The Royal Danish Academy of Fine Arts,
Schools of Architecture, Design and Conservation
School of Architecture

Masashi Kajita, Assistant Professor, Institute of Architecture and Design, School of Architecture & School of Design

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Universal Design and Accessibility for All: Architecture, Cities and Space

Universelt Design og tilgængelighed for alle: arkitektur, byer & rum

Universal Design and Accessibility for All: Architecture, Cities and Space

The project 'Universal Design and Accessibility for All: Architecture, Cities and Space' was initiated in September 2016 through a grant of DKK 4.9 million from the Bevica Foundation. This funding covers a seven-year period and supports research and research-based teaching activities that contribute to maximising the independence, participation and enjoyment of disabled persons in the built environment.

We wish to design ideas and processes that promote inclusion in various spatial conditions. We look at the spatial implication of contemporary challenges aspiring for equality in relation to the built environment and study spatial conditions for inclusion through the perspective of architecture and its related design elements and contexts.

We work closely with the notion of disability and focus on a wide range of persons with reduced mobility. Yet our challenge is to widen the focus and include people regardless of age, ability and possible limitations. We engage with society's challenging issues by taking an inclusive approach to research, and we develop research/design methods and tools that are empathic but also innovative, through which we seek an alternative insight into the way differences, vulnerability and sensitivity in design lead to environments with more potentials.

Current and planned projects span the fields of the housing and care environment, sports and leisure buildings as well as historical buildings and landscapes. At KADK, we work closely with other research projects including Spaces of Danish Welfare and Virtual Scenarios in Response. Gained knowledge is disseminated through lectures, seminars, workshops and integrated into design teaching at both BA and MA levels. In 2017, students from the Master's programme in Spatial Design, under the title of 'Material Includes', designed and built a floor and a fireplace in the garden of the Embassy of Switzerland in Copenhagen. The students engaged with disabled persons in their design process, and accordingly their design concerned how formal, tactile and visual qualities of bricks may guide and motivate pleasure in people including those with reduced abilities. Another project, titled 'Ageing in a Vertical City' focuses on the issue of ageing and disability and investigates how Hong Kong residents currently engage and experience 'home' and 'care home' environments with a view to how future care homes and home care fit future needs and aspirations.

Facts: Project responsible: Masashi Kajita, IBD, Visiting Professor Rama Gheerawo, Helen Hamlyn Centre for Design at the Royal College of Art (UK), Olga Popovic Larsen, IBT, Jonna Majgaard Krarup, IBBL, and in the future two more PhD students. Team collaborators: Disabled People's Organisations Denmark, the Danish Building Research Institute, SBi, Aalborg University, Force4 Architects and Schønherr A/S. Masashi Kajita is furthermore a Visiting Scholar at the HHCD at the RCA, and has undertaken research and design projects together with the Hong Kong Polytechnic University.

Project responsible: Masashi Kajita, Assitant Professor (IBD)
Rama Gheerawo, Visiting Professor at KAKD/ Director of HHCD at RCA

Olga Popovic Larsen, Professor (IBT)
Jonna Majgaard Krarup, Associate Professor (IBBL)
Industrial PhD#1 (IBBL), supervised by Jonna Majgaard Krarup and Masashi Kajita
Industrial PhD#2 (IBD), supervised by Olga Popovic Larsen and Masashi Kajita

Lars Klint, Associate Professor (IBD)
Anders Hermund, Assitant Professor (IBD)
Ture Slot Bundgaard, Teaching Assitant Professor (IBD)

Industrial Post-doc#1 (IBK)

GOVERNANCE OF INCLUSION

Policy development and Legislations
Economic implication of Inclusive/Universal Design
Urban strategy and the network of infrastructures
Accessible Tourism
Accessibility and Transformation of listed buildings

INCLUSIVE DESIGN PROCESS AND METHOD

Inclusive urban space and design process
Network analysis of actors in the fields
Representation of users and user representatives

DISABILITY AND SPATIAL DESIGN

Spatial understanding of the experience of disabled persons
Disability and Various dimensions of accessibility
Autonomy of design practices and bodily experience in contexts

TECHNOLOGY FOR INCLUSION

Cognitive science approach for inclusive design
Accessibility and virtual reality

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Inclusive urban space and design process: #2
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TECHNOLOGY FOR INCLUSION

Cognitive science approach for inclusive design: #4
Accessibility and virtual reality: #4

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Accessibility and Transformation of listed buildings: #1

INCLUSIVE DESIGN PROCESS AND METHOD

Inclusive urban space and design process: #2
Network analysis of actors in the fields
Representation of users and user representatives: #3

