

A Transformation of the Orangery at Stora Sundby Slott

# Submerged in Heritage

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Chalmers School of Architecture  
Department of Architecture and Civil Engineering

Examiner: Mikael Ekegren  
Supervisor: Björn Gross



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**CHALMERS**  
UNIVERSITY OF TECHNOLOGY

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For sharing history, knowledge and insight into the operation.

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For hospitality and sharing knowledge and experience.

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For endless support.

## ABSTRACT

This thesis explores how culturally protected environments can evolve to meet contemporary needs without compromising their historical integrity. Set within the cultural heritage site of Stora Sundby Slott, the project investigates the refurbishment, adaptive reuse and extension of the 19th-century Orangery, transforming it from a seasonal café into a year-round venue for events and dining.

The thesis is centered around the investigation of the palimpsest view, where architecture is seen as a layered record of continual change, as described in *Adaptive Reuse of the Built Heritage: Concepts and Cases of an Emerging Discipline* (Plevoets & Van Cleempoel, 2019). The process is structured as a sequence, allowing theoretical ideas to be translated into spatial concepts and systematically tested. The concepts respond to three branches of palimpsest, being Imitatio, Inventio and Aemulatio. These concepts are evaluated based on a set of criteria derived from the County Administrative Board's Knowledge Base for Stora Sundby (Länsstyrelsen Södermanland, n.d.). The concept which answered best to the criteria was Aemulatio, which was further investigated and developed into the final design proposal.

The proposal is partially submerged, allowing it to be integrated within the terrain rather than appearing as an isolated object. Strict lines from the Orangery extend into the addition, and the architectural elements are curated to direct attention toward the key qualities of the estate. The estate's entrance has a prominent visual connection to the Castle, which is framed by the Orangery on one side and lake Hjälmarén on the other. With a low addition that is embedded into the terrain it avoids disturbing the first impression of the site. Inside the building, the experience shifts. The placement of the addition instead strengthens its connection to the estate by opening views toward the water and Castle from both the upper and lower levels.

The project examines how materiality, construction and site-specific interventions can contribute to the extended life, use and value of historic architecture. The result is a proposal that bridges heritage conservation and contemporary transformation, ensuring the continuity of Stora Sundby's architectural and cultural narrative.

Keywords: Adaptive reuse, Palimpsest, Aemulatio, Cultural heritage.

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## INTRODUCTION

### Background & Problem description

Culturally protected environments, such as Stora Sundby Slott, represent an essential part of the shared cultural heritage and play a central role in preserving the collective history and identity of a society. These environments have an archival function, embedding narratives of social structures, political power and architectural ideas from different historical periods. Their spatial configurations, materiality and construction techniques communicate values and worldviews that have shaped our built environment over time. In this sense, they serve as physical testimonies of our development, not merely being static objects but carriers of identity, continuity and collective memory.

By protecting these environments, not only unique aesthetic and historical values are preserved, but a continuity and sense of rootedness within the built environment are also maintained. However, when architecture no longer serves a functional purpose, it risks falling into neglect, which could lead to gradual deterioration.

To prevent deterioration, historic buildings must be thoughtfully adapted to contemporary needs, functions and uses. This calls for a careful balance between preservation, transformation and addition, where respect for existing values is combined with an openness to renewal, thus ensuring both the continued relevance of the cultural heritage sites and the preservation of their material, architectural aesthetic and cultural integrity.

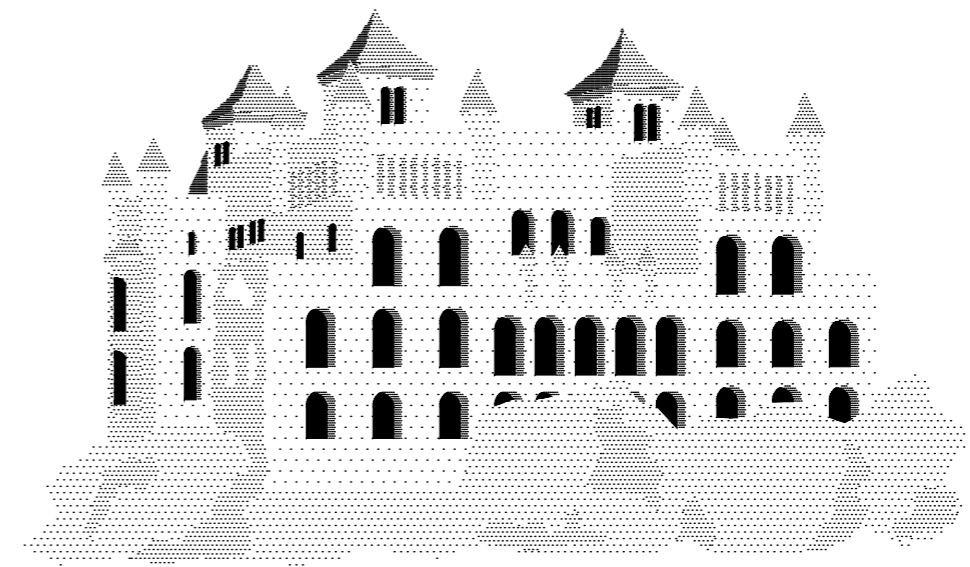


Figure 2. Exterior perspective of Stora Sundby Slott.

## History

The origin of Stora Sundby dates back to the 13th century, when a simpler fortification was built in a strategic position by Hjälmarsund. This fortification was besieged by Albrekt av Mecklenburg in 1364, during his struggles with Magnus Eriksson for the Swedish crown. The foundation of the fortification is still visible today, slightly north of the castle.

In the 15th and 16th century, the old fortification was abandoned and a new fortress was built on the site of the current castle, next to the shoreline of Hjälmaren. The fortress was called Sundby Hus and was for three centuries owned by the mighty Sparre family.

In the beginning of the 19th century the fortress was bought by one of the richest men in the country, Count Carl De Geer. His wife Ulrika however, was mildly impressed by the old fortress, and instead dreamed of a romantic knight's castle. Drawings of Sundby Hus were sent over the North Sea to the architect Peter Frederick Robinson. Back came drawings of a castle with a neo-gothic spirited Norman style architecture, completed with turrets and towers. The master builder Abraham Nyström got the task to realize the plans, which involved keeping most of the old walls and the interior, dressing the castle in a new armour.

In 1848 the construction of Stora Sundby Slott was finished. The new castle has four towers for the seasons, twelve smaller towers for the months, fifty-two rooms for the weeks and three hundred sixty-five windows for the days.

Since 1888, the Klingspor family has owned the castle, permanently residing there since 1937. With great care and humility toward its history, only gentle adaptations have been made to meet the demands of modern living.

After the castle's exterior was completed in 1839, attention turned to the interiors and the estate's other buildings. Abraham Nyström created drawings in the Empire style for the economical buildings on the estate, including an Orangery. These economical buildings were completed around year 1850, and support the operation on the estate with their own specific function. Over the years, the buildings have been altered, yet they remain an integral part of the estate's history (Stora Sundby, n.d.).

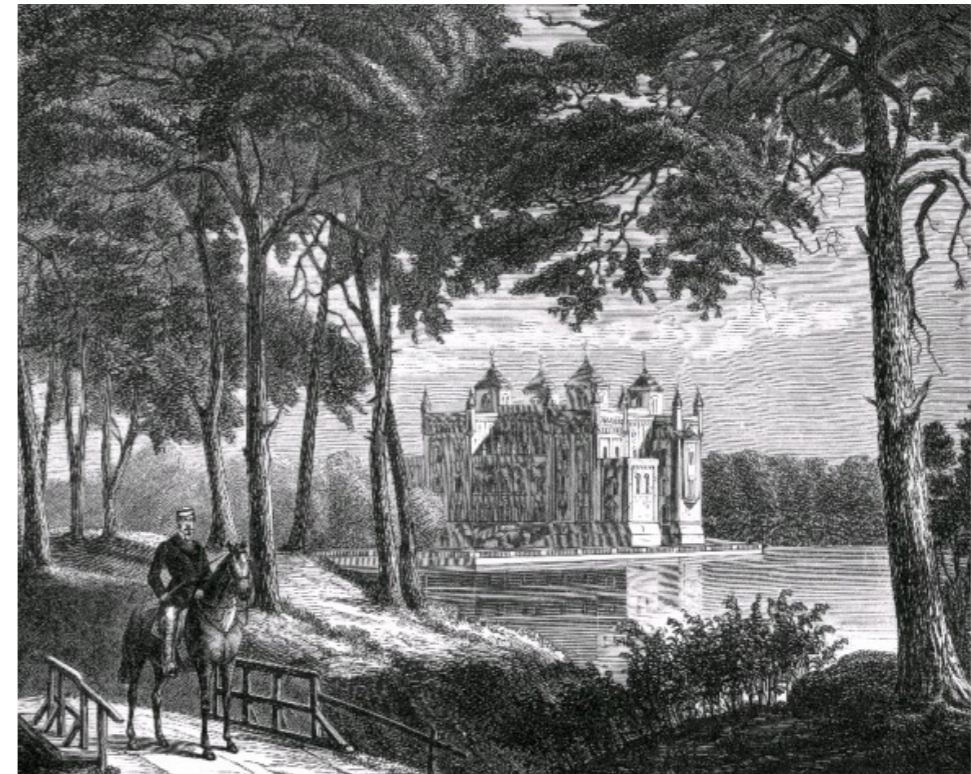


Figure 3. SLM M036246 - Slottet Stora Sundby, litografi. Photo: Sörmlands museum (n.d.).

## **Aim & Research question**

The focus of this thesis is to prevent culturally significant buildings from deterioration by adapting them to contemporary needs and safeguarding their relevance in the future.

*How can Stora Sundby Slott, as a cultural heritage site, be adapted to contemporary functions, such as tourism, while respecting its historical layers and identity?*

*How can the Orangery be adapted to accommodate new functions, including restaurant and event venue, while preserving its historical character and reinforcing its role within the estate?*

## **Project**

The project proposes an extension of the existing Orangery, transforming the seasonal café into a year-round restaurant and event venue, oriented towards the views of Stora Sundby Slott and lake Hjälmarén. The proposal includes refurbishment, adaptation and extension of the existing building, exploring the integration of new functions within a historic environment.

## **Delimitations**

The project is focused on the specific site and context of Stora Sundby Slott in Eskilstuna.

A phased development strategy for the estate will be explored, however, this thesis is limited to an in-depth investigation of selected areas within the first phase of the estate development. The primary focus is the refurbishment, adaptation, and extension of the existing Orangery.

Cultural heritage regulations are acknowledged and used to inform the design process, but are not treated as fixed constraints. Instead, they are interpreted as a framework guiding the integration of new interventions.

## **Sustainable Development**

Sustainability is approached through the adaptation and reuse of existing structures, supporting their continued relevance and extending their lifespan. The project aims to limit disuse and demolition by introducing new functions within the existing structures, paired with targeted new additions.

## **Expected Results**

The project aims to result in a realistic and buildable proposal, where the overall architectural strategy and detailing are carefully developed. At the same time, the proposal seeks to challenge and extend conventional approaches to working within cultural heritage contexts, exploring how new architectural expressions can be introduced while maintaining and reinforcing the historical character of the site.

## **Reading Instructions**

The report is structured as a progression from theoretical framework to design proposal. It begins with an introduction and method section, followed by site analysis and theory. The chosen theories are then translated into concepts, which are evaluated to determine one approach to develop into the final design proposal.

## METHOD & TOOLS

This project is conducted through research through design, where architectural design is used as a method to explore how new interventions can be integrated within a cultural heritage site. The process is structured as a sequence, allowing theoretical ideas to be translated into spatial proposals and systematically tested:

**Theory → Concept → Evaluation → Design**

This structured approach allows the design process to be both exploratory and systematic, ensuring that architectural decisions are grounded in both theoretical understanding and site-specific conditions.

### Theoretical foundation

The process begins with the establishment of a theoretical framework based on the concept of palimpsest, as described in *Adaptive Reuse of the Built Heritage: Concepts and Cases of an Emerging Discipline* (Plevoets & Van Cleempoel, 2019). Palimpsest understands the built environment as a layered condition where new interventions are added in relation to existing structures and meanings.

This phase includes literature studies and case studies, which provide both conceptual grounding and architectural references. In parallel, the County Administrative Board's Knowledge Base for Stora Sundby (Länsstyrelsen Södermanland, n.d.) is analyzed to identify the cultural, historical, and spatial values of the site. Together, these form the basis for both concept development and evaluation, ensuring that the project is anchored in both theory and context.

### Concept development

Based on the theoretical framework, three concepts are developed: *Imitatio*, *Inventio* and *Aemulatio*.

These concepts represent distinct strategies for engaging with the existing built environment. They are explored through iterative sketching and model studies, enabling an initial spatial translation of theoretical ideas. At this stage, the aim is not to define a final solution, but to generate and compare alternative approaches, allowing the implications of each strategy to be understood.

### Evaluation

The concepts are then evaluated using a set of criteria derived from the Knowledge Base. These criteria are translating the identified heritage values into practical tools for assessing architectural interventions. The evaluation focuses on how each concept responds to key aspects such as use, historical continuity, architectural expression, and the overall perception of the site. This comparative analysis makes the decision-making process grounded and transparent, supporting a reasoned selection of one concept for further development.

### Design development

The selected concept is developed into a design proposal through an iterative process. Drawings, physical models, and digital visualizations are used to continuously test, refine, and improve the spatial, material, and functional qualities of the design. This phase makes up the main part of the research through design process, where knowledge is generated through making.

### Summary of method

The method follows a structured progression from theory to proposal. By moving from theory into concept, and from evaluation to design, the project ensures that the final outcome is analytically grounded and spatially investigated. This approach enables a balance between investigation and assessment, where design decisions are continuously informed, tested and refined throughout the process.

