Attention! Ongoing Care

Maintenance and Repair at Farsta Sports Field

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Abstract

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Attention! Ongoing Care is a thesis that explores what care can be in architecture and how caring can be applied through maintenance and repairs of buildings in a context determined by limited resources.

In current architectural discourse, there is an increasing desire to move away from harmful practices, including demolishing buildings for new construction, non-holistic extraction, and an emission intensive building industry. Instead, care, maintenance, and repair, as well as the labour involved in these activities, have been defined as key topics. In this thesis, however, actions such as renovation, transformation, maintenance, and repair are not considered inherently sustainable. Rather, the thesis places careful consideration regarding who performs these acts, what resources are used, how they are carried out, and what consequences they entail.

The thesis has two points of departure. The first is a study of current discourse of care. The second point is a study of everyday sports facilities in Southern Stockholm. These facilities are high in use and are exposed to heavy wear and tear, thus making them ideal for an investigation of care. Further, they are cared for by several different groups and governed by several interests, thus actualising questions such as who cares for whom. These studies, combined with explorative investigations of the studied sports fields, are presented as Learning from Farsta Sports Field.

The implementation of the approach is prompted by the need for care in the day-to-day operation of Farsta Sports Field, and for future maintenance and repair of the facilities. A scenario in which the resources and responsibilities of the caregivers are increased, is developed. Utilizing existing resources at site, a workshop and depot to store materials and equipment, is added. The design considers the use of on-site or reclaimed resources, functionality for the caregivers, and the ease of future maintenance. Several interventions in the ice hockey rink are made based on opportunities offered by the new workshop and from learnings and design translations of the discourse.

The thesis concludes with a manifesto for how to apply an approach of care in architecture and work as a guide for future maintenance and repair.

Left: Collages of the contemporary backside of architecture
The collage *that formulates the starting point of this master thesis.*
The building stock in need of care. The extraction of the nature with consequences on the biodiversity and environment, The endless approach of wear and tear. Demolishing and renewal. Exploiting labour. And the "invisible" resources of time, labour and material resources to maintain the built environment.

Introduction

Hikaru Nissanke (2021)

"Culturally, we're very good at discussing celebrated buildings and architects, but less good at talking about architecture's un-glamourous aspects – one of which is the repair and maintenance of what we have so that we don't have to dispose of them later. Not everything is, nor can be, 'high architecture' and so we need to learn to work with it, not least of all for environmental reasons."

Is there a crisis of care in the built environment? According to Hikaru Nissanke (2021) we as architects and society need to draw attention to the non-glamorous aspect of the architecture, such as maintenance and repair, to prevent future disposing of buildings.

This thesis began with questioning how easily today's society seems to discard buildings and constantly replace or renovate them, motivated by the fact that they are no longer fulfil their function, that their materials have been used up. Also influenced by trends of the right to renovate for your own preferences or simply for opportunities to generate more profit through further development. In German architectural discourse, the practice of demolishing buildings and replacing them with new ones is called Ersatzneubau (Hertweck et al 2022), and even if a similar word in Swedish is not yet established the mentality of fast consumption is well grounded in the western culture. The wave of demolitions and the growing need for renovation and repairs in the building stock made me ask what and why we, as a society, care for, and what is required for us to continue caring or care even more. Is care synonymous with maintenance and repair?

Theories regarding conservation, preservation, and restoration are well established in architecture and tend to focus on buildings with some form of social or historical significance, regulated by guidelines, codes, and statements from building authorities. However, what happens when we also must attend to "less glamorous" architecture, particularly that which is valued for reasons beyond aesthetics or cultural history, such as for environmental reasons and social values? As Nissanke (2021) queries, do architects possess the knowledge or toolkit necessary to care for, maintain and repair architecture that is not celebrated or considered high in value?

Care is a broader and more complex approach that can stem from responsibility, economic circumstances, and cultural background. The thesis explores practices of care as well as how we value the built environment in a future scenario where we need, or are even compelled, to use fewer material resources, prioritize reuse, and recognize the potential of what we already possess. With Sweden's environmental goals aiming for at least 70 percent of waste to be recycled by 2025 (Sveriges Miljömål 2023), and considering that in 2020, Sweden's greenhouse gas emissions from the construction industry accounted for 21 percent of the total, not included the emissions abroad (Boverket 2023), architects must focus on the process behind the architecture if our profession can make something good and trustworthy.

In addition to the question of material resources and the environmental impact of the built industry the process of resource extraction and the process of building involves the fact that we by design exploit labour. As much as drawing attention to existing building, ask questions of how we maintain and repair. It also asks the question of the process of care and how it includes someone's time and labour.

1. What can care mean in the context of architecture?

2. How can care be applied as an approach to maintenance and repair at Farsta Sports Field?

Thesis Questions

Aim and delimitations

This master's thesis aims to explore what care can be in architecture. The intention is to contextualize the theory and discourse in perspective from be general to be understood and analysed at specific sites in the context of ordinary and everyday facilities. In this thesis, is delimited to Sport Facilities in Southern Stockholm.

Within this context, a method is developed with the aim to explore how caring can be applied trough maintenance and repairs of buildings in a context determined by limited resources. Based on the method, the discursive analysis and the design, the thesis is conclude with a manifesto for how to apply an approach of care in architecture that will work as a guide for future maintenance and repair.

Additionally, the thesis discusses how architecture is valued and what facilitates care. In the scenario of constrained resources, the aim is to explain how an approach of care enhance values for the labourers, the users, the aesthetics and its ongoing life and goes beyond values of newness and maximized development on the behalf of the earth's resources.

The aim is to present an alternative to the "wear and tear" mentality, emphasizing that care maintenance, and care a crucial methods. This thesis intention is not to explain how to set an end to demolition or to limit the contemporary architecture to focus on preservation and restoration as their main strategies. Instead, the aim is to draw attention to that care, maintenance, and repair are vital methods, while also highlighting that transformation, renovation, maintenance, and repair are not inherently sustainable actions. It about how to establish a culture of care. The intention is to shed light on the labour systems and material flows behind the actions of care to make them visible through various forms of representation. It is also in this thesis and its representation to show the everyday life of architecture, how to learn from it and increase the appreciation of architecture that can be considered ordinary.

The thesis is not about how to make a project with the intention to close the material loop and explore the best method to design with reused resources. In the developed method the use of reused materials is one of many important aspects of the caring architecture. The staring point and focus is delimited to what in this thesis is defined as already existing resources and includes more aspects than material resources.

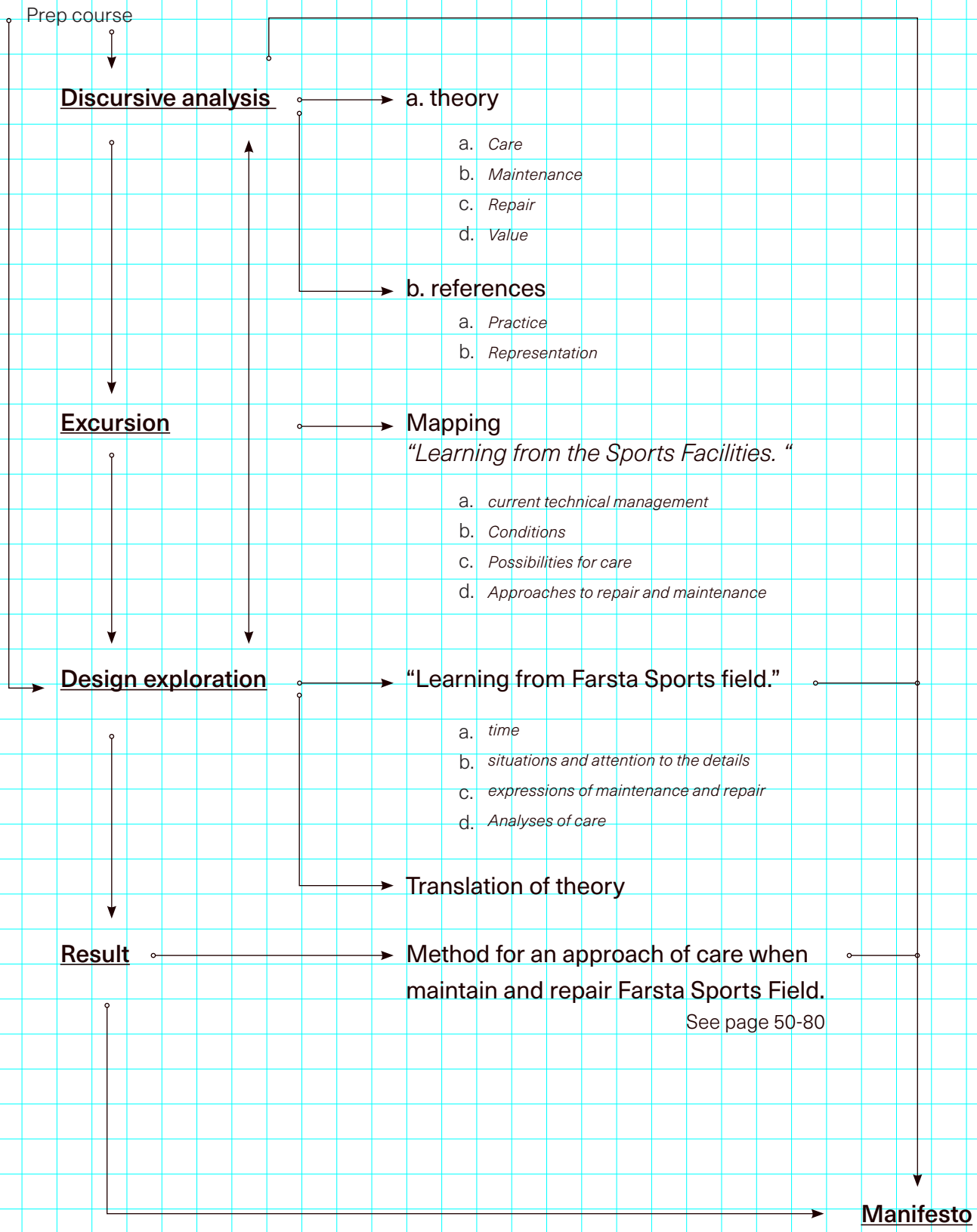
Care
Is a process of provide something for a need

Caregiver
Is a person that practice care but that must not include physical labour of for example building. For example, on a theoretical level a architect can also be an caregiver.

Maintainer
Is a person that doing labour to maintain something.

Maintenance
Is the ongoing action to keep something in good condition.

Resource
Is something useful with value or quality for it's context.


Prep course
Discursive analysis
a. theory
a. Care
b. Maintenance
c. Repair
d. Value
b. references
a. Practice
b. Representation
Excursion
Mapping
"Learning from the Sports Facilities. "
a. current technical management
b. Conditions
c. Possibilities for care
d. Approaches to repair and maintenance
Design exploration
"Learning from Farsta Sports field."
a. time
b. situations and attention to the details
c. expressions of maintenance and repair
d. Analyses of care
Translation of theory
Result
Method for an approach of care when maintain and repair Farsta Sports Field.
See page 50-80
Manifesto

Discursive analysis

To understand how care, maintenance and repair is theorized and defined in the contemporary architectural discourse, literature by Hélène Frichot, Hillary Samples, Maria Puig de la Bellacasa, Shannon Mattern is analysed. In addition, the contemporary architectural magazine Arch+ and The architectural review with themes of repair, care and maintenance has been an important reference for this thesis to get an overall picture of the discourse and contemporary practices of it. To set care in relation to what is valued in the built environment literature written by Alois Riegl and Stephen Carins and Jane Jacobs about value and decay is analysed.

Excursion

A part of the method to set the discourse in a context and bring the theory from general to actual analyse, an excursion and mapping of four different Sports Facilities is Southern Stockholm is made. The focus is current technical management and learning from it. Current conditions of the facilities and possibilities for care. Approaches to repair and maintenance. It is presented as "Learnings from the Sports Facilities".

Design exploration

In parallel with excursion, several design explorations with focus on the context of Farsta Sports Field is made and are presented as "Learnings from Farsta Sports field." The focus is the visibility of time and maintenance with attention to draw the physical details of few situations. In addition, an understanding of the theory of care, maintenance and repair is visualized through diagramming, 3d-modelling and animation.

Result

In the last phase a method, for an approach of care when maintain and repair Farsta Sports Field, is developed. It is based on the discursive analysis, the Learning from the Sports Fields and Design Explorations The method consists of four steps, Identify the Need, Start with the Resources, Design/Action and Care Receiving. It is implemented in three scenarios. The first is to make it possible for the operation to do care work with existing resources at the site by designing a workshop and depot to store material and equipment. Secondly is how the workshop is used for maintenance and repair of the facilities. The third scenario shows the possibility an approach of care has for the development through transformation at the sports field with focus on the activity. The implementation is explained trough explorative design based on the theory of care, maintenance and repair. It is represented with the aim to make the process and labour visible through visualization and drawings with close attention to the details.

The final part of the result is a manifesto for how to maintain and repair with an approach of care based on the method, the implementation and discourse.

Method and process

This chapter and diagram explain how the process of this master thesis is developed. Under the result a more detail explanation of the developed method can be found at page 51.

Siteplan of Southern Stockhom

1. Farsta Sports Field
2. Enskede Sports Hall
3. Hovet/Globen
4. Kärrtorp Sports Field

Context for excursion
Southern Stockholm Area

The excursion takes place in the context of sports fields in southern Stockholm and shed light on the ordinary and often non-fashionable buildings alongside those with strong architectural or cultural value. These sites have a lot to learn from, already have clear activities and infrastructure for maintain the main activity, sports. They are heavily used of various groups and activities, each with different needs and motivations of care.

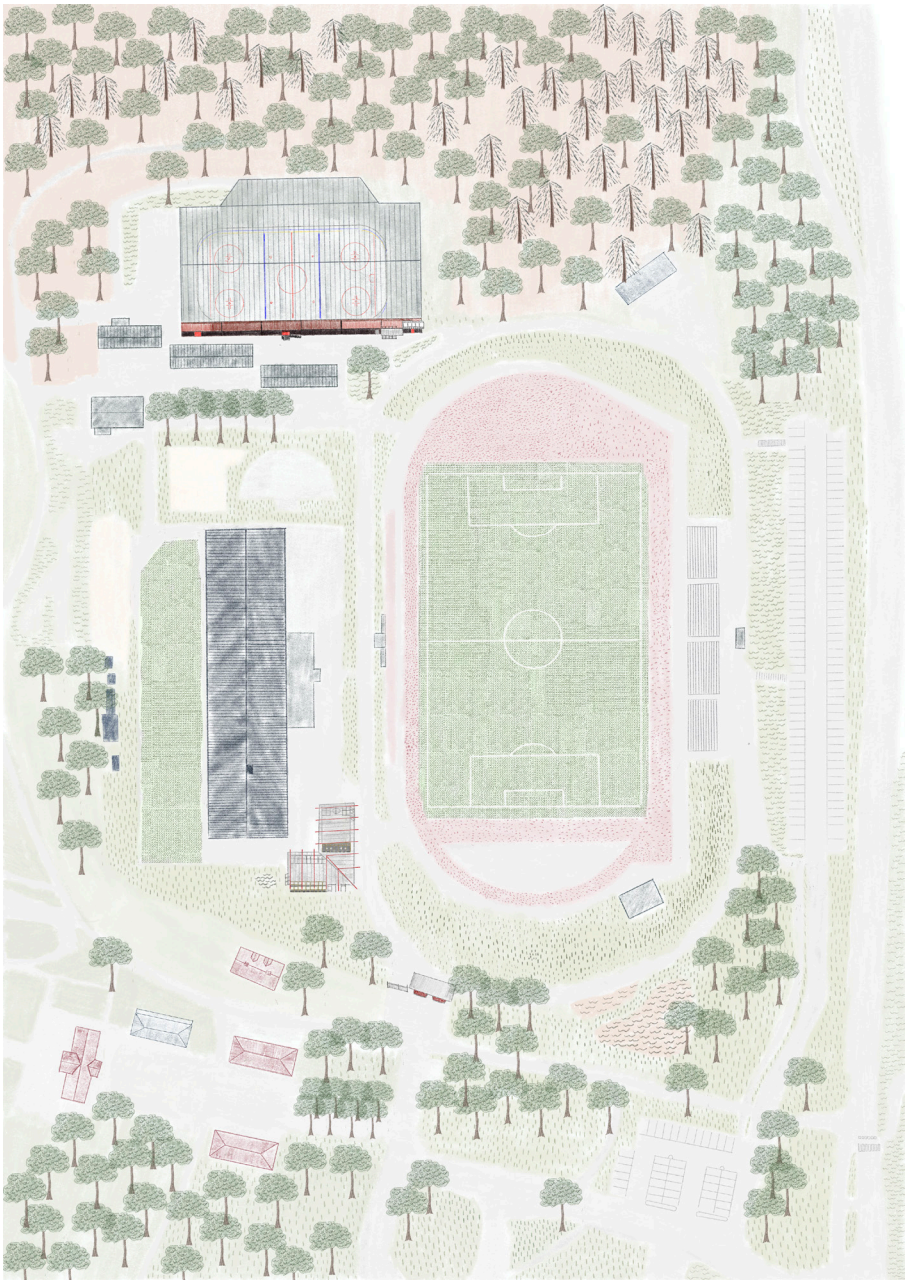
The choice of sports facilities is influenced by the authors personal background at participating in several sports at several similar facilities in Stockholm.

The choice of four different sites is to compare the sports hall with the sports field, the arena with the everyday facility and different cultural classifications.

Context for developed method and implementation
Farsta Sports Field

To limit the focus, Farsta Sports Field was selected to develop the method of Care, and where the design is implemented. The site itself is not considered as the main context of this master thesis, like a regular architecture project where it's designed for a clear question or function. Farsta Sports Field is instead considered as a playground for learnings, explorations, development of the method and a place where the implementation of the design is situated. The main and most important context of the thesis itself is in the relation to the discourse.

The choice of Farsta for situated the thesis outcome at, is mostly for its already existing resources for care and its characteristics of an ordinary sports field from the 70's that has been thorough several stages of development.



Siteplan of
Farsta Sports Field

Hélène Frichot (2023)

"The craftsperson, the designer, must venture of the safe circle of her studio and venture further afield to gain material knowledges and know-how. She must enter into negotiations with materials, and this requires an ethics of care."

F1-F4:
Screenshots from @archplusnet on Instagram 20231019 of the video essay "Open by maintenance" by @tatitadaa (Tatjana Bergmeister) and @antonkrebs_ (Anton Krebs)

This video essay was the introduction to the discourse and an inspiration for the choice of the master thesis question and method. Also, it is the introduction to the style of renders by Anton Krebs.

Discourse

Care

Care in architecture is in this context not about designing better for care institutions such as hospitals and elderly home. It is not ether a critic against the contemporary architects for not being involved in care. Is it a critical concept of reorientation of the discipline about the involvement through things (Tronto 2019).

Theory of care originates from theory in feminism and considered the buildings in a relationship with their ongoing environment, people, flora and fauna, and their existence through time and space (Tronto 2019). The main argument for care in architecture, according to Tronto (2019), is the acknowledgment of the broken planet. A caring architecture is going beyond the idea of "what the client wants", beyond sustainable architecture and the ideal of beautiful objects. To achieve this, one must ask questions like; "What happens to the people, the society? How will it affect them? How will it be occupied over time? How will the care of it change depending on who has the responsibility for it? How are the building materials collect?" (Mattern 2022).

Frichot (2023) calls this process, "Follow the dirt" where one of the most fundamental aspects is to put attention to all resources on their path to become building and to consider how maintain it. One method for this is to centre oneself in the situation and pay close attention to the details through as accurate drawings as possible (Frichot 2022). This gains an embodied knowledges about the assembly and the relations to its surrounding.

