



## FRONT-RUNNER CITY: GENOVA (ITA)

«Progetto di riqualificazione della ex Caserma Gavoglio per la realizzazione del Parco Urbano»

*«Requalification Plan for Gavoglio Barracks to realize an urban park»*



European  
Commission

Horizon 2020  
European Union funding  
for Research & Innovation

This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No. 730052 | **Topic: SCC-2-2016-2017: Smart Cities and Communities Nature based solutions**

# Pilot Project

- ▶ **UNaLab** develops nature-based solutions to enhance the climate and water resilience of cities in demonstration areas
- ▶ The **Italian Government** transferred the ex military complex to the Municipality, provided that it will regenerate the area (45'900 mq, corresponding to 5,6% of the total district area)
- ▶ The **Municipality** has started a participatory process in the district, involving citizens' cooperatives, builders' groups and more than 30 local associations. **Citizens** were asked to take part in the re-activation of Lagaccio and express their wishes and ideas about the area
- ▶ The vision for the requalification project has now been defined and translated into a **project**.

# Demo Area



- Gavoglio Barracks (4.59 ha)
- Demo Area (1.62 ha)

- In the middle of the urban district
- High density of buildings and waterproof areas
- No green areas or public spaces
- Rivers in culverts under the ground



- **Re-connect the Gavoglio Barracks area to the neighborhood:**

- New access to the area;
- Enhancement of urban landscape;
- Corridor to the existing nearby green areas (e.g. Peralto Naturalistic Park and the Forts).

- **Create inclusive and multi-functional public spaces:**

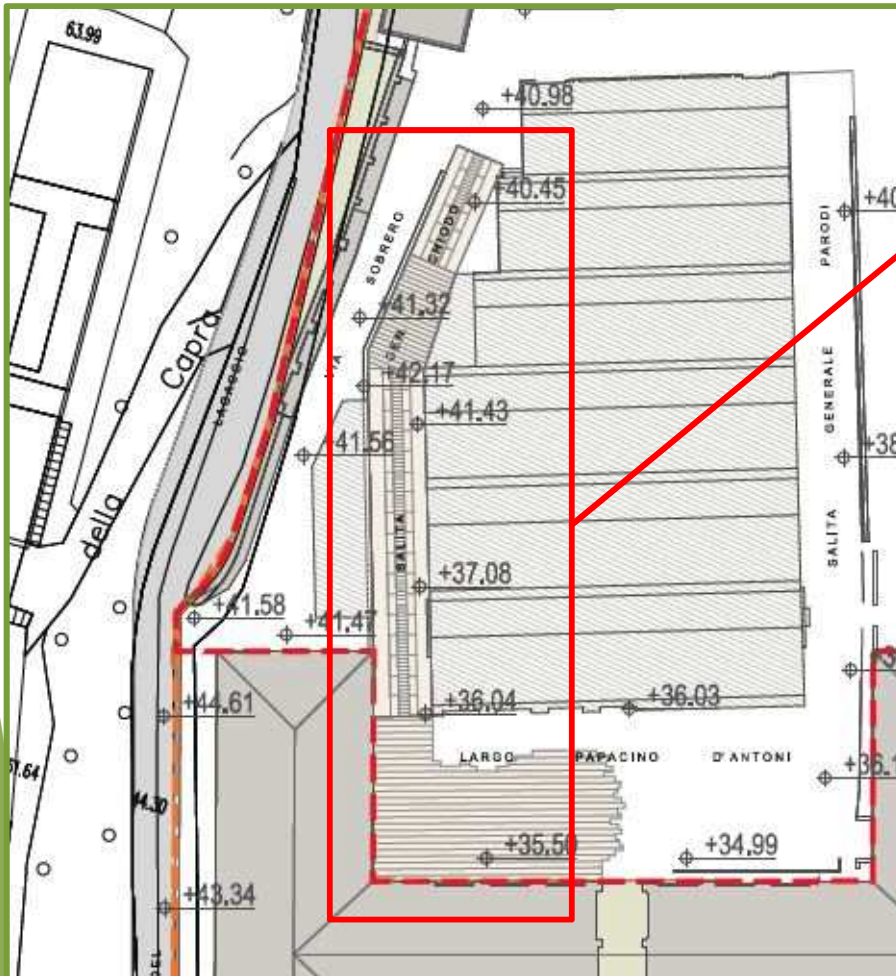
- Spaces for all ages;
- Central and multi-purpose public space for the citizens;
- Thematic areas for different project functions.

