

# **ALL BODIES WELCOME**

*Reimagining Inclusive and Sensory Accessibility at the Aalborg  
Waterfront*

## **Thesis Title**

*All bodies welcome*

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*Finally, I am grateful to all the people who directly and indirectly contributed to the preparation of this report. Their support, conversations, and shared experiences have been valuable throughout this process.*

## ABOUT ME & MOTIVATION

*My name is Sazgar, and I was trained as an architectural engineer in Iran, where I also gained several years of experience in this field. As a Kurdish woman with a different religious background, meaning that I belong to a minority in terms of gender, ethnicity, language, and religion, I have repeatedly experienced the feeling that “this place belongs to the majority, and there is not enough space for you” in different forms throughout my life in Iran.*

*The feeling of being less capable or less entitled simply because of being different from the majority was something I lived with for many years.*

*This way of thinking is widely normalized and socially accepted in Iran. Concepts such as dominant and subordinate, better and worse, strong and weak, deserving and undeserving continue to reproduce themselves because the reasons behind these norms are rarely questioned. As a result, cycles of exclusion, inequality, and marginalization are constantly reinforced on larger scales.*

*With this lived experience, working in any field that can create equal opportunities for groups with different backgrounds and abilities compared to the majority has become a very important value in my life.*

*At the same time, design has always been one of my main interests. Therefore, as an Urban Design student, combining these two subjects together felt like a unique and meaningful opportunity for me.*

*In addition, the Aalborg waterfront has always been one of my Favorite public spaces in Aalborg, and during the three years I have lived here, I have visited it many times. During these visits, the noticeable presence of wheelchair users in the area always attracted my attention.*

*Studying at Aalborg University and engaging with the topics explored there gave me the opportunity to connect the main pieces of this project like a puzzle and eventually discover the theme of my thesis. I am grateful for this opportunity, which allowed me to combine my personal values with my interests and passions in design.*

## ABSTRACT

*This project, titled “All Bodies Welcome,” explores the extent to which the regenerated Aalborg Waterfront supports diverse bodily and sensory experiences, and how it can be reconfigured to move beyond minimum accessibility standards. While the site is often perceived as inclusive due to its relatively flat topography and provision of ramps, this research reveals that such measures alone are insufficient to ensure equal spatial experience for all users.*

*The study combines spatial analysis with sensory ethnography, drawing on theoretical frameworks such as Universal Design and Spatial Justice, as well as insights from embodied and sensory experience studies. Empirical input was gathered through interviews and informal conversations with users, particularly individuals with visual impairments and wheelchair users. These interactions highlighted how everyday design elements such as seating, edges, and circulation paths can unintentionally exclude certain groups by privileging specific bodily norms.*

*The findings demonstrate that accessibility is not solely a technical or regulatory issue, but also a sensory and experiential one. In response, the project proposes a set of design interventions aimed at fostering a more*

*inclusive urban environment. These include a guiding pathway for visually impaired users that integrates existing site elements, sensory rooms that provide shelter and support sensory regulation, and inclusive seating designs that enhance both detectability and social interaction.*

*Overall, the project argues for a shift from reactive, compliance based accessibility toward a proactive and integrated approach to inclusivity. By embedding diverse bodily and sensory needs at the core of the design process, urban spaces like the Aalborg Waterfront can evolve into environments that genuinely welcome all bodies.*

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## ***00 INTRODUCTION***

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## INTRODUCTION

*Designing based on able or standard bodies has, in many ways, become normalized in urban design practice. As designers, we often do not question why certain bodies are missing from specific spaces. For example, when we see stairs connected to a waterfront, we rarely ask why a wheelchair user is not present there. On the contrary, when we are faced with such discussions, many of us tend to ask: why should a wheelchair user be there at all?*

*This way of thinking reflects what is described as ableism, a system that values certain abilities over others and marginalizes those who do not fit these norms. As Wolbring (2008, p. 1) explains, “ableism values certain abilities, which leads to disability; the discrimination against the ‘less able’”. In this sense, design is not neutral but shaped by implicit assumptions about what a normal body is and how it should function. Hedvall and Ericsson (2024) similarly argue that design and even the language around accessibility can unintentionally reinforce separation and stigma by categorizing people through fixed labels rather than focusing on the spatial qualities and functions that support human variation.*

*There are different ways this exclusion is justified. In some cases, designers may believe that certain spaces are not safe for people*

*with different abilities and therefore try to protect them by limiting their access. Here exclusion is justified in the name of safety. However, this approach shifts responsibility away from design itself. If a person cannot use a space, it is not because of their disability, but because the space has not been designed to support diverse abilities. As Nielsen (2026) shows, many urban environments are shaped by “design practices shaped by invisible norms about how a ‘typical’ body is expected to be”, which results in physical, social, and even psychological barriers.*

*In other cases, designers may assume that people with different abilities simply do not need or want to use certain spaces. However, this assumption can only be challenged through direct engagement and conversation. Experiences from users demonstrate that being in public space is not only about visual aspects such as the view. For example, for blind users, the waterfront is not defined by sight but by other sensory and social experiences. Being present in such spaces is also about participation and interaction. As Nielsen (2026) shows urban environments can “restrict their possibilities for action” and shape how people are able to engage with space (Nielsen, 2026, p. 2).*

*Furthermore, Nielsen (2026) shows that these design decisions are not neutral but are rooted in broader social norms that prioritise certain bodies and abilities. As a result, people with different abilities often*

*have to adapt, compensate, and invest significant mental and physical effort to navigate spaces that are not designed for them.*

*In fact, participants describe how “even short trips require extensive planning” in such environments (Nielsen, 2026, p. 2). This highlights that the problem does not lie in the individual, but in the design of the environment itself.*

*Therefore, this project approaches design not as a process of creating spaces for a single ideal user, but as a process of questioning the norms that define who is included and who is excluded. By rethinking these assumptions and engaging with user experiences, it becomes possible to suggest interventions that support different bodies and ways of being in the Aalborg waterfront.*

## **Problem Statement**

*Which **bodily and sensory norms** are **embedded** in the regenerated Aalborg waterfront, and how can its design be **reconfigured** to support diverse bodies beyond **minimum accessibility standards**?*

## METHODOLOGY

*The research process began with collecting and analysing detailed information about the site from various online sources. In addition to this, the site was already familiar to the author of this project, as it is located in the city centre and has been experienced regularly over two years of study at the CREATE building in Aalborg. This familiarity provided a deeper understanding of the spatial, social, and contextual conditions of the waterfront.*

*In February, the site was visited and evaluated four times, including one visit at night and three visits during the day. These visits aimed to capture different spatial qualities, atmospheres, and patterns of use at different times. One of these visits was specifically dedicated to a sensory and embodied evaluation of the site, based on the theories of Sarah Pink and Philip Vannini. During this visit, sensory and embodied data were collected and recorded at five selected points across the site, focusing on elements such as sound, light, wind, movement, and spatial perception.*

*At the beginning of the project, the intention was to involve a larger number of participants with different physical and sensory abilities in order to broaden the empirical basis of the study. Emails were sent to several organizations at the beginning of the semester, and these organizations assisted*

*in distributing the request to potential participants.*

*However, no participants were recruited through these emails. As a result, the direct participant-based investigations within the project remained limited to a sensory walk-through conducted together with Nikolaj, who had previously collaborated with us the earlier semester, as well as smaller informal conversations with two wheelchair users encountered at the site. To partly compensate for this limitation, the study also incorporated additional empirical material and user experiences collected through previous interviews and research material provided by the project supervisor. This supplementary material supported the broader understanding of bodily and sensory experiences within urban space and informed parts of the analytical and design process.*

*In March, a site visit was conducted together with a blind participant as part of a general evaluation of the waterfront. This visit included an open and unstructured conversation about his experience of the Aalborg waterfront, its popularity for him as a blind user, and the reasons behind it, as well as the possibilities and limitations of his presence in the space. The participant, Nicolai, is a 35 year old man who grew up in Aalborg and is highly familiar with the city, although he currently lives outside Aalborg. He used to visit the waterfront regularly when living in the city.*

*Following the initial conversation, the same five previously selected points were re-evaluated through his sensory and embodied experience, in line with approaches of sensory ethnography and embodied spatial experience. This session was conducted as a walking interview and lasted for more than two hours, allowing for real time observation of how he navigates and experiences the space through his senses.*

*In April, informal conversations (small talks) were conducted with two wheelchair users. These discussions provided insights into their experience of being present at the waterfront, particularly in relation to the generally accessible conditions of the site, such as ramps and relatively flat surfaces. However, these conversations also revealed important challenges, especially regarding urban furniture. In particular, the existing benches were identified as not fully inclusive and not supportive of different bodies and needs.*

*In the next stage of the research, the collected sensory and embodied data from the five selected points were used to inform the placement strategy of sensory rooms, which were developed as a key design intervention in response to the site conditions. These sensory rooms aim to respond to different sensory needs and provide spaces for rest, protection, and alternative ways of experiencing the waterfront.*

*Furthermore, smaller design interventions were proposed in specific parts of the site*

*that were identified as less inclusive, such as the waterfront stairs. These interventions aim to improve accessibility and usability while maintaining the spatial character of the site. In addition, based on direct feedback from users regarding existing urban furniture, a new bench and seating system was designed as part of the proposal, with the aim of improving inclusivity and enabling shared use by people with different abilities.*

*Overall, this methodology combines site analysis, sensory and embodied evaluation, and user engagement in order to better understand how different bodies experience space. The study is partly informed by sensory ethnography (Pink, 2015) and draws inspiration from an embodied approach to spatial experience (Vannini, 2015), which emphasise understanding space through the body and the senses.*

*In addition, elements of walking interviews (Kusenbach, 2003) were used to gain real time insights into how users navigate and experience the site. The insights gained from this process directly informed the design interventions, aiming to move beyond standard solutions and respond to a wider range of users and experiences.*

## ***01 Theoretical Framework***

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# The Body as a Changing Condition

## What is a body, and what characterizes a body?

*Within this project, the body is understood not only as a biological or physical object, but as the medium through which people experience, sense, move through, and understand the world around them. Human interaction with space always takes place through the body and the senses. Movement, balance, vision, hearing, touch, strength, comfort, and physical effort all influence how environments are experienced and navigated.*

*At the same time, bodies are not fixed or universal conditions. According to Hedvall and Ericsson (2024), bodily diversity should be understood as a natural part of human life rather than as an exception outside the norm. Human bodies differ from one another and continue to change throughout life through age, illness, injury, exhaustion, pregnancy, sensory sensitivity, or temporary and permanent physical limitations.*

*At the beginning of life, humans are highly dependent on others for care, movement, and orientation. As people grow, they gradually develop abilities that allow them to become more independent in the world. However, these conditions do not remain stable throughout life. As people age, they may once again experience reduced mobility, sensory limitations, or environments that become physically demanding and resistant. In this sense, bodily vulnerability and dependency are not limited to a specific group but are shared human conditions that can affect everyone at different moments in life.*

*From this perspective, the issue is not about designing for “normal people” in contrast to “disabled people.” Instead, inclusive design responds to the continuously changing nature of human bodies and experiences. This understanding challenges able bodied assumptions within design practice, where spaces are often designed around standardized, physically independent, and visually oriented users. Within this project, the body is therefore understood as dynamic, diverse, and constantly changing throughout life.*

# Sensory Ethnography

## Understanding Space Through different senses - Sarah Pink

*In order to understand inclusivity beyond physical accessibility, it is necessary to consider how space is experienced through the body and the senses. The work of Sarah Pink provides an important theoretical foundation for this perspective. Through her development of sensory ethnography, Pink argues that experience is not only visual or cognitive, but multisensory and embodied.*

*Pink challenges the dominance of vision in spatial analysis and emphasizes that perception is always relational and situated. As she states:*

*“Perception is not simply a matter of receiving information through the senses, but is part of an ongoing process of engagement with the environment.”  
(Pink, 2015)*

*This understanding shifts the focus from space as a static object to space as something lived and continuously negotiated through movement, sensation, and interaction. According to Pink, the senses do not operate separately; rather, they work together in what she describes as a multisensory experience of place. She writes:*

*“We do not simply see, hear, touch, taste and smell in isolation; instead, our sensory experience is integrated and situated within our everyday practices.”  
(Pink, 2009)*

*This perspective is particularly relevant when examining public spaces such as waterfronts. These environments are not only defined by their*

*physical layout, but also by wind exposure, soundscapes, material textures, light reflections, temperature, and even subtle smells from water and surrounding activities. Such elements shape how comfortable, safe, or overwhelming a space feels to different individuals.*

*Pink also emphasizes the importance of movement in understanding space. Experience is produced through what she calls “emplacement,” a concept that highlights the inseparable relationship between body, mind, and environment. She explains: “Emplacement invites us to consider the interconnectedness of mind, body and environment.” (Pink, 2011)*

*This means that inclusivity cannot be evaluated solely through measurable dimensions such as width, slope, or distance. Instead, it requires attention to how bodies feel in space – how surfaces support or resist movement, how sound either guides or disorients, and how light can create clarity or discomfort.*

*In relation to this project, Pink’s theory supports an expanded understanding of inclusivity that goes beyond minimum accessibility standards. While accessibility ensures entry and navigation, sensory experience influences whether individuals can remain, orient themselves, and feel at ease. A waterfront may technically be accessible, yet strong wind, excessive noise, glare from water reflections, or a lack of tactile cues may create barriers for certain users.*

*By applying Pink's sensory perspective, the analysis of the Aalborg waterfront therefore considers not only spatial structure but also how the environment is encountered through the body. Inclusivity becomes connected to perception, atmosphere, and sensory comfort. Designing for diverse bodies thus requires attention to multisensory conditions and the ways in which space is lived rather than merely observed.*

# Embodied Spatial Experience

## The Meaning of Movement – Phillip Vannini

*While Sensory Ethnography emphasizes how space is perceived through the senses, the work of Phillip Vannini extends this understanding by focusing on movement, embodiment, and everyday practices. Vannini, working within the field of mobilities studies, argues that space is not merely something we observe, but something we actively perform and inhabit through our bodies. Vannini challenges static understandings of space and instead highlights how meaning emerges through lived, embodied engagement. As he writes:*

*“Embodiment is not something we have, but something we do.” (Vannini, 2015)*

*This statement shifts the perspective from viewing the body as a passive object moving through space to understanding it as an active participant in the production of place. Walking, balancing against wind, adjusting posture on uneven ground, or slowing down due to uncertainty are not neutral acts – they shape how space is experienced. In his work on non-representational methodologies, Vannini emphasizes that everyday practices, sensations, and movements are central to understanding social life. He argues:*