Care

Joan C. Tronto (2019)

"In the most general sense, care [is] a species activity that includes everything that we do to maintain, continue, and repair our 'world' so that we can live in it as well as possible. That world includes our bodies, our selves, and our environment, all of which we seek to interweave in a complex, life-sustaining web."

Definition

To understand the concept and actions of maintenance and repair following diagram explains what defines it. Tronto (2019) describes the care practice in following five aspects:

Caring about, includes that someone must recognize the need of care. Here are different needs often in conflict with each other and ends up in a question of class, power and commitment.

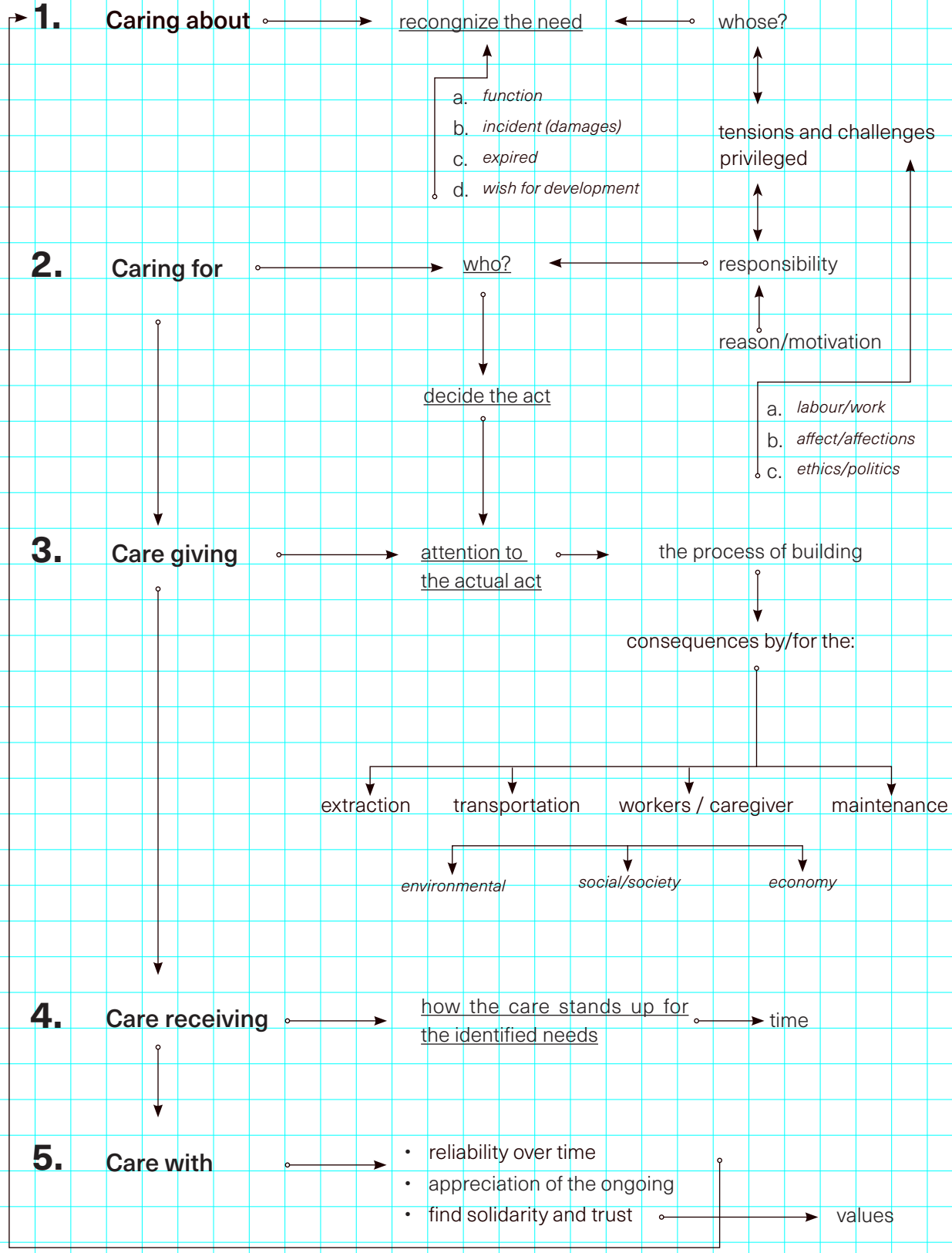
Caring for, are in the state where the need is accepted, and someone has to step up and claim responsibility for it. After that the act is decided.

Care giving, includes attention to the actual act, For example what are included in the process of building, with origins and consequences of the extraction, transportation and maintenance of material or the selection of workers.

Care receiving, are about how the care stands up for the original needs and how it have changes during the process.

Caring with, question of how become reliable over time. When it is reliable people appreciate the ongoing care and care become a way to find solidarity and trust among people.

Diagram to the right:
A summery of the definition of Care based on Joan Tronto (2019), Maria Puig de la Bellacasa (2017) and Shannon Mattern (2022).


1. Caring about
recongnize the need
whose?
a. function
b. incident (damages)
c. expired
d. wish for development
tensions and challenges
privileged
2. Caring for
who?
responsibility
reason/motivation
decide the act
a. labour/work
b. affect/affections
c. ethics/politics
3. Care giving
attention to
the actual act
the process of building
consequences by/for the:
extraction
transportation
workers / caregiver
maintenance
environmental
social/society
economy
4. Care receiving
how the care stands up for
the identified needs
time
5. Care with
• reliability over time
• appreciation of the ongoing
• find solidarity and trust
values

Maintenance

The ongoing process

Maintenance is matter of time and an ongoing process. It begins in the time after the building's completion and involves evaluating what that implies. With the phase of post-occupancy, it can be argued that the building the architecture is in constant development by its users, nature and its own aging. According to Samples (2016) the post-occupancy and actions of maintenance introduce new ideas but also require the architect to be vulnerable and understand its community.

For Mattern (2018), the venerability for the architect lies in accepting that everything is breaking down and maintenance and repair offer chance to study how to put it together again. Society wants to control of the unpredictable, the accident. It's the modern paradigm where everything can be planned, and it deny the responsibility to the disorder it also has given rise to (Attia 2022). For example, the legacy in society of colonialism and capitalism based on destroying natural environment, and for that reason should not be discourages of the never-ending task to repair it.

The approach to maintenance depends on many factors. For examples, laws and codes for the building, trends in society, personal conditions of time and economic resources, or what society have decided to value and protect (Samples 2016) The approach of maintenance can be totally different depending on the building becomes classified as an "monument", and this can happen due both to the passage of time and age or for other values.

To value the new

Maintenance shall not be considered as merely cleaning (Samples 2016). Cleaning, with its activities of dusting, polishing or vacuuming, is focused on the present moment and for keeping a healthy environment. Instead, maintenance an investment in the persistence of architecture.

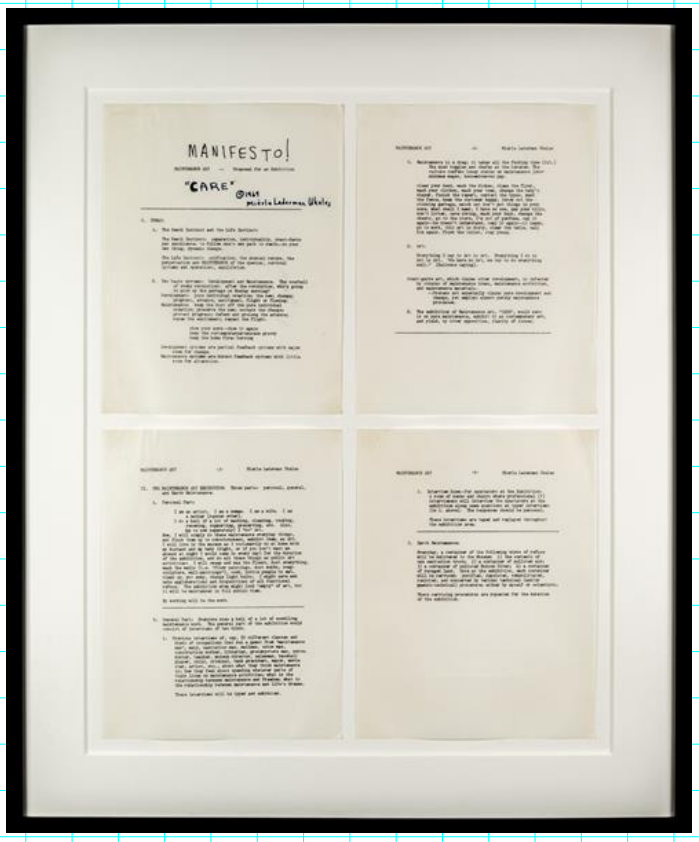
According to Samples (2016), maintenance work is an activity of safeguarding the holistic images of an architectural work. Here lies the contradiction of contemporary architecture and its portrayal in the media. The images of the building in its finished state, captured when new, tends to depict how the architecture is and shall be, rather than how it is lived in. For Samples (2016), the time when architecture is new is a very short compared to its whole lifespan. The aim should never be to remain new; rather, maintenance is a positive indication of the nature and human life.

Even Benjamin (2024) points out that the disadvantages with today´s easy approachable media are the constant stream of new images of objects in its finished state. Also, the acceptance for constantly increasing the value through renovations promoted in “home improvement television programs”. For Samples (2016) maintenance and in turn also skilled labour is needed to endure this picture of beauty.

The art historian Alois Riegl, in 1913, defined five definitions of value; age, historical, deliberate Commemorative value, use value and at last newness value. According to Riegl (1913) the common mass has always been pleased by the aesthetics of the new and the complete. Whereas ages and use considered undesirable. Newness can only be maintained by constantly removing signs of aging.

Architectural modernism, led by Le Corbusier, emphasized formal clarity, light and hygiene. Le Corbusier saw America, compared to Europe, as a prime example of cleanliness, free from the ethos of preserving cracks as part of the patina (Cairns and Jacobs 2017). What Le Corbusier considered dirt was high valued patina for Riegl. The example illustrates that what is valued is often an personal opinion but is affected of the current approach to it.

Cairns and Jacobs (2017) argue that patina in architecture, where natural weathering can be one reasons by ads a beauty and it’s the sign of ages that can turn even an ugly building over.



F5 (left): Manifesto for Maintenence Art 1969!
Mierle Laderman Ukeles

F6 (below): Touch Sanitation
Mierle Laderman Ukele shaking hand with one of New Yorks sanitary workers

F7 Public Park in South Bermondsey Assemble studio (2024)
Documented proceed of relocation and transformation of a playground equipment with attention to the act and the labour of it.

Labour

As mentioned earlier, Samples (2016) argues that skilled labour is necessary for beauty, but it is not mentioned if it must be skilled for maintenance. In the theory of maintenance, labour is an important question to consider and relates to theory of Care.

Maintenance operates silently and is not as well documented as construction drawings or preservation guidelines (Samples 2016). According to Samples (2016), architects have neglected maintenance work in favour of the more attractive pursuit of form. One reason to this may be that changes in the appearance and condition of architecture are slow and unpredictable, occurring far from the architect's office. Maintenance is explored in allied disciplines such as preservation, material science, building codes, insurance laws and the technical management by property owners. Nonetheless, to maintaining and repairing the architect's work requires labour.

Maintenance is a never-ending and constantly ongoing act that happens all around us (Samples 2016). The invisible labour is what hold society together, the act of preservation, and society must be aware of the massive workforce it depends on (Frichot 2022). To bring awareness of the invisible work of maintenance, often carried out by female people of colour, various works of art have contributed to the visibility of these processes (Mattern 2018). One of the most influential publications in feminist theory about maintenance and repairs is Mierle Laderman Ukele´s "Manifesto for Maintenance art" from 1969 and in 1979 -1980 when Ukele shook hand with 8500 sanitary workers in New York (Frichot 2019). The work of Ukele is a way notice the small and large act of care and repair.

In art and by scholars there is a risk of aesthetics and romanticising the act of maintenance and t unpaid reproductive labour. Therefore, when making it visible in the documentation, it's important to treat it like something cosmetic and without spectacle (Mattern 2022).

To care for the built environment and ensure beauty by skilled work is a way something very privileges to do. According to Puig de la Bellacasa (2017) care means different things for different people in different situations. It can be an affection, a moral obligation, work, a burden, a joy, something to learn or practice, or just something we do. In Puig de la Bellacasa book Matters of care (2017) three dimensions of care is identified; labour/work, affect/affectations, ethics/politics, which intersects in tension and challenges. Care can become a moral pressure; for instance, should a paid care worker be required to show affection in their work? On the other hand, if maintenance does not involve some level of care, is it still care? asks Puig de la Bellacasa (2017).

Moreover, the entire discourse of maintenance and repair can be viewed as privilege. According to Mattern (2022), the slow moment in society a political strategy, but it must be acknowledged that having time for it is a luxurious position.

Repair

Repair is an action in the discourse of maintenance.

Attia (2022) describes how the Western world often think of repair as an injury that must be restored. Both in the theory of repair (Attia 2022) and maintenance (Shannon 2018) there is a question condition in time the object shall be maintained or restored to. According to Attia (2022) it's impossible to restore something to its original state; only the idea of the original state that can be returned. Both injury and repair are defined by time and follow each other indefinitely. Attia (2022) argues that through repair, the blind spot of modernity can be understand, where repair, cracks or injury aren't meant to be shown.

In Kader Attias work "Traditional Repair, Immaterial Injury" from 2014 the tears and ruptures are visible, as the wounds of history cannot be undone and thus must be an essential part of the work of reparation. The concept is a common approach outside the Western society, as seen in the Japanese method of repair broken pottery called, Kintsugi. In Kintsugi, the cracks are considered a part of the object's history and are not disguised. The approach also adds an aesthetic value to something associated with failure.

In architecture, disrepairs and breakdowns are often a result from intentional neglect or a defective construction (Benjamin 2024). Today's desire for an increasingly repair oriented society of repair is based in a reaction against the planned obsolescence, where objects break easily to encourages consumption (Benjamin 2024). For Benjamin (2024) when repairing, the approach of care is important. Question of why, for whom and by whom are crucial. Additionally, one must consider if the repair is reactive? Proactive? Condition by urgency? Or a function of anticipation? Moreover, in today's global condition with a need of a sustainable resource extraction, repair and its style must be what is materially permissible, not just what is materially possible.

According to Benjamin (2024) the traditional approach of retrofitting often aims to reinvent the old, while modern repair methods offer a complex opportunity to incorporate other aspects, such as care, appreciation of the ongoing work, the opportunity to learn how to break things better. For Benjamin (2024) a repair cannot only react and be a "sticking plaster", like something that immediately has to be fixed and the consequences of the outcome will be affected of the hurry. It must pre-empt through supporting design by making it possible to repair. This can involve integrating repairability or enabling disassembly.

Platform21's

Repair Manifesto

1. Make your products live longer!
Repairing means taking the opportunity to give your product a second life. Don't ditch it, stitch it! Don't end it, mend it! Repairing is not anti-consumption. It is anti- needlessly throwing things away.

2. Things should be designed so that they can be repaired.
Product designers: Make your products repairable. Share clear, understandable information about DIY repairs.
Consumers: Buy things you know can be repaired, or else find out why they don't exist. Be critical and inquisitive.

3. Repair is not replacement.
Replacement is throwing away the broken bit. This is NOT the kind of repair that we're talking about.

4. What doesn't kill it makes it stronger.
Every time we repair something, we add to its potential, its history, its soul and its inherent beauty.

5. Repairing is a creative challenge.
Making repairs is good for the imagination. Using new techniques, tools and materials ushers in possibility rather than dead ends.

6. Repair survives fashion.
Repair is not about styling or trends. There are no due-dates for repairable items.

7. To repair is to discover.
As you fix objects, you'll learn amazing things about how they actually work. Or don't work.

8. Repair – even in good times!
If you think this manifesto has to do with the recession, forget it. This isn't about money, it's about a mentality.

9. Repaired things are unique.
Even fakes become originals when you repair them.

10. Repairing is about independence.
Don't be a slave to technology – be its master. If it's broken, fix it and make it better. And if you're a master, empower others.

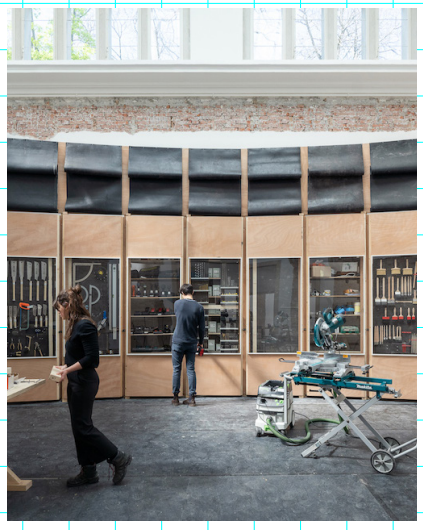
11. You can repair anything, even a plastic bag.
But we'd recommend getting a bag that will last longer, and then repairing it if necessary.

Stop Recycling. Start Repairing. www.platform21.nl

F8 (left):
Repair Manifesto, Platform 21's

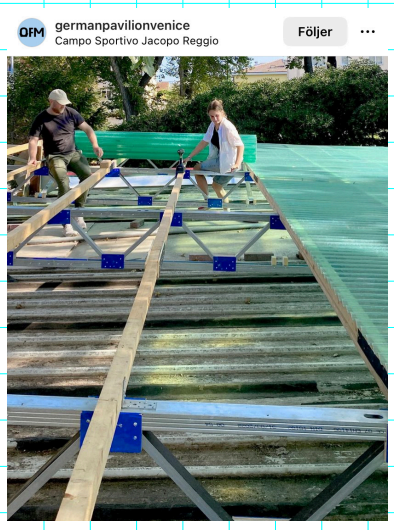
Repaired pottery inspired by the method of Kintsugi

F9 (right): Traditional Repair, Immaterial Injury Kader Attia



F10 Workspace for maintenance, the German pavilion.

F11 Depot of material from the art biennial 2022.



F12 Maintenance 1:1 repairing a soccer club.

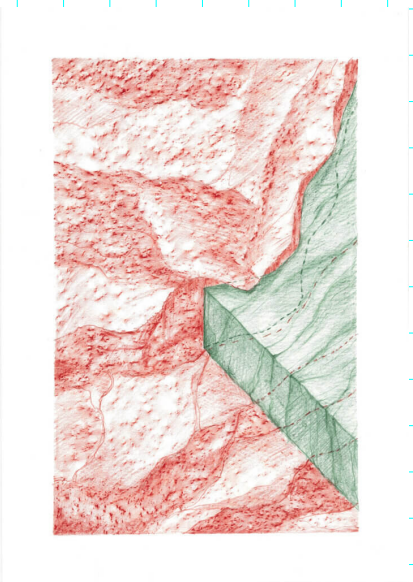
Open for maintenance and Mainteanace 1:1
German Pavillion, Venezia 2023.

The 2023's German Pavilion at the Venice Architecture biennale is not an exhibition. It's a place of making, doing maintenance and smaller interventions at the pavilion and all-around Venice. It's starts with gather material from the 2022 art Biennale, catalogue it and store in the pavilion for later use. In addition, spaces for workshop, meetings, food and hygiene is organized to make it possible to participate in the agenda of the pavilion. At the Instagram account @germanpavilionvenice, the process of real interventions by participants in summer schools, is document. The work is one of the most contemporary examples of how a process of maintenance can look like and has been an inspiration for this master thesis. Both the process of starting with the resources, inspiration for needed spaces for maintenance, examples and inspiration for design by ways to assemble materials/objects.

