

SCORCHED GROUND

Archive of a Landscape

/

BRÄND MARK

Arkiv av ett landskap

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Scorched Ground: Archive of a Landscape | Göteborg, Sweden 2020

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Student Background

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	Inhabiting the Hinterland: Vännäs	(UMA2)
	Architectural Scenarios	(UMA1)

Acknowledgements

A big thank you to my grandfather Håkan Hellstrand, whose love and knowledge of the forest and landscape is so great it has inevitably seeped into all of us whom you love just as much. The profound and at times overwhelming sense of connection to place and landscape that is at the core of this thesis, I in many ways owe to you. I am eternally grateful for the row of overloaded hard back folders full of all things related to the Västmanland fire that you keep, and one of my great joys is that I will now enjoy Karlfeldt together with you.

Consequently, a special thank you goes out to my cousins Johanna and Erika Hellstrand. To Johanna, who with analytical insight and narrative skill wrote about the fire and the cultural impact in such a way as to inspire this thesis. For a thesis in architecture, a lot of time has been spent learning rudimentary forestry practise and basic forest ecology. In this, my eternal thanks to Erika, my cousin-turned-personal-forestry consultant and answerer of all questions, basic and strange.

At the risk of turning the thesis into a family affair, a big thank you to the rest of my family, for keeping me sane and all the rest. A thank you to my fellow students, for all our time together, in and out of the studio. Together we managed to shine.

Här är din väg, där spenslig björk
mot åsen byggt en ljus portik.
Vid sidan ligger tjärnen, mörk
av ljuvligt ruvande mystik.
Träd lätt på golv med timjan strött!
Det ligger bygd därnedanför.
Där blomstra byar vitt och rött
och jordens glädje, dit du hör.

Min väg går bort åt annan trakt.
Den dunklar in i valv av gran,
tills myren vidgar, allt för flackt
och hårt belyst, sin bleka plan.
Den stiger tungt mot bergets bryn,
den sprängs isär av stenig vret,
tills krönet öppnar stort en syn
mot öde rymd och evighet.

"Vandring"
by Erik Axel Karlfeldt, 1924

chapter 1

/

Spark

Abstract



Hälleskogsbrännan, January 2020

The thesis investigates architectural design for a transforming landscape in a hinterland context. The intention of the thesis is to design an archive of a landscape and to argue for the cultural heritage held in the forest. Bergslagen has been inhabited as primarily a farming, forestry and farming area for centuries. In 2014 sparks from a forestry vehicle caused a forest fire which in a week would spread to become the largest single fire in Sweden in modern times. Beyond the devastation of property, the fire changed the landscape to the extent that people who have lived, worked, and been in the forest for generations no longer recognize it.

The archive is placed in the burnt landscape left after the forest fire. From the idea of the forest as a room, as a frame, and as a landscape, the intention of the archive was to collect the knowledge, memories, and stories of the forest - before, during and after the fire - in one location. The choice of a rural location was made as a comment on where society chooses to manifest collective memory and commemorate events in built form, with priority skewed towards the urban. Anchoring design choices in contextual analysis, the architectural goal was a building with a narrative that would shift from a structure originating in the burnt landscape into a space that belongs in the re-grown forest.

The combination of a program that inherently relates to the cultural context with a site described as an "unrecognisable landscape" is at the core of the thesis. These two components allowed the thesis to address the challenge of how architecture relates to place and context on an additional level beyond topography/site. The desired impact of the thesis is to contribute to knowledge about and care regarding architecture in non-urban places. Using architectural design strategies combined with an ethnological approach, the building belongs in and has

a connection to its place while residing in a landscape unfamiliar to locals and visitors alike.

Keywords:

Archive design, transforming landscape, narrative architecture, cultural heritage environment, place

Aim and Motivation

The thesis aim is to design a building that belongs to its place and context. The design project propose an archive of a landscape, specifically for Bergslagen and the area affected by the 2014 forest fire (locally known as “Den stora skogsbranden” or nationally as “Skogsbranden i Västmanland”). The aim of the archive is to call to remembrance an event rather than serve as a memorial of it. The archive will hold and contribute to knowledge of and about the forest and the landscape.

The thesis and the design proposal highlight and argue for the cultural heritage held in the forest. Commonly, non-economic values in the Swedish forests are regarded from biological and ecological values. However, cultural heritage remains and monument may be found in an “ordinary” forest by taking part of the local knowledge and displaced information (in the sense of information being located in a different geographical place). Doing the thesis in the design for architectural heritage direction, the proposal argues for the cultural environment and cultural heritage in the forest as relevant for an architectural tradition.

With regards to personal knowledge of the context and initial investigations, an archive is assessed as a more relevant program than a museum or a memorial monument. Because of its dynamic task of collection, preservation, and distribution of information (Press, 2019) an archive is better suited to tell the story of the landscape with the fire as a part of the whole context, connected to the forest before, during, and after the summer of 2014. A museum or a memorial would potentially present a narrative of the event or the story of the fire as being past, which would limit the design proposal to the fire itself.

With this as the objective, the theoretical aim is to investigate architectural design in and for a rural context, using context mapping and incorporating ethnological methods to inform design decisions. The aim of the design

project is a building with a connection to site and place, and a sense of belonging in its larger context. Combining the program of an archive with an aim for contemporary relevancy in the context, the design project will investigate how architecture can work with narratives and aspects of time in built form. The thesis will reference theories of critical regionalism as a discourse, and aims to contribute a design reference in a contemporary, Swedish context.

The motivation with regards to the choice of site and the rural context is to afford architectural care and concern to an area which is often overlooked in contemporary development. Additionally, the choice of a rural location for this architectural thesis is a comment on where we as a society choose to commemorate events. With priority skewed towards events and locations in the urban context, this thesis propose value in a variety and diversity in how and where we manifest collective memory in built form. Further benefits of working in a rural context is to study non-urban typologies and architectural morphology, with the intent to gain knowledge that is universally applicable, but regional in its origin (Frampton, 1983, p. 153).

The aim of this thesis is to be of interest to architects working in rural and hinterland places, with the intent to nuance and broaden ways of treating and relating to this type of context in an architectural design project. The aim is also to showcase an architectural reference of how to relate to landscapes and places that have been affected and drastically transformed by climate change and natural disasters such as storms, fires, rising sea levels, or drought. Additionally, the aim of the thesis is to also be of interest to inhabitants of rural areas, who deserve an architecture that takes as much care, influence, and characteristics from its place as projects in urban areas generally do. In this regard, the thesis aim is to be of specific interest to the inhabitants and the people affected by the 2014 Västmanland forest fire.

Commemorate:

To call to remembrance

To mark by some ceremony or observation

To serve as a memorial of

(Merriam-Webster, 2019)

Delimitation

Though the thesis utilizes and to an extent stand on ethnographic references, concepts and theories, it is an architectural thesis with no ambition or intent from the author to make claims of belonging to an ethnographic academic field.

The thesis will not directly address issues of regional versus urban development, or displacement as an effect of natural disasters. However, strategies, methods, and contextual approach applied in the thesis may prove relevant, or partially relevant, to other projects more closely related to those topics.

This thesis has no ambition to take active part in political and societal debate regarding the design of memorials, which has re-emerged parallel with the proposals for the Utøya memorial monument. The thesis proposes an alternative program, the archive, as a relevant way to commemorate collective experiences and trauma. The archive adds a dynamic element, as an alternative to the more static nature of a memorial or a museum.

Similarly to how the thesis relates to the ethnological academic field, the theoretical references and the design proposal touch upon aspects of forestry. This is done to add nuance and layers to the architectural design process and understanding of the local context. Design decisions and analysis based upon these sources should be regarded as done by a novice in the forestry field with architectural intent.

With regards to delimitation in method, this thesis will not focus on the investigation of artefacts and flows, as included in the application of the contextual inquiry research method (Hannington & Martin, 2012). One of the four principles of contextual inquiry, partnership in the master-apprentice relationship, is not relevant to this thesis, as the subject of research is not on the production

Research Questions

How can architecture establish a connection to place, and relate to a drastically transformed landscape?

How can a building relate to a burnt landscape, and maintain connections to its context through changes in the landscape?



Grävingsberget, January 2020

Här lyfter han ur kärr och skog och ängar
den nakna, melankoliskt gråa ryggen,
en ensam fur i mager mylla tronar
som på en stång en hatt med breda skyggen.
O ödemark, du har min kärlek vunnit!
Jag älskar stigarna, de människotomma,
den flacka hed, där luft och dager flöda,
där ljung och timjan blekt i sanden blomma.

Och det är maj, och över åsen stormen,
min barndomsvän, den starke sångaren, drager.
Knappt spörjs här liv - i talln en kråka gungar,
en skara får det torra betet gnager.
Ett vekt och mäktigt jubel mig betager,
för alla fångna känslor öppnar låsen;
och ensam, ensam mellan jord och himmel,
jag vandrar sjungande framåt på åsen.

Dock - sällsamt! - ej allena, ty framför mig
rör sig en kvinnlig skepnad, vän att skåda,
där som skulle, hemligt vingad, foten
på dammets lätta, vita skyar tråda.
Liksom en stor och ljusröd sol sig tecknar
mot luftens heta blånad parasollen.

Hur kom du, främling, hit till dessa höjder,
där nejden syns som död åt alla hållen?
Jag följer hennes spåda fjät i sanden.
Jag hastar ej, jag vill ej henne hinna -
vem känner, vad på nära håll jag funne?
Där stigen stupar skall hon få försvinna.
Så kan jag tro, när genom dalens vallmor
den stilla kvällens drömsignal är blåsen:
jag såg den kvinna som mitt hjärta väntar
i sol och majvind vandra över åsen.

chapter 2

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Theory

Architecture, Narrative and Landscape

Connecting to research in architecture the thesis will incorporate architectural theory within the discourse of critical regionalism, design for architectural heritage, and architecture in relation to memory and events. Additional written references and theory will include works in ethnology, reports from the Swedish National Heritage Office (Riksantikvarieämbetet) and the Swedish National Board of Housing, Building and Planning (Boverket).

Connecting to ethnological research on natural disasters and disorientation, the thesis is partaking in an understanding of a forest fire as a cultural trauma. It contributes to this thesis with an understanding of how a forest fire affect the people who experience it, and by extension, how they will relate to the landscape after the fires. The ethnographic tradition is of particular relevance to this thesis as an additional layer to the contextual reading and understanding of place and site.

The thesis investigates how to design architecture to convey cultural heritage and the history of a place with a narrative space. In *Architecture and Narrative - The Formation of Space and Cultural Meaning* (2009) Sophia Psarra examine the relationship of buildings conceived as abstract patterns, their perception through sensory experience, and how this relates to the structure of their message in a cultural context. The social dimension of architecture, specifically cultural buildings, is investigated through spatial morphology, an interpretation of visual experiences and movement patterns in space.

Spatial morphology with its emphasis on visual connections is particularly suited to interpret, analyse and communicate cultural buildings with intentions of communication through spatial sequences and the exhibition of objects (Psarra, *Architecture and Narrative - The Formation of Space and Cultural Meaning*, 2009). In the design proposal for the archive, the spatial sequences and deliberately arranged visual axes intend to frame and exhibit the burnt landscape. This has been done comparable to how paintings and sculptures are exhibited in museums. The in archive, the exhibited view has a dynamic element, as the landscape is constantly changing

with the seasons and the forest's regrowth.

Applying critical regionalism to approach design on the site, Frampton's theoretical work is valid in translating the investigation of the local into a humanistic architecture with a concrete connection to its place. Critical regionalism seeks to identify regional "schools" that reflect their local conditions, the practices' aim lies in conveying the vernacular traditions and their origins as coming from the interplay of geographical, cultural and tectonic traditions.

Critical regionalism takes a decentralized stance and rather than consider regional culture as something "given" it accepts the regional as actively and independently cultivated (Frampton, *Critical Regionalism: modern architecture and cultural identity*, 2014). Frampton argues that the strength of provincial culture is in its capacity to assimilate and interpret outside influences while applying the local and regional tradition with artisanal skill. In this way, a critical rural architecture cultivate contemporary design that relate to the specific place by adapting methods and approaches from external influences.

The process of assimilation and reinterpretation has to encompass more than the visual or graphic aspects of a design. In its application critical regionalism favour intentional design with a conscious idea of where an initial critical impulse may cross the line into photogenic scenography or cheap populism. Deference towards local materials, tectonic tradition and light cannot fall into favour of the sentimental, where rational form and modern technique is intentionally excluded to the benefit of traditional form (Frampton, *Critical Regionalism: modern architecture and cultural identity*, 2014, p. 317). Critical regionalism is not a call for a return to vernacular or "traditional" architecture, but the implementation of regional strategy emphasising place creation and adaptation to place, context and local conditions.

Chronicling the forest through notions of architectural concepts, their perception and cultural meaning, the narrative of the landscape expands to include both the content of the story and the manner in which it is preserved and retold. Architecture and spatial concepts

are frequently narrated through illustrations, models and drawings, visualizing space and abstract principles in through visualisations. In the thesis design proposal the universal technique is applied and adapted to narrate the story of the local landscape, the forestry and the fire.

The social factors of architecture can be explored through spatial morphology and analysis of movement patterns. The cultural meaning expressed through architecture can be found imbedded in the relationships between spaces and form. However, creation of cultural value is prevalent in the architectural design process by its ordering of space into sequences and hierarchies. Architecture cannot be interpreted as isolated, meaning-less void or as a token holding cultural content by association (Psarra, *Architecture and Narrative - The Formation of Space and Cultural Meaning*, 2009, p. 15).

The relation of narrative content and architectural perception in the design proposal is a building which balances space and function with the narration of place. By consciously working with relationships of narrative structure, arrangement of sequence and perceptions of space architecture becomes a relevant way to tell a narrative that may generate knowledge into cultural meaning (Psarra, *Architecture and Narrative - The Formation of Space and Cultural Meaning*, 2009). The aim is not only to express existent cultural values or meaning, but also contribute additional layers to an already rich cultural heritage environment. The architecture is designed as a part in a much larger story, the narrative of the landscape. With this perspective, the manner in which the architecture and the building relate to the context is to expand the design scope in the beginning to regard the future ruin to be the most enduring aspect of the design.

Discussing approaches to "building the site" and the importance of topographic aspects in architecture, Frampton describe the laying of architecture into the topography. The design proposal in the thesis will approach the combination of a universal grid with topographical path (Frampton, *Critical Regionalism: modern architecture and cultural identity*, 2014) by adapting the regional

strategy for how field and forest barns are placed on top of the topography, with a particular consciousness to their placement in the landscape. With rationalised placement and strategic locations, the structures are influenced by the topography whilst resting on top of it, rather than burrowing into it.

The building site within the fire area is specifically chosen to suit an architectural program that benefit from the less intense light from the North. Though this cardinal direction is generally considered less of an asset for universal architecture, the archive materials need to be protected from direct sunlight. Roof skylights provide daylight falling non-octagonally indoors, and create an indirect connection to the world outside and a sense for the passage of time. In 10-30 years, when new trees have grown to reach above the buildings' roof, the second floor windows will provide a view up into the tree crowns, with the sky as the backdrop. The placement on a North-East facing slope high up in the landscape allow the buildings to maintain their external and internal narratives told in the framing of vistas. The placement in between three mires frame the immediate setting, and with time the open area surrounding the buildings themselves may become a fourth glade in the regrown forest. The intention of the spatial sequence in the design proposal is to utilise selected openings and vistas from within the building to frame and exhibit the surrounding landscape, rather than primarily use the internal spaces to exhibit objects inside the archive.

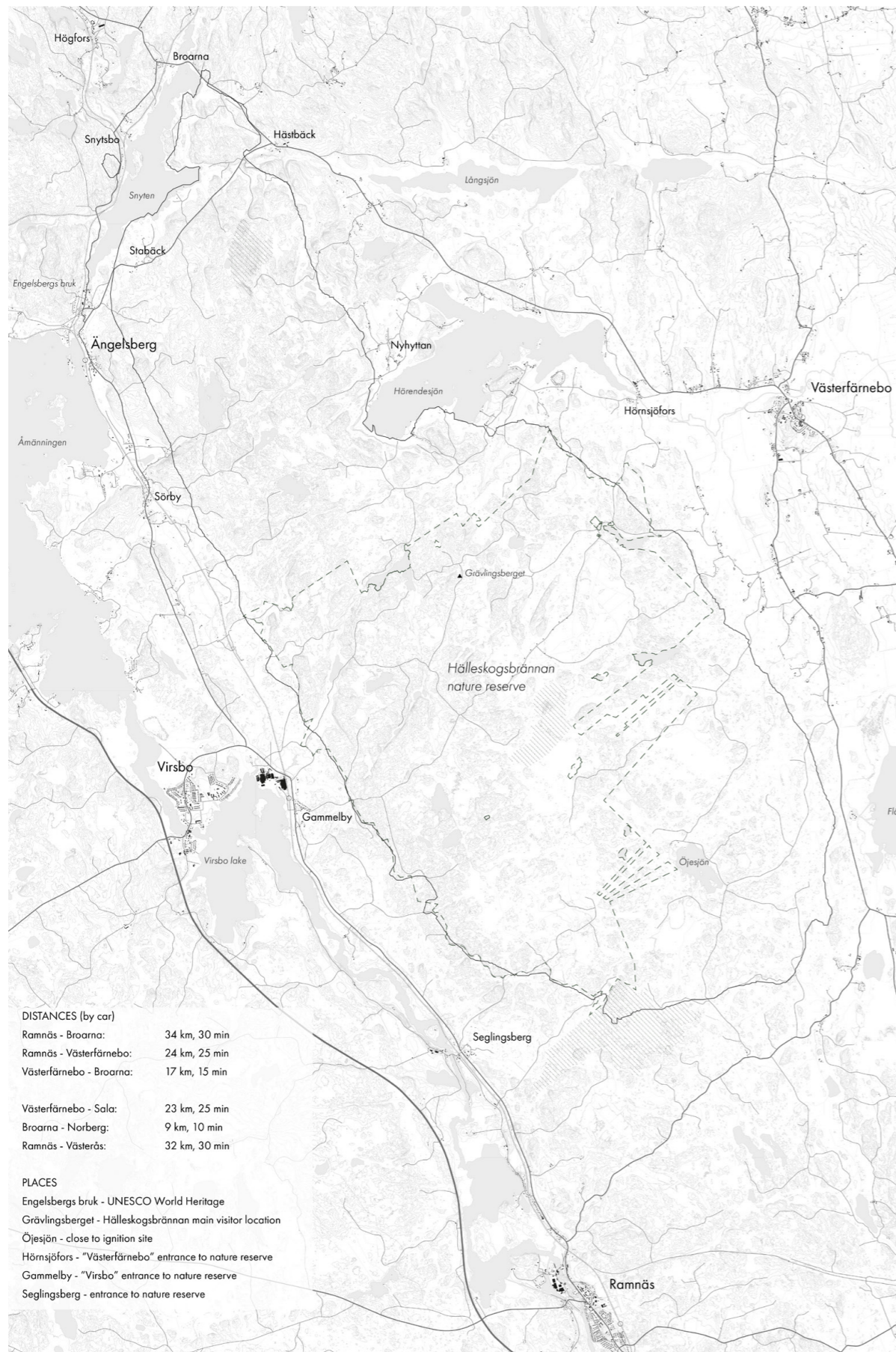
The architectural language intentionally limits its claim on territory established on the site. The volumes will initially appear as free standing volumes in the vast and open landscape, but as the forest regenerates, in time the buildings will increasingly blend into their surroundings. The temporal aspects in the design strategies are adapted to the timeline of the forest, exceeding the 50-100 years generally referenced in discussions regarding the lifetime of buildings. The timeline of forests expand further, with ecological predictions and timelines for nature reserves and protected landscapes spanning hundreds of years. The primal function of the archive is to preserve, protect

and make available the stories for future generations, but the goal of the thesis is for the architecture to also obtain selected characteristics from a museum and to engage in the context, the narrative, and the transmission of knowledge in order to add to the cultural meaning already existing on the site (Psarra, *Architecture and Narrative - The Formation of Space and Cultural Meaning*, 2009, p. 11). Subsequently, from the outside the buildings are intentionally designed as introverted, turning inwards.

