



Arkitektur- og designhøgskolen i Oslo  
The Oslo School of Architecture and Design

## DIPLOMA PROGRAM FALL 2018

**Diploma candidate:** Lena-Mari Nordli

**Institute:** Architecture

**Main supervisor:** Associate Professor Lisbeth Funck

**Second supervisor:** Visiting Tutor Matthew Anderson

**External supervisor:**

**Company cooperation:**

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**Title of project:** Interaction beyond limits - A library and exhibition space

*Lisbeth Funck*





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Oslo, 23.04.18

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Title

**Interaction beyond limits - A library and exhibition space**

Ingress

Based on the overlapping themes of sight-lines, movement and reflection I want to meet the functional program with the intention to provide a space with extended sensual borders, and investigate the spaces' capacity to interact with the surroundings beyond its own limits.

Abstract

With my starting point being the term parallax I will examine a public space in connection to its extended borders, with attention to the site specific sight-lines formed by the physical arrangement of the space.

Through a process of contextual, spatial and programmatic studies I will develop a program of public and semi-public library and exhibition space, as an extension to the already existing building of The Oslo school of Architecture and Design.

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## 1\_INTRODUCTION

### Background

The Oslo School of Architecture and Design (AHO) has since 2001 been located at Maridalsveien 29. From 2001 and up until this date both the organisation and the number of students has increased by roughly 250 to a total of 650 people. There is an ever-increasing pressure upon its premises, and the growth is expected to continue, especially now, with the new landscape architecture programme and the planned expansion of the design programmes. The school is faced with two options. One option is to occupy nearby buildings for these additional programmes. The second option is to work on expanding the school area within the site limits, with the result of a more compact solution. At the same time has the AHO library expressed an interest for more varied reading spaces, and the school is in general in need for additional exhibition space.

This project is based on the option of concentration the school, by adding a new building within the perimeter of the plot. The new building will contain a library and exhibition space.

### Location

With Maridalsveien to the west and Akerselva to the east, the Oslo School of Architecture and Design (AHO) is located in a transition between an urban road and the Kuba park area along the river. Maridalsveien is the official border between St.Hanshaugen og Grünerløkka, and Akerselva a symbolic border between Oslo west- and east-side. Both are relatively busy with traffic and pedestrians, and the pathway along the river functioning as one of the main recreational areas for the citizens.

### Site

The school program is arranged in a linear structure, which varies from one to three stories high, with the three story high walls encircling the school yard like fortified walls. The main entrance, an exhibition gallery and the cafeteria is visible from the introverted school yard, and an additional outdoor space with a very private feel to it is located up a long staircase on the second level. A seven meter wide and tall portal puncture the continuous volume of the building, creating an opening towards Maridalsveien, into the school yard. On the opposite side a gap between the two three story high end walls of the C-shaped building opens up towards Akerselva with its paths and greenery. The gap is the site of this project. The portal and the gap provides a passageway through the school yard and between the busy urban traffic and the lush Kuba park. The project will arrive at the site as a new structure, a mediator between the two end walls, the urban character and park, and the privat and public. Claiming its space and interact with the surroundings.

### Program

The program of this project is a library and a gallery. The library will be a mix between public spaces and areas private for the students at spesific hours. The gallery will be of a public character. To create an essentially public space as part of this very introverted school presents a challenge, and I see it as important to emphasize the already existing passageway, and its connection to Akerselva with its park areas.

## 2 PROGRAMMATIC THEMES

Inspired by the concept of parallax, the architectonic themes for this project will be sight-lines, movement and reflection. The architectonic themes will be the point of departure, and will be investigated during this semester, with the aim to arrive at a project with capacity to interact with the surroundings beyond its own limits, and correspond to the public character of the program.

### Parallax

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The architectonic program for the diploma semester Fall 2018 is to develop a structure *inspired* by the spatial concept of parallax. Parallax has been an important influence on architects for more than two centuries - ever since the interest for the sensual aspect, changing landscape while moving, and multiple view was introduced in garden designs and in architecture, and the effect produced by mirrors as in the famous Galerie des Glaces of the Palace of Versailles. Le Corbusier (1887-1965) reintroduces movement in architecture with the Promenade Architecturale giving attention to the effects of a dual movement and to seeing the other.

Parallax: the apparent displacement or the difference in apparent direction of an object as seen from two different points not on a straight line with the object.

