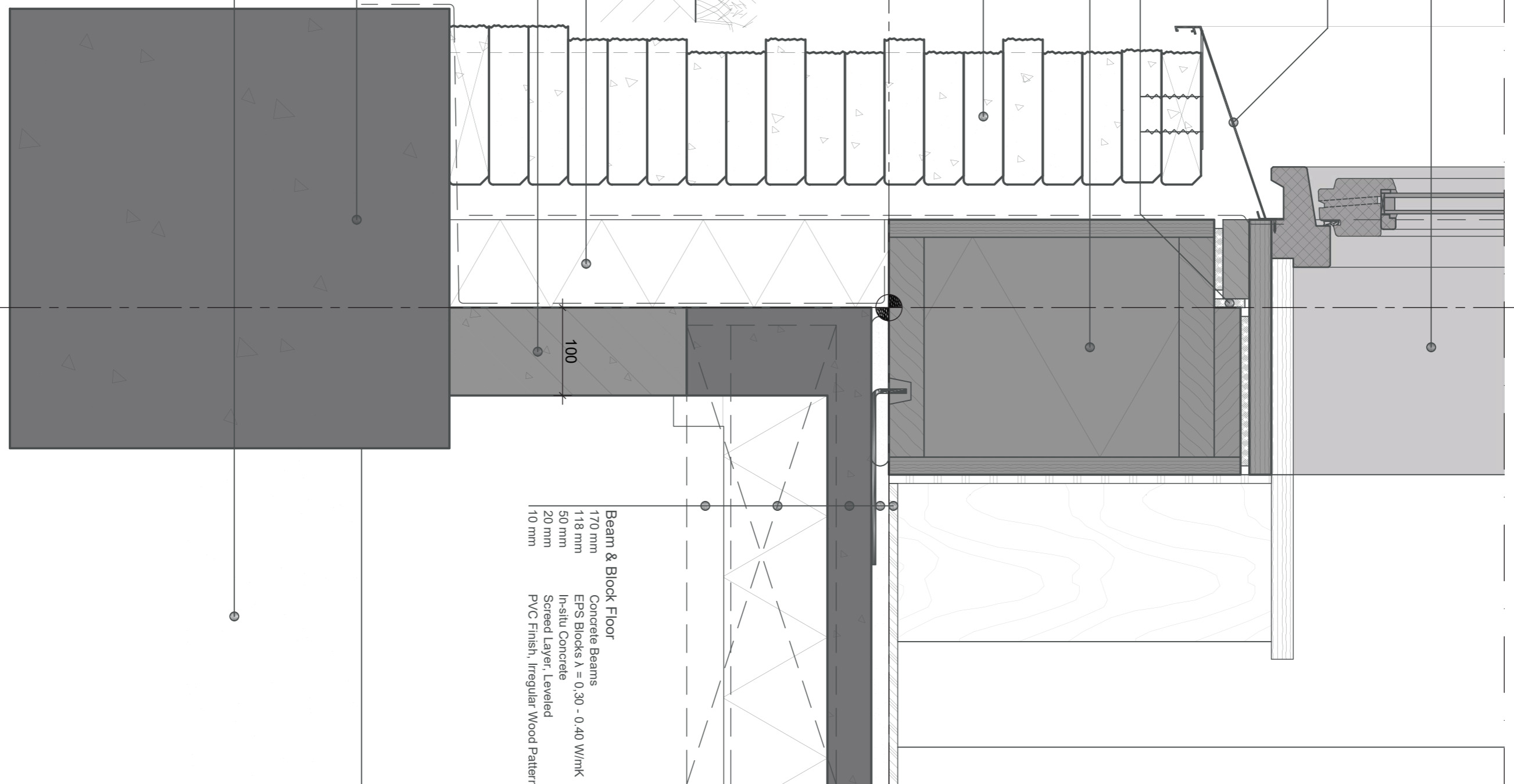
10

310

300

42 | 118 | 50 | 20 | 10  
 170 | 40 | 30  
 240

**Beam & Block Floor**  
 Concrete Beams  
 170 mm  
 118 mm  
 EPS Blocks  $\lambda = 0,30 - 0,40$  W/mk  
 50 mm  
 In-situ Concrete  
 Screed Layer, Levelled  
 PVC Finish, Irregular Wood Pattern  
 10 mm



(7)



7

**Gravel Roof**  
 120 mm Gravel layer  
 40 mm Sedum Drainage  
 Waterproof / Vapor-open Membrane  
 160 mm +SL EPS Roof Insulation  $\lambda = 0,30 - 0.40$  W/mK  
 20 mm OSB-Board  
 20 mm OSB-Board  
 Waterproof Membrane  
 300 mm Wooden Load bearing Beams

**Green Roof**  
 120 mm Sedum Substrate  
 40 mm Sedum Drainage  
 Waterproof / Vapor-open Membrane  
 160 mm +SL EPS Roof Insulation  $\lambda = 0,30 - 0.40$  W/mK  
 20 mm OSB-Board  
 20 mm OSB-Board  
 Waterproof Membrane  
 300 mm Wooden Load bearing Beams

P + 4750

P + 4320

**Timber Frame**  
 15 mm Wooden Boards; Different Dimensions  
 40 mm Wooden Slats  
 20 mm Chipboard  
 250 mm Rockwool  $\lambda = 0,35$  W/mK  
 20 mm Chipboard  
 12 mm Gypsum  
 P + 4060  
 Tp. Frm.

**Aluminium Frame**  
 Powder-coated, dark gray

**Element Spacing**  
 10 mm

**Prefabricated Window Element**  
 Reused wooden window; repaired & cut-to-size;  
 Wood colour  
 20 mm Triplex structural frame

**Open Aluminium Drainage**  
 Powder-coated, dark gray

120  
 40  
 160 + slope 6%  
 40  
 360 + slope  
 660 + slope  
 300  
 300

16.30

890  
 165  
 15  
 40  
 114  
 190  
 236  
 100  
 310  
 310  
 820

7



