Constructing the Clear-cut

1. Pinus sylvestris x2

2. Pinus sylvestris

3. Betula pendula

4. Betula pendula

5. Picea abies (Dead)

6. Pinus sylvestris

7. Betula pendula

8. Pinus sylvestris

9. Picea abies (Dead)

10. Betula pendula

11. Betula pendula

12. Pinus sylvestris

13. Betula pendula

15. Betula pendula

16. Betula pendula +Pinus sylvestris

On Landscape, Trees and Representation

Wilma Berg

Chalmers School of Architecture
Department of Architecture & Civil Engineering

Examiner: Naima Callenberg

Supervisor: Daniel Norell

Master Thesis 2026

Thesis Title:	Constructing the Clear-cut On Landscape, Trees and Representation
Author:	Wilma Berg
Year of graduation:	2026
Institution:	Chalmers School of Architecture Department of Architecture & Civil Engineering
Program:	MPARC Architecture and Urban design, MSc
Profile:	Architectural Experimentation
Examiner:	Naima Callenberg
Supervisor:	Daniel Norell

CHALMERS
UNIVERSITY OF TECHNOLOGY

Special thanks to:

Daniel Norell & Naima Callenberg, for guidance and valuable feedback

Peter Christensson, for encouragement, books, and lending me the drone

Jarkko Nordlund, for 2500 drilled holes for the model

Friends & Family

Viktor

Abstract

For thousands of years, humans have lived with and from the forest. Today, however, the question of how we manage our forests has become increasingly polarized, and at the centre of this debate stands the so-called clear-cut. By viewing humans as an active part of the landscape rather than as external destroyers of nature, this thesis aims to investigate the site that a clear-cut constitutes and, through architecture, narrate its past and continuing story.

Drawing from landscape architecture, geography, and history of ideas, the thesis departs from the fact that the clear-cut is not untouched nature, but a part of a landscape that is a human construction. The form of the clear-cut is the result of the technologies that have historically shaped the landscape. Unlike the concept of nature, time, fragments, and memory are closely interwoven in a landscape. In addition to being a significant bearer of culture, there is also a strong connection between the trees of the forest and the origins of architecture, exemplified by The Primitive Hut. By understanding these aspects and how they have shaped the site that the clear-cut constitutes, the thesis provides a continued narrative for the clear-cut that discusses the role of humans in the constructed landscape.

The thesis studies a particular clear-cut in a forest in the vicinity of Gothenburg. An architecture project for this site is developed through three parallel working methods: sensing, writing, and shaping. The abstracted geometric language of architectural drawing is ill-suited to capturing the ever-changing nature of the ground, trees, and plant-life. Drawing from geographer Dennis Cosgrove, three modes of representation are developed in response to this: The cosmographical, geographical, and the chorographical. The project emerges in the form of a gathering space, a so-called ting that works as a democratic forum where stakeholders in the forest come together. Through its form, materiality, placement in the landscape, and function, the architecture demonstrates human entanglement with its surroundings.

The aim of this thesis is not to romanticize clear-cuts or cultivated land. It is not a denial of the damage humanity has inflicted upon its surroundings, nor of the environmental and climate challenges we face. Rather, the thesis highlights the importance of humans as active agents in the landscape.

This is not a story of what has been lost, but of what may yet be found.

Keywords:

nature, culture, cosmography, geography, chorography

Birch mirroring itself in the water.

Contents

Introduction

Around 14,000 years ago, humans attempted to settle north of Öresund for the first time (Wetterberg, 2018). They failed. A thousand years later they tried again, this time successfully. The difference was that the climate had become warmer, and they now also had the trees on their side. Since then, the forest has been a prerequisite for human survival in the Nordic countries. Over time, however, humans have increasingly distanced themselves from their surroundings. Instead of being part of the landscape, they see themselves as external observers of nature (Ingold, 1993). Today, the question of how we manage our forests has also become a highly polarized debate. Environmentalists want the forest preserved for the sake of biodiversity and ecological values, while forest owners seek to increase efficiency and maximize yield. At the centre of this conflict stands the so-called clear-cut.

Historical references show that the relationship between architecture, humans, and nature stretches far back in time (Lavin, 2020). Within the language of architectural drawing, it becomes clear that there is a friction between trees, which are in constant change, and architecture, which has traditionally been understood as fixed and stable. It seems that the abstracted geometric language of traditional architectural drawing is ill-suited to capturing the ever-changing nature of the ground, trees, and plant-life. The Primitive Hut, which Marc-Antoine Laugier describes in his text *Essai sur l'architecture*, adds another aspect to this problematic. Laugier argues that nature, with the forest and its trees, can be understood as the origin of architecture. In nature, the fundamental principles for creating beautiful architecture can be found. At the same time, however, it becomes clear that it is difficult, perhaps even impossible, to represent this relationship without transforming nature into culture.

In a similar way to how the tree makes the conflict between nature and culture visible within architecture, the clear-cut reveals that it stands not only at the centre of a conflict of interests between people, but also within a conflict between nature and culture — natural and artificial — actual and virtual. The clear-cut as an archetype, as a void of absence within an otherwise dense forest, makes the inherent conflict within the constructed landscape visible. This thesis takes the above proposition as its driving force in the search for the full narrative of the clear-cut and the human role within the constructed landscape.

Intentions

The intention of the thesis is to investigate the site that the clear-cut constitutes through a series of explorations with a focus on architectural representation, and how cosmographical, geographical, and chorographical representation can serve as a means to both understand and, at a later stage, communicate the narrative of the clear-cut. Through this, I aim to examine and discuss the human relationship to, and role within, the constructed landscape, where the boundary between the natural and the artificial becomes unclear. The character of the clear-cut exposes the friction between nature and culture. Because the clear-cut is a place that makes this conflict in the landscape visible, I argue that it can serve as a site for discussion regarding issues related to the similarly contested debate on forestry.

The project takes the form of a gathering space, a so-called ting, which functions as a democratic forum where stakeholders in the forest can come together. Through its form, placement in the landscape, and function, the architecture demonstrates the human entanglement with its surroundings.

Research Questions

How can the clear-cut be investigated and communicated as a constructed landscape through architecture and architectural methods of representation?

How can this narrative foreground humans as active agents in the landscape?

Delimitations

This thesis investigates a specific clear-cut located in the vicinity of Gothenburg. Information and material are collected and interpreted with the selected clear-cut as the point of departure. The design proposal is adapted to the unique conditions of this particular site. The thesis, however, aims for its results to contribute to a broader and more general discussion regarding the role of humans and their relationship to constructed landscapes.

The thesis does not take a position on how the forest in general, or the selected clear-cut in particular, should be managed. Its aim is not to participate in the environmental debate or to solve any problems related to the environment or forestry, but rather to expose and stage the constructed landscape in search of its full narrative.

Background

Upset root plate.

Trakthyggesbruk

Sweden's total land area is about 41 million hectares (Wetterberg, 2018). Of this, 28 million hectares consist of forest, and 23 million of those 28 are classified as productive forest land. The most common method of managing the forest is through so-called clear-cutting forestry (trakthyggesbruk).

Through clear-cutting forestry, the forest is managed as if it were farmland with growing crops (Skogstyrelsen, 2025). If the area a forest owner wishes to harvest exceeds half a hectare, a notification of felling must be submitted to Skogsstyrelsen. This must be done at least six weeks in advance. Then the harvester and forwarder arrive at the site. Most of the trees are felled, but some are left standing together with high stumps and shrubs. The timber is sorted depending on size and purpose and is later collected by a logging truck that transports the logs to their next destination.

For new trees to grow on the clear-cut area, replanting is also required. The most common method is planting seedlings. For the seedlings to grow well, the soil generally needs to be scarified. The most common type is harrowing (harvning), where a forestry machine turns the soil so that the mineral soil is exposed. Both before final felling, during planting, and after planting, site preparation and clearing (hyggesrensning) may be needed to ensure the seedlings have the best conditions to grow. Using a clearing saw, unwanted vegetation is removed in much the same way as weeding a garden bed.

The Swedish forest consists of about 80 percent coniferous trees such as pine and spruce. After planting, it takes between 45 and 100 years for the stand to reach the minimum age allowed for a new final harvest, depending on the conditions of the site.

Then the cycle begins again.

The Continued Journey of the Timber

The logging truck transports the timber on its trailer. About 47 percent of the wood goes to sawmills, 45 percent to pulp mills, where cellulose is extracted for paper production, and 8 percent becomes firewood and other uses (Föreningen Sveriges Skogsindustrier, 2025). At the sawmill, 31 percent of each log becomes wood chips when it is sawn into planks and boards. This residue is used by pulp mills. Bark and sawdust are turned into fuel.

Of the timber products Sweden produces, about two-thirds are exported. Of the planks and boards that remain in the country, a large share is used for renovation, reconstruction, and extensions. The second-largest category is new house construction.

Diagram of clear-cuttting forestry and the products of the forest.

Through clear-cutting forestry, the forest is managed as if it were farmland with growing crops.

Harvester

Forwarder

Wood products. A large share is used for renovation, reconstruction, and extensions. The second-largest category is new house construction.

Saw mill

Saw timber

Electricity and heat

Branches, tree tops, and stumps

Heat and power plant

The timber is sorted depending on size and purpose.

Pulpwood

Paper products

Pulp mill

For new trees to grow on the clear-cut area, replanting is also required. The most common method is planting seedlings.

A Historical Overview of Forestry in Southern Sweden

The history of the forest and forestry is probably considered by many to be a story that primarily belongs to the northern parts of Sweden. Over the years, however, the significance and involvement of southern Sweden in the development of forestry cannot be overlooked. Already during the early Middle Ages, Norway was one of the foremost exporters of timber to England (Wetterberg, 2018). During the 16th century, demand increased, which led the Norwegians to begin sourcing logs from Värmland and the surrounding regions. One of the earliest techniques for processing logs was the water-powered saw, and one of the very first saws mentioned in historical sources, in 1489, belonged to Älvsborgs fästning. Göta älv became highly significant during this period, as timber from Värmland was floated out into Vänern and then further down towards the coast. The water-powered saw did not reach Norrland until the latter half of the 16th century.

In the 18th century, sawmills became larger and consequently required more power. Many of the new sawmills were therefore established along waterways with stronger currents. Behind these new sawmills were often trading houses such as James Dickson & Co in Gothenburg. The Scottish brothers James and Robert Dickson arrived in Gothenburg at the beginning of the 19th century. The brothers soon became involved in the Norwegian timber trade and, not long after, they had purchased a sawmill in Värmland and leased another at Trollhättefallen. They would go on to become some of Sweden's wealthiest timber barons during the 19th century.

In Norrland, the Dickson brothers and others conducted large-scale forestry operations focused on profit and export, while forestry in southern Sweden looked somewhat different at the time. Although industrial forests existed in the south, the forest was primarily used for private purposes. Agriculture was the main focus, and livestock were allowed to graze freely in the woods. Farmers also practiced slash-and-burn cultivation (svedjebruk) — burning the forest to make the land easier to use for crops and pasture. In Norrland, the forests were depleted as the largest trees were exported abroad, while in the south, the forests were reduced to thin remnants by fire and grazing. By the late nineteenth century, the crisis was growing, and the public expressed concern over the increasingly sparse forests across the country. In southern Sweden, much of the forest was privately owned, and farmers strongly defended their property rights — they resisted replanting trees for fear it would reduce grazing land for their animals.

At the beginning of the twentieth century, the forests in southern Sweden were in poor condition. It was, as Wetterberg writes, "the land of heather plains." In 1905, despite protests from farmers, the government introduced regulations concerning forest management across the entire country. Since then, extensive reforestation has taken place in southern Sweden. In the 1920s, the timber stock in Götaland amounted to between 42 and 76 cubic meters per hectare. Today, it has increased to around 300 cubic meters per hectare. Reforestation has primarily consisted of pine and spruce, as these species are the most economical and easiest to manage.

173. Granen.

Jag aldrig färg och klädnad skiftar,
af nordens folk en trogen bild.
Så vår- som vintertid jag viftar
min spira, lika grön och mild.
Åt alla skydd och hägn jag delar
mot stormens ras, mot haglets skur;
i toppen muntra orren spelar,
vid foten leka markens djur.

När människan mina fränder sluter
uti alléers stela tvång,
ett ostördt lif på fjäll'n jag njuter
och sjunger där min frihets sång.
Ej min natur jag mäktar dämpa;
när västan leker i sin dal,
jag vill med nordanvädren kämpa
i himlarymdens blåa sal.

Granen, Folkskolans läsebok, 1909.

Theory

Remaning trees in a clear-cut.

Trakthyggesbruk

Skogsstyrelsen (2025)

Explains how contemporary forestry is practiced.

A Historical Overview of Forestry in Southern Sweden

Wetterberg (2018)

Explains the human relationship to the forest and how the forest has been used and transformed over centuries.

Nature and Landscape

Cairns & Jacobs (2017)

Schama (1995)

Ingold (1993)

Discusses the difference between nature and landscape, as well as how humans perceive their surroundings through these concepts.

↓

A practical interperation

Sörlin & Wormbs (2018)

Clarifies and provides a practical interpretation of what Ingold refers to as taskscape. Introduces the concepts of Sensing, Writing, and Shaping.

→ **On-site Catalogs**

Gasperoni (2024)

Provides concrete proposals for what Sörlin and Wormbs refer to as Writing.

→ **Cosmography, Geography and Chorography**

Cosgrove (1999)

Both theories describe methods for how hidden perspectives can be revealed and how the perception of the clear-cut can be broadened.

↓

Architecture and Trees

Lavin (2020)

Mostafavi & Leatherbarrow (1993)

Further develops the meaning of representation in relation to trees, nature, and landscape. Introduces visual references, such as the Primitive Hut. Mostafavi and Leatherbarrow add a concrete example of how nature physically affects architecture to the Primitive Hut's theoretical connection between nature and culture.

Diagram outlining the theoretical framework.

The diagram illustrates the theoretical references of the thesis. Under each heading in the following theoretical sections, the referenced sources, their connections, and the ways in which they complement one another are presented.

Nature and Landscape

An intuitive way to describe the forest is, for many, to call it nature. But what we refer to as nature is, as Schama (1995) points out, in fact a myth. There is practically no untouched land left, and the very moment that nature becomes accessible to humans, it also ceases to exist. But if the forest is not nature, and certainly not the clear-cut area — what kind of place is it then? For thousands of years, the Swedish forest has been used by humans to meet their needs. The clear-cut could therefore be understood both as a result of and an extension of society itself. Cairns and Jacobs (2017) write about the concepts of stim and dross — the first describing stimulating land, developed for human use, while the latter refers to waste and leftover material, the by-product of the productive city. The authors also note that in Middle and Old English, the term waste land referred to "nature," since nature was land that was either unused or could not be used by humans. From this reasoning, one could therefore understand the clear-cut as a by-product of humanity and society.

Schama's (1995) view, however, is that culture and nature are interconnected, and that humans, through culture, shape nature into landscape. The word landscape originally derives from the German *Landschaft*, meaning a unit of human occupation. In the Netherlands, human use and transformation of the landscape were interpreted as a narrative in itself. According to Schama, landscape is composed of memories, myths, obsessions, metaphors, and allegories, and it must first arise in our minds before we can experience it. Historically, our image of the landscape, through its myths and stories, has been an important part of national identity. The landscape has been extensively used by humans to tell stories of belonging, but also as a means to rationalize dominance and colonialism. Some scholars argue that the emergence of agriculture and the industrial revolution marked the beginning of the Earth's downfall, the moment when humanity shifted from being in harmony with nature to becoming its overlord. However, Schama maintains that by understanding landscape as a tradition of myths and memories, we can comprehend what we have, but also what we risk losing.