# Objectives

- **Create a new urban nature able to mitigate climate change :**

- Natural devices for rainwater management;
- Permeable and vegetated areas to improve natural hydrological cycle;
- Socialization spaces to reconnect people with nature.

- Buildings and pavements subject to cultural heritage protective restrictions



## Critical Issues

Building 'A' of  
Gavoglio Barracks

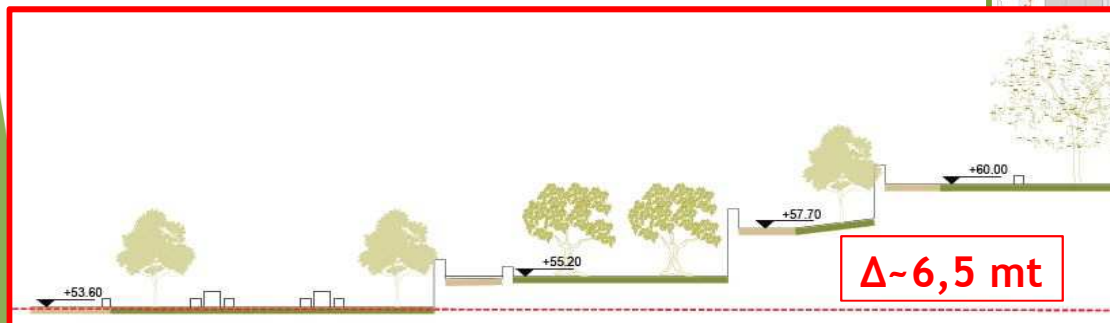
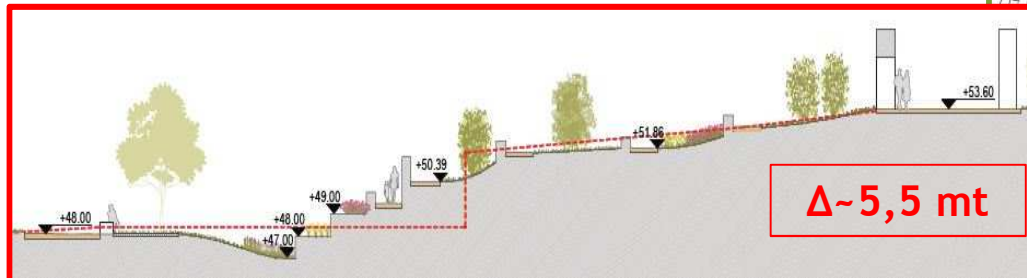
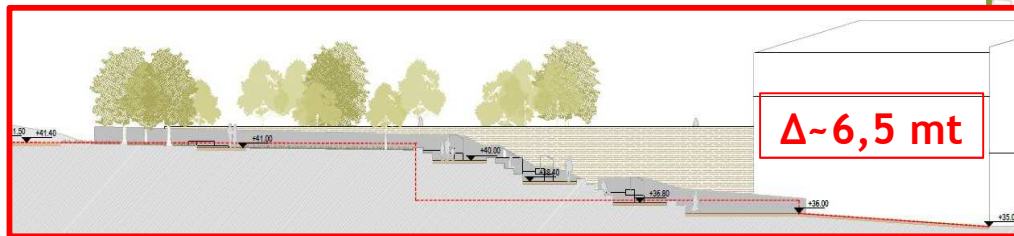


Paving in part of Largo Papacino  
D'Antoni and all along Salita  
Generale Chiodo

*Project's pavings in Largo  
Papacino recreate and complete  
the protected one*