DISABILITY AND SPATIAL DESIGN

Spatial understanding of the experience of disabled persons: #5
Disability and Various dimensions of accessibility
Autonomy of design practices and bodily experience in contexts

TECHNOLOGY FOR INCLUSION

Cognitive science approach for inclusive design: #4
Accessibility and virtual reality: #4

GOVERNANCE OF INCLUSION

Policy development and Legislations: #6

Economic implication of Inclusive/Universal Design

Urban strategy and the network of infrastructures

Accessible Tourism

Accessibility and Transformation of listed buildings: #1

INCLUSIVE DESIGN PROCESS AND METHOD

Inclusive urban space and design process: #2

Network analysis of actors in the fields: #6

Representation of users and user representatives: #3

DISABILITY AND SPATIAL DESIGN

Spatial understanding of the experience of disabled persons: #5

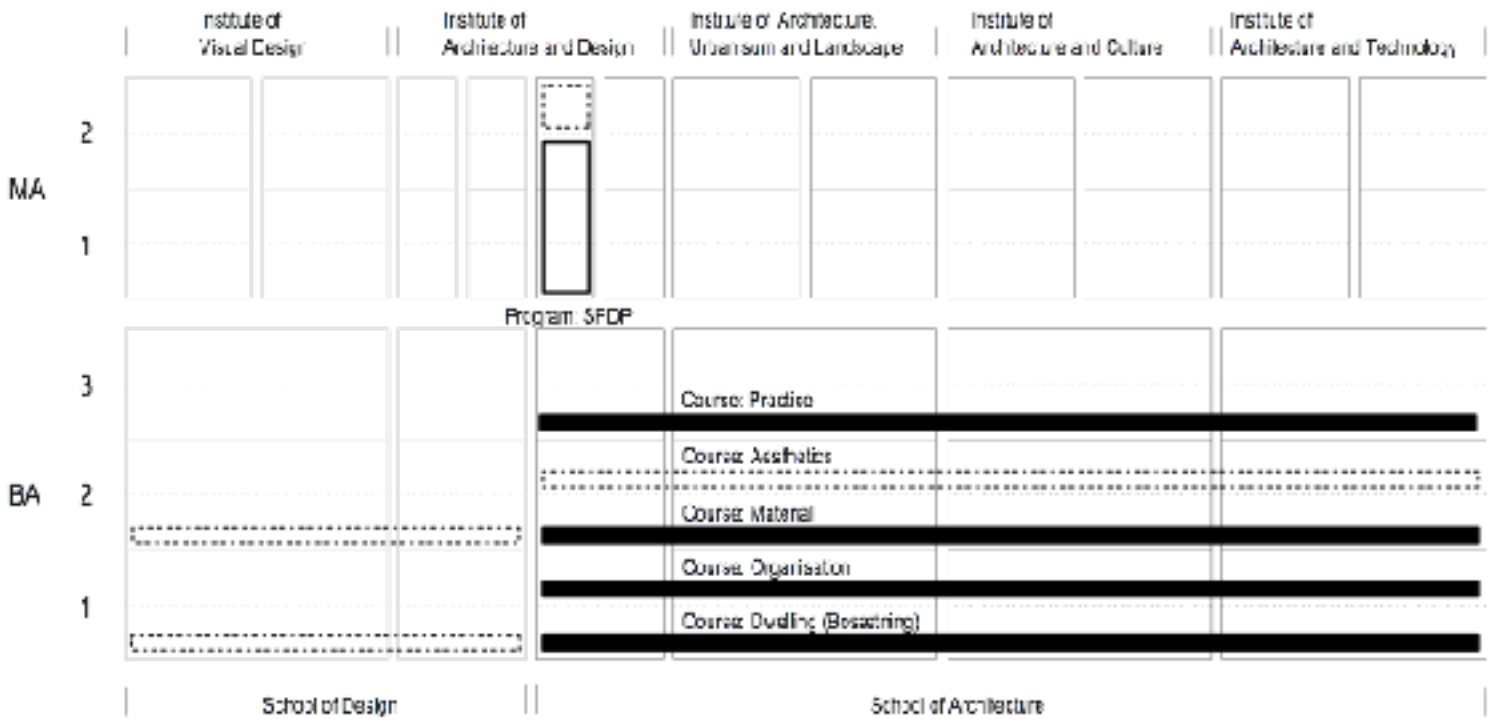
Disability and Various dimensions of accessibility: #6

Autonomy of design practices and bodily experience in contexts: #6

TECHNOLOGY FOR INCLUSION

Cognitive science approach for inclusive design: #5

Accessibility and virtual reality: #4



Teaching activities at KADK

Production of ‘context-dependent/ situated knowledge’