Environmental historians have made a thorough attempt to restore nature's own history (Schama, 1995). Schama emphasizes that historians have succeeded in presenting nature as an actor in history, rather than merely the backdrop to humanity's drama. He argues, however, that it is impossible to write a history without human involvement — as mentioned earlier, there is scarcely any place on Earth that humans do not have a relationship to. It is practically impossible to separate nature from culture. According to Schama, most who have tried have also failed. As examples, he mentions two artists, Andy Goldsworthy and David Nash, who have created art with as little impact on their surroundings as possible — for instance, through found sculptures, produced by the forest or the sea. Yet, as Schama points out, by discovering and exhibiting these sculptures, we have also appropriated them.

Someone who, however, has taken on precisely this challenge is Ingold (1993). Ingold seeks to temporalize the landscape. This means that instead of viewing the landscape from a distance, as a cultural interpretation of nature or as something static and measurable, the landscape should be understood as a process of time rather than as a spatial surface. Ingold explains that landscape is not the same as land, since one can see, hear, and feel the landscape, but not measure it. Nor is landscape space. Space is an abstract and geometric construction. Space belongs to the observer who seeks to map the world through representation. Through this representation, for example, through a map or a photograph, space becomes a fixed moment in time. In space, it is possible to separate individual objects and view them each on their own. Landscape, on the other hand, is the lived world, created by those who dwell and act within it. Above all, landscape is not a depiction of nature; yet, nor is it, in collusion with humanity, in opposition to nature. Nature is often regarded as elevated and ideal, something humans experience from a distance. Nature is what exists "out there", while humans live "in here", as Ingold writes. In this context, landscape would then be understood as humanity's interpretation of nature, and thus a distancing from nature toward the cultural and conditioned.

It seems that Schama and Ingold share a similar understanding of how humans and landscape are closely intertwined. Their perspectives differ somewhat in that Ingold regards the cultural appropriation of nature as a form of detachment and a way of viewing the world from afar, while Schama instead argues that a cultural reinterpretation of nature is inevitable and essential for building our understanding of the world. Both, however, maintain that humanity is part of a shared world, and that humans, rather than terrorizing it from a distance, are like all other organisms, actively part of its continual creation.

A Practical Interpretation

Traces of former lives, such as buildings, paths, and cultivated land, are not seen as fragments of a bygone era but as active components of the present, which continue to influence how humans live and remember (Ingold, 1993). Taskscape is the human version of the temporal process that shapes the landscape. The processes and activities that humans engage in are part of the formation of the landscape. Just as the landscape consists of form, the taskscape consists of actions that are interlinked over time.

Sörlin and Wormbs (2018) can offer a practical interpretation of what Ingold describes as taskscape. The term environment originates from the verb *environ*, which was used to describe the enclosure or surroundings of one's own farm. Later, the term came to refer to the resources and assets of the estate. Like both Schama and Ingold, the authors argue that the environment is not merely something external that humans affect, but rather something actively formed through human actions, knowledge systems, and technologies. Nature is shaped through technology into environment. Thus, the environment can be understood as a historical result of human activity. It is worth noting that Ingold also describes the concept of environment in a similar way. He argues that the notions of landscape and environment are essentially quite similar, but that environment can be understood as the world as function, that is, the resources available to its organisms. The environment is nature shaped by its organisms. Landscape, on the other hand, refers to values as form. However, Ingold cautions that we should be careful with the word form, since form often tends to be prioritized over process. Embodiment is the process through which form is generated. Ingold understands embodiment as a movement in which the form is produced through incorporation, rather than as a finished result of inscription.

Human activities can be divided into sensing, writing, and shaping (Sörlin & Wormbs, 2018). Shaping means physically transforming a place, for instance by cultivating soil or forest. But for this to occur, shaping must be preceded by sensing and writing. Sensing refers to the systematic collection and registration of data about nature. Writing becomes the way of conveying this information. This can be done through documenting and visualizing nature and environment, for example through images, art, or literature. In this way, Sörlin and Wormbs argue that technology should not only be seen as the cause of or solution to environmental problems, but rather as the central medium through which environments are formed. By studying the role of technologies, one can write a new kind of environmental history that connects the mutual transformation of humans and the Earth. If we understand how earlier technologies have shaped our environments, we can also consciously design future technologies that support sustainable transitions.

Cosmography, Geography and Chorography

The clear-cut has a distinct form constituted by the boundary between forest and open ground. Its perimeter forms a clear spatial threshold, where the visitor can move from the dense forest into the echo of the open surface. In order to investigate how earlier technologies (Sörlin & Wormbs, 2018) have shaped the clear-cut, I draw on Denis Cosgrove's (1999) reflections on geometry and representation. Cosgrove argues that Euclidean geometry has historically been the tool through which humans have constructed the universe and thereby sought to understand their surroundings.

Frontispice to David Gregory edition of Euclid's *Opera*, Oxford, 1703.

Aristippus points to geometric figures drawn in the sand — a sign that the shipwrecked travellers have arrived at a civilised island.

Euclidean geometry is based on point, line, and area. In their simplest form, these three elements produce the circle and the triangle. With geometry as a point of departure, Cosgrove identifies three distinct modes of representing the world: Cosmography, Geography, and Chorography. These three representational methods constitute different perspectives from which we may observe our surroundings.

Cosmography places the observer at the center of the universe. From this position she can contemplate the movements of celestial bodies and the position of the stars in the cosmos. Based on my reading of Cosgrove, I interpret Cosmography as the representation method most closely linked to geometry. Cosgrove writes that geometry forms the underlying structure of the cosmos, and that the circle creates light and order within the dark chaos of space. Geometry can also be used to divide the surface of the Earth. Geography positions the observer above the Earth, thereby allowing her to categorize its surface into continents, oceans, and landmasses. Geography is a global perspective that has historically been used to control and colonize different parts of the world. For instance, from the early fifteenth century onward, Europeans used maps and coordinates to draw borders and divide the world among themselves. Chorography brings the observer down to the surface of the Earth and depicts the experienced landscape. Chorography represents a local and subjective perspective. If maps and coordinates are the outcome of Geography, landscape painting or photography might be understood as products of Chorography.

On-site catalogs

Site analysis is often technical and focused on architectural representation, which becomes problematic because a site is then reduced to an abstract image of land, to technical descriptions and plans for how the ground is to be used in favor of architecture, Gasperoni (2024) argues. Like the previous theorists, Gasperoni calls for another interpretation of how we should relate to a site. She argues that today's architect approaches the project site as a tabula rasa — that is, a blank slate. We have detached nature from our built environment, which is instead increasingly understood as culture. Gasperoni believes that on-site catalogs may serve as a tool to reconnect the built environment with nature. Here, Gasperoni expresses thoughts similar to those of Ingold (1993), since one could understand this act of reconnecting nature and the built environment as corresponding to what Ingold defines as landscape.

On-site catalogs constitute a generative practice for analyzing a site that involves experimentation and innovation. The purpose of the catalog is not to categorize or systematize a place in order to domesticate it through architecture, but rather to reveal hidden or forgotten processes and narratives, thereby forming a starting point for design. Thus, these catalogs could be understood as a practical interpretation of Ingold's (1993) taskscape and what Sörlin and Wormbs (2018) describe as writing. However, I believe it is important to emphasize that the catalog must serve as a tool for expanding perception, rather than merely a compilation of objects. Otherwise, the catalog risks becoming a representation of space, which, as Ingold reminds us, is an abstract and geometric construction in which time is fixed — something that would not be representative of either the forest or the clear-cut area.

In her article, Gasperoni interviews several architectural practices that have worked with on-site catalogs, and through these conversations it becomes evident how the catalog should be used to avoid becoming a representation of space. In her interview with STUDIO SM/S, it appears that after collecting and compiling seemingly worthless artifacts, a process begins in which the artifacts are assembled in new ways, without consideration of their original function or purpose, thereby creating new forms and, in turn, new conceptions of the artifact itself.

An artifact is manufactured according to a predetermined image, sometimes with the aid of a drawing, and is considered complete when it has been reproduced in accordance with that image. Ingold (1993) argues that within a landscape, no artifacts truly exist, since the form of the landscape does not follow a predetermined direction. He regards the artifact as the opposite of the landscape — something finished and preordained. The landscape, by contrast, is never finished, but is an ongoing process that emerges through lived experience. This statement applies equally to fragments belonging to the forest as to those produced by humans, since we are all part of the transformation of our shared world.

In Gasperoni's interview with Archibloom, a model of Rome is discussed. In the conversation, it becomes clear that the model can be seen as an artifact, but not for that reason as a symbolic object. The model is not viewed as a representation of reality, but as an expression of the relationship between nature and culture. It becomes an artifact that mediates relations rather than reproducing appearances.

Architecture and Trees

On Timber, the Species of Trees.

Almost everyone has a relationship to the forest and its trees. Throughout history, architects have sought to engage with trees both as a building material and as living organisms, attempting to negotiate this complex relationship within their drawings. One example is a drawing by Antonio da Sangallo the Younger illustrating Chapters IX and X of Book II of Vitruvius (Lavin, 2020). These chapters are dedicated to trees and their uses in architectural construction. In Sangallo's illustration, the trees are labeled with names. Reading these labels guides the viewer's eye from left to right across the drawing. The trees on the left are rendered in an almost orthogonal manner, whereas the trees on the right are depicted in perspective and situated within their natural environment. Lavin suggests that the drawing can be interpreted as presenting the trees on the left as appropriated by humans and understood as timber, while those on the right are represented as living organisms. A path runs between the aligned trees, which may be interpreted as linking these two perspectives.

During the Enlightenment in Europe, everything was expected to be explainable and rational, including architecture. The presence of trees in architectural plan drawings became a difficult problem, as their organic indeterminacy stood in contrast to the orthogonal logic of buildings. Unlike stable architectural structures, trees are dynamic and change over time. At the same time, including trees in plan drawings allowed architects to demonstrate knowledge of and awareness of their surroundings. Isometric projection functioned as a compromise, enabling trees to be represented simultaneously as a point (planting) and as a crown (mature growth) within the drawing. In order to interact

with the architectural plan, however, trees had to be abstracted. Isometric projection resolves temporal discontinuities, but at the cost of the tree's biological autonomy. Even today, trees are often drawn in this way in architectural plans.

Another example of how architects relate to the tree both as product and as living organism is the Primitive Hut (Lavin, 2020). In the mid-eighteenth century, industrialization and large-scale deforestation of French forests had just begun. The country was experiencing social unrest, and during this same period Marc-Antoine Laugier wrote *Essai sur l'architecture*. Laugier opposed the excesses of the Baroque and longed to return to nature and its trees. He sought the origin of architecture and believed that its explanation could be found in nature's simplicity. The result was the Primitive Hut: a construction consisting of four vertical supports, a horizontal beam, and the classical temple roof, illustrated in the second edition of the text by Charles Eisen.

While Laugier's text clearly expresses a longing to return to nature, it also reveals certain contradictions. Laugier speaks of nature and uses the forest's trees to explain the origin of architecture, yet what he describes is culture. He refers to the vertical trees as pieces of timber rather than as organic tree trunks. In doing so, the trees are removed from their ecological context; they are already timber. Charles Eisen attempts to smooth over this contrast in his illustration by depicting some branches as cut back—on their way to becoming timber—while others remain lush, representing their continued existence as trees. Nevertheless, the tree trunks are positioned in a perfect rectangle within the image, reinforcing the impression of nature being transformed into culture through geometry and composition.

Mostafavi and Leatherbarrow (1993) write that nature and architecture undeniably have a relationship with one another. Nature constitutes the precondition for architecture, just as Laugier once pointed out. The trees, the soil, and the metals in the ground are the origin of all built structures created by humans. But just as nature is the starting point for architecture, it will also become its undoing. After architecture has been completed in its final form, nature takes over and continues to reshape it through rain, wind, and sunlight. Architecture and nature are closely bound together. Just as sun and rain colour a building's facade, the facade in turn will colour the ground at its base. Through this line of reasoning, architecture perhaps does not have to be seen as stable and fixed in time, but as part of, and as changeable as, the rest of the landscape.

Charles-Dominique-Joseph Eisen (1720–1778), Frontispiece.

Reclining on the ruins of the Classical Orders, a woman points toward The Primitive Hut — the future of architecture.

The story of the Primitive Hut constitutes a clear example of the tree's dual position within architecture. Laugier longs to return to nature and seeks to find the simple and beautiful origin of architecture in trees. But at the very moment the Primitive Hut comes into being, the tree as a living organism ceases to exist. At the same time as trees become timber, nature also becomes culture. The Primitive Hut could very well be seen as an example of the incompatibility of these two concepts, but at the same time it shows that architecture can constitute a link between humans and nature.

In the same way that the role of the tree in the Primitive Hut makes the conflict between nature and culture, natural and artificial, actual and virtual visible, the clear-cut reveals a similar conflict in the landscape. A majority of the forest in Sweden consists of productive forest land (Wetterberg, 2018), and of the land that is not actively used, there is hardly any that has not been affected by humans (Schama, 1995). I believe, however, that few people reflect on the forest as a constructed place when we are picking mushrooms or walking the dog. It is only when the walk leads to the open void in the dense forest that we become aware of human intervention in the landscape. Änggårdsbergen in Gothenburg is considered a scenic recreational area. Despite the fact that all the plants have been provided with name labels, I believe that few people reflect on Änggårdsbergen as an artificial place. And unlike the clear-cut, this place never seems to reveal itself, but is instead perceived as natural, just as nature is supposed to be. The difference may be that Änggårdsbergen is a place of addition, while the clear-cut is a place defined by the absence of trees.

Änggårdsbergen.

Picea sitchenis introduces itself through its name and origin.

1. Pinus sylvestris x2

2. Pinus sylvestris

3. Betula pendula

4. Betula pendula

5. Picea abies (Dead)

6. Pinus sylvestris

7. Betula pendula

8. Pinus sylvestris

9. Picea abies (Dead)

10. Betula pendula

11. Betula pendula

12. Pinus sylvestris

13. Betula pendula

15. Betula pendula

16. Betula pendula +Pinus sylvestris

17. Pinus sylvestris

18. Pinus sylvestris

Interpretation of On Timber, the Species of Trees.

When an area is clear-cut, regulations require that a number of trees, stumps, and high stumps be left on the site (Skogsstyrelsen, 2025). The illustration of the trees left standing in the clear-cut shows that the spruce trees have been harvested, while pine and birch have been left standing.

1. Pinus sylvestris x2

2. Pinus sylvestris

3. Betula pendula

4. Betula pendula

5. Picea abies (Dead)

6. Pinus sylvestris

7. Betula pendula

8. Pinus sylvestris

9. Picea abies (Dead)

10. Betula pendula

11. Betula pendula

12. Pinus sylvestris

13. Betula pendula

15. Betula pendula

16. Betula pendula +Pinus sylvestris

17. Pinus sylvestris

18. Pinus sylvestris

Theoretical Insights

In the theoretical section, three concepts that could be used to describe the clear-cut were introduced: nature, landscape, and environment. Some of these concepts contain contradictions between the different sources, as in the case where Schama considers landscape to be a product of human culture, while Ingold does not wish to involve the concept of culture at all. Lavin adds how the relationship between nature, architecture, and humans has historically been interpreted through architectural representation. Mostafavi and Leatherbarrow add a particularly concrete demonstration of how nature and architecture affect one another. The different sources, however, share a relatively similar understanding of the theories surrounding nature, landscape, and environment, and even where they differ, the underlying meaning is often the same.

In order to clarify the concepts and their many and ambiguous meanings, the following summary list is provided:

Nature

In Middle and Old English, the term waste land referred to “nature,” since nature was land that was either unused or could not be used by humans.

