A Transformation of Thordéns Ladugård

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Year of Publication: *2025*
Examiner: *Mikael Ekegren*
Supervisor: *Isabella Eriksson*

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ABSTRACT

Over centuries, the barn has become an integral part of the Swedish landscape and our built cultural heritage. Due to rationalization of the agricultural sector in recent years, many barns have become obsolete and been left to decay. One such barn is Thordéns Ladugård, located on the outskirts of Uddevalla and currently functioning as winter storage for boats.

The aim of this thesis project was to investigate the transformation possibilities for this abundant building stock through a transformation proposal of Thordéns Ladugård. The questions guiding the thesis were:

How can Thordéns Ladugård be transformed, using the intervention strategy of aemulatio, to accomodate new uses and prolong its lifespan?

How can the concept of genius loci be used as a method to determine the character of the building and as a basis for new interventions?

The project consisted of an inventory- and a design phase, with adaptive reuse theory and analyzed reference projects laying a theoretical framework for the investigation.

The building, its history and its context was analyzed to determine the genius loci of the building and how new interventions could relate to the existing structure.

Using the intervention strategy of aemulatio, the design proposal expands upon the existing qualities of the barn to create a multi-use program of independent functions; a ceramics workshop and gallery as year round functions, as well as an event venue fit for the summer months.

The new interventions aim to reimagine the traces of human interraction by working with the existing structure and the qualities that define the barn. This approach was materialized through varying interior climate zones, situational adaptations and dynamic interior communications.

The transformation proposal contributes to the reference bank of adaptive reuse projects within the typology. It showcases strategies of embracing unconventional properties and making them an integrated part of the design.

The project is a response to the rationalization of not only the agricultural sector, but the building sector as a whole. Choosing to embrace imperfection and build upon it can create unique architectural experiences while preserving our built cultural heritage.

Keywords: barn; transformation; adaptive reuse; aemulatio; genius loci

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INTRODUCTION

1. PURPOSE / AIM / EXPLORATION

Over centuries, the barn has become a natural part of the rural landscape and a showcase of traditional building methods.

Due to the rationalization of the agricultural sector in recent years, many barns have become obsolete and have been left to decay. Without a purpose, these abandoned buildings are at risk of being demolished, and with them a piece of our built cultural heritage.

In some cases, old barns have been transformed to accomodate new uses; such as housing, office spaces or event venues. The more common fate is that they end up as large storage units.

One such barn is Thordéns Ladugård in Uddevalla, a dilapidated barn from 1945 that is now being used as winter storage for boats and other vehichles.

Since the size, structure, condition and context of each barn varies greatly so too does their adaptability. Hence it is important to investigate different types of barns to see the full potential of this abundant building stock.

This thesis project investigates what transformation possibilities exist for abandoned barns.

2. THESIS QUESTIONS AND OBJECTIVES

The questions guiding the thesis were:

How can Thordéns Ladugård be transformed, using the intervention strategy of aemulatio, to accomodate new uses and prolong its lifespan?

How can the concept of genius loci be used as a method to determine the character of the building and as a basis for new interventions?

The objective was to create a transformation proposal for Thordéns Ladugård - expressed through drawings, physical models and renderings - as well as a booklet supporting the design project with extended information.

3. METHOD

A theoretical framework based in adaptive reuse theory as well as analyzed reference projects was developed and utilized throughout the project.

The project work was divided into two main phases; Inventory and Design.

The focus of the inventory phase was to get to know and understand the building. The investigation consisted of multiple site visits where photographs, sketches, measurements and dialogues with affiliated locals laid the foundation for the understanding of the building.

The inventory phase was materialized through multiple photographs, a digital BIM-model and a written analysis of the different parts of the barn, their condition and their qualities.

The BIM-model as well as a complementary physical structural model were of great importance to understand how the barn was built, the ideas behind its different parts and how it worked as a whole.

The design phase built upon the inventory phase, with the analysis of the building and the site leading to the development of the design concept.

This concept was then investigated through multiple sketching iterations, as well as through more in depth drawings and illustrations.

The final design was materialized through traditional drawings, physical models and renderings.

4. DELIMITATIONS

The thesis does not cover strategies to revert barns back to agricultural functions.

The thesis project does not provide generally applicable methods or solutions for barn transformations. Each barn is unique and should be approached accordingly.

The design project does not include transformation proposals of other facilities on the property. They are, however, part of the general program.

This is not a restoration project.

5. READING INSTRUCTIONS

The booklet is divided into three major parts;

Background / Theory: Sets the theoretical framework for reusing existing buildings. Includes adaptive reuse theory as well as analyzed reference projects of transformed buildings.

Inventory: An investigation of the building and its context. Showcases qualities, challenges and possibilities. The chapter is concluded with a program description and concept for the design proposal.

Design proposal: The tranformation proposal of the barn. The proposal is evaluated and discussed in regard to the thesis questions at the end.

Fig. 01 Main gate

BACKGROUND / THEORY

LITERATURE

Described in *How Buildings Learn* (Brand, 1997), a building consists of different layers, each with their own function and rate at which they change.

STUFF: Furniture and other decorations
DAILY - MONTHLY

SPACE PLAN: The interior layout (room defining elements)
3 - 30 YEARS

SERVICES: Technical elements (HVAC, elevators, electrical wiring)
7 - 15 YEARS

SKIN: Facade/cladding
20 - 60 YEARS

STRUCTURE: Load bearing elements and foundation
30 - 300 YEARS

SITE: Never changes

How these layers relate to each other determines the adaptability of a building. Brand states that an adaptive building allows these differently paced systems to change independently of each other, rather than entangling themselves together. The author notes that traces of change are part of what makes a building come to be loved.

Based off the findings of Brand (1997), it becomes apparent that the structure and site outlive all other aspects of a building. This conclusion deduces that most structures will outlive their original purpose, and will most likely be a completely different building at the end of their life than at their beginning. The practice of finding new uses for existing structures is commonly discussed under the umbrella term ”adaptive reuse”.

The framework for adaptive reuse theory is further presented in the book Adaptive Reuse of the Built Heritage (Plevoets & Van Cleempoel, 2019).

When approached with a project regarding an existing building, Plevoets & Van Cleempoel (2019) suggest different intervention strategies that can be utilized depending on the desired outcome for the project. These include:

- Translatio - aiming for similiarity compared to original, in the spirit of restoring the work. A translation of the original.
- Imitatio - aiming for equality to the original.
- Aemulatio - aiming to expand upon and improve the original building, both aesthetically and functionally.
- Facadism - where the interior and exterior are treated seperately.
- Ruination - where the existing ruin contains memories of which you build upon.

Apart from these strategies, utilizing the concept of *genius loci* (2019, p. 79), meaning sense of place, can help to understand a building. It is a term used to describe the feeling of a building and its relationship to its environment, its users and its historical context. Plevoets & Van Cleempoel (2019) mean that the sense of place is grounded in human interractions, where the built environment and its inhabitants affect each other continuously over time. In practice, genius loci as a design tool can help determine the character of a place and what changes can be made while still maintaining the feeling of it.

For this thesis project, the concept of *genius loci* is used in the inventory phase to determine the character of the building and what types of interventions to implement. The intervention strategy being used in the design phase is *aemulatio*, with the aim to reimagine the existing structure and use it as a basis for new interventions.

REFERENCES

PC CARITAS

location: Melle, Belgium
architect: architecten de Vylder Vinck Taillieu
year: 2016
size: 1800 m^2

With this transformation project, the boundary between outdoors and indoors is blurred. Solitary volumes within the shell of the existing building create refuge from noise and weather.

The selective reinforcment and demolision of elements create new internal connections and gives the building a light and airy character.

Old and naturally weathered materials are juxtaposed with brightly colored structural reinforcements, clearly differentiating what is old and what is new.

The building encourages the visitor to explore, investigate and be curious. The visual connection between different levels and the interplay between existing and new elements creates a unique and intriguing meeting space.

The project is an exploration of exposure, questioning expectations and traditions of indoor environments. It is also an exploration of structure and how the introduction of new elements can reimagine the spatial possibilities of the building.

Fig. 02 PC Caritas, interior view

BARN CONVERSION

location: Rüegsauschachen, Switzerland
architect: Freiluft Architektur
year: 2015
size: 240 m^2

A pragmatic addition to an existing reused barn; a concrete core holding necessary functions and vertical communication.

The internal seperation between the existing and new addition lets them coexist while highlighting their differences in matieriality and function.

The design of the extension embraces the patchy nature commonly found in barn repairs. The irregular placement of its openings and the reuse of materials creates a collage-like expression based in functionality.

