Repurposing abandoned transport infrastructure towards social inclusion: The case of Baana, Helsinki

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Abstract
With globally increasing challenges for the role of public spaces and their contribution to inclusion and justice within urban settings, this article examines the repurposing of transport infrastructure to provide dedicated walking and cycling public spaces, specifically the case of Baana in Helsinki, Finland, a former freight railway conduit. Building on the concepts of mobility design and walking as a social experience, the article examines Baana's role both as a non-motorised transit space, and one supporting fluid encounters among diverse users. The impact of Baana's design is examined – in terms of utility, attractiveness, and symbolism – on pedestrians' activities, experiences, and perceptions. Initial findings reveal Baana's barriers and potentials and serve to develop further research on addressing differential pedestrian experiences, to inform future mobility design processes.

Keywords: Baana, fluid encounters, Helsinki, inclusion, mobility design

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1. Introduction

Concerns with the environment have triggered interest in non-motorised mobility, with a focus on its utilitarian performance within transport planning (Maciorowski and Souza, 2018). Yet, non-motorised mobility affects liveability, including aspects of justice and inclusion. Cities have resorted to different approaches to promote walking and cycling, sometimes through repurposing transport infrastructure as in New York's Highline project (Davis and Gray, 2019; Lang and Rothenberg, 2017; Millington, 2015), or redesigning public spaces, including streets, which was prominent following the COVID-19 pandemic (Mukhtar et al., 2024). Understanding the relation between non-motorised mobility environments and social aspects requires an investigation beyond exploring the physical environment that addresses the utilitarian, physical act of commuting, towards considering influences of and on social practices and experiences during mobility (Sheller and Urry, 2006). Building on concepts of walking as a social practice, and mobility design, this article presents an understanding of design for walking, while considering the value of walking beyond the necessary or optional commuting activity. This research could inform planning for 'walking-friendly cities' often characterised by the environment supporting social inclusion, health, and economic benefits, and walking's potential role in generating inclusive individual experiences and social encounters (Middleton, 2018, p. 299).

Literature on mobility design identified several research gaps, one being the lack of combined analysis of functional, aesthetic, and symbolic aspects of urban environments and their impact on mobility at micro-scales (Blitz and Lanzendorf, 2020; Mehta and Bosson, 2021). This article provides such an analysis at the micro-scale for one case study through a mixed-methods methodology. The case study focuses on the initial segment of Baana in Helsinki, a network for cycling and walking, which transformed a former railway corridor for non-motorised mobility. This article presents the initial phase of a broader research on Baana, and addresses the following questions: What design elements, aesthetics, and symbolic aspects in Baana promote walking beyond the necessary activity? How is Baana perceived while walking?

2. Framing walking in lived public space beyond a transit activity

Walking is simultaneously a human right and a social practice, which enables different types of interactions based on the pedestrian's positionality (Creswell, 2009; Kanellopoulou, 2017; Scarponi et al., 2023). Walking is the oldest and least environmentally impactful mode of mobility, yet within transport planning it is often considered as secondary compared to other modes, and is reduced to a necessary linear, transit, commuting function, which occurs on the street or while traversing other public spaces. The utilitarian perspective has been questioned with the mobility turn, to emphasise walking's several 'types, forms, and characteristics' including the experiential, perceptual and social (Gehl, 2011; Middleton, 2018, p. 299; Sheller and Urry, 2006).

While walking, urban spaces unfold sequentially, affect the pedestrian, and change the experience of a place depending on pedestrians' flows and practices (Kanellopoulou, 2017; Lehtovuori, 2012). Walking is differential and relational; it varies depending on the combination of the environment comprising actors and objects simultaneously present, with a grafting of perceptions, meanings, memories, and experiences onto the space (Koohsari, Karakiewicz, and Kaczynski, 2013). The relational perspective is tied to Lefebvre's (1991) production of space explained as the interaction of planned and designed physical space, symbolism and users' social practices that affect space.

Walking is a multisensory activity that allows the pedestrian to reinterpret or even reconfigure them or interact with the city. The aesthetics and symbols generated within the environment, objects and 'human and nonhuman agents' interacting with the pedestrian, walking as a multisensory experience allows the pedestrian first to interpret stimuli – both material and immaterial such as signs, or mnemonic triggers – and second to attribute meanings to urban locations – including those related to safety, and inclusion (De Certeau, 1984; Hebbert, 2005; Kanellopoulou's, 2017, p. 188; Middleton, 2018; Mehta and Bosson, 2023; Sheller and Urry, 2006, p. 214).

The sociality of urban walking explores the actors involved, the type of involvement (how or why) and the consequences of this interaction. Depending on socio-cultural factors, encounters while walking could generate different verbal and non-verbal social interaction to various degrees, or even exclude users (Blokland, 2017; Middleton, 2018). Walking 'provides opportunities for social interaction' that could be direct or indirect, serendipitous 'fluid encounters' occurring once, or more enduring 'public familiarity', with others including maintenance staff, or law enforcement personnel, unhoused persons, youth, elderly and so on (Blokland, 2017, p. 553, 561; Kanellopoulou, 2017, p. 188; Sheller and Urry, 2006). Public familiarity refers to recognising strangers through recurrence or shared social practices, and actively or passively communicating among individuals based on tacit knowledge and unspoken norms (Blokland, 2017; Middleton, 2018, p. 308; Scarponi et al., 2023). Walking as a social practice varies in purpose and type, and entails improvisation, 'tactical learning' and adapting to different spatio-temporal rhythms while walking (Blokaland, 2017). Examples of interactions range from encounters while walking a dog, strolling, pushing a buggy, jogging, taking a shortcut, or 'emergent issues' such as an object, animal or person traversing one's path (Koohsari, Karakiewicz, and Kaczynski, 2013; Mehta and Bosson, 2021; Middleton, 2018, p. 305; Scarponi et al., 2023). It is the diverse types of sociality at the micro-scale that leads to negotiation, contestation, degrees of inclusion in public spaces, or the right to determine one's position as a pedestrian in urban spaces (Blokland, 2017; Middleton, 2018). While walking, sociability, and encounter 'are central components of urban public space' and become a resource for ensuring inclusion (Blokland, 2017, p. 560). The seemingly arbitrary encounters along the spectrum from the incidental to the sustained are often tied to spatio-temporal rhythms (recurrences at specific locations), which could be facilitated by mobility design. It is this simultaneous experience of individualism or being part of a crowd, which affect social interaction that urban spaces enable, (Blokland, 2017). While designing for walking, all types of encounters should be considered to understand and address the potentials and risks of 'subtle

forms of exclusion and the resulting reinforcement of structural inequalities' (Blokland, 2017, p. 554). This is where the investigation of aesthetics and symbolism of walking environments that could have exclusionary or inclusionary roles, is important.