# Critical Issues

- High differences in altitude all along the demo area (up to 55 meters)

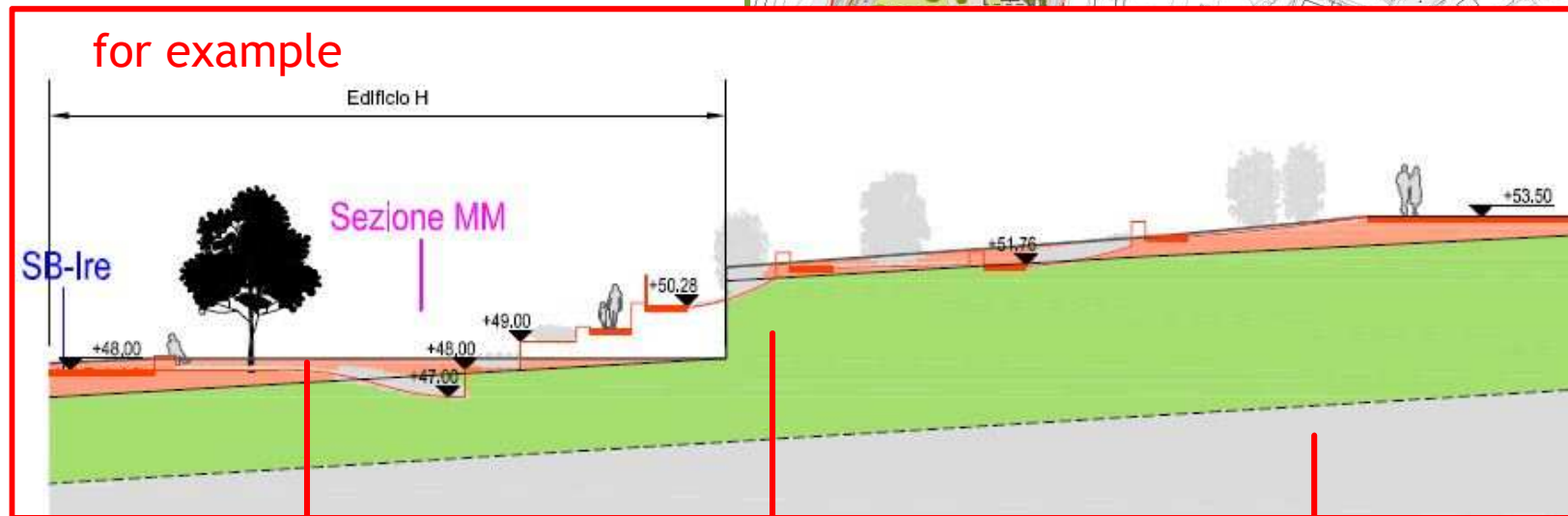


*Project's retaining structures can reach 4 mt height*

# Critical Issues

- No deep rock substratum

*Project's diggings can't be very deep to limit costs, soil retention layers must be quite thin, accessibility design has more restrictions to contain slopes*

