

Ex Caserma Perotti, Bologna

Via Carlo Marx - Via Alberto Legnani

The proposed transformation pertains to a section of the former 'G. Perotti' barracks area, a complex dating back to the early 1940s, located on the eastern outskirts of Bologna in close proximity to the ring road and motorway Junction. The area is located on the outskirts of a portion of the city, planned and built post World War II and is characterised by a robust network of green spaces, slow mobility routes and a strong presence of services for the population. To the south lies a district designated for Affordable and Popular Housing constructed in the 1970s, complemented by Detailed Plans established in response to Bologna's 1985 PRG.

In the immediate context, several initiatives are underway that will shape the future configuration of the area such as the construction of a complex designed for public functions and the offices of the Revenue Agency, in another section of the former 'Perotti' barracks. The creation of new services and planned networking interventions make the area particularly attractive for green and inclusive urban regeneration, including services, public spaces and housing.



Plot Area:

The size of the intervention area (land area) is approximately 58,000 square metres.

Expected Land Use:

The objective of the transformation is to initiate a process of urban regeneration with low environmental impact and significant social value, to be implemented through an urban restructuring intervention. The intervention, in addition to the existing total volume (approximately 80,880 cubic metres, a figure to be confirmed by the successful bidder in relation to the regulations and legislation in force at the time of issuing the building permit), will be able to benefit from a volume increase of 10%. Of the volume realised, at least 30% must be allocated to university housing, the

subsequent management of which shall be the responsibility of the successful bidder, who shall apply the prices of the 'capped fee'; the intervention will generate areas for public facilities (including equipped public spaces and public car parks) of no less than 100 sqm/100 sqm of usable area.

Site Ownership:

State Property.

Type of Property transfer intended:

Valorisation through sale of the complex.

Deadline for the submission of the Expression of Interest: 11 July 2024, 18:00 CET

Presentation of the site and development expectations

Bologna stands out as an appealing and lively city, boasting excellent personal services, transportation infrastructure, and a thriving residential market.

Characterised by a very high density of services and commercial activities, it boasts a public administration with a good spending capacity and a high degree of tax autonomy. The city's long standing role as a university city, spanning a thousand years, now seamlessly integrates with its recently established but rapidly flourishing tourist appeal. The demand for student housing is outpacing the available supply, driven by dynamic student mobility, which is leading investors to seek out new markets in search of opportunities. The market is characterised by the following factors, which major university cities have in common:

- Increase in out-of-town students (in the last five years +10% in Italy, and +14% in Bologna).
- Structural shortage of university student accommodation (in Italy, structured supply meets about 7% of the demand from out-of-town students).
- High rents in university towns, especially larger ones, stem from high demand and lack of adequate supply, which may limit access to universities.

The data mentioned above are taken from sensitivity studies conducted by the Agenzia del Demanio for the site.

The phenomenon of the shortage of residential supply also affects the traditional rental segment aimed at families. At the root of the problem are the large share of vacant properties and the ever-increasing number of rental units for short term tourism. The University of Bologna recognises the shortage of accommodation for its students as one of the University's main limitations. For this reason, over the next five years it intends to promote agreements with public and private bodies to expand the supply of accommodation and to facilitate matching the supply and demand for existing housing solutions.

The Caserma Perotti area, located in the upper Bolognese plain on Via Carlo Marx, is on the eastern outskirts of Bologna, not far from the junction of the ring road and the motorway, and is defined to the north by the historical break in the Adriatic railway line.



The barracks is located on the outskirts of the city that has been planned and built since the Second World War, consisting of juxtaposed parts made cohesive by a robust network composed of green spaces, slow mobility routes and a strong presence of services for the population. To the south of Via Carlo Marx lies a sizable residential area constructed in the 1970s, comprising economic and social housing, in which municipal areas for services, green spaces and sports facilities are concentrated. An alternate route has characterised the area east of the Barracks, hosting the workshop of the city's transportation company.

