Students Reinventing Cities

Sustainable Student Housing in the Metropolitan City of Milan-Segrate

Marconi District adjacent to Green Kilometre

Milan's green belt will be further strengthened in the coming years by creating the Green Kilometre in Segrate, the eastern gateway to the city.
Segrate, a municipality of approximately 35,000 residents, spans 17 km2, with nearly 5 km2 dedicated to parks and artificial water basins. It is a polycentric city composed of seven neighbourhoods, each equipped with schools, civic centres, and sports facilities.

The entire territory is undergoing a major transformation to enhance liveability and sustainability. Central to this transformation is the Green Kilometre project. As part of the Horizon Europe Project ReGreeneration in collaboration with C40 Cities, the Green Kilometre focuses on depaving Road Cassanese and promoting soft mobility to connect surrounding residential neighbourhoods and enhance green spaces.

In this context, the project area, situated in the Marconi artisanal and industrial district, occupies a strategic position along the Green Kilometre and within these new development plans. Through this competition, Segrate seeks innovative proposals for student housing, addressing a critical need in the broader metropolitan area of Milan.

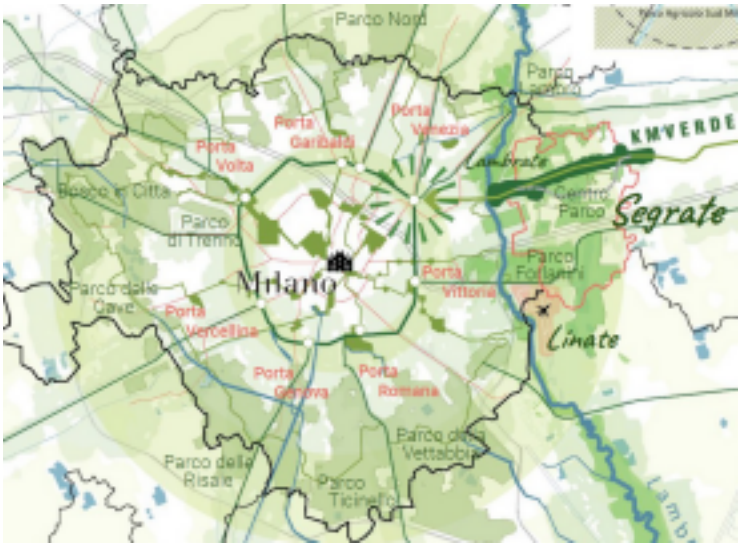


Figure 1) Map of Milan-Segrate

Approx. site area: The area of approximately 2 ha is a central part of the industrial district Marconi. It is situated adjacent to the future Green Kilometre.

Key Information: The project site is made up of a public and a private area. The first part includes the only public property inside the Marconi district (Baraonda Social Centre) and the public asphalt parking in its proximity. The second part includes the two privately owned warehouses located between the Baraonda and the future Green Kilometre. Part of the site is also the connecting streets to the main asset.

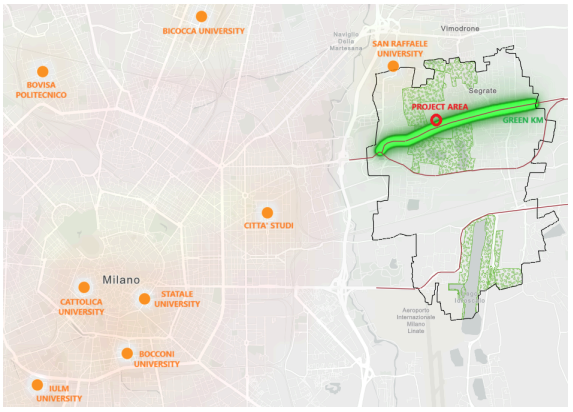
Priority areas & main expectations: The project emphasises the integration of student housing and the enhancement of public and private spaces within the area. Improvements should focus on increasing permeability through depaving, expanding green cover to provide shade and mitigate heat islands, incorporating nature-based solutions to enhance environmental resilience, and promoting soft mobility by establishing pedestrian- and cycle-friendly connections.

