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Front page photo: Nyhavna, Ormen Langes veg, photo by John Arne H. Tømmervold, Trondheim Municipality, overlays by ClimaGen.

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Executive Summary

As a Demonstration City in the ClimaGen project, Trondheim is piloting climate-resilient urban re-greening in the districts of Lademoen and Nyhavna. This report details the progress made during the first 18 months of the project up to June 2026, focusing on the implementation of nature-based solutions and the establishment of local co-creation frameworks.

The project area represents an ongoing complex urban transition, connecting the historic residential neighborhood of Lademoen with the industrial harbor of Nyhavna. The primary objective is to overcome socio-economic vulnerabilities and poor physical connectivity through measures that at the same time improve the local biodiversity and public spaces, while addressing climate mitigation and adaptation.

During this reporting period, five strategic interventions have been prioritized:

1. Testing of temporary vegetation and plant species as urban nature restoration measures
2. Establishing stepping stones for both nature and people
3. Safer and more attractive pedestrian connections with vegetation
4. Strengthening green structures in the streets of Lademoen
5. Strengthening ecological functions in existing parks of Lademoen

The ClimaLab serves as the frame for Trondheim's "Living Lab" activities:

- **Research and monitoring:** Working with NTNU and SINTEF to define the socio-ecological baseline and the long-term impact model.
- **Cultural engagement:** Partnering with the arts sector, including Rosendal Teater and Trondheim art biennale 2026, to use cultural innovation as a tool for community dialogue.
- **Intergenerational co-creation:** Engaging students and schools, youth entrepreneurs, and local residents in the design and maintenance of their new green spaces.

A key lesson learned is the importance of integrating ClimaGen activities into overarching municipal strategies. The project is firmly anchored in Trondheim's Climate City Contract (CCC) and the Area Investment Programme (AIP). This alignment ensures that the innovative methodologies developed for nature-based solutions and social inclusion can be scaled from a neighborhood pilot to a city-wide standard.

1. Trondheim in ClimaGen

1.1 Goals and ambitions: from strategy to action in Trondheim

For Trondheim, ClimaGen is about more than just meeting climate targets; it is an opportunity to connect the historic Lademoen district with the developing Nyhavna harbor through a more cohesive, green and resilient urban landscape, so-called green corridors. We have built our goals around three main areas: the physical environment, the well-being of our residents, and the way we govern our city.

Our primary goal is to turn parts of the industrial and gray areas into "ClimaGreens", with a minimum of a 25% increase in green spaces and/or quality compared to the project's start. Nyhavna is a territory characterized by its industrial history and the harbour area is currently severely nature-deprived. Lademoen on the other side of the railway is greener, with three established parks and a big cemetery.



Illustration: The four core strategies of ClimaGen, source ClimaGen

With ClimaGen we shall strengthen local climate adaptation and resilience by deploying multifunctional nature-based solutions that address urban stormwater management, temperature regulation, soil remediation and promote public health. By increasing green biomass (carbon sequestration) and promoting green corridors for bikes and pedestrians (emission reduction) ClimaGen contributes directly to the city's goal of climate neutrality by 2030 and the need of Climate mitigation.

Through our local initiative, "Nature Leads the Way" (*Naturen viser vei*), we are building a physical and ecological bridge between the residential neighborhoods of Lademoen and the harbor area at Nyhavna. This and other (re)greening measures will improve the biodiversity in public spaces.

A successful climate transition must be fair and feel right for the people living in it. Following the New European Bauhaus (NEB) values of sustainability and togetherness, the municipality of Trondheim's ambition is to see a 20% increase in inhabitant satisfaction by the end of the project.

We will reach this through our ClimaLab, where we bring together residents of all ages, youth entrepreneurs, and local artists in co-creating projects, activities and measures. By using the project's impact model, we will monitor how people actually experience these changes, ensuring that new green spaces foster a sense of local pride, safety, and ownership rather than just being "projects" imposed from the outside.

Finally, we want the lessons we learn from ClimaGen to change how we build the rest of Trondheim. We aren't just looking at these two districts; we want ClimaGen to be a blueprint. By using the project's joint sense-making and collaboration activities, we will actively integrate what we learn about nature-based solutions and social innovation into our long-term municipal and regional planning strategies.

As a Mission City, our ultimate goal is to show how high-level climate targets can be translated into vibrant, safe, and green neighborhoods where people actually want to live.

1.2 Stage of the project

Trondheim is currently concluding its first innovation cycle in the project, which focuses on co-creation and local anchoring. During these first 18 months, the project has mapped local opportunities, started developing urban nature restoration methodologies with the university, and established connections with residents, the cultural sector, and local businesses to identify sub-projects for joint development.

The project has operated along two parallel tracks during this initial stage:

- **Co-creation and pilot testing:** The city has been in an active co-creation phase, establishing a ClimaLab as a platform for stakeholder engagement, based on existing structures and activities. While planning larger interventions, several smaller-scale measures have already been tested to gather early experiences.
- **Implementation of major infrastructure:** In parallel with the co-creative processes, high-impact municipal projects already underway within the demonstration area and its greening areas have reached several milestones. This includes:
 - **Strandveiparken:** The expansion and renovation of the park was completed in the summer of 2025. The upgrade directly contributes to the project's regreening targets and was finalized after being closed for soil remediation.
 - **Innherredsveien:** The structural transformation of Innherredsveien into a "green street" (*miljøgate*) has been carried out. This project is the result of long-term planning and significant pressure from local residents to improve safety, air quality, and connectivity in the neighborhood.

As the project moves into the second innovation cycle, "Harvesting Local Treasures" (M19–30), the focus will shift toward implementing the nature-based solutions (ClimaGreens) that have been co-created during this first phase.

1.3 Details about the demonstration area

The selected demonstration area for the ClimaGen project is Nyhavna-Lademoen. This area aligns with the municipality's "Lademoen Living Conditions Zone" and the ongoing Area Investment Programme (AIP). The AIP is described in chapter 1.3.3. Within this district, the project aims to enhance and expand the existing green infrastructure, establishing new green corridors that physically and ecologically connect the transforming industrial harbor of Nyhavna with the historical residential area of Lademoen.



Illustration: Map showing the demonstration area (grey) and the greening area of the green corridors (in light green). Details are found in Chapter 4. Source: ClimaGen

With the massive housing development currently taking place in the area (see map below), the pressure on existing green spaces is increasing. Nyhavna can however also become a gateway to the Lade urban nature park, northeast of the demonstration area. By renaturing the 'grey' industrial zones of Nyhavna, we are not just creating local parks, but functional entrance points to a larger, protected urban nature system, as envisioned by local stakeholders in the [Lade-manifesto](#). Read more on the web site made by organizations for the [Lade urban nature park](#).

The proposed interventions consist of a strategic combination of high-impact investment projects already underway and co-creative pilot projects developed in close collaboration with local residents through the ClimaLab framework. A common objective for all measures is to increase resident satisfaction and well-being by improving the local natural and environmental quality.

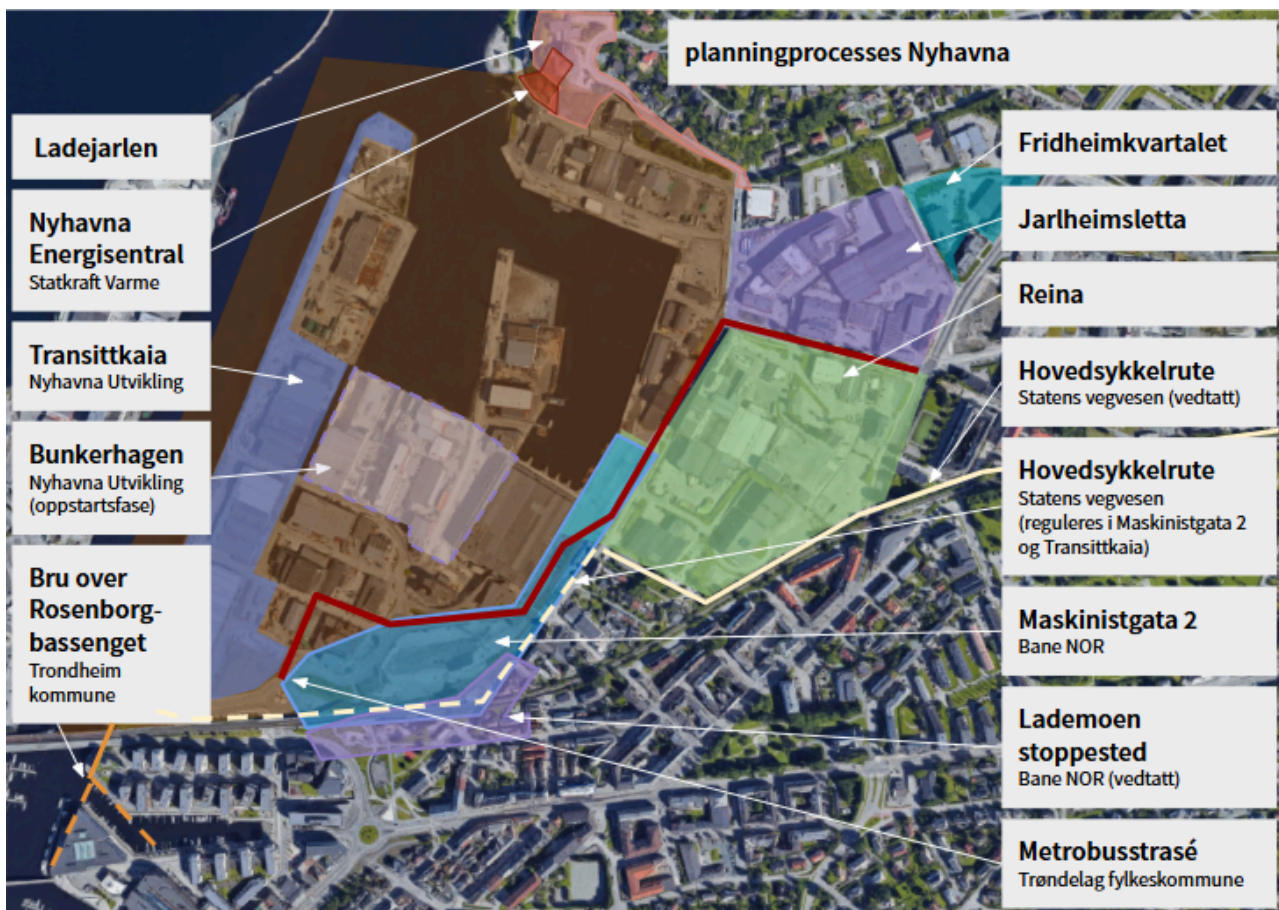
To reach the project target of a 25% area increase/improvement in ClimaGreens (nature-based solutions), the strategy focuses on three main pillars:

1. **Increased or improved green areas:** Converting grey/industrial surfaces into permeable green spaces.
2. **Increased habitat diversity:** Enhancing biodiversity and ecological complexity.

3. **Increased quality:** Improving accessibility, aesthetics, and social functionality of urban nature.

The ClimaGen interventions are integrated into and add value to several existing projects and strategic programmes in Trondheim:

- **Area Investment Programme (AIP) Lademoen - Nyhavna:** The overarching social and physical regeneration programme.
- **Ormen Langes veg:** Infrastructure and greening project led by the Mobility and Transport unit.
- **Upgrade of Strandveiparken:** A key park renovation led by the Urban Greening department.
- **Upgrade of Lademoparken:** A key park renovation led by the Urban Greening department.
- **Upgrade of Inherredsveien, including new urban spaces:** A structural transformation to improve surface-level connectivity and safety, led by Trøndelag county
- **Urban Planning for Nyhavna and Lademoen:** The long-term spatial development strategy managed by the City Planning Office. (See illustration of ongoing planning underneath:)



*Illustration: Map showing ongoing planning processes in and around the demonstration area.
Source: City planning office, Trondheim Municipality*

1.3.1 Municipal plans

The work we are doing in ClimaGen closely aligns with and supports many of the municipality's plans and strategies. The most important ones are briefly described below.

Looking beyond standard land-use regulations, ClimaGen's community-driven and green initiatives are strongly connected to the social part of the municipal master plan, ["Trondheimsløftet"](#) (2020–2032). The main vision of this plan *"Sammen skaper vi Trondheim"* (Together we create Trondheim) perfectly matches our project's approach of using "living labs" where residents, researchers, and local businesses work together.

The main goals of ClimaGen's greening projects directly support Trondheimsløftet's focus on social sustainability. By working through the local Area Investment Programme (AIP), the project aims to lift vulnerable neighborhoods.

Trondheim's contribution to ClimaGen is rooted in the Municipal Plan for Natural Diversity ([Kommunedelplan for naturmangfold](#) 2023-2032). Under Strategy 1: Stop the loss of biodiversity, the plan identifies the restoration of "ecological infrastructure" as a primary goal. By implementing greening and nature-based solutions (NBS) in this area, ClimaGen serves as the primary tool for realizing the municipality's goals for urban ecological connectivity.

These objectives are also described in the [Quality Programme for Nyhavna \(2022\)](#) that show that the Nyhavna area currently represents a breach in the city's ecological network, isolating the Nidelva river corridor from the coastal path (Ladestien).

Parts of our pilot area are legally protected to ensure that nature and history always come before new buildings. A significant part of the demonstration area's perimeter is governed by specific land-use regulations under the [Municipal Land Use Plan \(KPA\)](#) § 32.11, Mandatory Provision Zone #12 (Urban nature park). This zone includes key project sites such as Talerøret and Ormen Langes veg (up to the centre line). According to the KPA, development within this zone must grant special consideration to natural values, cultural heritage, and the landscape.

In the ClimaGen context, these regulations provide a legal foundation for our efforts to re-establish the ecological corridor between Nyhavna and Lademoen.

1.3.2 Climate-related challenges

The demonstration area of Nyhavna and Lademoen faces significant climate-related risks, primarily linked to its low-lying coastal location and the increasing frequency of extreme weather events. Key challenges identified for the project period and beyond include:

- **Rising sea levels and storm surges:** Large parts of Nyhavna are at risk of flooding during extreme high-tide events ([Trondheim Climate Map, 2050 scenario](#)).
- **Wave impact and coastal erosion:** Recent assessments ([Multiconsult, 2025](#)) highlight increasing vulnerability to wave overtopping and mechanical impact during storms.
- **Urban heat island (UHI) effect:** Extensive dark surfaces (asphalt/roofs) create local heat stress, adversely impacting the health of residents in the adjacent, densely populated Lademoen area.
- **Soil pollution:** Industrial contamination risks leaching hazardous substances into the fjord during heavy rainfall and flooding. Driven by the area's industrial heritage, contamination levels exceed legal limits across multiple sites, both known and unmapped.

- **Biodiversity gap and ecological fragmentation:** The large grey areas of Nyhavna isolate habitats.



Left: Photo by Glen Musk, 2022 showing The Strandvei Park before the upgrade in 2025. Underneath the playground the soil was highly polluted. Source: Trondheim municipality

Center: Photo by John Arne Tømmervold, 2026, showing the outlet of Ladebekken, which is closed and piped. The outlet also acts as an overflow, and during heavy rain, contaminated water can flow out into the fjord. Source: Trondheim municipality

Right: Photo by John Arne Tømmervold, 2026, showing the lack of biodiversity in the streets of Nyhavna. Source: Trondheim municipality

1.3.3 Socio-economic vulnerabilities: context and community resilience

The choice of Lademoen-Nyhavna as a demonstration area is rooted in the Trondheim Area Investment Programme (AIP) – known locally as “områdesatsing”. The AIP is a targeted policy instrument designed to improve the local environment, housing conditions, and living standards in specific urban areas facing socio-economic challenges. Rather than replacing regular municipal services, it acts as an extraordinary, coordinated, and cross-disciplinary effort conducted in close partnership with residents, voluntary organizations, and local businesses. Crucially, it serves as an innovation platform for the municipality to test new methods of co-creation and to mobilize the unique potential and resources already present within the neighbourhood.