Fig. 04 Freiluft barn, exterior view

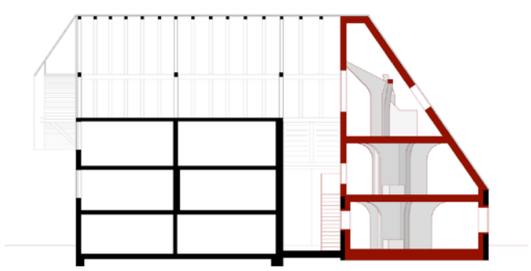


Fig. 03 Freiluft barn, section

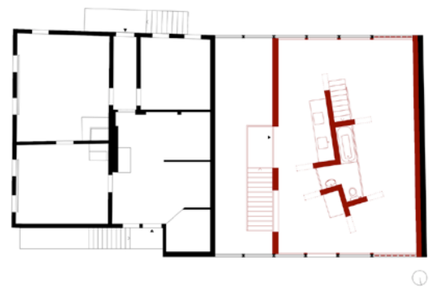


Fig. 05 Freiluft barn, plan

Fig. 06 Ventilation chimney

THE MAIN MATERIAL

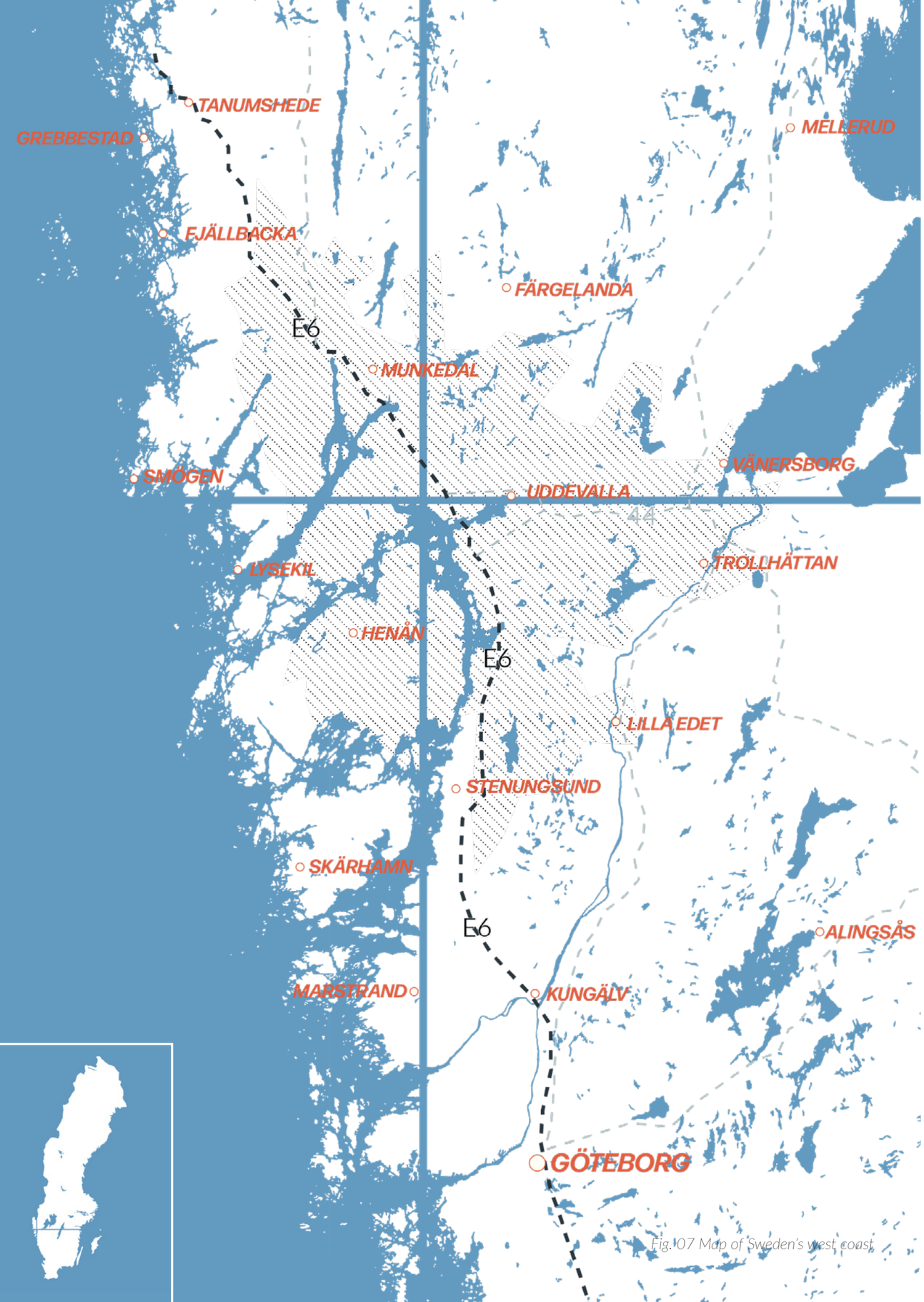


Fig. 07 Map of Sweden's west coast

LOCATION

The barn is located on the outskirts of Uddevalla, a mid-sized city on the west coast of Sweden with about 60 000 inhabitants. It lies in a bay of Haftstensfjorden and is easily accessible by car and bus.

Because of the close connection to the E6-highway and the national highway 44, the barn is accessible to several neighbouring cities. The hatched area on the map shows car accessibility within a 30 minute drive of the site.

Fig. 08 Överby

SITE ANALYSIS

The barn shares the farmyard known as Överby Gård with a row of garages and an earth cellar. These buildings were some of the first to be built in the area in 1945. Since then a suburban area with villas has expanded upwards on the hill north-west of the farmyard.

Residents of the area travel mostly by car, but it is common to see people taking walks or exercising along the main road south of the barn. The road serves as the only access way to the residential areas.

The farmyard is surrounded by fields from the north to south east, which are still being cultivated by another farmer. White gravel and patches of grass cover the sloping farmyard.

The surrounding vegetation and presence of the bay create a calm and scenic environment.

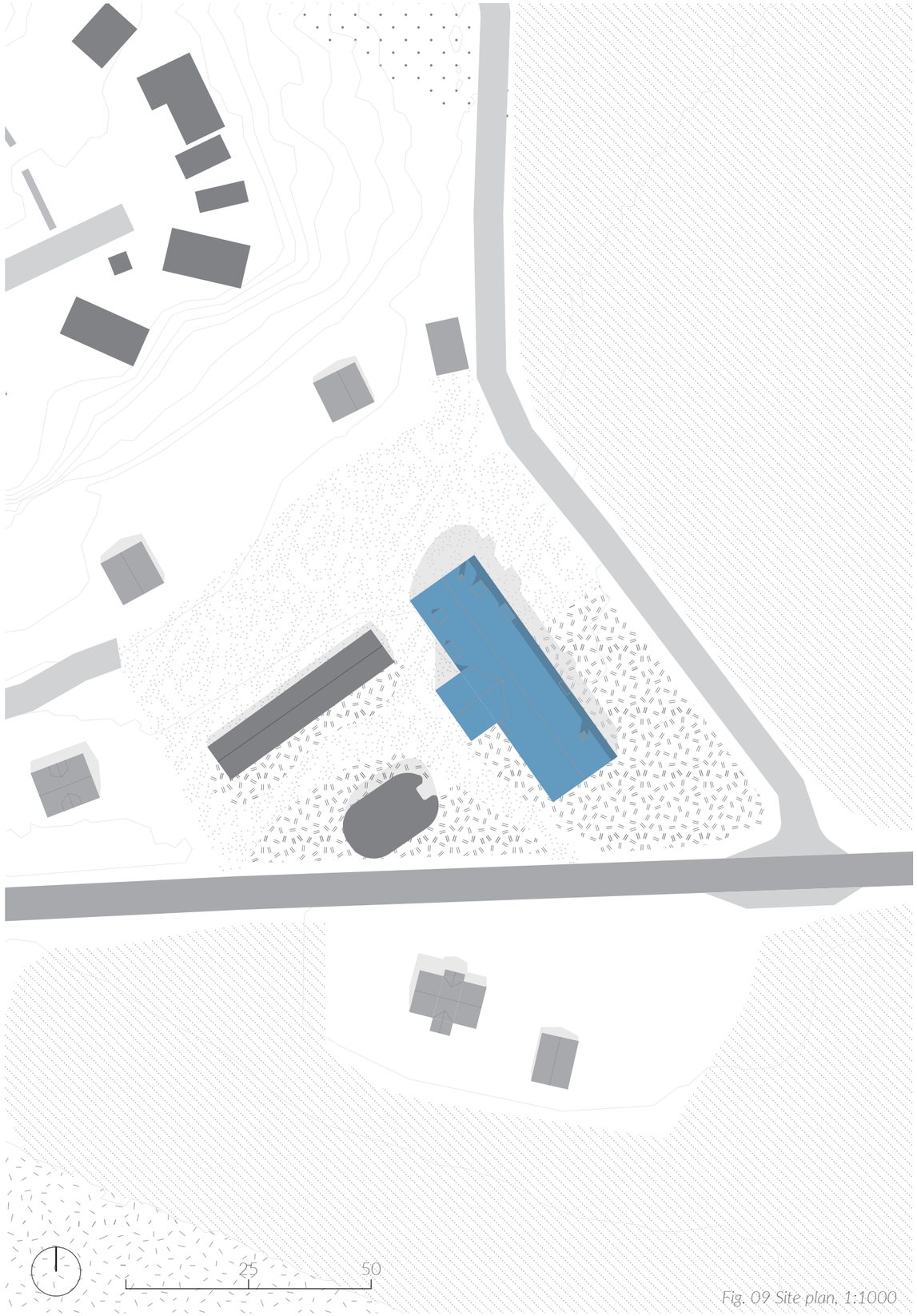


Fig. 09 Site plan, 1:1000

Fig. 10-21 Archive photos

HISTORY

The following is as told by the son of Gustaf B. Thordén, as well as by the farmer who most recently used the barn (P. Thordén & G. Johansson, personal communication, October 18, 2024).

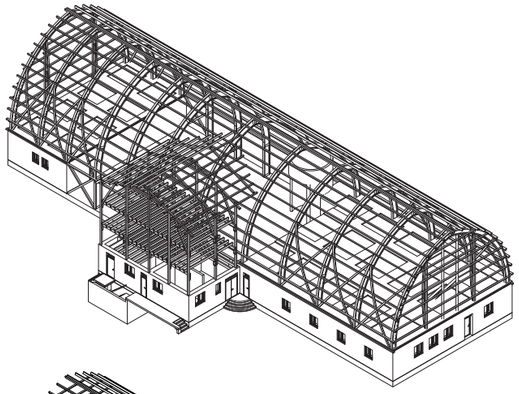
The barn was commissioned by Gustaf B. Thordén and constructed by SKANSKA in 1945. Thordén, who was a prominent entrepreneur in Uddevalla at the time, wanted the barn to represent the modern age of agriculture; a statement piece dignifying the trade.

This request was translated into a technologically advanced building with mechanical systems aiding the farmer with everyday tasks, such as grain elevators, hay lifts and ceiling based rail-systems.

These ambitions were also evident in the construction, with on site concrete stone production, indoor tile claddings and pre-fabricated laminated wood beams creating a robust structure still in good condition today.

It functioned as a dairy farm into the early 2000's where the cattle fell ill and had to be put down. After the loss of the cattle, the barn underwent major changes in 2011 where it became less of a barn and more of a storage unit. Multiple walls and part of the concrete foundation were demolished, one of the laminated wood beams was relieved to fit bigger vehicles through the gate and all the windows in the cow stable were boarded up to allow for potato storage.

Today the barn is owned by one of Gustaf's grandchildren, and is being used to store boats and other vehicles during the winter months.



STRUCTURAL OVERVIEW

The barn consists of three main structural materials; concrete, laminated wood and timber. The techniques with which they are used and what purpose they serve vary throughout the building.