The architecture does not seek to fight for attention with the landscape. Neither is there an ambition to hide in the landscape, which would be impossible in the context and on this site for several decades. Rather, the architecture seeks to appear familiar in the wider cultural context but new and unfamiliar to the burnt landscape, which in itself is alien to inhabitants and visitors in the area. The narrative of the architecture is told in collaboration with the cultural context and surroundings. It will continue to evolve and adapt to changes in the landscape, as it is a story told from within the buildings rather than a conversation of facades with their immediate surrounding.



Hälleskogsbrännan, January 2020



Landscape and Identity

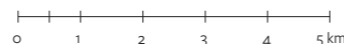
The narrative quality of the ethnological references utilised in the contextual investigation of the thesis correlate with the narrative aim of the thesis project and the intentions of the design proposal. Identity and relationships to the surrounding environment is in part created from the stories and events we tell. Landscape function as a link for people to those stories, and the narrative connections through time to generations and people inhabiting places before and after us. In this manner, the landscape is important for individual and cultural belonging both in time and space (Hellstrand, 2015, p. 12).

The burnt forest is unrecognizable to inhabitants and visitors alike, and there is a universal emotional impact from a devastated landscape. Six years after the fire the landscape is still impactful in its otherness, with the extreme deviation of the landscape from our cultural idea of a forest. Being in the landscape the visual narrative of the landscape communicate the scale and impact of the event, and the reiteration of stories from the fire carry an acute emotional note. Cultural expectations on the landscape, of what nature and the forest should be and look like has been referenced in ethnological research as "The Swedish View on Nature" ("Den Svenska natursynen" authors translation) (Hellstrand, 2015, p. 34). Ethnological research has shown that the cultural value and importance for identity and belonging in our perception of the forest extend to people who may not live in a specific place or have a connection to the forest through ownership such as farming and forestry (Hellstrand, 2015). The norm is dependent on the cultural context in which it exist, and in the context of the thesis the expectations on the forest is a green space for a livelihood, recreation and everyday use. The expectation is for it to grow, to be cultivated, and for the inheritance and continued care by future generations.

The forest fire suddenly and devastatingly transformed the landscape, which culturally threatened both collective and individual feelings of safety in place. The shared narration and preservation of stories from the event are used to recreate cultural meaning and attachment to place. With the new landscape after the fire the expectations for

the new landscape will change. After the fire, locals and frequent visitors have reestablished a relationship to the new landscape. These new relationships are in their recency more fragile than the ones created before the fire, which extend back through generations and had an inherent sense of continuation into future generations.

For some, those links may now be or appear broken by the devastation of forest and property. For others the event of the fire will be a cultural marker in the relationship to the landscape, the fire creating a lasting sense of a "before and after" which through retelling of stories from the event will be incorporate in the narrative of the landscape. The emotional devastation of the event will become anecdotal to the generations after, but the changed perception of the landscape will remain. A place for the stories of the landscapes impact and influence in the cultural context, integrating the story of the fire in the larger narrative aids the creation of cultural meaning in a specific space.



Method

The methods applied in the thesis will be qualitative and exploratory, with focus on immersive, contextual research to establish site analysis and base design decisions on. Contextual Design, as described in “Universal Methods of Design” (Hannington & Martin, 2012) will be adapted to the architectural design process, incorporating methods of design ethnography, contextual inquiry, and directed storytelling.

Design ethnography is a research method focused on developing a comprehensive and empathic understanding of people and their lives. This method is relevant to the thesis project to form an analysis of place with a comprehensive perspective, and from this develop a design concept. Design ethnography is derived from ethnographic research, and detailed observations in connection with unstructured, informal interviews will provide relevant knowledge to develop the contextual understanding (Hannington & Martin, 2012, ss. 60-61). With the thesis’ goal to design a building, the delimitation of the comprehensive understanding will be limited to place and context. Design ethnography is related to contextual inquiry and observation as methods for design research.

Contextual inquiry as a method for design research is applied in this thesis to investigate the fires’ impact of, and influence on culture and the physical environment. Contextual inquiry is based on four principles of context, partnership, interpretation, and focus (Hannington & Martin, 2012, ss. 46-47). With regard to the principle of context, the aftermath, and memories, of the fire and the relationship to the landscape (specifically the fire area) is ongoing, and the focus in this thesis. The second principle, partnership as in a mutual relationship with the people living in the context is not only inevitable, but vital to this thesis. The principles of interpretation and focus will be influenced by the authors personal relationship to the place and inhabitants, which will invalidate the analysis as having “objective value”. However, with the thesis aim of

a design project focused on retaining a strong quality of belonging to its place, it is assessed that the importance of objective value in the analysis is overruled by the benefit of access and personal perspective and experience.

Directed storytelling is used to gather stories and lived experiences from inhabitants in the area, with a particular but not exclusive focus on stories related to the fire of 2014. Directed storytelling relies on a narrative inquiry, with questions posed within conversations so as to continue the flowing structure of the story. The exploratory nature of the method aims at capturing the “expressing the essence of the experience” (Hannington & Martin, 2012, ss. 68-69) from personal stories, to contribute to influencing and/or reinforcing design decisions. External documentation of the stories is critical to the thesis project, with equal relevance for interpretation to inform design decisions for the architectural project part of the thesis, and for re-telling and sharing, for readers of the thesis. The method is established within design ethnography as useful when direct observations are not possible, as is the case within this master thesis. Two main factors influence this assessment; the time restriction and framework of the thesis prevents an extended stay (“living in place”) for a period long enough to gather relevant personal stories related to the landscape; and second, the fire is put out since October 2014, and the most relevant stories of this event and the aftermath come from people who lived in the area at the time.

Contemporary Discourse

In the development of the project plan and initial research for the thesis, works of contemporary discourse relating to the topic of the Västmanland Fire and disappearing landscapes has been noted.

At the Royal Danish Academy of Fines Arts (KADK), School of Architecture there is a master thesis in landscape architecture by Anna Livia Helander. The thesis, “Efter Branden – utveckling av ett nytt skogslandskap i Västmanland” is from 2015, and has a focus on creating a large scale strategy for a development of the area for visitation and forest re-establishment (Helander, 2015). This thesis distinguishes itself from Helander’s thesis in scale, discourse, and method, as the intent of this thesis is to develop an architectural design proposal relating to the burnt area, but will not propose any strategies for development of forest in the fire area. Helander does not explicitly implement contextual analysis methods and design strategies, which are central to this thesis.

Issue 108 of Topos Magazine concern the topic of displacement, dedicating a section of the magazine to questions regarding transformed and devastated landscapes as an effect of environmental disasters. Though this thesis will not deal with topics of displacement in geography, the term and anthropological concept as discussed in Topos 108 relates to the human cultural and emotional ties to landscape, as it is understood and connected to space in the theoretical context of this thesis.

An essential reference to the thesis is the essay “Brända rötter – naturen, identiteten och kulturella föreställningar I skuggan av en skogsbrand” by Johanna Hellstrand. The ethnological essay investigate stories of the affected inhabitants’ experiences of the Västmanland Fire, regarding the underlying cultural and social conceptions of nature, identity and landscape. This essay has been influential in the incorporation of ethnological concepts and ideas of identity as connected to landscape, which will

be investigated within field of the architecture in the thesis design project.

Skrällande släggor i gruvan slå
troget mot väggar av berggrå metall.
Stiger ur djupet då och då
mullrande skottens skall.
Buktar i vildmark en körväg sin krök,
mellan hopa av järnmalm böjd,
dit, där en masugn sin lågande rök
pustar mot kallblå höjd.

Och där går han med tunga fjät,
rimfrostsilvråd i skägg och hår.
Längs med vägen i lugnt majestät
susande granskog står.
Och det glittrar som klaraste diamant,
när på de snötyngda trädens gren,
när på drivbäddad dikeskant
solen tömmer sitt sken.

Men han vandrar där dyster i själ,
aktande tyst på sin foras gång,
böjd, som tyngdes hans själ jämväl
av en malmtung bördas tvång.
Det är ej blott mödan, som kuvat hans mod,
hand tyngs ej blott av det släp utan slut,
som brutit hans lemmar och sugit hans blod
ur den magrade kinden ut.

Han tyngs av i sekler nedärvt förakt,
i ymnighet skänkt av den veka hop,
som grundat sin rikedom, sin glans, sin makt
på vad bonden slitit ihop,
han tyngs av att veta, att detta ljus,
som bildningens målsmän ha i sin vård,
får lysa fritt i de fines hus
men stängs ute från bondens gård.

Du arbetets härdade, lugne trääl,
tyst du tar det fåvitska hånet emot-,
gror ej ändå i din tåliga själ
ett växande, dunkelt knot?
Har aldrig vid fåran du drömt någon gång
om en strid, som skall göra på nesan slut,
en strid, som i skaldens siande sång
ren skakar de rasslande spjut?

Hell dig, du redlige bondeman!
Dagen skall komma, när glad och trygg
din sänkta panna du lyfta kan
och räta din styvnade rygg -
när namnet bonde är skällsord ej mer,
men aktad i fribornas krets du står
och fröjdas att dagen allt varmare ler
i den flyktande nattens spår.

chapter 3

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Context

The Forest

The total fire area has been estimated to 13 077 hectares by the Swedish University of Agricultural Services (SLU), with 12 807 hectares on land and 270 hectares water (Färjare & Wikell, 2016, s. 4). The area is on a flat, long ridge in the north-west to south east direction, with a water rich forest landscape typical for the region. An estimated 17% of the area was open, nutrient poor mires and lakes which is considered a high percentage in Swedish forests (Ek & Onsten-Molander, Landskapskaraktärsanalys för Västmanlands län, 2016, p. 97).

The large scale hilly landscape typical for Bergslagen especially characterise the northern part of the fire area, with rock outcrops and fewer wetlands. The southern parts are lower, with a myriad of small lakes and a network of mires in between ridges. Before the fire 73% of the area was cultivated as production forests, with numerous clear-felled areas and young or recently planted trees. The forests were dominated by coniferous trees, mainly pine trees with fir trees mixed in, prioritised in accordance with the nutrient meagre soil and the landscapes combination of wet mires and dry hills. Some types of leaf trees occurred sporadically mixed with the pine and fir, however large areas with predominately leaf tree forest were highly unusual.

The western and southern part of the area was historically connected to the ironworks of the 16th and 17th century, with large continuous forest stands that today are owned by large forestry companies (Ek & Onsten-Molander, Landskapskaraktärsanalys för Västmanlands län, 2016). In the eastern parts ownership of forest and forestry parcellation is commonly connected to the villages along Svartån river, and has been cultivated as an aspect in the farming. The combination of small scale, family farmers who own and cultivate forest as well as open land is traditionally typical for the region, and prevalent today. In the eastern part of the fire area an unusually high number of cultural heritage sites in the form of border marks have been found. These are connected to the numerous villages where the forest was historically used as woodland pasture for livestock, as a compliment to the open pastures.

With the rationalisation and industrialisation of the forestry industry in the 18th century the water rich forests were drained to be more beneficial to the more economically desirable fir forests. This practise was widely implemented in Bergslagen, leaving the forest more at risk of fires due to drainage (Ek & Onsten-Molander, Landskapskaraktärsanalys för Västmanlands län, 2016). A result of this is that the vegetation which survived the fire is primarily the trees and brush growing on the mires and wetlands.

Of the almost 13 100 ha that burned, 107 individual private forest owners together owned an estimated 4000 ha, four large forestry companies owned 6800 ha and 2300 ha belonged to “others” (Myndigheten för samhällsskydd och beredskap, 2015). Though fire and ash can to an extent act as fertiliser and enhance growth, the change in the soil and the fact that the detritus completely burned has reduced the fertility of the ground compared to before the fire. This change will especially affect private land owners who own and cultivate the forest as a part of their generational assets.

As a consequence of the large areas of protected nature within the fire are, there is a high likelihood of the area developing into “new” primeval forest. There is also a large likelihood that the regrown forest will develop as a mixed leaf and pine forest, rather than the predominately coniferous production forest that burned in the summer of 2014. The brush and young shrubs that have gained foothold in this “new” forest already cover many historical remnants of human activity in the forest. Cultural heritage inventories have only been carried out in small sections of the fire area, and sites which have not yet been found are in danger of never being discovered in the low growing vegetation, or being destroyed by future preparation works for forestry outside of the nature reserves (Ek & Onsten-Molander, Landskapskaraktärsanalys för Västmanlands län, 2016) (Ulfhielm, Kulturhistorisk inventering inom 2014 års brandområde, 2016).

Presently, the forest is in the very beginning of regrowth. Blackened, dead trees that still stand on burned roots

may fall silently in the wind, and large areas resemble giant scale pick-a-stick games with tall pine stems lying across one another. Mire areas distinguish themselves in the landscape with clusters of black stems, burned bare of their crowns and branches. The landscape is still dominated by the bare rock revealed when the detritus burned, and long grooves from the movement of the glacial ice reveal the direction of glaciers during the last ice age.

In autumn, the vast open spaces are covered in low brush and yearling plants, the landscape resembling that of the mountainous tundra hundreds of kilometres north of Bergslagen. Low shrubs and brush in vibrant fall colours give the ground a softened appearance, with large boulders and bedrock breaking through irregularly. In the winter time, this forest is black and grey, dominated by blue sky and vast vistas of rocky landscape with soot black stems. The bark has fallen away to reveal the brown-orange inner layers, which with time pale into a light grey. The pattern in which the bark has fallen reveals the species of tree, with pine bark hanging of the stem in large sheets before falling, giving the tree and peeled appearance. Fir bark falls in smaller vertical slivers and give the stem a spotted look. In early springtime, the landscape takes on a slight pink-purple tone from the stems of young leaf brush which has been quick to sprout in the early years after the fire. The purplish-red stems in combination with the dead material from the last seasons after the fire create a stark contrast with the black stems of the trees still standing, the grey-white bedrock, and the large blue sky of the open landscape. At once repetitive and nuanced, the burnt landscape possess a unique and haunting beauty.

During the life time of the people who experienced the fire, the forest will regrow into young, brush forest with little to no berry and mushroom growth. The young trees and sprouts will attract larger game, both deer and moose are prevalent in the area. With them there is also potential for larger forest dwelling predators such as lynx and even wolves to follow, as both are already established in the region.

The Fire

On the 31st of July 2014, a Friday in the middle of an exceptionally hot and dry summer, sparks from a forestry vehicle cause the dry forest floor to catch fire. In the following week, the fire spread to approximately 13 100 hectare, 131 km² (Myndigheten för samhällsskydd och beredskap, 2015), the largest single fire in Sweden in modern times (Dickson, 2019, p. 4). To communicate the scale of this, a comparison can be done to with Sweden's second largest city, Göteborg, which counts its urban area to 233 km² (Wikipedia, 2019).

Despite GPS data from the forestry vehicle the fire fighters get lost on their way to the initial fire. The site is deep inside the forest, with geographical names that usually only appear on forestry maps and are reached by narrow gravel roads used by forestry workers. The maps available to the fire fighters are old, and the road in to the felling area is new enough that it does not appear on any available maps or GPS systems (Karlsson, 2017, p. 16). Before they arrive at the site, the initial fire area of 30 by 30 meters has expanded to encompass an area of 300 by 1000 m. In the following two days the fire grow to an area of 2700 hectares (2,7 km²), and the first preparations for evacuation of villages close by are done. In addition to the three municipal fire brigades local residents and farmers help with the firefighting effort. The use of agricultural machines and above all manure spreaders to water circumscription lines play a large role in aiding and supplementing the fire brigades.

Sunday afternoon a warning that the situation is worsening is sent out and the day after, Monday the 4th of August, will afterwards be described as the most critical point of the fire. In the aftermath it is referred to as Black Monday ("Svarta Måndagen") both in stories and the written documentation (Gustavsson, Skogsbranden i Västmanland 2014, 2015). The fire spread uncontrollably with the hard wind in inaccessible terrain, with an estimated speed of 2,5 km/h and a top speed of 5 km/h on the Monday (Ek & Onsten- Molander, Landskapskaraktärsanalys för Västmanlands Län, 2016, p. 96). Time and again the fire jumps across demarcation lines, with fire fighters at the risk of quickly being surrounded. From Sunday afternoon

the fire grow fivefold from 2,7 km² to 140 km² Monday evening. During the afternoon and evening the villages Gammelby, Västervåla and Ängelsberg, along with farms and settlements in the surrounding areas are evacuated. The evacuation efforts encompass approximately 1000 people and 1700 animals (Gustavsson, Skogsbranden i Västmanland 2014, 2015). Evacuation plans for Norberg, a city of approximately 4600 people, are being arranged and initial preparations put through with busses sent to the town square to await evacuation orders.

There are plenty of stories from the fire during the black Monday, several of which are well documented in literature and new articles after the fire. Fire gases ignite in the treetops and due to the harsh winds the fire leap 1,5 km across lake Snyten, which had been considered a natural North demarcation line in the extinguishing strategy. Part of the forest and one building catch fire, and from this secondary fire area there is only 10 km to Norberg. The second fire is quickly discovered, and farmers coming in from Dalarna with refitted harvesters to be used as water tanks are intercepted by locals at the village Broarna. They can almost instantly start combatting the flames, and limit the second fire to an area of approximately 300 x 500 m. Several times fire fighters and forestry workers aiding in the extinguishing efforts all over the fire area are surrounded by the fire leaping the demarcation lines and need to be rescued by army helicopters partaking in the efforts. One of the most dramatic stories retell the rescue of five people caught in the fire whilst driving a water tank truck. Surrounded on a cliff by the lake shore, the workers were winched up in an army helicopter from the lake waters. Monday evening two forestry workers were caught in the fire in the North, just outside of Stabäck. One man perished, and the other was saved by three fire fighters from Virsbo after being lost in the flames for two hours.