The initiative in Lademoen officially began in 2022 with extensive participatory processes to build a local knowledge base, following a political decision in 2021 to expand the municipality's area-based efforts to new districts. The work is formally backed by a binding letter of intent between the Norwegian national government and Trondheim Municipality, which secures cooperation and funding for a five-year period from 2024 to 2028, with the possibility of extension. At the local level, Trondheim's strategic program for these areas extends to 2031, aiming to convert the lessons learned into lasting organizational and social improvements.

With respect to socio-economic vulnerabilities and housing instability, Lademoen is a district that has faced an accumulation of living conditions challenges over a long period. A defining characteristic is the high concentration of municipal social housing, which accounts for 10.1% of the total housing stock—nearly three times the city average of 3.8%. The area is dominated by small apartments, leading to a highly transient population with an annual turnover rate of 26%. This makes it difficult to build the lasting support networks essential for a resilient community. This is documented in the [Lademoen Socio-Cultural Site Analysis \(2022\)](#).

Furthermore, data from the HUNT Study confirms that residents in Lademoen report lower levels of life satisfaction than the rest of Trondheim. Public spaces are often perceived as neglected or unsafe, and there is a documented shortage of social infrastructure for youth and families.

Despite these challenges, the 2022 analysis highlights a resilient "soul of the neighbourhood." Lademoen is identified as a district with a strong sense of local ownership and a "do-it-yourself" (DIY) culture. This cultural capital, driven by a diverse and often artistic population, is a key asset for the project. By tapping into this local strength, the Area Investment Programme aims to foster a socially sustainable community where residents are empowered as neighborhood actors, ultimately reversing negative trends from a long-term perspective.

1.3.4 Cultural heritage and historical context

The ClimaGen demonstration area is situated within a landscape of significant historical value, protected by several [Cultural Heritage Zones](#) (*Hensynssone kulturmiljø*) in the Municipal Land Use Plan (KPA). The project area is defined by the intersection of industrial history, maritime heritage, and traditional working-class urbanism:

- **Nyhavna and maritime heritage:** As a former industrial harbour, Nyhavna holds high antiquarian value, specifically related to its WWII history (e.g., the Dora bunkers) and maritime education traditions at Ladejarlen. The transformation into a green urban district must respect these monumental structures and the industrial aesthetic that defines the area's identity. This is well described by Nyhavna Utvikling on [their web site](#).
- **Traditional working-class districts:** The residential areas of Lademoen, Buran and Voldsminde represent some of Trondheim's best-preserved historical wooden housing and brick apartment blocks. These areas are protected to maintain their unique architectural character and social history as traditional labourers' quarters.

Through ClimaGen, Trondheim municipality with partners aim to integrate nature and heritage by using green infrastructure to enhance, rather than hide, historical areas. These new green spaces will improve the view of protected buildings and create 'breathing spaces.' This approach ensures a climate-resilient future that is rooted in the local culture and history.



Photo by Glen Musk: Traditional wooden housing at Lademoen, Source: Trondheim municipality

1.4 Summary of how ClimaGen Trondheim is working with the ClimaGen components

The primary objective of ClimaGen Trondheim is to transform the Lademoen-Nyhavna district from an industrial "asphalt desert" into a climate-resilient, biodiversity-rich and inclusive urban area. By implementing our "ClimaGreens" interventions around green corridors, we have an ambitious goal of increasing the green coverage within the greening area by at least 25%. This work within the wider demonstration area serves as a Living Lab to gather vital experience and data before the final, permanent transformation of Nyhavna is completed. Through Climagen we aim to increase satisfaction by 20%.

18 months into the project our portfolio is structured around five strategic pillars, they are explained in more detail in chapter 3:

1. Testing of temporary vegetation and plant species as urban nature restoration measures *(see chapter 3.1.1-2)*
2. Establishing stepping stones for both nature and people *(see chapter 3.2.1-2)*
3. Safer and more attractive pedestrian connections with vegetation *(see chapter 3.3)*
4. Strengthening green structures in the streets of Lademoen *(see chapter 3.4.1-2)*
5. Strengthening ecological functions in existing parks of Lademoen *(see chapter 3.5.1-3)*

The main challenges after 18 months involve complex ownership structures (for example the train tracks and some surrounding areas are owned by BaneNor, the national railway company, other areas have a combination of ownership and long-term leases), historical soil contamination, and conflicts between new infrastructure and existing trees. However, the project has strengthened its political anchoring, with ownership being transferred to the City Councillor for Urban Development in 2025. Moving forward, the focus will be on scaling up temporary solutions and ensuring that the knowledge gained through our ClimaLabs is formally integrated into the upcoming regulatory plans for the area.



Photo by Merete Mauland: Neighbours and Municipality co-creating and greening the “street plaza” in Gregus gate, May 2025

2. Engagement, Governance & Finance

2.1 Engagement

Trondheim has established a local ClimaLab as a collaborative governance platform to drive engagement within the project. This Living Lab serves as an innovation hub focusing on arts, culture, youth, entrepreneurship, and sustainable finance. The work is developed in partnership with the European Network of Living Labs (ENoLL), JA Europe, and THINK E, ensuring that local engagement strategies are aligned with international best practices and co-creation methodologies.

The municipality of Trondheim coordinates a broad ecosystem of stakeholders, including residents, the local cultural sector, and businesses. The goal is to move from traditional public consultation to a "Quadruple Helix" collaboration model where academia, public authorities, the private sector, and civil society co-create the physical and social transformation of the neighborhood.

Trondheim Municipality (TK) leads the collaboration, managing a local consortium of strategic partners. To ensure high-quality interventions and deep local anchoring, dedicated resources (person-months) have been allocated to key external partners:

- **NTNU (Norwegian University of Science and Technology):** NTNU – the Norwegian University of Science and Technology – is Norway's largest university. The Smart Sustainable Cities group contributes a transdisciplinary approach and extensive experience from major European urban transition initiatives, including the EU Mission for Climate-Neutral and Smart Cities and several New European Bauhaus (NEB)–related Horizon Europe projects (for example CrAFt, NEB-STAR, Re-Value). Furthermore, NTNU's Gjærevoll Centre, an interdisciplinary research center established in 2022, contributes expertise in biodiversity and sustainability. The centre develops practical tools and precise methods to describe future changes in biodiversity, providing research-based knowledge to help public and private sectors reduce threats to nature.
- **Sintef:** SINTEF is one of Europe's largest independent research organisations and a non-profit research institute. More than 90% of its annual turnover derives from contract research for industry and the public sector in Norway and internationally. SINTEF is multidisciplinary, with expertise in technology, natural sciences, medicine, and the social sciences. It is represented through its Trondheim unit of SINTEF Community.
- **Rosendal Teater:** Their mission is to be a hub and leading regional engine room for artists, arts organisations and audiences to reimagine what the performing arts and the world around us can be. The theatre co-produces and presents two seasons per year of performances, parties, concerts, installations, film screenings, festivals, residencies, discursive events, as well as other kinds of social events. RT also runs its own cafe, which provides the organisation with very special, informal and social conditions for gathering people of all ages and backgrounds to gather, meet and hang out around food, drink and art events.
- **Nyhavna Utvikling AS:** This company is the driving force behind the transformation of the industrial area Nyhavna into a future-oriented district in Trondheim. Owned by both Trondheim Municipality and Trondheim Port Authority, the company is dedicated to creating a sustainable urban area where history meets modern innovation. Their mission involves responsible property development and management, aiming to establish new

workplaces, green urban spaces, housing and services while preserving cultural heritage. Through a commitment to high-quality, eco-friendly solutions, Nyhavna Utvikling ensures that the new district will be a diverse and accessible asset for the entire city.

Quantitative data

Indicators description	Number
Number of stakeholders engaged, defined as participants into co-creation activities. <i>(This is part of the project KPI on stakeholders involved in ClimaLabs)</i>	650
Estimated number of citizens reached via broader Communication, Dissemination & Exploitation actions. <i>(This is part of the project KPI on stakeholders involved in ClimaLabs)</i>	500
Number of co-design/co-creation sessions	10
Number of greening measures tested or launched <i>(Talerøret, Strandveikaia, Jernbaneparken, Strandveiparken, Lademoparken, Innherredsveien, Buranforest, Gregus street plaza)</i>	8
Estimated number of youth engaged <i>(part of the JAE youth engagement and the city challenges)</i>	70
Number of partnerships formed/strengthened (incl. Financial and entrepreneurs) <i>(Informal new partnerships formed with TSSK, Buldr.no, Trondheim Art Biennale, Lade school, not counting the formal ClimaGen partners)</i>	4

2.2 Stakeholders

The following stakeholder mapping is based on a Quadruple Helix model, identifying key actors across the public sector, academia, industry, and civil society. The mapping and categorization were refined during the ENoLL Learning Session (Miro workshop) held on February 27th 2026 where the local ecosystem in Trondheim was analyzed to ensure broad engagement and inclusive co-creation. This list identifies the "change agents" necessary for the successful implementation and long-term sustainability of the nature-based solutions in the Nyhavna and Lademoen area.

2.2.1 Public sector stakeholders

Trondheim Municipality (various departments)

- **Value for the stakeholder:** Achievement of statutory goals for biodiversity and climate adaptation; improved interdisciplinary collaboration (breaking silos); and a more resilient urban core.

- **Type of contribution:** Project leadership (WP9); technical expertise in urban planning, water management, and parks; long-term maintenance of interventions; and regulatory oversight.

Trøndelag County Council (Fylkeskommunen)

- **Value for the stakeholder:** Alignment with regional climate strategies; knowledge transfer for regional scaling of nature-based solutions (NBS).
- **Type of contribution:** Regional strategic alignment; knowledge sharing with other municipalities; and potential regulatory support at the regional level.

Municipal anchor institutions (Schools, kindergartens, library)

- **Value for the stakeholder:** Greener and safer surroundings for students and children; new outdoor arenas for environmental education.
- **Type of contribution:** Arenas for youth engagement (JA Europe activities); sites for smaller "ClimaGreens" pilots; and dissemination of information to families and youth.

2.2.2 Academia stakeholders

NTNU (Norwegian University of Science and Technology)

- **Value for the stakeholder:** Real-world laboratory for research on climate impact and urban ecology; opportunities for student projects and scientific publications.
- **Type of contribution:** ClimaGen Partner. Academic expertise; impact monitoring and assessment; development of the ClimaImpact model; and hosting student-led co-creation activities.

2.2.3 Private sector stakeholders

Nyhavna Utvikling (Nyhavna Development) (Private-public sector – Real estate developer)

- **Value for the stakeholder:** Increased property value through improved blue-green infrastructure; fulfillment of future environmental requirements (BREEAM/EU Taxonomy); and "green" branding of the district.
- **Type of contribution:** ClimaGen Partner. Provision of test sites for pilots; integration of NBS into permanent urban development plans; and bridge-building between temporary project measures and long-term commercial goals.

Bane NOR Eiendom (Private-public sector – Real estate developer)

- **Value for the stakeholder:** Improved surface water management near railway tracks; aesthetic enhancement of station areas.
- **Type of contribution:** Landowner dialogue; technical coordination regarding safety and proximity to railway infrastructure; and collaboration on greening rail-adjacent zones.

Local businesses at Nyhavna and Lademoen

- **Value for the stakeholder:** More attractive surroundings for customers and employees; reduced risk of local flooding through improved drainage.
- **Type of contribution:** Feedback on practical implementation in industrial zones; potential local co-maintenance of green spots.

2.2.4 Civil society stakeholders

Residents of Lademoen, Svartlamoen, and surrounding areas (unorganized, but see organisations below)

- **Value for the stakeholder:** Improved local environment; reduced heat island effects; and new social meeting points in a greener neighborhood.
- **Type of contribution:** Primary users of interventions; local knowledge providers; and participants in co-creation and citizen science monitoring.

Lademoen Vel (Neighborhood association)

- **Value for the stakeholder:** Stronger influence on local development; improved social cohesion in the neighborhood.
- **Type of contribution:** Local mobilization; communication channel to residents; and organizational support for neighborhood events.

Svartlamoen resident organization (Neighborhood association)

- **Value for the stakeholder:** Protection of local culture and identity; ensuring that renaturing measures support the unique social fabric of the area.
- **Type of contribution:** Expertise in sustainable self-governance; alternative perspectives on urban rewilding; and hands-on participation in pilot projects.

Lade Urban nature park (Lade bynaturpark) (organization)

- **Value for the stakeholder:** Realization of the "missing link" in the green corridor between the city center and the Lade peninsula.
- **Type of contribution:** Strategic advocacy; specialized biodiversity knowledge; and linking ClimaGen to the broader park vision.

Rosendal Teater (Civil Society – Cultural Institution)

- **Value for the stakeholder:** New arenas for artistic expression; increased community relevance through participation in the climate transition.
- **Type of contribution:** ClimaGen Partner. Facilitation of co-creation through artistic methods; a physical hub for ClimaLab activities; and emotional/cultural engagement of the public.

Trondheim Art Biennale (organization)

- **Value for the stakeholder:** Opportunities to use public art as a driver for climate awareness and dialogue.
- **Type of contribution:** Creative methods for visual engagement and making climate challenges visible to the broader public.

Bakklandet and Lademoen Parishes (The Children's Cathedral, church)

- **Value for the stakeholder:** Upgraded outdoor spaces for church and community activities; a greener profile for child-centered social work.
- **Type of contribution:** Physical space for interventions (e.g., churchyard greening); and an arena for engaging children and vulnerable groups.

Trøndelag center of contemporary art (TSSK)

- **Value for the stakeholder:** Opportunities to use public art as a driver for climate awareness and dialogue. Establish an outdoor venue for their new location at Nyhavna
- **Type of contribution:** Creative methods for visual engagement and making climate challenges visible to the broader public.



Photo by Glen Musk, 2022 showing a mural by the artist Villo: a crow building a nest. The photo illustrates the close connection between the inhabitants of Svartlamoen and the local nature. Source: Trondheim municipality

2.3 How we engage with stakeholders/activities

To ensure low-threshold participation and broad reach, Trondheim ClimaLab utilizes a mix of digital, informal, and community-led engagement formats:

- **Digital outreach & visual storytelling:** Short, engaging social media videos made by the municipality are used to inform the public and invite them to local events. These videos simplify complex project goals and make the ClimaGen initiative more accessible.
- **Informal presence (open office days):** Instead of formal meetings, municipal representatives set up "open offices" in local neighborhood hubs and libraries. This allows residents to drop by for informal conversations, lowering the barrier for dialogue compared to organized workshops.
- **Academic & student-led data collection:** In collaboration with NTNU students, we conduct digital surveys, in-depth interviews, and "pop-up" street interviews. This work is vital for establishing a baseline for resident satisfaction and gathering qualitative insights into neighborhood needs.
- **Community-led events:** We support and participate in events organized by the residents themselves, such as the "Lamotreff" (neighborhood gathering) and the local Cultivation Festival. These events, driven by volunteers and local organizations, have proven more effective at engaging diverse groups than traditional municipal information meetings.

2.3.1 Interaction with students

Design students

Trondheim Municipality, faculty, and design students from NTNU collaborated to create future scenarios for Nyhavna, centering on the perspectives of young inhabitants. Collaboration took place through two courses [TPD4156 Service Design](#), [TPD4129 Design System](#) and [TPD4166 Strategic design](#). In Service design and Strategic design, "Design Jam" served as an arena for dialogue and knowledge-sharing, allowing participants to co-create diverse visions for the district's future. The program combined expert presentations with hands-on workshops and final student presentations. In Strategic design, a group of 3 students worked with the Climagen project to propose strategic placemaking directions for Nyhavna, resulting in short-, mid-, and long-term interventions.