Therefore, a micro-scale analysis is needed to understand the multisensory, dynamic walking experience – which is based on synergies rather than isolated elements – to ensure that designing for walking encourages social encounters essential for inclusive urban experiences (Middleton, 2018, p. 301; Scarponi et al., 2023; Spinney et al., 2015).

3 Designing for walking

Non-motorised mobility design covers various aspects of the built environment, starting with environmental considerations based on promoting a modal shift to impact travel behaviour away from the automobile, rather than promoting health and wellbeing (Blitz and Lanzendorf, 2020; Cook et al., 2022; Lozzi and Monachino, 2021; Mehta and Bosson, 2021). Planning for integrated, well connected, and continuous pedestrian flows, which are safe vis-à-vis vehicular traffic, are among the factors considered to encourage panoply of activities by diverse users (Blitz and Lanzendorf, 2020; Maciorowski, and Souza, 2018). The focus is often on ensuring travel safety while paying little attention to walking as a social activity, reducing it to a mode among other, which could be excluded in some urban environments (Maciorowski, and Souza, 2018). On streets, priority is given to automobility flows, while pedestrians wait for green signals along traffic-control barriers, which raises concerns about spatial justice, affects the experience and social practice of walking (Cohen and Almarwani, 2022; Kanellopoulou, 2017).

Cervero and Kockelman's (1997) seminal work on non-motorised mobility design refers to the impact of density of users, diversity of land use and building configuration, and design of the street network, with less emphasis on the aesthetic and symbolic, for instance how benches, lighting or vegetation affect walkability. Other considerations have been added such as accessibility and travel distances (Ewing and Cervero, 2010). Equally, considerations of pedestrians' needs, attitudes, perceptions, and experiences, relate to design's functional, aesthetic, and symbolic aspects of mobility spaces. Blitz and Lanzendorf (2020, p. 1) explain these three interrelated aspects as: the utilitarian dimension offering the possibility to commute on foot; attractive environments that trigger appreciation to walk through; and the 'semantic content' and signs that support pedestrian's construction of meanings attached to these environments. These aspects recall literature on liveable streets, which offer sufficient support from the surroundings for diverse activities that encourage spontaneous interaction among strangers (Sauter and Huettenmoser, 2008). This space-object relation together with the users' experiences, generates meanings, creates affordances that could contribute to pedestrians shaping or redefining the space with opportunities for social interaction (Mehta and Bosson, 2021). Lively streets require collaborative design processes for permeability, interaction with street frontages, designating areas for non-motorised mobility, and considerations for integrating various amenities including vegetation, and 'community-gathering places' (Al Mushayt et al., 2021; Mehta and Bosson, 2021: p. 160). In relation to the three aspects, material and immaterial obstacles could discourage walking and reduce social interaction.

On the functional level, planning and design implicitly outline power relations among urban modes of mobility, defining when, where and what pedestrians can do (Middleton, 2018). Obstacles to walking could relate to speed, ability to stay stationery, waiting at intersections, and issues of safety in shared mobility spaces, where different mobility modes negotiate priority, with limitations for the visually or hearing impaired as an example (Curl, Ward-Thompson and Aspinall, 2015; Middlteon, 2018). Aesthetically, spaces for walking should be designed as physically attractive and positively stimulating the senses through colours, materials, sounds, light, vegetation, amenities, comfort from weather conditions, providing vistas, and maintenance, which have an impact on mental wellbeing and perceptions of safety (Blitz and Lanzendorf, 2020; Koohsari et al., 2012; Scarponi et al., 2023). Symbolically, the provided information with direct or indirect signifiers could register different interpretations for the pedestrian, which are socio-culturally embedded. This includes signage, advertisements, presence of specific amenities, art, the design of the space and the objects in it, which could signify safety, who and how to use them – based on age, gender, or other user traits – and whether interaction within and with them is possible (for example changing surface material to designate walking or cycling, edges that provide affordance and so on).

Further attention should be given to safety as it is influenced by functional, aesthetic, and symbolic aspects, especially if different user groups are considered (Scarponi et al., 2023). The term safety refers to harm from vehicles or cyclists (clearly delineated paths or separate paths – addressed by transport planning), harm from the physical space (egress points, visibility, lighting, provision of amenities – addressed by designers) or harm from other people (addressed by security and governance). Safety varies temporally according to the pedestrian's positionality (considering the complexity of safety perceptions that are embedded in the pedestrian's individual past experiences and influenced by socio-cultural factors).

In summary, mobility design contributes to the design of public spaces at the intersection of transportation and urban planning and at the scales of urban design, landscape design, and architecture. The output should address the individual who makes decisions whether, when, and where to walk. Spaces designed for mobility become the communication medium between the city and the pedestrian, determining walking duration, and types. Spaces designed for walking should be functional, attractive, comfortable, safe, and enable social encounters (Scarponi et al., 2023).

4. Methodology

To identify opportunities and obstacles for social encounters and inform future considerations towards increasing the role of walking in social inclusion, a micro-scale approach enables juxtaposing planning and design aspects of the public space with walking experiences. The relations between utilitarian walking and walking as a social, multisensory practice are analysed in relation to Baana's planning and design.