## SITE

### Location

The site is connected to a broader region through Riksväg 56, which passes west of the site, linking the area to Eskilstuna, the Stockholm region and the central parts of Sweden. This balance between accessibility and isolation allow Stora Sundby to maintain its historical presence and rural calm, while still being a part of the larger region.

The castle itself is located on a peninsula, creating a strong visual and spatial dialogue between land and water. The calm water mirrors its facades and towers, while the surrounding parkland and forests provides a soft, natural frame. The proximity to the water is apparent throughout the site and makes the castle feel anchored in the landscape and open to the horizon.



Figure 4. *Map of Sweden.*

## Inventory

The surrounding buildings on the estate form a carefully composed collection that balances symmetry, order and simplicity. Their expression is characterized by clear proportions and repetition. The evenly spaced openings create a rhythmic harmony that enforces the estate's ordered character. The repetition of simple, well-balanced volumes unites the composition and grounds it gently in the landscape.

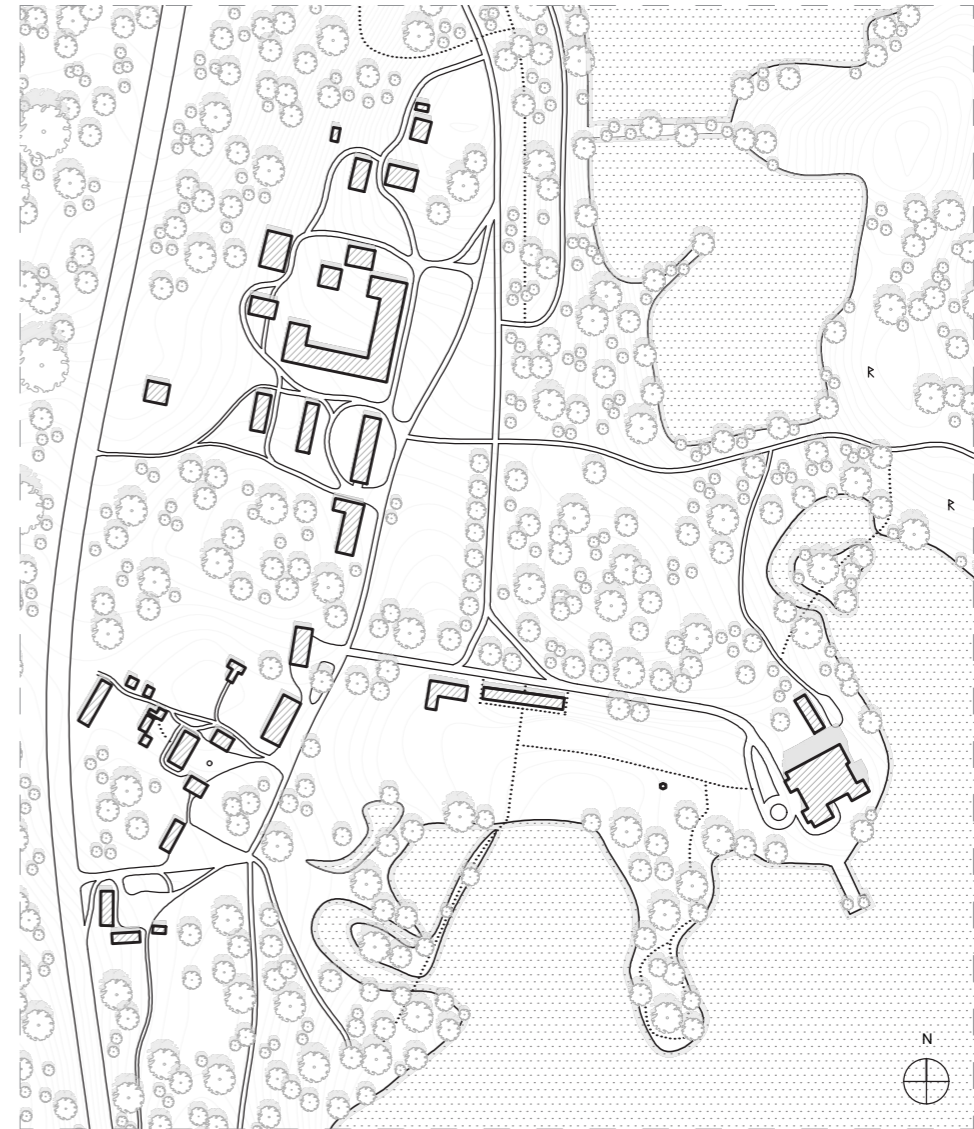


Figure 5. Existing site plan. Scale 1:5000.

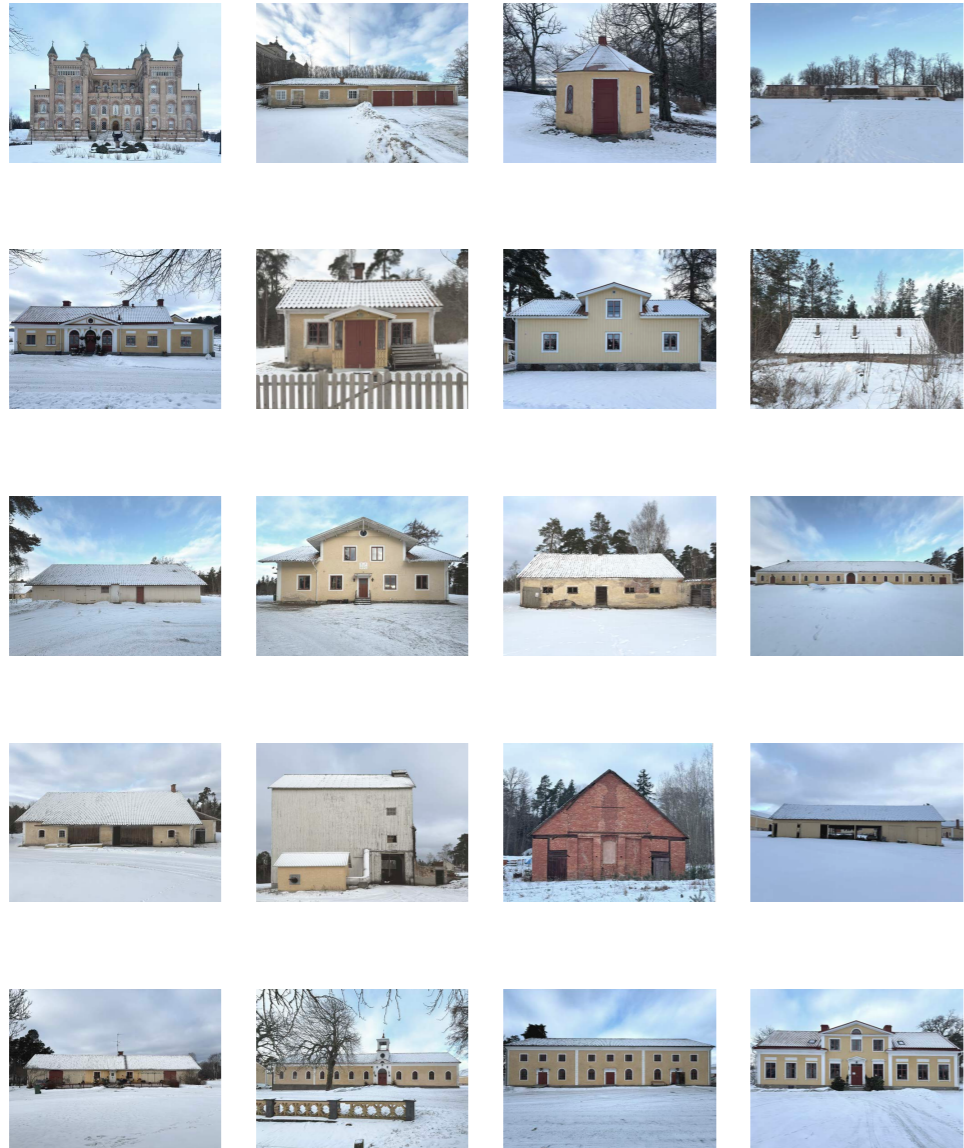


Figure 6 (Photo gallery). *Inventory of the buildings on the estate.*

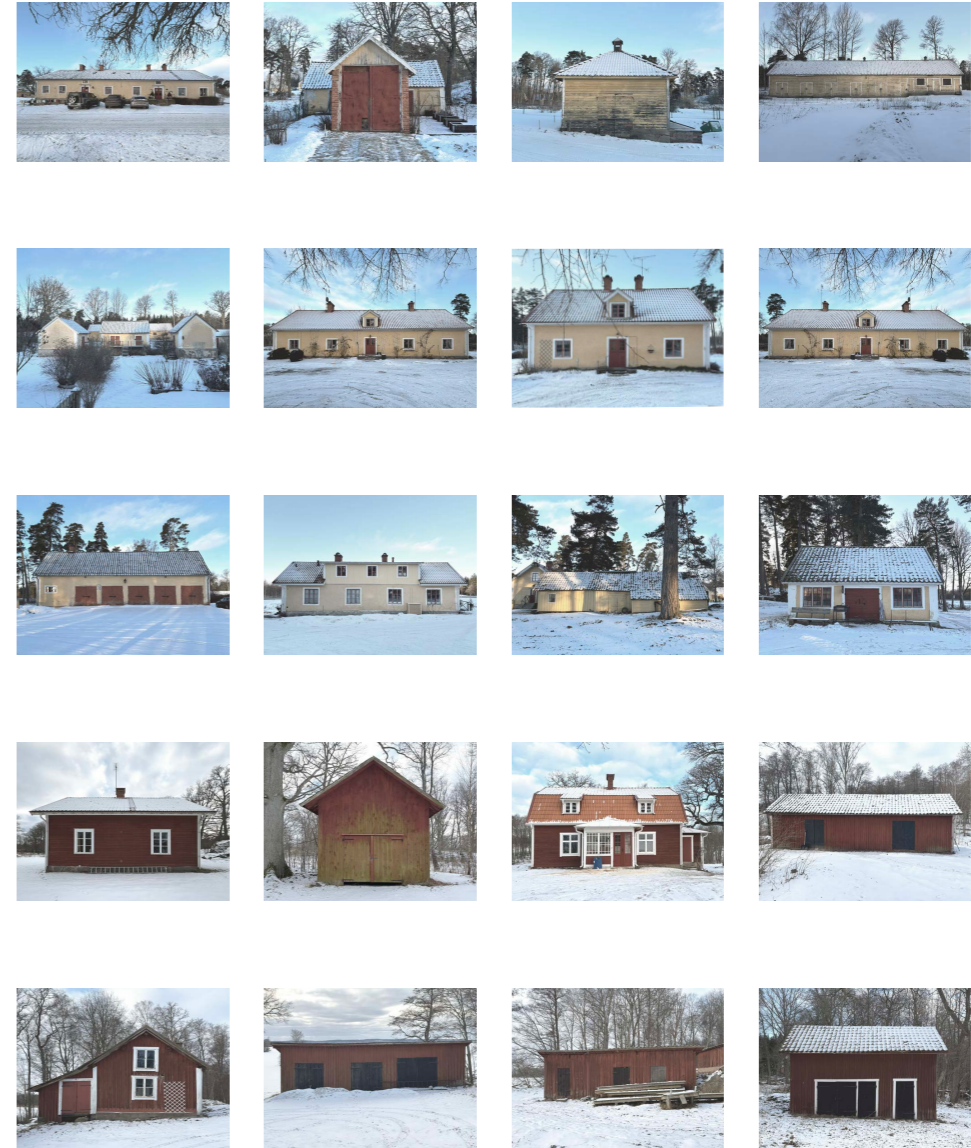


Figure 7 (Photo gallery). *Inventory of the buildings on the estate.*

## Development phases

The transformation of Stora Sundby is envisioned as a gradual and sequenced process, where each phase lays the foundation for the following phases. Rather than imposing a finished masterplan from the start, the development grows organically from the existing qualities of the estate. Each stage strengthens the site's identity, increases activity and creates a solid organizational and economical foundation, which is necessary for long term management.

### Phase 1 - Increasing visitor flow

The 19<sup>th</sup> century greenhouse is adapted from a seasonal café into a year round restaurant and event venue. Through this adaption, the estate becomes a cultural and culinary destination, ensuring activity throughout the year and generating a steady flow of visitors who engages directly with the protected heritage environment.

During the transitional period, a small relocatable modular structure is introduced as a flexible supporting resource. Its mobility allows it to support the operation wherever needed throughout all phases of development. By adapting to shifting needs, it embodies the gradual growth and responsive transformation rather than fixed interventions.

The entrance sequence of the estate is redefined, where the three most southern buildings will shape a trading square with visual connections toward the castle and its surrounding landscape. This space will be the visitors first encounter with the estate, strengthening orientation, accessibility and identity.

These interventions combined will increase visitor flow in a controlled and sustainable manner, creating the foundation necessary for phase 2.

### Phase 2 - Continuous movement

With the continuous presence of visitors and events, the conditions are suitable for complementary businesses to establish themselves within the castle grounds. Facilities will be developed within Smedjan intended for different work fields, including co-working spaces, ateliers and craft workshops. This reinterprets the traditional estate functions through a contemporary lens, creating a red thread between the historical narrative and the functions of today.

The Estate Office is relocated from Vårdshuset to the southern corner of Ladugården, allowing Vårdshuset to transition toward solely housing. The residential structures are further refined and reorganized into a village-like enclave within the estate. This area remains connected to the castle environment, but with a clearer distinction between private and public.

This creates opportunities for continuous movement of residents, entrepreneurs and guests. The estate becomes active on a daily basis, not only during peak season. Existing conference facilities in the Förvaltarbostaden are enhanced, supporting a broader range of gatherings and professional activities.

