



Circular Retreat
House of Modern Rituals



House of Modern Rituals: Circular Retreat

TU Delft
Faculty of Architecture
and the built environment

5435145

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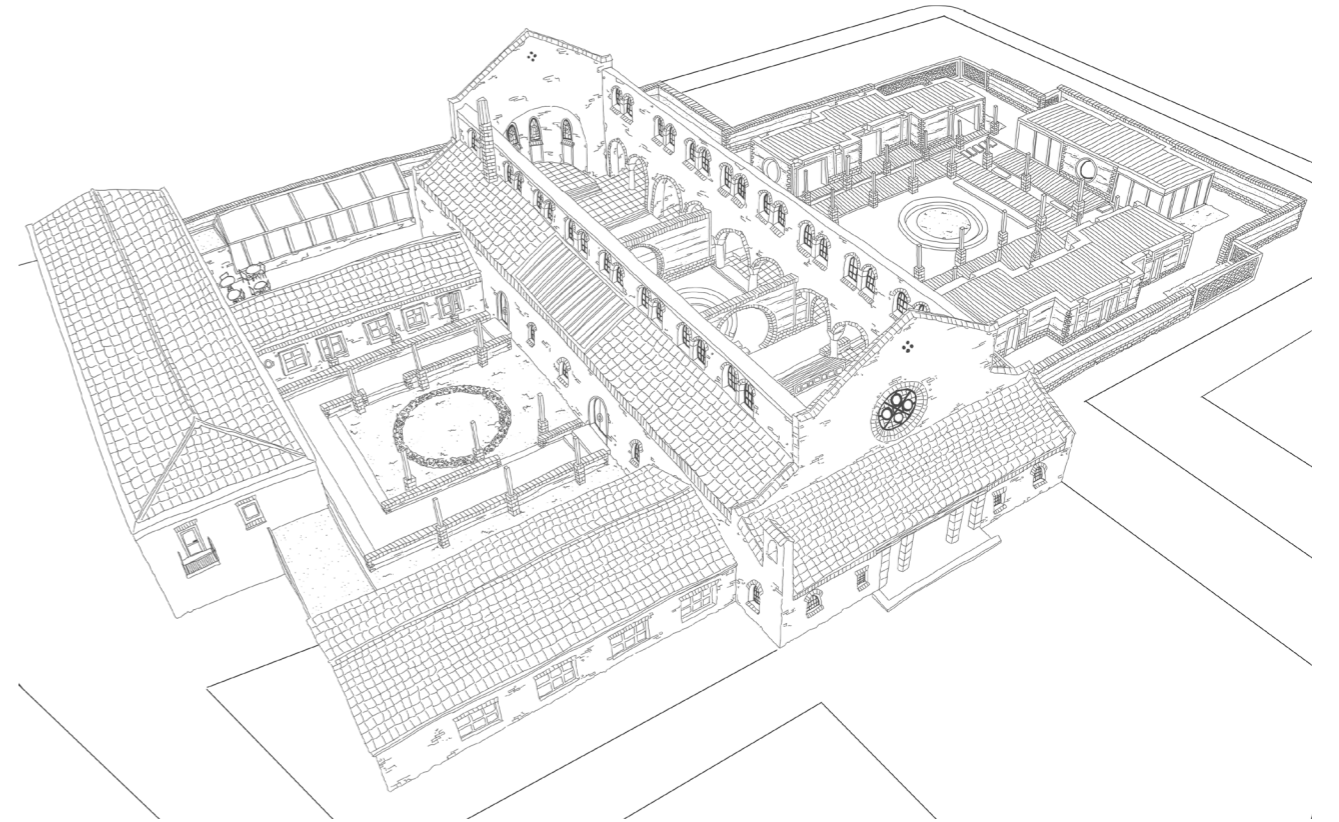
Graduation Studio
Heritage & Architecture
MSc 3+4 Revitalising Heritage
Zero Waste Church
AR3AH115

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Introduction

This research explores how the St. Dominicus church in Utrecht can be revitalised with the help of contemporary spiritual values. As a result of secularisation and the shift from religion to spirituality, there is a noticeable increase in vacant church buildings. In this research a design strategy is proposed that revises the original function in a way it can better accommodate the modern spiritual needs. Incorporating the results of different literature and analytic studies in spiritual architecture, this study demonstrates a way to create a design that accommodates more spiritual experiences through architecture. It argues that these experiences can be evoked through architectural qualities that adhere to the bigger spiritual concepts of sensuality, humanity and sustainability.





Case study

St. Dominicus church
Oog in Al, Utrecht
The Netherlands



Churches in The Netherlands currently face a decline in members and struggle to stay in service. The cause for this secularisation is partly because institutionalized religious traditions are not received well in modern times. Most Dutch people no longer define themselves as religious but instead, identify as atheist or spiritual. They renounced the traditional procedures and rules of their church community. A consequence of this decline in churchgoers means an increase in vacant church buildings. Does this automatically mean that the function of the church becomes redundant? In the Netherlands, most of these vacant churches are repurposed into museums, housing, libraries, and even supermarkets. Instead of trying to fit in a different function altogether, this research explores the possibility to revitalize a church by revising the original function in a way it can better accommodate more modern spiritual needs.

Research shows that by renouncing the traditional precepts of the church, meaning is no longer provided by religion (meaning OF life). Instead,

individuals have to search for it themselves (meaning IN life). Sociologist Linda Woodhead and anthropologist Peter Versteeg describe that this shift from collectively worshipping an external divine being to personally experiencing the divine is what separates spirituality from religion. Therefore, the purpose of this redesign project is to revitalize the St. Dominicus church in Utrecht by evoking spiritual experiences through architecture.

As a result of research into spiritual experience, the list "10 Design Principles for Spiritual Architecture" was defined. It consists of a brief description of what qualities are most prevalent in spiritual architecture. These ten principles are derived from the analysis of case studies and a literature review on contemporary spirituality. The studies conclude that spiritual experiences can be evoked through architecture by designing with these principles, which characterize the spiritual.

In one of the researched studies, Architecture professor Julio Bermudez explains that in architecture, the experience of spirituality is mostly understood in the sense of aesthetics, but to create more intense experiences it should also be in service of the ethical. If considered carefully in a design, the layout, functionality, and context of a building can raise morale, social justice, cohesion, and environmental conservation. In other words: doing good through architecture can help others and the environment. It can prove valuable to integrate spirituality into the design process and inspire more reflective, effective, and insightful design approaches.

Another study by Architecture professor Brian R. Sinclair mentions that to facilitate more spiritual experiences an individual must be connected to the self (sensuality), the social/cultural (humanity), and the environment (sustainability). These main concepts of sensuality, humanity, and sustainability are used to describe and explain how spiritual experiences can be evoked through the proposed design interventions.

10 Design Principles for Spiritual Architecture

1. Use prominent geometric forms
2. Create at least one large and open space (inside or outside)
3. Frame views of the surroundings with care
4. Use homogeneous and solid materials that are long-lasting (unity, coherence)
5. Use natural and weathered materials (or materials that weather over time) to show impermanence as a contrast to the solid structure
6. Use reflective materials, such as water, to evoke meditation and contemplation
7. Create a route that allows for different flows through the building (intuitive wayfinding)
8. Consider the connection with nature/the environment when designing
9. Design with the history of the place and/or the building in mind
10. Vary light and shadow to experience the rhythm, scale, and spaces of a building

St. Dominic church

The St. Dominic church was built in 1951 on behalf of the Dominicans. The church is named after the old Sint Dominicus church, which stood in the city center of Utrecht at Mariaplaats. The old Sint Dominicus church was commissioned and demolished in 1940, as it was not used to a sufficient extent. Ten years later, with the population of the city of Utrecht expanding, it was decided to “rebuild” the church outside the city center. The new Sint Dominicus is located in a new housing estate built just after the Second World War. Before housing took its place there was only arable farming. The building blocks were formed in the grid of these arable fields. The church was designed by Herman van Putten (1905-1966), an architect with a Catholic background, who designed many other churches besides the Dominicus. The church falls under municipal monuments and was built in the Bossche school style.

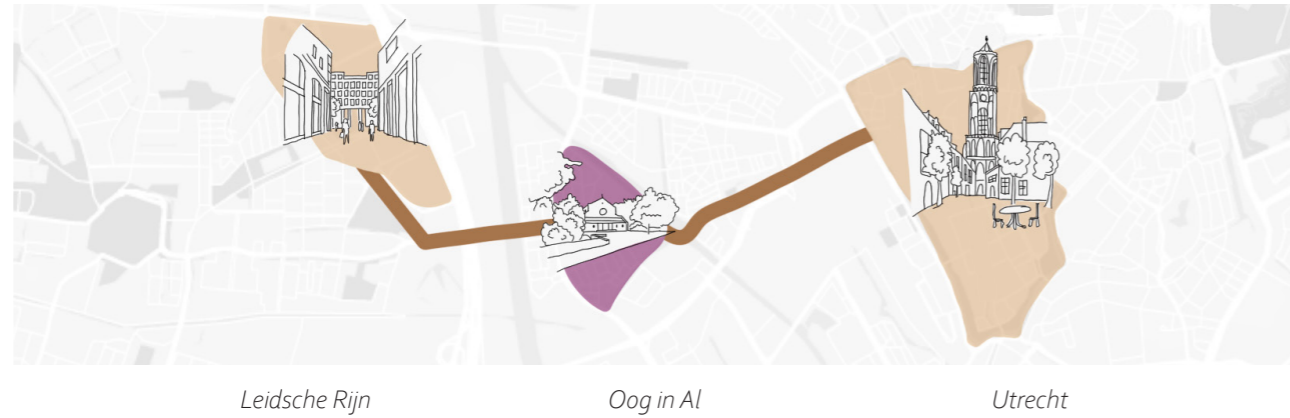
The current St. Dominic’s church was designed in memory of the old St. Dominic’s church (also known as the Walsteegkerk). Compared to the old church, we can see that this church was built in an older architectural style. The Walsteegkerk was built in a neo-classical architectural style. A big contrast to the new St Dominic’s with the Bossche school. Yet here and there, conscious design choices were made that took the old church into account. For instance, the new church did not want two tall bell towers but chose to build a small, non-obtrusive bell tower. The use of stained glass was also reflected in the new church. However, the use of decorative elements is hardly present. This is also typical of the Bossche School but does

contrast with many Roman Catholic churches built before this time.

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 landmark of the area. In addition, the church also stands on a piece of land surrounded by a street. This sets the church apart from the surrounding buildings as an individual. Also in the materialization, the purity of material use sees monumental features that contribute to the experience of this church. 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.



St. Dominic church



Oog in Al as connection between city centers

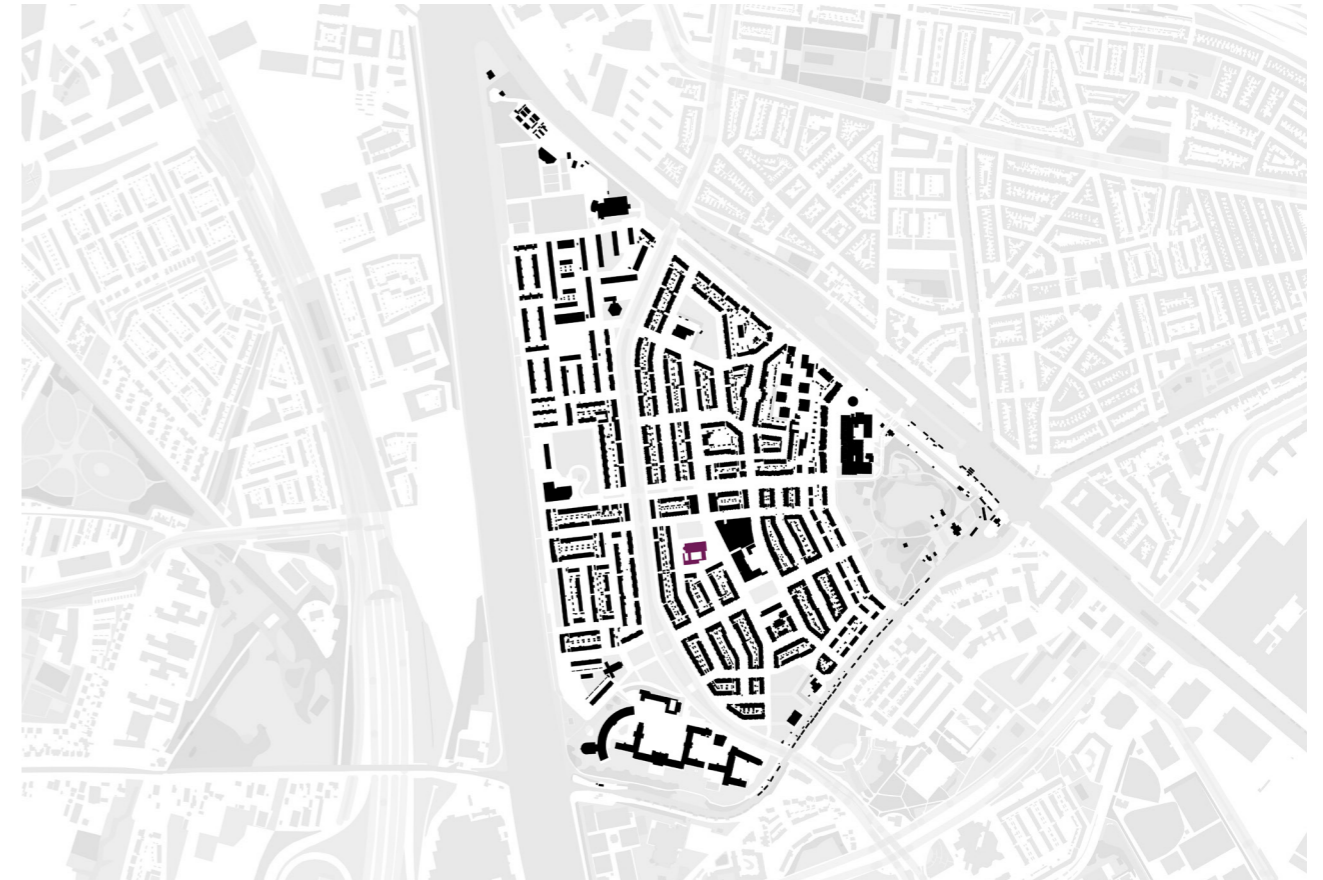
Project location

Oog in Al is a pre-World War II residential area of Utrecht. Its name is derived from a 17th-century outhouse located on the junction of the Oude Rijn and the Leidche Rijn, in the east-corner of the island. The city centre of Utrecht is a central place that is easily accesible for the residents of Oog in Al.

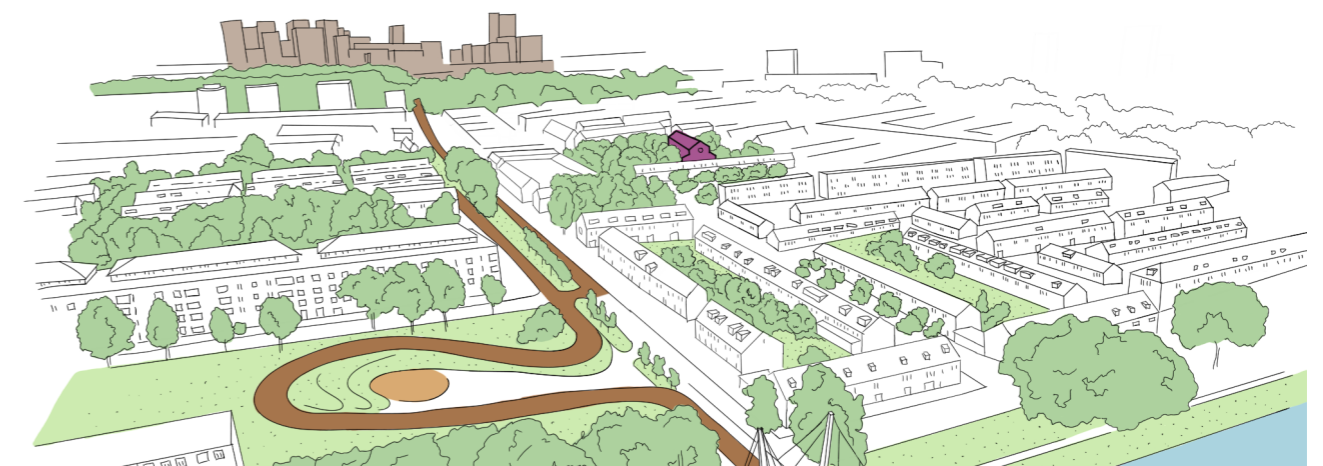
The original plan of Oog in Al is designed by Berlage and Holsboer. Their plan was never finished due to the outbreak of World War II. After World War II, the neighbourhoods of Halve Maan Noord and Halve Maan Zuid were built. This is where the St. Dominicus church is located. It is situated in a quiet neighbourhood where there are a few facilities nearby.

The St. Dominicus church has a central place in the neighbourhood of Oog in Al. In the overview drawing, it becomes clear that the church is part of a greener area in the neighbourhood. It is situated close to the main bicycle street that connects Oog in Al to the city center. The areas around the bicycle street and the waterways are the greener areas of the neighbourhood.

The volume of the church is very similar to the rest of the buildings in the surrounding area and is therefore not immediately noticeable. It fits in the rest of the morphology that can be seen in the neighbourhood. The area surrounding the church is mostly low-rise row houses.



The neighborhood Oog in Al



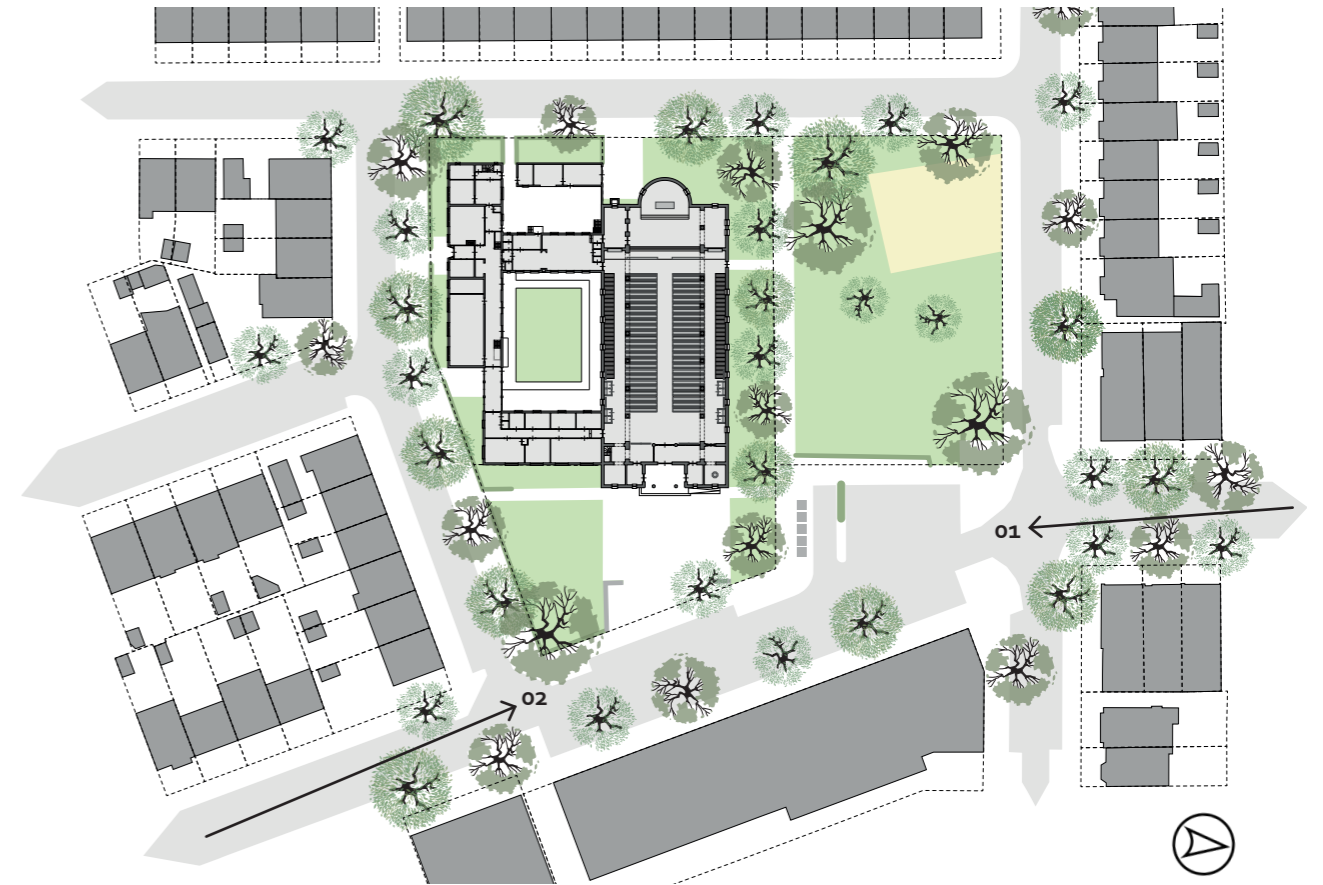
The surroundings

Project site

In this map, the direct surroundings of the church are illustrated. Here we see that the church is located on its own "island" in the neighbourhood. It is enclosed by roads and greenery. On the right side of the church is a large field that is the property of the church. This provides opportunities for extensions to the existing structure.

The church is positioned to the west and most of the wind comes from the south. Overall the church itself is sheltered from most influences from outside.

The sightlines show the church from the main routing through the area. The church is poorly visible from this side. Here you look upon a green wall that surrounds the building. On Saturday, the corner of this street is used as a marketplace.



01 North entrance to area



02 South entrance to area

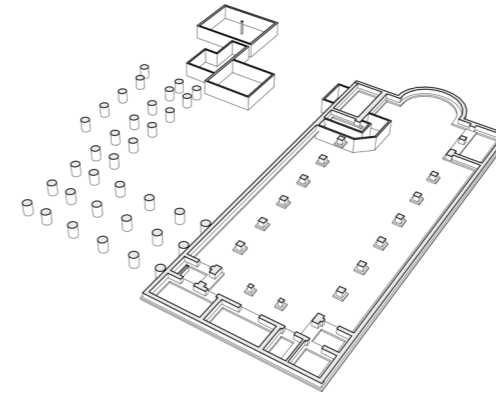
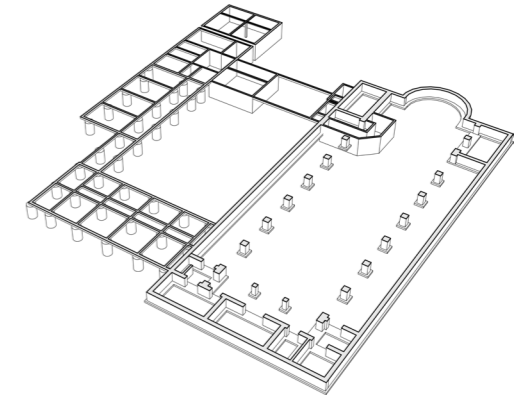
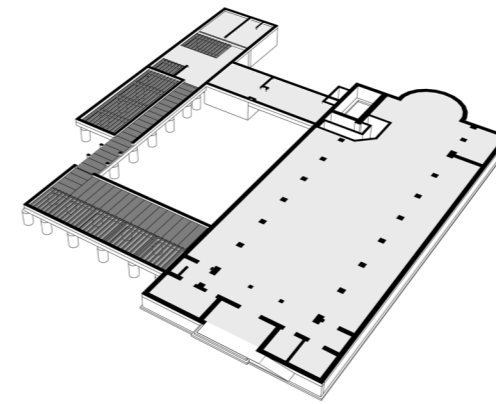
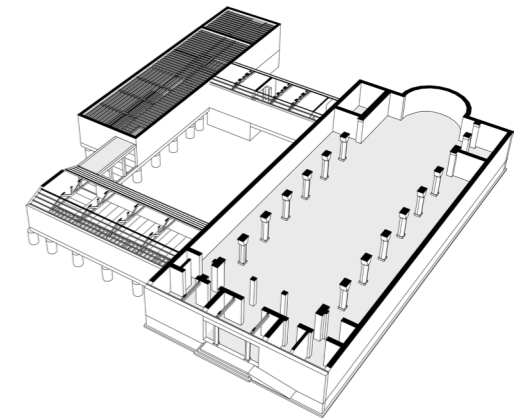
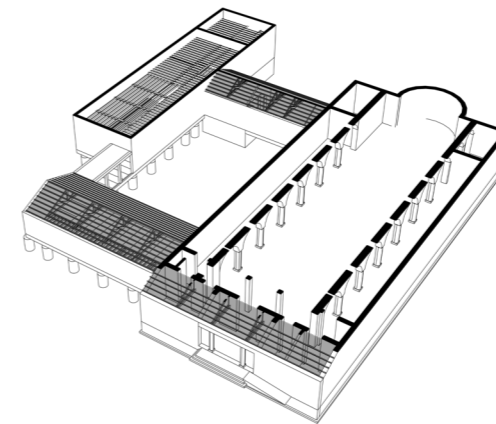
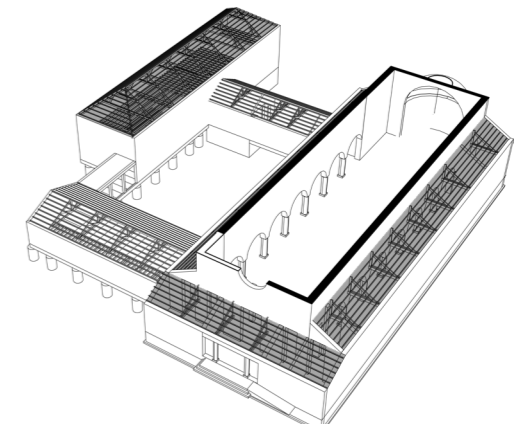
*Bossche School style**Romanesque style**St. Dominic church*

Building structure

The overall building structure speaks for itself. Through load-bearing walls and beams, floors and roofs are made. The large spans mean that most of the floor plan is freely divisible. This would allow intermediate walls to be easily removed or modified to create new spaces without major interventions.

The church consists of a combination of Bossche School and Romanesque elements. For example, the capitals of the columns have a trapezium form that often comes back in the Bossche School furniture but the shaft has a round form. Round forms and arches do not appear in the Bossche School, they are more characteristic of the Romanesque style. The roof structure is also a combination of both styles. The timber structure is typical for the Romanesque style and the straight lines that form the roof are meaningful for the Bossche School.

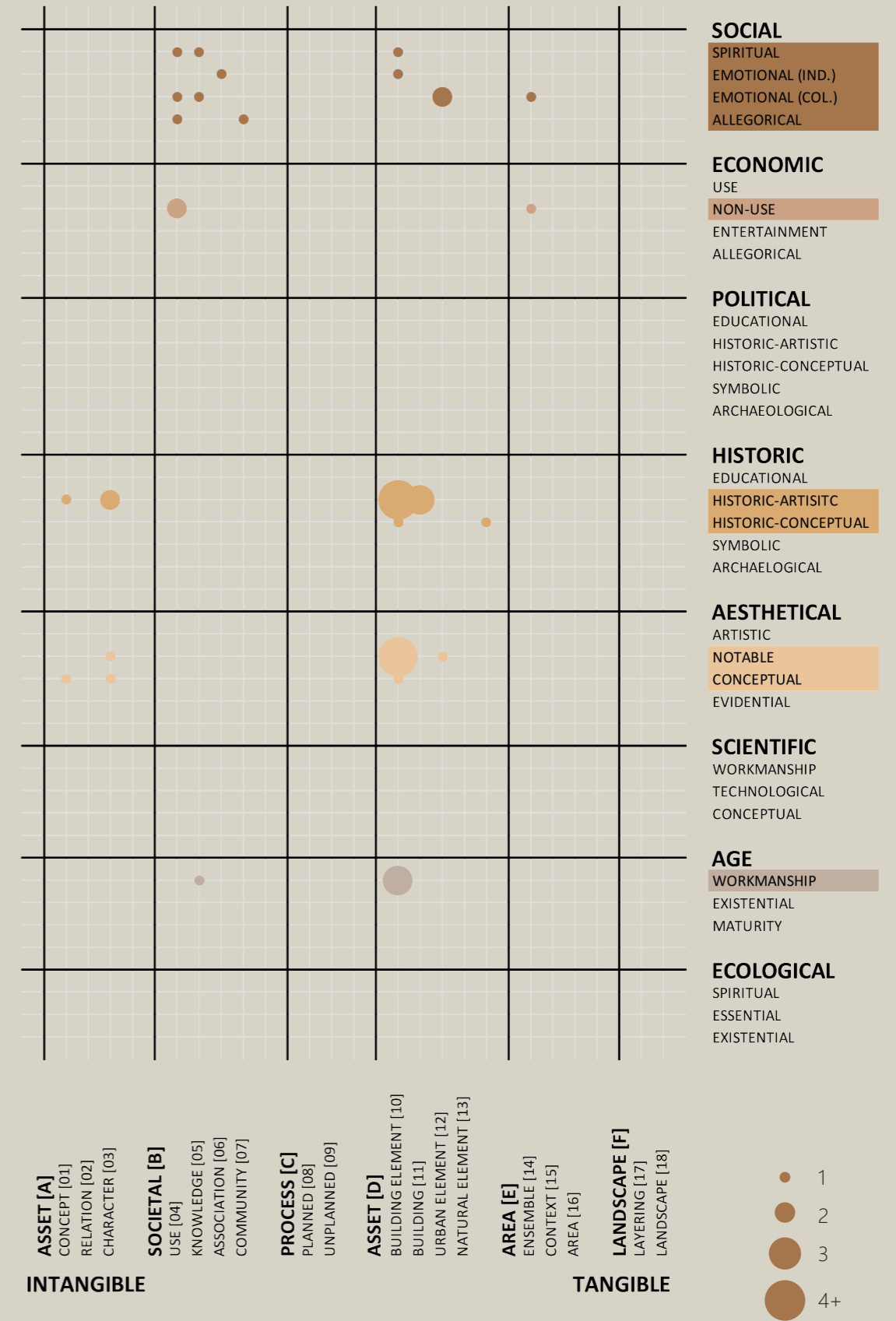
The church is neither one nor the other style but lies in between. It is less decorated than the Romanesque style but has more decoration than the Bossche School. It has the simplicity and proportion system of the Bossche School but in combination with the arched and round elements of the Romanesque style. Just like the Bossche School, the church almost always shows its true materials and every material has its purpose, but it uses more colourful materials like the Romanesque style. In this church, only the brickwork on the inside of the building extensions is plastered and the used concrete in the building is covered by other materials.