*“Social life unfolds through embodied practices, affects and performances that cannot be reduced to representations alone.” (Vannini, 2015)*

*For spatial design, this perspective is particularly relevant. It suggests that inclusivity cannot be assessed solely through visual analysis or technical measurements. Instead, attention must be given*

*to how bodies move within space: how surfaces support or hinder walking, how wind pressure alters balance, how sound influences orientation, or how spatial openness affects one's sense of exposure or comfort.*

*In the context of a waterfront environment, these embodied dynamics become even more pronounced. Strong winds may require physical adjustment and effort. Open edges without protective elements may influence posture, pace, and perceived stability. Textures underfoot may either guide or confuse movement. These bodily responses are not secondary; they are fundamental to how space is lived.*

*Vannini's approach encourages designers to observe and interpret space as a field of ongoing performances. Movement is not simply circulation; it is an expressive and sensory practice. Inclusivity, therefore, involves more than ensuring that a path is wide enough or technically accessible. It requires understanding how different bodies experience effort, balance, orientation, and rhythm within the environment.*

*By integrating Vannini's perspective into this project, the analysis of the Aalborg waterfront moves beyond static spatial evaluation and toward an embodied understanding of mobility. Inclusivity becomes connected not only to access, but to the quality of movement itself – whether bodies can move confidently, comfortably, and without excessive physical or sensory strain.*

# Universal Design

*Universal Design is one of the key theories related to inclusivity, and therefore it forms an important part of this project. This idea was originally developed to move beyond minimum accessibility standards and toward a broader and more inclusive understanding of how we shape space.*

*Ronald Mace defined Universal Design as: “the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design” (Mace, 1998).*

*What makes this definition powerful is the phrase “to the greatest extent possible.” It recognizes that complete universality is almost impossible, because every person has different needs, abilities. Instead of aiming for a perfect solution, Universal Design encourages designers to reduce exclusion as much as possible from the very beginning of the design process.*

*The Seven Principles of Universal Design, developed by the Center for Universal Design, help translate this vision into practice. These principles focus on equitable use, flexibility, intuitive understanding, perceptible information, tolerance for error, low physical effort, and appropriate spatial dimensions.*

*Over time, the understanding of Universal Design has expanded beyond physical mobility. Edward Steinfeld and Jordana Maisel describe Universal Design as: “a process that enables and empowers a diverse population by improving human performance, health and social participation” (Steinfeld & Maisel, 2012).*

*This broader perspective includes sensory, cognitive, and social aspects of experience. In spatial environments such as waterfronts, inclusivity therefore means more than simply providing ramps or accessible paths. Elements such as wind exposure, sound levels, surface materials, lighting conditions, and feelings of safety all influence how different bodies experience a space.*

*For this reason, Universal Design should not be understood only as a checklist of requirements, but as a way of thinking about space. It invites designers to consider whether a place only meets minimum standards, or whether it truly supports different bodies and sensory experiences in a meaningful way.*

## Spatial Justice

*The concept of spatial justice helps to understand how space can influence equality in cities. It suggests that the organization of urban space is not neutral, but rather reflects social and political decisions. As Edward Soja explains, “justice and injustice are infused into the multiscale geographies in which we live” (Soja, 2010, p. 1). In other words, the way spaces are designed, distributed, and organized can either support or limit equal participation in urban life.*

*Spatial justice therefore focuses on how different groups experience access to space. Even when a public space appears open and available to everyone, the design of that space may still privilege certain users while making it difficult for others to fully participate. This means that accessibility is not only about entering a place, but also about whether different people can use, navigate, and stay in that environment comfortably.*

*The concept is also closely connected to Henri Lefebvre’s idea of the “right to the city.” Lefebvre argues that urban space should not only be accessible but also inclusive of different forms of participation. As he writes, “the right to the city is far more than the individual liberty to access urban resources: it is a right to change ourselves by changing the city” (Lefebvre, 1996, p. 158). This perspective highlights that public spaces should support presence and participation for diverse groups of people for certain users.*

From this viewpoint, spatial justice encourages designers and planners to question whose needs are being considered in the design of urban environments. Design decisions such as seating placement, circulation paths, shelter, or edge protection can influence who feels comfortable staying in a space and who does not. A space may technically allow access, but still fail to support meaningful presence for certain users.

In the context of the regenerated Aalborg waterfront, the idea of spatial justice provides a useful lens to examine how the space accommodates diverse bodies. Rather than only asking whether the waterfront is accessible, this perspective raises a broader question: who is actually able to remain, participate, and experience the waterfront environment. This shift from access to presence becomes an important starting point for exploring more inclusive spatial interventions.

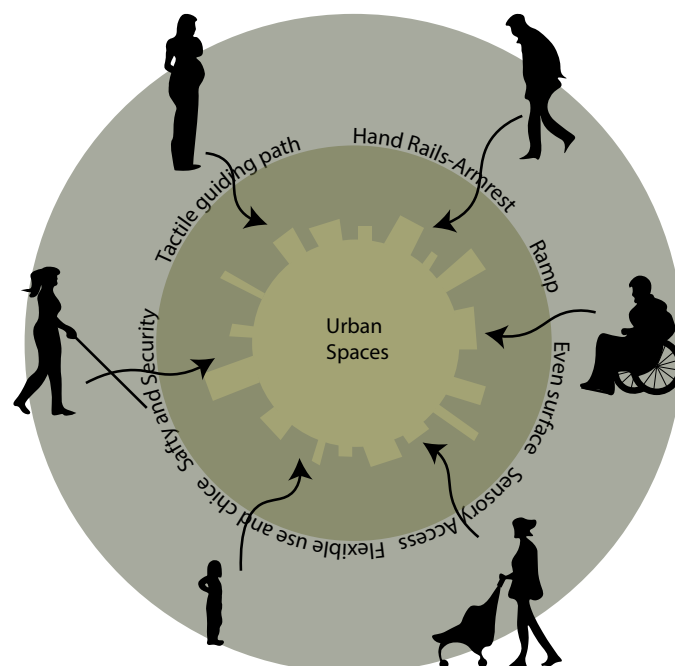


Figure 1. Relationship between Body, Design and Spaces. author.

## **02 Analysis**

### ***Data-Centered Environmental and Spatial Analysis***

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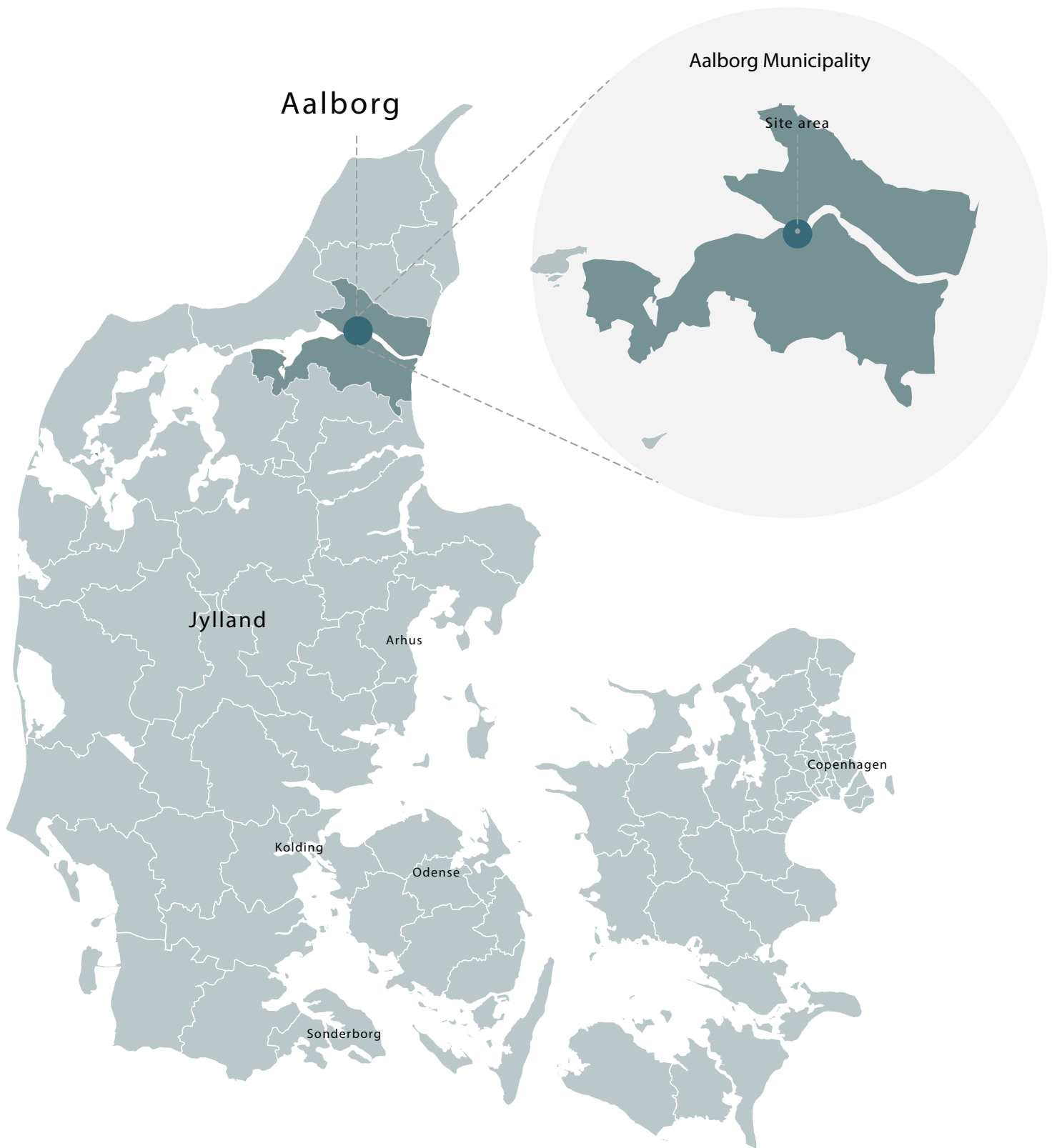


Figure 2. Site location Within Denmark and Aalborg Municipality. Adapted by author.



Figure 3. Aerial view of the site in 2025. Google Earth, edited by author.

**57°02'57"N 9°55'45"E**

### *Location*

The project area is located along the central waterfront of Aalborg, in close proximity to the city centre. The site extends linearly along the harbour edge and is situated between the Utzon Center to the west and Musikkens Hus to the east.

The site is directly adjacent to the waterfront, with the Limfjord forming its northern boundary, while the southern edge is defined by urban blocks and infrastructure. Its position places it between cultural buildings, public spaces, and pedestrian routes within the inner city.

The geographical coordinates provided represent the approximate central reference point of the project area, while the full extent of the site is defined by the marked project boundary.



Figure 4. Aerial view of the site in 2025. Google Earth, edited by author.



Figure 5. Satellite view of the site in 2025. Google Earth, edited by author.



Figure 6. Aerial view of the site in 2010. Aalborg kommune, edited by author.



Figure 7. Satellite view of the site in 2010. Aalborg kommune, edited by author.

## Historical context

The study area is located along the central waterfront of Aalborg, next to the Limfjord, and includes the areas around Nordkraft and Musikkens Hus. In the past, this part of the city was mainly used as an industrial harbour area, with port infrastructure, energy production, and very limited public access to the waterfront (Aalborg Kommune, 2006).

From the late 1990s, after industrial activities started to decline, the area became part of a wider waterfront redevelopment process. Several former industrial buildings were reused or replaced by cultural, educational, and public functions. Important examples of this transformation are the reuse of Nordkraft and the construction of Musikkens Hus (Aalborg Kommune, 2011). Today, the area is a post-industrial waterfront that has been reshaped through different planning initiatives to reconnect the city centre with the waterfront.

Although these changes have improved public access and made the area more visible, the planning focus has mainly been on movement, functions, and the overall image of the city. Because of this, the waterfront is not experienced in the same way by all users, and some groups may find the space less comfortable or harder to use.

the cultural transformation of the site developed over time, beginning with the completion of the Utzon Center in 2008, followed by the CREATE building of Aalborg University around 2015, and the completion of Musikkens Hus in 2014–2015.

Scale 1/10.000

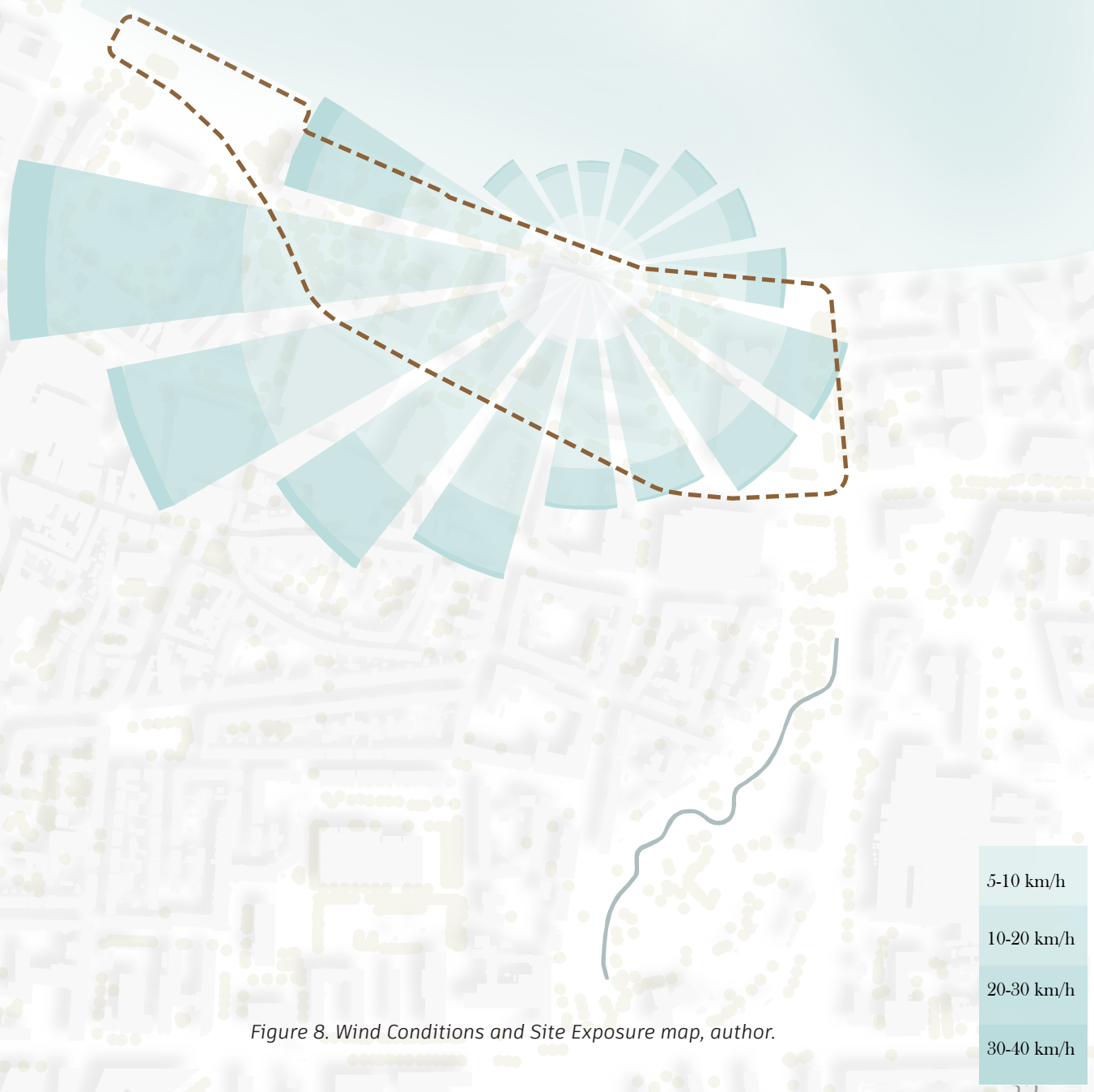


Figure 8. Wind Conditions and Site Exposure map, author.