Several dry weeks with unusually hot temperatures preceded the fire. This, in combination with the hard winds made the fire spread at a unpredictably rapid pace. Smoke and ashes spread across a large area far exceeding the fire itself, primarily North into Dalarna.

Smoke and ash also spread far South-East, enveloping Sala and reaching Västerås, Uppsala and eventually the North-West suburbs of Stockholm. The fire affected four municipalities, with three separated fire brigades involved in the firefighting efforts. The scale and chaotic course of the event warranted extensive cooperation and incident coordination leader Lars- Göran Uddholm, was appointed by the national government through Länsstyrelsen on the 5th of August (Gustavsson, Skogsbranden i Västmanland 2014, 2015). In the aftermath and the stories from the fire, Uddholms appointment has been retold as vital in strategizing and succeeding with the confinement and extinction efforts. In addition to the local fire brigades, firefighters from all over Sweden, and European fire airplanes, local farmers and forestry workers' knowledge of the geography was vital in the inaccessible areas.

The area that burned was more than twice the size of the previous record fire in Halland, which encompassed 600 ha, and it would take more than two weeks until the fire was regarded as under control, one and a half months before Länsstyrelsen hand over control of the extinguishing work to the regional fire brigades, and more than 6 months before the fire is declared as put-out (Gustavsson, Skogsbranden i Västmanland 2014, 2015).

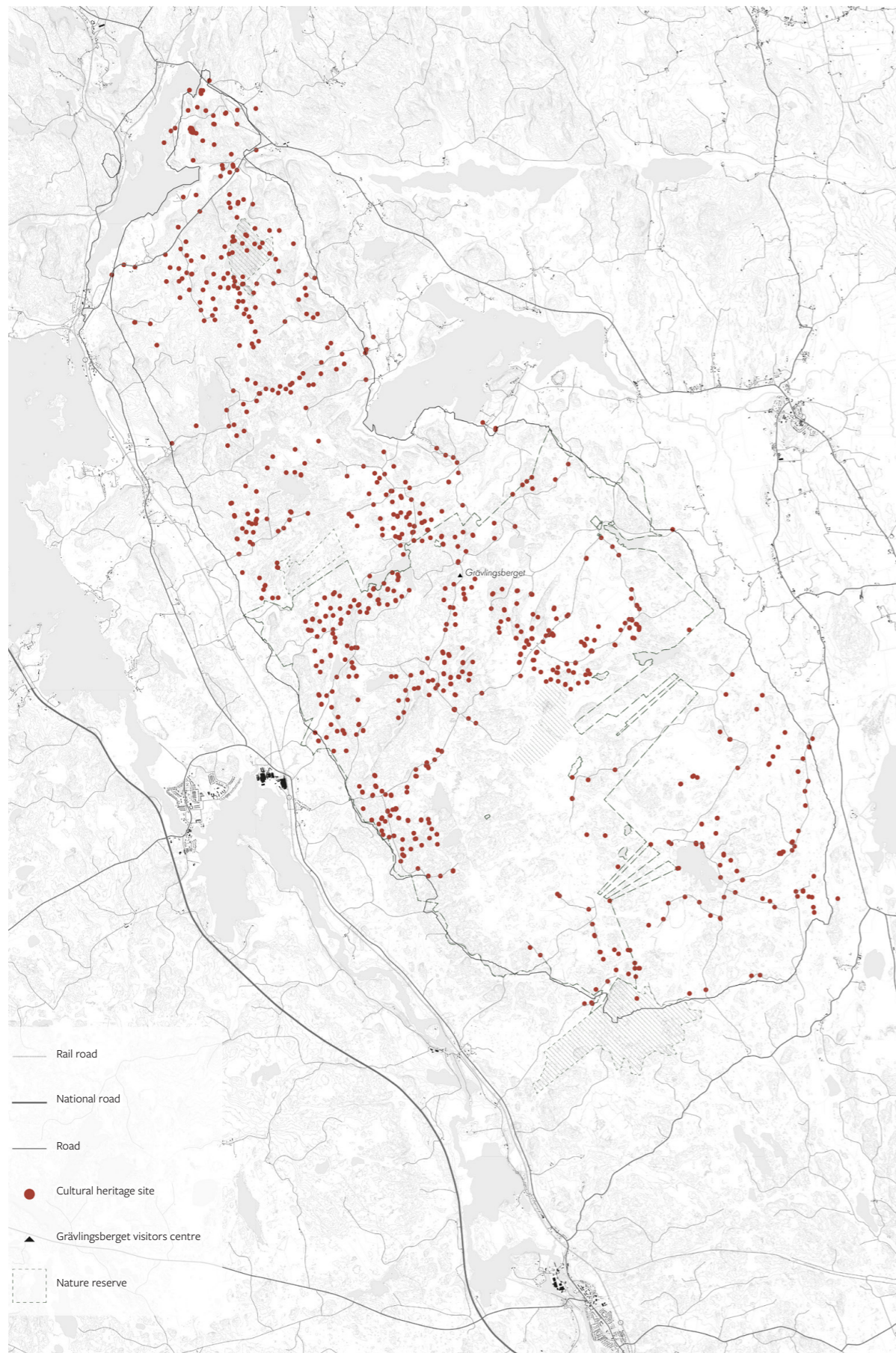
The fire, known locally as 'The Great Forest Fire', and nationally as the 'Västmanland Fire', has changed the landscape to an extent that the people who have lived by, worked in, and been in the forest for generations no longer recognized it as it once was. Old landmarks, demarcation lines and the forest rooms are gone, and now in a process of re-establishment. It will take an estimated 80-90 years before the forest is back, in regards to trees re-growing and regulations regarding cultivation and forestry, and the new forest will be significantly changed from the previous coniferous one.



The fire area superimposed on Göteborg



Fire area, September 2014
(photo: Helstrand, J.)



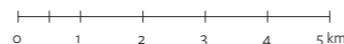
Cultural Historical Landscape

In the preface to the 2016 report from the cultural history inventory of the fire area, commissioned by Västmanlands county government agency (Länsstyrelsen) the value of the forest as cultural heritage is emphasised along with the importance of making the new knowledge about the landscape available to land owners, stakeholders and the general public (Ulfhielm, Kulturhistorisk inventering inom 2014 års brandområde, 2016, s. 1). Before the Västmanland Fire it was known that a smaller number of ancient structures and remnants existed in the area affected. Furthermore, the importance of the region during the industrialisation and the period of the ironworks and iron mining in the region is well established and documented (the regions' cultural name, Bergslagen, is from the original "Bergslag", a corporation of people who had a right to mine and harvest the mountains in a particular region).

Monument and artefact remnant inventories have previously been done in the area, in 1963 and 1989 when the previous investigation was revised and updated. These were focused on ancient (pre 1850's) monuments and artefacts and were primarily looking at the infields. A third inventory was done after the fire, carried out in two sections in the fall of 2015 and spring of 2016. Within the fire area there were 44 previously documented cultural heritage remnants, and the first part of the inventories was to find and examine these for damages from the fire. The second task of the cultural history inventory was to investigate different sections of the fire area looking for previously undocumented and unregistered cultural heritage sites. After the full investigation a total of 720 cultural heritage sites and remnants have been registered to the Swedish National Heritage Board's registry and database, including the previously known 44 sites (Ulfhielm, Kulturhistorisk inventering inom 2014 års brandområde, 2016). Several areas had not been inventoried before and because of this they have not had cultural heritage remnants registered prior to the fire. However, it has previously been speculated and surmised that there have been more monuments and remnants in the area in addition to those registered before 2015 (Ulfhielm, Kulturhistorisk inventering inom 2014 års brandområde, 2016).

After the fire large areas of woodland ground were uncovered, and cultural heritage remnants that had previously been hidden beneath vegetation were uncovered. The fact that a large amount of production forest and peat covered ground were burnt is a tragedy, but it has also contributed to a large number of cultural heritage sites who had otherwise been hidden, being discovered in the burnt landscape. Because of the time constriction for the cultural heritage inventory project, in combination with the sometimes difficult to access landscape the report concludes that there is a large probability for a number of as yet unfound remnants, in particular charcoal kilns and forest hut foundations. However, ground and vegetation recuperation, in particular since spring 2016, means that these are likely to be hidden under greenery once more, and become almost impossible to find in future inventories (Ulfhielm, Kulturhistorisk inventering inom 2014 års brandområde, 2016).

In the part of the fire area dominated by woodland ground the fire was more intense than in the southern parts, resulting in the detritus being burnt off and the underlying bedrock being exposed (Ulfhielm, Kulturhistorisk inventering inom 2014 års brandområde, 2016). Mostly charcoal kilns and foundations of forest huts for charcoal-burners have been registered in the area, in combination with iron work huts and mills located in close proximity to the rapids and streams crossing the area. An ancient road leading between Nyhyttan village and Västervåla church leads directly through the fire area and parts of the path can still be seen and followed today.



A New Landscape

The total area burnt after the fire was estimated to 13 077 ha, distributed over 12 870 ha land, approximately 9600 ha of production forests, and 270 ha water (Myndigheten för samhällsskydd och beredskap, 2015). The unique ecological conditions left after the fire provided a landscape with conditions friendly to rare and unusual flora, some of which have never before been seen in the region. The summer of 2015 scorch geraniums (svedjenäva, *geranium bohemicum*) were prolific, and the first ever appearance of fire geraniums (brandnäva, *geranium lanuginosum*) was found in the North-East part of the fire area (SVT Nyheter Västmanland, 2015). Both species are listed as red in Artdatabanken, the registry managed by the Swedish University of Agricultural Sciences that collect and register data concerning biodiversity in Sweden. The red category in the directory signifies species that are at risk of severe weakening and extinction.

The fire area can be deciphered into three main regions. In the South the landscape is relatively flat and characterised by large conjoined moors. It was predominately divided into large forest stands, owned and cultivated by large forestry companies. The stands were historically divided into smaller units, with proximity to several small ironworks and the river Åmänningen. During the industrialisation of the forestry practices, they have been merged into the larger parcels of today. The point of origin for the fire is located far South in the burnt landscape, on a felling area previously owned by Sveaskog and close to the border of the eco-park.

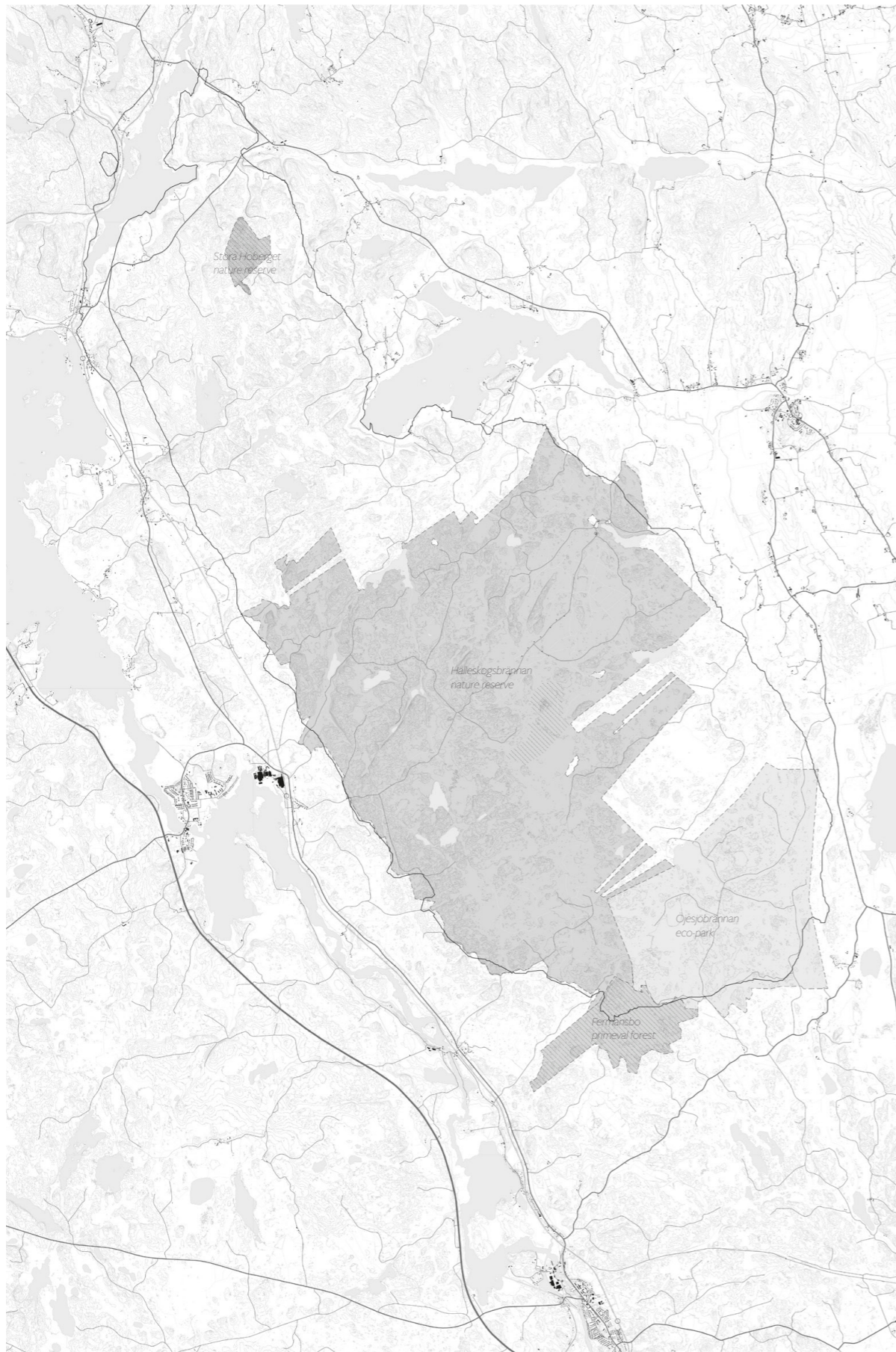
In the South the fire was less intense in comparison to the middle and Northern parts, which were dominated by pine forests and a rocky, mountainous landscape with only smaller networks of moors (Ulfhielm, Kulturhistorisk inventering inom 2014 års brandområde, 2016). Due to hard winds and the inaccessible terrain, the fire was most intense in the Northern parts, which it spread to Sunday evening and Monday the 4th. In both the North and the middle regions the forest detritus burned, exposing the underlying rock. Large expansions of the burnt forest still stand in the middle of the fire area, creating a black and grey forest of dead pine and fir trees. With the exception

of safety felling close to roads, any trees that have fallen is due to winds and the dead roots no longer being able to hold up the weight of the tree. There is a sharp border visible between the middle and the North along the border of Hälleskogsbrännan nature reserve. In the North the vast majority of the burnt trees have been felled in preparation for future production forests. The landscape resembles the mountainous regions of Northern Sweden, with vast vistas spanning large distances. The area is predominately owned and cultivated by private forest owners, who are likely to have owned and cultivated the forest for generations.

There are four areas of protected nature located within or partially within the fire area, three nature reserves and one eco-park. Hälleskogsbrännan, Fermansbo primeval forest, and Öjesjöbrännan eco-park share borders with one another, and together they create a unique situation as one of the largest continuous areas of protected nature in Sweden (Ek & Onsten- Molander, Landskapskaraktärsanalys för Västmanlands län, 2016, p. 99). In the middle of the fire area is Hälleskogsbrännans nature preserve, which covers 6420 hectares. The preservation was created after the fire, and stretch over an area with both the northern and southern landscape characteristics included. At the southern end of the fire area is Fermansbo primeval forest, which is a separate nature preserve. Originally protected in 1984 the preservation was enlarged in 1992 and 2007, and today cover 354 hectares. Since the fire Sveaskog has created Öjesjöbrännan Eco park, an area of 1500 hectares directly bordering the primeval forest and Hälleskogsbrännan nature preserve. The two preservations and the eco-park together connect 8274 hectares of forest with various characters: hilly pine forests, lakes, moorlands and primeval forest.

Hälleskogsbrännan nature reserve was created in 2015 by the county administrative board, Länsstyrelsen, in order to protect the unique ecological conditions and landscape left after the fire. It is located in the central and South-West part of the landscape and covers 6420 ha, almost half the fire area. To the South is Fermansbo

primeval forest nature reserve, which covers 345 ha and was created in 1984. This primeval forest has an average tree age of 150 years, which may be a contributing factor to it being relatively unaffected in the fire. Older forests standing on water rich ground are generally more resilient to forest fires (Karlsson, 2017) than homogenous production forests that are felled when they are between 70-90 years old. East of the two nature reserves Sveaskog forestry company created Öjesjöbrännan eco-park with 1570 ha with the lake Öjesjön close to the initial burning point. The eco-park has a partial protection and does not fall under the same regulations as a nature reserve. Eco-parks are created on the initiative of the land owners in an agreement with Skogsstyrelsen, with a contract of protection for a maximum 50 years and run by the land owners. In the Northern part of the fire area is Stora Hoberget nature reserve, established in 2007. It is considerably smaller, only 27 ha centred around Stora Hoberget Mountain. Due to the intensity of the fire during black Monday the pines that grew in the forest here have almost all fallen in winds after the fire. The oldest archaeological finds of the cultural historical inventories were made here, with relics dating 9000-11000 years old (Ulfhielm, Kulturhistorisk inventering inom 2014 års brandområde, 2016). Stora Hoberget is the least accessible of the protected areas, with steeper terrain and small forest roads leading to the nature reserves parking and visitors point.



