

MINIMAL INTERVENTION
AN ATTEMPT READING THE ULTIMATE



Graduation Project

A method of Minimal Intervention

A design for Oslo

Four times have I set foot on the territory of Oslo, thirty days in total.

Deeply attached to it, I present this work for,

This place with gifted uniqueness,

This city of ice and snow,

This land bred by water.



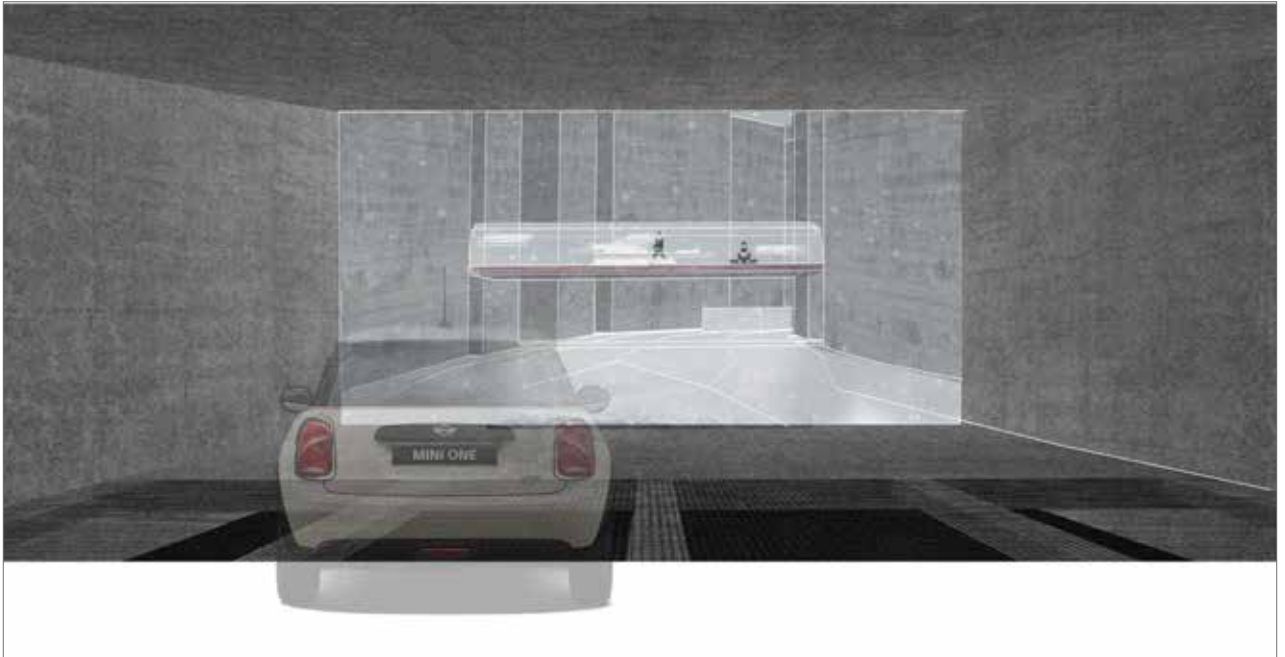
'Where am I?'



City bred by the sea



Gift from the sea



Meet me where the cliff greets the sea

When time is calculated by seconds,
you find yourself caught up with fatigue.
What you will still own is a route on your foot,
as if you were driving freely along the Scenic Route,
exploring for the buried surprises.



You will always own some place,
where you witness how it grows,
how it slowly drifts away, taken over by others.

How you keep noticing,
where might only belongs to you,
at least for this moment.

MINIMAL INTERVENTION
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Wanxin Liu
MSc Landscape Architecture

Supervised by
Inge Bobbink
Luisa Maria Calabrese

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Foreword

Development in the field of Landscape Architecture has gradually turned it into a role of mediator among architects, urbanists, ecologists, socialist, engineers, etc. Landscape architects contend among systems and search for mediations, aiming at a result of spatial intervention.

In such sense we spend our energy on presenting solutions which satisfy all disciplines. This is one way of developing this field, it is also one of the most practical way, under the criteria set by the modern society.

I am in favour of this pragmatism, in a way that this is a survival method of doing things. This answers to the needs of the world, which is to be multivariate, diverse and integral.

But is this the only direction that we as landscape architects should and must pursue? Is the world nothing but busying in solving problems? How about a simple satisfactory of experiencing a lovely place nearby? Where is the basic enjoyment that landscape architects reveal the qualities of those lovely spaces and let people be happy to use them, let people be touched by a pure drop of rain, moved by a scene, restored from mental fatigue, triggered to think of something, and brought back to some memory?

Landscape Architecture should not be only about dealing with complex global issues, but also about valuing a place and make it appreciable by letting people experience it. In the modern society, especially in big cities, life is fast, busy and full. Behind the method of Minimal Intervention this thesis proposed, is the thinking of,

Where locates landscape architecture's ability to provide the opportunity of emphasising nature's free gift of materials?

How could we experience the qualities of space in which we live and reside?



'Un air rosé', Bernard Lassus, 1965

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<< Fascination

< A phenomena

My fascination started with ‘Un air rosé’ by Bernard Lassus¹ in 1965. By putting a strip of white paper into the red tulip, the paper irradiated with the reflection of the tulip which represents a volume of light, coloured differently from its surroundings. In this way people are made aware of the beauty of the tulip by experiencing it.

Immediately caught up by its provoking appearance, I sensed that there could be multiple understanding on this experiment. It developed into a driven force of my thesis afterwards.

Similar expression can be found in a poem by Wallace Stevens², ‘Anecdote of the Jar’, in *Harmonium* (1923):

*I placed a jar in Tennessee,
And round it was, upon a hill.
It made the slovenly wilderness
Surround that hill.*

*The wilderness rose up to it,
And sprawled around, no longer wild.
The jar was round upon the ground
And tall and of a port in air.*

*It took dominion everywhere.
The jar was gray and bare.
It did not give of bird or bush,
Like nothing else in Tennessee.*

The jar organizes wilderness simply by its presence. The wilderness of the environment seems to orientate itself by all the ‘rounds’: round, surround, around,... What might be thought the most minimal intervention has the effect of transforming the vast and unruly area of land: the jar ‘took dominion everywhere’.

I am deeply impressed by the wisdom in these two stories, of how minor moves can create impact on altering perceptions or revealing certain understandings that might be ignored or treated unfairly.

< Spatial practices

With curiosity on the possibility whether this principle can have its influence on the domain of landscape architecture, I started looking for supports from existing researches and landscape projects.

‘After the experiment with the tulip in 1965, Bernard Lassus had explored this phenomena as a design principle in his artistic projects. Afterwards, together with Lucius Burckhardt they further develop it and made it part of landscape architecture theory’³.

The principle of Minimal Intervention underpins Lassus’ approach to gardening, namely he arranges things such, that even those which remain unchanged will be seen in a new way. Contrasts and transitions render things more visible, although the degree of visibility depends on

img1 Un air rosé, 1965, Lassus, B. (1998). *The landscape approach (Penn studies in landscape architecture)*. Philadelphia: University of Pennsylvania Press. p21

1 Bernard Lassus (1929-), first an artist and then a landscape architect, from France. He uses his art to invent the landscape. The eloquent landscape theorist and ‘only garden thinker of our time’, as the American expert on gardens Bob Riley called him, is deeply concerned with discovering the everyday place as a special one.

2 Wallace Stevens (1879-1955), an American Modernist poet. *The Collected Poems of Wallace Stevens* (Alfred A. Knopf, 1990)

3 Burckhardt, L. (2015). *Why is landscape beautiful? : The science of strollology* (M. Ritter & M. Schmitz, Eds.). Basel: Birkhäuser. p146

the context⁴. Other practices of Minimal Intervention are designed in a way that an extra element which comes out of a thorough understanding of the context, works as *heterogeneity*, is added to the existing, which helps expressing certain ideas towards the origin.

As a result, I cannot yet concluded from these projects into a generic method that I can follow to create something ‘minimal’, since most of them which applied similar principle are gardens in similar scale⁵, from suburban cottages, motorway landscapes, to garden restoration, reinvented housing estates and contemporary parks. The interventions are fragmented as well as targeted. They responded a lot to the assignment and limitations, but are not guided by any principles. In a nutshell, Minimal Intervention brought out by Lassus is more of a statement of attitude than a practical tool for spatial intervention.

< Broader meaning? Impact on larger scales in complex setting

Therefore, with the belief that Minimal Intervention have potentials on influencing spatial environment for larger scales, even in more complex urban settings, I explored Minimal Intervention further through disciplines and scales, looking for evidence of minimal existence, as supplement of my understanding towards Minimal Intervention, in order to see how Minimal Intervention can extend its ability to become a more generic method for landscape architectonic design.

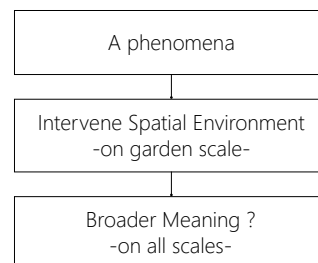
Besides, looking back at my previous design projects, I found out that I have had the unconscious tendency of intervene the landscape as less as possible, while still answers to the assignment. Curiosity drives me forward in searching for reasons. Why am I into this design ‘style’? It might because of the fact that I agree a lot on the humble attitude we as landscape architects should hold when facing the world, or isn’t it true that most of the problems of a place is actually caused by former designs? Some erased what should be treasured on site, some paid hardly any notices of the context and created things which contradict with the surroundings, some caused more troubles than what they have solved.

In one of my projects I’ve worked at TU Delft, I have demonstrated how a series of little interventions on several intersections create impacts firstly on the scale of a city axis, then on a historical city structure, until the final goal of bringing back the memory of city Rotterdam before it lost its heart to the war.

Is there a way to adapt an intervention in its complex context? Recognising the situation and asking the right question would be key dealing with this question, since tomorrow’s landscape is a mystery and yesterday’s landscape is not something that we can just simply reconstruct⁶. Valuable identities of the existing should be fully discovered, precious traces of the past should be salvaged, to avoid creating misunderstandings to the site. Next is to come up with delicate and subtle interventions to inflect their presence and significance, and develop a comprehensible landscape with respect to the context.

Michel Conan had once described in one of his books, the choice of term ‘Minimal Intervention’ by Lassus is somewhat a ‘misnomer’⁷, since

img2 Overview of fascination.



4 Weilacher, U. (2008). *Syntax of landscape : The landscape architecture of peter latz and partners (Originally published 2008 2008. ed.)*. Berlin: DE GRUYTER. P116

5 Lassus believes that the garden is the place of inventions of our age. It's no longer paintings and sculptures. This is also the trigger that moves him from art to landscape design. Therefore there is hardly any project found from his work larger than the scale of gardens applying the principle of Minimal Intervention.

6 Weilacher, U. (1999). *Between landscape architecture and land art*. Basel: Birkhäuser. p109
A comment by Bernard Lassus in an interview with the author.

7 Conan, M. (2007). *Contemporary garden aesthetics, creations and interpretations (Dumbarton oaks colloquium on the history of landscape architecture, 29)*. Washington, D.C.: Dumbarton Oaks. P117

minimalism is first and foremost the name of a short-lived movement in American art.

In fact, we should not see his work at the beginning of this century as belonging to any art school or stylistic art movement. The call for Minimal Intervention simply demanded a deep sense of respect for the historic layers of cultural transformation and appropriation of nature that any landscape is made of. Calling for fully discover and value the context and avoid making rush decisions.

<<A hypothesis: Minimal Intervention, a powerful tool to experience landscape regardless of its scale.

< A Fascination: Scale

Firstly brought out as phenomena through an art experiment, Minimal Intervention shows its ability to bring other tangible dimensions to the existing. Later practices on developing Minimal Intervention as a landscape architectonic method to intervene the spatial environment stands for an attitude of cautiousness and responsibility, as well as leaving marks which correspond with the surroundings.

What triggers me and leads to this project is to develop Minimal Intervention on the scale of landscape. Can and how does it work as an experiential tool for landscape architecture, creating principles for spatial interventions that reveal qualities and represent the identity of the site, so that the potential of the existing is valued, in order to orientate the development?

< A Position: Reveal

In the academic environment where I was trained to be a landscape architect, we are always exhausted in solving problems. Sometimes we drown into all kinds of discussions under the circumstances of global issues, such as climate change, population explosion, depletion of natural resources and so on.

There are no right answers to wrong questions, but sometimes we skip the step to examine a question before starting solving it. We need to be alerted not losing our independence of thoughts.

There are actual opportunities and potentials of places hiding under the seeming normality. To reveal them is of the same importance with asking a right question. As human being we are in need of experiencing the quality of our environments, either for a mental restoration or for a simple pleasure.

Thus this method is not driven by the desire of problem-solving, but more of a strategy of quality-revealing in order to arouse understanding, just like what 'Un air rosé' has triggered.

It is not that this method cannot help with solving problems. It can in terms of certain problem can be revealed, or sometimes a solution can be initially lead out through the revealing. But those types of places are not the most suitable sites that correspond with this method. In those places, people are already worrying and taking measures. Minimal Intervention comes with an essence of defining and revealing the identity of the con-

8 Lassus, B. (1998). *The landscape approach (Penn studies in landscape architecture)*. Philadelphia: University of Pennsylvania Press. p50

9 Burckhardt, L.

text. These qualities are hidden or ignored which otherwise could possibly be valued and lead to a next development. To quote Lassus' proposal to define a suitable testing site, 'Is it impossible today to rediscover and/or invent a landscape from the one that is blemished, over-exploited, and not easy to interpret?'⁸

As a conclusion before all, research leads to the hypothesis of Minimal Intervention as a landscape architectonic tool. It has two hierarchical definitions.

The first and the essence of it, is that minimal interventions on single spots are of experiential values, under the guidance of intervention principles on carefully chosen locations. Besides, it should contain certain exposures towards landscape. After all, Man can only enjoy nature, when he understands what is hidden behind it or how it functions⁹.

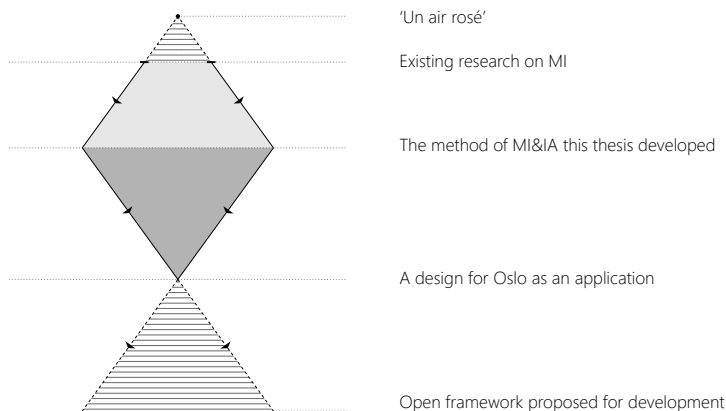
The second is that, interventions on more locations should be able to work through scales as compositions, shed light on a series of relations. If connected, either through memory or sight corridors, interventions on different locations will create an extra dimension to the landscape composition of the city.

The decision of where to arrange these spots will then be crucial. In order to convincingly select the locations and materials, the process which help read the context with thorough understanding to the environment is essentially required, namely the Inventive Analysis.

Inventive Analysis and Minimal Intervention together is the main methodology this thesis wants to develop. By applying it onto a testing site, the method is contextualized proven afterwards.

< A Summary

For this project, starting from 'Un air rosé', I studied into existing research and developed the method which is applicable in a more complex setting. Then I chose Oslo and the topic of water to test that this method can work for wider contexts, also promising for other locations and topics. A framework is then proposed as the last part of the method, for design to develop.



<<Research objective and questions

To conclude, I arrived at this **Research objective**:

To develop and apply Minimal Intervention as a landscape architectonic method that corresponds with and reveals the quality of the site by making it experiential, regardless of the scale of landscape.

In order to achieve this objective, the **Research question** I proposed is:
Can and how does Minimal Intervention work as a landscape architectonic tool, create experiential impacts through scale?

< Relevance and importance

It is vital to apply an approach with consciousness so that the essence of it can reach its full value. In this approach, the essence is how to come up with and arrange the interventions which can create impact which acts beyond them. This project demonstrates how Minimal Intervention as a landscape approach can be explicitly applied on a testing site, so that the procedure can be exemplified, in order to fit in other situations which are under experiential purposes.

In this case, the site I chose to test this method on is Oslo, capital city of Norway. Oslo is not a problematic site which requires urgent measures. On the contrary, it has potentials that could be revealed so that new development can possibly be guided. To work with revealing and experiencing, Minimal Intervention is the suitable tool.

Theme of water is what I define as the core identity of this city. Reason will follow in the site introduction part. Although the analysis I raised is not necessarily all related to water, they all represent certain identity of Oslo and be able to facilitate a new relationship between city and water. In other sites, design topic can change into other aspects instead of relationship with water. For instance, how people conceive space; a relation between human and nature (green space, etc.); the historical or cultural value that is hidden under modern constructions; a possible future spatial quality for urban development; or the beauty of everyday environment that could be easily ignored, etc. In those cases, water is possibly able to work as a tool instead of a topic which helps revealing. Other optional tools can be artificial elements or the existing things, for instance the existing identities or qualities. After which, design principles can be generated based on specific analysis to the site, and design experiments can be elaborated.

To further sharpen the research question relating to the testing site, the quality that this project wants to reveal is the uniqueness of water condition in Oslo on building public spaces.

< Scope and Limitation

The nature of this method - quality revealing - already set tone of its limitation. Although it can help with revealing the problems of site to some extent, many will still find it conservative and cannot keep pace with modern development and our increasing demands on perceiving the world through stimulant lenses.

I. Methodology

[Minimal Intervention: a powerful tool to experience landscape regardless of its scale]

<<Overview: A research framework

Aim of the research is revealing qualities of a specific site by making it experiential. Lassus' experiment evoked a delicate touch upon people's mind by letting them experiencing the beauty of a tulip. He laid foundation for the principle of Minimal Intervention, which answers to this desire at the scale of garden, by inviting heterogeneity into the existing environment. In order to broaden the meaning of Minimal Intervention, methodology in this thesis explored the possibility of revealing certain understanding towards a complex context on the scale of landscape. This chapter elaborates how the principle is further developed into a generic landscape architectonic method, through the following procedure:

I. Development for Minimal Intervention

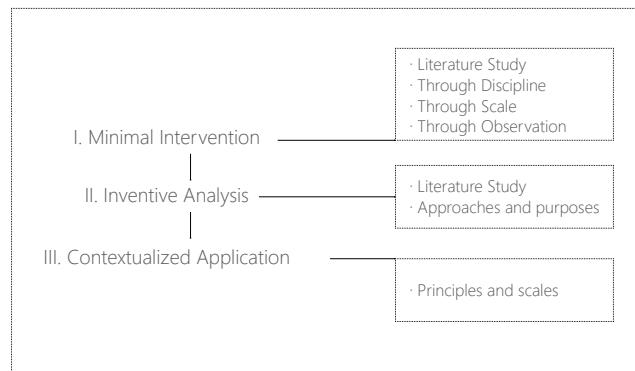
Study the existing research on Minimal Intervention; add broader understanding to it based on observation and exploration through disciplines and scales.

II. The need for Inventive Analysis

Create Inventive Analysis in order to read the site thoroughly with respect to the context, in order to define the strategic locations and situations.

III. Contextualized application

Come up with principles with respect to the situation and be ready to apply them on a testing site.



This methodology consists of two main parts, one deals with the development of Minimal Intervention, the other deals with the systematic research on an analysis approach, namely the Inventive Analysis. The contextualized application is proposed after these two parts.

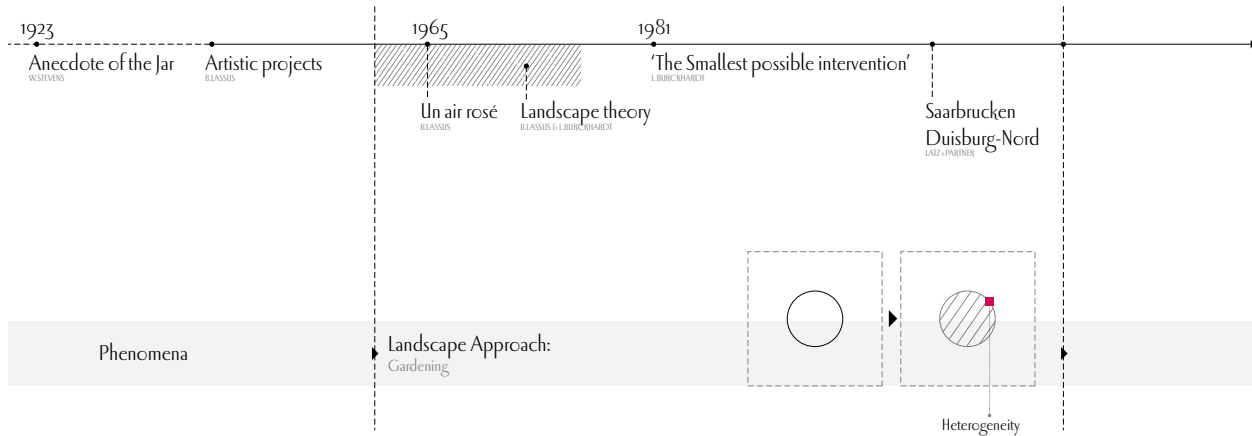
<<I. Development for Minimal Intervention

In order to broaden the meaning and expand the influence of Minimal Intervention, research firstly formulates a developed understanding towards Minimal Intervention.

An overview scheme at the end of this part summarized the process of how the research is elaborated, from literature study on existing researches(i), add extra understandings based on exploration through disciplines(ii) and scales, to the additional discoveries as supplement understandings(iii).

This part of the study helps with inspirations, design languages and tools, on how an intervention can be physically built and connected among each other.

i. Literature study: A theoretical background



img3 A time-line of the development of Minimal Intervention with the method of: A heterogeneity adding to a single element.

Study into the existing research is shown above by a time-line, recording the process of how the domain of landscape architecture has been touched upon under the guidance by Minimal Intervention.

The current application of Minimal Intervention focuses on applying Minimal Intervention in the scale of gardening: add heterogeneity¹⁰ to reveal certain understanding.

¹⁰ 'The heterogeneous is more receptive than the homogeneous.' Lassus, B. (1998). *The landscape approach (Penn studies in landscape architecture)*. Philadelphia: University of Pennsylvania Press. p59

ii. Minimal Intervention through disciplines:

Looking for evidence of minimal existence as supplement of the understanding towards Minimal Intervention. This inspired me on defining in what way can I physically build the intervention, through the experiment of adding, deleting and rearranging.

Traces of the existence of minimal based on the definition of this thesis can be found in lots of disciplines, from art, literature, photography, philosophy to music.

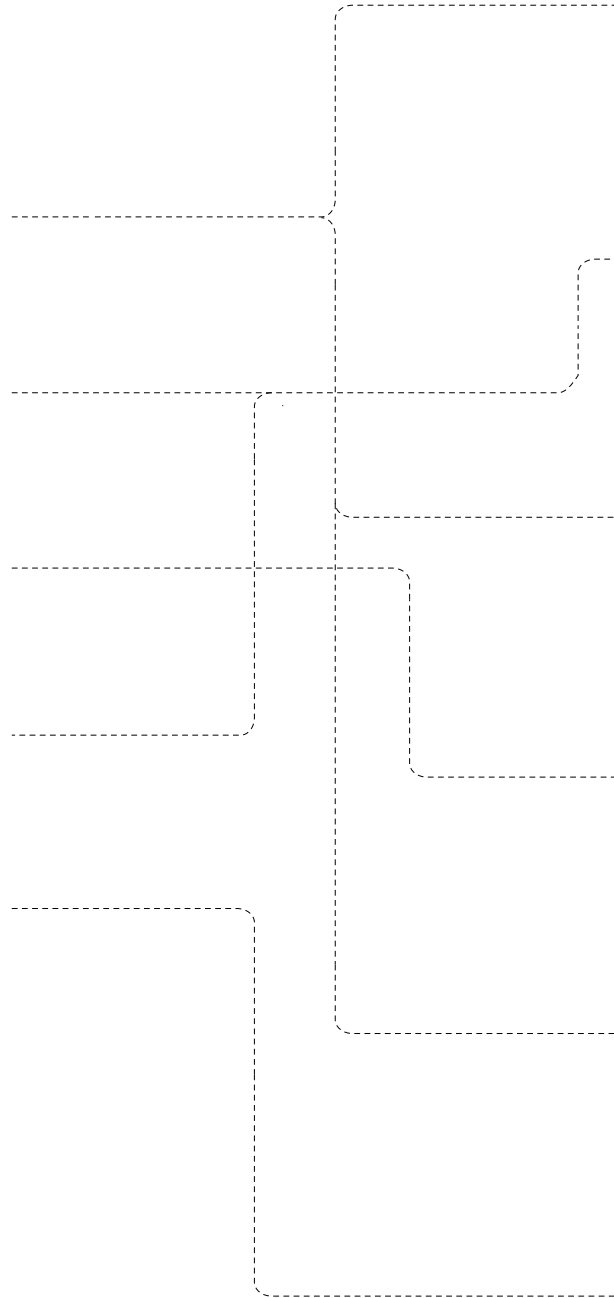
——— ART

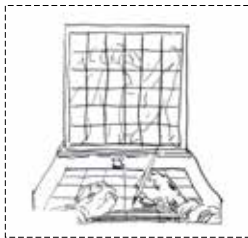
——— LITERATURE

——— PHOTOGRAPHY

——— PHILOSOPHY

——— MUSIC





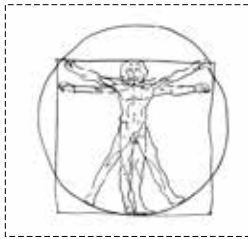
Perspective
Vanishing Point

ADDING

THE THREE ODDEST WORDS
When I pronounce the word FUTURE,
the first syllable already belongs to the
past.
When I pronounce the word SILENCE,
I destroy it.
When I pronounce the word NOTHING,
I make something no non-being can hold.
By William Shakespeare
Translated by Thomas Heywood

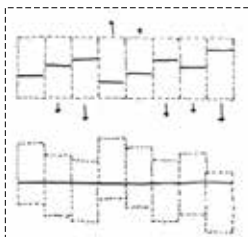


Art of 'made by beings'

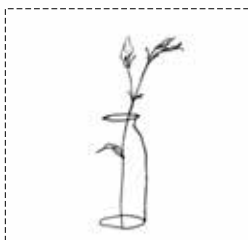


Mathematics into Art
Golden Ratio

ARRANGING

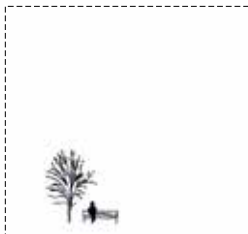
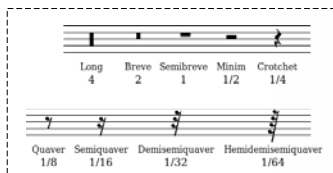


Stable Dynamics



Gestalt Psychology

DELETING



Rest/Blank Leaving

iii. Additional understandings

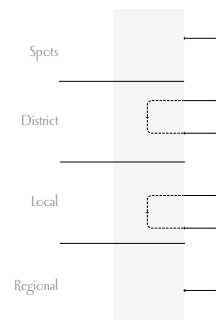
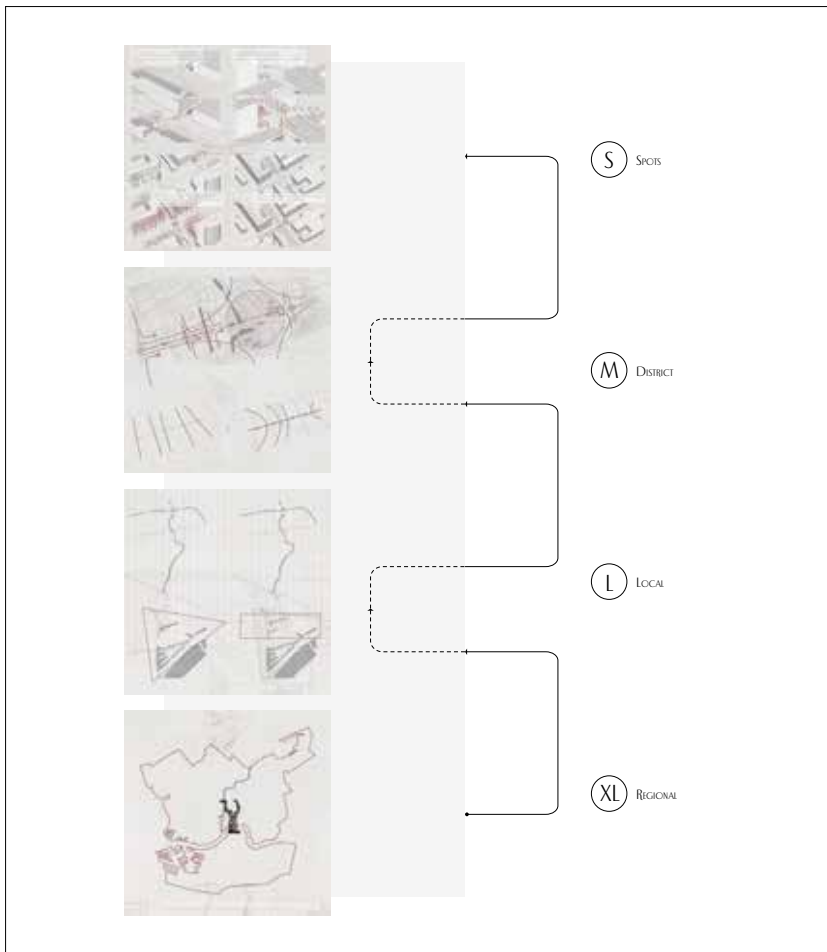
The next four pages depicted four extra findings from observation and former experiences. They are also supplements of my understanding towards Minimal Intervention which threw lights on how this method can contribute to the physical interventions.

