

Multifunctional public space and green corridor Nădășel

FC Cluj-Napoca

Type of NBS intervention

NBS3 + NBS6 Creating a green corridor and multifunctional community space that will integrate community gardens, urban orchard, and other public space features.

Description of the planned interventions

The NBS extends the existing fruit trees area establishing a new community urban orchard. Additionally, multifunctional public spaces will be developed: including a dog park, relaxation and socialising areas, and ornamental green spaces. Garden boxes will be incorporated, connected to the urban orchard and leisure areas. Developing new green connections involves fulfilling ecological demands, particularly in connection with natural ecosystems. The existing vegetation will be enhanced by introducing a mix of local trees and fruit trees while a developing dedicated pedestrian and bike pathways along the corridor.

Vision



NBS 3



NBS 6

Project indicative: CJ3.2

Project type: complex project

Project starting point: 0-5 y

Project ending point: 0-5 y

Linkages: CJ3.4

Estimated costs: can vary a lot from 50K to 200-300K EUR investment.



Scenarios

Do-it-all (extract)

The site is undergoing transformation with the support of the municipality, actively involving local communities in constructing multi-functional, productive and sustainable green public spaces such as vegetable gardens and urban orchards. Efforts have been made to secure and improve accessibility to the riverbank. To enhance the green corridor, additional locally adapted vegetation will be planted.

However, given an existing electrical line (LEA) on the site requires specific considerations for the planting and landscaping work. To ensure safety, only low to medium size vegetation in the proximity of the LEA are allowed. No constructions will be permitted in this area to avoid interference with the electrical line.

The Nădăşel project aims to raise awareness about the importance of visually appealing and productive and sustainable community spaces. By involving the community in the process, the project strives to create spaces that are beneficial for residents.

Do-something-meaningful (extract)

The site is being transformed with the support of the municipality, actively involving local communities in improving the local landscape. The transformation incorporates productive gardens such as vegetable gardens in raised boxes and/or orchards.



Study area

Approximately 1.1 hectares, regarded as a valuable component of the local green infrastructure (GI) due to its significant local vegetation and unique landscape. It features important open spaces that can be utilized for community events and activities.

However, the site's gravel pathway is currently difficult to access due to (unnecessary) fencing. The area contains fruit trees planted informally by the residents.

The site is well-maintained and free of debris or waste.

Located near single-family housing neighbourhoods and adjacent to social housing blocks in the east, the site holds the potential to connect these two communities.

Local planning frameworks

Three key documents need to be considered:

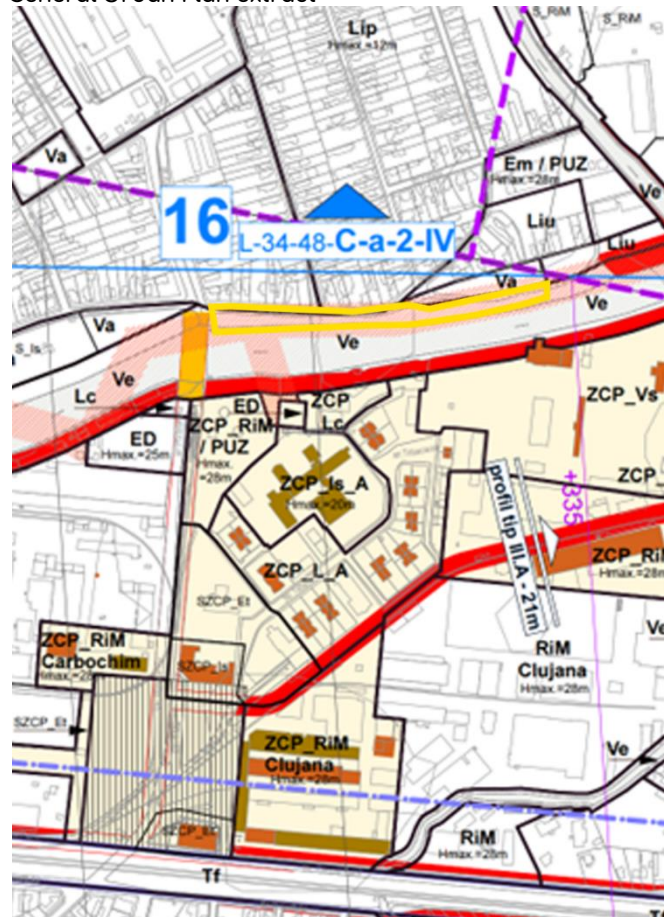
1. The General Urban Plan for the site comprises two zones: (i) Towards the river *Ve*: Green water protection areas or ecologic corridors. Interventions within this zone are not allowed without detailed urban plans (PUD). Site organisation, rehabilitation, or modernisation are carried out through integrated projects aimed at improving functionality, urban image, pedestrian/bicycle movement, infrastructure, traffic regulation, parking, urban furniture, and vegetation. Permitted interventions include high-rise, medium, and low vegetation, pedestrian and bike pathways, urban furniture, landscaping, and hydrotechnical works. (ii) East part of the site, away from the river: *Va*: Green public space with unlimited public access. In addition to the *Ve* zone, annexes such as sanitary groups and administration spaces are permitted.