[The Design Jam method](#) as described in the article *Fostering Student Creativity And Futuring Through Design Jams* (Löfström, E., Høiseth, M., Arntsen, T. J., Hoven, J., Vittersø, S., & Høstad, T. (2025)) are used in ClimaGen as an effective tool for co-creation. This workshop format integrates the core values of the New European Bauhaus (NEB): sustainability, inclusion, and aesthetics. Through these sessions, students, researchers, and local residents work in cross-disciplinary teams to explore future scenarios and prototype solutions for the project areas. This method helps ensure that technical climate actions are balanced with social and visual qualities that benefit the neighborhood.



Photos by Maja Langva showing a Design Jam session. Source: NTNU

Service Design (TPD4156)

This course focuses on service design in neighborhood development, with emphasis on children and youth (2024) and everyday journeys in local communities (2025). Guided by the design methodology as co-creation, exploratory approach and, the work applied a structured and iterative design process, where methods were central to exploring user needs and developing concepts.

Through interviews, observation, journey mapping, co-creation, and activities such as Design Safaris and Design Jam, the project examined how young people imagine the future opportunities in the district, and how they experience accessibility, safety, and belonging in their everyday environments. The course also emphasized collaborative learning through iterative development and final presentations.

Materiality was a key component, exploring how physical elements, spatial qualities, and tangible touchpoints shape service experiences. By working with materials and prototypes, the project investigated how environments influence perception and use over time.

The project demonstrates how service design can address complex socio-material systems, integrating accessibility, safety, agency, materiality, and community into inclusive and meaningful service experiences.

Design System (TPD4129)

In this course they worked on a project focused on systems-oriented design, with emphasis on children and youth in 2024, as a preparation for ClimaGen already in 2024 with a plan to continue in 2026. The course explores how designers can understand, analyze, and intervene in complex socio-technical systems, working both in systems and for system change. Guided by design methodology and systems thinking, the project combined analytical and generative approaches to address interconnected challenges.

Through mapping, stakeholder analysis, and visualization techniques, the project examined relationships, dynamics, and dependencies within existing systems and speculative and future imaginaries. The work emphasized how multiple actors, perspectives, and structures shape problem spaces, and how design can reframe and transform these conditions.

The project demonstrates how design can operate at the system level by developing holistic concepts and interventions that address complexity and support sustainable change. Key concepts such as interdependence, system dynamics, participation, and transformation were central to the work.

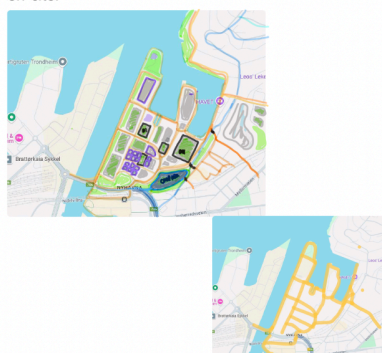
Strategic Design (TPD4166)

This course presents a strategic vision for the transformation of Nyhavna into a vibrant, inclusive, and sustainable urban district over a 5–25 year development period. Guided by the Double Diamond design methodology, the project combined stakeholder engagement, user-centered research, and spatial analysis to reimagine Nyhavna as a livable environment where people, nature, and urban life coexist harmoniously. Through interviews, city walks, persona development, and alignment with Trondheim Kommune's Quality Program, the research identified key values and qualities currently associated with the area. Findings emphasized the importance of improving connectivity, activating underutilized spaces, and integrating green infrastructure to support climate adaptation, social interaction, and recreation. The project further demonstrated the value of observation and co-creation in urban design, revealing the latent potential of fragmented or underused spaces when approached through intentional and human-centered planning. Concepts such as accessibility, community, relaxation, and climate resilience were identified as essential considerations that should be embedded early in the design process.

The final proposal prioritizes interconnected green corridors, pedestrian- and bicycle-oriented mobility, and inclusive public spaces that enhance well-being and community life. By integrating cultural heritage, sustainable mobility, and resilient urban strategies, the vision for Nyhavna aims to create an adaptive and future-oriented district shaped by local identity and evolving societal needs. Ultimately, the project highlights the complexity of urban-scale design and the importance of balancing long-term vision with present-day social, environmental, and political realities. It demonstrates that thoughtful, participatory, and context-sensitive urban development can contribute to more meaningful and enduring urban environments.

INITIAL SPATIAL CONCEPT

Our first test to explore how green infrastructure, public space, and mobility strategies could coexist on-site.



Initial focus on how pedestrians and cyclists could safely and enjoyably share green corridors. Early sketches explored separating paths while encouraging interaction, comfort, and fluid movement. Greening was layered into the design to enhance both biodiversity and experience.

FUTURE VISIONS

We developed three extreme future visions to stretch our thinking:

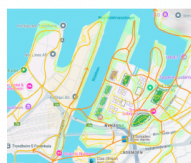


1. Nature First:

Car-free district with forests, wetlands, and minimal architecture. Focus on biodiversity and peaceful, slow movement.



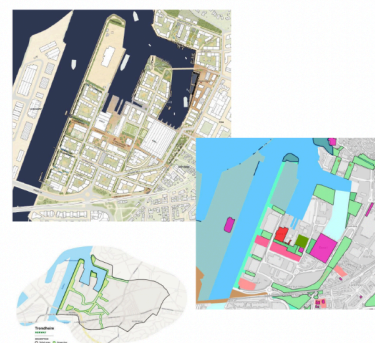
2. Sustainable Engagement
Balanced urban life with greenery and housing. Seasonal, flexible routes support active, eco-friendly lifestyles.



3. Green & Connected Mobility
Bike-first, walkable area with fast cycling routes and strong public transport—designed for seamless, sustainable movement.

INTEGRATION WITH CITY PLANS

We aligned our ideas with ClimaGen's and Trondheim Municipality's long-term plans to ensure our solutions could fit seamlessly into future developments.

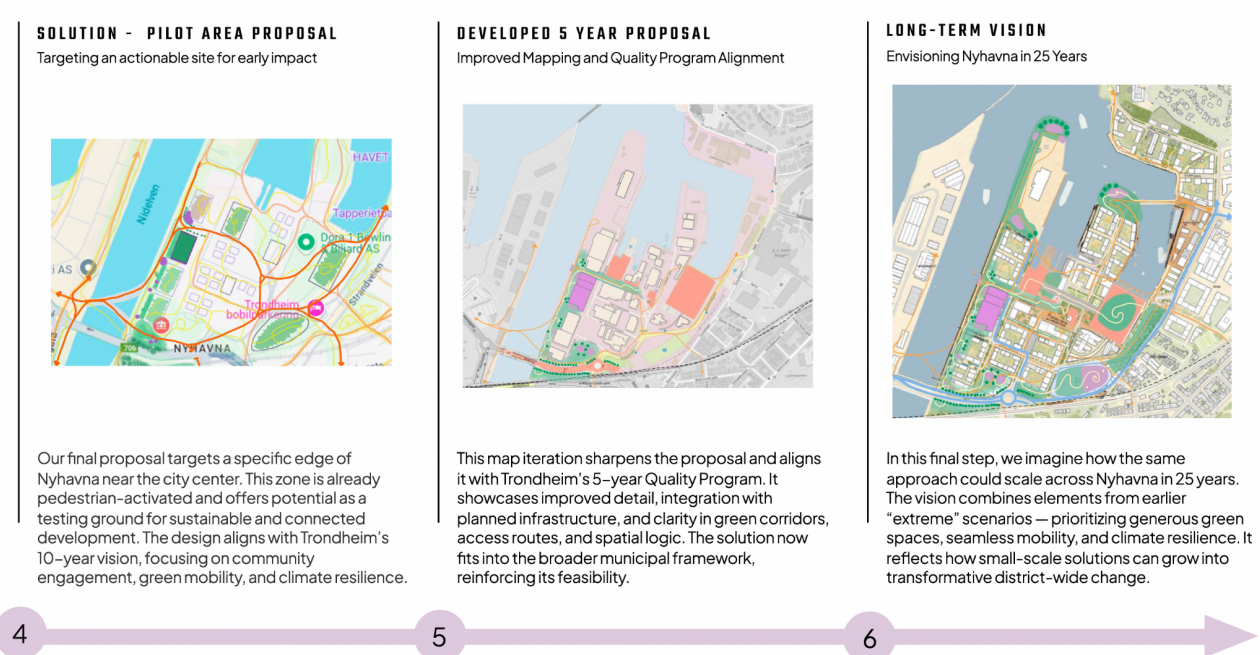


By considering different development scenarios, we maintained flexibility and relevance across possible futures. The green corridor concept emerged as a consistent theme throughout these plans.

1

2

3



Illustrations above from the students work in TPD4166 Strategic Design. Source: NTNU

Interdisciplinary courses

NTNU has several courses where students from different backgrounds and studies work together in short courses proposing interdisciplinary solutions. Two of these have been linked to the ClimaGen project in spring 2026. It is the Ursa major spring school and the [course AAR4911 "Experts in team, architecture for non-architects"](#). Cooperation with other interdisciplinary courses are described in chapter 3 ([AAR4845 Landscape analysis](#) and [BI3090 Internship Project](#))

Experts in team - architecture for non-architects

This interdisciplinary course focused on how architectural and creative methods can be utilized to solve complex urban challenges. With a strong emphasis on green urban renewal and nature-based solutions, students work in teams centered on the Nyhavna and Lademoen areas in Trondheim. Students collaborated to deliver concrete ideas and proposals on how these neighborhoods can become greener, more climate-resilient, and more attractive for both people and bees. Throughout the project, students receive input and engage with key local stakeholders, including Trondheim kommune and Nyhavna Utvikling.

URSA MAJOR young scientists school

Trondheim Municipality and NTNU engaged in a collaborative effort as part of the URSA MAJOR Young Scientists School (UM YSS). The municipality contributed insights on neighborhood cooperation and smarter city management, drawing upon the Norwegian concept of "dugnad" (collective voluntary effort) as a model for social and civic mobilization.

The students addressed two core themes:

1. **Social innovation:** Focus on inclusion, health, and quality of life, with the objective of prototyping services, technologies, or processes that enhance urban well-being.

2. **Solar energy competence in high-latitude cities:** Communicating solar potential effectively while addressing citizen concerns regarding climate conditions, reliability, costs, aesthetics, and environmental impact.

Furthermore, students applied an assessment model based on the New European Bauhaus (NEB) principles to identify value indicators within the industrial landscape of Nyhavna.

2.3.2 Innovation camps for local secondary schools

Ungt entreprenørskap (UE) is the local member of JA Europe and they have an existing agreement with the municipality to facilitate camps at local secondary schools. Through the ClimaGen project, they have received dedicated funding to orient their assignments toward climate challenges and socio-economic inequalities within the pilot area. Following a collaborative process with UE and the municipal Department for Education and Children, we established a project plan to pilot this initiative at the two nearest secondary schools: Lade and Rosenborg. Although Rosenborg unfortunately had to withdraw (2026), the collaboration continues with Lade secondary school. The process begins with an Innovation Camp, which will serve as a foundation for establishing Student Enterprises during the autumn term. This represents a significant further development of UE's standard project model, and we look forward to following the progress through autumn 2026.

2.3.3 Arts-based engagement

Collaboration with Trondheim Art Biennale

A key engagement activity in 2026 is the collaboration with the Trondheim Art Biennale on a project located at the railway site (Jernbanetomta). This intervention, created by artist Kåre Grundvåg, utilizes art as a medium for dialogue and social activity in a developing urban area.

A central pedagogical element of the project is that the work is sculpted on-site in an open process. By intentionally having the work "unfinished" during the exhibition period, the project ensures that the public meets both the artist and the work-in-progress, transforming the artistic intervention into a platform for continuous interaction.

While the project is artistic, it is developed in close coordination with technical departments and playground inspectors to ensure safety, demonstrating a successful integration of creative practice and municipal regulations.

Collaboration with Rosendal teater

Rosendal theater is the host for the ClimaLabs kick-off on June 2, where 60 students will start their work on improving conditions in the surrounding neighborhood. Rosendal theater is also in the process of developing an art project that could commission up to 10 community gardens with Trondheim kommune. These gardens will be open to the public and engage people in Østbyen in artistic experiences and discussions around climate and nature while at the same time working to green the east side of town. The project will mobilize the public and engage them in a direct way in the greening of this urban area.

2.4 How we engage with stakeholders/organizations

2.4.1 Nyhavna as an innovation ecosystem for green growth

Nyhavna is currently undergoing a significant transition from a traditional industrial harbor to a dynamic hub for technology, creativity, and circular business models. A key focus within ClimaGen is to leverage this flexible co-creation space to foster green innovation through local partnerships.

- **Architectural co-creation:** We reach out to both newly established collective for architectural practitioners (Underskogen) and NTNU students, offering to co-create and construct structures for vegetation and social zones in our projects. This provides emerging and independent professionals with essential practical experience while delivering sustainable urban furniture to the district. This part of the project is developing and we hope to see results already at the end of 2026.
- **Merging recreation and art:** A synergy is being explored with the local bouldering hall, which manufactures climbing modules for schools and kindergartens. The project investigates placing these modules near their premises, directly opposite the "Talerøret" intervention site. By integrating the municipality's extensive experience with public art, we are exploring a collaboration between street artists and the bouldering hall. This initiative aims to enhance the area's attractiveness by merging physical activity with urban culture, creating high-quality meeting places for the community.

2.4.2 The strategic governance framework

[The Strategic plan for public spaces and connections](#) (*Strategisk plan for uterom og forbindelser - SPUF*) serves as the strategic governance framework for all ClimaGen activities in Trondheim. It was developed by the City planning office in Trondheim, in cooperation with the Department of Municipal Engineering and Landscape architects at Asplan Viak from 2023-2026.

The plan ensures that stakeholder engagement is not a series of one-off events, but a structured process that informs long-term urban policy. The development of SPUF involved a comprehensive dialogue with a diverse range of local stakeholders to ensure the plan reflected the actual needs of the neighborhood. The process started in 2024 and was finalized in 2025. The engagement process followed the ClimaLab approach by including:

- **Diverse inhabitant groups:** Input was gathered from a wide selection of residents and local organizations.
- **Institutional anchors:** Dedicated sessions were held with representatives from local kindergartens and schools to capture the perspective of those who use the public spaces daily.
- **Targeted youth engagement:** A specific workshop was conducted with youth living in the district. This was vital to identify areas perceived as unsafe or unattractive, such as the railway underpasses and Lademoparken after dark.

A key outcome of this engagement was the creation of a "Bank of Ideas" (Idébank) — a collection of specific community requests for improvements. ClimaGen utilizes this bank to select and prioritize its physical interventions (ClimaGreens), ensuring they address documented local challenges:

- **Reducing barriers:** The community identified the railway as a major physical and psychological barrier. ClimaGen's interventions along the railway line (e.g., Anton Kalvaas gate) directly respond to the need for increased "social control," better lighting, and urban gardening to transform these "backside" areas into attractive green connections.
- **Reconnecting to nature:** Although residents live near the fjord and the coastal path (Ladestien), engagement revealed they use these areas infrequently due to poor connectivity. ClimaGen acts on the SPUF vision by establishing the "inviting thresholds" and green corridors needed to repair this disconnect.

By utilizing the SPUF vision as our framework, we ensure that ClimaGen's short-term measures are not standalone pilots, but they serve as the first concrete steps in realizing a long-term urban policy that is now being integrated into formal regulatory plans for Nyhavna and Reina. This process secures the project's legacy by turning community feedback into permanent, climate-resilient urban form.

The methodology for co-creating the SPUF was originally developed during the Saupstad-Kolstad area development project. Experience has shown that plans presented with a more open approach—utilizing less formal mapping techniques and accessible terminology—serve as highly effective dialogue tools for a wide range of stakeholders.

