



NBS 6

Green corridors in (former) industrial areas

FC Cluj-Napoca

Project indicative: CJ6.3

Project type: complex project

Project starting point: 5-10 y

Project ending point: 10-15 y

Linkages: CJ 6.2, CJ 6.3

Typology of the intervention

NBS6 Green corridors development programme for integration of ecologic public space requirements in the case of future developments in former industrial areas. The objective is to transform strategic segments of the river corridor in accessible public spaces, by deploying eco-friendly interventions that maintains the natural ambiance and ecologic role of the areas.

Description of the planned interventions

The current proposal entails the establishment of a local development program that aligns local agendas with new stipulations for repurposing the industrial sites situated adjacent to the river corridors. The objective is to ensure proper NBS implementation of the future developments (conversion projects) – making the river corridors accessible. It is recommended that future developments adhere to the following principles: (i) Ecological design and DNSH principles; (ii) Preservation of the natural ambiance of the areas; (iii) Ensuring unrestricted access for residents.

Scenario

Do-it-all (extract). Through the Restructuring Procedure Contract (regulation proposed in the General Urban Plan) the conversion of former industrial sites will occur in an integrated manner, taking into clear consideration the optimal density of residents at the neighborhood level in relation to the capacity of local infrastructures such as roads and public facilities. The new developments will seamlessly integrate the river corridor, maintaining its natural ambiance by clearing the riverbed of invasive vegetation and implementing additional planting with native species. Through the conversion of privately owned industrial sites, along with other public space-related interventions conducted by the municipality, the entire river corridor of Somesul Mic and Nadasel River will transform into a green natural spine for the former industrial neighborhoods, promoting leisure activities in nature and facilitating soft mobility.

Do-something-meaningful (extract). Through the Restructuring Procedure Contract, the conversion of former industrial sites will seamlessly integrate the river corridors into a coherent network of public spaces, enabling unrestricted access for residents. Minimal interventions are permitted within the river corridor, subject to stringent environmental and landscape requirements, to maintain the ecologic characteristics of the corridor.

Vision

Riverbank ecologic landscape design, Regional Design Fil Bleu Glatt. Source <https://landezine.com/regional-design-fil-bleu-glatt-by-studio-vulkan/>

Current situation: valuable natural areas along the river, that are not accessible, due to the conformation of the industrial sites.

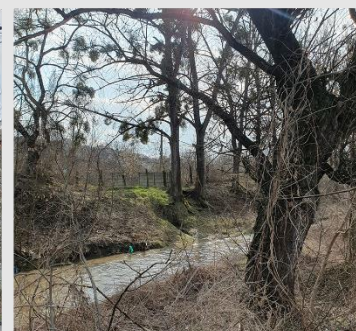
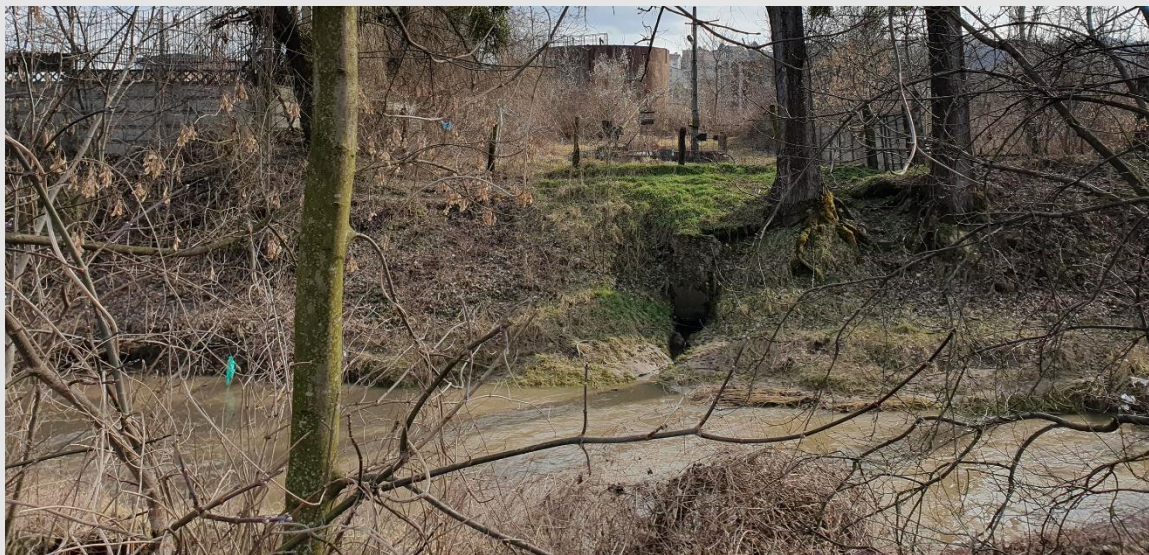


Study area

Industrial units are generally owned privately, possessing significant land areas, located in important locations for urban development. The initial industrial activity has ceased or significantly reduced. Currently, some spaces are rented to small enterprises for production activities and industrial or quasi-industrial services, storage, etc., generally carried out in improvised, precarious, and inadequate conditions. Some spaces are completely unused. The industrial premises reveal a mediocre, disorderly internal structure, a result of unsystematic developments over time, with access/reception areas being dysfunctional or non-existent. The industrial buildings/warehouses have various designs, most built in the second half of the 20th century and are in different states of conservation and have very different utilization values. Few of them have industrial heritage value. The urban infrastructure is generally degraded. The lands have varying levels of contamination due to the industrial activities that have taken place here.