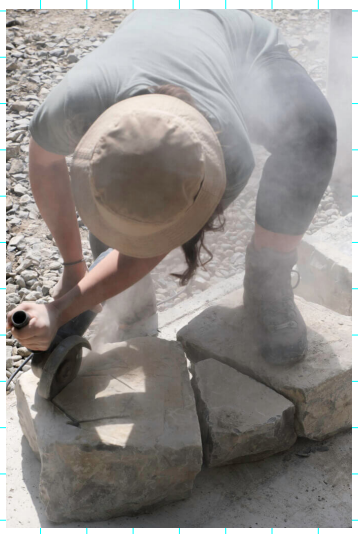
Revealing encounters
Summer School, studio*ser*

Revealing encounters is a summers school in 2022 organized by studio*ser* in Valle di Muggio where the students studied encounters of time, material, space and people and the re-draw them and made physical interventions.

This thesis take inspiration from studio*ser*'s method of working with taking inspiration and learnings in the real situations or what they call encounters. To start in the situations that may not be used as intended, has be re-developed or has an kind of "skewness". They have two ways of presenting them. First, every time the website is reloaded a new picture of an encounter appears. The second is by the hand-drawings.



F13 A hand drawing, with close attention to its context.

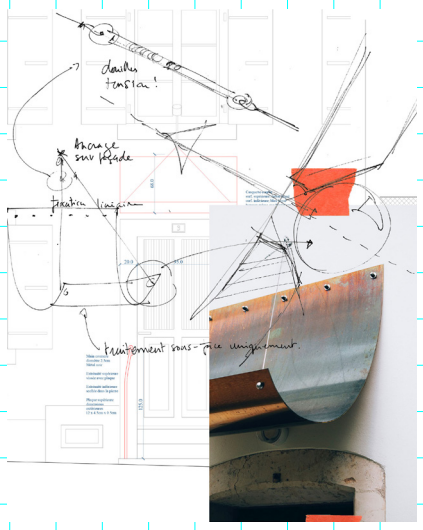


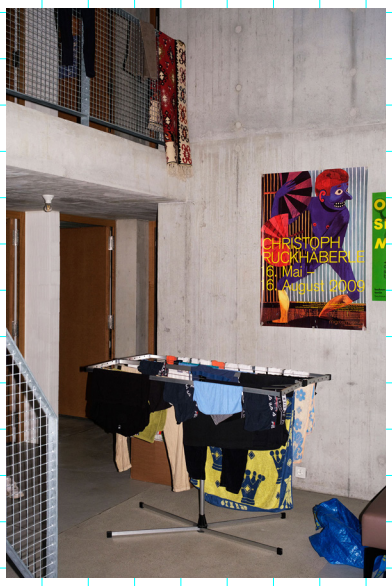
F14 To visualize the process of making. A student making a water bowl for animals.

F15 Screen shots of studioSer website with a new encounter for each refresh.

F16, “Tin Can” Castel Kosmos:
This tiny house is an inspiration of the design of the workshop at Farsta Sports Field, with is combination of metal sheets and red accent colours. Also, Kosmos way of designing to make it possible for the users to build them self is part of this thesis method.

F17, Club Absinthe is a transformation project by MacIver-Ek Chevroulet:
that has been an inspiration for an approach of small interventions and the details for design such as the canopy in the picture above. Also the mixed use of photos on drawings and representations of isometric line drawings.





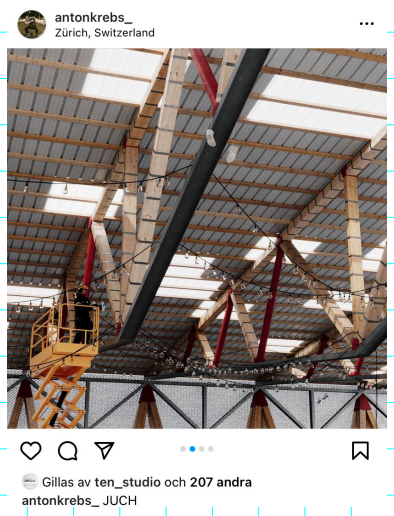
F18. “Student housing”
Photo by Max Creasy:
Max Creasys photos almost like “Frozen moments” captures architecture in it’s real life and are an inspiration for composition for this thesis visualization. It is also a reference like studio*ser* to pay attention to the encounters of architecture, time and people around the cities.

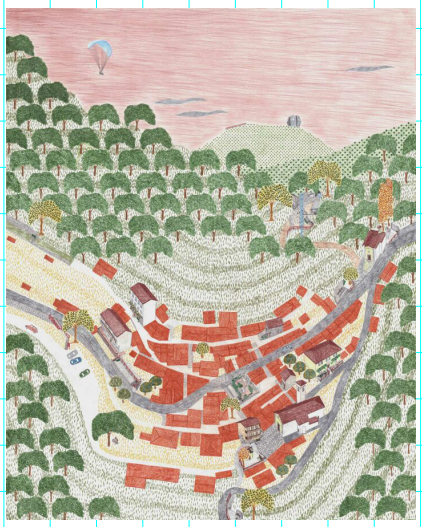
Design + Visual References

Following references has been used for inspiration to the representation and design of this thesis. It is an addition to the references on the previous page, but what separates them apart are that they in first hand are visual references and not references for the method.

F19, Material test, Lendager:
Investigation of aluminium sheet metal and heat to remove the paint cover. The reference is used for the proposed expression of the furniture and facade at the workshop at Farsta Sports Field.

F20, JUCH, Anton Krebs
Render Anton Krebs for Ten Studio about reuse and recycling and attributes that become form. Inspiration for the style of renders.





F21 Drawing Monte studio*ser*:
Situation drawing from studio*ser*s project in Monte redevelopment of public spaces for elderly. This drawing is an inspiration for the site plan. By capturing the sites context with a colourful hand drawing.

1. Farsta Sports field
   Can be considered as a typical sports field in the region. Classed to have “some value for the city and cultural historical value.”

   An facility from 1970 with football, track and field, ice hockey rink (developed in different steps), a sports hall from 2014 and also area for spontaneous sport.

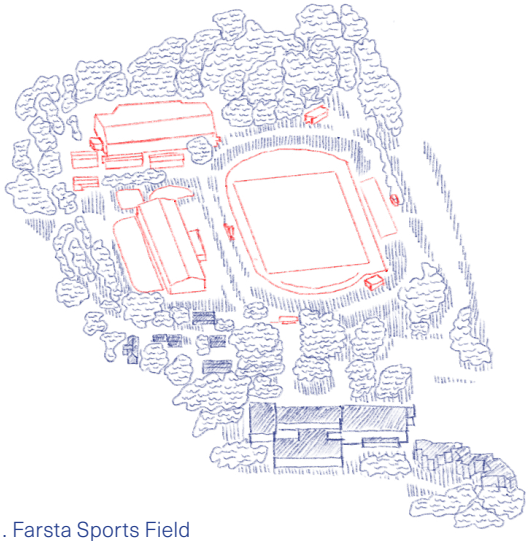
2. Enskede Sports Hall
   Built between 1956 and 1960 with a large sports hall, a smaller sports hall that can be divided, rooms for table tennis, budo, wrestling, weight lifting, also a small swimming pool and bowling hall. After 2005 the facility is added with special equipment for gymnastics, but the other functions remain. Has high cultural historical value according to Stockholm City Museum.

3. Hovet/Globen
   A former outdoor ice hockey rink that has been transformed to an multiarena, first in the 50's and 60's and later in 2002. Is connected to Globen (Avicii Arena) and will be part demolished around 2028.
   High cultural historical value according to Stockholm City Museum.

4. Kärrtorp Sports field
   A similar site as Farsta but with a private tennis hall instead of a sports hall. The original outdoor rink has got a tent for cover. The changing room facilities, as at Farsta, are in independent buildings from various years.

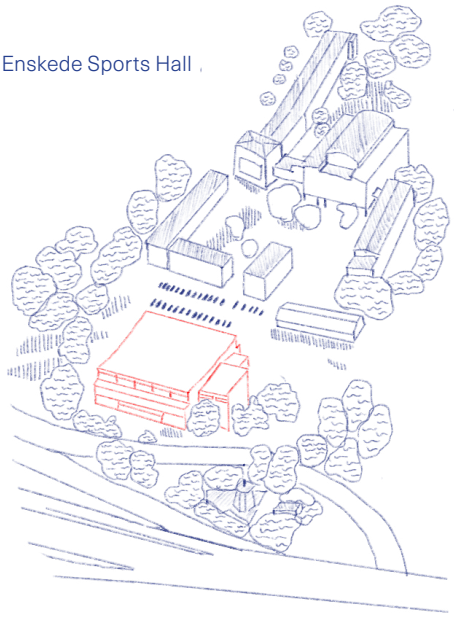
Excursion

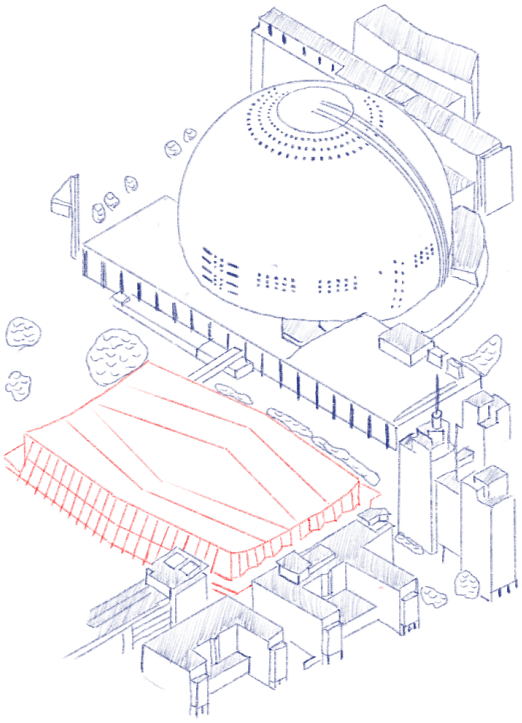
In the excursion phase site visits are done together janitors for the facilities in February 2024 and for Hovet October 2023. The analyse is based on interviews with janitors working as partly caregivers with focus on the cleaning and maintenance for the activity, technical chiefs with an overall knowledges on the facilities and the author with a background as user of sport facilities and material and design knowledges as an architect. In addition following analysed categorise are based on the theory from the discourse where its is in crucial to understand why, for whom, by whom and with what consequences a repair and maintenance is done. The mapping is a mix from all sites, sorted in different categories.



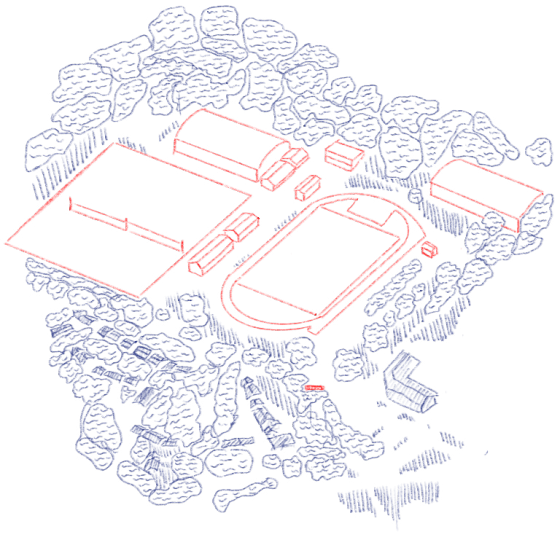
1. Farsta Sports Field

2. Enskede Sports Hall





3. Hovet (+ Globen)



4. Kärrtorp Sports Field

Examples of care and maintenance

Day-to-day work

Farsta/Kärrtorp

a. Cleaning the facility
b. Pick rubbish outside
c. Maintaining the ice

Enskede

a. Cleaning the facility
b. Pick rubbish outside
c. Maintaining the ice

Hovet

a. On-call operations
b. Repairs or refurbishments
c. (Cleaning by a hired firm)

When needed but recurrent:

a. Making the ice
b. Harrow the ice
c. Mill the ice
d. Brush the soccer filed
e. Harrow
f. Shoveling snow
g. Cutting Grass
h. Blow leafs
i. Smaller repairs, equipment for the maintenance and the facility

a. Lager cleaning
b. Smaller repairs, equipment for the sport like net, goals.
c. Replacement of equipment (sports)

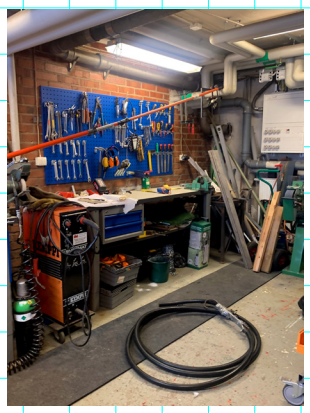
a. Repairs
b. Renovations
c. New installations

Categories of storages:

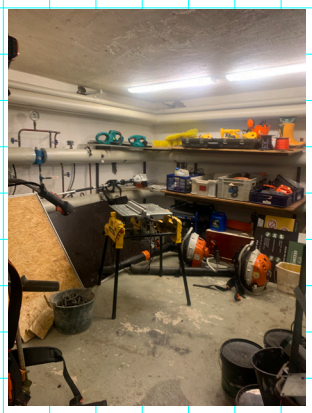
a. Garages for lager vehicles
b. Areas to store care taking equipment.
c. Areas to store equipment for the main function (sports)
d. Places to store leftover material and seasonal equipment.

At Farsta Sports field, additional storages space is provided when needed by constructing a new warehouse. If there is a need for a looked storages for a sport association, it's often addressed by building inside existing storages areas. According to the janitors, there is always a need for more storages due to the increasing demand for equipment in their work.

1. Spaces



1a. Farsta
The workshop area.

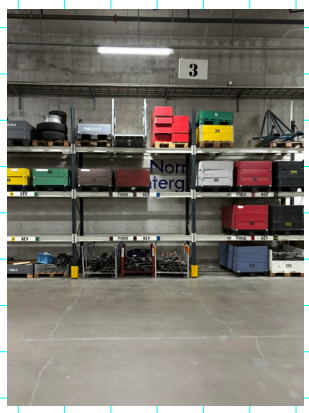


1b. Farsta
Combined storages and workshop area.

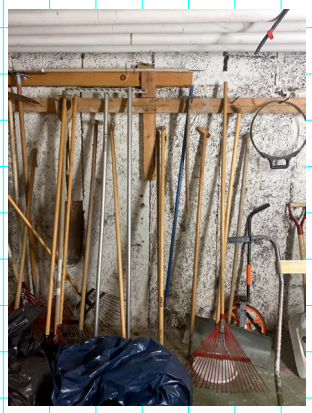
1c. Enskede
Workshop area behind a tarpaulin.

1d. Hovet/Globen
A full size carpentry

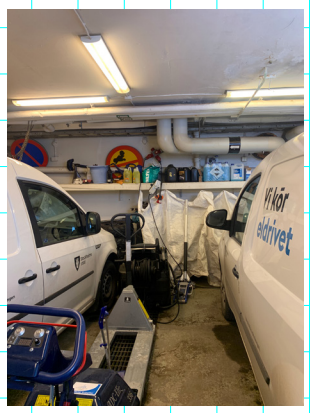
2. Storages



2a. Hovet/Globen
Category d



2b. Farsta
Category b



2c. Farsta
Category a

1d. Farsta
Category d/a

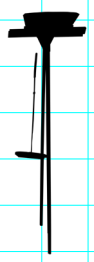
Examples of care, maintenance and repairs

3. Indication of care:

Supporting objects

Knowledges in the use and needs / call for everyday maintenance

One example of understanding care is through the objects that indicates that someone or a collective is caring for something. It can be directly related to the performance of the activity or assisting/prevent maintenance operations. Often, solutions are improvised on-site using products not specifically designed for that purpose.



3a. Visible cleaning equipment

Actions: *In all common places, changing room and entrance*
For cleaning the ice hockey booth from gravel to protect the skates and the ice.

Farsta

3b. Changing water tap

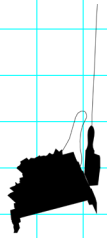
Actions: *Plastic pipe for fit the bottles and watering can. The water can is for maintaining the ice by the players them self. The sink has been under development, traces visible at the wall. Made at site.*

Farsta

(Skarpnäck)

3c. The plastic pipe

Make it possible to jump over the fence. Made at site by the sport club or janitors.

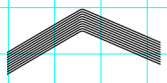


3d. Brushes at the football field

To keep dirt from entering the field and to avoid granules to follow with the player to the rest of the Sports Field. Made by standard brushes and can be replaced with new ones.

Kärrtorp/Farsta

Farsta



3e. Melting the snow

To facilitate the process of taking care of the snow from maintaining the ice in the ice hockey rink.

Examples of care, maintenance and repairs

4a. The gate to
the sports field
Not in its intended use, a barrier and a storage.
Some repairs and attentions to keep it as it was.

Kärrtorp

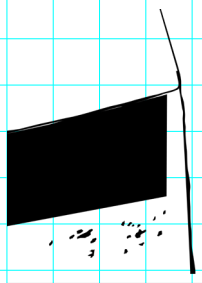
4b. The gate to
the sports field 2
Not in its intended use, a barrier and a storage. Working as a notice board.
Some repairs and attentions to keep it as it was.

Farsta

4. Wear before tear

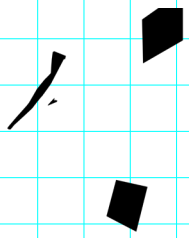
Traces of usages, disrepairs, breakdowns

Farsta



4c. Insulation
ice hockey rink

Farsta



4d. The entrance
ice hockey rink

These situations share the characteristic of being in the state of waiting. They are still almost functional, with some degradation of damage from their original state. However, due to their breakdown and visual appearance, there are also potential situations that can be recognized as in need for care. There's much to learn from these situations. For example by analysing how they broke or reached their current state, which can lead to potential innovations or changes, both in them and in similar situation.

In situation d, for example the gutter is a result of damages from another maintenance work, likely caused by equipment such as a tractor or a scissor lift. Traces from it are also visible at the metal sheet. This highlights that in every maintenance task, there's a potential for creating more work if not careful, if the work isn't properly planned, or if the right equipment in a careful way isn't used.

Situation a and b involve entrance gates that are no longer used for their original function and are therefore being cared for with limited time and resources, repaired temporarily by the janitors themselves

In situation c, the wall bears evidence of damages from ice hockey pucks and are also worn by dust, mould etc., that has been fixed on the surface.

Examples of care, maintenance and repairs

5. Increase value:

Aesthetic value and newness

"A refresh?"

or just taking care of a bad situation... or a expired material?

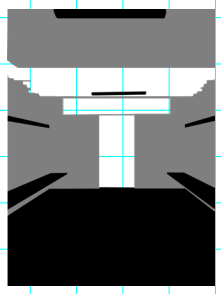
The category
This category highlights situations that have recently undergone changes to increase their value, aiming to appear new and fresh. The reasons often include wear, expired materials, and a desire for a new aesthetic from the owner.

Actions:
The actions fall under a common approach of retrofitting, focusing on fixing surfaces by painting, replacing tiles, and furniture with new ones. These actions can be categorized as maintenance because the primary aim is not just development or transformation.

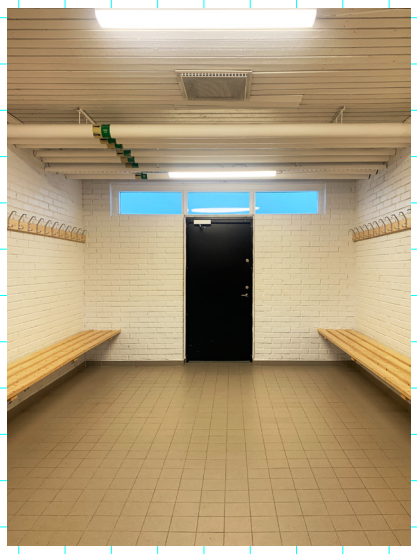
Motivation
The actions are mainly reactive, initiated when someone recognizes the need for fixing or solving a problem. Anticipation plays a role in the choice of actions, often opting for easy solutions like painting over wear or replacing furniture with similar items instead of repair and maintenance.