The SPUF acts as a strategic supplement to formal, legally binding urban plans. Its non-binding nature provides the necessary flexibility to navigate complex urban challenges and identify innovative solutions that might be constrained by traditional planning formats. Within ClimaGen, this framework ensures that short-term renaturing measures (ClimaGreens) are anchored in a cohesive vision, which can subsequently be integrated into formal regulatory processes for Nyhavna and Reina.

As part of the extensive planning for new residential areas in Lademoen and Nyhavna, the SPUF serves as a vital strategic backdrop for dialogue with housing developers and private partners. Due to its open and flexible format, the plan shifts the focus away from early-stage technical or financial negotiations—such as price per square meter or the exact number of units—and toward overarching qualitative considerations and community needs. By utilizing the SPUF as a framework, the municipality ensures that new housing developments are better aligned with the social and environmental requirements of both current and future residents. This approach fosters a partnership where commercial development contributes to the long-term goals of a climate-resilient and inclusive neighborhood.

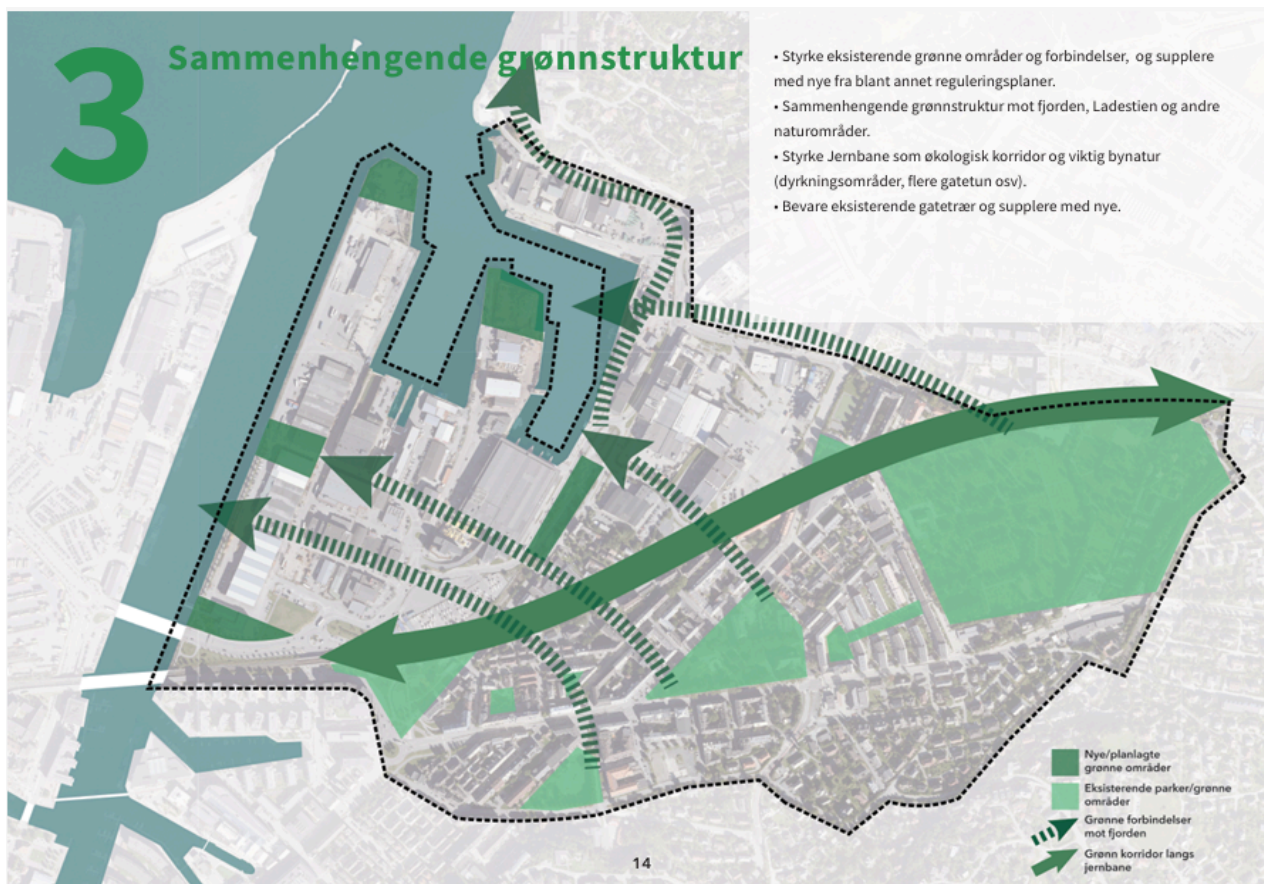


Illustration: One of the thematic maps showing the principles of creating a green infrastructure connecting the existing green parks of Lademoen with the future plans of Nyhavna (source: [The Strategic plan for public spaces and connections](#), Source: Trondheim municipality/Asplan Viak)

3. (Re-)Naturing measures - physical interventions

Each city within ClimaGen is responsible for selecting and implementing its own measures to create climate-resilient green spaces that contribute to climate neutrality. In Trondheim, the primary objective is to implement renaturing interventions (ClimaGreens) within the Lademoen-Nyhavna living zone, aiming for a minimum 25% increase in green coverage within a defined baseline within the greening area. These efforts are designed to enhance local biodiversity and gather vital experience and data ahead of the final urban development of Nyhavna.

The design of the ClimaGreens in Trondheim follows a "stepping stone" strategy. Since a continuous green corridor through the industrial harbor is not feasible at this stage, these interventions are strategically placed as ecological hubs. These hubs allow biodiversity to move across the "Nyhavna bottleneck," reconnecting the Nidelva river corridor and the existing green infrastructure of Lademoen with the Lade peninsula.

To achieve the goal of a 25% increase in green coverage and enhanced climate resilience, Trondheim has structured its "ClimaGreens" interventions into five strategic pillars as introduced in chapter 1.4. Each pillar addresses specific urban challenges using nature-based solutions (NBS).

1. **Testing of temporary vegetation and plant species as urban nature restoration measures:** We have established research areas to test if local plant species can withstand the harsh harbor climate and at the same time add biodiversity and beauty to the area. The research is done by NTNU, Institute of Biology in collaboration with Trondheim kommune. Focuses on using modular and temporary greening to transform industrial "grey" areas into inviting spaces while gathering data on plant resilience in harsh environments. Few interventions can be fully permanent yet because the area will undergo a lot of construction, so careful selection is important. *See chapter 3.1.1-2*
2. **Establishing stepping stones for both nature and people:** A central methodological approach is the "Nature Exchange" concept—a "thrift-shop" for natural resources where we salvage, store, and reuse local vegetation and soil. Our engagement model ranges from strategic co-creation with local businesses and at Nyhavna to arts-based engagement through the Trondheim Art Biennale. Social sustainability is integrated through partnerships with organizations like the Blue Cross, empowering vulnerable groups to take ownership of urban development through practical renaturing work. An innovative pilot is exploring how specific vegetation (phytoremediation) can help clean contaminated industrial soil, creating a future park without the carbon footprint of massive soil replacement (Nature-based remediation for cContaminated soil). *See chapter 3.2.1-3*
3. **Safer and more attractive pedestrian connections with local vegetation:** Uses the "Nature Leads the Way" concept to create green corridors that guide pedestrians, improve traffic safety, and reduce the psychological barriers of heavy industrial traffic. The project "Nature leads the way" - phase 1 at Reina has been completed, and we are currently planning the extension along Ormen Langes veg, where vegetation is used actively to separate soft mobility users from heavy industrial traffic. The timeline is not defined yet because of the need to establish new piping in the street. *See chapter 3.3*
4. **Strengthening green structures in the streets of Lademoen:** Focuses on reclaiming street space for people through "urban gardening," street plazas, and "green school routes," emphasizing resident-led maintenance and social inclusion. Resident-led initiatives in Anton

Kalvaas gate and Gregus gate are focusing on urban farming and safe school routes. See chapter 3.4.1-2

5. **Strengthening ecological functions in existing parks:** Upgrades established parks by improving soil health, protecting heritage trees, and integrating edible nature through community-driven gardens. Through collaborations with stakeholders like the "Children's Cathedral" ([Barnas Katedral](#)) and the local Svartlamoen community, we enhance biodiversity and social inclusion in Strandveiparken, Lademoparken and Buranbanen-park. See chapter 3.5.1-3

3.1 Testing of temporary vegetation and plant species

A key methodological innovation for Trondheim is the development of a "Nature Exchange" (thrift-shopping of nature). Instead of relying solely on commercial topsoil and nursery plants, ClimaGen will experiment with salvaging local soil seed banks and existing vegetation from nearby construction sites. This method, supported by the municipal plan's focus on preserving local genetic diversity, aims to accelerate rewilding and ensure that the new green corridors between Nyhavna and Lademoen are ecologically resilient and historically authentic to the region's flora. By integrating these nature-based solutions (ClimaGreens) with the plan's monitoring frameworks, the project provides a scalable model for how Trondheim can grow while simultaneously restoring its natural capital.

3.1.1 Strandveikaia 102

Location, ownership and responsible unit

Located at Strandveikaia 102, this site is owned by Nyhavna Utvikling AS. Strategically positioned within the harbor area, it has historically been used for industrial storage. Responsible Units are the Agency for Municipal Engineering / Urban Planning Office/ Bydrift, together with Nyhavna Utvikling AS and NTNU.



Photo by John Arne Hansen Tømmervold, showing the beginning of the transformation of Strandveikaia May 2026 . Source: Trondheim municipality

Description and background

Strandveikaia 102 is being transformed from a passive storage area into an active research field and a logistics hub for urban nature. This site is strategically important for realizing the project's goals of circular resource management. It serves as the primary base for the "Nature Exchange" initiative (thrift-shopping of nature), where nature is treated as a mobile and salvageable resource for the city.

We envision a transformation of a comparable scale to [MAKING IS THINKING](#) - AKSELERATOR - LARVIK | 350 (also known as Akseparken). Initiated as a workshop and summer school, this project ran from March 28 to June 24, 2021, with the theme of revitalizing a city district for the 2021 Larvik city anniversary (Larviks byjubileum 2021). The Larvik project was directed by NTNU's architecture and research group 'Making is Thinking' (TRANSark / Faggruppe FORM at IAT, Faculty of Architecture and Design). It was led by Gro Rødne, August Schmidt, Nina Haarsaker, and Hanna Landfald Hanssen. Together with a team of NTNU architecture students, they converted a large parking area into a verdant park within weeks. This extensive co-creation initiative engaged a diverse range of participants including schools, kindergartens, artists, and prison inmates who contributed elements like plants they had sown and nurtured throughout the spring.



Photo from Larvik Municipality: A parking area in Larvik was transformed into a park. Source: Larvik municipality.

Engagement and co-creation

The intervention is developed through an interdisciplinary collaboration between Trondheim Municipality and NTNU (Faculty of Architecture, Department of Biology, and Department of Natural History, NTNU University Museum). Dialogue is also underway to include the "Build" research environment, linking practical implementation with academic research. This ensures that the greening measures are not only aesthetic but also contribute to scientific knowledge about biodiversity in transitional urban zones.

NBS Innovation (Nature Salvage Station and Nursery):

- **NTNU Research in planter boxes:** Establishment of experimental planter boxes with vegetation from local vegetation types into planter boxes of two different sizes. A large meadow planter box ($\approx 25 \text{ m}^2$) is created to test different seed mixes of flowering forbs and grasses for maximum flower and decorative purpose and minimum maintenance and resistance to ruderal and invasive species colonisation. The forest site ($\approx 25 \text{ m}^2$) will test the importance of using hügelbed (mound bed) methods for building forest-like humus rich soils that can provide a rich understorey flora around urban trees.

Furthermore, mobile smaller planter boxes (0.5 m^2) are tested with different substrates and local species for evaluating the success of meadow, forest and rock outcrop plant species as decorative and pollinator promoting green infrastructure elements in urban areas under transition from grey to green. This part of the project involves three MSc students in biology.

- **Intermediate storage of vegetation:** The area acts as a "waiting station" for trees and shrubs salvaged from other municipal construction projects. This prevents the loss of valuable vegetation, allowing it to be repurposed at Nyhavna once permanent plans are finalized.
- **Local plant nursery:** Development of a local nursery to cultivate plants from local seed banks, ensuring genetic diversity and historically authentic flora for the district.
- **NTNU, 1. year students architecture.** The first project assigned to students in the architectural programme at NTNU involves the completion of a full-scale architectural intervention aimed at enhancing the intrinsic qualities of a specific site.

In the autumn semester of 2026, students will be challenged to design and realise wooden structures that engage in dialogue with trees, or that facilitate plant growth either within or upon constructed elements. Within this framework, students may incorporate features such as bee hotels, bird habitats, and other structures that support biodiversity, while also creating spaces that encourage interaction between animals and people. These interventions may foster connections both with nature and among individuals.

As educators, we will provide an overarching framework that contributes to the objectives of ClimaGen, particularly its ambition to transform Nyhavna into an attractive and inclusive environment for a diverse range of users, from pollinators to people. The students will provide an arena for this to happen.

Expected outcome

- **Climate & Nature:** Optimized utilization of local natural resources, reduced carbon footprint by avoiding commercial nursery logistics, and preservation of local biodiversity.

- **People:** Increased knowledge exchange between researchers and urban planners, and a visible demonstration of how the circular economy can be applied to urban nature.

Status

Currently in the planning and start-up phase. Physical preparations are underway to receive the first plants and trees for storage and research during 2026.



First plan showing how the area can be transformed with planter-boxes and areas for student workshops, illustration by NTNU and the Municipality (left) and photo by John Arne Hansen Tømmervold showing students preparing for sowing meadow in the planter boxes in June 2026 (right). Source: Trondheim municipality and NTNU

3.1.2 Styrmannsgata

Location, ownership and responsible unit

Styrmannsgata is a central cross-street in the Nyhavna district, consisting primarily of municipal road area. The responsible units are Nyhavna Utvikling, Mobilitet og samferdsel, and the City Planning Office.



Photo by John Arne Hansen Tømmervold, May 2026 showing the intervention area. Source: Trondheim municipality

Description and background

This street serves as a vital access point for several key public destinations, including the municipality's reuse warehouse and shop (BrukOm) and the Trondhjems Turnforening (gymnastics hall). Despite high foot traffic from visitors and children, the street currently lacks adequate infrastructure for "soft mobility" (pedestrians and cyclists). The area is dominated by asphalt and heavy industrial traffic, creating safety barriers and a sense of insecurity for the local community.

Engagement and co-creation

This project serves as a prime example of how art and academia can drive urban transformation:

- [Trondheim Art Biennale](#): Styrmannsgata will be a primary arena for the 2026 Biennale. Artistic interventions will be used to challenge the current industrial use of the space and visualize new, greener solutions.
- **Student collaboration**: A partnership has been established with students from NTNU in the course AAR4911 "Experts in team, architecture for non-architects" (spring semester 2026). Through workshops and concept development, they provide fresh perspectives on "tactical urbanism," allowing the city to test solutions before permanent plans are finalized.

Styrmannsgata is a potential area for experimenting with greenery as physical buffers to separate heavy industrial transport from pedestrians. It is also interesting to test specific plant species' resilience to the harsh, salty, and windy harbor environment and create "pocket parks" and social zones next to the reuse shop and the gymnastics hall.

Expected outcomes

- **Climate & Nature:** Increased urban biodiversity in a current "asphalt desert" and valuable data on resilient plant selection for the Nyhavna area.
- **People:** Enhanced traffic safety for children and youth attending the gymnastics hall, increased attractiveness for the reuse shop's customers, and a strengthened sense of place through the connection to the Art Biennale.

Status

Currently in the co-creation and planning phase.