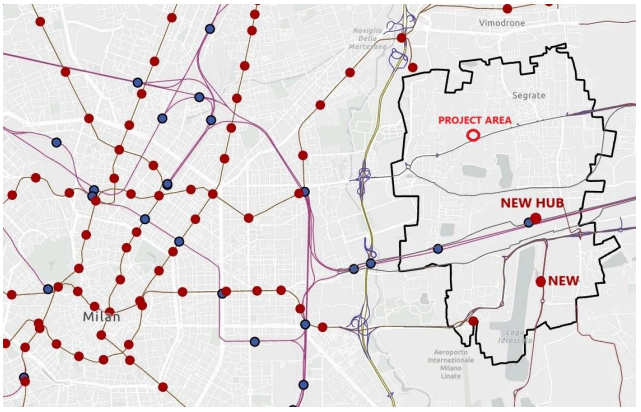
Beyond addressing the specific needs of the site, the project must also demonstrate scalability and replicability, offering a model for transformation that can be applied to other industrial areas within the same neighbourhood or across the city. This approach ensures that the project's impact contributes to a broader urban regeneration strategy.

Presentation of the Site and development expectations

Socio-urban Framework, Characteristic Elements of the Territory and Mobility

In the Metropolitan City of Milan, there are 9 universities and more than 200,000 students. Segrate, the natural eastern gate of Milan, is currently connected by public transport and train. Soon, the area will also benefit from enhanced connectivity through the extension of Milan's M4 subway line and the development of the new Porta Est intermodal hub.



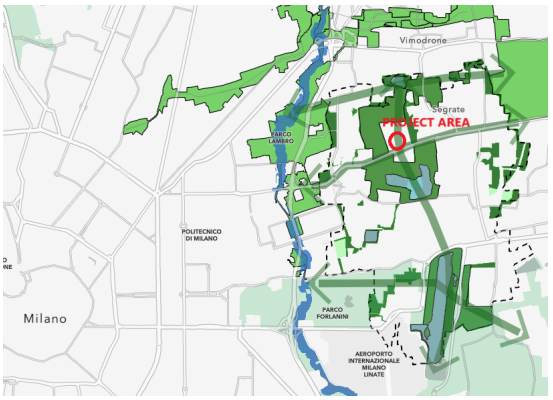


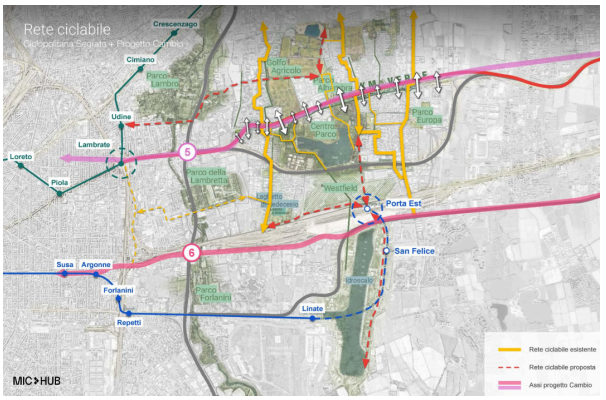
Figures 2 & 3) Universities in the Metropolitan area of Milan & Subway stops (in red) and Train stops (in blue)

These new infrastructures will significantly transform Segrate's transport network. The new subway stops will provide seamless access to neighbourhoods like San Felice and Segrate Centro from Milan, and they will allow Segrate residents to easily reach Milan and its wealth of opportunities, including university facilities. This improved accessibility is expected to increase the area's appeal, creating new opportunities for students. It is within this context that the idea of developing new student housing in Segrate has emerged, offering a well-connected living solution for the growing student population.

Green Infrastructure

In addition to the planned transportation projects, Segrate's vision also includes a robust network of green infrastructure, both existing and proposed. These green spaces are set to play a pivotal role in enabling citizens to travel sustainably, using soft mobility options to move from each neighbourhood to reach all the places of interest and hubs in the area.