Nature is a place that humans have never experienced. Nature is elevated and idealised, something that in reality does not exist (Schama).

Nature is something elevated and idealised that humans observe from a distance. Nature is static and measurable. To see the world through the concept of nature is to see it as a system of objects that are almost entirely disconnected from one another (Ingold).

Nature, with its trees, can be considered the origin of architecture (Marc-Antoine Laugier, Primitive Hut).

Nature is the prerequisite for architecture to exist, but through weather and climate it will also become its downfall (Mostafavi & Leatherbarrow).

Environment

The term environment originates from the verb environ, which was used to describe the enclosure or surroundings of one’s own farm. Later, the term came to refer to the resources and assets of the estate.

Environment is not only something external that humans affect, but is actively shaped through human actions, systems of knowledge, and technologies. Nature is transformed into environment through technology. Thus, environment can be understood as a historical result of human activity (Sörlin & Wormbs).

Environment can be understood as the world as function, that is, which resources are available to its organisms. Environment is nature shaped by its organisms (Ingold).

Landscape

The term landscape originally derives from the German Landschaft, meaning “a unit of human occupation.”

Landscape is constructed from memories, myths, obsessions, metaphors, and allegories. Landscape must first emerge in our minds before we can experience it. In order to understand our surroundings, we need to interpret them through culture. Historically, our image of the landscape, through its myths and narratives, has been an important part of a nation’s identity (Schama).

Landscape is the lived world, created by those who dwell and act within it. In a landscape, time, fragments, actions, and memory are closely intertwined. Traces of previous lives, such as buildings, paths, and cultivated land, are not seen as fragments from a lost past, but as active parts of the present that still affect how humans live and remember. Taskscape is the human version of the temporal process that shapes the landscape. The processes and activities humans engage in are part of shaping the landscape (Ingold).

The built environment brought together with nature (Gasperoni).

Landscape can be interpreted through Euclidean geometry (Cosgrove)

It seems that Ingold’s and Schama’s approaches to nature and landscape, Sörlin and Wormbs’ ideas concerning the concept of environment, as well as Lavin’s reflections on the relationship between nature, architecture, and humans, can be interpreted through practical methods, such as Gasperoni’s catalogues and Cosgrove’s three methods of representation.

In a similar way to the friction that exists between the theoretical concepts, there are also contradictions between theory and practice. One example is the model of Rome, which is referred to as an artefact. According to Ingold’s interpretation of the concept of the artefact, the model would contradict the very meaning of landscape, yet the model is instead described as an embrace of the concept; it communicates relationships rather than representation.

In the following methodology section, this friction, where the boundary between the natural and the artificial becomes unclear, is investigated through the mapping of the clear-cut and three explorations: Catalogs from the Clear-cut, Forms from the Clear-cut, and Representations of the Clear-cut.

Method

The architectural project is developed through three parallel working methods: sensing, writing, and shaping. These three methods were originally introduced as ways of categorising the technologies humans use to shape their environment (Sörlin & Wormbs, 2018). Shaping refers to physically altering a place, for example through the cultivation of land and forest. Sensing refers to collecting data and systematically registering nature. Writing becomes the means through which this information is communicated. This can be done by documenting and visualising nature and the environment, for example through images, art, and literature.

An important premise of the thesis is that the clear-cut is part of a constructed landscape created by humans. Since these three terms describe the mechanisms through which landscapes are constructed, I find it appropriate to use them as the framework for the project. Below, I describe how I have interpreted these concepts as methods adapted for an architectural project.

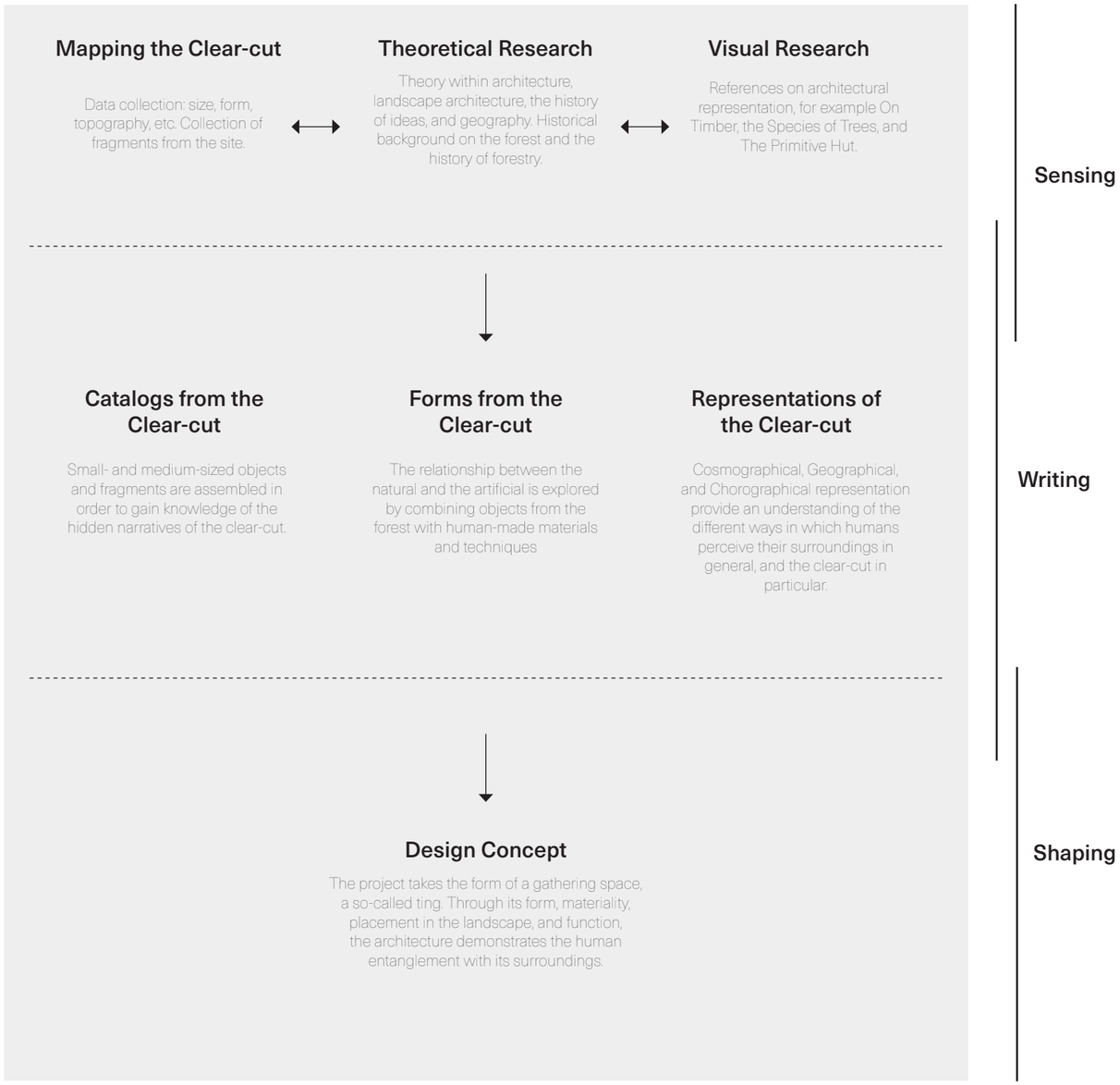
Sensing
During the Sensing phase, data is collected from the clear-cut. The information include measurements, the external form of the clear-cut (perimeter), topography, and the age of trees, as well as general documentation of flora and fauna. Physical objects and fragments are also collected from the site. Together the data provides an overall understanding of the clear-cut.

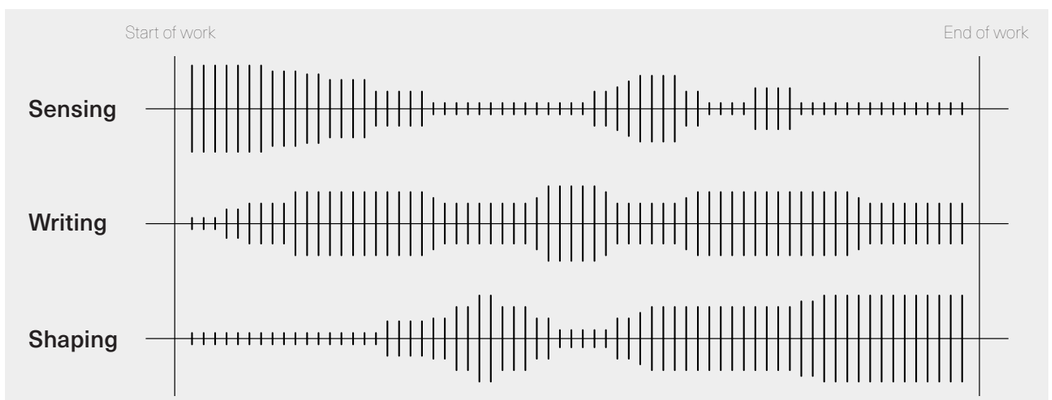
Research is conducted in architectural theory as well as in other fields such as geography and the history of science and ideas. During the sensing phase, references are also collected, both of concrete examples of built buildings and structures, as well as references on architectural representation, such as *On Timber, the Species of Trees.*

Writing
The compiled data is related to and interpreted through historical and theoretical sources. Different types of collected material, such as 3D scans and analogue photographs, are combined with, for example, historical maps or line drawings as speculative representations of the clear-cut. The outcome is, for example, the cosmological, geografical and chorografical drawing.

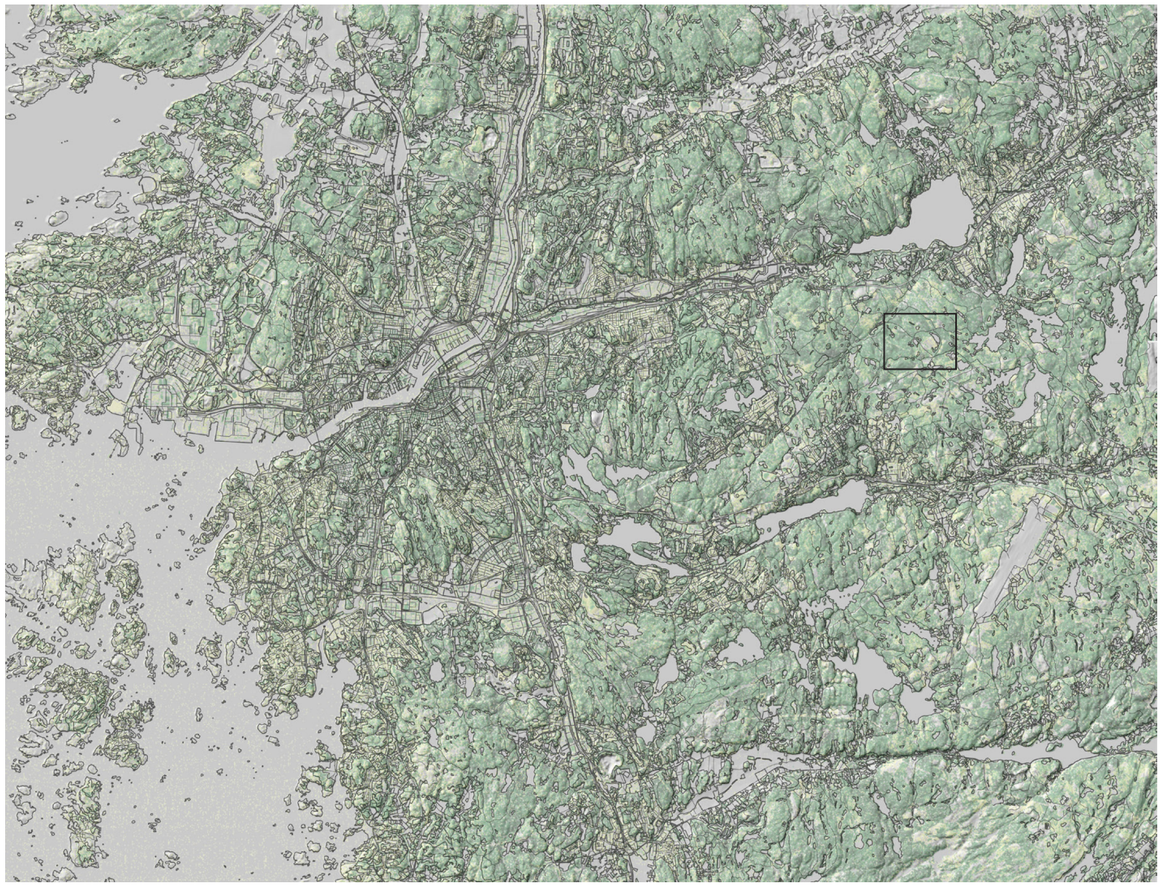
In this phase, the tone and language that define what the clear-cut represents are established. Through theory and background studies, an understanding of the clear-cut is developed, which in turn can inform architectural interventions that interact with the landscape. Similarly, research on built structures, volume studies and material experimentation can help define what kind of place the clear-cut is, and how the landscape might be reshaped.

Shaping
The site constituted by the clear-cut is explored through iterative design. These investigations may consist of physical volume studies in model form as well as detailed drawings of how the architecture relates to the topography of the clear-cut or to its perimeter.





Method digram.



Site

Contextual map, 1:200 000.

The green gradients on the map indicate tree height, ranging from light green for trees approximately one meter tall to dark green for trees thirty meters or higher. Information of tree height comes from Skogstyrelsen.

Siteplan, 1:10 000.

The green gradients on the map indicate tree height, ranging from light green for trees approximately one meter tall to dark green for trees thirty meters or higher. Information of tree height comes from Skogstyrelsen.

The selected clear-cut is located approximately a 30-minute drive from central Gothenburg and is owned by the Swedish forestry foundation Skogssällskapet. Skogssällskapet owns forest properties across Sweden and Latvia (Skogssällskapet, 2024). The organization was founded in 1912 as an economic association, but has since 1962 operated as a public benefit foundation.

The clear-cut was selected based on its size, degree of enclosure, topography, and spatial experience. As a guideline for identifying a clear-cut with interesting spatial qualities, I drew on a set of principles developed by Schob and Callejas (2024) to identify clearings in Europe with potential heritage value:

1. The clearing is surrounded by a dense buffer zone of forest.

2. The clearing is harvested at one time rather than as the result of several years of gradual clearing. The same applies to the surrounding forest; both are even.

3. The clearing stands on its own within the forest and is not surrounded by other clearings or logging areas. It forms a distinct boundary and transition between forest and open space.

4. Other spatial typologies may occur within the clearing, such as streams, stones, roads, cultivated land, and structures. However, the clearing must not be dominated by these typologies.

5. The form of the clearing and the experience of it are independent of the type of ground and the type of trees that surround it.

Mapping the Clear-cut

The clear-cut located in the vicinity of Gothenburg, has been mapped based on a selection of factors, presented below. The clear-cut was examined as found, without any preconceptions or ideas about what it might become. The purpose is to investigate the qualities and characteristics of the clear-cut in the current situation and within the context that constitutes the forest and the clear-cut today. The goal is to obtain an overall picture of the clear-cut.

Size + Perimeter

Measurements can be obtained from Lantmäteriet and Skogsstyrelsen.

Age of the Clear-cut + Age of the Harvested Trees

The age of the clear-cut can be determined from Skogsstyrelsen. Vegetation can also provide a more precise indication of the clear-cut's age. To determine the age of the harvested trees, one can count the growth rings.

Overall Mapping of Trees, Soil, and Vegetation

What kinds of trees and plants surround the clear-cut? Which species are dominant? What does the ground look like — moss or clay? Is there any distinctive feature in the landscape, such as a stream or a power line?