Middle French parallaxe, from Greek parallaxis, from parallaxein to change, from para + allassein to change, from allos other. - Merriam Webster Dictionary.

### Sight-lines and movement

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Sight-line as the direct view from the eye. Sight-line as both empty space and framing of a specific view. Sight-line as blocking or disturbance of a view, and how this obstructed view in some cases performs stronger for the observer. Sometimes it's more intriguing when you see a glimpse of a view as opposed to a complete picture. Sight-line as the changing of view when moving through a space, and as the actual decision of movement. Sight-lines and movement takes part in all architecture. For this project it will be the element of most influence during the process.

Sight-line: a line extending from an observer's eye to a viewed object or area. - Merriam Webster Dictionary.

### Reflection

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Reflection in terms of the mirroring of surroundings, and as both a barrier and a connection between a space and the outside. An opaque reflection occurs when a surface absorbs non of the light thrown at it, and thus reflects all light. Transparent surfaces are able to absorb a diversity of light, and will reflect light accordingly. I am fascinated by a reflective transparent surface's ability to melt together in and out, and I aim to create interactions between inside and outside space, according to my project question.

Reflection: an instance of reflecting; especially : the return of light or sound waves from a surface, the production of an image by or as if by a mirror, the action of bending or folding back. - Merriam Webster Dictionary.

### 3\_CONTEXT

Walking along Akerselva River you experience a variety of landscape, nature and building typology, alternating between residential housing, industrial areas, and typical urban contexts with mixed commercial and office buildings. The views of the plots context will be my point of departure for this project.

The history of Akerselva as the major artery through Oslo extends far back. In European context it is, as the only industrial river that starts and ends within the city boundary, unique. The river is special in its representation of various industries and eras, and today a walk along the river can provide an insight into our own story. There is an ongoing change in the way we perceive and process the urban fabric along the riverside, which the city has turned its back to for a long time. The changes in the industry and the way we live in the city now, have provided new possibilities for the riverside. Some industries have moved out of the city centre, and other industries have gotten outdated and shut down. The vacant areas have given space to contemporary activities, and we have arrived at a place where the river is a value for recreation and social life, and not a pollutant industrial outlet. Emphasis has been placed on accessibility for the city's residents as well as tourists, and many of the abandoned industrial buildings have been turned into museums, cafés and other cultural services. Thus, Akerselva appears as a cultural monument in what is a continuous outdoor museum throughout the city.

At the banks of Akerselva lies AHO, where the school's east wing, south wing and the open stretch between the gables together take up about 100 meters along the path. In the east wing lies today's library; a specialist library for use in school, the academic community and the general public (with some restrictions). The plot of this project is located on the 30 meter long stretch between the gables of the schools south wing and east wing, and the design of the project is therefore crucial for the accessibility of the school from Akerselva. AHO is an introverted building, in the way that most of its entrance are facing the school yard, which the building embraces. You enter the school yard, and then the building, through the portal from Maridalsveien or via the project plot. The site is thus one out of two public entrances to this introverted building.

#### *Transparency*

Inclusion and user involvement are words used in the debate about democracy in architecture and urban development today. Questions regarding what it takes to initiate a public debate, and whether a public architectural debate is of importance and at all desirable, are discussed. The Architects profession is to shape society's physical space, and with or without user involvement, there is a broad consensus for the architectural ideas, debates and innovation to be transparent and accessible to the community.

## 4\_PROJECT

### 4.1\_Intentions

With the term parallax as the point of departure for this project, I intend to remain in the parallax mindset, to be aware of the shifting and changing perception of space when moving through it. I want to investigate this project as part of an extended movement through a continuous space, and define both the physical and sensual borders of the project according to this research.

I believe it will be important for this project to emphasize the public nature of the program so that a new building on the site won't prevent or reject external traffic, but rather engage the public and initiate an open architecture debate as well as accommodate general stay in the area. I want to work on the movement on the ground floor according to this, and I will consider a structure lifted above the ground floor. I intend to let the elements influencing this movement interact with the arrangement of the space and context, and together form specific sight-lines through, into and beyond the project.