**01** *Foundation church***02** *Foundation extension***03** *Ground floor***04** *First floor***05** *Low roof structure***06** *High roof structure*

Value	Attribute type	Attribute	Stakeholders
Social			
Spiritual	Tangible: Asset: Building element	Altar	Parish
Individual	Tangible: Asset: Building element	Altar	Parish
Emotional (col.)	Tangible: Area: Ensemble	Popular homes due to original details	Parish
Allegorical	Intangible: Societal: Use	Listing services in Utrechts Dagbald	Church Community
Emotional (col.)	Tangible: Asset: Urban element	Churches, schools and greenery in the neighborhood	Marco Groenen (architect)
Emotional (col.)	Tangible: Asset: Urban element	Churches, schools and greenery in the neighborhood	Parish
Emotional (col.)	Intangible: Societal: Use	Art expositions	Church Community
Emotional (col.)	Intangible: Societal: Knowledge	Church bell	Individual churchgoer
Allegorical	Intangible: Societal: Community	Stained glass windows	Anja van Leusden (caretaker)
Spiritual	Intangible: Societal: Knowledge	Maria Chapel	Individual churchgoer
Emotional (ind.)	Intangible: Societal: Association	Monastery garden	Individual churchgoer
Spiritual	Intangible: Societal: Use	Education for pastors and priests	Marco Groenen (architect)
Economic			
Non-Use	Intangible: Societal: Use	Original/current function	Government
Non-Use	Intangible: Societal: Use	Original/current function	Marco Groenen (architect)
Non-Use	Intangible: Societal: Use	Extention as a result of functional change	Government
Non-Use	Tangible: Area: Ensemble	Extention as a result of functional change	Government
Historic			
Historic-artistic	Tangible: Asset: Building	Bossche school	Parish
Historic-artistic	Tangible: Asset: Building	Bossche school	Marco Groenen (architect)
Historic-artistic	Tangible: Asset: Building	Bossche school	Independent source
Historic-artistic	Intangible: Asset: Character	Nave	Municipality
Historic-artistic	Intangible: Asset: Character	Finish of supporting structure	Municipality
Historic-artistic	Tangible: Asset: Building Element	Finish of supporting structure	Municipality
Historic-artistic	Intangible: Asset: Concept	Human scale	Marco Groenen (architect)
Historic-conceptual	Tangible: Asset: Building element	Round apse	Architectural historian
Historic-artistic	Tangible: Asset: Building element	Brick arches	Architectural historian
Historic-artistic	Tangible: Asset: Building element	Undecorated columns	Architectural historian
Historic-artistic	Tangible: Asset: Building element	Simple wooden roof	Architectural historian
Historic-artistic	Tangible: Asset: Building element	Closed character of the facade	Architectural historian
Historic-conceptual	Tangible: Asset: Natural element	Green space	Architectural historian
Aesthetical			
Conceptual	Intangible: Asset related: Character	Entry	Municipality
Conceptual	Intangible: Asset related: Concept	Entry	Marco Groenen (architect)
Conceptual	Tangible: Asset: Building Element	Entry	Marco Groenen (architect)
Notable	Tangible: Asset: Building Element	Wrought iron by the Brom brothers	Municipality
Notable	Tangible: Asset: Building Element	Wrought iron by the Brom brothers	Individual churchgoer
Notable	Intangible: Asset: Character	Aesthetics by architect Herman van Putten	Municipality
Notable	Intangible: Asset: Character	Aesthetics by architect Herman van Putten	Parish
Notable	Tangible: Asset: Building Element	Church bell	Individual churchgoer
Notable	Tangible: Asset: Building Element	Stained glass windows	Individual churchgoer
Notable	Tangible: Asset: Urban element	Square	Marco Groenen (architect)
Notable	Tangible: Asset: Building element	Round apse	Architectural historian
Age			
Workmanship	Tangible: Asset: Building element	Crucifix	Parish
Workmanship	Tangible: Asset: Building element	Wrought iron candlesticks	Parish
Workmanship	Tangible: Asset: Building Element	Church bell	Individual churchgoer
Workmanship	Tangible: Asset: Building element	Stained glass windows	Individual churchgoer

Value assesment

The diagram shows the important building elements that are mentioned by various stakeholders. The size of the circle represents the importance of the value, it shows how often it is mentioned in documentations.



Building elements

Floorplan

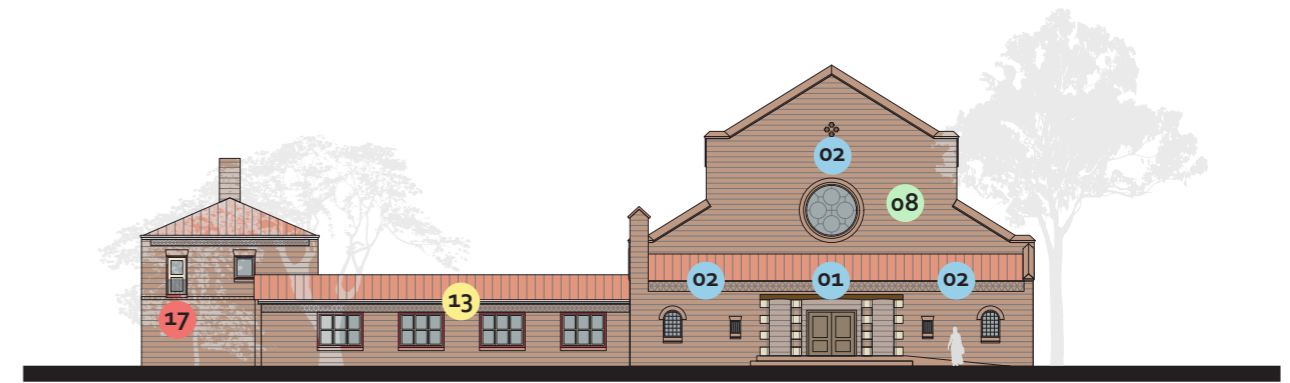
- High monumental value
 - 01 Entry; Proportions and aesthetical character
 - 02 Stained-glass windows; Aesthetical and craftsmanship
 - 03 Arches; Undecorated and materialisation arches
 - 04 Maria chapel; Spiritual association community
 - 05 Round apse; Romanesque concept
 - 06 Courtyard; Enclosure, emotional association and natural element
 - 16 Southern entry; Proportions and aesthetical character
- Positive monumental value
 - 07 Church bell; Manual church bell location
 - 08 Nave; Proportions and aesthetical character
 - 09 Altar; Spiritual meaning location
 - 10 Square; Urban meaning
- Indifferent monumental value
 - 11 Extensions; Historic relevance former function
 - 12 Sacristy; Spiritual relevance church function
 - 13 Wooden windows; Material value
- Negative monumental value
 - 14 Bridging extension; Materialisation and location
 - 15 External storage; Location



Building elements

Facades

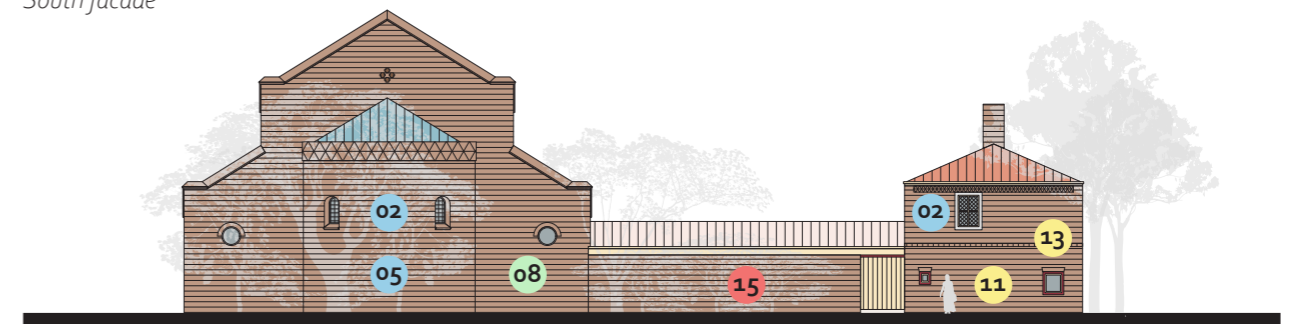
- High monumental value
 - 01** Entry; Proportions and aesthetical character
 - 02** Stained-glass windows; Aesthetical and craftsmanship
 - 05** Round apse; Romanesque concept
 - 16** Southern entry; Proportions and aesthetical character
- Positive monumental value
 - 07** Church bell; Manual church bell location
 - 08** Nave façade; Close character of the façade
- Indifferent monumental value
 - 11** Extensions; Historic relevance former function
 - 13** Wooden windows; Material value
- Negative monumental value
 - 14** Bridging extension; Materialisation and location
 - 15** External storage; Location
 - 17** Balcony; Irrelevant location



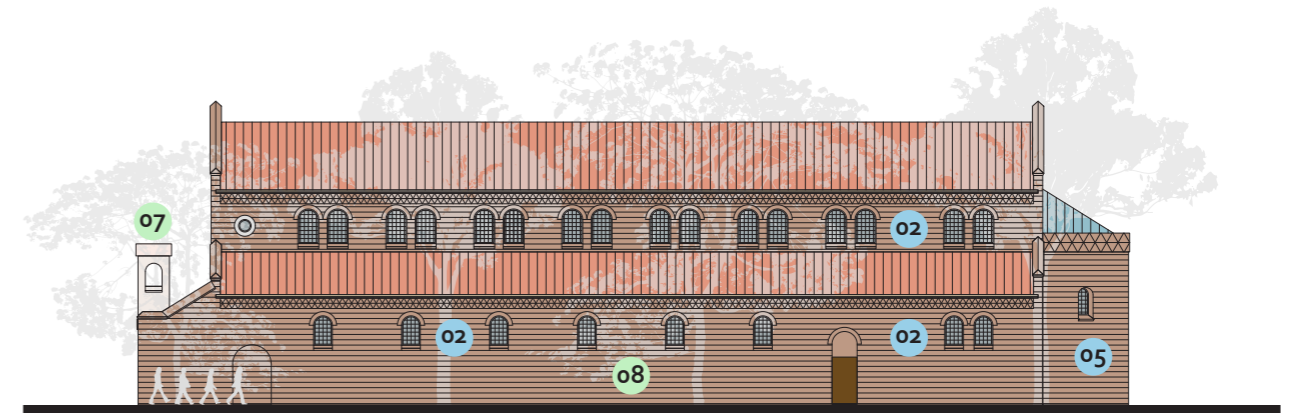
East facade



South facade



West facade



North facade

How can contemporary spiritual values help repurpose the St. Dominicus church?

The individual

Instead of collectively worshipping an external being, spirituality focusses on personal spiritual experiences.

Modern rituals

Modern rituals are reinterpreted to be more inclusive of various beliefs and separate spirituality from religion.

Architectural elements

Architecture can be a tool to help design more spiritual experiences.

Spiritual concepts

To help evoke spiritual experiences, a design must adhere to bigger spiritual concepts.

Spiritual architecture

The study on contemporary spirituality was conducted to understand the value and definition of spirituality for the redesign. The findings of this study function as a framework and clarify and substantiate the redesign process. In addition to this, various works of the architects Tadao Ando, Louis Khan, and Peter Zumthor have been analyzed for their spiritual architectural qualities. The list "10 Design Principles for Spiritual Architecture", as mentioned in the introduction of this paper, is based on the acquired information from this theoretical and analytical research.

The following case studies have been selected for their spiritual characteristics and their relation with the natural landscape. The analyses discussed in this section attempt to uncover the narrative that the architects intend to illustrate through their architecture. By observing the pre-determined and structured sequence of events, spaces, and movements, these narratives can be studied.

Some of the works of Tadao Ando, Louis Kahn, and Peter Zumthor, are analysed and compared by using this sequence to discover what elements make these specific buildings spiritual.



Example case studies

Spirituality in design

To facilitate more meaningful peak or spiritual experiences an individual must be connected to the self (sensuality), the social/cultural (humanity), and the environment (sustainability) as has been stated by Robert Birch and Brian Sinclair. These concepts of sensuality, humanity, and sustainability, can help in the design of more spiritual architecture. This section discusses the aesthetical qualities of these concepts, but the close relationship between the aesthetics and ethics of architecture should be considered when designing. To connect an individual to the self, a person must engage in all of the senses (hearing, smelling, touching, seeing and tasting). Through design, a richer experience can be created that generates an awareness of one's surroundings and encourages one to focus on the present.

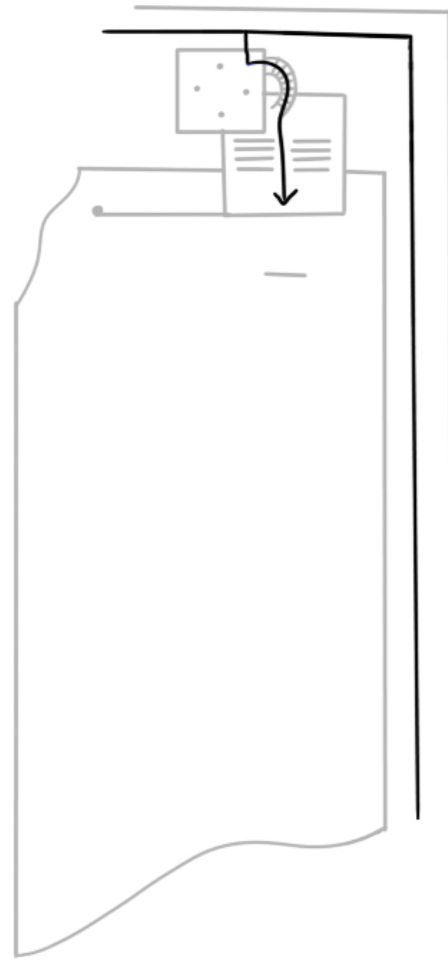
The social and cultural connection can arise from narrative and authenticity. The sense of authenticity and sacredness of a place derives from the significance attached to it through history. Truth is an important element when designing with narrative and authenticity in mind. For example, we can be honest or dishonest to our environment by living harmoniously with nature or exploiting it. Therefore, a building will become more honest with the environment when using natural materials. Using weathered materials can also evoke a feeling of impermanence and can imply a certain history or narrative of time. Monuments can also communicate a narrative by reminding a person of their place in the world and in the social and cultural context.

The importance of our connection to our environment has already been mentioned more than once. When describing the numinous as something bigger and beyond ourselves, the connection to nature is easily made. When experiencing a natural landscape it is hard not to feel a sense of the numinous, nature is what gives us life.

Using nature as a "model" for design can stimulate spiritual experiences. By designing a truthful and authentic replication of natural harmony and order a person can feel more integrated and unified with the natural world.

“ Architecture has the ability to turn geometric proportions into shivers, stone into tears, rituals into insights, light into joy, space into contemplation, and time into heightened presence ”

- J. Bermudez, 2015



Tadao Ando

Church on the water

Built in 1988
Shimukappu-Mura, Japan
Religious building

In the works of Tadao Ando the buildings are in direct contact with their surroundings. He captures and frames nature with his architecture. The reflective quality of water naturally leads to meditation and contemplation, while the geometric elements of the buildings lead the visitor through the different spaces of the building.

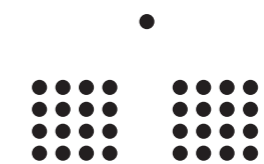
Movement

- Architecture guides user to destination
- Up to down
- Looking outward



Space

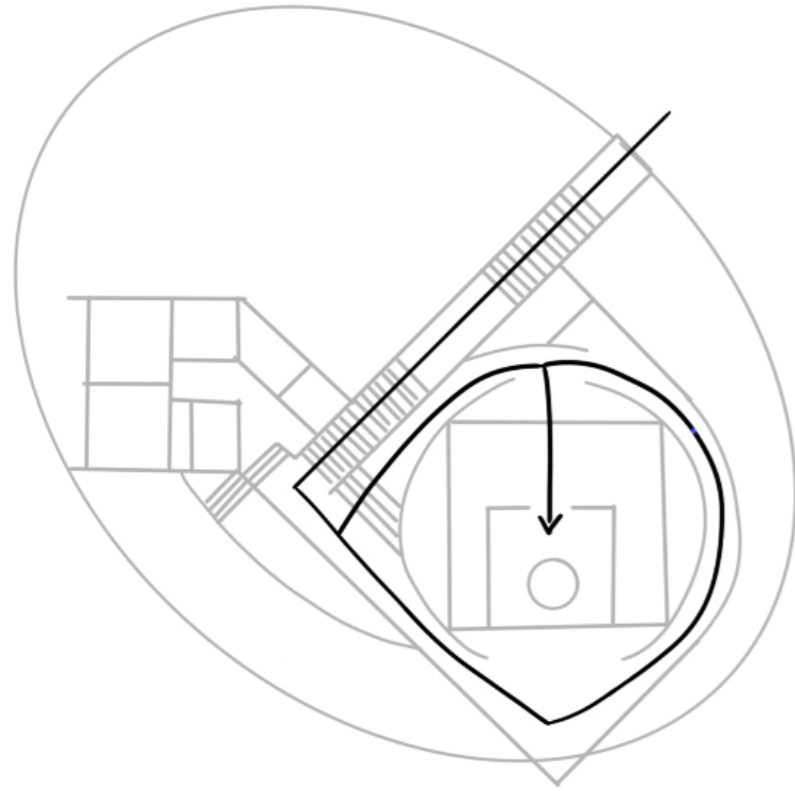
- Object in nature
- Reflection of water
- Framing nature
- Strong geometric forms
- Open



Users:
Individuals in a group

Event

- Chapel
- Mass
- Wedding ceremonies



Tadao Ando

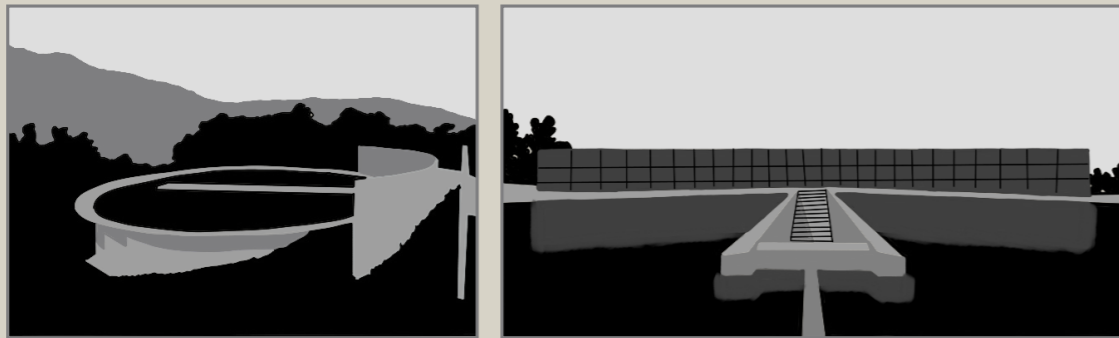
Water Temple

Built in 1990
Awaji Island, Japan
Religious building

He lets the user experience their surroundings by positioning and opening the buildings toward the infinite landscape. The buildings appear in their surroundings as heavy, concrete, ordered, and seemingly simple objects that contrast the immeasurable nature and provide the user with a sensorial experience.

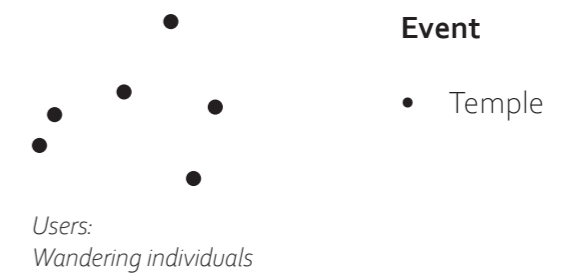
Movement

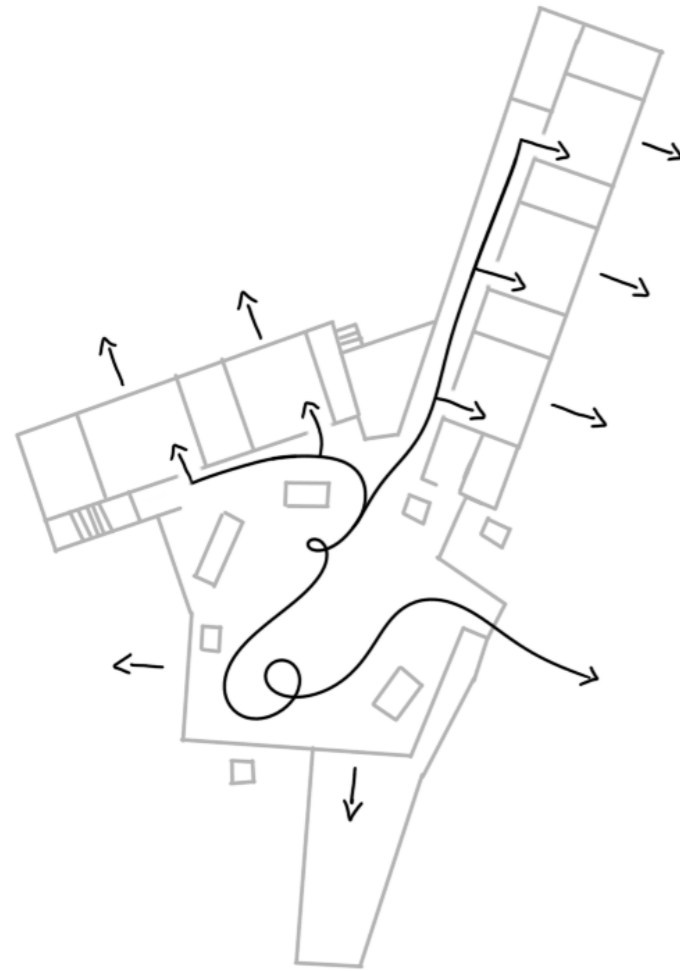
- Architecture guides user to destination
- Up to down
- Continuous routing (circle)
- Looking inward



Space

- Object in nature
- Reflection of water
- Strong geometric forms
- Closed





Peter Zumthor

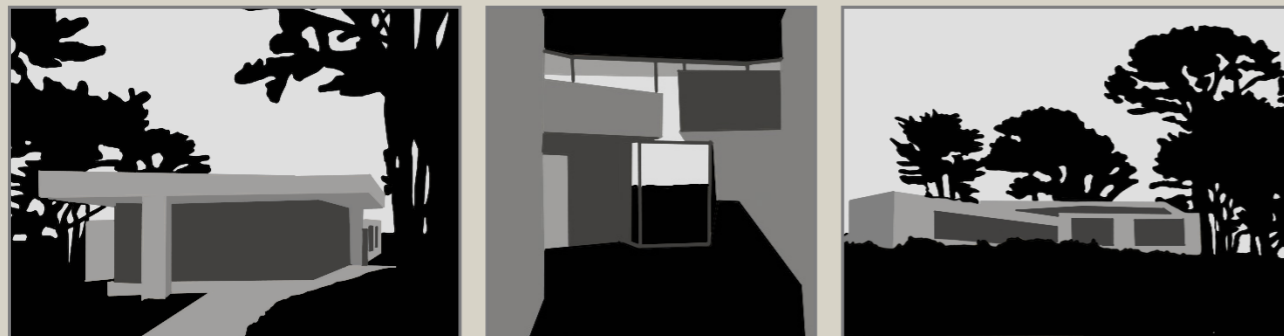
Secular Retreat

Built in 2018
Chivelstone, UK
Private house

Zumthor designed the Secular Retreat with rammed concrete, this technique gives horizontal stripes to the walls, both inside and out. The layout of the house is very simple, all organized on one story, where the residents share the kitchen and living room. This building frames views and celebrates the place.

Movement

- Architecture orientated towards landscape
- Transition space between outside/inside and rooms
- Free routing
- Looking outward



Space

- Object in nature
- Horizontality
- Collage of perspectives
- Open



Event

- Retreat
- Holiday residence



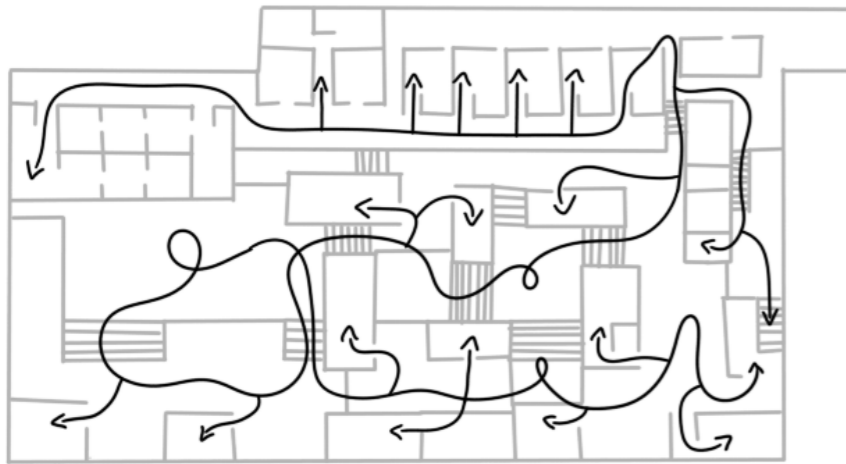
Users:
Individuals

Peter Zumthor

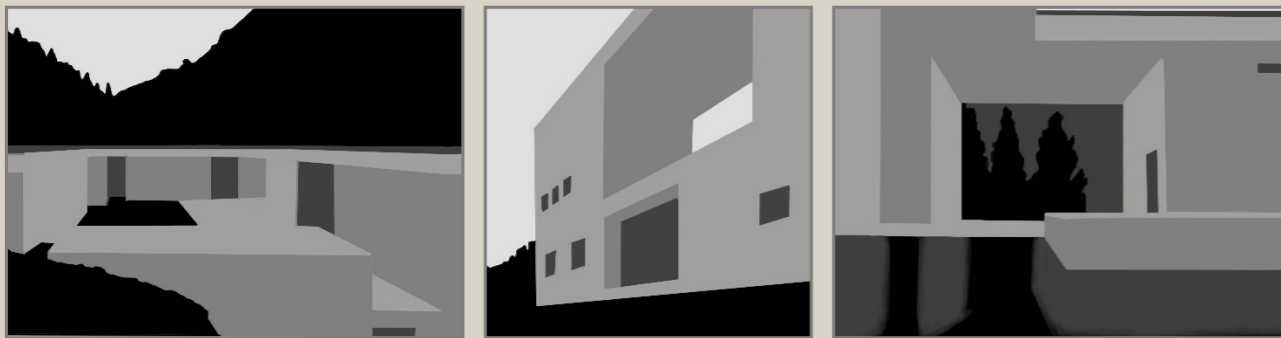
Therme Vals

Built in 1996
Switzerland
Wellness centre

The same horizontality in materials can be found in his Therme Vals where he used locally quarried Valser Quarzite slabs. This building frames views but also denies them at some points to provoke a sensuous experience. The layout of the building invites the user to explore.

**Movement**

- Transition space between rooms
- Free routing
- Looking inward

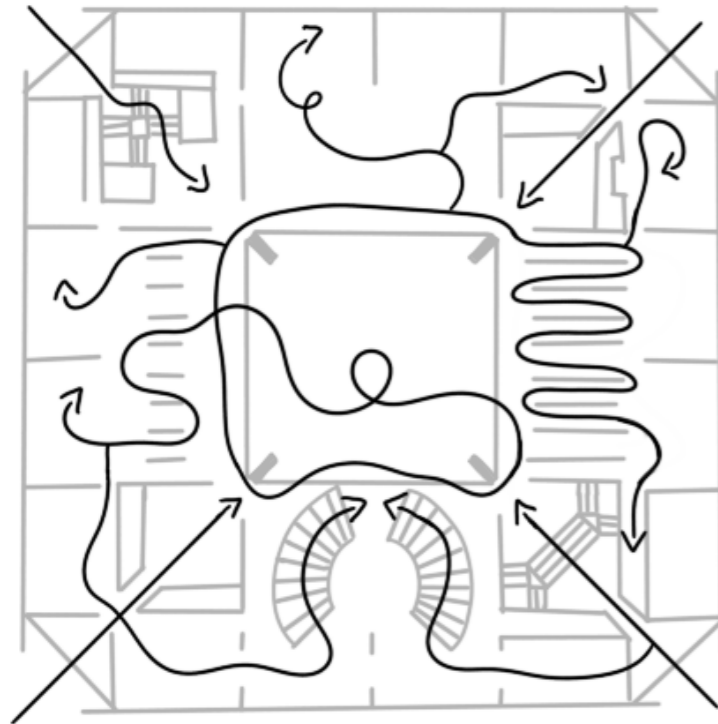
**Space**

- Object in nature
- Reflection of water
- Framing nature
- Horizontality
- Collage of perspectives

**Event**

- Retreat
- Wellness/spa
- Hotel





Louis Kahn
Exeter Library

Built in 1972
Exeter, US
Library

In the projects of Louis Kahn we see a symmetry in the building structure that helps the user understand the plan of the building and therefore helps them find their way. Upon entering Exeter Library the visitor finds himself in a large open space with strong geometric forms and light that comes in from the top and the sides of the building

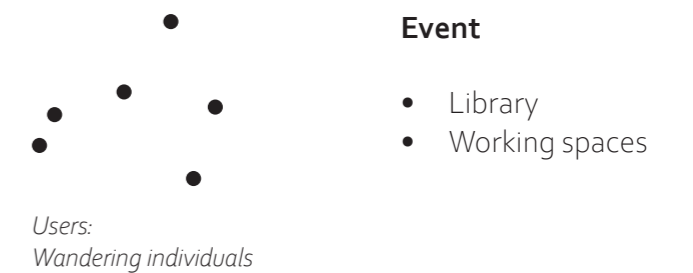
Movement

- Symmetrical floorplan
- Layered floorplan (different "rings")
- Free routing
- Looking inward



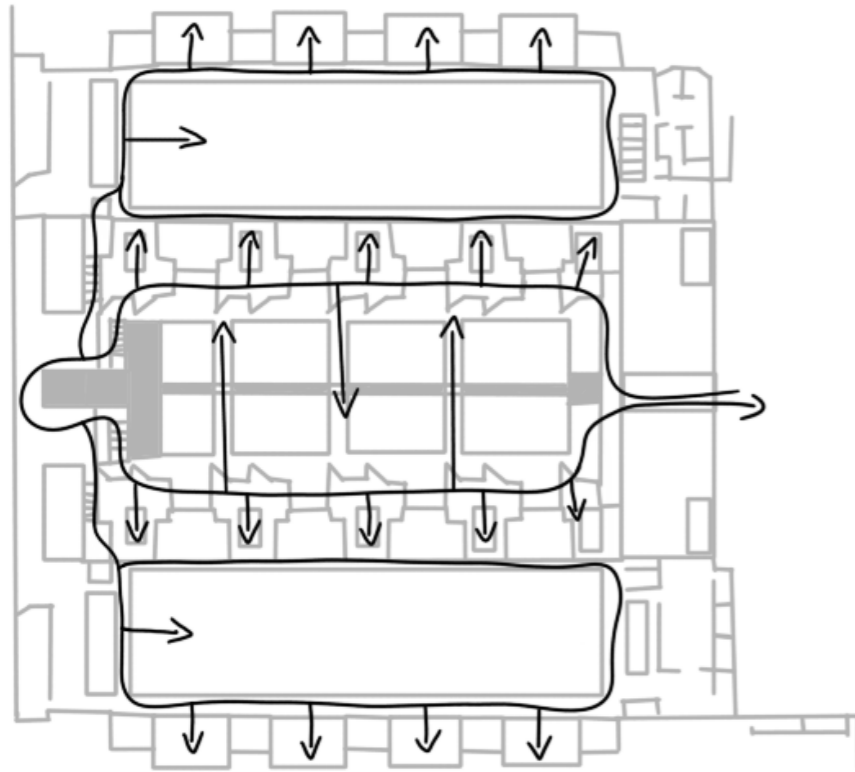
Space

- Symmetrical
- Rhythm in facade
- Strong geometric forms
- Closed



Event

- Library
- Working spaces



Louis Kahn

Salk Institute

Built in 1965
San Diego, US
University

Kahn used wood to contrast the stone and concrete to give a sense of warmth to the spaces. Salk Institute looks to the outside and faces the ocean. A thin channel of water divides the central space, drawing the visitor toward the horizon. The materials of the Institute are nearly identical in color, which gives the space a primitive and almost sublime monumentality.