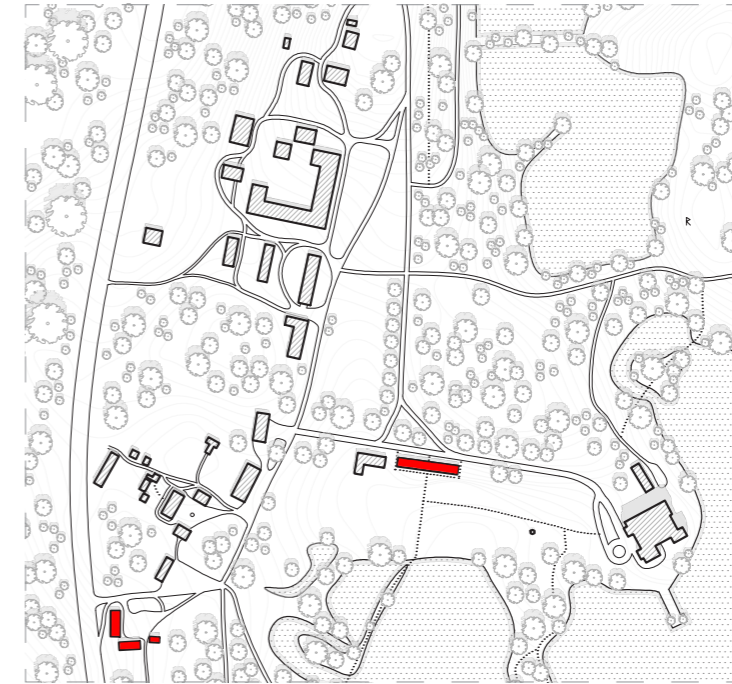


Figure 8. Site plan Phase 1. Scale 1:7500.

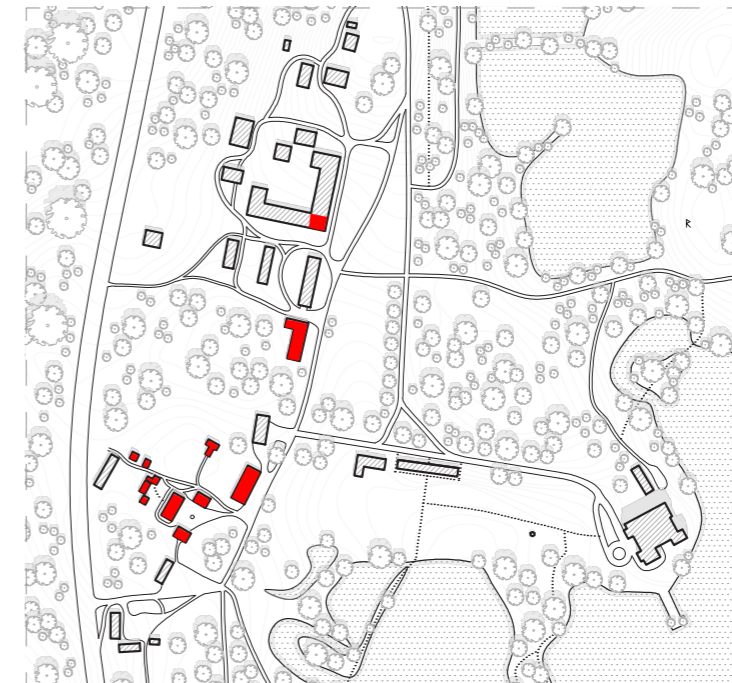


Figure 9. Site plan Phase 2. Scale 1:7500.

### Phase 3 - Enhancing the landscape

This phase reinforces the estate's landscape and expands its productive role. A Garden Market is established on the old farmland to the west, strengthening the historical connection between cultivation and daily life on the estate.

This intervention also leads to renewed purposes for the surrounding buildings. During peak season, the Garden Market extends into a close by storage building, benefiting from its close relationship to the trading square at the estate's entrance. This structure also accommodates storage for the operation of the garden. Tegelbruket is repurposed as storage for crops and goods, where its thick masonry walls naturally maintain a stable climate suited for preservation.

The Castle Park and surrounding landscape are planned and enhanced with the recruitment of a head gardener to ensure that the experience of the nature matches the architectural quality of the built environment.

### Phase 4 - Extending visit duration

The final phase introduces functions that extend the duration of visits and deepen the overall experience of the castle environment. These are a boutique hotel, an estate museum and related attractions.

At this stage, the estate has transitioned from a primarily agricultural and forestry focused operation into a prominent cultural destination, yet still maintaining its historical integrity. The organizational structure has also shifted toward long term property management.

The core mission of this phase becomes the careful management and preservation of the estate's buildings and landscape, while external actors operate the specialized programs within the unique spatial framework provided by Stora Sundby.

Through this phased and organic development the estate does not simply expand, it matures.

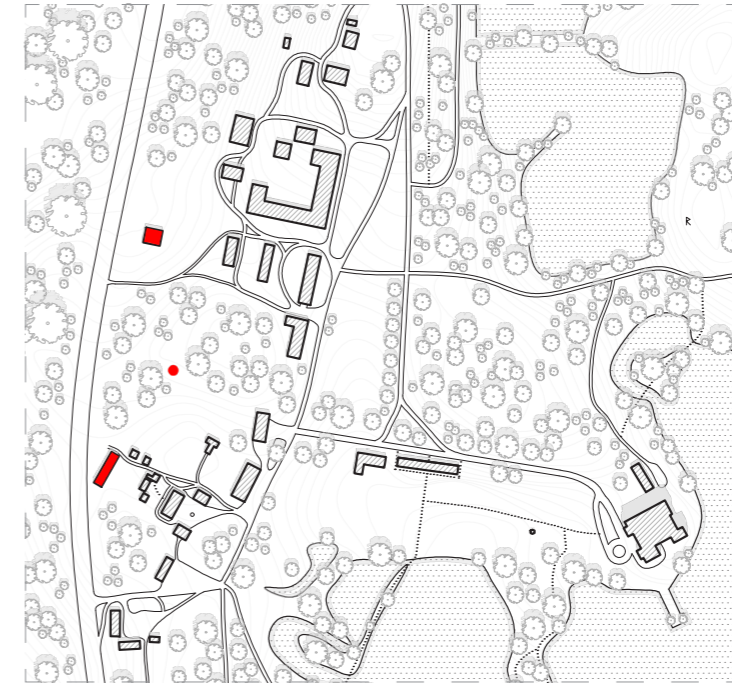


Figure 10. Site plan Phase 3. Scale 1:7500.

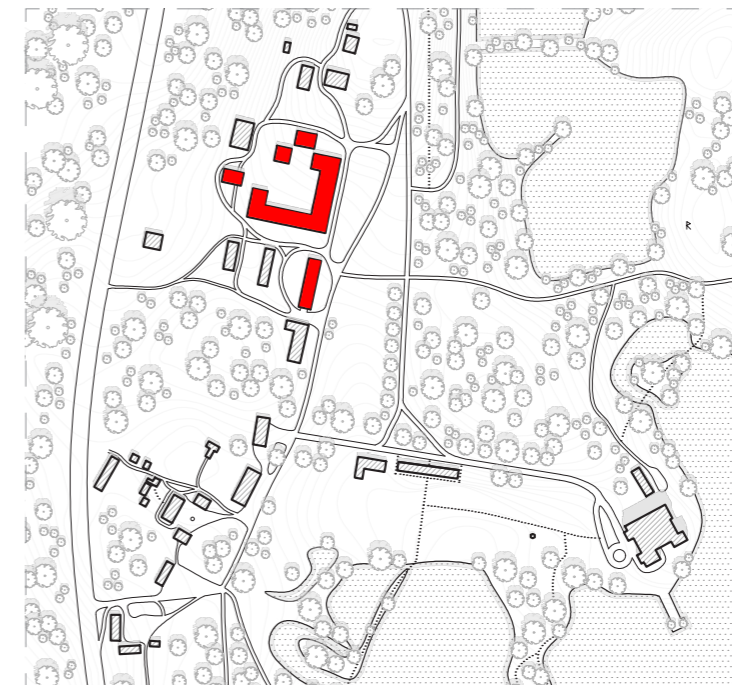


Figure 11. Site plan Phase 4. Scale 1:7500.

## The Orangery

The original function of the Orangery was as a supporting cultivation building, supplying the estate with fruit and vegetables. The architectural form closely follows its function, with a 54 meter glazed south-facing facade, the building is oriented for optimal growing conditions.

For its time, the Orangery incorporated technically advanced systems, the key feature being the heating system. A furnace provided heat to the building, by having chimney channels embedded in the masonry walls. This enabled a controlled internal climate and an extended growing season.

In its current state, the Orangery occupies a central position within the estate, clearly visible from the main entrance and with close proximity both to the castle and waterfront. Its spatial prominence makes it a strategic location, suitable for accommodating new functions and becoming a more active part of the estate's new operations. Today, the building operates as a seasonal café, primarily open during the summer months. While the structure remains in usable condition, refurbishment is necessary in order to prevent further deterioration and support future use.

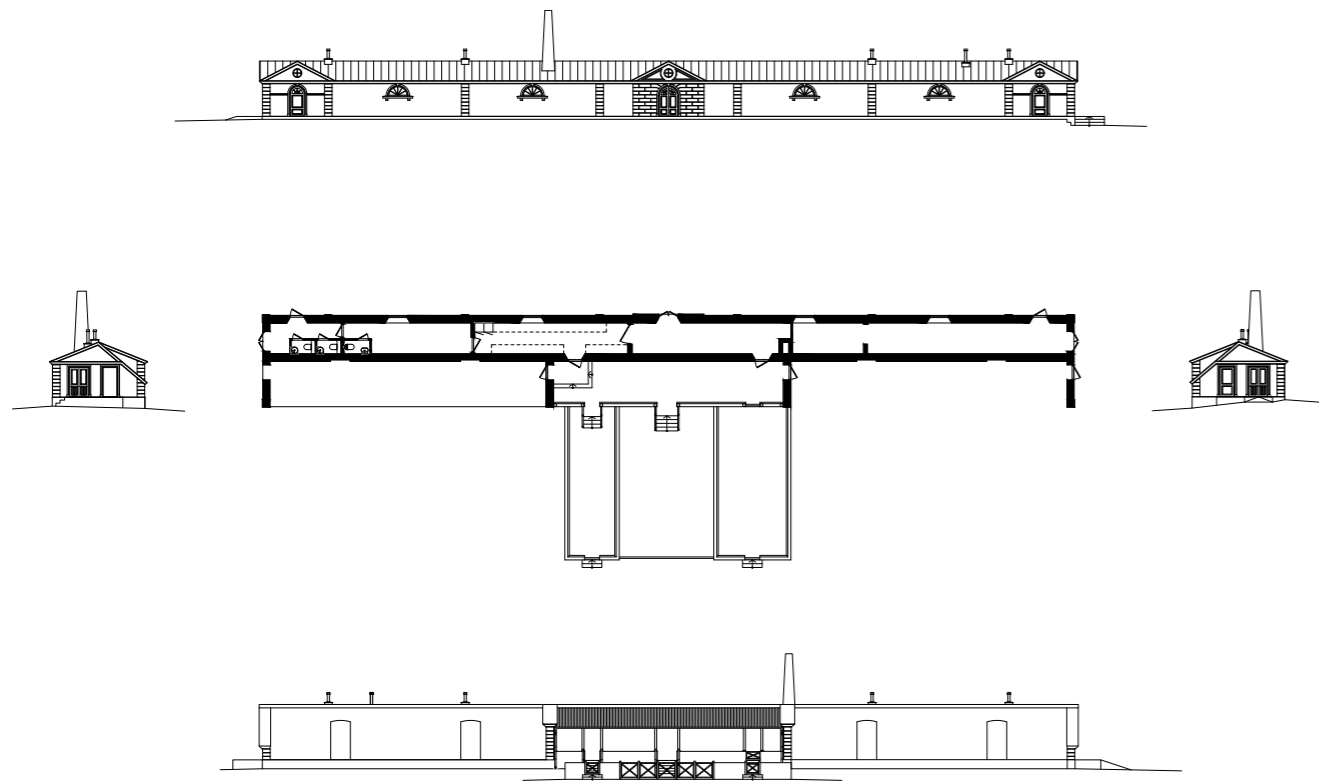


Figure 12 (Photo gallery). Drawings of the existing Orangery. Scale 1:500.



Figure 13 (Photo gallery). Photos of the existing Orangery.

## THEORY

### Palimpsest rather than monument

Plevoets and Van Cleempoel describe in *Adaptive reuse of the built heritage: Concepts and cases of an emerging discipline* (2019) that there are two main ways to approach existing buildings; either as monuments or as palimpsest.

The monument view sees the built heritage as something fixed and almost sacred, preserved as a static object representing a specific moment in history. Interventions to monuments are minimal and aim to freeze the building's appearance to maintain its authenticity and integrity. While this perspective is applicable for the castle, it will not serve the economical buildings right, since they need a proper function in order to prevent disuse and deterioration.

The palimpsest approach sees built heritage as a layered record of continuous change, like a manuscript rewritten over time. Instead of restoring a building to a single "original" state, traces of past alterations; materials, spatial changes, or marks from adaptation, are valued as evidence of its history. New interventions are contributing to the ongoing narrative rather than halting the building's evolution (Plevoets & Van Cleempoel, 2019).

The palimpsest view is a fitting theory for the economical buildings since it's allowing interventions that adapt the building to contemporary needs, functions and uses. Under the Palimpsest view, there are three branches; Imitatio, Inventio and Aemulatio.

### Imitatio

The approach is based on imitation or close resemblance to the historic buildings. These interventions aim to visually blend into the historic context by taking inspiration from, or even mimicking proportions, form, materiality and detailing. The main focus is to create a sense of continuity within the built heritage, rather than contrasting new and old.

### Inventio

The interventions introduce an original design, independent of the existing structures and their logic. The historic buildings remain contextually important, but do not determine the proportions, form or composition. The additions create a contemporary architectural layer, often creating a clear distinction between new and old.

