NEGOTIATING HERITAGE AND ECOLOGY

Nature-Based Solutions and Green Classrooms for Urban Regeneration in Rome

LIGHTHOUSE: URBAN | SAN LORENZO - CASTRO LAURENZIANO - VALLE GIULIA



San Lorenzo urban context



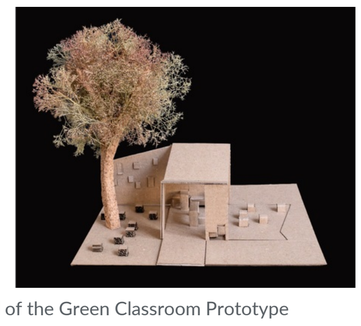
Via De Lollis' site



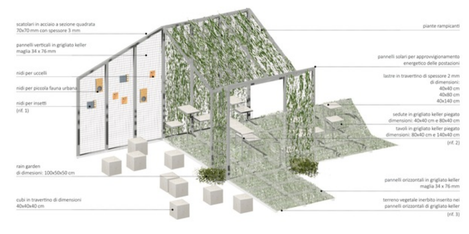
Via De Lollis' Giardino della Memoria



visit to the Sapienza microforest in the Parco dei Caduti garden



model of the Green Classroom Prototype



Green Classroom axonometric



Living Lab with schoolchildren



Living Lab with university students

Community social characterization

San Lorenzo is a dense, mixed-use urban district adjacent to Sapienza University, shaped by its working-class history, archaeological heritage and railway infrastructure. Long-term residents, students, university staff and school communities share a fragmented urban environment, with limited accessible green spaces and opportunities for outdoor activities.

Motivation of the pilot

The Rome pilot investigates how **nature-based solutions can reconcile archaeological heritage conservation, ecological regeneration and new forms of public space use** in a historically layered urban environment.

The transformation of the Via De Lollis archaeological site into a public garden provides an opportunity to introduce vegetation and ecological processes while protecting and enhancing buried archaeological remains.

Building on Municipio Roma II's initiative to promote Green Classrooms, the pilot also explores **outdoor learning as a new dimension of public space**, connecting nature, heritage, education and community life. The two lines of experimentation aim to develop innovative and replicable approaches to urban regeneration.

Existing NBS applications and initiatives

San Lorenzo Microforest (Sapienza DICEA); urban forestry initiatives promoted by Roma Capitale; green infrastructure and biodiversity research; Tree Room Aniene (FutureEcologies).

Leverage resources for NBS

Sapienza's research on urban regeneration and the *City as Care*; Municipio Roma II's resolution promoting Green Classrooms; local initiatives advocating for accessible green spaces; existing university–municipality cooperation and community networks.

Environmental Challenges

Mitigating urban heat island effects, increasing biodiversity and improving ecological connectivity in densely built areas. A key challenge is **integrating vegetation, root development and sustainable water management with the protection and enhancement of buried archaeological remains**, without compromising their conservation.

Social Challenges

Overcoming the separation between the university and surrounding neighbourhoods; reclaiming inaccessible or neglected public spaces; promoting inclusive outdoor learning, environmental awareness, physical well-being and intergenerational interaction.

Economic Challenges

Developing feasible, low-impact interventions through cooperation between public institutions. Addressing implementation and maintenance costs while testing NBS and Green Classroom models that can be adapted and replicated in other urban contexts.

Governance in the pilot case

Sapienza DiAP and Municipio Roma II collaborate through a **Living Knowledge Lab**, involving schools, university students, researchers and local stakeholders.

The Living Labs explored both the integration of NBS in archaeologically sensitive areas and the meaning, functions and spatial characteristics of Green Classrooms, translating scientific knowledge, institutional objectives and community needs into design proposals.

Local governance profile

Sapienza DiAP (research, design and co-creation); Municipio Roma II (local governance and outdoor learning initiatives); Sapienza Rectorate; Roma Capitale; archaeological heritage authorities; local schools, associations and community representatives.

Target group

Local residents, children and school communities, university students and staff, older people and visitors. Green Classrooms are conceived as inclusive spaces for learning, social interaction, outdoor activities and well-being, accessible to different age groups and communities.

Small-scale NBS testing

1. Via De Lollis – Archaeological Garden and Integrated Green Classroom
Transformation of an inaccessible archaeological site into a public garden, testing heritage-compatible planting systems, sustainable water management and new pedestrian connections, while protecting and enhancing buried archaeological remains.

The project integrates a **Green Classroom, a playground and an interpretive narrative wall**, making the site's archaeological and environmental history accessible through new opportunities for learning, play and social interaction.

2. Green Classroom – Replicable Prototype
A modular and adaptable outdoor learning structure developed through the Living Labs, with its first planned installation in the **Parco dei Caduti del 19 luglio 1943**, next to the existing San Lorenzo microforest.

Conceived as a multifunctional public space, it accommodates environmental education, **outdoor classes and activities – including yoga and other well-being practices – as well as individual study, group learning and community gatherings**. The prototype can be adapted to different public green spaces.

Challenges raised during the preparatory meetings

How can NBS be implemented while protecting and enhancing buried archaeological heritage?

How can Green Classrooms accommodate different forms of learning, recreation and everyday public use?

How can community participation, scientific research and institutional cooperation contribute to feasible, replicable and long-term urban interventions?

Why these sites and who owns the land?

Via De Lollis – Municipio Roma II and Sapienza University: A public park integrating historical and archaeological interpretation, NBS, landscape design, a playground and a site-specific Green Classroom, while protecting and enhancing buried archaeological remains.

Parco dei Caduti del 19 luglio 1943 – Public park within Municipio Roma II: First planned implementation of the replicable Green Classroom prototype, next to the San Lorenzo microforest.

Giardino Nicolini – Municipio Roma II: Testing alternative Green Classroom models for local residents and school communities.

Via Scarpa – Sapienza University: Testing Green Classroom configurations for outdoor learning, study, social interaction and ecological enhancement.

Related projects to create synergies

#CURACITTÀ ROMA – La Sapienza della cura urbana; San Lorenzo Microforest (Sapienza DICEA); Municipio Roma II Green Classroom programme; Tree Room Aniene (FutureEcologies); local urban forestry and biodiversity initiatives.

Possible local partners, associations, initiatives and champions to be engaged

Sapienza students and PhD researchers; Istituto Comprensivo Tiburtina Antica; Istituto Comprensivo Machiavelli; parents' associations; La GRU Association; 12Lab; FutureEcologies; local cultural and environmental associations; residents and community organisations.

ROMA MUNICIPIO ROMA II

DIPARTIMENTO DI ARCHITETTURA E PROG

SAPIENZA UNIVERSITÀ DI ROMA

Pilot Case