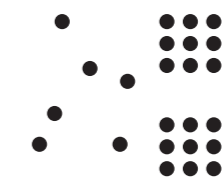
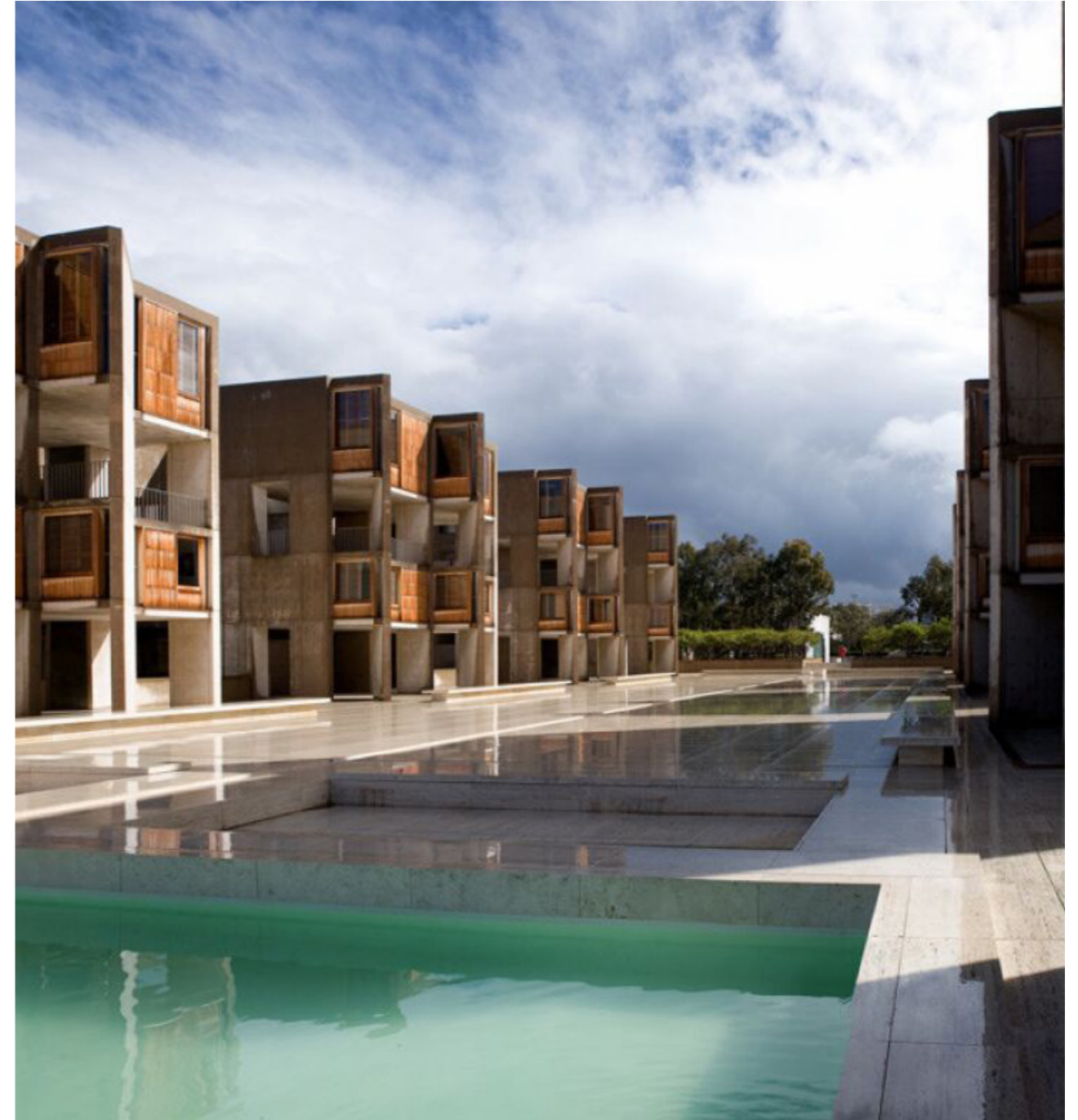
Movement

- Symmetrical floorplan
- Architecture guides user
- Structured routing
- Looking outward



Space

- Symmetrical
- Rhythm in facade
- Strong geometric forms
- Water as space divider/ guideline
- Closed



Users:
Individuals and groups

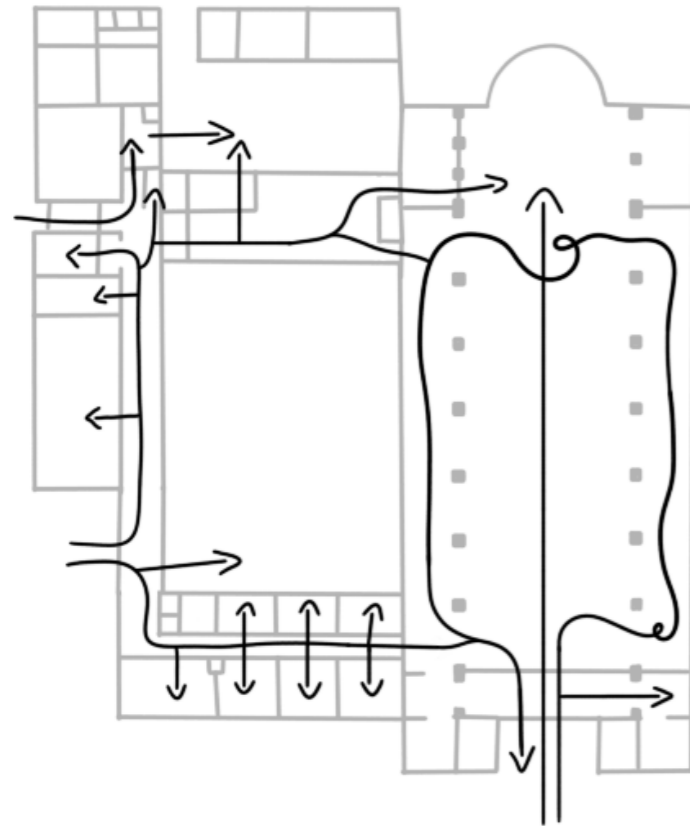
Event

- Laboratory
- Residences
- Working spaces

10 Design Principles for Spiritual Architecture

- 01** Use prominent geometric forms
- 02** Create at least one large and open space (inside or outside)
- 03** Frame views of the surroundings with care
- 04** Use homogeneous and solid materials that are long-lasting (unity, coherence)
- 05** Use natural and weathered materials (or materials that weather over time) to show impermanence as a contrast to the solid structure
- 06** Use reflective materials, such as water, to evoke meditation and contemplation
- 07** Create a route that allows for different flows through the building (intuitive wayfinding)
- 08** Consider the connection with nature/the environment when designing
- 09** Design with the history of the place and/or the building in mind
- 10** Vary light and shadow to experience the rhythm, scale, and spaces of a building





Sacred space

The space of the existing church has clear architectural elements that can be described as spiritual. We can recognize prominent geometric forms that determine a rhythm in the space; the large open space suggests something bigger and outweighs our human scale; the church is a monolithic structure that uses homogeneous and long-lasting materials; and the floorplan offers space for multiple functions.

Movement

- Straight/main routing through church
- Building divided in two parts
- Multiple entrances



Space

- Symmetrical
- Rhythm in facade
- Strong geometric forms (arches)
- Big open space
- Closed



Users:
Individuals and groups

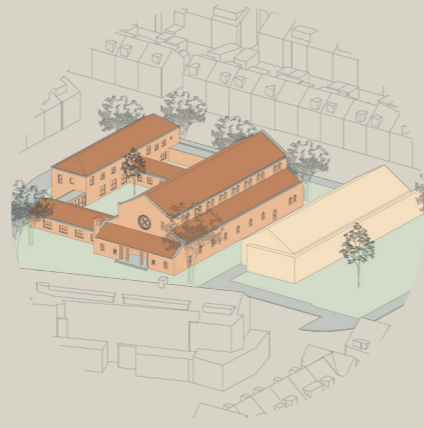
Event

- Mass
- Chapel
- Social gatherings
- Art expositions

Mass studies



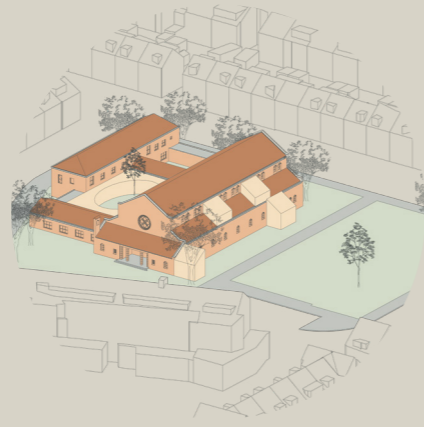
01 Top up



02 Parallel extension



03 Asymmetrical extension



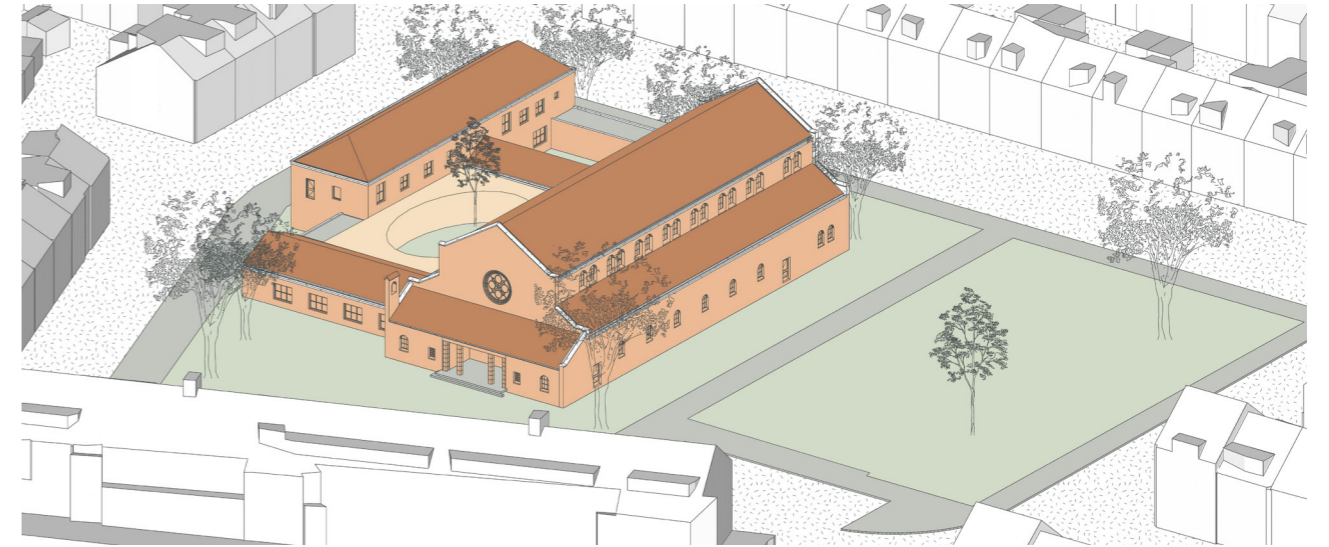
04 Small additions



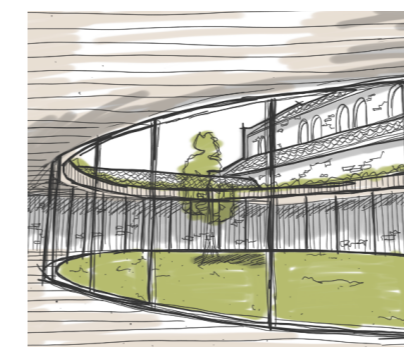
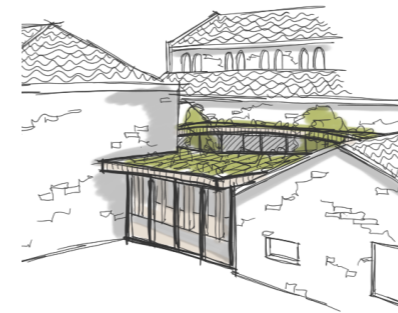
05 Symmetrical extension



06 Church top up



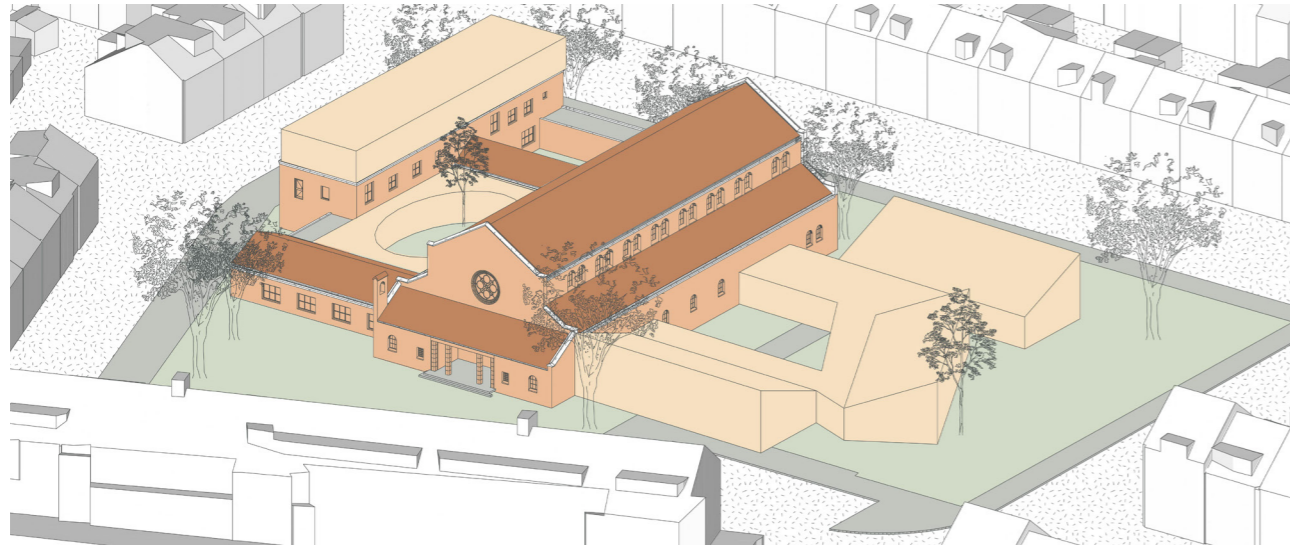
Central courtyard



Circular pathway around courtyard

Present design principles

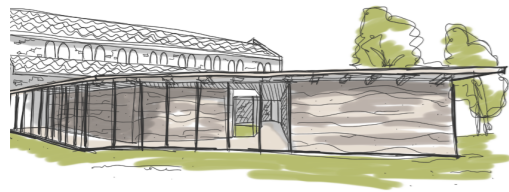
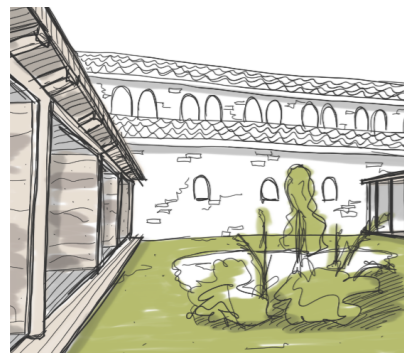
01. Use strong geometric forms
02. Design with the history of the place and/or the building in mind
03. Create at least one large and open space (inside or outside)
04. Frame views of the surrounding landscape with care
05. Use homogeneous and solid materials that are long-lasting (unity, coherence)
06. Use natural and weathered materials (or materials that weather over time) to show impermanence as a contrast to the solid structure
07. Use reflective materials, such as water, to evoke meditation and contemplation
08. Consider the connection with nature/the environment when designing
09. Create a route that allows for different flows through the building (intuitive way-finding)
10. Facilitate space for different events and structured sociality (programmed social activities)



Asymmetrical extension

Present design principles

01. Use strong geometric forms
02. Design with the history of the place and/or the building in mind
03. Create at least one large and open space (inside or outside)
04. Frame views of the surrounding landscape with care
05. Use homogeneous and solid materials that are long-lasting (unity, coherence)
06. Use natural and weathered materials (or materials that weather over time) to show impermanence as a contrast to the solid structure
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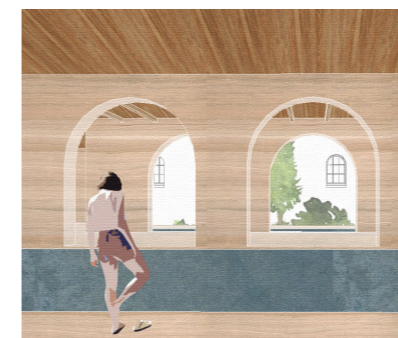
Impression of new extension



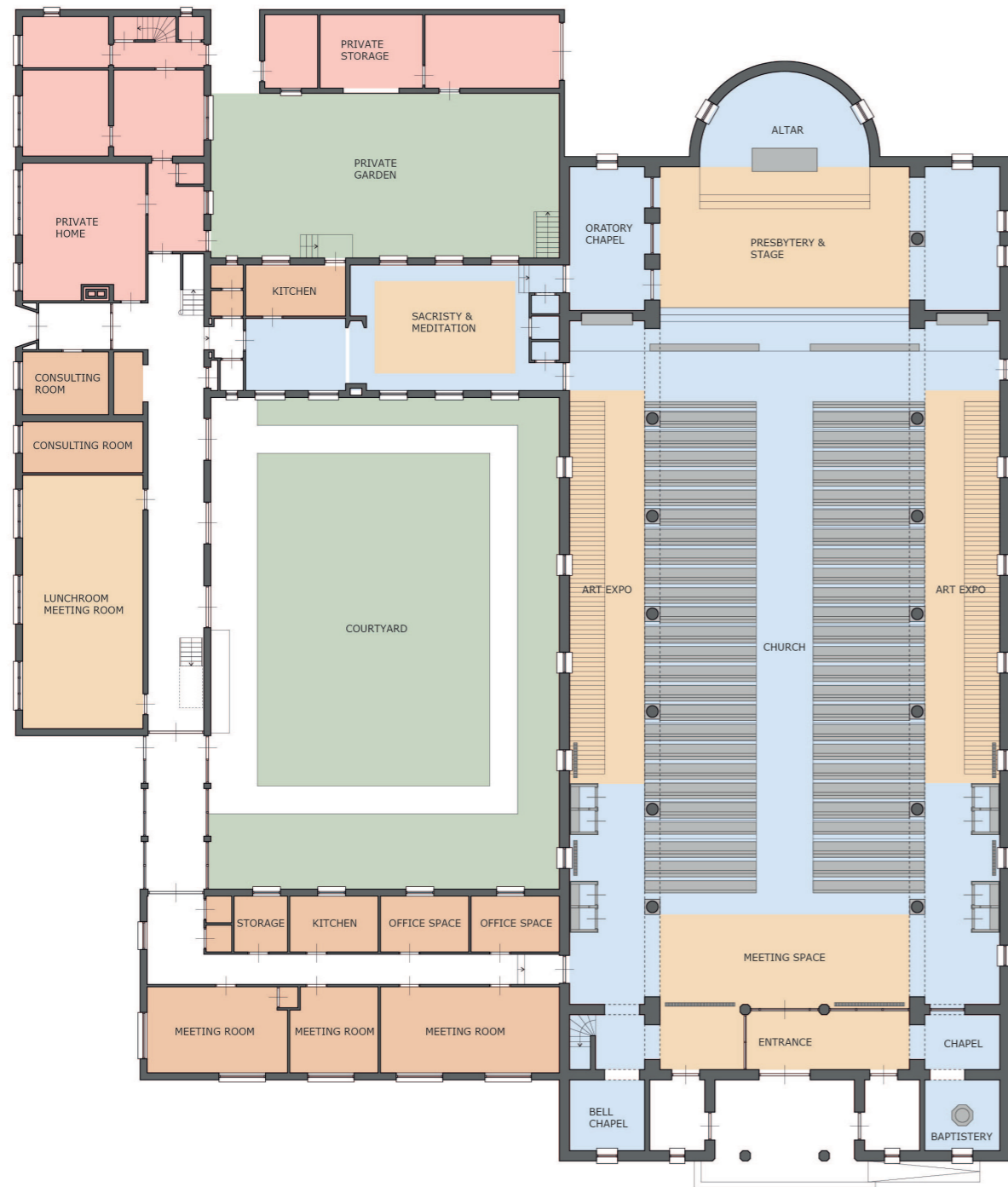
Symmetrical extension

Present design principles

01. Use strong geometric forms
02. Design with the history of the place and/or the building in mind
03. Create at least one large and open space (inside or outside)
04. Frame views of the surrounding landscape with care
05. Use homogeneous and solid materials that are long-lasting (unity, coherence)
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Impression of new extension



Current church functions

Church functions

- Sunday mass (weekly)
- visitation
- celebrations/holidays
- funeral ceremonies
- wedding ceremonies
- art expositions
- small concerts
- charity events
- Christian meditation (monthly)
- reading group (monthly)
- bible teachings (monthly)
- retreat days (4x a year)
- evening vigils
- language lessons for asylum seekers (weekly)
- organization of meals

Modern rituals

- mindfulness
- walking (nature)
- celebrations (holidays, birthdays)
- funeral ceremonies
- wedding ceremonies
- art expositions
- music and dance
- festivals
- meditation classes
- wellness
- yoga classes
- retreats
- coaching classes

Table 1. Comparison of functions

Modern rituals

According to Peter Versteeg, the shift from religion to spirituality resulted in more modern rituals that emphasized subjectiveness and intense personal experiences. These modern rituals are reinterpreted to be more inclusive of various beliefs and separate spirituality from religion. They are not attached to religious beliefs but can still provide spiritual experiences and a sense of community or belonging. So, including modern rituals in a program can help develop individual spirituality and offer a sense of belonging. A few examples of these ritual forms include meditation, yoga, and retreats or courses and meetings that are related for example to art, religion, and dance.

From Table 1, we can conclude that most church functions already concur with modern rituals. The main difference, however, is that the current functions are based on the use of explicit religious sacredness such as specific places, rituals, and objects that have been designated sacred in anticipation. Whereas modern rituals focus more on the personal experience of the spiritual which arises unintentionally from the nature of the individual experience rather than its designated intentions. The challenge is then to convert those existing functions to accommodate more subjective experiences. The spaces in the church were organized to enable strict adherence to the sequence of movements necessary for the rituals. So, considering that within sacred space form follows function, to achieve this, a change in the structure of the church building is required.

Ritual space

The church is a place that serves Christian rituals and embodies the divine. These sacred rituals engender an understanding or reminder of God. The spaces in a church are merely devices for ritual display. The layout of the church consists of a sequence of spaces in which rituals take place. Entering the sacred space initiates a series of rituals in which the presence of God can be felt. Here the divine is expressed in the experience of size, lighting, acoustics, incense, and materiality of the space, but also in the symbols and decorations, such as a cross, candles, water, or special furniture, that indicate an encounter with the sacred. These various symbols and objects are an instantly recognizable part of the ritual space. This is especially true for the more formal and official rituals that occur in the Mass. The Eucharist (last supper), takes place in the most sacred space of the church, the apse, and is the central moment of the Mass. It is therefore self-evident that the layout of the church is oriented toward this place. The Eucharist derives from a domestic ritual of breaking bread and drinking wine where the apse represents the triclinium: a formal dining room in early Roman houses. The arches, vaults, and domes in the church emphasize the idea of 'interior' and define the sacred ritual space.

As mentioned before, these spaces, rituals, and objects have been designated sacred in anticipation and are a manifestation of an external divine being. Spirituality on the other hand looks inward to oneself and manifests itself in the individual experience of the divine. It is considered to be subjective and therefore more inclusive and open than the traditional Christian

religion. The new design should represent these notions of spirituality as opposed to the notions of religion. This starts with the structure of the building that has been constructed to serve the Christian rituals. The St. Dominicus church is an example of the Christian Basilica, which is the main archetype for a Christian place of worship and originally derived from the Roman basilica. However, the early Roman basilica was not meant to be sacred, it was intended for formal and informal public gatherings. Unlike the Christian church, the Roman basilica was accessible from all sides and had a more open structure, without a specific direction (Figure 1). The proposed design intervention encapsulates the shift from religion to spirituality by intercepting the designated sacred space. This results in a divided space that no longer serves one direction with specific places for designated collective rituals but provides an open structure that allows space for individual experiences.

Within this structure, space is made for modern rituals that help evoke individual spiritual experiences. These rituals will take place in a secure and neutral environment organized as a retreat. The retreat will function as a space within the city, a sanctuary enclosed by walls, a sacred space that is a temporal interruption of the everyday. The extension that is needed to facilitate the retreat residences will therefore, together with the previous extension of the church, function as the wall that encloses the innermost spiritual space (Figure 2). In pursuance of maintaining parts of the historic and spiritual values of the existing church building, the current functions and spaces are modified to adhere to modern rituals.