### Aemulatio

The additions build upon the logic of the existing buildings and acknowledge their historical and architectural value. Rather than imitating, they seek to reinterpret the underlying architectural principles with a contemporary architectural language. This creates a respectful form of rivalry, where the addition enriches the context by engaging in a dialogue with the historic fabric.

## Knowledge Base

The County Administrative Board's Knowledge Base, *Riksintresse för kulturmiljövården: Stora Sundby D 12 - Kunskapsunderlag* (Länsstyrelsen Södermanland, n.d.) gives a thorough description of the cultural heritage environment. It explains how historical periods have been layered, creating a complex cultural landscape that gives the site its unique character.

The site's strategic location in the crossing of Köpingsåsen and Hjälmarens, has been an important contributor to its development from an Iron Age settlement to a medieval fortress and later a noble estate. The current castle, transformed in the nineteenth century, together with the surrounding park, forest, agricultural land and economic buildings, form a coherent and well-preserved union (Länsstyrelsen Södermanland, n.d.). The Knowledge Base identifies three value categories that define the importance of the site:

### Knowledge value

The site's ability to communicate its history, as well as to inform and educate visitors about the cultural heritage.

### Experiential value

Concerning visual qualities, spatial relationships and the overall perception of estate.

### Use value

Emphasizing the importance of the estate's functions, such as agriculture, forestry and tourism, all supporting the economic feasibility to maintain and preserve the environment.

The Knowledge Base emphasizes that all interventions made to the site should preserve and enhance these values, allowing the site to remain active and continue to evolve over time (Länsstyrelsen Södermanland, n.d.).

## Basis for Evaluation

The identified values are translated into a set of criteria used to evaluate the palimpsest concepts, with each criterion responding to the description of the site's values, structure and management principles. This ensures that interventions are directly linked to conservation worthy aspects of the estate.

### Giving use to the existing building

Responding to the importance of continued use, involving agriculture, forestry and tourism. This criterion ensures that the existing buildings remain active and relevant by introducing new functions.

### Respecting the building's historical function and values

In an environment where each building tells its own story, this criterion ensures that interventions relate to the building's history, maintaining the readability of its original function.

### Respecting the existing building's aesthetic

Aiming to maintain the coherent perception of the estate's building stock, this criterion addresses how new interventions respond to scale, proportions and materiality. This ensures that the additions are respecting the existing aesthetic.

### Not disturbing the overall perception of the cultural heritage site

Highlighting the importance that the cultural heritage should be experienced as a unified environment, this criterion aims to preserve spatial relationships, visual connections and the overall perception of the site.

### Increasing understanding of the cultural heritage

As the site should be managed in a way that maintains and increases the understanding of its cultural significance, this criterion ensures that interventions contribute to the readability of the site's historical layers.

### Contributing to the development toward the final vision of the estate

*Introduced within the project and does not derive from the Knowledge Base.*

In order to work strategically with the long-term development of the site, this criterion evaluates whether new interventions contribute to the estate's future development and evolving operation.

### Summary of evaluation criteria

- Giving use to the existing building
- Respecting the building's historical function and values
- Respecting the existing building's aesthetic
- Not disturbing the overall perception of the cultural heritage site
- Increasing understanding of the cultural heritage
- Contributing to the development toward the final vision of the estate

## TRANSLATING THEORY INTO CONCEPT

### Concept development

Based on the theoretical framework, three concepts are developed: *Imitatio*, *Inventio* and *Aemulatio*.

The concepts are simplified to represent their key characteristics. At this stage, the aim is not to define a final solution, but to generate and compare alternative approaches, allowing the implications of each strategy to be understood.

### Concept of Imitatio

Developed in order to respect the existing built environment, the concept reflects the Orangery's footprint and proportions while still adding new functions. A clear relationship is formed between the old and new, as the mirrored addition acts as an extension of the existing Orangery. Based on a transparent, lightweight tectonic structure, the addition emphasizes the glazed facade of the Orangery.

This gives the addition an open and transparent expression, enhancing the connection to the surroundings. The space between the two volumes creates a sheltered and inviting outdoor area, framing the view towards the castle.

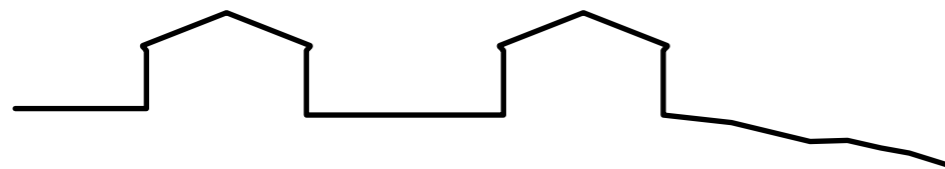


Figure 14. *Imitatio* concept sketch.

### Concept of Inventio

To maximize the ability to comprehend and experience the site, the extruded addition overlooks the estate. The glazed and tectonic timber structure acts as a visual landmark, improving orientation while creating a distinct contemporary layer. This layer marks a new era in the estate's development, emphasizing the growing focus on tourism. Altogether, this showcases the historical timeline of the site, from Iron Age settlement to the 21st century.

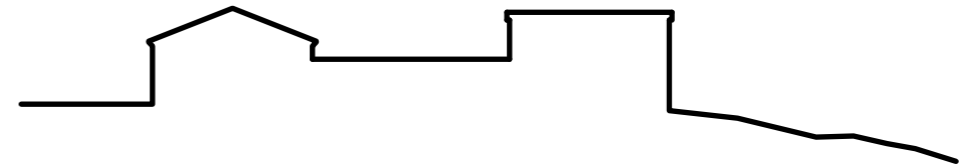


Figure 15. *Inventio* concept sketch.

### Concept of Aemulatio

In order to protect the aesthetics, sightlines and character of the estate, a terracing strategy is employed, submerging a majority of the addition into the terrain. This minimizes the visual impact and maximizes the functional effect. As a result of this, the differences in levels also create distinct spatial zones with varying qualities.

The Orangery becomes a central entrance motif and the heart of the composition, connecting indoor, outdoor and underground spaces. The new addition remain hidden from the estate's main entrance, integrated within the landscape and orienting itself toward the castle and the water. The roof of the addition becomes an outdoor seating area by blending into the landscape, inviting visitors to enjoy the views without visual obstructions of a new structure.

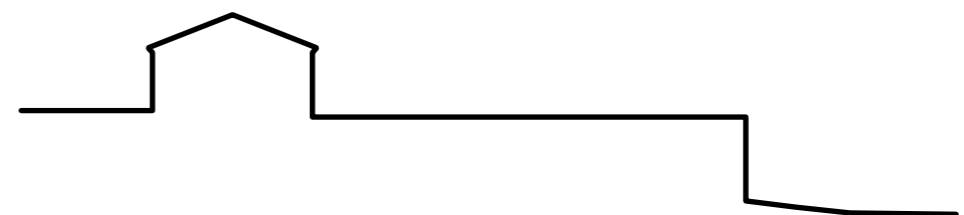


Figure 16. *Aemulatio* concept sketch.

## Concept evaluation

The concepts are evaluated based on the criteria derived from the Knowledge Base.

### Concept of Imitatio

- + Giving use to the existing building
- + Respecting the buildings historical function and values
- Respecting the existing buildings aesthetic
- Not disturbing the overall perception of the cultural heritage site
- + Increases understanding of the cultural heritage
- + Contributing to the development toward the final vision of the estate

### Concept of Inventio

- + Giving use to the existing building
- + Respecting the buildings historical function and values
- Respecting the existing buildings aesthetic
- Not disturbing the overall perception of the cultural heritage site
- Increases understanding of the cultural heritage
- Contributing to the development toward the final vision of the estate

### Concept of Aemulatio

- + Giving use to the existing building
- + Respecting the buildings historical function and values
- + Respecting the existing buildings aesthetic
- + Not disturbing the overall perception of the cultural heritage site
- Increases understanding of the cultural heritage
- + Contributing to the development toward the final vision of the estate

## Comparative analysis

Through the evaluation of the concepts based on the criteria derived from the Knowledge Base, Aemulatio most successfully met the requirements.

All of the concepts succeeded in giving use to, and respecting the existing building and its historical functions and values. Aemulatio, unlike the other concepts, also respects the building's aesthetic and the overall perception of the estate, mainly by being submerged into the terrain, avoiding visual obstruction.

Although Imitatio fulfilled a majority of the criteria, it did not respect the aesthetic of Abraham Nyström's 17th century Orangery, nor did it positively impact the overall perception of the site. Inventio proved to be the weakest alternative, the reason mainly being its contrast to the existing Orangery's proportions.

Aemulatio was considered weaker in its capacity to increase the understanding of the cultural heritage. This criterion however, does not necessarily need to be addressed through the building volume itself, as it could be met by reintroducing and reinterpreting historical functions that can be experienced by the visitors.

With this reasoning in mind, Aemulatio was considered the most fitting concept and will therefore be further investigated and developed into the final design proposal.

## REFERENCES

### Barcelona Pavilion

Location: Barcelona, Spain  
Built: 1929  
Architect: Ludwig Mies van der Rohe & Lilly Reich

The Barcelona Pavilion is defined by a flat roof supported by steel beams and freestanding walls of glass and stone, guiding movement through the space and creating a seamless relationship between interior and exterior.

The building opens toward reflecting water mirrors and terraces, enhancing the contact to the surrounding environment. The composition is defined by clarity, proportion and strong materiality, and where the light and surfaces are curated to have a strong presence within the building.



Figure 17. *Barcelona Pavilion*. Photo: Lasse Olsson Photo (2022).

### Restaurang ÄNG

Location: Ästad Vingård, Tvååker  
Built: 2022  
Architect: Norm Architects

The restaurant consists of two stories, a light and transparent greenhouse forms the upper level, while the restaurant itself is partially embedded in the terrain below, making it integrated within the surrounding landscape.

The lower floor opens through a glazed facade toward a nearby pond, establishing a close relationship between indoor and outdoor. The interior creates a calm and warm setting that frames the dining experience through a combination of Japanese inspired influences and generous usage of wood.



Figure 18. *Restaurang ÄNG*. Photo: Christian Boo (2016).

## TRANSLATING CONCEPT INTO DESIGN

Evolving from the concept of aemulatio, the addition is submerged into the terrain to respect the built heritage and the overall perception of the site, while still adding new features and functions. Striving towards the vision:

***Minimizing visual impact while maximizing functionality.***

The building is able to serve multiple functions including restaurant, café and events, making flexible areas a key component when transforming the building from seasonal cafe to year-round venue.



Figure 19. Building model.

### Space program

The program was developed by analyzing references and through a collaborative process with Stora Sundby Slott. The aim was to create a framework well suited for the operational needs of the estate and to enhance the visitors experience.

The analysis resulted in a restaurant program centered around a flexible dining hall accommodating 100–125 seated guests depending on the occasion, together with a café and other supporting functions.

### Program

Entrance floor	Bottom floor
Usable floor area: 285 m <sup>2</sup>	Usable floor area: 380 m <sup>2</sup>
Entrance	Stairwell
Stairwell	Entrance hall
Café	Dining hall
Café storage	Wine cellar
Restroom	Restroom
Wardrobe	Bar
Kitchen garden	Front kitchen
Garden storage	Back kitchen
Terrass	Staff locker room
	Storage
	Technical facilities
	Outdoor seating

By creating natural connections between these spaces and carefully shaping the movement through the building, the spatial sequence enriches the experience and creates a narrative.

### Entrance floor

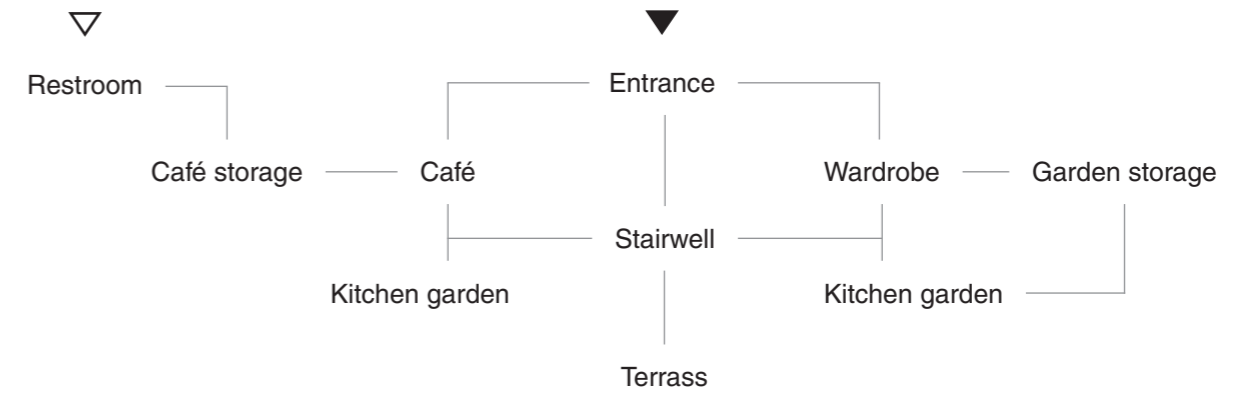


Figure 20. Program Entrance floor.