2. Law approved by the Local Council (Hotărâre nr. 311/1998): This law prohibits parking vehicles and animals on green areas. Furthermore, it restricts any changes in the designated purpose of green spaces, disallowing conversion into parking lots, vegetable gardens, or other landscaping forms.

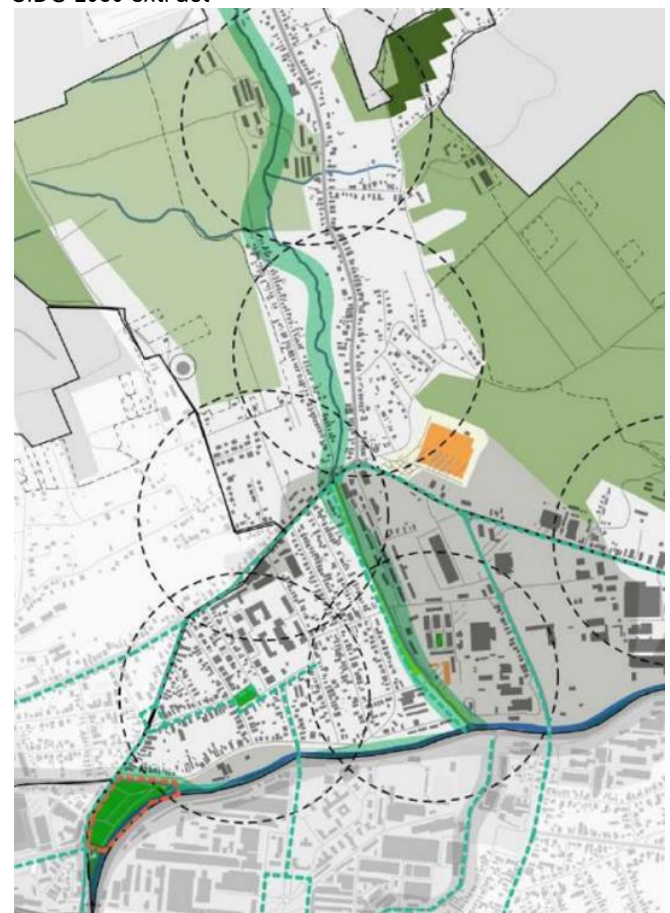
3. SIDU (Integrated Sustainable Urban Development Strategy). The site is at the border between two neighbourhoods Bulgaria and Iris. It is recommended to complete the street vegetation alignment and extension of the Velo network.

4. PUZ (Zonal Urban Plan) – PUZ Someșul Mic. The current area for CJ3.2 is included in the broader study area of the document, but no regulations/proposals have been made to this site. The area is characterised by un-landscaped and deficient area and physical barriers (fences).

General Urban Plan extract



SIDU 2030 extract



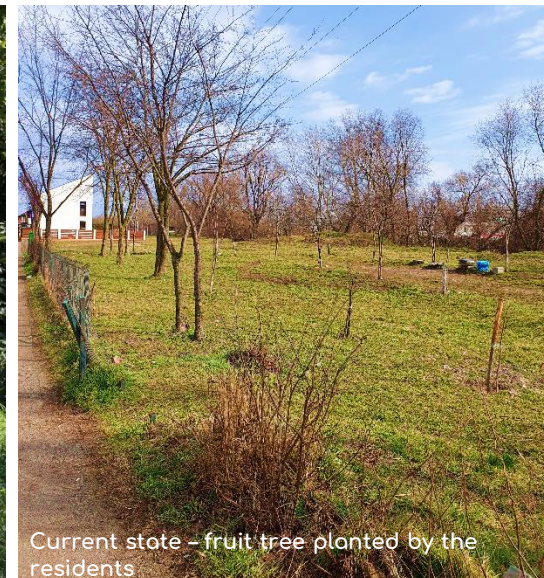
- PUBLIC SPACE
- Realised interventions
- - - Interventions ongoing/finished
- - - New proposed interventions

Challenges of the site

- Integrating NBS with soft-mobility needs: incorporating pedestrian and cycling pathways within the site layout.
- Overcoming the constraints imposed by Local Law (Hotărâre nr.311/1998), which primarily limits the establishment of community gardens focused on urban orchards; exploring the inclusion of raised box gardens for potential vegetables or aromatic plants.
- The area is intersected by a high-voltage power line, presenting a challenge for the transformation with NBS. Developing safety protocols and tailored landscaping designs is of paramount importance to address the proximity of the power line to other interventions.