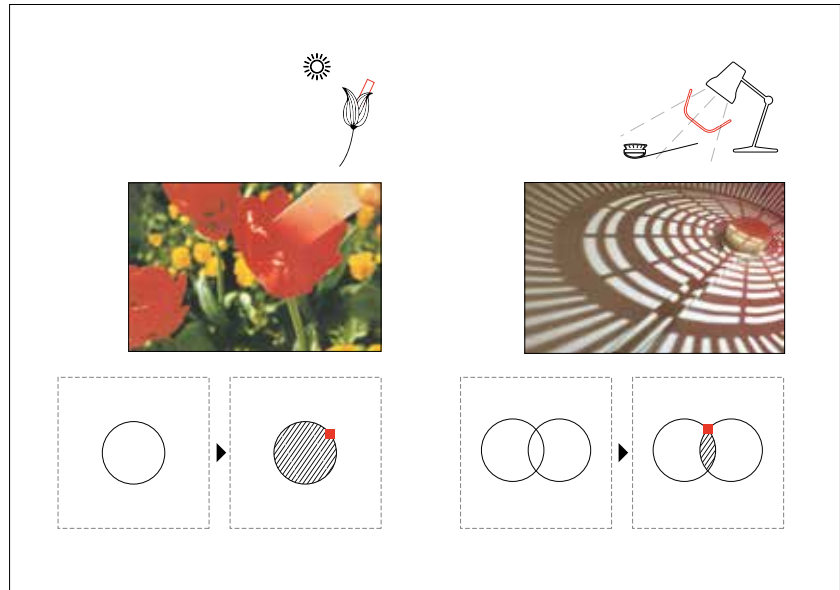
Minimal Intervention through sale: Minimal interventions which are designed in spots (small scale), can become part of a composition in a larger scale. It can be a juxtaposed layer which add extra dimension to the existing context. These interventions could then further create impact through scale.

Another way of impact is created scale by scale. For example, spots working together into firstly an axis influencing the district, which can work with other existing axis of the city, creating its influence in a local scale as a network. It relies on how to organize and structure the relations into different compositions through scales.

img4 A research on Minimal Intervention through scales. The project shown here is one of my own works which I 'unconsciously' applied the idea of working minimally. This project demonstrated how small interventions happening in the intersection or similar spots, can work together and influence different scales.

img5 A development based on *A heterogeneity adding to a single element: invite a third element.*





Role of a third participant: Reveal understanding of a relationship by inviting a third element as heterogeneity.

In the artwork of *Un air rosé*, the artist invited a strip of white paper as one heterogeneity into one other element, using which creating an awareness of quality of the existing situation.

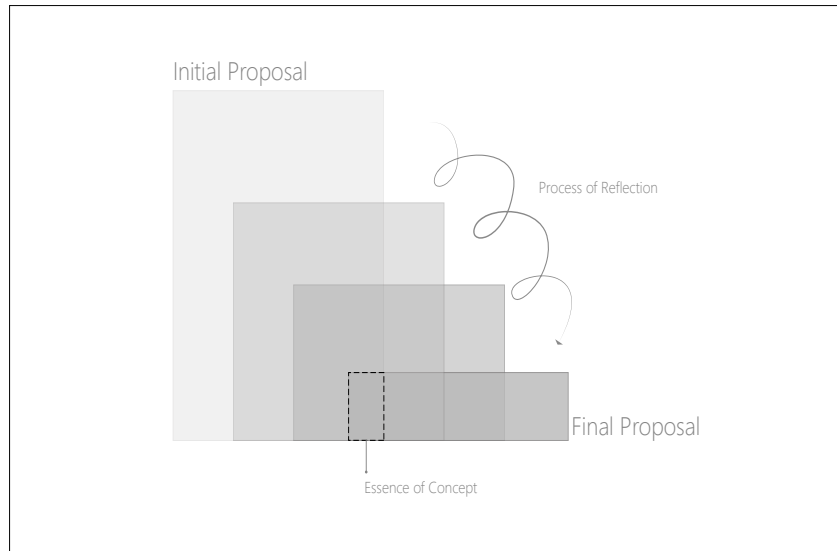
Heterogeneity can also be added as a third element into two elements, to reveal the quality of their relationship.



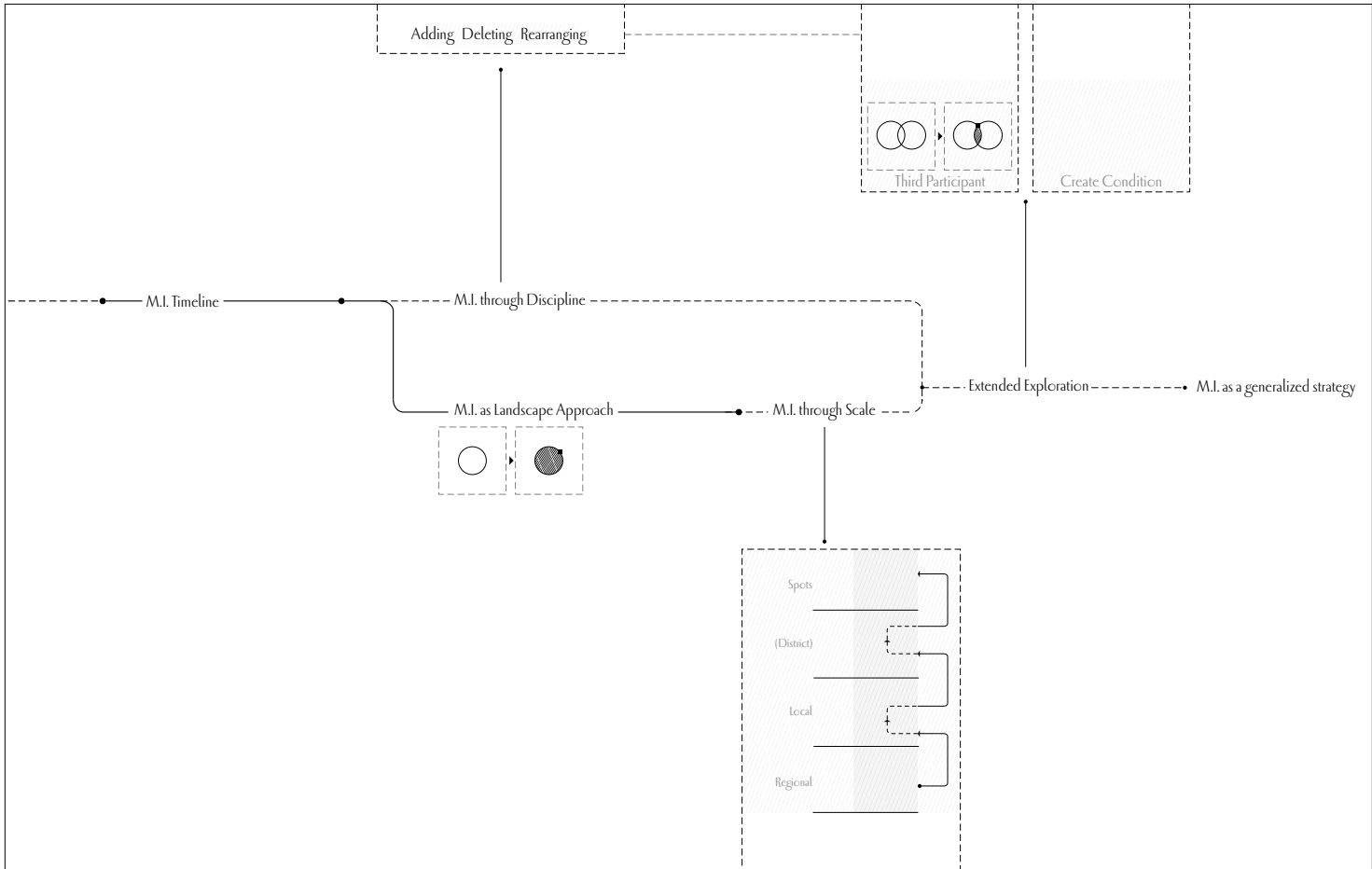
img6 Potential of creating conditions. (Elephant path in city)
Photo by Frits Palmboom.

img7 Minimal Intervention as a reflecting tool for design.

Creating conditions: This photo renders a wild rural landscape. The man is still in the photo, however one can imagine his movement simply by the traces behind him. In this circumstance, the slope is the condition, the traces are something that reveal the hidden movement. This inspired me to the question of what kind of condition are needed or can be created for interventions to happen. Due to the complex context that I want to explore, the 'condition' will be surely different from here which is a total wild and rural setting, but principle of it can be taken considered of.



A reflecting consciousness: Minimal Intervention can work as a reminder of reflection for a completed design. When certain interventions are finished, it will help to look back and think over whether they will cause more damages than benefits, if the proposed interventions are answering directly to the initial objective without being excessive and unnecessary. By repeating this process, design proposal can be sharpened further.



¹¹ Samuel, F. (2007). *Le Corbusier in detail*. Burlington: Elsevier.

¹² Berlanda, T.(2014). *Architectural Topographies: A Graphic Lexicon of How Buildings Touch the Ground*. Routledge.

'The project can be realized once you have invented the analysis.'

It spoke, I listened.

Site and analyse start and guide the project. They evoke senses, lead to concept and build solid foundation for later interventions.

I was once deeply touched by a paragraph in *Le Corbusier in Detail*, in which Le Corbusier described a graceful scene of how even the most laconic settings would convey meanings to their inhabitants¹¹:

'The furniture, the walls, the openings to the outside, this cozy den of his where minutes, hours, days and years of a lifetime unfold, all speak to him.'

His description endow objects with life. During the process of understanding a place, the site, like all living creatures, speaks to us in its own language and conveys the history and meaning of the place. To listen carefully, we should spend time in the field, communicate with people there, investigate into old stories, and learn about traditions. The idea lies in the site, more than in our minds¹². In this sense, the design has already begun starting the first visit on site.

Analysis, a 'phase' of design?

During the reflection on my former projects, I concluded that I have once treated site analysis as a mandatory 'step' during a design process. At first, I studied from projects accomplished by others. What they drew for their sites, I drew something under the same topic for mine. After achieving more knowledge of systematic approaches on how to analyse a site from a scientific point of view, mostly with reference to a fixed procedure, I hunted information on a site which is required by certain method.

Analysis as interweaving input

In this project, I found that following a fixed procedure to conduct an analysis is far from sufficient to serve the goal of this thesis- exploring Minimal Intervention on all scales in more complex settings. Minimal Intervention asks for subtle whisperings, which means the clues are delicate. When following certain procedure, lots of perceptions and feelings are ignored only because they are not asked for.

However, what this project needs for a solid foundation is both sensitive and systematic, a method with the ability to take advantages with abstract perceptions on one hand, and to be convincing as an academic approach on the other in order to locate positions for minimal intervention to happen.

The Inventive Analysis firstly proposed by Lassus have enlightened me of this specific point view of 'analysing' a site - 'reading' might be more of the appropriate word since analysis itself is not the goal in his theory. He sees a site with deep emotion and with the desire of looking for impressions and inspirations. Meantime he explores history and stories from literature and documents to give extra dimension on understanding

the site, which afterwards leads to a comprehensible design. He treats all his findings during this process equally valued and later makes decisions to define potential.

In order to develop a thorough understanding of Inventive Analysis which could serve the goal of this thesis, research first looks into the Inventive Analysis based on existing studies. Next to this, more possibilities from both intuitive and theoretical point of view are amplified to the theory.

After which, the developed approach of Inventive Analysis will contribute in the coming contextualized application, help locating positions for minimal intervention to happen in a real context.

Theoretical research into Inventive Analysis follows two steps:

I. Background

The characteristic which makes Inventive Analysis different from most of other analysing method is that, it treats all information that has been gathered as input for later operating without bias, instead of looking for information based on the requirement by the approach itself. It asks one to go beyond first ignorance and pay attention to values that could easily be ignored only because it is normal.

Besides, the approach of Inventive Analysis asks for a total immersion into the site as the basic foundation of understanding its value. Value of the site comes from aspects that are present in force, absent, or simply uncoordinated¹³. It requires an observer for a frequent visits in different seasons, weathers or different times of day, and for stories and memories of the site. To analyse the existing is also to discover in the use of the places what has been hidden by the erosion of time and is in the process of disappearing.

Historical value is one of the most important feature that is always considered. The exploration of what was there and what had been there will contribute to the invention of a contemporary creation.

In Lassus' proposal for a garden reinvention to the Tuileries, he created a palimpsest on site with five layers of different periods, layered its historical perspectives with its contemporary possibilities. The Tuileries assignment asked not only reinventing an famous garden which had witnessed a series of inventions over centuries, but also maintain its prominence, its historical significance and become a public park for today¹⁴.

For Lassus, landscape - like *mille-feuille* - consist of many historical layers and levels of meaning superimposed upon each other, making any place potentially unique. It is a consequence of the cultural and age-related heterogeneity of our society that the individual increasingly only perceives particular levels of meaning of the garden and the landscape¹⁵.

There are certain terms that Lassus often used in describing his method, among which readers can have a grasp on his position with respect to the context. Stratum, Fraction and Entity, Visual and Tactile scale, Valorized, Stratification, Palimpsest, ...

¹³ Lassus, B. (1998). *The landscape approach (Penn studies in landscape architecture)*. Philadelphia: University of Pennsylvania Press. p? (Quote Peter Jacobs)

¹⁴ Lassus, B. (1998). *The landscape approach (Penn studies in landscape architecture)*. Philadelphia: University of Pennsylvania Press. p?

¹⁵ Hunt, J. (2015). *The Making of Place, Modern and Contemporary Gardens*. Reaktion. p164

II. Development

WHAT:

Definition and hypothesis

Inventive Analysis is an approach of conducting analysis, providing argumentation and foundation for Minimal Intervention.

It is a systematic way of organizing random and (both intuitive and tangible) information that has been gathered from the site.

It is different from other approaches of analysis, in a way that Inventive Analysis gathers information like a bottle, without knowing what you need and expect to find, without judging what is important and what is irrelevant. A method to collect and hold value.

It collects values, not problems.

It accumulates values by organizing values into layers.

It is a system which takes advantages of all achieved information related to the context.

WHY:

Even the most *laconic* settings would convey meanings which deserves to be experienced. Minimal Intervention requires delicate attention on locations. Nothing from the site is irrelevant in building Minimal Intervention. The whole context should be considered as an entity of landscape, and all phenomenon that catch your senses, and all the hidden under modernization are fractions that make up the whole landscape.

Inventive Analysis is a suitable preparation for Minimal Intervention, for the reason that it values information which might be ignored if one follow certain methods, and only focus on collecting the required information.

Inventive Analysis also records what had existed in the site in different time phasing. They are valued as important as what is still there. By organizing information into layers with time span unfolded, locations with experiential potentials are selected.

FOR:

Two goals: Locations and situations

Inventive Analysis locates crucial places by the overlapped layers. They are selected for the interventions to be applied.

Besides which, the process of organizing information into proposed layer helps collecting situation which can be seen as representation to the layer. Design principles are proposed later for these situations, which guide the interventions further on selected locations.

HOW:

Collect and organize, extract and intervene

16 Lassus, B. (1998). *The landscape approach (Penn studies in landscape architecture)*. Philadelphia: University of Pennsylvania Press. p?

17 Weilacher, U. (1999). *Between landscape architecture and land art*. Basel: Birkhäuser. p106

i. Multiple sources of collecting information

Inventive Analysis collects values, not problems.

'It was necessary to make possible an interpretation that would not deny the natural given, or the patrimonial given, or the social given'¹⁶.

Lassus' word points out the source where information could be collected from the beginning.

The element which stands out, draws attention, or simply interesting, can be recorded. He seeks ways for different user groups on site and derive from the landscape a poetic sense of human diversity and history. Besides, what this part also want to add as valuable input is exploring the possibilities of establishing a new relationship between human and non-human, for instance the flow and forces of nature as they can be recognized at present.

What's more, since the goal of this project is to explore and reveal the quality, some existing values can also be found in literatures which focus on introduction or exemplifying projects that have been done on site.

Talk with people on site

No matter local residents or tourists, they see the site from their own perspectives. Ask them to draw mental maps or use their own way to express what they think of the place, what they appreciate and what they need further more.

Observation

*Spatial perception,
Environmental psychology,
User behaviour,
Bright/shadowed area,
Traces of nature,
...*

Read into stories

*What has happened?
How the city developed?
...*

ii. Multiple ways of organizing the findings

The information collected from both intuition and facts can be chaotic. This part is to come up with ways to arrange findings and organize information so that the outcome can serve as foundation for later intervention.

With time: Dealing with the stacking of time is a promising way to categorize the findings. Clues can be found from the overlapped information. Other options can be interweaving or decomposing to build extra dimension of understanding on top of the superficial information.

Inventive Analysis can also work as an interface which is able to connect with other existing theories.

Make a map

To make a map (not a tracing) investigates the ways in which landscape representation not only reflects a given reality but also constitutes a way of seeing.

It acts in the complexity, discovering within past and present and it visualizes the interrelationship and interactions between natural, social and economical process.

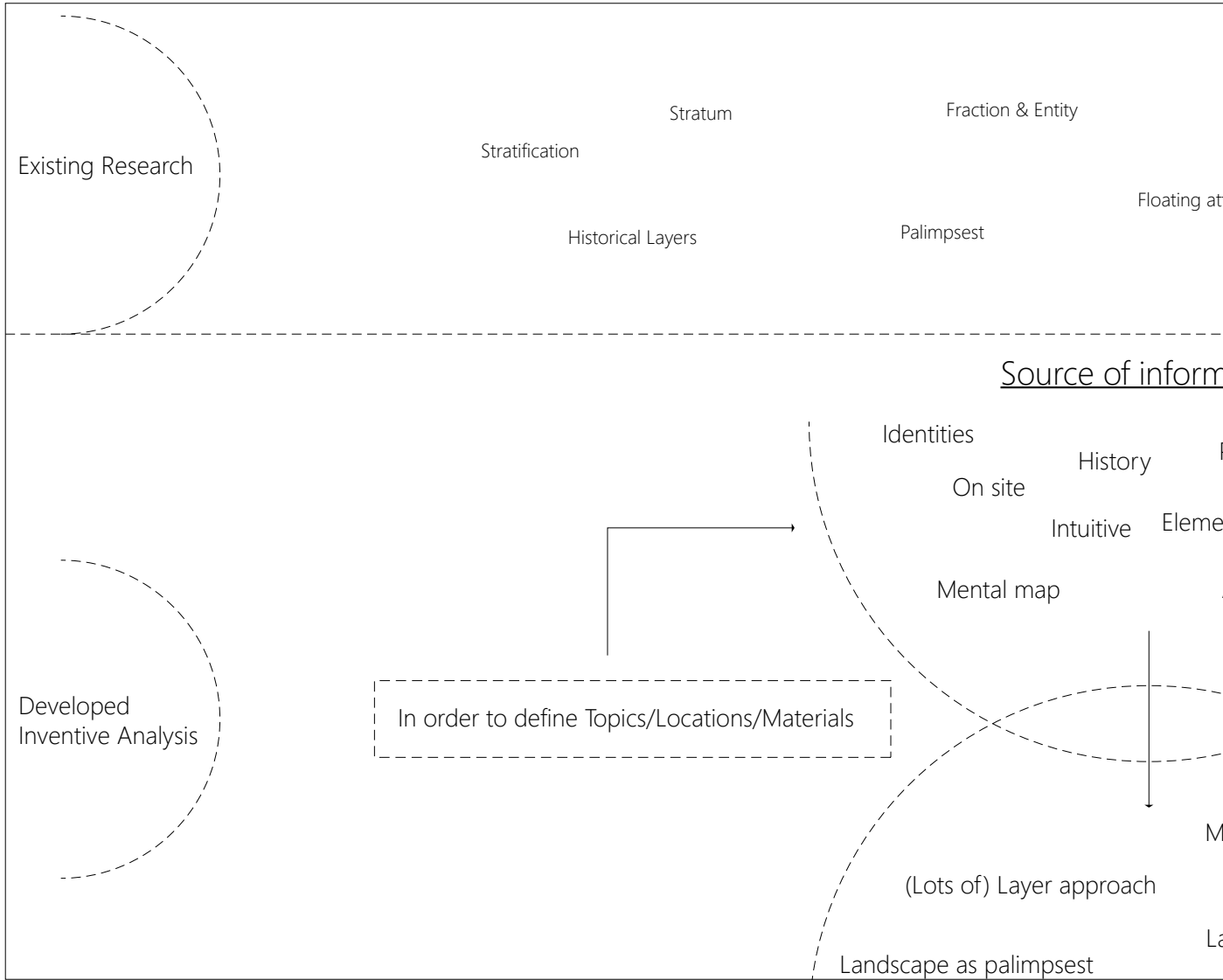
It give us the opportunity to see and re-formulate the reality.

Make a collage

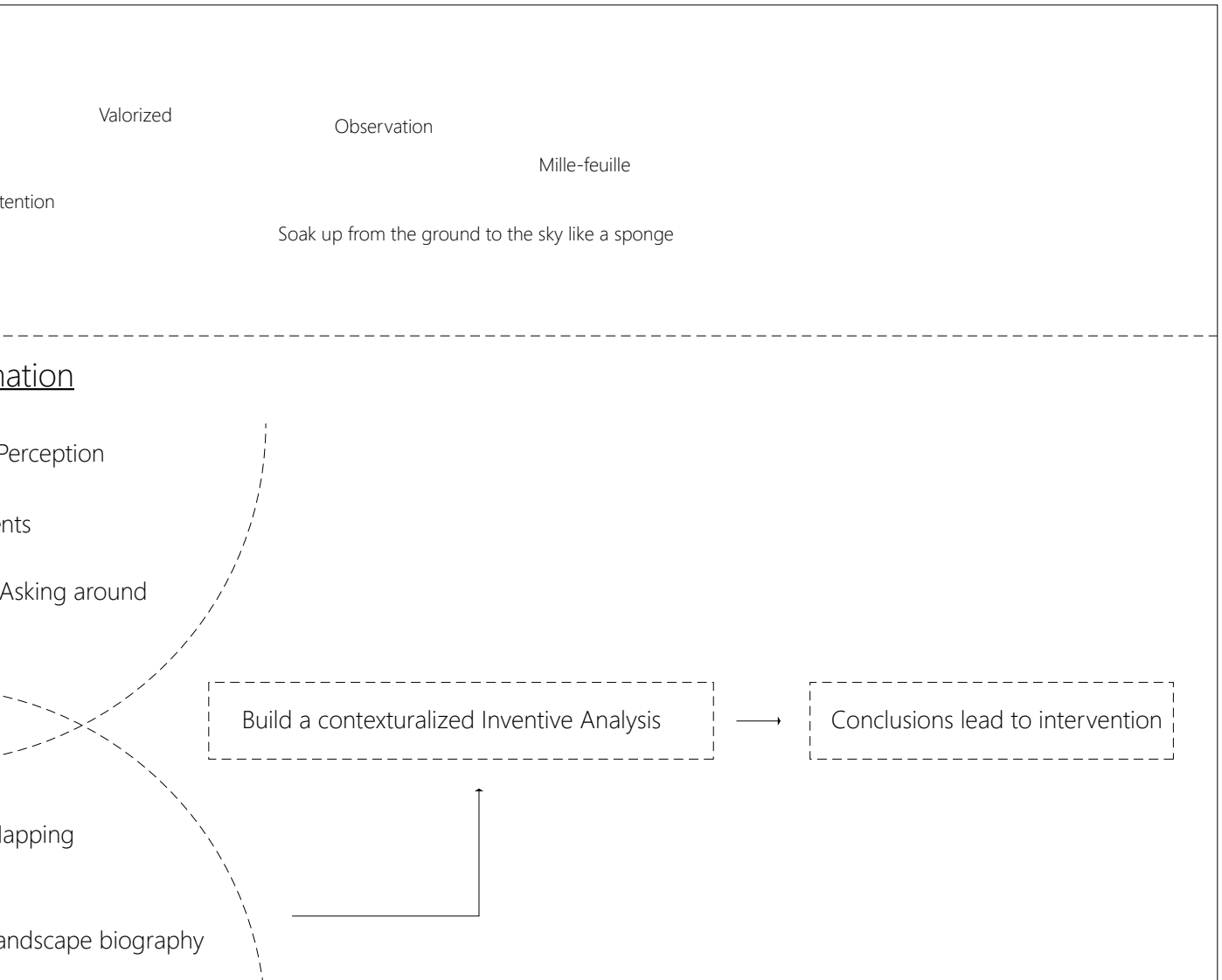
For us to reveal the totality of the context. Different objects, times, and subjects are brought together into the same page. The collage is indeed a part of the process: not a framed and final representation, as a render is, but a medium to think and develop our ideas.

Choose an theory

*Layering approach,
Landscape biography,
Landscape as palimpsest,
...*



img9 A conclusion scheme on the method of Inventive Analysis



<<III. Contextualized application

Oslo is chosen as a testing site to apply this method in order to explore whether Minimal Intervention as a landscape architectonic approach, can expand its impact to larger scales in a more complex urban setting. Inventive Analysis in this case is built upon fully respects to the context and traces through time. Elements, qualities, identities and characteristics of the site are perceived and collected in an intuitive way. Multiple sources contribute to this collection of information, for instance the interviews to people on site, both local residents and tourists; the reading in local library searching for traces of urbanization; ...

In order to understand relationships among the complexity and palimpsest of the site, among all the optional systematic methods that are already existed, a layer approach is chosen and proposed as main structure organizing the threads.

Each layer is defined with respect to the identities of city through time, organizing the initial findings. Being faithful to the essence of the characteristic of Inventive Analysis, stacking of different time periods are recorded. Besides which, the re-decomposing of each layer helps extracting new findings that are adding extra dimensions to its original characters. New findings are recorded and prepared to compare with the next site visit, to see if they correspond with each other or not.

By repeating this processes, crucial strategic locations or areas with value and potentials are chosen, and prepare for Minimal Intervention to happen.

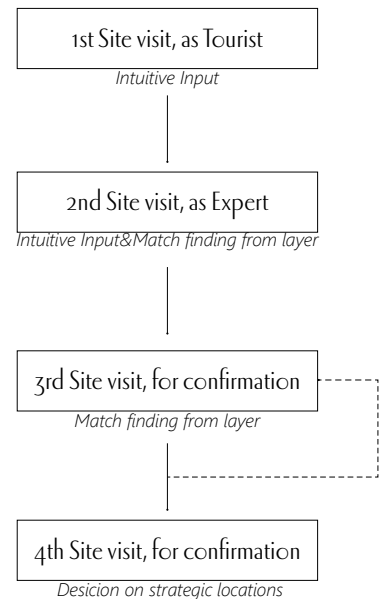
Minimal Intervention starts from design principles proposed for these chosen locations. There can be optional principles that one location could apply, or one principle for different location to experiment. After the selection of which principle suits each location and/or area, compositions of these interventions will be explored, to answer the question of can and how Minimal Intervention make an impact through scales, in this much more complex urban setting.

The process of Inventive Analysis and Minima Intervention is never ending, especially the research on site. But after certain times of visiting, the design can reach the most effectiveness.

In this case, limited by time and distance, I had stepped foot on land of Oslo for four times in total. Each from a different perspective, each end up with new impressions. First as tourist, wandering around the city without a plan in detail, taking photos and recording discoveries, sensing the space, both natural and concrete. Second as a student visiting the landscape apartment of local university, experiencing the city through the lens of landscape architecture, inferred what had made the landscape as it is now. Purpose of the third and fourth are mainly for confirmation of the supposition during the process.