3.2 Establishing stepping stones for both nature and people

3.2.1 Talerøret - the megaphone

Location, ownership and responsible unit

The site is owned by Trondheim Municipality and is strategically located at the mouth of the Ladebekken stream. It serves as a key transition point between the industrial harbor zone (Ormen Langes veg) and the popular coastal path, Ladestien.



Photo by John Arne Hansen Tømmervold, May 2026 showing the intervention area. Source: Trondheim municipality

Description and background

Talerøret (the 'Megaphone') is a prominent social landmark and artistic installation, originally gifted to the city to commemorate NTNU's 100th anniversary. Despite its status as a landmark, the site currently consists of a large, impermeable concrete surface that offers little ecological or social value beyond the installation itself. The area is part of the city's green structure and is operated by the Urban Greening Department (Bydrift IPS).

Engagement and co-creation
The revitalization of this grey space was initiated by the site's immediate neighbor—a local bouldering gym (buldre.no)—reflecting a bottom-up, community-driven desire to improve the link between the residential district of Lademoen and the fjord. Within the ClimaGen framework, the project is being developed as a "Living Lab" activity, where co-creation with local stakeholders and youth ensures that the interventions transform a "grey" barrier into an inviting gateway to nature.

Interdependent strategies

- **Biodiversity:** The project follows the "Stepping Stone" strategy creating high-quality habitats that reconnect the Nidelva river corridor with the Lade peninsula.
- **Planning:** The site is located within the Mandatory Provision Zone #12 (Bynaturpark), meaning development must grant special consideration to natural and cultural heritage values.
- **Urban form:** It directly addresses the vision to repair the current disconnection between residents and the waterfront.

Expected outcomes

- Transformation of paved surfaces into a functional ecosystem, testing NBS (Nature-based Solutions) suitable for coastal and stream-mouth environments while increasing local biodiversity.
- Enhanced recreational quality and improved resident satisfaction by providing a greener, more accessible connection to Ladestien.

Status

Currently in the co-creation and planning stage. Implementation is scheduled for 2026-27, coordinated with the larger infrastructure project at Ormen Langes veg.

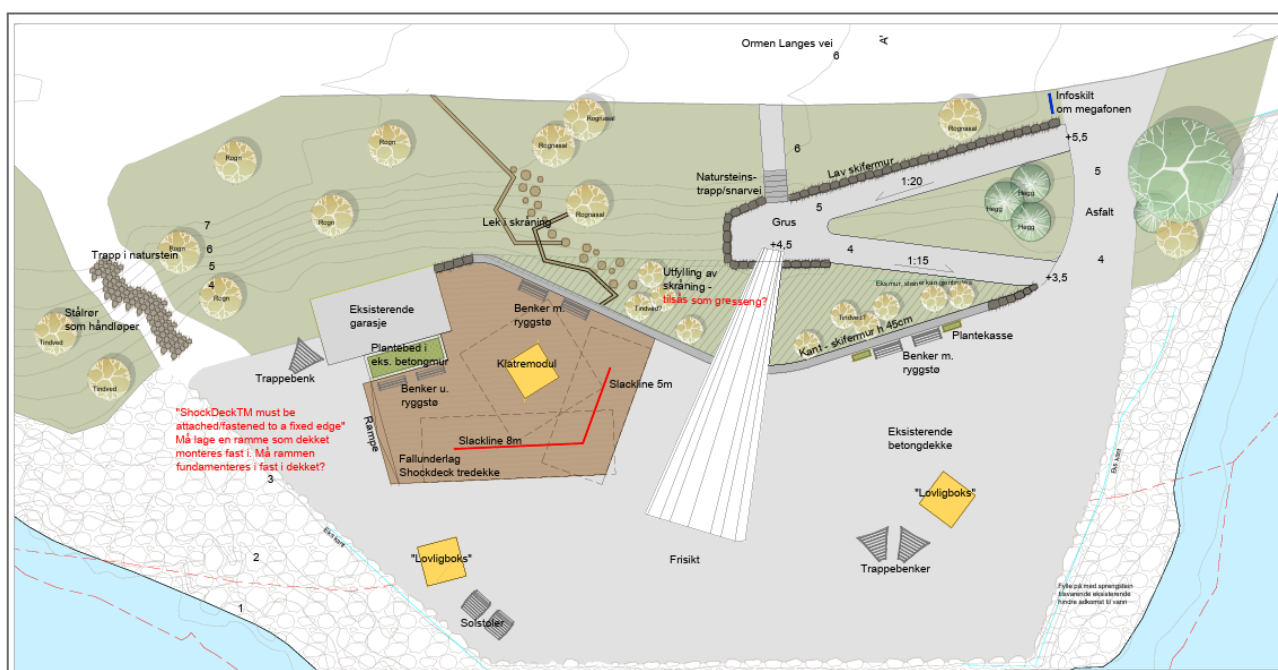


Illustration by the municipality (2026) showing a possible development of the area around the megaphone. Source: Trondheim municipality

3.2.2 Jernbaneparken – The railway park

Location, ownership and responsible unit

The site is a linear railway space situated between Strandveien and Styrmannsgata. Ownership is complex and shared between Bane NOR (the national railway infrastructure property company), Trondheim Municipality, and the Trøndelag County Council, requiring a high degree of inter-institutional coordination. As part of the ClimaGen work, the municipality and Bane Nor have signed a contract (2026) giving the municipality the possibility to develop interventions on their land. There is no rent as long as the interventions are within the scope of ClimaGen.



Photo by John Arne Hansen Tømmervold, May 2026 showing the intervention area, with some initial temporary planters of Nature leads the way. Source: Trondheim municipality

Description and background

The area is currently a neglected transitional zone characterized by spontaneous urban vegetation and historical industrial soil pollution. The space has been misused for unauthorized parking and storage, contributing to a lack of social control and a sense of insecurity for residents and children using it as a school route.

Engagement and co-creation

A central "Living Lab" activity involves an ongoing dialogue with the residents of Svartlamoen (an adjacent alternative housing area) to clear the site of parked vehicles and caravans. This bottom-up engagement is crucial for establishing local ownership. Furthermore, the site will host arts-based engagement through the Trondheim Art Biennale (2026), using temporary artistic interventions to spark public interest and participation in the area's transformation.



Photo by Ingfrid Lyngstad NTNU, October 2025 showing students visiting the intervention area (left) and photo by the municipality of the artists working on the art piece “A bad idea” by Kåre Grundvåg. Source: Trondheim municipality

Landscape analysis

In this NTNU-course ([AAR4845 Landscape analysis](#)) in October 2025 we collaborated with the municipality on a 4-week long module as part of the mandatory assignment in the course. The course is mandatory for students from urban planning and has some architecture students as well (electives), and the main topic is urban green structures and strategies (Landskapsanalyse). The designs were presented as alternative concepts to an ongoing Zoning for the area, that served as knowledge background along with the transdisciplinary learning given through collaborating with the Department of natural history, University Museum, and the department of biology, and with internship students (see below). The aim was to integrate applied ecology in planning at a deeper level than the students are capable of themselves. The reciprocal information for different program students is innovative and addresses urban challenges like this. The surveys made of the internship students, gave new information about the status of the area regarding existing species of vegetation, soil contamination and also a small recreational survey for passers by. The idea was to bring a new type of park into the city, as an ecological space, and we named the projects the “urban forest” to inspire us to make an urban forest and use landscape ecological principles in an urban setting. In addition, the park should mimic and reflect the landscapes of Lade, such as the meadows, the deciduous woodland groves and rock outcrop vegetation communities. The plans aimed to integrate sustainable mobility, local climate, scale and neighbourhood, and use time as a factor. In the meeting with Bane NOR at the 24th of March, five groups presented their work, and we talked about the area’s important role as a stable green space in the transformation period for Nyhavna, between the old, the new (Transitkaia) and the plans for densification around the station, a process that will last many decades.

Student internship biology and geography autumn 2025

Students from the interdisciplinary Natural Resource Master programme, led by NTNU Department of Biology and including geography students, collaborated in an assignment during an internship project hosted by the municipality ([BI3090 Internship Project](#)). The task of the internship project was to map the vegetation and soil conditions in the area, as well as survey the local users’ wishes

for a coming green area. This mapping was to be used as foundation for the municipality when planning how parts of vegetation and soils can be reused, whereas more drastic interventions were needed for getting rid of the most aggressive invasive species and the most polluted soils. In the same way, the survey will be used by the municipality when prioritising interventions at the site.

There were many trees in the area suitable for staying as part of the new urban forest. The herbaceous vegetation had some invasive species and was otherwise dominated by typical urban ruderal species, and restoration of the area could probably enrich the biodiversity of the area considerably. The soil was polluted at levels that needed interventions at places, mostly close to the rail tracks; if to be used for the urban forest, phytoremediation was suggested by the students. Other places with soil testing in the area had soils without significant pollution and can be used as they are for creating green spaces.

The survey of passing visitors showed the appreciation of the area and keeping elements of its current stage. Despite the very ruderal vegetation of the site, it obviously was seen as a useful seminatural site within the Nyhavna by the locals. The interactions by the geography and biology students with the students of the landscape ecology course (see above) gave many useful exchanges of ideas to how natural vegetation can be used for making the site more attractive, for instance by using vegetation to block the view of the nearby bombastic buildings and together with other structures, the noise of the traffic.

Strategies

- **NBS innovation (Phytoremediation):** In collaboration with NTNU, the project is conducting mapping of soil contamination and existing vegetation. The goal is to test if specific vegetation can provide a nature-based solution for soil remediation, avoiding the high carbon footprint of traditional soil replacement.
- **SPUF and social safety:** This intervention is a direct response to the Strategic Plan for Public Spaces (SPUF), which identified the railway as a major barrier. By establishing a park here, ClimaGen helps transform a "backside" area into a safe, green connection.
- **Diversity and inclusion:** In line with the Inclusiveness and Diversity Management Plan, the project emphasizes "DIY" urbanism and inclusive design to ensure the park reflects the neighborhood's unique social fabric and remains accessible to all.

Expected outcomes

- **Climate & Nature:** Scientific data on the effectiveness of urban vegetation in remediating polluted soil; increased biodiversity; and improved local stormwater management.
- **People:** Creation of a high-quality temporary park by Spring 2027; improved perceived safety; and a new recreational arena that reduces the barrier effect of the railway.

Status

Currently in the mapping and co-creation phase. Technical surveys of pollution and vegetation are ongoing, alongside stakeholder dialogue. Implementation of the temporary park is scheduled for Spring 2027. The students' work was presented for Bane-Nor, the housing developers in a seminar in March 2026.

3.2.3 Svartlamoen playground

Location, ownership and responsible unit

The nature-based playground at Nordtvedts gate 10, 12, and 14 is part of the alternative housing district of Svartlamoen. Svartlamoen was established as Norway's first urban ecological experimental area following a local political initiative and a city council decision in 2001. Trondheim Municipality owns the land and the buildings, but leases the properties to the Svartlamoen Foundation. The goals for the area involve facilitating an alternative, resident-governed district focused on urban ecological experiments, heritage preservation of the historic wooden housing, knowledge development, and functioning as a general social housing initiative.



Photo of the playground in Svartlamoen, source: Trondheim municipality

Description and background

The playground site is currently legally regulated as a building/development zone, but serves as an outdoor meeting place, a playground, and a venue for local concerts. An initial soil screening conducted by the municipality in 2025 identified ground contamination. Supplemental environmental engineering surveys performed in 2026 confirmed that concentrations of lead and polycyclic aromatic hydrocarbon (PAH) compounds exceed site-specific safety acceptance criteria calculated by the risk assessment tool. Targeted physical measures are required to mitigate long-term exposure for the users.

Traditional procedures would be excavating the ground to a depth of up to 1 meters, and refilling it with clean soil. However, this approach would necessitate cutting down all the mature trees in the

area. It would also demand substantial resources to dig up, transport, and dispose of the contaminated soil in an approved landfill—significantly increasing the project's carbon footprint and directly conflicting with the city's climate mitigation targets.

To avoid these negative impacts, a nature-based solution is being considered. This approach is based on the sustainable principle of leaving the contaminated soil in place to protect the local tree canopy, while safely encapsulating the ground using natural materials such as gravel, wood chips, and slates.

Engagement and co-creation

The project utilizes a co-creation approach to ensure technical remediation respects the culture of the neighborhood. An initial co-creation meeting will be held in August 2026 to gather community needs, map local landscape values, and catalog existing use patterns. Following the technical modeling of soil remediation alternatives, a neighborhood site inspection and a layout review are scheduled for autumn 2026 to let residents evaluate and adjust the final landscape plans before physical ground interventions begin.

Expected outcomes

- **Climate & nature:** Leaving the contaminated soil in place eliminates heavy transport emissions, while the preserved mature tree canopy safeguards carbon sequestration and provides natural shading to reduce the urban heat island (UHI) effect. Covering the ground with permeable natural materials (gravel and wood chips) optimizes local stormwater management and prevents contaminant leaching during heavy rainfall. The preserved canopy protects urban wildlife habitats
- **People:** The primary goal is to neutralize health risks. Incorporating a wooden stage and amphitheater to encapsulate the lower ground blends safety with local identity.

Status

The project is currently in a planning phase, including risk modeling and co-creation.

3.3 Nature leads the way - safer and more attractive pedestrian connections

Location, ownership and responsible unit

A strategic corridor stretching from the residential area of Reina, through the industrial heart of Nyhavna, and connecting to the coastal path (Ladestien). The land is primarily a public road area owned by the municipality, but it borders several private industrial plots.



Photo by John Arne Hansen Tømmervold, May 2026 showing the planned intervention area in phase 2 in Ormen Langes vei. Source: Trondheim municipality

Description and background

Nyhavna is currently characterized by heavy industrial traffic, an unclear road network, and a significant lack of green space—often described as an "asphalt desert." The project "Nature Leads the Way" (*Naturen viser vei*), based on a winning concept by [BOGL architects \(2022\)](#), aims to establish a continuous green path through the area. This path uses nature-based solutions (NBS) to provide visual guidance for pedestrians while acting as a physical and psychological buffer against heavy transport.

- **Phase 1:** Reina Crossing (Completed 2024): A temporary intervention using large planter boxes and reinforced lighting to create a safer crossing over the high-traffic Maskinistgata. It serves as a pilot for temporary NBS until permanent urban redevelopment occurs.
- **Phase 2:** Ormen Langes vei (Under Planning, 2026): Extension of the green path toward the waterfront. This phase focuses on using vegetation buffers to protect soft mobility users from industrial traffic, with ClimaGen-led monitoring of plant health and social impact.
- **Phase 3:** Future Extension (Potential Upscaling): A proposed extension to further strengthen the link to the inner harbor. This phase represents the long-term "Roadmap" for the area's transformation.



Photo, 2025 showing the first part of Nature leads the way, established in 2024. Source: Trondheim municipality

Engagement and co-creation

A unique aspect of this project is the integration of social sustainability through a partnership with Blue Cross (Blå Kors) and their "Step by Step" (Steg for steg) program. Participants—individuals facing challenges with abuse or mental health—have contributed directly to the planting and maintenance (2024). This adds a layer of social inclusion to the physical renaturing, providing "stepping stones" for people as well as for nature.

The local business community is actively involved, particularly in the planning of Ormen Langes vei. As this street serves as a vital logistics artery for heavy industrial transport, targeted meetings were held to map the specific needs and operational concerns of local enterprises.

Through this co-creation process, business owners provided insights on how to balance industrial logistics with the goal of creating a safe and attractive pedestrian corridor. The dialogue focused on traffic safety for pedestrians and bikes and explored how nature-based barriers (NBS) could effectively separate pedestrians from heavy vehicles without hindering commercial operations. This engagement ensures that ClimaGen's interventions solve real-world functional challenges while securing the local acceptance and long-term sustainability necessary for a successful urban transformation.