Detailed Mapping and Analysis of Objects of Interest

Individual objects are selected. These may include remaining stumps and trees, or parts of the clear-cut that form an interesting shape. Each object is mapped based on, for example, color, form, and unique characteristics. Later, literature studies may be conducted to investigate possible historical connections.

Degree of Enclosure

Information can be gathered both from satellite imagery and from on-site experience.

Topography

Can be obtained from GIS data, but may also be mapped more precisely on site.

Structures In or Near the Clear-cut

For example, hunting towers or piles of timber.

Collection of Fragments

Artifacts may be collected from selected objects, for example.

Location

57°43'50.3"N 12°13'22.2"E

Age

According to the Skogsstyrelsen's map the trees were felled in 2022.

Age (years) of harvested trees based on growth ring count
47, 55, 50, 52, 56, 57, 53, 54

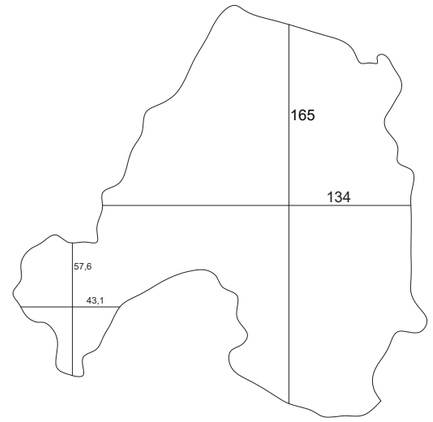
The growth rings appear to be spaced further apart during the last 30 years.

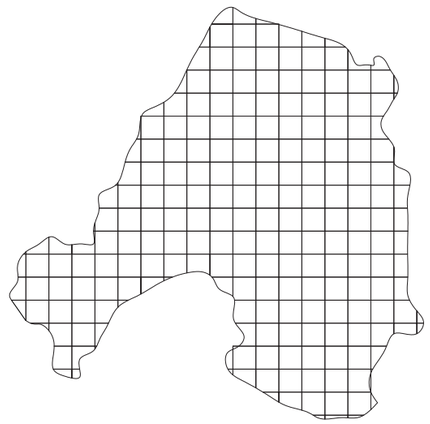
Perimeter

Pine and birch in the east, spruce in the west.

Enclosure

Although the clear-cut is bordered by only a thin strip of trees to the north and northeast, the landscape feels like an enclosed space. The contrast between the undergrowth along the perimeter and the openness of the interior contributes to the perception of a defined "room."





Perimeter and measurements of the clear-cut.

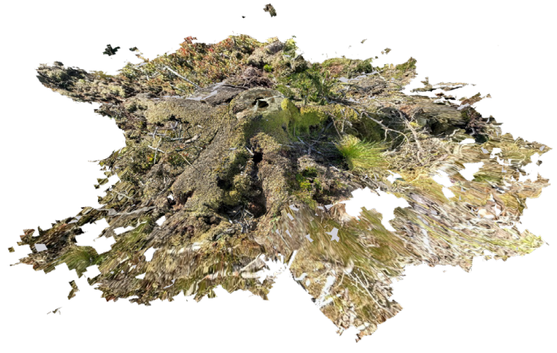
Soil and Ground

Shallow soil with extensive bedrock exposure. A barren landscape covered with heather and tall yellow grass; moss also occurs. In the perimeter, the moss is thick and green.

New plants have started to grow within the clearcut: pine (20–50 cm), likely self-seeded, and spruce (60–90 cm), planted in straight rows.

Topography

Two small hills or ridges located close to one another near the path that leads into the clear-cut, approximately three meters high. In the north there is a steep slope leading down to a plateau.



3D scan of stub with moss.

Catalogs from the Clear-cut

During the sensing phase, the clear-cut was documented using analog photography. I also collected objects from the clear-cut, such as twigs, plants, and cones. The information was then compiled into site-catalogs (Gasperoni, 2024).

The purpose of the catalogs is to provide an overview of what exists on the clear-cut today, as well as to highlight which organisms, structures, and traces influence and together shape the landscape. I interpret Ingold's (1993) reflections on the landscape as suggesting that there is essentially no hierarchy between organisms, memories, and fragments, since we are all participants in shaping our shared world. Regarding the photographs, I have attempted not to impose any value judgments on the subjects. The images were taken based on what I considered to make a "good" photograph, perhaps more a matter of proportion, perspective, and color than of content. Nevertheless, it is inevitable that a viewer interprets the images through their own preconceptions and experiences. For example, I believe that the photographs could be read quite differently depending solely on whether they are in black and white or color. The objects, on the other hand, have been presented in a neutral manner; all are photographed against the same background and from the same angle. However, there has naturally been a selection process in choosing which objects to collect from the clear-cut, and this selection constitutes a directed interpretation of how it is to be understood. As Schama (1995) suggests, the selection of images and objects might be seen as my attempt to imagine the clear-cut, and thus, to understand the landscape.

A newly planted spruce among heather.

Newly sprouted leaves.

Spider web among heather.

Fallen pine.

Fallen trees along the slope of the clear-cut.

Group of moss.

Spruce trees at the edge of the clear-cut.

Upset root plate.

Birch tree in backlight.

Contrast between moss and grass.

Dead branches in the foreground and living trees in the background.

Man standing on the highest hill.

Entrance between two pines.

A fractured stump.

Moss-covered stump.

Pattern in the trunk of a dead tree.

Fallen trees.

Lone birch.

Tall and spindly birch, also lonely.

Sculptural branches.

Large stone at the edge of the clear-cut slope.

Fallen trees, again.

Lone birch, again.

Two hills and a valley.

Residues.

Spruce cone, Picea abies.

Raspberry, Rubus idaeus.

Spruce cone, Picea abies.

Wall moss, Pleurozium schreberi.

Heather, Calluna vulgaris.

Spruce cone, Picea abies.

Pieces of wood, Picea abies.

Blueberry, Vaccinium myrtillus.

Red fescue, Festuca rubra.

Broom moss, Dicranum scoparium.

Branch/stick.

Spruce cone, Picea abies.

Branch/stick.

Bracken fern, Pteridiumaquilinum.

Branch/stick.

Tufted hairgrass, Deschampsia cespitosa.

Stick.

Stick.

Yarrow, Achillea millefolium.

Forms from the Clear-cut

According to Ingold (1993), no artifacts can be found within a landscape, since an artifact is produced according to a predetermined image and brought to completion as a final object. The landscape, on the other hand, is never finished, but is an ongoing process that emerges through lived experience. Cones and plants from the clear-cut are, in this respect, certainly not artifacts. However, Ingold also argues that this statement applies not only to fragments of the forest, but equally to fragments produced by humans. As an example, Ingold (1993, p. 170) notes that an image of what a building might look like can indeed arise in the human mind, but that this image can be understood in the same way as the DNA of a tree. In both the case of the building and of the tree, form is the result of an embodied process of memories and fragments that together constitute the landscape.

In this exploration, I have taken objects from the clear-cut: a cone, a heather, and a piece of moss, and examined them in relation to materials and techniques created by humans. In an attempt to create a broader understanding of the artifacts, I have then placed them into new situations, without regard for their original function or purpose. Just as the clear-cut is a place reshaped by humans through technology, my reinterpretation of the organic objects can be seen as a way of transferring this larger process to a smaller scale. One might view the result as a contrast between forest and human — a shining cone would certainly be striking if one were to find it hanging among its peers in the spruce. But perhaps the result can also be understood precisely as Ingold emphasizes — as an intertwining between forest and human. Our paths are not merely crossed, but inevitably entangled, just as the tin has melted into the cone's scales. In my search for what the clear-cut constitutes as a place, I allow my objects to embrace this duality.

Artifact 01

Artifact 01, spruce cone, Picea abies. Relief, tin cast.

Spruce cone, Picea abies.

The tin relief peeks through behind the vaults of Göteborgs konstmuseum, as a part of its new facade.

Artifact 02

Artifact 02, heather, Calluna vulgaris. Relief, plaster cast.

Heather, Calluna vulgaris.

The heather relief is placed as paving stone on Gustav Adolfs torg.

Artifact 03

Arifact 03, wall moss, Pleurozium schreberi. 3D print, plastic.

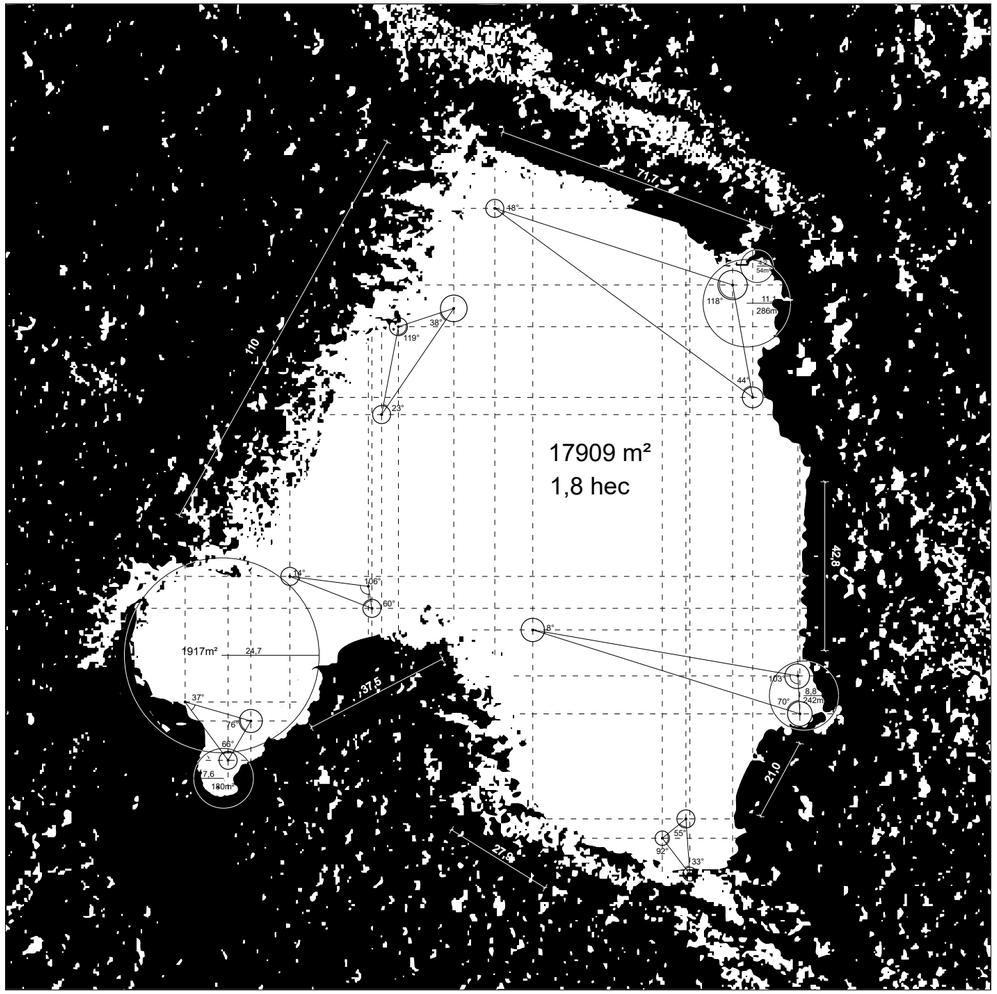
Wall moss, Pleurozium schreberi.

As an alternative to the crab in a box, Konserthuset now has a moss on the roof instead.

Representations of the Clear-cut

In this exploration, the clear-cut was investigated through Cosgrove's (1999) three methods of representation: Cosmography, Geography, and Chorography. All of these representations are based on Euclidean geometry, yet they represent three entirely unique perspectives from which we can perceive our surroundings. Ingold would perhaps argue that cosmographical and geographical representation are instead representations of space rather than landscape, since space is an abstract and geometric construction and belongs to the observer who seeks to map the world through representation. I would argue, however, that these representations offer a broader perspective and a greater understanding of the clear-cut than the traditional architectural drawing. In none of these representations is all information about the clear-cut expected to exist simultaneously. Instead, the drawings become filters through which we can observe the clear-cut. In the cosmographical drawing, for example, the clear-cut is entirely abstracted into geometric figures and angles. This is hardly how we experience the site when visiting it, just as we rarely experience the world as a fragmented collage, as in the chorographical representation. Nevertheless, both of these perspectives exist at the same time.

There is also a historical aspect connected to the emergence and purpose of these methods of representation. The map emerged as a tool that enabled Western societies to colonise the world through coordinates and boundary-making. I believe that this knowledge can reveal how many hidden perspectives may exist within a drawing, and how much power a representation can have over the way we perceive the world.

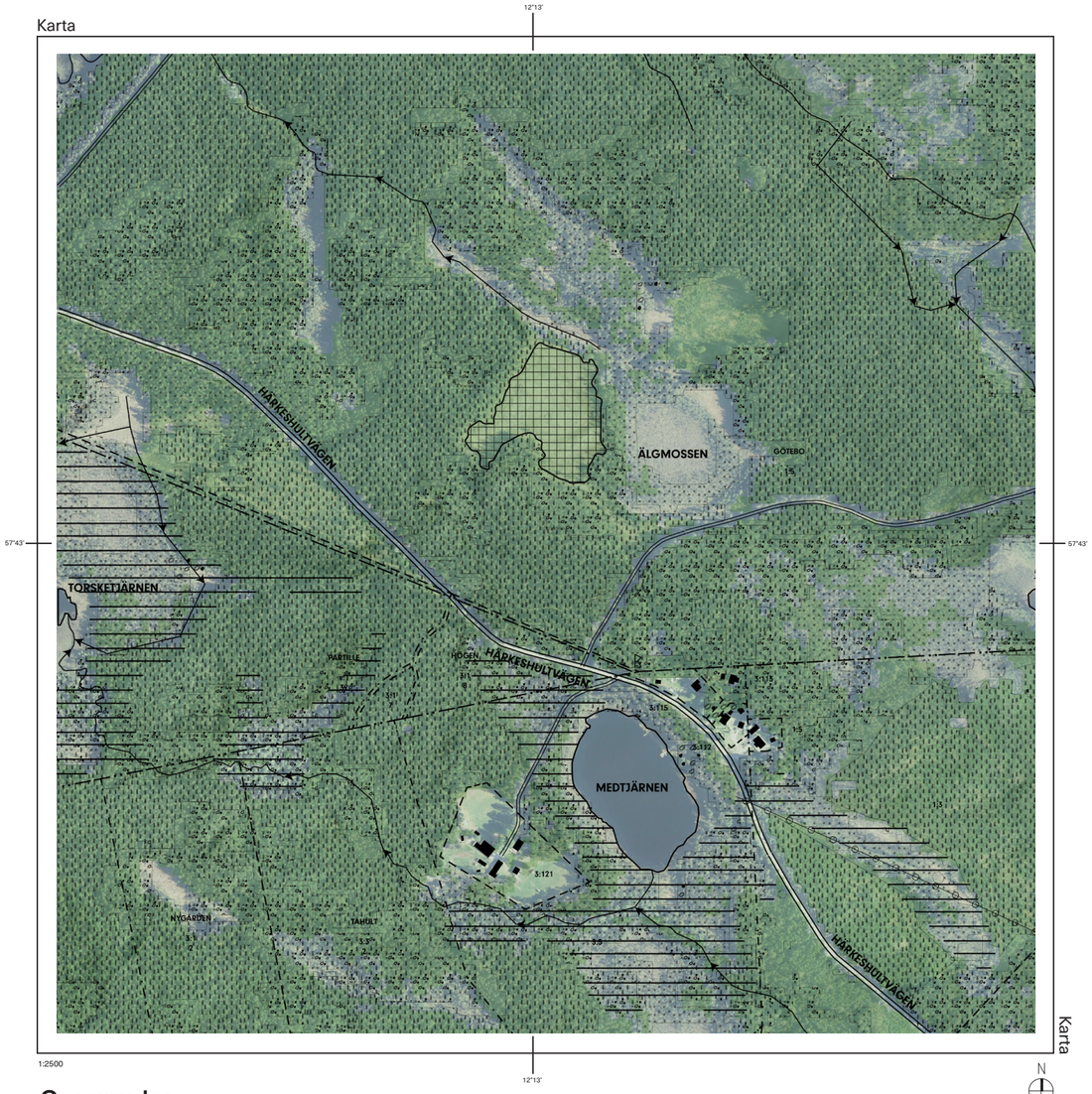


Cosmography

Cosmological drawing. The perimeter of the clear-cut and the trees are abstracted into geometric figures, angles, and measurements. The trees that remain standing in the clear-cut appear as points that can be triangulated.