Labour
The actions are identified by the technical manager, decided upon by the owner (the municipality or property company), and carried out by hired craftsmen.

Care receiving
How the actions are received varies. Newly made surfaces are more vulnerable to vandalism, but due to the high attendance of janitors, they are maintained in their new state. In the changing rooms, the choice of painting with white colours raised questions among some guests about whether it was unnecessary work, especially when the original natural brick wall was in good condition.
In situation B, the material choice was poor in terms of cleaning possibilities and will/has been redone.

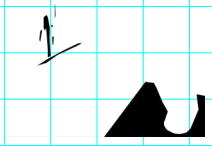


5a. Changing room
Actions: Replacement of tiles, white paint on brick walls and ceiling, replacement furniture, new lights
When: around 2 years ago
Condition: Good

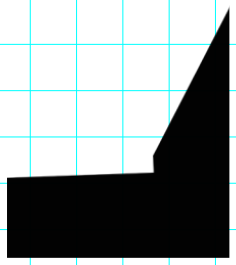


Kärrtorp/Farsta

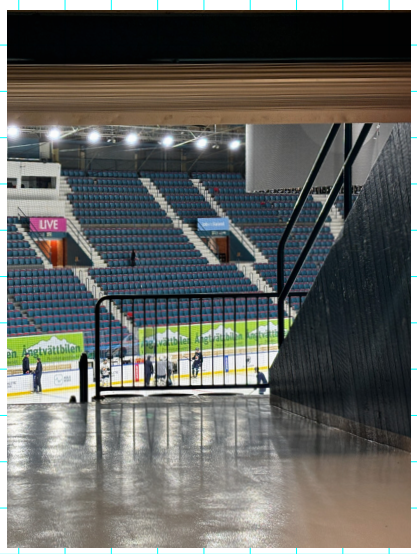
Enskede/Farsta



5b. WC
Actions: Total renovation, keeping porcelain
When: around 1 years ago
Condition: Okay, difficult to maintain

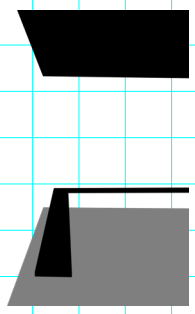


4c. Public entrance and stands
Actions: New floor and colour on the walls
When: around 3 years ago



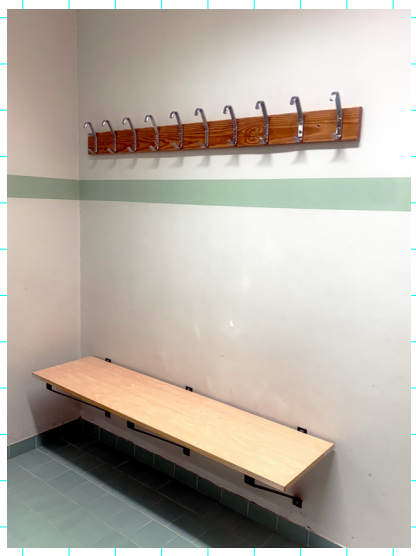
Hovet

Farsta



5d. Changing room
Actions: Replacement of tiles, white paint ceiling, keeping + replacement of furniture, new lights
When: around 2 years ago
Condition: Okay

Examples of care, maintenance and repairs



6a. Changing room swimming pool
Actions: *Replacement of the bench top with an other board*

Enskede

The category:
This category collects examples of visible traces indicating that something has happened. In all these situations, there are also invisible traces of maintenance, but these can only be imagined because they are either not documented, harmonising with their surroundings to blend in, or have been replaced with new maintenance work. Patching and repairing can have an important role in the narrative of architecture. As Attia (2022) stated, it is impossible to restore something to its original state, so the crack should be embraced. Compared to these situations, Attias work or for examples repair method like Kintsugi focus more on intentionality, creating ornaments and art. Instead, the patching in these situations is more reactive and influenced by urgency (Benjamin, 2024). They are made to cover holes using available materials, often different from the original, or by what is available on-site, attempting to blend in, but due to material differences in time and wear, they will look different.

Actions:
Patching and repairing is an action an a visual appearance. It shows events of history in a situation such as colour changes, the introduction of a contrasting materials, or by different method of assemble.

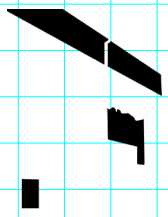
Labour:
These actions are probably done by hired craftsmen. In the situations with assembly of objects that originally served another purpose indicates that they can be reused from the site.

Care receiving:
Responses to the original needs.

6. Patching and repairing

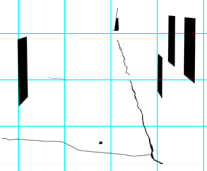
6b. Facade ice hockey rink

Actions: *Changes in the colour of the facade indicates work made in different times*



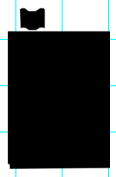
Farsta

Enskede



6c. Lookers corridor + repairs in floor

Actions: *Try to blend in. New panels and filled cracks.*



6d. Facade north

Actions: *Covering holes in contrasting metal. New window*

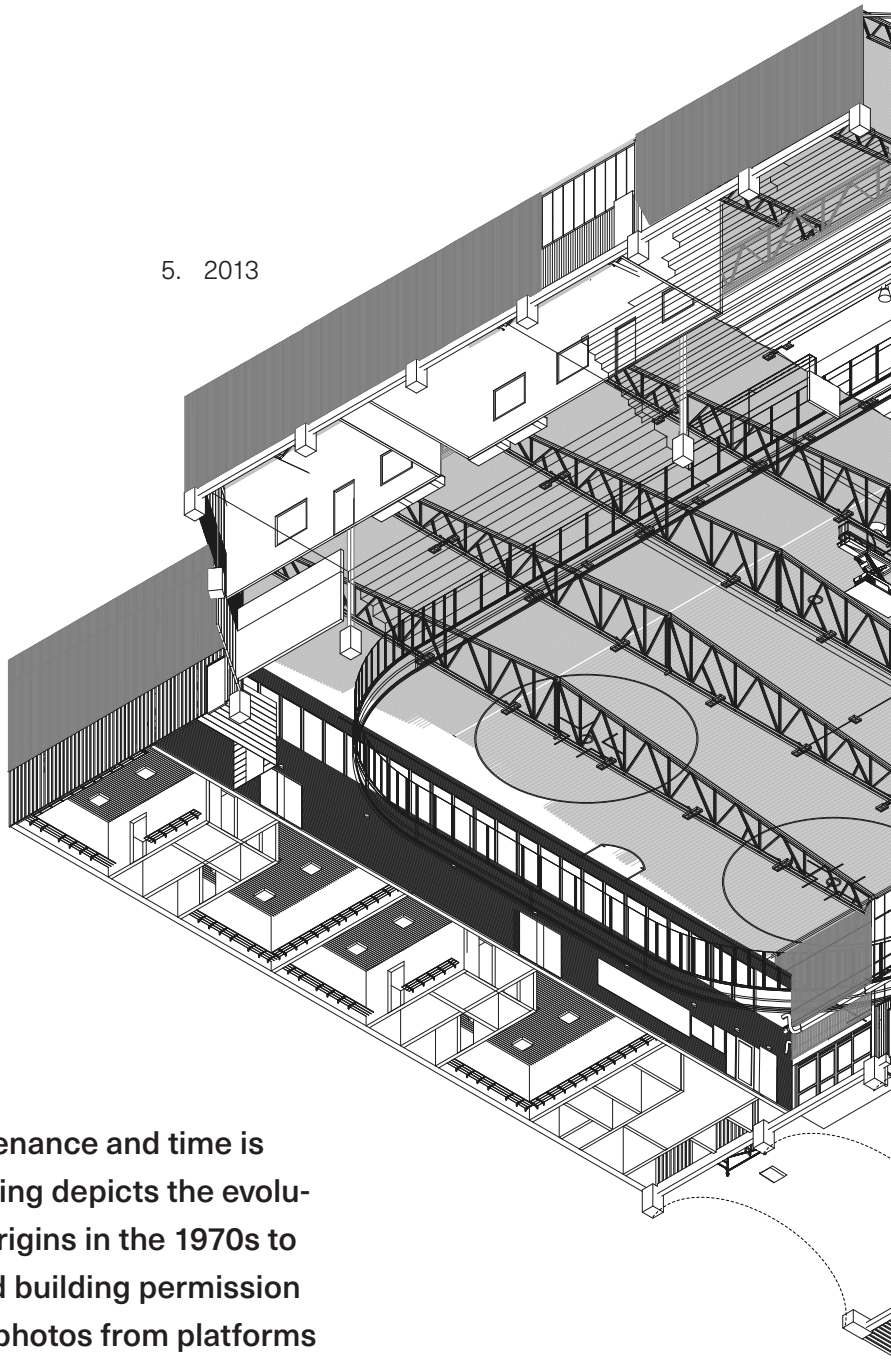
Enskede

Enskede

6e. Basement window

Actions: *Glass in ground level that has been broken. Repair with cement and a similar product.*

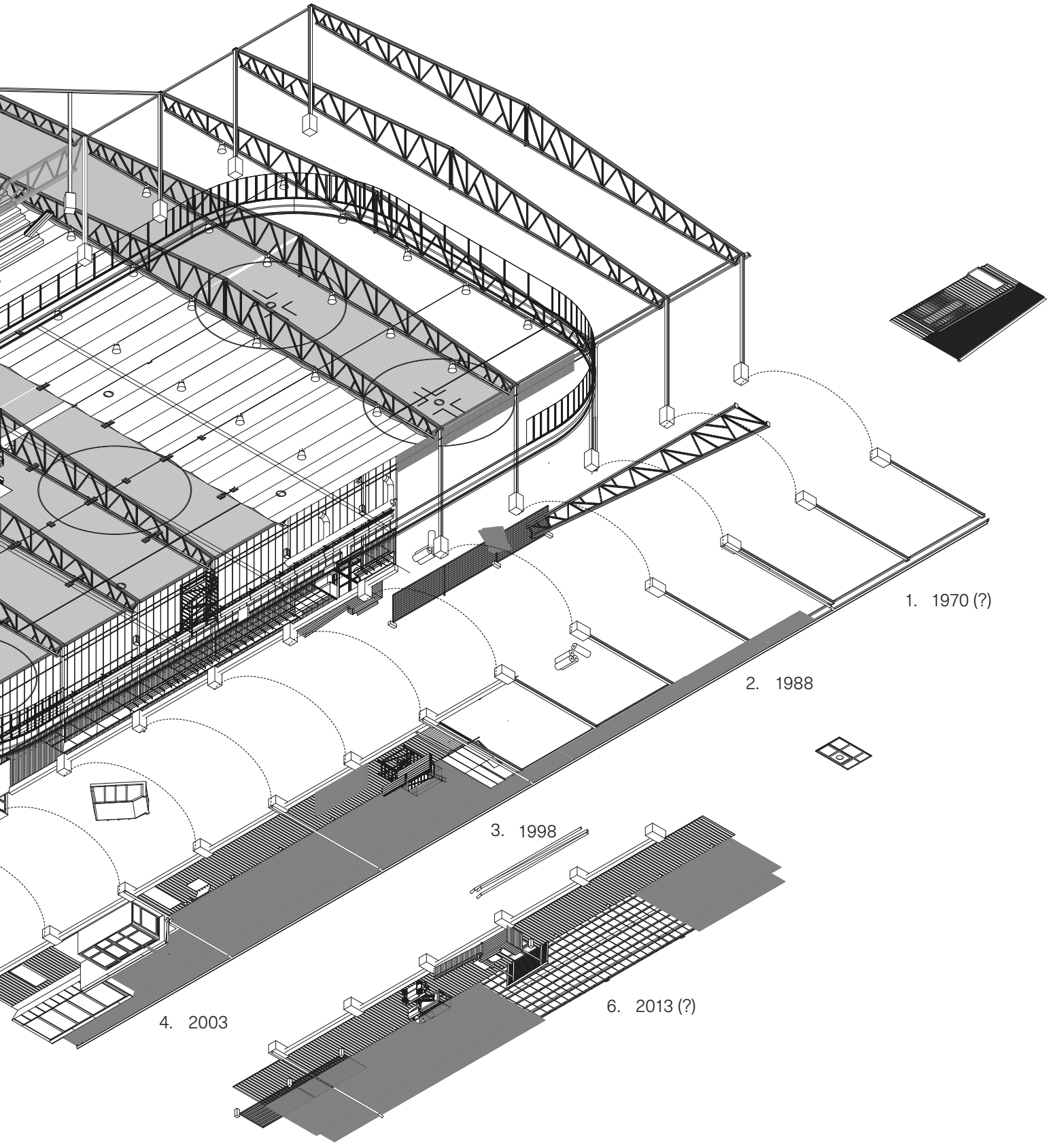
1. 1970
   Outdoor facility
2. 1988
   The structure and the roof is add
3. 1998
   The structure is covered
4. 2003
   Changing rooms and café is add (the left part in this drawing)
5. 2013
   New stands and gym for the hockey
6. In the 2010's
   Facade renovation? Colour differences indicates. New roofing felt?
7. Between 1998 and in 2010's
   Foiledceiling is added and removed
8. In the 2010's
   Renovation of changing rooms
9. In the 2010's
   New ventilation
10. In the 2010's
    New lighting
11. 2023
    New ice hockey puck
12. All the time
    Invisible work

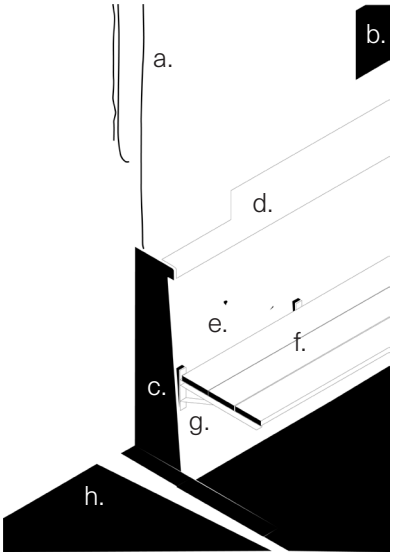


Design Exploration

Learning from Farsta Sports Field

This drawing is a explanation that maintenance and time is related in an ongoing process. The drawing depicts the evolution of the rink from its outdoor facility origins in the 1970s to its current appearance. It is based on old building permission drawings, on-site observations, and old photos from platforms like Facebook and Instagram. The drawing serves as a tool to comprehend changes, development, maintenance work, and repairs and are represented in the drawing by suddenly appearing or disappearing. It's recognized that imagining the original state can be a tool to understand why something looks the way it does today.


1. 1970 (?)
2. 1988
3. 1998
4. 2003
6. 2013 (?)

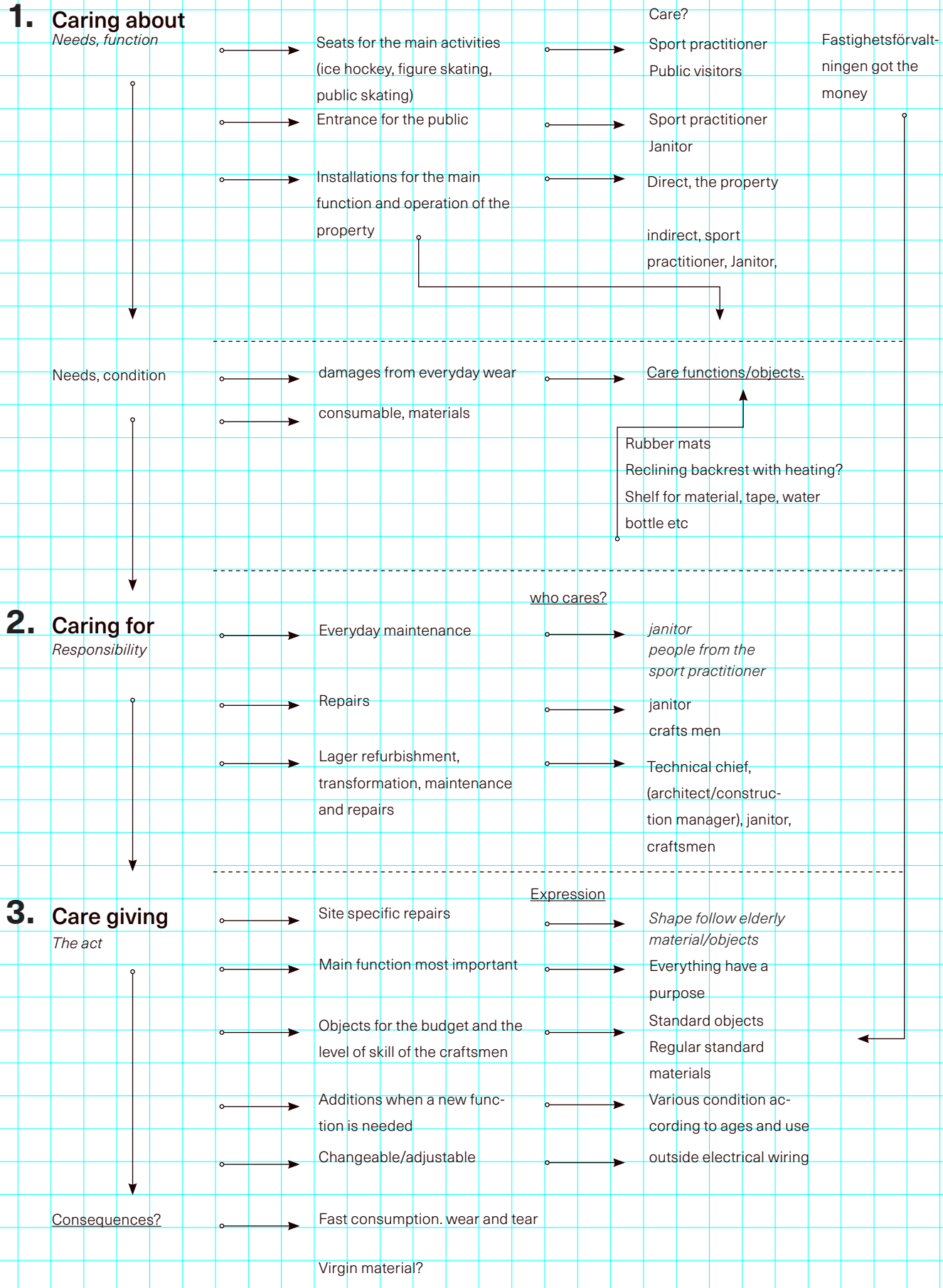


Example of care

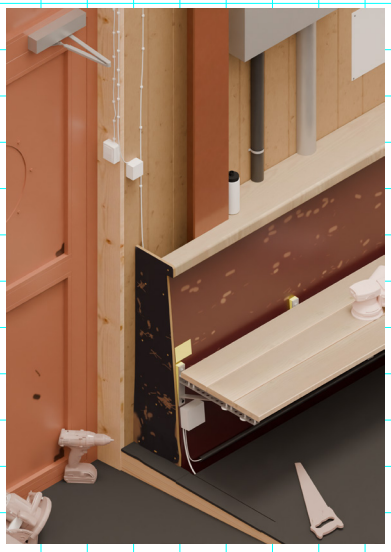
The ice hockey booth, Farsta Sports Field.