Figures 4& 5) Green infrastructure map and soft mobility map

Key elements of this green infrastructure include *Centro Parco*, the *Green Kilometre*, and the *Golfo Agricolo*. Below is an overview of these projects:



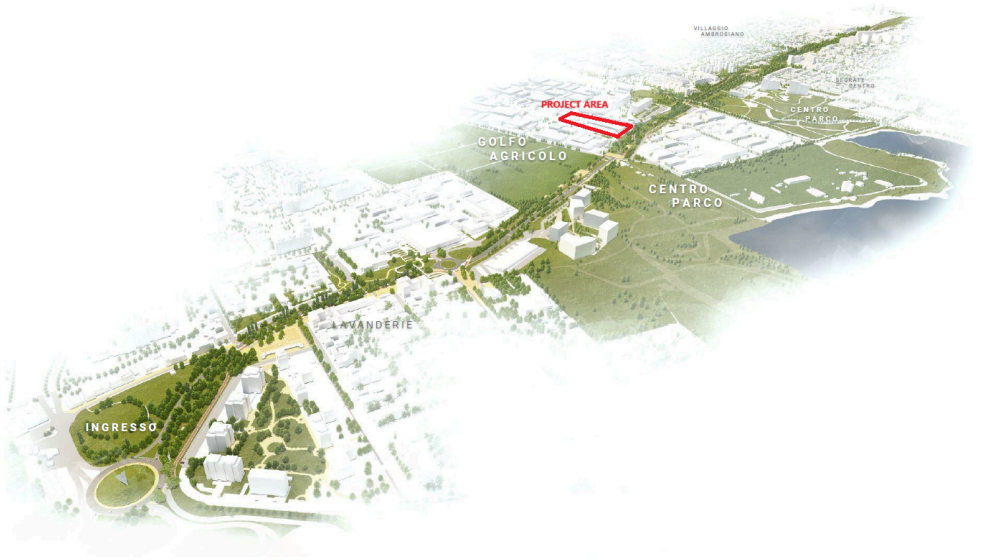
Centro Parco

Centro Parco is a 100-hectare park developed around a former quarry, now transformed into a lake. Still under construction, its completion is secured by approved urban agreements for the coming years. Its strategic location links the new Porta Est Hub to Segrate's northern districts, enhancing connectivity while providing a natural retreat for residents.

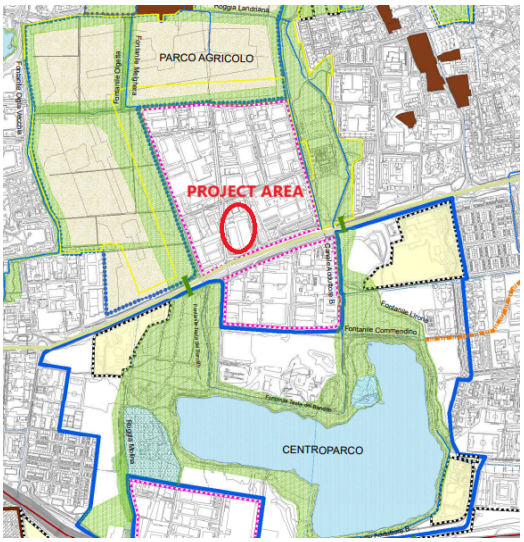


The Green Kilometre

The Green Kilometre is a transformative project aimed at downgrading the Cassanese Road, currently the primary traffic artery in the northern area of Segrate. With the construction of the alternative *Cassanese bis road* further south, traffic on the Cassanese Road will decrease significantly, eliminating the need for its current 4 lanes, which will be reduced as per the project in place of a linear park of more than 3 km. The goal is to transform a space that is currently a dangerous physical barrier into a space that instead connects the neighbourhoods and unites them.



Golfo/Parco Agricolo



Golfo/Parco Agricolo is an area of 70 ha recently acquired by the Municipality, making it a public asset. It has an agricultural vocation and the next projects will increasingly allow the use of the space by the citizens.



The Project Area - Marconi District

Located near three key ecological systems—the Golfo Agricolo, Centro Parco, and the future Green Kilometre—the Marconi industrial district houses the project area of interest.

The Marconi district is one of the industrial districts of the city and, like other industrial districts, it is characterised by minimal permeable surfaces and limited greenery. However, it is uniquely positioned adjacent to the future Green Kilometre and surrounded by Golfo Agricolo (to the north and east) and Centro Parco (to the south). While it will maintain its industrial functions, this positioning naturally steers the district's evolution towards improving the environment and the quality of the space.