My initial researches into the term parallax led me to some thoughts about reflecting surfaces and how they possess different qualities. Some reflective surfaces may absorb non of the light thrown at it, thus it will reflect all light and duplicate its surroundings. Other surfaces may have different reflective qualities, depending on a subjects distance from the surface. Transparent surfaces in architecture usually reflect different levels of light, depending on factors like thickness of the material, the angle of the surface and also the contrast between the levels of light inside and outside a surface. Reading one of the works by Junichiro Tanizaki, *In praise of shadow*, I became fascinated by the strong correlation between the contrast of light and reflectivity, how you see your own reflection in a window if looking out at night-time, and how you almost don't see your reflection at all during daytime. In a situation where there is little contrast of the light, a merging between inside and outside space may occur. Standing outside looking in, a reflection of the surroundings and the space behind the surface is difficult to distinguish. Walls have in most cases the ability to physically regulate the amount that an outside space is allowed to interact with an inside space. A transparent surface behaves differently. Though it physically is often just as regulating, it enables a sensual merging of the inside and outside space, and extending or manipulating a space's experienced borders.

Based on the overlapping themes of sight-lines, movement and reflection I want to meet the functional program with the intention to provide a space with extended sensual borders, and investigate the spaces' capacity to interact with the surroundings beyond its own limits.



## **4.2\_Strategy**

I will begin with a thorough investigation of the extended area along Akerselva, beginning with mapping of sight lines in order to achieve an understanding of the parallax movement in the area, and to locate the site's sensual connections and borders. The result of this study will be a series of photos together with a map with markings of where the photos are taken.

Building on the identified sight lines, parallax connections and borders I will frame the borders of the site.

The sight-lines will be the foundation for the further development of the project, and from here I will work on the movement in the structure.

I would like to take the spatial studies out from the context, and work on the space independent from the site and the functional program, to learn about the new spatiality. This study will result in series of drawings, models and photos.

I will take this new knowledge back to the site, and strategically arrange (structural) elements on the site in order to find new sensual connections with its surroundings.

The result of the spatial studies will interact with existing school building and the functional program of a library and exhibition space.

## **4.3\_Space**

Spatial qualities and material will be defined during the different stages of investigation.

## 4.4 Program

### Functional program

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The functional program is a new library and space for exhibitions in connection to the Oslo School of Architecture

#### Indicative program:

50-70 seats	- Reading space.
200 m2	- Gallery/exhibition space.
75 m2	- Offices.
	- Meeting room.
	- Reception area.
50 m2	- Storage.
1000 m2	- The collection

The library has expressed an interest and need for more and varied reading spaces that can have extended opening hours compared to the collection and loans. Different kinds and qualities of reading spaces should be offered - consider furnishing, sound level/silence, materials, and light quality.

Automatic lending facilities can also be considered.

1500 m2	- Total area.
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### About the existing library\*

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The library is situated on the ground floor towards the lovely landscape along Akerselva River. Everybody is welcome to the Library, but only AHO's students and staff may borrow books.

#### *The collections*

The main emphasis of the collection is on architecture, urbanism, art, design and building technology; supplemented by a general background collection on social science, philosophy and science studies.

The building of the architectural collections started in 1968 when the school moved to St. Olav's gate, and the design collections started in 1996, and in 2004 the master programme in landscape architecture started. Over the years many gift collections have been added - from architecture offices, municipal authorities and private institutions.

In 2016 the number of print volumes were approximately 50.000, 200 print journal subscriptions and 2000 e-journals.

#### *Digital resources*

We subscribe to national and international reference databases, full text databases and digital dictionaries and handbooks.

#### *Retrieval*

The reference collection and bound magazine volumes is located on the mezzanine. Also on the mezzanine is the Library's collection of travel guides. Book labelled "nærmag." are located separately in a storage room adjoining the Library, and can be accessed by asking the staff at the Library's reception desk.

## 5\_SCHEDULE

- Completion of site working model.
- Completion of sun studies. Diagrams.
- Mapping of context. Photography and mapping of historical layers.
- **Framing boarders of the site.**

AUGUST

Week

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- |    |  |
|----|--|
| 33 | <ul style="list-style-type: none"><li>- <b>13.08.18 Diploma Fall 2018 START.</b></li><li>- Studies: sight-lines (spatial structures + photos).</li><li>- <b>17.08.18 Submit program - w/frontpage.</b></li></ul> |
| 34 | <ul style="list-style-type: none"><li>- <b>Initiate spatial studies.</b></li></ul>   |
| 35 | <ul style="list-style-type: none"><li>- Final adjustment of Diploma program.</li><li>- Organisation of material.</li></ul>   |