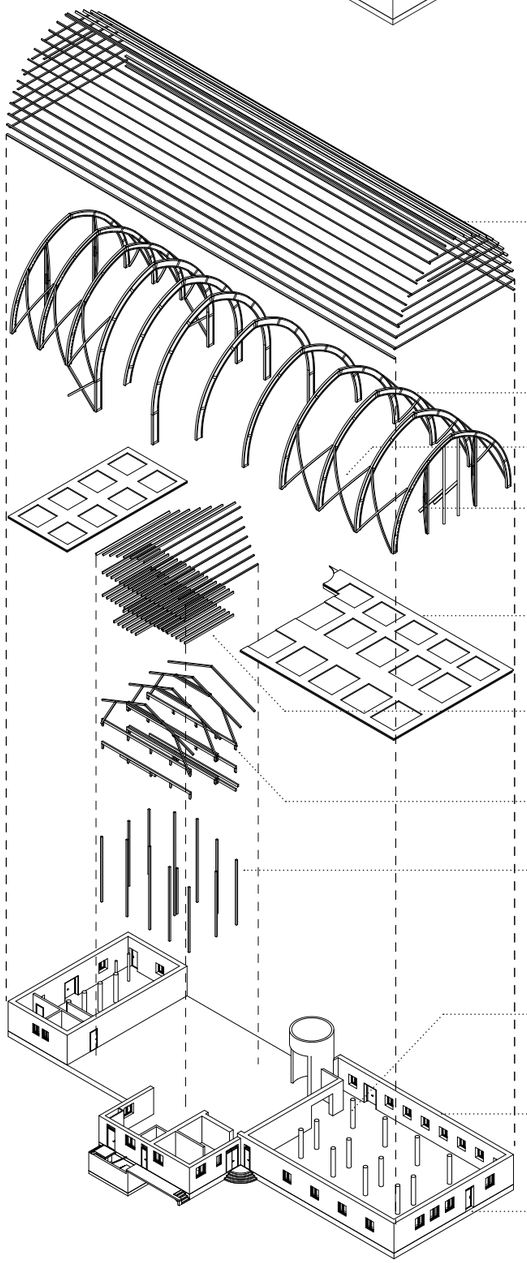


Fig. 22 Structure

TECHNICAL OVERVIEW

The technical systems of the barn are an integral part of its design and function. They directly influenced the design of the structural elements, as well as the layout of the building.

At the time of its completion, the technical systems were groundbreaking and aided the farmer with various cumbersome tasks, as well as raising the quality of life for the cattle.

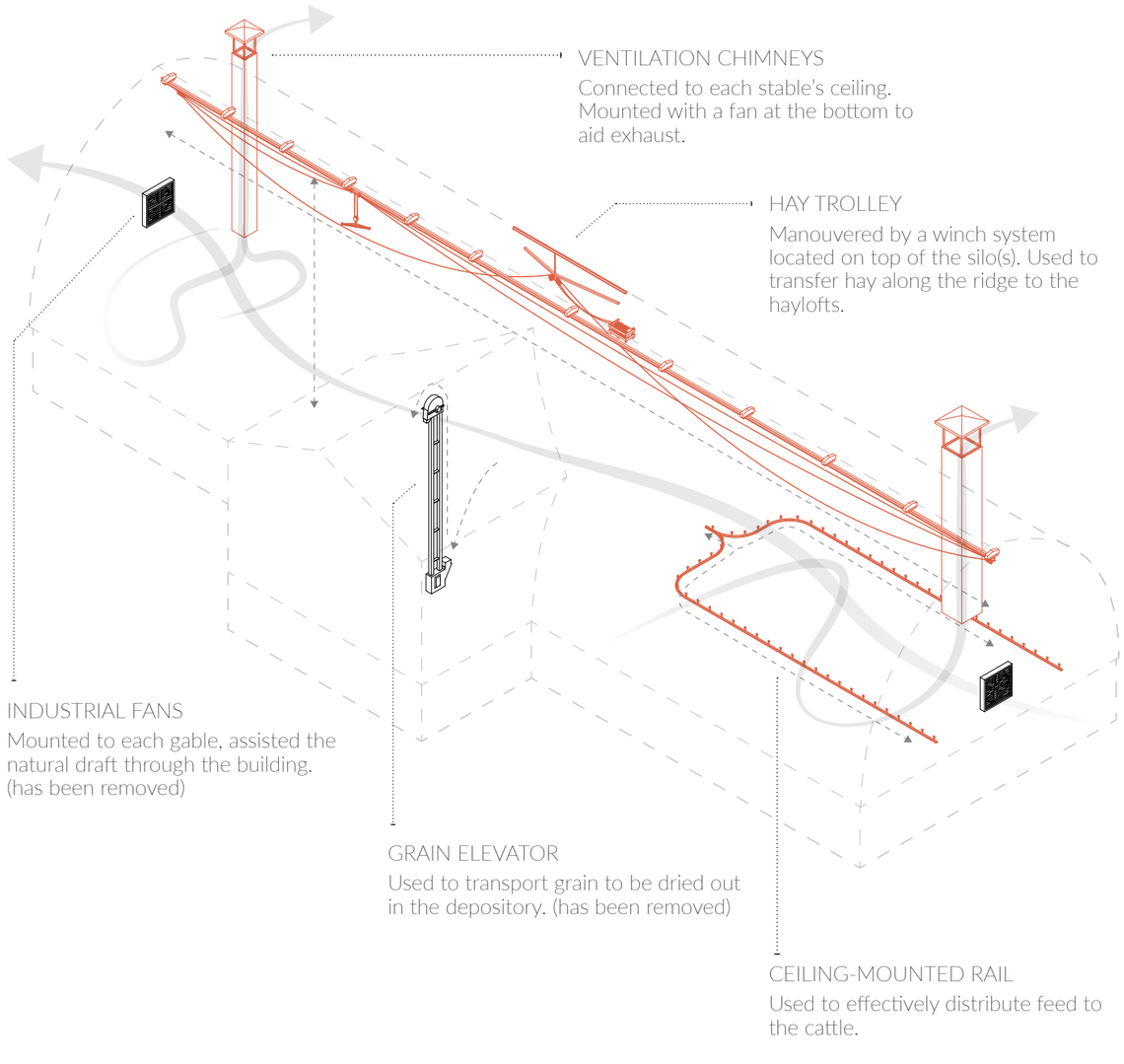
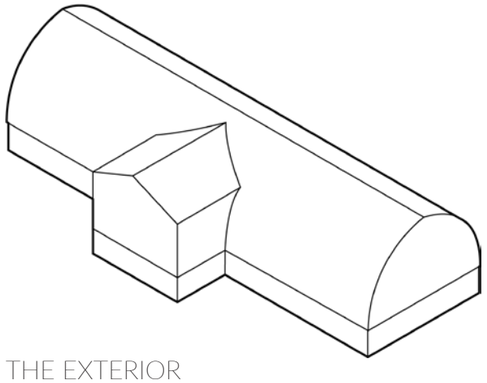


Fig. 23 Technical systems

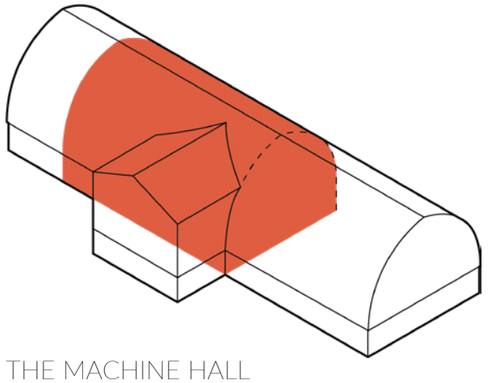
BUILDING ANALYSIS

To better understand the building and to formulate its *genius loci*, the analysis of the barn is divided into different zones reflecting their original purpose.

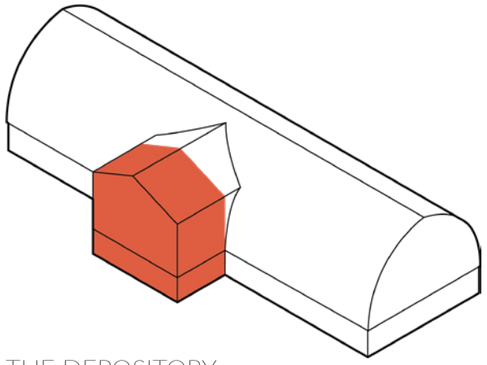
This pragmatic division highlights the unique qualities of each part, their history and how they contribute to the character of the building as a whole.



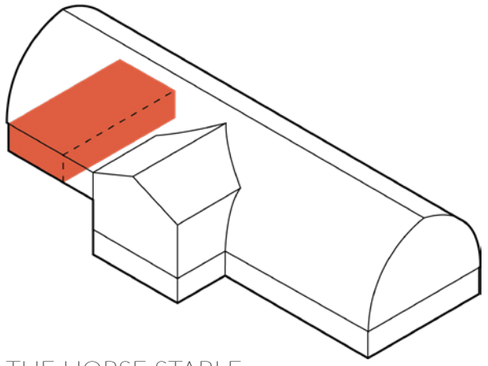
THE EXTERIOR



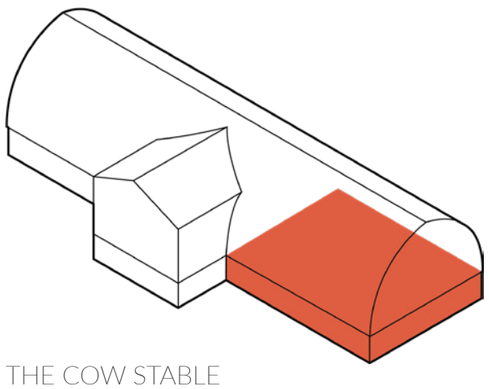
THE MACHINE HALL



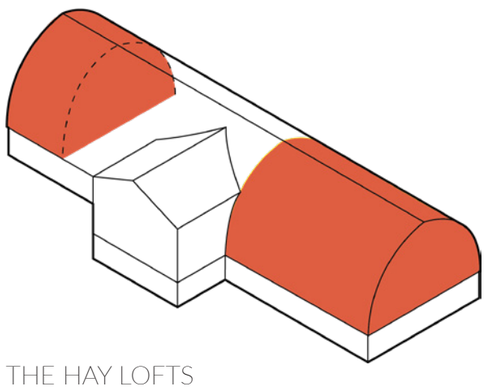
THE DEPOSITORY



THE HORSE STABLE

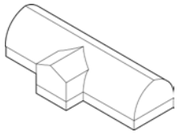


THE COW STABLE



THE HAY LOFTS

Fig. 24-29 Zone diagrams



THE EXTERIOR

Many of the facade materials are original and have gained a natural patina, some more gracefully than others. Most concerning is the roof on the eastern side, with large amounts of moss buildup which has lead to frost shattering damages.

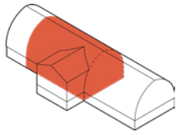
Multiple windows on the ground floor have been either boarded up or replaced. Those that are still original are visibly worn with wooden frames.

There are multiple entrances to the building and all original doors, window frames and gates are painted with a cool, desaturated blue.

Fig. 30 Roof

Fig. 31 North-east gate

Fig. 32 Boarded up windows



THE MACHINE HALL

The main hub of the building, where tractors and other machinery were stored. Used to have a ramp spanning across the room between the silo(s) and the depository. One of the silos as well as the ramp have been demolished.