Several methods are used to respond to the two research questions (Table 1). Mapping using existing City of Helsinki maps served to position Baana contextually in relation to the street network. In addition to information available on the city's website, three interviews with

planners and one designer from Helsinki City served to inform considerations for walking and pedestrians related to the research questions. A walk-along observation method akin to 'mobile ethnography' was conducted to locate while walking aspects related to comfort, attractiveness, and safety. This method allowed for describing the multisensory experience along the unfolding of the path while walking (Kanellopoulou, 2017; Middleton, 2018; Sheller and Urry, 2006: p. 217-218). Participant observation in the form of 'copresent immersion' for one year by walking along Baana served to directly observe copresence and types of interactions, while 'time-space diaries', and taking photographs were used in both observation methods (Middleton, 2018; Sheller and Urry, 2006: p. 218).

Table 1: Methodological overview

Method	Input	Output
Mapping	. Helsinki City maps (City of Helsinki 3) . Kartta Helsinki maps (City of Helsinki Map Service 4) . Openstreet maps . Helsinki transport HSL (Helsinki Regional Transport Authority) . Helsinki Region Infoshare . Google Earth	- Sub-districts - Roads and urban blocks - Main landmarks - Traffic intersections - Public transport stops - City bicycle seasonal locations - Baana initial segment
Interviews	Helsinki City planning department: . Interview 1 with transport planner 19 January 2024 . Interview 2 with non-motorised mobility planner 26 March 2024 . Interview 3 with architect, urban design 25 April 2024	-Inclusion and justice -Connectivity and networking of Baana -Considerations while designing for pedestrians -User feedback -Design considerations for the southern part of Baana
Walk-along observation	. Epicollect5 mobile application with questionnaire conducted on 30 March 2024 . QGIS	-Photographs and sound recordings (traffic, birds, other) at 94 spot locations with short notes -Map of spot observations on: . pleasant the spot is (scale 1 to 3, very, neutral, unpleasant) . safety perception (scale 1 to 3 very safe, unsure unsafe) . windy or sheltered (scale 1 to 2) . sunny or shaded (scale 1 to 2)
Participant observation	Mobile phone camera and voice recorder Visits between May 2023 and May 2024	Walking all along the segment and registering recording: -Seasonal changes -Construction-related changes -Users -Activities, events -Posts on bins and utility boxes -Materials

		-Signage -Art -Urban furniture -Vegetation -Types of walls

5. The Baana

The segment researched in this article is the former seven-metre-deep freight railway corridor that was constructed in 1894 and divided the city despite the seven bridges across it. This corridor stopped working in 2008 when the cargo port was relocated and the western harbour was transformed to a residential area, which required establishing connectivity with the city centre (Bravo, 2022). Following participatory planning, with residents and university students, and a competition for the transformation of this conduit, the Baana transformation was completed in 2012. The design maintained the industrial memory of Baana, first with the name referring to the railway, 'the series of landscaped and garden areas full of suggestive railway motifs', maintaining the existing wild vegetation and adding 'flowering creepers, several varieties of tall grass, and different types of bushes with perennial foliage to give an individual touch to each section of the cutting', keeping the original colours, materials and structures – including the seven bridges, while adding stairs to increase permeability along Baana – except for the sports zone, which alluded to the colourful containers once transported on the freight trains. The sports facilities include a basketball court, table tennis and pétanque pitches (Morethangreen, n.d.). Baana is described as 'austere, versatile and resistant project of recycling the railway track … so enthusiastically received by very different kinds of users.' In 2014, Baana received a special mention in the European Public Space prize for the collaboration and repurposing of obsolete infrastructure for non-motorised mobility, reducing the barrier effect and reconnecting the city with a non-commercial public space for 'recreation, sports and art' (David, 2022; Good News Finland, 2014; Nordregio, 2018). The provided amenities from sports to green spaces and 'picnic tables' converted Baana to 'an urban living room' (Nordregio, 2018). Moreover, Baana's success sparked the city authorities to consider implementing a non-motorised network starting from the centre, a project that has also inspired other countries (Nordregio, 2018). The initial 1.3-kilometre Baana stretch replacing the abandoned railway, became a concept for cycling highways as part of Helsinki City's vision to promote sustainable mobility and complete 150 kilometres of cycling paths (see City of Helsinki 3). (Figures 1).

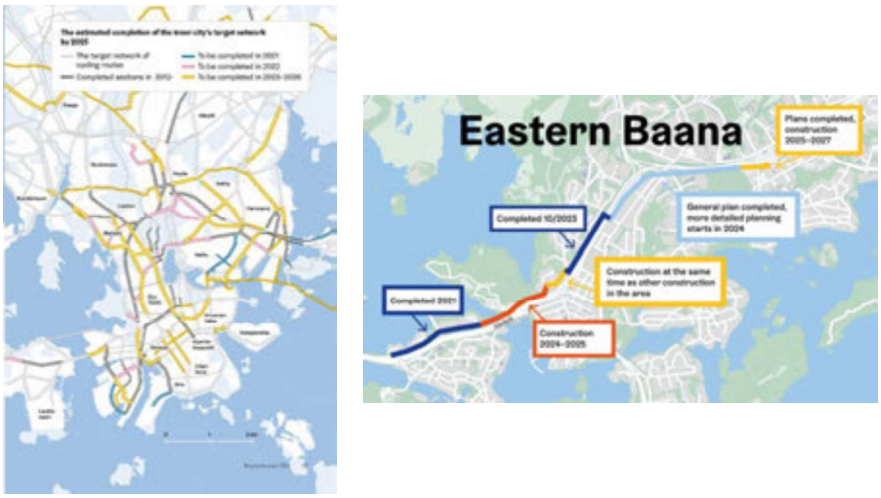

Figure 1: The cycling network and the Baana alignment (source: City of Helsinki 1, 2)

6. Analysis of findings

The analysis first positions Baana contextually, analyses it through functional, aesthetics, and symbolic design aspects. Next these findings are juxtaposed with findings from walking as a dynamic, multisensory social experience, to reveal levels of social interactions, and how Baana encourages or deters them.