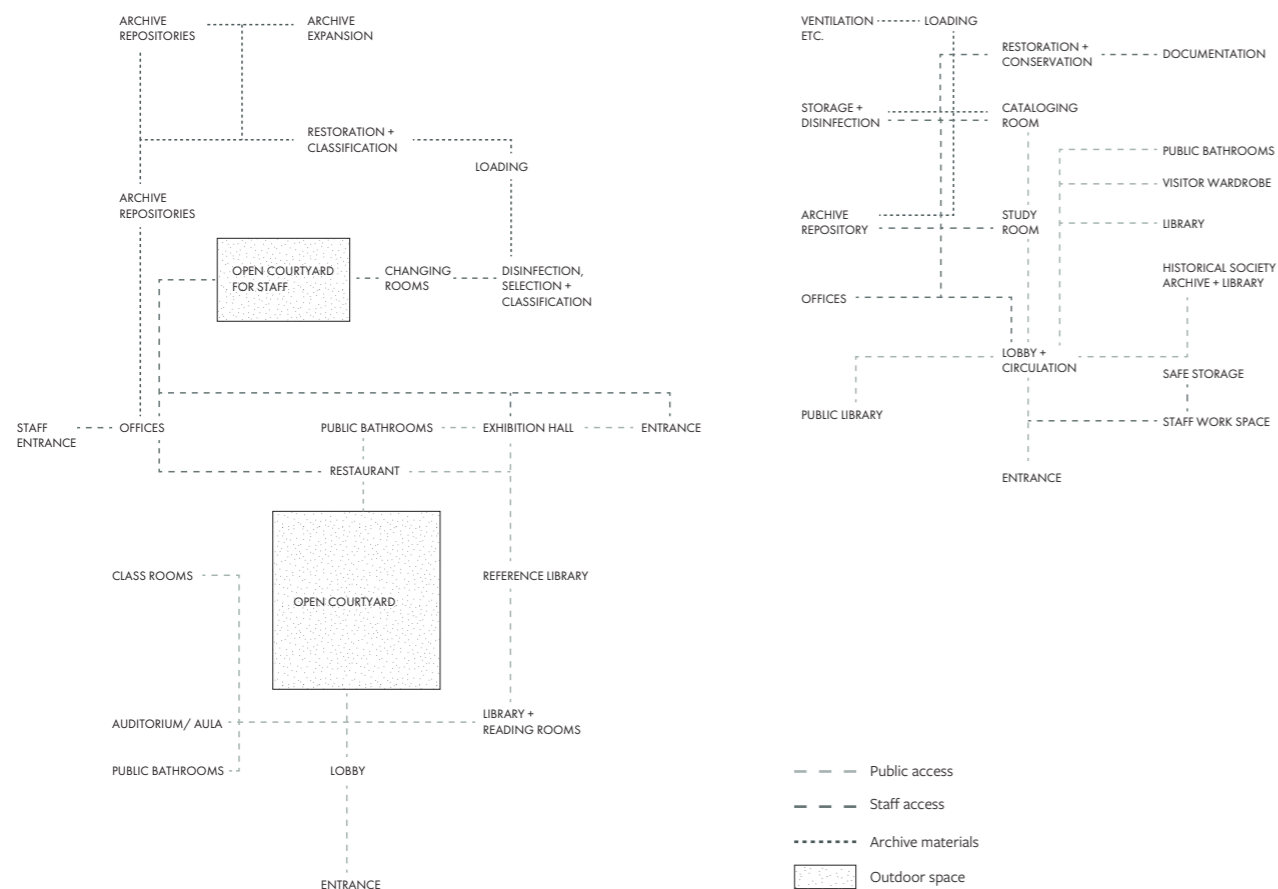
Hälleskogsbrännan, April 2020

References - Spatial Sequence

To understand the spaces and arrangement of rooms and functions necessary to an archive, two main references have been studied: Oaxaca's Historical Archive Building by Mendaro Arquitectos and the Public records annex in Vermont, referenced and discussed in Victor Gondos Jr.'s article "Archival Buildings" (1964).

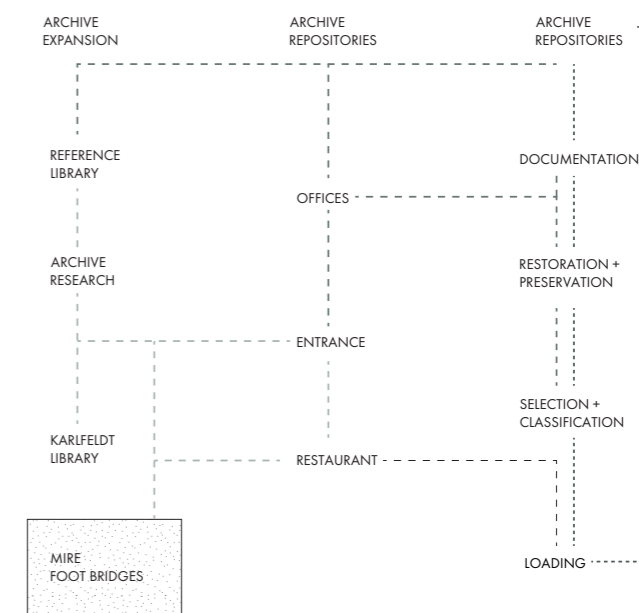
The arrangement of the program is represented in the diagrams with rooms and spaces connected by three access categories: the visitor, the staff, and the archival material. The diagrams are developed from a study of the buildings' plans and sections. Both references are built with three floors, which is not represented graphically in the diagrams. The connection between functions represents both vertical and horizontal circulation. The only outdoor spaces represented are those with particular importance to the architecture of the building and the program. A degree of simplification has been applied, to better communicate a clear diagrammatic representation of the buildings.

From studying the references a schematic arrangement of the program suitable to the specific conditions of the site and adapted to the idea of the archive of a landscape has been developed. Similar to the diagrams from the references, the schematic representation is simplified and does not show the division between levels and separation in buildings. The proposed archive building is significantly smaller than the references, and the required space for future expansions of the archive is available on the site. The size of the design proposal is adapted to the initial demand for space and interest in the archive materials.



Oaxaca's Historical Archive Building (right)
Preserve and protect the documentary collection of Oaxaca's Heritage
11 815 m², 2017

Vermont Public Records Annex (top)
Annex to State Library and State Historical Society Building
5 284 m², 1963



Landscape Archive
Thesis Proposal
1792 m²

References - Architecture and Materiality



Field barn, Västmanland

Grävlingsberget visitors centre Hälleskogsbrännan, Västmanland

PROGRAM:
Visitors centre Hälleskogsbrännan nature reserve
Lookout tower, windbreak, wc, parking

RELEVANT DESIGN ELEMENTS:
Relation to site and the nature reserve

Field barns Västmanland

PROGRAM:
Storage

RELEVANT DESIGN ELEMENTS:
Placement in landscape
Structural logic
Typology - construction and proportions

Engelsberg Archive Engelsbergs bruk, Västmanland

PROGRAM:
Archive for Nordstierman business concern
UNESCO World Heritage site

RELEVANT DESIGN ELEMENTS:
Typology - transformed barn into archive repositories
Placement of buildings in landscape

Naturum Fulufjället Fulufjället National Park, Dalarna

PROGRAM:
Nature room - information centre for the nature preserve

RELEVANT DESIGN ELEMENTS:
Meeting building - ground
Framing of views
Daylight solution

Nedom berget, bort mot skogens gränser,
breder mossen ut sig, flack och sank.
Mellan låga, starrbevuxna tuvor
skymtar vattenytan fet och blank.

När vid påskatid ett andpar sjunker,
trött av färden, hitåt ned ur skyn,
flyr de strax ånyo, vill ej smutsa
sina vingar i den bruna dyn.

Snart står skogen som en pingsklädd stuga,
grön och lövad efter veckans verk,
och en nykläckt hägg står vit på golvet,
som en flicka i sin nattvardssärk.

Men med stilla svärmod fäster mossen,
likt en fattig och förgråten brud,
ljusa hardun, bleka hjortronblommor
mellan vecken av sin blacka skrud.

Och när inne genom trädens skymning
vina tjäderflykt och morkullssträck,
surrar här blott sländan, välva grodans
simtag tunga vågor som av bläck.

*

Torparflickan, sökande i skogen
en förirrad ko i sommarkväll,
kommer hon till mossen, tystnar hastigt
hennes lockning, drillande och gäll.

Hon har hört, att hållfast gyttja gömmer
mången hemsk och blodig hemlighet.
Stundom som ett nödscri ut till bygden
ljuder tranans skrällande trumpet.

Barn, av sina egna mödrar strypta,
när ännu de knappt sett livet gry,
rike färdmän, rånade och dräpte,
sova i den bottenlösa dy...

Och med ögon lysande av rädsla
spanar barnet mellan al och tall:
spöklikt över mossens döda pölar
svävar dimman, stinkande och kall.

chapter 4

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Design Proposal

Program

An archive is a collection of documents and materials selected for permanent preservation because of their importance as a source for research, historical or contemporary, or as records evidence of the past. The objective is to protect, preserve and organize information in order to make it available for contemporary and future users. An important aspect in this is that in order to access information, researchers and users need to know that the information is preserved and exists in an archive, and where.

The full meaning of an archive should not be read or understood solely on the value of the individual items, but rather the value comes from its context: the material's internal relationship and with other records and the organisations and communities that create and use them. Archives have value because of their connection to nations, regions, communities and individuals - they are our recorded collective memory (The National Archives, 2016).

When modern society manifest collective memory in built form the common place and typology is a memorial or museum in an urban setting. The intention of placing the thesis proposal for an archive in a rural context rather than an urban one is to afford architectural focus, care, and value in a context which is less often distinguished. The projects intention is to serve as a place for knowledge and information gathering and generation, and in doing so additionally commemorate the Västmanland Forest Fire. By manifesting collective memory in a rural setting, the thesis project is making a statement that events that take place in the hinterland are equally important to interests outside of the regional area as events that take place in urban centres.

The choice of program, an archive of a landscape, is made as a comment on what we as a society choose manifest as collective memory in built form. An archive is chosen as a more relevant program than for example a museum, because of its dynamic task of collection, preservation, and distribution of information (Press, 2019).

Arguments can be made both for the centralisation and

decentralisation of archives, and different strategies are applied depending on the archives material and access to space. In the article "Archival Buildings – Program and Planning" for The American Archivist, Victor Gondos Jr. recommend that the archive should be located centrally with respect to where the largest number of users are and that the most important factor to take into consideration is the access to space for future expansion of the repositories (Gondos, 1964, s. 468). Beyond this, five general principles for choosing a location for the archive are proposed:

1. Proximity to the organisations which the archive relates to, and from where the archival materials are collected.
2. Proximity to cultural and research institutions that benefit from and utilise the archive, which may have a cooperative relationship with the archive.
3. Near the centre of public life.
4. Away from fire-threatening establishments, districts threatened with flooding and areas with harmful airborne particles.
5. Away from areas especially threatened in times of war and societal unrest: closely built and densely populated areas.

As these five points were developed to cover as many situations as possible, they are at several points contradictory, and have to be weighed against each other with the situation, context and purpose of the specific archive in order to be prioritized and adjusted to the specific project.

For this project the first and second point have the biggest importance and relevance to the cultural context and the design proposal for an archive of a landscape. The site of the project is not centrally located in relation to a specific village or town, but rather to the landscape and the event and place it is an archive of. In terms of cultural context rather than governmental organisational districts, Bergslagen is relevant as the catchment area for the archive. It is a relatively sparsely populated area with

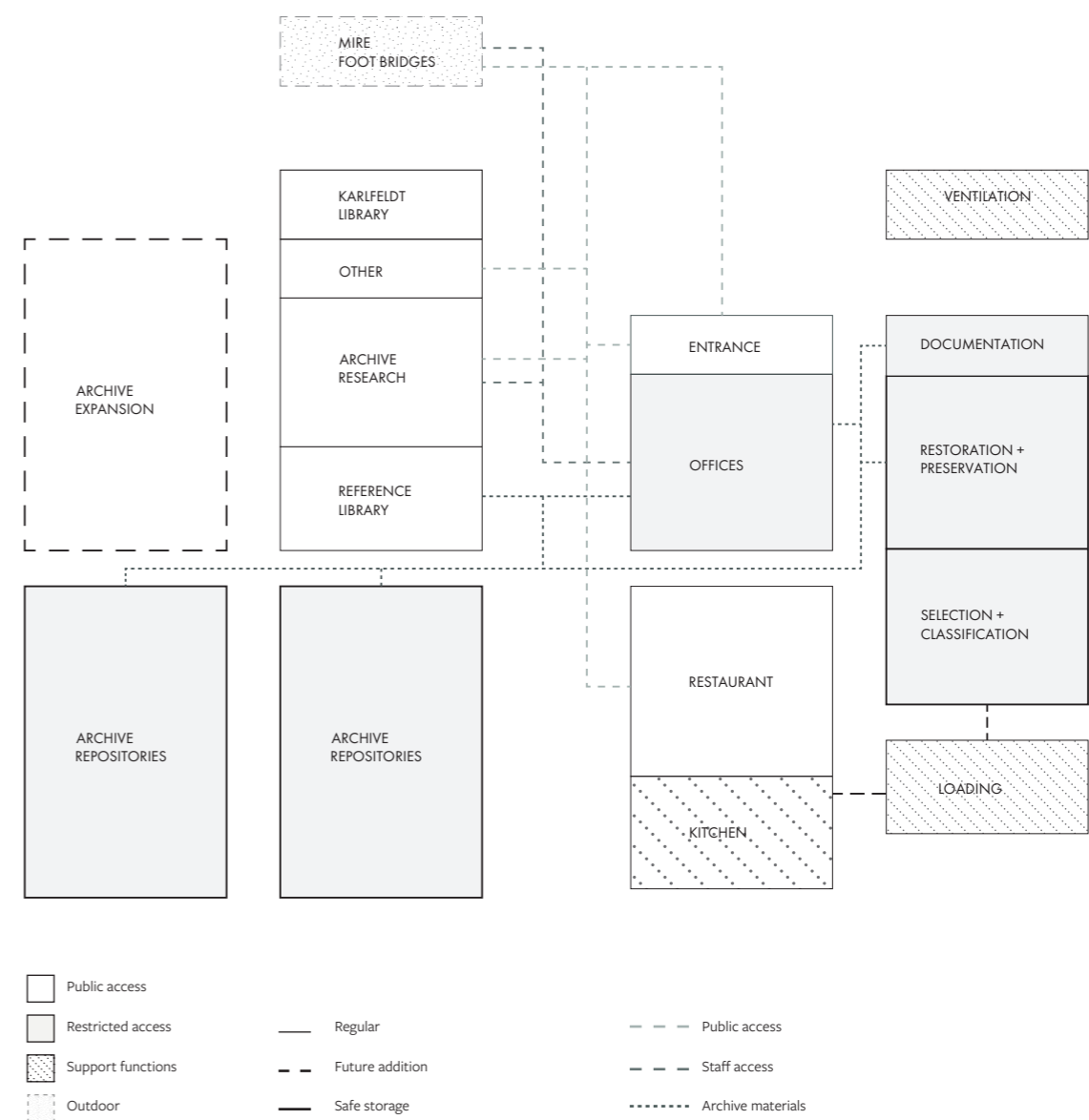
smaller towns and villages with rural character. Centres of public life are widely distributed across large areas, and social gathering points are not necessarily located in the places or towns with the most inhabitants. Rather, the places have emerged depending on geography, local community and individual ties to a place or people.

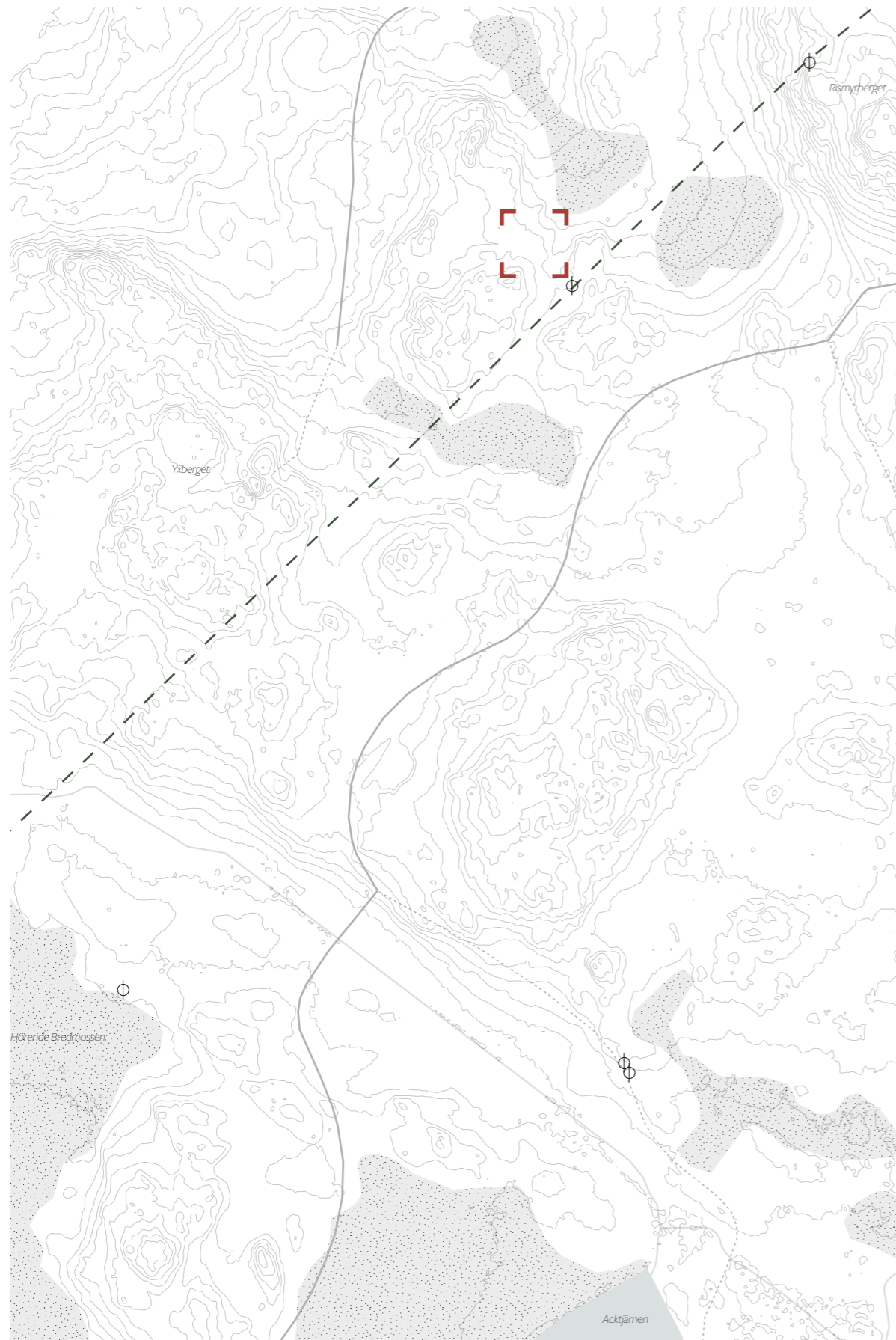
The archival material will focus on the landscape Bergslagen, and primarily be collected from the surroundings. A large section of the archive will be dedicated to materials related to the Västmanland Fire, the forestry and the art created in and referencing the area. Because of this the site for the archival buildings is chosen inside the burnt landscape, at a location which is central in the geography. The accessibility of the archive material in relation to the physical context, the burnt landscape, contribute to the social purpose of a building with a narrative dimension, specifically engaged in the production and transmission of knowledge and cultural content (Psarra, Architecture and Narrative - The formation of space and cultural meaning, 2009).