Specific challenges of the sites

- Ownership and juridical procedures that prolong the time of transforming these sites into valuable urban assets.
- Negotiations with private investors to adapt NBS in the future green areas, especially related to the river corridor. Future developers must comply with the local regulations that regulate future green and leisure spaces to have public access, but the level of ecological design implemented is hard to control.
- New development projects may negatively affect the local ecosystems temporarily, during the construction works. It is important to ensure a level of protection of the river corridors and then proper integration within the public spaces network.



Landscape typology: Industrial area adjacent to river corridors. Source: Codrut Popina

Local frameworks

1. **General Urban Plan: Territorial Unit – RiM (Restructurable industrial zone - mixed zone).** To change the purpose of these lands, a **Restructuring Procedure** will be applied based on a contract between the Local Council of Cluj-Napoca Municipality and the owners of industrial units. The stages of the procedure involve:

(a) negotiations with the local public administration to establish the framework conditions for restructuring – which will determine the new functional profile, main urban indicators, necessary public interest objectives in the area (general and local street layout, utility infrastructure, green spaces, playgrounds for children, squares, public educational, health, and social housing institutions, etc.)

(b) development of urban studies (master plan that will address themes such as accessibility, spatial-functional organization, infrastructure, traffic, parking of vehicles, system of public spaces, public utility servitudes that affect the respective territory, technical-economic parameters) and necessary environmental studies.

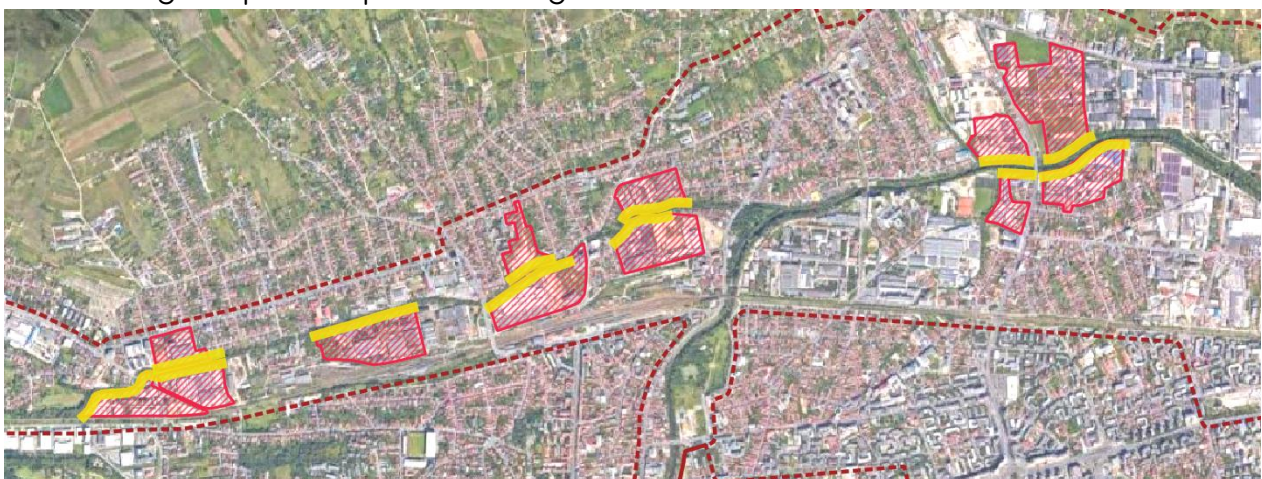
(c) finalization of negotiations based on the data provided by the above-mentioned studies, which become an integral part of the contract.

(d) conclusion of the restructuring contract between the Local Council of Cluj-Napoca Municipality and the holder of the industrial unit.

(e) development of the restructuring urban zoning plan and the related detailed zoning plan.

The process of rehabilitating and modernizing public space will only be based on complex specialized projects aimed at improving the urban image in line with its character, prioritizing the development of pedestrian movement and spaces intended for them, modes of cycling, regulating vehicle traffic and parking, organizing urban furniture and vegetation.

- Plazas will be organized as pedestrian spaces, motorized traffic occupying a maximum of two sides.
- Green spaces, such as squares or gardens, will have unlimited public access.
- Urban furniture will be integrated into a coherent concept for the urban image of public spaces throughout the ensemble.