Following situation is analysed by the definition of care (next page) and visualised as it "as found state" from February 2024. Current composition is at least ten years old but has been through same maintenance like changing rubber mats, electrical wiring and signing.

a. *External wiring, exchangeable*
b. *Wall that allows temporary signing*
c. *At site made furniture, Adapted to d.*
d. *Top plank, standard wood*
e. *At site made distances to recline the backrest*
f. *Wood non treated*
g. *Products from the local hardware store*

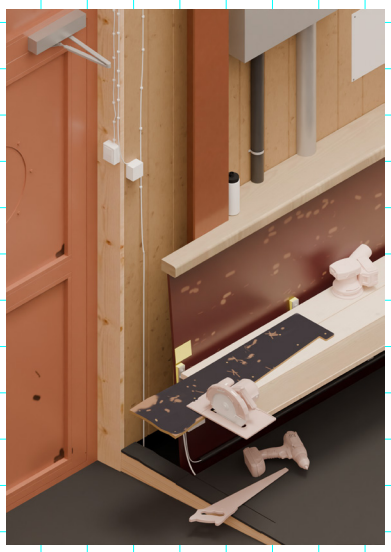

1. Caring about
Needs, function
Seats for the main activities (ice hockey, figure skating, public skating)
Entrance for the public
Installations for the main function and operation of the property
Care?
Sport practitioner
Public visitors
Sport practitioner
Janitor
Direct, the property
indirect, sport practitioner, Janitor,
Fastighetsförvaltningen got the money
Needs, condition
damages from everyday wear
consumable, materials
Care functions/objects.
Rubber mats
Reclining backrest with heating?
Shelf for material, tape, water bottle etc
who cares?
2. Caring for
Responsibility
Everyday maintenance
Repairs
Lager refurbishment, transformation, maintenance and repairs
janitor people from the sport practitioner
janitor crafts men
Technical chief, (architect/construction manager), janitor, craftsmen
Expression
3. Care giving
The act
Site specific repairs
Main function most important
Objects for the budget and the level of skill of the craftsmen
Additions when a new function is needed
Changeable/adjustable
Shape follow elderly material/objects
Everything have a purpose
Standard objects
Regular standard materials
Various condition according to ages and use
outside electrical wiring
Consequences?
Fast consumption. wear and tear
Virgin material?

Cleaning



Maintenance

Maintenance

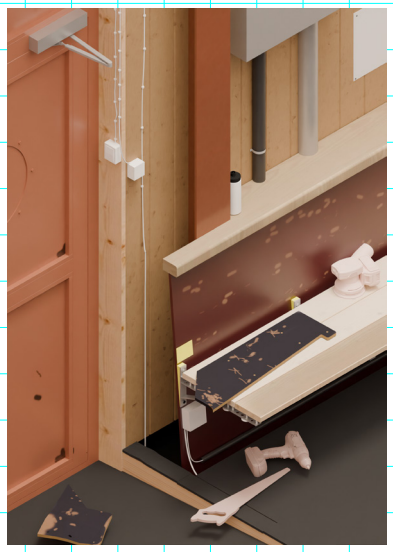


Removing

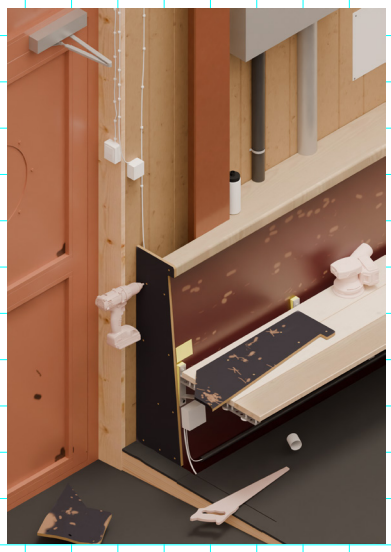
What is maintenance and repair?

Visualized at the situation of the entrance and the booth.

This exploration explains this authors differences between the concepts of cleaning, maintenance and repair and set it in contrast to the every actions in regarding changes in the built environment cannot go under these definitions.



Removing



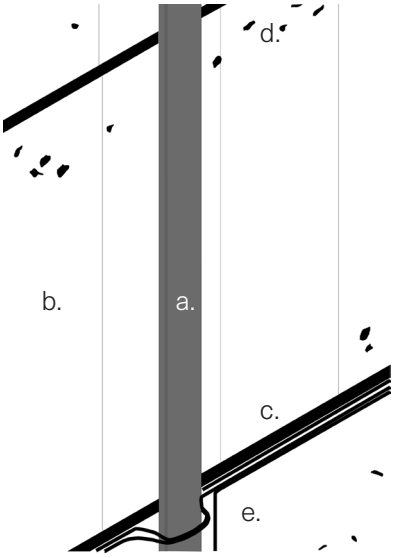
~~Repair~~ – Replacement

Repair – ~~Replacement~~

Contrasting repair

Left: Pillar and interior wall

Under: Diagram, explaining investigation



The structure

The load bearing structure and the infill, interior ice hockey rink

a. *Visible pillar*
b. *Wood wool (träullit)*
c. *Metal band to cover the splices*
d. *Damages from pucks*
e. *External wiring, changeable*

Learning from Farsta Sports Field

Truss and roof. Ice rink

1. **The buildings consist of visible layers**

   the structure

   external installations

   walls at infill between posts

2. **Expansion in stages**

   a question of standard and economic resources

3. **“Go with the flow”**

   Reactive maintenance. Earlier actions set standards for new ones.

4. **Surfaces made to be worn**

   For protraction of the facility and to put up signings/installation on.

5. **Standard products**

   from the local hardware store

6. **On-site made furniture**

   Solutions based on the conditions on-site and with material available at the local hardware store.

7. **Accessible cleaning equipment**

8. **Mixed appearance**

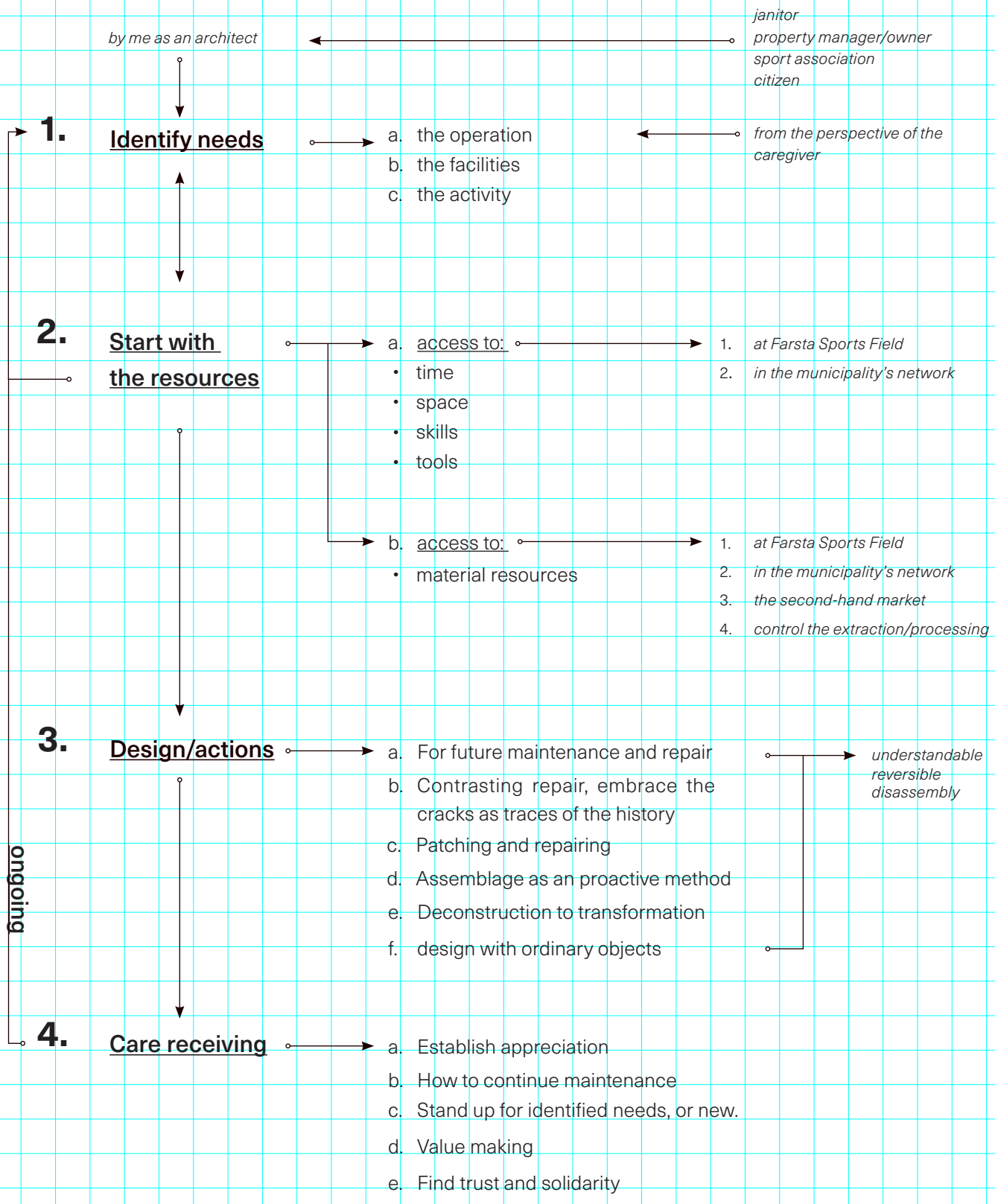
   When something is care for by many instants

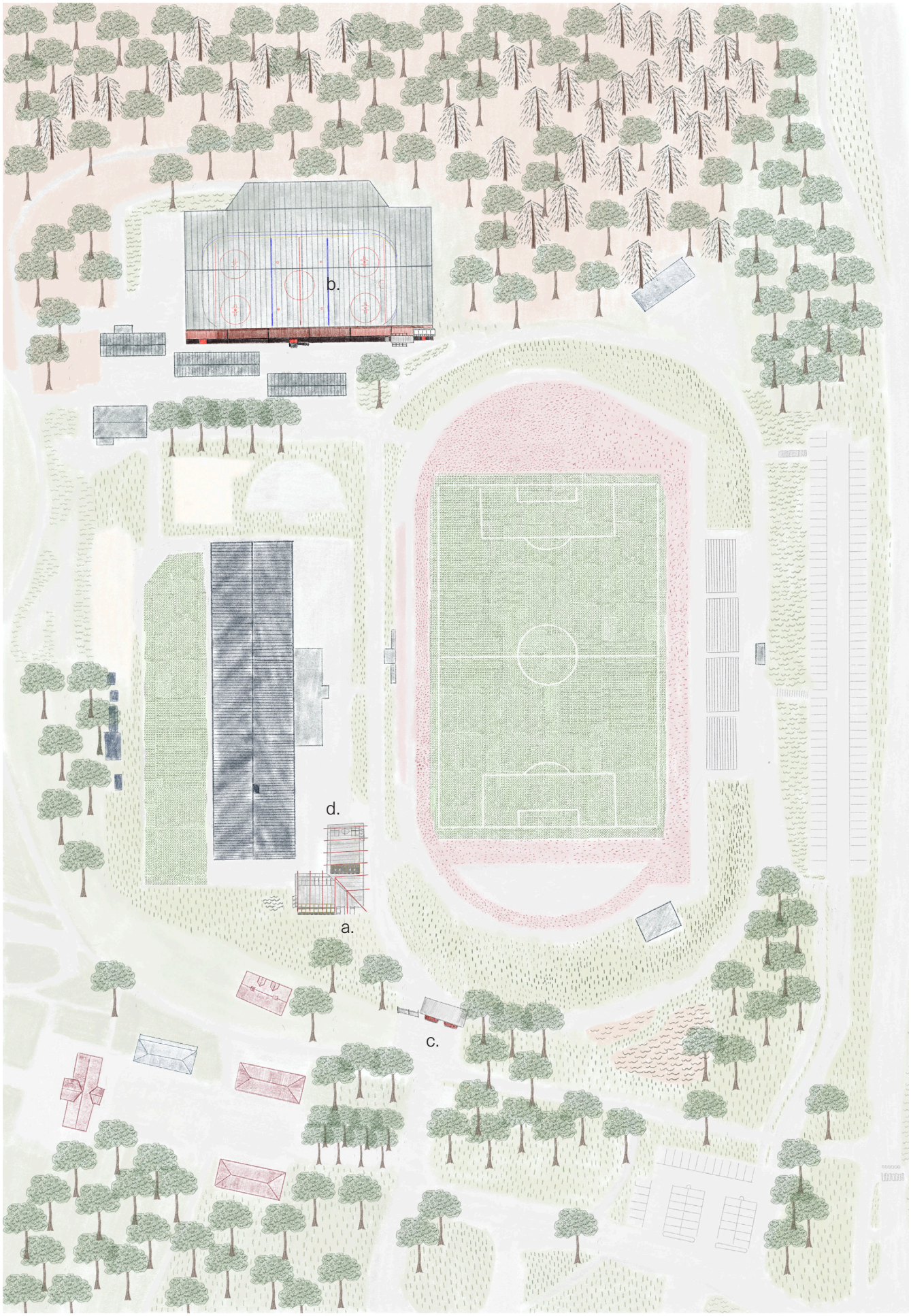
9. **Cared by several groups and interests**

   Responsibility in relation to claimed areas

Result

Method for an approach of care when maintain and repair Farsta Sports Field.


by me as an architect
janitor
property manager/owner
sport association
citizen
1.
Identify needs
a. the operation
b. the facilities
c. the activity
from the perspective of the caregiver
2.
Start with the resources
a. access to:
• time
• space
• skills
• tools
1. at Farsta Sports Field
2. in the municipality's network
b. access to:
• material resources
1. at Farsta Sports Field
2. in the municipality's network
3. the second-hand market
4. control the extraction/processing
3.
Design/actions
a. For future maintenance and repair
b. Contrasting repair, embrace the cracks as traces of the history
c. Patching and repairing
d. Assemblage as an proactive method
e. Deconstruction to transformation
f. design with ordinary objects
understandable
reversible
disassembly
4.
Care receiving
a. Establish appreciation
b. How to continue maintenance
c. Stand up for identified needs, or new.
d. Value making
e. Find trust and solidarity
ongoing


b.
d.
a.
c.

1. The operation

If any work of maintenance and repair shall be possible the operations care must be prioritized. This thesis suggest that the caregivers shall give space for doing or preparing lager repairs/maintenance work but also development for the sports field by adding a new workshop to the site. To make it possible to work in a scenario of limited resources the need of store materials/objects and tools is important. In combination with the workshop a depot (storage) is added.

2. The facilities

The second category of need is regarding the need for the facilities be maintained and repaired. Interventions of four situations at the ice hockey rink is in this thesis is a way to explain how the workshop and depot is needed, how the theory from the discursive analysis and design exploration can be implemented and how a future scenario of maintenance can look like.

3. The activity

The category of the activity aims in this thesis to shed light on that this method of maintenance and repair also embodies forward-thinking and transformation. Interventions for the activity is done in the encounters of other needs. The first is a transformation that a consequences of a part deconstruction of the entrance gate house and the second is an addition of a function for the sport participation in form of a sport equipment library called Fritidsbanken.

What comes first to identify the need or to start with the resources?

The steps in the is closely related. It is arguable that the need always will be influenced by the conditions and resources the caregiver has to achieve. For the development of this thesis the second step of the method was identified in parallel with identifying the need. But in a real scenario is more effective to understand the need to know what resources that can be useful and then adapt the need considering accessible resources.

The recognized need is delimited to focus on the caregiver (the maintainer) and their conditions and resources for care of facilities.

The role of the architect.

The needs is in this master thesis is it identified by the author and is delimited to base the method and design implementation on perspective the caregivers and secondly the perspective for the users of the functions (sport activity).

1. Need for the operation
   a. *The workshop and depot*
2. Need for the facilities
   b. *Interventions at the ice hockey rink*
3. Need for the activity
   c. *Deconstruction and transformation of the entrance gate house*
   d. *Fritidsbanken*

1. Identify the need

The first step in the method is to identify the need. There is 3 categories of needs that can be identified. The first is regarding the possibilities to perform care. The second is needs for the facilities with the starting point in breakdowns with potential actions of maintenance and care and not the wish for development. The third category is needs for the sites main activity which is in this case is the sport but from the perspective of the caregiver.

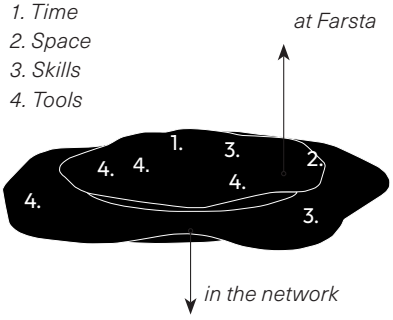
Left: Visualized diagram of available resources within the method.
In the middle and top of the pyramid shows a selection of resources available at Farsta Sports Field. The second layer shows the possibilities that needed resources can be available in the municipality own network (or if the method is applied on another site it will be the that owners network such as friends, family or other relations) and shall be considered before renting or buying needed resources.

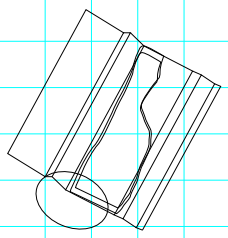
Right: The diagram
Shows on a general level what types of categories in the resources of time, space, and skills that will be needed for an approach of care when maintain and repair at Farsta Sports field.

