

Bicycle Path Blatusa Banlozi

FC Zenica

Existing Situation

Study area & Intervention site

The conversion of former industrial sites is a strong economic driver. Given planned mixed-use developments in the study area, a green corridor will connect the different elements as better connections between the development site and city centre are needed. The intervention site is directly related to the future development area.

Description of the study area

The designated "Economic - Business Zone Zenica - North" of the Regulatory Plan is about 6 km north of the city centre. The area of 15.93 ha is covered by Regulatory (Detail) Plan "Economic - Business Zone Zenica - North". The west side borders the industrial track leading to ArcelorMittal Zenica. On the east side, the area borders on the left bank of Bosna River. The future development of this part of the city focuses on the primary tasks for construction of the City of Zenica Wastewater Treatment Plant. In addition, the construction of economic and business facilities and traffic infrastructure and supplement, construction of energy and other necessary infrastructures.

Site challenges

- Public procurement procedures,
- Spatial limitations
- Financial resources
- Security aspects at night

Project indicative: Z6.1

Project type: simple investment

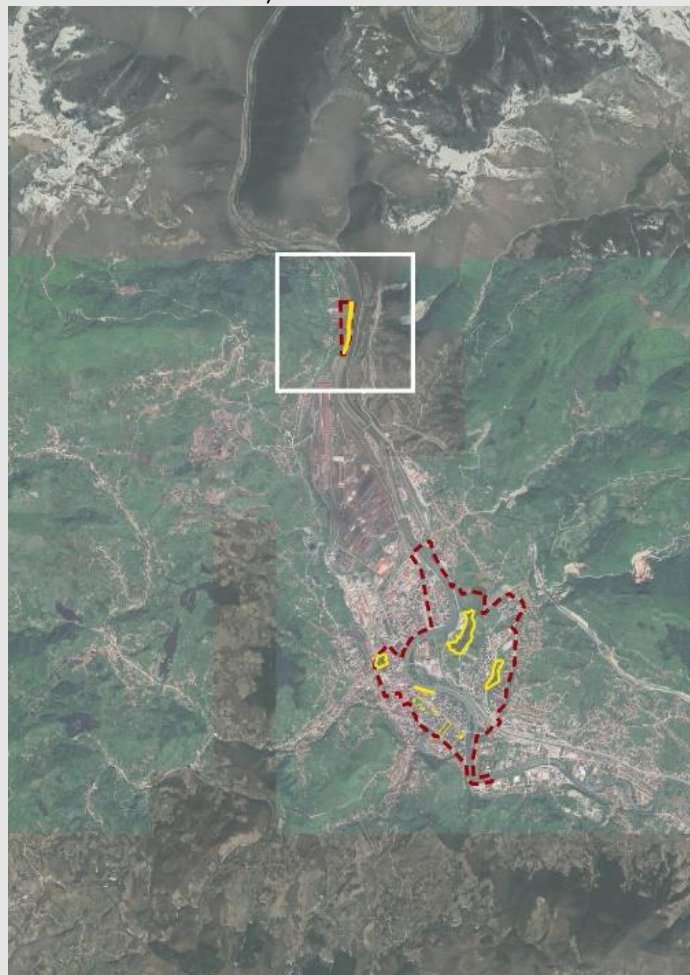
Project starting point: 0-5 y

Project ending point: 0-5 y

Estimated costs: 400K EUR (costs may exceed this threshold depending on the extent of infrastructure works)



NBS 6



Masterplan for the future development



Local planning framework (urbanistic regulations) or relevant legislation

Area National legislation

The Feasibility study of developing bicycle traffic (2021) as an extension of the already existing bicycle infrastructure covers the intervention site. Bicycle parking spots and public bicycle terminals can be found in the proximity of the site (within 1km radius).

International legislation

Harmonize the definition of infrastructure elements with UNECE and Vienna Convention for Road Signs and Signals, to have a clear distinction between categories and assure transparency among countries. Updates can be shared with UNECE for further development of the Vienna Convention.

- European Landscape Convention
- "EU biodiversity Strategy"



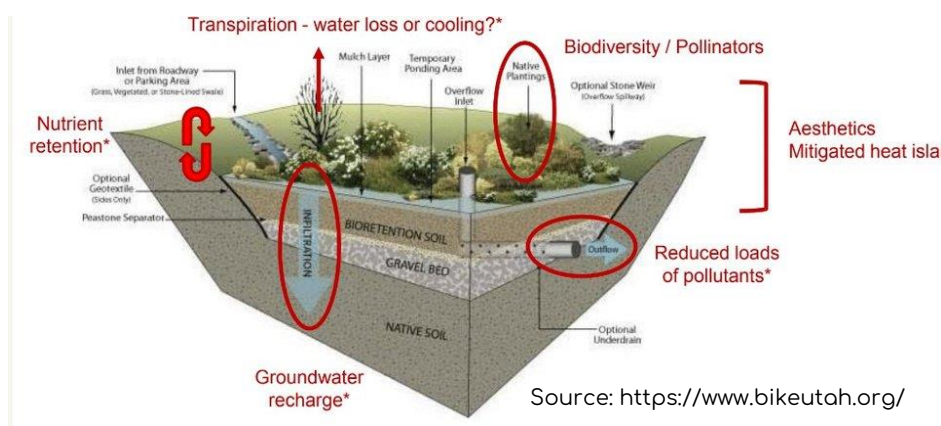
Photo of the current situation. Source: Mirza Skiric