Within the Helsinki City district, Baana is orientated north-east to southwest, which in this analysis is referred to as 'north' and 'south'. To the north, Baana starts at the cultural hub with the largest linear park in Helsinki, surrounded by the parliament and its extension, Oodi central library, the Music Hall, and Kiasma museum. The hub is in proximity to the central railway station, other museums, and cultural buildings. To the south, the Ruoholahti (west harbour) is a mixed-use area, predominantly residential, with offices, commercial, educational, and cultural activities. Between Baana's two ends, there are ten sub-districts, with different character areas, including mixed building uses with diverse architectural characters (Figure 2). Public transport stops are located along Baana with tramway routes at both ends, bus lines along the parallel and traversing roads. The nearest bus and metro station is east at Kamppi. Seasonally, there are four city bicycle points along Baana, one at the south end, and several in its vicinity. To the south, the tramway passes through a shared space with vehicles, bicycles, and pedestrians.

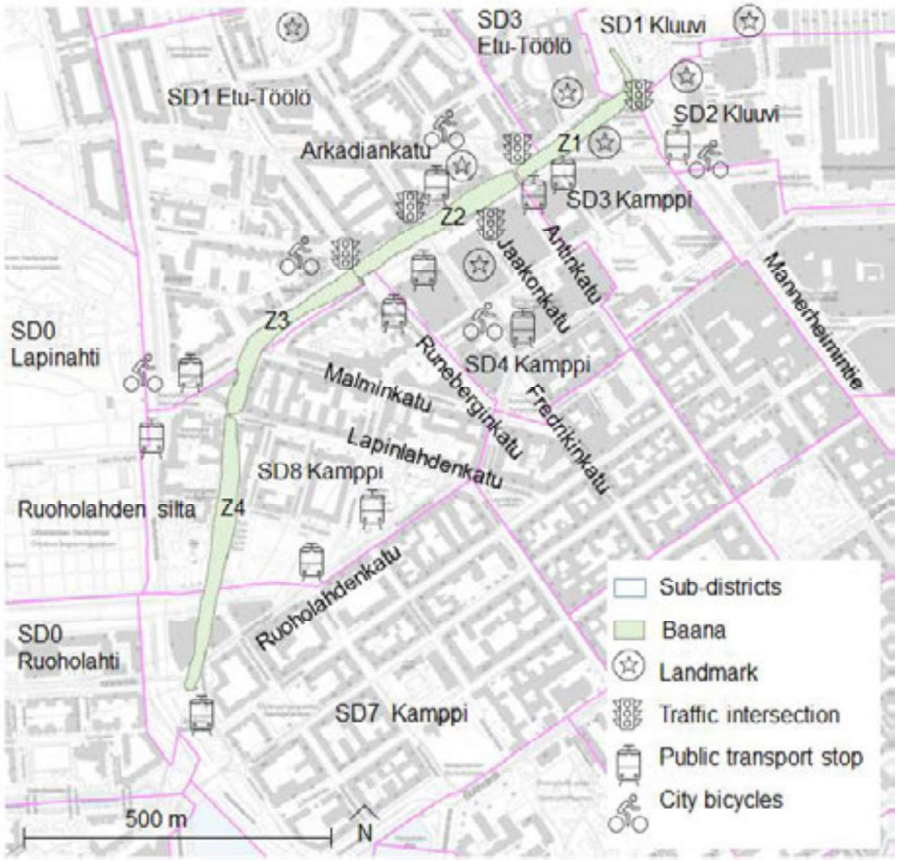

Figure 2: The Baana in between Oodi north-east and Ruoholahti south-west (Source: by author and basemap from City of Helsinki Map Services)

The decision to transform Baana aligns with Helsinki's city planning principles for 'social security, feeling of safety and attractive urban spaces, and provision of a cycling network.' (Interview 1) However, walking is still considered as a mode of transport, whereby one planner emphasised on 'understanding the term 'pedestrian' in relation to 'mobility and to streets and crossing' (Interview 1). The other planner stressed 'that everybody can walk and should walk more, and the goal is to provide safer, liveable streets and choices for the modes of transport on an everyday life basis.' (Interview 2) Both planners indicated 'the focus is on street liveability, creating places and connections to encourage short-distance walking and pedestrian routes' (Interview 2), and 'an 'environmentally friendly space that provides people with a vibrant and liveable atmosphere.' (Interview 1) Both indicated that inclusion is another principle applied to public spaces in Helsinki, yet inclusion was interpreted as facilitating the safe mobility of users with special needs – wheelchairs and visual impairment – that is supported through ramps, and cobbled stone to divide cycling and pedestrian lanes (Interview 2). When asked about gender

and age categories, ‘gender is not that much considered in the design, though the space can be experienced differently based on gender, so lighting matters in this case, and has been considered in the design; also the presence of street art and other activities (basketball) to invite other users, not only as a transit space.’ (Interview 2) When asked about seasonal conditions, one planner indicated that ‘salt and brushing’ method is used for melting ice rather than spreading gravel as in other streets (Interview 2). However, this applies to the cycling rather than the pedestrian lane as noted during the observations (Figure 3).

Figure 3: clearing ice from cycling but not pedestrian lane (Source: by author 13 January 2024)

Both planners indicated design considerations and limitations in Baana’s transformation, initially designed as a public space, with cycling being integrated later. ‘Baana was originally more a public space, inclusive for people of all age and abilities, which should apply to all city streets, so the plinth and edges needed to be reconsidered, to enable social activities’ (Interview 1). The importance of establishing connections with the surroundings and other public spaces was stressed: ‘the surroundings are very important rather than straight direct lines, as a long-distance pedestrian attraction’ (Interview 2). Baana also connects to the park in front of the parliament extension, the square in front of Oodi, the shared space at the Ruoholahti, and currently the newly planned Maria area (Interview 2). Another limitation is the corridor width ‘causing bicycle congestion and spillover to the pedestrian path as user numbers increase’, while it widens near Oodi due to space availability (Interview 1). Also, the lack of optimisation of the ‘drainage and other spaces’ was noted (Interview 2). A third concern at Ruoholahti is the

shared space design where ‘cyclists find it difficult to see where other people are walking, but for pedestrians it is easy to choose routes as it is an open ground.’ (Interview 2) In presenting these limitations, the planners did not mention shortcomings from the pedestrian perspective.