2. Start with the resources

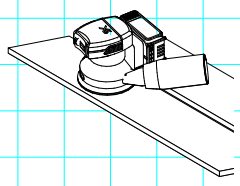
a. Access to time, space, skills (knowledges), tools

1. Time
2. Space
3. Skills
4. Tools

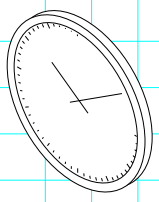




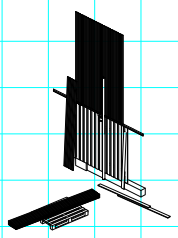
a. for experiment



b. for craft

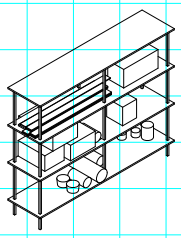


c. for the ongoing process

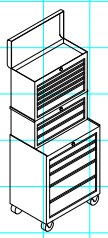


d. for material search

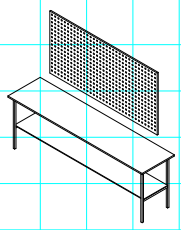
1. Time



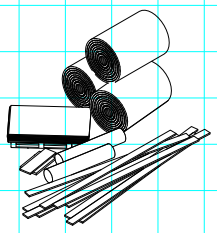
e. for organization and accessibility



f. for tools and equipment

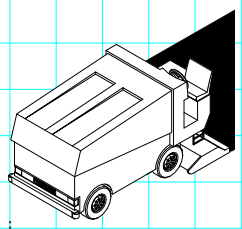


g. for workshop

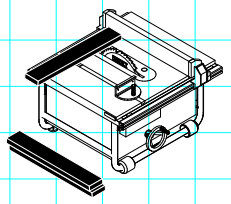


h. for storages

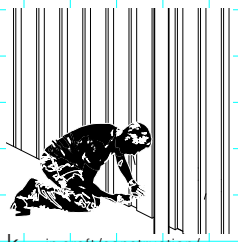
2. Space



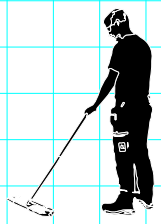
i. in maintaining the sport facility.



j. In the specific tools



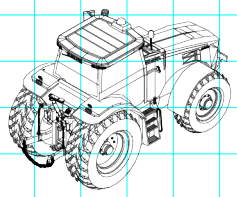
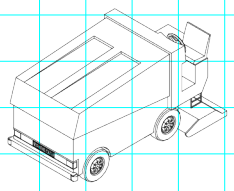
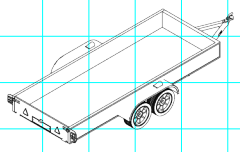
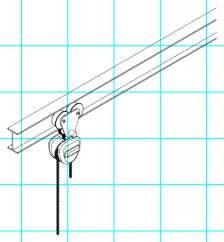
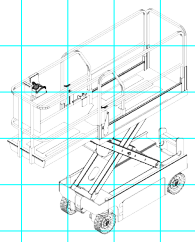
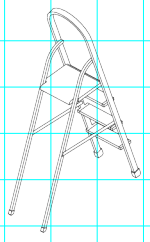
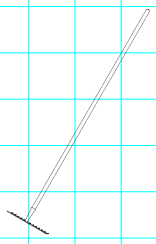
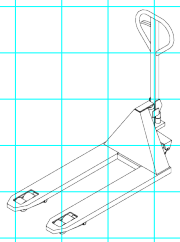
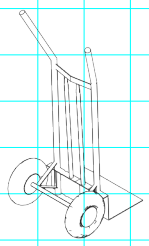
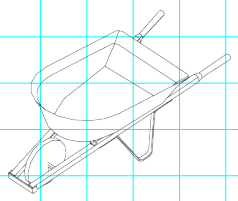
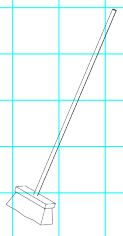
k. in craft/construction/ repair and materials

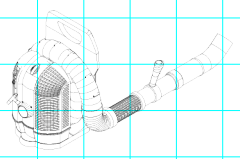


l. in maintenance and cleaning

3. Skills

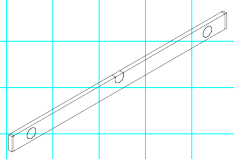
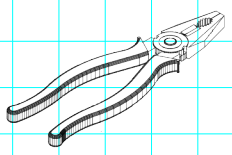
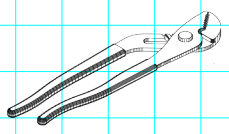
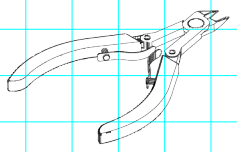
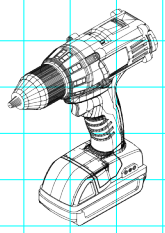
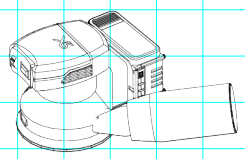
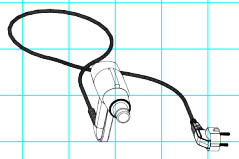
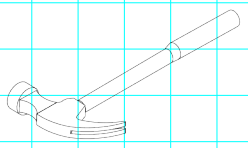
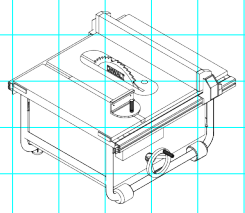
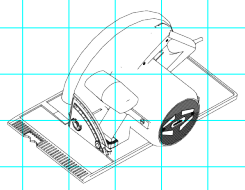
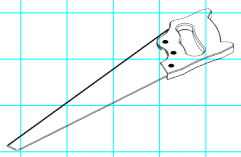
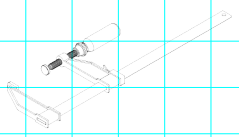
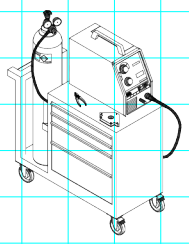
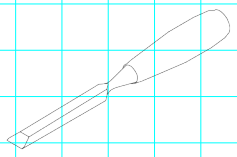
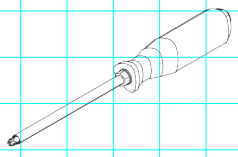
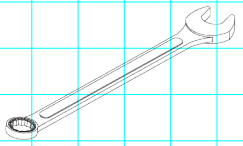
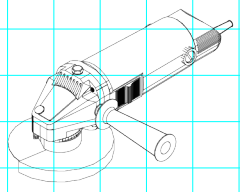
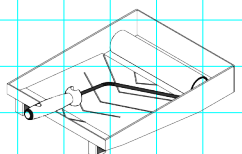
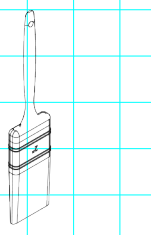
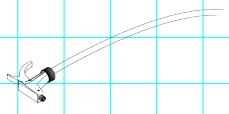
Before design, and in parallel with the identifying of the needs, choose actions based on what is available at the site. The first step is to imagine it from the caretaker's point of view and their access of skills (knowledges), time, space and tools. Avoid the outcome to be controlled by an imagined visual expression or function. Also avoid the actions that is not possible with the available resources at site. Next in hierarchy is to search for resources (skills, time, space and tools) in the own network (municipality own sports fields, colleges, similar facilities).




4. Tools

Following tools is investigated as existing resources at Farsta Sports Field.

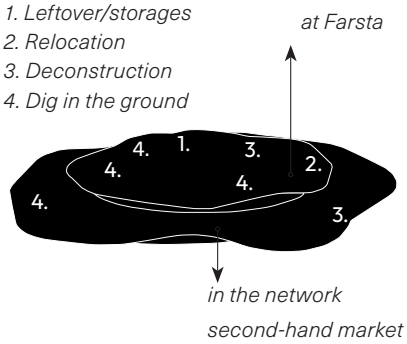





















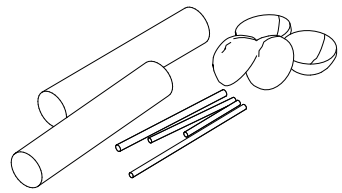
Left: Visualized diagram of available material resources within the method. *In the middle and top of the pyramid shows a selection of material resources available at Farsta IP and also the easiest materials to access. The materials will be used for maintenance, repair and new additions and interventions. The categories with accessible material resources is, Leftover/storages, relocations, deconstruction and dig in the ground. The second layer in the diagram shows the possible resources that can be available municipality own network as reclaimed resources. Last in the hierarchy of were to source material is to be allowed to use virgin material. If so, it must be in a controlled process of extraction and care if the method of care shall be achieved.*

2. Start with the resources

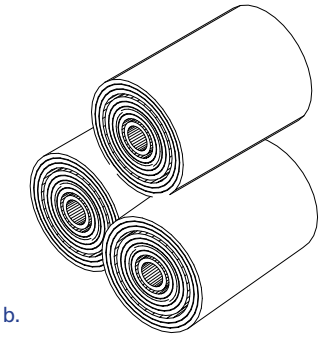
b. Access to material resources

In considering a care concept, attention must be given to the origins of resources, including materials for construction. To start with the access of material resources means to being in the own controlled site itself. It deepens the understanding of the consequences related to function, use, and maintenance. Working with existing resources fosters creativity, improvisation, and innovation while reducing the need for new materials, minimizing waste, and offering economic advantages.

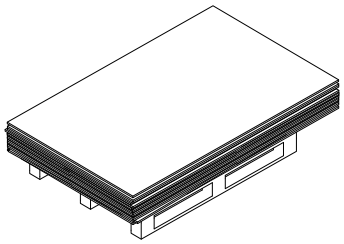




a.



b.



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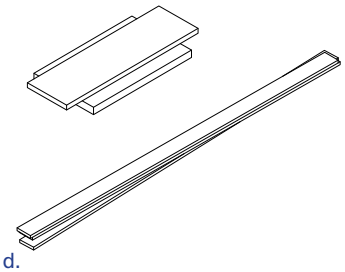


d.

a. Various components in metal
For example ventilation pips, water pipes, metal rods, old

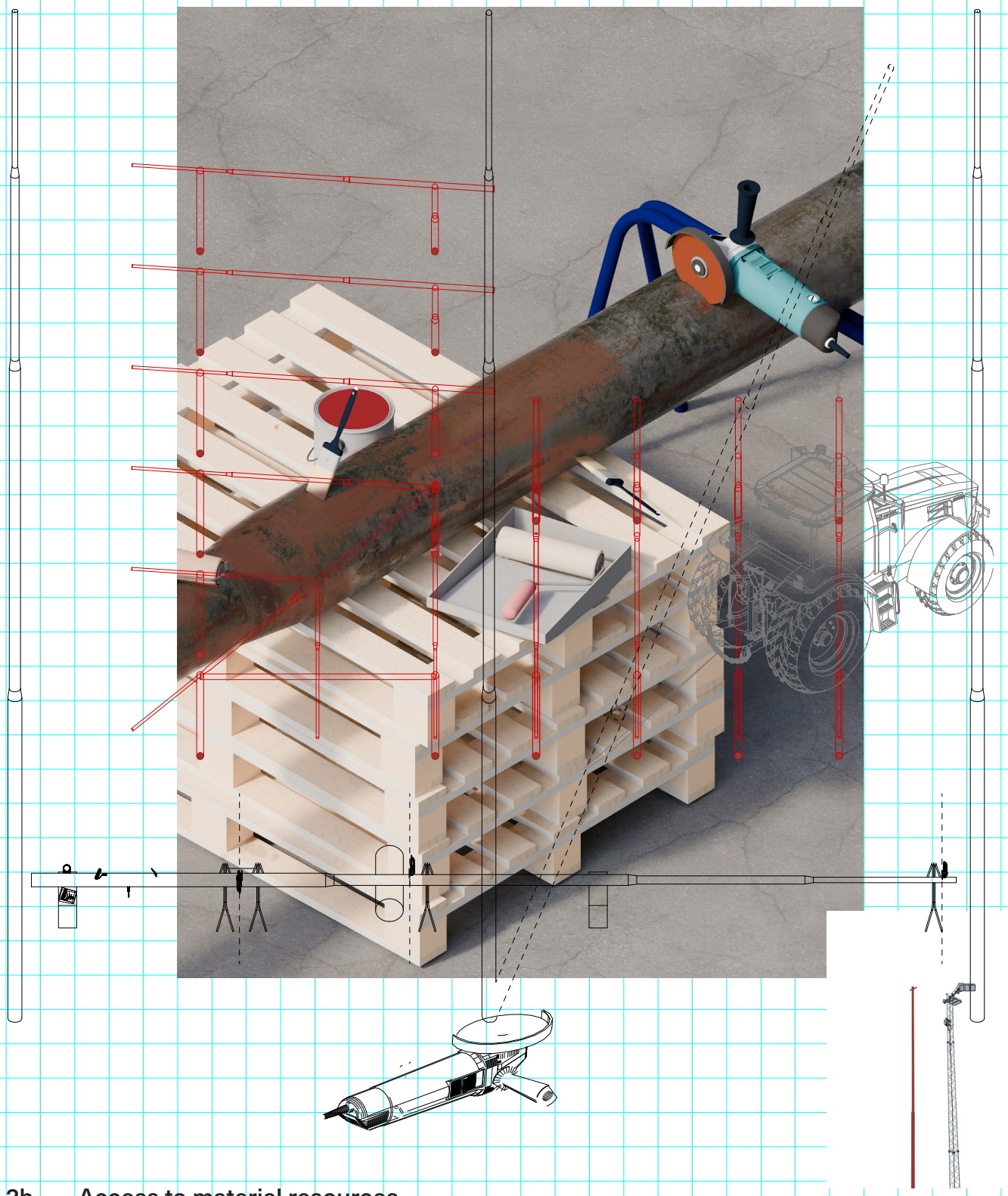
b. Piles of rubber mat
Leftover from an attempt to cover the ice over the summer that didn't worked.

c. Construction plywood
Today located in one of the cold storages. Has been used in various project around the Sports Field, for example for furniture.

d. Various components in wood
In all different sizes and quality.

b. Access to material resources

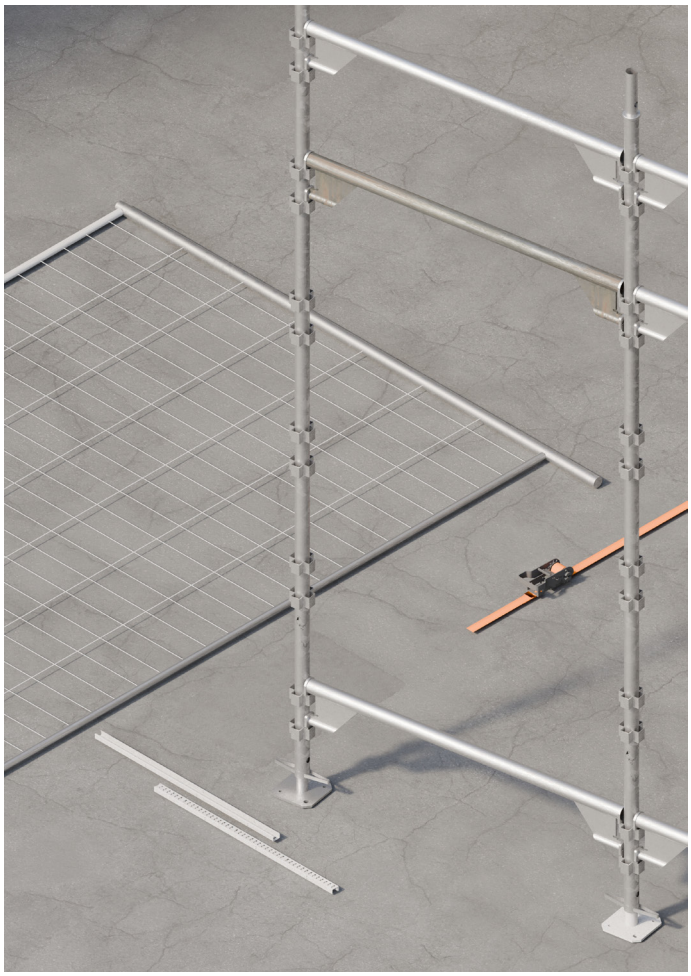
Leftovers/storages



2b. Access to material resources

Relocation/Transformation

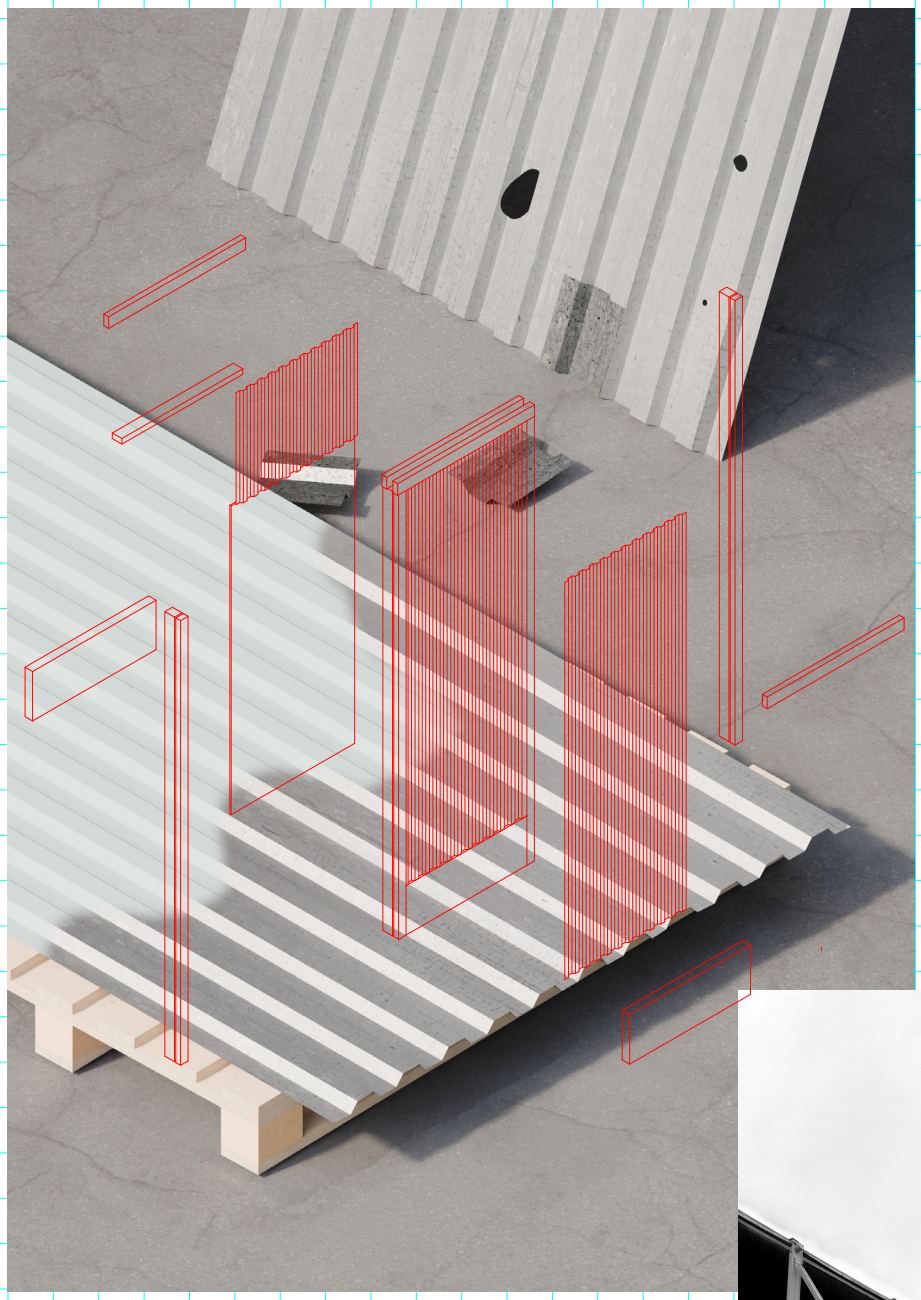
Right: A selection of reclaimed materials that will be used in the design implementation.
Scaffolding from Haki
Construction fence in various sizes
Metal rails
Tension bands

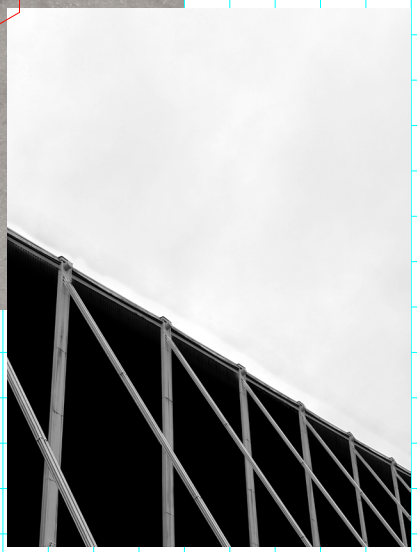


2b. Access to material resources
Reclaimed construction objects

In the process of identify material for the design of the workshop old construction support objects and standard products was available at different auction sites online. Inspired of material/object there some was selected as possible objects to design with. As part of the discourse to value ordinary thing this approach may be helpful in the aspect for the caregiver to be familiar with and understand how to use. It also for an architect a design task to put up an assembles of this in compositions that they may not be made for.

Left: Collage of the relocation of the lighting poles at Farsta Sports Field.
In the beginning of the process of investigate available resources at the sports field 16 leftover lighting poles á 22 meter was identified. Later it was decided to transform them to the load bearing structure for the workshop. The collage explains the process of that.

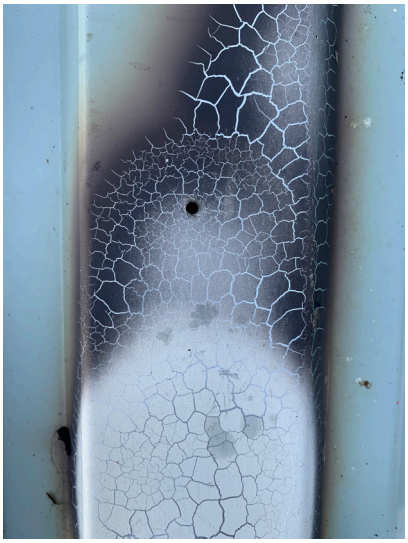




What happens to the metal sheets from Hovet when it is demolished?

