

Marias Kiouris pollinator-friendly route

FC Piraeus

Type of NBS intervention

NBS 8 Pollinator landscaped areas and connection with green pathway.

Vision



Redesign options for green areas within key public spaces: Up-The intersection with Ipapantis Street and the intersection with Agiou Dimitriou Street; Down-Existing public space near the school and the existing playground. (Student's projects)

Project indicative: P8.3

Project type: simple investments

Project starting point: 0-5 yrs.

Project ending point: 0-5 yrs.

Linkages: P6.1, P6.2

Estimated costs: 30-60K EUR (or more depending on the extend of the interventions)



NBS 8

Description of intervention

Area near Primary School Dimotiko - Community-oriented Green Core:

- Plant high percentage of pollinator-friendly and locally adapted shrubs and flowers.
- Develop an urban gardening area for educational activities with raised beds for vegetables and aromatic plants.
- Create open green space for relaxation and outdoor activities.
- Preserve and enhance existing greenery, ensuring a balanced mix between natural open and shaded areas.
- Plant fruiting shrubs to attract birds and provide nesting and shelter for pollinators.

First part of the Street Corridor - Linear Park:

- Utilize existing railway lines as a historical landmark and encourage vegetation growth.
- Plant flowering species to attract butterflies and increase greenery both horizontally and vertically.
- Incorporate green walls and horizontal gardens where possible, particularly in unused spaces and facades facing public areas.
- Ensure high percentage of natural shaded areas between Thesmoforiou and Methonis Street.
- Implement green swales as water collectors along pathway.

Second part of the Street Corridor:

- Landscape the existing green areas with trees and shrubs.
- Enhance greenery and biodiversity with a balanced mix of flower beds and pollinator beds.
- Increase percentage of locally adapted trees at all intersections between the street corridor and traffic lines.

Scenarios

Do-it-all (Best-case)

Developing new liveable green and public spaces by preserving and organising existing areas, transforming abandoned railways into community-oriented parks, creating gathering spaces, picnic areas and relaxation zones.

The goal is to achieve a balanced mix of open spaces and shaded areas, incorporating vertical walls and horizontal gardens to enhance the area's ambiance. "Green curtains" (alignments of tall vegetation) along traffic lines will help absorb pollution. The design integrates a harmonious blend of vegetation and paved areas. Additionally, the plan aims at creating flourishing habitats for pollinators and birds by planting locally adapted and native trees and shrubs. Key areas will feature abundant flowering plants, seed mixes, and nesting sites for pollinators.

Grass areas may be left unmown or have reduced the cutting frequency (it recommended to reduce the need of irrigation). Bioswales and water-based gardens will be implemented for drainage in affected areas. The plan includes support for training and capacity-building to ensure the proper long-term maintenance of the NBS interventions

Do something meaningful

Develop "green curtains" (dense alignment of tall vegetation) along high-traffic areas to absorb pollution and increase pollinator biodiversity. Utilise uncultivated land, notably fenced areas to promote local wild vegetation growth and attract pollinators. This intervention serves as a prototype for future green corridor projects, inspiring neighbouring municipalities to enhance green assets. Goal is to create 15 additional pollinator-friendly green corridors in Piraeus over the next 15 years, with Piraeus leading the way in raising awareness among other municipalities.



BEFORE



AFTER



Potential interventions on green spaces in relation to a new key public area- the 1st part of road that is more abandoned (Erica Franzosi, Silvia Ceremoli)



BEFORE



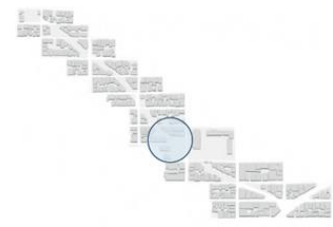
AFTER



Potential Interventions on green spaces in relation to a new key public area - the last part of MKR (Erica Franzosi, Silvia Ceremoli)



BEFORE



AFTER



Potential interventions in front of the school area (Erica Franzosi, Silvia Ceremoli)

Study area

The study area overlaps with the P6.1 Marias Kiouris pedestrian road – green corridor.

Implementing pollinator-friendly interventions on approx. 140m length and 1.500 m²(0.15ha), located near the Primary School Dimotiko.

Challenges

The area faces several challenges for developing green and public spaces:

- high percentage of impermeable surfaces.
- neglected scattered greenery along the road.
- lack of quality and multifunctionality in existing green/public spaces.



The historic tram line remains underutilised in need of transforming fragmented green areas into cohesive green corridors.

Additionally, shaded areas and seating for pedestrians in proximity to green spaces are missing.