The Royal Danish Academy of Fine Arts,
Schools of Architecture, Design and Conservation
School of Architecture

Carolyn Butterworth. Licking the Barcelona Pavilion,1992

Workshop: The haptic way of knowing: the sensory potential of materials

12 September 2017
Place: AUD.2

Masashi Kajita, Assistant Professor, Institute of Architecture and Design, School of Architecture & School of Design

Partners:

Bent Munch
Bjarke Juul
Carsten Hussing
Ella Frederiksen
Erna Christensen
Finn Petersen
Flemming Sundt
Hans Rasmussen
Jacob Monies
Jan Andersen
Jeanne Riise
Jesper Rostgaard Hansen
Leif Holzmann
Mogens Kragh Hansen
Peter Vonsild
Philip Henrik Jensen
Sven A. Knudsen
Ulla Wæber
Vibeke Svendsen

Peter Vonsild is visually impaired and only sees strong contrasts, xxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Students Name

Students Name

Students Name

Students Name

Students Name

Students Name

Students Name

Students Name

Students Name

Students Name

Where is your favourite place and why (description of spatial situation)?
You must try to understand situations they describe in relation to architectural elements (such as wall, window, floor, door, ceiling) and mediating phenomena (such as daylight, acoustics, and social interaction). xxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

What is [a material in question, e.g. wood] to you?
Material might be chosen with a direct link with above situation (and/or architectural elements), or might come from your own interests as a group responding to conversations you had with a participant.
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xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxped and harbour areas had

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3 June 2017
Place: Swiss Embassy I. Copenhagen

Masashi Kajita, Assistant Professor, Institute of Architecture and Design, School of Architecture & School of Design

1. The [illegible] is mainly built with Kolumba K57 bricks which are the most fireproof. The K57 laid on edge required a [illegible] width [illegible] block footing. A thinner mortar course was used to raise the brick to the datum of the fireplace.
[illegible] pit below the fireplace provides a reservoir for water runoff.

2. The FIELD is made of a combination of Kolumba K54 and Flensborg D31 and D73. [illegible] and white glazed Flensborg [illegible] the grey K54, [illegible] decorative quality [illegible].
To facilitate the slight level change across the site, a row of black Kolumba K56 was needed. [illegible] blocks above a concrete strip footing support the K56 wall.

3. [illegible] K54 and grey K54, [illegible] to [illegible].

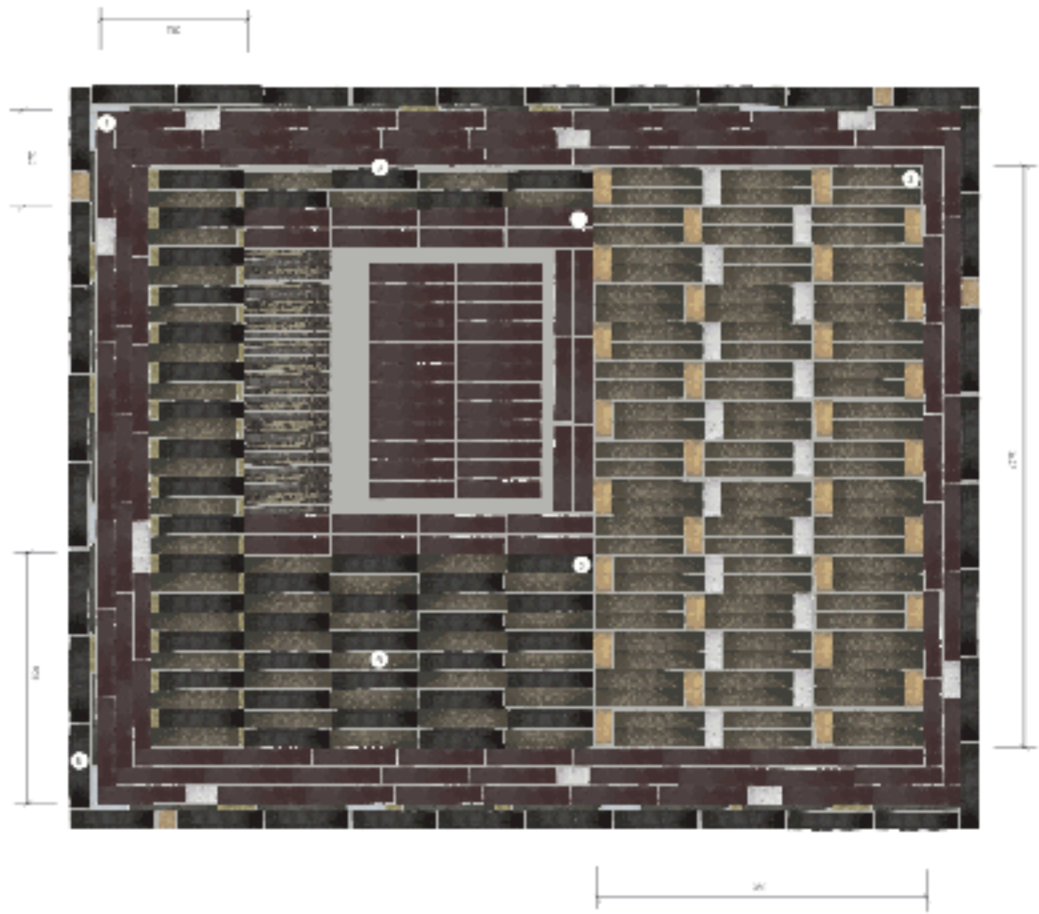
4. The EDGE is lined with Kolumba K57 that are arranged from the corners in a herringbone pattern running around the field.
Some Flensborg D31 and white glazed D73 fill gaps as the Kolumba bricks are not modular.