The form of the clear-cut is most clearly represented through Cosmography. In the cosmographic drawing, the clear-cut appears almost binary. Its perimeter becomes evident — the forest constitutes the black field and the open ground the white. Point, line, and area form the geometric figures of the drawing, aiming to describe the clear-cut's dimensions, angles, and surface in the simplest possible manner. In the drawing, a clear contrast emerges between the organic surface of the black field and the strict mathematical order of the geometric figures.

Karta



Geography

Geographical drawing. Map of the clear-cut and its immediate surroundings. Legend to the right.

The perimeter of the clear-cut is not the result of aesthetic consideration, but rather of economic and legal conditions. To describe why the clear-cut appears as it does, the geographic drawing is employed. Throughout history, maps have been used to draw boundaries and determine which property belongs to which landowner. There are also forestry regulations governing the harvesting of forest land, accessible through the maps provided by Skogsstyrelsen. For example, there are requirements to leave trees standing along watercourses in order to ensure that animals and plants receive sufficient shade (Skogsstyrelsen, 2025). This may explain the clear-cut's northern boundary.

Legend

Map symbols

- Municipal boundary (town, market town or other municipality)
- Boundary of village, farm unit or named cadastral unit
- Property boundary (including informal subdivision parcel)
- Public road (carriageway ≥ 6 m)
- Public road (carriageway < 4,5 m)
- Watercourse (flow direction)
- Power transmission line
- Building
- Productive forest land
- Nature value, wet woodland (sumpskog)
- Pine
- Spruce
- Non-precious deciduous forest
- Mixed forest
- Ancient monument (fornlämning)
- Clear-cut

Chorography

Chorographic perspective. Fragments and memories assembled into a collage. The left side of the image is marked by no information pixels — the full story of the clear-cut has not yet been discovered.

The experienced space of the clear-cut is best described through chorographic representation. Within the chorographic representation, many of the ideas that Ingold (1993) ascribes to landscape can be identified. The representation is subjective, and like landscape itself, the collage consists of fragments and memories.

Practical Insights

The starting point of this thesis is that the clear-cut, as an archetype, makes several conflicts within the constructed landscape visible. The clear-cut stands not only at the center of a conflict of interests between people, but also makes us aware of the conflict between nature and culture, and thereby the complicated relationship between humans and their surroundings. The purpose of the explorations has been to investigate, test, and interpret the ideas and theses presented in the theoretical section of the thesis, based on the unique conditions of the selected clear-cut. A central assumption in these investigations has been that humans play an active role in the landscape. However, rather than trying to prove a specific position, the work has been guided by curiosity toward what insights the different explorations can highlight regarding the human relationship to the constructed landscape.

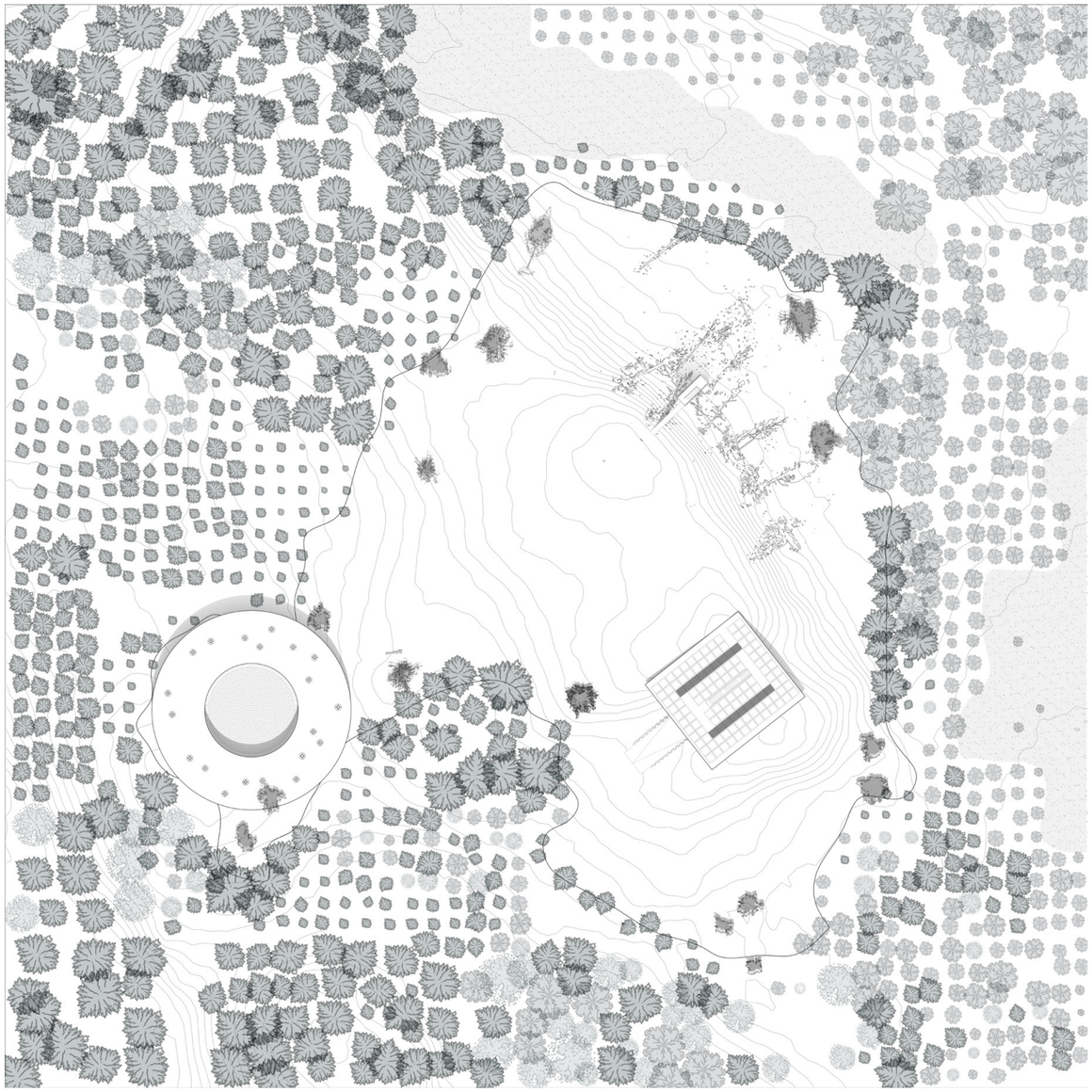
Program: The Ting

The design project of the thesis is a gathering space in the form of a ting, where different stakeholders connected to the forest can meet to discuss how the forest should be managed. For example, the owner of the forest where the clear-cut is located, Skogssällskapet, could invite the neighboring residents living in the area. Just as building permits are required when constructing a new building in an urban environment, the neighbors of the clear-cut should be given the opportunity to express their views on how their local surroundings should develop. The ting could therefore serve as the meeting place where this discussion can take place. The ting can also function as a gathering space where broader questions concerning forests in Sweden can be discussed. Here, for example, environmental organizations could meet with major forest owners or authorities to discuss an overall approach to the country's forests. However, in order to make decisions regarding the forest, knowledge and information are necessary, and therefore the ting also serves an educational role concerning forests and forestry.

Design Principle

Through the ting and its three pavilions, the ideas that first took shape in the theoretical section of the thesis, and were later developed through the completed explorations, are demonstrated. The purpose of the pavilions is to highlight and clarify the connection between humans, architecture, and nature. Some parts of the design demonstrate a more literal interpretation of the explorations, while other parts represent a broader interpretation of them. The pavilions are not an answer or a solution to the question of how forests should be managed. Rather, the buildings embody the discussion of nature and culture, and therefore serve as a basis for reflection on the human role within the constructed landscape.

Implementation



Site plan of the clear-cut and the three pavilions.

N

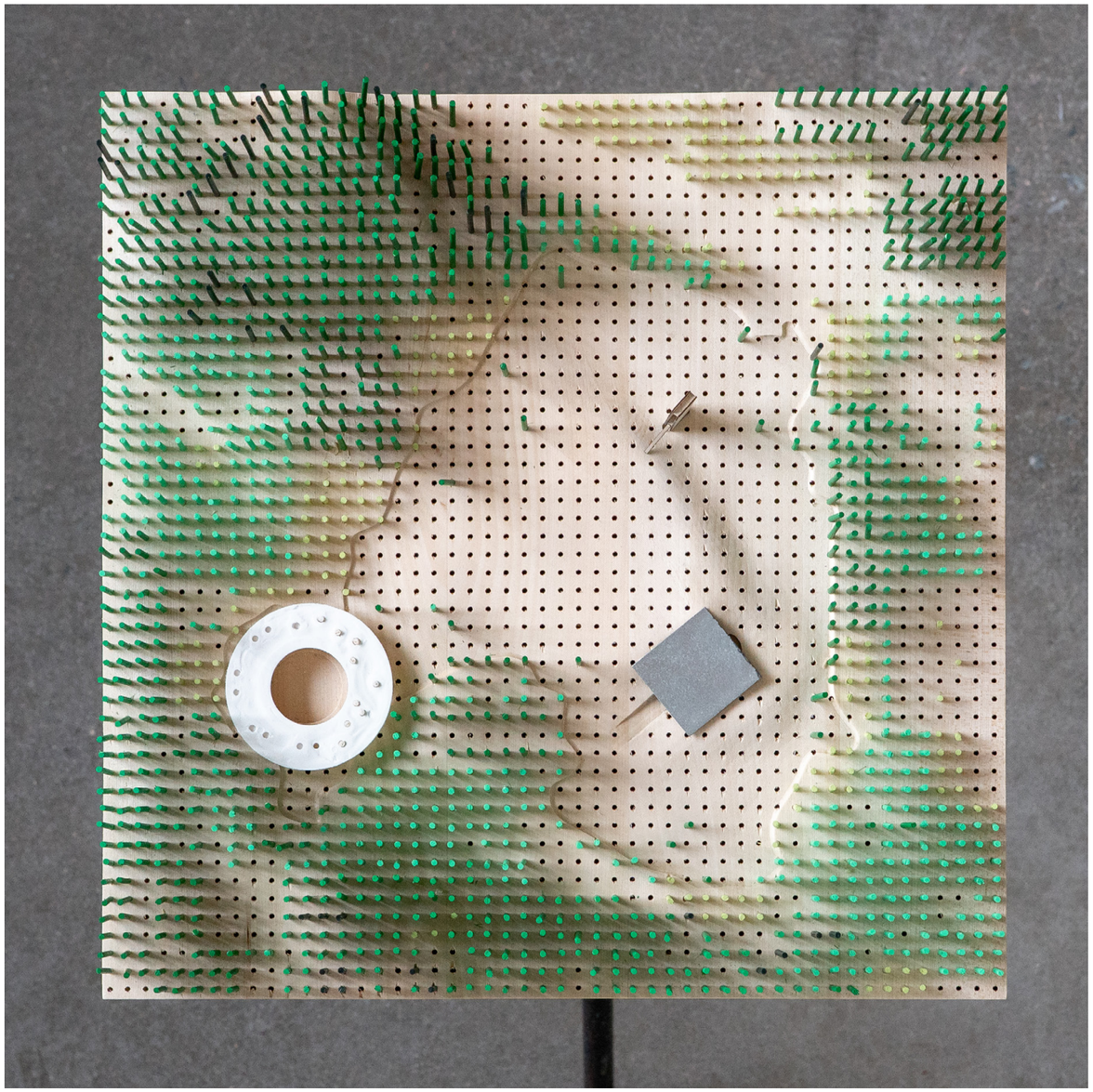
The Ting

Within the clear-cut there are three pavilions: The Assembly, The Exhibition, and The Tower, which together constitute The Ting. The pavilions are constructed in three different materials: concrete, metal, and timber, and each relates to the terrain of the clear-cut and its surrounding perimeter in different ways. All structures fulfil specific functions within the clear-cut. The Assembly is the gathering place of the clear-cut. Here, stakeholders of the forest meet when decisions regarding the forest are to be made. However, in order for decisions concerning the forest to be taken, both an insight into the catalogue of the forest and the clear-cut — that is, the objects, fragments, and memories that constitute the clear-cut — as well as an outlook over the treetops of the clear-cut and surrounding forest are required. These functions are fulfilled by The Exhibition and The Tower.

Themes from Theory and Practice

Lavin (2020) argues that trees have historically constituted a difficult problem within architectural representation, since their constant change has been considered difficult to reconcile with the stability of architecture. I argue that the clear-cut and its pavilions can physically manifest this representational problem.

The clear-cut is part of a process in which trees are harvested, after which new saplings are planted and later harvested again. From the tree-ring analysis carried out during the sensing phase, it became clear that this particular clear-cut is harvested approximately every fifty years. In order for the clear-cut to remain legible over time, its pavilions must therefore relate to the fact that the site will gradually grow over again. The Assembly responds to this condition through its circular opening, which acts as an excavation within the clear-cut where vegetation occurring on the site is no longer allowed to grow. The Exhibition, through its roof, establishes its own ground plane where the vegetation that thrives there is always arranged according to a complete systematisation. The Tower, in turn, consists of several different levels from which the observer can follow the growth of the trees over time.



Model of the Ting and its three pavilions, 1:500.

The trees can be removed and relocated between the holes in the model. Their colour indicates their height, ranging from light green for trees five metres tall to dark green for trees thirty metres tall or higher.