The units of the archive related to the 2014 forest fire and forestry will benefit from the archive being located being on site, i.e. in the fire area. Users and researcher with regards to research in natural conservation and forestry will strongly benefit from researchers being able to walk the fire area and to directly observe natural processes. Visitors with interests in cultural heritage and historical and archaeological fields will be in the landscape that play a vital role to shape and frame the context of events and periods of.

Archive operations	approx. 360,5 m ² (167,5 + 193 m ²)
Selection and classification	32 m ²
Disinfection	13 m ²
Restoration	45 m ²
Preservation	32
Temporary storage	19 m ²
Photo studio	20 m ²
Dark room	6,5 m ²
Repositories	193 m ² (6 sections)
Offices and entrance	approx. 226,5 m ²
Office area	34 m ² (3 stations)
Lunch and break room	23 m ²
Safe short term storage	10 m ²
Printing + scanning	5 m ²
Office supply storage	4 m ²
Toilets	3,5 m ² + 5 m ²
Entrance and wardrobe	75 m ² (separated into two buildings)
Exhibition space	55 m ² (separated into two buildings)
Toilets	2,5 m ² + 2,5 m ² + 5 m ²
Cleaning closet	2 m ²
Loading area	68 m ²
Loading (archive)	20 m ²
Temporary storage	19,5 m ²
Waste room	9,5 m ²
Loading (restaurant)	9,5 m ²
Waste room (restaurant)	9,5 m ²

Visitors	approx. 290 m ²
Research hall	100 m ²
Karlfeldtsamfundet library	70 m ²
Reference library	75 m ²
Temporary safe storage	12 m ²
Specialised reading - micro film	9,5 m ²
Group rooms	12 m ² + 12 m ²
Restaurant	approx. 125 m ²
Dining area	82 m ²
Kitchen	27 m ²
Fridge and freezer	4 m ²
Dry storage	7,5 m ²
Dish room	4,5 m ²
Support	65 m ²
Heating	9 m ²
Electricity	9 m ²
Sprinkler room	9 m ²
Ventilation	18 m ² + 20 m ²
Total area (inkl. corridors)	1792 m ²





Area map 1:5000



Site

To narrow down the selection of suitable sites for the archive buildings, five conditions specific to the local context were formulated. These conditions were developed during the contextual investigation and the conceptual development of the design project.

1. The site should be located within the fire area.
2. The path to the building has to pass through the fire area, the site should not be located on the edge of the burnt landscape.
3. Walking distance from the archive to Hälleskogsbrännan nature reservation.
4. Not located inside of the nature reservation.
5. Direct access to an existing road inside of the area.

Points 1 and 2 were formulated with the conceptual element of the proposal as having two aspects: the line and the point. The linear element of the proposal engages with the forest as a view and a panorama, unfolding the landscape and telling the story of the fire along the visitor's journey to and from the archive. In this way, narrative aspects of the architecture begins and ends with the landscape outside of the buildings.

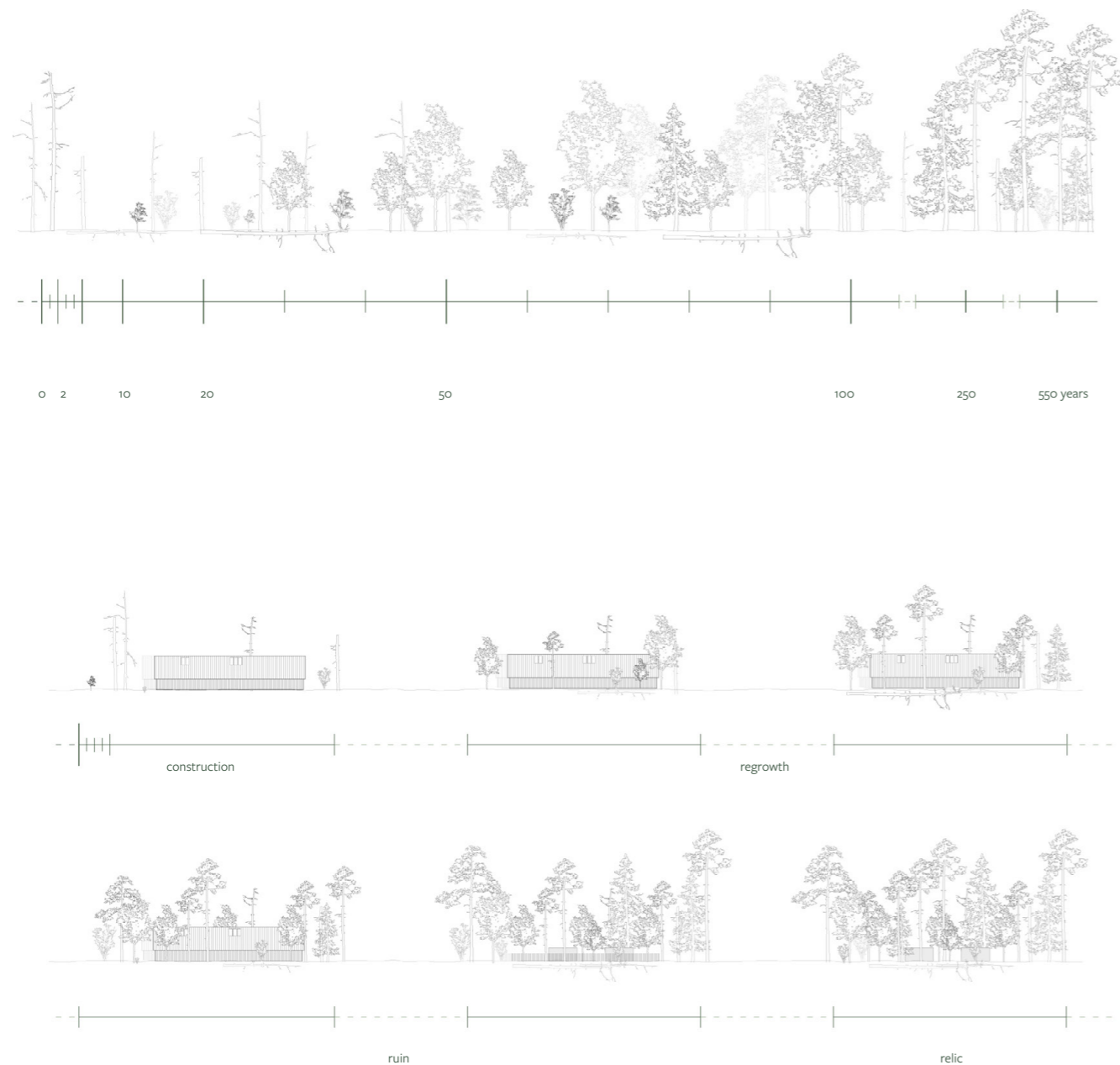
Points 3, 4 and 5 relate to the buildings impact on the landscape. Hälleskogsbrännan nature reserve was created in 2015 in order to preserve the unique biosphere and minimise human impact on the natural habitat emerging after the fire. Arguments for placing the archive within rather than adjacent to Hälleskogsbrännan are not strong enough to override the restrictions of the nature reserve. As the fire area was previously cultivated as production forest, there are several existing roads utilised by cars and forestry vehicles. Changing an existing dirt and gravel road into a more permanent road suitable to servicing the archive is deemed as having a lesser impact on the landscape than building a new road. The forestry roads have been laid out to maximise access to the forests and are adapted to the topography of the landscape.

Access to the archive is either by the road through the nature reserve or an existing forestry road. A shorter new

road is drawn to connect the two existing ones, and will serve as access to the archive. The roads will still be able to be utilised in the forestry.

According to the five specific criteria, several potential sites were located within the fire area. Considering the role of the archive in relation to the cultural heritage environment and the nature reserve, a site between Yxberget and Rismyrberget was chosen as the location for the archive. Proximity to the car road through Hälleskogsbrännan, walking distances to Grävingsberget visitors' centre and diverse natural habitats, and the topographical layout of the site were the final factors taken into account.

Concept - The Line and The Point



Progression
Forest regrowth and archive evolution

The Line:

The line regard the visitors approach to and departure from the archive. Since the intention of the archive, in addition to the protection and preservation of the materials is to tell the story of the landscape and the forest an important aspect of the architecture is the narrative of the building. As visitors travel through the burnt landscape, there is a narrative of the fire and the regrowth of the forest. Passing through it, the landscape is a mute presence all the more impactful because of the contrast between the vast openness of the burnt ground in comparison to the dense forests surrounding it.

The story told by the landscape will change with the seasons and the passage of time, and returning visitors will be told a different narrative of the landscapes regeneration on each visit. Placing the archive by the border of the nature reserve and connecting the two roads add another layer to the story depending on which route visitors chooses. With time, the forest may appear very different depending on this bureaucratic border as it directs the manner in which it is allowed to recover. Though the border between nature reserve forest and production forest may not be as sharp in reality as it is on maps, the location of the archive next to the border will give visitors access to the effects of different strategies for forestry within easy walking distance of the archive.

Though an equal part in the concept and narrative of the archive, the line is a small part of the architectural design proposal. It is a general description of and estimation of how the landscape will transform with a proposed forestry strategy of picking felling and the descriptions from the conservation plan for Hälleskogsbrännan nature reserve by Länsstyrelsen Västmanland (Västmanland's county board).

The Point:

The building is situated on a rise in the topography between three mires, by the border to Hälleskogsbrännan nature preserve. On the topographical rise there are two "peaks" marked: Yxberget and Rismyrberget. The area is situated on a flat rise in the topography with vast views to the North and the West.

The view is a result of the combination of the topography falling drastically in the Western direction and the lack of standing trees since the fire. The trees have either fallen in the wind or been felled as a safety precaution in the creation of the road through the nature preserve. Since both trunks and roots burned in the fire relatively weak winds can cause dead trees to fall silently and unexpectedly. The visible roots or breaks in the trunks signal that a tree has fallen due to winds, rather than the clean cutting surface from a saw. From the direction of fallen trees with roots still attached on the site, the wind is strongest from the West or South-Western direction.

The mires, though situated very close to one another, have distinctly different characters. The southernmost one is almost dry and free from trees or stems originating before the fire. The borders are overgrown with young birch and alder trees. The northern mire is wet, with some trees left after the post fire felling still surrounding it, creating a glade in the open landscape. The third mire, at the foot of Rismyrberget is covered in old pine trees, burnt by the fire. The tops are gone, but the scorched stems still stand in the peaty ground revealing the soil to be richer in oxygen than the other two mires close by.

Line - The Forest



0 - 2 years

The detritus burned, leaving the bedrock bare. The ground has the appearance of a black moon landscape. Underground, several types of seeds and rhizome survived the fire. During the first several years these will sprout and bloom. The first spring after the fire geraniums (*geranium lanuginosum*, and *geranium bohemicum*) bloom in the thousands. Their seeds can rest below the ground for hundreds of years and can only bloom after a fire. Dead trees still stand but will fall in heavy winds.

3 - 5 years

Trees which died or were damaged in the fire fall, where fungi and insects aid in decomposition. Several species of woodpeckers and other birds feed on the insects. Birch, aspen, and other plants cover the landscape, creating the appearance of a lush green carpet across the topography.

6 - 20 years

Birch and aspen have grown approximately 5 - 6 meters tall and leaf trees dominate the forest mixed in with any trees that survived the fire. Young pine trees are starting to sprout. There is plenty of food for moose and other herbivores.

50 - 60 years

The pine trees that survived the fire are still alive. New pine and fir trees have grown large but are still young. These in combination with the leaf trees make the re-grown forest more varied than it was before the fire. Maximum general life span for birch and aspen.

100 years

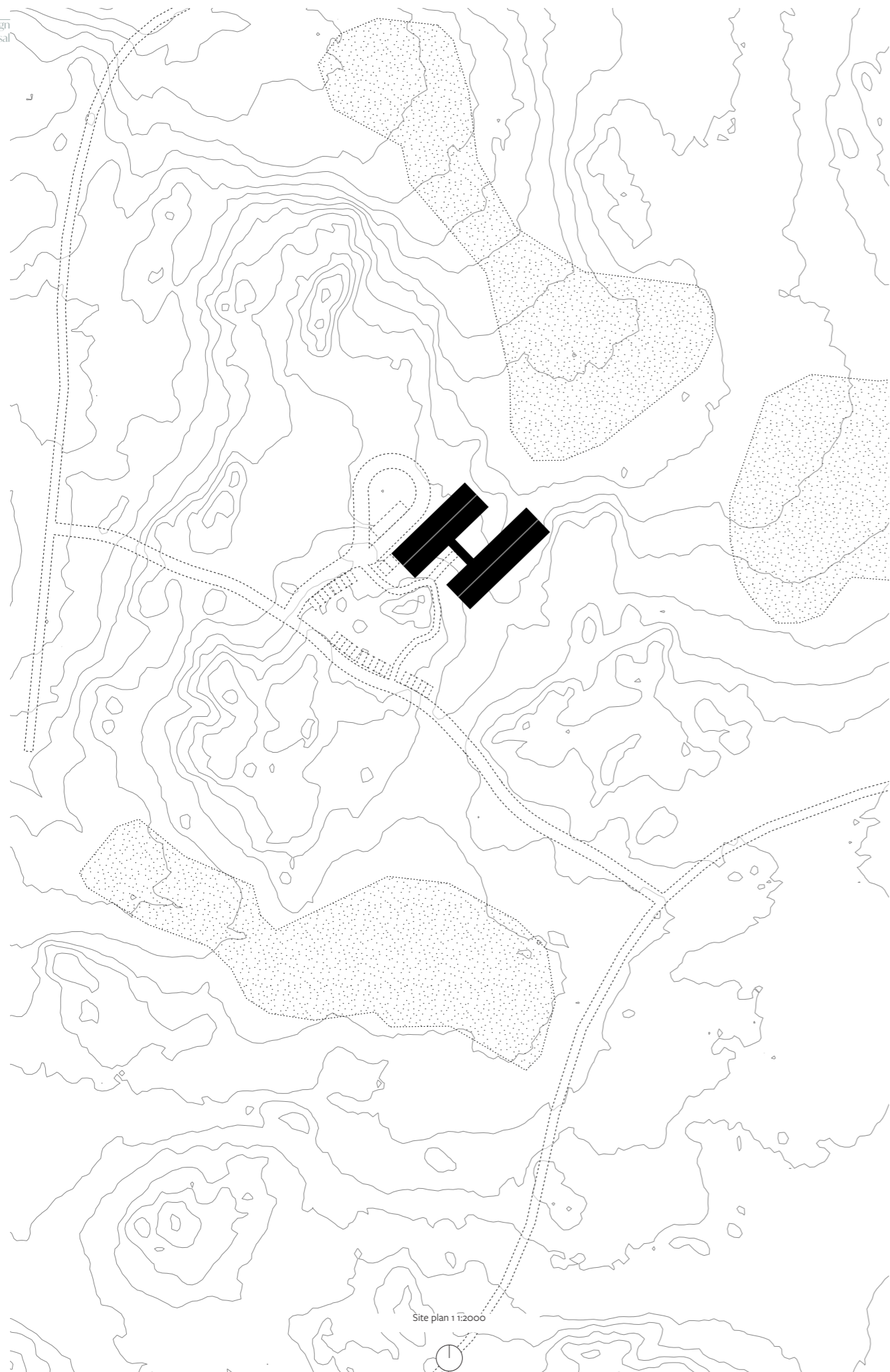
A light mixed forest without brushwood and tall pine trees, both old and new. Birch and aspen are fully grown, and some have even fallen and started decomposing. The forest has very high nature conservation values.

200 - 300 years

Maximum life span for the new fir trees that sprouted during the first years after the fire.

500 - 600 years

Regular life span for the pine trees that sprouted during the first years after the fire.



Site plan 1:2000

Point - The Archive

The design concepts developed for the design proposal originates in the strong impact the burnt landscape has on the site. The design concept for the buildings is the reversed ruin, an additional conceptual layer to the design of the archive. Both aspects of the concept regard time and change, and the reverse ruin concern the evolution of the buildings into ruins over time. The idea was developed in relation to the cultural heritage remnants found all around the fire area. Rather than designing the building with an estimated life span of approximately 100 years in mind, the context of the forest and the cultural heritage environment opens up for a design with a longer perspective. From the beginning the design is looking at what the physical traces left behind from the archive may look like and what hierarchy and spatial sequence they communicate.

Working with the archive as the reverse ruin derivate from the long horizons and expansive time lines adopted in forestry and ecology. The intention is the preservation and protection of the materials, volume B surrounding the repositories can easily be changed, adapted or destroyed in the next fire or storm. At the core of the buildings, the A volumes are protected by the surrounding structure and remain on the ground after the devastation. Eventually, this hierarchy can be read in the ruin of the design.