During these four visits, comparisons of the changes in season and time can be seen as unexpected findings.

img10 Site visit and information hunting



<< A framework guiding future development

Since within this method (not only in the case of the application for Oslo) there is no limits on where to stop, it always has the potential to evolve into a wider context. A framework will be needed in order to continue the design process in the future.

With a framework concluded here and example presented in the contextualized chapter, this project can evolve with designs by other people.

The purpose to build connections among interventions aiming for a impact through scale, comes naturally once the initial intervention is build. Method of creating connections contains but not restrictively, bridges and paths, sight corridors, and most importantly, a common language to be recognized and recalled.

More locations built, more sense the connection among scales make. Following the project framework from last page, this chapter is more focusing on how a single contextualized intervention can be finished by other designers.

< On Oslo:

Taking this project of Oslo as example, **with the intention of building a relationship between water and urban life which can be explored and experienced by people, this framework of how one can follow and build such an intervention, is also a way expressing the role of minimal specifically in this project.**

In order to reach this objective, physical objects which make up the intervention on single location is always piles or small areas of water, with a shelter somewhere around it marking a crucial spot, serving different functions and purposes. Design languages that describe them is always consistent with the presented design.

Every location serves for experiential purpose(1), contains hidden discovery towards environmental elements in the landscape (2) to be explored, and with delicate details (3) that agrees to the whole story.

Location:

The location of both water and shelter is carefully defined. These are the locations which touch upon one or more important layers of the city, the ones that make sense through dimensions, speaking of historical, cultural or natural aspects.

(Criteria of judging if a targeting place makes any sense, can be find on next chapter)

Composition:

Always piles or small areas of water, with a shelter marking the significant choice of locations.

Material:

In order to avoid distraction from the intention, and focus on the meaning of certain intervention, materialization of both building the water and the shelter stays minimal as well.

For shaping the water, concrete is chosen as it shows most contradiction between soft and hard.

The choice of glass for shelters is for one hand reducing the volume, on the other hand, it provides the opportunity of interacting with the rain, snow and sun light. Besides glass, the combination of steel and concrete serve for construction purposes, which also represents an identity of city in the northern land. Steel is used in small pieces, only serve for necessary construction needs.



Construction/building structure

Being minimal in creating a constructive detail is also important. A hidden node avoids distraction from experiencing the landscape and exploring discoveries. Details are supposed to tell the same story with any other scale of this project.

Innovative constructions are always welcomed with the goal of building a closer relationship between water and city life. The structure is always straightforward in building the relationship and is only there for the construction reason, instead of focusing on testing new structures.

Details of construction are as concealed as possible in order to strengthen the intention of certain intervention.

Discovery:

For each location, there is hidden knowledge about the earth, the sea, water in all forms and senses which could be experienced by users. This is also part of the experiential purpose.

Apply the proposing principles:

Six minimal principles are cautiously proposed dealing with different situations. All six principles proposed in this project are made up of a water intervention and a shelter by its side.

To cope with the unique weather condition on the Scandinavian land, and strengthen the design signature, shelters are added to each of the location. They serve different functions as needed, or stay as a pure shelter, waiting to be discovered.

Thus every design of single location will firstly be able to build the possibility to interact with water, secondly always a shelter as embellishment, interact with both the water and existing landscape, thirdly always delicate details for the construction.

They always answer to the same task of creating opportunities for people to interact with water, explore and experience. With simple changes, cer-

tain intentions of discovery meant for each location are exposed. These principles are qualified as 'minimal', comparing to its influences.

There is absolutely no need to be restrained by pursuing 'minimal', and that is also the least thing this project calls for. To be 'minimal' is not the intention in itself, but to accomplish a provocative project which reveals the quality, be able to evolve and keep making sense through scales, while creating experiential environment contributing to the relationship with water and urban life, is the final goal.

Thus blindly inviting seemingly 'minimal' interventions is nothing but surplus. Instead, to apply the 'minimal' principles onto carefully chosen locations, the appearance of that application doesn't seem to be important anymore.

As individual design intervention, it can reveal qualities which are sometimes hidden by urbanization, by industrialization or misunderstanding. They share understandings and create space with experiential value. As compositional individuals, locations with these interventions can be recognized and connected with each other by their explicit design languages. Together they add an extra dimension to the city identity.

With a framework and examples presented, it is possible that the project develop not only into place with programme, but also make a different on the next level of scale.

< On other context:

This project took Oslo as a testing site, set an example of how Minimal Intervention works as a landscape architectonic approach. For other site under different topic, a total different framework can be built up for further development. Main aspects will still be the design language, criteria for choosing locations, common intentions and so on.

Criteria for materials could also be defined as local or representative, with traditional construction but still consists of precise and delicate details.

In other sites, design topic can focus on other aspects instead of relationship with water. For instance, a relation between human and green space; the historical or cultural value that is hidden under modern constructions; a possible future spatial quality for urban development. Comparing to this project, more natural tools can be chosen to build the interventions.

<< Conclusions: Minimal Intervention as a landscape approach

By reading the site thoroughly, design principles are presented after extracting the meaningful situations; by overlapping information collected from the site, locations are chosen and potential connections among them is gradually formed.

Minimal Intervention and Inventive Analysis as one method for landscape architectonic design, should always be considered as a pair of coexistence, both indispensable for each other.

To make this method applicable is to integrate Minimal Intervention and Inventive Analysis into the research design. Aiming at salvaging traces of the past, and slightly inflecting their presence and significance in a way that allows an extra dimension and create the production of a new layer¹⁸.

To conclude,

Inventive Analysis for:

Fully understanding of the site; define meaningful locations of the context; provide material for the interventions.

By visiting the site several times in different time, season and weather under different purposes, the verification of strategic locations will be chosen.

Minimal Intervention as:

In each location it creates experiential value, reveal qualities of certain site.

Compositionally they adds an extra dimension to the city identity.

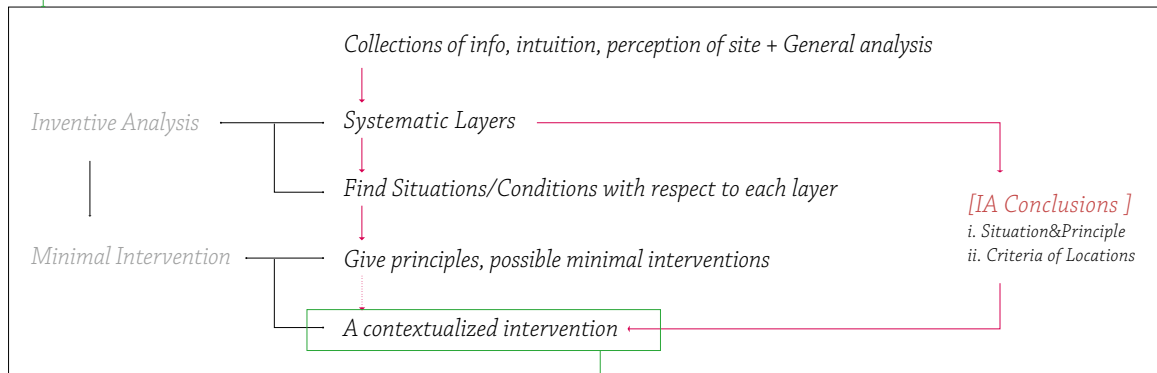
This method calls for a humble attitude, always own potentials to develop and create bigger impact through scales.

18 Wu, X. (2017), *Patricia Johanson and the Re-Invention of Public Environmental Art, 1958-2010*. Routledge. p218

img11 How the method of Minimal Intervention & Inventive Analysis is applied on a contextualized context in this thesis.



Research Objective: Experiential goal with impact through scales



A framework for further development

II. Application: Oslo as a testing site

'Is it impossible today to rediscover and/or invent a landscape from the one that is blemished, over-exploited, and not easy to interpret?'⁷



Method developed, what the project needs now is to invite a site to test it. Minimal Intervention deals with places that has an experiential potential to be expressed and interpreted.

In each of those sites there could be a most suitable revealing-need topic. For instance, how people conceive space; a relation between human and nature (water, green space, etc.); the historical or cultural value that is hidden under modern constructions; a possible future spatial quality for urban development; or the beauty of everyday environment that could be easily ignored, etc. In those cases, water might be able to work as a tool instead of a topic which help reveals the understanding. Other optional tools can be artificial elements or the existing things, or the existing identities and qualities. Using this method, different projects might be developed.

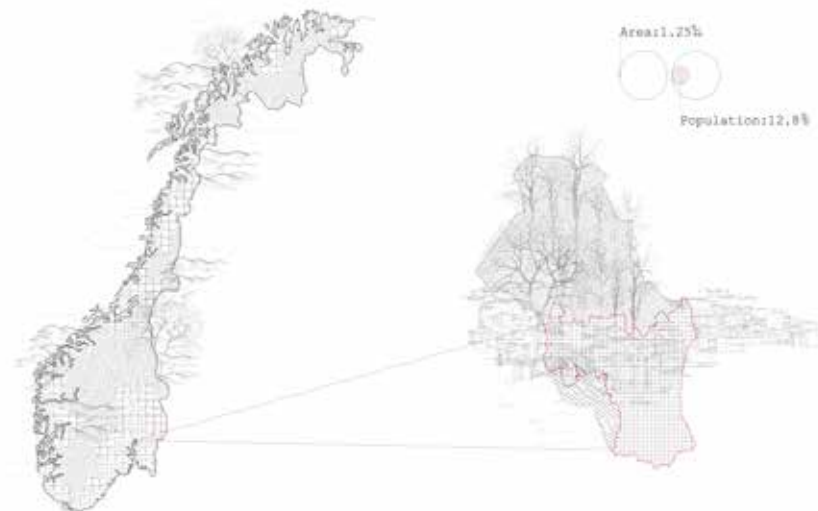
In this project, the site to test this approach is Oslo, capital city of Norway. Oslo is not a problematic site in the sense of sea level rise, air pollution or endangered ecosystem, which requires urgent measures. On the contrary, it has potentials that could be revealed so that new development can possibly be guided. To work with revealing and experiencing potentials, Minimal Intervention is the suitable tool.

<<A paradox

Along the Norwegian coast there are many fjords, islands, and bays, resulting in a coastline of over 25,000 kilometres. This country owns a rich natural resources with intimate water experience.

But what we have in mind about the image of Norway, it is not the situation in Oslo. The total length of Oslo's coastline is approximately 3,400 kilometres. Most of the area on this boarder between land and Oslo-fjord is covered with paved concrete for industry. Rivers were sent into pipes in the process of urbanization. The relationship between water and urban life is alienated.

img Image of Norway in people's mind and situation of Oslo.







In Oslo there lives 12.8% of the population in Norway, but it only covers 1.25% of the land area. From this perspective, Oslo can be seen as one of the many major cities in the world with huge population, where people don't own the privilege of being closed to nature. Why can't people who live in city be gifted the opportunity to be closed to nature?

In the wild nature, people are keen on and are encouraged to do adventures and to explore, to conquer and to experience nature. But the first idea when facing the force of nature in the city is to hide from it. Urbanization had derived something from us, which is the intimacy with nature. But it doesn't mean that we don't need it.

At this unique place on earth, the land of ice and snow, the temperature drops frequently below zero. The wind tears through the landscape in winter, snow and rain are always reshaping the scenery. In this project, people are given the opportunity to experience the harshness and possibilities of what nature can create in a northern land, in a sheltered condition.

img A paradox between Norway and Oslo.

Image of Norway



Intimate water experience, Rich natural resources

Situation of Oslo



Alienated relationship between water and urban life



Adventure in the roughness



Hide subconsciously

The extreme weather and different forms of water create a lot of potential of changes in experiencing Oslo's city landscape. This the world's winter capital owns unique qualities in presenting this character to its citizens which is not known of at present.

What's more, few cities throughout the world can offer the comparable proximity of outstanding and distinct natural beauty and sophisticated urban life. Locating at the end of Oslo-fjord, the city owns rich resources from its fjord water system the most impressive view towards the archipelago. With a relatively safe seafront from climate change, this city could have owned a much more appealing water related closeness for citizens, instead of sending rivers into tunnels and using concrete to fully cover the space for containers and vessels.

People have been unaware of the fact that the uncertainty of whether the sea level is rising or falling in Oslo is actually a benefit for them, instead of a threat from climate change. The unawareness has caused conflicted problems (Oslo-fjord pollution, inner-city inundation from river, etc.)

In this sense, Oslo is also a suitable site to test the method of Minimal Intervention for being 'blemished, over-exploited and not easy to interpret'. Meantime, it is only natural that I define water theme as the topic for Oslo, and search into the relationship between water and the city.

As stressed ahead, this method is not driven by the desire of problem-solving, but more of a strategy of quality-revealing in order to use. The real situation will help Oslo into building a next relationship with water if it can be successfully presented. In order to do this, people firstly need to be confident and build a sense of safety towards water. Minimal Intervention will act as a starting point, build the awareness in order to be used in the future development.

The entrance and foundation I choose to build for water relation is the city identities of Oslo, this lead to the inventive analysis afterwards. All the analysis I raised is not necessarily water-related, but they all represent certain characteristic of Oslo and be able to serve for the desire of creating a new relationship between city and water. These material of identities could be the historical development, the complex tunnel system, unique geographical features, etc.

Climate change and sea level rise has always been a global issue that is almost threatening every coastal environment, even for those who should not worry about such problem.

In the case of Oslo, despite the fact that tidal gauge in Oslo records a declining sea level (automatic data that is only confirmed occasionally), some theories did point out the sea level in Oslo is decreasing because of isostasy¹⁸. There are also theories that the sea level rise is expected to be most at the equator and that it would most close to the poles due to the pull of gravity. After all, there is no exactly bulletproof on the stereotype of sea level rise. This will be an positive opportunity for experiencing water.

¹⁸ Parker A., 2013. *Impacts of sea level rise on coastal planning in Norway*. Ocean Engineering 78(2014)124-130

To further define the research objective in the case of Oslo, this project aims at revealing quality of Oslo's unique environmental landscape architectural features by making them experiential. These features include weather, water along the coast and water in pipes, water in the form of snow, ice and rain, the sound, view and tactile of it, and so on.



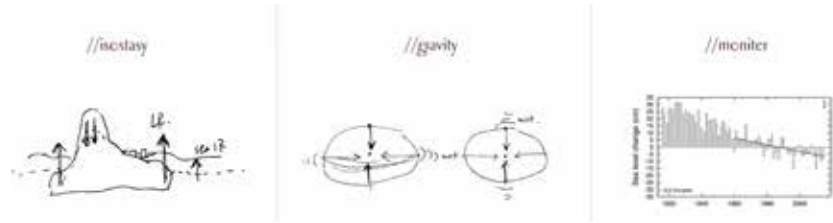
img Time-line tracing from 1048 to 1925, recording the information of how the city of Oslo developed with its city center moved twice towards west; how the river ended in pipes and how the coastal area gets expanded for the industrial purposes.



1048

1314

img Some general analysis is made to help firstly read into Oslo. Some findings will be collected afterwards from city development, shoreline development, change in the relation between city and water and so on. The drawing above shows the theories on sea dynamic in Oslo. The conclusion is that sea level in Oslo is decreasing because of isostasy.



1624

1794

1859

1925

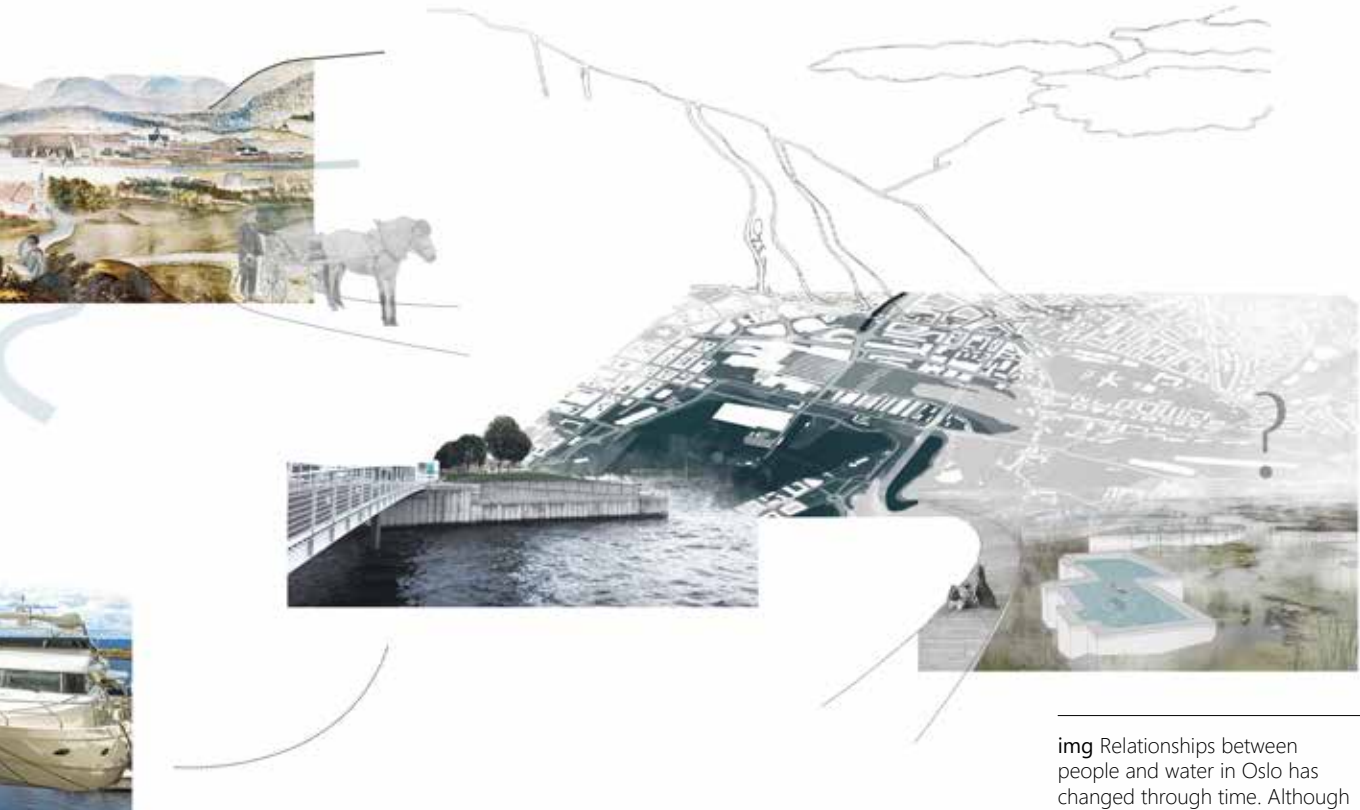
First harbour activity and the original wooden containers. Harbour is constructed with the same material.



Initial transformation of the old harbour in the 21st century, a single dot chosen from the fully covered coastal area is transformed into a little beach area for swimming and sunbathing purposes.

Old villages are firstly build next to the water. There was a close relationship between people and the river.

People used to gather around the entrance of where river meets the fjord, celebrating the gift from nature.



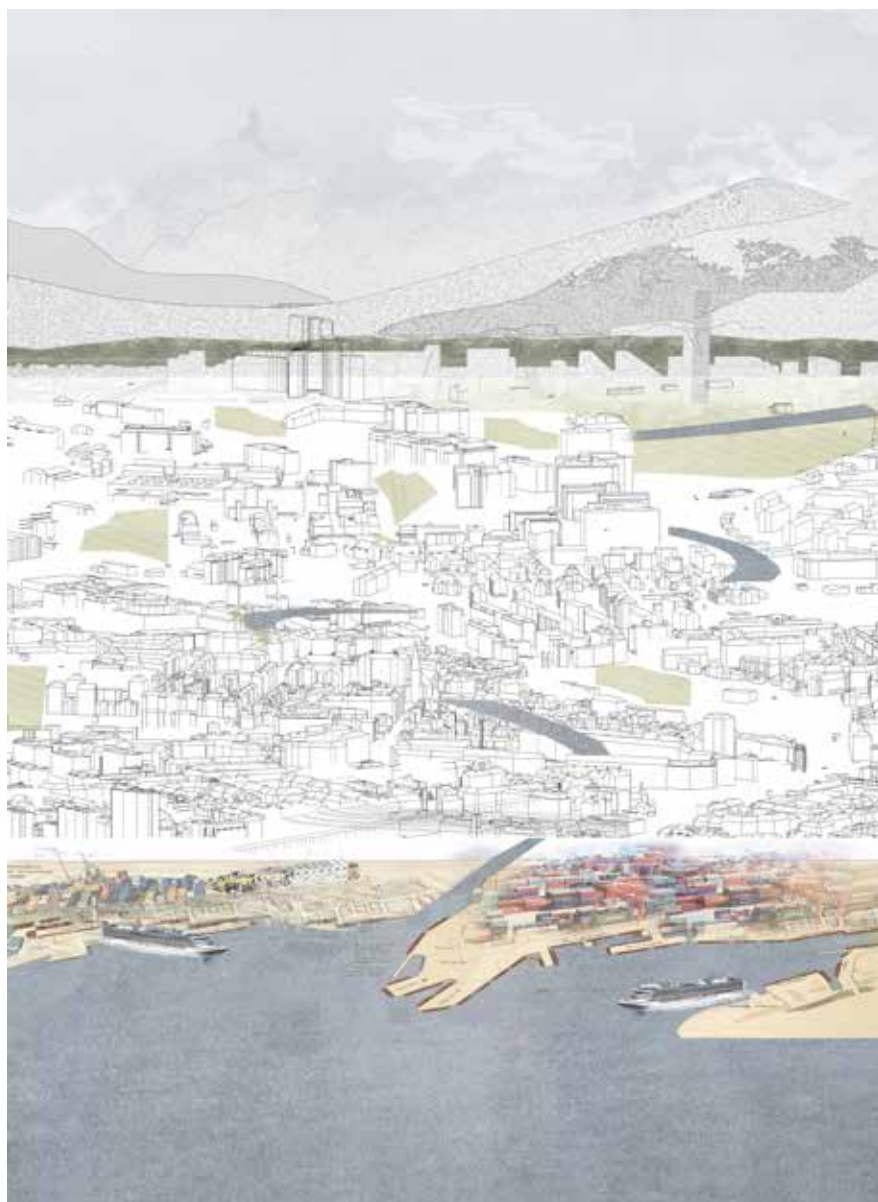
img Relationships between people and water in Oslo has changed through time. Although there has been experiment and appeal for the transformation of waterfront because of biodiversity, there is still an alienated relationship between urban life and water. It's not only because of modernization, but also because of the hot discussion worldwide under the topic of sea level rise which doesn't suit the case of Oslo.



img Major unexploited land in today's territory of Oslo, with pieces of farming land. Settlements are constructed by the water.

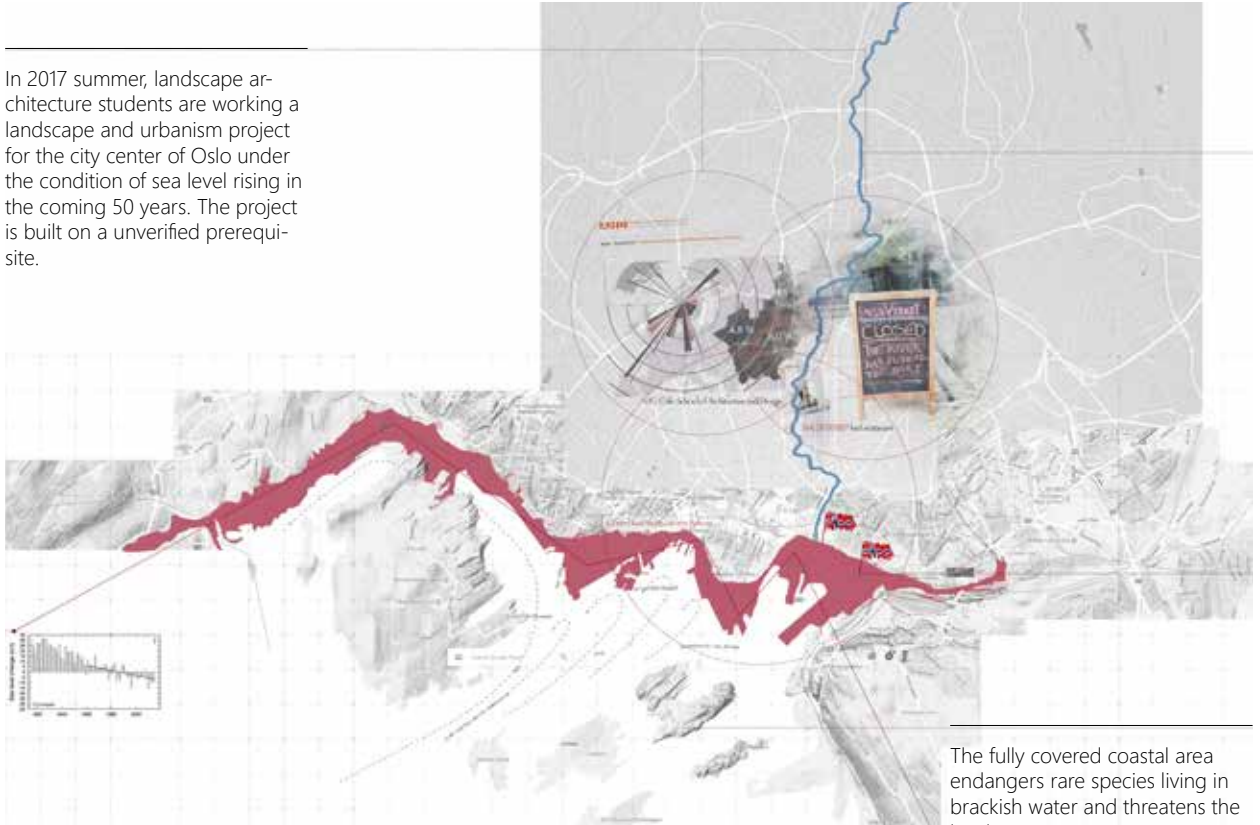


img First shipping industry and expansion of settlements along the river.



img Water in patches because of the pipes, resulting in lots of river 'ends'. Harbour is fully constructed, city has taken over the land.

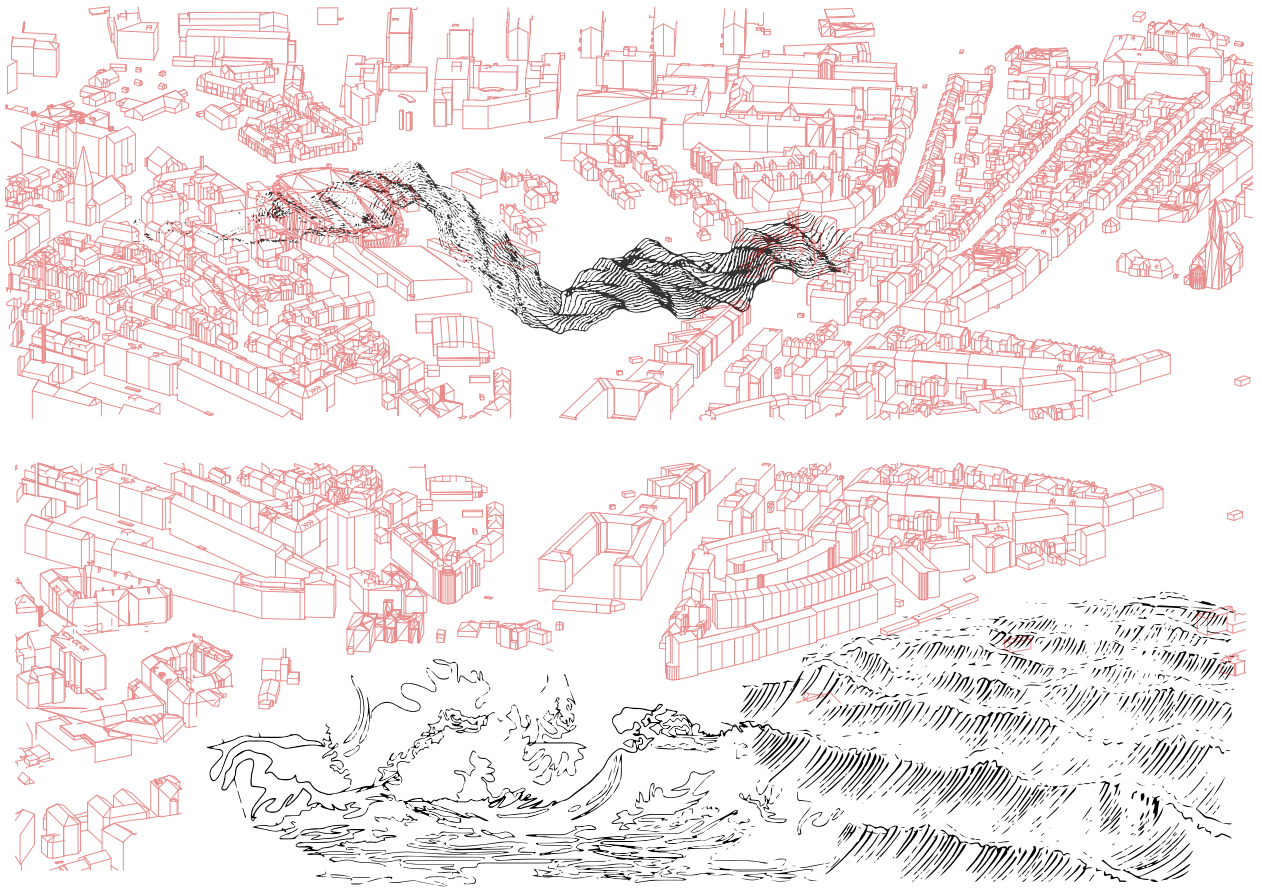
In 2017 summer, landscape architecture students are working a landscape and urbanism project for the city center of Oslo under the condition of sea level rising in the coming 50 years. The project is built on a unverified prerequisite.



img The unaware of the quality has caused problems in the past. Currently the covered river in pipes has caused pollution in Oslo-fjord as well as city inundation. Bars are putting out 'Closing' signs because of the flood that could be avoided if the pipe capacity is calculated of the suitable volume nowadays under the condition of global warming, or the river isn't sent into the pipe in the first place.