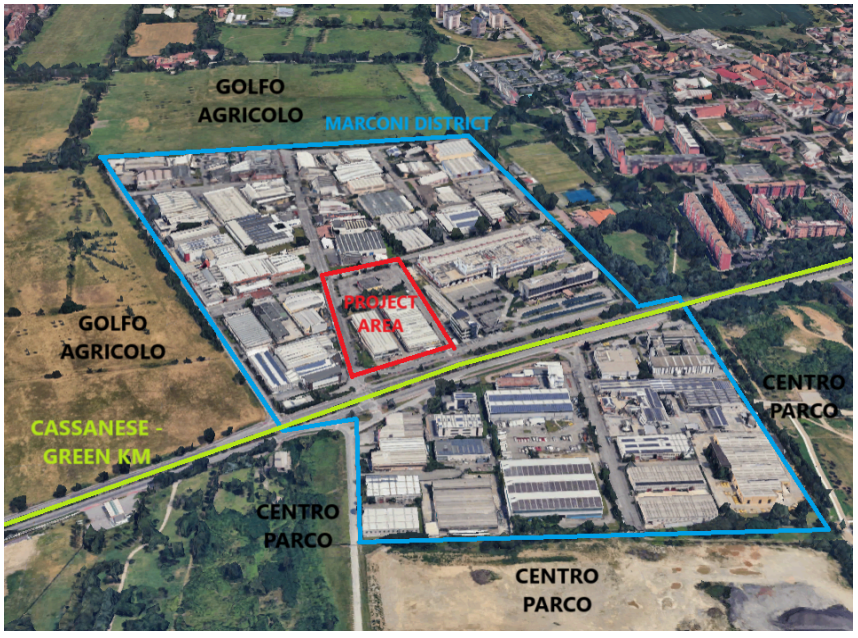


Figure 6) Project Area Map

Priority development objectives and project scenario

The project area spans the section bordered by *via Marconi* to the east, *via Pacinotti* to the north, *via Galvani* to the west, and *Cassanese Provincial Road* to the south.
The project area currently includes:

- Public zone:
  - The Baraonda Social Center is the district's only public building. Established in 1995 and relocated to Via Pacinotti 13 in 2009, has long been a vibrant hub for cultural and recreational activities in Marconi. Over the years Baraonda has hosted numerous projects and events, including music and theatre performances, fundraising dinners, book presentations, art exhibitions, children's workshops, and a community bookshop. During the COVID-19 pandemic, Baraonda played a vital role in supporting the local community.
  - A large asphalt parking lot where student housing and a public square are proposed.
  - Key streets - especially Via Marconi and Via Galvani - will also be reimagined to improve connections with nearby green spaces, cycling paths, and the main transit nodes, including the future East Gate Hub and subway station.
- Private zone: Includes two industrial warehouses - one housing a gym and commercial spaces, and the other artisanship. All the private parts need to be rethought maintaining the activities and buildings.



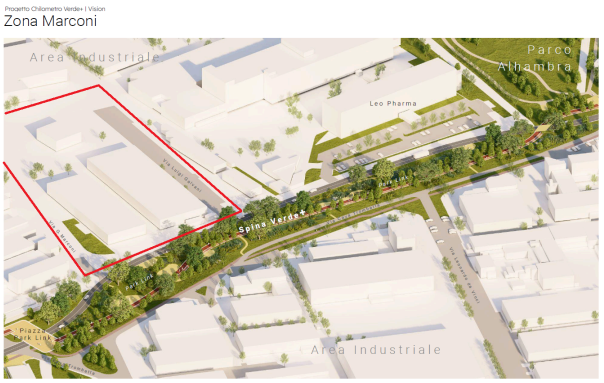
Figures 7 & 8) Images of the Intervention Area

The Marconi district is therefore a strategic area for the development of the city and the metropolitan area. The students taking part in the competition are asked to reimagine the social centre and warehouses to design student housing and the public space between and around them following the listed priorities:

1. Use of natural materials for structure and finishes;
2. Modularity building in order to allow replication;
3. Connection with Green Kilometre and East Gate Hub;
4. Contamination in the Marconi neighbourhood;
5. Depaving of the area, improving permeability and resilience.