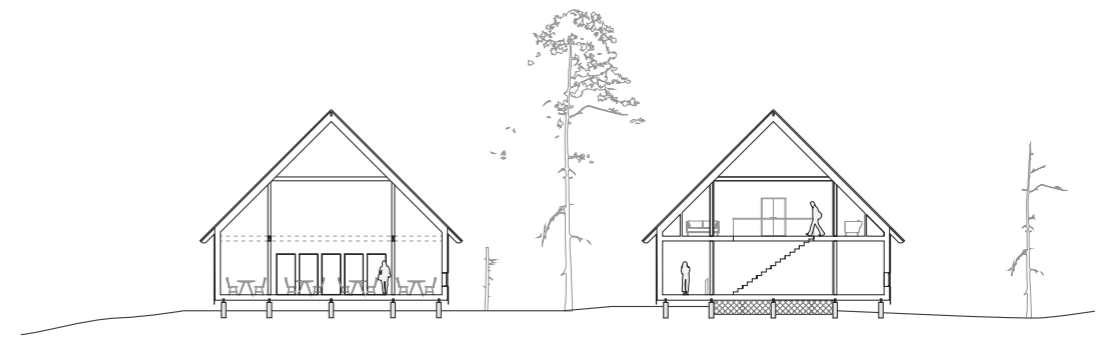
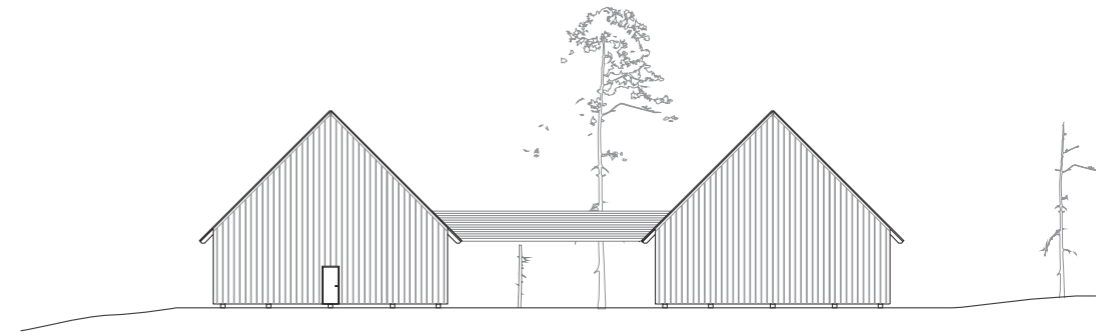
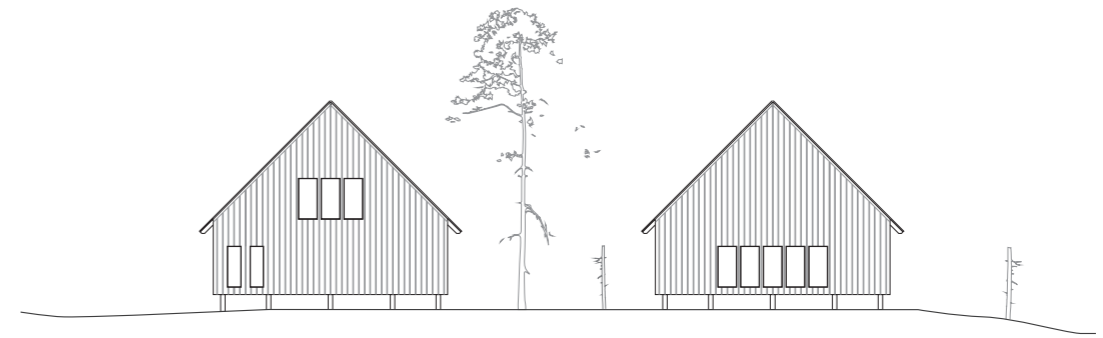
Similarly to the Oaxaca reference, the archive include materials related to cultural heritage and strives for a strong connection to site and context both in content and architectural design. The program is expanded to include functions not strictly related to the archival work, but to accommodate visitors to the nature reserve. The open and exposed character of the site influenced the division of the program into two buildings. The two buildings facilitate a delicate presence and position of the volumes and enable the architecture to frame specific vistas.



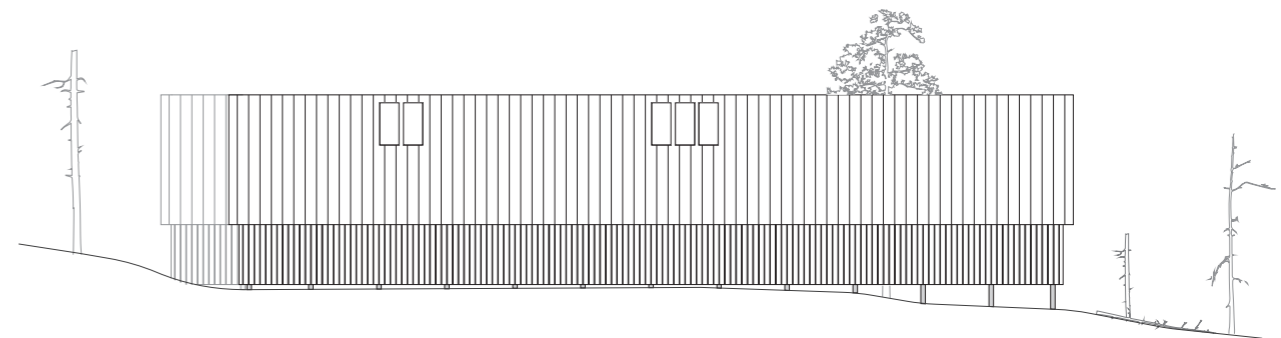
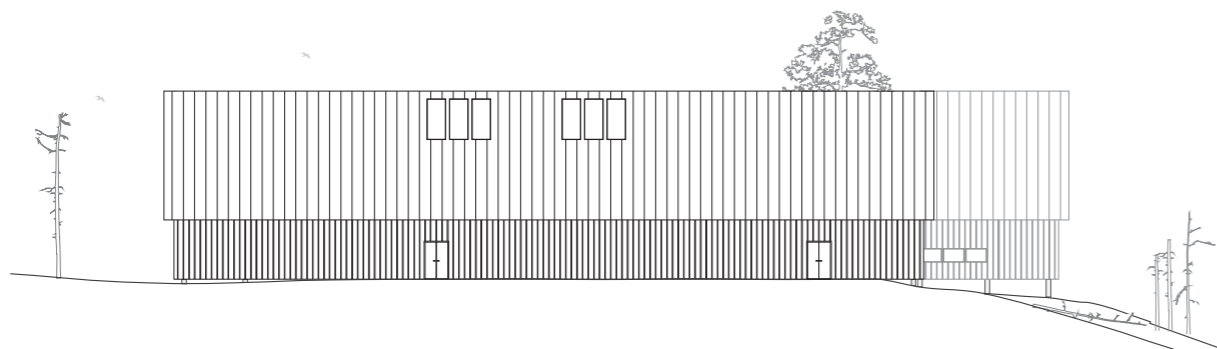
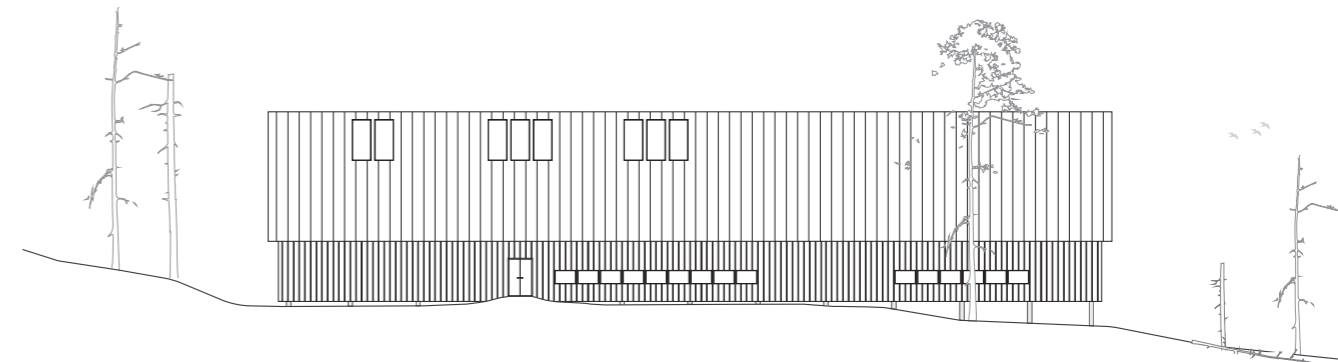
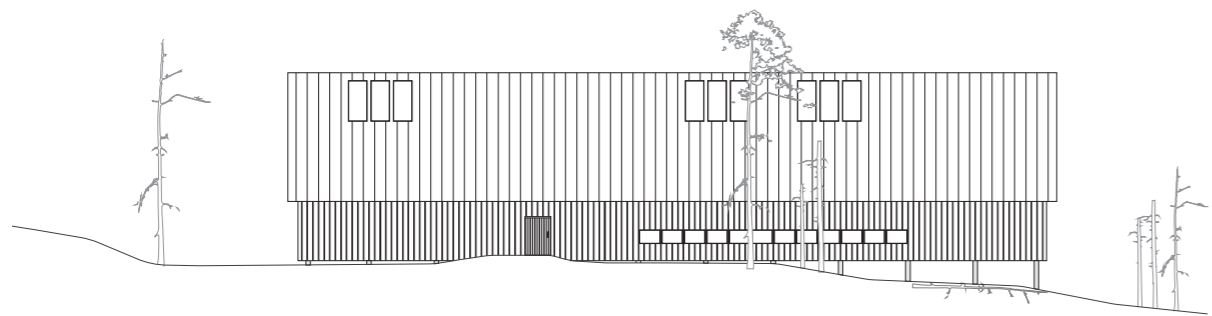
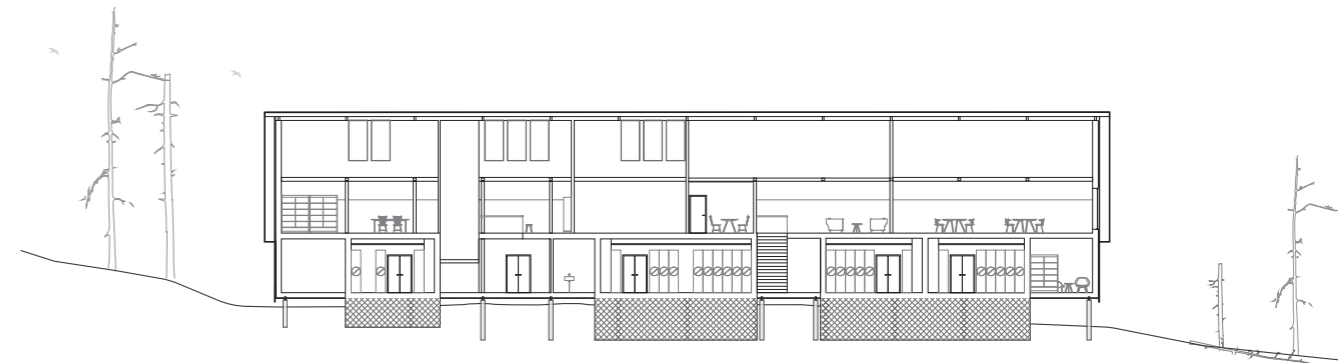
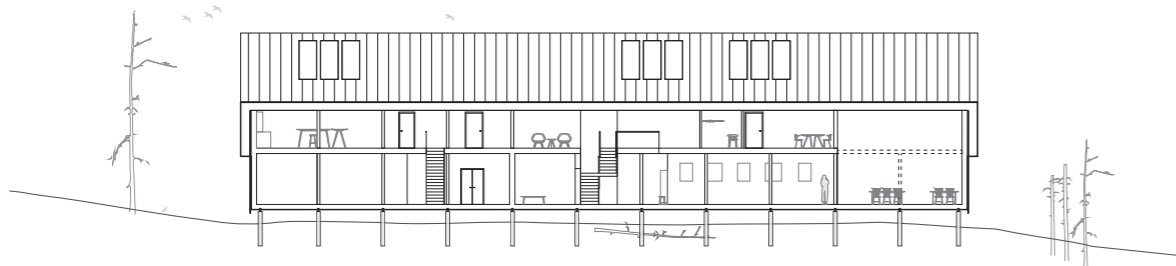
Reverse ruin:
Reference for A volume, hut stove
Reference for B volume, charring pile



Architectural Proposal



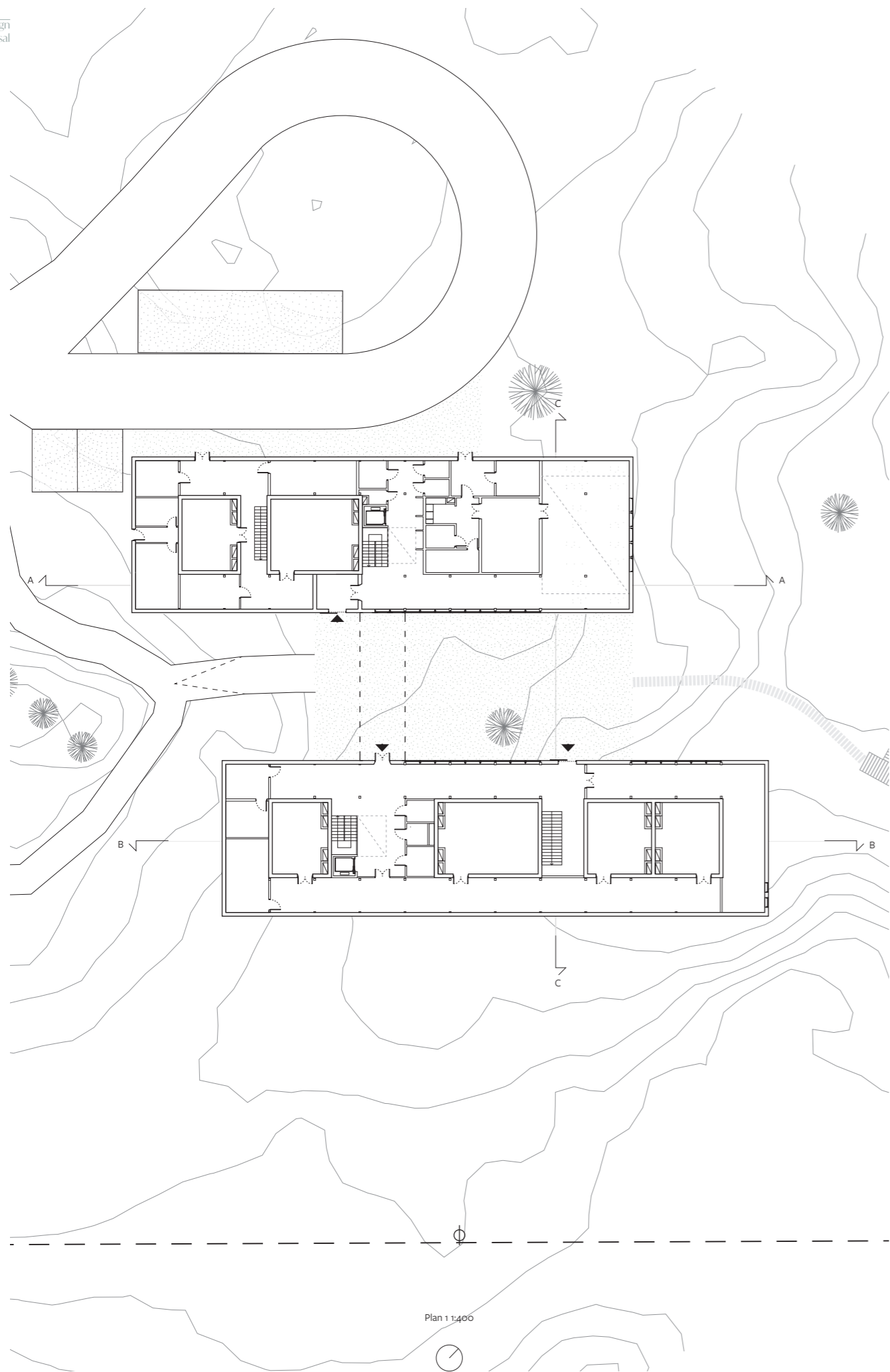
Facade South- West 1:400
Facade North- East
Section C 1:400



Section A 1:400
Inner facade House 1
Elevation North- West 1:400 (house 1 front)



Section B 1:400
Inner facade House 2
Elevation South- East 1:400 (house 2 front)

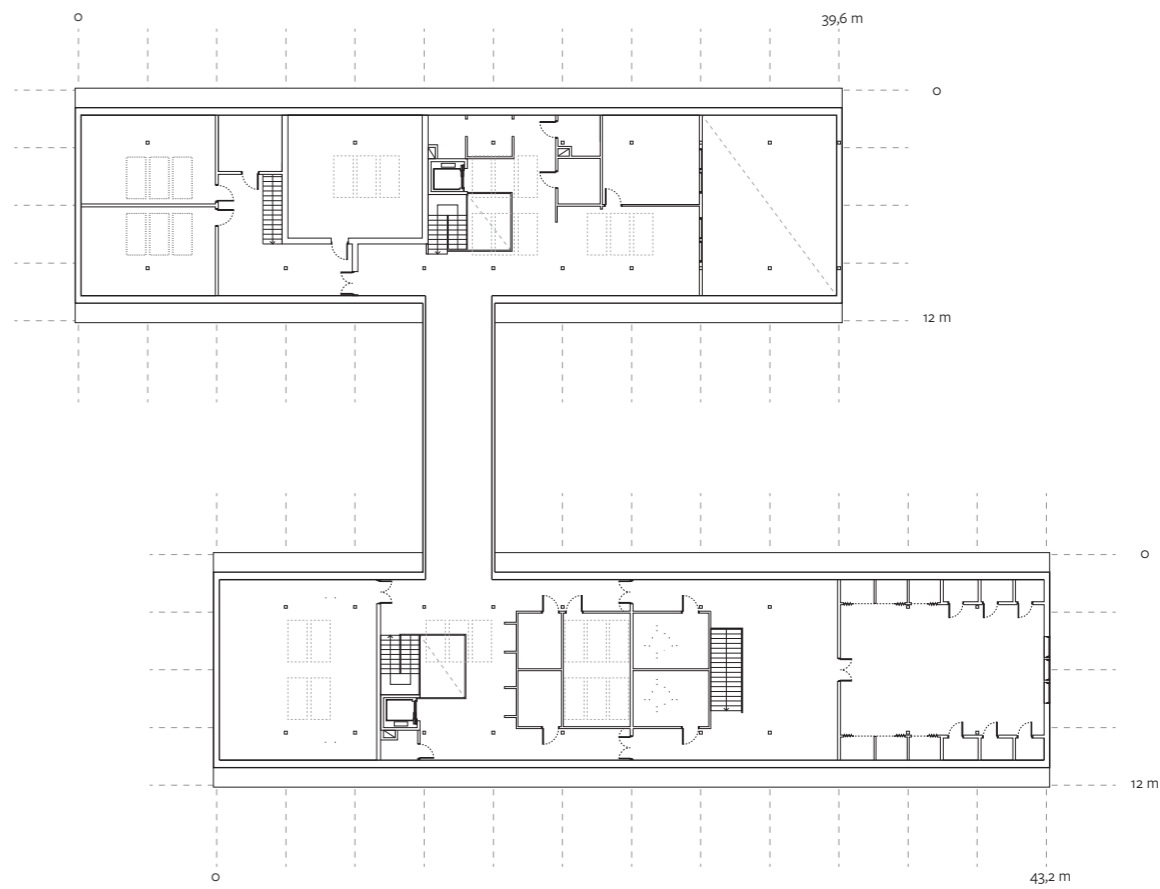


House 1: archive operations
(898 m²)

- Main entrance and exhibition space
- Visitors restaurant
- Archive operations
- Loading
- Repositories