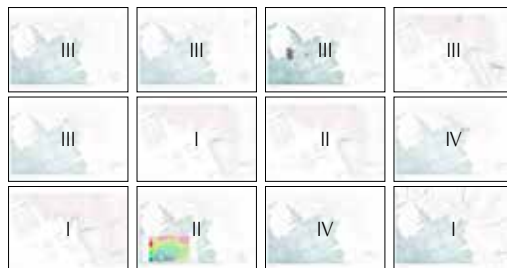
The fully covered coastal area endangers rare species living in brackish water and threatens the biodiversity.

Up until the 1980s, the dominating strategy for Oslo's rivers and streams was to enclose them for practical reasons. Nowadays, the opposite approach is to actively reopening the waterways, make them accessible, facilitate increased habitat for biodiversity, and handle storm water more efficiently. Development will happen gradually, what Minimal Intervention will act is to enlighten the awareness and lead to possible futures.



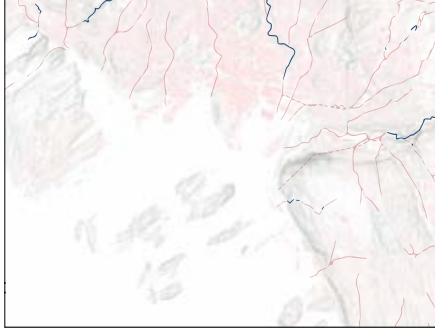
img Illustration of two main water characteristics in Oslo at present.

img Layers are defined to organize the identities and perceptions of the place. Based on information collected from site, they are categorized into layers of nature, movement and urbanization. Crucial spots and city structures are picked up by overlapping the layers. From each layer the essence can be extracted for minimal interventions to happen.



Collect, categorize and overlap

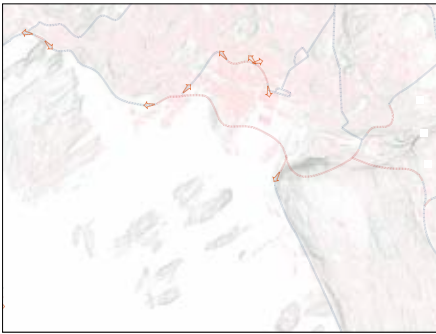
WATER



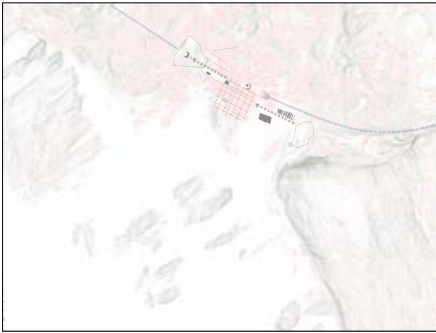
NATURE



MOVEMENT



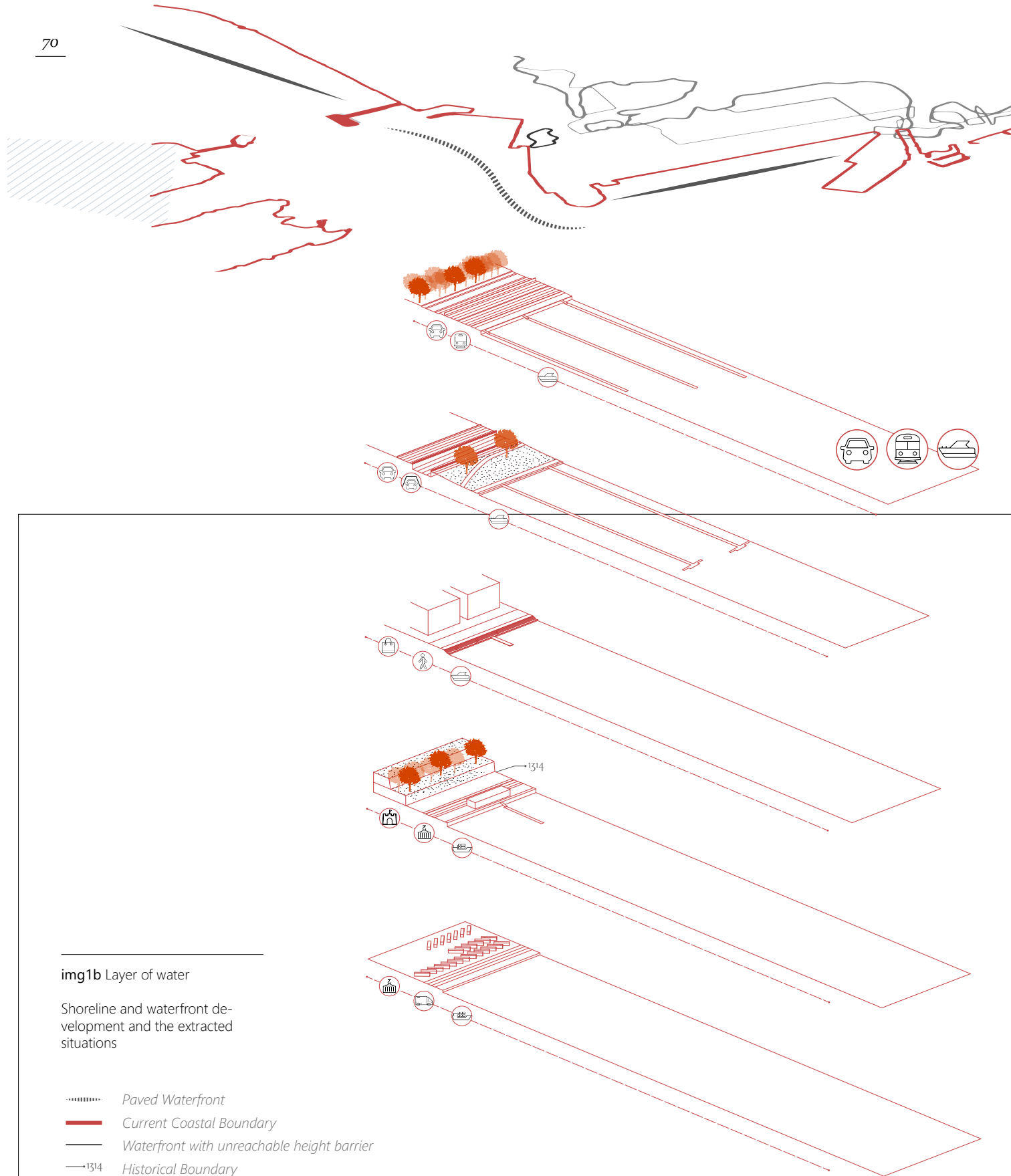
URBANIZATION





img1a Layer of water

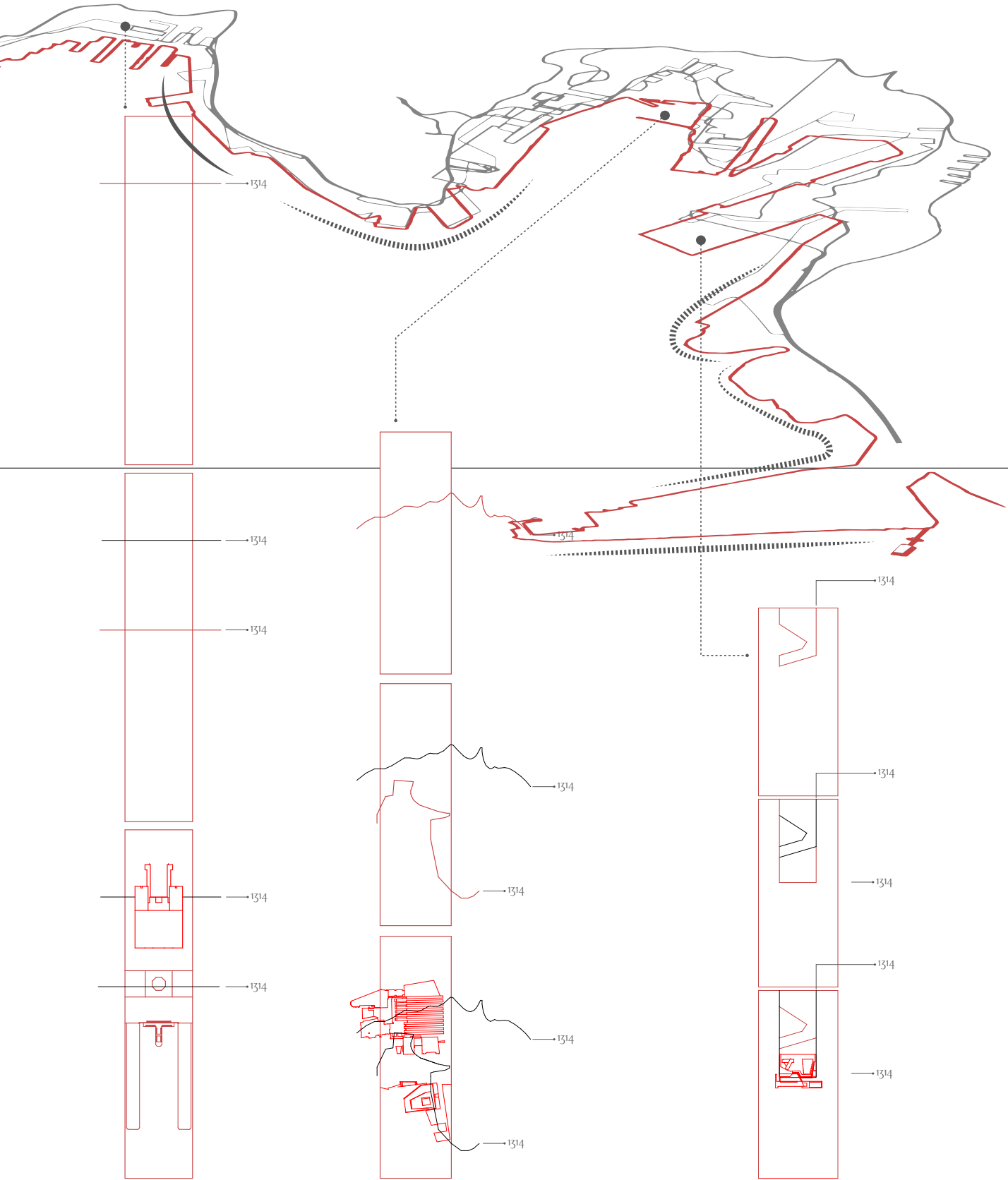
Shoreline and waterfront development. Expansion Progress and Coastal Line since 1048

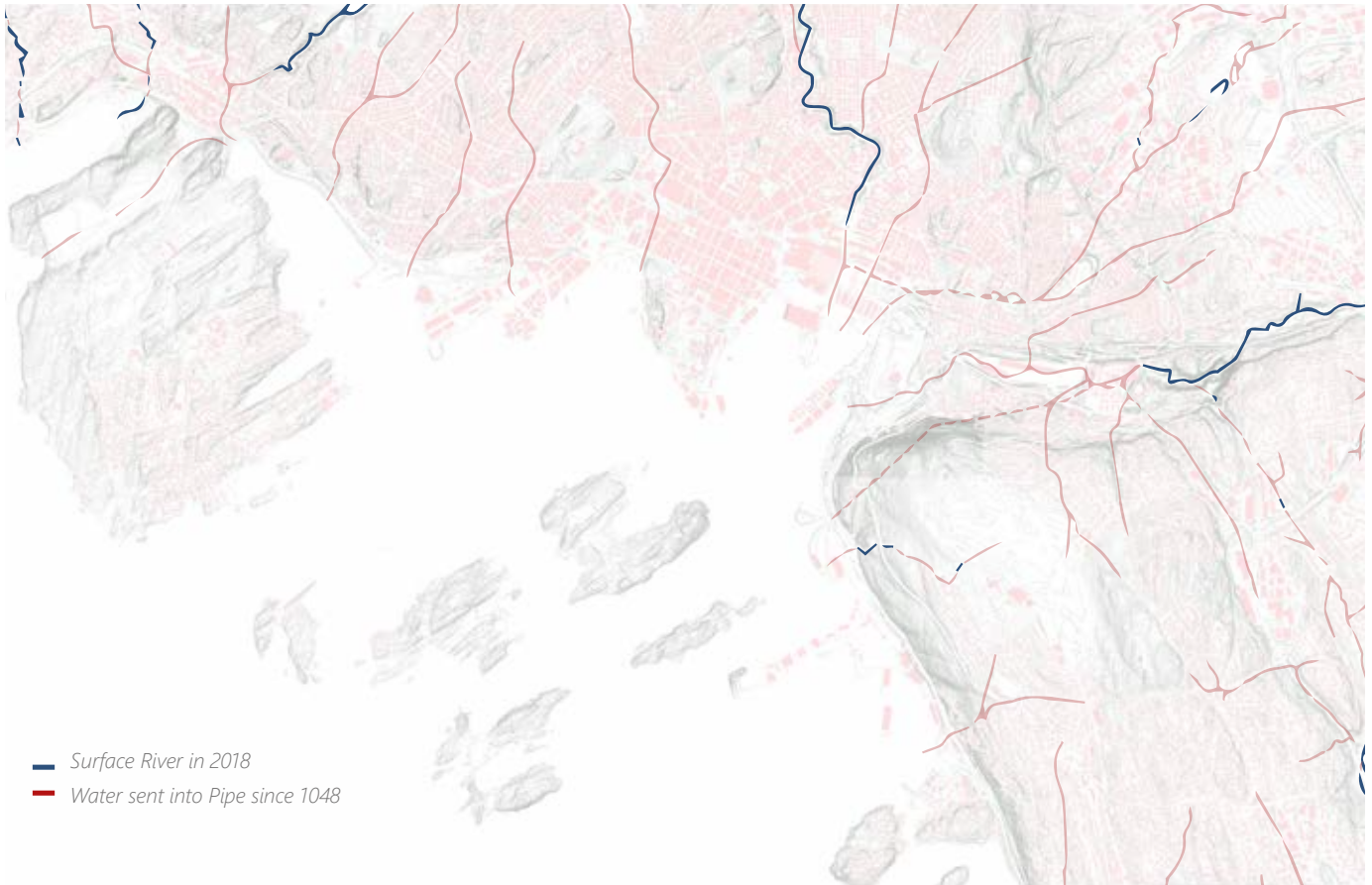


img1b Layer of water

Shoreline and waterfront development and the extracted situations

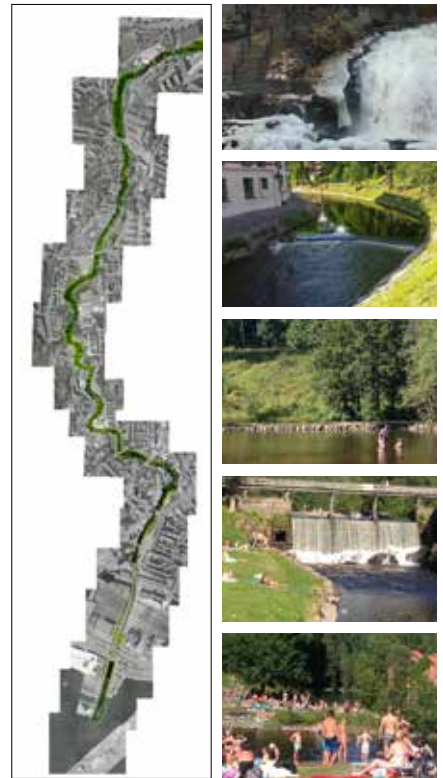
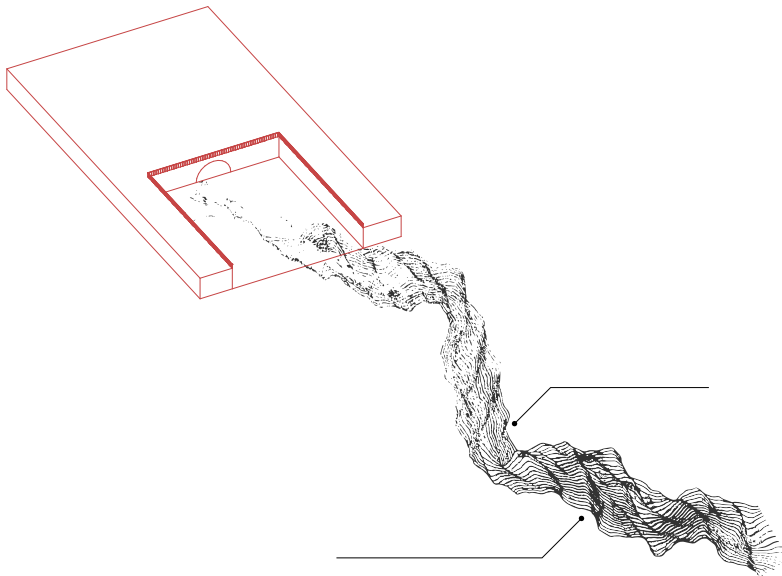
- Paved Waterfront
- Current Coastal Boundary
- Waterfront with unreachable height barrier
- 1314 Historical Boundary





img2a Layer of water

Water inland and river ends created by the pipe construction underground.



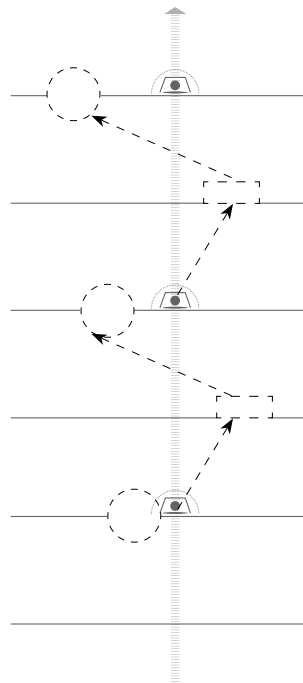
img2b Layer of water

Water inland and river ends. The extracted situations are the river-side spaces and where the river goes into pipes.



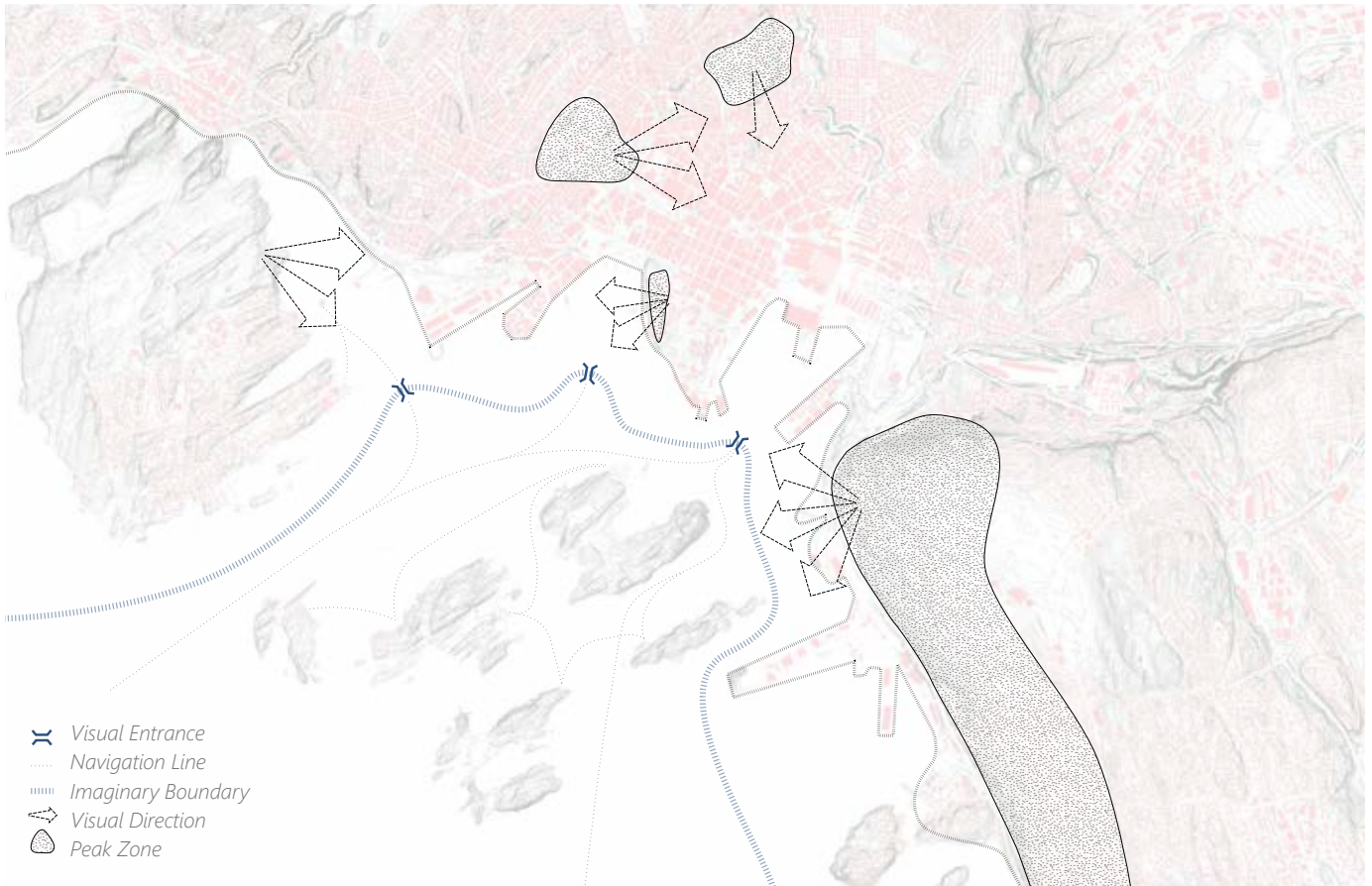
img3a Layer of movement

Car and tunnel



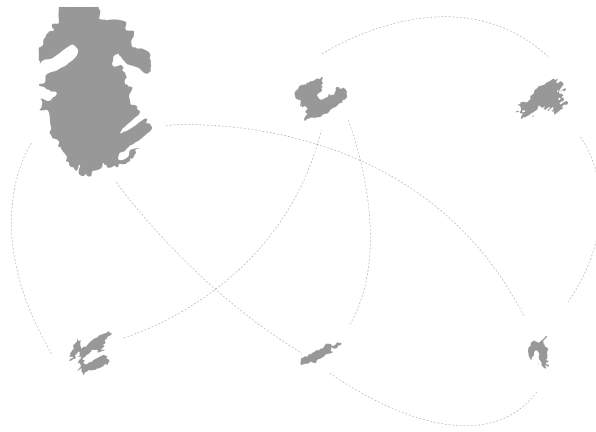
img3b Layer of movement

Where cars go into the tunnel, rectangular represents a sight attraction and a circle represents the tunnel entrances being seen from a distance, dotted line represents sights.



img4a Layer of movement

Vessel movement and navigation

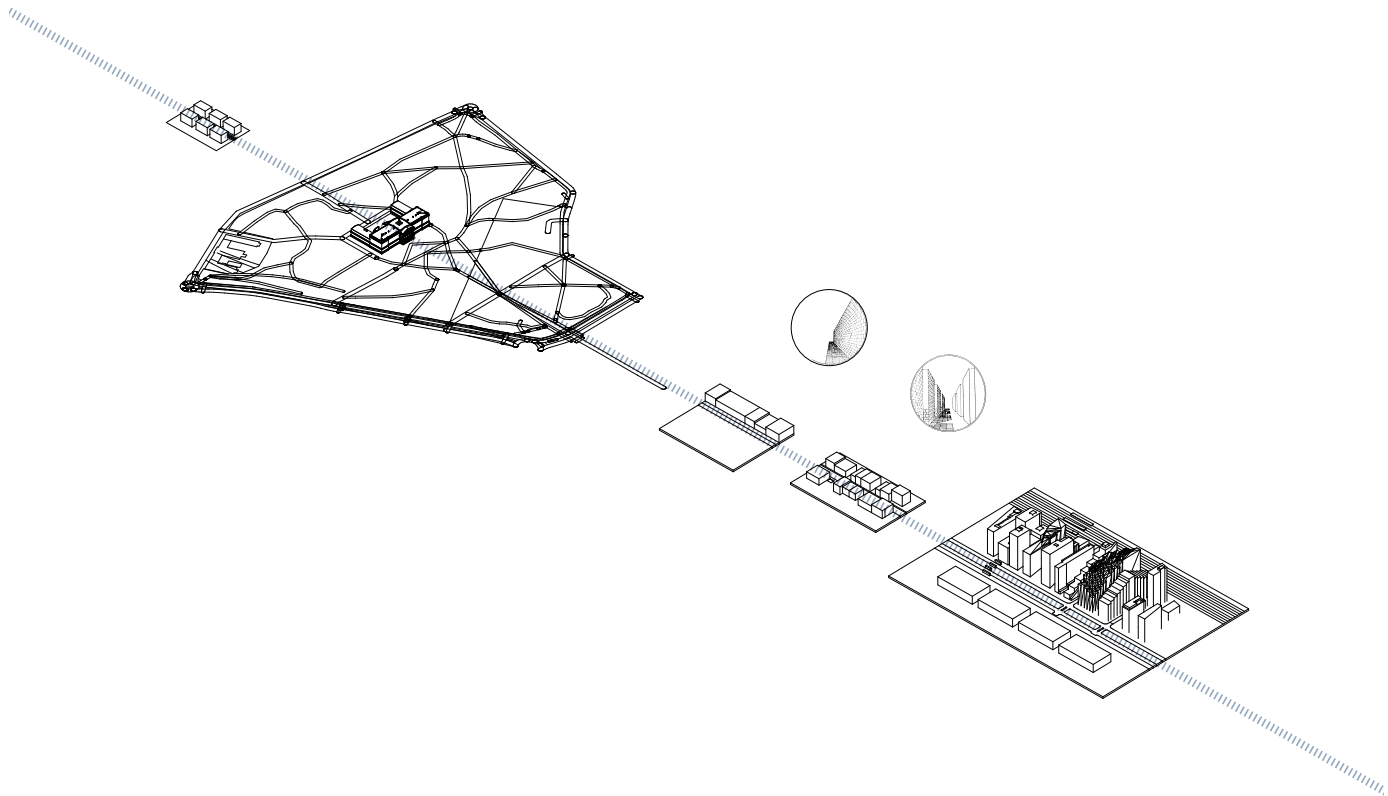


img4b Layer of movement

Navigation directions create visual entrances. Extracted situations are the three visual entrances.