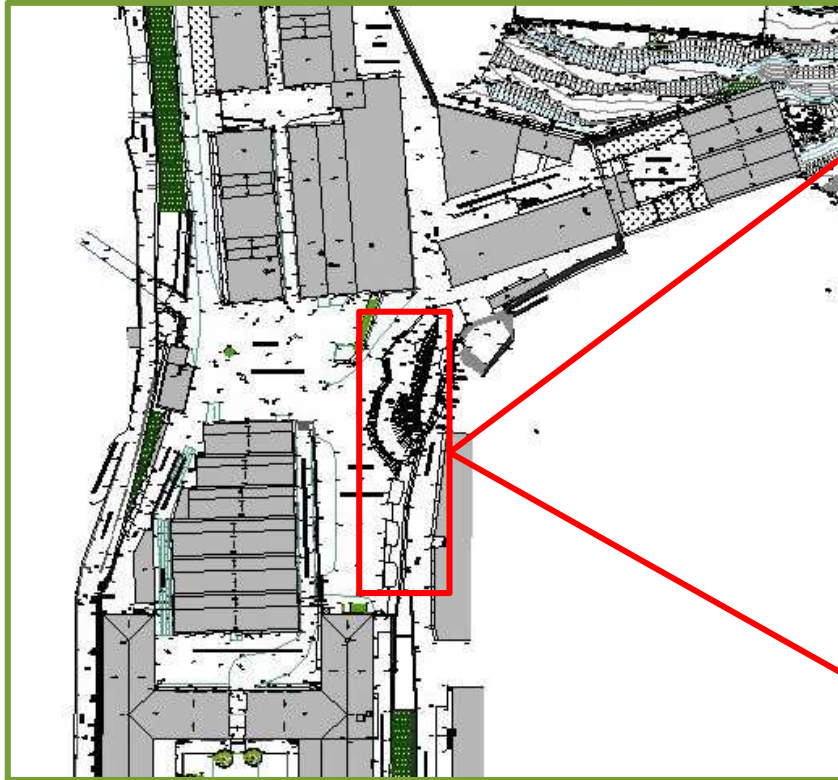


Layer of fill material

Layer of high-medium fractured marly limestone

Layer of compact marly limestone

- Via Ventotene's landslide and concrete wall



*Project's landscape minimizes the visual impact of the landslide and reduces the heat stress of the concrete big wall*