The Assembly

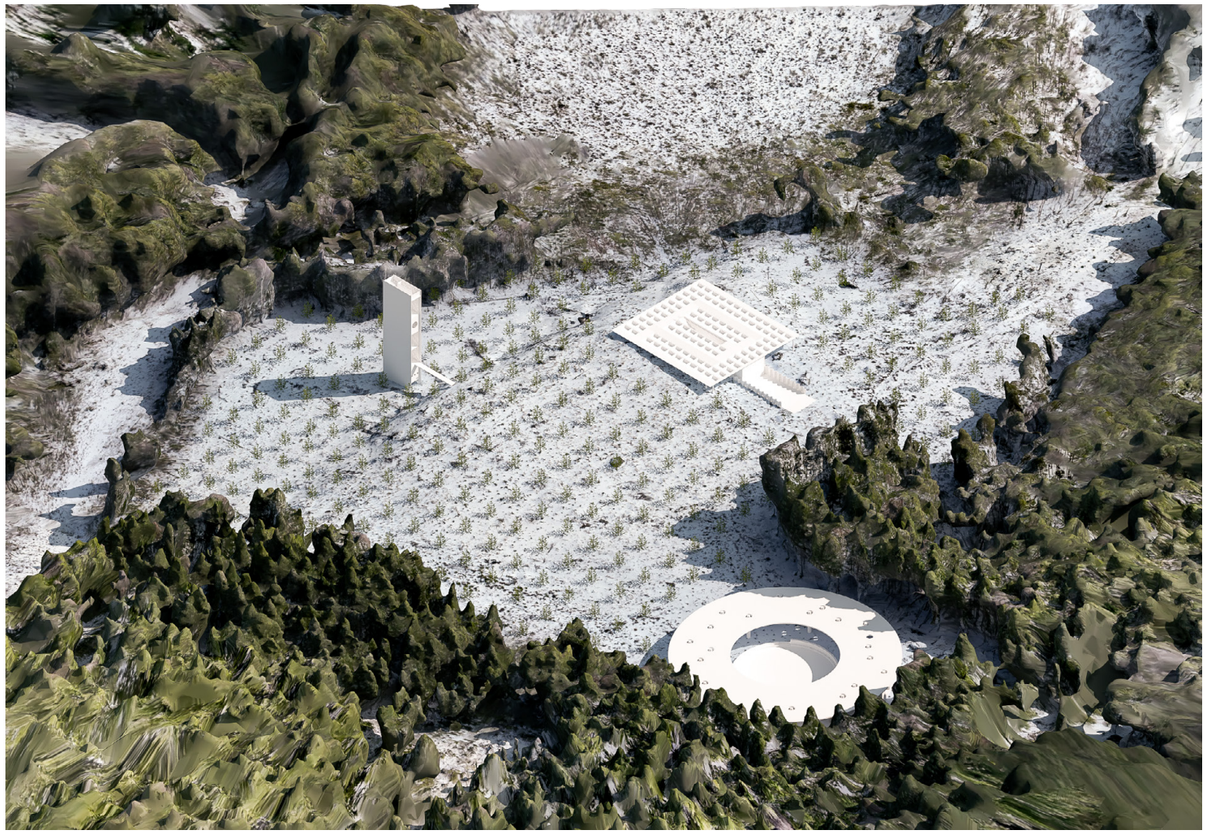
The Assembly fills the imagined circle from the cosmographical drawing at the perimeter of the clear-cut.

The Exhibition

The Exhibition hides between the two hills of the clear-cut.

The Tower

The Tower, like the trees left standing in the clear-cut, stands as a tall and solitary object.



View of the clear-cut and the three pavilions when the planted saplings are still small.

View of the clear-cut when the planted saplings have grown into fully mature spruce trees.

Exterior perspective of The Assembly.

The Assembly

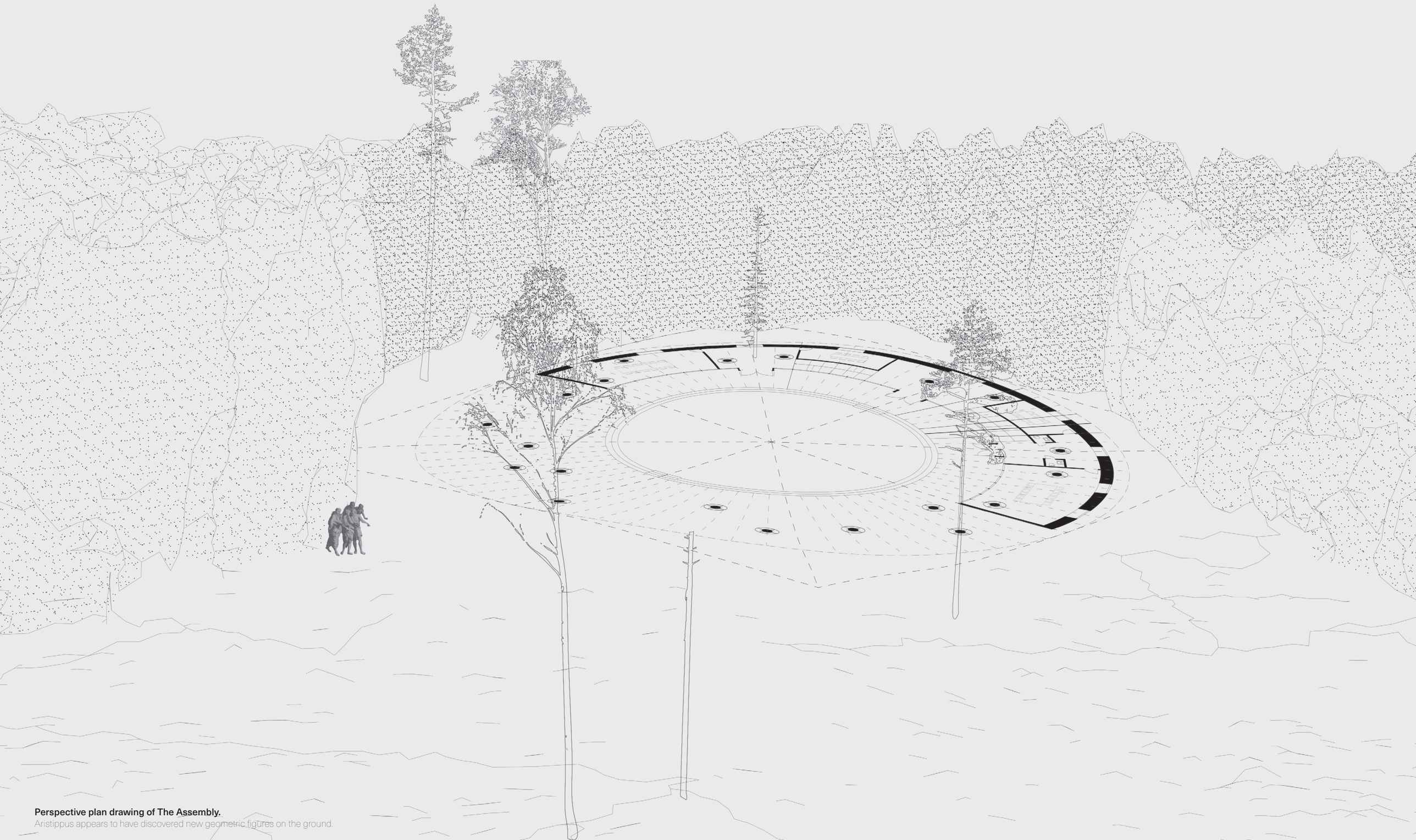
At the south-eastern edge of the clear-cut, The Assembly's circular roof rests upon its many columns. Like the trees previously harvested on the site, the columns attempt to form a coherent group. Beyond this forest of columns lies the circular gathering space, where the roof also abruptly ends, allowing the forest's stakeholders to sit outdoors while making decisions regarding how the forest should be managed. The building opens towards the clear-cut and closes itself towards the forest edge. Due to its rounded form, there is always complete visibility of who arrives at and approaches the gathering space. Within the enclosed volume of the assembly space are smaller meeting rooms that are partially tempered by the fireplace integrated into the pavilion's deep concrete wall.

Themes from Theory and Practice

The Assembly is designed according to the mathematics of the circle. The volume of the building fills out the imagined circle in the cosmographical drawing of the clear-cut. Its perfect geometric form stands in contrast to the lushness of the forest edge, and thus the pavilion has a strong connection to Cosgrove's cosmographical representation.

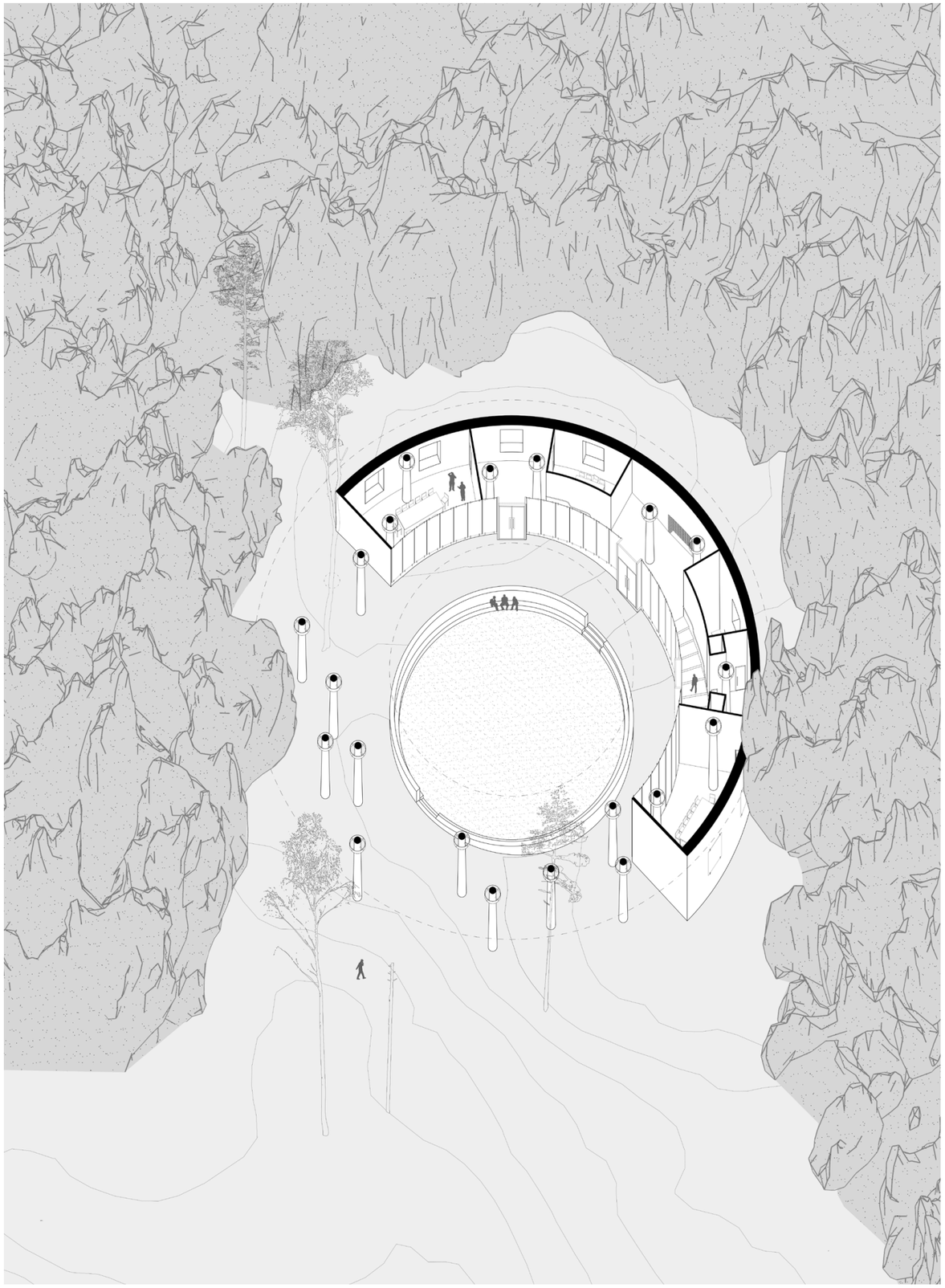
The columns support the roof of the assembly space together with one of the trees left standing in the clear-cut. In this way, the columns can be understood as alluding to trees, while at the same time the arrangement can also be interpreted as the tree attempting to become a column. The pavilion therefore addresses the question of the boundary between nature and culture, and what is considered natural and artificial.

Through the pavilion's construction, the landscape is allowed to affect the architecture. Rainwater from the roof is drained through the columns, which over time will become covered with algae and eventually erode. In this way, it becomes clear that, as Mostafavi and Leatherbarrow (1993) describe, nature and architecture are closely intertwined. Rather than attempting to imitate the forms of nature, the pavilion instead adopts an abstract and mathematical form that remains in contact with nature through its elements.

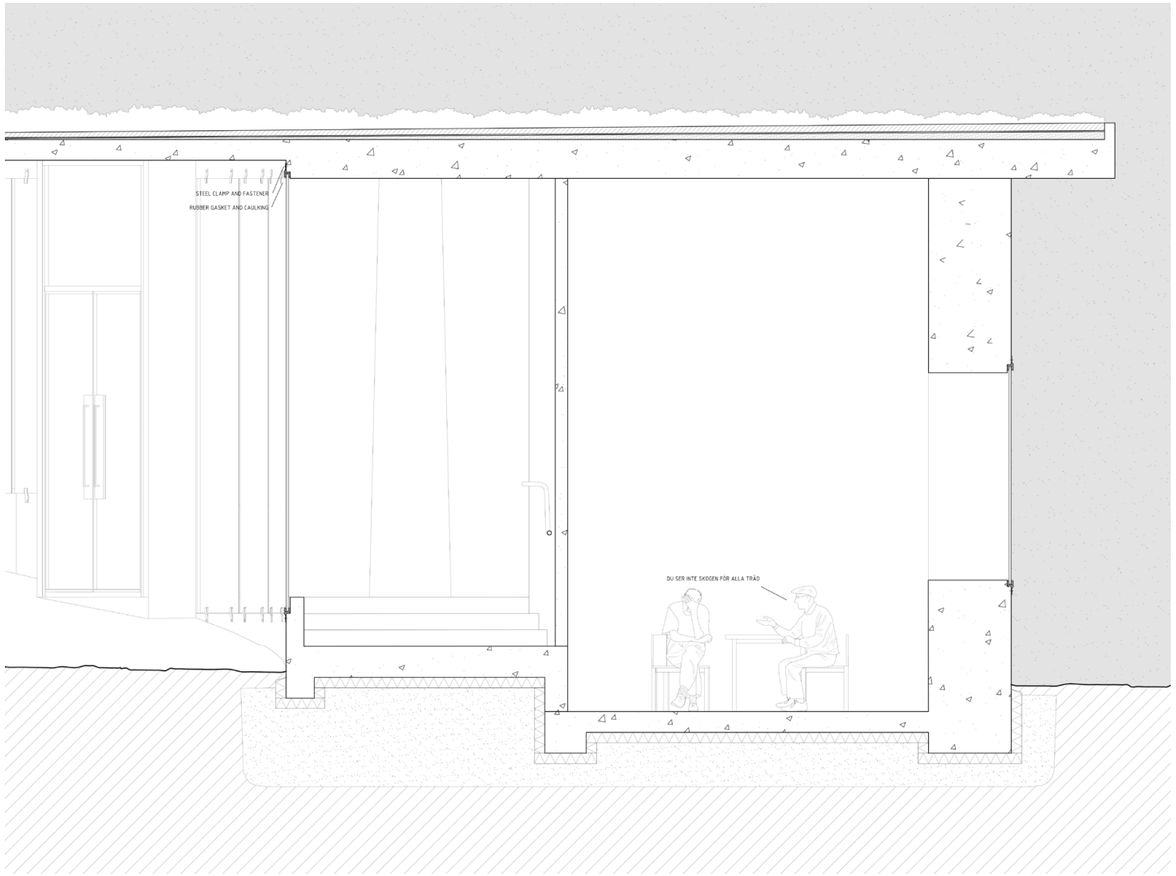


Perspective plan drawing of The Assembly.
Aristippus appears to have discovered new geometric figures on the ground.