### Bottom floor

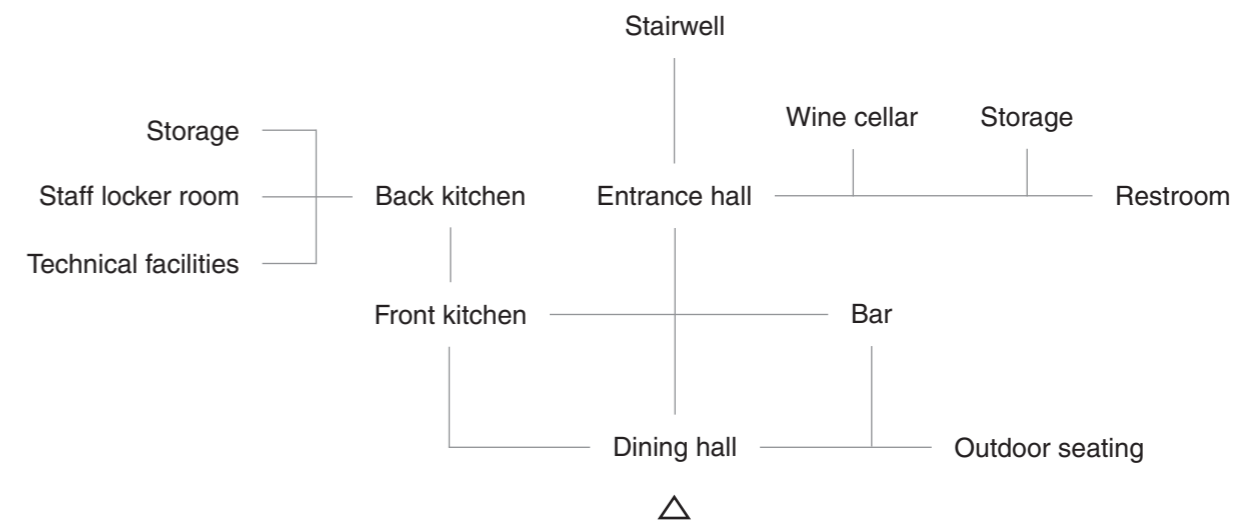


Figure 21. Program Bottom floor.

## Design Strategy

The submerged building allows the architecture to become integrated with the terrain rather than appearing as an isolated object. The architectural elements are curated to direct attention toward key qualities and avoid disturbing the existing composition of the estate.

The view from the entrance of the estate has a prominent visual connection to the castle which is framed by the Orangery on one side and water on the other. With a low addition that is embedded into the terrain it avoids disturbing the first impression of the site.

From inside the building, the experience shifts. The placement of the addition instead strengthens its connection to the estate by opening views toward the water and castle from both the upper and lower levels.

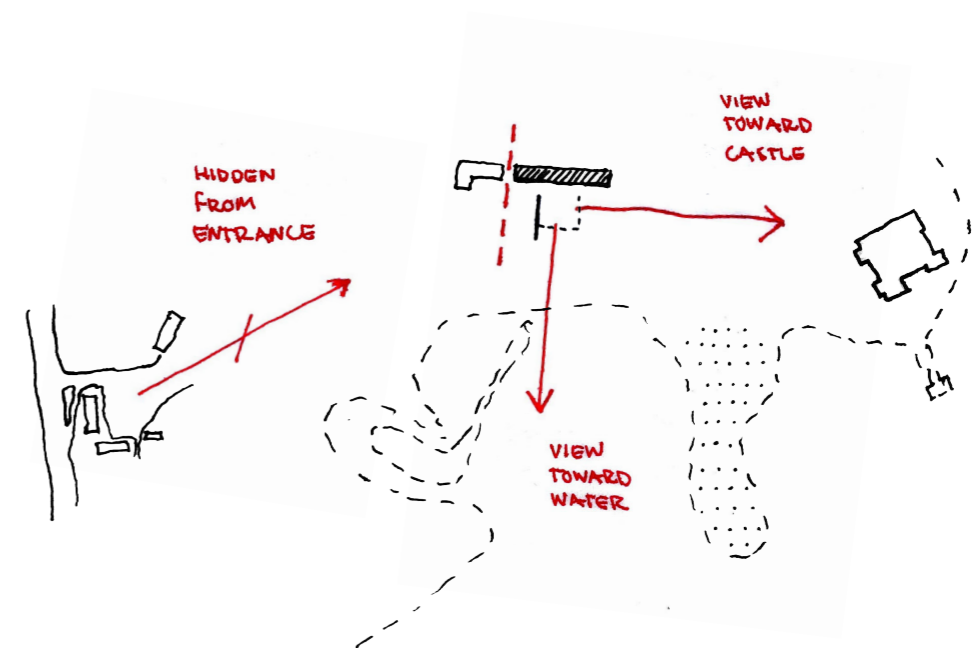


Figure 22. Concept sketch.

## Overall plan

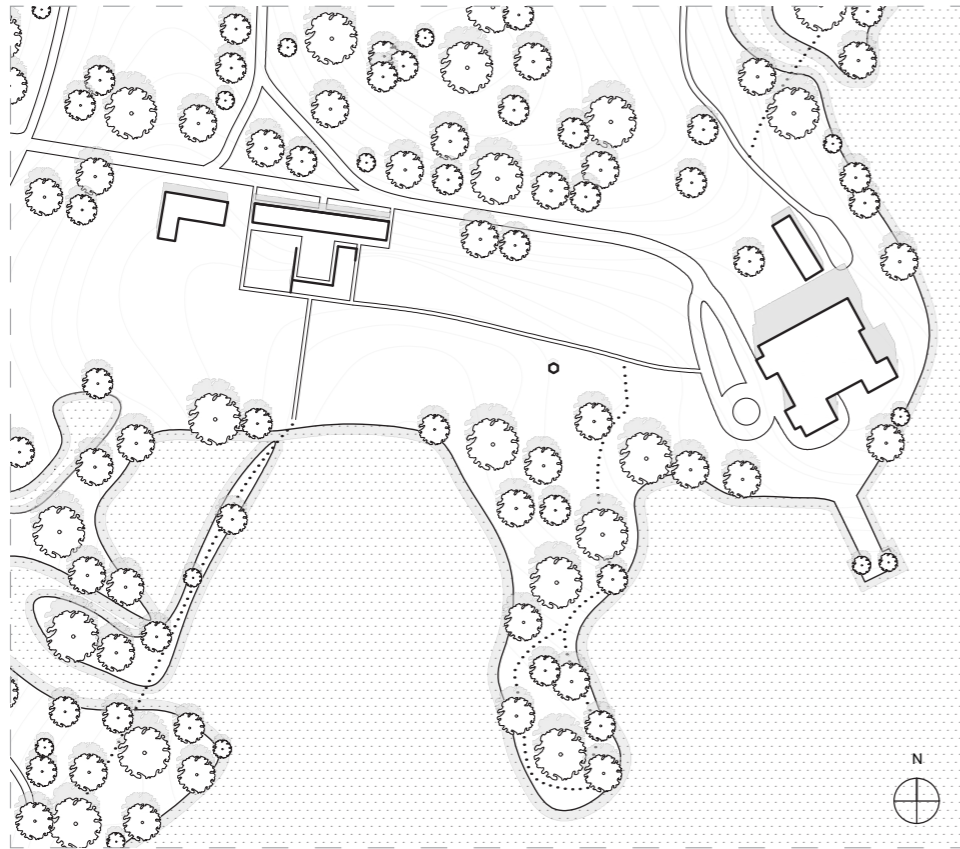


Figure 23. Site plan. Scale 1:3000.

## Water connection

The total height of the building has been monitored in order to keep a reasonable distance to the water. The water level of Hjälmarén is regulated through a system of canals, making it resilient against fluctuations and keeping it relatively stable at approximately 22 metres above sea level. This stability allows the proposal to be embedded within the terrain without risking flooding and drastically rising water levels.



Figure 24. Landscape section. Scale 1:1500.

## Building

The design derives from a dialogue between heavy and light, solid and transparent. Drawing inspiration from the existing Orangery and the Castle, robust granite walls meet a glazed timber structure, forming a contemporary architectural layer in dialogue with the existing. Strict lines extend from the Orangery and into the addition, while smoother silhouettes from the landscape and vegetation softens its appearance.

The Orangery becomes the entrance motif of the composition, acting as the primary point of arrival. Upon entering, a carefully introduced opening in the existing wall creates a clear visual connection between the building and the landscape. Following this axis, a new staircase connects the two floors and becomes the nave for circulation. This staircase is enclosed with a reinterpretation of the original glazing, which is also utilized as Kitchen Gardens, providing the restaurant with estate-grown crops, reconnecting to the Orangery's original function.

The axis continues outward to the terrace above the new addition, creating opportunities for outdoor seating connected to the café in the Orangery. The existing views framing the Castle and the water have been preserved and enhanced, ensuring that the historic buildings remain visually dominant within the cultural heritage site.

The sequence of the bottom floor is organized as a journey towards the light. The entrance hall forms a darker core, with more enclosed and service-oriented functions. Visible through a straight axis, the dining spaces unfold toward the landscape and offer a bright, transparent atmosphere. The heavy stone walls become defining elements which are curating the views as well as meeting the surging landscape. The exterior is contrasted by a warmer wood clad interior, which creates a more inviting space. The flexibility and openness of the dining hall makes it suitable for dining as well as for hosting events, such as weddings and conferences. A water mirror is introduced as an element that reflects light and mirrors the surrounding landscape. Large glazing dissolves the boundary between interior and exterior, extending the dining experience into the landscape.

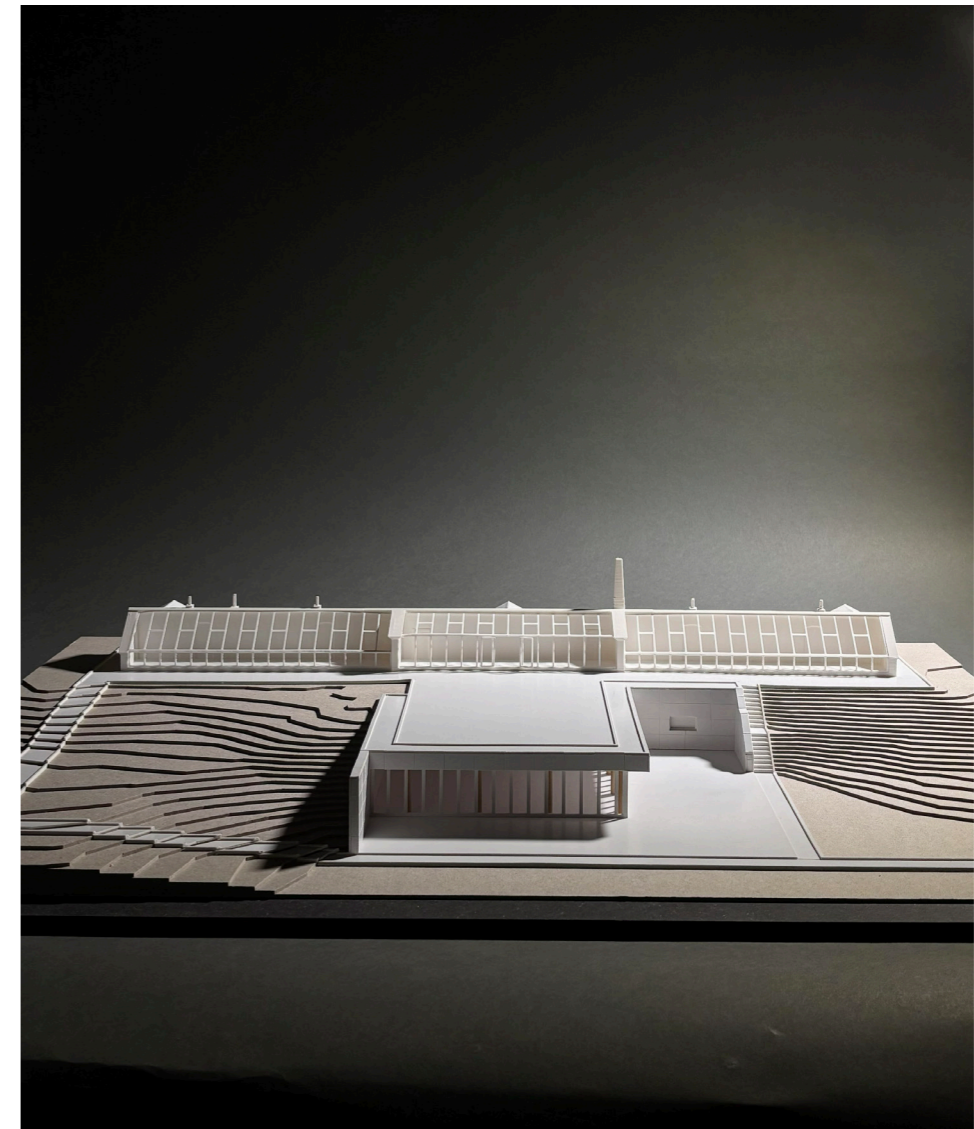


Figure 25. Building model.