## Wind Conditions and Site Exposure

Wind conditions in Aalborg are predominantly influenced by south westerly winds, which represent the most frequent wind direction on a long term climatic scale. In addition, westerly and north westerly winds also occur regularly, particularly during colder periods of the year (Danish Meteorological Institute, n.d.).

Despite the statistical dominance of south westerly winds, north westerly winds are more strongly perceived within the project site. This is primarily due to the site's open exposure along the waterfront, where the northern and north western edges directly face the Limfjord without significant natural or built wind barriers. As a result, winds approaching from these directions reach the site with limited obstruction and higher perceived intensity.

Furthermore, north westerly winds are often associated with lower temperatures, increasing the effect of wind chill and contributing to greater thermal discomfort for pedestrians. This combination of open waterfront exposure and colder wind conditions intensifies the user's experience of north westerly winds, particularly along the northern edge of the site.

▲ Scale 1/6.000

■ January  
■ April  
■ July



Figure 9. Shadow and Thermal Exposure map, author.

## Shadow and Thermal Exposure

This map illustrates the shadow conditions of the site throughout different months of the year and highlights how seasonal changes influence the spatial experience of the waterfront. As can be observed, in January and generally during the winter months, the amount of shadow cast by the surrounding buildings on the pedestrian path located on the northern side of the site is very high. As a result, large parts of the walking areas remain in shade for long periods of time during the day. This condition strongly affects the pedestrian experience during colder months and increases the feeling of coldness and exposure within the space, making the environment less comfortable for staying, walking, or resting outdoors.

In general, shadow influences almost the entire site during winter months, creating colder and less inviting public spaces. Only the western side of the site remains less affected by shadow due to the absence of tall buildings in that area, which allows more sunlight to reach the ground surface. This creates a clear environmental contrast between different parts of the site during wintertime.

During the warmer months, however, the amount of shadow decreases significantly as the sun angle changes. In this period, the waterfront edge can become almost fully exposed to direct sunlight for most of the day. While this improves thermal comfort during some periods, it can also lead to excessive solar exposure during hotter days, especially along the open waterfront areas where there is limited protection from the sun. In other words, the waterfront edge is exposed to extreme cold and heavy shadow during winter months, while in summer and warmer seasons it becomes highly exposed to direct sunlight and heat.

Scale 1/6.000

- Green areas
- Trees
- Limfjorden
- Site



Figure 10. Blue and Green Structure map, author.

## Blue & Green Structure

This map illustrates the existing blue and green structure of the site. The Limfjord is located along the northern edge, forming a continuous blue boundary that clearly defines the site both physically and visually. The waterfront acts as a strong natural edge and establishes a distinct spatial identity for the area.

Within the site, several pieces of green areas are located between buildings. These green spaces are separated from one another and are not physically connected. In addition, several trees are scattered throughout the site, mainly along streets and around buildings; however, they do not form a continuous green corridor. As a result, the overall green structure appears fragmented and lacks spatial continuity. There is no clear green network linking the open spaces together or connecting them directly to the waterfront.

Although the site benefits from a strong blue presence along its northern boundary, the internal green structure lacks coherence. The presence of significant buildings between the green areas limits the possibility of connecting them into one continuous green network. This spatial condition reflects an urban morphology that prioritizes architectural presence and direct waterfront accessibility over ecological continuity.

In conclusion, the site possesses a strong blue identity due to the Limfjord, while its internal green spaces remain distributed and fragmented. Instead of enforcing physical continuity, future design strategies may focus on enhancing the quality, sensory experience, and local accessibility of each individual green space.

Scale 1/6.000

- 1 Musikkens hus
- 2 Creat (Aalborg university)
- 3 Utzon center
- 4 Residential buildings
- 5 Green areas
- 6 Car parking
- 7 Bicycle parking
- 8 Hotel (Pier 5 Hotel)
- 9 Restaurant
- 10 FOA (Trade Union)
- 11 Student residence



Figure 11. Land Use map, author.

## Land Use

According to the Kommuneplan, the site is designated as a mixed-use zone. As a result, a diverse range of users and activities are present throughout the area. The site accommodates various functions including a concert hall (Musikkens Hus), university buildings (CRE-AT – Aalborg University), the Utzon Center (museum and cultural institution), residential buildings, student housing, a hotel, restaurants, and parking facilities.

The residential buildings and the hotel represent permanent, 24-hour functions and contribute to continuous occupancy of the site. In contrast, the Utzon Center, the university building, and the FOA building are primarily daytime functions and are generally open until approximately 17:00.

Musikkens Hus plays a particularly important role in activating the site during evening hours. Most of its events begin after regular working hours, typically ending around 23:00. Based on the published seasonal programs, the average number of events varies throughout the year, ranging from approximately one to three events per week in autumn and winter, two to three events per week in spring, and fewer events in summer, generally between one and two per week. This seasonal variation directly influences patterns of evening and night-time activity in the eastern part of the site.

The Sanya Restaurant, located in the central part of the site, operates until 22:00. However, since its main entrance is positioned along Nyhavnsgade (as shown in the site entrances analysis), visitors are generally not drawn into the interior of the site, which limits its contribution to internal evening activation.

Several areas within the site are allocated to car and bicycle parking, which are discussed in more detail in the parking analysis. While these functions support accessibility, they do not significantly contribute to active public life.

Overall, the dominant character of the site is defined by public and semi public functions. This mix of uses plays a key role in maintaining activity beyond typical working hours.

Spatially, the eastern part of the site, where Musikkens Hus is located, appears more active during the evening due to event based activity. In contrast, the western part contains larger open spaces and tends to appear quieter at night. However, due to its proximity to the city centre, this western section experiences considerable movement and urban activity during daytime hours.

Scale 1/6.000

- Paths (Hard)
- - - Paths (Soft)
- ▨ Districts
- 🏢 Landmarks
- ▬ Edges
- ☀ Node
- ☑ Water



Utzon Center



Musikkens Hus



Creat

Figure 12. Legibility map, author.

# Legibility Analysis of the Site

*(Based on Kevin Lynch – Local Scale)*

This map illustrates the legibility structure of the site based on Kevin Lynch's theory of imageability at a local scale. As shown in the diagram, three prominent and architecturally distinctive buildings are located within the site: the Utzon Center, Musikkens Hus, and Creat. These buildings function as potential landmarks due to their unique form, scale, and symbolic significance within the urban fabric.

The site is defined by two strong edges. One edge is formed by the waterfront along the Limfjord, which acts as a natural boundary. The second edge is Nyhavns-gade, a heavily trafficked urban road that creates a clear physical and sensory separation from the inland areas. Three nodes are identified at the entrances of the landmark buildings. These nodes represent potential gathering points where pedestrian flows concentrate and where different movement patterns intersect. Such locations may accommodate social interaction and temporary occupation during events or daily activities.

The circulation network is divided into hard paths (primarily vehicular routes) and soft paths (pedestrian connections). The waterfront promenade represents the most dominant pedestrian path, while internal walkways connect different parts of the site. In addition, districts are defined according to different spatial characters and atmospheres within the site, reflecting variations in openness, enclosure, and functional use. According to Kevin Lynch (1960), urban legibility depends on the clarity of five elements: paths, edges, districts, nodes, and landmarks. In this site, the architectural distinctiveness of Musikkens Hus and the Utzon Center creates strong landmarks that enhance orientation and contribute to imageability.

The waterfront functions as a positive, open edge, while Nyhavns-gade acts as a more rigid and potentially divisive boundary due to traffic and noise, which may reduce permeability and pedestrian comfort. The nodes located at the entrances of landmark buildings support orientation and strengthen users' cognitive maps. Overall, the site demonstrates relatively high legibility at a local scale. However, the strong sensory contrast between the calm waterfront and the trafficked street may result in differentiated spatial experiences for different user groups.

Scale 1/6.000

- Inactive Façade
- Impermeable Edge
- Site Entrance
- Buidling Entrance



Figure 13. Entrances and Openings map, author.

## Entrances and Openings

The map shows how the site can be accessed and how open or closed its edges are. The northern edge of the site, which is located along the waterfront, is largely impermeable. The continuous edge and the physical boundary of the water limit direct access from this side. In contrast, the southern edge of the site is much more permeable. Several openings between the buildings allow people to enter the site from different points. These gaps create multiple connections between the surrounding urban area and the waterfront.

The site is also accessible from the western side, where a large open green space begins. From there, the site can be reached from the waterfront edge and from behind the Utzon Center building. Accessibility from the eastern side of the site is slightly more time consuming compared to the western side. This is mainly because the buildings in the eastern part are longer and create a more continuous urban edge. However, the openings between buildings in this area are generally larger.

Another important spatial characteristic is the orientation of the building entrances. Most entrances of the existing buildings are oriented east west rather than north south. This arrangement encourages movement through the interior parts of the site and helps keep the internal spaces active and dynamic.

Overall, In this site, the stronger permeability from the south and west supports movement toward the waterfront, while the northern edge remains visually open but physically limited.

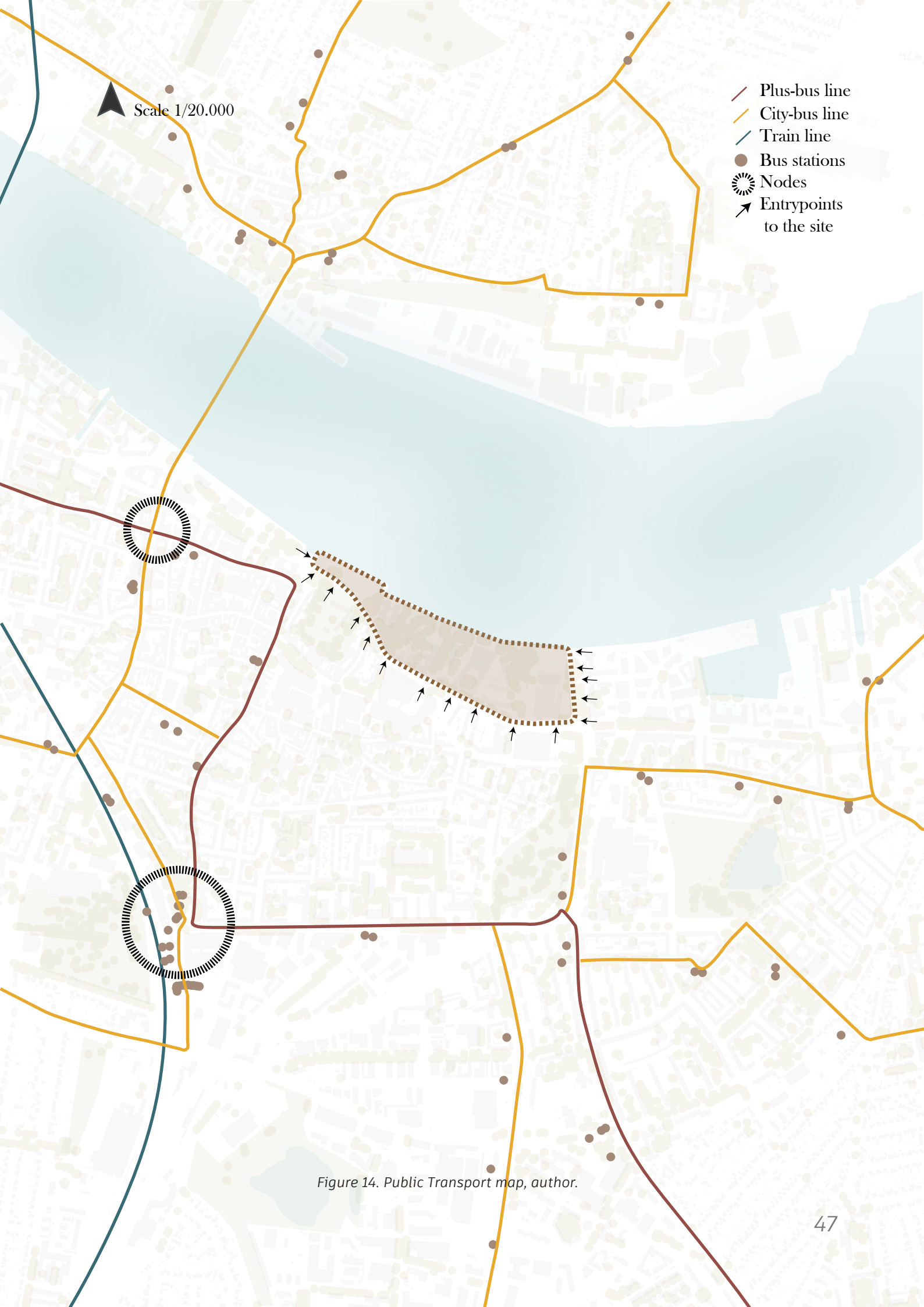


Figure 14. Public Transport map, author.