Source: World Landscape Architect.com Taichung Green Corridor



Source: Clark Wilson, USEPA



Source: <https://www.bikeutah.org/>

Vision

Scenarios

Do-it-all (best-case)

Consolidating the local bicycle infrastructure will happen in three phases from the extension of existing paths to the construction of new bicycle roads, connecting the city centre with the riverbanks and deviating the regular traffic. This NBS intervention requires strong political will and commitment, project documentations, resolved property agreements, permits and finances (securing funding sources) for the development of new paths. To achieve this, a study to clearly define the complete biking route and necessary connections will be needed. Co-implementation process will be initiated to assess requirements, preferences, and availability of involvement in the maintenance of the project.

Do-something-meaningful

The feasibility study elaborated in 2021 highlights points necessary to intervene. A proper plan for reconnecting the existing cycle paths and consolidation of slow mobility infrastructure will be elaborated and all property related issues will be solved before implementation. A secured source of funding will be identified. A strong awareness raising campaign accompanying the initiative is recommended.

NBS intervention specifics

Typology of NBS 6

Accessible green corridors - cycling infrastructure.

Z6.1

Description of the planned interventions

- Obtain all necessary permits, settle property related aspects.
- Carry out public procurement procedure.
- Implement solutions.

Operational Objectives, Targets & Indicators

- Integration within existing pedestrian/soft mobility network.
- Prioritisation of pedestrian space.
- Safe segregation of cycling infrastructure.
- Customized green space development.
- Develop proposed infrastructure in accordance to national and international guidelines and best practices.
- Capture and clean stormwater.
- Enhance awareness about green mobility and environment.
- Public participatory process in the landscape design
- Developing a sense of community, spatial belonging, and co-ownership to ensure co-maintenance by residents together with the city administration

Targets

- develop 2000 m of bicycle paths.
- develop 2000 m of pedestrian space.
- develop 2000 m of linear green spaces, with min. 100 no. of planted trees, and adjacent shrubs and grasses that are locally adapted and promote biodiversity.

Partners/Stakeholder

Beneficiaries: Municipality in collaboration Real-estate developers

Users: Community residents, local business owners

Design requirements

Accessibility

Pedestrian route and bicycle lanes

Design the bicycle path by taking into consideration:

- road usage typology
- traffic volume
- adjacent land uses
- available space
- site characteristics (e.g: soil, slope, infiltration capacity)
- contributing drainage area (option 1: channel collected rainwater of the path into the river -Dortmund example; option 2: design ecological retention basins)

Landscaping

- Vegetation adjacent to the bike/pedestrian path should be locally adapted and diverse: grasses, shrubs, trees.
- Edge effect: local high diversity is supported where the edges of two ecosystems overlap and share resources, in this case land/water (along the perimeter of the water body - river Bosna (edge is the boundary or interface between two biological communities - e.g. forest and grassland or between two different landscape elements - e.g. land and water, while the ecotone is the transition zone along the edges of the two adjacent ecosystems).
- Ensure sufficient shaded areas for bike commuters.

Infrastructure works

- Possible stormwater management practices:
- Filtration of contaminated water, from roadways for example, before entering the larger system
- Swales (shallow, relatively broad, and vegetated channels designed to store and/or convey runoff and remove pollutants)
- Collection of clean water into natural systems such as biofiltration ponds
- Permeable landscape areas allow water to infiltrate into the soil and be taken up by planting and trees.

Security/safety

- Minimum width of cycle track or lane should be 2 m for one way (exceptionally 1.5 m) and 3 m for two-way (exceptionally 2.50). (exceptions apply when there are spatial limits)
- Minimum safety distance between the cycle track and the carriageway should be 0.75 m for speeds over 50 km/h and 0.50 m for speeds up to 50 km/h. If there are parked vehicles, then the minimum safety distance from the parking should be 0.75 m for speeds over 30 km/h and 0.50 m for speeds up to 30 km/h.
- Minimum width of the cycle road should be 3 m.
- Mixed traffic with pedestrians should be at a minimum width of 2 m.
- If there is a parapet between cycling track and motorized traffic lane, should be constructed injury-safe - no sharp shapes at cyclist side.
- In general, avoid cycle lanes (no physical delimitation – only different texture) in favour of cycle tracks (clear physical delimitation – through curb/green areas/poles/ etc...).
- Cycle intersections:
 - All national standards request continuity for cycling (example hr): if a specific cycling infrastructure (cycle lane, track etc.) ends, transition to mixed-use cycling on the carriageway should be constructed.
 - Radius of the bike lanes for cyclists should be 5 m at least.
- All transitions between different materials should be smooth. Transitions from track to carriageway should be designed with flush curbs (without difference in level).

Urban furniture and equipment

- Depending on the duration of bicycle parking, differing levels of quality/provision may be applied, from freestanding or simple bicycle racks to more complex solutions.

Bicycle parking:

- Outside parking should be well-lit and in a visible location.
- Short-term parking should be located directly at the destination.
- Designs should be functional and simple, blending in the local landscape.