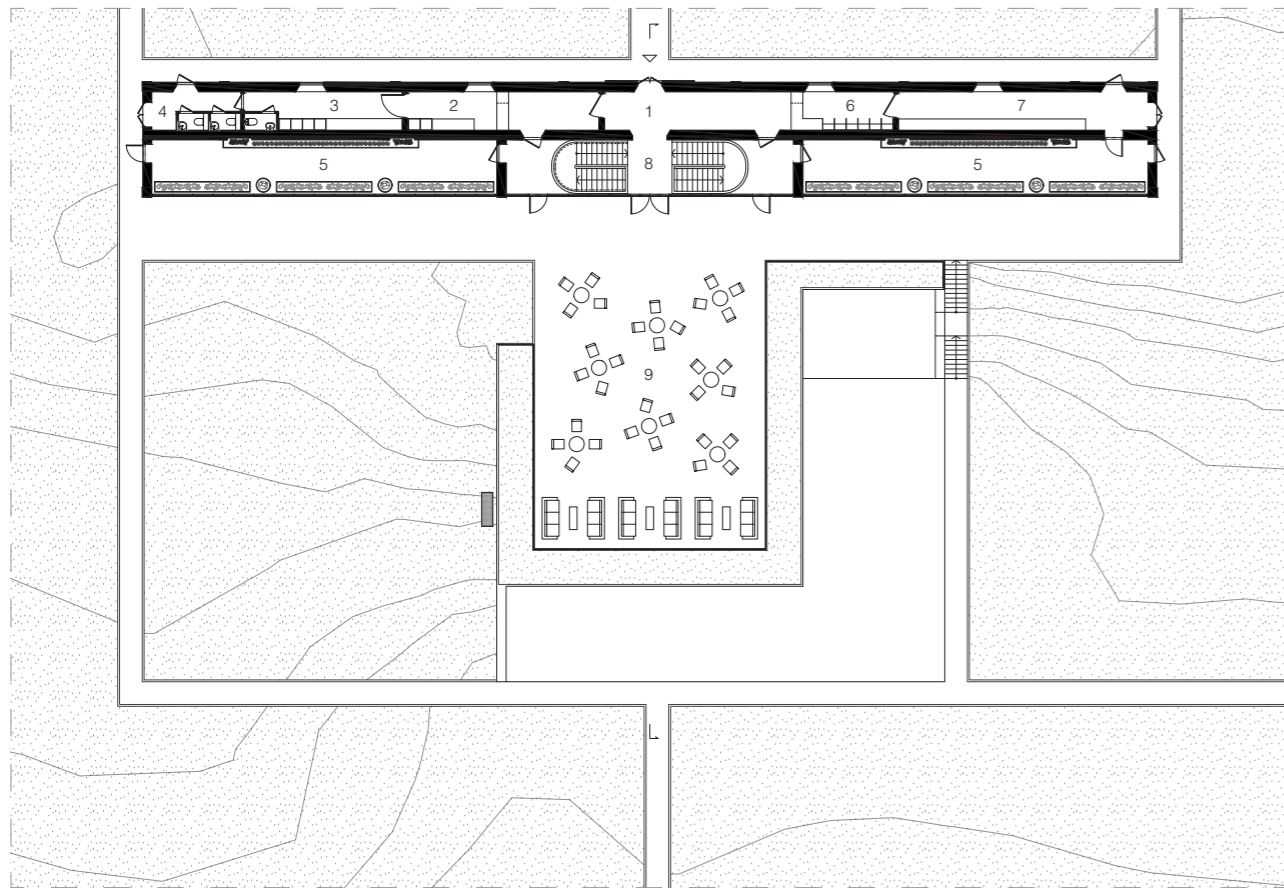


Figure 26. Entrance floor plan. Scale 1:400.

- |                   |                   |
|-------------------|-------------------|
| 1. Entrance       | 6. Wardrobe       |
| 2. Café           | 7. Garden storage |
| 3. Café storage   | 8. Stairwell      |
| 4. Restroom       | 9. Terrace        |
| 5. Kitchen garden |                   |



Figure 27. Visualization of the sightline from main entrance.

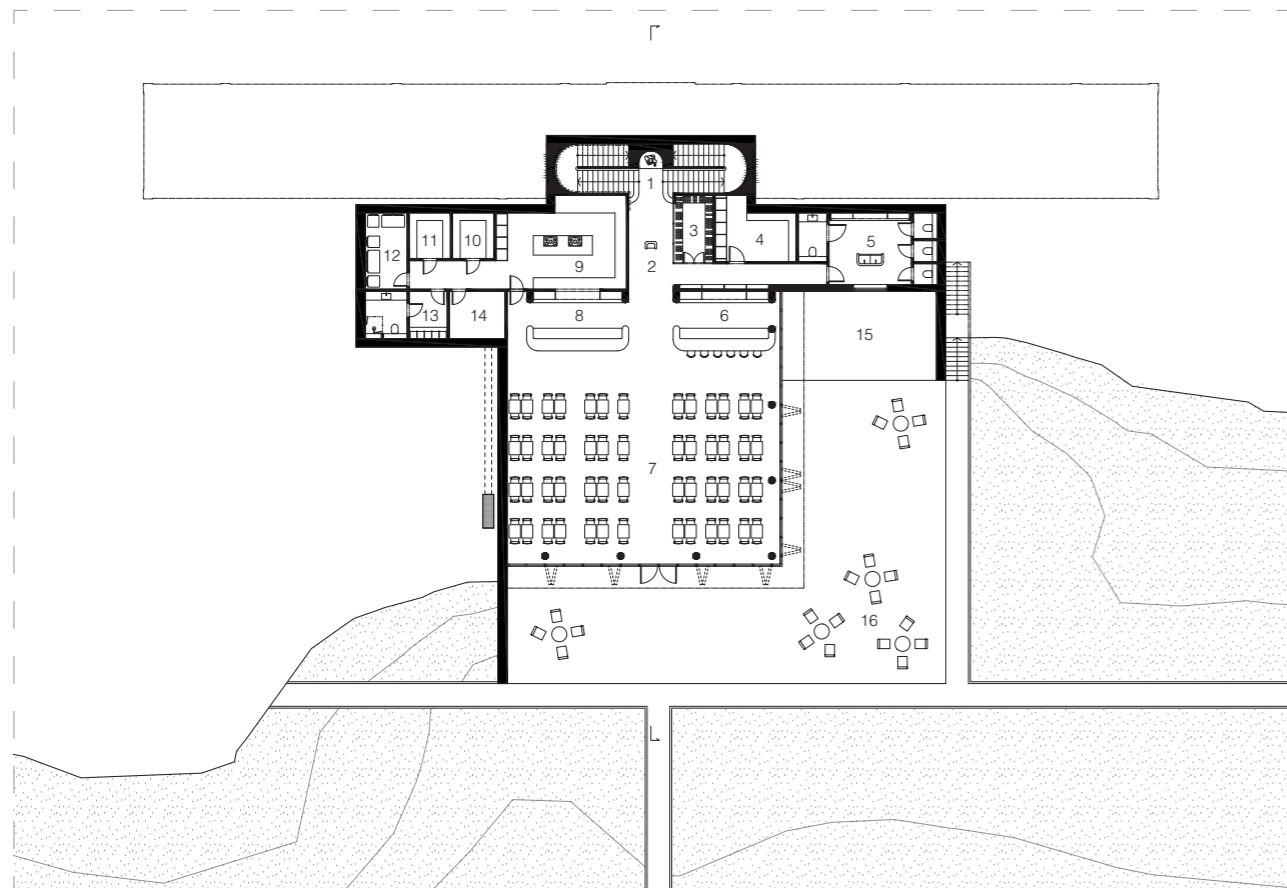


Figure 28. Bottom floor plan. Scale 1:400.

- |                       |                            |
|-----------------------|----------------------------|
| 1. Stairwell          | 9. Back kitchen            |
| 2. Entrance hall      | 10. Pantry                 |
| 3. Wine cellar        | 11. Fridge                 |
| 4. Storage / Services | 12. Recycling              |
| 5. Restroom           | 13. Locker room            |
| 6. Bar                | 14. Services / Ventilation |
| 7. Dining area        | 15. Water mirror           |
| 8. Front kitchen      | 16. Outdoor seating        |



Figure 29. Visualization of the Entrance hall.



Figure 30. Visualization of the Dining hall.

### Spatial flexibility

The building is designed as a flexible venue, accommodating a variety of events throughout the year, including conferences, weddings and larger gatherings. For weddings, the rooftop terrace can host the ceremony, overlooking the estate, while the lower floor transforms into a reception and dining space through its open and adaptable layout.

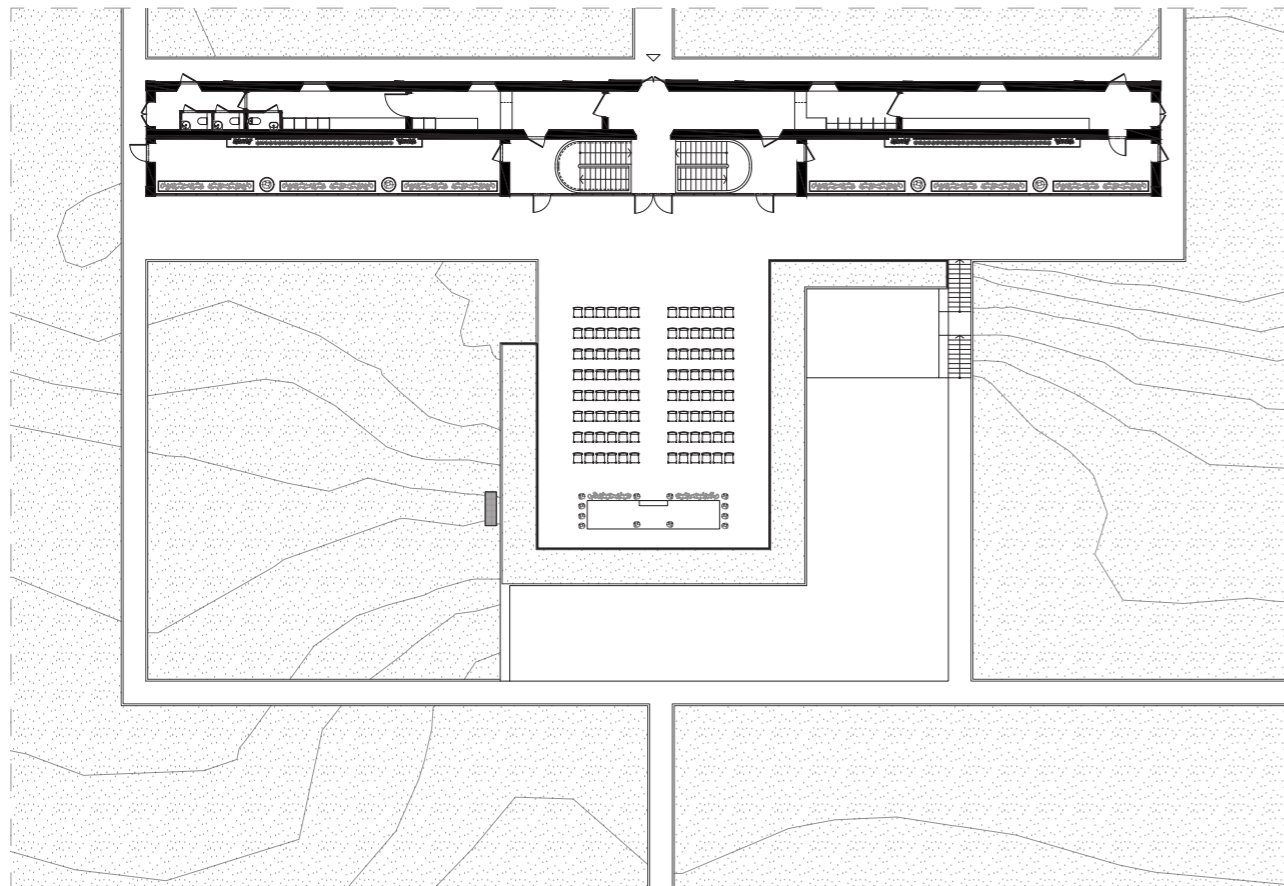


Figure 31. Wedding scenario, Entrance floor plan. Scale 1:400.

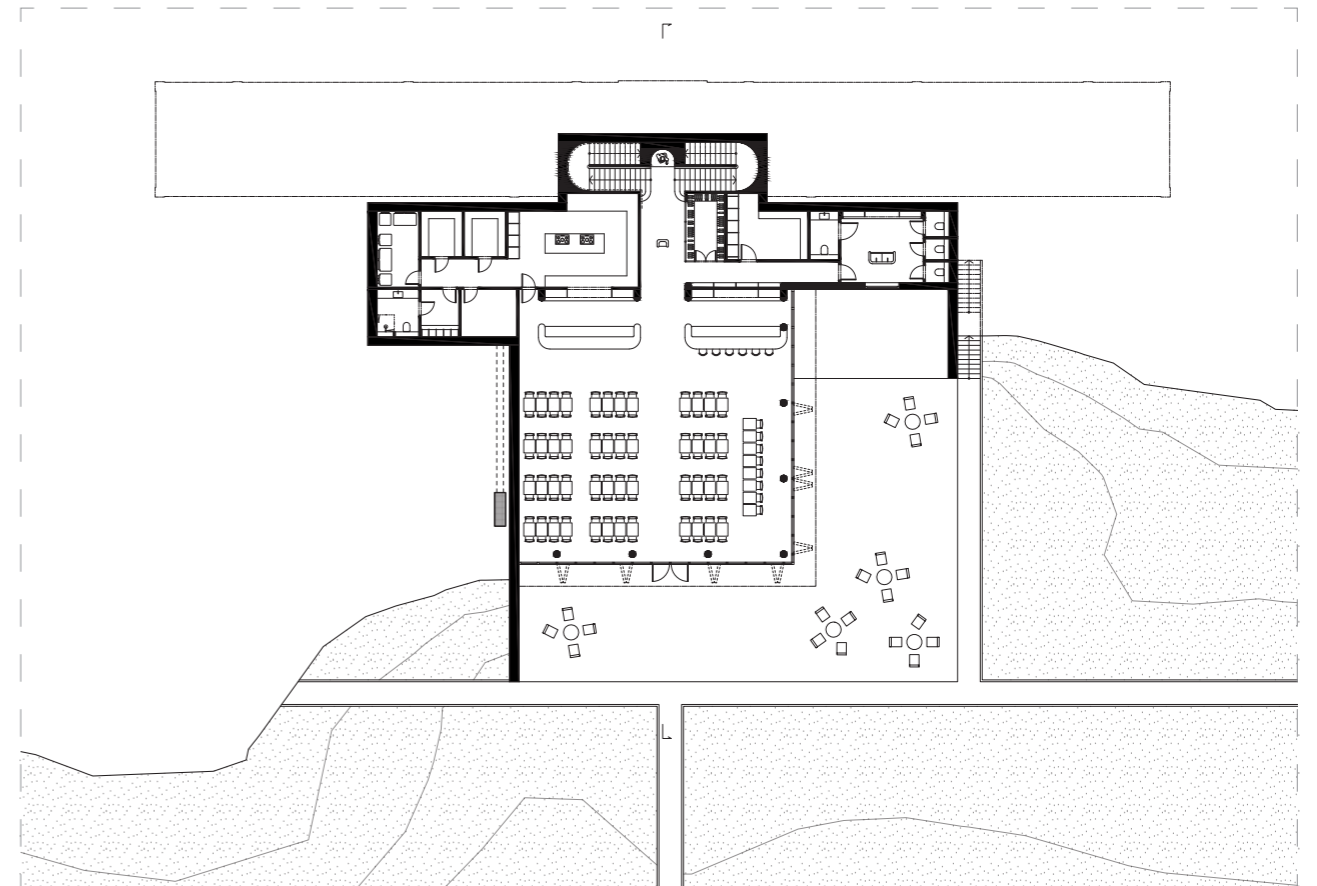


Figure 32. Wedding scenario, Bottom floor plan. Scale 1:400.