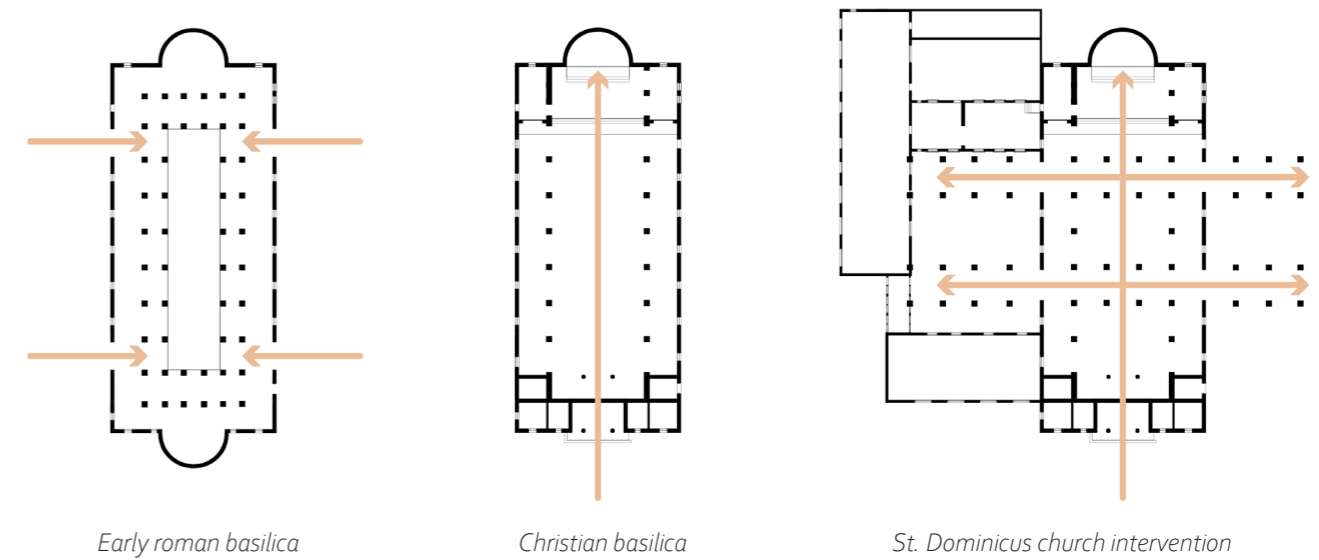


Figure 1 The adaptations of the basilica archetype

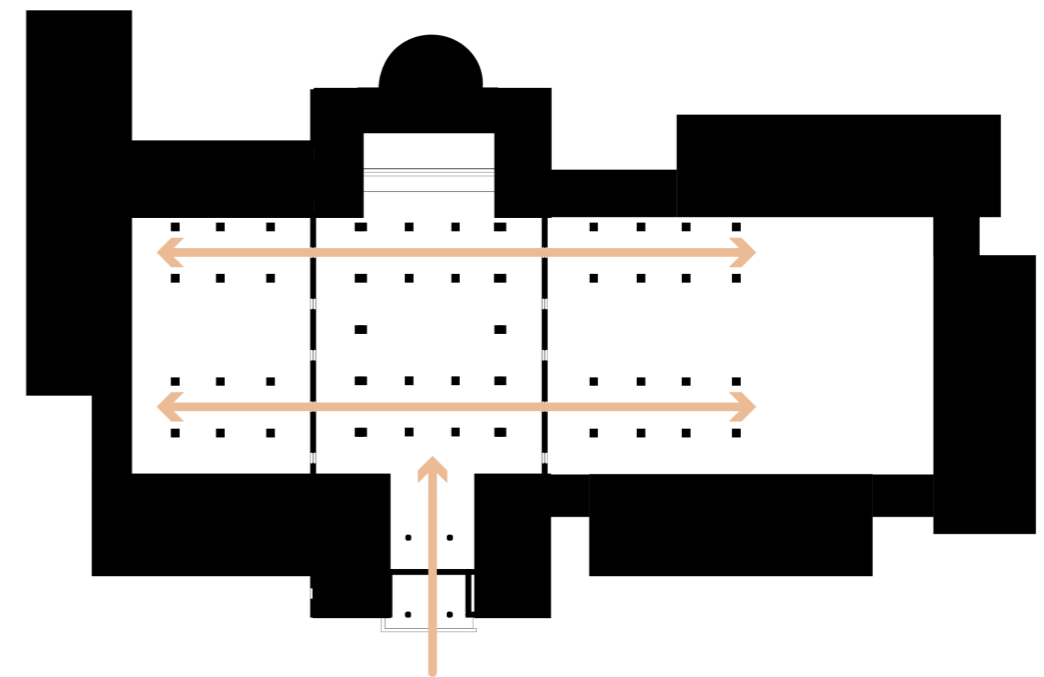
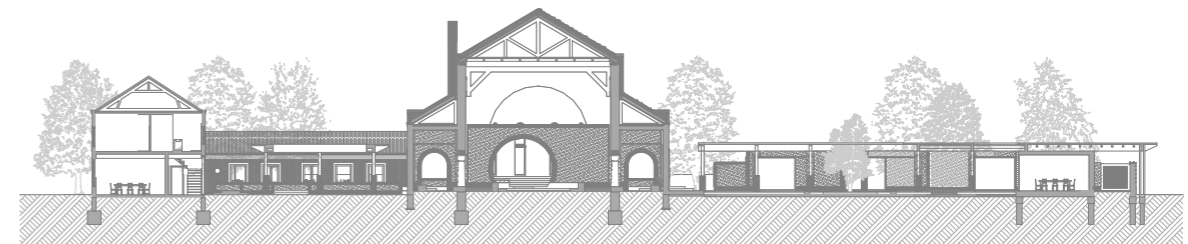
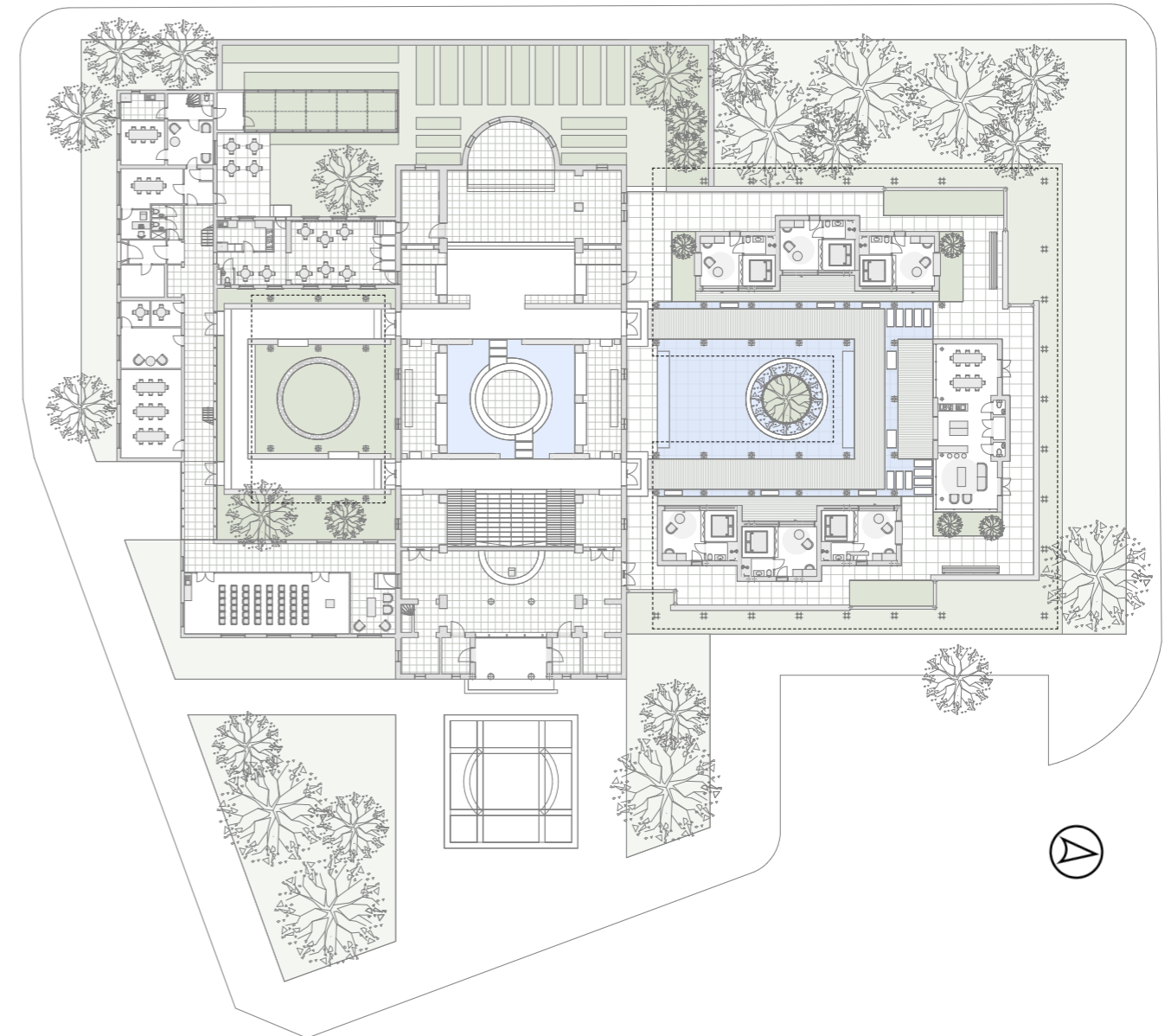


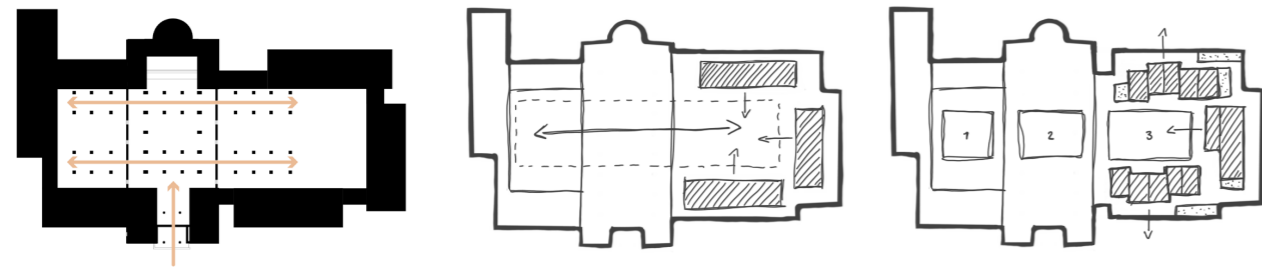
Figure 2 A sanctuary enclosed by walls

Sustainability, Humanity and Sensuality

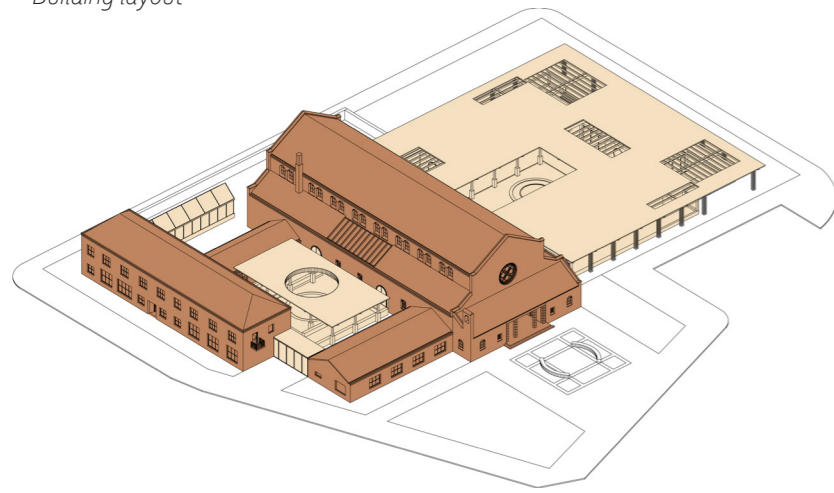
The design tells a story about how we should live in harmony with our natural environment, ourselves and others. It encapsulates the shift between religion and spirituality by illustrating the individual, impermanent, and imperfect nature of the spiritual in contrast to the collective, permanent, and perfect structure of religion.



Final redesign for the St. Dominicus church



Building layout



- Religious, old, permanent
- Spiritual, new, impermanence

Building layout

The redesign encapsulates the shift from religion to spirituality. It illustrates the individual, impermanent, and imperfect nature of the spiritual in contrast to the collective, permanent, and perfect structure of religion. Contrary to praying and worshiping an external god, this design emphasizes the main concepts of spirituality as described by Architecture professor Brian R. Sinclair: sensuality, humanity, and sustainability. The concepts relate to the modern rituals and functions that can be found in the three different areas formed by the building structure (Figure 3).

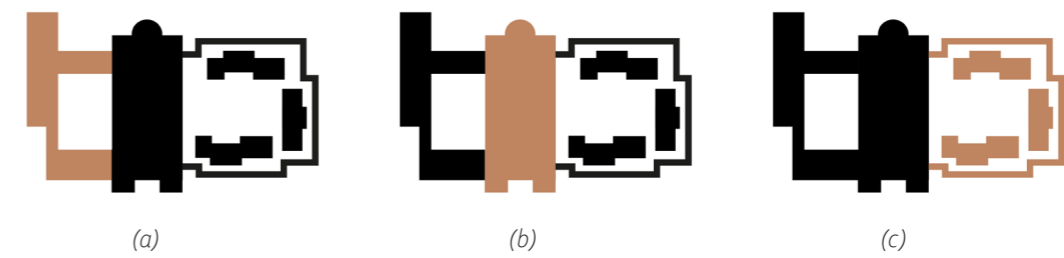
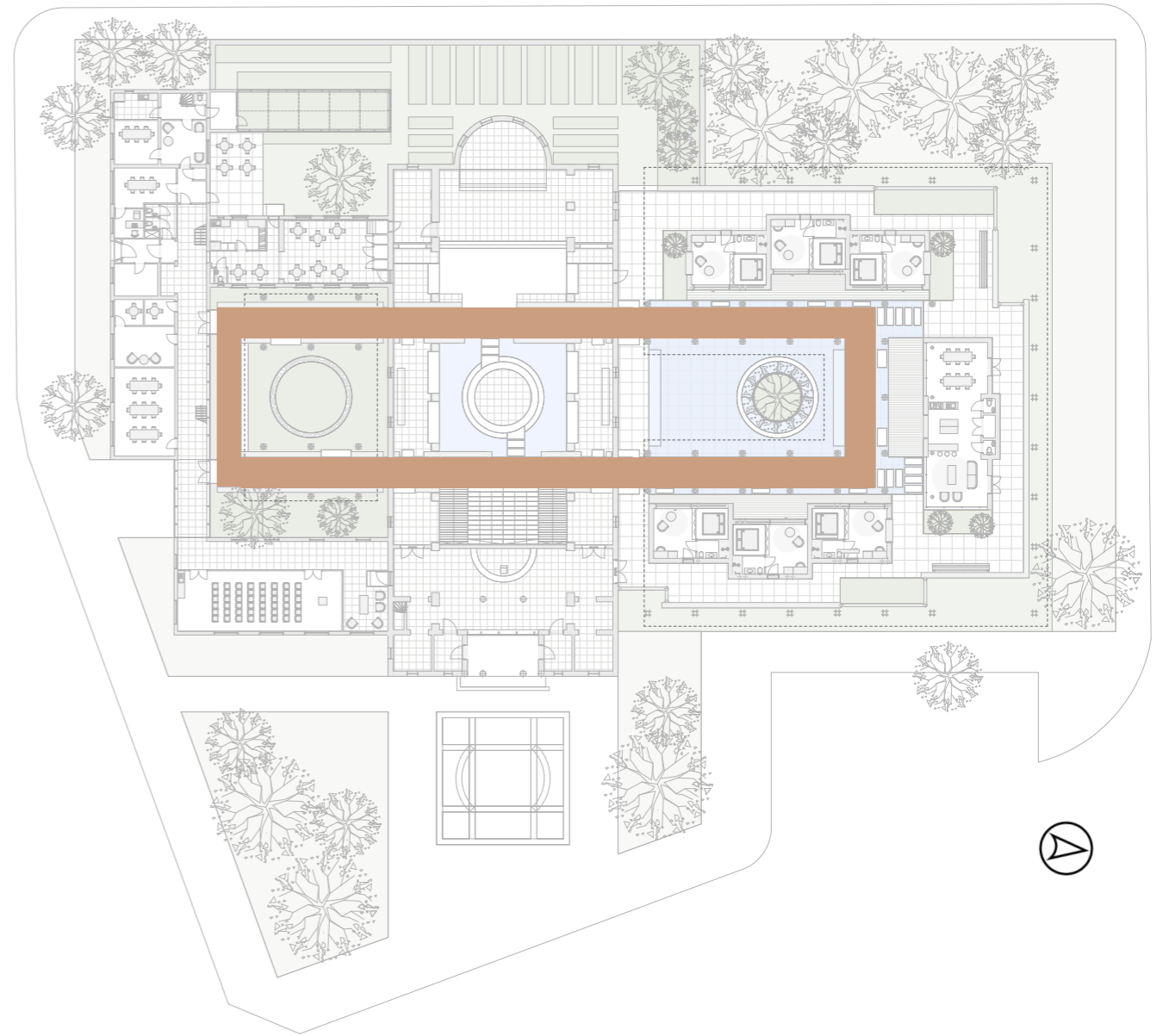
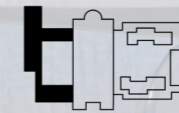


Figure 3 The three areas of (a) sustainability, (b) humanity, (c) and sensuality

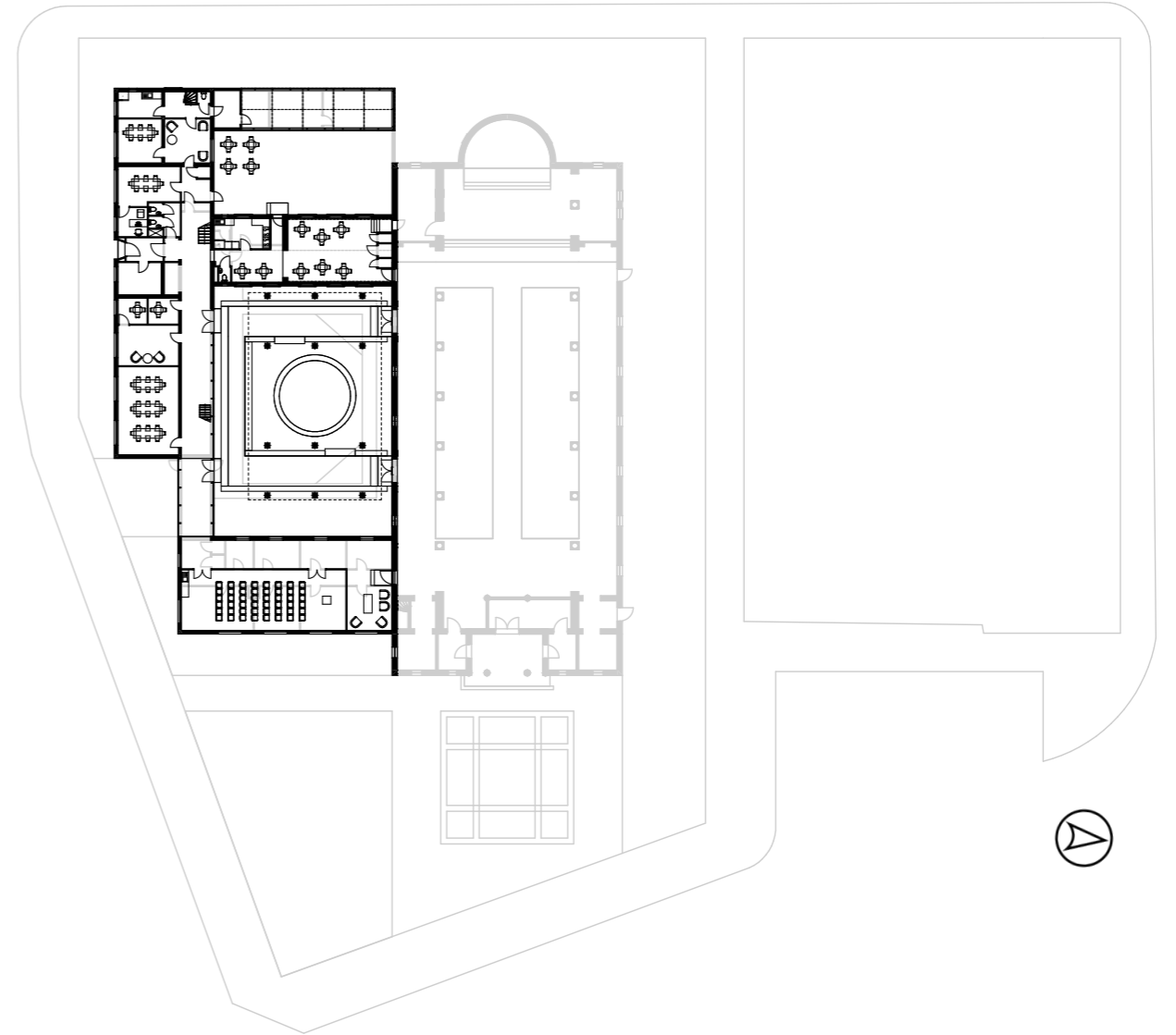
The Monastery

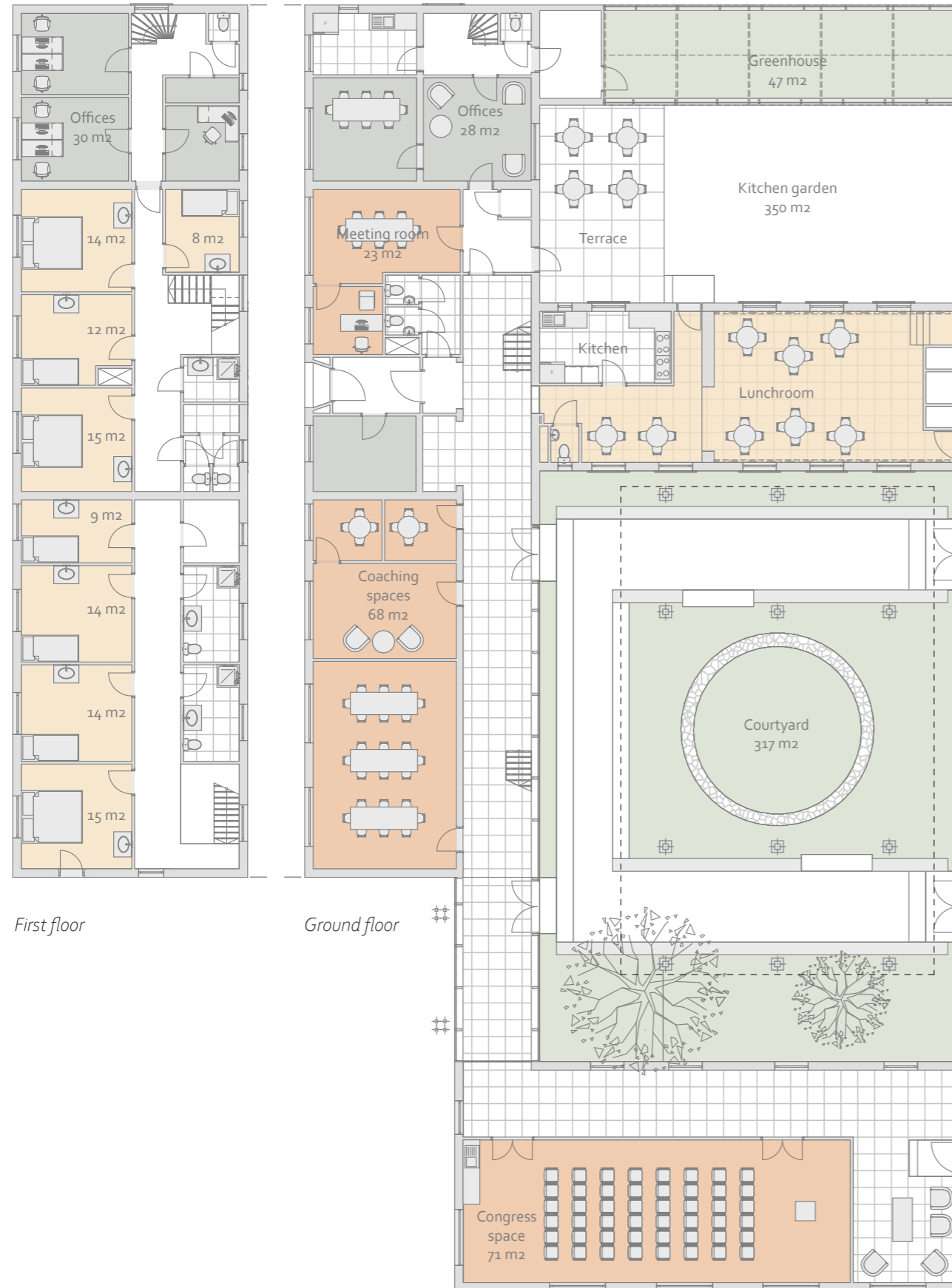
The Monastery retreat is characteristic of the concept of sustainability. Here visitors can learn about and explore their spiritual side and interact with nature. This place, where originally monks devoted their lives to God through prayer and work, can now be used similarly by visitors in search of the spiritual. It will provide space for coaching and mindfulness classes, short stay rooms, a lunchroom, a congress space, a courtyard garden, and a kitchen garden where nature takes center stage. When describing the numinous as something bigger and beyond ourselves, the connection to nature is easily made. Landscape architect and artist Rebecca Krinke describes that when experiencing a natural landscape it is hard not to feel a sense of the numinous, nature is what gives us life. Nature is central to the courtyard garden and the kitchen garden. Visitors can work in the kitchen garden to connect with and become more aware of the natural world.



SUSTAINABILITY

To connect with the environment





Kitchen garden



Lunchroom



Glass passageway

Monastery retreat

In the monastery, visitors can attend coaching/mindfulness classes and congresses and use the lunchroom, courtyard garden and kitchen garden, that offer a peaceful atmosphere. In this retreat area, visitors will stay in the old rooms of the monks that used to reside here. These rooms all share bathrooms and are situated on the first floor of the old monastery. During this short stay, visitors are provided with the opportunity to live in a different rhythm in order to experience the spiritual.

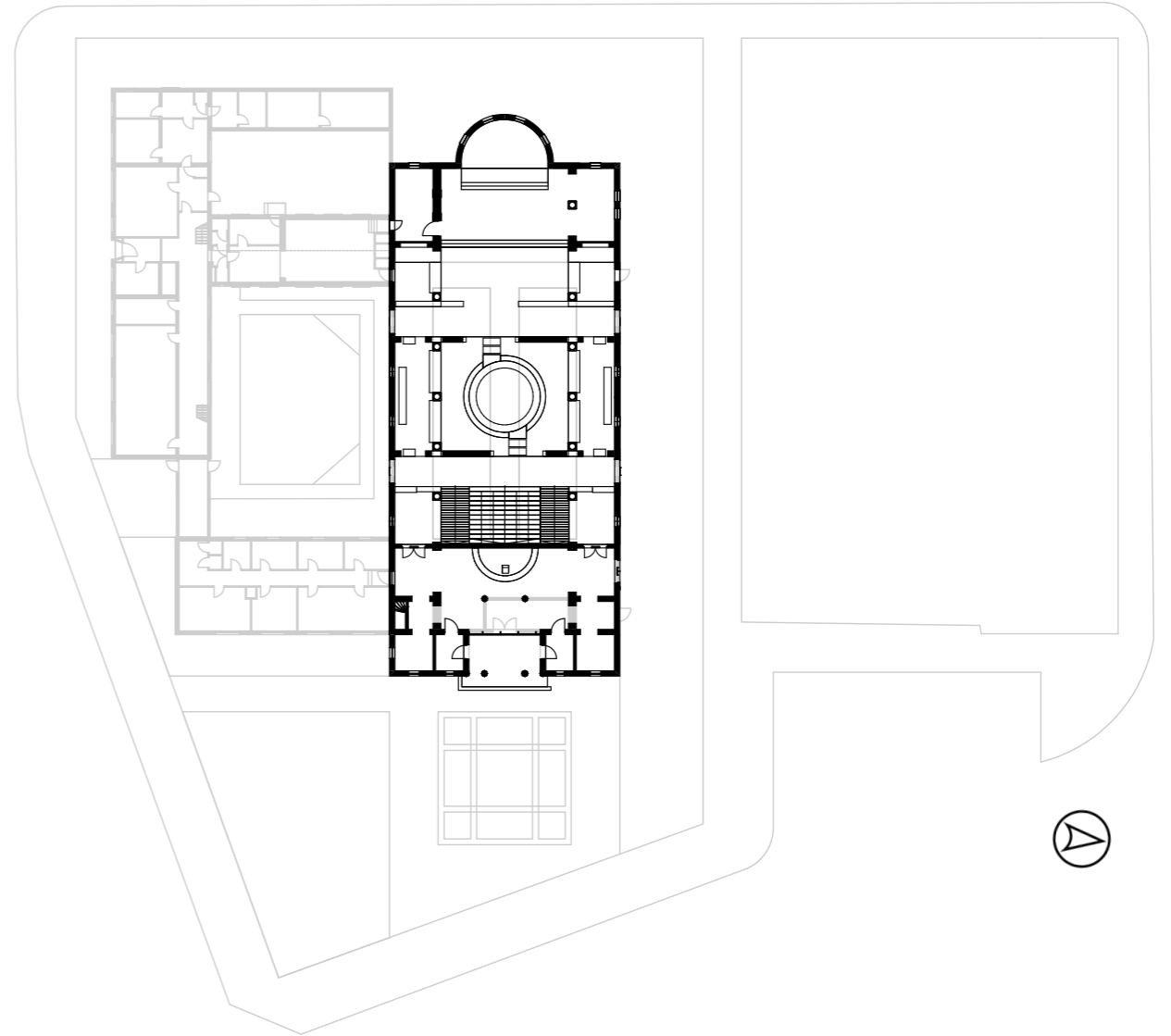
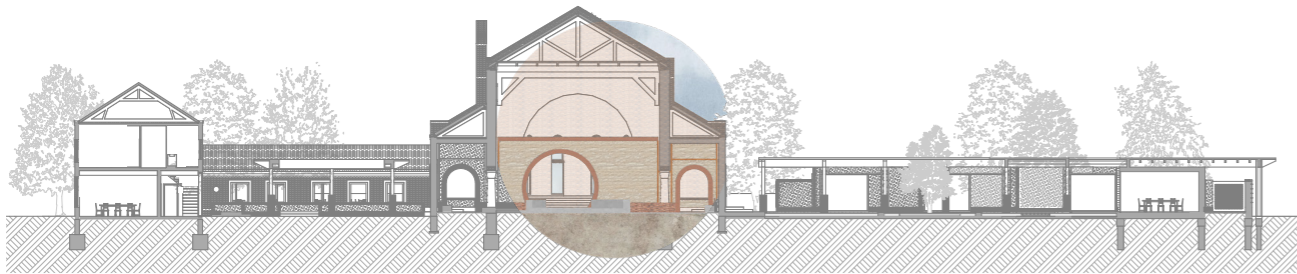
While residing in the retreat, visitors can work in the kitchen garden/greenhouse. This garden provides the vegetables and fruits that can be consumed in the lunchroom. The lunchroom is located in the old sacristy, where visitors can now share their meals.

The new glass passageway connects the surrounding monastery buildings with the courtyard where a large circular opening draws the attention of the visitors. Light and rain fall through the circle into the centre courtyard and can evoke a sense of serenity.

The Church

The church space is characteristic of the concept of humanity. The social and cultural connection can arise from narrative and authenticity. A place's sense of narrative and authenticity derives from the significance attached to it through history. Using weathered materials or materials that weather over time can evoke a feeling of impermanence and can imply a certain narrative over time. A sense of impermanence can also arise from flexibility and adaptability in the program of space. This social and cultural connection is made through the adaptation of the historic church building. This most sacred space of the building which was used for explicit collective rituals and worshipping will continue to be a place where social and cultural events are hosted. The multifunctional space will accommodate functions such as art expositions, small concerts, and gatherings, and will also serve other functions such as meditation and yoga classes.







Main entrance



Tribune staircase



Side aisles

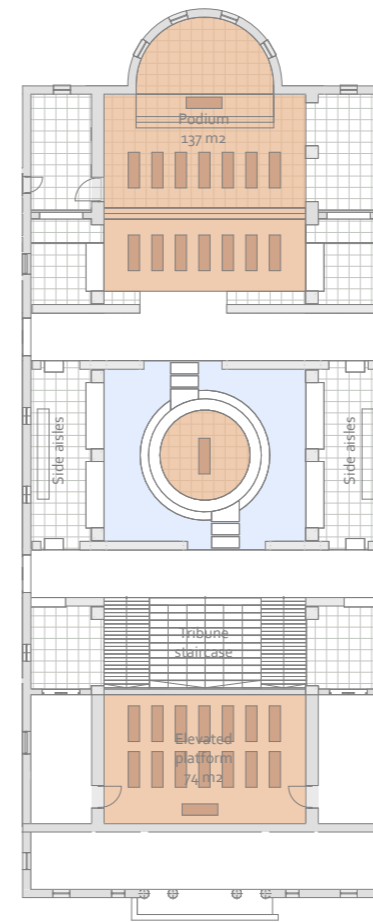
Multifunctional space

The church becomes a multifunctional space that can be closed off if necessary. If no activities occur, this space can be used for personal contemplation or meditation. Not all activities will take place at the same time, the space can be used as needed.

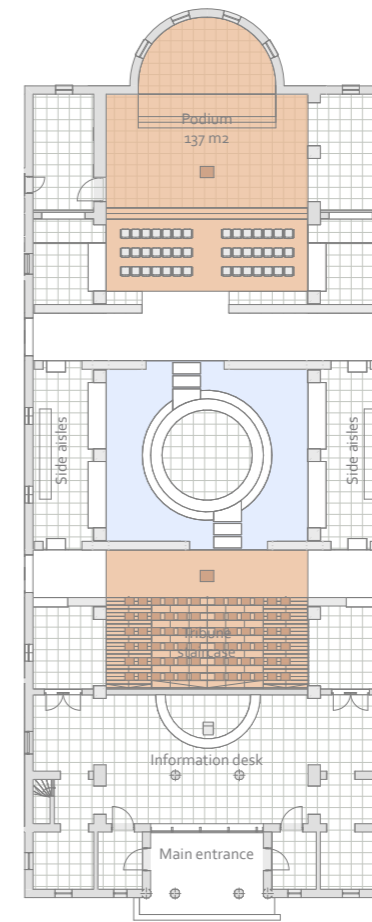
All visitors enter the retreat through the main entrance. This dark and cramped place is the gateway towards the spiritual and the visitor leaves the outside world behind.

The staircase in the central area of the church is made from the old church benches will function as seating area for concerts and talks.