The main thoroughfares of via Carlo Marx, viale Lenin and via Due Madonne, as well as the proximity to junction 11 of the Tangenziale (ring road), make it easy to reach the site through the road network. The area is well served by the lines of the Emilia Romagna Passenger Transport (TPER), with stops located on viale Lenin and via Due Madonne, facilitating travel to the city centre and major districts. Additionally, there are nearby stops for the Metropolitan Railway Service. It should be noted that the area of Ex Caserma Perotti is well connected to the city's bicycle network.

The portion of the barracks subject to intervention is an unused state-owned complex, decommissioned by the Ministry of Defence in 2023, characterised by a general state of abandonment of the buildings and by neglect of the external areas with the consequent growth of uncultivated and uncontrolled vegetation. Access to the area is precluded to outsiders by barbed perimeter walls and access gates.

There are currently four large 'U' shaped blocks, which once housed the various dormitories of the companies serving at the barracks, in a dilapidated and unsafe state; there are also four other buildings, which in the past played a supporting role in the activities of the barracks, also in a dilapidated state. In addition to these buildings, there are also, scattered throughout the area, several steel structures used as storage or temporary warehouses, in some cases still enclosed by perimeter walls while in others with only the load-bearing structure still standing, also in a state of total abandonment and danger.

It should be noted that two underground NAFTA tanks are located on the premises, with one serving the canteen building and another serving as the fuel distributor for refuelling military vehicles. These tanks were installed by the technicians from the VI infrastructure department. Additionally, there is an extra tank situated in the north-eastern corner of the lot, although it is not documented on-site. This tank does not overlook the boundary between the State property and the TPER depot. There is no documentation attesting the possible need for remediation either in relation to the presence of the three tanks or of the entire area. No war risk characterisation assessments are currently available. The requested intervention is intended to be an opportunity to promote a process of urban regeneration that, taking into account the state of the place and its marginality within the urban fabric, provides the possibility of reorganising the area with an organic design, fostering a central hub and facilitating the reconnection of the intervention zone with the rest of the city, developing new and different ways of experiencing the city that can also trigger social innovation processes.

The intervention, in addition to the existing total volume (of approximately 80,880 cubic metres, a figure to be confirmed by the successful bidder in relation to the regulations and legislation in force at the time the building permit was issued), may benefit from a volumetric increase of 10% (in line with action 1.1 a of the regulations of the General Urban Plan, PUG, as set forth below and as reiterated at the Operative Technical Tables held between the Agenzia del Demanio and the Municipality of Bologna pursuant to the Memorandum of Understanding entered into on 25/05/2023) developing a total cubage of approximately 88,950 cubic metres.

The regeneration project must incorporate several key components, including allocating 30% of the overall project capacity for university housing, expanding the housing inventory by utilising the entire or a portion of the remaining developable volume, the creation of new public spaces (with the urban standards transferred to the municipality, as well as exclusive green spaces for public use), and a resilient, sustainable and zero-emission urban development.

In regard to the volume destined for university housing, the subsequent management will be the responsibility of the winning bidder, who will have to apply the price of the "capped fee" (to find the definition, please refer to action no. 2.1 b of the WYP regulations); the intervention will generate areas for public facilities (including equipped public spaces and public car parks) in an amount of no less than 100 square metres/100 square metres of usable surface area. For further details, please refer to the documentation in the *dataroom*, which specifies the intervention site, the programme and expected destinations, the environmental performance to be achieved, and any other element useful for project development.

The project will be linked to the "Interregional Archive Centre of the Agenzia delle Entrate Emilia-Romagna and the new headquarters of the Bologna 2 Territorial Office" construction project situated to the south of the intervention zone (in the diused portion of the former Perotti Barracks), already financed. This project envisions the creation of a substantial and accessible green public space. Consequently, it is imperative to maintain seamless integration between the ongoing construction and the proposed project. In the same urban zone, it is worth noting that:

- a new nursery is to be built in Via Barbacci (work will start in 2024);
- The Agenzia del Demanio and the Municipality of Bologna have signed a memorandum of understanding for the redevelopment of the former STA.MO.TO Barracks in which, through an urban redevelopment project, it is planned, among other things, to create approximately 600 beds for university housing at below-market rents. The two barracks (STA.MO.TO and Perotti) will be connected by an equipped green corridor that will ensure acoustic and visual mitigation from the railway network, the presence of a cycle track and new collective functions.