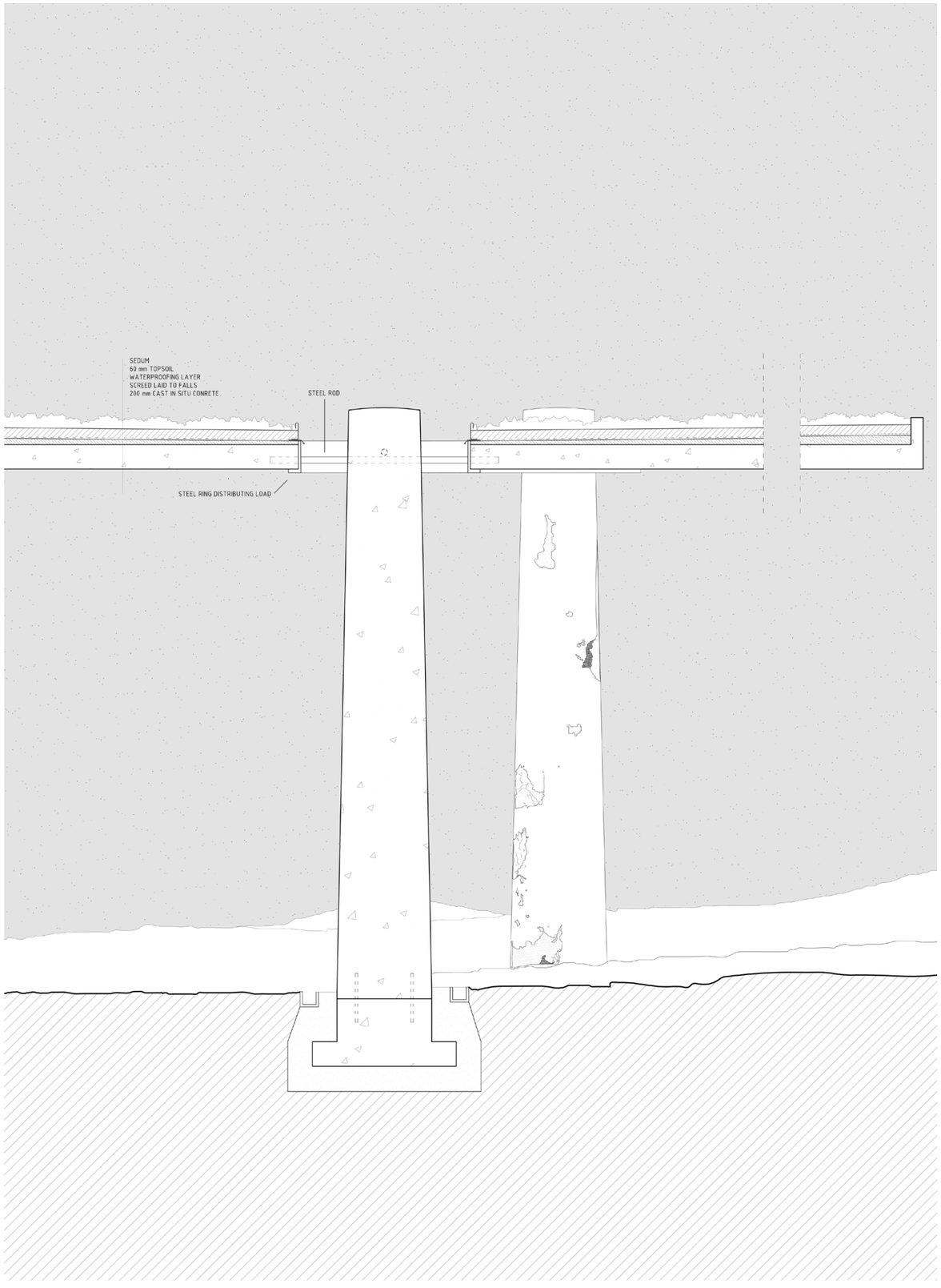
Axonometric drawing of the Assembly, volume.



Axonometric drawing of The Assembly, section.



Detail of The Assembly.
The enclosed volume of the assembly space.



Detail of The Assembly.
Columns support the roof of the assembly space.

Exterior perspective of The Exhibition.
The staircase of the exhibition hall guides the visitor up onto its roof.

The Exhibition

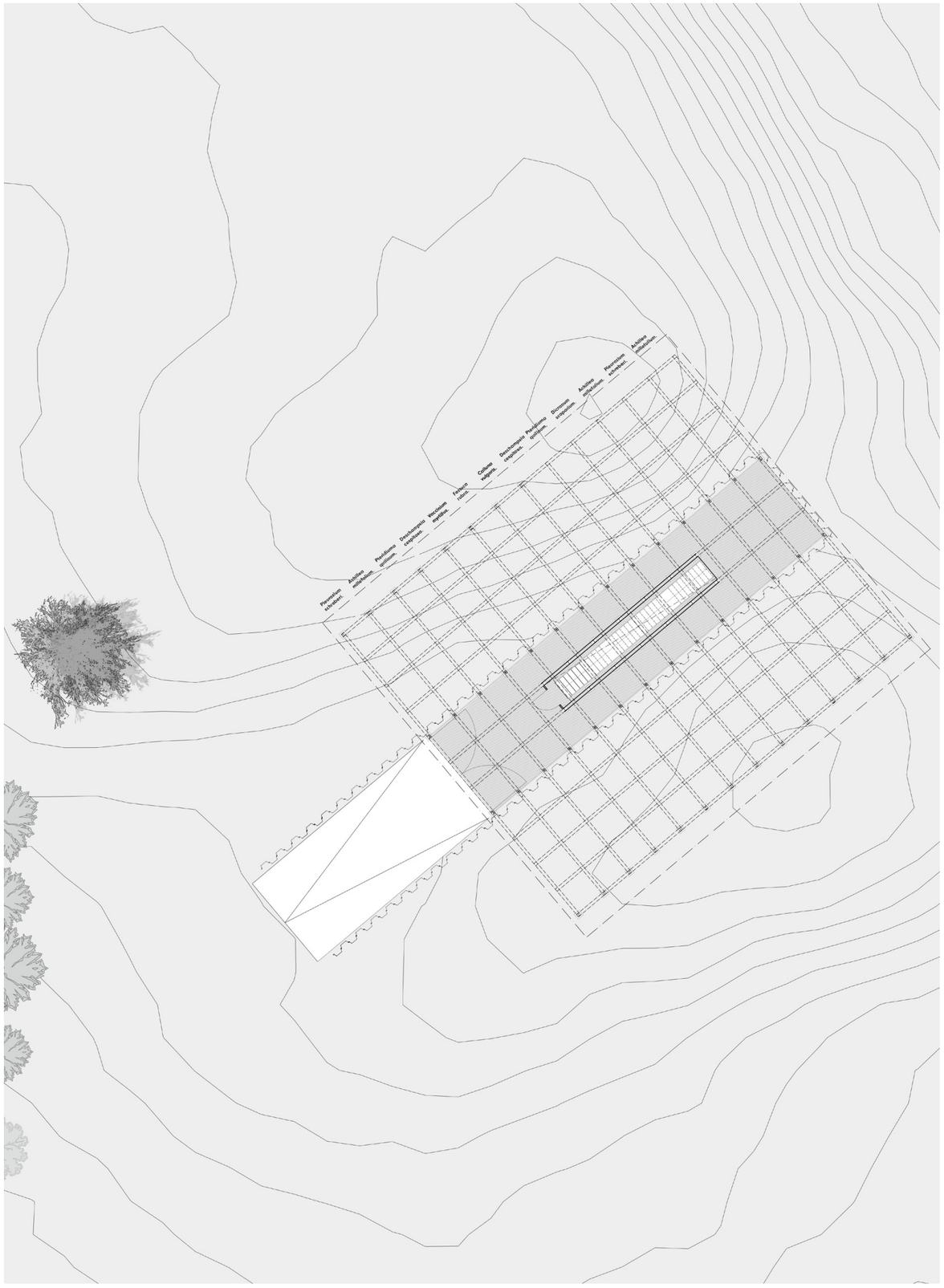
The Exhibition sinks down between the two hills of the clear-cut. A ramp leads down towards the entrance of the building. Once the visitor has stepped inside, she quickly realises that the pavilion's elongated staircase immediately sends her back out again. Between the hills, the building stretches out a large roof where vegetation thrives, and it is these plants that constitute the building's primary exhibition. The pavilion's structure, consisting of I-beams arranged in a beam-grid system, forms a strict framework from which trays measuring 1600 × 1800 millimetres are suspended. It is within these trays, arranged in straight rows along the x- and y-axis, that the plants of the exhibition are planted. Through an exact and predetermined pattern, the visitor can learn about the catalogue of plants belonging to the clear-cut.

Themes from Theory and Practice

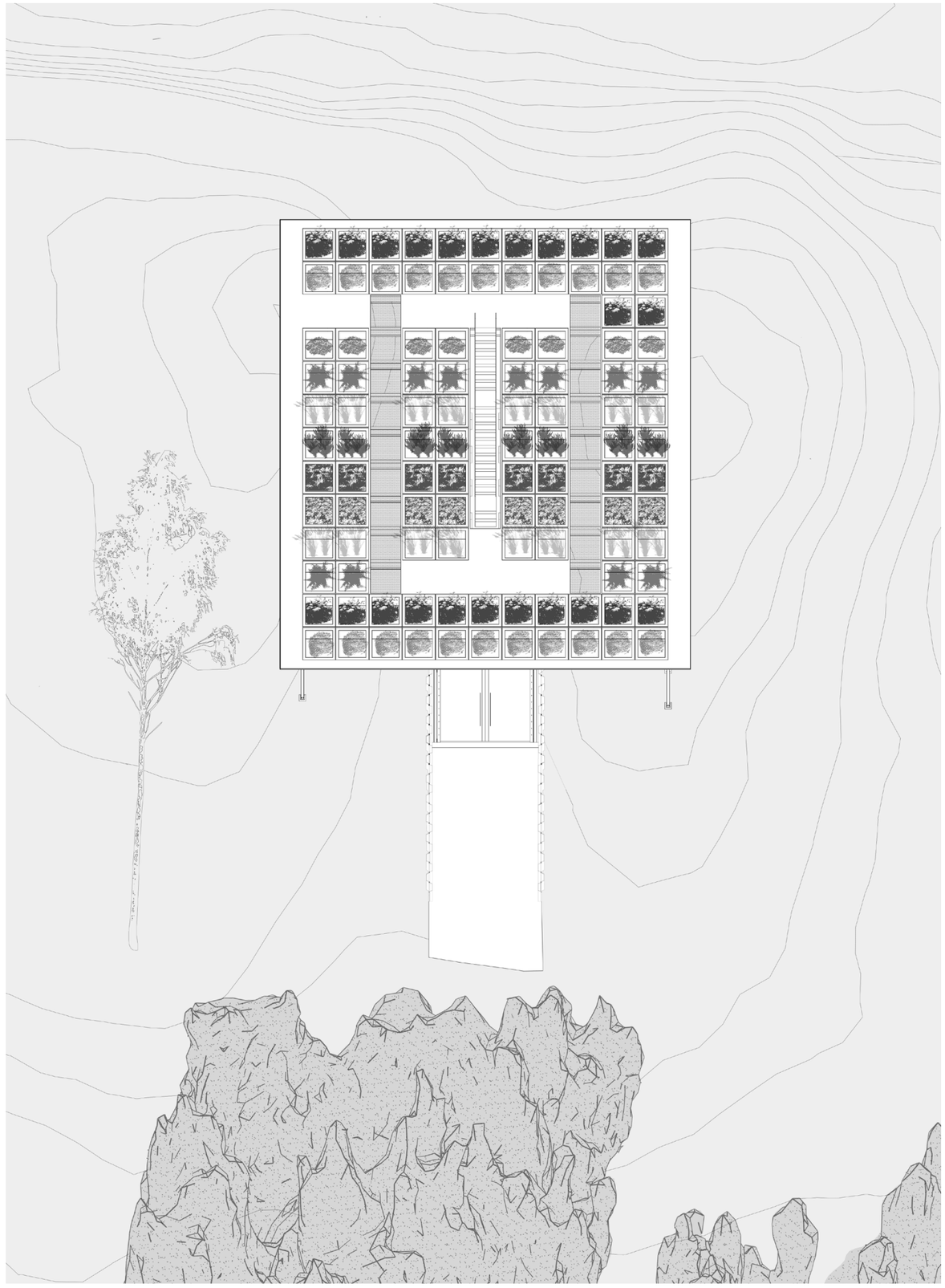
The Exhibition has a strong connection to what Cosgrove refers to as geographical representation. The vegetation is planted according to the system established through the building's construction. The planting beds are systematised in the same way humans distinguish between continents and oceans on a map. Through this ordering of the plants, thoughts are also raised regarding the discussion Lavin presents in On Timber, the Species of Trees. Perhaps these plants can be considered more appropriated than their counterparts growing in the ground below.

At the same time, the planting could be understood as a living example of Gasperoni's site-catalogues. On the roof of the building, the plants are organised in such a way that they can easily be read by an observer. Perhaps new perspectives can emerge when an organism is isolated in this manner, and in doing so increase the perception of the narratives embedded within the clear-cut.

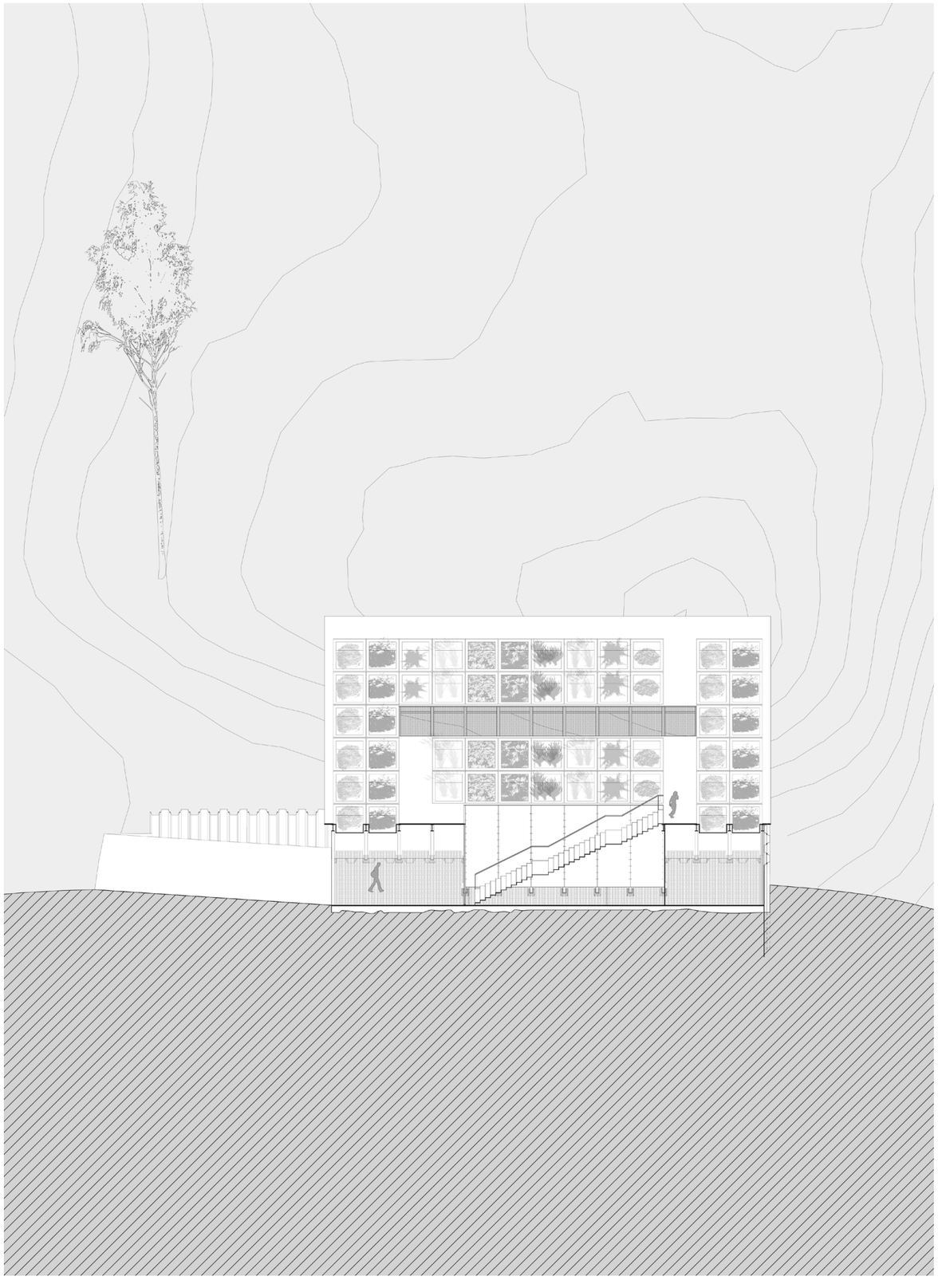
A final theme addressed by The Exhibition is that, like The Assembly, weather and climate are allowed to affect the pavilion's construction. In this case, the metal will inevitably rust. However, another perspective is introduced here, since the architecture is also clearly allowed to govern the landscape. On the pavilion's roof, certain sections consist of perforated metal plates. Sunlight is therefore allowed to pass through these areas, and in this way the architecture dictates where vegetation is allowed to thrive and where it is not.