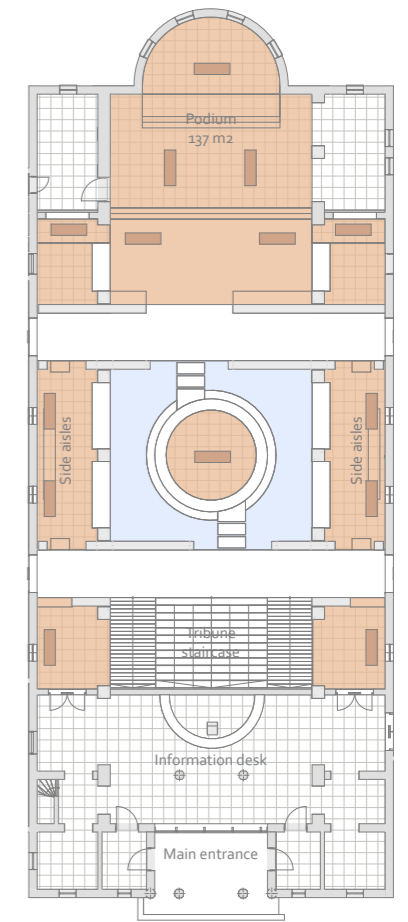
The side aisles are a secondary routing that looks towards the inner, most spiritual space of the church. A skylight was added that allows more light to enter the centre of the church.



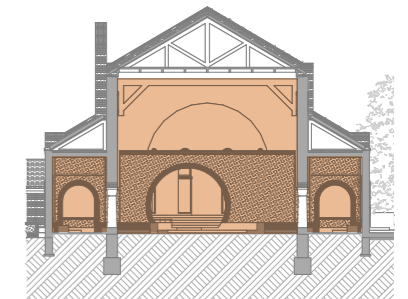
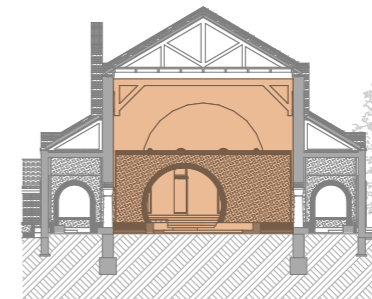
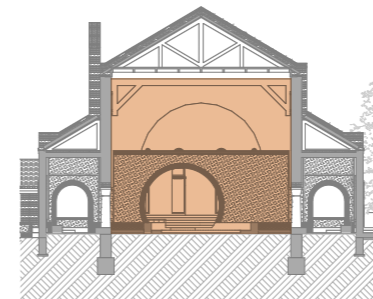
01 Meditation and yoga



02 Talks and concerts

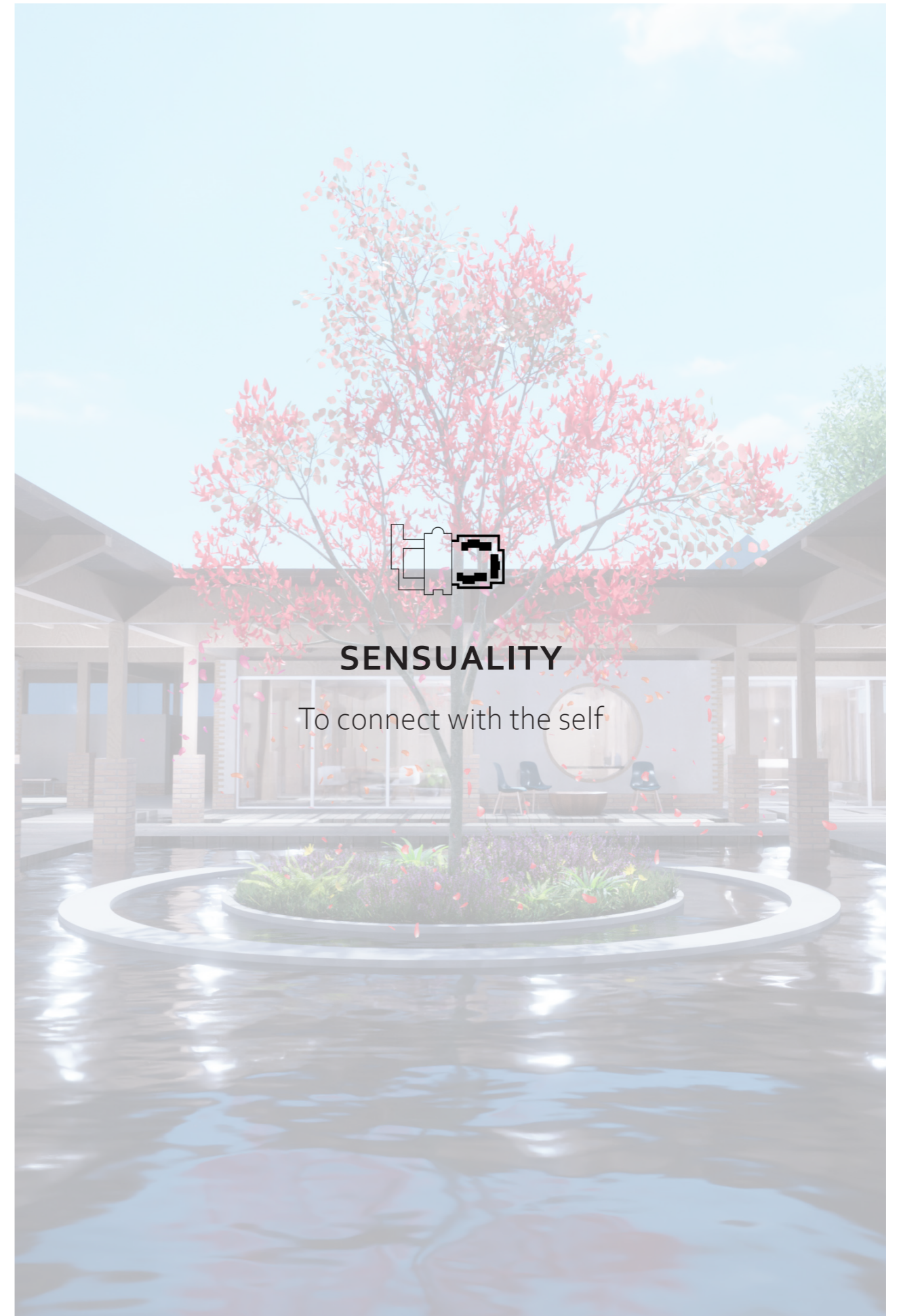


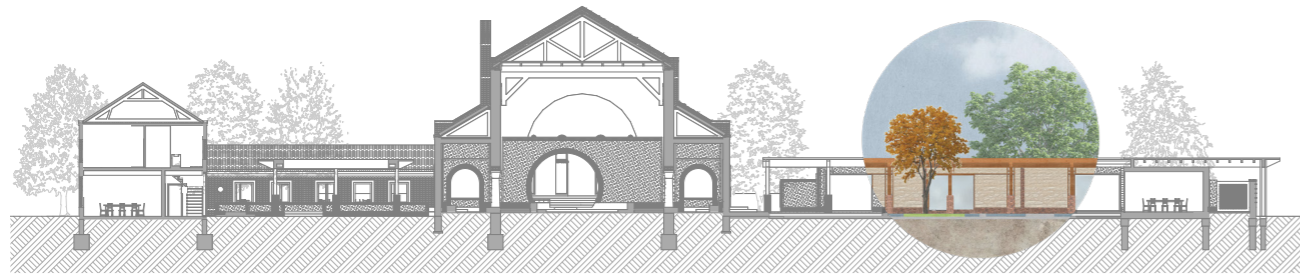
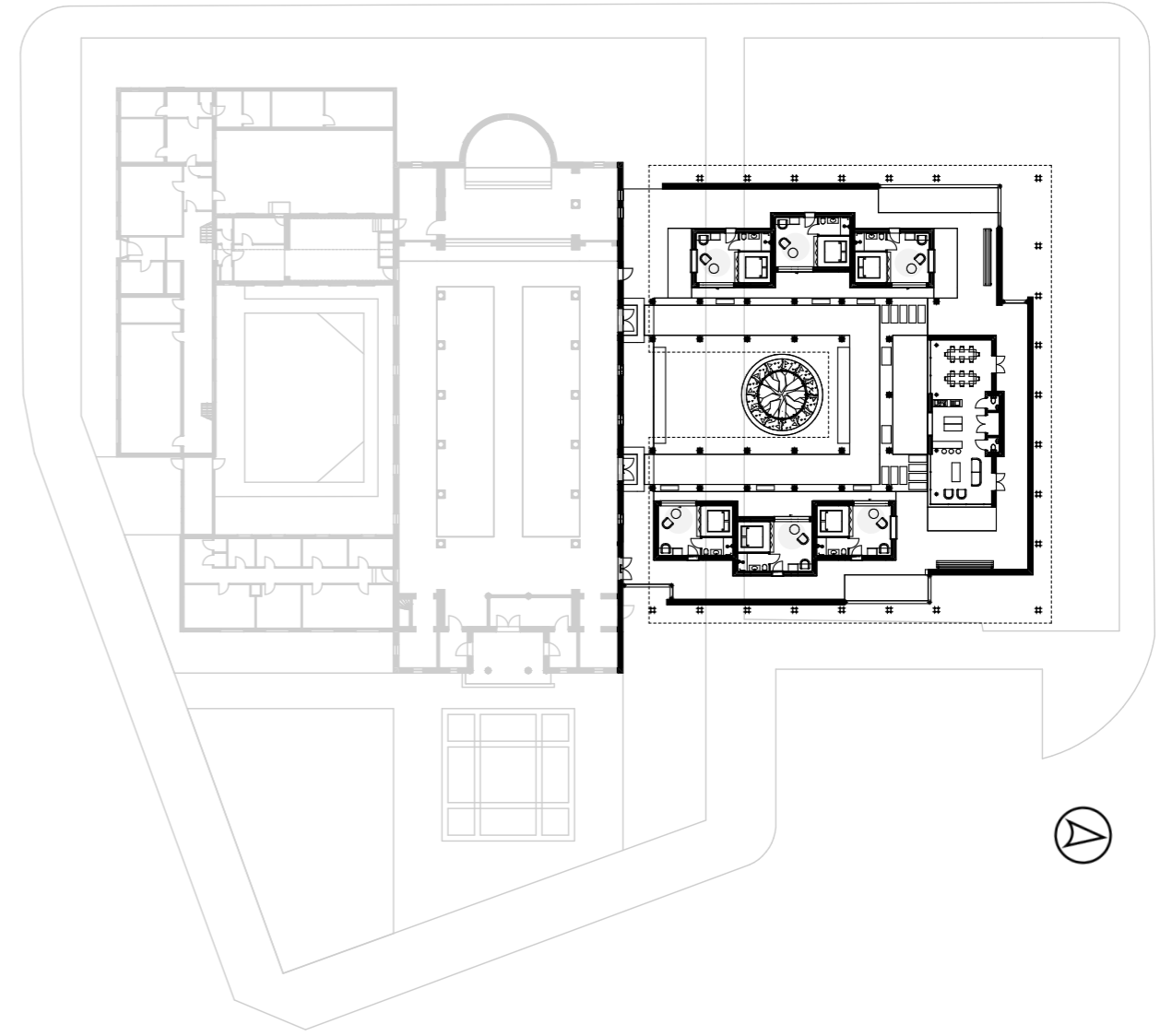
03 Expositions

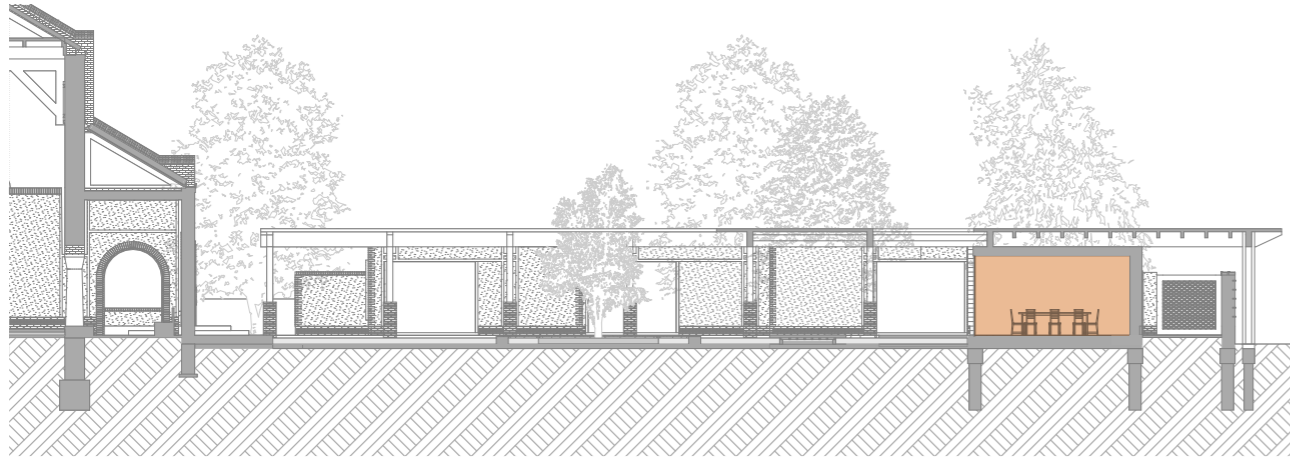


The Circular Retreat

The Circular Retreat is characteristic of the concept of sensuality. To connect an individual to the self, a person must engage in all of the senses. Through design, a richer experience can be created that generates an awareness of one's surroundings and encourages one to focus on the present. This means using materials, textures, and light in a way that is authentic and gives meaning to a building. The name Circular Retreat represents the connection with nature and the rhythm and continuity of its seasons. The retreat is designed to acclimate to the different seasons to reconnect with the natural world and its rhythm. Visitors are encouraged to use the available spaces and natural resources in different ways throughout the seasons to become more aware of their natural surroundings.

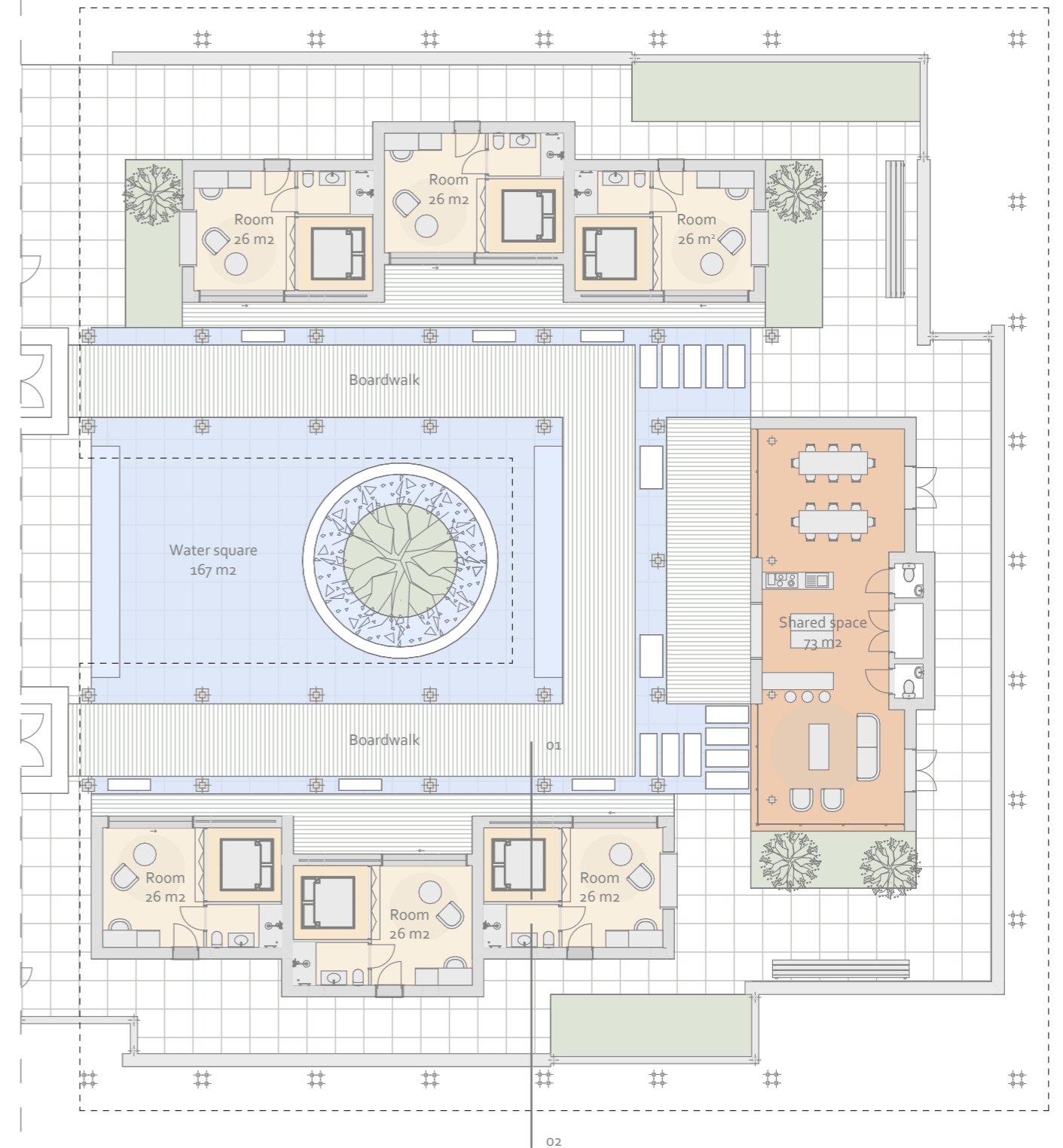






The Circular Retreat

This part of the retreat will provide the visitor with a unique stay. Here they will have to live with the rhythm of nature in order to create awareness of their surroundings and their own way of life. This is part of the spiritual experience of the retreat. In this area, the visitors have their own separate rooms and a shared living room where they can eat together.

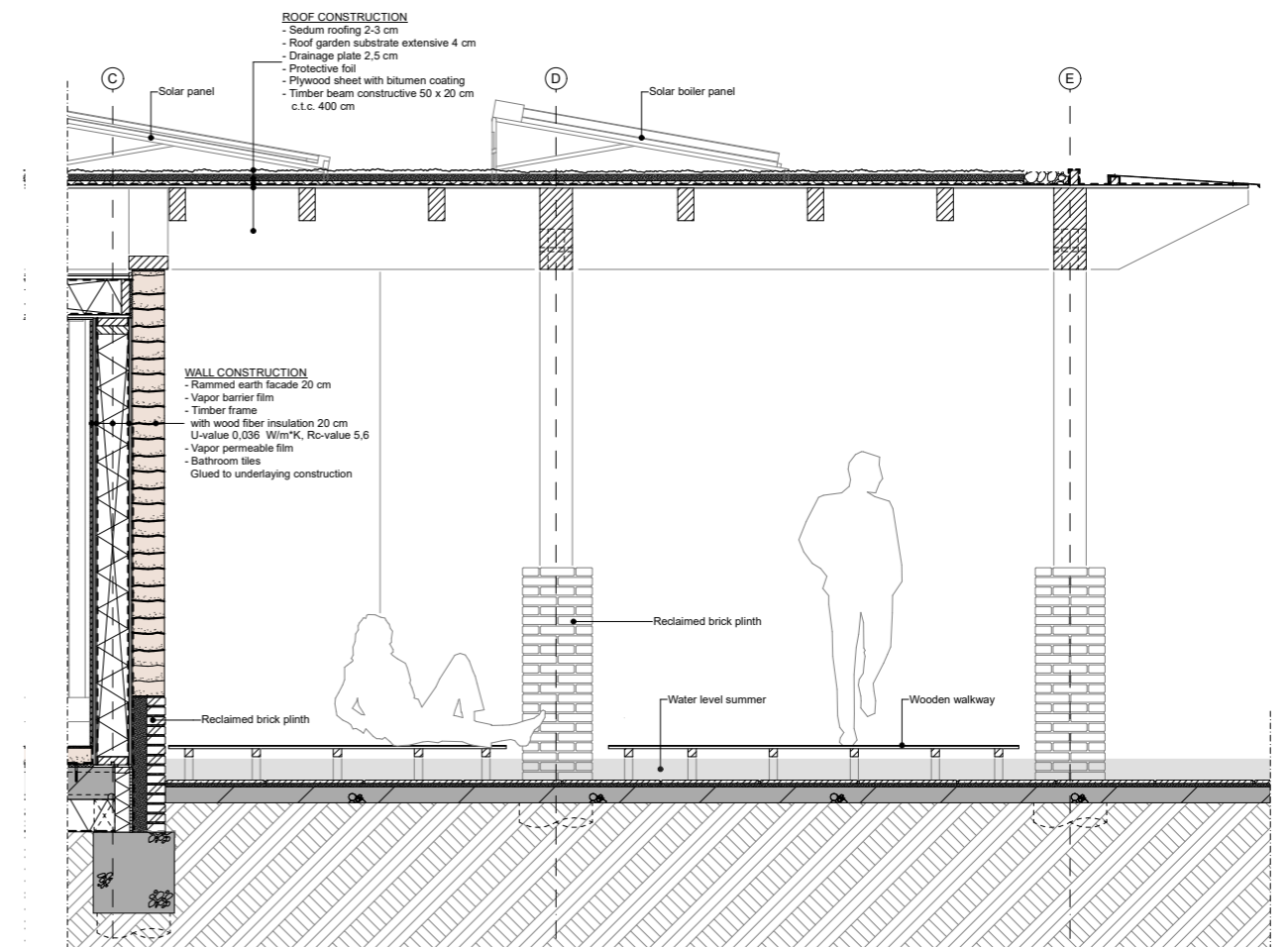




Facade fragment 01 *Courtyard wall*

Inner courtyard

A timber boardwalk connects the retreat rooms with the rest of the building and the central water square that flows underneath this path. Alongside the boardwalk are small terraces that are connected to the guestrooms. These terraces are just big enough to sit on so the room has to be opened up to better experience the outdoors.

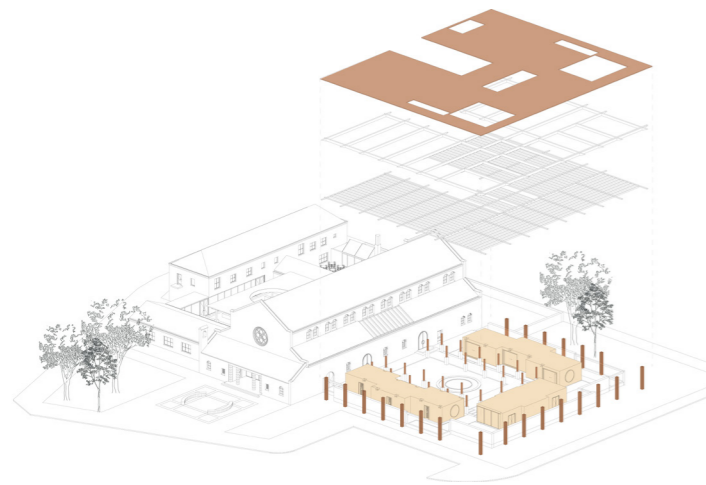


Facade section 01 *Boardwalk and terras*

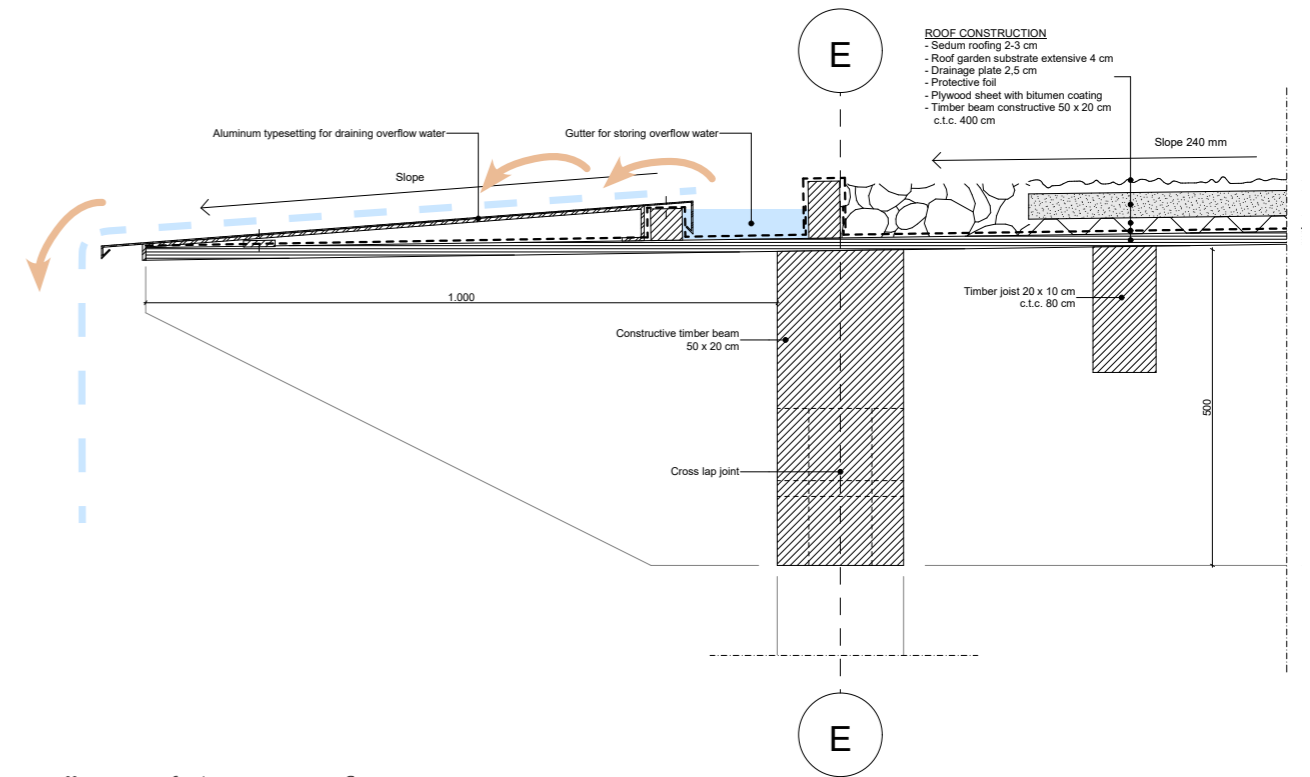


Experiencing nature

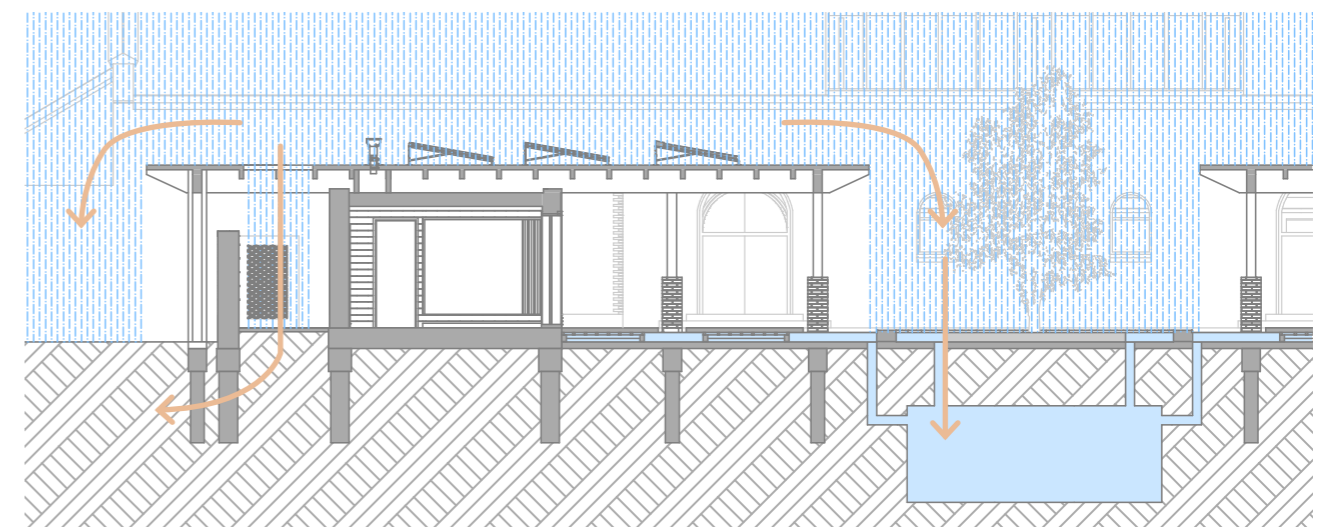
The design of the Circular Retreat plays with transitions of inside and outside spaces where people can take shelter and protect themselves or expose themselves to the elements. The outer wall is independent of the rest of the structure and serves as protection against the chaotic outside world. The visitors enter their rooms through this long, circular, outside hallway, which guides them toward the residences that look inward to the courtyard. Inside these guest rooms, people can withdraw completely from the outside world. The whole structure is covered by a timber roof construction that hovers over and connects the different spaces. The square at the centre of the retreat functions as a water reservoir to store rainwater. The water will flow off the roof freely. This way visitors can experience the weather more intensely.