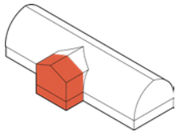
To be able to fit even larger machines, one of the laminated wood beams was relieved to make room for a larger gate. The cow stable used to extend a bit into the machine hall, but the extension has since been demolished.

Most of these changes were made in 2011, just a couple of years before the discontinuation of the barn.

Fig. 33 Demolished floor

Fig. 34 Machine hall

Fig. 35 New gate



THE DEPOSITORY

A concrete block socket with a wooden pillar beam system above, adding up to four floors in total. The ground floor used to house storage and bottling stations for milk while the upper floors were used to store and dry out feed for the cattle.

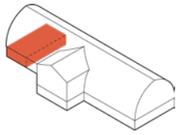
The low ceiling height, small windows and delicate tectonic details give the upper floors a sense of intimacy, compared to the otherwise generous and open spaces of the barn.

Each floor has doors facing the machine hall, telling a story of how these zones were once connected through elevated walkpaths.

Fig. 36 Door to machine hall

Fig. 37 Depository, second floor

Fig. 38 Depository, ground floor



THE HORSE STABLE

Textured concrete flooring, walls clad with ceramic tiles and a painted plaster ceiling create the boundary for the stable.

Deep window niches with slanted window sills lets natural light reflect on the bright surfaces.

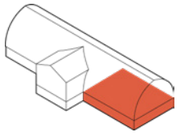
All installations are placed onto the wall rather than inside it, which is a reoccuring trait of the building; different systems are not interconnected and has been allowed to change independently of each other.

With a massive climate envelope, the stable has a comfortable interior climate with access to one of two ventilation chimneys.

Fig. 39 Horse stable dividers

Fig. 40 Horse stable

Fig. 41 Horse stable window



THE COW STABLE

Similar materiality as the horse stable, with ceramic tile cladding, concrete clad steel columns and a concrete floor, here without texture.

The windows have been boarded up to allow for potato storage.

The three rows of columns divide the room into sections, with a suspended rail running across the ceiling. This rail was once used to distribute grain to the cows' feeding baskets.

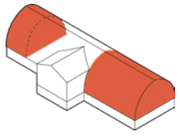
The cow stable used to be directly connected to the milk storage facility in the depository through the previously mentioned extension into the machine hall.

Fig. 42 Cow stable columns

Fig. 44 Cow stable wall

Fig. 43 Cow stable entrance

Fig. 45 Calf room



THE HAY LOFTS

Located above the stables, this is where hay would be stored to dry out. The natural draft through the building gives a unique setting to the space; sheltered but aware of the climate. You are connected to the nature outside, although you are not able to see it.

From the southern hayloft you have access to the mezzanine on top of the silo(s), from which you could control a crane mounted to the ridge. This crane could hoist several tonnes of hay, and is the cause for the large dimensions of the laminated wood roof beams.

Roof repairs consisting of translucent panels, along with the slight gaps between the gable facade panels result in a unique natural lighting of the space.

Fig. 46 Silo

Fig. 48 Hay crane

Fig. 47 Hay loft

MATERIAL INDEX EXTERIOR

Wood panel with gaps - Hay loft gable

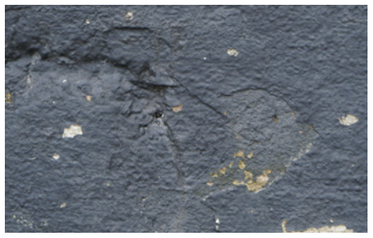
Wood panel + cover battens - Depository

Wood panel + gaps - Machine hall

Large gate (new) - Corrugated metal

Small gate (original) - Painted metal

Double door (original) - Stable



Foundation - Concrete + plaster

Stable wall - Cement brick + plaster

Stable wall - Cement brick + plaster

Eternit roof - Good condition (west)

Eternit roof + repair (west)

Eternit roof + moss buildup (east)

Fig. 49-60 Exterior materials

MATERIAL INDEX INTERIOR

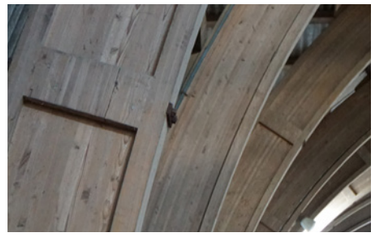
Silo - Board formed concrete

Plastered wall - Machine hall/Stables

Wood panel - Ventilation chimney

Wood panel with gaps - Hay loft gable

Eternit roof + timber joists



Laminated wood beams

Ceramic tiles - Stables

Wood panel - Depository

Wood panel - Depository

Concrete foundation

Patterned concrete floor - Horse stable

Wood panel flooring - Hay lofts

Fig. 61-72 Interior materials

Fig. 73 Roof repair

CONCLUSIONS

By looking at the different zones as parts of a whole, consistent themes appear that help formulate the *genius loci* (Plevoets & Van Cleempoel, 2019) of the building:

Exposure to climate

Apart from its original agricultural function, the building relates to its environment through its architectonic qualities. Varying internal climate zones, natural drafts through the building and the subtle presence of natural light creates a feeling of semi-sheltered outdoor spaces rather than conventional indoor environments.

Organic change

The traces of past use are highlighted through patchy repairs and modifications, being proof of human interraction and care for the building (Brand, 1997). These interventions stand out among original materials with decades of natural patina buildup, showcasing the passage of time and the changes that come with it.

Movement/connections

The technical systems and traces of past connections tell a story of a dynamic interior space, where machines, crops as well as the farmer would traverse the spaces of the barn in various ways, connecting the different zones both vertically and horisontally.

CONCEPT

The design proposal aims to emphasize the *genius loci* of the building by reimagining the traces of past use through new interventions. Using the intervention strategy of *aemulatio*, the design proposal aims to expand upon the existing structure and add new qualities.

Original materials are kept and mended only when necessary, embracing their natural patina and creating contrast between existing and new elements.

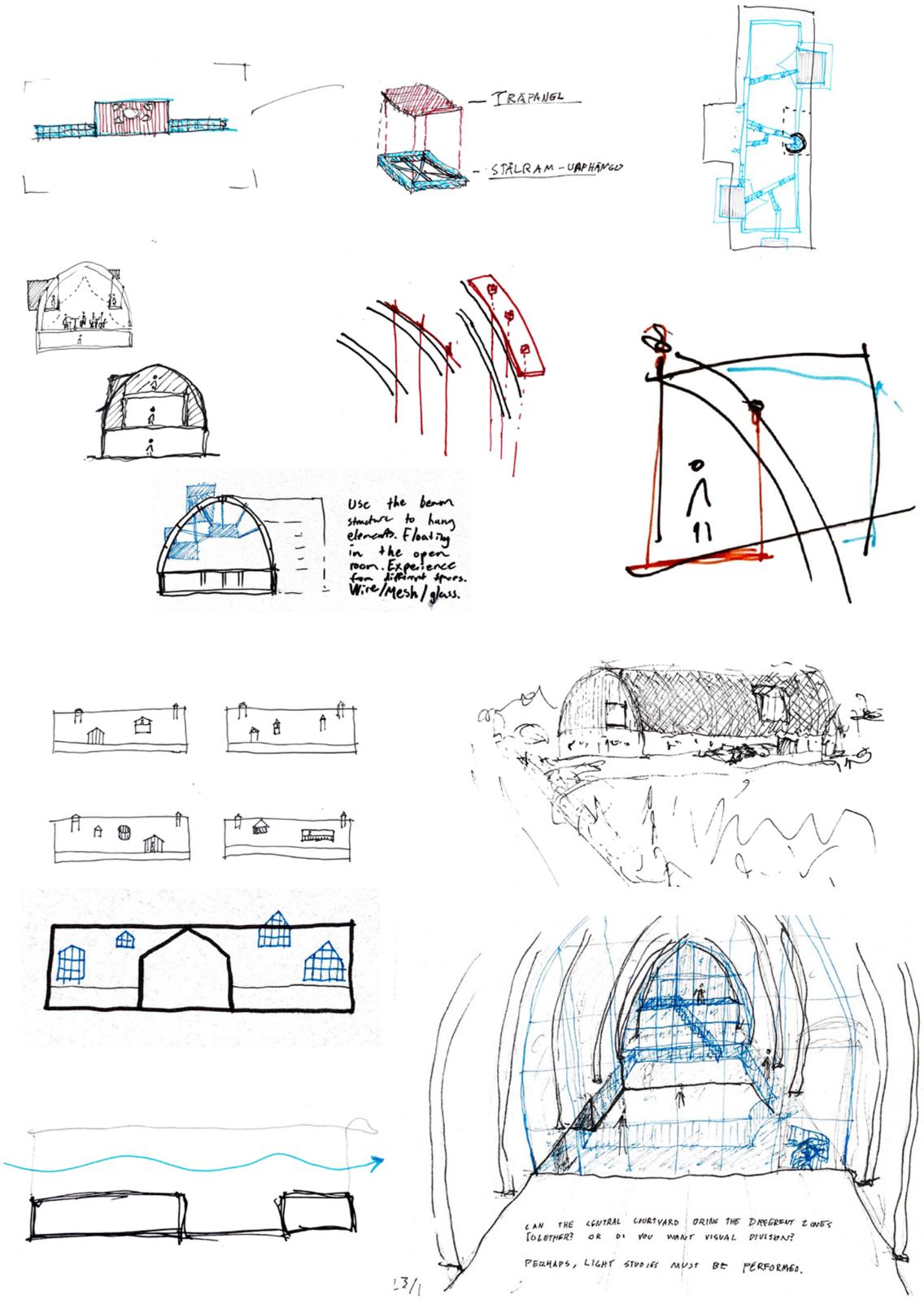


Fig. 74 Concept sketches

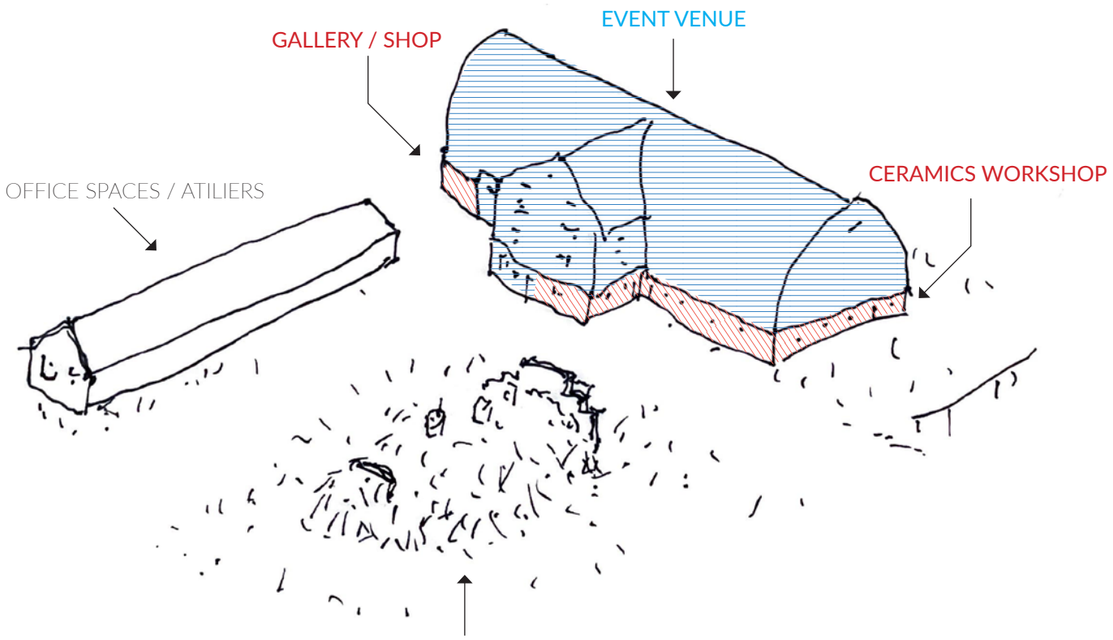


Fig. 75 Program illustration

PROGRAM

The detailed development plan for the area states that the barn and the neighbouring economy buildings, after some refurbishment, may be used as a center for recreational activities as well as for handicraft- and farmers markets (Rådhuset Arkitekter AB, 2000).