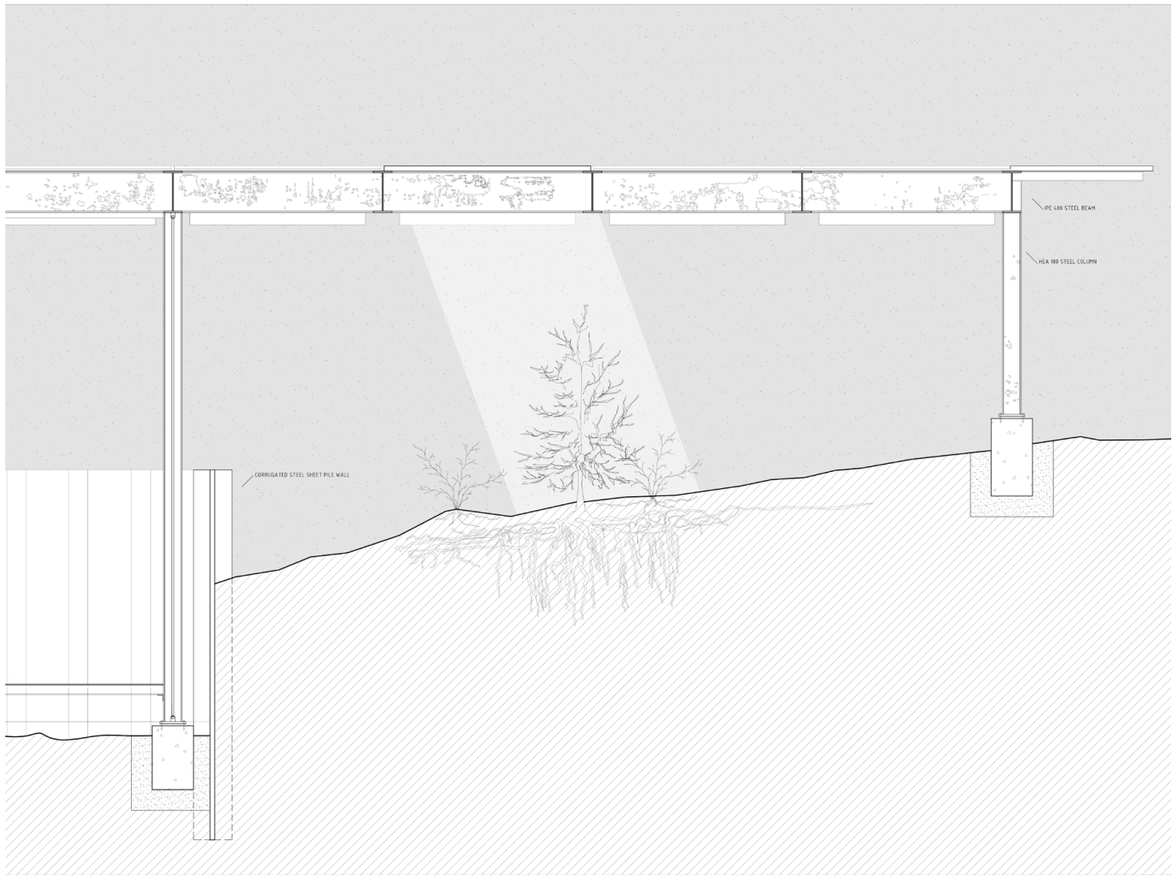
Plan of the structural system of The Exhibition.
The plants of the clear-cut have been systematically organised across the roof.



Axonometric drawing of The Exhibition, volume.



Axonometric drawing of The Exhibition, section.



Detail of The Exhibition.
The perforated metal allows sunlight to pass through at selected locations.

Exterior perspective of the Tower.
The Tower rises above the perimeter of the clear-cut.

The Tower

Beginning from the lower plateau of the clear-cut, an observation tower rises 25 metres above the ground and can easily rival the treetops of the surrounding forest edge. Like the trees left standing within the clear-cut, the tower stands as a solitary object. The structure is a timber truss construction that allows the observer to move between the tower's many flights of stairs. The tower's short sides are primarily open — it is only where a chorographed view appears that the façade closes and directs the observer's gaze towards a specific fragment of the clear-cut.

Themes from Theory and Practice

The tower primarily engages with themes from cosmographical, geographical, and chorographical representation. The viewpoint closest to the ground faces directly towards the slope of the clear-cut. At this level, the observer experiences the landscape in a close and chorographical manner. Higher up in the tower, a viewpoint is positioned completely parallel to the ground, allowing the observer to view the landscape in the same way one might read a map. At the top of the tower, a panoramic view overlooks the entire clear-cut. Here, the observer gains an overview and may be understood as occupying the centre of the universe, just as the cosmographical drawing prescribes.

Axonometric drawing of The Tower, section.
The Tower offers chorographical views of the clear-cut.

View of one of the remaining birch trees.

Fragmented view of the slope of the clear-cut.

The Assembly appears through the tower's circular opening.

View parallel to the ground.

The Tower's different viewpoints.

Conclusion

The intention of the thesis was to investigate the constructed landscape, using a specific clear-cut as a point of departure. The clear-cut as an archetype was chosen because, in its character as a void of absence within an otherwise dense forest, it exposes the conflict in the landscape between nature and humans. The clear-cut was investigated through a series of explorations with a focus on architectural representation, and how cosmological, geographical, and chorographical representation can serve as a means to both understand and communicate the narrative of the clear-cut. Based on insights from the theoretical part of the thesis and the conducted explorations, the result became a ting, where stakeholders in the forest can meet, consisting of three pavilions that in different ways address and discuss themes explored in the earlier parts of the thesis.

Discussion

An initial question in the thesis was what kind of place the forest and the clear-cut are. At first glance, it may seem obvious that the forest is nature. However, I believe that a key to understanding our surroundings, and to approaching a place such as a clear-cut, is to question what we think we know. The purpose of this thesis was never to deny environmental problems and upcoming climate crises, nor to romanticise forestry. I believe that we can all agree that the extinction of species, environmental problems, and climate crises are negative, and that contemporary forestry can no longer be considered sustainable. However, during the process of the work, it became clear that there is another conflict underlying the environmental one, which in many ways may be seen as the origin of the conflicts that have affected the forest and forestry.

The forest has been a resource and a precondition for life for as long as humans have lived in the Nordic region. It has taken different forms throughout history as the climate, as well as human opinions and needs, have changed. The forest has been burned and cut down by farmers in favour of pasture land. It has been harvested on a large scale and then replanted at the initiative of the state. Today, large parts of the Swedish forest are part of a system in which it is systematically harvested one tract at a time. Other parts of the forest, such as Änggårdsbergen in Gothenburg, are part of a different system, where trees and vegetation are arranged according to human preference.

I believe that it is important to recognise the constructed landscape, regardless of its character. Like Schama and Ingold, I consider it problematic to view the forest as nature. By seeing our surroundings in this way, humans distance themselves from their environment. They are no longer part of the landscape, but instead observe nature from a distance. The forest becomes a problem to be solved, rather than a reality in our lives. If we instead acknowledge the history of the forest and the clear-cut, and the memories, myths, and narratives that shape our understanding of the landscape, as Schama writes, together with the actions of humans over time, as Ingold adds, we may gain new perspectives on the constructed landscape and the human role within it.

Architecture and architectural representation are the mediums through which the human role in the constructed landscape has been investigated and discussed. Examples such as reliefs of objects from the forest in plaster and metal become a visual clarification of the conflict between humans and nature in the clear-cut. Through this type of representation, it is shown that the boundary between the natural and the artificial is unclear. Historical drawings and illustrations such as the Primitive Hut can be interpreted as suggesting that nature and culture are incompatible, but they can also be understood as indicating that nature is the origin of architecture, and that architecture constitutes the link between humans and nature. I believe that methods of representation such as cosmological, geographical, and chorographical drawing can serve as a way to increase perception and understanding of a place. Just as it can be problematic to too easily accept what we believe we know — such as the initial question of the identity of the forest and the clear-cut — I believe that much information may be lost if we relate only to the traditional architectural drawing.

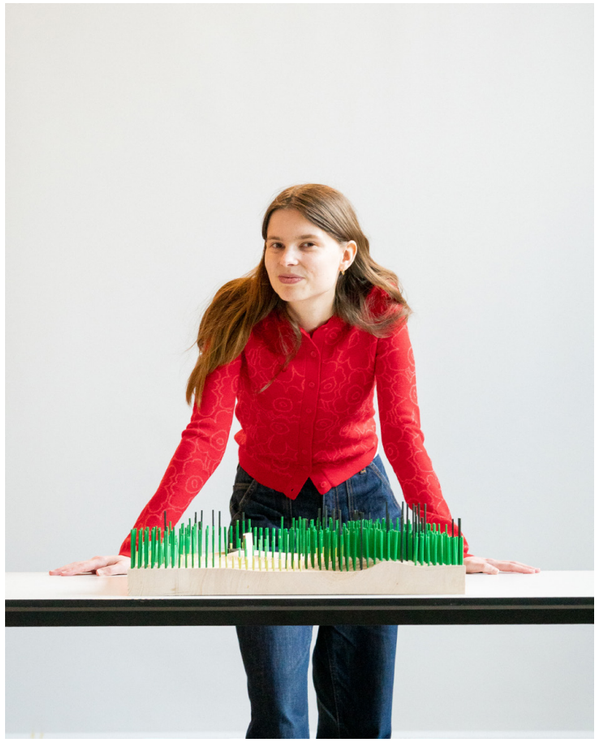
The architecture, in the form of the three pavilions, is an extension of humans into the landscape. Through the role of architecture and its impact on the landscape, as well as the landscape's impact on architecture, the human relationship to the landscape is reflected. The architecture highlights the question of what is natural and what is artificial. The pavilions are constructed from three different materials, all of which originate from nature. Nature and architecture are closely intertwined. Weather and wind are allowed to affect the pavilions by eroding the concrete and rusting the metal. At the same time, it becomes clear that architecture also affects the landscape, for example by filtering light and thereby determining where vegetation can become more or less abundant. The architecture also engages with themes from cosmological, geographical, and chorographical drawing. One example is the exhibition building's systematic organisation of plants found in the clear-cut. Another example is the precise mathematics of the assembly space, which stands in contrast to the lush forest edge just outside the window. Through such qualities, the architecture reinforces the conflict in the landscape that the clear-cut has already made visible.

The role of architecture and architectural representation in this context has been to make visible, expose, and stage the human role in the constructed landscape. I believe that architecture, like all forms of art, has the ability to highlight important questions in society. This type of architecture will never be a solution to conflicts such as how forests should be managed in the future. Rather, architecture creates the conditions for change to occur. The entanglement that architecture has with the landscape, which in turn highlights the human entanglement with the landscape, does not necessarily have to be positive. In the search to understand the human role in relation to its surroundings, I believe it is necessary not to assign value to how a landscape is constructed. What is instead interesting in this context is whether architecture can reveal what we value in our surroundings, and our role in caring for what we collectively create.

This is not a story of what has been lost, but of what may yet be found.

Student background

Master of Science, Architecture and Urban design Chalmers University of Technology	2024 - 2026
Foundation Programme in Fine Arts KV Art School	2023 - 2024
Bachelor of Science, Architecture Chalmers University of Technology	2020 - 2023



Wilma Berg

wilmaannie.berg@gmail.com
+46 722 41 09 60

Bibliography

Litterature

Cairns. S, Jacobs.J. (2017). *Buildings must die: a perverse view of architecture*. MIT Press paperback edition.

Cosgrove, D. (1999). Liminal Geometry and Elemental Landscape: Construction and Representation. In Corner, J. (Red.). *Recovering landscape : essays in contemporary landscape architecture*. (p. 103-118). Princeton Architectural Press.

Gasperoni, L. (2024). *Cataloguing as an operation of mediation and situatedness*. Candide, 24, 98–109.

Ingold, T. (1993). *The temporality of the landscape*. World Archaeology, 25(2), 152–174.

Mostafavi, M. & Leatherbarrow, D. (1993). On weathering: life of buildings in time. Cambridge, Mass.: MIT Press.

Schama, S. (2004 [1995]). *Landscape and memory*. London: Harper Perennial.

Schob, Maximilian & Callejas, Luis. (2024). *From Radiance to Geometry: Identifying European Forest Clearings with Potential Heritage Value*. 314-332. 10.14627/537752029.

Sörlin, S., & Wormbs, N. (2018). *Environing technologies: a theory of making environment. History and Technology*, 34(2), 101–125. https://doi.org/10.1080/07341512.2018.1548066

Wetterberg, G. (2018). *Träd: en vandring i den svenska skogen*. Stockholm: Albert Bonniers Förlag.

Web-pages

Lavin, S. (2020). *Trees Make A Plan*. https://drawingmatter.org/trees-make-a-plan/

Lavin, S. (2020). *Trees Move In*. https://drawingmatter.org/trees-make-a-plan/

Föreningen Sveriges Skogsindustrier. (2025). *Från råvara till material*. https://www.svenskttra.se/trafakta/allmant-om-tra/fran-timmer-till-planka/

Skogssällskapet. (2024). *Stiftelsen Skogssällskapet*. https://www.skogssallskapet.se/om-oss/organisation/stiftelsen.html

Skogstyrelsen. (2025, 18 november). Skogsvårdslagen i kortversion. https://www.skogsstyrelsen.se/lag-och-tillsyn/skogsvardslagen/

Visuals

Circle of the Sangallo Family, On Timber, the Species of Trees, drawing for Vitruvius, book II, chapter 9, c.1530–1545. Courtesy of the Metropolitan Museum of Art. https://www.metmuseum.org/art/collection/search/383097

Frontispice to David Gregory edition of Euclid's *Opera*, Oxford, 1703.

Frontispiece of Marc-Antoine Laugier: Essai sur l'Architecture 2nd ed. 1755 by Charles Eisen (1720-1778). Allegorical engraving of the Vitruvian primitive hut.

Granen. Project Runeberg. *Folkskolans läsebok* 1909.

AI-appendix

AI has been used to assist with the translation of certain parts of the text and to provide suggestions for headings.

Constructing the Clear-cut

1. Pinus sylvestris x2

2. Pinus sylvestris

3. Betula pendula

4. Betula pendula

5. Picea abies (Dead)

6. Pinus sylvestris

7. Betula pendula

8. Pinus sylvestris

9. Picea abies (Dead)

10. Betula pendula

11. Betula pendula

12. Pinus sylvestris

13. Betula pendula

15. Betula pendula

16. Betula pendula +Pinus sylvestris

On Landscape, Trees and Representation

Wilma Berg

Chalmers School of Architecture
Department of Architecture & Civil Engineering

Examiner: Naima Callenberg

Supervisor: Daniel Norell

Master Thesis 2026