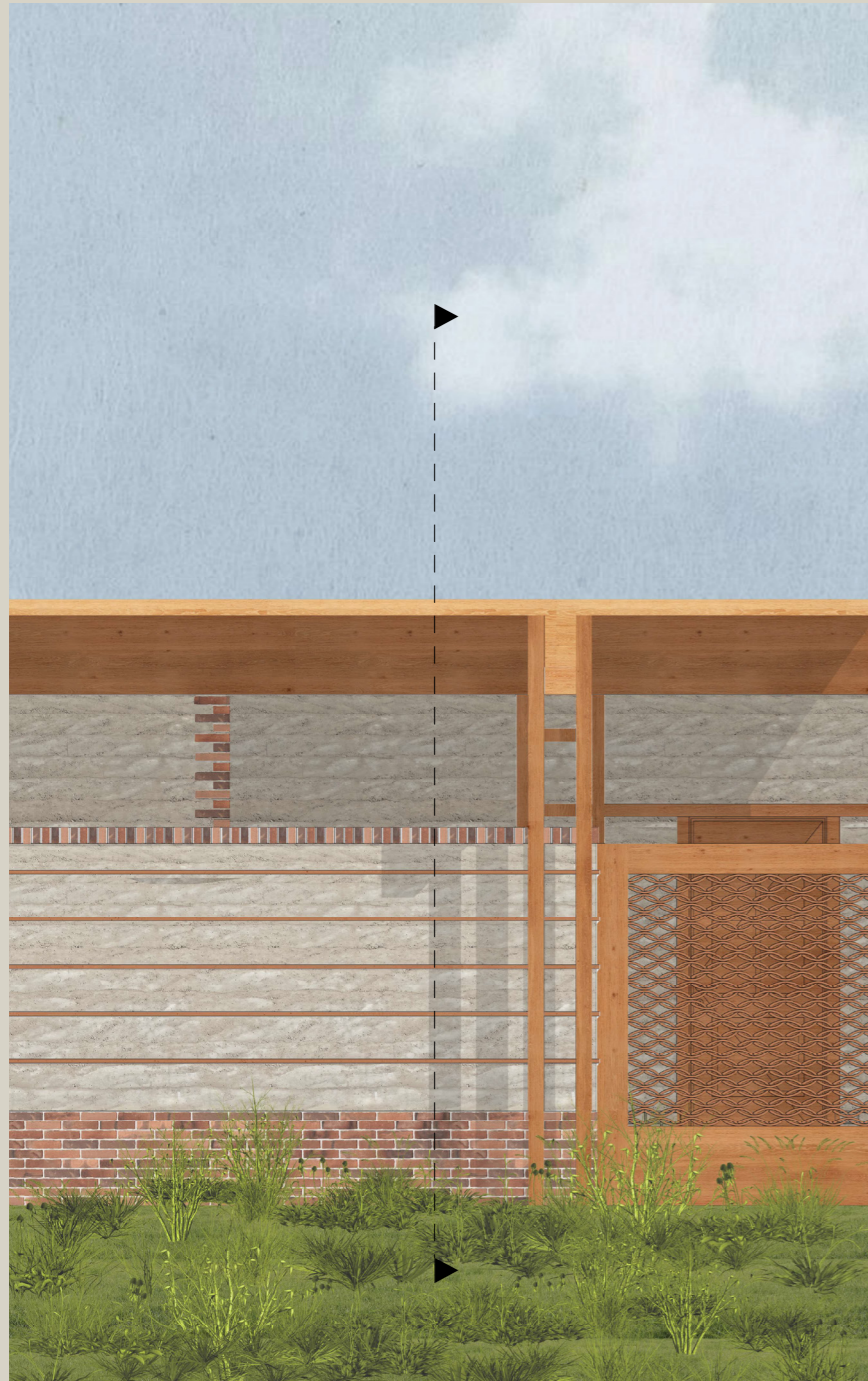
- Roof structure
- Retreat rooms



Detail 01 Roof edge water overflow



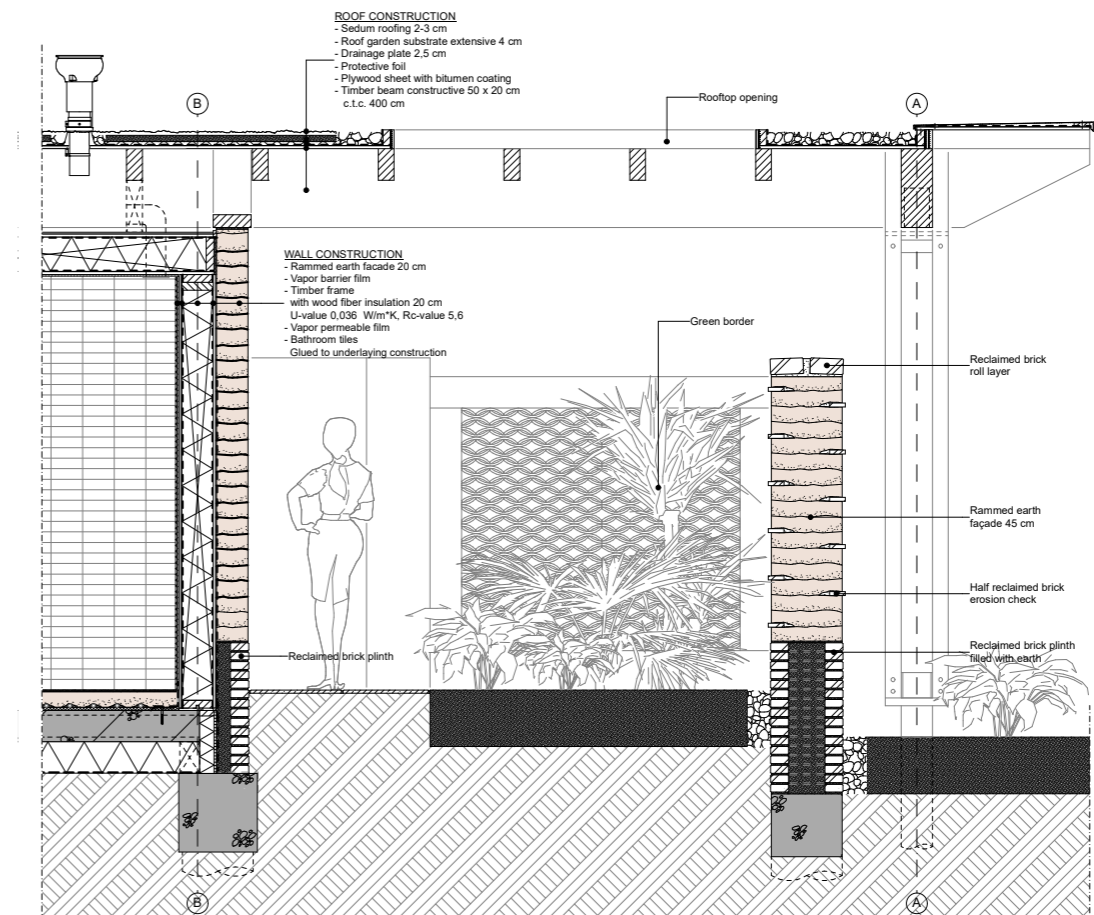
Rainfall through roof system



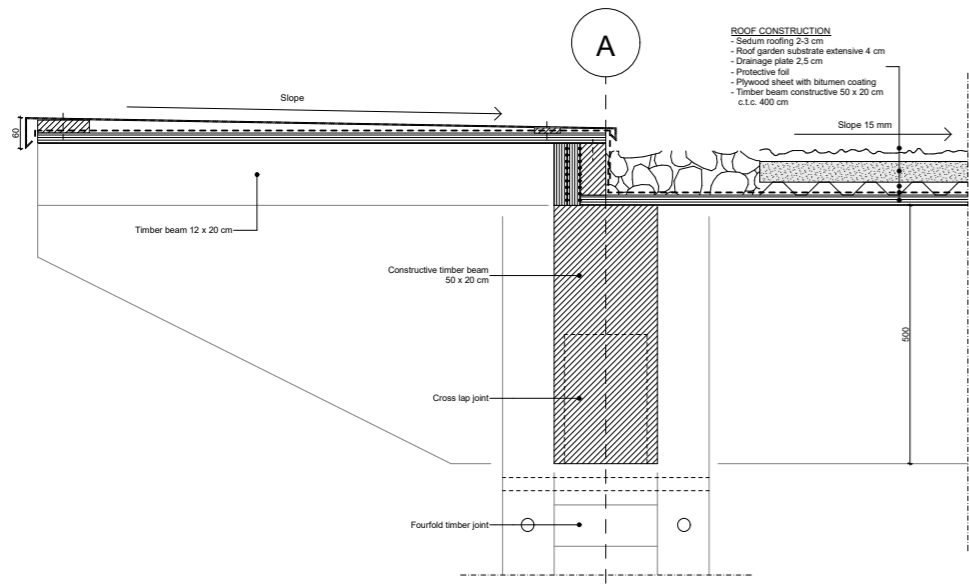
Facade fragment 02 Outer wall

Outer hallway

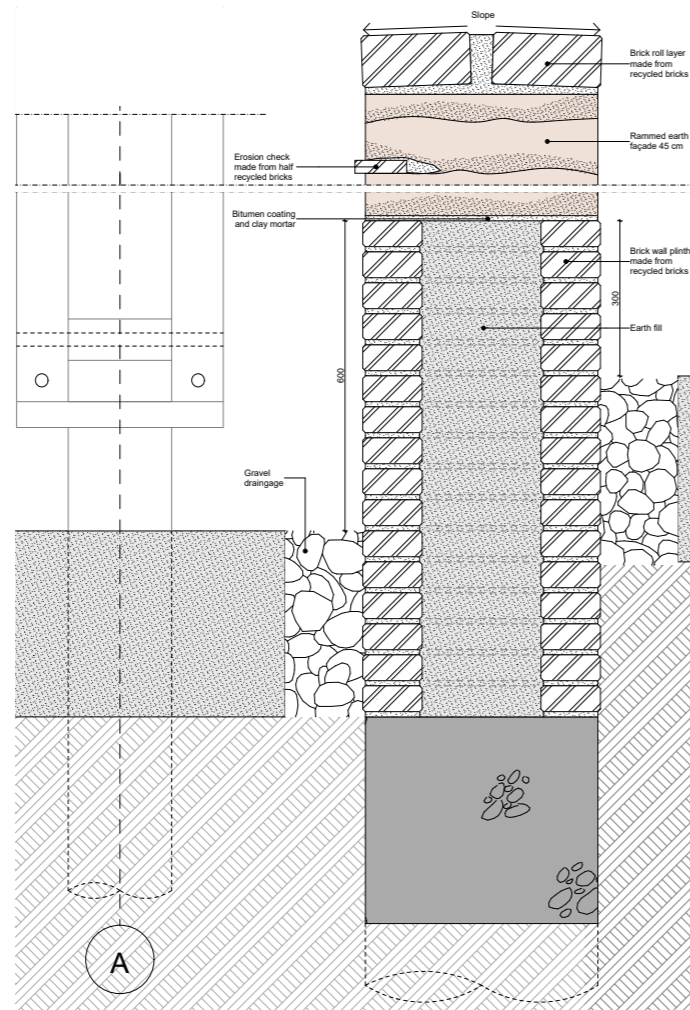
The hallway that surrounds the retreat rooms is an open space between the inside of the retreat and the outside world that lies beyond the protective layer of the walls. This in-between space acts as a transition zone from where visitors can enter their rooms. The hallway is a continuous route from which the rest of the retreat can be accessed.



Facade section 02 Open hallway



Detail 02 Roof system outer wall



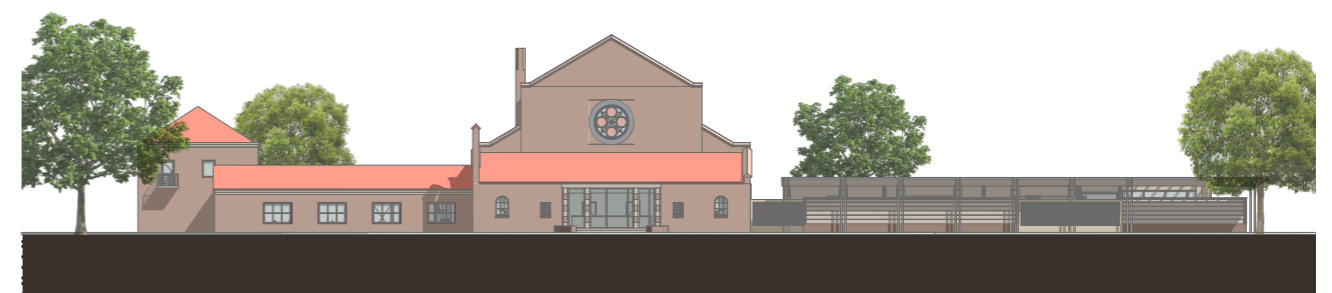
Detail 03 Foundation outer wall

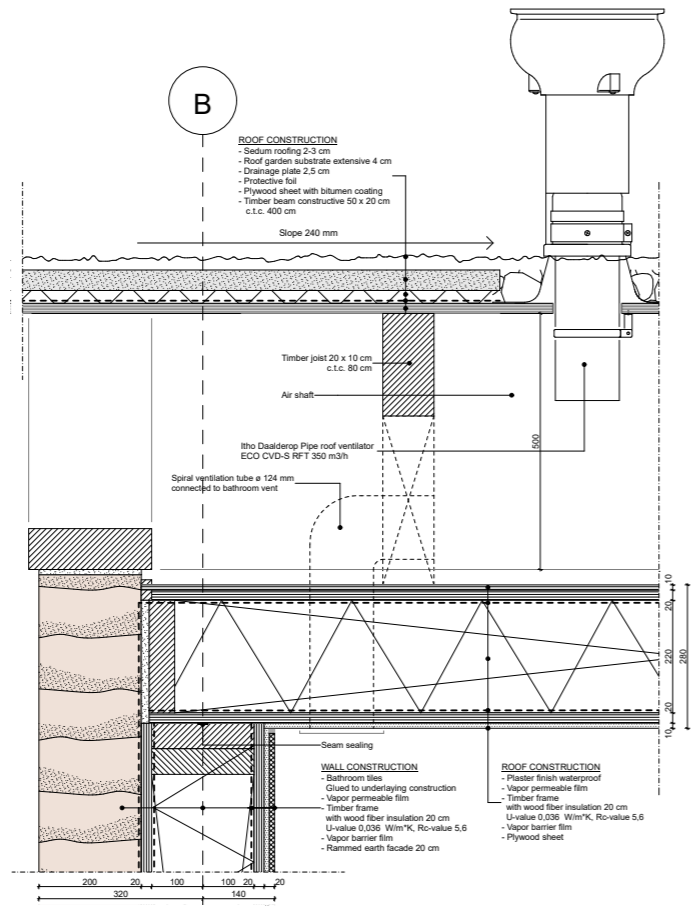


The outer wall system

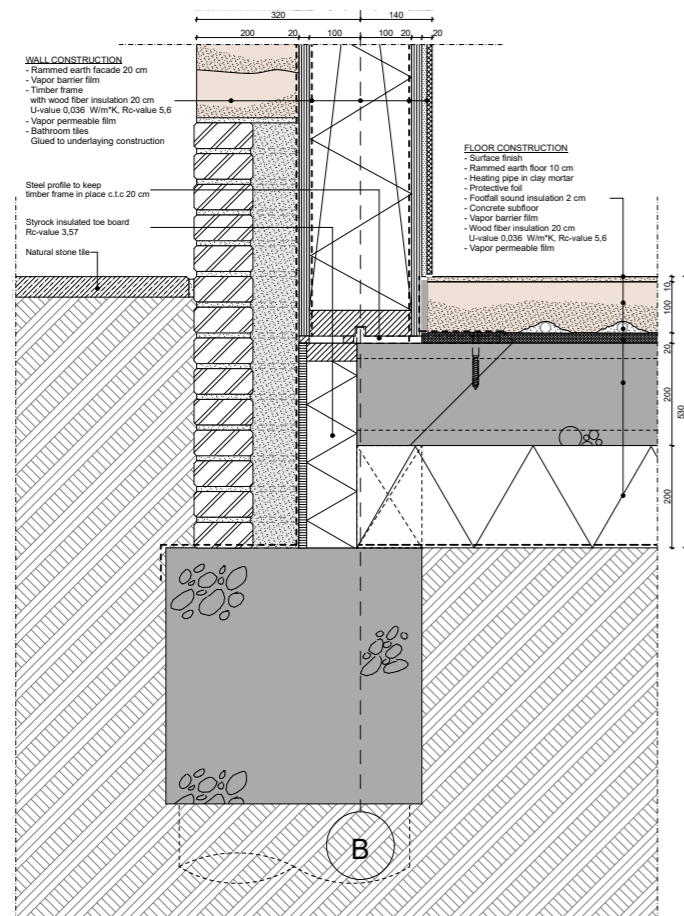
The thick rammed earth walls that surround the retreat separate the outside and inside and offer protection. This protective function is visible in the appearance of the walls. The rammed earth rests on a brick plinth and is covered on the vulnerable edges. The horizontal brick lines act as erosion checks that protect the rammed earth from serious water damage.

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Detail 04 Roof system rooms

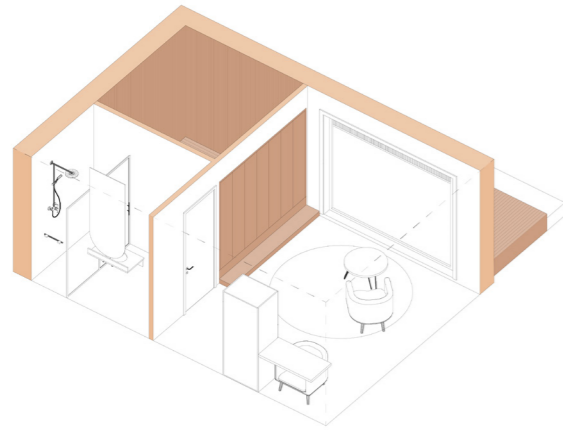
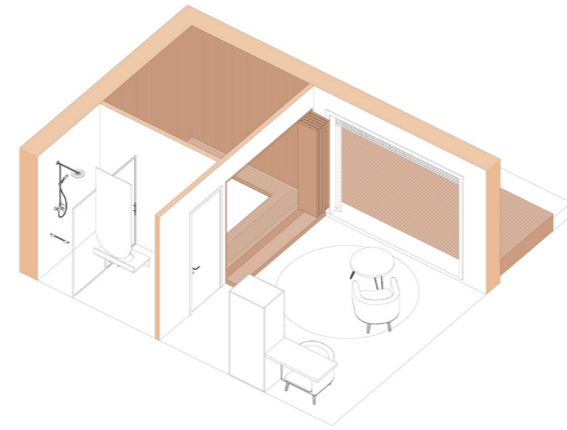
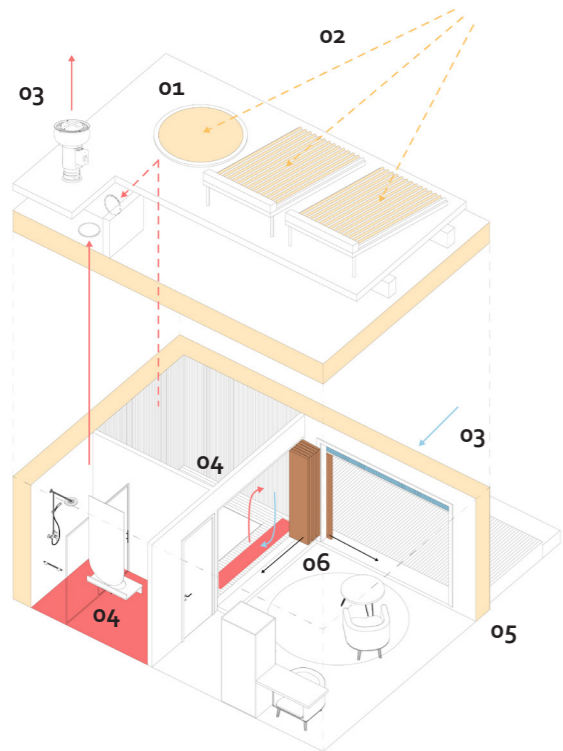


Detail 05 Foundation rooms



The inner wall system

The walls on the inside of the retreat are less robust than the outside walls but still function as a protective layer between the outside and the inside for the visitor. Erosion checks are not necessary since these walls are fully protected by the roof system that hovers over the rooms and instead, the walls are separated by timber frames to give a sense of interior to the facades.

**Winter** Closed walls**Summer** Open walls**Climate** Technical aspects**Climate design**

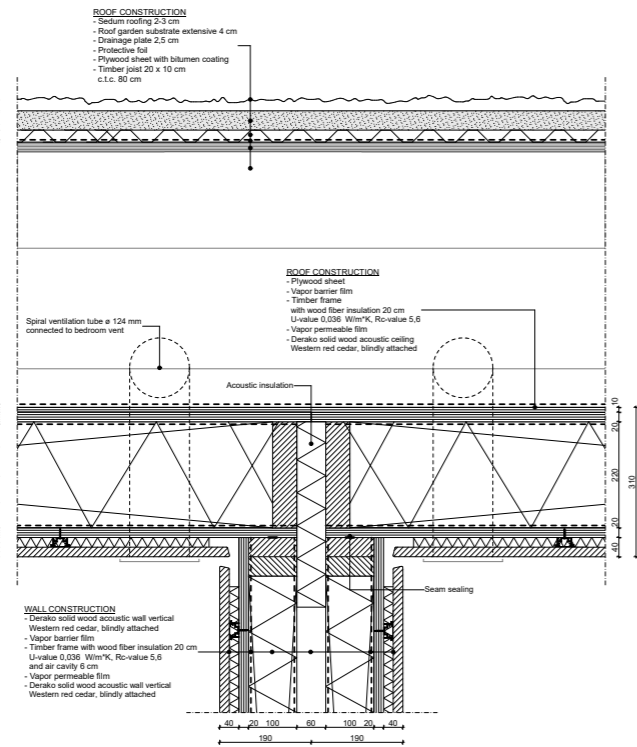
- 01 Visitors wake up with natural daylight through a skylight in the sleeping area. This strengthens the connection with the natural rhythm.
- 02 Water will be heated by sunlight through panels on the roof. The water will be warmer when there is more sun.
- 03 Fresh air will enter the room through a vent in the facade and is sucked off by a pipe roof ventilator.
- 04 The bathroom will be heated by underfloor heating and the sleeping area through a floor convector. This convector heats or cools the incoming air.
- 05 The entire room is well insulated so it can be warmed more efficiently. Every room works separately and has its own envelope.
- 06 Openable wall system.

**Natural rhythm**

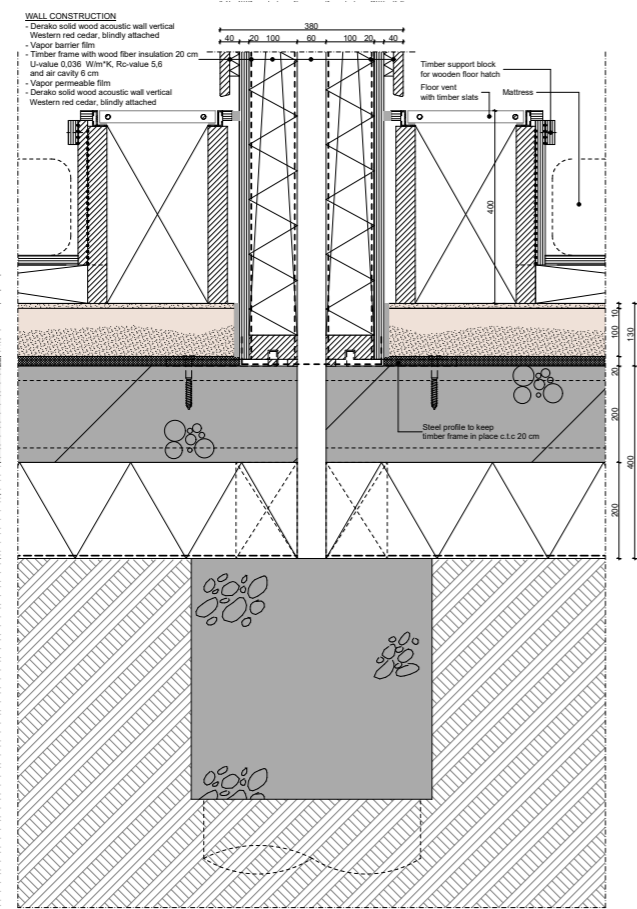
The use of the guest rooms depends on the current season and the availability of natural resources. The entire room is well-insulated but only the bedroom and bathroom are heated. Each room has a smaller, lockable, wooden cabin where the sleeping area is located. This modern take on a box bed allows the small space to warm up faster when it is cold. In autumn and winter, it will be

logical for visitors to withdraw more to this room, because the other rooms are less comfortable.

In the warmer periods, the wall can be opened to keep cool air in the room. A sliding door can be opened to access the outside terrace. Every room looks towards the inner spiritual space, marked by a cherry tree.



Detail o6 Separation roof rooms



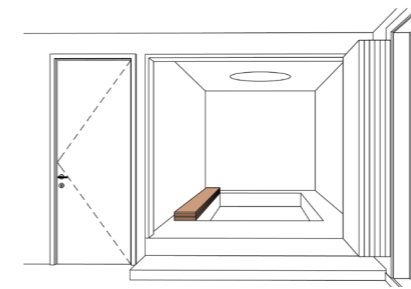
Detail o7 Separation foundation rooms



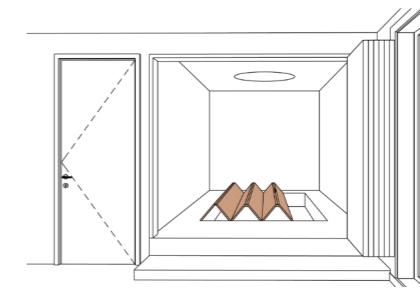
Opened



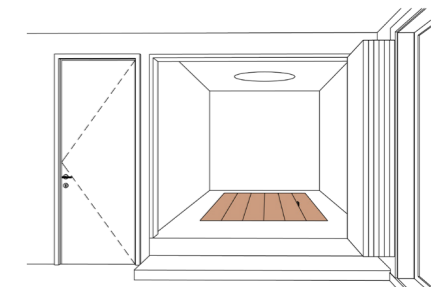
Closed



01 Opened



02 Opening/closing



03 Closed

Multifunctional room

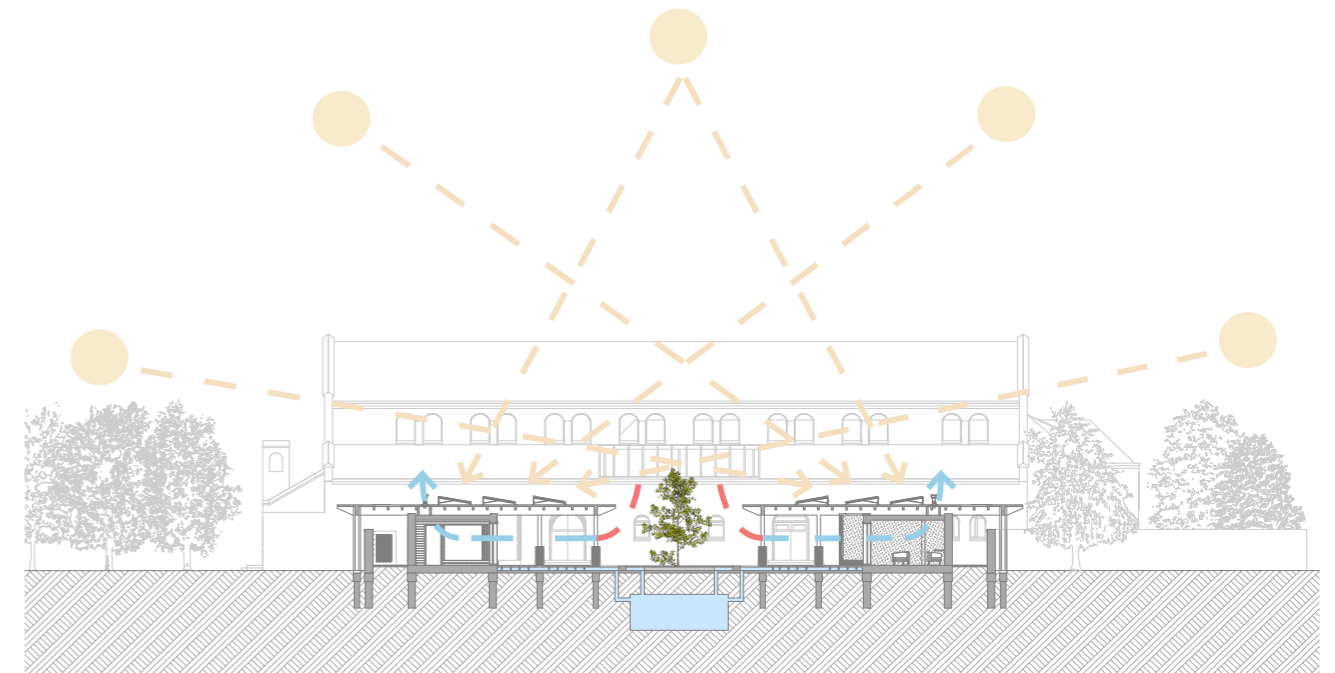
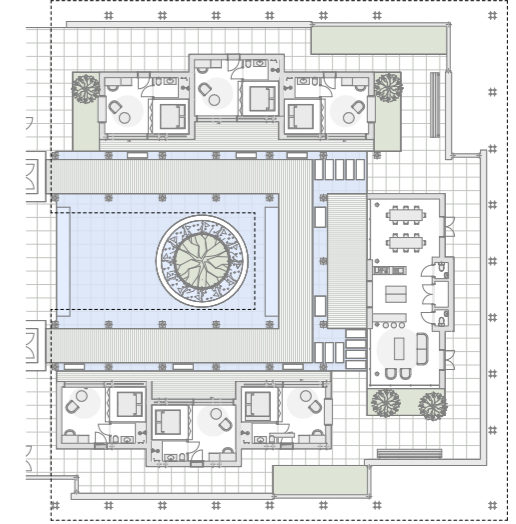
In the spring and summer, people will turn more to the outside, when it is warmer and more comfortable. In this period the modern box bed can also be transformed into a meditation space.

This can be done by covering the bed with a wooden panel system.



Summer season

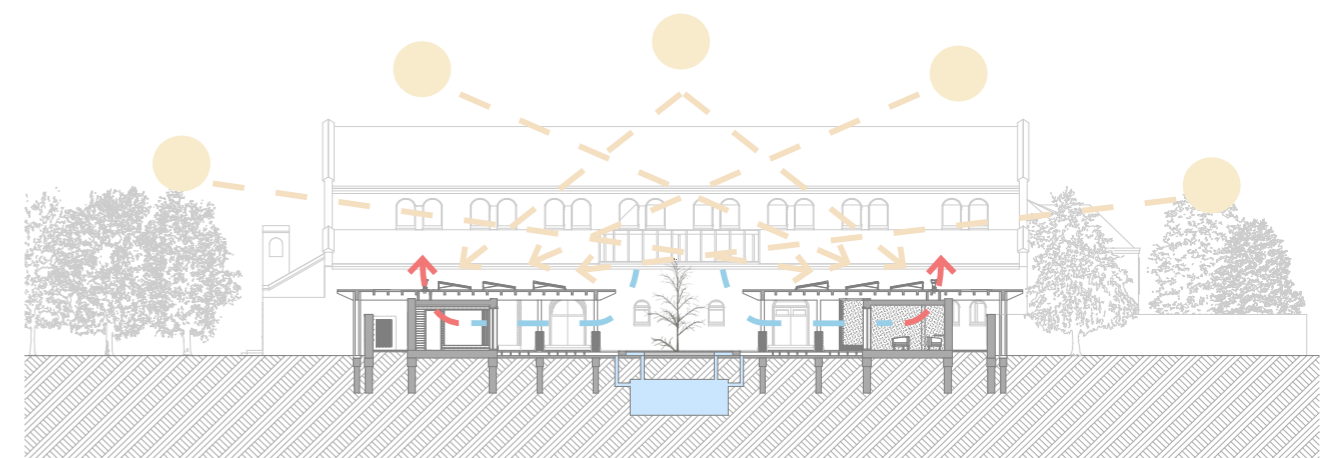
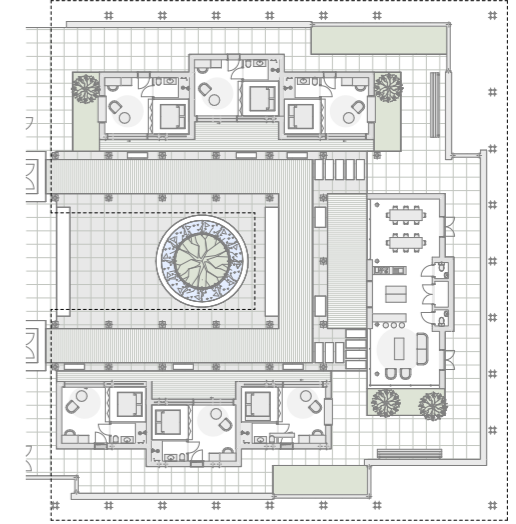
The Summer period is a period full activity and new ideas. The square will be filled with water that was collected during the Autumn and Winter. The water will cool down the hot air before it enters the rooms. The excess water will also be used to water the plants in the kitchen garden.