# Public Transport

## *Accessibility of the site*

This map illustrates the public transport network surrounding the site, including the Plusbus line, city-bus lines, the train line, bus stations, key nodes, and main entry points to the area. The diagram highlights the spatial relationship between the site and the existing public transport infrastructure within the broader urban context.

The westernmost edge of the site is located approximately 250 meters from the nearest bus stop, which serves the Plus bus line. The Plus bus represents a higher capacity and strategically important public transport corridor within the city. Similarly, the easternmost edge of the site is also positioned around 250 meters from the nearest city bus stop, which connects the area to other parts of the urban network. When considering the site as a whole, the walking distance from its central area to both of these bus stops ranges between approximately 400 and 500 meters. This means that even users located in the middle of the site remain within a reasonable walking distance to public transport services.

Overall, the site is situated between two significant bus corridors, providing access from both the western and eastern sides. This dual accessibility enhances the site's connectivity and integrates it into the wider public transport system of the city. The presence of multiple nearby bus lines increases flexibility for users and strengthens the site's potential for sustainable and transit oriented mobility.

According to international planning standards, a comfortable walking distance to a bus stop is generally considered to be between 300 and 500 meters (Calthorpe, 1993; Gehl, 2010). In this case, the site edges are within a highly accessible range at approximately 250 meters, and the central area remains within the accepted 400–500 meter threshold. This suggests that the site has a good level of public transport accessibility in quantitative terms. The presence of both a high capacity Plusbus corridor and a city bus line further enhances connectivity and supports sustainable mobility.

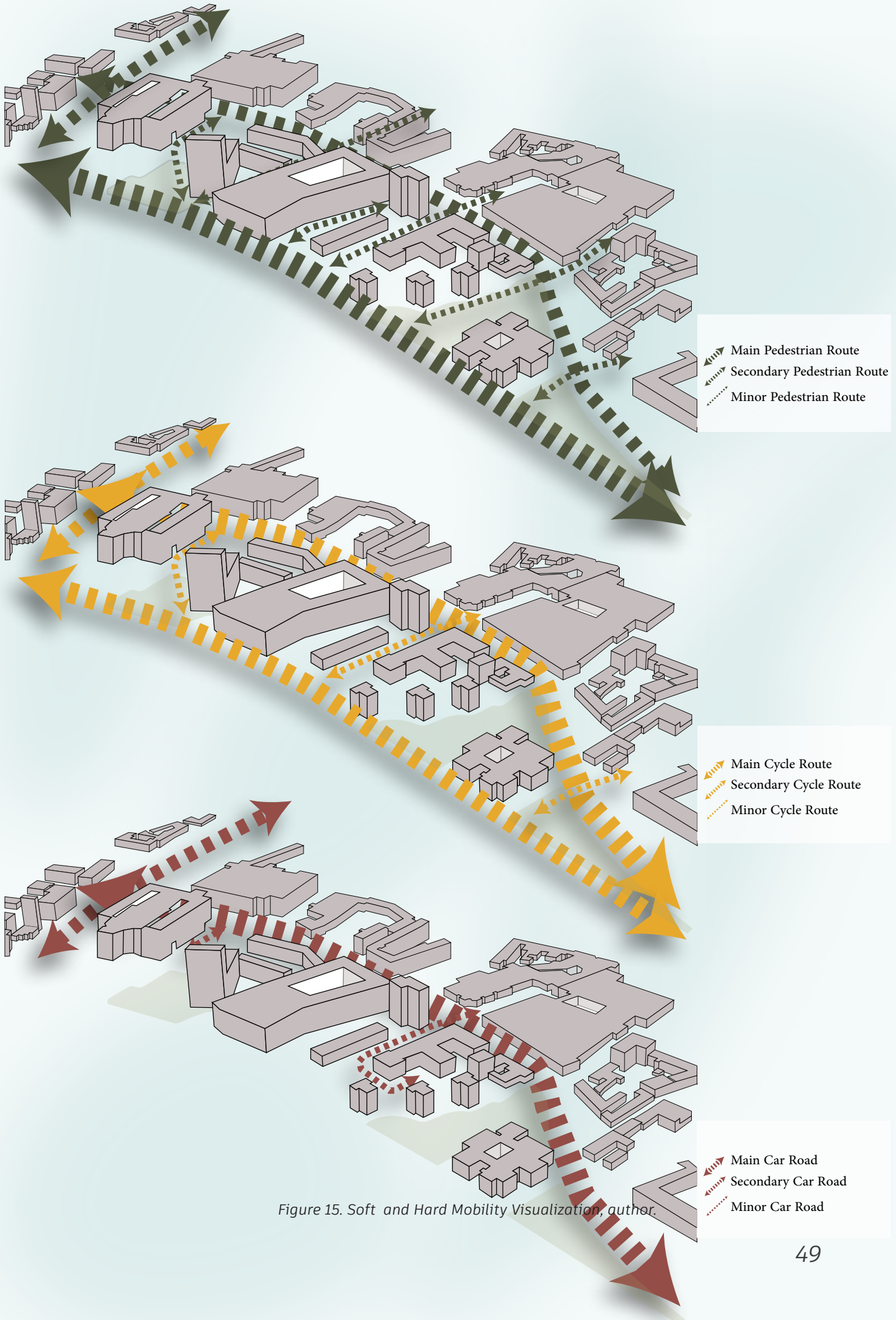


Figure 15. Soft and Hard Mobility Visualization, author.

## Soft & Hard Mobility

This diagram shows the soft and hard mobility structure of the site, including pedestrian, cycle, and car networks. The hierarchy of movement clearly defines how different user groups experience the area.

The main pedestrian route is located along the Limfjord waterfront. This promenade runs between the water and the buildings and has the highest priority for walking. It offers open views, natural light, and direct access to the waterfront. From an inclusive design perspective, this route has high potential because it is wide, visually open, and separated from heavy car traffic. It creates a calmer and more comfortable environment, especially for children, elderly people, and people with sensory sensitivities.

Secondary pedestrian routes are located between the buildings and along Nyhavns­gade. These routes are more enclosed and sometimes influenced by traffic noise from nearby streets. Minor pedestrian paths connect internal spaces but are less dominant. Overall, the waterfront remains the strongest soft mobility spine of the site.

In terms of cycling, the main cycle route is along Nyhavns­gade, behind the buildings. This route has high intensity and functions as an important urban mobility corridor. Karolinelundsvej, running almost northsouth, is another strong connection. The waterfront cycle route is secondary in intensity but still widely used. However, in some areas, the overlap between cyclists and pedestrians may create spatial tension and reduce comfort, especially for vulnerable user.

Regarding car mobility, Nyhavns­gade and Karolinelundsvej form the main hard mobility edges of the site. These streets carry heavy traffic and generate noise, speed, and physical barriers. From an accessibility perspective, these roads can create psychological and physical separation between the waterfront and the inner city.

▲ Scale 1/6.000

- Over 75 db
- 70-75 db
- 65-70 db
- 60-65 db
- 55-60 db



Figure 16. Noise map, author.

## Noise

Based on the map, the highest level of noise pollution occurs along Nyhavnsgade Street, where traffic generates continuous sound levels above 75 dB. Because this road runs along the southern edge of the site, the noise spreads primarily in that direction and forms a strong acoustic corridor parallel to the waterfront.

However, the buildings located along this street act as a physical barrier, reducing the penetration of traffic noise toward the northern parts of the site. In many areas behind these buildings, the noise level decreases, which indicates that the built structures partially protect the interior spaces from direct exposure to road traffic noise.

Nevertheless, in locations where there are large openings without buildings, such as the green spaces surrounding the Utzon Center, the noise is able to travel further and reach the waterfront edge. In particular, on the western side of the Utzon Center, where the green strip is narrower and the spatial buffer is smaller, the noise level remains relatively higher compared to other parts of the waterfront.

Therefore, according to the map, the northeastern part of the site along the waterfront, extending toward Utzon Park, appears to be the quietest area of the site, with noise levels mostly less than 55–60 dB.

▲ Scale 1/6.000

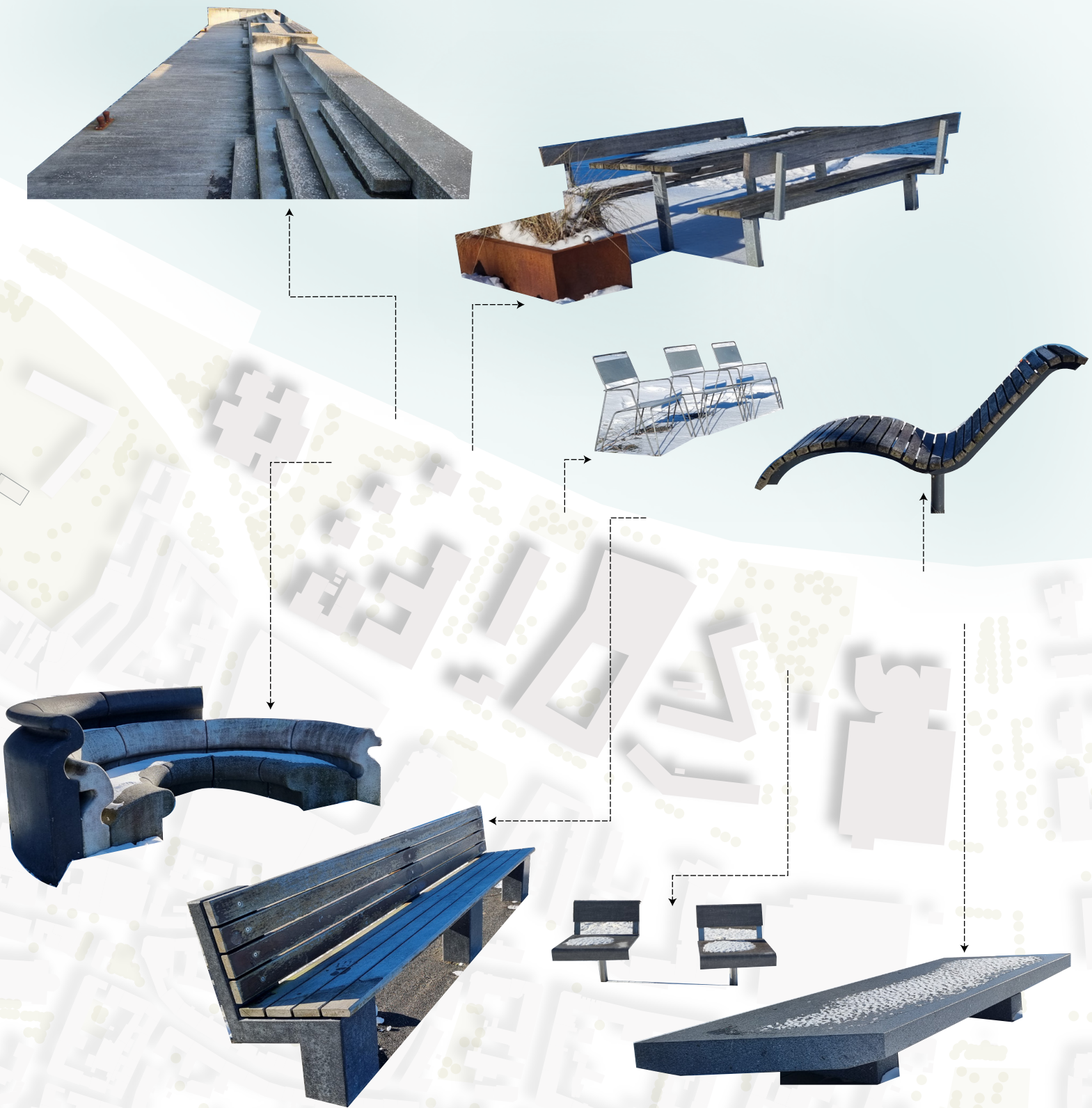


Figure 17. Seating typology diagram, author.

## Seating Typologies and Spatial Use

This map illustrates the different types of benches and seating areas located across the site and their spatial distribution in relation to user presence and activity. The variety of seating arrangements supports different forms of staying, resting, gathering, and observing within the waterfront environment. The seating elements are mainly made of wood, metal, and stone, materials that can become challenging under rainy, snowy, or cold weather conditions, especially in the Danish climate where exposure to wind and moisture strongly affects outdoor comfort.

Based on site observations, the waterfront terraces and benches located directly near the water were used more frequently compared to other seating areas across the site. This higher level of use did not necessarily seem to be related to the form, ergonomics, or material quality of the furniture itself. Instead, the strong attraction appeared to come mainly from the physical and visual proximity to the water.

The possibility of sitting close to the waterfront, touching the water, observing movement, and experiencing the atmosphere of the harbor seemed to encourage people to stay longer in these areas. In contrast, some seating areas placed further away from the waterfront remained less active despite offering similar seating conditions. This suggests that the relationship between seating and surrounding spatial qualities can play a more important role than the furniture design alone.

At the same time, several seating types across the site present limitations regarding comfort and inclusivity. Hard materials, cold surfaces, and exposed positions reduce usability during colder seasons and may not equally support people with different physical abilities or sensory needs. Therefore, the mapping of seating typologies was also used as part of the broader analysis of embodied spatial experience and inclusivity within the waterfront environment.

## **02 Analysis**

### ***Human-centered Sensory and Embodied Analysis***

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## Embodied Experience and Sensory Analysis

To better understand how different bodies experience the waterfront, a sensory ethnography and embodied spatial experience analysis were carried out at five different points across the site. The method was inspired by sensory ethnography approaches discussed by Sarah Pink and embodied experience theories by Phillip Van-nini. Instead of focusing only on the visual qualities of the site, the analysis explored how the environment is experienced through the body, movement, and the senses.

The analysis was conducted twice. First, I experienced and documented the site myself through walking, sitting, pausing, listening, and interacting with the environment in February. During this process, information related to the five senses sight, sound, touch, smell, and thermal sensation was recorded. In addition, movement impulses and body reactions were carefully observed, including moments where the body naturally slowed down, accelerated, changed direction, avoided certain areas, searched for protection, or felt encouraged to stay longer in a space. Factors such as wind exposure, noise levels, material textures, spatial openness, and feelings of comfort or discomfort were also documented.

The second analysis was carried out together with a blind participant in March at the same five locations. The participant described their sensory and bodily experience while moving through the site. In this process, hearing, smell, and the feeling of coldness or wind exposure became the dominant senses the participant relied on and repeatedly emphasized during the conversations. Sounds such as footsteps, water movement, traffic, and sound reflections from surrounding buildings played an important role in orientation and spatial understanding. Smell also helped the participant recognize changes between different areas of the site, while thermal sensations such as wind intensity, humidity, and cold surfaces strongly affected feelings of comfort and safety.