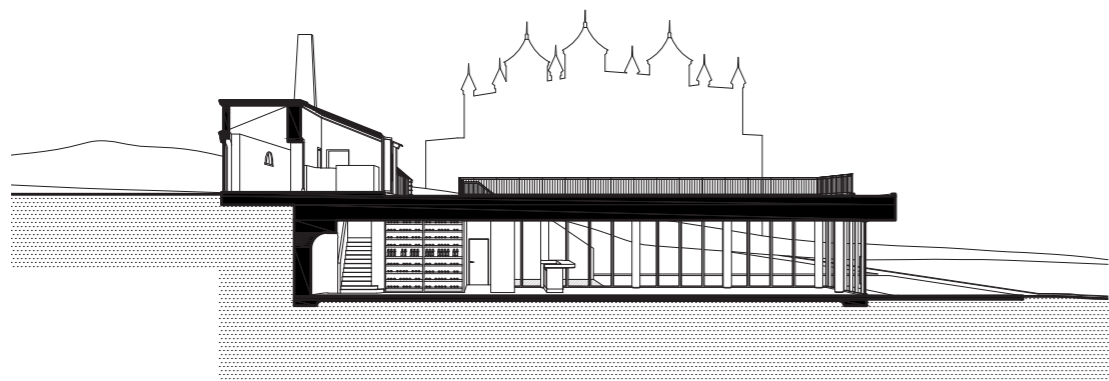


Figure 33. Section perspective. Scale 1:300.



Figure 34. Visualization of the Bar.

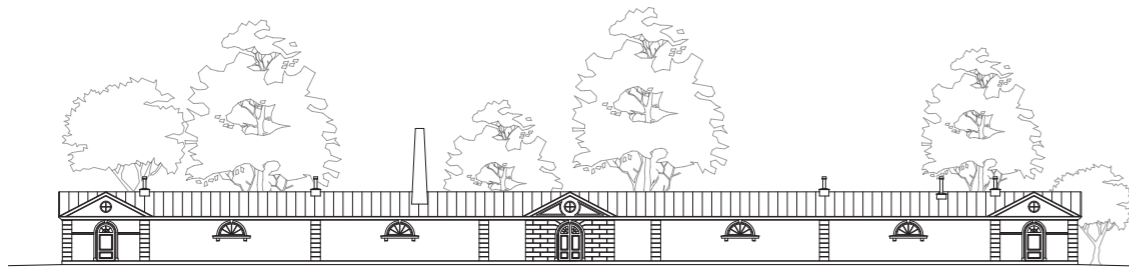


Figure 35. North elevation. Scale 1:400.

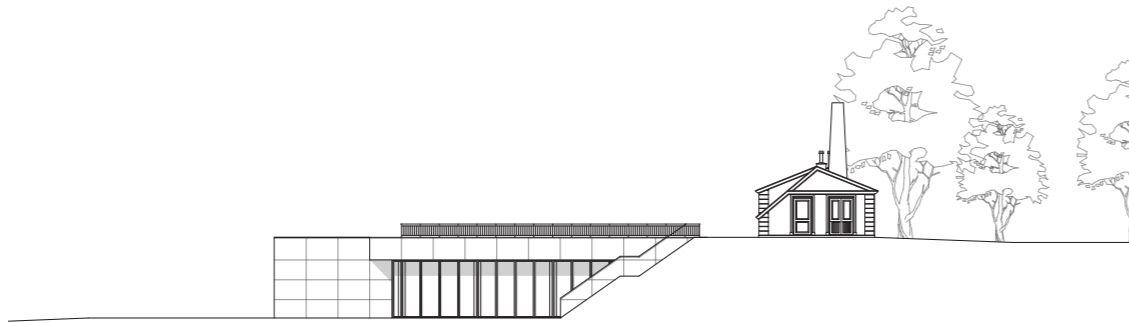


Figure 36. East elevation. Scale 1:400.

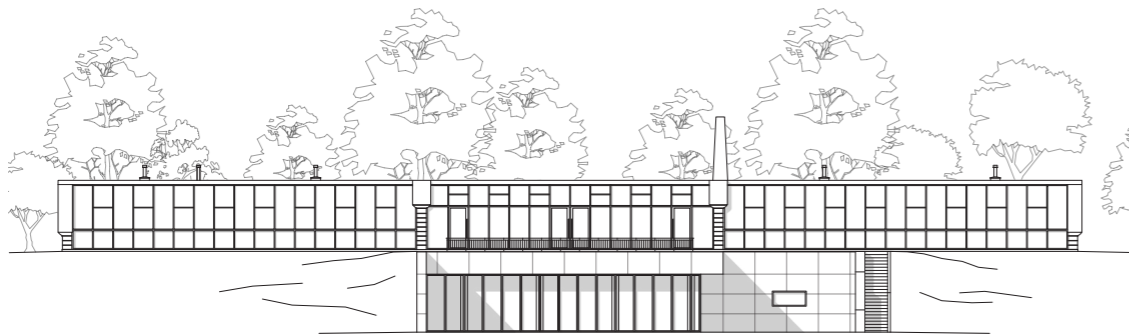


Figure 37. South elevation. Scale 1:400.

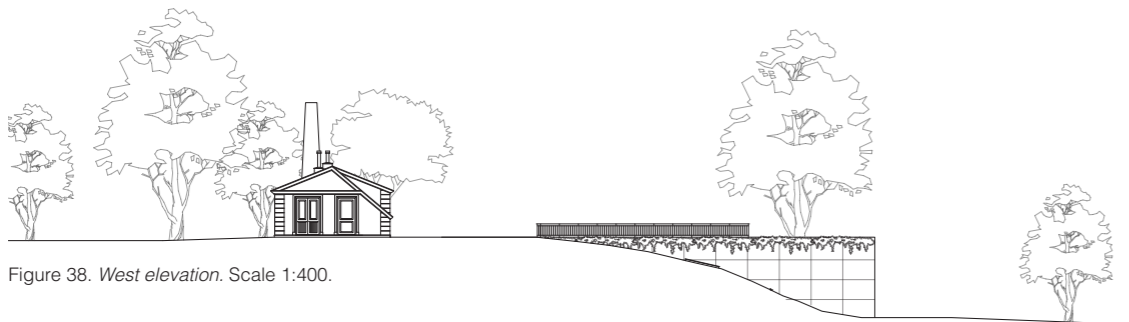


Figure 38. West elevation. Scale 1:400.



Figure 39. Visualization of the exterior.



Figure 40. *Visualization of the exterior during summer.*



Figure 41. *Visualization of the exterior during winter.*

## Details

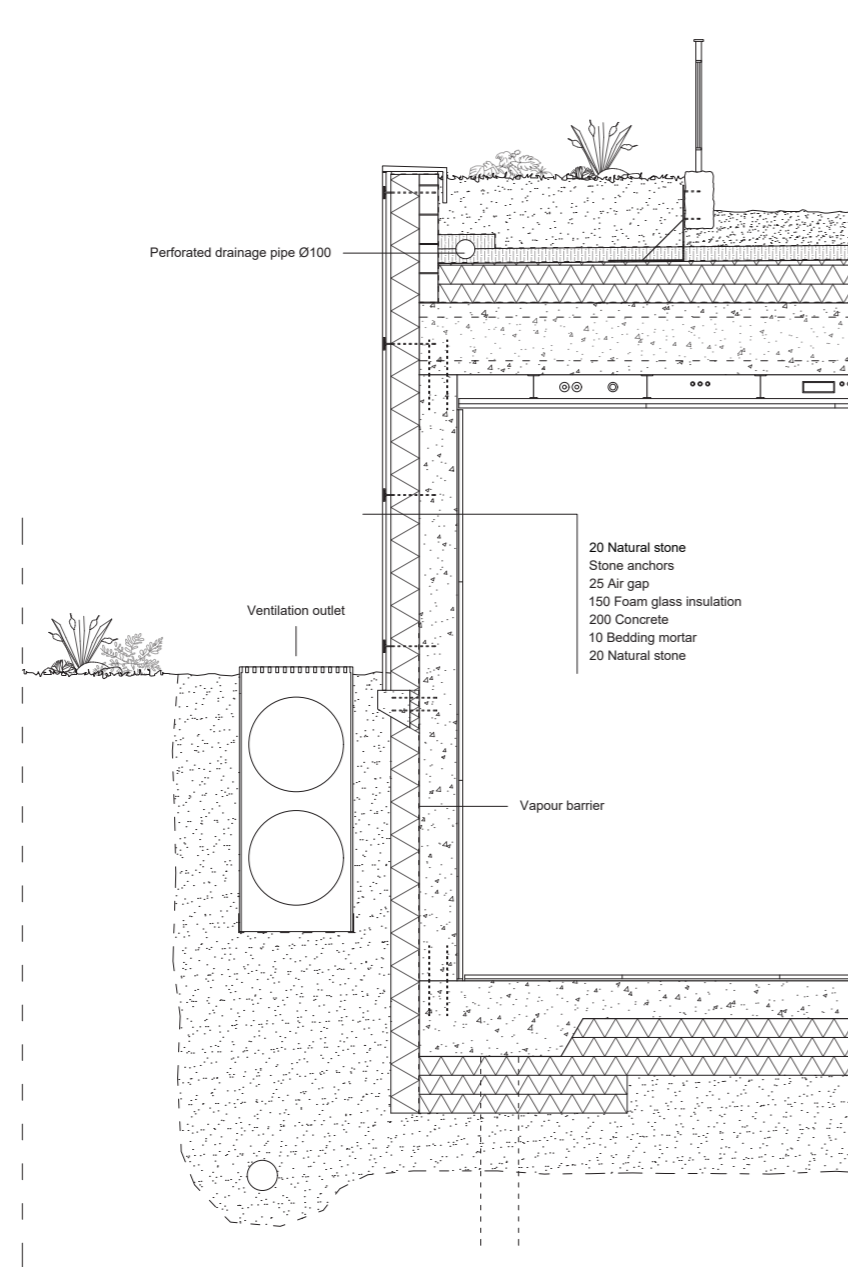


Figure 42. Detail section of load bearing wall. Scale 1:40.

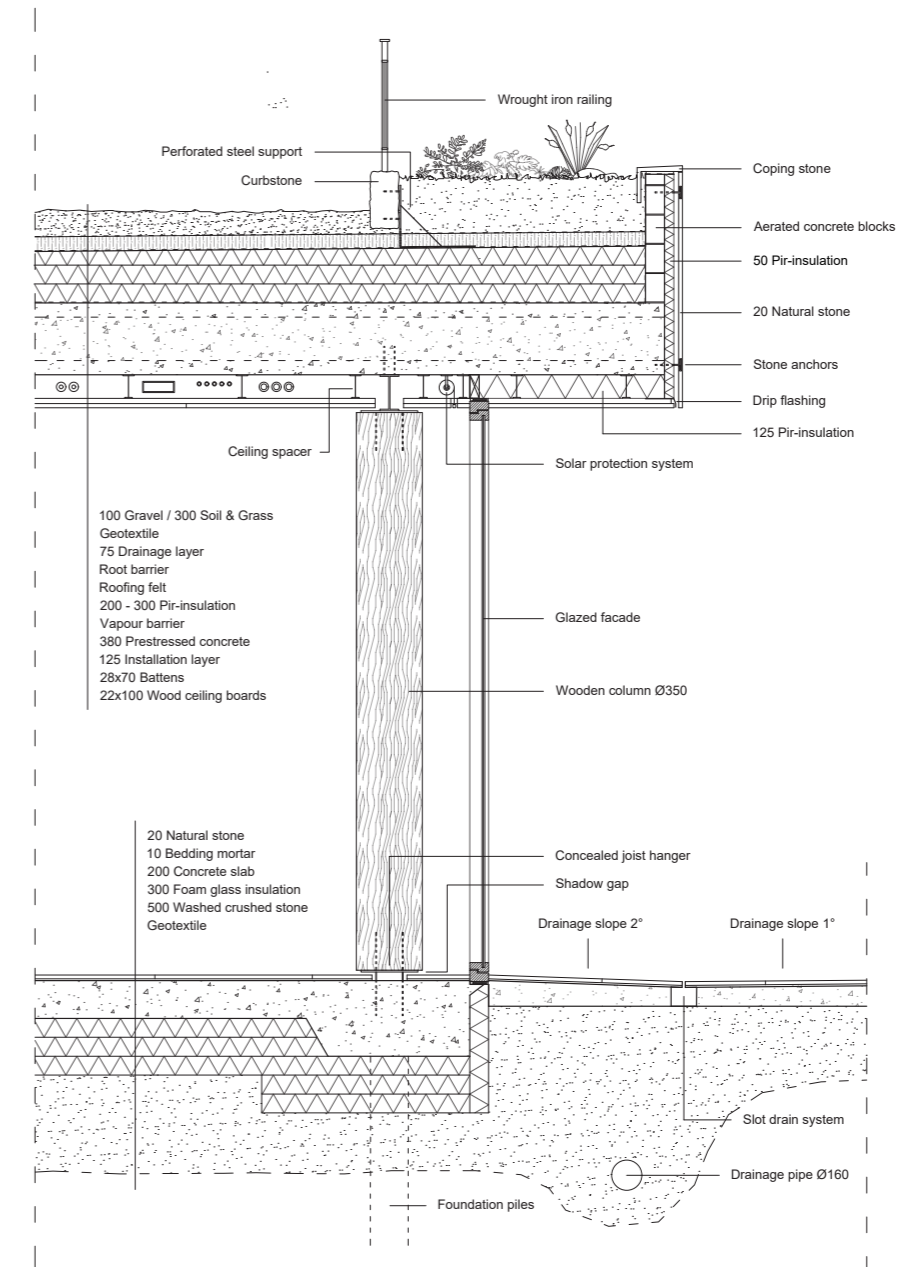


Figure 43. Detail section of glazed facade. Scale 1:40.