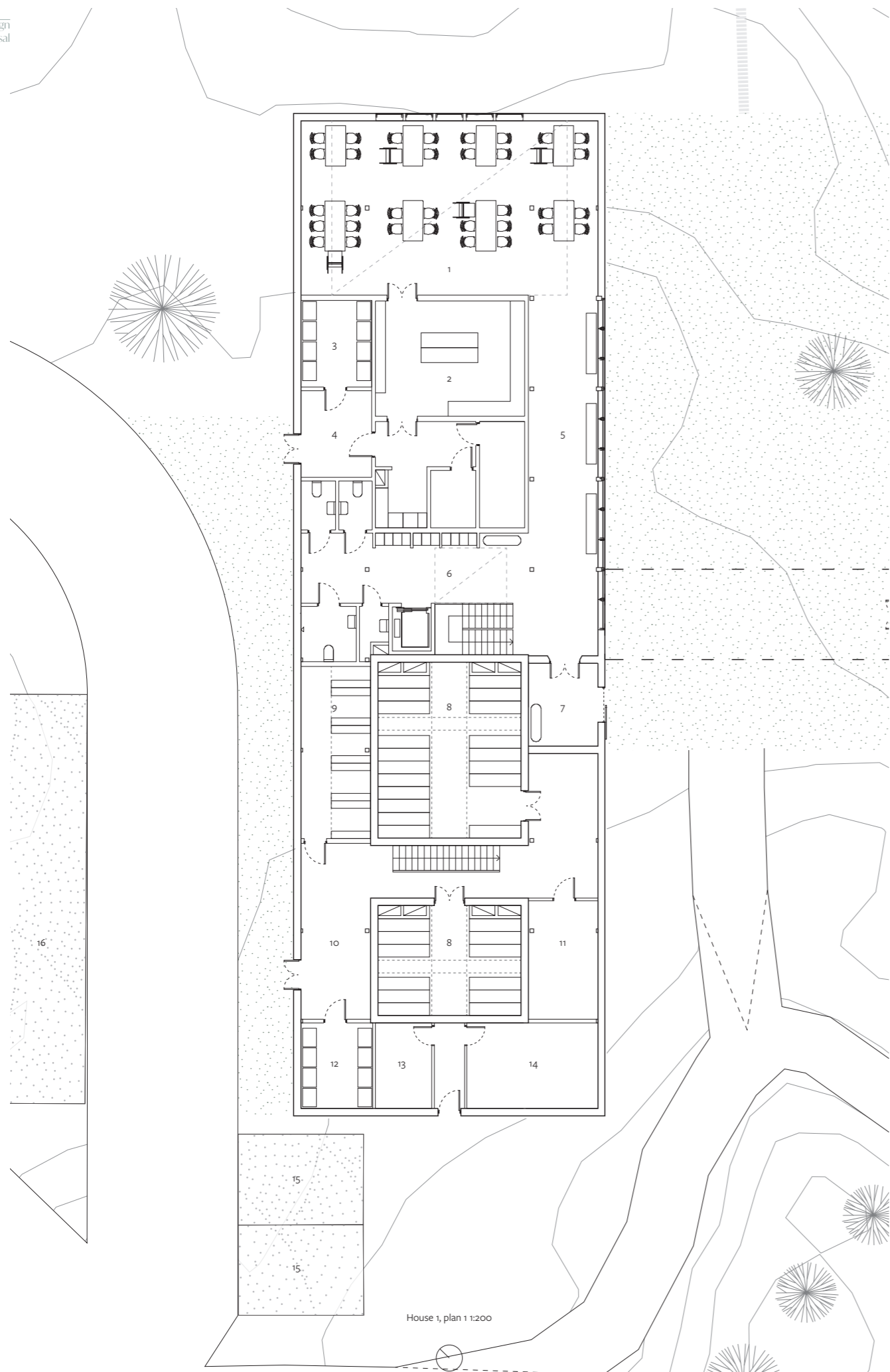
House 2: research facilities
(946 m²)

- Main repositories
- Research facilities
- Reference library
- Karlfeldt library
- Second exhibition space



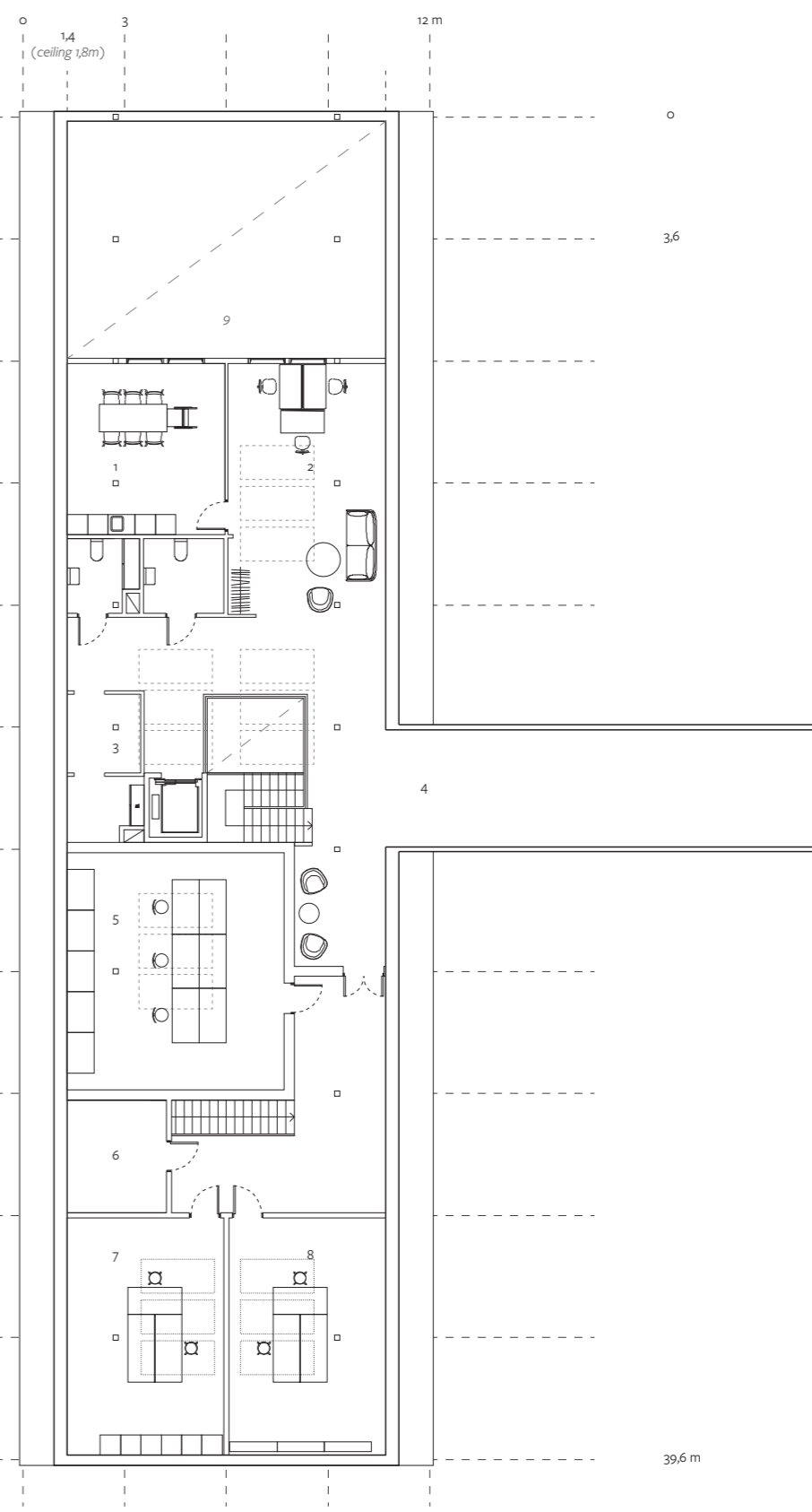
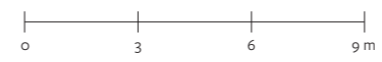
Plan 2 1:400





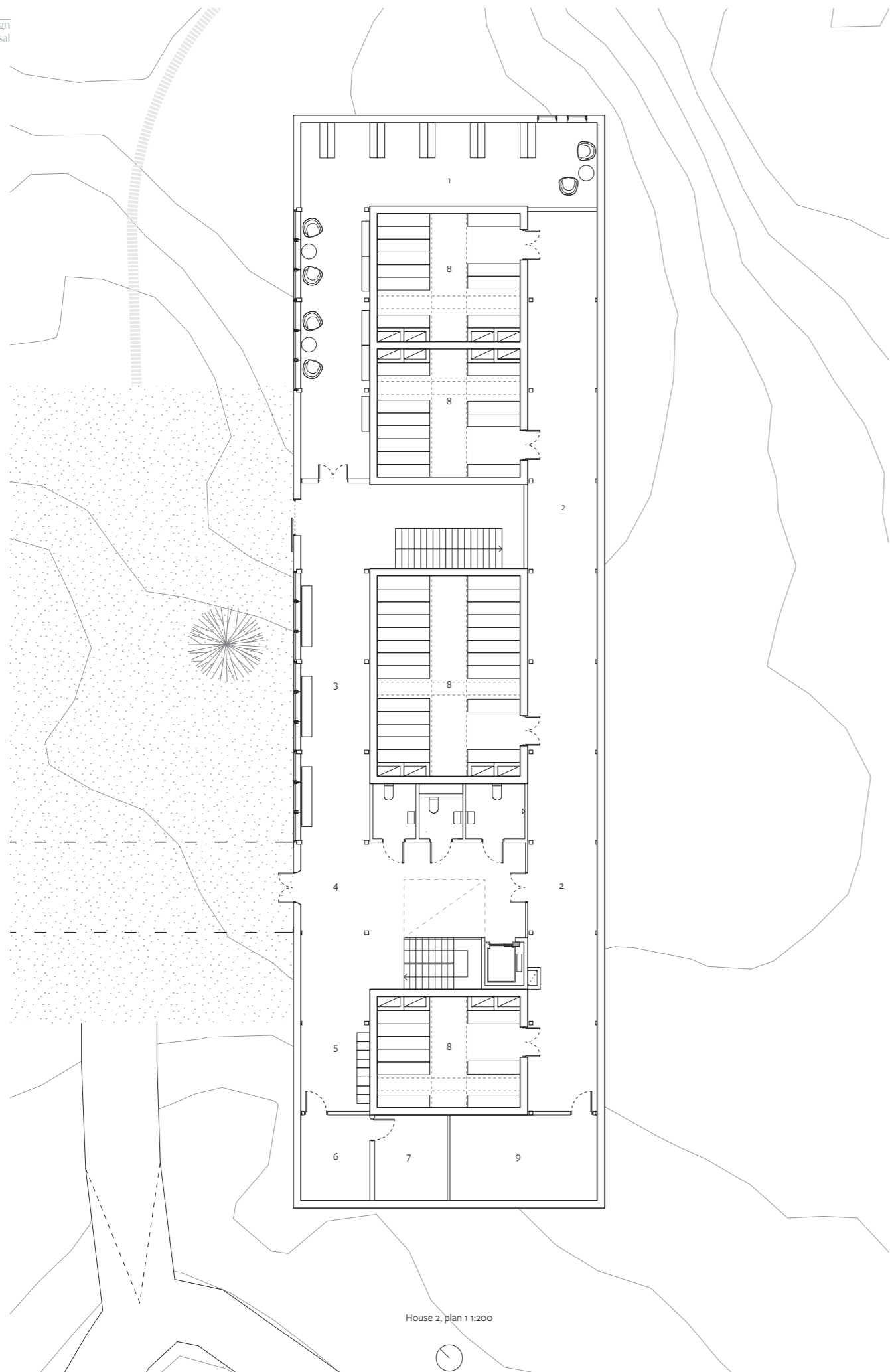
House 1, plan 1 1:200

- Plan 1:
1. Restaurant
 2. Kitchen
 3. Waste (r)
 4. Loading (r)
 5. Exhibition
 6. Lockers and toilets
 7. Entrance
 8. Archive repository
 9. Temporary storage (a)
 10. Loading (a)
 11. Disinfection
 12. Waste (a)
 13. Sprinklers
 14. Ventilation
 15. Handicap parking
 16. Bus drop-off
- Plan 2:
1. Lunch room
 2. Office
 3. Printing and storage
 4. Overpass to house 2
 5. Restoration
 6. Safe storage
 7. Preservation
 8. Selection & classification
 9. Restaurant (plan 1)

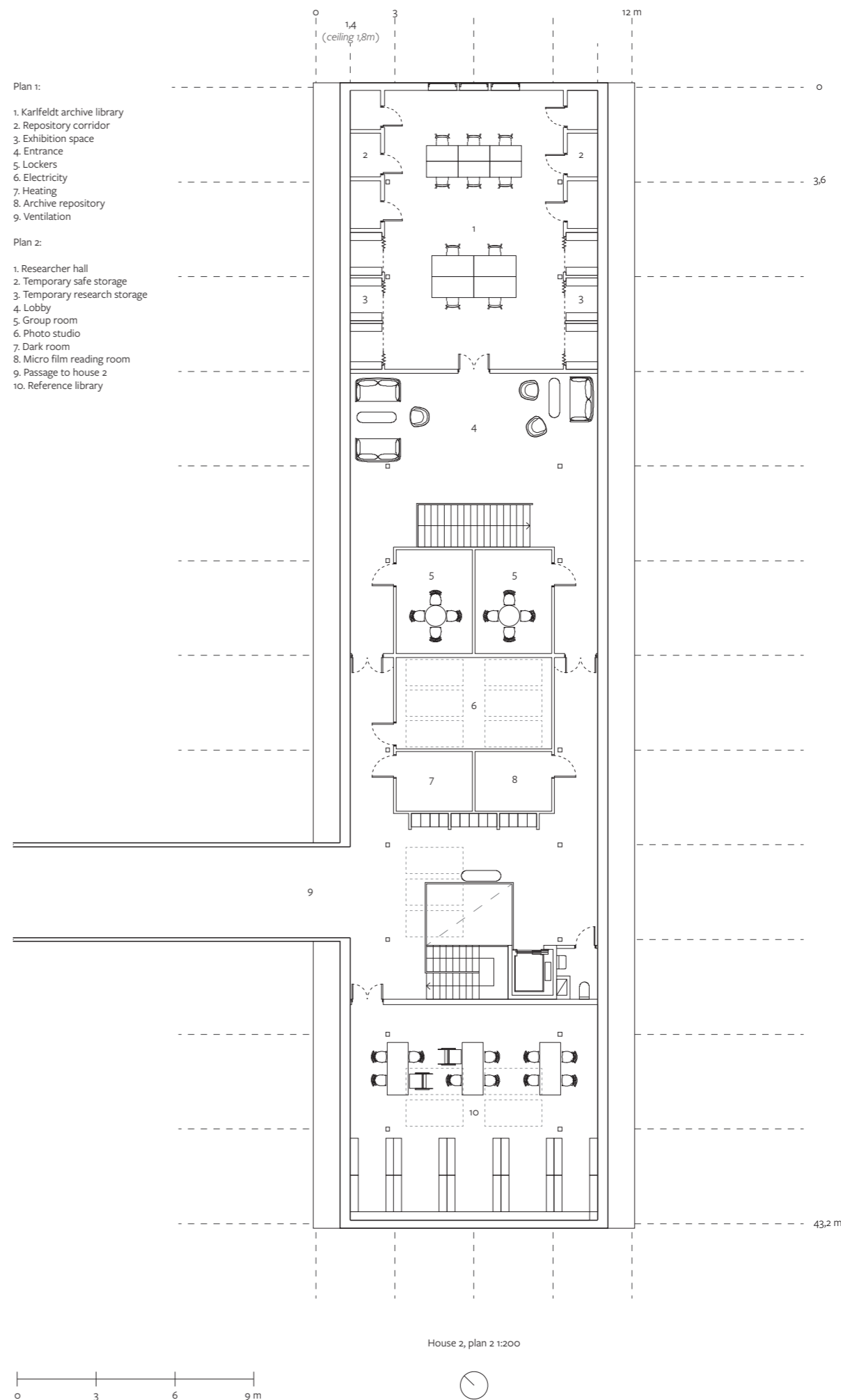


House 1, plan 2 1:200





House 2, plan 1 1:200



House 2, plan 2 1:200

- Plan 1:
1. Karlfeldt archive library
 2. Repository corridor
 3. Exhibition space
 4. Entrance
 5. Lockers
 6. Electricity
 7. Heating
 8. Archive repository
 9. Ventilation
- Plan 2:
1. Researcher hall
 2. Temporary safe storage
 3. Temporary research storage
 4. Lobby
 5. Group room
 6. Photo studio
 7. Dark room
 8. Micro film reading room
 9. Passage to house 2
 10. Reference library



Reverse Ruin - A and B Type Volumes



The program is divided into two building volumes in order to adapt the size of the archive to the site. The division also allows the placement of the volumes to arrange the visual impact of the volumes in relation to the landscape. The aim of the design strategy is an introverted impression, where the exterior of the building don't necessarily reveal the internal arrangement of the volume. The goal is buildings who belong in the landscape, with a clear division between the inside and the outside.