Finally, it should be noted that the planned green line of the tram will have its terminus at the Due Madonnelle depot and will ensure improved accessibility to the area and a connection between the north and south areas of the municipality. The creation of new community services and planned connectivity interventions make the area particularly attractive for urban development.

Specific planning rules and regulations

The Municipality of Bologna has a [General Urban Plan](#) (PUG) approved by Municipal Council resolution PG 342648/2021 of 26 July 2021; by resolution PG 174721/2023 of 17/03/2023 the Municipality started a wide-ranging process of amendments to the territorial government instruments, and by resolution PG 522099/2023 of 01/08/2023 the Municipal Council adopted the variant proposal, which is currently undergoing the approval process.

One of the key urban strategies outlined in the WYP regarding the transformation area involves combating soil consumption by implementing urban regeneration strategies for anthropized soils.

Additionally, it includes enhancing infrastructure with urban green spaces, the increase of social housing supply and the experimentation of new forms of housing. Implementation is subject to an urban redevelopment project, as stipulated by the PUG Regulations and detailed within the technical frameworks outlined in the Memorandum of Understanding between the Municipality of Bologna and the Agenzia del Demanio dated 25/05/2023.

In particular, the sustainability conditions indicated in the WYP Framework, summarised herein, must be met:

- **Action 1.1a** - Promoting the renovation and upgrading of the existing building stock. Interventions are implemented with an equivalent total volume within the designated intervention area. Additionally, for these interventions, the Plan acknowledges a one-time volumetric incentive of 10% based on the Total Volume within the intervention area. This incentive applies to interventions that encompass both seismic adaptation and accessibility improvements, as outlined in Building Regulations - Article 27. New constructions or infrastructures must be situated in areas with previously anthropized soils within the subdivision and minimise the consumption of intact soil.
- **Action 1.2b** - Enhance urban green infrastructure. Every urban planning and building intervention must contribute to enhancing soil permeability and urban drainage. Each project must demonstrate a thorough analysis of various alternatives to minimise waterproofing from construction and paving while improving urban drainage compared to the current state. This pursuit of improvement should ensure a project RIE index of no less than the performance level specified in the Building Regulations - Article 28 - P4 Regulation of natural cycles. Private parking spaces designated as appurtenant (PE), as outlined in Action 2.2a, are prohibited from being constructed at ground level within the appurtenant areas, unless explicitly permitted by the Building Regulations - Article 27. Underground parking spaces must be constructed to encompass the entire footprint of the building's covered surface. Any portion of the parking area extending beyond this footprint must be overlaid with "tree-lined" green roofs in accordance with the specifications outlined in the Building Regulations - Article 65.
- **Action 2.1b** - Encouraging an increase in social housing supply. The following provisions are identified to help meet the need for social housing:
 - In this specific case, it is mandatory to reserve a quota of no less than 30% of the total volume (V_t) for residential functions (A) for social housing. On the basis of the Memorandum of Understanding signed between the Municipality and the Agenzia del Demanio (State Property Agency), this quota must be earmarked for university housing, at a subsidised rent, *whose fees are no more than 20% higher than the "subsidised intermediate fees for conventional guests" applied by the Regional Agency for the Right to Higher Studies for similar types of residences and for similar standards of services offered.*
- **Action 2.2a** - Encourage the redevelopment and realisation of local infrastructure assets. As part of this initiative, it is mandatory to allocate areas for public facilities to the Municipality, with a minimum ratio of 100sqm/100sqm of gross floor area, in relation to the intended functional categories and according to the specified implementation guidelines within the same initiative.
- **Action 2.3a** - Making the city universally accessible. In all urban interventions, spaces, and in particular public spaces for public use, must be designed according to the principles of 'universal design' (design for all). All urban interventions involving the establishment of residential functions must guarantee the accessibility of inhabitants to specific neighbourhood services within a radius of 1,000 m (barrier-free pedestrian pathway) from each planned dwelling. Street design must also contribute to improving urban comfort through careful environmental design.