The planners indicated some concerns coming from the public, ‘Baana is considered a symbol and landmark of bicycle and walking infrastructure in Helsinki, especially in social media. Yet, a loud minority call it a waste of space or a waste tube.’ (Interview 1) No further explanation was provided regarding the criticism. Nevertheless, this segment ‘initiated the network idea’ (Interview 2), which would be applied throughout the city: ‘We want to turn interactive inclusive public space into a norm and not a highlight for people on foot, for activities, on street or on-site businesses.’ (Interview 1)

City level improvement of public spaces and non-motorised mobility network expansion directly impact Baana, which is part of this system. At the northern end, the ongoing renovation works along Mannerheimintie (City of Helsinki, 3) have temporarily disrupted Baana’s direct extension to the north-eastern public spaces (Figure 4).

Figure 4: Mannerheimentie street upgrading and impact on Baana’s northern end (source: by author 15 April 2024, 31 August 2023)

At the southern end, the upgrading of the Maria area is affecting Baana, though the cycling and pedestrian paths are not interrupted as in the northern end (Figure 5). The official city website states that the renovated southern part will shift the cycling path eastward to make space for a new ramp; relocate the ‘Helsinki’ art bench and basketball court; replace the pétanque with vegetation; renovate the benches and planted area and plant more trees (Helsinki City3, 22 March 2024). Further explanation of the project’s impact on Baana was obtained from the third interview.

The city’s concern was to connect the currently disconnected Maria area once upgraded. Therefore, changes at Baana were consequences rather than goals. Critical voices came from the public, particularly those in Baana’s vicinity. Concerns included the safety of children with the new bridge, shading Baana from the new taller buildings in the Maria area. The city authorities responded by conducting a traffic impact study with safety measures, with the design ‘mostly concentrated on the school children and their safety’ indicating that Baana’s ‘quality

remains the same, more greenery and trees and planted areas, most important functional spaces are kept but in different places.' (Interview 3) Also, the graffiti removed due to the new bridge construction will be replaced by new art (Interview 3). When asked about designing for pedestrians and their inclusion in this project, the designer indicated that there were 'no pedestrian counts, … Pedestrians were not considered as much as the bikers, though in the south there are the functional areas for people walking.' (Interview 3) (Figure 6).

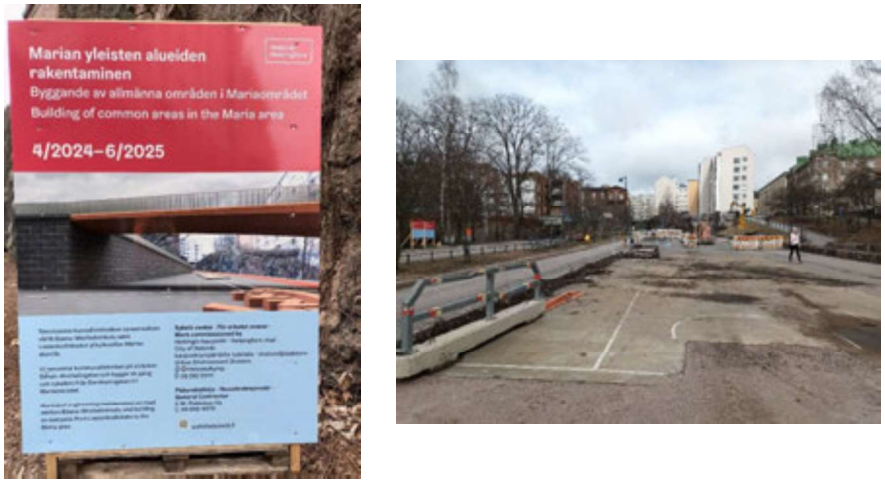

Figure 5: Maria area upgrading and impact on Baana's southern end (source: by author 18 April 2024)

Figure 6: southern Baana dismantled bench and graffiti to be replaced (Source: by author 18 April 2024)

Baana's mobility design

In the interviews with planners, one indicated: 'Baana is formed of segments that vary from purely functional to stay and gaming.' (Interview 1) The current 1.3 kilometres strip accommodates parallel cycling and pedestrian lanes that diverge in two locations due to the corridor's widening, creating four zones (Figure 1).

Starting from the north, **Zone 1** is centrally located crossing Mannerheimintie, connected with a shared ramp above, and tunnel underneath, which offers vistas to the cultural hub and connects to its open public space with ample seating. This zone connects with a pedestrian ramp and two concrete stairs to the adjacent park of the parliament extension, which is monitored by a CCTV. A third steel staircase is at Arkadiankatu. Zone 1 includes art but not seating, though there are some affordances along the planted terraces. Ardkadiankatu tunnel is deep with a wide unused shoulder and is poorly lit. The cycle and pedestrian paths are divided with paint until Arkadiankatu (Figures 7, 8).

Figure 7: Zone 1 functional, aesthetic and symbolic features (Source: by author)

Figure 8: Oodi seen from the tunnel and under Arkadiankatu (Source: by author 31 August 2023 and 5 March 2024)

Zone 2 continues until Runeberginkatu with Fredrikinkatu, Antinkatu and Jaakonkatu in between, and is less connected to the west side. Antinkatu has no vertical circulation. The stair at Jaakonkatu is directed to the north, while at Fredrikinkatu is directed south. Fredrikinkatu is a new concrete bridge with columns and a CCTV underneath. Jaakonkatu comprises two separate steel and wood bridges for cars and pedestrians. Under Jaakonkatu the wider east shoulder is unused. The west side in zone 2 has no lighting, piping crosses overhead near the bridges. Seating, amenities, and art are provided. The paths are divided with paint (Figures 9, 10).