2b. Access to material resources + 3. Design

Deconstruction/reclaimed



During the burning process

During the burning process, *the paint has partly being removed and an new appearance make it possible to get an uniform colour of the facade at the workshop from various metal sheets.*

Left: Collages of the relocation of the lighting pole at Farsta Sports Field.
One method of source materials is to identified. Later it was decided to transform them to the load bearing structure for the workshop. The collage explains the process of that.

Metal sheets to the workshop
One method of sours material resources is from demolitions sites. Eventually, can metal sheets from a partly demolition of Hovet get an second life in the building of a new workshop at Farsta. To make something more valuable again or increase the aesthetic value of the material, can be some method of transformation or upgrading innovation. During the process of this thesis experiments of one heating up metal sheets to burn away the colour cover to get a new and different appearance. This is in line with the method to that includes time for experiment and to test out solutions to later reflect on the action/method can be used.

Deconstruction to transformation of the entrance gate house

One way to source material resources is through deconstruction. The choice of objects from which to source materials is a matter of hierarchy at the Sports Field. To obtain something new, such as in this case the workshop and its furniture, deconstruction is necessary. How far the action is taken depends on the situation and its function and what consequences it has. For example, in this case, partially deconstruction the entrance gate is motivated by the need to obtain materials from it, like a materials depot. Furthermore, the labour required to maintain it in its current state and function provides little benefit to the users and caregivers. If the entrance gate is transformed to be a worthy entrance of its time, with more openness and a temporary entrance stand, it will become an active place instead of a closed monument to a bygone era.

2b. Access to material resources

Deconstruction to...

A entrance as a pavilion

In the new appearance of the entrance gate is it possible to place a transformation of the old entrance gate bench (see process at following pages). The design is based on the concept of the workshop and made by leftover material from its construction. The Sports Field has a need for places to temporally be covered from rain or sun during times of waiting, like a parent waiting for the child during practice or friends to hang out before biking home. This entrance has now more the appearance of a pavilion, visualised in its ongoing process.

3. Design/actions

...Transformation for the activity

The operation
Workshop and depot

As a part of take actions and make design for the operation is to organize a workshop and depot that make it possible to maintain, repair and develop Farsta Sports Field. A apsect of the theory of maintenance is to make the caregivers work visible, the design of a workshop and a depot is here treated as the centre piece of the sports field. Vital for its existence. One part of it is the placement at the site as something important and directly in the visitor's view. The second part is introducing of more daylight/views and places to doing work outside in protection from the weather.

The concept of visible layers has been important as an part to make the architecture readable and understandable. It doesn't have to be maintenance free or have a robust appearance, but someone else must have the condition to separate the parts from each other and easily understand its order.

By using familiar items, like ordinary objects such as construction fence or u-shaped profiles in metal, the design also becomes understandable and flexible, as it relates to a system that can be extended and easily disassembled. The main reason isn't just the standard measurements or replaceability; rather, opportunity to explore unexpected composition and what new architectural and aesthetic values it uncovers.

The workshop and depot are design to fit standard products of for example woods and boards and make it possible to take in the scissor lift, the pallet truck with the standard EU-pallet ect.

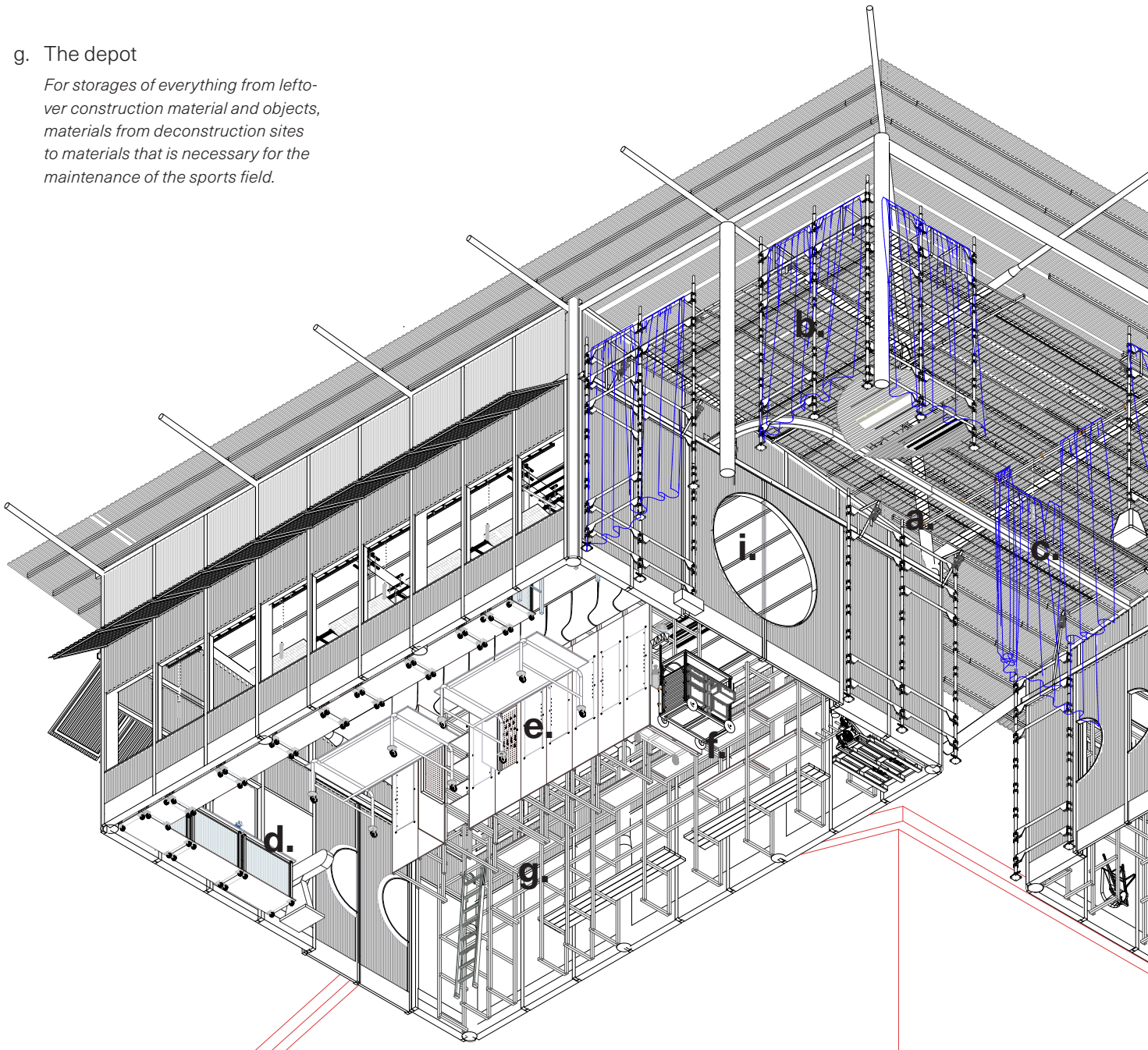
In the workshop shall be possible to reorganizes the layout, both in the everyday work and in the longer time for other activities.

3. Design/actions + 4. Care receiving

The outdoor space for the workshop
Visualized in action of daily repairs and in making of furniture for Fritidsbanken.

g. The depot

For storages of everything from leftover construction material and objects, materials from deconstruction sites to materials that is necessary for the maintenance of the sports field.



d. The workshop

Is for all maintenance and repair work and include possible heavier work that involves metal, water, wood work and includes all necessary tools and workspaces for it.

e. The furniture for tools

Function as a room divider and between the workshop and the depot

f. The maintenance carriages

A flexible workbench and storages that can be transported to the worksite.

a. The outdoor space

The first room of the workshop is a entrance and loading protected by the roof. Here can maintenance/repair work be organized. A smaller van or trailer can back in for the weather protected loading/material organization.

i. Sliding doors

All entrances have sliding doors to make space for the work and material organization.

j. The depot

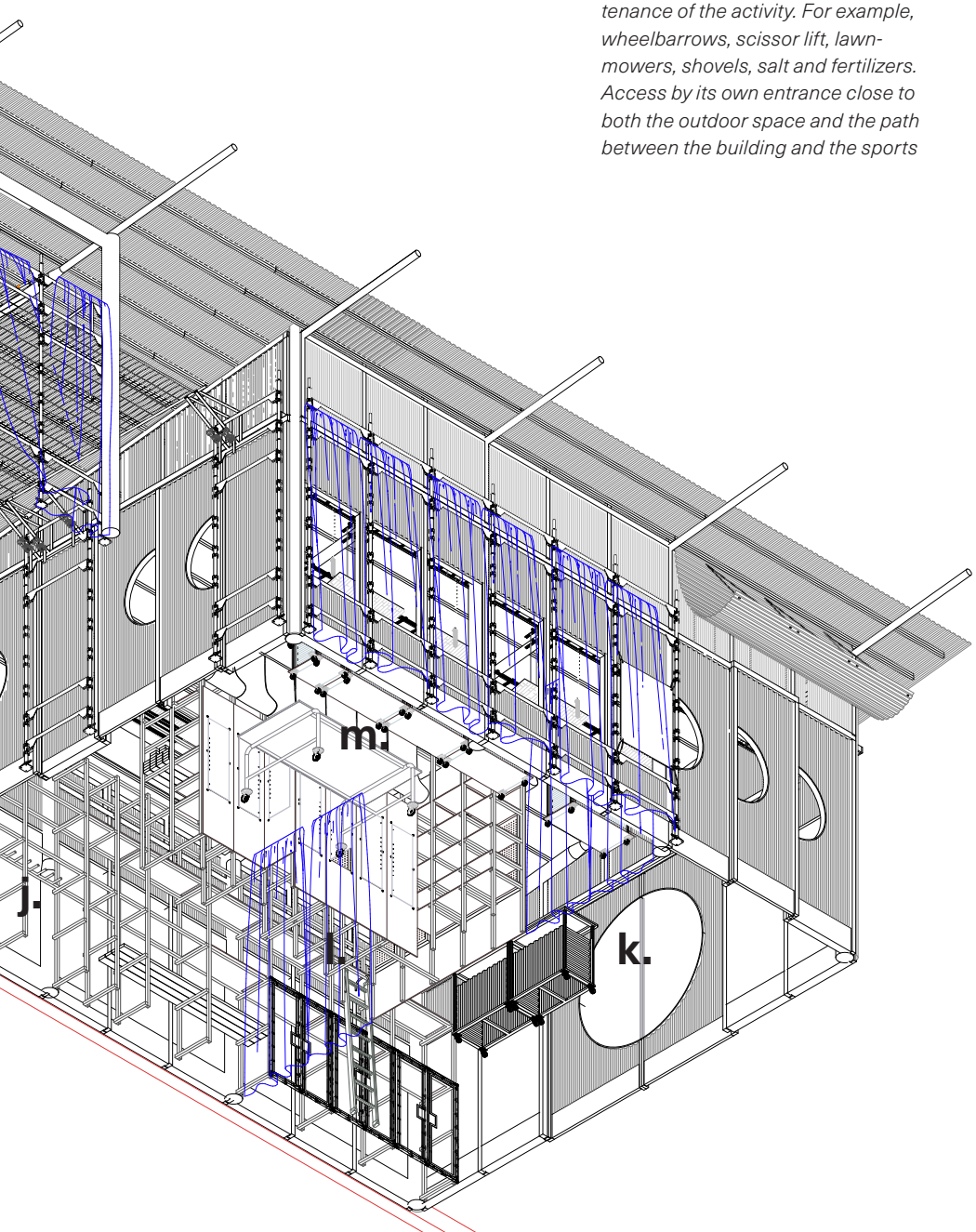
The left building is built the second stages of the construction The depot includes equipment more for maintenance of the activity. For example, wheelbarrows, scissor lift, lawnmowers, shovels, salt and fertilizers. Access by its own entrance close to both the outdoor space and the path between the building and the sports

k. Fritidsbanken

As part of taking care of already existing resources, promote a circular consumption and make activity more social included Farsta is I need for a space where Fritidsbanken can have their activity.

l. The laundry

A smaller place for laundry is included in the depot. For Fritidsbanken mostly.



b. Scaffolding

As a layer for protection of the walls, and a structure that make it possible to hang and lean objects in it the scaffolding become a part of the toolbox and design element.

c. Curtain

The outdoor space is possible to divide with curtains, which as well can be used as sun protection or cover from the public. The curtains are made of ground cloth or a shiny construction cloth. The curtains can be taken down and also fasten by straps to the scaffolding.

m. The “clean workshop”

A workshop in connection to Fritidsbanken for works including textile work as sew and 3d printing etc. Can be remodelled as more storages space if necessary.

The interior

The interior walls is a construction of post and planks divided in sections a 1200 mm. It's a measure that is used in the industry and is retuning both in the measurement of scaffoldings, some equipment and different wooden boards. The concept is to make the layers of the workshop visible. It is a separate and visible structure with infill's of post and plank that then is in-filled with a board or metal sheet that is screwed. The division of the wall to consist of different parts can be helpful for future maintenance and repair work when every part can be worked on individually without interfere of with the overall concept. Surfaces and corners that will be exposed for wear are strengthen with wooden planks that also mark the openings (see the axonometric drawing on previous pages) The socket is visible and around 400 mm high. The floor is covered of leftover rubber mats.

The workshop shall be light and it is designed with a windows that can be covered from the outside and at the eaves is it frosted corrugated plastic sheets.

The workbench

A at site made work bench made of wood from the deconstruction the gate house, leftover pieces of metal from the building of the workshop, construction plywood and a top of the leftover rubble mat.

The bench is movable to make it possible for the caregivers to rearrange when it is needed to cut lager pieces of wood or make a lager table.

The worktable

A movable table made of pieces from the deconstruction of the entrance gate house. Can be made at site. It is possible to rotate the table in the area between the furniture for tools and the workbench.

3. Design/actions + 4. Care receiving

Interior perspective of the workshop.
Outside the image is the entrance from the outdoor workshop space and loading zone. To the left of the work bench line is the sink. Then comes the equipment for metal work, then wood and last grinding machine. Above is cable duct with hanging junctions boxes to get a clean workbench from cables.

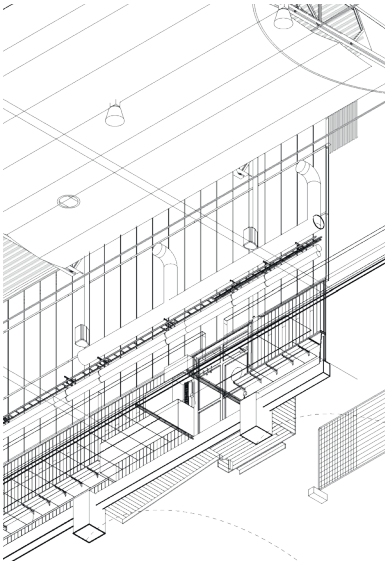
Exterior perspective,
details of the façade.
The façade towards the track and field arena(east) has the layer of the scaffolding in front of the metal sheet façade. In front of it a layer of curtains can be added. Above to mark one of the entrances to Fritidsbanken is a canopy.

3. Design/actions + 4. Care receiving

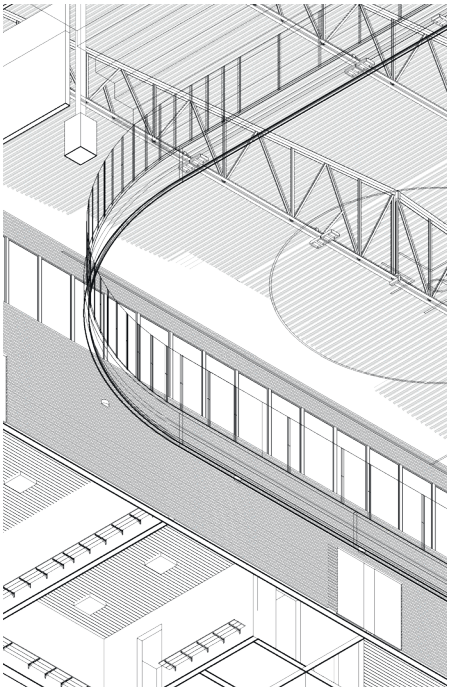
The activity; Fritidsbanken

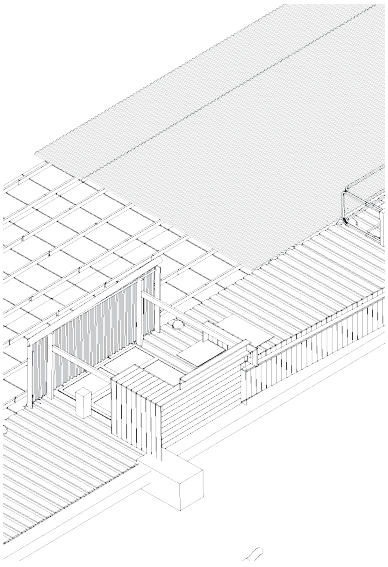
Interior perspective, Fritidsbanken.
View standing in the entrance at the gable of the second building of the workshop. Frtidsbanken has the same principle of furniture as the workshop with construction plywood doors with a cabinet with a board with holes. The doors cover the shelves for storages sport equipment. In front of is a desk made of the old benches from the gate house covered in sheet metal. The position of Fritidsbanken is towards the area for spontaneous sport and the sports hall. It can be imagined that the place can be transformed to a square for activity with help of the possibilities that are with making furniture and equipment for it in the workshop with resources from the site.

Situation 1

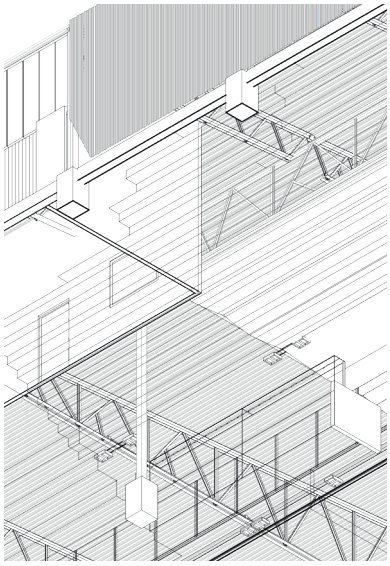


Situation 3





Situation 4



Situation 2

3. Design/actions + 4. Care receiving

Implementation at the facility

Farsta Ice Hockey Rink

To exemplify how the method of care can be implemented in situations for future maintenance and repair, four scenarios are visualized in their ongoing process. They depict imagined scenarios of potential needs that could arise at the rink.

Detail, the wall

Interior perspective, the booth and the interior wall
Ongoing actions of taking care of the damages of the wall by painting and fill in the holes with a contrasting colour to visualise the history of the damages. Wood surfaces is sanded and if needed waxed.

Situation 1

Increased lifespan, careful method of newness

With existing resources (equipment) at site and with an introducing of caregivers for the facilities, working from the workshop, actions for increasing the lifespan of the physical materials can be made. The aim is not to directly advocate newness. But a material in good condition that carefully being maintained by removing worn, traces of ages and damage is a method for preventing neglect of the objects that in the long term can lead to a state of total brokenness and made it a possible victim of replacement. The actions may seem ordinary and small, for example grinding and painting, but it can only be possible if someone has the time and the motivation to save material resources.

Left: During the process in the workshop

Above: The situation imagined in the state when the need is recognized.

Situation 2

Contrasting repair with traces of history

This situation is located in the gym area where an speculation in what an approach of care implies in a imagined state of breakdown can be carried out. According to Karder Attia is it not possible to restore something to its original state, you can only restore it to an imagined and in here lays instead a possibility to bring new values of embrace the cracked by highlight it as an part of the history. Like the Japanese method and technique for repairing pottery, Kintsugi.

The action in this situation can be refereed to as contrasting repair where both the joinery and the available

Right: During the process at the situation

Below: Detail of the contrasting repair with ornamental joinery

materials from the depot bring an new aesthetic value to the repair. It is reactive repairs but have an appearance of being intentional organized and can be redouble by being screwed. A method to add to the situation would be increase the strengthening of vulnerable surfaces like plaster boards walls or corners.