SEPTEMBER

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|----|---|
| 36 | <ul style="list-style-type: none"><li>- Spatial studies independent from site.</li></ul>                |
| 38 | <ul style="list-style-type: none"><li>- Development of spatial studies.</li></ul>                       |
| 37 | <ul style="list-style-type: none"><li>- Moving back on site: positioning of spatial elements.</li></ul> |
| 39 | <ul style="list-style-type: none"><li>- Movement on site.</li><li>- Organisation of material.</li></ul> |

OCTOBER

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| 40 | <ul style="list-style-type: none"><li>- Study trip to Japan, Kyoto.</li></ul>  |
| 41 | <ul style="list-style-type: none"><li>- <b>Interaction: spatial study meets program.</b></li><li>- Development of spatial/program studies.</li></ul> |
| 42 | <ul style="list-style-type: none"><li>- <b>Interaction: spatial study/program meets site.</b></li></ul>  |
| 43 | <ul style="list-style-type: none"><li>- Development of site/context.</li></ul>   |
| 44 | <ul style="list-style-type: none"><li>- Organisation of material.</li></ul>  |

NOVEMBER

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|----|--|
| 45 | <ul style="list-style-type: none"><li>- Development of space/program/site/context.</li></ul>             |
| 46 | <ul style="list-style-type: none"><li>- Development of space/program/site/context + detailing.</li></ul> |
| 47 | <ul style="list-style-type: none"><li>- Development of space/program/site/context + detailing.</li></ul> |

DECEMBER

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|----|--|
| 48 | <ul style="list-style-type: none"><li>- <b>23.11.18 Deadline for withdrawal, changes and title.</b></li><li>- <b>Completion of space/program/site/context + detailing.</b></li></ul> |
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|----|---|
| 49 | <ul style="list-style-type: none"><li>- Final model.</li><li>- Organisation of material to be delivered.</li></ul>                          |
| 50 | <ul style="list-style-type: none"><li>- Visual representations. Render/model photo.</li><li>- <b>14.12.18 Diploma submission.</b></li></ul> |

## 6\_DELIVERED MATERIAL

### Process

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- Process summary
- Sketchbook
- scale 1:1000 - Situation plan
- Illustration - Mapping of Site/context
- Illustration - Sun diagram
- text - Architectural program.
- model/photo/div.- Spatial studies

### Final project

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- text - Description
- scale 1:500/1000- Situation plan
- scale 1:200/500 - Situation model
- scale 1:100/200 - Series of sections
- scale 1:20/50 - Section
- scale 1:20/50 - Plan
- scale 1:20/50 - Model
- scale 1:5 - Relevant details
- illustrations - Visualisation

## 7 REFERENCE MATERIAL

Tanizaki, J. (2001). *In praise of Shadows*. London: Vintage.

Manguel, A. (2008). *The Library at Night*. Yale University Press.

Bois, Y. and Shepley, J. (1984) *A Picturesque Stroll Around "Clara-Clara"*. The MIT Press.