The proposed student housing should be closely connected to its surroundings, such as the Baraonda and the gym. The surrounding external public spaces should be transformed into inclusive areas that encourage social interaction, and communal experiences, easily accessible and of high quality. In developing their proposals, the participants will have to deal with the issue of existing vehicle traffic in the industrial district and anticipate its likely transformation.

It will be fundamental to think about how this space can serve the Green Kilometre and therefore how it can be connected with it.



The section of the future green kilometre in the Marconi district will be characterised by a more spontaneous green design, as shown in the image below.



Now



After

Figure 9) Future green kilometre in the Marconi district

City climate priorities and specific environmental challenges

In 2021, Segrate Municipality signed up to the **Global Covenant of Mayors**, committing to:

- Reduce CO2 emissions (and possibly other greenhouse gases) in its territory by at least 40% by 2030, primarily through improved energy efficiency and increased use of renewable energy sources;
- Increase its climate resilience, adapting to the effects of climate change.

In alignment with these goals, this project requires:

- Buildings (new structures) are to be constructed using natural materials for both structure and finishes and existing buildings are to be retrofitted with sustainable finishes.
- Public spaces to prioritise livability and permeability, incorporating pedestrian and cycling connections to the Green Kilometer.

Students will have to take into account the following general goals:

- Urban cooling and reduction of the 'heat island' phenomenon through urban forestation and an increase in green areas;
- Creation of a 'sponge city' through depaving, reducing the hydraulic risk and decreasing the inflow of rainwater to the sewerage system;
- Promote clean construction, i.e. reuse, disassembly, life-cycle approach and minimisation of waste generation on site.

Regarding soil permeability, the Municipality of Segrate has since 2017 introduced a **Biotope Area Factor (BAF)**, a nature-based solution to enhance soil permeability and ecological value to be applied to all significant interventions on the territory. Each district has a minimum BAF target, calculated as the effective ecological area weighted by ecological coefficients of specific surface characteristics. For each district of Segrate, a minimum BAF Target has been identified to be respected to guarantee the correct permeability and rewards are provided for projects exceeding the minimum BAF target.

Specific Planning Rules & Regulations

The design of the student housing must meet the requirements of **Ministerial Decree No. 1437/2022**, which mandates at least 100 single rooms of at least 11.7 m² net (including bed space and bathroom). Additionally, 5% of these rooms should be accessible, with increased space for accessibility needs (at least 10%). At least 4.3 m² per bed space must be allocated for shared spaces (cultural, educational, recreational, support, and administrative services), which includes the Baraonda building.

According to the provisions of the **City of Segrate's Urban Plan (P.G.T.)**, the Marconi district is subject to the forecasts summarised below.

With reference to **Table PdR08 "Zoning"** the private area of the site is part of the Industrial urban texture called D2 - "Production areas with the possibility of functional reconversion". It is also part of "Urban regeneration areas". These are production areas for which the Plan calls for a functional conversion that increases their compatibility with the surrounding urban fabric. The non-permitted uses are large retail structures and shopping centres, single and associated medical practices, clinics, logistics, open-air material storage facilities, hotels, and agricultural activities. The urban planning parameters for the area, to apply for the public and private separately, are:

- Building Index (If): 0.6 sqm/sqm which means that there can exist on that site a maximum gross floor area equal to 60% of the site size. The existing index is kept if it is higher;
- Coverage Ratio (Rc): 50% which means that at the end of the project the area without any building is a minimum 50%;
- Maximum Building Height (H): 25 m;
- Biotope Area Factor (BAF): minimum 0,4, which is a nature-based solution for any new intervention in Segrate.

New volumes in the public part must maintain a minimum distance of:

- 7.5 metres from roads.
- 10 metres from private buildings.
- 5 metres from the boundary with the private part of the site.
- The distance between buildings must be equal to or greater than the height of the tallest building).

Part of the site is affected by the constraint related to the presence of a power line as shown in **Table PdR 09 'Constraints'**. The relative buffer zone, drawn in the table, does not allow the construction of new buildings and must therefore be dedicated to public space.

For any other territory characteristics, please refer to the technical documentation of the P.G.T. on the institutional website.

Language Requirements

Proposals must be submitted in English or Italian.

City-specific Awards

The Municipality of Segrate will exhibit all the projects presented at the most important city event and all participants will have the opportunity to present their projects to the City Mayor and the entire Municipal Administration.