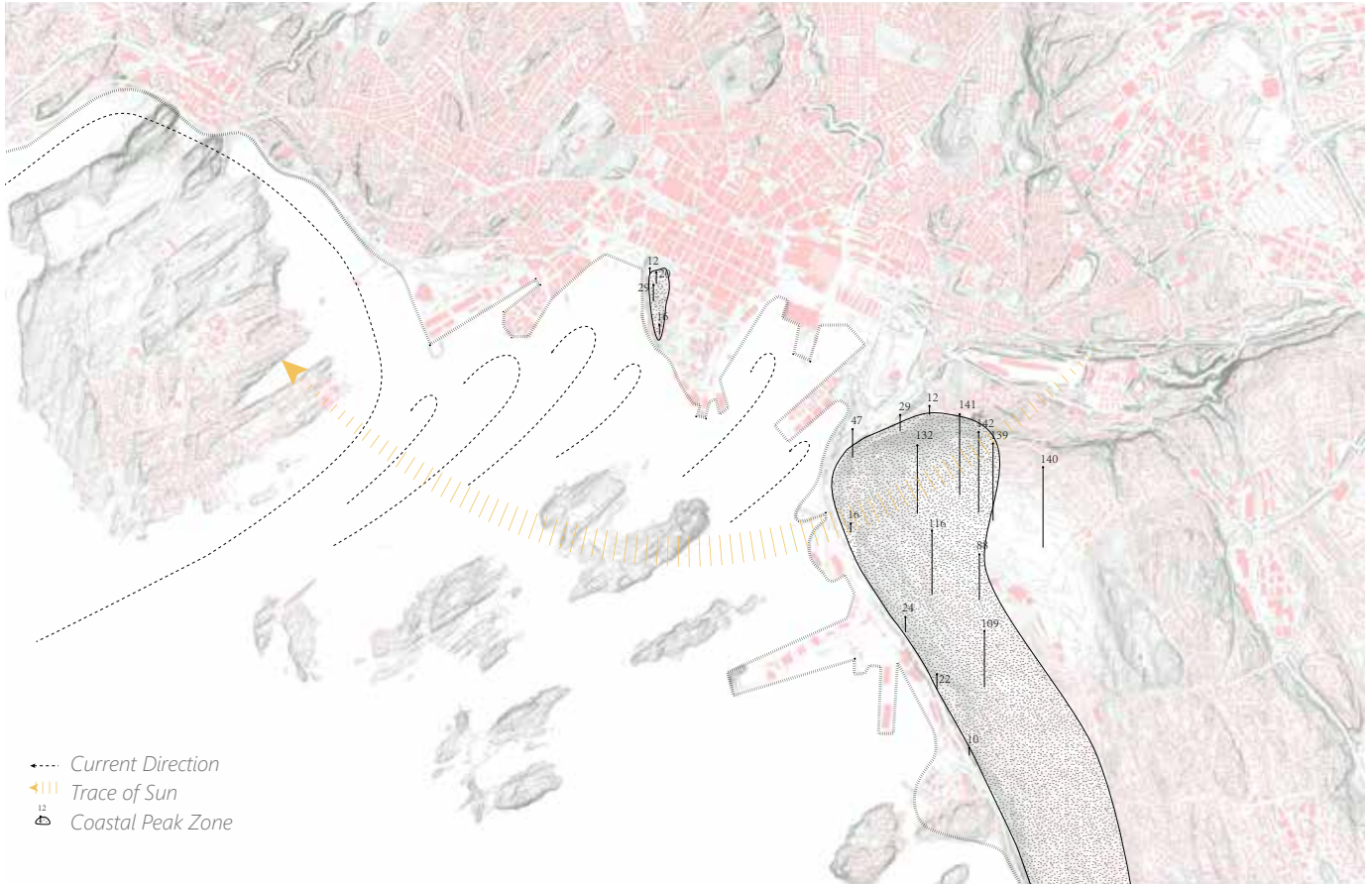


img5a Layer of urbanization.
The city center has moved twice westwards.



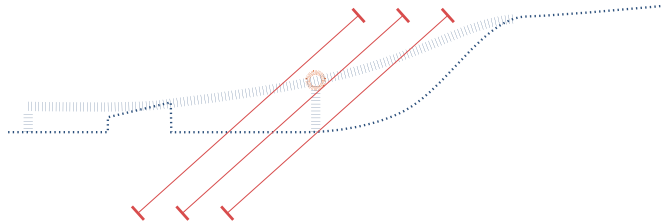
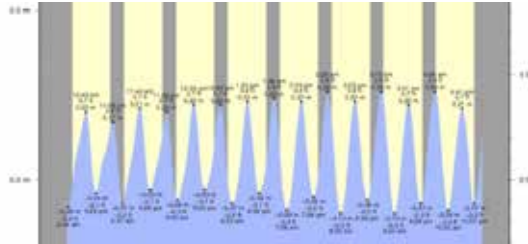
img5b Layer of urbanization

Types of experiences along the main city axis. Extracted situations are the public squares along the axis.



img6a Layer of nature

Including visual peak area, tide information and the trace of sun.



img6b Layer of nature

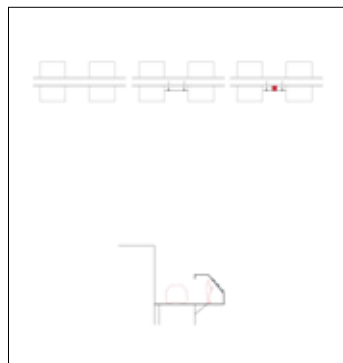
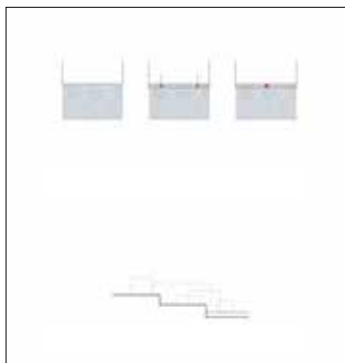
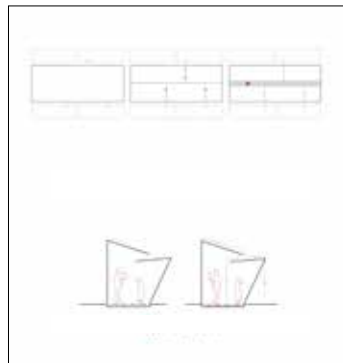
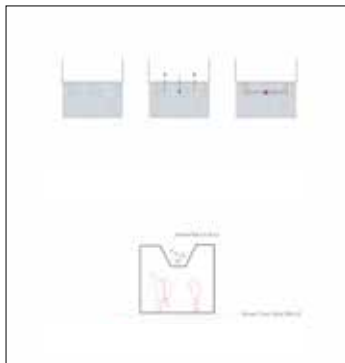
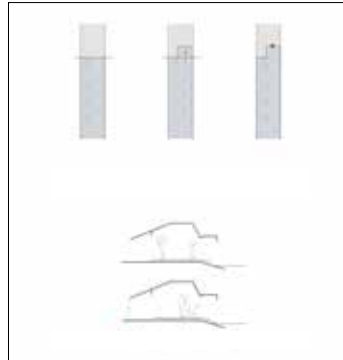
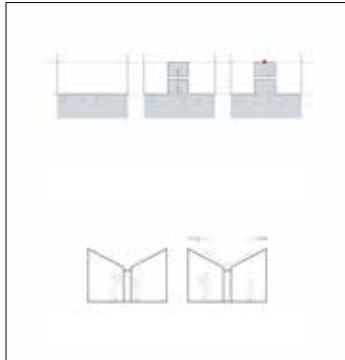
Old castle is now taken over by nature, muddled by the castle and natural mountain park, the extracted situation is the location in between, building a height connection.

img Six minimal design principles are proposed based on the situations extracted from each layer. Every one of them corresponds with and represent each one of the layers.

They share different understandings towards water concerning city life with different focus.

They answer to the same task of creating opportunities for people to interact with water, to explore and experience.

They provide an initial step to create a space that is experiential.



Intervene and experience

Shelter for each location

To cope with the unique weather condition on the Scandinavian land, and even more strengthen the design signature, shelters are added to each of the location. They can serve different function as needed, or stay as a pure shelter, waiting to be discovered.

Shelter is the essence part of the intervention principle, framing the experience of water intervention. The spatial dimension a shelter being part of the principle is added to our senses. Seeing when the snow is reshaping the scenery, listening when the rain drops... Our perception of the body is associated with direction, which a shelter is able to orient.

What's more, Oslo pulls an average of 763 mm of rainfall per year. The wettest month is August with an average of 90mm of rain. Thus there is a tendency for people to find a indoor place in winter. However, to keep it united with the intention of being experiential, lots of shelters are designed without a floor or some of the walls, in order to get in touch with the sky, the ground, and the air. Shelters create opportunities for people to physically interact with nature.

Design of a shelter also serves as signature, being part of design language, ornament the intervention, in order to realize the idea of being recognized and build the mental connection. They are designed in a way that they agrees to the character of the principle, help strengthen it.

Thus every design of single location will firstly be able to build the possibility to interact with water, secondly always a shelter as embellishment, interact with both the water and existing landscape, thirdly always delicate details for the construction.

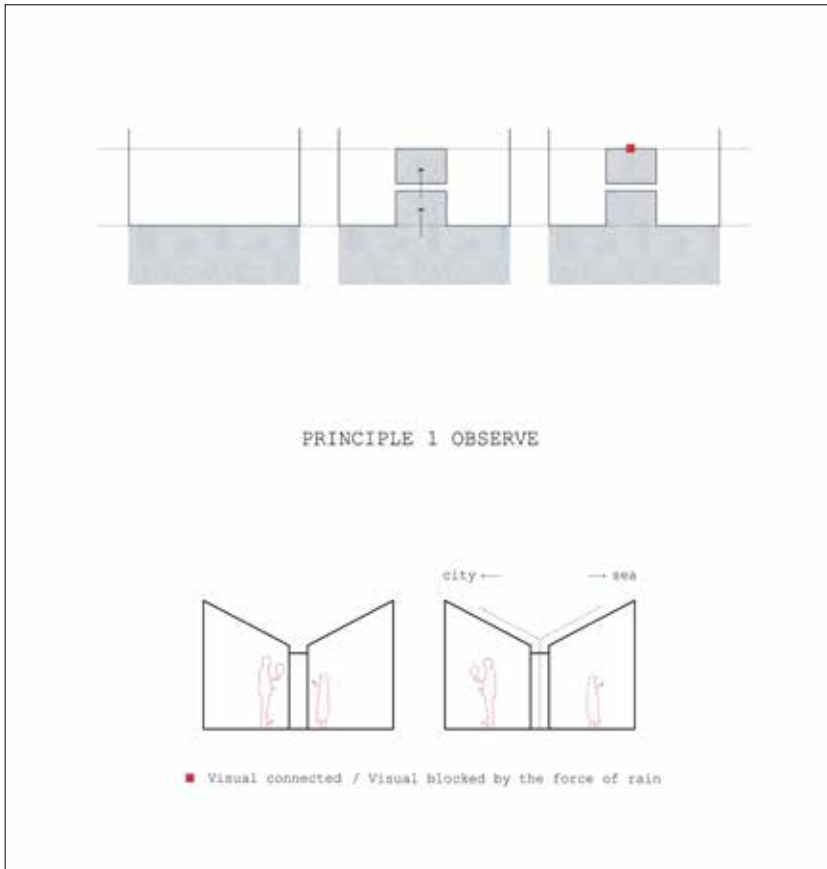
When they are being contextualized onto different location, further detail will be designed based on the context.



A sheltered condition framing the experience

<<Principle 1 Observe

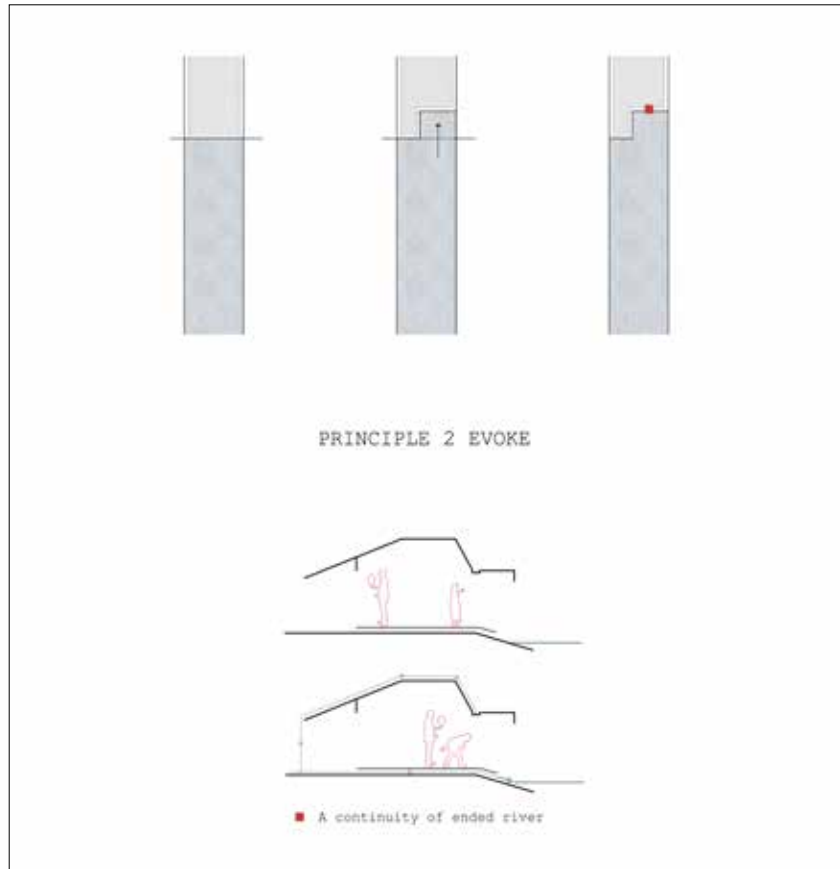
- _Extend an extra water into the land, touching the old shoreline.
- _Shelter is for viewing city and sea by different sides, especially when it rains and the rain creates a shield in between the shelter.
- _Different size of water can apply this principle. Following design proposes three example of how different size of water apply the same principle.



<<Principle 2 Evoke

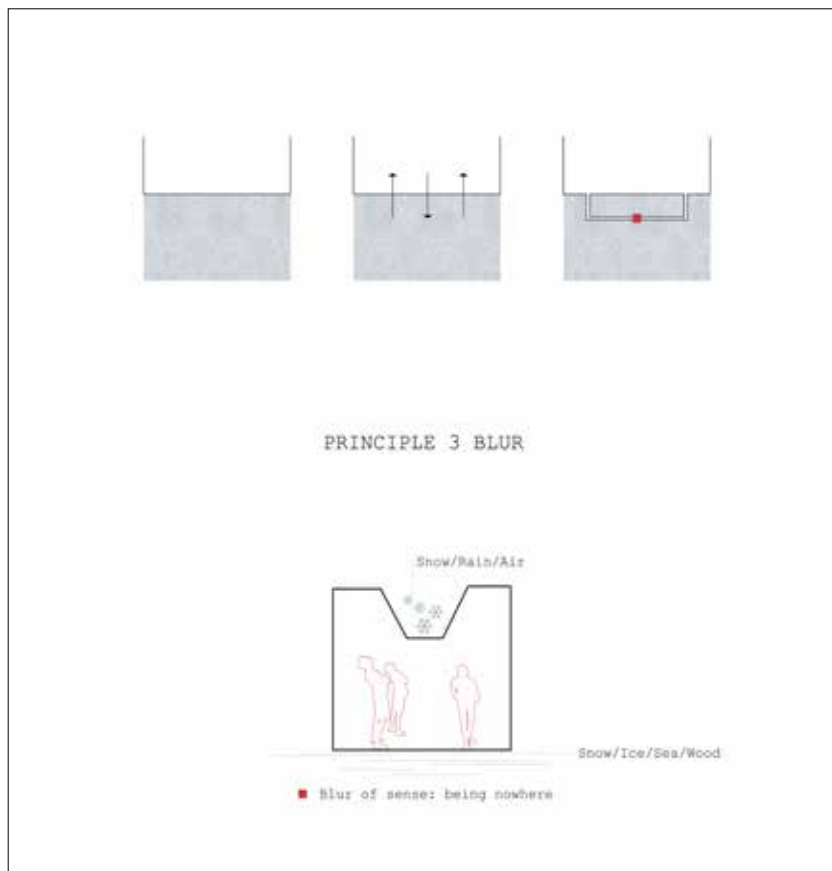
_An extra piece of water extend beyond where the river goes into the pipe. The newly created space will trigger the question of why there is an extra water and why it stop? Then people walk back where they notice the pipe and deduce how the river used to flow.

_Shelter for marking the end, flow of water cycles continuously under the shelter, which is easy to observe especially when it rains.



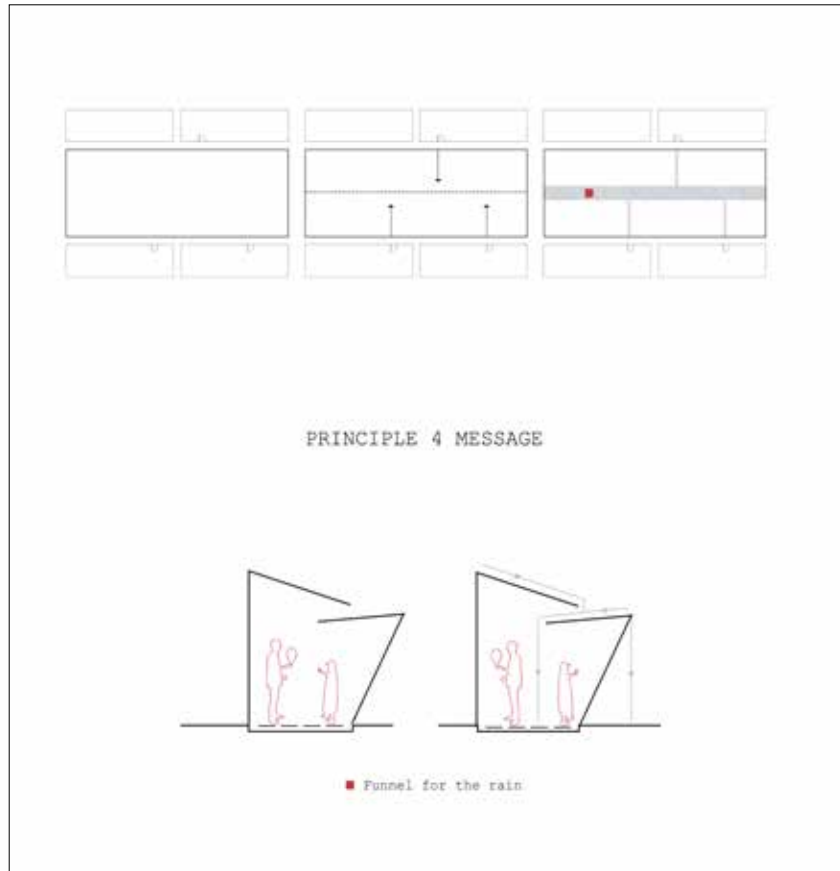
<<Principle 3 Blur

_Blur the land and sea, blur the cognition of whereabouts
_Shelter designed especially for when it snows, showing the difference with rain and ice. Blocking the top also add the mystery of the whereabouts.



<<Principle 4 Message

_Convey the message when water change it form with different weather.
_Shape of shelter is a funnel, collecting water in a visible way.

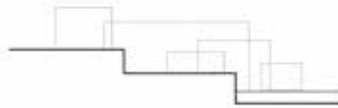


<<Principle 5 Connect

- _Connect land to the sea.
- _Shelter can be applied into various forms.
- _One side of the dynamic water, the other is the land.



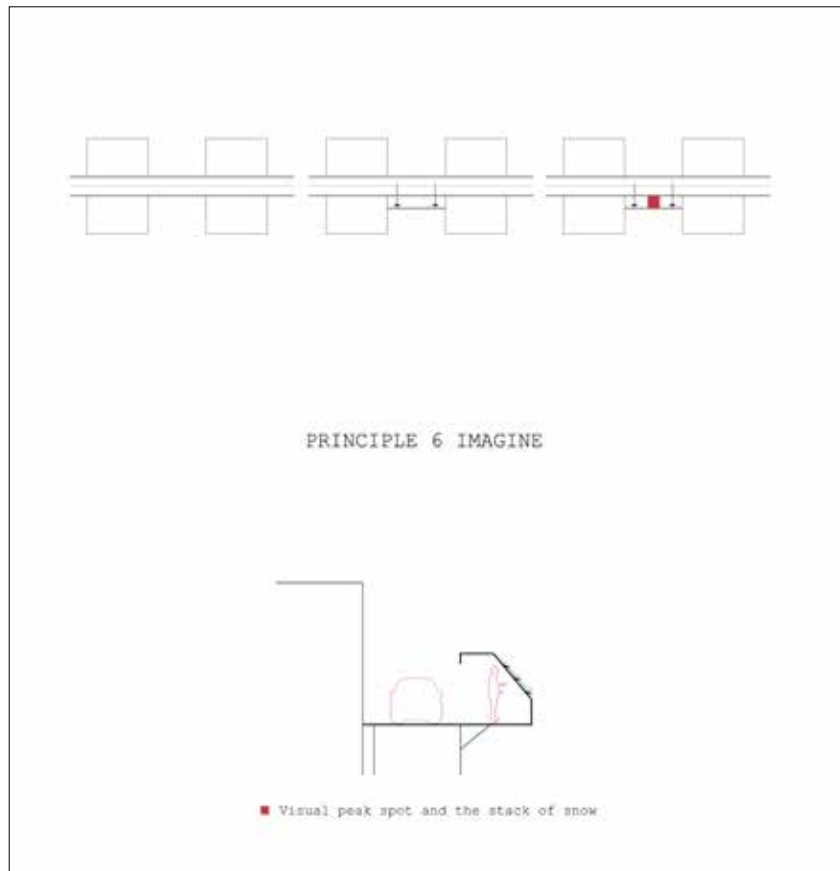
PRINCIPLE 5 CONNECT



■ Building connection by adding layers

<<Principle 6 Imagine

- _Imitating the imagine of ice far away.
- _Create opportunity for snow to stack on the glass, creating a vague view.

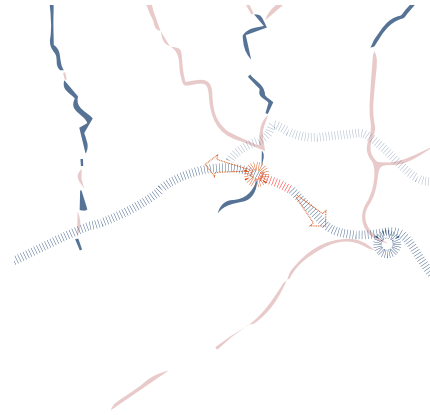
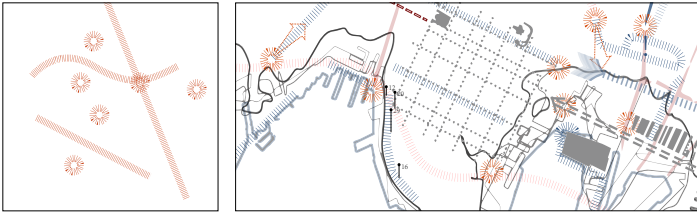


<<Where? Criteria for choosing locations

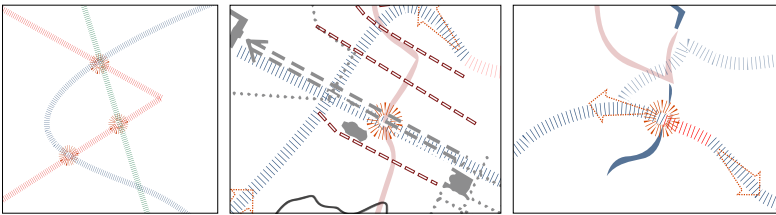
Criteria for how to choose locations where design principles are contextualized is brought out based on cross-reference analysis.

There are three criteria that comes out of the inventive analysis.

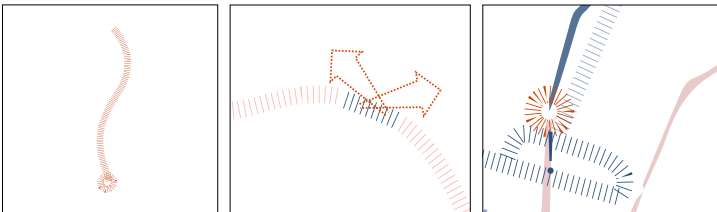
I. An area repeatedly appearing during the process. Densely gathered area of interest situations. Concentration of complex encounters.



II. Overlapping/Crossing spots, Rich in context and meanings.

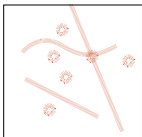


III. Left over locations from single layer but representative spots on that layer. Look back and double check. Has the potential to be used as criteria I.

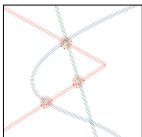




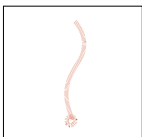
img of the two conclusions from the layered analysis is to pick out the crucial locations.



Criteria i. A composition in the scale of a core area



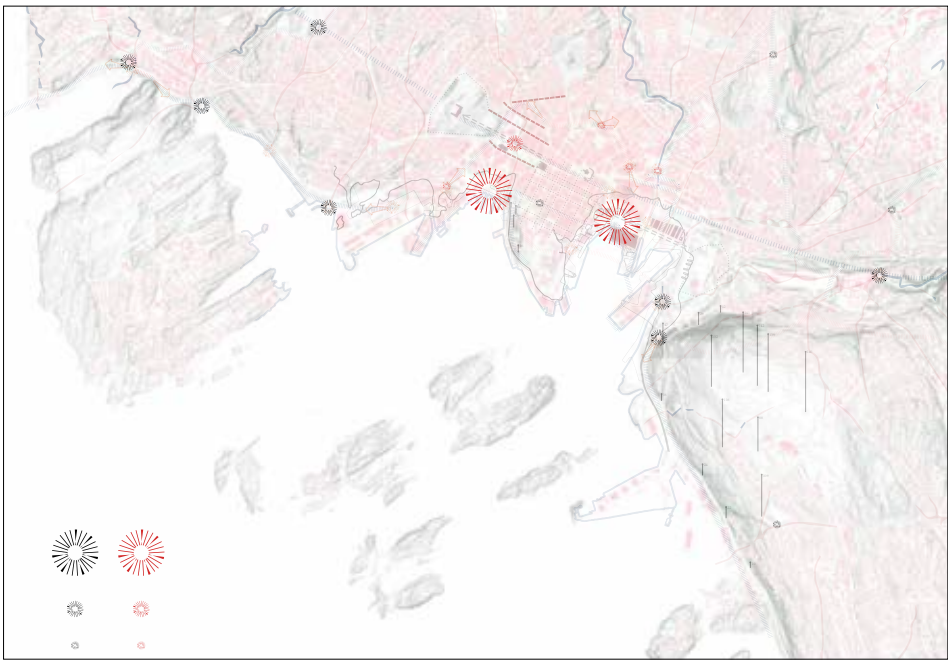
Criteria ii. Overlapping/Crossing spots



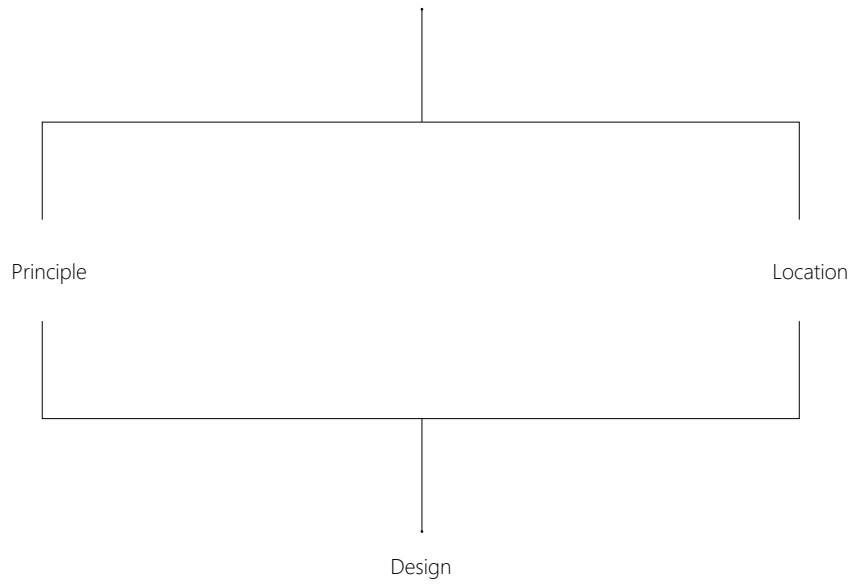
Criteria iii. Leftover but representative spots on each layer



img Red dots are the locations which are designed as reference to the rest.



Analysis



III. A design for Oslo



This part explains how to reach the research objective and answer to the research questions by creating minimal interventions with impact through scales.

Contextualized principles

- Experience the natural given in a sheltered condition
- Arouse understanding
- Buried surprised
- Layer representation

More of them are carefully arranged onto locations and designed with delicate interventions, as a result they will create bigger impact through scales, which meets the research objective.

Physically connected

- Composition of principles

Mentally connected

- A procession of water spaces

A layer being added to the city

- Movement of water discovery
- Surprises when links are made

Correspond with the Norwegian Scenic Route, an experience in a city environment.

Life in a city bred by the sea



The land of ice and snow
Where the midnight sun blows
Hundred thousand lakes glow
In the land of ice and snow

Northern lights guide our way
Come whatever may
Forest god protects our day
In the land of ice and snow

LAND OF ICE AND SNOW

/by STRATOVARIUS

Where Koskenkorva flows
Where the freezing wind blows
Summer nights are white and warm
In the land of ice and snow

Here I was born and here I've lived
And one day here I will die
Under northern starry sky
In the land of ice and snow...