5. The outer edge is made of the black K56 that [illegible] the whole wall for the floor. The grey K54 bricks nuance the strong contrast between the [illegible] K57 the black K56. The vertically laid K54 is set in concrete to support gravel [illegible] the surface is flat [illegible].
In order to [illegible], the [illegible] Flensborg D31, [illegible] change of [illegible]mm.

6. Some parts of the K56 wall are now level with the ground hence the lack of footing.

7. Between the [illegible] of the [illegible] and the edge, a [illegible] of [illegible]mm is [illegible]. This [illegible] has an exceptional [illegible] because one can see the sea while enjoying the fire.

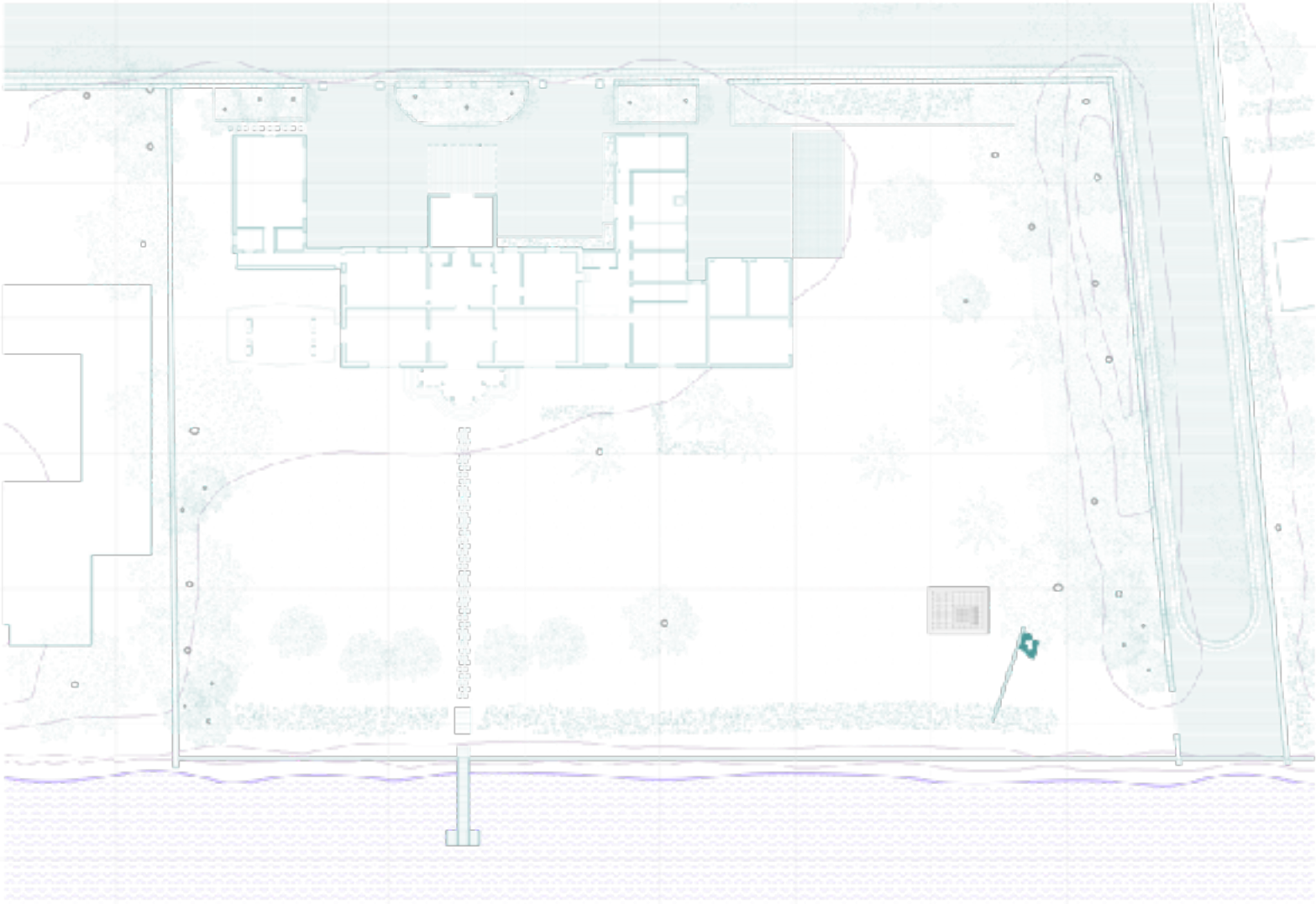
8. On the opposite side, a smaller area of [illegible]mm allows the use of a stool.