The design proposal will contain a mixed use program for the barn. A seasonal function as an event venue for weddings and other large parties, as well as year round functions consisting of a ceramics workshop and a gallery/shop.

The earth cellar and garage are also included in the proposal, functioning as a wine cellar with wine tasting and offices/atiliers respectively. These will, however, not be designed further in the design proposal beyond their stated function.

DESIGN PROPOSAL

From its vaulted ceiling, large dormers pertrude, hinting that its agricultural purpose has been replaced by something else.

Their irregular placement remind of patchy repairs, as if they are necessary adjustments for the barn's new chapter.

Fig. 76 Exterior render

Fig. 77-78 Added materials, entrance

Fig. 79 South west entrance rendering

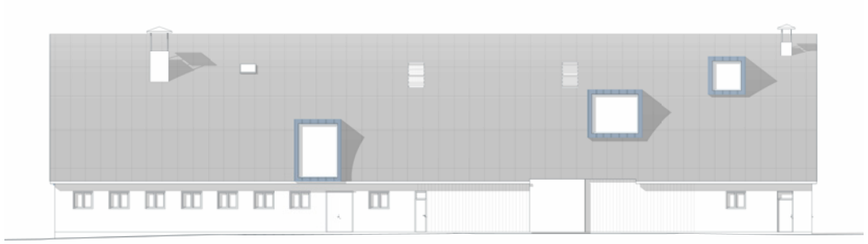


Fig. 80 North east facade 1:400

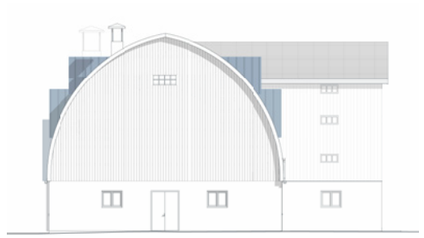


Fig. 81 North west facade 1:400

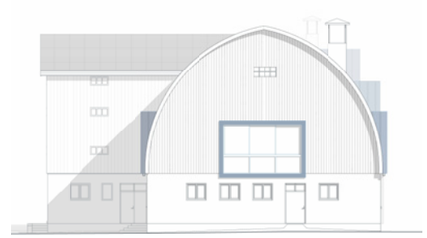


Fig. 82 South-east facade 1:400

Fig. 83 South-west facade 1:400

2 10 20

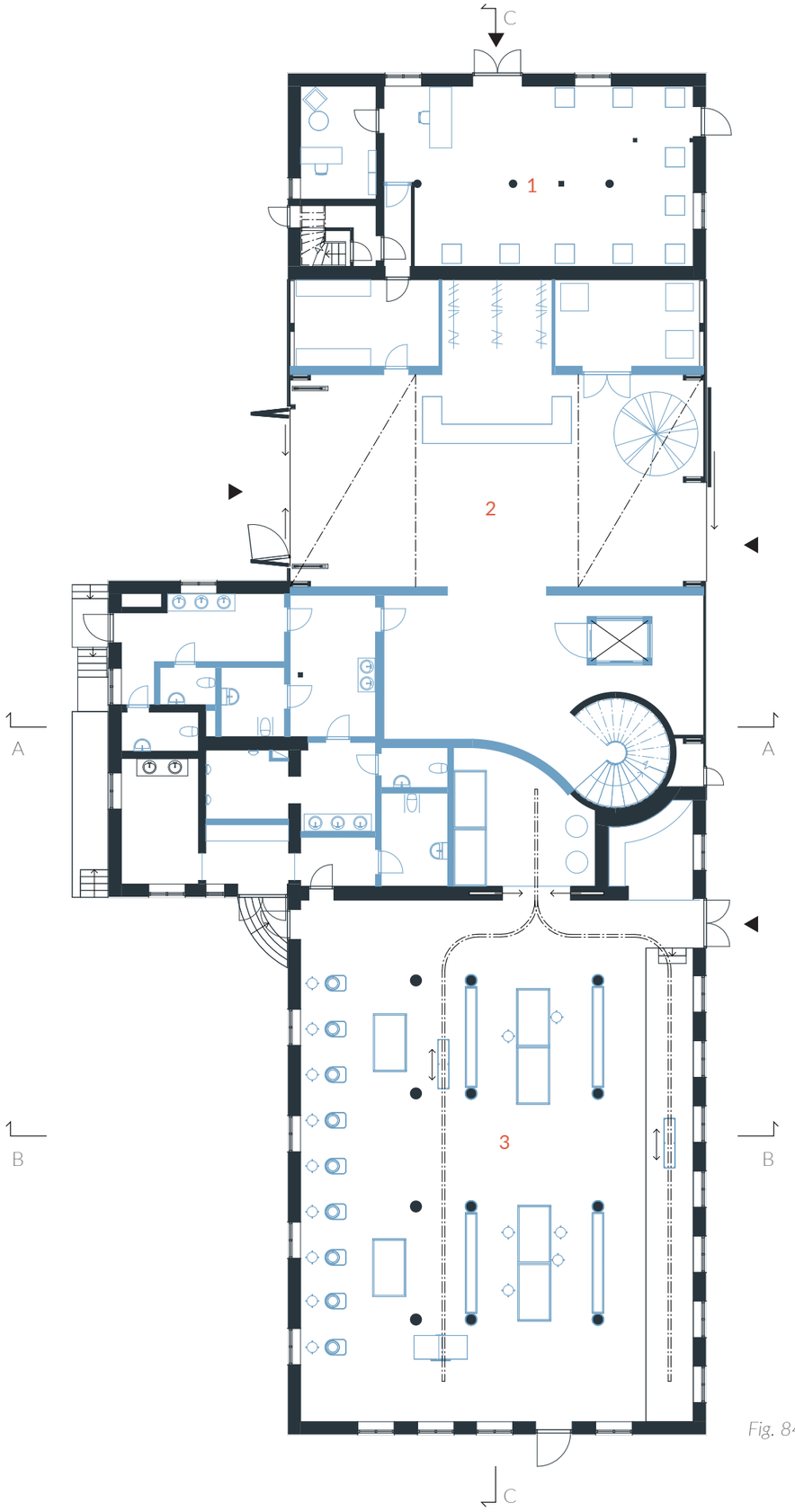


Fig. 84 Ground floor 1:200

GROUND FLOOR

1 5 10

The ground floor hosts three seperate functions; A gallery and shop in the previous horse stable (1), the entrance and communication zone for the event hall in the previous machine hall (2) and a ceramics workshop in the previous cow stable (3).

These functions have seperate entrances and flows, allowing them to function simultaneously without interference.

The two stables, as well as the bathroom package, are heated and ventilated to allow for year round use, while the event hall remains uninsulated and is suited for the summer months.

Fig. 85 Ceramics workshop rendering

The ceramics workshop utilizes the existing columns to create spatial division through integrated shelves.

The ceiling mounted rail allows for smooth transports of ceramics between different zones of the workshop.