The Norwegian Scenic Route





<<Interventions on locations

At every location there is a different story and concept behind it. The differences in detailing of each location is a way showing their potentials for further development.

There are two components in each intervention. An intervention creates water intimacy and shelter as a mark, coping with extreme weather condition.

With the demanding of the site, they serve certain functions later, determined by its location. In this way the initial intervention gets developed. The invisible connection with the site, the view, the water and the memory connects. All of a sudden before you notices, another one pops up and it become a place.

There are three aspects representing different levels of design process with potentials to grow.

- _Experiential value
- _Hidden discovery
- _Delicate details

Hidden discoveries

Man can only enjoy nature, when he understands what is hidden behind it or how it functions. Six theme of locations are presented in detail, of how 'hidden' discoveries can be introduced into the design.

A conscious experience with nature. A understandable atmosphere.

A theme. A highlighted phenomena.

By providing ways of engaging with nature.

It's a media creating opportunities for intimacy with water.

<Tidal Museum>

Landscape changes all the time-as weather and light-yet they are totally timeless

<Flower Shop>

Bloom and cherish the sun

<Sound of Winter>

Music and the dripping water

<Fish Shop>

Watch and Bon Appétit!

<Skating Destination>

Thanks to the ice, be where you couldn't be last week

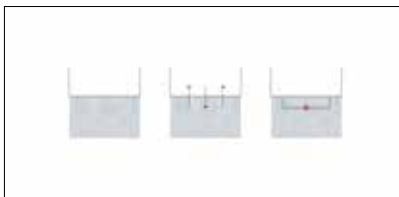
img 'Wind from the sea', Andrew Wyeth, 1947. It depict an open attic window as the wind blows the thin and tattered curtains into the room. This subtle and provocative image inspired the idea of creating hidden discoveries into each location. Relate the design with buried knowledge of water dynamic, soil, sun, snow, rain and so on, for people to explored while experience the space.

tidal museum

Interventions on location_I. Tidal Museum

Experiential

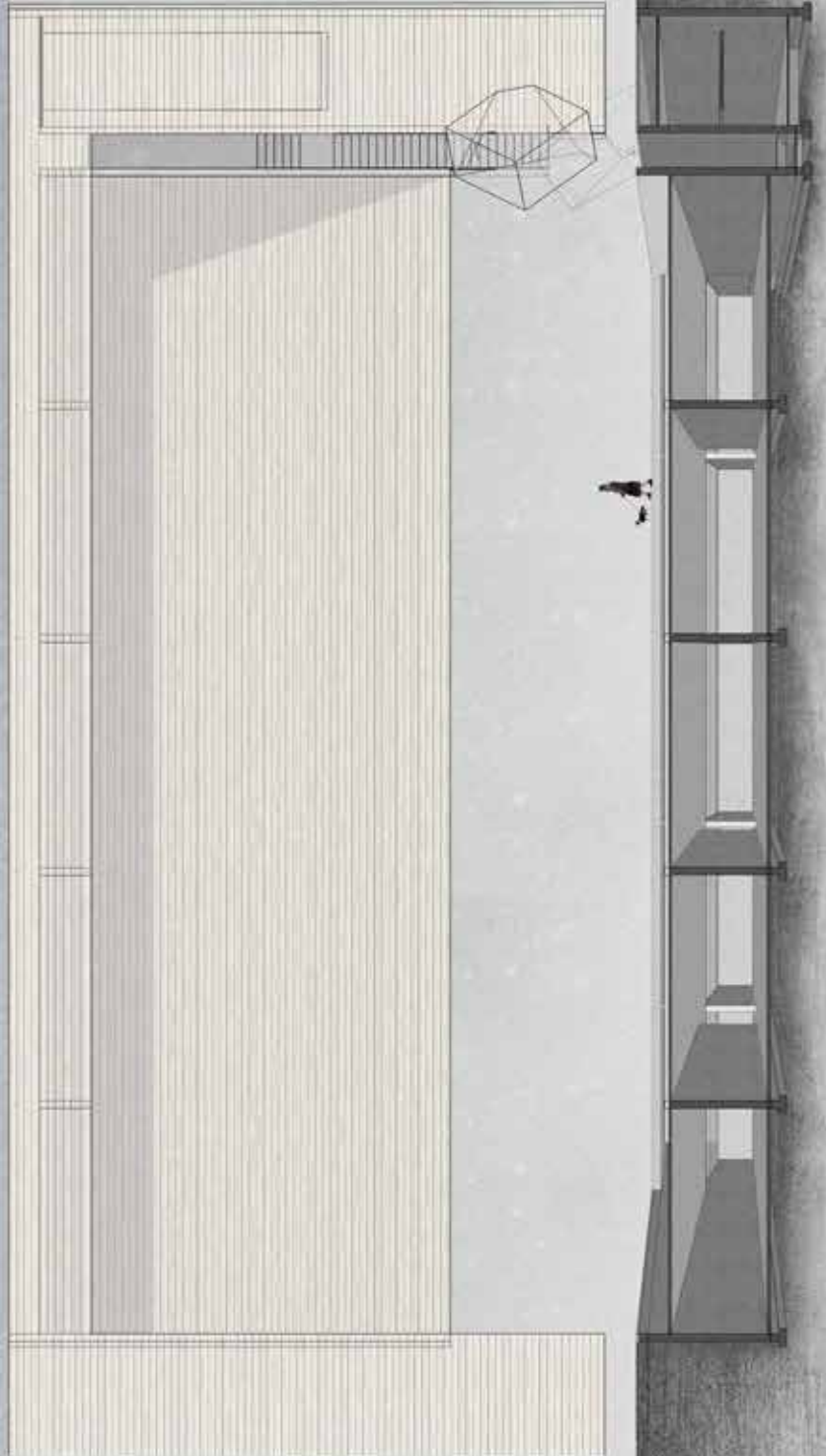
- _ Experience the tide change.
- _ Create interaction with the platform of Opera House opposite to it.
- _ Delicate change of each room makes people more aware of the change in the appearance of water and light.
- _ Different design of the stairs influence the activities in each room.



img Example of intervention on locations_Tidal Museum

- I. Location
- II. Context
- III. Situation
- IV. Design principles chosen based on situation

Qualities of context:
 -Sit in core area 1,
 -Sit on one of the modern city axis,
 -Sit at the entrance of where water meets land,
 -Where it can interact with the opera house,
 -Where water dynamic (tide) appears noticeably
 It contains all the qualities that I want to capture and reveal.
 It matches my intention.



img Plan and section

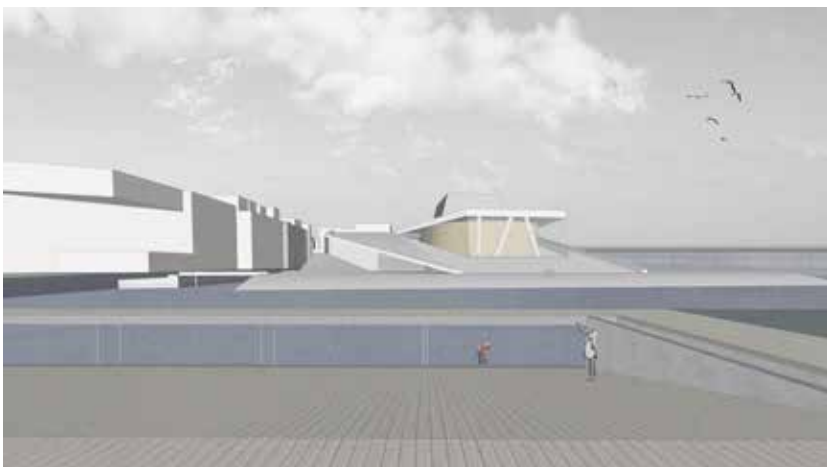
Interventions on location_I. Tidal Museum Experiential



img One of the interventions for "Gift from the sea" acts as Entrance to tidal museum&interaction with the Opera House



img Inside and outside. Interact with the Opera House and the tide dynamic.





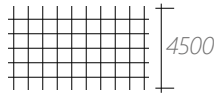
img Up and down. Experience the change of tide in an outdoor environment.

Interventions on location_I. Tidal Museum

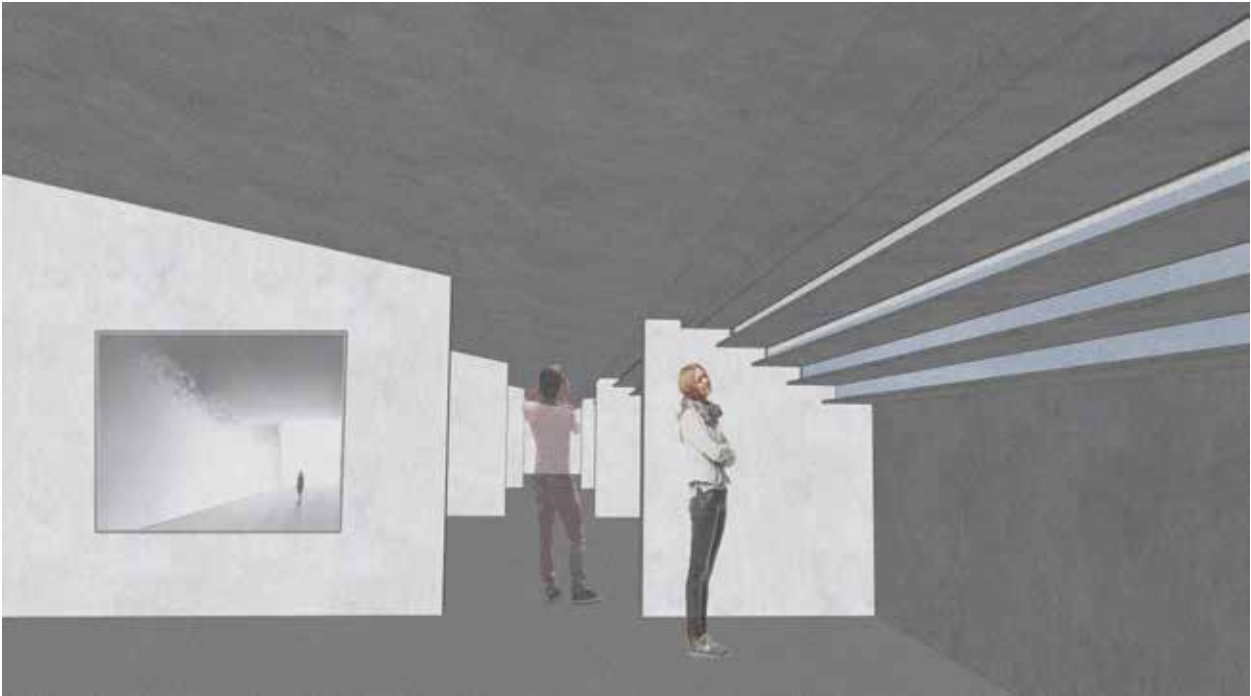
Discovery



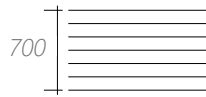
img Due to the depth of permafrost in Oslo, it is most efficient to convey water above ground as opposed to digging below permafrost each time there is a need for pipe. The means by which storm-water moved from building, to sidewalk, to street. The result is "cuts" in the sidewalk as seen in the image below.



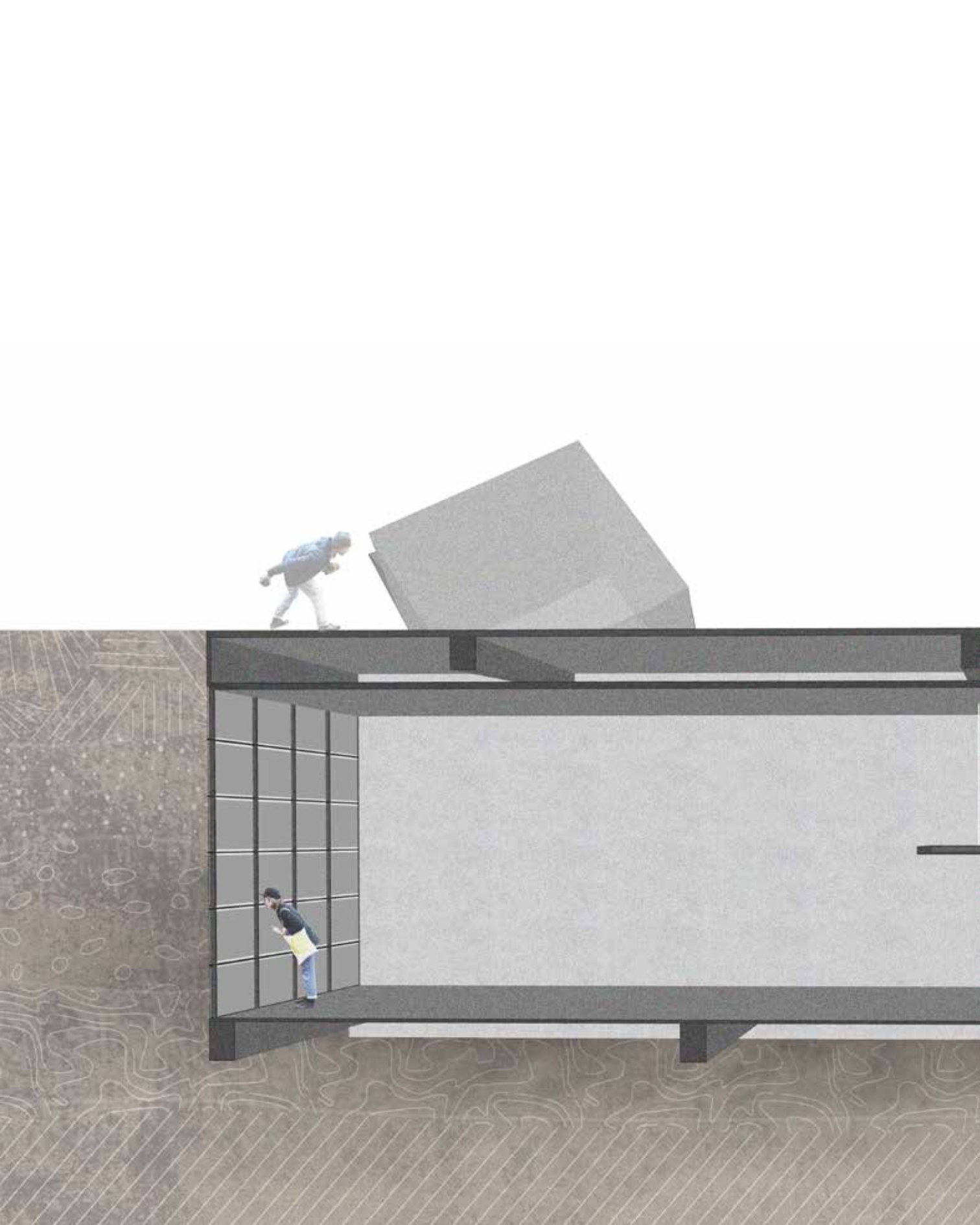
**Permafrost: A discovery*



img Dynamic tide in the front, and still soil in the back. The contrast highlights such timeless of this landscape.

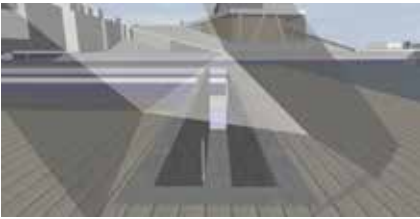


**70cm tidal difference in Oslo*



Landscape changes all the time - as weather and light - yet they are totally timeless.





I.



II.



III.

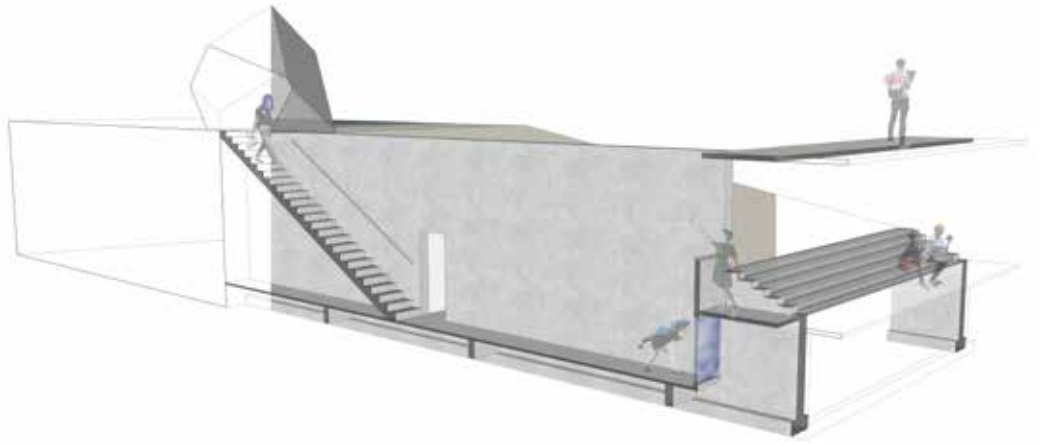


IV.

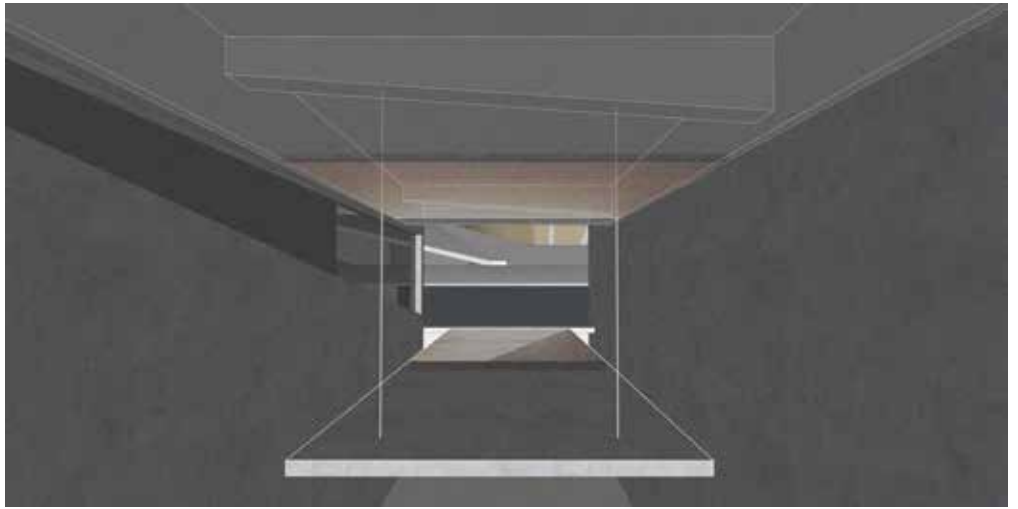
Details:
Being minimal in creating a constructive detail is also important. A hidden node avoids distraction from experiencing the landscape and exploring discoveries. Details are supposed to tell the same story with any other scale of this project.
Innovative constructions are always welcomed with the goal of building a closer relationship between water and city life. The structure is always straightforward in building the relationship and is only there for the construction reason, instead of focusing on testing new structures.
Details of construction are as concealed as possible in order to strengthen the intention of certain intervention.



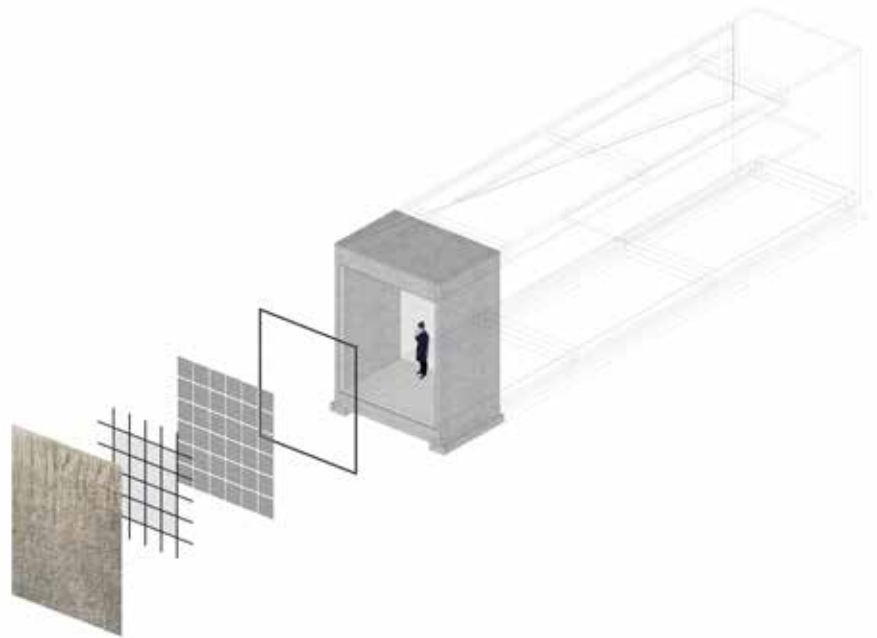
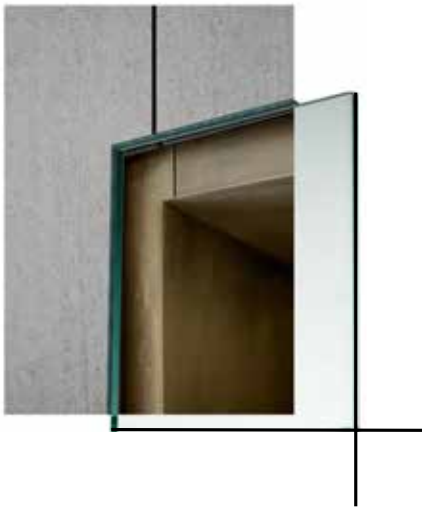
I. STAIR



I. STAIR



II. HANGING FLOOR



III. GLASS WALL



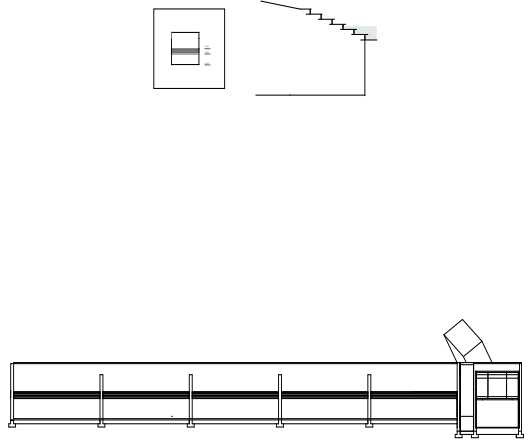
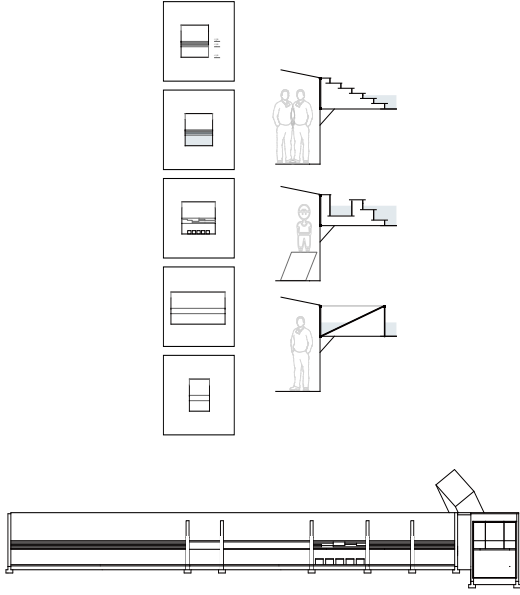
IV. TIDAL GLASS

Interventions on location_I. Tidal Museum

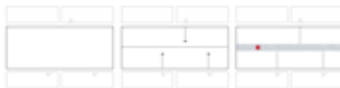
A reflection

How Minimal Intervention can work as a reflection tool, this is how it contributes revising my design.

It is supposed to be people who change instead of the design to suits their needs and wishes. Users define the use of space.



Interventions on location_II. Flower Shed



img Flower Shed

I. Location

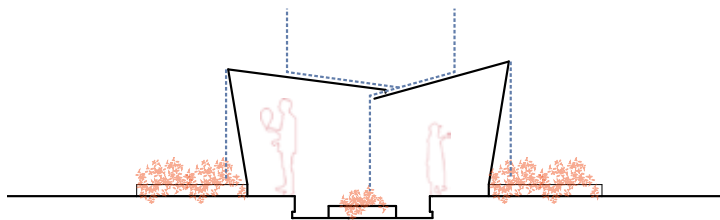
II. Context

III. Situation

IV. Design principles chosen based on situation

Qualities of context:

- Open area for public spaces is suitable for flowers. Inspired by the flower shop, in front of which there always planted areas of flowers serve as exhibit function.
- Sit on the main city axis



Interventions on location_III. Sound of Winter



img Sound of winter

I. Location

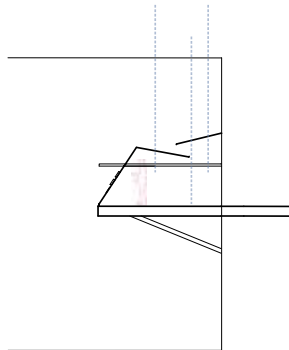
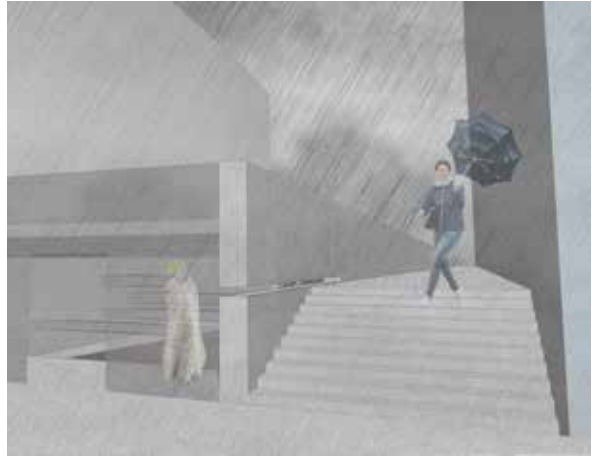
II. Context

III. Situation

IV. Design principles chosen based on situation

Qualities of context:

- Height difference
- Current platform on the bridge
- Snow stacking is close enough to observe
- Sound of a runoff water with height



Interventions on location_IV. Fish Pond



img Fish Pond

I. Location

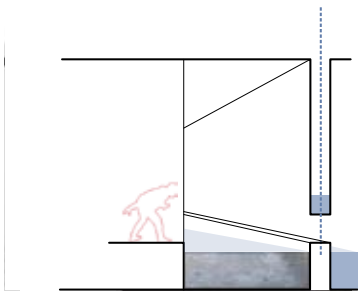
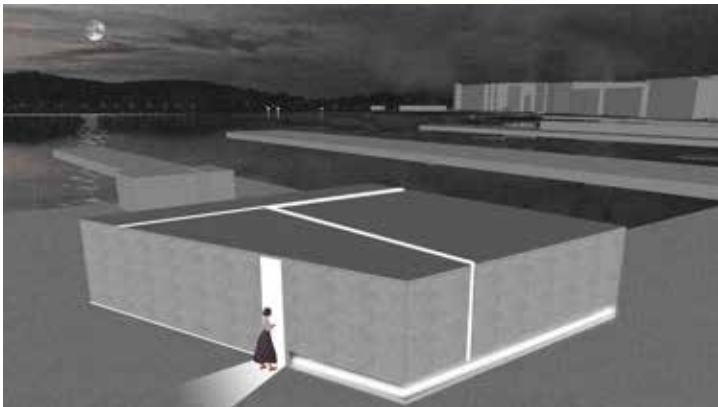
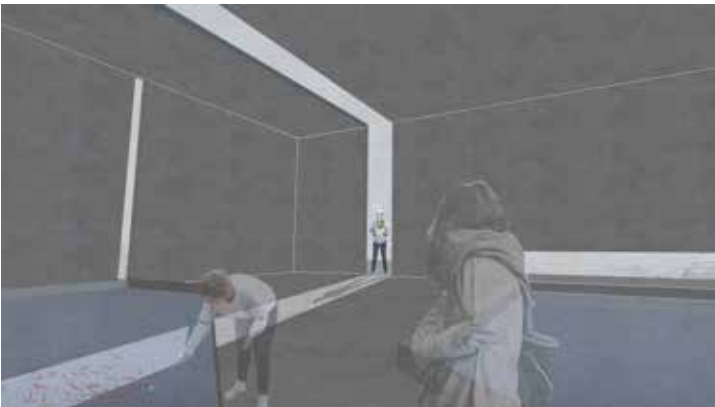
II. Context

III. Situation

IV. Design principles chosen based on situation

Qualities of context:

- Being closed to the sea
- Sit at the entrance of vessels, a good location as a light house