Comparing these two embodied experiences demonstrated that urban spaces are not experienced equally by all bodies. The analysis showed how movement, sensory perception, and bodily comfort are directly shaped by spatial design decisions. The insights gained from this process later informed the design interventions and contributed to developing a more inclusive understanding of the waterfront experience. In addition, the findings from the sensory ethnography and embodied analysis were also used as part of the placement strategy for the sensory rooms.

In addition to the sensory walk conducted together with Nikolaj, who is blind, informal conversations were also carried out with two wheelchair users in order to gain further insight into how different bodies experience the waterfront environment. While these conversations were shorter and less structured than the sensory walkthrough, they still provided important embodied and experiential knowledge related to the site.

One wheelchair user explained that although physical access and movement through the site felt relatively manageable, some social situations within the space remained exclusionary. For example, many of the existing seating arrangements along the waterfront did not allow wheelchair users to comfortably position themselves together with friends within the same social setting. As the participant described, this often meant that friends had to remain standing beside the wheelchair near the waterfront edge, or that the wheelchair user had to stay slightly separated from seating areas where others were gathered around tables or benches. This made direct eye contact and natural social interaction more difficult and created a feeling of social distance within shared public space. The conversation highlighted how exclusion is not only related to movement and accessibility, but also to social interaction, and the ability to participate equally within public space.

The second wheelchair user described the site as generally accessible in terms of navigation and movement across the area. This perspective contributed a different type of embodied knowledge, showing that certain aspects of the regenerated waterfront already support mobility and independent movement for some wheelchair users.

Although these contributions were based on smaller conversations rather than full sensory walkthroughs, they still formed part of the embodied and sensory understanding of the site. Together with the sensory ethnographic observations and the walkthrough with Nikolaj, these interactions helped broaden the analysis by including different bodily perspectives, sensory experiences, and spatial challenges connected to the waterfront environment.

On the following pages, the selected observation points are marked with different colors, and the collected observations and sensory experiences related to each location are presented using the same color system for clarity and comparison. First, my own embodied and sensory experiences are presented, followed by the observations collected together with the blind participant at the same locations.

Scale 1/6.000

- Sensory Observation point 1
- Sensory Observation point 2
- Sensory Observation point 3
- Sensory Observation point 4
- Sensory Observation point 5
- View Direction

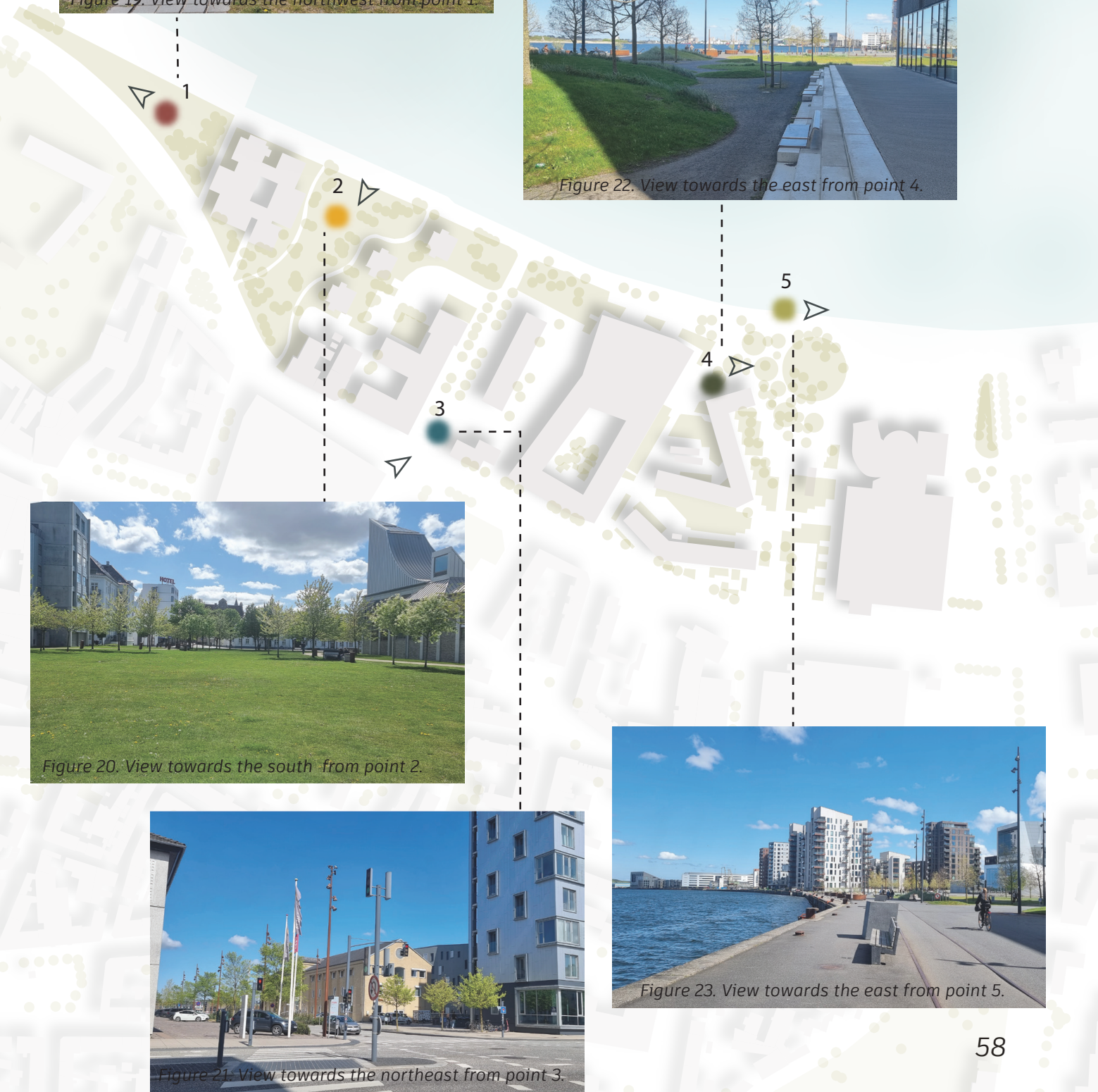


Figure 18. Mapping of embodied and sensory analysis points, author.

Sense	Observation	Movement Impulse
Sight	The space looked open and wide. The view of the Limfjord felt calm, while the walking area added quiet movement. The winter colors made the area appear cold and muted.	There is an open green area, yet I feel no desire to stay; I feel that this is a transitional space, and I need to pass through it rather than stay. There is little to see, feel, or engage with.
Sound	Continuous traffic noise overwhelmed the auditory field	
Smell	There was an absence of noticeable scent	Body Reaction
Touch (wind, surface, temp)	It had recently rained, and the area had been covered with snow a few days earlier, which made the ground wet and cold	Although I felt cold, after a short pause and slowing down, my body decided to increase its speed again.
Taste (air quality)	The air had a cold, sharp edge.	

Table 1. Sensory and embodied observations recorded by the author at point 1, 2026.

Sense	Observation	Movement Impulse
Sight	One side feels calm, while the other appears more lively due to the nearby street. My gaze does not naturally prioritise one direction over the other.	I experienced a slight sense of disorientation, and my body lost its tension.
Sound	The relatively distant sound of passing vehicles reinforced the sense that no major activity was occurring nearby, contributing to a calmer and more stable spatial atmosphere	
Smell	The smell of damp soil lingered	Body Reaction
Touch (wind, surface, temp)	The partially melted snow left the ground wet and cold, which reduced comfort and discouraged longer stay	While I was visually scanning the space, my body was slowly wandering around the area. However, because some parts were wet and muddy, my exploration did not last long, and I decided to leave.
Taste (air quality)	The air felt fresh and clean	

Table 2. Sensory and embodied observations recorded by the author at point 2, 2026.

Sense	Observation	Movement Impulse
Sight	Visually, the three-way intersection feels active and dynamic. Cars constantly change direction, and the movement creates a sense of visual busyness. The traffic signs and road markings add structure but also increase visual complexity	The space did not feel suitable for staying, and I felt the need to make a quick decision about where to go next and move away.
Sound	Continuous traffic noise overwhelmed the auditory field	
Smell	There was an absence of noticeable scent	Body Reaction
Touch (wind, surface, temp)	The passing cars did not create strong physical vibrations, but the continuous airflow from the traffic made my body feel more alert and slightly tense	My attention became fully focused, and I kept quickly looking at the red traffic lights and the cars and bicycles around me to find a safe moment to cross the street. My steps became faster and more hurried.
Taste (air quality)	The air felt fresh and clean	

Table 3. Sensory and embodied observations recorded by the author at point 3, 2026.

Sense	Observation	Movement Impulse
Sight	In this area, the presence of the CREAT building and the residential building limits the viewing angle to about 100 degrees toward the Limfjord. The waterfront appears close and naturally attracts attention.	I stood in this area for a short time and felt calm. Although I knew it was not a place for stopping or sitting, the enclosure created by the buildings behind me and on my left gave me a feeling of protection from the wind.
Sound	Soft ambient sounds and distant human voices created a layered and balanced soundscape, encouraging slower movement	
Smell	There was an absence of noticeable scent	Body Reaction
Touch (wind, surface, temp)	Reduced wind intensity and warmer surfaces created a softer tactile atmosphere, encouraging slower movement.	Here, my body feels more relaxed, and my muscles are less tense. My gaze is focused mainly in one direction, and I feel a sense of safety
Taste (air quality)	The air felt fresh and clean	

Table 4. Sensory and embodied observations recorded by the author at point 4, 2026.

Sense	Observation	Movement Impulse
Sight	Here, the view is fully open, and the Limfjord feels very close and clearly visible. The surrounding buildings appear farther away, which enhances the overall sense of visual openness	The damp bench beside me did not allow me to sit, which reduced the possibility of staying. At the same time, the open view of the Limfjord and the lower level of traffic noise, together with the quiet voices of people passing, made the space feel calm and inviting.
Sound	Near the waterfront, the soundscape was dominated by wind and distant human activity, while traffic noise remained subdued. This acoustic balance contributed to a sense of calmness and perceived safety.	
Smell	There is a faint smell of water.	Body Reaction
Touch (wind, surface, temp)	The wind pressed steadily against my body, and the cool air sharpened the sensation of exposure. The hard concrete surface underfoot offered little physical comfort, reinforcing the transient nature of the space.	My body tightened because of the cold. However, as I walked slowly, my head kept turning toward the Limfjord, and I felt a strong desire to look at it.
Taste (air quality)	The air felt moist and marine	

Table 5. Sensory and embodied observations recorded by the author at point 5, 2026.

Sense	Observation	Movement Impulse
Sight	-	<p>Walking straight is kind of difficult. There's no real way to figure out where you are. t's just a very wide open space... (The lack of spatial markers, tactile guidance, or strong sensory cues makes orientation extremely difficult for visually impaired users.)</p> <p><b>Body Reaction</b></p> <p>There's nothing that makes you want to just stay in this specific spot. There is nothing for you to enjoy right here.</p> <p>The participant expresses no emotional or physical desire to remain in the space, indicating low sensory attraction and poor place quality.</p>
Sound	The traffic kind of ruins it . It's a little echoy, but that's about it. It's hard to hear.	
Smell	Not much. not really anything out of the ordinary. It's kind of a little salty, probably from the water.	
Touch (wind, surface, temp)	It just feels like grass mostly. It's pretty chilly	
Taste (air quality)	It's pretty chilly.	

Table 6. Sensory and embodied observations recorded with the blind participant at point 1, 2026.

Sense	Observation	Movement Impulse
Sight	-	<p>It's still easier to kind of find it going around. People kind of spread out. So it's not overwhelming.</p>
Sound	It's more peaceful because the street's not here anymore. You'll hear people too... lots of people. You can still hear some traffic noise.	
Smell	Mostly like... water a little bit It's probably a little bit of food from some restaurant somewhere. It's probably a little more present now.	<p><b>Body Reaction</b></p> <p>This is usually a place I would relax.. This is probably somewhere I would bring my laptop and get some fresh air. This is probably somewhere I would have lunch.</p>
Touch (wind, surface, temp)	It's really open, which is nice. The grass is pretty soft.	
Taste (air quality)	That's annoying, he smokes. It's more peaceful because the street's not here anymore.	

Table 7. Sensory and embodied observations recorded with the blind participant at point 2, 2026.

Sense	Observation	Movement Impulse
Sight	-	It feels more like not as open.  (The enclosed spatial structure created by surrounding buildings may help provide clearer spatial boundaries, which can support orientation compared to very open spaces.)
Sound	It's a little calmer. It's more quiet. We're further away from the traffic now. You can still hear it, but it's not as obvious. Most of what changes now is actually the sound.	
Smell	It's mostly the food. I think it's actually the restaurants.	<b>Body Reaction</b>  probably better. It's less distracting. Especially if you're doing something while you're here.
Touch (wind, surface, temp)	It's more closed off. It feels more like not as open.	
Taste (air quality)	It's a little cooler. It's quieter and less distracting.	

Table 8. Sensory and embodied observations recorded with the blind participant at point 4, 2026.

Sense	Observation	Movement Impulse
Sight	-	People walk a lot or bike a lot through here.  (There was no tactile guidance to help him find a way to cross)
Sound	There's a lot of bike and people traffic, while crossing to the edge but no car traffic.	
Smell	The food smell kind of stronger from here.	<b>Body Reaction</b>  This feels more like it's meant for passing through.  (He couldn't find the seating and he almost tripped because of a small level change in the pavement while trying to move quickly)
Touch (wind, surface, temp)	There is an elevation change to reach there.	
Taste (air quality)	It's a little windier. The wind obviously changes direction.	

Table 9. Sensory and embodied observations recorded with the blind participant at point 5, 2026.

## Waterfront Terraces Through Different Bodily Needs

The existing seating areas along the waterfront appear open and welcoming, but they are not fully inclusive. These seating spaces are formed by concrete steps, ledges, and lowered platforms. While this design encourages informal use and allows people to sit freely near the water, it also requires a certain level of physical ability. Users must be able to lower themselves onto hard surfaces and stand up again without support. As a result, the space mainly works well for agile and able-bodied users, while it can be difficult or uncomfortable for others.