EXISTING MATERIALS

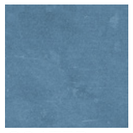
PAINTED PLASTER

CONCRETE

CERAMIC TILES

ADDED MATERIALS

OAK



COATED STEEL

Fig. 86-87 Added materials, workshop

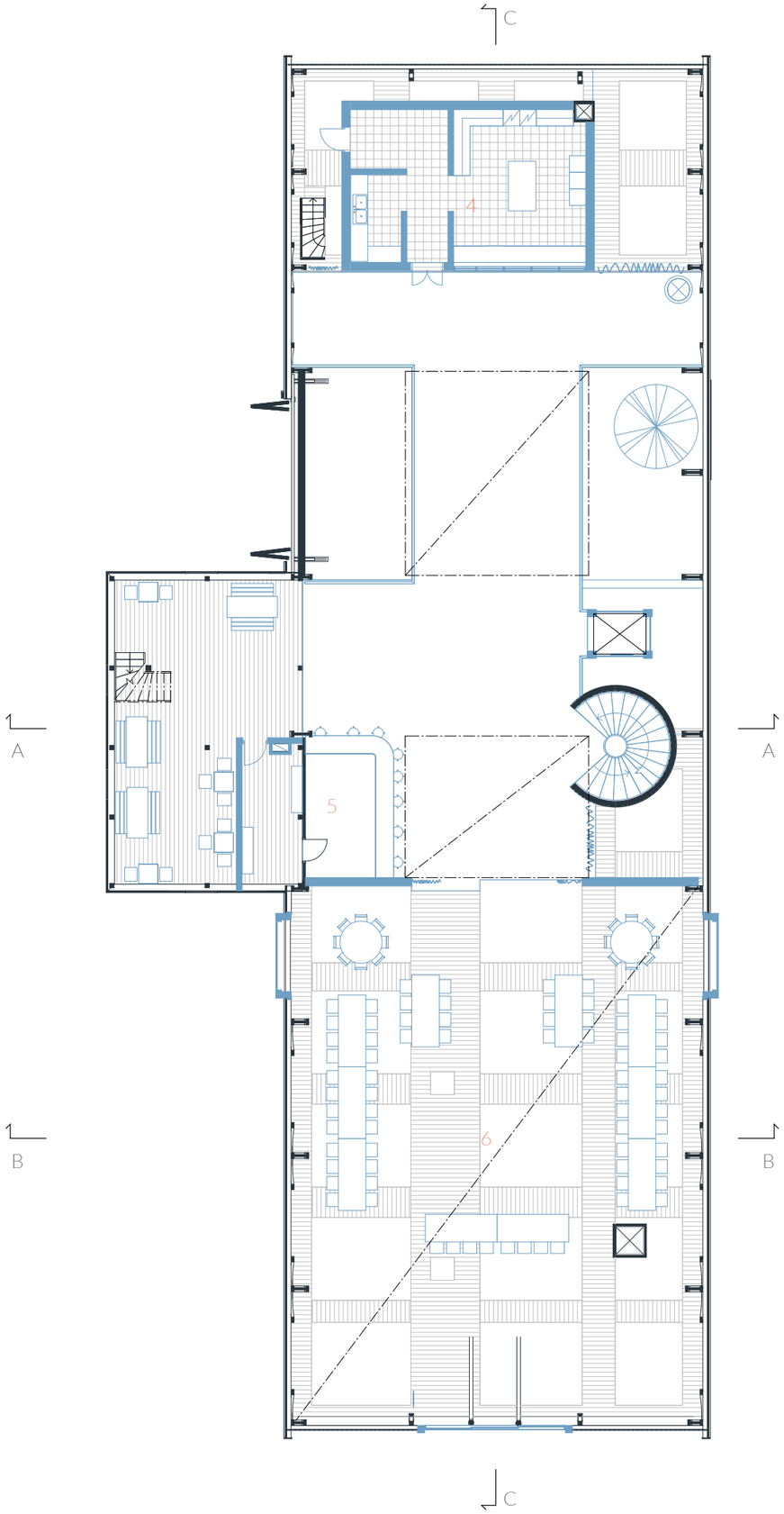


Fig. 88 First floor 1:200

FIRST FLOOR

1 5 10

Up through the spiral staircase in the old silo, the visitor enters the main floor of the event venue, containing a heated kitchen in one end (4), a large open space in the other (6) and a bar in between (5).

ADDED MATERIALS

GRAVEL FROM FARMYARD

LINEN CURTAINS

TINTED BOARD FORMED CONCRETE

Fig. 89-91 Added materials, event venue

Fig. 92 Event venue render

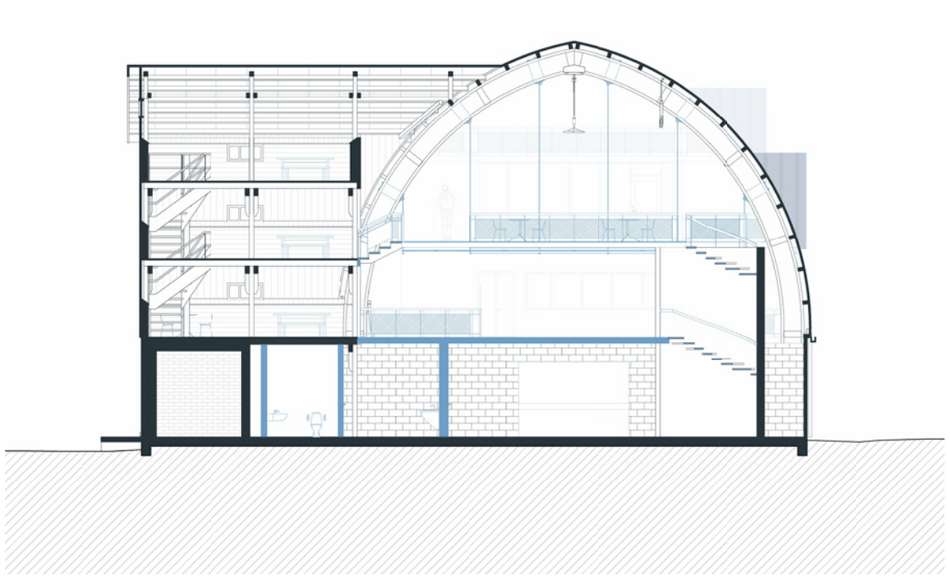


Fig. 93 Section A-A 1:200

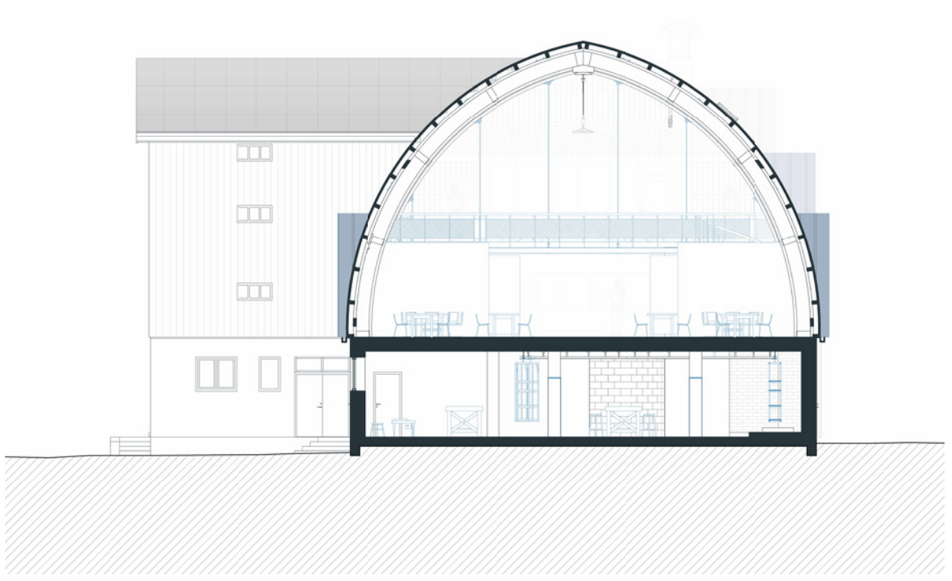
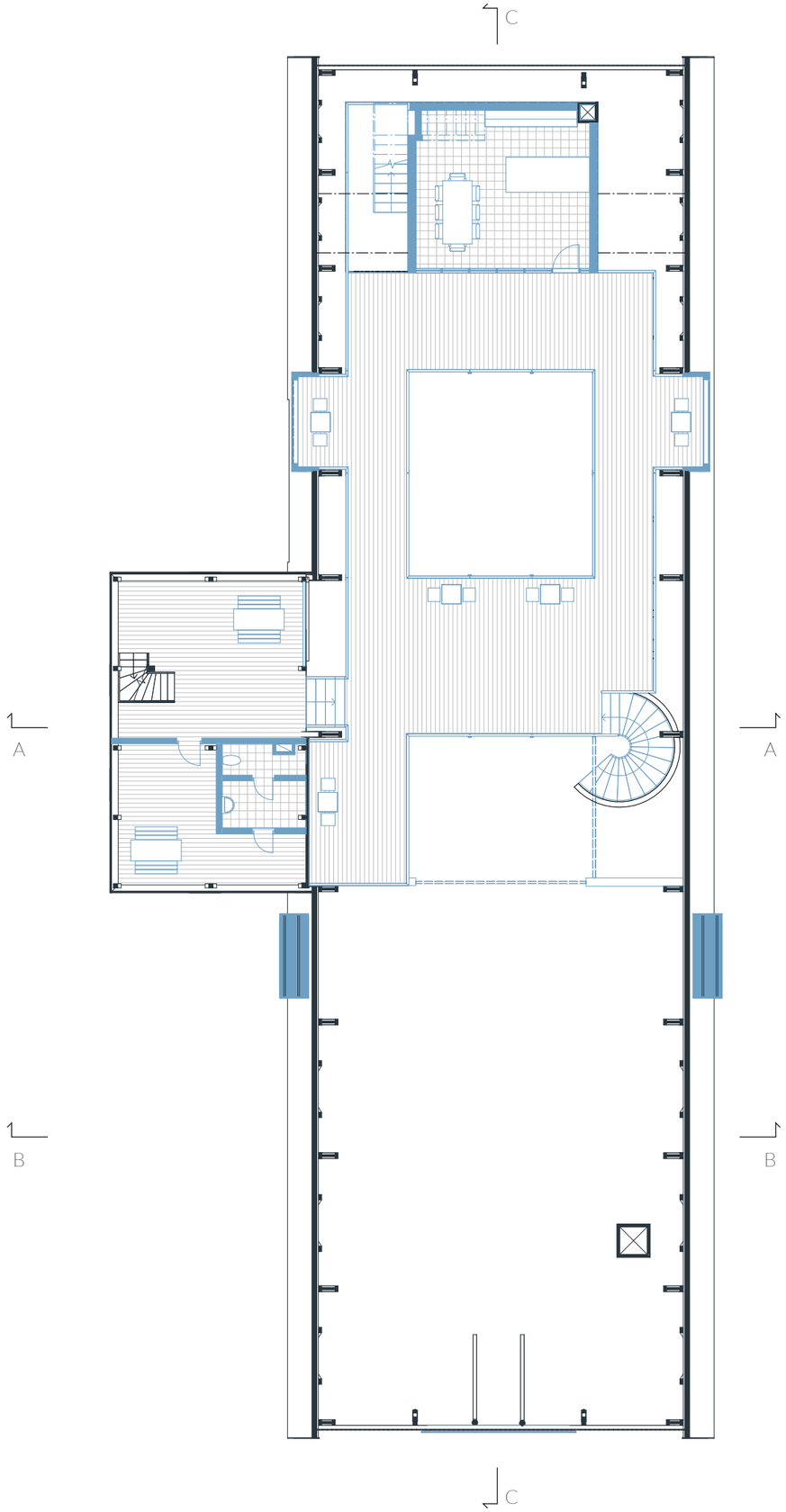


Fig. 94 Section B-B 1:200



SECOND FLOOR

A suspended walk path lines the outer perimiter of the building, allowing the visitor to experience the grand vaulted volume from different vantage points.

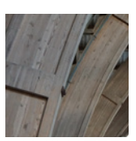
Fig. 95 Second floor 1:200

Fig. 96 Dormer rendering

Along the suspended walk path lies recessed areas extending into the dormers, creating intimate spaces for conversation with framed views of the surrounding environment.

EXISTING MATERIALS

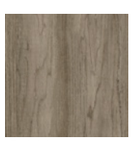
ETERNIT



LAMINATED WOOD

ADDED MATERIALS

STEEL CHAIN LINK



OAK

COATED STEEL

Fig. 97-99 Added materials, suspended walk path

The new interventions create a vertically dynamic interior atmosphere, where the visitor is encouraged to explore the building.