Winter season

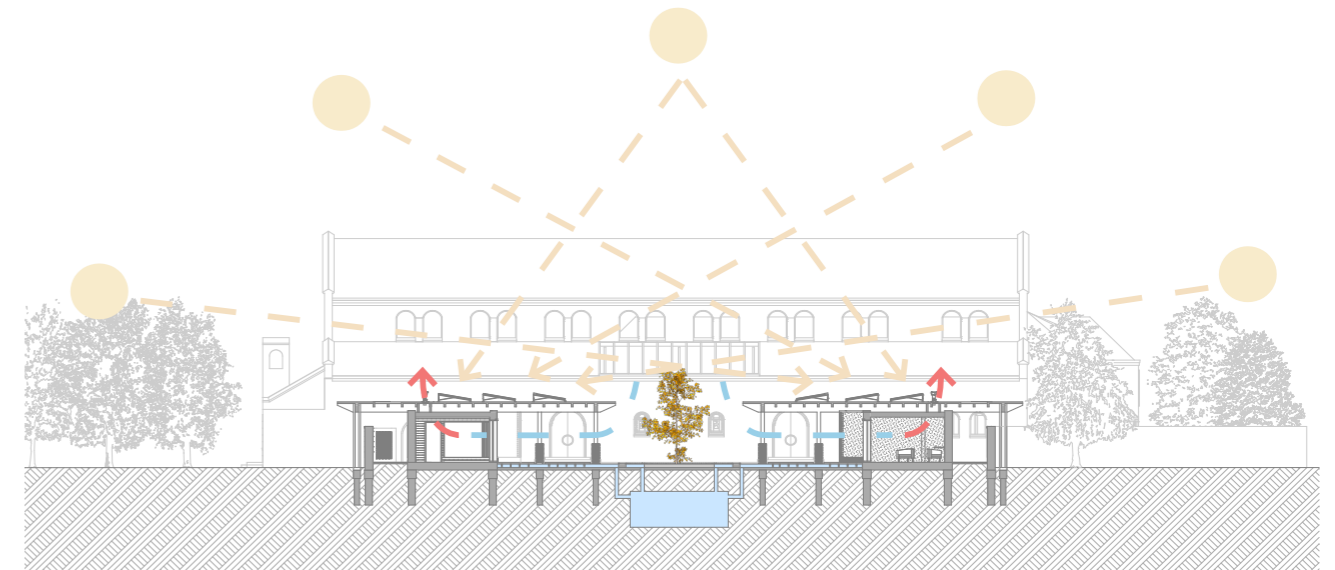
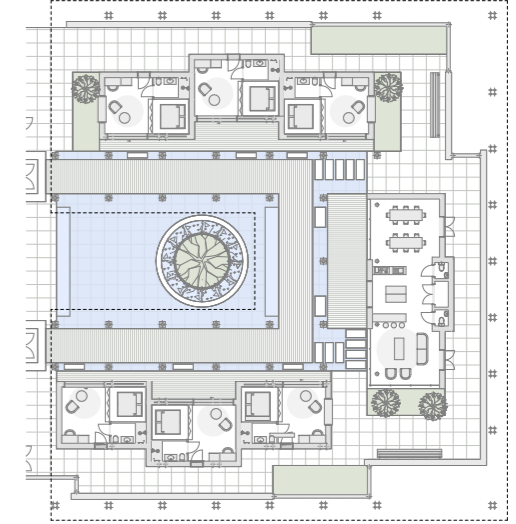
The Winter period is a period of rest and contemplation. The water square will be empty and visitors are forced to turn inward. The cold outside air will be heated by a floor convector that uses hot water. This water is heated through the use of solar light and when there is not enough light, the water will be reheated by a boiler.





Spring and Autumn season

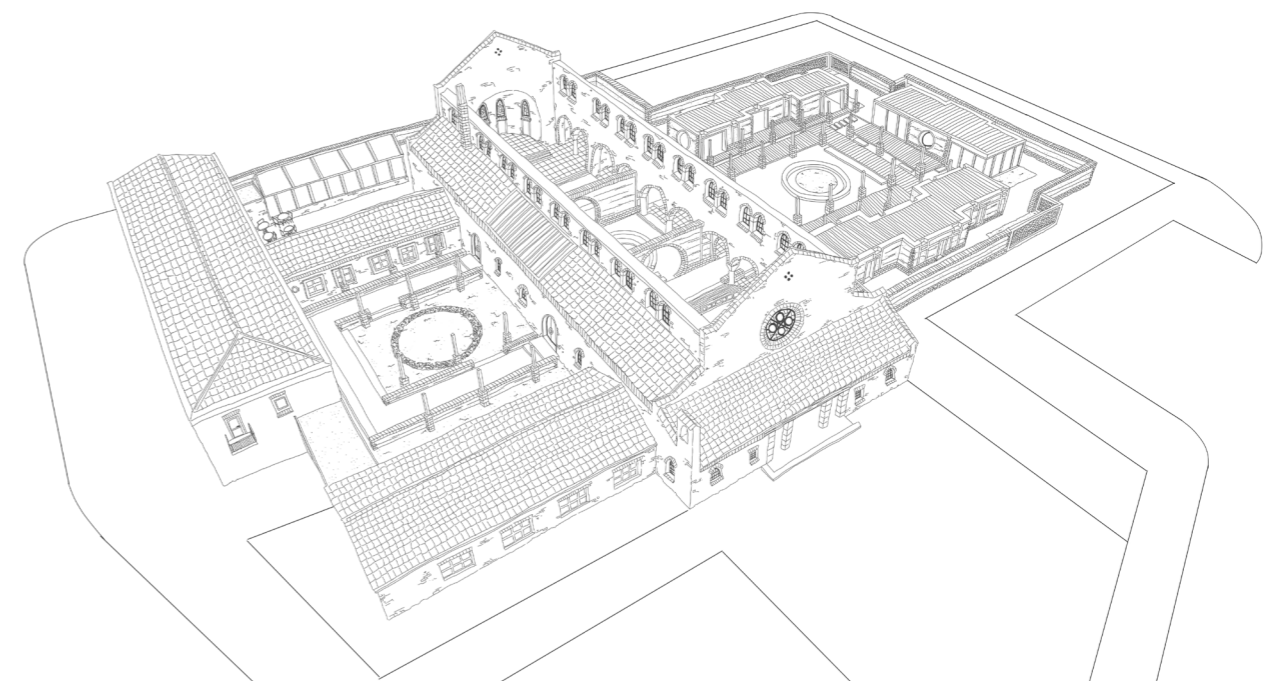
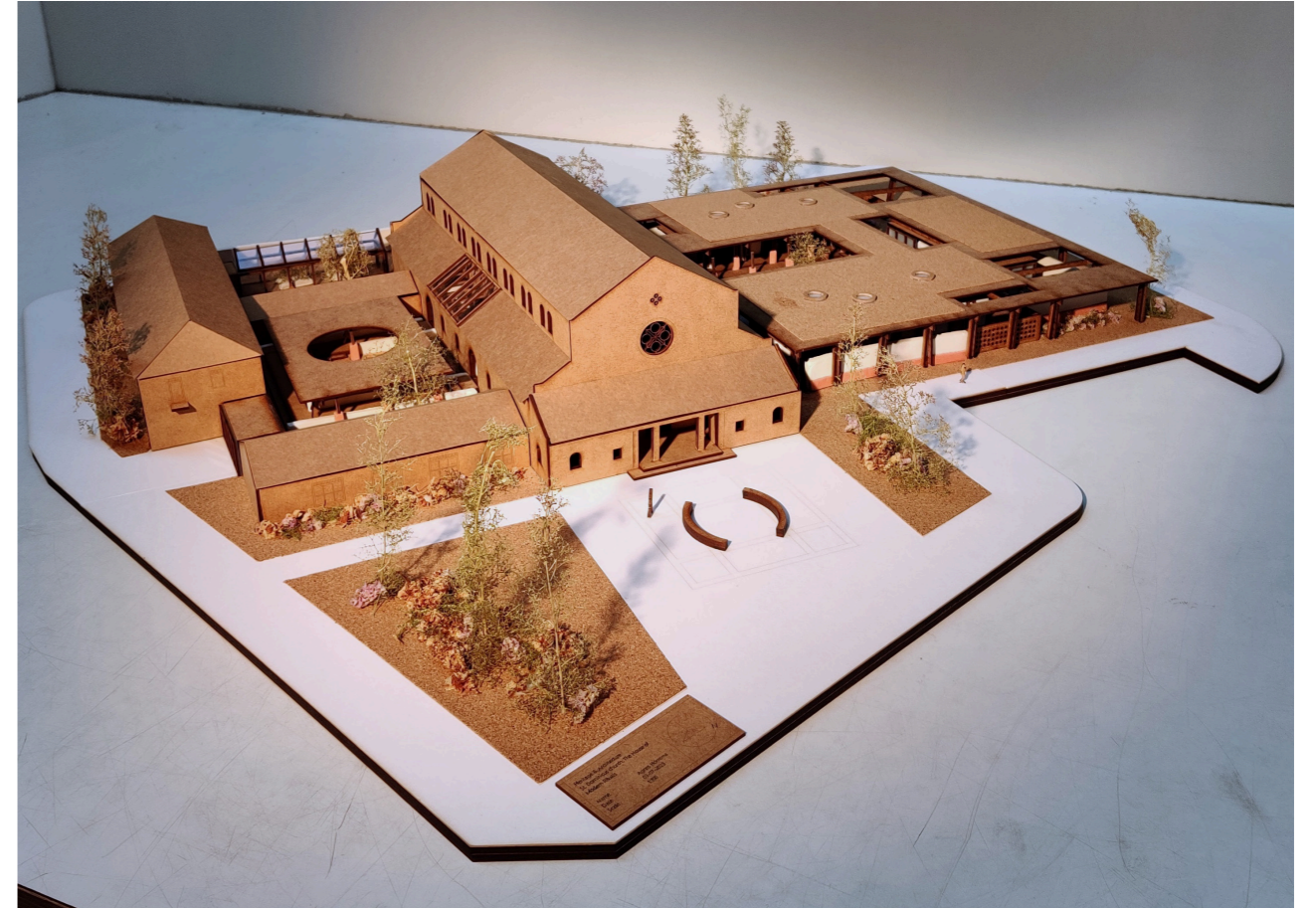
During the Spring the water square will be slowly filled with water that was stored underground during the winter and during the Autumn the square will be slowly emptied into the underground basin. In these in-between seasons, the rooms can be adjusted depending on the weather conditions.



Spiritual experience through the building process

Craftmanship

The act of building can be seen as something spiritual when there is an awareness of how elements and materials come together in a design and when the qualities of that design are shown in something that was carefully made by hand. This means that the craftmanship and building process can even be seen and experienced after it was built. A good example of this is the rammed earth wall, which consists of compressed layers of earth that are still visible after the completion of the wall. Other elements in the design also show similar references to their own building process, like the roof tile partition wall construction and the placement of the brick facade elements.





Red Cedar wood

Indicates warmth and separates elements



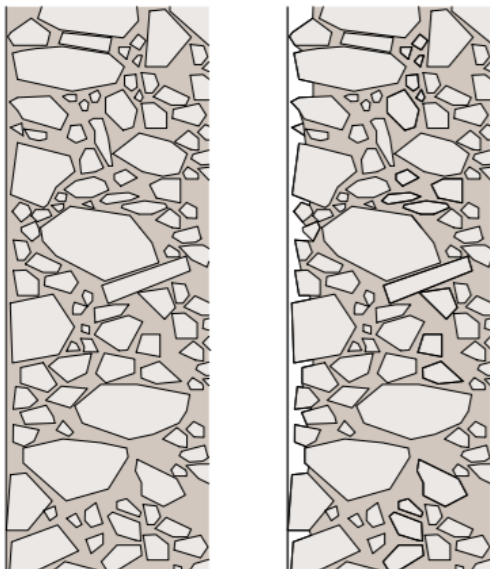
Rammed Earth

Infill or fabric of the wall



Reclaimed Brick

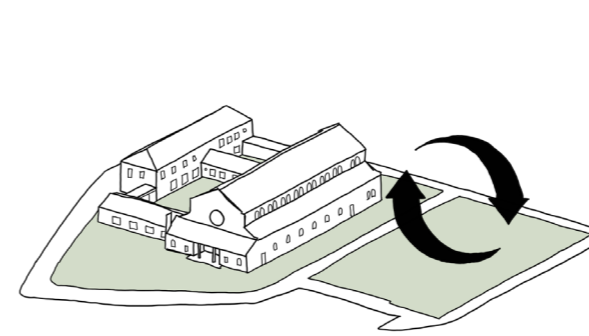
Foundation and protective layer



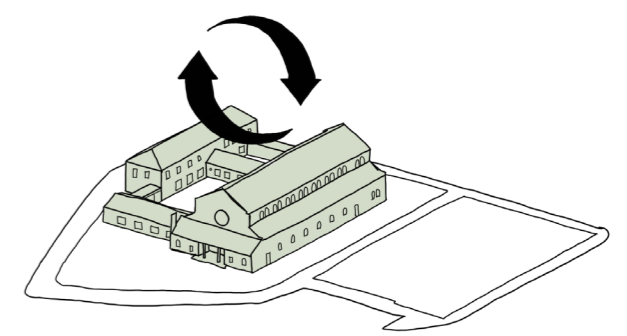
Erosion process rammed earth

Material experience

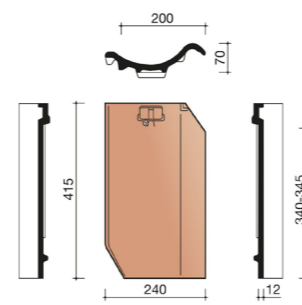
In contrast to the sober-looking solid church structure, rammed earth is used to form the thick walls, and wood is used to form the roof and other interior elements to give a sense of warmth and create a more inviting atmosphere. Both materials have the property to weather over time. This impermanence suggests that change is a natural part of our world and helps to provoke a sensuous experience. The outer walls of the retreat are also made of a thick rammed earth construction that is enhanced by reclaimed bricks to slow down the erosion process. The excavated soil from the site will be used in the rammed-earth mixture. The use of these materials derives from the circular design approach of the project and their spiritual values.



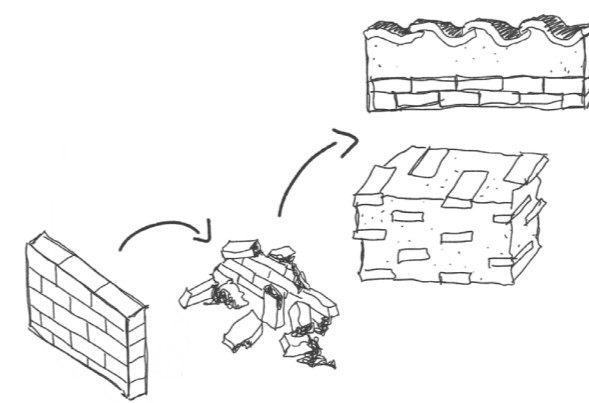
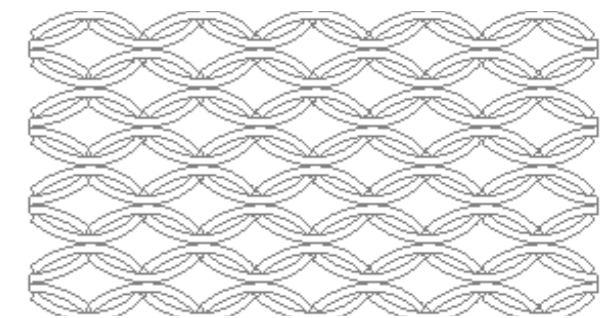
Reuse of the soil



Reuse of the building materials



Reclaimed roof tiles



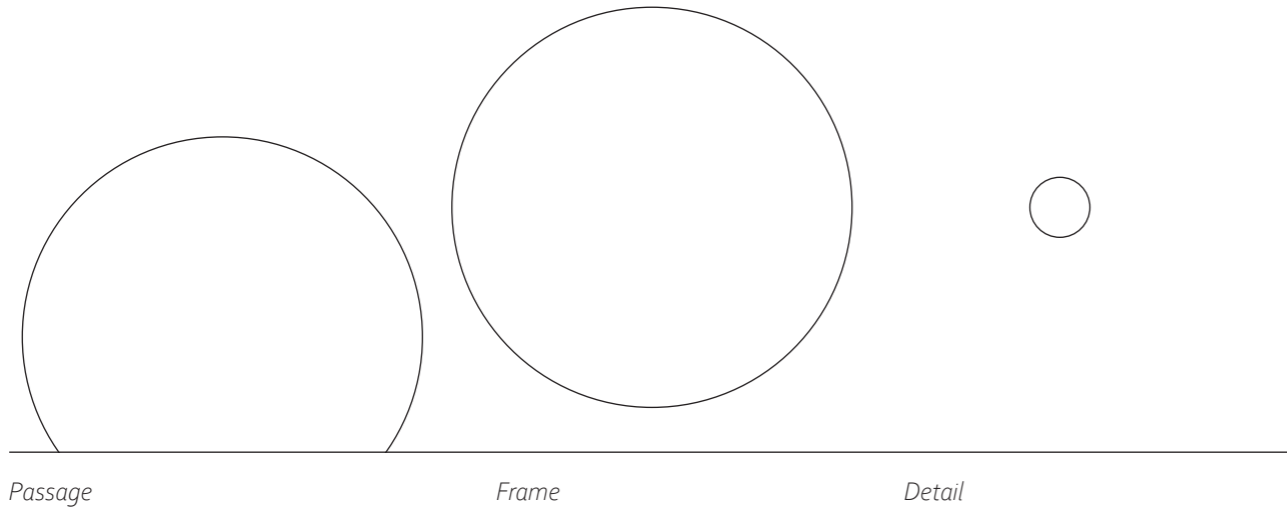
Reusing materials in new walls

Zero waste

The zero waste strategy for this design is closely related to the spiritual concept. Weathered materials are used to show the impermanence of the structure.

These materials have their own characteristics and work together in the design to complement the imperfect and create a sensual experience.

Reclaimed roof tiles will be used to create semi-transparent walls to lighten the seemingly solid walls that enclose the retreat.



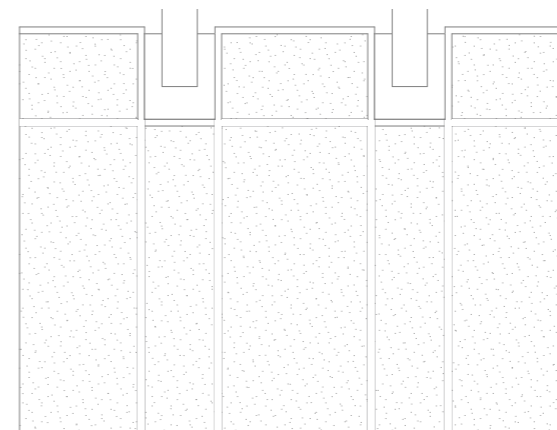
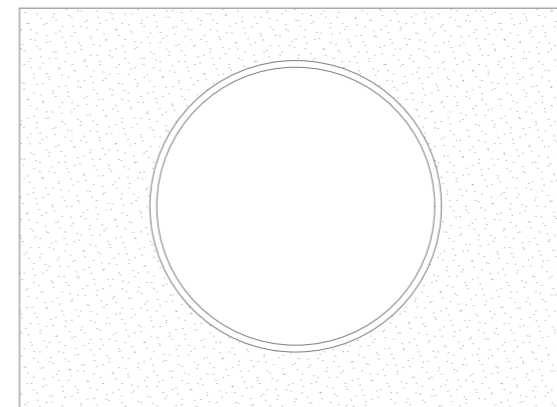
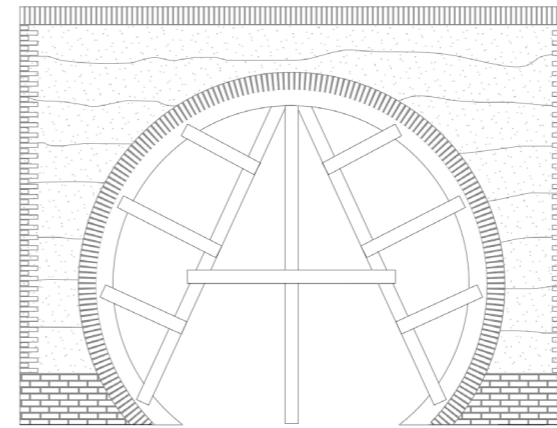
The circle

The circle represents the notions of totality, wholeness, original perfection, the Self, the infinite, eternity, timelessness and the divine.

Instead of symbolisation and decoration that is associated with religion, the circle will be an important architectural element in the spiritual design.

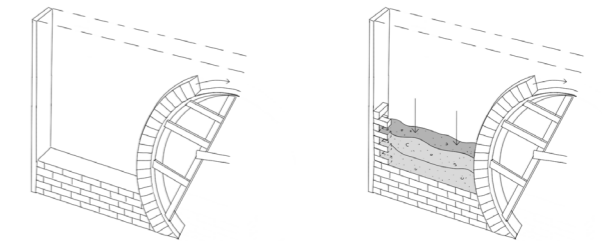
Apart from its symbolisation, the circle also forces people to look towards the inside or stand in the centre of a space.

Material rules



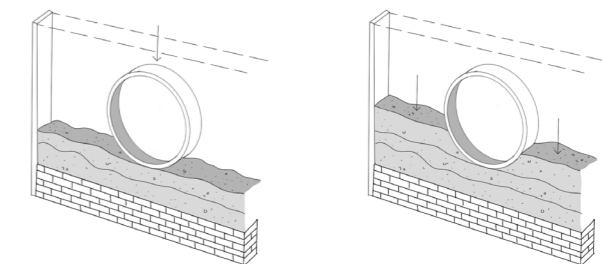
Edges

All of the fragile edges of the rammed earth walls will be covered by the reclaimed bricks. They will offer protection and support.



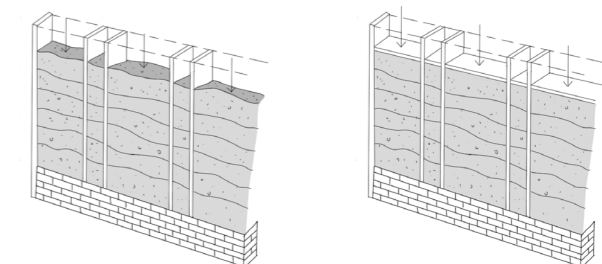
Openings

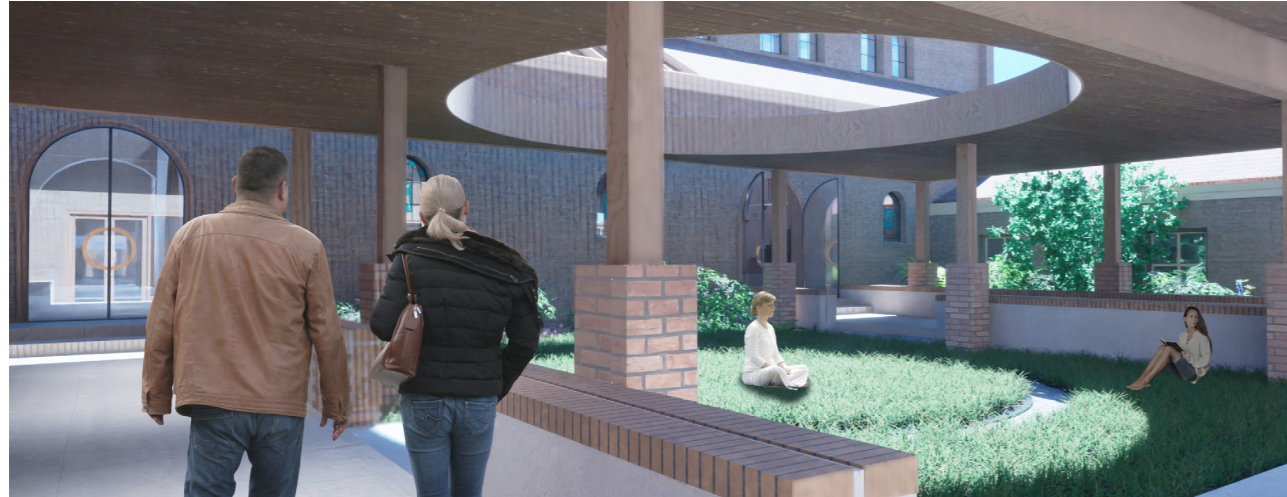
Whenever a opening is made in the walls, a timber frame will be used to create a sense of interior.



Separations

When the new structure meets the old, a timber frame prevents the two from touching. This way the new layer weaves through the old structure.



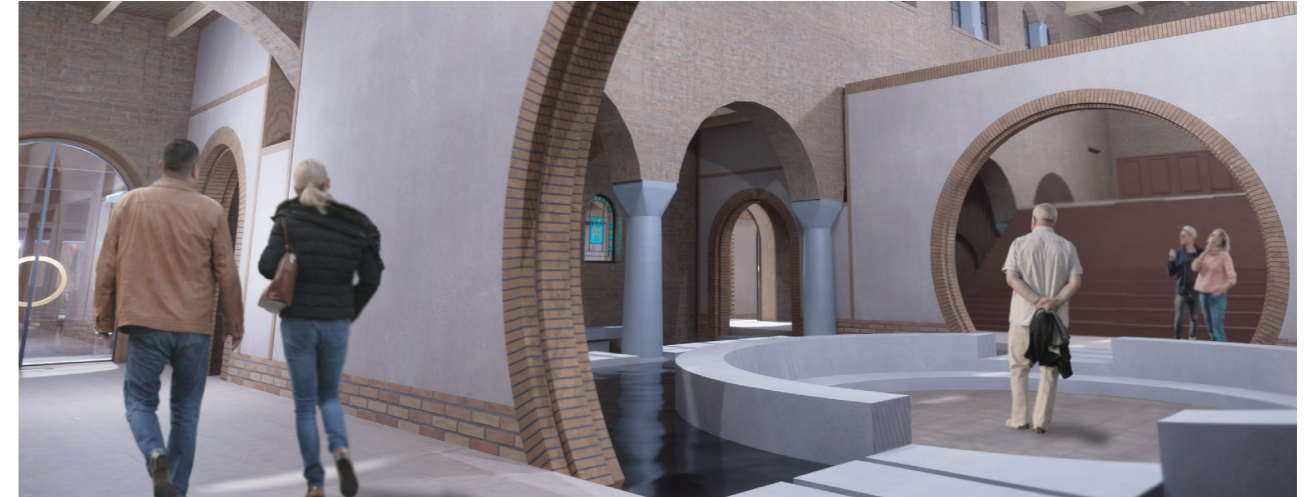


Framed courtyard

In the courtyard, the rammed earth walls act as smaller balustrades that guide the users in a certain direction but also frame the green inside space.

The same is true for the roof structure that hovers over the courtyard and opens up in the center, which causes visitors to focus their attention on

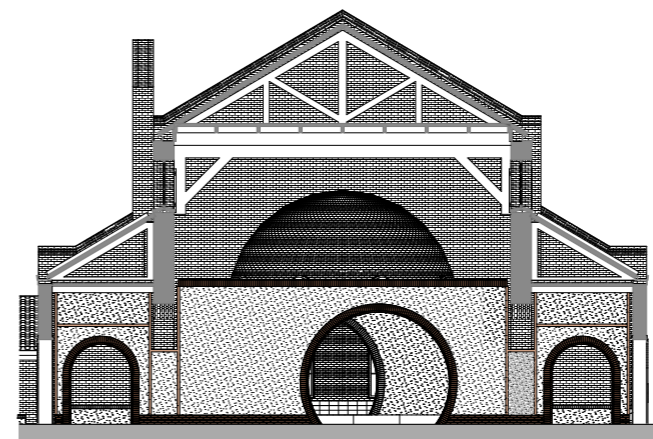
the central green space. In this area, the roof is supported by the same brick pillars as can be found in the retreat area on the other side of the church.



Church walls

The walls inside the church are the highest and are there to bring back the human scale into the church, without sacrificing the spatial qualities of the large open space. Furthermore, they emphasize the new circular routing that runs through the space of the church in order to put less focus on the dominant direction of the church that leads toward the apse. That same direction

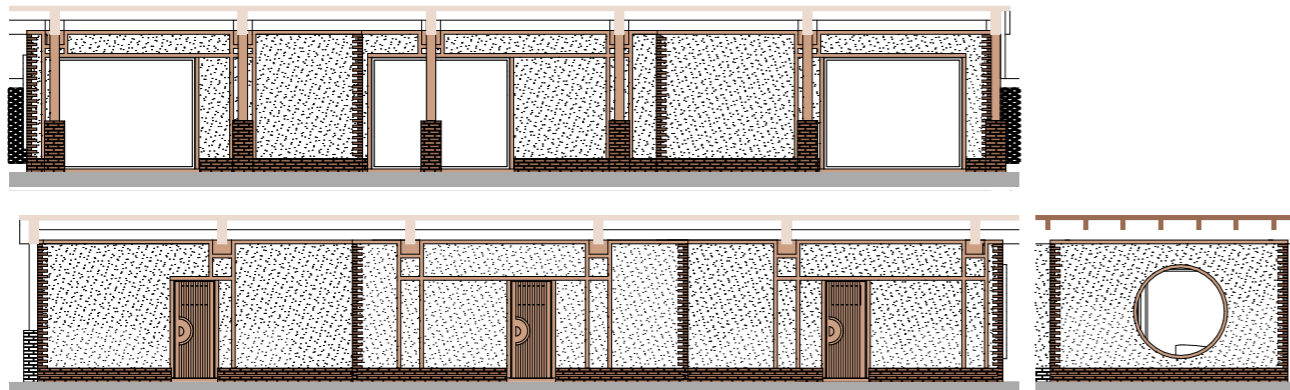
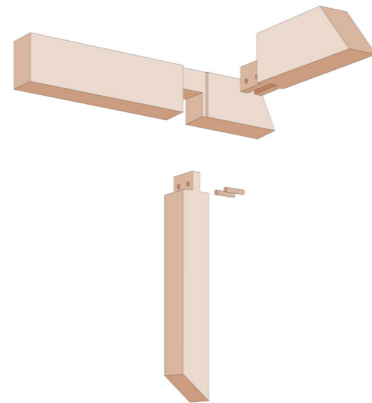
is interrupted by shifting the circular openings in relation to each other. This means that visitors have to alternate their movement according to the path and cannot walk or see in a straight line.