Several groups may experience barriers when using these seating areas. Wheelchair users, for example, cannot easily access the lower levels where people sit closest to the water. The stepped structure limits their ability to reach these areas or transfer safely to the seating surfaces. Elderly users may also struggle because the seats are low and there are no handrails or armrests to assist them when sitting down or standing up. Pregnant users or people with temporary injuries may face similar difficulties. In addition, the hard concrete surfaces and lack of back support can make longer stays uncomfortable for people with joint pain or limited mobility. The design may also create challenges for visually impaired users. The multiple level changes and the proximity to the water edge can increase the risk of accidents if the spatial boundaries are not clearly recognizable. Without tactile cues or protective elements, the space may feel unsafe for people who rely less on visual information to navigate.

Another important aspect is sensory comfort. The seating areas are fully exposed to sun, wind, and surrounding activity. While some users may enjoy this openness, others may find it overwhelming or uncomfortable. The concrete material can become very hot in direct sunlight or cold in windy conditions, which further limits comfort for longer periods of rest.

Therefore, although the waterfront seating provides attractive places to sit and enjoy the view, it does not offer equal opportunities for all users to stay, rest, and experience the water equally. The design favors flexible and physically confident bodies while providing limited support for users who require more accessible or protected seating conditions. This observation highlights the need for more inclusive and supportive environments along the waterfront, where different bodies and sensory needs can be accommodated more equally.

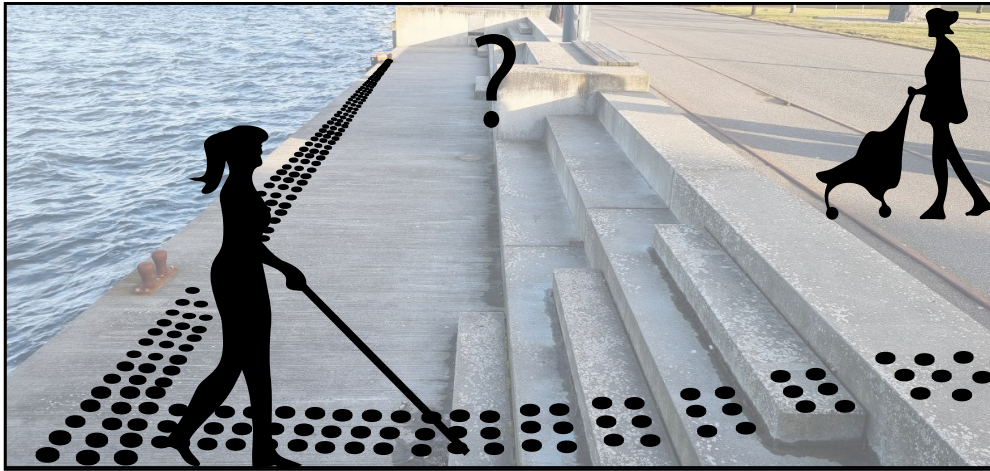


Figure 24a. Accessibility challenges at the waterfront terrace, author, 2026.



Figure 24b. Accessibility challenges at the waterfront terrace, author, 2026.



Figure 24c. Accessibility challenges at the waterfront terrace, author, 2026.

## Sub-Conclusion

### *Bodily and Sensory Norms Embedded in the Aalborg Waterfront*

This sub-conclusion addresses the first part of the research question by identifying which bodily and sensory norms are embedded in the regenerated Aalborg waterfront. The analyses demonstrate that although the waterfront is generally accessible, the spatial design still prioritizes agile, visually oriented, and physically confident bodies more successfully than users with different mobility, sensory, or comfort needs.

In terms of bodily movement and accessibility, many parts of the waterfront are designed around assumptions of balance, flexibility, and independent movement. Elements such as stepped terraces, and exposed waterfront edges encourage interaction with the water, but they also require users to lower and lift their bodies without support. As a result, these spaces mainly support able-bodied users while creating difficulties for wheelchair users, elderly users, pregnant users, and people with reduced mobility. The absence of ramps, handrails, armrests, and accessible seating positions limits equal participation in some of the most attractive parts of the waterfront.

The analyses also revealed that existing fixed bench-and-table seating arrangements often do not allow wheelchair users to position themselves equally within shared social situations. This can create physical separation from the group and make direct eye contact and natural social interaction more difficult. In this sense, exclusion is related not only to movement through space, but also to participation within everyday public life.

From a sensory perspective, the waterfront strongly prioritizes visual experience through open views and visual connection to the Limfjord. However, the embodied and sensory analyses showed that other sensory experiences are less supported. For the blind participant, orientation depended mainly on sound, smell, tactile cues, and thermal conditions. The lack of tactile guidance systems, detectable pathways, and cane-readable furniture edges made navigation more stressful and uncertain, showing how the site still assumes vision as the dominant way of experiencing space.

Environmental conditions such as strong wind exposure, traffic noise, hard materials, and limited opportunities for shelter also created discomfort for some users. While some users may experience the openness of the waterfront as attractive, others may experience it as overwhelming or physically demanding.

The analyses suggest that the waterfront does not equally support all users' ability to stay, participate, and feel comfortable within public space. Although physical access is generally provided through ramps and flat surfaces, equal experience is not fully achieved. Certain bodies and sensory experiences continue to be prioritized, while others require greater effort and adaptation to use the space comfortably.

Overall, the analyses demonstrate that the regenerated Aalborg waterfront still reflects several able bodied and visually oriented design assumptions, while also revealing opportunities for more inclusive and supportive spatial interventions.



Figure 25. Waterfront Terraces Supporting Able-Bodied Activities. Photo by Peter Sikker Rasmussen for CF Møller Architcts. 2026.



Figure 26. Waterfront Terraces Supporting Able-Bodied Activities. Photo by Vibeke Ronnow for CF Møller Architcts. 2026.

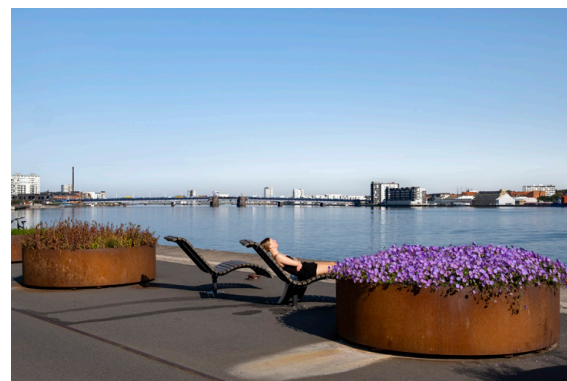


Figure 27. Waterfront Supporting Able-Bodied Activities. Photo by Peter Sikker Rasmussen for CF Møller Architcts. 2026.

### ***03 Bridging Analysis and Design***

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## Synthesis of Spatial and Human Analysis

The synthesis of the spatial and human oriented analysis reveals a clear gap between the physical design of the Aalborg waterfront and the way the space is experienced by people with different bodies, abilities, and sensory conditions. While the spatial analysis focuses on the structure of the site, including circulation paths, seating areas, waterfront edges, and urban connections, the human centred analysis investigates movement, sensory perception, bodily comfort, and the challenges faced by users with different physical and sensory needs. Bringing these two perspectives together helps uncover not only physical barriers, but also the less visible forms of exclusion embedded within the everyday experience of the site.

From a spatial perspective, the waterfront offers several strong qualities. The continuous promenade along the Limfjord creates visual openness and public access to the water, while landmarks such as Musikkens Hus and the Utzon Centre strengthen the identity of the area. However, the analysis also identified several limitations. Connections between the city and the waterfront are interrupted by high trafficked roads such as Nyhavnsgade, reducing accessibility and continuity. In addition, many waterfront seating areas, particularly the stepped edges facing the water, are mainly designed for agile and able bodied users. These spaces often lack ramps, handrails, armrests, backrests, tactile guidance, and supportive seating alternatives for wheelchair users, elderly people, or users with reduced mobility.

The human oriented analysis further demonstrated that the experience of the waterfront changes significantly depending on sensory and bodily conditions. Wind exposure, noise from traffic, sharp edged furniture, and sudden level changes created moments of discomfort and difficulty during embodied observations and walking interviews. For the blind participant, navigation relied heavily on sound, smell, tactile cues, and temperature changes, while the absence of detectable pathways and cane readable furniture edges made movement more stressful and uncertain. These experiences highlight that accessibility is not only about reaching a place, but also about feeling safe, comfortable, oriented, and able to remain there.

When these findings are combined, it becomes clear that the main challenge of the site is not only physical accessibility, but also sensory accessibility and equality of staying. Although the waterfront technically allows public access, the ability to comfortably stay, observe, and socially participate is not equally shared among different users.

Existing seating elements such as concrete steps and isolated benches support only a limited range of bodies and experiences. As a result, some users can easily enjoy the waterfront, while others experience exclusion, sensory overload, or insecurity.

Based on this synthesis, the project introduces a series of small-scale and integrated interventions that aim to improve both spatial and sensory inclusivity without changing the overall identity of the waterfront. One of the key interventions is the introduction of sensory rooms, which act as protective micro environments within the larger open landscape. These spaces provide shelter from wind and noise, create opportunities for sensory recalibration, and support longer and more comfortable stays through inclusive seating and protected resting areas. Their placement is directly informed by the analysis and located in areas where sensory discomfort or exposure is strongest, while still maintaining visual connections to the waterfront.

Alongside the sensory rooms, the project also proposes a tactile pedestrian network designed especially to support blind and visually impaired users. This network integrates tactile paving, detectable ground surfaces, and existing site elements such as the old railway tracks in order to improve orientation and independent navigation across the site. Additional interventions focus on transforming the waterfront edges into more inclusive spaces by introducing ramps, handrails, armrests, backrests, and tactile surfaces that allow a wider range of users to safely approach and experience the water.

The project further responds to interview findings through the design of inclusive urban furniture. The proposed seating system aims to improve comfort, detectability, and social participation by reducing sharp protruding edges, improving cane detectability at ground level, and integrating spaces where wheelchair users can sit together with others rather than separately. In this way, the interventions aim not only to improve accessibility, but also to support dignity, independence, and collective participation in public life.

Through this approach, the project seeks to transform the waterfront from a space that offers unequal opportunities for staying into a more inclusive urban environment that supports different bodies, sensory experiences, and ways of using space. The interventions therefore function not only as physical additions, but also as tools for creating a more balanced and supportive relationship between exposure and protection, movement and pause, independence and support, allowing more people to experience the waterfront as a shared place of everyday life and belonging.

## Vision

The vision of this project is to create a waterfront that is not only accessible, but also supportive, comfortable, and welcoming for different bodies and sensory experiences. While the Aalborg waterfront already offers important spatial qualities such as public access to the water, open views, and strong cultural destinations, the project aims to rethink how these spaces are experienced by people with different physical and sensory conditions.

Rather than designing for one “standard” user, the project recognizes that people move, rest, navigate, and experience urban environments in different ways. For some users, the waterfront can feel open, attractive, and socially engaging, while for others it may become physically demanding, difficult to navigate, or sensory overwhelming due to wind exposure, noise, inaccessible seating arrangements, and limited opportunities for shelter or support. The vision therefore focuses on creating a more inclusive environment that supports different abilities, movement patterns, sensory needs, and ways of participating in public space.

A central part of the vision is to demonstrate that creating a more inclusive waterfront does not necessarily require a complete redesign of the area. Instead, even small scale and carefully integrated interventions can create meaningful differences in how different users experience, navigate, and participate within the space. Through interventions such as sensory rooms, tactile pathways, inclusive seating, ramps, and supportive waterfront edges, the project aims to improve the everyday experience of the site while maintaining its existing identity and openness toward the Limfjord.

The vision also challenges able bodied and visually oriented assumptions that often shape urban design practice. Instead of understanding accessibility only as physical access or compliance with minimum standards, the project seeks to support equal opportunities for staying, resting, observing, social interaction, orientation, and sensory comfort. In this way, inclusivity becomes connected not only to movement through space, but also to the ability to comfortably remain and participate within public life.

In the long term, the project aims to support a more equal and supportive relationship between bodies and urban space, where the possibility to experience the waterfront is not limited to certain groups. Instead, the waterfront becomes a shared urban landscape that allows different people to experience the space in their own ways while still feeling included within the same public environment.

# Design principles

## *Equality of Staying*

Supporting not only movement through space, but also equal opportunities for resting, observing, and participating.

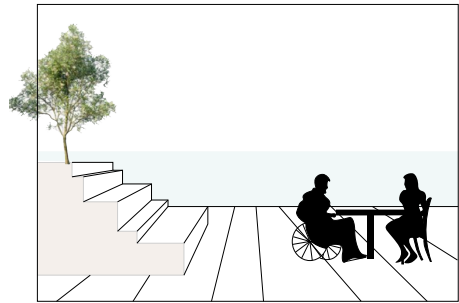


Figure 28. Equality of staying, author, 2026.

## *Shared Social Space*

Encouraging collective participation through inclusive seating and gathering spaces.

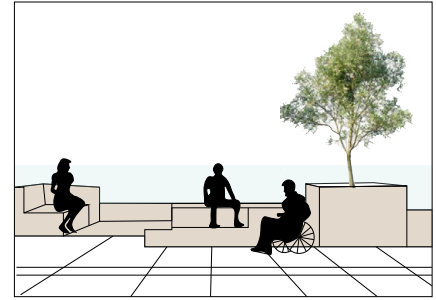


Figure 29. Shared social space, author, 2026.

## *Detectability and Orientation*

Improving spatial legibility through tactile guidance, detectable furniture, and clearer navigation.

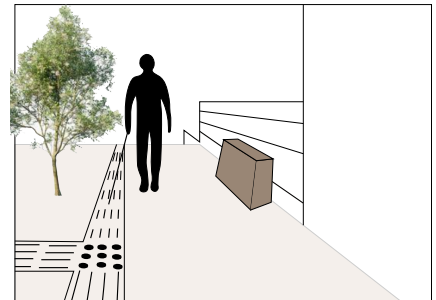


Figure 30. Detectability and orientation, author, 2026.

## *Supportive Waterfront Edge*

Transforming the waterfront edge into a more inclusive space for different bodies and mobility needs.

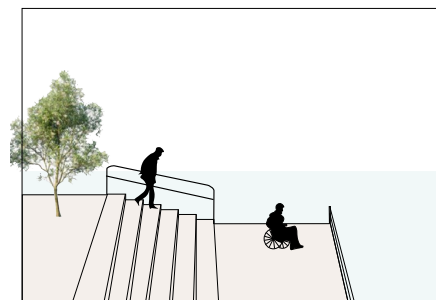


Figure 31. Supportive waterfront edge, author, 2026.

## *Protection Within Openness*

Maintaining the open identity of the waterfront while introducing moments of shelter and sensory relief.