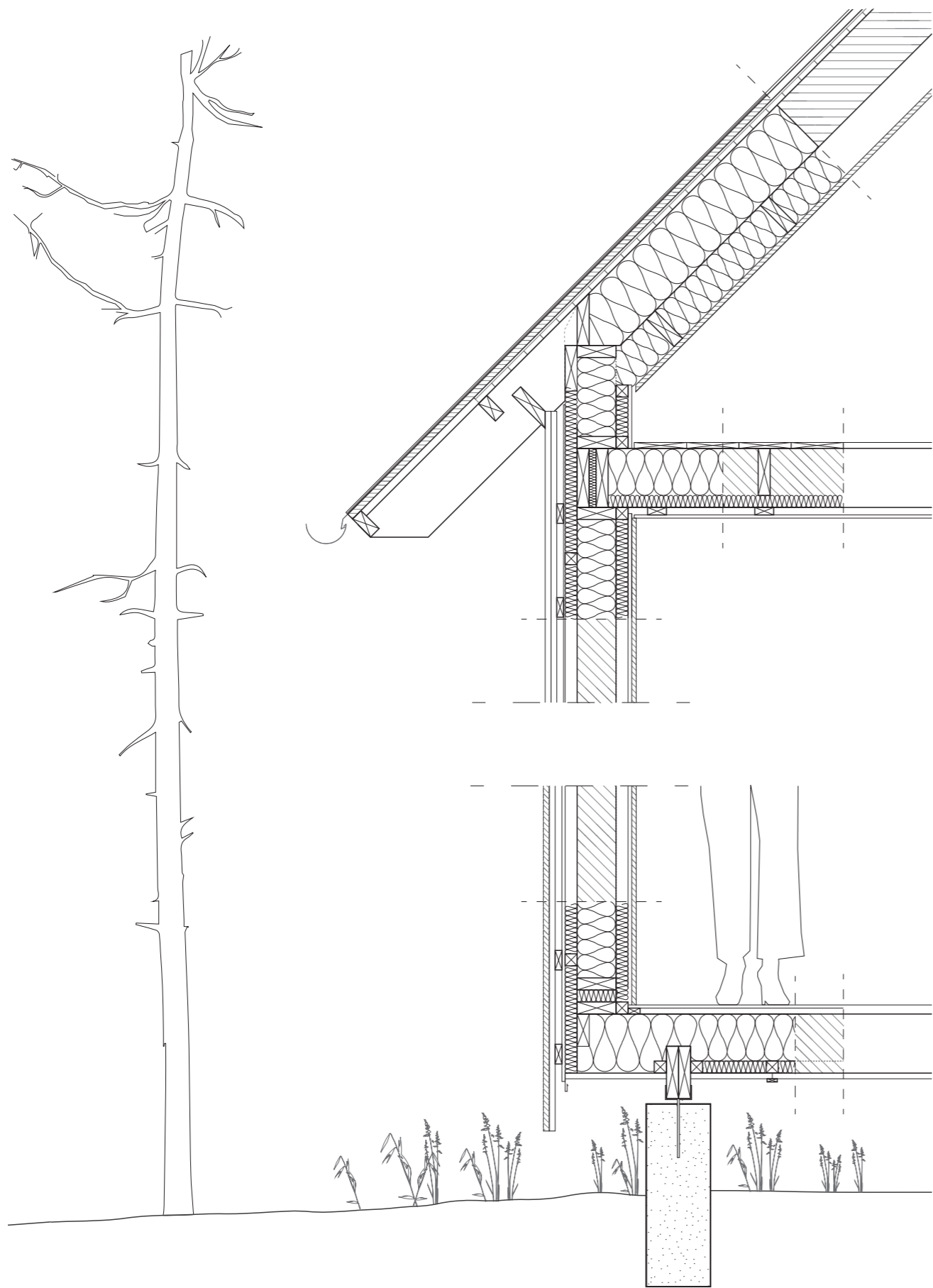
The architecture takes inspiration from the field and forest barns scattered across the rural areas in Bergslagen. The archives' pitched roofs and rectangular dimensions communicate the same function as the barns: storage. The construction utilise the same plinth and wood structure in order to achieve a light meeting of the building with the ground. Lifting it on plinths, the volumes cast a shadow beneath the building giving it a light impression of hovering just on top of the topography.

Working conceptionally with the archive as designing a reverse ruin creates an interplay with the long horizons and expansive time lines adopted in forestry and ecology. The intention is the preservation and protection of the materials and B type volumes surrounding the repositories can easily be changed, adapted, or destroyed in the next fire or storm. At the core of the buildings the A volumes are protected by the surrounding structure and remain on the ground after the devastation. Eventually, this hierarchy can be read in the ruin of the design.

The A type volumes are constructed in concrete, communicating their durability and their separation from the B type volumes. In the interior the wood frames and beams of the B type volume is exposed. Internal walls are done in a plain white finish to direct the attention of visitors to the vistas framed by the windows, or to the objects and art exhibited on the walls.

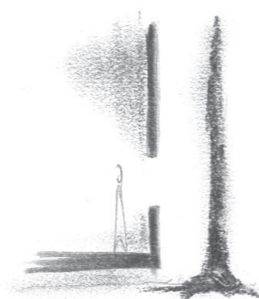
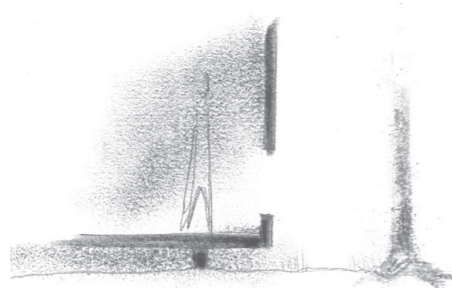
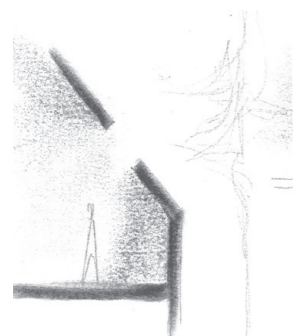
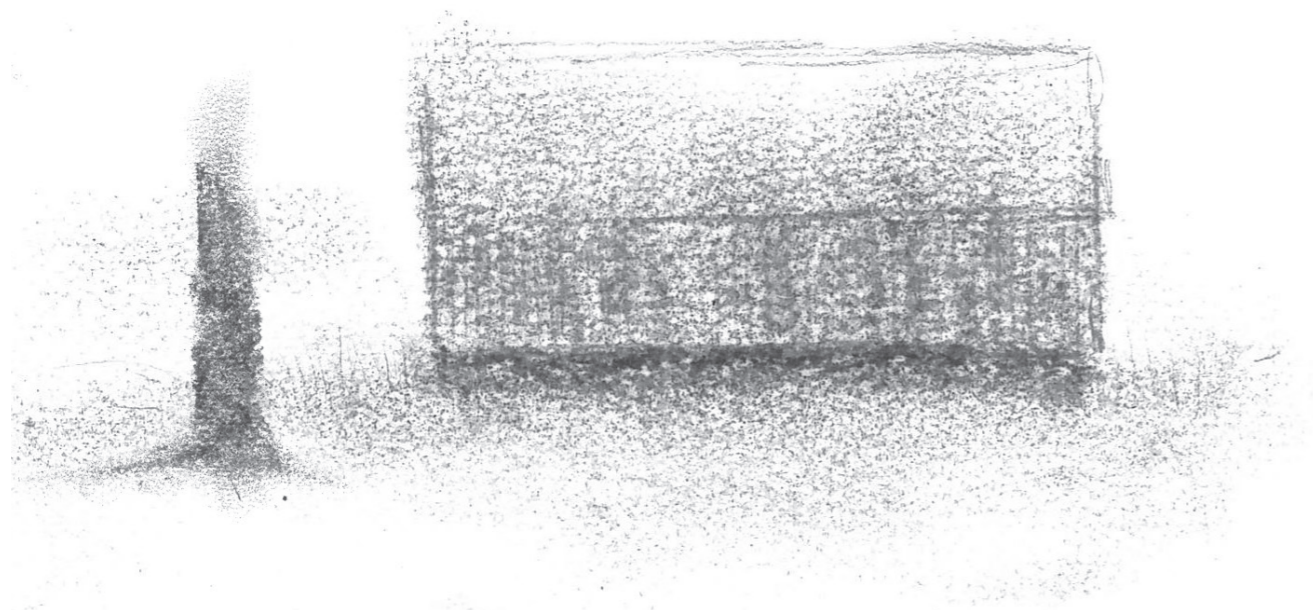
Construction - B Type Volumes

Warm roof	(445 mm)	Plinth foundation	(292 mm)
Folded sheet roof (silver aluminium)	5 mm	Concrete plinth	
Furring strip + air gap	25 x 38 mm	Sill plate	
Oil board	8 mm	Carrying lines	45 x 195 mm
Roofing boards	22 mm	Lock boards	12 x 38 mm
Truss + insulation	220 mm	Stiff plywood board	22 mm
Diffusion barrier	2 mm	Drip plate	
Installation layer + insulation	145	Lath + insulation	45 x 45 mm
Inner panel	18 mm	Diffusion barrier	2 mm
Snow lock		Floor beams + insulation	45 x 195mm
Insect net		Floor lath	
		Plank floor	22 x 120 mm
External wall	(340 mm)	Floor	(285 mm)
Burnt tar coating		Plank floor	22 x 120 mm
Lock lath	22 x 22 mm	Frame beams	45 x 220 mm
Pine panel facade	22 x 195 mm	Beams cc600 + insulation	45 x 175 mm
Furring strips + air gap	25 mm	Lath + insulation	45 x 45 mm
Wind board	9 mm	Diffusion barrier	3 mm
Lath + insulation	45 mm	Lath cc400	28 x 70 mm
Wall beam + insulation	145 mm	Installations	28 mm
Diffusion barrier	2 mm	Plywood ceiling	12 mm
Lath + insulation	45 mm		
Installations			
Gypsum board	13 mm		
White glazed plywood board	12 mm		



Wood frame construction
Detail 1:20

Process - Framing Landscape



Hand sketches
Facade and framing landscape



Model study for building placement

De svarta skogarna mumla
som psalmsång kring fädernas lutande kors,
och dovt som en vakande humla
bak åsarna tonar Avesta fors.
Ån vindspelet knarrar vid gruvan
och släggorna picka på hällarnas järn,
men spoven sover på tuvan,
och änderna vila på vilande tjärn.

Nu ville jag girigt samla
all nejdens drömmande fågring och sång
och minnena, unga och gamla,
som sjunga i natt liksom livet en gång,
nu ville jag dofterna fånga
som välla ur vårnattens jäsande brygd,
och föra dig med på min långa,
min ovissa väg, du min Folkarebygd!

Jag går mellan lärkors och nästen,
jag följer din ström, som i saktmod och ro
går fram mellan klippornas fästen
och sandiga brinkar, där svalorna bo.

Frid hägnar de vänliga Dalar,
men stenen står hög vid brunnbäckes älv
och stolt i sin stumhet talar
om kraft, som i trångmål vet hjälpa sig själv.

"Uppbrott"
by Erik Axel Karlfeldt, 1898

chapter 5

/

Aftermath

Summary



Hälleskogsbrännan mire, February 2020

The thesis investigates the manner in which architecture can relate to place and context in a landscape that has been drastically transformed by a forest fire. Similar to archive collections, the value of the cultural heritage environment in Bergslagen exceeds the value specific to the individual relic or remnant. The combination of the relics with one another in their wider geographical and historical context create additional layers of cultural value that is held in the landscape itself. The archive of a landscape is designed to convey the existing cultural heritage and the history of the place in a narrative space. The narrative perspective emerging from the work with the theoretical and contextual background for the thesis guided the evolution of the concept with the line and the point.

When reflecting on critical regionalist architecture Frampton reason that “the strength of provincial culture resides in its capacity to condense the artistic and critical potential of the region while assimilating and reinterpreting outside influences.” (Frampton, *Critical Regionalism: modern architecture and cultural identity*, 2014, p. 323).

By placing the archive in the burnt landscape left after the 2014 Västmanland fire, the transformation of the forest and the event of the fire is incorporated as an aspect in the architectural narrative. The burnt ground is set in relation to the archival materials: the knowledge about the art, the cultural historical context, and the forestry practices the archive aims to preserve, protect and contribute cultural value to. The value of the archive is not only held in the individual value of the materials stored, but in their context as being stored together and in the fire are. The narratives together become the story of, from and about the landscape.

The inclusion of ethnological theory and knowledge from forestry practices has been vital in creating architectural

concepts that refer to the specific place and purpose of the building. The relation of narrative content and the architectural design connects space and function with a narration of context. By consciously working with relationships between structure, perception of space and site conditions, the archive becomes a relevant way to tell a narrative that may generate knowledge into cultural value.

Reflection

The original intention behind designing an archive was my personal impression of the fire as being largely forgotten outside of the immediate geographical and cultural context. Contrasting this was my personal experience from the place and the fire, and how in some aspects the event is still very much on-going. The vibrancy and impact of the landscape and the stories still carry weight in parts of my personal and social narrative. With this objective, a continuous assessment of architectural practise in relation with the dramatic narrative of the fire has been balanced thorough the thesis work.

The architectural risks were to unconsciously rely on symbolism and falling into cheap manipulation and pastiche symbolism, rather than adopting a critical regional approach which genuinely reinterpret the universal into the contextual. For instance, burnt wood has been used in contemporary architecture, most notably in Peter Zumthor's Bruder Klaus Field Chapel. A referential leap could be made from forest fire to burnt wood materials. In the narrative of the Västmanland Fire, there is burnt wood in excess. More than 70% of the forest that burned was production forest, wood which in the aftermath had to be felled and sold at a fraction of the value the unburnt wood would have had. This had a heavy economic impact, particularly on the over 100 private forest owners. In this narrative, the use of burned wood in cladding or elsewhere in the design project would lack valid design intention, tactile value, and the notion would be insensible and cheap in the narrative and in the cultural context. The landscape after the fire and the stories from it will always be a reminder of the fire. There is no need for an architectural gesture as a reminder of what happens to wood when trees burn.

Regarding cultural heritage landscape and forests the universal notion of forests with heritage value tend to favour primeval forests. Recurring comments regarding the "artificial" nature of cultivated forests imply that the act of forestry disqualify the landscape from being

"natural" and thus having cultural heritage value. The romanization of nature and untouched landscapes can be traced back to the national romantic movement of the early 1900's, directly succeeding and in some parts parallel to the industrialisation of Sweden. The notion of human impact making landscape less authentic or genuine is rarely discussed regarding urban landscapes, buildings or cemeteries. Culturally valuable areas are protected and cared for, but they are rarely frozen in time. The extensive ruins and cultural remnants found after the Västmanland Fire collectively add an additional layer to the heritage value of the fire area and Hälleskogsbrännan. Contradictory, the activity which in our contemporary context render the forest "artificial" is the origin of cultural heritage value prevalent in the regional context, as human activity is a condition for the creation of cultural heritage (Riksantikvareämbetet, 2017).

An archive which only document the fire would risk limiting the narrative and the contextual and continued relevancy of the archive. The intention is for the narrative aspects of the archive to start at the entrance to the fire area, rather than at first sight of the architecture or the at entrance to the buildings. The core concept of the line and the point has the potential to adapt and develop with the regrowth of the forest, rather than relying on the landscape surrounding the buildings staying the same.

Because of the narrative of the archive itself, as well as designing a building generating cultural value in the historical context the archive had to be designed with the awareness of its inevitable ruin. Separating the program into two typologies, the design intentionally separate the valuable archive materials form the rest of the program in the ruin. The prevalence of infield and outfield barns in Bergslagen provided architectural inspiration from the context. The architectural decision became to adopt the established typology of the barn because it is recognisable both in the universal and in the regional context. The universal wood frame construction adapted to the site

and the program with the intention and narrative of the architecture is recognisable to visitors of the archive and has familiarity in its structural logic. Adapted to the site, the needs of the program and the architectural ambition regarding internal spaces and sequence the ordinary frame construction is specifically adapted to this particular place and form.

Understanding the value of cultural heritage environments in these terms favour a critical regionalist approach to the architectural design. The ideas behind the architecture expand to include and argue for the decision to build on the site at all. This is especially valid in a location and a landscape that is striking in its untouched state. If a place is beautiful in its own right one should choose another location for a building, unless the building add value to the place not only by its architectural design as an object, but also in the cultural meaning the architecture generates.

Outcome and Impact

The envisioned outcome of this thesis is to contribute to architectural design and architectural design strategies that respond to physical transformations in the landscape. With climate changes in the Anthropocene age rising ocean levels and natural disasters such as forest fires, hurricanes, and land erosion threaten landscapes.

The desired impact of the thesis is to contribute to an expansion of knowledge about and care regarding architecture in non-urban places, using site and context analysis to achieve a building that reflects and belongs to its place. With this approach the outcome of the thesis project aims to contribute a design reference within critical regionalism in a contemporary Swedish context.

The thesis result in a design proposal for an archive is an investigation of a rural typology for an traditionally urban program. An building with an inherent dynamic aspect that belongs to its context and place by storing, gathering and narrating stories of and about the place. The architecture relate to the burnt landscape, the wider cultural context and to the forest that will eventually re-grow within the fire area.

Glossary

English	Swedish	Merriam- Webster thesaurus	In thesis
Hinterland	Glesbygd	<i>"A rural region that forms the edge of the settled or developed part of a country"</i>	More remote than "rural"
Detritus	Förnan	<i>"Loose material (such as rock fragments or organic particles) that results directly from disintegration"</i>	Referring to the soft, dead organic materials on the forest floor.
Swedish National Heritage Board	Riksantikvarieämbetet (RAÄ)	-	Sweden's central administrative agency for cultural heritage and cultural and historic environments.
County Administrative Board	Länsstyrelse	-	Swedish state government agency within the county/ region ("län").
Ironworks	Järnbruk	<i>"A mill or building where iron or steel is smelted or heavy iron or steel products are made"</i>	Site/ complex for extraction and refinement of raw iron ore from the 17th and 18th century.
Mining district	Bergslag	-	Archaic term for the cooperation of miners in an area with the legal right to mine mountain materials.
Bergslagen (region name)	Bergslagen	-	Loosely defined region in the middle of Sweden where a large number of privileged Bergslag were situated.
Ancient monument, ancient relic	Fornlämning	-	An early historical structure or relic, a monument worth of preservation and study due to archaeological and heritage interest.
Cultural heritage	Kulturarv	<i>"Something transmitted by or acquired from a predecessor"</i>	Encompass all material and immaterial remnants of human activity through the ages. Remnants may be historical traces, objects or phenomena. (RAÄ definition)
Cultural environment	Kulturmiljö	<i>"The circumstances, objects or conditions by which one is surrounded"</i>	The impressions human activities through the ages have made in the physical environment. A context that may contain artefacts, place names or traditions tied to the place.
Infields	Inägor	<i>"A field near a farm house"</i>	-

English	Swedish	Merriam- Webster thesaurus	In thesis
Charring	Kolning	<i>"To convert to charcoal or carbon usually by heat"</i>	-
Charring area	Kolningsanläggning	-	Area used to produce charcoal, multiple relics from charcoal production
Charcoal pile	Kolmila	-	Carefully arranged pile of wood, covered by turf or other layer, inside which a fire is lit in order to produce charcoal
Charcoal kiln	Kolbotten	-	Structure, usually made in stone, for production of charcoal. Permanent version of the charcoal pile.
Cairn	Röse	<i>"A heap of stones piled up as a memorial or as a landmark"</i>	Marking a border or a road
Forestry parcel	Skifte, skogsskifte	<i>"A small piece of land that is developed or available for development"</i>	A plot of forest, usually cultivated for forestry.
Slag stone, slag brick	Slaggsten	<i>"Brick made from the dross or scoria of a metal. Slag is the glass-like by-product left over after metal has been separated from its raw ore"</i>	Slag stones are used in vernacular buildings in Bergslagen from the iron cultivation period.
Rhizome	Jordstam	<i>"A somewhat elongated usually horizontal subterranean plant stem"</i>	-
Mire	Myr	<i>"Wet spongy earth"</i>	A wetland where oxygen levels are too low for dead plants and other organic materials to decompose, instead they collect and create peat.
Coniferous forest	Barrskog	-	Forest composed primarily of evergreen trees, in Sweden primarily pine and fir. Found in areas that have long winters and moderate to high annual precipitation.
Brushwood/ brush	Sly	<i>"A thicket of shrubs and small trees"/ "Scrub vegetation"</i>	-
(Forest) Stand	(Skogs-) Skifte/ Bestånd	-	Piece of forest owned by persons or a company. Correspondent to plot.

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