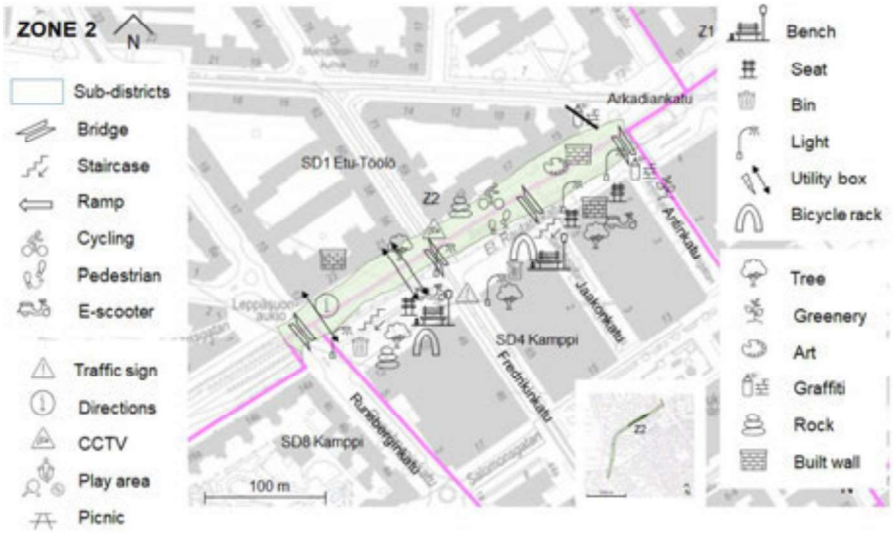

Figure 9: Zone 2 main features (Source: by author)

Figure 10: Top left: from Antinkatu looking towards Arkadiankatu; top right: from Fredrikinkatu towards Runeberginkatu; bottom left colonnade of Fredrikinkatu; bottom right pipes between the two bridges (Source: by author 30 March, 1 May 2024)

Zone 3 continues passing through the staircase at Malminkatu to Lapinlahdenkatu. It is the most visually permeable, connected to the east and west with stairs facing each other and directed towards Baana, and two ramps. The west ramp directed south joins the upper street, and the ground floor of the adjacent buildings. The east ramp is directed north at Runeberginkatu and leads to the Kamppi metro. Zone 3 lanes and ramps are divided with cobble stone for cyclists and pedestrians, yet there is a cross-circulation between cyclists and pedestrians traversing east and west (Figure 11).

Zone 3 offers diverse seating arrangements, and affordances along the planted areas on both sides. Though it has less art, it has direction signage to the nearest metro and Baana's surroundings. Between the new buildings adjacent to Baana and until Malminkatu, Baana narrows significantly, and cyclists then transgress onto the pedestrian lane if there are two and no pedestrians coming. Under Runeberginkatu with two graffiti, a pink bird house was added to the west wall, which has a wider unused shoulder that connects with the planted area. On the bicycle lane going north and just before Runeberginkatu is the only electronic panel, which is occasionally used. South just before Fredrikinkatu to the east there are two niches in the wall, with linear lights inside (Figure 12).

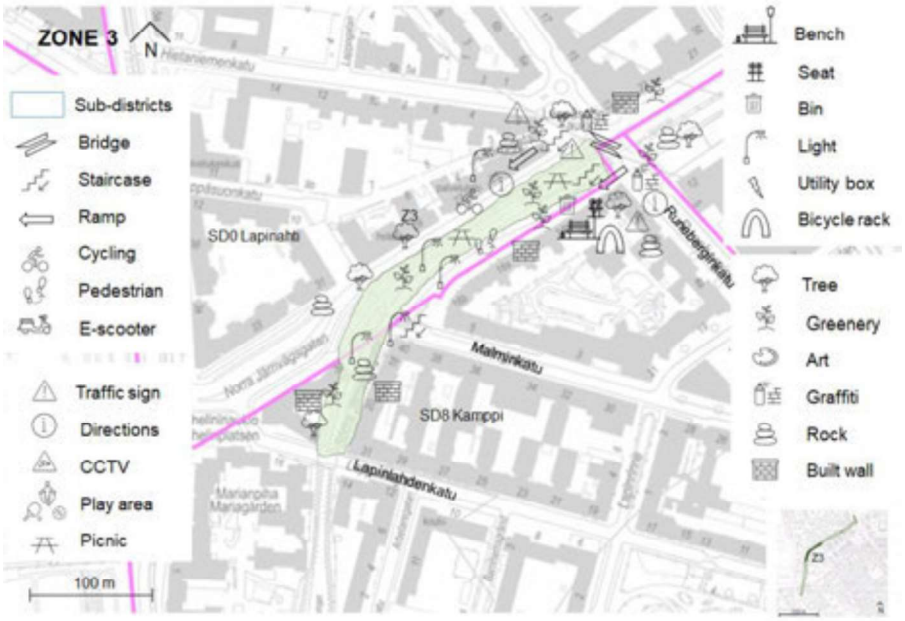

Figure 11: Zone 3 main features (Source: by author)

Figure 12: Top left stairs east and west; top right narrow part and contact with residential building; bottom left and right seating area in two seasons (Source: by author 27 April24 March, 6 January, and 17 April 2024)

Zone 4 passes by the ramp perpendicular to Lastenkodinkatu directed south, is traversed on top with the Ruoholahden silta bridge with an access stair facing Baana and ends with the shared space at Ruoholahdenkatu, thus forming two sub-zones (Figure 13).

Under Lapinlahdenkatu is the pigeon graffiti and round light. The paths divided with cobbled stone, are separated in the sports and recreation area. This area provides affordances especially on the eastern side, adjacent to the children's playground next to the ramp at Lastenkodinkatu. Moving towards zone 3, zone 4 has less visibility due to the narrow corridor. The construction in the Maria area partly blocked the open space in this zone and temporarily dismantled most of the sports activities. Zone 4 has essential signage, but less than in Zone 3. Moving towards Ruoholahti, the bridge partly blocks the view. In between, there is a picnic area, the only digital advertisement display panel located facing Ruoholahdenkatu, and a city bicycle station. Here zone 4 has direct contact with the street leading to the shared space, including one school building, with a supermarket on the ground floor (Figure 14).