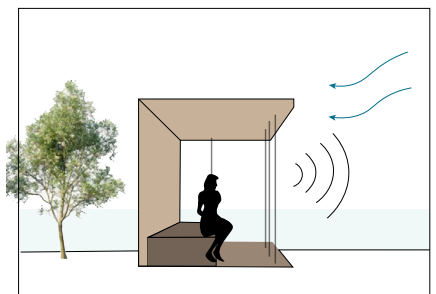


Figure 32. Protection within openness, author, 2026.

## Design Approach

Rather than proposing a complete transformation of the waterfront, the project focuses on small scale and integrated interventions that respond directly to the spatial, bodily, and sensory challenges identified through the analyses. The design approach works with the existing qualities of the site, such as openness, visual connection to the Limfjord, public accessibility, and social activity, while aiming to improve inclusivity, comfort, orientation, and opportunities for staying and participation.

An important aspect of the approach is to move beyond able bodied and visually oriented assumptions that often shape urban design practice. Through principles of Universal Design, the project expands accessibility beyond physical entry and minimum standards toward equal opportunities for orientation, staying, resting, social interaction, and sensory comfort for a wider range of users. Rather than treating bodily and sensory differences as exceptions, the project considers them as a natural part of public life and as an important starting point within the design process.

The proposed interventions therefore aim not only to improve movement through space, but also to support equal participation and experience within public space.

The table below illustrates how the identified spatial assumptions and challenges informed the inclusive design responses and Universal Design strategies developed within the project.

Existing Design Assumptions	Spatial Challenges Identified Through Analysis	Design Response	Related Universal Design Principles
Accessibility is mainly understood as physical entry into space.	Although the waterfront already contains ramps and accessible routes, equal participation and comfort are not fully achieved for all users.	The project expands accessibility beyond entering the space toward staying, participating, resting, interacting, and experiencing the waterfront equally.	Equitable Use, Flexibility in Use.
Public spaces are often designed around able bodied, visually oriented, and physically independent users.	Users with different sensory and bodily conditions experience the site differently and may face physical, sensory, or social barriers.	The design process includes wheelchair users, blind users, and people with sensory sensitivities as part of the starting point of the design rather than as exceptions.	Equitable Use, Flexibility in Use.
Social seating areas assume standardized body positions and interactions.	Existing fixed bench and table seating arrangements can separate wheelchair users from shared social situations and make eye level interaction difficult.	Inclusive seating arrangements are proposed to support integrated seating, equal positioning, and more inclusive social interaction.	Equitable Use, Size and Space for Approach and Use, Low Physical Effort.
Waterfront environments often prioritize openness, exposure, and visual experience.	Strong wind exposure, traffic noise, and lack of sheltered spaces can create sensory discomfort or overload for some users.	Sensory rooms and supportive sheltered spaces are introduced to provide moments of retreat, sensory regulation, and comfort while maintaining visual connection to the waterfront.	Flexibility in Use, Low Physical Effort, Equitable Use.
Safety is often addressed through restriction or exclusion.	Blind users may experience uncertainty near waterfront edges due to limited tactile guidance and orientation cues.	Tactile pathways, detectable elements, and supportive waterfront edges are introduced to support safer and more independent navigation without limiting access to the waterfront experience.	Perceptible Information, Tolerance for Error, Simple and Intuitive Use.

Table 10. Inclusive design responses developed through Universal Design principles, 2026.

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# Masterplan

- Tactile Guiding Path
- Tactile warning surface
- Design Interventions

Scale 1/3.000







Figure 33. Masterplan, author, 2026.

## Master plan

The masterplan focuses on creating a more inclusive waterfront environment that supports the presence and movement of different bodies and abilities within the site. One of the main interventions is the design of a guiding pathway network for blind and visually impaired users. In addition to providing access to the existing buildings and important functions across the site, the guiding path also continues along the waterfront edge. This decision was made to ensure that blind users are not excluded from experiencing and walking along the shoreline because of safety concerns. Instead of removing access, the project aims to create safer and more supportive conditions for independent movement and sensory engagement with the waterfront.

The site already supported wheelchair users to a certain extent through the presence of ramps in areas with height differences, allowing access to many parts of the waterfront. However, the project aims to move beyond minimum accessibility standards and focus on a stronger sense of inclusion and participation. For this reason, additional interventions for wheelchair users were also developed in other parts of the site. These interventions are intended not only to provide physical access, but also to support comfort, social interaction, independence, and equal experience within the public space. In the following section, selected areas of the site that were explored more deeply for design interventions are presented in detail.

# Zoom In 1

-  Tactile Guiding Path
-  Tactile warning surface
-  In-ground Guiding Lights
-  Reused Rail Track

 Scale 1/3.000



Figure 34. Masterplan Detail 1, author, 2026.

## Multi-Layered Guidance System

As shown in this zoomed-in area of the masterplan, the existing railway track has been integrated into the guidance network as part of the navigation route for blind and visually impaired users. Rather than removing or visually hiding this industrial element, the project reinterprets it as a functional and meaningful component of the new inclusive design strategy. In this way, an existing feature of the site is transformed into a spatial tool that supports orientation, movement, and sensory recognition.

This intervention also reflects the project's intention to work with the existing identity and materiality of the waterfront instead of completely replacing it. The railway track creates a continuous and recognizable linear element within the landscape that can support spatial awareness and navigation while also preserving a connection to the history and character of the site.

In the green area and garden space, which was described by the blind participant as calmer, more comfortable, and more pleasant, the guidance pathway is further strengthened through the use of in-ground lighting elements. These lighting elements are inspired by the existing lighting atmosphere in front of Musikens Hus and are adapted here as part of the inclusive navigation strategy. Beyond their practical role in improving visibility and orientation during darker hours, they also help create a softer and more supportive sensory atmosphere within the landscape.

As a result, the guidance route is not designed as a single isolated element, but rather as a combination of different spatial cues and layers working together. Existing railway tracks, tactile pathways, spatial edges, and integrated ground lighting collectively contribute to a navigation system that aims to support safer, more independent, and more intuitive movement for blind and visually impaired users throughout the site.

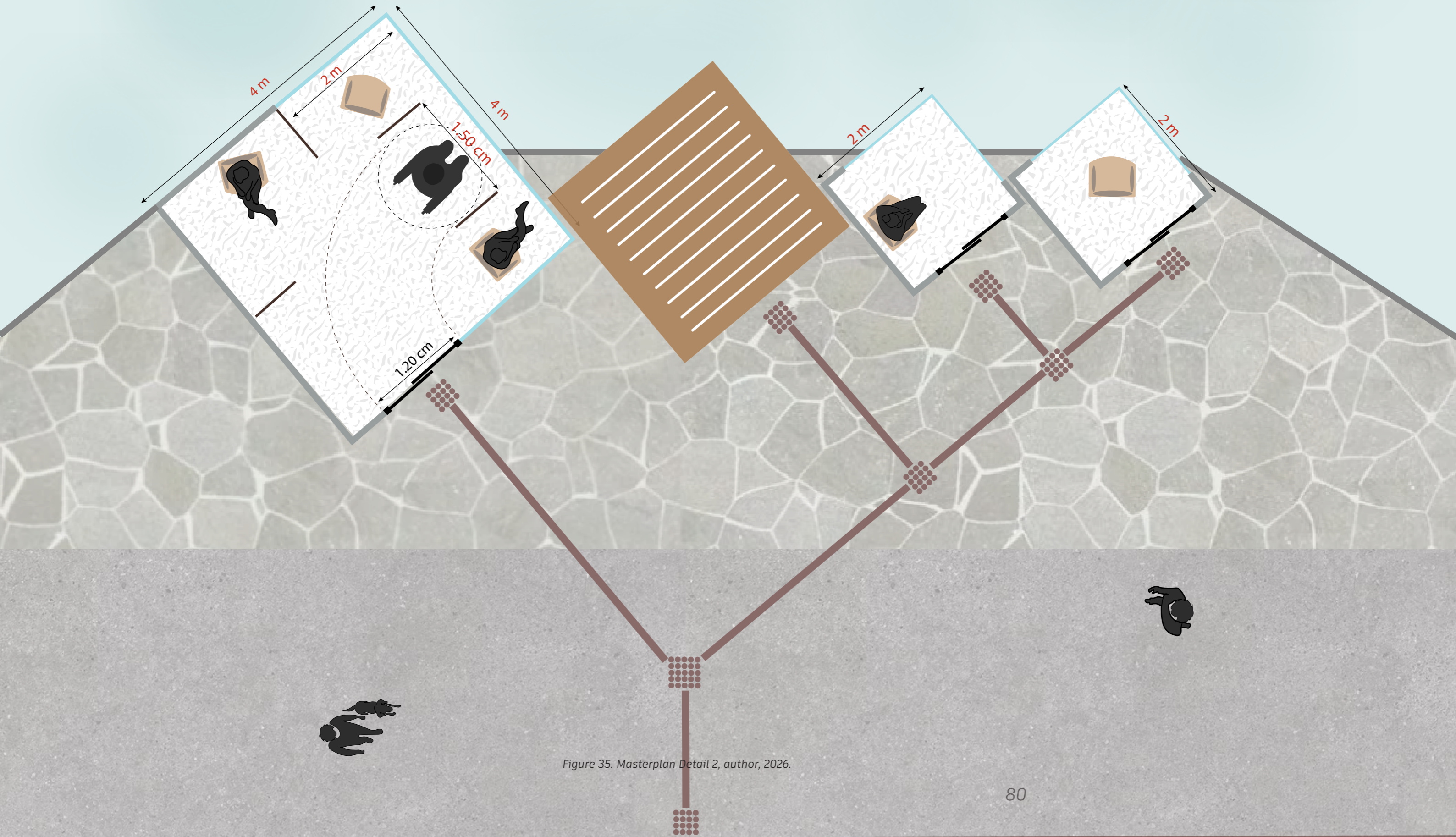


Figure 35. Masterplan Detail 2, author, 2026.

## Sensory Room Concept

The sensory rooms were introduced as a response to the environmental and sensory conditions identified throughout the site analysis. Although the waterfront offers attractive views, social activity, and strong visual connection to the sea, it is also a highly exposed environment affected by strong wind, cold weather, noise, movement, and limited opportunities for temporary shelter or retreat. During the sensory and embodied evaluations of the site, these conditions repeatedly appeared as factors that could make staying in the space physically or mentally demanding for some users.

For this reason, the project proposes sensory rooms as small supportive micro spaces integrated within the waterfront landscape. Their purpose is not to isolate users from the public realm, but to create calmer and more protected conditions within it. The rooms provide opportunities for temporary rest, sensory regulation, observation, warming up, or short moments of retreat while still maintaining visual connection to the surrounding waterfront and social activities.

The design process was primarily informed by site analysis, sensory ethnography, embodied spatial observations, and interview. In addition, Nielsen's (2026) research on Universal Design and post phenomenology helped broaden the understanding of how different users may experience public space differently depending on their bodily, sensory, or emotional conditions. For example, one wheelchair user described difficulties staying warm in open and windy public spaces, while another participant explained how overwhelming sensory stimulation in crowded environments could affect their comfort and ability to remain in public space. A participant with autism also described how observing social interactions from a calmer and more protected position helped them feel more comfortable within public life (Nielsen, 2026).

As a result, the sensory rooms were designed as semi enclosed environments that create a balance between retreat and participation. Their smaller scale was intentionally chosen to create feelings of calmness, safety, and intimacy while still preserving openness toward the waterfront. In this way, the sensory rooms attempt to function as small "urban valves" distributed across the site, where users can pause, recover, recharge, or simply spend time away from the intensity of the larger public environment.

## Design Inspiration

The design was inspired by the existing viewpoint structure along the waterfront and the circular geometries visible on the façade of Musikkens Hus. Rather than directly copying these elements, the intervention draws inspiration from their transparency, lightness, and relationship with the waterfront environment. Transparent glass surfaces are used to maintain visual connection with the sea and surrounding public life while still creating a sense of shelter and enclosure. This approach was important in order to avoid creating isolated spaces and instead maintain a continuous relationship between the user and the social atmosphere of the site.

The material choice was also influenced by the identity of the waterfront itself. Since the site is a newly regenerated urban area with a contemporary architectural language, glass and metal were considered more compatible with the surrounding environment than more traditional materials such as wood. In this way, the intervention attempts to connect visually and materially with the existing character of the waterfront landscape.



Figure 36. Waterfront viewpoint structure. Photo by Jørgen True for CF Møller Architects.

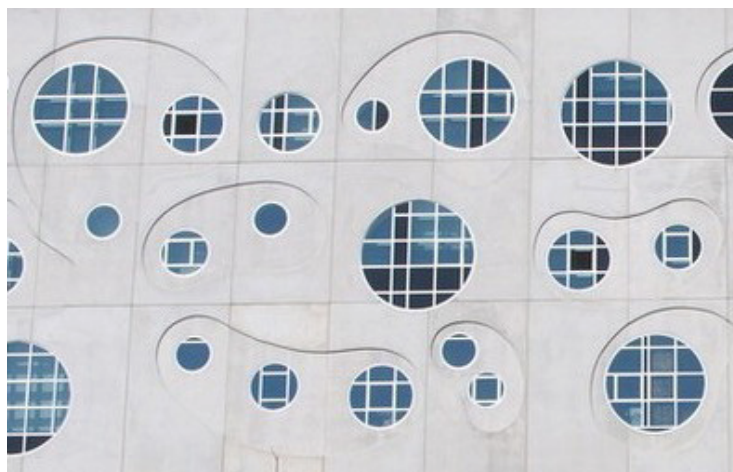


Figure 37. Facade of Musikkens Hus, author, 2026.

The square geometry of the rooms was strategically rotated in relation to the dominant western wind direction. This positioning allows two sides of the structure to provide wind protection, while the entrance is placed on the eastern side to create a calmer and more sheltered interior condition. Although inspired by the needs of users with different disabilities and sensory sensitivities, the sensory rooms are intended to support multiple forms of participation and experience rather than serving one specific group only.

## Placement Strategy

The placement of the sensory rooms was determined through a combination of human based and data based analysis. Spatial analysis showed that the selected area experiences lower levels of car related noise pollution while receiving higher sunlight exposure compared to other parts of the site. These conditions made the location more suitable for supportive and comfortable micro spaces.

Human based observations and embodied evaluations also highlighted the importance of proximity to the waterfront itself. Compared to other areas, the waterfront edge attracts more social activities such as walking, sitting, fishing, and longer periods of stay due to its atmosphere and visual connection to the sea.