Strategies include:

- **Sustainable mobility:** The project is partly funded and coordinated with the Green Transport Package (Miljøpakken), ensuring that greening measures are integrated with traffic safety and cycling infrastructure.
- **SPUF & biodiversity:** The corridor realizes the SPUF vision of "green connections" and functions as an ecological corridor through a high-traffic industrial zone.
- **Living Lab monitoring:** Within ClimaGen, NTNU monitors the vegetation's performance in these harsh, high-traffic environments to identify the most resilient species for urban NBS.

Expected outcomes

- **Climate & nature:** Reduction of the heat island effect in the "asphalt desert"; improved local biodiversity; and testing of modular, mobile planting boxes.
- **People:** Increased perceived safety for pedestrians; improved access to the fjord for residents; and significant social impact through inclusive labor practices (Blue Cross).

Status

- Phase 1 is completed and currently in the monitoring phase. It will however be included in the railway park in 2026.
- Phase 2 is in planning/co-creation.
- Phase 3 is currently being evaluated for future upscaling within or beyond the ClimaGen timeframe.



Illustration: Competition proposal by [BOGL 2022](#), showing a complete green corridor through Nyhavna. Source: BOGL

3.4 Strengthening green structures in the streets of Lademoen

These measures focus on reclaiming street space from cars and transforming it into functional green areas. It ranges from small-scale, citizen-led "urban gardening" in municipal housing courtyards to large-scale infrastructure transformations along the main artery, Innherredsveien.

3.4.1 Neighborhood-led interventions: courtyards and school routes

Location, ownership and responsible unit

The local streets in Lademoen comprise the internal road and sidewalk network of the neighborhood. These streets are partly owned by Trondheim Municipality and partly by private landowners. Regardless of the specific ownership status, the municipality maintains operational responsibility for the network. The Road Unit within the Department of Urban Operations (Bydrift veg) is responsible for both the overall management and the daily operations of the roads. However, the Department of Municipal Engineering (Kommunalteknikk) retains responsibility for the urban spaces and public areas adjacent to these streets.

Description and background

The streets along the railway line (Gregus gate, Anton Kalvaas gate, Biskop Sigurds gate) have historically been perceived as "backsides"—grey, unsafe, and prone to decay. Through ClimaGen and the local Area Development Program (Områdesatsing), the municipality sees the need of transformation into a "green school route." A key focus is the courtyards of municipal social housing, which have suffered from lack of maintenance and vandalism.



Photo by John Arne Hansen Tømmervold, May 2026 showing part of the intervention area. Source: Trondheim municipality



Photo by John Arne Hansen Tømmervold, May 2026 showing part of the intervention area. Source: Trondheim municipality

Engagement and co-creation

- **The "Dugnad" model:** In 2024 and 2025, several neighborhood events (dugnader) were held. In Anton Kalvaas gate, residents planted 8 different fruit trees and established 15 double-sized planter boxes for urban farming.
- **Resident-led initiatives:** In Gregus gate, residents initiated the removal of parking spaces to create a street plaza. They took charge of planting perennials and maintaining existing vegetation.
- **Social inclusion:** A new collaborative model between "Urban Greening" (Bydrift) and the "Residential Environment Team" (Bomiljøteam) ensures that residents in municipal housing are empowered to take care of their own immediate environment, increasing social control and pride in the neighborhood.
- **Greening the streets:** In collaboration with students from NTNU's design program, we conducted a study to explore how to involve residents in greening their streets. The students led a comprehensive engagement phase involving local neighbors, the garden association, the library, and students from the neighborhood. This resulted in a methodology for identifying where to place planters and create small social zones outside apartment entrances, while giving residents the responsibility for ongoing maintenance.

We intend to develop this concept further. Following discussions with our partners in Eindhoven, we discovered they are working on a similar project. We will maintain a close dialogue with them to share experiences and identify the best solutions for implementation.

Expected outcomes

- **Climate & nature:** Increased urban biodiversity through edible plants (fruit/berries) and perennials; reduction of "grey" surfaces.
- **People:** Improved perceived safety for children on school routes; reduced vandalism through increased resident ownership; and new social meeting points for vulnerable groups.

Status

Planning and co-creation is ongoing.

3.4.2 Innherredsveien: large-scale strategic transformation

Location, ownership and responsible unit

Innherredsveien is a central artery located in the heart of the Lademoen district, serving as a primary link between the neighborhood and the Trondheim city center. Both the ownership of the infrastructure and the responsibility for the planning and implementation of the upgrade lie with the Trøndelag County Municipality (Trøndelag fylkeskommune).



Photo by Glen Musk, January 2022 showing the intervention area before transformation. Source: Trondheim municipality

Description and Background

[The transformation of Innherredsveien](#) into a sustainable urban street (miljøgate) represents one of the largest streetscape initiatives under the Green transport partnership (Miljøpakken) in Trondheim. Construction formally commenced in August 2023 and is scheduled for completion during the second half of 2026. While the ClimaGen project itself started in 2025, the initial project proposal submission in 2022 was built, together with other initiatives, upon this ongoing infrastructure initiative. The overarching objective of the project is to deliver a profound neighborhood revitalization, securing wider pavements, optimized cycling infrastructure, and greener, more liveable urban surroundings.

The project is based on a concept introducing large amounts of vegetation and testing new ways of constructing the road in order to give the planted trees enough space for root development.

Key Technical Interventions:

- **Greening:** Planting of 136 new trees and 1,150 m² of perennial and shrub beds.
- **Advanced planting methods:** To ensure tree survival in dense urban soil, 79 trees are planted in specialized concrete tanks or root-friendly reinforcement layers to allow for air and water infiltration under paved surfaces.
- **Reclaiming space:** The closure of unsafe pedestrian underpasses (Voldsminde and potentially Ullstadløkkveien) allows for the creation of new, green urban plazas at surface level.

- Cars have been removed from the streetscape by new regulations, making way for public transport and a main cycle highway.

While the project significantly increases the total number of trees, it also involves difficult trade-offs regarding existing vegetation.

- **Loss of existing trees:** A total of 43 trees were removed during the process. Most of these removals were identified early due to unavoidable conflicts with new underground technical infrastructure.
- **Arborist assessments:** During construction, additional trees were evaluated by arborists. It was discovered that previous urban development had severely damaged their root systems, making them unstable or unhealthy. For the old trees alongside the Lademo park the soil was entirely replaced due to the high concentration of road salt and compact structure.
- **Mitigation and net gain:** To compensate for this loss, the project is planting 136 new trees (a ratio of more than 3:1). These new trees are provided with significantly better growing conditions—such as specialized root-friendly soil and concrete planting tanks—to ensure they reach their full ecological potential. Automatic irrigation has been installed for both trees and perennials

Engagement and co-creation

Community engagement and co-creation have served as foundational pillars throughout the planning and transformation of Innherredsveien, balancing diverse stakeholder interests through a multi-level participatory approach.

The ambitious scope of the redevelopment triggered significant mobilization within the local community. A key milestone was the revitalization of the Lademoen neighborhood association (Lademoen velforening), which empowered residents to adopt an active, structured role in shaping their immediate environment. Furthermore, to evaluate the real-world impacts of traffic reduction, a [1:1 scale pilot project](#) was implemented in collaboration with the Norwegian public roads administration (Statens vegvesen) and local advocacy groups. This live trial allowed residents to experience the proposed modifications firsthand and provide direct, actionable feedback prior to permanent implementation.

The project emphasized co-creation across multiple governance levels. Numerous dialogue sessions brought together residents, local business owners, Trondheim Municipality, and Trøndelag County Council to ensure that Innherredsveien would evolve into a public space rather than remaining a mere transport artery. Dedicated co-creation efforts also targeted specific cultural and commercial anchors; for instance, the Rosendal Theatre (Rosendal Teater) collaborated directly with the City Planning Office (Byplankontoret) to seamlessly align operational logistics, freight deliveries, and audience flow with the new pedestrian-centric street architecture.

Expected outcomes

The transformation of Innherredsveien combines environmental ecosystem services with human-centric design to revitalize the neighborhood. In line with ClimaGen's goal of a 20% increase in inhabitant satisfaction, the project replaces a heavy transit artery with a green, human-scale corridor. By reclaiming space from vehicle traffic and removing unsafe pedestrian underpasses, the design creates welcoming green plazas and wider pavements. These changes are

expected to directly enhance local well-being, lower traffic stress, and foster social interaction and community pride.

These social benefits are closely integrated with nature-based climate solutions. The introduction of 136 trees and 1,150 m² of multi-layered perennial beds will improve air quality by binding particulate matter, while providing natural shading and wind protection. Additionally, these green areas function as vital stormwater management systems that absorb water during heavy rain, while simultaneously boosting urban biodiversity by creating habitats for pollinators. Ultimately, the project delivers a safe, green, and health-promoting streetscape that significantly elevates daily quality of life for the local community.

Status

As of August 2025, the Innherredsveien project reached a major milestone with the reopening of the Buran 2 bus stop, which had been closed for nearly a year due to construction. The section stretching from the Solsiden roundabout to Mellomveien is now fully asphalted, directly improving traffic safety and accessibility for public transit, cyclists, and pedestrians.

The project is now moving into its next phase, focusing on the stretch from Aslak Bolts gate to Stadsingeniør Dahls gate. Upgrades to the underground infrastructure—including new water, sewage, and utility networks—along with the main roadway, are scheduled for completion by the end of 2025. Final paving and landscaping will continue through spring and summer 2026, keeping the entire milestone timeline on track for final delivery in the second half of 2026.

3.5 Strengthening ecological functions in existing parks

This cluster focuses on enhancing the resilience and social value of established green spaces. By integrating nature-based solutions (NBS) into existing parks, we address challenges such as soil contamination, aging vegetation, and urban heat, while strengthening the social fabric through targeted co-creation with children and marginalized groups.

3.5.1 Strandveiparken

Location, ownership and responsible unit

Strandveiparken is a local green space situated in the northern part of the Lademoen district, positioned between the residential area along Strandveien and the railway line. The park is owned by Trondheim Municipality. The responsible unit for the planning and development of the park is the municipality's Department of Municipal Engineering (Kommunalteknikk). Ongoing maintenance is led by Department of urban operations (Bydrift)



Photo by Glen Musk, May 2022 showing the intervention area before transformation. Source: Trondheim municipality

Description and background

Strandveiparken was reopened in the summer of 2025 following a major renovation that included the removal of contaminated soil—a critical step in restoring the site's environmental health. The project emphasized circularity, as existing vegetation was preserved and old park elements were refurbished and reused. Following the completion of the double-track railway, the park will expand toward the tracks. This new area is designated for a "utility garden" further bridging the gap between social recreation and urban biodiversity.

Engagement and co-creation

The park's design is the result of extensive participation, including open meetings called "Lamo-talk" (*Lamosnakk*) neighborhood meetings and dedicated workshops with children and youth. A specific collaboration with the Svartlamoen community is revitalizing the "Gullparken" section to its original form.

Expected outcomes

Improved soil health, increased social meeting points for all ages, and enhanced ecological connectivity along the railway corridor.



Photo by Glen Musk, 2025 showing the result of the intervention in Strandveiparken. Source: Trondheim municipality

3.5.2 Lademoparken

Location, ownership and responsible unit

Lademoparken is a centrally located urban park in the heart of the Lademoen district, serving as a key social meeting point for the local community. The park is owned by the Trondheim Municipality. The responsible unit for the park's overall management and development is the municipality's Department of Municipal Engineering. Maintenance is led by the Department of urban operations.



*Photo by Glen Musk, 2022 showing the intervention area in Lademoparken before interventions.
Source: Trondheim municipality*

Description and background

Lademoparken is currently under stress due to the construction of the Innherredsveien. ClimaGen focuses on preparing the park for new usage patterns.

Engagement and co-creation

The "Children's Cathedral" (Barnas Katedral): In 2024, 2025 and 2026 the Lademoen Parish (located within the park) transformed grey gravel areas into a vibrant Urban Garden in close cooperation with the municipality. This co-creation involved architecture students and local families, resulting in apple hedges and vegetable beds that connect the churchyard seamlessly with the public park.

Together with local artists, they have expanded the garden this year with an insect hotel, where ReMida and La Humla Suse participated as external partners.

They also host a weekly open church that includes all the children in the neighborhood, offering dinner and artistic workshops.

Expected outcomes

Preservation of significant urban tree canopy and improved social inclusion through faith-based community gardening.

3.5.3 Buranskogen (the Buran forest)

Location, ownership and responsible unit

Buranskogen, also known as the Buran Forest, is a wooded urban area located on the eastern edge of the Lademoen district, situated between Weidemannsveien and the Buran sports field (Buranbanen). The area is owned by the Trondheim Municipality. The Department of Municipal Engineering (Kommunalteknikk) is the unit responsible for the overall management and planning of the area, while the daily operations and maintenance are carried out by the Department of Urban Operations (Bydrift).



*Photo by Glen Musk, 2023 showing the Buranbanen (park) in front and the Buranforest in the rear.
Source: Trondheim municipality*

Description and background

This small forest serves as a vital green link, but has suffered from neglect and the spread of invasive species. The project aims to improve accessibility and ecological quality.

Engagement and co-creation

Key Societal Stakeholders are Møllenberg & Rosenberg Neighborhood Association, Weidemannsveien Kindergarten. In the summer of 2025, children from Bispehaugenmå and Lilleby School participated in a "Learning by Doing" activity to identify and clear invasive species. This

hands-on involvement serves as a pedagogical tool for biodiversity awareness. The project is documented by [a film](#).

Expected outcomes

Improved pedestrian connectivity; removal of biological barriers (invasive species); and increased ecological literacy among local children.



Photo from Buranskogen, where young pupils from Bisphehaugen and Lilleby schools remove invasive plants from the small forest. The goats help as well. Source: Trondheim municipality.

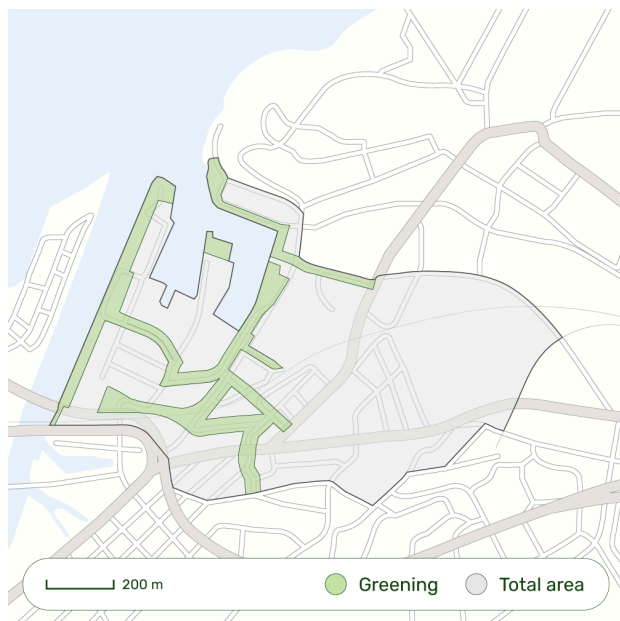
4. Monitoring & assessment

4.1 The ClimaImpact framework in Trondheim

All the demo cities in ClimaGen aim to increase the proportion of new and/or restored public green spaces by 25% (Greening) in selected areas. We also aim to increase satisfaction by 20%. To ensure that the nature-based solutions (NBS) implemented in Trondheim deliver benefits for both the environment (climate adaptation, mitigation and nature) and the community, the project utilizes an impact assessment framework. This framework is developed with the guidance and support of SINTEF. The collaboration ensures that our local data collection is scientifically robust and aligned with relevant standards for monitoring urban NBS. The model itself is a product of co-creation (*see upcoming D3.3 ClimaGen Impact Model Definition 1, and D3.2 ClimaGen Impact Pathways 2*). By establishing this baseline and continuous monitoring regime, Trondheim ClimaGen provides the necessary key performance indicators (KPIs) to indicate that investing in nature is an investment in both climate neutrality and social equity.