In red: RiM (Restructurable industrial zone - mixed zone) territorial units. In yellow: proposed corridors for ecologic interventions – in total 3,7 km long corridors (there is proposed a minimum width of the future landscaped corridor of 10m – optimal width 15-30m)

2. **The North Mobility Corridor Masterplan** represents a relevant driver for triggering conversion projects and new developments in these industrial areas. Investors confirmed publicly the availability to contribute financially to the modernization and development of the road infrastructure. Thus, it is considered that collaboration between public and private entities can go forwards, and also ensure proper development and use of the riverbanks.

Partners

Beneficiaries: Real estate developers (residential, mixed-use, and commercial-oriented developers), **Municipality:** strategic planning department, and green spaces and environment department.

Additional Investors / "Shareholders": Municipality

Users: Current residents, and future residents

Objectives

Policy Objectives and targets

Objectives:

- Coordinate the conversion and development of industrial areas adjacent of the river corridors.
- Restore and enhance the ecologic role of the river corridor in synergy with improvements of the green public space network and soft mobility (pedestrian and bike pathways).

Targets

- 12 contracts (Restructuring procedure contracts proposed within the General Urban Plan). 1 for each of the 12 identified sites.
- rehabilitation of 3,7 km of the blue green corridor.
- 3,7 to 5 ha of regenerated land with ecologic properties.

Context/argumentation

Strategic and regulation drivers

Relevant strategic and regulation drivers have been put in place through the General Urban Plan zoning, regulation, and procedural requirements. Additional requirements for maintaining access to the green corridor and further landscape and ecologic design recommendations must be further included in the documentation that will permit building on these sites. The responsibility relies on the municipality representatives that will elaborate the cooperation contract and building permits documentation.

Challenges and drivers

The main risks include:

- significant shifts in political perspectives.
- limited synergy and collaboration among decision-makers within the public administration.
- inadequate financial resources, and a lack of awareness regarding the benefits and impact of sustaining an ecologically friendly approach.

Policy extent

The urbanistic program proposal is designed to be applicable to the identified sites for future conversions, in connection with the blue-green network. Furthermore, the program's objectives can extend to a regulatory proposal for incorporating green capillary interventions/solutions within the new developments (as detailed in CJ5.2 - Green roofs program).



Landscape typology: Industrial area adjacent to river corridors. Source: Codrut Papina

Design recommendations

Accessibility

- Ensure accessibility of all vulnerable groups.
- Reserve terrain for bike pathway (for a corridor along the entire river)
- Properly mark the entrances in the community public space

Ambiance/Aesthetics

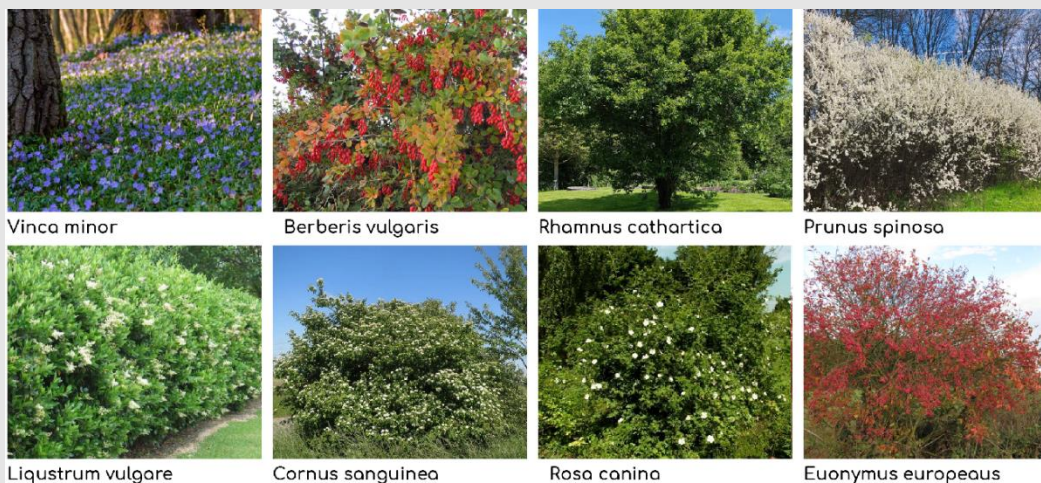
Ensure the integration of the river corridor into the new public space design by preserving the natural landscape and ambiance.

Landscaping

Riverbank restoration – use of riparian adapted native vegetation.



High humidity ----- Medium humidity
 Medium-size vegetation for creating buffer areas and protection zones.



Pollinator friendly plantations used for open areas



Humidity ----- Medium humidity



Medium humidity ----- Harsh light

- Keep interventions minimal with high % of pervious surfaces.
- Utilize locally adapted, low maintenance vegetation.
- Incorporate pollinator-friendly species.

Urban furniture and equipment:

It is recommended to arrange urban furniture for relaxation and nature observation, using ecologic design, without affecting the natural ambiance of the areas.

Annexed functions and activities

Ensure a balanced distribution of functions, including orchards, leisure spaces, multi-functional community areas.