Sensory qualities such as the smell and sound of the water also played an important role in the placement strategy. These sensory cues can become especially important and reliable for blind and visually impaired users as part of their spatial experience and orientation.

For this reason, the sensory rooms were intentionally placed close to the waterfront in order to maintain visual and sensory connection to the sea while still offering calmer and more protected spatial conditions.



Figure 38. Sensory room visualization, author, 2026.

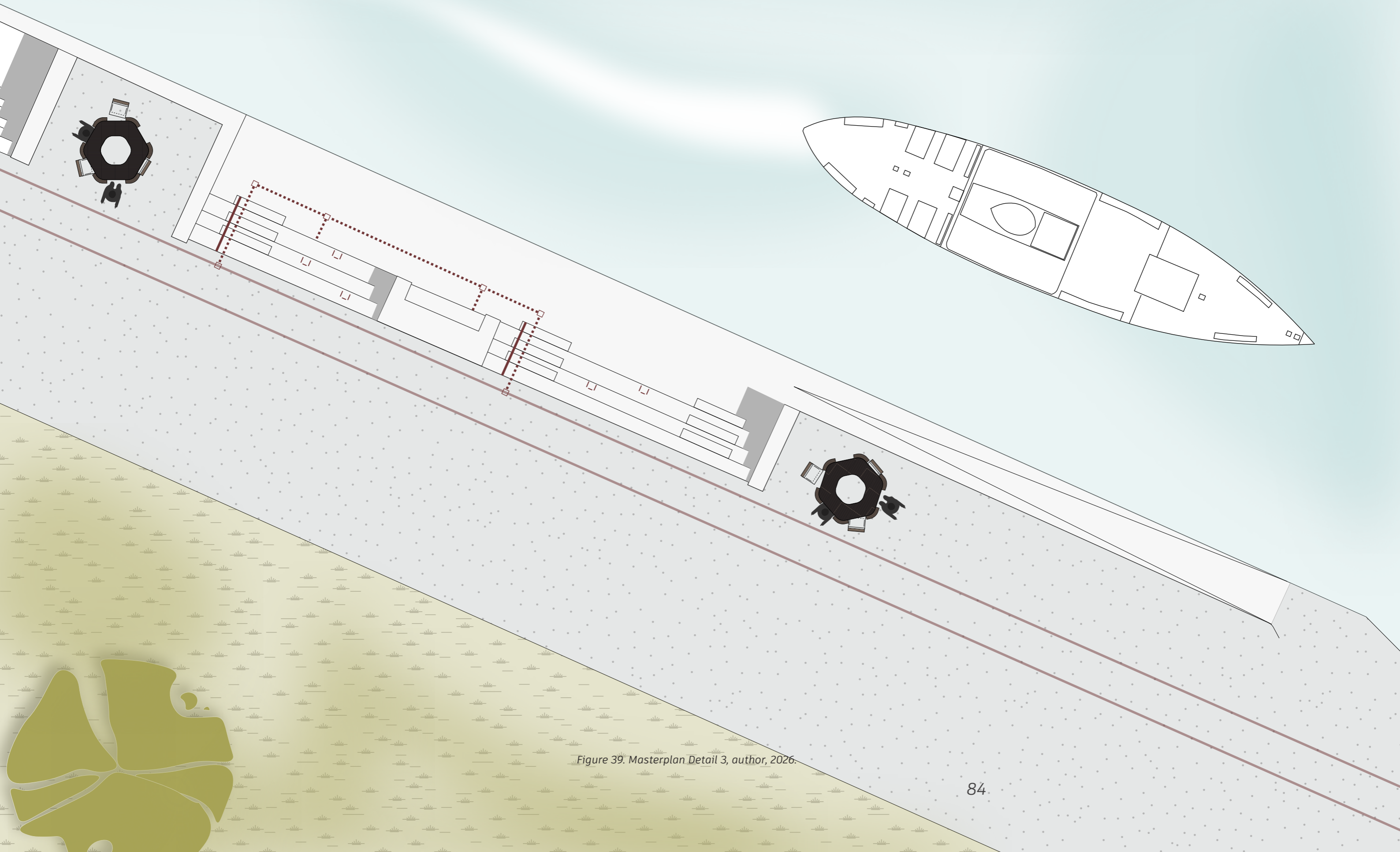


Figure 39. Masterplan Detail 3, author, 2026.

## Waterfront Terrace Interventions

This intervention focuses on the waterfront terraces and the stepped edges along the harbour, which are already among the most active and frequently used parts of the site. The area attracts many users because of its direct connection to the water, open views, and opportunities for different social and recreational activities such as sitting, walking, fishing, and spending time near the waterfront. However, despite its popularity, the existing design still contains several barriers that limit equal comfort, accessibility, and independent use for people with different physical abilities.

The proposed intervention therefore focuses on improving the inclusivity of the existing waterfront terraces through a series of small but targeted design additions. Elements such as handrails, armrests, guiding pathways, and accessible ramps are introduced in order to support safer movement, easier navigation, and more comfortable use of the space. These interventions particularly aim to improve accessibility for wheelchair users, elderly users, and visually impaired individuals while still preserving the open and social character of the waterfront edge.

Rather than completely redesigning the area, the project attempts to work with the existing qualities and spatial identity of the terraces while reducing exclusionary conditions within the space. In this way, the intervention seeks to transform an already attractive public area into a more inclusive waterfront environment that can be experienced and enjoyed by a wider range of users.

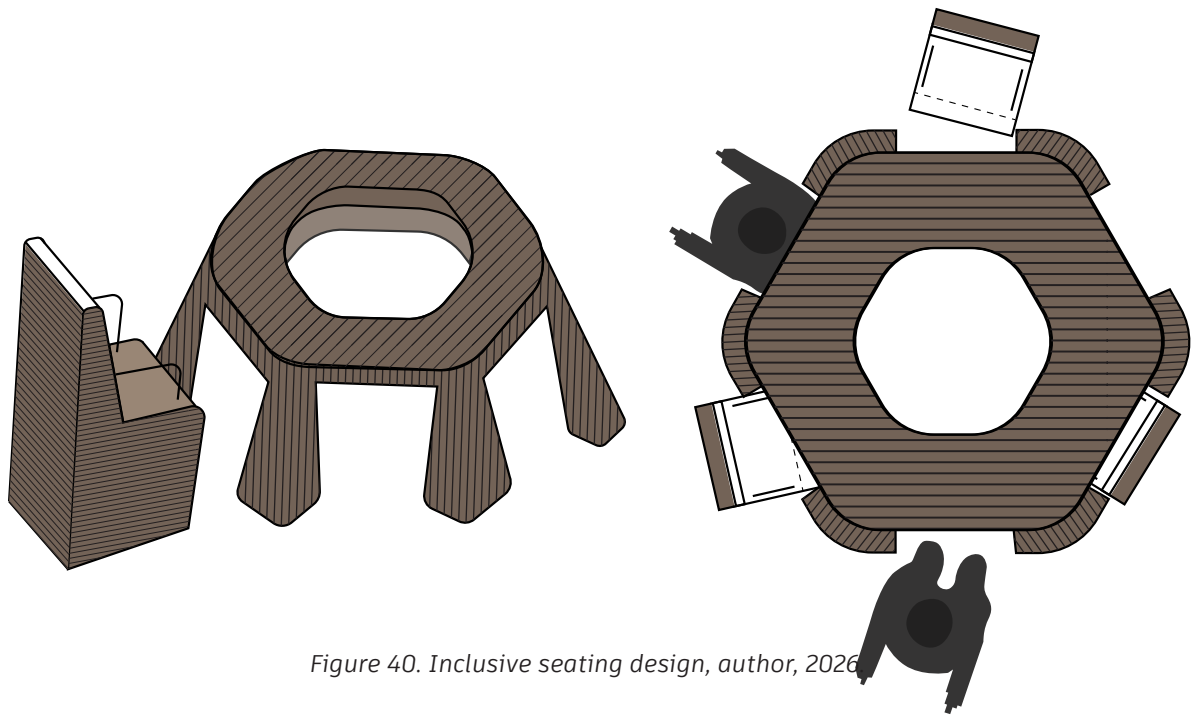


Figure 40. Inclusive seating design, author, 2026.



Figure 41. Inclusive seating design Visualization, author, 2026.

## Inclusive Bench and Table Intervention

The final intervention focuses on the redesign of public seating furniture based directly on insights gathered through interviews and conversations with users. Unlike large scale spatial interventions, this proposal addresses inclusion at the level of everyday public interaction and social participation through the design of benches and shared seating areas.

During the interviews, a blind participant described the existing waterfront benches as difficult and sometimes unsafe to navigate. Although the benches visually occupied a large volume in space, they were connected to the ground only through thin metal supports, making them difficult to detect with a cane before physical contact occurred. The participant explained that this often resulted in collisions with the furniture, particularly because some edges and corners were relatively sharp. This highlighted the difference between how an object may appear visually and how it is actually experienced through bodily and sensory interaction within public space.

At the same time, a wheelchair user explained that many of the existing shared seating arrangements along the waterfront still prevent equal participation in social situations. Although seating areas are physically present, wheelchair users are often positioned at the edge of the group or forced into uncomfortable positions that limit direct interaction and natural eye contact with others.

In response to these observations, the proposed bench and table design introduces a more inclusive seating configuration. The lower structure and legs of the furniture are shaped in a way that allows blind and visually impaired users to detect the object earlier through ground-level cane contact before colliding with upper elements of the furniture. In addition, three open spaces without fixed seating are integrated around the table in order to allow wheelchair users to comfortably join the group, maintain equal positioning, and participate more naturally in social interaction and shared public life.

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## Conclusion

The Aalborg waterfront, as one of the most popular urban spaces in Aalborg, has undergone significant regeneration in recent years and is used by many people throughout different seasons and weather conditions. Although the site is often perceived as accessible because of its relatively flat surfaces and existing ramps, the analysis in this project revealed that there is still no equal opportunity for all users to navigate, stay, and experience the space in the same way. The findings showed that accessibility is not only related to physical movement, but also to sensory experience, comfort, orientation, safety, and social participation.

Among users with different abilities, wheelchair users were one of the groups more visibly present on the site, particularly during good weather conditions. This was largely supported by the smooth surfaces and existing ramps that made physical access easier. However, conversations with wheelchair users revealed that accessibility alone does not necessarily create equal experience. Exclusionary seating arrangements and social spaces can still create feelings of separation and marginalization within public space.

For blind and visually impaired users, the lack of tactile guidance systems, detectable pathways, and supportive furniture made navigation more difficult and stressful. Their experience of the waterfront was shaped not mainly through sight, but through sound, smell, temperature, bodily movement, and spatial orientation. This highlighted how strongly many urban environments continue to prioritize visual experience while overlooking other sensory ways of experiencing space.

Based on these findings, the project proposed a series of small-scale and integrated interventions informed by spatial analysis, sensory ethnography, embodied experience, interviews, and user observations. Supported by theories such as Universal Design, Spatial Justice, Sensory Ethnography, and Embodied Spatial Experience, the interventions aim to improve not only physical accessibility, but also participation, comfort, orientation, and equality of staying within public space.

Rather than completely redesigning the waterfront, the project attempts to work with the existing spatial qualities and identity of the site while reducing exclusionary conditions within the environment. In this way, the project argues for a more supportive and inclusive understanding of urban public space, where different bodies, senses, and ways of experiencing the city are considered as part of the design process rather than as exceptions to it.

## Reflection

Interviewing a blind person and having small talks with wheelchair users showed me how different the same experience such as walking and spending time in a popular urban space like the Aalborg waterfront can be for people with different abilities. While I could easily navigate the space, freely choose where to sit, recover, recharge, and enjoy the view, the situation was very different for them. Obstacles such as furniture with sharp edges, benches with exclusionary forms, and stairs connecting to the water without ramps make the experience demanding rather than enjoyable. These conditions can also create a feeling of not belonging.

At the beginning of the project, my intention was to involve a larger number of participants with different physical and sensory abilities. Despite sending emails to different organizations at the beginning of the semester, and despite their cooperation in forwarding my request to potential participants, I did not receive responses from most individuals. In the end, I was only able to carry out a longer sensory walk-through together with Nikolaj, who had already collaborated with us during the previous semester, in addition to smaller conversations with wheelchair users.

Accessing participants with different abilities proved to be much more difficult than I initially expected. One possible reason may have been the use of English as the main language of communication. However, I also began reflecting on whether other deeper social reasons may exist, such as learned patterns of self-censorship created through repeated exclusion within society and the built environment. Participating in interviews and discussing urban spaces that often do not respond to people's needs may itself feel exhausting, emotionally demanding, or uncomfortable. Vulnerability, fear of judgment, or a desire to avoid visibility due to being perceived as different may also influence participation. There may also be reasons that remain difficult for me to fully understand as someone whose own bodily needs are still largely supported by urban environments.

At the same time, this process made me realize how important embodied experiences are for understanding spatial problems. Experiencing the waterfront together with Nikolaj gave me access to another layer of spatial understanding that I could not have reached through observation alone. Watching him repeatedly collide with the sharp and undetectable edges of benches during what should have been an ordinary walk transformed my understanding of seemingly small design details. What appeared neutral to me suddenly became painful, exclusionary, and exhausting through another body's experience.

In many ways, these experiences also resonated with my own feelings of exclusion in different social, educational, and institutional situations throughout my life. Despite repeated attempts to fit into systems designed around the expectations and needs of the majority, there have also been moments in my own experiences similar to “colliding with invisible edges.” Over time, these repeated experiences can create emotional exhaustion and a feeling of being outside or not fully belonging.

Having these conversations and observing the consequences of design decisions for people with different abilities has fundamentally changed the way I see the design field. It has not only made me more sensitive but has also challenged the assumptions and norms that I had internalized over the years. I find myself rethinking my approach to design again, questioning what I previously considered normal or acceptable.

This project has opened a new line of thinking for me. It encourages me to pay closer attention to how people with different abilities experience urban spaces, where they are visible, where they are not, and why. I believe this marks a new starting point for me to reconsider my internal assumptions and defaults in the design field. In my future design practice, I want to move beyond designing mainly for visual experience or for able bodies and instead consider a broader range of human senses, bodily conditions, and ways of experiencing urban space. I will also always try to involve people with different physical and sensory abilities within the design process itself, not as exceptions, but as an essential part of understanding and shaping more inclusive urban environments.

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AI tools were used as supportive tools for language clarification and for transforming two author-produced rendering into a realistic version.

## ***06 Appendix***