4.2 Greening

The area of Nyhavna-Lademoen involves many stakeholders and is subject to many ongoing political processes due to the transformation of the harbour area. As a result, the original planned greening area as proposed in 2022 has been adjusted and expanded. This is a direct response to the numerous initiatives currently underway. Some of the areas included in 2022 are no longer accessible for the ClimaGen project within the current timeline. However, these have not been removed from the defined intervention zone, as the situation may change further. The exact measures within the planned greening area will be decided in co-creation with private and public stakeholders, in alignment with the principles and initiatives described in chapter 3.



Map 2022 (left) of the demonstration area (total area, black line) and the planned greening area (green) from the application phase in 2022.



Map 2025 (right) showing the area refined in 2025, according to ongoing political processes and stakeholder engagement.

4.2.1 Existing green areas (GIS analysis)

The total demonstration area of Nyhavna-Lademoen covers 1,140,000 m², a territory characterized by its industrial history and dominance of 'grey' infrastructure. Within this district, a specific intervention zone for greening (new green corridors) was identified, totaling 159,000 m².

As shown through a GIS analysis, the harbour area is currently severely nature-deprived. The total greening area contained only 1,140 m² of existing green surfaces when the project started in 2025. This represents approximately 7% of the defined greening area. This extremely low baseline is a direct result of the area's legacy as a paved industrial harbour. On the Lademoen side of the demonstration area, the greening area includes streets and parking areas, which are nature-deprived as well. The same number for the demonstration area as a whole is 17% existing green areas, including three parks, a big cemetery and private gardens, mainly in the Lademoen area.

The original intention is shown in the map from 2022 above of roughly outlined green corridors. The next figure shows the refinement of the greening corridors based on the current state of planning, political processes, and stakeholder engagement. The overall shapes remain the same, but smaller changes were made to better align with current developments.

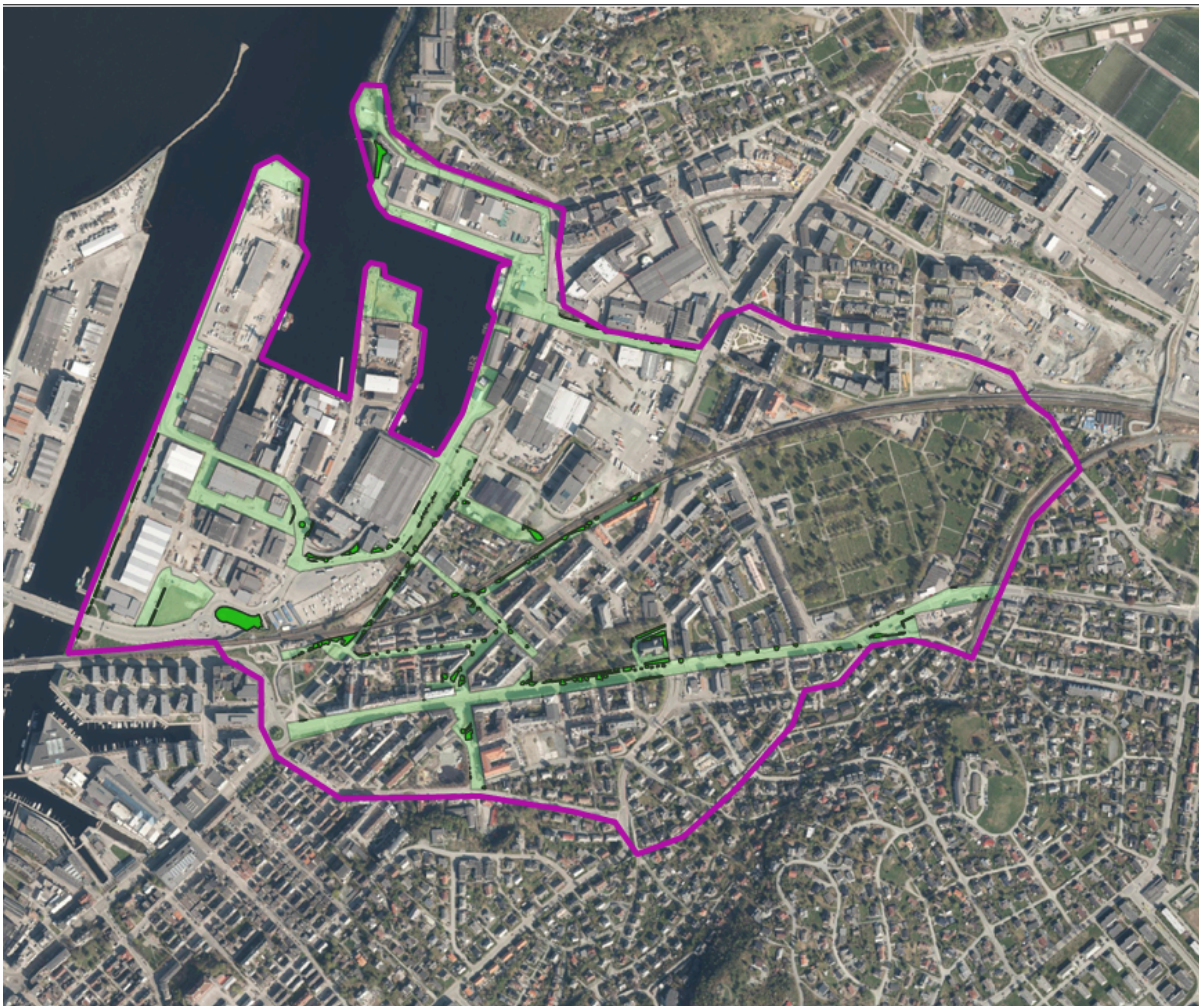
The size of the greening area has increased from 80,000 m² originally to 159,000 m² in the new map (*further details can be found in D3.3*).

The mapping of co-creation projects intended for implementation aims to add 6,700m² of new green space and approximately 210 new trees. While this represents a statistically substantial increase of 588% against the existing green in the greening area, it must be understood as a critical first step in breaking the asphalt dominance of the district. These interventions serve as essential

ecological 'stepping stones,' initiating the long-term transition from a sterile industrial zone to a climate-resilient urban neighborhood.

While the targets outlined above represent the current ambition of the Trondheim ClimaLab, it is important to emphasize the inherent complexity of implementing nature-based solutions (NBS) in a dense, industrial urban fabric. Several of the planned measures are highly dependent on successful cooperation with a diverse range of stakeholders, including private landowners, national infrastructure providers (e.g., Bane NOR), and local business interests.

Due to the nature of these multi-stakeholder processes, some interventions remain subject to final technical approvals and evolving regulatory requirements. Consequently, the final quantitative output at the end of the project period may be adjusted based on these external factors. However, within the ClimaGen framework, this uncertainty is treated as a vital source of learning. The project documents the 'governance bottlenecks' and negotiation strategies required to reclaim industrial space for nature. Even if certain physical measures are scaled or modified, the project succeeds by establishing the strategic blueprints, social trust, and stakeholder alignments necessary for the long-term green transformation of Nyhavna.



Baseline Trondheim: Demonstration area (total area, purple line) and the planned greening area (light green). The existing green (baseline) is dark green. Source: Trondheim municipality

Trondheim baseline 2025		
Demonstration area (grey) (m ²)	1 140 000 m ²	
Planned greening area (light green) (m ²)	159 000 m ²	
Baseline (dark green) (m ²)	1 140 m ²	
Area of expected improvement/increase of baseline (m ²)	6 070 m ²	210 new trees (2100 m ²)

Table 1 The different areas used to define the baseline and expected improvement (numbers based on the methodology of D3.3).

4.2.2 Counting wildlife as a possible indicator

Monitoring local insect populations serves as a key biological indicator for urban biodiversity and ecosystem health within the demonstration area. This indicator is built upon previous, community-driven citizen science initiatives in cooperation with NTNU and the children's cathedral, including informal insect-counting in Lademoparken. This provides quantifiable data on how physical renaturing interventions such as converting standard grass lawns into diverse, native flower meadows directly affect pollinator density and species richness over time. The potential counting is described in [a youtube video made by NTNU](#).

4.2.3 Invasive alien species and biodiversity management

Invasive alien flora outcompete native species and degrade urban biodiversity. In accordance with the national Regulations on Alien Organisms (2016) and the Norwegian Alien Species List (2023) (Fremmedartslista), the project targets aggressive, ecologically damaging plants. A major operational challenge in urban zones like Lademoen is the spread between private gardens and public green spaces.

To bridge municipal environmental data with active neighborhood co-creation, ClimaGen will utilize Trondheim Municipality's established crowdsourced mapping via the national portal [Artsobservasjoner.no](https://artsobservasjoner.no). Existing user-generated data within the demonstration area defines the ecological baseline. Local residents, schools, and volunteer groups are mobilized as neighborhood actors to systematically map, report, and participate in the eradication of these species.

To evaluate the ecological and social impact of nature-based solutions and renaturing strategies the project can monitor the reduction of invasive alien species.

4.2.5 Results baseline greening and indicative measures

Category (preliminary)						
	Green Space	Trees and shrubs ²	Soil conservation and quality management	Green built environment	Natural or semi-natural water structures (blue-structures)	Infiltration and bio-filtration structures
Baseline 1140 m ²	1140 m ²	Approx 60 existing trees	-	-	-	-
Measure 1 Areas within Nyhavna	500 m ²	20 = 200m ²	-	X	X	-
Measure 2 The railway parc	700m ²	30 new trees = 300m ²	700m ²	-	-	x
Measure 3 Safer and attractive pedestrian connections	600m ²	10 new trees = 100m ²	-	-	-	-
Measure 4 Regreening existing streets 1) Inherredsveien, ongoing 2) Others, to be defined	1.150m ²	136 new trees = 1.360	-	-	-	-
	500m ²	5 new trees = 50m ²	-	10m ²	-	10m ²
Measure 5 Enlarging of Strandveiparken Enhance the ecological diversity in existing parks	800m ²	8 new trees = 80m ²	800m ² (removing polluted soil and gravel)	-	-	-

4.3 Satisfaction

To measure the baseline for satisfaction In ClimaGen, Trondheim municipality has together with SINTEF used two different tools for KPI, and both are described below.

4.3.1 Trøndelag Health Study (HUNT) 2017-2019

The Trøndelag Health Study ([The HUNT Study 2017-19](#)) has broadly documented the health and living conditions of the pilot area, as described in Chapter 1.3.1 of this report. This provides an important backdrop for our work and establishes our baseline for satisfaction.

The municipality has presented the HUNT results and other indicators of living conditions on a public [portal](#). For Lademoen, the HUNT study shows that 62.4% of women (aged 18–69) greatly enjoy their local neighborhood, compared to 72.4% in Trondheim as a whole. For men in the same age group, 57.1% greatly enjoy their neighborhood, compared to 69.6% in Trondheim.

The HUNT survey also measured the proportion of inhabitants who report feeling highly safe in their local community. Lademoen-Nyhavna scores lower than the rest of the municipality: only 72.4% of women (18–69) reported feeling safe, compared to 85.6% for the city in general. For men, the figures are 76.2% compared to 88.4% for the city overall.

We recognize that making a real impact on these factors takes time. The next HUNT study is planned for 2028–2030, and the area investment program will run until 2031—both of which extend beyond the timeline of ClimaGen. Consequently, it is currently not possible to use these metrics as direct KPIs for our work.

4.3.2 The Socio-Cultural Site Analysis 2022

[The Socio-Cultural Site Analysis \(2022\)](#) serves as a baseline for the Area Investment Programme in the Lademoen-Nyhavna area. The analysis provides important insights into resident well-being and how people experience their living environment in Lademoen-Nyhavna. It shows that 63% of residents find it attractive to live in the district, particularly valuing its central location, creative environment, and diverse community. At the same time, the analysis uncovers significant barriers to well-being that form a crucial baseline for ClimaGen: Many residents report feeling unsafe in their neighborhood, especially at night and in specific areas such as dark underpasses and walkways along the railway. The report also highlights a lack of inclusive meeting places for different social groups, along with challenges related to traffic, noise, and neglected outdoor areas. For ClimaGen, this establishes a satisfaction baseline characterized by strong local pride and a sense of belonging, which is undermined by a perceived lack of safety and unattractive public spaces. To achieve the project's goal of a 20% increase in resident satisfaction, our green interventions must build on this local engagement and actively serve as tools to create safer, brighter, and more welcoming meeting places.

4.3.3 Targeted inclusion for social impact

To ensure that the target of a 20% increase in inhabitant satisfaction is met in a socially just manner, we must proactively address the needs of those most at risk of exclusion. During the ClimaGen Study visit in Gernika in April 2025, a dedicated session on inclusiveness identified

specific groups that require more conscious engagement to ensure they are not overlooked during the transformation of the neighborhood. The findings highlight that our baseline and subsequent monitoring must specifically account for:

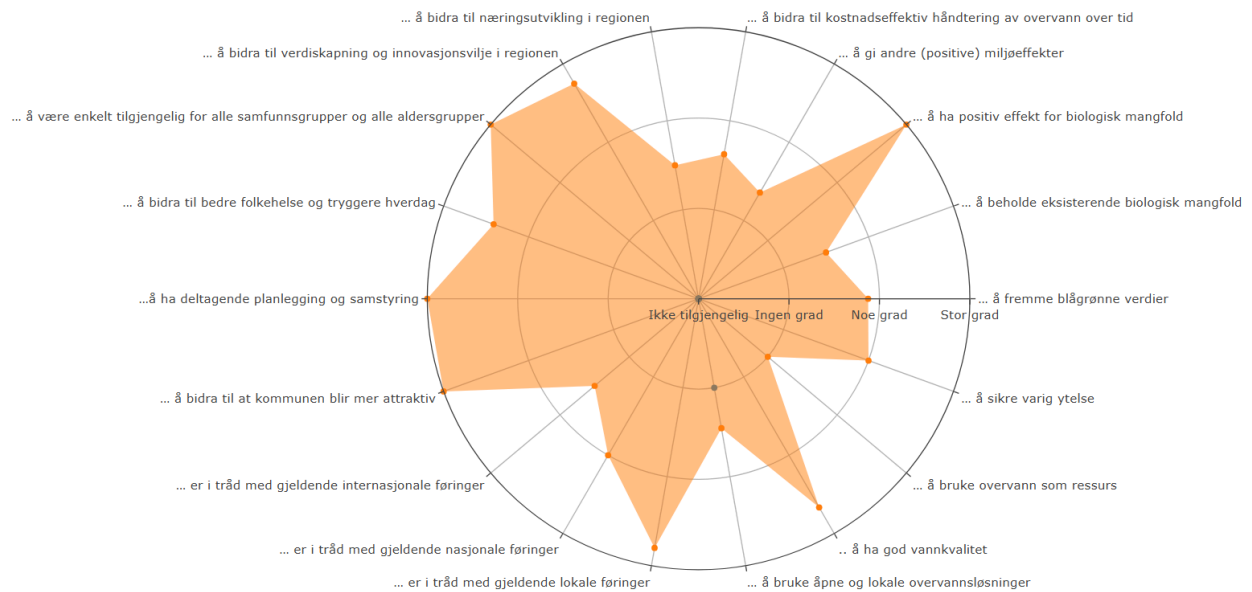
- Kindergarten-aged children and youth: These groups are frequent users of urban spaces but are often marginalized in formal planning processes.
- Individuals with substance dependencies: As Lademoen has a high concentration of residents with complex needs, their perspective is vital for creating safe and functional green spaces.