Main constraints to be considered in the development of the project

- Constraint of non-building due to railway respect (Presidential Decree 753/80);
- Constraint of the acoustic zoning plan.

The planning process should account for a minimum buffer zone of 30 meters around the project constructions of the hydrogen bus supply infrastructures. These infrastructures are slated for development at the Tper depot, which is roughly situated in the northern part of the subdivision (fg 219 mapp 829).

For additional constraints and details, please refer to the Certificate of Urban Designation available in the *dataroom*.

Please note that, by means of Decree on file Prot. No. 1095 of 12/02/2018, available in the *dataroom* and referenced therein, the Ministry of Cultural Heritage and Activities and Tourism has communicated that the complex does not meet the requirements of cultural interest pursuant to articles 10 and 12 of Legislative Decree 42/2004. In the same Decree, the Mibact recalls, in the case of excavation works, the provisions of Articles 28, 88, 90 et seq. of Legislative Decree 42/2004 concerning archaeological protection and the provisions of Article 25 of Legislative Decree 50/2016 concerning the prior verification of archaeological interest.

The Transformation is subject to an Agreed Building Permit on the basis of an Agreement pursuant to Article 11 L. 241/1990 between the Municipality of Bologna and the Agenzia del Demanio (State Property Agency), which sets out the general guidelines of the intervention and defines the outline of the agreement. This agreement will be annexed to the tender documentation.

City climate priorities and environmental challenges

Through its territorial governance instruments, notably the General Urban Plan (PUG) and Building Regulations, the municipality mandates the reduction of energy consumption originating from non-renewable sources while promoting the generation and self-utilisation of energy derived from renewable sources.

In 2019, the Municipality of Bologna joined the ['New Covenant of Mayors for Climate and Energy'](#), with which the signatory cities committed to pursue the target of a 40% reduction in greenhouse gases by 2030, and at the same time to address the issue of adaptation to climate change. In April 2021, the City Council approved the ['PAESC - Action Plan for Sustainable Energy and Climate'](#), the implementation of which will achieve a 44% reduction in emissions compared to 2005, maintaining the emission factor of the national energy mix unchanged, and 60% with the consideration of a declining emission factor of the national energy mix.

Furthermore, the Administration has decided to apply for the 'EU Mission - 100 Climate Neutral Cities by 2030', committing to achieve climate neutrality by 2030. In April 2022, the Municipality of Bologna was selected as one of the 100 cities, so new interventions must take the lead in order to compete for this important result. The Municipality of Bologna has adopted a strategy focusing on urban green infrastructure development, including tree planting, green spaces, and greening of the building envelope. This strategy serves as both a direct measure to mitigate emissions and as a means to reduce energy consumption. It achieves the latter by regulating the urban microclimate and mitigating extreme summer heat events through the cooling effects of green spaces and tree-lined areas. These areas facilitate evapotranspiration, provide shading, and generate breezes through thermal exchange between green spaces and built surfaces. The WYP identifies open spaces and publicly owned buildings as key areas for implementing environmentally-focused strategies. It advocates for the exploration of innovative

technologies and methods in energy and water conservation, enhancing microclimate comfort, and regulating natural cycles.

Potential approaches include solutions that promote the use of natural systems (Nature-Based Solutions - NBS) and prioritise seismic safety, always striving for optimal performance levels and fostering experimentation and innovation. The design and construction of high-quality public spaces and buildings present invaluable opportunities to address the challenge of urban adaptation to climate change.

The intervention should aim for zero-carbon, in alignment with C40 standards and should prioritise inclusivity and resilience. It should particularly emphasise retrofitting, energy efficiency, and sustainable construction practices. In pursuit of this objective, the design should address climate challenges outlined in the 'Reinventing Cities' initiative, with a focus on the following issues:

- The project must incorporate solutions/features geared towards creating **an urban area with positive energy**, self-sufficiency, and negative emissions, achieving an outstanding level of performance. (PUG regulations - Action 1.4a; RE - art.28 P3). Examples of elements to meet these criteria could include: compact construction; orientation of buildings to optimise solar energy contribution; realisation of Zero Emission Buildings (ZEB), i.e. with zero direct or indirect fossil energy consumption, including thermal energy, electricity, and meeting 100% of condominium needs from Renewable Energy Sources (RES); establishing energy production facilities powered by renewable sources at neighbourhood level; implementing an energy distribution network from RES within the vicinity and connecting it to the local/national grid; ensuring ample provision of charging stations for electric vehicles powered by RES; and offering bike sharing/car sharing services.
- Among the main causes of the 'heat island' effect in the city are the high incident solar radiation and the high radiation absorption coefficient of the materials used in the built city. The WYP envisages that urban planning and building interventions take these factors into consideration, contributing to improving thermal comfort conditions during the summer period. The territory of the city of Bologna has been subdivided according to homogeneous classes of climatic morphology, obtained from the weighted linear combination of four macro-parameters: surface temperature, determined by the optical and emissive properties of surface materials, presence of vegetation, urban morphology (in terms of the ratio between the height of buildings and the width of adjacent streets) and building density. The site in question has been identified as being of medium-low microclimatic fragility and it is therefore requested that the basic level of **microclimatic wellbeing** conditions present in the urban fabric during the summer period be pursued in particular through (PUG Discipline - Action 1.3c; RE - art. 28 P1):
 - Improvement of the Microclimatic Wellbeing Index - BM by at least 10% with respect to the actual state. The evaluation of the improvement in Microclimatic Well-being - BM must be carried out by applying ex-ante and ex-post the calculation of the PMV (Predicted Mean Vote) index, regulated by UNI-EN-ISO 7730, or an equivalent index (e.g. PET, PPD) (Building Regulations - Appendix).
 - Interventions on horizontal external surfaces with materials that reduce the effect of incident solar radiation by increasing the reflection coefficient (albedo) of the surfaces affected by the intervention to values greater than 40% ([RE-Appendix](#)).
- As indicated in Action 1.3d of the WYP Discipline, in order to **reduce the population's exposure to anthropogenic pollutants and risks** and to achieve a **suitable acoustic climate** mainly through the correct location of uses and buildings, residential functions, amenities, and communal spaces (public or for public use) should be situated in areas shielded from existing and proposed transportation infrastructures to minimise the need for sound barriers. Less noise-sensitive functions should thus be placed facing the infrastructure, with planted strips established to mitigate noise levels affecting buildings.

- Due to the susceptibility to flooding, it is essential to implement appropriate design measures proportional to the **hydraulic risk** assessment to **reduce the vulnerability** of both property and individuals at risk, as outlined in the Table of Constraints and corresponding documents, as well as in the RE - Article 27 and 18.
- In order to redevelop public space in favour of **universal accessibility** (implementing policies of pedestrian and bicycle accessibility and integrating public transport as an opportunity to redevelop public spaces), it will be necessary to design street space and bicycle and pedestrian connections in continuity with the existing and planned bicycle network.
The planned buildings will have to have areas for **common services for cycling mobility**, as well as adequate support services for cycling mobility and its consolidation over time (bike sharing, parking and sheltering, enforcement policies, e-bikes, urban logistics, cycling for social mobility, services for cycling tourism and sport cycling, information for the cycling community).
The technical and performance standards and criteria for network design are contained in the Cycling City Design Guidelines, annexed to the [Biciplan](#).

Missions and Indicators

Projects should respond to the following challenges/missions, considering the C40 guidelines, and potentially the sustainability objectives and indicators endorsed by the Agenzia del Demanio for its building interventions (materials included in the *dataroom*).

Projects are invited to address the ten challenges in an integrated manner, in particular the mandatory and priority challenges related to Low-carbon mobility, Climate resilience and adaptation and Green space, urban nature, and biodiversity.

Challenges/missions for the complex:

- 1. Green buildings and energy efficiency (mandatory)**
- 2. Clean construction and building life cycle (mandatory)**
- 3. Low-carbon mobility (priority)**
- 4. Climate resilience and adaptation (priority)**
- Sustainable lifestyle and green jobs
- Sustainable water management
- Circular resources and sustainable waste management
- 8. Green space, urban nature, and biodiversity (priority)**
- Social inclusion and community engagement
- High-quality architecture and urban design