A stretch of approx. 1km is observed on the former light rail track majorly on the Marias Kiouri Road which shows potential for Implementation of NBS 8 under proGReg.

NBS 8: Pollinator Biodiversity

Plants attracting pollinators

Local frameworks

"Athens-Attica 2021" Regulatory Plan (2011) highlights environmental protection and the restructuring of the productive fabric, including agricultural production.

Piraeus Blue Growth Strategy 2018-2024 includes measures for integrated spatial planning and interventions aimed at urban revitalization.

Piraeus Masterplan (2014) proposes the construction of three pedestrian roads, namely Gkoura, Thessalonikis, and Olinthou, which are connected to the intervention area.

Operational objectives

- Improve local GI by creating a continuous green corridor along Marias Kouri Road covering 600 sqm of the total intervention area surface.
- Improve pollinator biodiversity along Marias Kouri Road through low-maintenance interventions: 20 existing areas left with grass unmown.
- Develop and implement three workshops for training and capacity-building of local communities/businesses/schools to assure correct long-term maintenance of the green spaces.
- Improve air quality by increasing the percentage of locally adapted trees planted and pedestrian protection from traffic in all intersections

Key considerations

The intervention is an important "second layer" of Marias Kiouris Road development, working in synergy with P6.1. Aims to complement P6.1 interventions by addressing challenges of MKR such as need for coherent and liveable green/public spaces for the community and a safe and healthy environment for pollinators.

Area 1 First part of MKR (abandoned/unused)

Highlight the area's history on 400m long abandoned tramline and increase attractiveness of the landscape by:

- ensuring green path with high biodiversity planted with flowering species,
- developing 4 green roofs/walls,
- 1 rain garden in relation to water collectors,
- 2 new natural-shaded spaces by planting 12 locally adapted trees



Area 2 Second part of MKR
Organise and revitalise all existing green areas containing trees and shrubs and reinforce biodiversity by developing 1 new green area with mix of flower beds and pollinator-friendly beds.



Area 3 Key area near Primary School Dimotiko

Extend purpose and biodiversity of existing green areas by developing:

- 1 new green open-space for relaxation activities of c. 200m,
- 1 area for educational activities of c. 50m equipped with raised beds for vegetables and aromatic plants
- 2 areas for nesting and shelter for pollinators,
- plant 30% of existing green spaces with pollinator-friendly and locally adapted shrubs and flowers.



Targets

- 600m of continuous planted areas (100 new locally adapted tall trees and 3000 shrubs planted in entire area) out of which 180m planted with pollinator-friendly and locally adapted shrubs and flowers.
- 20 existing areas left with grass unmown.
- 3 workshops for training and capacity-building of local communities/businesses/schools implemented.
- 1 new green open-space for relaxation activities of c. 200m;
- 1 area for educational activities of c. 50m equipped with raised beds for vegetables and aromatic plants.
- 2 areas for nesting and shelter for pollinators created (KEY AREA 3).
- 1 linear park - 400m long abandoned tramline planted with flowering species.
- 4 green roofs/walls developed.
- 1 rain garden in relation to the water collectors (1st Part MKR).
- Min 7 shaded areas (using tall vegetation).

Partners

Beneficiaries:
Municipality
Additional Investors / Shareholders: Local businesses and shops along MKR, Parent's Association, Citizens around MKR, relevant NGOs (e.g ecology / environmental, sustainable development, people's rights fields)
Users: local, school students and their parent, teachers, local businesses and shops

Design requirements

Accessibility:

- Signage in key points.

Landscaping:

- Ensure coherent new vegetation planting according to shading needs.
- Allow flexibility and multifunctionality of main community spaces.
- Use flowering plants to attract butterflies and fruiting shrubs to attract the birds as much as possible.



Strong sense of community – Barbeque in the public space between neighbours

Annexed functions and activities:

- Ensure seasonal maintenance of green areas: pruning, fertilising, mulching.
- Use sustainable ways / techniques of planting and maintenance of the vegetation.
- Use reused materials for furniture and equipment.
- Include seating areas in both key community areas and secondary public spaces.



Pollinator-friendly corridor and vegetation (Erika Franzosi, Silvia Caremoli)

Vegetation

Trees, bushes and flowers that are native from the region and/or suitable for the climate and the urban environment



Pollinator-friendly corridor and vegetation (Erika Franzosi, Silvia Caremoli)



PLANTS MATCHING

FLOWER BED DESIGN



Example of a flower bed design and plants composition (Xiong Dongmei, Shen Daan, Wei Yuxin)

All graphic material: designs, intervention ideas, illustrations, and landscape proposal have been realised by students in the co-creation activities during Scenario-Building phase.