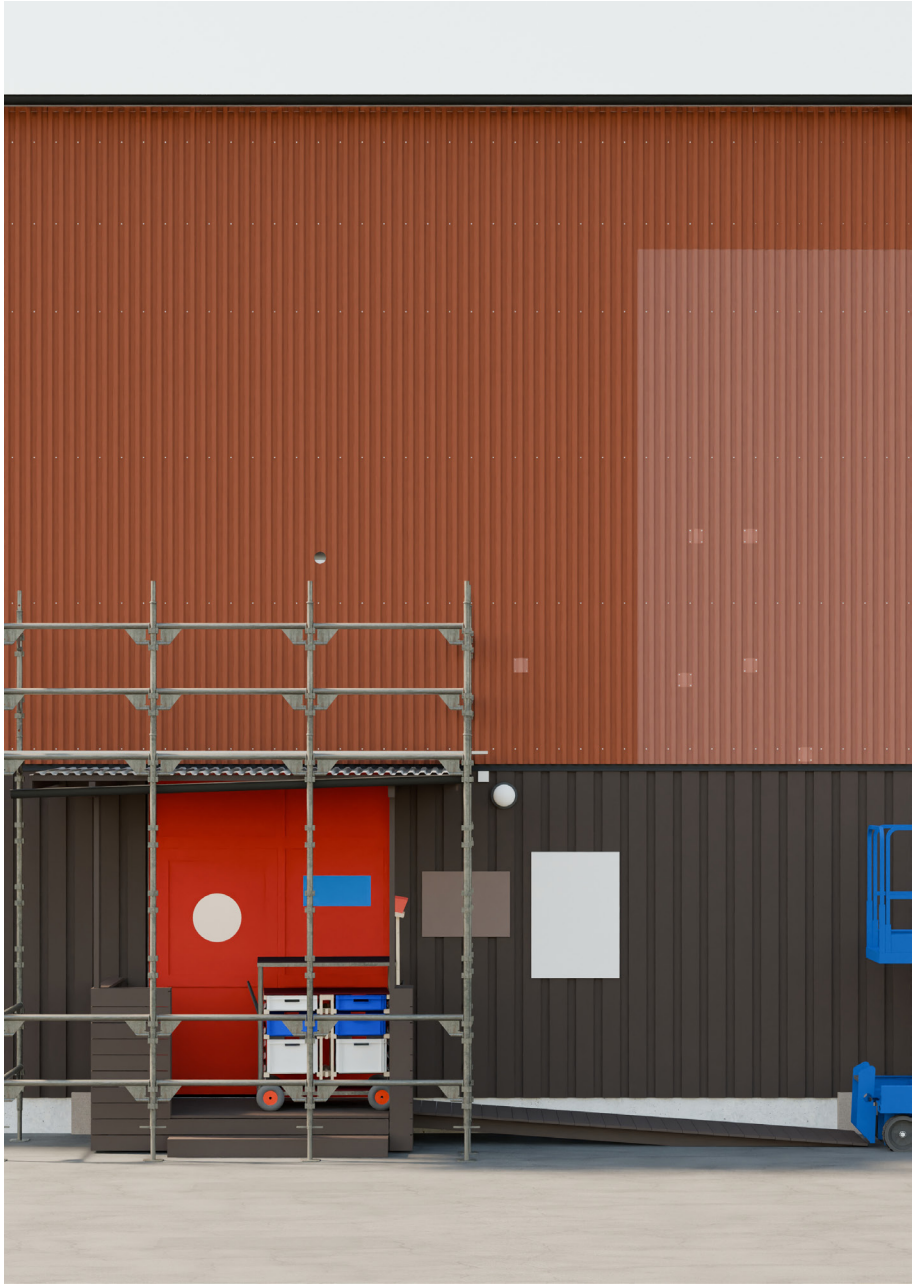
Interior perspective, the truss and hockey board
In situation 3 and supporting truss is made of different parts and put together as an assemblage. To install the pieces together they will be needed to build a scaffolding with stamps that is not available on site but it will be possible to maintain because of the position on a hight that is available for the scissor lift.

The images is showing replacement work of expired plexiglass that will be an careful act because it is done so it not effect the sport during the season and the material will be used in the workshop for cover shelves or make joiners.

Situation 3

Assemblage as a proactive method

A method where maintenance and repair is proactive. If the roof needs to be strengthened to prevent it from collapse by for example snow loads; Would it be possible to make a whole truss from the materials in the depot and from the reclaimed market? The assemblage of different parts will be necessary in the future and the harmonise and graphic concept for these additions will lay in the joinery that will be the element that also keep the object together visually.



Facade at the public entrance
Today the façade has small holes that can be good to maintain to prevent later work of removal or deconstruction. Some of them is not available with the scissors lift and the scaffolding needs to be build.

Situation 4

Patching and repairing

Sometimes the approach of try to blend in can be applied. Patching and repairing is a respond to maintenance work that approach removal. Instead, the patching become a pattern and history of the building. When patching and repairing it can be beautiful to work with the colour differences that try to blend in. The opportunity to innovation and make the beautiful ornamentations can seams endless but is only limited to access of time, skills, tools and materials.

The Manifesto

This thesis concludes in a manifesto that collect my thoughts on what an approach of care can be. It is presented as and "how-to manifest" for maintenance and repair in a context of architecture (*see the appendix*). The aim is to inspire to apply an approach of care in other scenarios in the context of architecture. It draws attention to the process behind our actions as both architects and caregivers. It is to be aware of the labour that is required for the design, to understand for who, by who and with what consequences. The manifest is based on both the theory in the current discourse of care, maintenance and repair and influenced on the learnings from the sports facility and the development method and implementation at Farsta sports field.

The impact the context of Sports field has have on the manifesto, and the general development of this thesis, is by the learnings from a situation that already works with maintenance but not mainly for the facility and understand what the difference. That Farsta already had many resources such as tools, equipment and materials helped the development of the method in the way to highlight that there is already a lot of potential with what is already existing, is rather a matter of organization and approach for it.

The municipal owned architecture can be experienced as sprawling. Thhe expression of it seems to not follow a general approach to maintenance but in other case also has similar standard solutions everywhere, concepts of signing or equipment. It is a place where additions is made when needed, reactivity as "solve solutions" that try to speak to each other. This thesis assumes from the design and the physical situations of Farsta as an way to highlight that even if one of the most important aspects of the approach of care is to be aware of the labour the grates impact the architect can propose a change is by the design in relation to the whole system. When I suggest that we shall design from the resources of the caregiver is not to subordinate the will of the caregiver or the opposite. It is to learn from each other and to meat in the conditions to give the facilities an longer life and ensure that the will be taking care of and being valued.

To pay attention to the ordinary building and to learn from the "industry shed" has been both challenging in the way that we are not use to look for care in the physical situations, rather by the actions and experience of the users. The municipality owned facilities in general has the appearance of being mundane and of a general ordinary assemblage with a little love. Now as a result, I can see value in these situations, it takes time and practice to analyse the physical environment by an approach of care. I have with this thesis localized some values and inspirations for maintenance and repair based on the industrial shed that the sports hall can be classified as and also translate the concept to be useful for the design of the workshop like the use of layers, external infrastructure, the possibility to disassembly, and the place for the post-occupant.

Care

Care in architecture, among the actions of maintenance and repairs, is to understand for whom? by whom? why? and with what consequences? This thesis exemplifies one approach of how this can be carried out in a scenario determined by limited resources. In the beginning of the process for maintenance and repair, but even design in general, one must start in the access to resources both the caregivers and the architects. We have to pay attention to our action and take control over them. In the beginning of the thesis, I thought that an approach of care and the aim with the thesis was to close the material loop, in long term stop demolitions and never use virgin materials. But the thesis result in a bigger discussion than an attempt to do the perfect method of reuse.

Discussion

Why is care an better answer? In the end I see it as an need to establish a culture of care where it is presented an alternative mindset of wear and tear. Of course care involves reuse and attention to the originals of the material but is it a lot more, like the attention to the labour and all other resources that also is involved in the process. It involves create conditions to make it possible to care, such as places and process of store material, so that we don't run to the hardware store and buy new with no control of these extraction.

It this scenario creating your own conditions for material extraction and including the deconstruction (sometimes necessary) is fruitful for something else. Transformation etc. It is a method that also deals with the question of economics, wish was not my initial attempt, but along the path I see this as beneficial both for the municipality and the long term economical survival of the sports fields.

Maintenance and the process of care will always be ongoing. It can be a slow process, and needs more time for material search. There is in the place of neglect of maintenance a situation gets worn out and become venerable for drastic actions. To be proactive requires labour, but with the right resources it can result in positive action. Also, to add a workshop and to keep it functioning requires labour. This thesis approach has been to create a organization of the workshop that is understandable and is redouble. The same approach can be applied on maintenance and repair. We have to design for systems that is flexible, changeable, disable and by this also possible to maintain.

In this thesis the question of aesthetic value and what we care for in the built environment, when we are facing a scenario of a increased reuse, maintenance and repair has been explored as approaches of finding other values in form of visibility of the process, conditions for the caregivers etc. But I have also learned that when the resources become the guide it doesn't means that design suffers. Style and aesthetic values will always be a question of personal taste. First the users and the caregivers must find solidarity and trust for the design. Secondly we must change our mindset about patching and repairing, the visible traces of history, to not be a story of a breakdown rather at possibility for new values. If we tend to appreciate newness it may not be the white clarity anymore rather that something its being fixed or get and updated appearance and something ornamental. In a context of differences in appearance of materials and object as an result of the use of reclaimed materials the assembling, the joinery, will be a design guidance.

The question of tolerance and precision is relevant. We tend to value the thing that is made with carefulness. I would argue that the most important solution for this is time for the craft, for the experiment and the acceptance to that it may be redone is a wish result is to be achieved. Also, we have to be humble and design the solutions for the actions of maintenance and repair based on the skills, tools and accessed materials of the caregiver. The architects can't control or force other people's personal involvement, which care is. We must be aware of that care is motivated different for different people in different situations, such as experienced responsibility, love, affection, a work or done because it perceived as ethically correct.

Time will go on, and changes will happen. We can't control everything. Theory of repair has teach me that everything can't be perfect and the original state is only imaginable. Instead breakdown creates possibilities to redo and learn how to break it better next time. Because theoretically it will always be a next time. Care, maintenance and repair is intertwined in time and space.

Attia, K. Grace, C. Sekulić D. (2022). Repair Cannot Only Be a Metaphor, It Thrieves on Action. *The Great Repair – Politics for the Repair Society. Arch+*. https://archplus.net/de/archiv/english-publication/The-Great-Repair/

Architectural Association School of Architecture. (2021). *AA tutors Hikaru Nissanke and Jon Lopez discuss the unglamorous importance of repair and maintenance in architecture.* https://www.aaschool.ac.uk/news/aa-tutors-hikaru-nissanke-and-jon-lopez-discuss-the-unglamorous-importance-of-repair-and-maintenance-in-architecture

Benjamin, L. (2024). In what style should we repair?. *The architectural review. https://www.architectural-review.com/essays/keynote/in-what-style-should-we-repair*

Cairns, Stephen & Jacobs, Jane. (2017). *Buildings must die: a perverse view of architecture*. Mit Press Ltd

Femmer A, Gödicke F, Greb J, Hiller C, Krag P, Makele M, Ngo A-L, Summan F. (2023). Open for maintenance. *German Pavillion 18th International Architecture Exhibition La biennale di Venezia. Arch+, features 117*

Frichot, H. Carbonell, A, Frykholm, H, Karami, S. (2022). *Infrastructure Love: Caring for Our Architectural Support Systems.* Birkhäuser Basel

Frichot, H. (2019). *Dirty Theory: Troubling architecture.* ADDR, A

Hertweck, F. Hiller, C, Krieger, M. Nehmer, A. Ngo, A. Topalović, M. (2022). Politics for the Repair Society, Editorial. *The Great Repair – Politics for the Repair Society, Arch+.* https://archplus.net/de/archiv/english-publication/The-Great-Repair/

Mattern, S. (2018). Maintenance and Care. *Place Journal* .https://placesjournal.org/article/maintenance-and-care/?cn-reloaded=1

Nehmer, A. (2022). CARE , *The Great Repair – Politics for the Repair Society, Arch+.* https://archplus.net/de/archiv/english-publication/The-Great-Repair/

Puig de la Bellacasa, M. (2017). *Matters of Care : Speculative Etichs in More than Human Worlds.* University Of Minnesota Press. http://ebookcentral.proquest.com/lib/chalmers/detail.action?docID=4745533.

Sample, H. (2016). *Maintenance Architecture.* MIT Press.
ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/

Scott, F. (2008). *On altering Architecture*. Routledge

Tronto, J. (2019). *Caring architecture* , Critical Care. Architecture and Urbanism for a Broken Planet. ed. Fitz, A. Krasny, E. MIT press

Bibliography

Readings

Arch+ (2023). *Workspace for maintenance, German pavilion*. [Photograph]. https://www.designboom.com/architecture/open-for-maintenance-german-pavilion-archplus-summacumfemmer-buro-juliane-greb-venice-architecture-biennale-05-17-2023/

Arch+ (2023). *Repository German pavilion*. [Photograph]. https://www.designboom.com/architecture/open-for-maintenance-german-pavilion-archplus-summacumfemmer-buro-juliane-greb-venice-architecture-biennale-05-17-2023/

Assemble studio. (2024) *Public Park in South Bermondsey*. [Photograph]. https://www.instagram.com/p/C3aflogN-Bm/?img_index=1

Attia, K. (2014). *Traditional Repair, Immaterial Injury*. [Photograph]. http://kaderattia.de/traditional-repair-immaterial-injury-2014-2018/

Bergmaister. T. Krebs, A. (2023). *Video essay "Open by maintenance"*. [Photograph/video] https://www.instagram.com/p/Cslw5A6A0yP/
Creasy. M. Student housing. [Photograph]. https://maxcreasy.com/

Högger. S. (2022). *Revealing encounters, A student making a water bowl for animals*. [Photograph]. https://www.studioser.ch/

Kosmos. (2023). *Tin Can Castle*. [Photograph]. https://k-s-m-s.com/projects/26QmY9S7H

Krebs, A. (2023). *JUCH*. [Photograph]. https://www.instagram.com/p/CsB4WKSs2rS/?img_index=1

Laderman Ukeles, M. (1969). *Manifesto for Maintenance Art 1969!* . [Photograph]. https://www.wikiart.org/en/mierle-laderman-ukeles/manifesto-for-maintenance-art-1969-1969

Laderman Ukeles, M. (1979-1980). *Touch Sanitation*. [Photograph]. https://www.wikiart.org/en/mierle-laderman-ukeles/touch-sanitation-1980

Lantmäteriet. (2024). *Siteplan of Southern Stockhom*. [Map] Retrieved February 19, 2024 from https://minkarta.lantmateriet.se/

Lendager. (2024). *Material experimentation*. [Photograph]. https://www.instagram.com/p/C32F5cSsUJ4/?img_index=2

MacIver-Ek Chevroulet. (2020). *Club Absinthe*. [Photograph]. https://maciverekchevroulet.ch/club-absinthe/

Studio Ser. (2024). *Screen shots of studiosers website with a new encounter for each refresh*. [Photograph]. https://www.studioser.ch/

Studio Ser. (2022). *A hand drawing, with close attention to its context*. [Photograph]. https://www.studioser.ch/

Studio Ser. (2022). *Drawing Monte*. [Photograph]. https://www.studioser.ch/

Platform21's. (2009). *Repair Manifesto*. [Photograph]. https://www.platform21.nl/download/4375

Virkki Wp, F. (2024). *Farsta*. [Photograph].

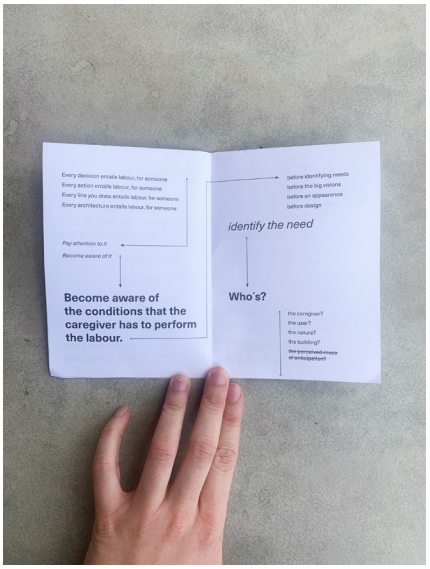
@germanpavillion . (2023). *Maintenance 1:1 Reparing a soccer club*. [Photograph]. https://www.instagram.com/germanpavilionvenice/?img_index=4

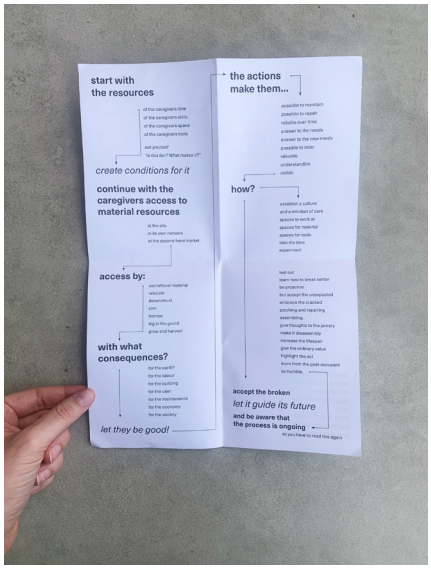
Visuals

Attention! Ongoing Care
Maintenance and repair at Farsta Sports Field

Maija Virkki
2024

Chalmers School of Architecture
Department of Architecture & Civil Engineering





Appendix

Manifesto! Ongoing Care

Every decision entails labour, for someone

Every action entails labour, for someone

Every line you draw entails labour, for someone

Every architecture entails labour, for someone

Pay attention to it

Become aware of it

Become aware of the conditions that the caregiver has to perform the labour.

identify the need

before identifying needs

before the big visions

before an appearance

before design

Who's?

the caregiver?

the user?

the nature?

the building?

~~the perceived mass of anticipation?~~

Manifesto!

Ongoing Care

care is not maintenance.
and maintenance
is not care.
repair is not care
and
care is not repair.
but maintenance and repair
can evolve care.

a how to:
maintain and repair

in the context of architecture

(this work is a result of the master thesis:
Attention! Ongoing Care - Maintenance and repair at Farsta Sports Filed. By Maija Virkki, May 2024 at Chalmers school of Architecture)

start with the resources

- of the caregivers time
- of the caregivers skills
- of the caregivers space
- of the caregivers tools

ask yourself
"is this fair? What makes it?"

create conditions for it

continue with the caregivers access to material resources

- at the site
- in its own network
- at the second-hand market

access by:

- use leftover material
- relocate
- deconstruct
- slim
- borrow
- dig in the grund
- grow and harvest

with what consequences?

- for the earth?
- for the labour
- for the building
- for the user
- for the maintenance
- for the economy
- for the society

let they be good!

the actions make them...

- possible to maintain
- possible to repair
- reliable over time
- answer to the needs
- answer to the *new* needs
- possible to redo
- valuable
- understandble
- visible

how?

- establish a culture
- and a mindset of care
- spaces to work at
- spaces for material
- spaces for tools
- take the time
- experiment
- test out
- learn how to break better
- be proactive
- but accept the unexpected
- embrace the cracked
- patching and repairing
- assembling
- give thoughts to the joinery
- make it disassembly
- increase the lifespan
- give the ordinary value
- highlight the act
- learn from the post-occupant
- be humble

accept the broken

let it guide its future

and be aware that the process is ongoing

so you have to read this again