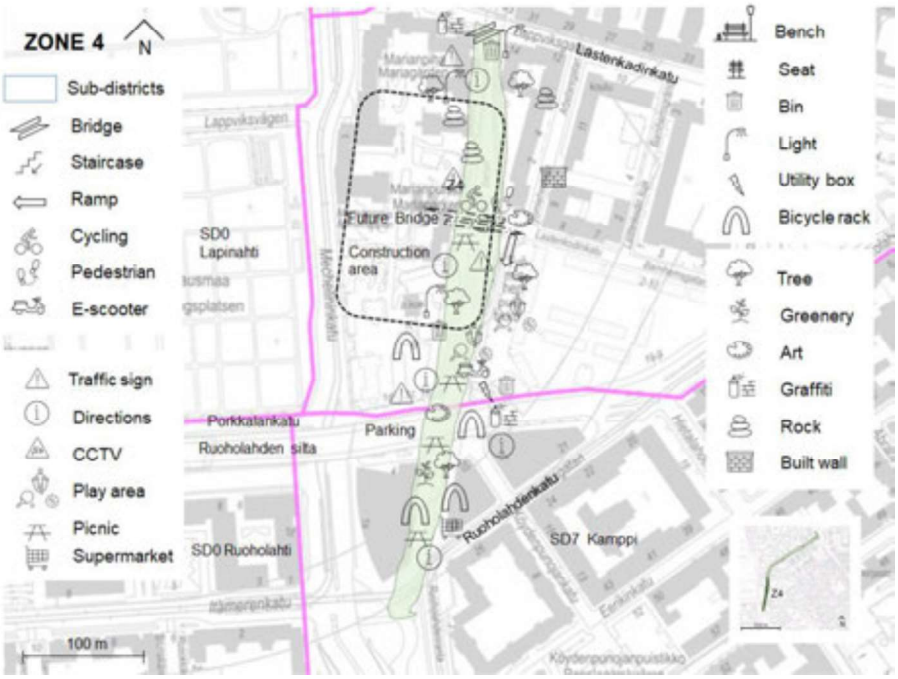

Figure 13: Zone 4 main features (Source: by author)

Figure 14: Top left basketball court; top right shared space; bottom left: Rouholahden bridge; bottom right Lapinlahdenkatu bridge (Source: by author- 6 and 30 March 2024)

To summarise, connectivity and permeability vary across the zones, with less linkages to the west. Regarding attractiveness, some zones are mainly utilitarian transit strips, while others incorporate art, seating, and diverse amenities, inviting diverse users to stay. Regular maintenance, and the presence of bins contribute to perceptions of safety, while lighting in some segments is insufficient. The non-uniform width of Baana indicated in the interviews allows for changes in levels of activities, the separation of different mobility modes, and reveals vistas, expanding cones of vision beyond the Baana to the surroundings (Figure 12). However, as mentioned in the interviews, this width variation is not optimised, with many shoulders left unused, noting their potential to provide more vegetation, art, and amenities. It is evident that zones 3 and 4 that are wider, with other amenities, offer more encounter opportunities. Signage for directions is mainly in zone 3, while in other zones it serves to inform about construction works and diversions. Safety from cyclists includes bottlenecks, crossings with pedestrians, and only paint separation in some segments. The tunnel closure north and construction of the new bridge south contribute to emerging disruptions that could impact some users from walking along Baana.

Baana's walking experiences

Walking types along Baana include mornings and evenings commuting possibly between home and work; walking to reach a destination along Baana, away from traffic intersections; taking a

shortcut across zone 3; walking a dog; pushing a buggy; leisurely walking and talking on the phone; strolling; jogging or running; walking individually, in pairs or groups.

While walking and depending on the time of day, non-humans include squirrels and hares in the early morning hours traversing Baana, especially in zone 4; ducks in zone 3 during summer; birds all around, especially in zones 2 and 3 as evident in the sound recordings. Other users include children in the adjacent play area also visiting zone 4; maintenance staff in the morning and on rare occasions police; runners at regular hours signal their fellow runners with acknowledgment; residents from the adjacent building in zone 3 walking a dog or smoking a cigarette; dogs with their owners sometimes interacting with passersby; people seated talking on the phone, eating, drinking beverages or simply looking; first-time visitors exploring Baana, youth in the sports area or sitting on the picnic places in zones 3 and 4; celebrating events, such as Vappu end of April (Figure 15). Observations indicate that the above activities provide interaction opportunities, and that different age groups and users with diverse capabilities walk along Baana. Stationery activities are reduced during harsh weather conditions, and footfall could be affected by ongoing city projects, yet children from nearby schools still come here for the outdoor hour (City of Helsinki5), and youth gather to celebrate events, such as Vappu or labour day celebration in May (Figure 15). Walking along Baana, some of the observations were validated with spot checks (Figure 16).

Figure 16: Perceptions of pleasant, safe, shaded, or windy locations (Source: by author using QGIS)

While walking, other senses are activated, and stimulated by cultural and natural elements. Art and vegetation are positive visual stimuli. Shading and wind are seasonal, favoured more in summer than winter, and often necessitating design interventions. Stairs have no cover but are

designed with the perforated metallic grid to prevent snow accumulation. The presence of deciduous rather than evergreen trees limits providing sheltering from wind and sun. The different types of seating areas cannot be used in rainy or snowy weather, something to be revisited together with the use of shoulders. Noise from the bridge in zone 4, the tramway in zone 1, and to some extent the parallel street to the west along Baana are considered noisy. However, all along, vegetation and trees offer refuge for birds, whose singing is a positive audio stimulus. In zones 3 and 4, especially in the mornings, the smell of buns from nearby bakeries provides pleasant olfactory stimuli, connecting Baana to the surroundings, while depending on wind direction, car exhausts along the western side are unpleasant. Baana is full of textures stimulating the tactile: different types of stone, concrete, wood, metal, and vegetation, combined with earth colours, or primary colours in the sports area. The rhythms of materials and colours provide a visual sequence while walking along Baana, sometimes inviting pedestrians to stop there, where the vertical blank walls disappear.