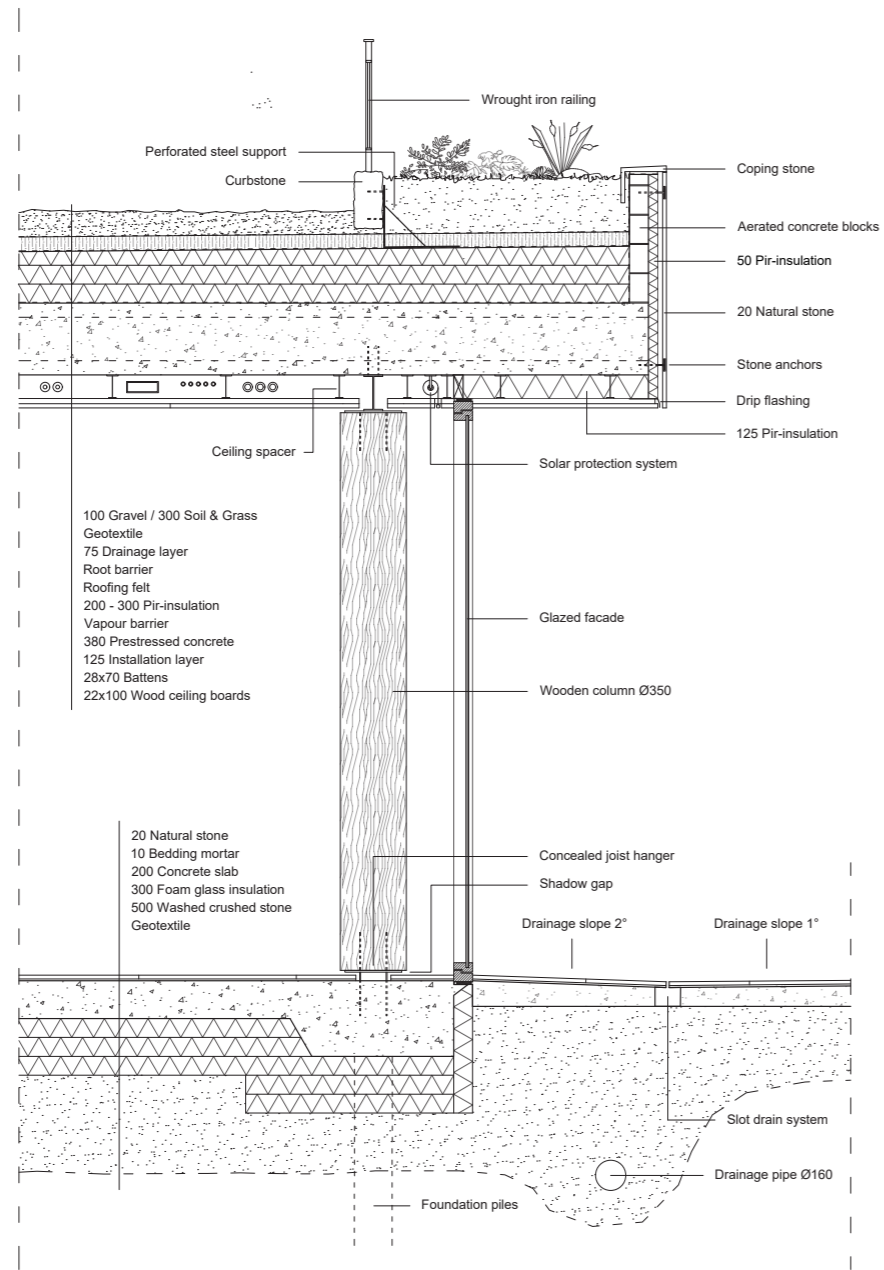


Figure 44. Detail section of glazed facade. Scale 1:40.



Figure 45. Detail elevation. Scale 1:40.

The concrete foundation is supported by piles, answering to the site's geotechnical conditions, ensuring long-lasting structural stability. Timber columns support the pretensioned concrete slab, dimensioned to support the open floor plan, the rooftop terrace, as well as its vegetation. Simultaneously, its thickness has been carefully optimized in order to keep a reasonable distance to the water level.

**Models**



Figure 46. *Detail model.*



Figure 47. *Detail model.*



Figure 48. *Building model.*

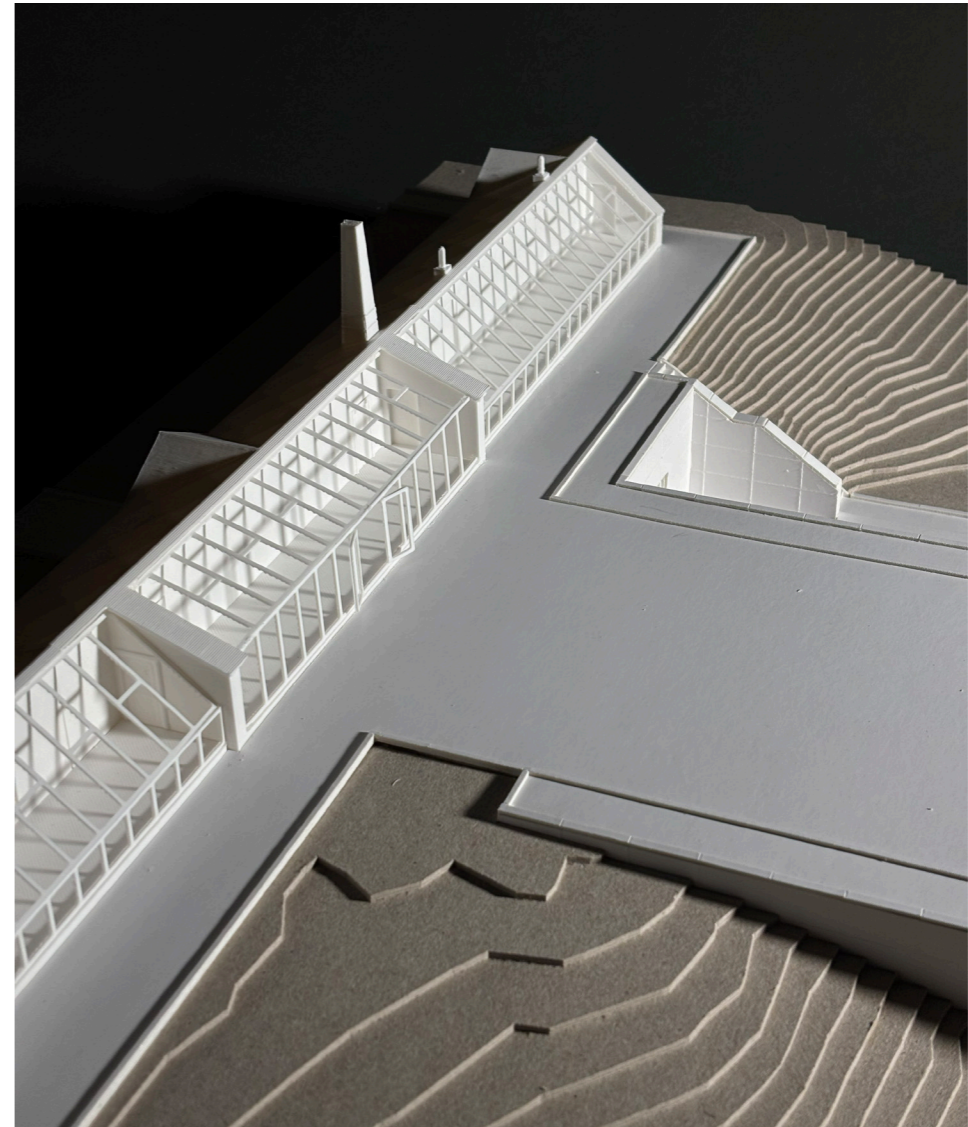


Figure 49. *Building model.*



Figure 50. *Site model.*

### Summary

Developed from the concept of Aemulatio, the addition aims to minimize visual impact while maximizing functionality. The proposal is embedded within the terrain, allowing the overall perception of the site to remain intact, while introducing new functions and creating a flexible building operating year-round as a venue for events and dining.

By integrating the volume into the landscape rather than placing it as a separate object, important sightlines are carefully maintained. Inside, the experience shifts to establish a stronger connection to the surroundings, by curating the view toward the Castle and lake Hjälmarén.

## DISCUSSION

### Reflection on Method

The project was conducted through a research through design methodology and followed a structured progression; theory, concept, evaluation and design. This meant that the concepts were developed from the theory and later evaluated based on criteria derived from theory as well, ensuring that the spatial concepts were grounded, tested and refined through an iterative process and informed by the theory.

Based on the theory of Palimpsest (Plevoets & Van Cleempoel, 2019), three conceptual strategies were developed: Imitatio, Inventio and Aemulatio, each representing a different approach to engaging with the built heritage. Explored through iterative sketching and model studies, the theories could early be translated into spatial ideas. The aim at this point was not to define a final solution, but to generate and compare alternative approaches to understand the spatial consequence of each concept before committing to a direction.

By evaluating the concepts with criteria derived from the Knowledge Base (Länsstyrelsen Södermanland, n.d.), the concepts' onsite effect on the cultural heritage of Stora Sundby Slott could be visualised. This enabled the possibility of assessing how each concept handled questions regarding continuity, use and perception of the site. By determining that Aemulatio answered best to the criteria, the decision to further develop it into a design proposal was not a stylistic choice, but a consequence of its ability to balance transformation while maintaining the overall composition of the estate.

The method did not produce a single fixed solution, but supported a design process driven by theory, reflection, comparison and analysis. This meant that the value of the methodology was not in the final concept, but more in the way it helped shape a critical and analytical approach to designing with an existing cultural landscape.

### Evaluation of Design Outcome

The design proposal demonstrates how an addition can be integrated into a cultural heritage site without disturbing the overall perception, but still expressing a presence of its own. The project investigates how the new extension can avoid becoming visually dominant but still contributing to the estate spatially and programmatically.

Although the extension is actively subordinate on the estate, it still expresses and distinguishes itself with its materiality and spatiality. Heavy granite walls and lighter timber structures form a dialogue between enclosed and openness. The proposal suggests that integration within the existing does not require disappearance, but a balance between visibility and identity.

The building is organized through defined axes, framed views and a clear distinction between enclosed and open spaces. This guides the movement through the building, where the landscape is revealed in different ways. The experience is carefully controlled, forming a new way of how the site is perceived.

To summarize, the project preserves the estate's qualities while introducing new functions and experiences, mainly through its careful placement, spatial organization and material choices. It balances discretion with presence, creating a flexible and functional building deeply rooted on the site.

### Limitations and Future Development

A limitation of the project is that although the proposal aims to preserve the overall perception of the site and become visually integrated, the experience depends on individual interpretations and point of view. Since the concepts were evaluated with criteria derived from the Knowledge Base (Länsstyrelsen Södermanland, n.d.), it aligns with the key points identified on the site, however, the intended reading of the extension as a subtle and subordinate structure may vary between different visitors.

The cultural heritage regulations are acknowledged and used as a guiding framework for the design and not treated as fixed constraints. This opens up for interpretation and also means that the proposal represents one possible reading of how such guidelines can be translated into a design, rather than a definitive solution.

Future work could build upon this thesis by applying it to other cultural heritage sites, in order to test how similar interventions perform in different contexts and conditions. This would develop the methodology into a more general framework for analysing and designing within protected environments, where sightlines, spatial hierarchies and landscape integration could serve as recurring design tools, developing a site-specific intervention into a broader transferable approach for sensitive contexts.

## BIBLIOGRAPHY

### Literature

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Plevoets, B., & Van Cleempoel, K. (2019). *Adaptive reuse of the built heritage: Concepts and cases of an emerging discipline*. Routledge.

Stora Sundby Slott. (n.d.). *Slottet*. <https://storasundby.com/slottet/>

### Artificial intelligence appendix

Artificial intelligence tools were used to support grammar correction, spell checking, enhancement of architectural renderings and assistance in formatting references throughout the thesis process.

### Images

All images belong to the author unless otherwise stated.

Figure 1. *Visualization of the Dining hall in the new extension.*

Figure 2. *Exterior perspective of Stora Sundby Slott.*

Figure 3. Sörmlands museum (n.d.). *SLM M036246 - Slottet Stora Sundby, litografi*. [Photograph]. <https://sokisamlingar.sormlandsmuseum.se/objects/c24-374457/>.

Figure 4. *Map of Sweden*. Edited from Lantmäteriets GIS-data.

Figure 5. *Existing site plan.*

Figure 6-7. *Inventory of the buildings on the estate.*

Figure 8-11. *Site plan Phase 1-4.*

Figure 12. *Drawings of the existing Orangery.*

Figure 13. *Photos of the existing Orangery.*

Figure 14. *Imitatio concept sketch.*

Figure 15. *Inventio concept sketch.*

Figure 16. *Aemulatio concept sketch.*

Figure 17. Olsson Photo, L. (2022). *Barcelona Pavilion* [Photograph].

Figure 18. Boo, C. (2016). *Restaurant ÄNG* [Photograph].

Figure 19. *Building model.*

Figure 20. *Program Entrance floor.*

Figure 21. *Program Bottom floor.*

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Figure 46-47. *Detail model.*

Figure 48-59. *Building model.*

Figure 50. *Site model.*

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