## Critical Issues

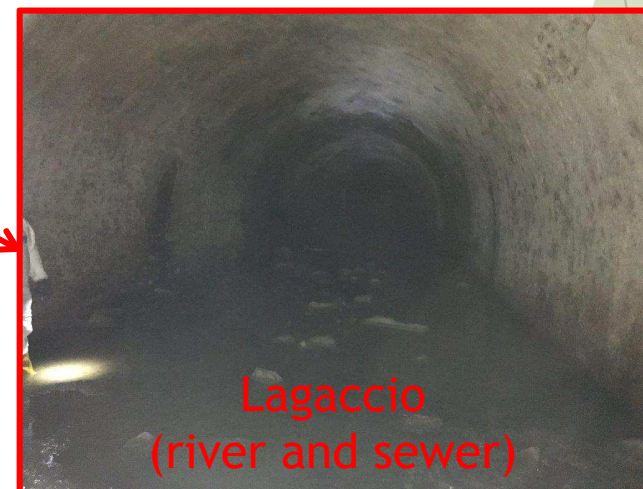


# Critical Issues

- Two culverts used as urban sewage system



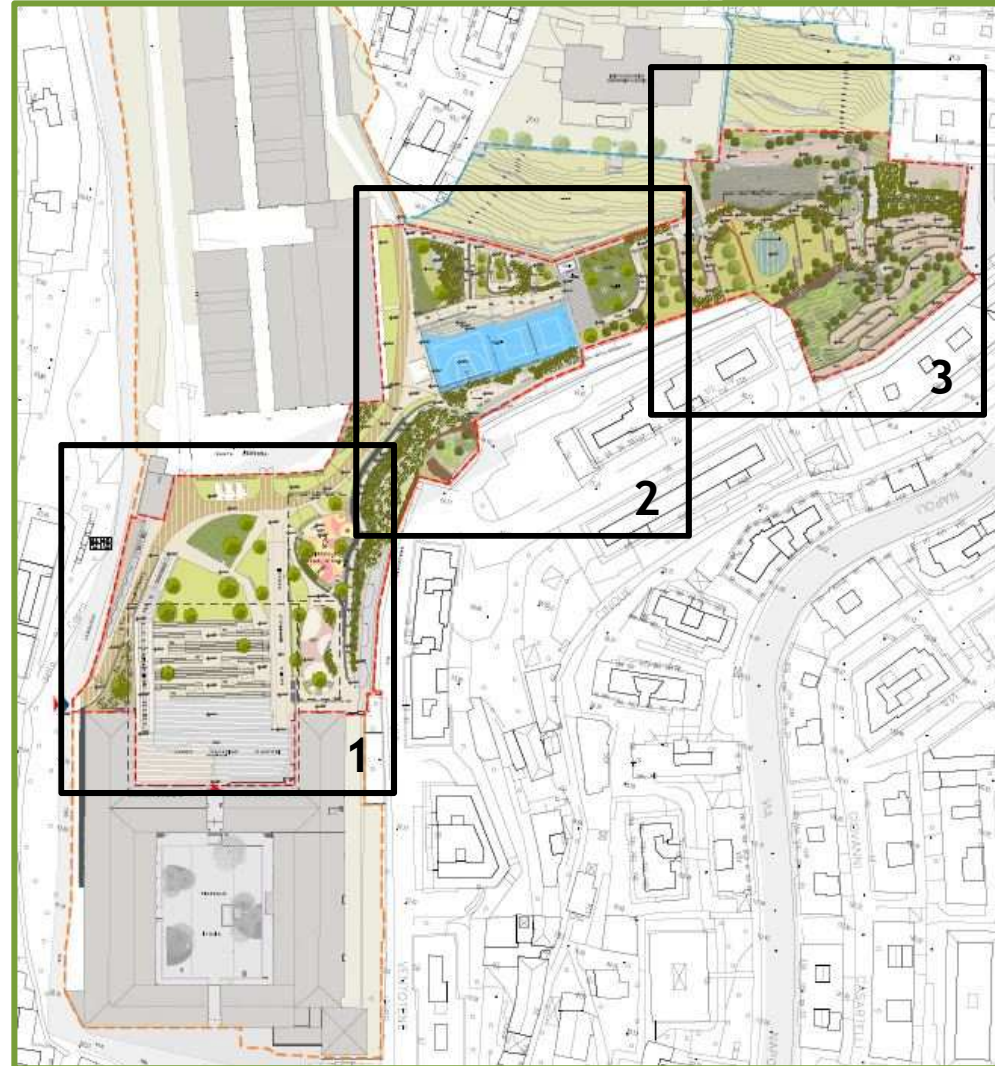
River daylighting can't be achieved in this project...



# The Project

- ▶ 16'200 mq of urban area to be regenerated and reconnected to the city
- ▶ Reference to Ligurian landscape and urban characteristics
- ▶ Input from the co-creation process and adaptation of the layout
- ▶ Different functions for different ages and purposes
- ▶ A park for all: accessible functional areas and paths despite the height gaps