Interventions on location_V. Skating Destination



img Skating Destination

I. Location

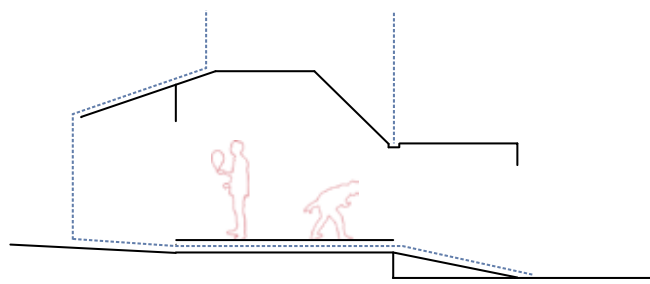
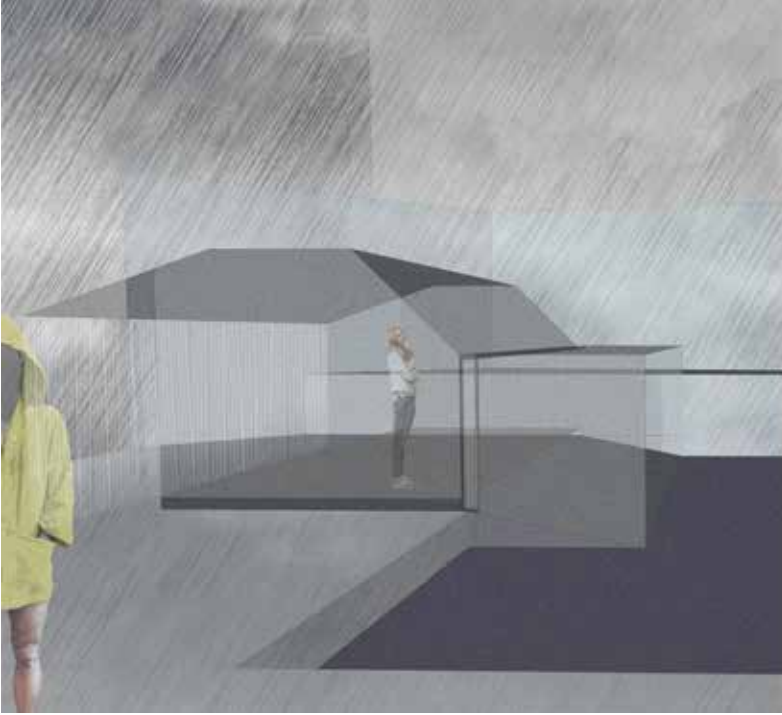
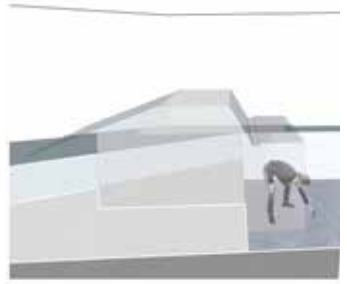
II. Context

III. Situation

IV. Design principles chosen based on situation

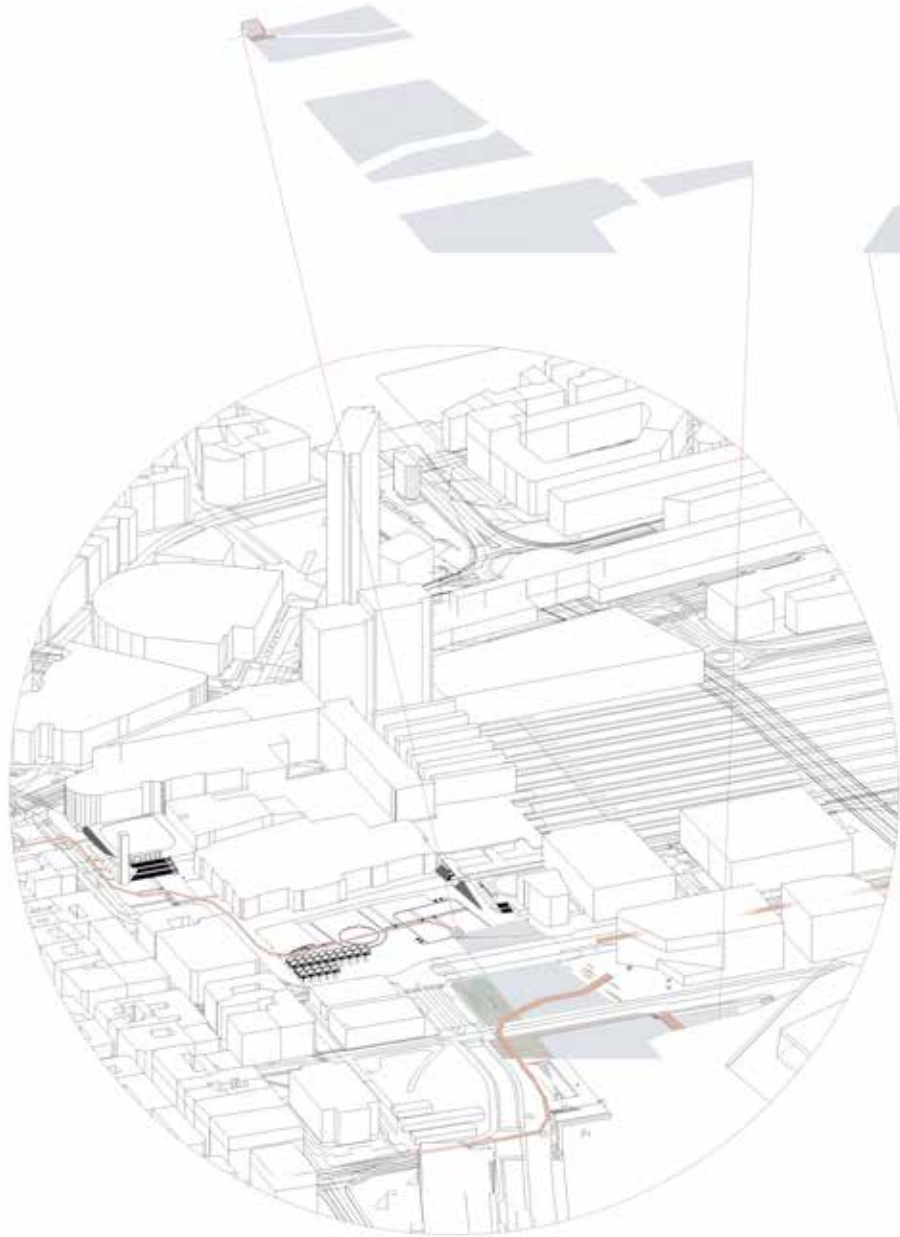
Qualities of context:

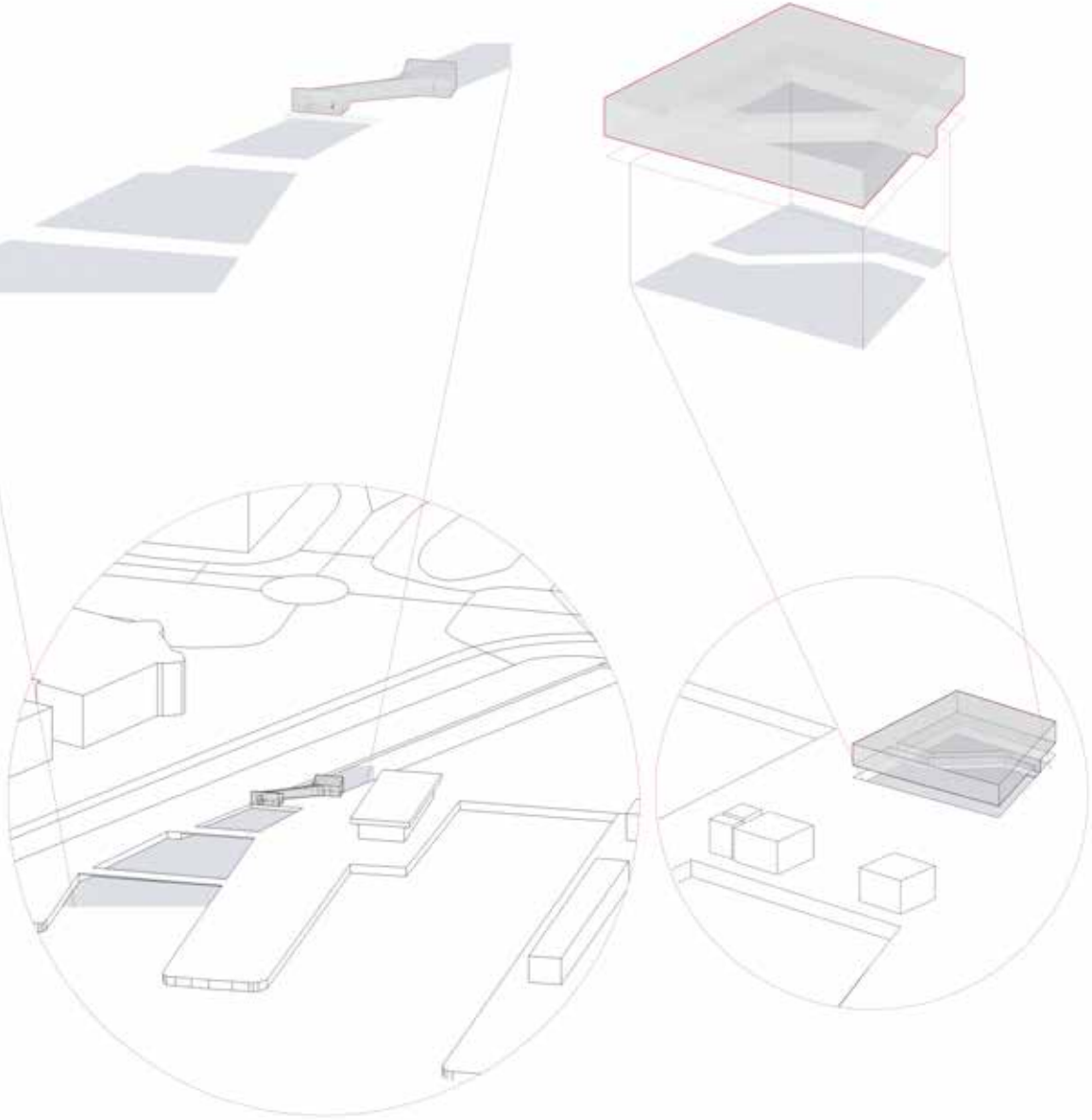
- Change of form obviously in winter
- A green open space close by



Interventions on location_Unthemed locations

- _Different size of water
- _Adapting same principles





Interventions through scales

In order to answer to the research objective, interventions for the first scale is to keep the essence of Minimal Intervention. Each of them contains experiential value, hidden discovery and delicate details. These are for using only minor move to create large impact and reveal understandings.

By picking the locations and design with recognizable language, they are already ready for the exploration for a broader meaning.

The broader meaning pursuing by Minimal Intervention is to create impact further through scales, in a more complex setting. This is done by building connections among locations, in the following four scales, each with different purpose.

The second scale focuses on physically connection, where dense interventions locate in two core areas. Connection is built by letting them grow to be part of the main city axis, and by creating the corridor of sight line.

The third scale focuses on mentally connection by taking advantages of the united design language, and by creating the corridor of sight line in a larger context.

The fourth scale focuses on transforming the interventions into a sub-consciously identity belongs to the city.

The fifth scale corresponds to the Norway Scenic Route. By building this comparison, a design meets scenery and a design meets urban life is related. One is successful in arranging the architectural pearls along the route, while the other aims at creating a procession of water spaces, buried in the city.

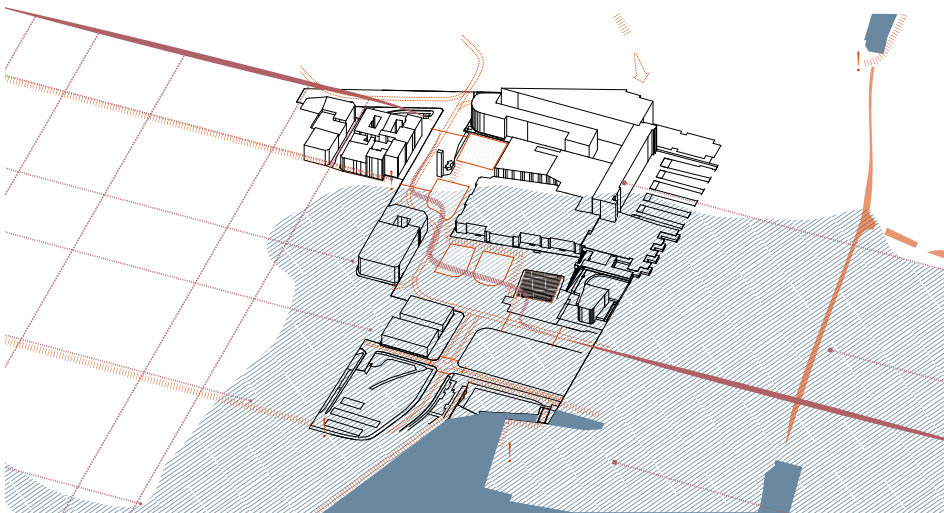
A framework of how this project can be followed up to grow is proposed in the end of methodology part. By adapting this framework, design can be followed up by other designers as well. In which way the intentions of using minor move to influence all scales will make more difference.

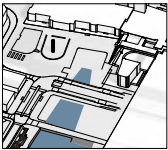


Interventions connected in scale II

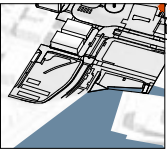
Core area I

Locations working together, make up for a part of the main axis of old city structure.

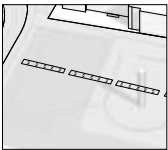




Old shore line provoke memory
Touches back to the layer of water



Visual connection
Touches back to the layer of movement



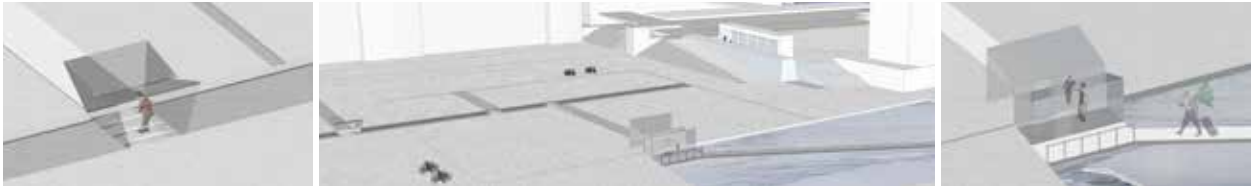
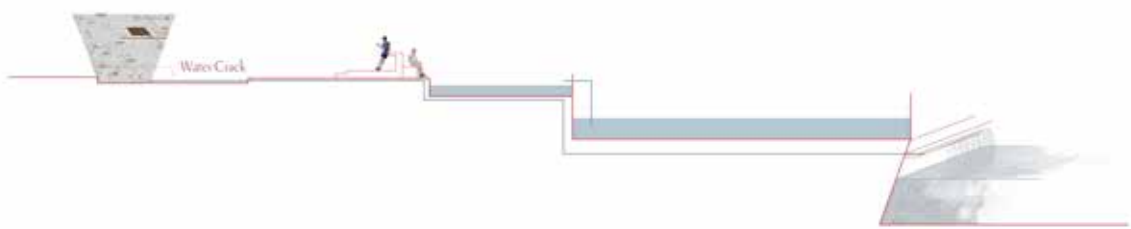
Arouse imagination
Touches back to the layer of urbanization



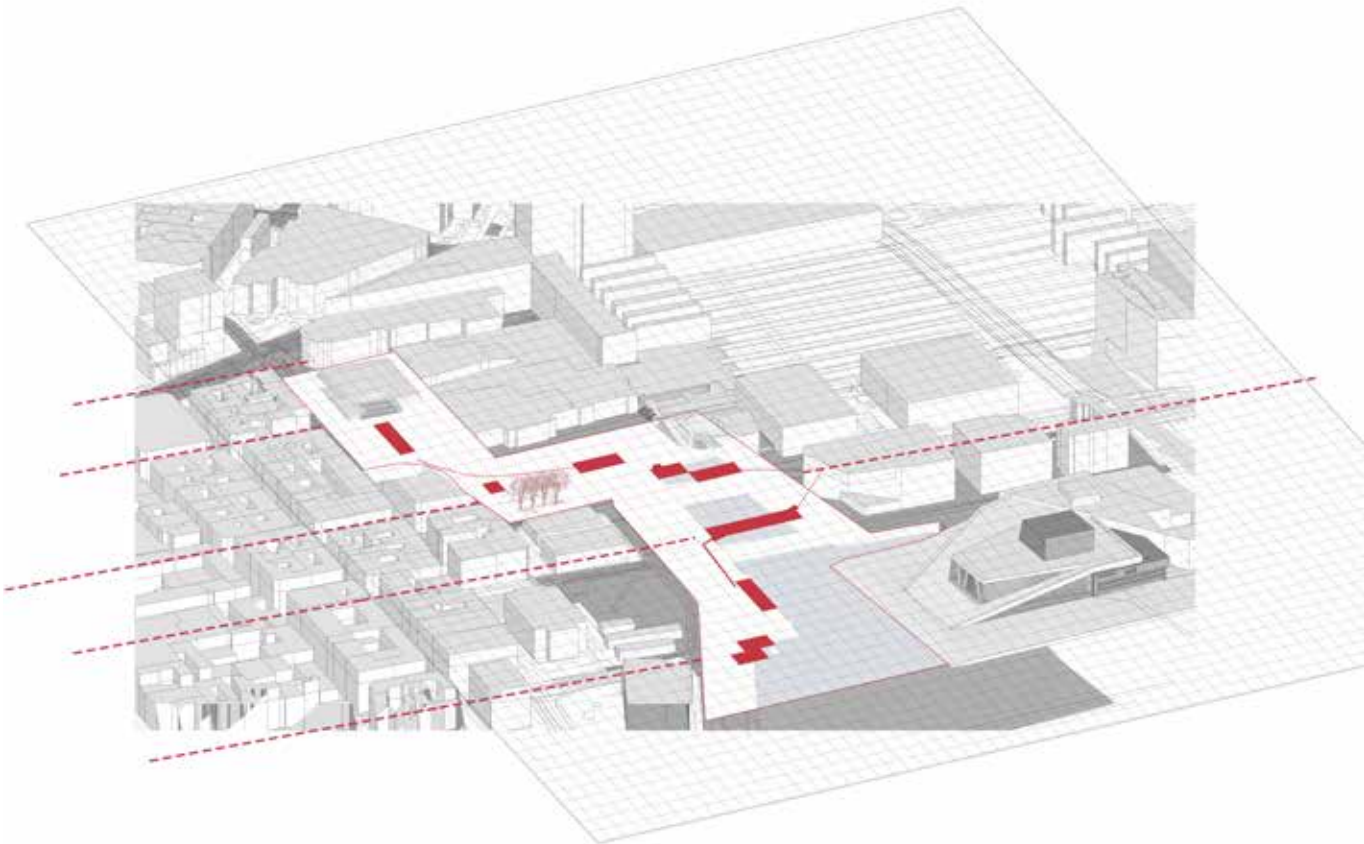
Interventions connected in scale II

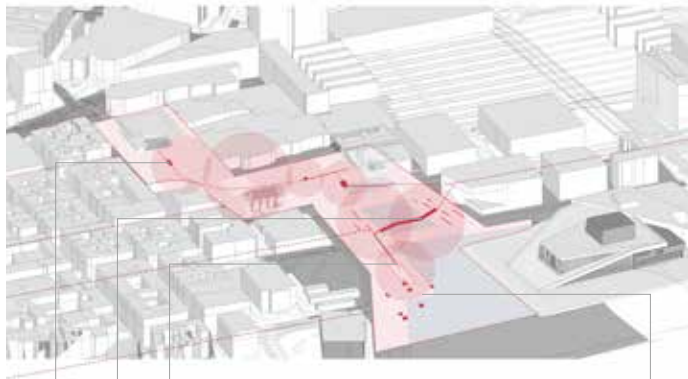
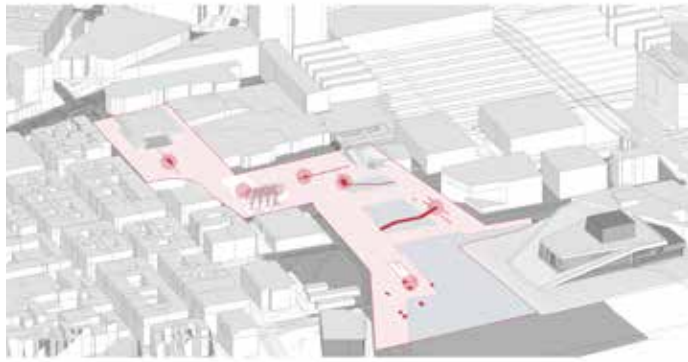
Core area I

by growing to be part of city axis which gets lost in the process of urbanization.



_(missing drawing: a comparison: before and after, axis lost and reappear)



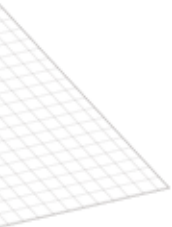


Tidal Museum (Principle 3+5)

Bridge (Principle 1)

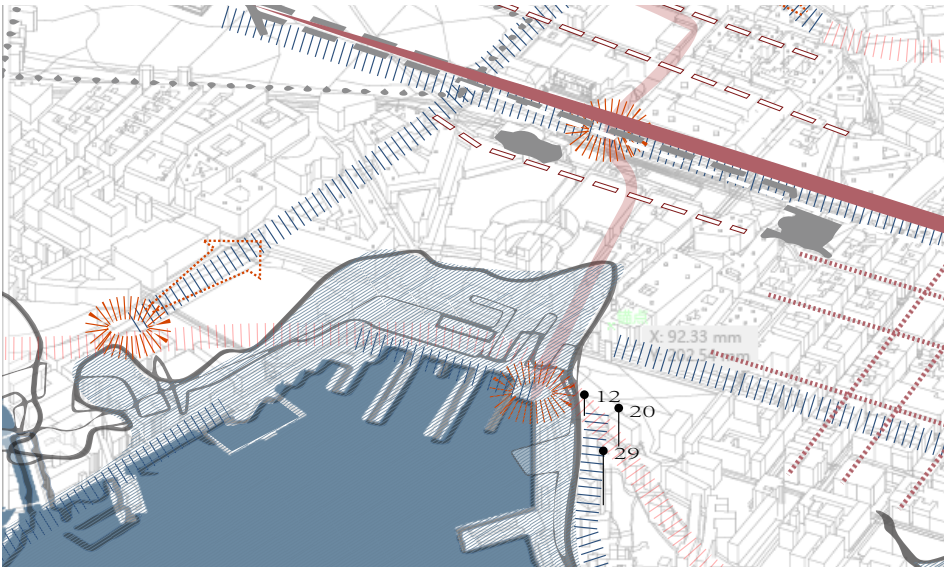
Gift From the Sea (Principle 5)

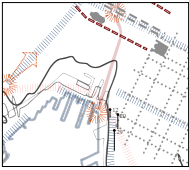
Flower Shed (Principle 4)



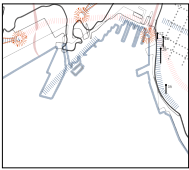
Interventions connected in scale II

Core area II

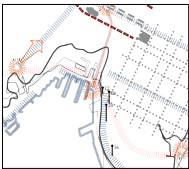




Old shore line provoke memory
Touches back to the layer of water



Visual connection
Touches back to the layer of movement



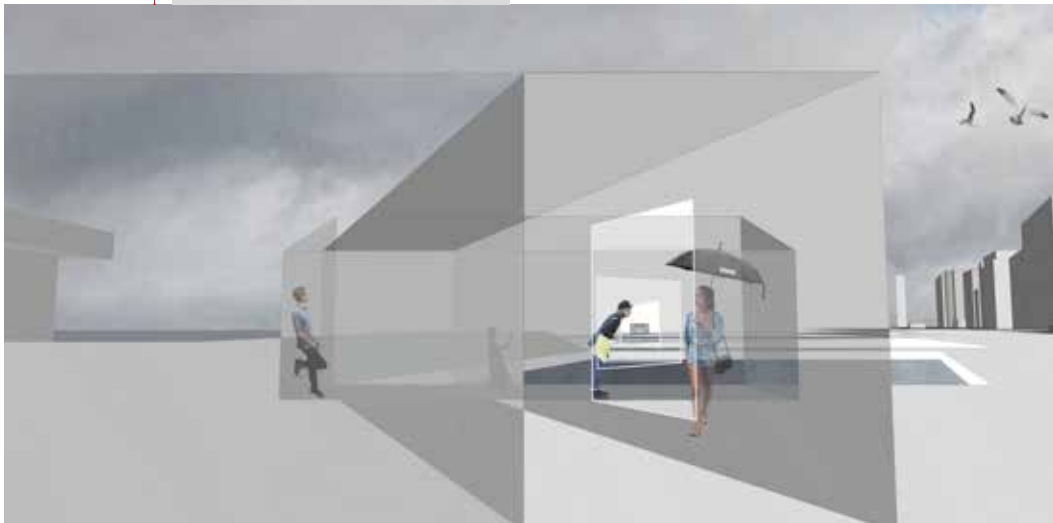
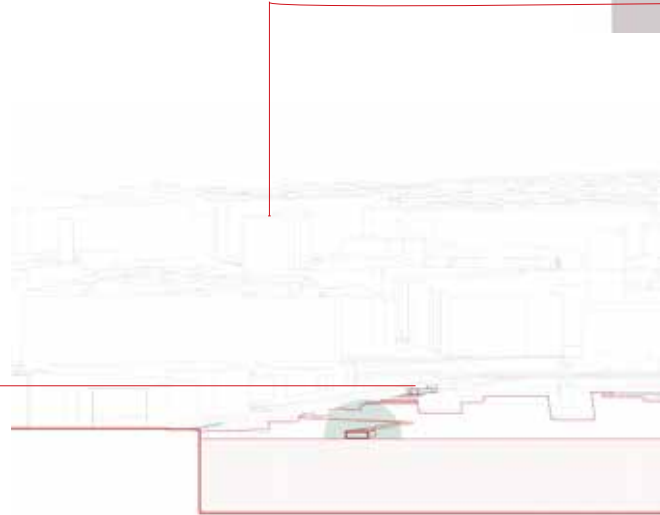
Add value to a location
Touches back to the layer of (car) movement

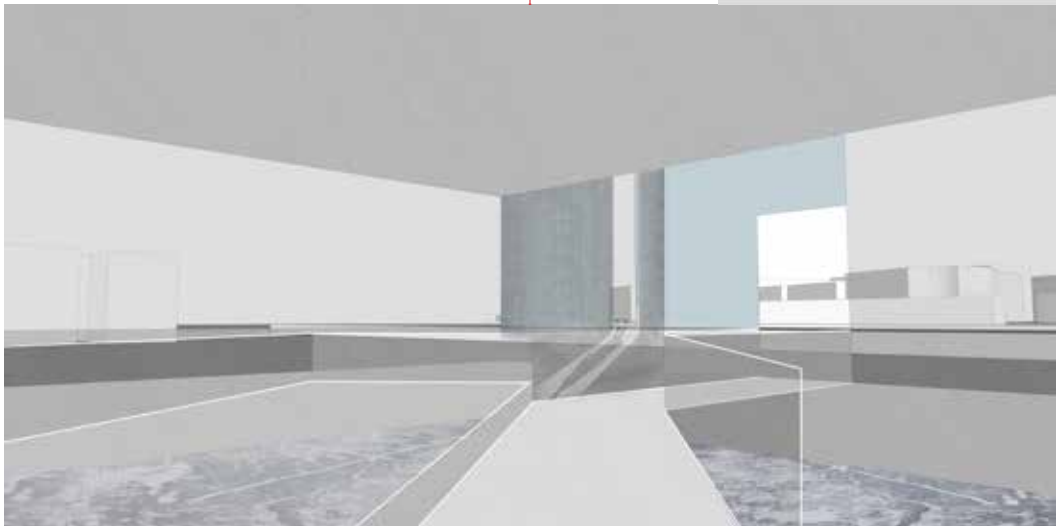
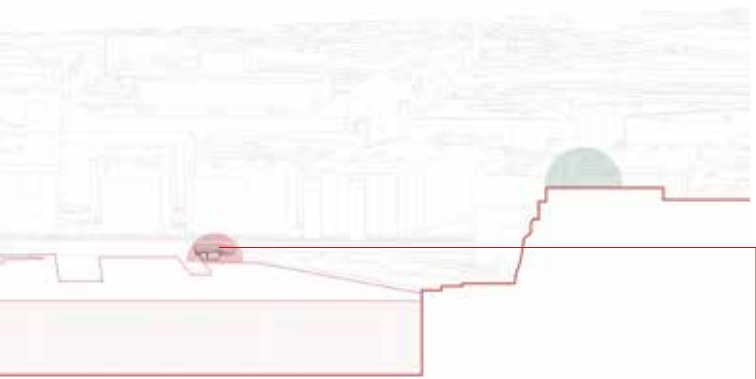