1 5 10

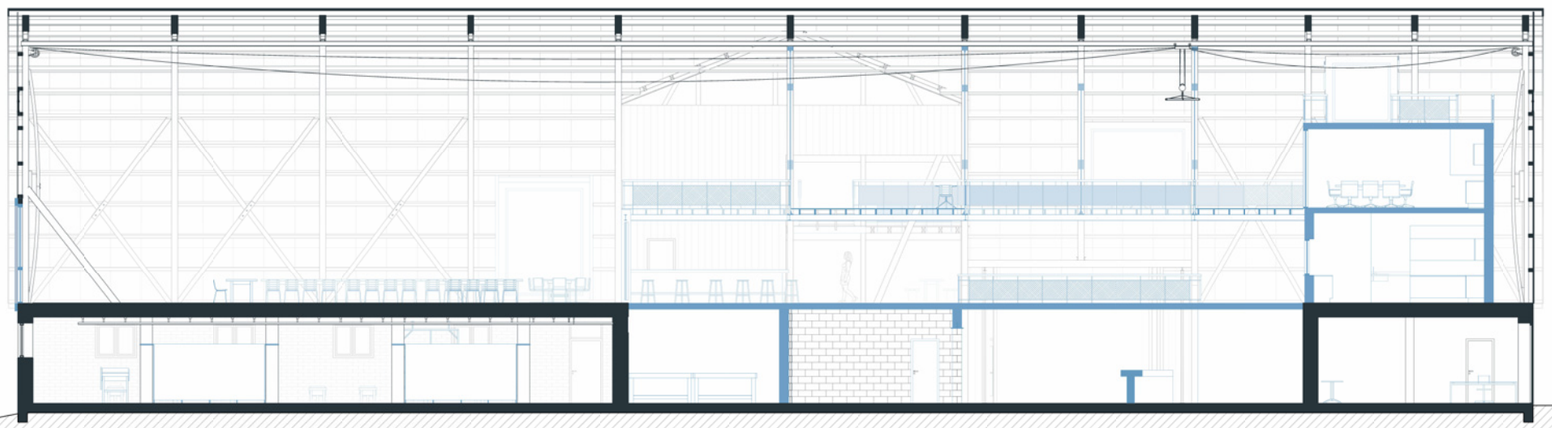


Fig. 100 Section C-C 1:200

Fig. 101 Above entrance rendering

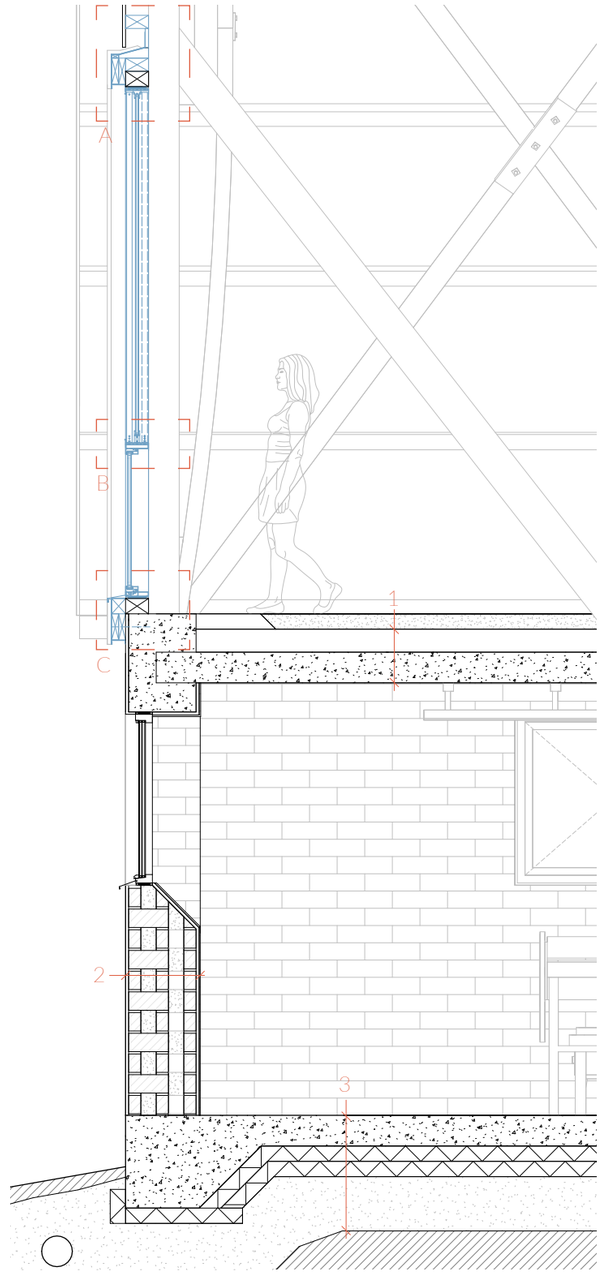


Fig. 102 Gable detail 1:40

0.5 1 2

1 EXISTING HAYLOFT*
145 TIMBER FRAMING + INSULATION
200 CONCRETE SLAB

2 EXISTING WALL*
20 PLASTER
440 CEMENT BRICK WITH ISCORIUM INSULATION
20 PLASTER
10 CERAMIC TILES

3 EXISTING FLOOR*
200 CONCRETE SLAB
200 INSULATION
DRAINAGE LAYER

**The existing construction is estimated based on archival photographs (fig 10-21) and documentation on site*

Fig. 103 Gable elevation 1:40

ADDED MATERIALS

STANDING SEAM ZINC METAL

BRUSHED TINTED ALUMINUM

Fig. 104-105 Added materials, exterior

Fig. 106 Suspended walkway render

ADDED INTERIOR MATERIALS

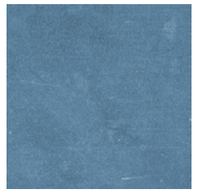
POLISHED
CONCRETE

CONCRETE
MASONRY

GRAVEL FROM
FARMYARD

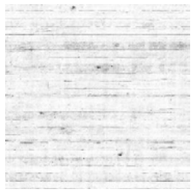
LINEN CURTAINS

OAK



COATED
STEEL

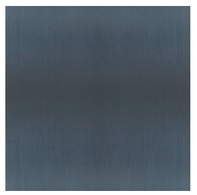
STEEL
CHAIN LINK



TINTED BOARD
FORMED
CONCRETE

ADDED EXTERIOR MATERIALS

STANDING SEAM
ZINC METAL



BRUSHED TINTED
ALUMINUM

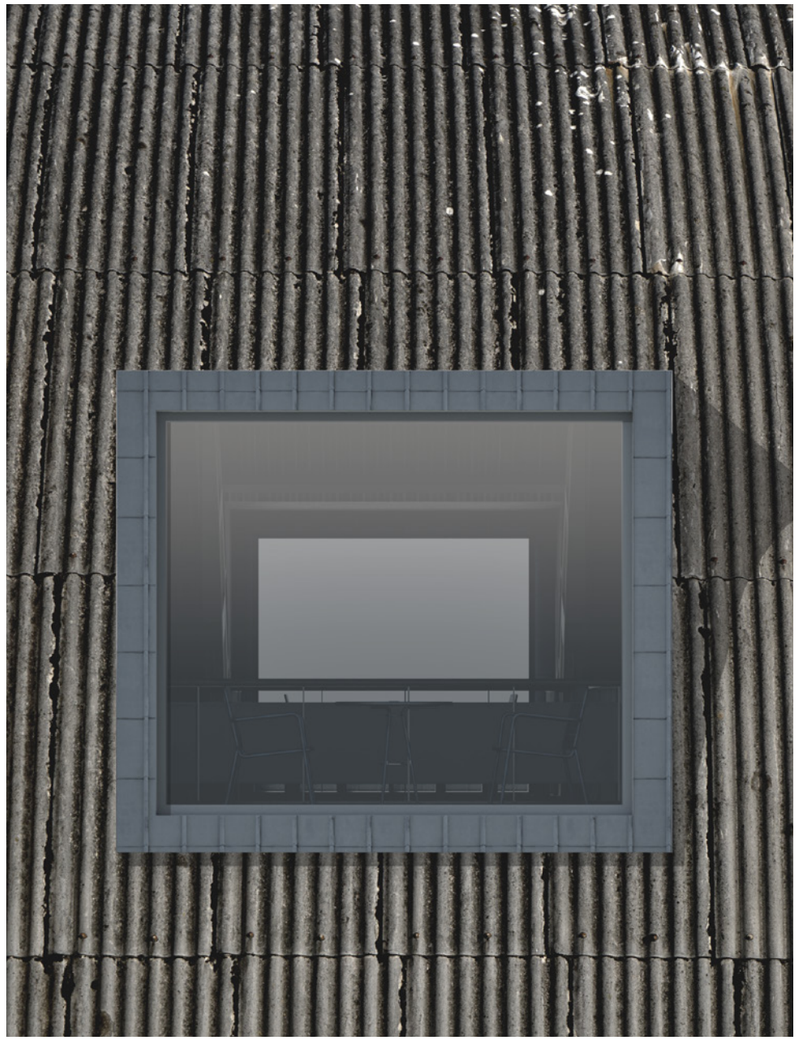


Fig. 107 Dormer elevation 1:40

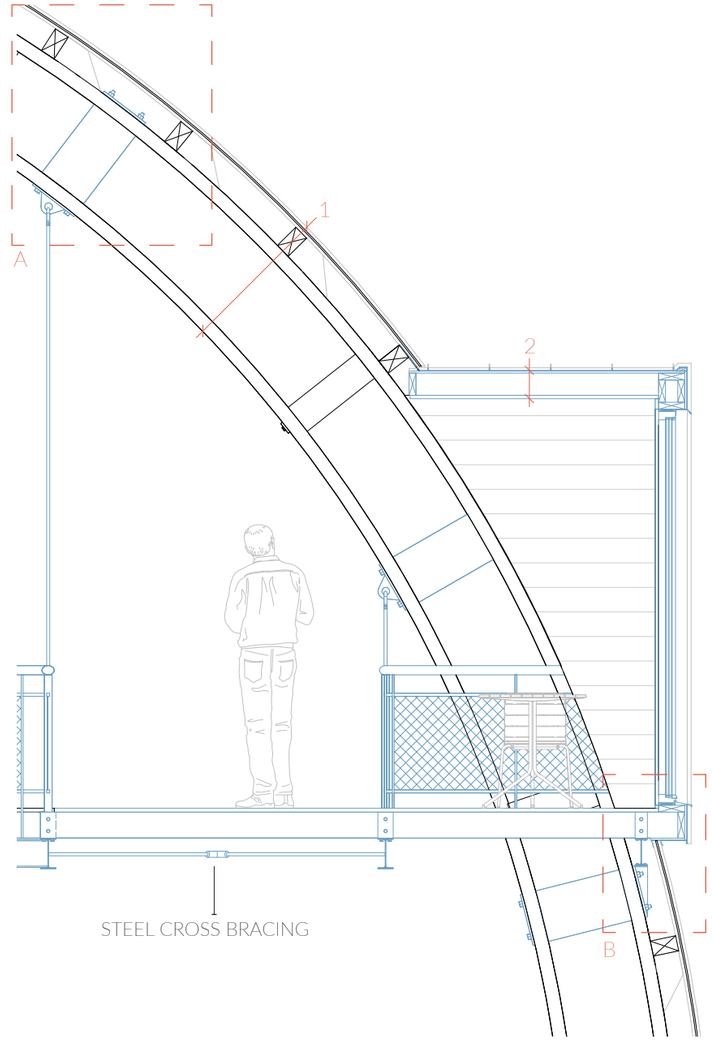


Fig. 108 Dormer detail 1:40

0.5 1 2

1 EXISTING ROOF

10	ETERNIT ROOF PANEL
100x170	TIMBER JOISTS CC 1000
740	LAMINATED WOOD BEAM

2 DORMER

0.8	STANDING SEAM ZINC METAL SHEET
3	ROOFING FELT
13	OSB-BOARD
145	TIMBER FRAMING
22	REUSED TIMBER PANEL

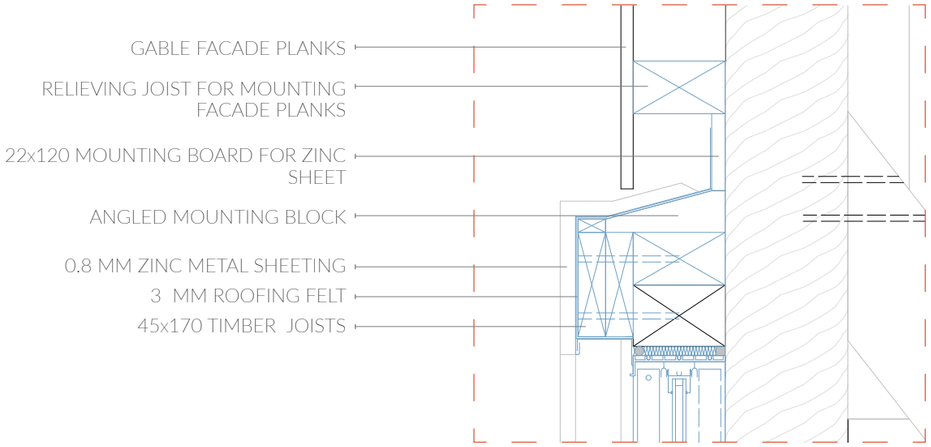


Fig. 109 Gable callout A 1:10

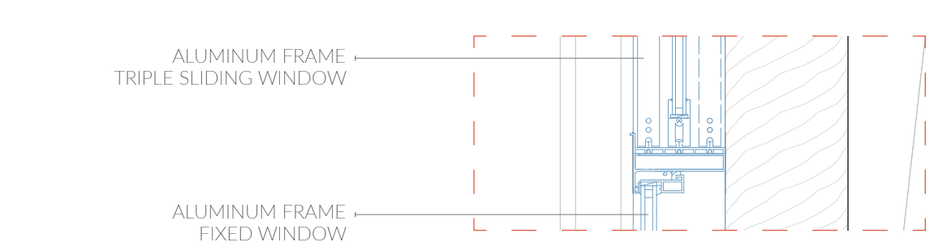


Fig. 110 Gable callout B 1:10

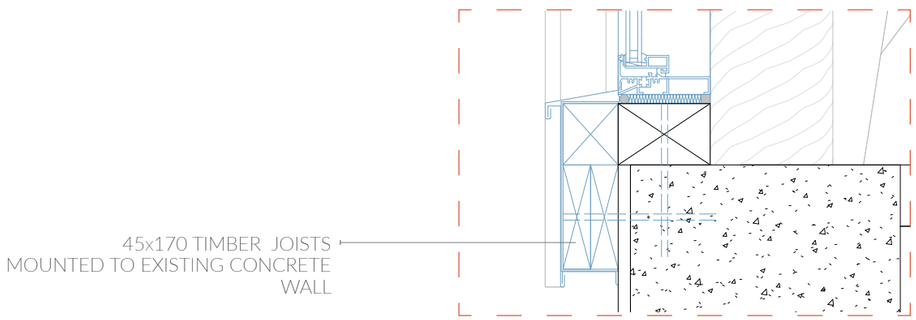


Fig. 111 Gable callout C 1:10

0.1 0.5

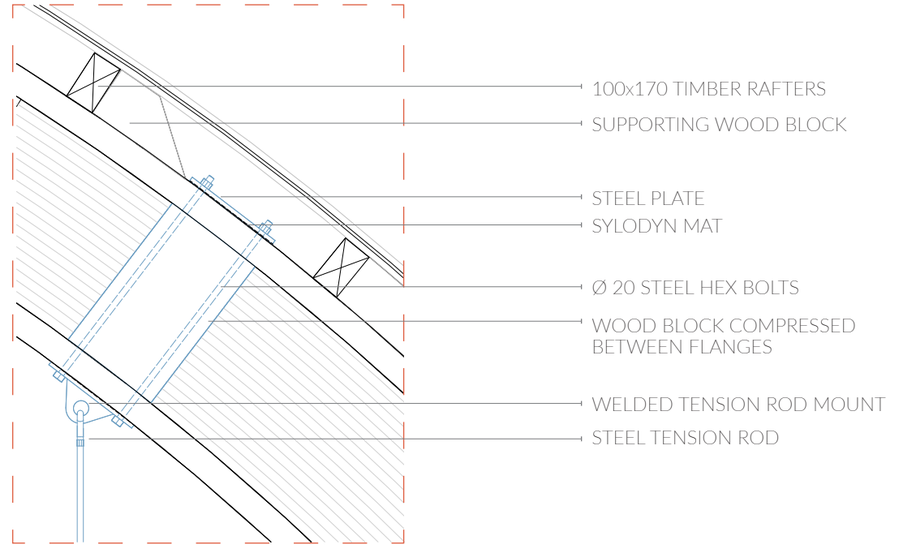


Fig. 112 Dormer callout A 1:20

Fig. 113 Dormer callout B 1:20

0.2 1

DISCUSSION

This thesis project sought to answer the questions:

How can Thordéns Ladugård be transformed, using the intervention strategy of aemulatio, to accomodate new uses and prolong its lifespan?

How can the concept of genius loci be used as a method to determine the character of the building and as a basis for new interventions?

The inventory phase led to discoveries concerning construction, material use and changes over time that created a greater understanding of the barn and its history. These findings helped formulate the *genius loci* of the building and how new interventions could fit into that context.

Describing the *genius loci* created a framework from which the design proposal could develop with the building's prerequisites as a foundation. The traces of past use and human interraction became inspiration for how the building could be transformed while still maintaining its most defining traits.

Using the intervention strategy of *aemulatio* led to a design that reimagined the capabilities of the existing structure and how it could interract with new interventions. Using materials inspired by the original building created a coherent expression while still differentiating the new and old.

The intention of the transformation proposal was not to completely remodel the expression of the barn, but rather to make conscious additions that seemed in line with the building's history of situational alterations that reflect the demands at that time. As with the barn transformation by Freiluft Architektur (2015), treating new interventions as repairs can give a sense of authenticity and contribute to the organic growth within the existing context.