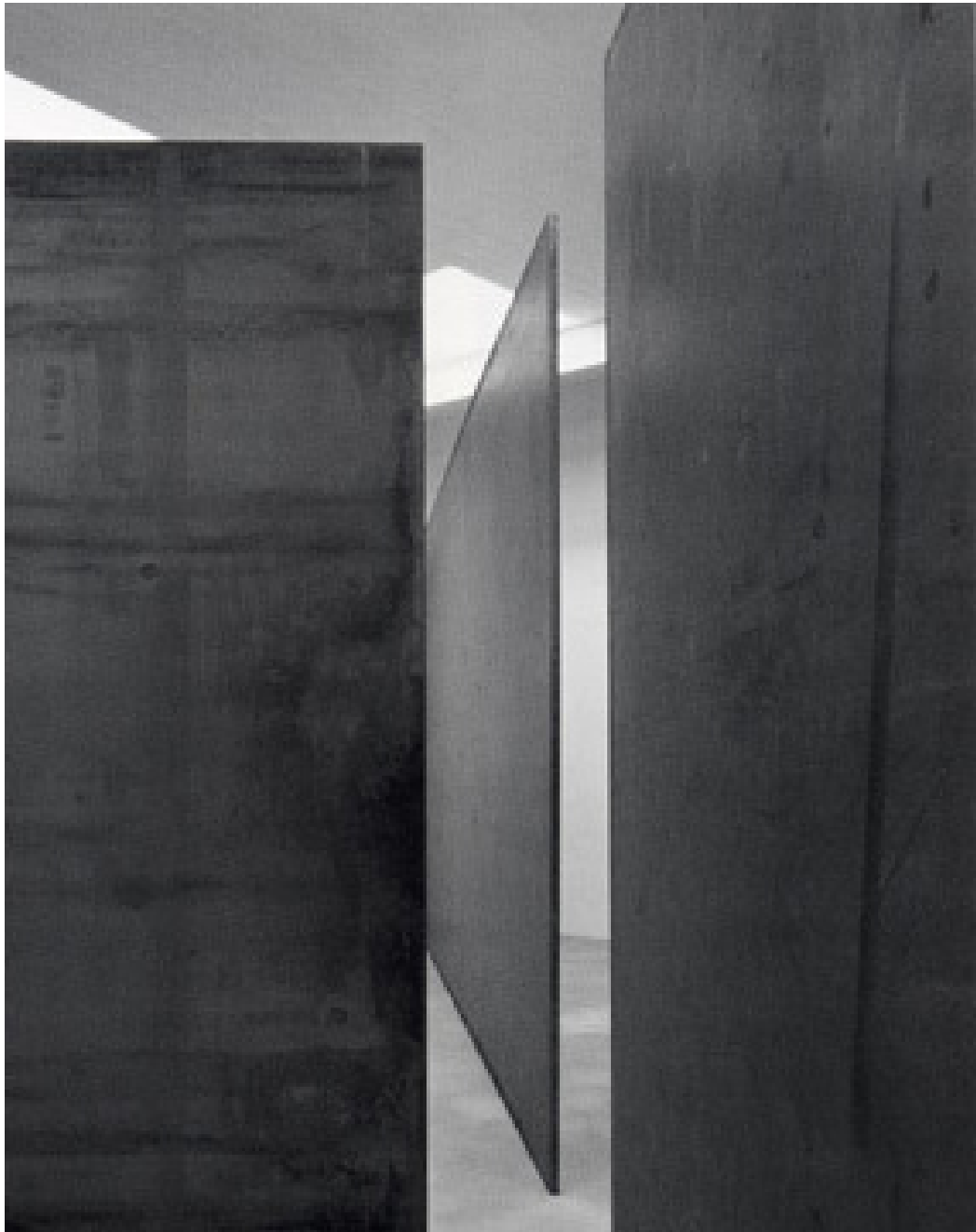
Vischer, R. (1873), Fiedler, C. (1878), Wolffin, H. (1886), Goller, A. (1887), Hildebrand, A. (1893), Schmarsow, A (1893). *Empathy, Form, and Space, Problems in German Aesthetics 1873-1893. Texts and Documents*. Published by the Getty Center for the History of Art and the Humanities. Distributed by the University of Chicago Press.

to roll	to curve
to crease	to lift
to fold	to inlay
to store	to impress
to bind	to fire
to shorten	to flood
to twist	to smear
to dapple	to rotate
to crumple	to swirl
to shave	to support
to tear	to hook
to chip	to suspend
to split	to spread
to cut	to hang
to sever	to collect
to drop	of tension
to remove	of gravity
to simplify	of entropy
to differ	of nature
to disarrange	of grouping
to open	of layering
to mix	of jelling
to splash	to grasp
to knot	to tighten
to spill	to bundle
to droop	to heap
to flow	to gather

to scatter	to modulate
to arrange	to distill
to repair	of waves
to discard	of electromagnetic
to pair	of inertia
to distribute	of ionization
to surfeit	of polarization
to complement	of refraction
to enclose	of simultaneity
to surround	of tides
to encircle	of reflection
to hide	of equilibrium
to cover	of symmetry
to wrap	of friction
to die	to stretch
to tilt	to bounce
to bind	to erase
to weave	to spray
to join	to systematize
to match	to refer
to laminate	to force
to bond	of mapping
to hinge	of location
to mark	of context
to expand	of time
to dilute	of carbonization
to light	to continue

Richard Serra, Verb List, 1967-68  
Graphite on two sheets of paper,  
25.4 x 21.6 cm (each).

Verb List by Richard Serra



*Circuit 2* by Richard Serra



*Intersection 2* by Richard Serra





*Casa del Fascio, Como, by Giuseppe Terragni*



*Ekeberg Pavilion, Oslo, by Dan Graham*



*Casa del Fascio, Como, by Giuseppe Terragni*

Distance from subject to reflective surface determine the surface's reflective quality.