Furthermore, the workshop identified a need to strengthen the institutional ecosystem within the ClimaLab. Specifically, the Norwegian Labour and Welfare Administration (NAV) and other representatives from the health and welfare sector were noted as currently underrepresented. Moving forward, we will establish a strategy to involve these institutional actors, ensuring that the renaturing measures address both age-specific vulnerabilities and the intersectional social challenges of the district.

4.3.4 Verbena – framework for assessing nature-based solutions

Verbena (*see also the upcoming D3.3: ClimaGen Impact Model Definition 1*) is a research-based tool for nature-based solutions developed with input from municipalities in Norway. It is a sustainability analysis of climate adaptation measures. It examines technical performance, environmental, governance, social and economic indicators. There are 18 goals, 36 criteria and 98 indicators. Measures are scored from 1 to 3 depending on how much they contribute.

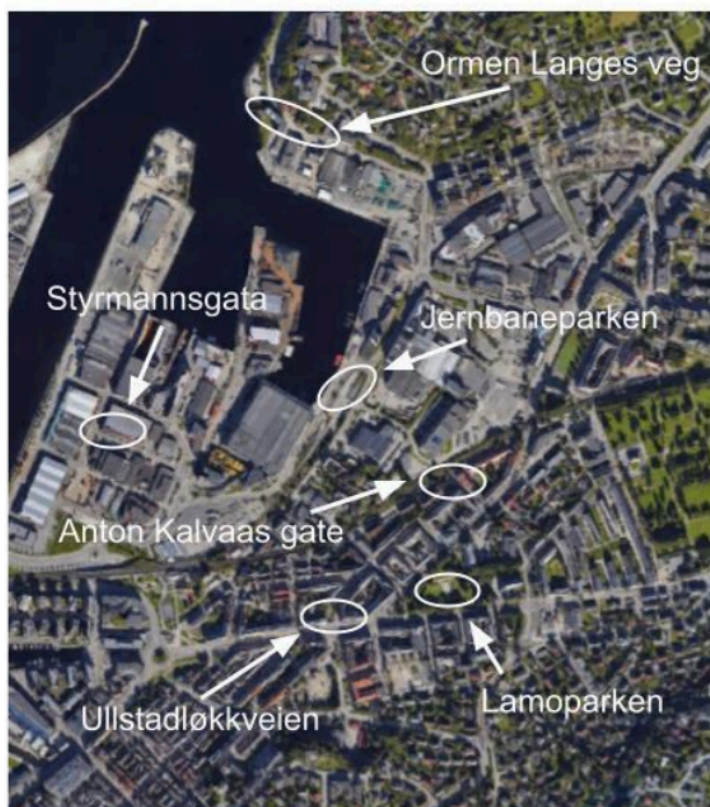
We have tested the Verbena-platform as an additional assessment tool alongside other tools such as the Public Space Survey and the ClimaGen method for measuring greening. It was tested in Anton Kalvaas gt, Jernbaneparken and Ulstadløkkveien. Present at the workshop were colleagues from the municipality who are familiar with Nyhavna/Lademoen. The conclusion was that Verbena might be a good tool for defining both the current situation and the planned situation. Is it possible to simplify Verbena to adapt it for ClimaGen, and this might be the next step in the Sintef-Trondheim municipality-partnership.



The figure is an example of how the tool presents the findings, showing results from the railway-park in the current situation (text in Norwegian) (source: the verbena portal)

4.3.5 The urban life survey

Trondheim has used a method based upon the urban life survey conducted by Trondheim municipality, which has been ongoing for nine years. The survey is a comprehensive qualitative and quantitative study of how people use and experience the various urban spaces in Trondheim. The areas included are streets, squares, plazas, parks, and blue-green spaces. The results from the urban life surveys provide important knowledge about which urban spaces people enjoy the most, what they miss, and how the urban spaces are used today. In the ClimaGen version of this study, we have selected 6 spots where both interviews and counts have been conducted. Students from NTNU have carried out both the interviews and people counting. We believe that this method is a good way to measure whether the goal of a 20% increase in user satisfaction has been achieved. This report first looks at the current state (baseline) and will then be followed up again when measures have been implemented.



*The map above shows the locations where surveys to assess satisfaction have been performed.
Source: Trondheim municipality*

In general, areas with a clearly defined social or recreational function are more highly valued than those currently less developed for public stay. This is reflected in the satisfaction scores for Lademoparken and Ullstadløkkveien, providing a useful starting point for future measurements. While the area is liked by many, the potential for transformation is substantial. Residents specifically highlight the need for less industrial dominance, better maintenance, and more greenery.

For most respondents, the presence of green elements is vital for quality of life, not just for the environment. Although the activity recorded in November was primarily linked to commuting due to the weather and season, the underlying feedback confirms a significant interest in making the district more activity-oriented and visually appealing.

4.3.6 Baseline satisfaction and indicative measures

Location/"Hot spot"	Baseline overall score (scale 1- 10, 10 is best)	+ Positive experiences in the location	- What can be improved
Ormen Langes vei	7	The fjord The view Path along the fjord	Less industrial character Benches More greening
Styrmannsgata	4	Brukom (second hand shopping market) Dora2 (Leisure and culture activities) Street art	Nicer architecture More greening The use of the area
The railway-park	6	Close to the water Shortcuts and paths Svartalmoen: a Special area	Clean up More greening Less industrial character
Anton Kalvaas gate (street in Lademoen)	6	Buildings Trees Central location	Less clutter Benches More trees
Ullstadløkkveien (a "street plaza")	7	Buildings Accessibility Shop/local square	Less roadwork Greening Benches
Lamoparken (existing park)	8	The architecture The church Lamoparken	Street lighting Lack of water in the fountain Toilets and waste management

The columns + (plus) and - (minus) indicate a positive and a negative thing about the area

5. Integrated actions - collaboration for long-term strategies and sustainability

5.1. Local coordination across political and institutional levels

Trondheim is one of the 112 cities selected in 2022 by the European Commission to participate in the EU Mission for 100 climate-neutral and smart cities by 2030, also known as the Cities Mission. This establishes a high-level political commitment and the structural framework through the developed [Trondheim Climate City Contract](#) that enables ClimaGen to operate with an efficient anchoring in Trondheim.

In 2024 the municipality of Trondheim turned into a parliamentary governance model, replacing a chairmanship model. After the election in 2023, the new city government was formed in Trondheim. The Leangen Declaration is the foundation for the new political coalition in position.

In this declaration the City Government states that they will "strengthen the knowledge on how developments and other interventions can be carried out in a way that reduces negative impacts on biodiversity, and how degraded nature shall be restored."

The ClimaGen project is owned by the City Council (Byråd). Ownership was strategically transferred to the City Councilor for Urban Development in 2025 to ensure the project is directly linked to the city's primary field of transformation.

The project's geographic scope and objectives overlap with the existing Area Investment Programme (AIP) for Lademoen-Nyhavna, allowing for shared resources and strategic alignment

Trondheim Municipality has a cross-sectoral climate budget as part of its yearly municipal budget plan. The municipal climate budget provides a useful framework for iterative updates, gathering input from across the organisation, integration of new climate actions, and reporting. The primacy of the budget as a governance tool also gives climate action necessary cross-sectoral buy-in. For 2026 the Climate Budget 2026 points out that "A basic measure for strengthening both climate adaptation and natural carbon sequestration is to safeguard existing natural areas and restore old natural areas.". This measure is especially relevant for ClimaGen.

In April 2024, Trondheim's fourth version of the [Municipal Energy and Climate Plan](#) was adopted by the City Council. This policy instrument serves as the strategic foundation for Trondheim's engagement in the EU Cities Mission. The four climate pledges are:

1. Trondheim is Climate-Neutral. Together we create a zero-emission society.
2. Trondheim is Energy-Smart. Together we make the best use of our renewable energy resources.
3. Trondheim is Circular. Together we take care of the resources and create a circular city.
4. Trondheim is Climate-Resilient. Together we create a sustainable society.

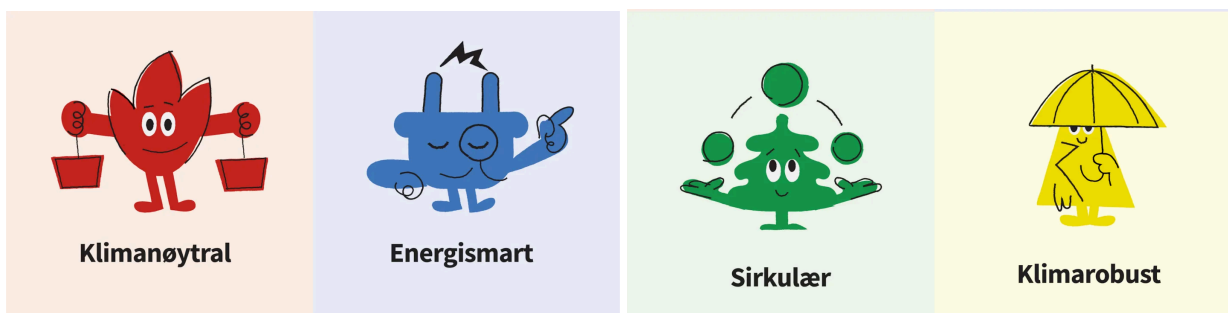


Illustration of the four climate pledges from the Municipal Energy and Climate Plan, source: Trondheim municipality

5.2 Policy and governance insights

For ClimaGen in Trondheim a steering group consisting of the Municipal Directors for Finance, Urban Development, and Business/Environment/Mobility ensures cross-departmental coordination. Formal and financial anchoring is managed through the steering group to ensure goals are integrated into the municipality's standard management systems.

Furthermore Trondheim utilizes a "Community of Practice" model. This is a cross-unit network where members from planning, engineering, environment, and operations departments work together to break down and connect across institutional silos. This deviates from standard municipal structures by using a decentralized partnership model rather than a traditional project manager. This is an active experiment to see if it leads to better use of local competence and increased flexibility.

5.3 Long-term sustainability & embedding ClimaLabs

- **Sustainable integration:** A primary goal of the "Community of Practice" is to ensure that ClimaGen's results are permanently anchored in the line organization's daily practice.
- **Planning legacy:** Specific roles within the project (e.g., in the City Planning Office) are responsible for ensuring that knowledge gained through ClimaLabs flows directly into ongoing formal regulatory plans for Nyhavna and Reina.
- **Maintenance strategy:** Participation from the Urban Greening department (Bydrift IPS) ensures that inhabitant-led initiatives are sustainable and that operational activities support local wishes.

5.4 Financial models

The financial strategy for ClimaGen in Trondheim relies on a diverse mix of public and grant-based funding, as the project is not designed around direct revenue generation or cost-recovery. Beyond the initial EU support, the municipality actively seeks funding through various local and regional channels. These include [the Area Investment Programme](#) (områdesatsingen), the [Green Transport Package](#) (Miljøpakken), and specific municipal grants such as [urban farming funds](#) (dyrkemidler) and the "[Climate Million](#)" (klimamillionen). Additionally, we are evaluating the use of developer contributions (rekkefølgekrav) to establish a solid, regulatory foundation for long-term financing.

Collaboration with external stakeholders is a crucial component of our financial model, as many partners bring their own independent funding streams to the project. Partners like Rosendal Teater and Nyhavna Utvikling utilize their own grants to support local interventions, while organizations like Young Enterprise (Ungt Entreprenørskap) help coordinate and refine specific youth-oriented projects. Furthermore, physical interventions in public parks are synergized with the municipality's overarching action programs (HØP), ensuring an efficient coordination of resources across departments.

According to the project-driven Project Maturity Level assessment (PML 4), the core economic logic of the project lies in generating non-monetized public and territorial benefits (see also the upcoming D2.3 ClimaGen Financial Concepts 1, for further integrated financial approaches). By improving biodiversity, climate adaptation, and public space, the project significantly increases the future value and attractiveness of the Nyhavna district, while potentially avoiding long-term public costs related to stormwater management and flood risks. Moving forward, the primary financial challenges involve detailing the long-term capital and operational expenditures (CAPEX and OPEX) and managing the fragmented cost allocation across multiple landowners, such as Bane NOR and Nyhavna Utvikling, to mitigate the risk of cost overruns.

6. Challenges, limitations, and lessons learned

6.1 Achievements

During the first 18 months, ClimaGen has successfully achieved several key successes with significant impacts. One of our most significant practical achievements has been clearing the neglected Jernbaneparken and securing a formal land-use agreement with Bane NOR. Organizationally, the project has strengthened the focus on green values within the municipality itself, while actively raising local awareness about greening the streets of Lademoen and the industrial spaces of Nyhavna. We have established deep, cross-sectoral collaborations involving local residents, the Svartlamoen community, the cultural sector, and university students. Crucially, the insights gathered from these co-creation processes have already provided a solid foundation for making upcoming permanent zoning plans significantly greener, while establishing better, long-term frameworks for public participation that support the overarching Quality Program strategies.

6.2 Challenges

The process has also presented valuable challenges. Navigating overlapping and evolving regulatory frameworks has been our primary barrier to implementation. The ClimaGen project frequently requires us to operate outside the municipality's streamlined project lines, pushing the organization outside its traditional comfort zone. We must dare to explore new boundaries to find flexible solutions alongside local residents. Furthermore, in an area undergoing such a high degree of transformation, it is difficult for residents to envision what the district can actually become. A major engagement challenge has been to awaken a realistic expectation that this environment can indeed become something different and greener. Internally, aligning expectations between short-term temporary pilots and long-term permanent infrastructure has proven critical to avoiding organizational uncertainty, as has finding the right balance between resources spent on physical implementation versus necessary research and planning.

6.3 Lessons learned

6.3.1 Transferable lessons & learnings

The project has brought profound changes to how Trondheim Municipality operates. By establishing a "Community of Practice," we have opened up traditional institutional silos, enabling planners, engineers, and operational staff to collaborate directly and better understand the current situation on the ground. This cross-departmental dialogue reveals goal conflicts early and highlights the importance of maintaining focus on multiple levels simultaneously. We have learned that when technical limitations block one path, maintaining flexibility often opens the door to better, alternative solutions. Working in parallel tracks—managing temporary projects while planning permanent ones—ensures continuous progress and provides stronger, empirically tested data for our long-term planning. Building strong networks and maintaining open dialogue with stakeholders like Trondheim Havn, Nyhavna Utvikling, and Bane NOR has continuously created new opportunities for the municipality.

These insights directly contribute to the ClimaGen Impact Model, demonstrating the absolute necessity of transparent communication. We have experienced that residents are highly supportive when they receive good, clear information about what we are doing and why. Our local scaling strategy relies on anchoring these lessons in our municipal strategies so that ClimaGen serves as a blueprint for the rest of the city. We have also drawn valuable inspiration from outside our own borders, incorporating techniques like the Japanese forest-planting method and exploring street art as a catalyst for urban dialogue.

6.3.2 Planned improvements, methods and next steps

Moving forward, we plan to improve our co-creation methods by stepping out of the traditional office setting. We will increasingly utilize "walking meetings" (*gå-møter*) that function as open, pop-up offices directly in the neighborhood to lower the barrier for resident participation. Finally, we want the lessons we learn from ClimaGen to change how we build the rest of Trondheim. We are not just looking at these two districts; by using the project's learning and exchange mechanisms, we will actively integrate what we learn about nature-based solutions into our long-term municipal and regional planning strategies. As a Mission City, our ultimate goal is to show how high-level climate targets can be translated into vibrant, safe, and green neighborhoods where people actually want to live.

List of Abbreviations and Acronyms

AIP	Area based investment program (Områdesatsing, OiT)
CCC	Climate City Contract
KPA	Kommuneplanens arealdel - The land-use element of the municipal master plan
KPI	Key performance indicator
NBS	Nature-based solutions
SPUF	The Strategic plan for public spaces and connections (Strategisk plan for uterom og forbindelser)
TK	Trondheim kommune
UE	Ungt Entreprenørskap (Young Enterprise)

The Consortium



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