Current state – existing foot pathway



Current state – fruit tree planted by the residents



Current state - main open area with potential to accommodate multifunctional activities. The present building is the social housing realized for disadvantaged communities



Current state - river area is a valuable landscape used informally for leisure, and in some cases, even fishing.

Partners

Beneficiaries: Municipality, members of the local community, and the group that is living in the social housing units

Additional Investors / "Shareholders": NGOs, Association of Intercommunal Development Cluj (ADIZMC), OAR Transylvania, Universities (UBB, USAMV)

Users: Local residents, disadvantaged groups of people

Objectives

- Improve the local landscape, and conserve and enhance the natural landscape/ambiance.
- Increase the accessibility of the river corridor.
- Renaturate the area with the role of ecologic corridor
- Accommodate social-oriented facilities in conjunction NBS

Targets

- Urban orchards area: approx. 1000 sqm
- Raised box gardens: 10-15 units (2x1m)
- Biodiversity: 90% of the existing (valuable) vegetation is kept and well maintained
- No. of users involved: 50-100 inhabitants.
- Pedestrian pathways: min 350m – max 450m long pedestrian pathway (pervious materials).

Design requirements

Accessibility:

- Ensure accessibility for all vulnerable groups in public spaces.
- Properly mark entrances to enhance visibility and ease of access.
- Consider minimal transformation of existing informal pedestrian tracks.

Landscaping:

- Improve local landscape by adding additional vegetation to the green corridor and creating vegetation alignments along the street.
- Collaborate with future users to select suitable species for the urban orchard and conduct trainings on planting, maintenance and harvesting.
- Ensure balanced and harmonious distribution of functions throughout the site, including orchard, leisure spaces, multi-functional community area, dog park, green corridor, and pedestrian/bike pathways.
- Incorporate pollinator-friendly species of trees and shrubs
- Prioritise high percentage of pervious surfaces, only allowing less than 10% of the site area to be impervious.
- Limit the height of trees, except for the blue-green corridor to a maximum of 2.5 meters.
- Create ecologic water retention basins and/or irrigation canals, thus not requiring classic irrigation systems (after the newly planted species have acclimated to the soil)

Security/Safety:

- Ensure security of the space by planting dense areas of locally adapted shrubs that prevent unauthorized access to the riverbank and electrical pole (ensuring access to the electrical pole for maintenance work)
- Limit the maximum height of any structure or intervention under the power line to 2.5 meters. To achieve this, consider a suitable urban orchard design with fruit trees trained on trellises, providing the added value of increased productivity.
- Note that automatic irrigation systems may be prohibited by the electrical company. In such cases, raised box gardens should be manually irrigated to encourage greater ownership and community interaction.

Aesthetics/ambiance:

- Preserve natural ambiance of existing corridor by complementing existing vegetation with low, medium, and high-rise plants.

Sustainability/Maintenance:

- Collaborate with local users to establish a yearly calendar for maintenance, harvest, distribution, and processing of fruits in the urban orchard.

Annexed functions and activities:

- *Va* zone allows for small scale annexes with the function of administration space. A semi-open space can be realised by a pergola – community forum/agora, and deposit of gardening tools.

Urban furniture and equipment:

- Benches and leisure areas using ecologic materials.

Recommended vegetation

Urban orchard



Prunus avium



Prunus armeniaca



Prunus domestica



Malus domestica

Riverbank restoration – use of riparian adapted native vegetation for enhancing the natural ambiance



Salix alba



Prunus padus



Juglans regia



Alnus glutinosa



Sambucus nigra



Corylus avellana



Berberis vulgaris



Rhamnus cathartica

High humidity ----- Medium humidity

Plantations adapted for harsh light



Acer platanoides



Fagus sylvatica



Quercus petraea



Quercus robur



Acer tataricum



Euonymus europaeus



Rosa canina



Prunus spinosa

Very arid/no shade ----- Medium arid/mildly shaded

Pollinator friendly plantations used for open areas



Geranium pratense



Echium vulgare



Centaurea cyanus



Consolida regalis



Vicia craca



Prunella vulgaris



Campanula rap.



Achillea sp.



Mellilotus officinalis

Humidity ----- Medium humidity



Cichorium intybus



Dianthus carth.



Centaurea jacea



Malva sylvestris



Papaver rhoeas



Hypericum perforatum corn.



Lotus corn.



Trifolium pratense



Althea officinalis

Medium humidity ----- Harsh light