The users seem to have tacit walking rules, such as walking slowly on the right side, while keeping the left open for fast walkers and runners; wheelchair users use both cycling and pedestrian lanes; small children on bicycles could cycle on the pedestrian lane without causing discomfort; groups walking next to each other would make way when they see another pedestrian; cyclists and pedestrians equally transgress each other's lanes when there is little or no traffic; utility boxes and bins are used to display different announcements for cooking classes, gatherings and parties, entertainment shows and other (Figure 15).

Figure 15: Top left: Vappu celebration; top right graffiti indicating less visibility. Centre left: ramp adjacent to play area: centre right: post for cooking classes; bottom left: metallic stairs; beottom right: seating area (Source: by author 27 April, 5 March, 24 April, 30 March and 29 April 2024)

Redefining the functional and aesthetic aspects to shape pedestrian spaces by users not by design, is evident along Baana. Drawing graffiti or posting advertisements on bins and utility boxes codes Baana, while decoding is based on the receiver and their knowledge of what the meanings are – example classes for cooking, dancing, a concert, or jobs – which are signals for establishing encounter beyond the space for walking, whereby 'the capacity to provoke relations' unfold outside the space itself (Blokland, 2017). Sitting or walking dogs in areas non-designated places such as in zones 3, 4 opens the possibility for other users to follow. Occasionally, pedestrian groups congregate on the picnic areas or near the sports area, and temporarily reconfigure it Baana (Figure 15). These signifiers define for whom Baana is, and the 'etiquette' in Baana leads to inclusion/ exclusion.

Regarding barriers and 'subtle forms of exclusion', the variation in lighting, leaving some segments along Baana as dim especially in winter, would discourage some users, for example vulnerable individuals. While the cycling lanes are kept clean in winter, ice forms on the pedestrian lane, especially in zone 4, and the ramp leading to the parliament extension in zone 1, which would deter some users. The design of the seating and its positioning limits interaction, noting that seats are mostly at the foot of the stairs, and face blank walls. The art provided, mainly graffiti, is not to everyone's taste, though the addition of the contemporary art display in Zone 2 in summer 2023 attracted the attention of many passersby (Figure 10). The offered sports do not cater for the very young or elderly, like other public spaces in Helsinki. The lack of a public toilet or at least clear signs to where some are located at both ends indicates that the duration of stay along Baana is limited.

Regarding safety, there are few hidden or less visible areas along Baana, under some bridges, the niches between two bridges or decreased visibility between zones 4 and 3. More importantly, almost along all Baana, there is visibility from above, overseeing from the bridges or along the streets. Design considerations for safety indicate risks when stepping down from stairs, or next to shoulders that are not levelled with the pedestrian lane (zones 1, 2). Safety from others during daytime does not seem to be an issue, expect in the segments where the lanes seem visually or physically disconnected. The presence of CCTVs could instigate

contradictory feelings of safety. Walls with informal graffiti suggest poor visibility, which also relates to issues of safety (Figure 15).

Summing up from the analysis, what aspects of Baana encourage what types of walking experiences and social encounters? Baana offers traversing the city and cutting through different architectural character areas, a perspective not commonly possible along the street network. Walking along Baana is comfortable and safe, with only few interruptions, no waiting time, dwarfing the railway conduit, and paying attention to the human scale. Experiencing Baana on foot reveals differences marked by opportunities and barriers for pedestrians and possibilities for social encounters. The dynamic interplay of stimuli for different senses from the physical surroundings and the designed space create transit nodes from one experience to the next. Walking along Baana is not limited to the necessary or optional, it offers a range of fluid encounters with diverse human and non-human users, as well as exchange with familiar strangers – familiarity built on recurrence, or similarity of the type of walking, for example with children, with dogs or running. There are implicit rules that give meaning to Baana, which are accessible even to first-time users, such as when to give way, negotiate one's pedestrian status, or learn about upcoming events. 'Subtle forms of exclusion' exist, for the three aspects. Functionally, accessibility from the west is still limited, with the new Maria area project promising to mitigate this. Aesthetically, asymmetrical attention is given to different user groups in the design. Symbolically, the choice of signage, art and design of amenities communicates to some user groups better than others. Though memory of the railway is important, it is worth questioning the extent to which its preservation is enhancing current walking experiences, or whether other interpretations could serve both purposes better through the choice of art, use of shoulders, or vegetation.

7. Conclusion

This article addressed two questions in ongoing research: *What design elements, aesthetics, and symbolic atmospheres in Baana promote walking beyond the necessary activity? How is Baana perceived while walking?*

Considering walking as a social activity beyond the utilitarian mobility need, and the importance of fluid encounters, the article presented an approach to analyse pedestrian urban spaces. This approach conflated the design and experiential aspects of function, attraction, and signification to identify barriers and potentials for supporting social encounters. Unpacking walking as a social activity revealed its multi-sensory experience, social connotations, and potentials to support interaction and sociability within urban spaces for walking, ranging from public familiarity to sustained social interaction.

The article presented preliminary findings from the initial research phase, which prepares the basis for the next phase that addresses some of the research limitations. The first is the absence of information about diverse experiences based on the pedestrian's intersectional identities (both internal from the individual and external from the socio-cultural background shaping the surrounding context) to examine the extent of how just or inclusive Baana is as a pedestrian environment. The second relates to user demographics, information on origins and destinations,

choice frequency and purpose of walking, and how they link to socio-economic distributions in the city more broadly, and opportunities for long-distance walking. Third, investigate the temporal aspect and dynamism of the walking experience depending on the time and seasons. In the second phase, a survey will be developed to identify differential experiences, and could be based either on visuals analysed by respondents, or user input that is georeferenced using an application like Epicollect5. The questionnaire could be replaced with walking narratives for a smaller sample that focuses on a specific user group (Kanellopoulou, 2017; Middleton, 2018; Scarponi et al. 2023).

While the current research serves as a steppingstone for further in-depth and participant-based research, it nevertheless proposes some suggestions for planners with possibilities to enhance functional, aesthetic, and symbolic aspects of the Baana towards addressing experiential asymmetries and reinforcing social encounter that is essential within urban environments.

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