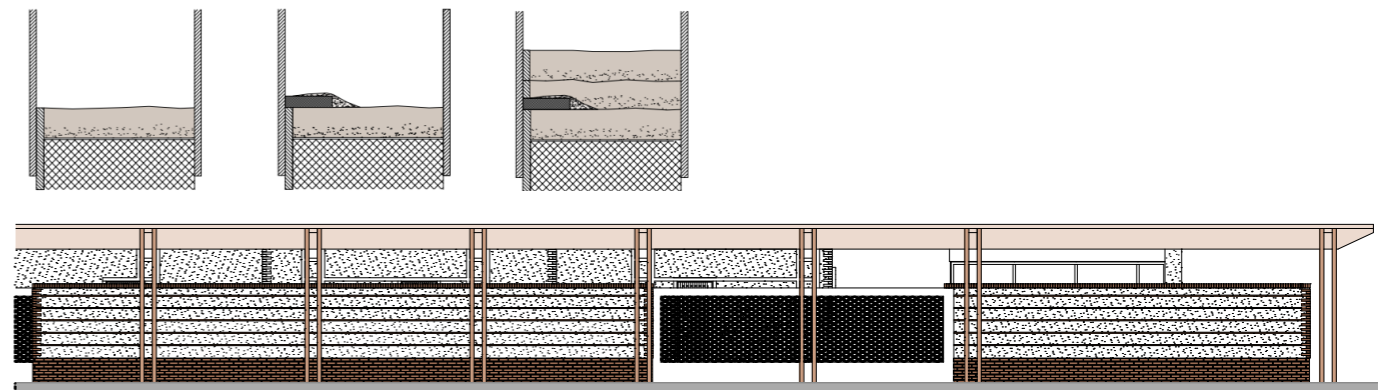
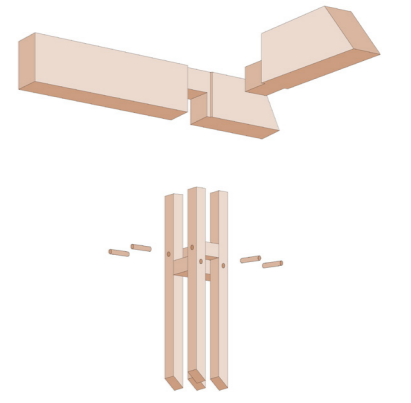
Inner walls

The inner walls of the retreat have their unique facade drawing that derives from the openings in the walls as well as the overhanging roof structure. The timber slats illustrate the separation of different elements. It shows how the different materials come together and how they stand alone. The seemingly disordered facades give a sense of imperfection. On the inside, firm brick pillars hold up the roof structure. The further from the ground, the lighter the structure seems to be.



Outer walls

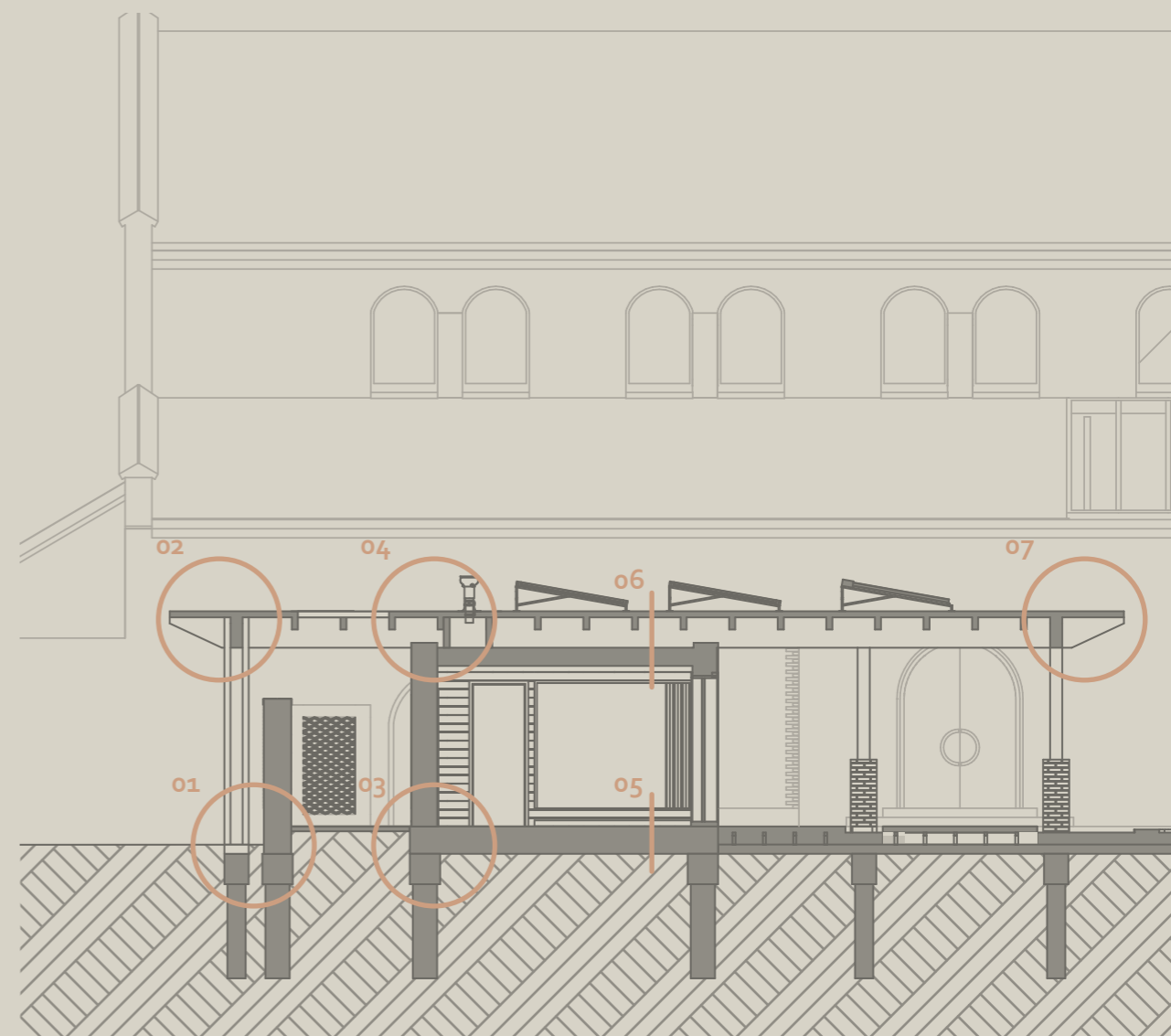
Reclaimed bricks will be used in the new wall construction as reinforcements and erosion checks. They serve as protection for the rammed earth. The roof structure hovers over the outer walls and lands on the ground on thin long legs. This gives the building a lighter and more transparent appearance. While the construction of the roof seems simple on the outside, the timber joints have a certain complexity. This in a way also represents the complexity of the spiritual.



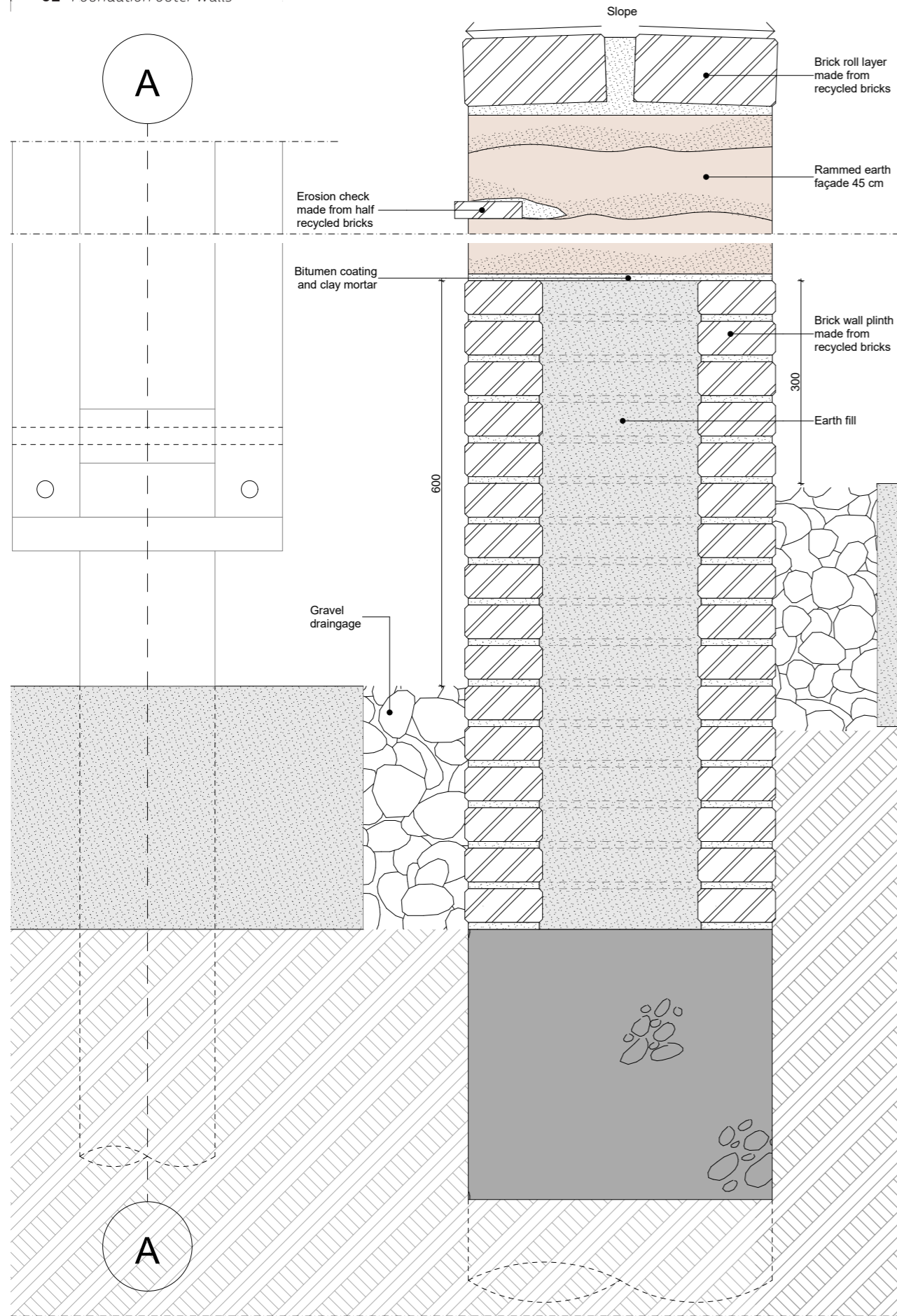


Scale model 1:100

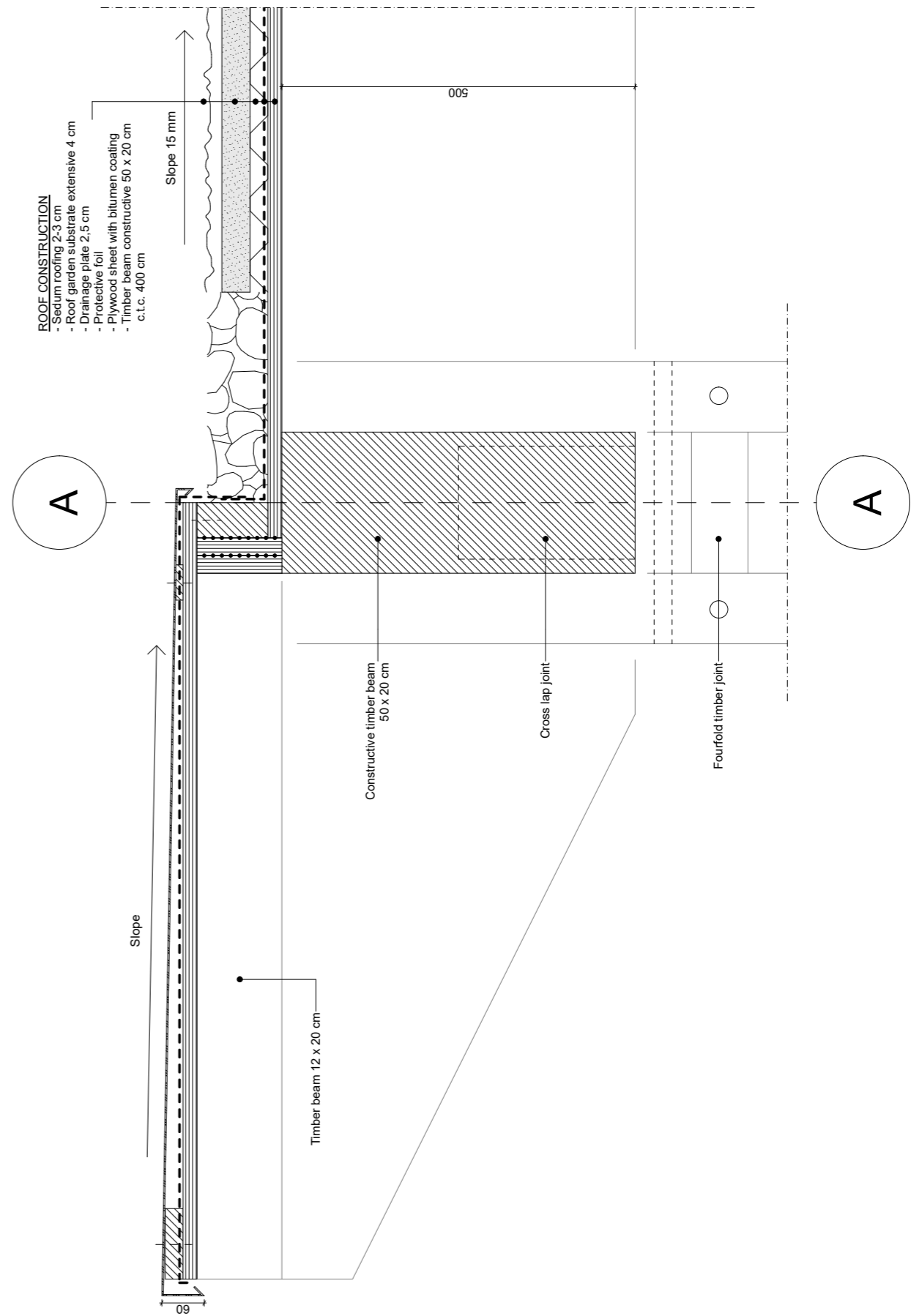
Detail positioning



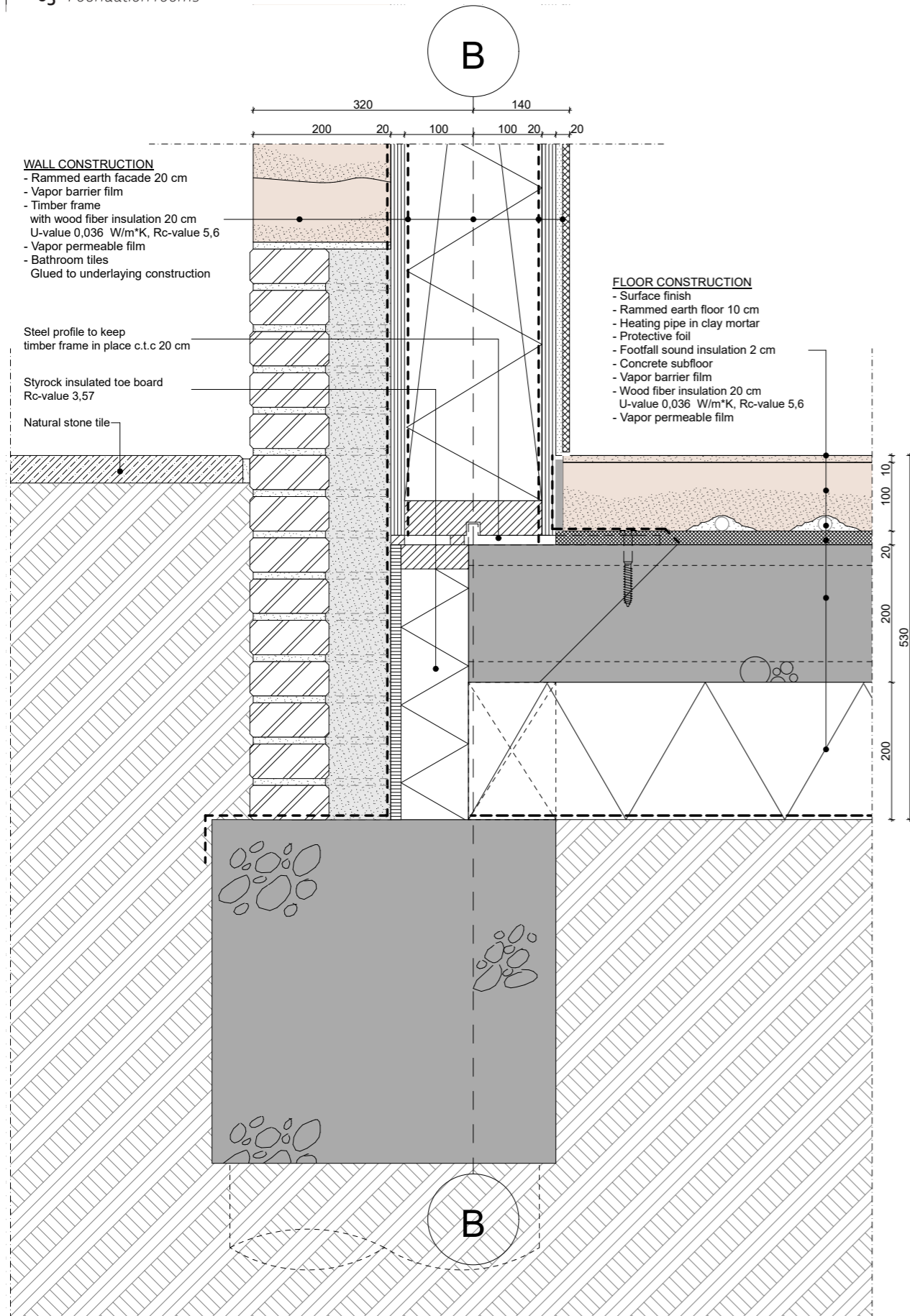
01 Foundation outer walls



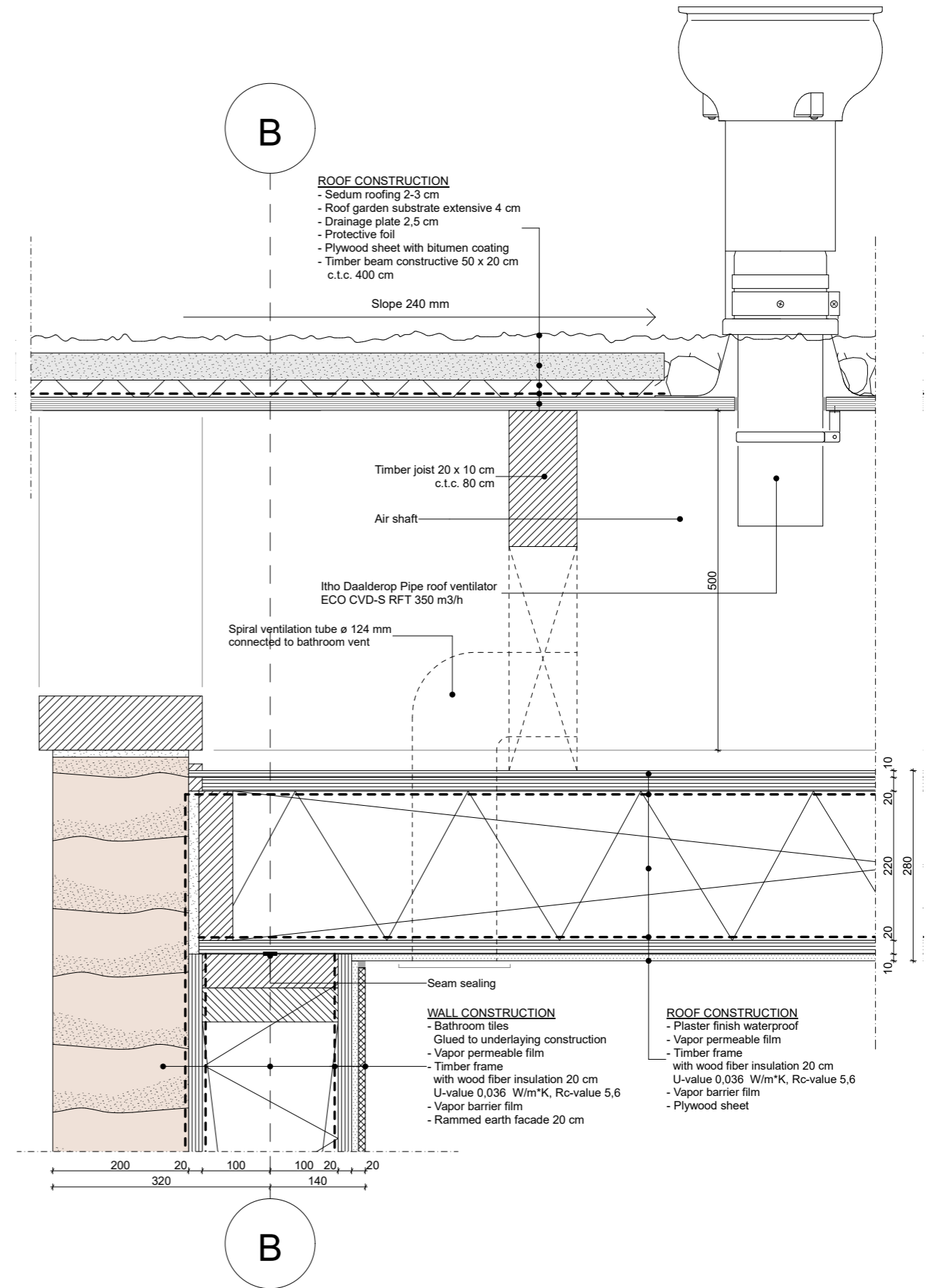
02 Roof system outer walls



03 Foundation rooms



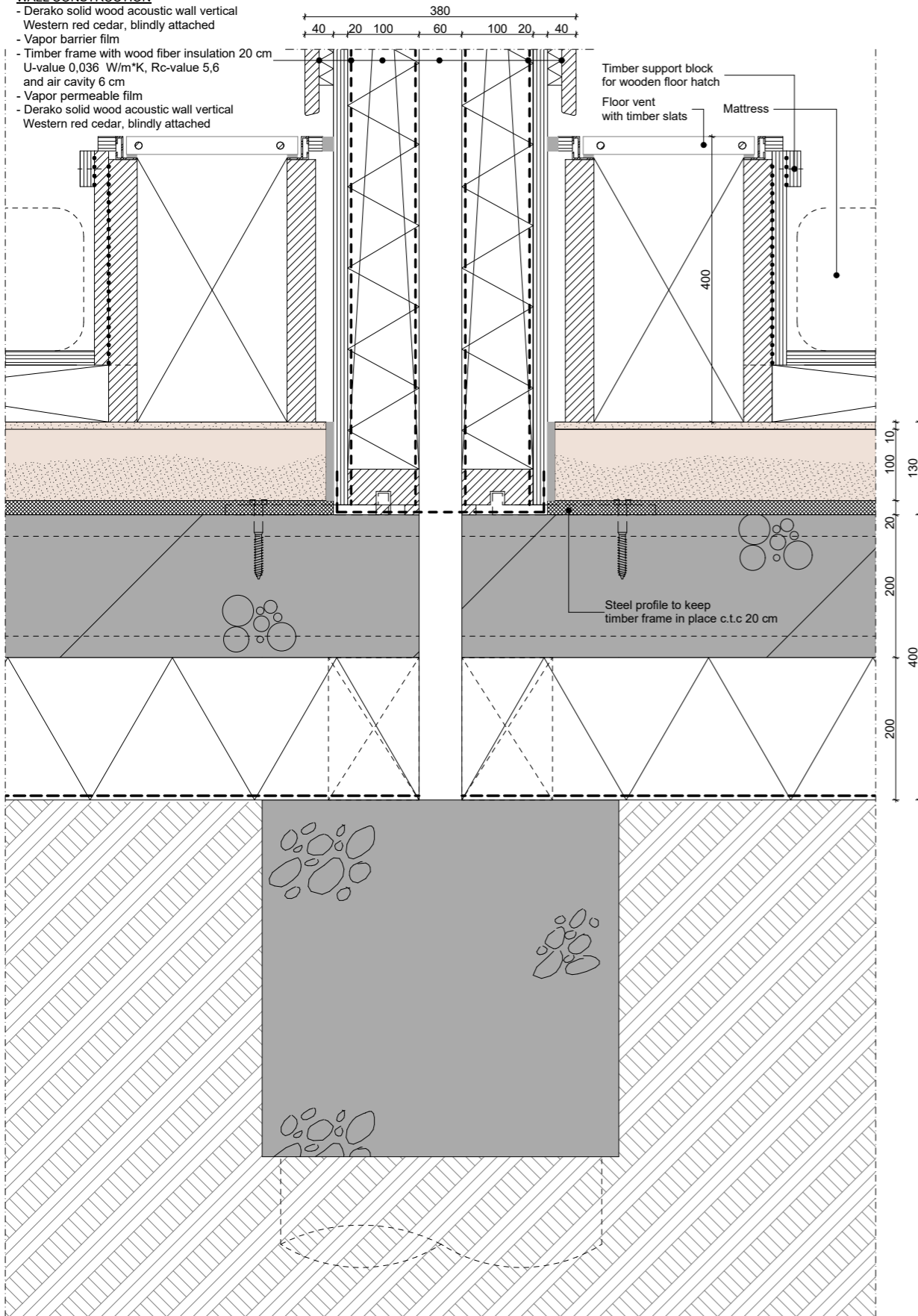
04 Roof system rooms



05 Separation foundation rooms

WALL CONSTRUCTION

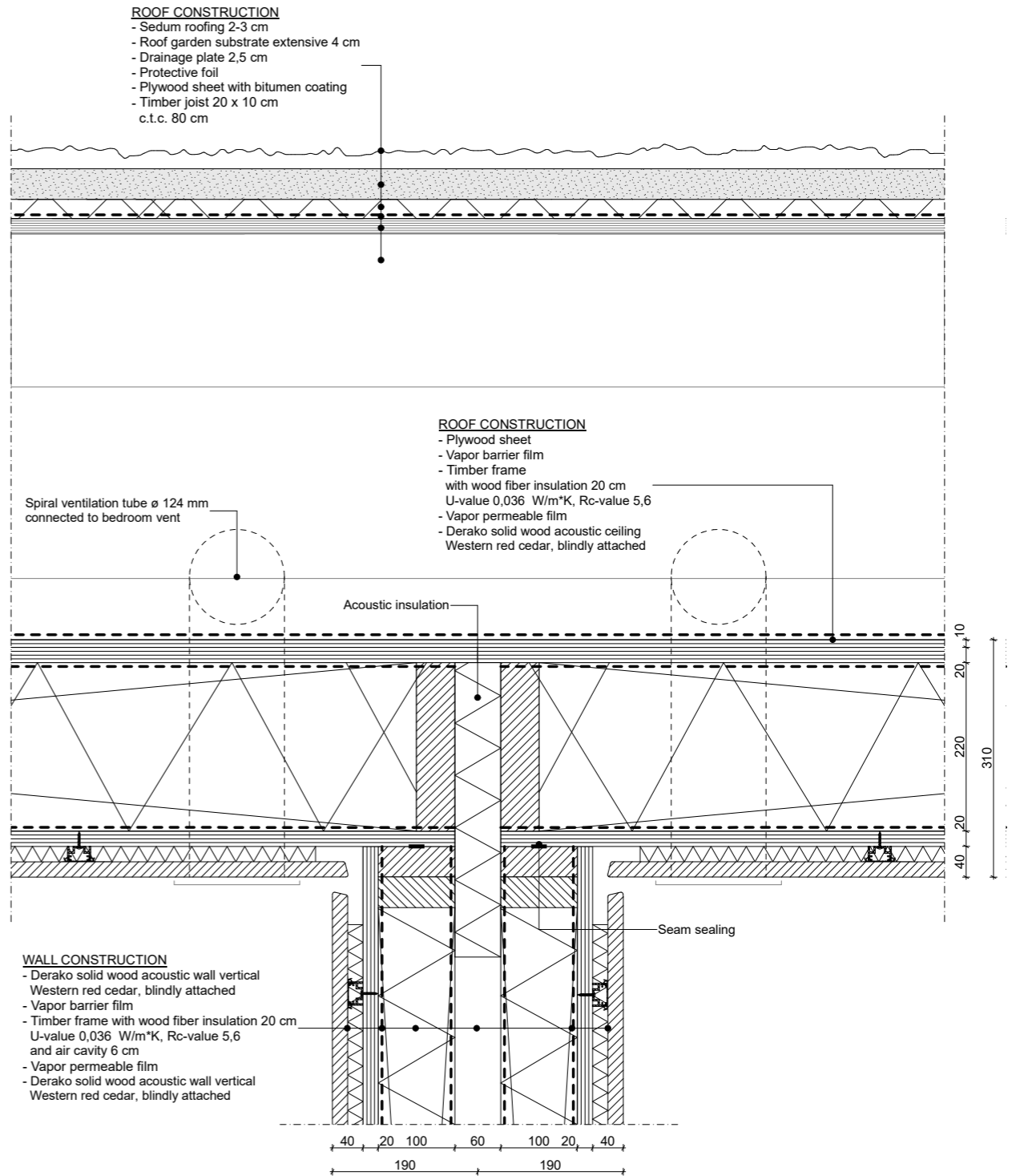
- Derako solid wood acoustic wall vertical Western red cedar, blindly attached
- Vapor barrier film
- Timber frame with wood fiber insulation 20 cm U-value 0,036 W/m²K, Rc-value 5,6 and air cavity 6 cm
- Vapor permeable film
- Derako solid wood acoustic wall vertical Western red cedar, blindly attached



06 Separation roof system rooms

ROOF CONSTRUCTION

- Sedum roofing 2-3 cm
- Roof garden substrate extensive 4 cm
- Drainage plate 2,5 cm
- Protective foil
- Plywood sheet with bitumen coating
- Timber joist 20 x 10 cm c.t.c. 80 cm



07 Roofsystem water square