This approach of situational alteration was also evident in the treatment of materials, where the majority of the existing materials were kept or mended, although some were visibly dilapidated. Their state was not seen as a negative quality, but rather a testament to the resilience of the barn and how it has withstood the test of time.

The question of insulating and heating the entire barn was considered in early stages of the design, but was ultimately ruled out. Partly due to the feasiblity of heating such a large volume, but mostly due to the existing qualities of the interior spaces. Inspired by PC Caritas (architecten de vylder vinck taillieu, 2016), the barn was deemed an appropriate subject to experiment with interior climate and exposure. The natural draft through the building is a quality that is unique to the typology, and was seen as part of the *genius loci* of the barn rather than a programmatic limitation.

The transformation proposal aimed to work with the current conditions and allow the barn to retain the qualities typical to the typology, rather than force it to change completely. With this approach, it became a question of finding a program that co-operated with the conditions of the existing structure, rather than choosing a program and forcing those demands onto the building.

This approach to programmatic adaptation shows that barn transformations do not have to aim for a complete remodel of the building to find new uses for it. Although Thordéns Ladugård in many aspects is a unique barn in the Swedish context, the strategy of using the existing structure as a basis for new interventions may be applied to other buildings within the typology.

As adaptive reuse is becoming more common within the field of architecture, it is important to have a large reference bank of projects from different typologies. There is an abundant building stock of abandoned barns not only in Sweden, but in all countries that share a similar progression of their agricultural sector. The diversity of reference projects is therefore crucial to showcase the potential of this building type.

The barn is a natural part of the rural landscape and our built cultural heritage. Its properties might be considered limiting, but with care and attention their imperfections can be utilized to create a unique kind of architecture.

This thesis project is a response to the rationalization of not only the agricultural sector, but the building sector as a whole. With technological advancement and optimization being prevalent objectives in all aspects of the building sector, one must consider which qualities are at risk of getting lost.

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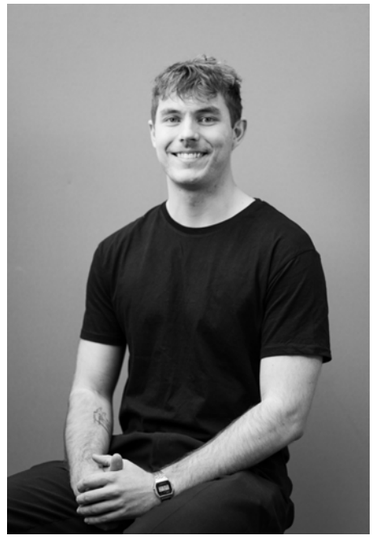
Plevoets, B., & Van Cleempoel, K. (2019). *Adaptive reuse of the built heritage*. In Routledge eBooks. https://doi.org/10.4324/9781315161440

PROJECT BASED REFERENCES:

Architecten de vylder vinck taillieu. (2017). *PC Caritas*. https://arquitecturaviva.com/works/pc-caritas-in-melle

Freiluft Architektur. (2015). *Barn Conversion*. https://freiluft.ch/projekte/umbau-bauernhaus-rueegsauschachen



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ACE410 Managing Design Projects
ACE575 Sustainable Building Transformation
ACE515 Building Tectonics 2