**3 detail plans to explore the project and its nature-based approach**



# Plan Detail #1

Unsealed soil through building demolitions

● Increase of the soil drainage capacity with permeable paving

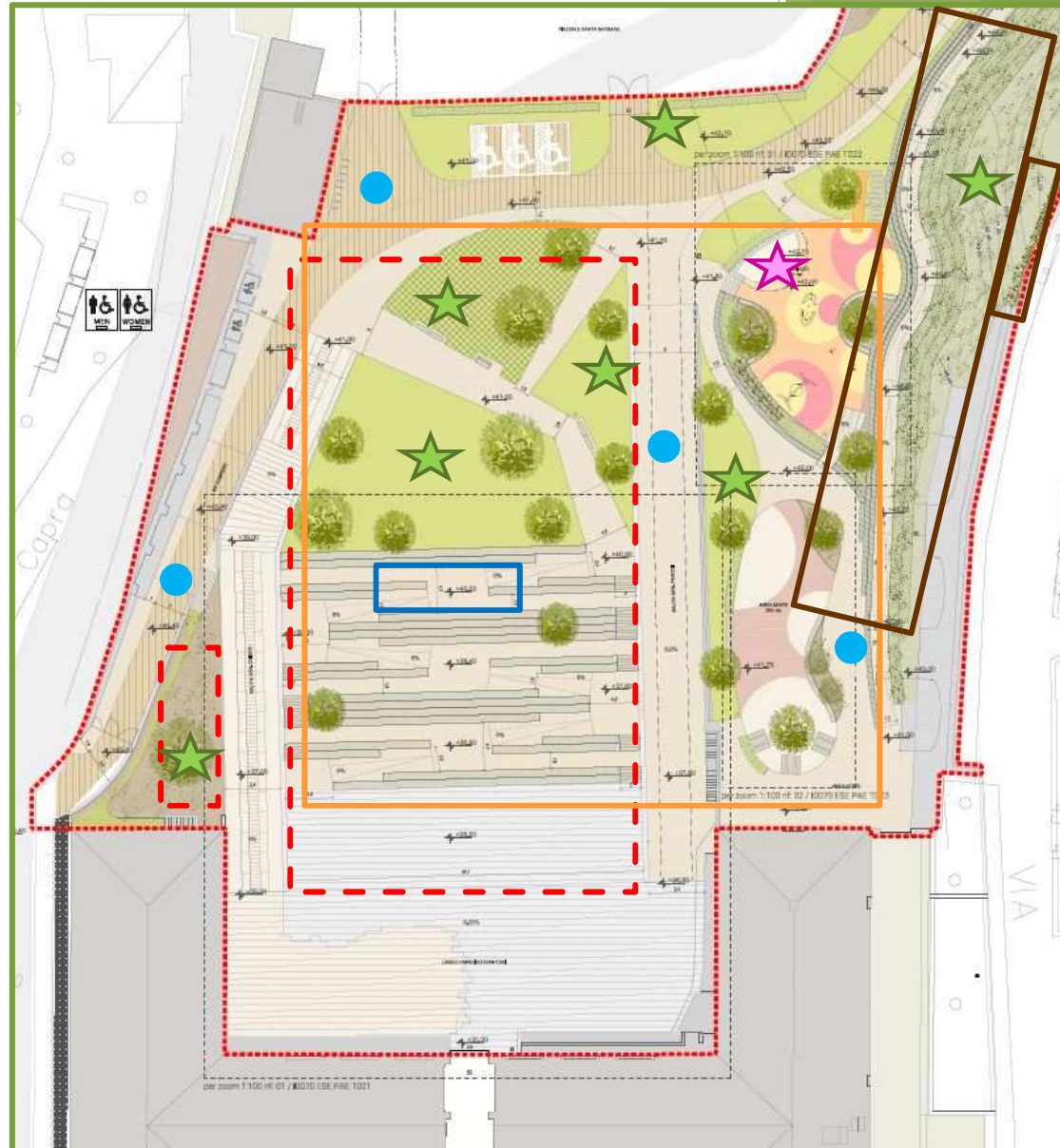
Management of water runoff with underground tank

★ Green areas

New recreational public space for the neighborhood

Sand playground

Green wall and gabions to increase biodiversity, reduce heat stress and reuse construction site debris



## Plan Detail #2

Unsealed soil through building demolitions

● Increase of the soil drainage capacity with permeable pavings

Raingarden and bioswale to reduce rainwater runoff from slopes and paths and to increase biodiversity and natural absorption into the soil

★ Green areas

New recreational public space and community gardens for the neighborhood

● Gabions to reuse construction site debris



## Plan Detail #3

Unsealed soil through building demolitions

● Increase of the soil drainage capacity with permeable pavings

Bioswales and infiltration basin to reduce rainwater runoff from slopes and paths and to increase biodiversity, rainwater detention and absorption into the soil

★ New green areas and requalified existing green areas

Community gardens

● Gabions to reuse construction site debris and log cribwall to secure slopes against sliding



# NBS Summary

Nr	NBS	Quantity
1	Demolitions: - Buildings and structures - Impermeable pavings	- 3'225 mc - 828 mc
2	Permeable pavings - Resin bound paving - Stabilized soil - Stone paving	- 2982 mq - 982 mq - 922 mq
3	Sand playground	26.5 mq
4	Rain garden	122 mq
5	Infiltration basin	108 mq
6	Bioswales	125 mq
7	Green areas: - Trees - Shrubbery zones - Community gardens - Lawns	- 124 pz - 5'660 pz - 2'025 mq - 1'522 mq
8	Log crib wall	1'255 mc
9	Gabions	1'227 mc
10	Water tank	30'000 lt