Interventions connected in scale II

Core area II
by corridor of sight line

- _ 'Where Am I' plays the core, connecting three interventions in core area II with the castle on the mountain by sights.
- _ Take advantages of site value
- _ Create interaction across the water, same with core area I

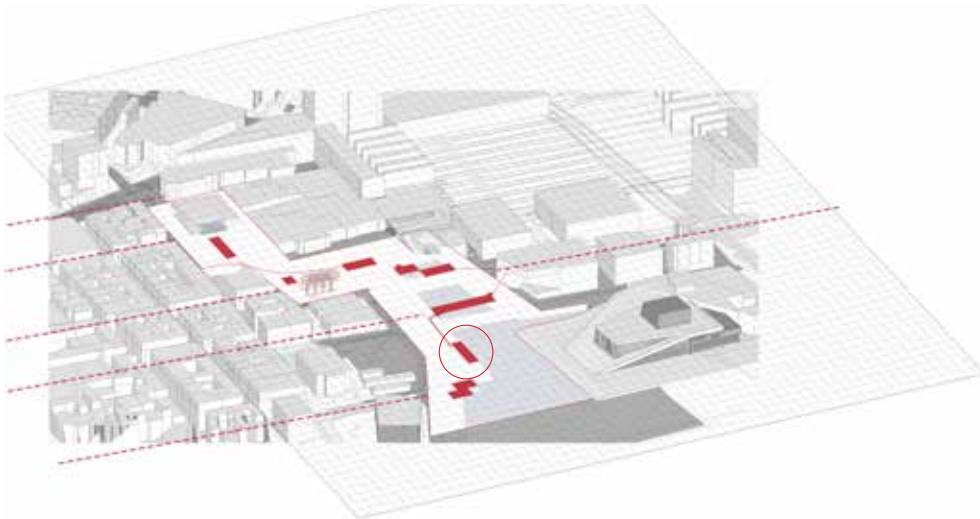
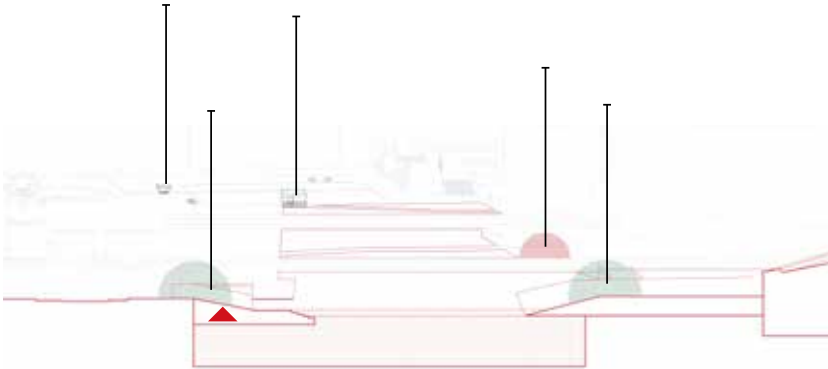
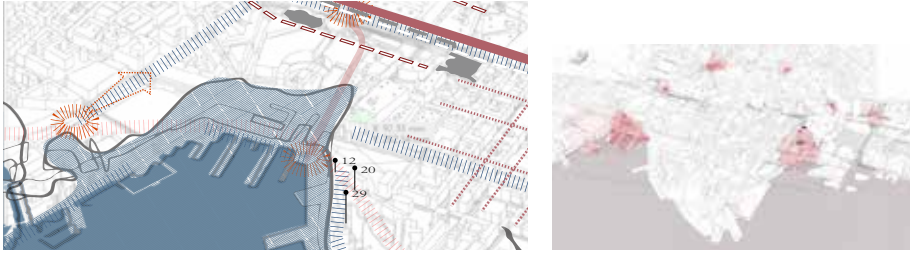


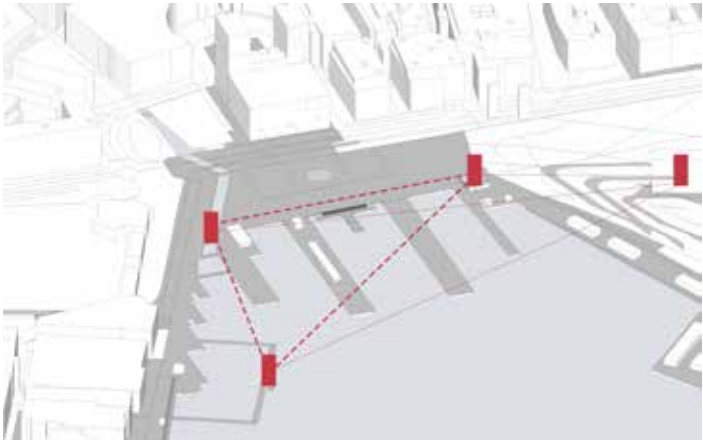
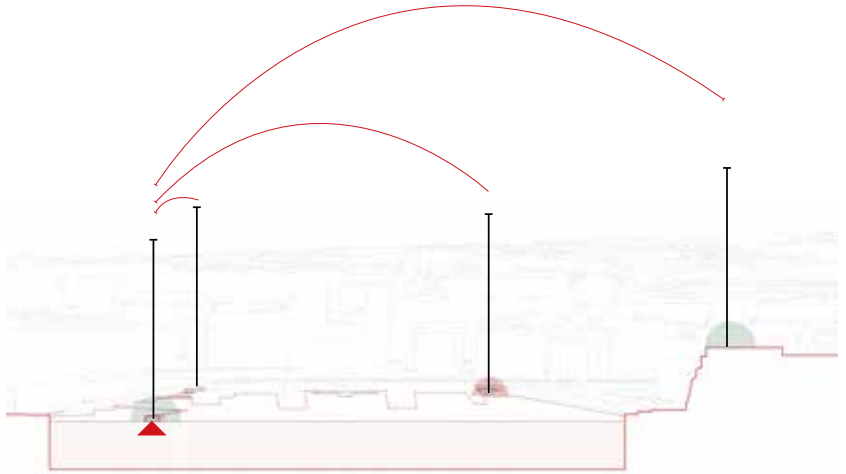
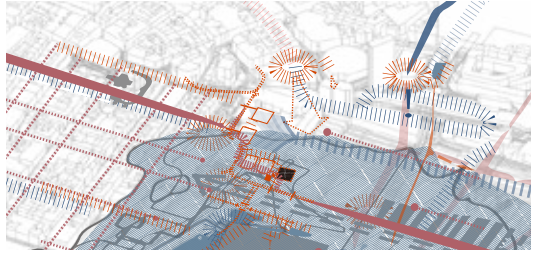


Interventions connected in scale II

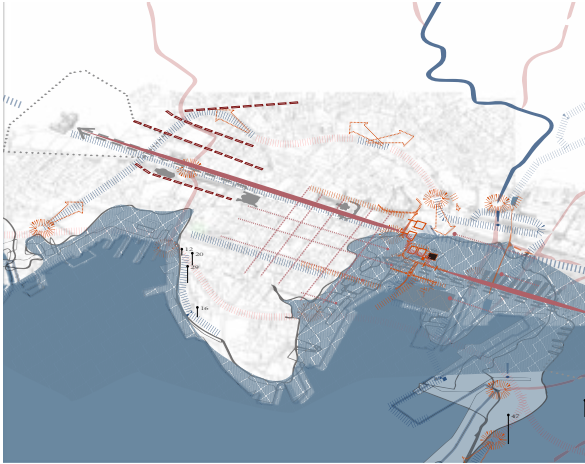
Based on conclusion from analysis:

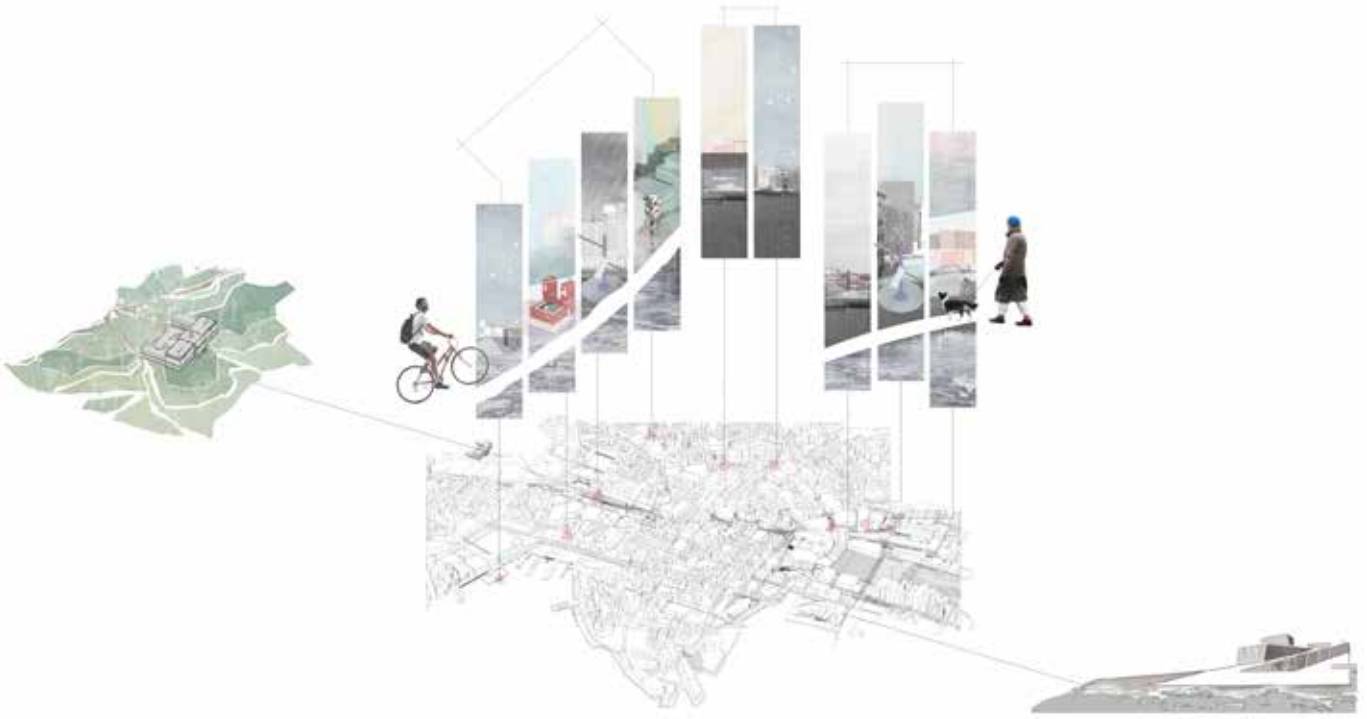
1. Chose 2 locations(areas) densely gathered with crucial points
2. Interventions touching back to analysis using principles
_create effects of both experience in each location and experience in composition in the 2nd scale





Interventions connected in scale III



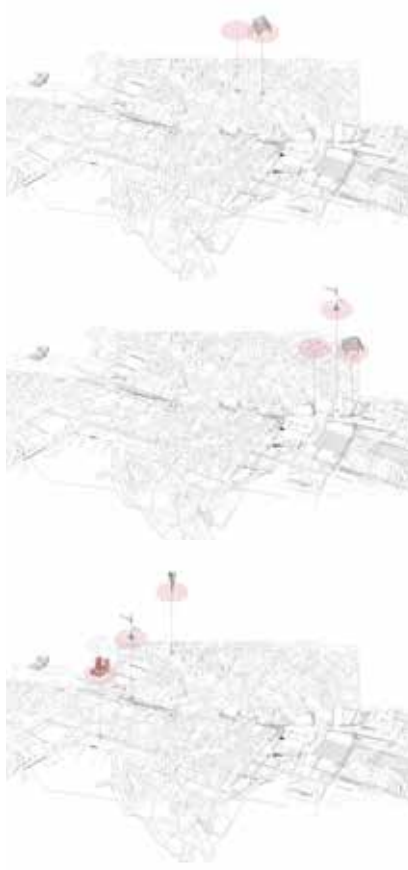


Interventions connected in scale III

by corridor of sight line
by recognition and memory of design composition and design language.
It is a procession of water spaces.

(Show same location with different weather/time)

_change with water, season, day and night.





(200m)



(300m)



(800m)

Interventions connected in scale IV

by subconsciously become a city identity and impression, an extra dimension to city layers.

It is a layer of water spaces.

When they are being noticed, recognized and associated, they are already bigger than the design. People can make connection spontaneously, based on their experience, tell their own stories.

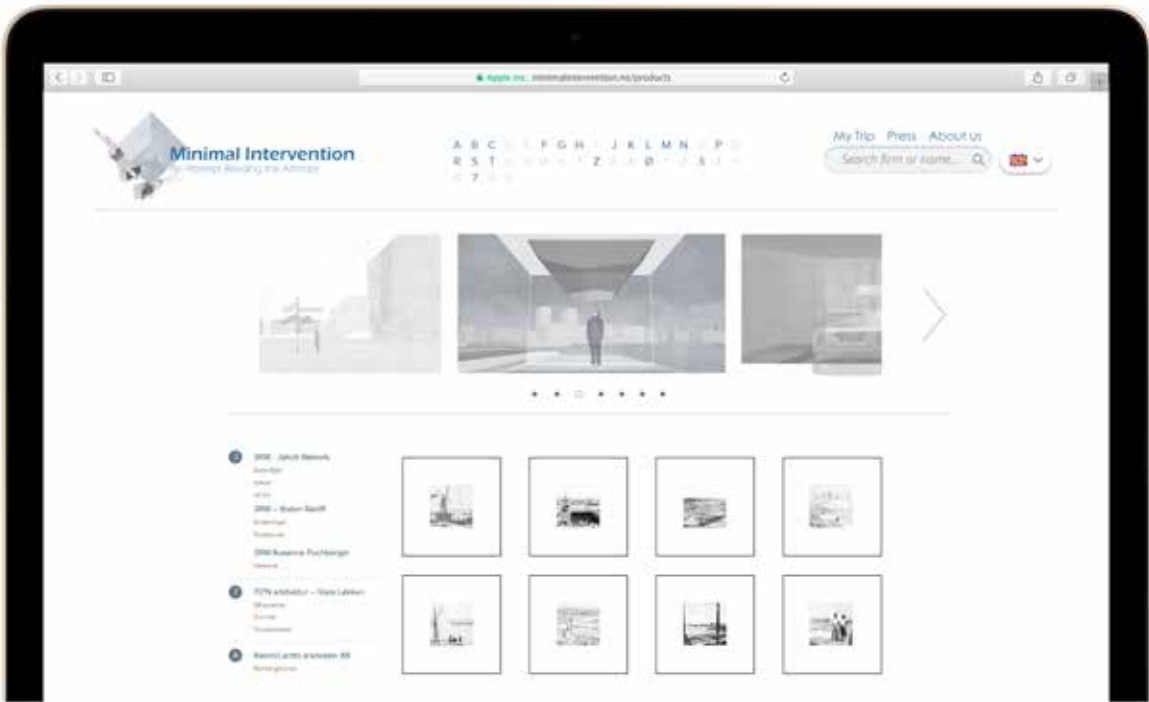


img 'Little Gardens', a miniature installation that fits on the top of a single table. It was designed in 2007 as a part of an exhibition during Tokyo Design Week when five Japanese architects, including Junya Ishigami, were invited to create a unique piece of art around the theme of a "box". According to Ishigami, each miniature element works both as a little flower vase and as a space container – a tiny "exhibition room" – for pressed flowers. Thoroughly catalogued and labeled, the innumerable containers are displayed as an entity on a round table where they form spatial clusters and ultimately – a whole landscape.



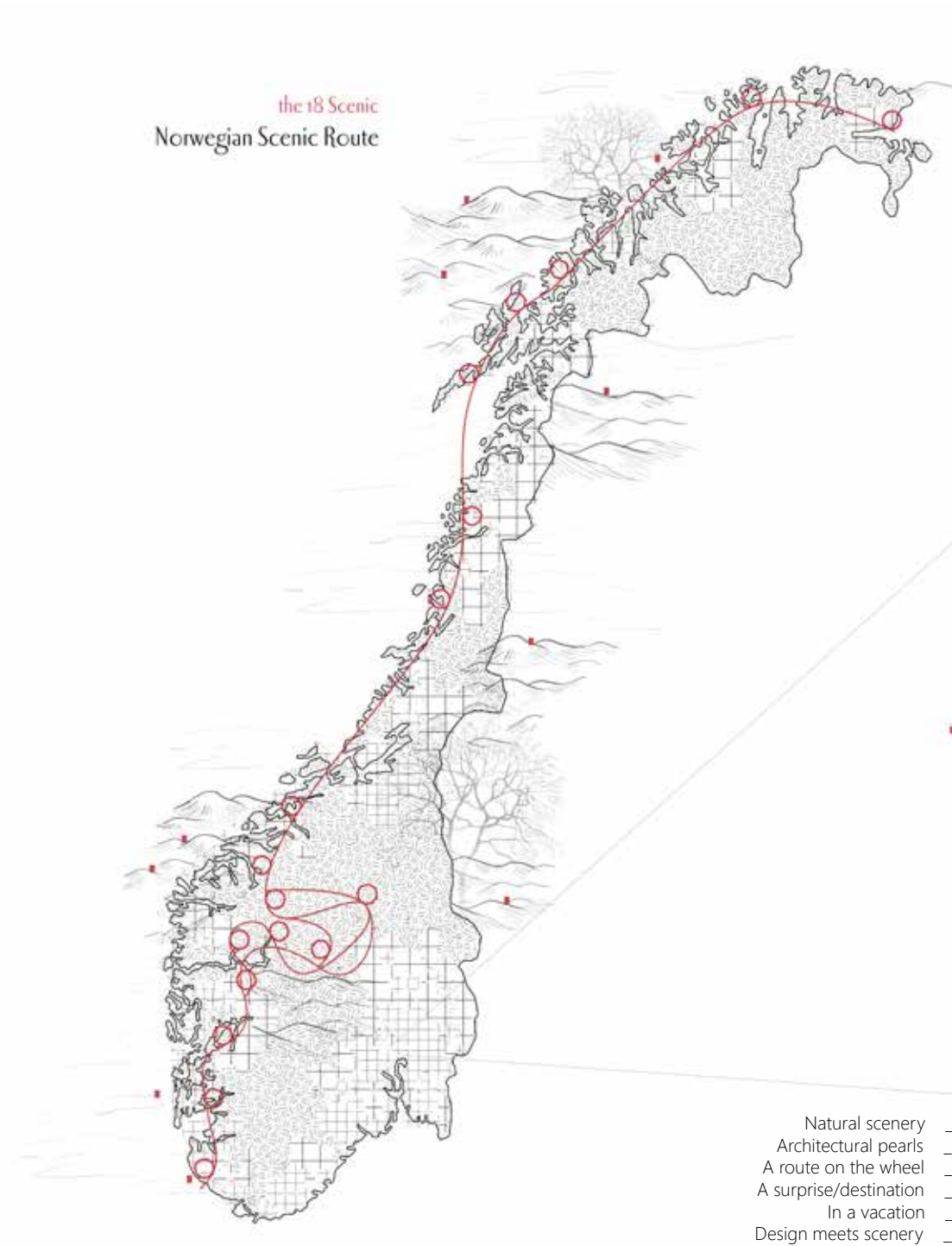
Interventions connected in scale IV

Follow the framework others can create their own design.

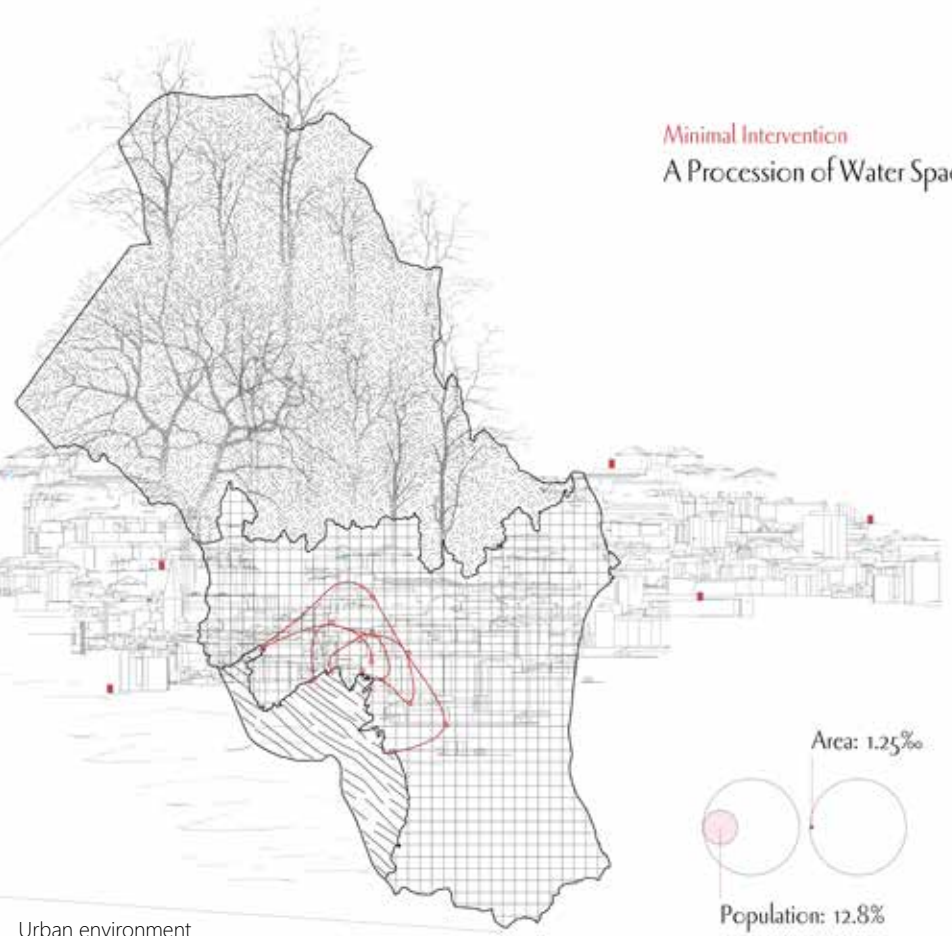




Interventions connected in scale V



Minimal Intervention
A Procession of Water Spaces



- Urban environment
- Water places
- A route by heart
- A surprise/destination
- No purpose with spontaneity
- Design meets life in city

Reflection

[Processes and Thoughts]

This project, Minimal Intervention: An Attempt Reading the Ultimate, focus on the basic need from we as human beings to the landscape, which is to experience. The result of it is a series of public spaces engaging with nature. These interventions guided by the minimal principles proposed in this project is specifically a characteristic of individual projects and the compositional impacts they create. But it also becomes a paradigm in that it reveals the presence and the quality, in general of landscape architectonic environment.

This last part aims to reflect on the progress of how the research design developed, in order to examine the initial goals. It also discusses the relevance of this thesis within a larger context.

On relevance and feasibility

LA-WISE

The position of quality revealing set tone for this project. Although at first I do an ambitious on facing a world wide problem of sea level rise. When things didn't go as I planned, I was hit by the idea of now that everyone is dealing with global problems, why would I bother then? This is not the only direction that we must pursue as landscape architects. Landscape Architecture should not be only about dealing with complex global problems, but also about valuing a place and make it appreciable by experiencing it.

What I truly want is to try something fun, taking advantages of the site while contribute to the very daily lives of us, the very normal people. Especially in a world with fast paces and panic attacks, a world awash with too much information to stay sober, we need something delicate to trigger us and think for ourselves.

SOCIETAL

In a modern society, especially in big cities, life is fast, busy and full. Behind the method of Minimal Intervention this thesis proposed, is the wish of integrating image of city into people's daily life with experiential value.

During the process I got a lot of questions on will people in Oslo really need your design? Firstly I really think it is not for us to decide whether people need something or not. Secondly, people will never say something like we are rich, satisfied and developed enough, we don't need to make progress anymore. We all agree to this. But what could lead the development that we all know will definitely happen? It should always starts at looking things differently, walking away from the stereotype and thinking outside the box. By revealing (even initially discovered) that there could be more possibilities between this city and water, that the river is no need to be fully covered in pipes, that the sea actually provides a safe and rich environment for this blessed city, development will happen, from the aspect of people's well-being and life in a modern world.

Minimal Intervention creating experiences where landscape architecture provides for the well-being of each citizen in this busy city. To rediscover their senses, to give them back what urbanisation has took away from them.

On method

Stood on the shoulders of giants, this thesis developed Minimal Intervention as a powerful tool to create experiential environment, with compositional value through scales of landscape.

Taking the relationship between water and a modernized city, Oslo, as a testing theme, this method is proved to be able to contribute to urban landscape in relation to identity of the city, character of nature, interaction of societies and so on.

Nature of this method defines experience itself as a valuable programme, meantime provides a possibility for the design to evolve at every scale. Taking interventions on spots as example, each of them tells a story which is experiential concerning its location. It has the potential to grow into a space with programme without intentionally preset.

If more locations created, they can be linked either physically or mentally, in this way creating impacts through scales. If not connected, the design also make sense as single location has a richness in providing experiential value, and that it's always ready for further development.

In other site, especially in one that is 'blemished, over-exploited, and not easy to interpreted', this method can contribute to the development by taking advantages of its identity and potentials, re-evoking our senses, seeing, hearing, touching and responding.

On research and design process

Starting with an instant fascination of 'Un air rosé', I studied this art experiment, from the phenomena into how it can influence the spatial environment, how it can furthermore make impact on wider context. During the process, I see the value in Minimal Intervention firstly brought out by Lassus, not only sets an humble attitude towards what has already been there, but also stands a position of how landscape architects can design our living environment.

EXPERIENTIAL

At one time when I was struggling in lines and diagrams trying to create an intervention on existing water which is 'minimal', before I managed to figure out what 'minimal' stands for in my thesis. It was quite a difficulty. When it comes to me that for a project starts from a provocative phenomena, and focusing on revealing the experiential value, the thing I was doing on the other hand seems too be so rigid and chained. It doesn't match.

I tried to stop being so 'systematic' and started imagining the physical atmosphere, and draw what could be the perception that I was pursuing, responding to the 'Un air rosé'. What situation on site stands for the tulip, and what could be the white paper that I stuck into the situation. Atmospheric images which tried to capture the variations in water and form, as well as the timeless landscape. These images belongs not only to each of the intervention on single location, but also to a larger picture. They began to form characters of their own, which in turn provided feedback and inspiration to the research on bigger context. It helps me settle what kind of project that I want to achieve, and further help completing the understanding towards Minimal Intervention.

_COHERENCE

I find it important to be consistent and always go back to see if the proposed research objective is responded properly. In this case, the task I gave myself to go through scales is a positive push. Sometimes things got stuck halfway, it is the good moment to jump to another scale and make something out of that scale, then it gets clear for connecting the whole story.

The process of repeatedly reviewing through scales is also the process of this thesis gets completed. Creating connections by different means among scales became instrumental in pushing my design forward. The design I presents in this project ends with the final investigation into details of Tidal Museum. Acting like the white paper which has been stuck into the tulip, even the smallest scale corresponds to the goal of experiential.

_SHELTER

When the idea of shelter as part of the principle was implanting into the original ones, the project makes a qualitative step forward.

As part of the principle they complete the story of water interventions.

When contextualized they are designed in respect to the identities of city and to the character of northern nature.

As signatures they build up connections and recognitions among experiential locations, help creating impacts through scales.

There is no such thing as effort in vain. Taking shelter as example, it was once serving as a negligible part of a contextualized design.

When I look back, there is a feeling that all dots connected. I would never imagine or expect inspirations I once had just hit back and contributes like a ring to the chain.

(Let go is also important.)

_MINIMAL INTERVENTION

I got the question a lot, of are my interventions really minimal, or how minimal is minimal? Like stressed in the framework, there is absolutely no need to be restrained by pursuing 'minimal', that is also the least thing this project calls for. To be 'minimal' is not the intention in itself, but to accomplish a provocative project which reveals the quality, be able to evolve and keep making sense through scales, while creating experiential environment contributing to the relationship with water and urban life, is the final goal.

To make it 'minimal' only means that, with simple changes, certain intentions of discovery meant for each location are exposed. These principles are qualified as 'minimal', comparing to its influences. This is a way of design which respect the most of the context, avoid adding more misunderstandings to the site and easy to follow.

Thus blindly inviting seemingly 'minimal' interventions is nothing but surplus. Instead, to apply the 'minimal' principles onto carefully chosen locations, the appearance of that application doesn't seem to be so important anymore. They might not looked like a 'minimal' intervention, but they all start from a minimal principle. The essence and purpose of them is to reveal the quality by creating experiences.

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