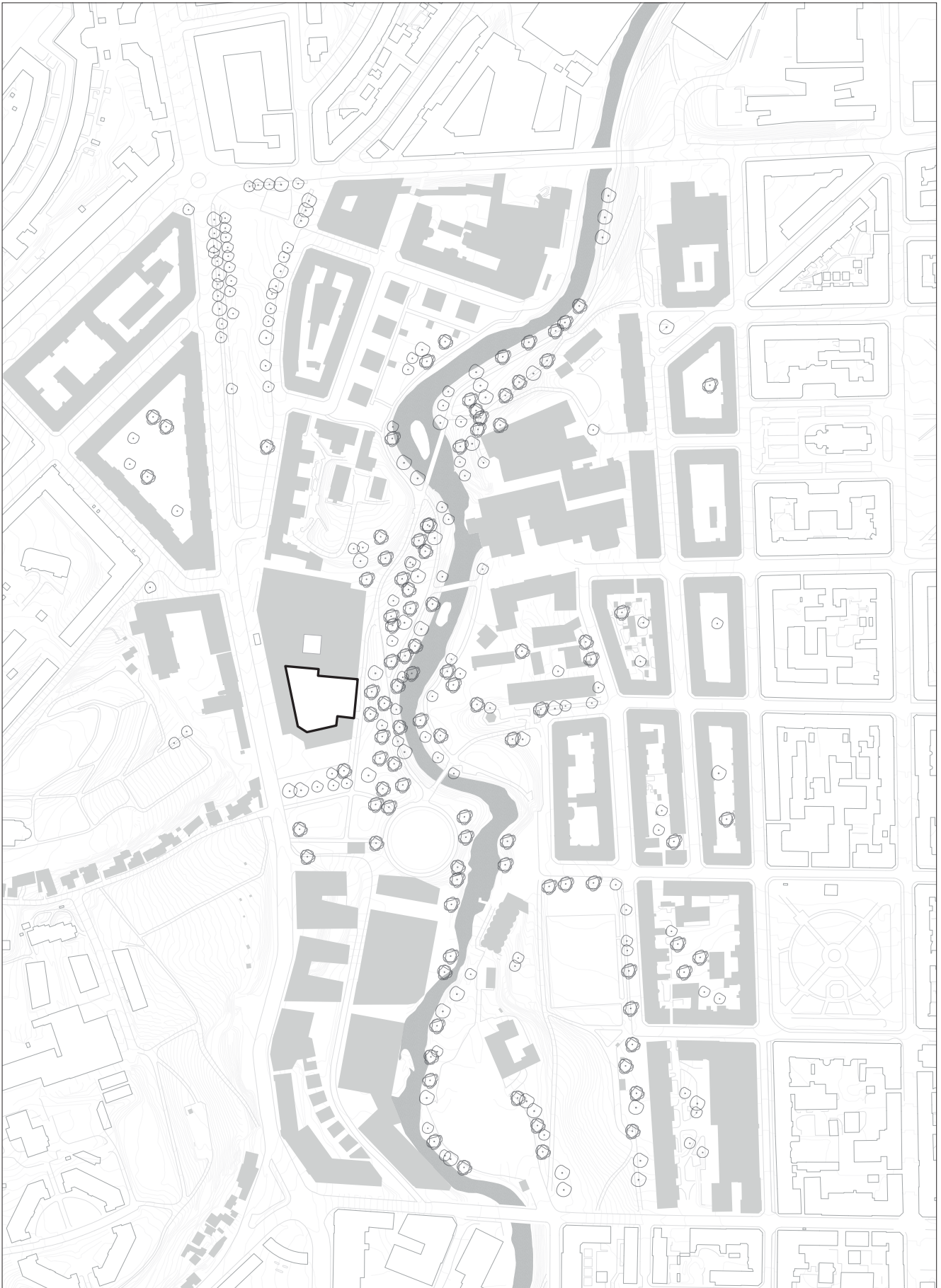


*Natur & Nikolai Bergmann, Tokyo, by SANAA*



*Natur & Nikolai Bergmann, Tokyo, by SANAA.*

**A\_SITUATION PLAN**



B\_AERIAL PHOTOGRAPH



# C SUN PATH DIAGRAM

Oslo

Sun highest position: June

Sun lowest position: December

## June 15th

Sun rise: 03:54

Sun set: 22:41

Mid day: 13:17

(Mid night: 01:17)

13:00



Altitude:  $52.6^\circ$



Azimuth:  $196.3^\circ$