Material Includes

The Swiss Embassy in Copenhagen, Hellerup (R.1.1.)

Plan drawing by me



0 250 1000

Damir Dragarevic

20.06.17

In the process of work, we discussed the relevance of inclusion of elderly and disabled persons, with reduced physical abilities. We interviewed eight individuals in order to get insight in their use of space. Questions aroused about their understanding and experience of materials, their dimensions, colours and sensory qualities. Most of these conversations inspired us to define some design principles for the dimensioning and the composition of patterns and colours. We decided on a set of 3 common questions to guide our investigation on the brick.

1. What is a brick?

2. What is a floor?

3. What is a fireplace?

SURFACE The grass is an unfriendly floor surface when riding on it with wheels. A harder surface is preferred, but if it is made with bricks, the mortar spacing in between should allow the floor surface to be flatter. For a visually impaired person with a stick, the spacing indicates that the floor is made out of bricks. Wheelchair users Erna Christensen and Marianne Rosenvold taught us that even a step of 3cm can be experienced as a mountain.

EDGES Speaking in the name of the visually impaired, John Hellbrunn taught us how he uses his cane to orientate himself in unfamiliar situations. When walking on a surface, the blindperson's uses their stick to find the closest danger that will help them orientate themselves in space.

CONTRAST Peter Vonsild is partially blind. Introducing his ability to sense big contrasts, he spoke to us about colour combinations. Bodil Torben Olesen a 69 years old architect that lost 95% of his sight in 1996.

MEMORY Lars, who is in his sixties, lives with osteoporosis. His personal gaze on the pleasure of using fire for primitive cooking involves nostalgia and memories of the past. Speaking about comfort and ergonomics, he seemed more concerned to protect children. Familarity and Swiss childhood memories are also evoked by Torben. Accordieg to him, a fireplace is simply a place at the ground to gather around with good friends.

From top left:
John, Ibrahim
Lars, Marianne,
Erna, Peter

TORBEN OLESEN

01/05/2017
Interview by Bertrand & Manuel

Torben is a 69 years old architect who lives with his wife in the neighborhood of Hvidovre Copenhagen. He lost 99% of his vision in 1995. Today he is still active in the board of construction for disabled and blind people and in offering advice to home builders and architects.

Torben perceives space in a very detailed way. He can feel, smell and hear an interior, using all his senses at once. With his memories and a pinch of imagination he can create a precise image in his mind of his surroundings. Every time Torben goes to a new place, he will arrive an hour before his meeting, just to get familiar with the area.
How big is it? How does it feel? Where is the chair?
His ability to use his vision depends very much on the weather and light. During a beautiful bright day, his vision would be disturbed, due to shadows and the position of the sun in Denmark. On a cloudy day the light is diffuse and therefore Torben can see a lot of details. Colors are also a key tool for Torbens navigation, especially contrasts. Torben senses of touch, smell, audility, light and colors are also used in his basement wood workshop. He is confident enough to use tools for his everyday repairs and even with his 1% visior, he still has all his fingers.
For Torben, bricks have been part of his young adult life, when he was working in the brick making industry. He explains the infinite possibilities in patterns and tactility and how bricks can take place in different constructions, such as houses, churches and floors. When asked about his experiences with fireplaces, Torben described his childhood memories in Switzerland. He was amazed to find a proper built fireplace that his scout friends and him could use standing.
For Torben a fireplace is simply a place at the ground « sitting together with good friends around the fire ».


5% UMT GES
ABC 3%