

Industrial resolution

in the town of Broumov

Introduction.

Thesis.

Urban analysis.

Precedents.

+ Background.

The Czech borderland, which is largely made up of rugged mountain ranges, embodies a microcosm of European history - a crossroads where the echoes of ancient empires, the scars of world conflicts and the desires of modernity intertwine, leaving an indelible mark in the socio-economic DNA of these regions. From the Middle Ages, to the industrial boom, to the current globalized world. All this has been etched into the identity of local residents and architecture. I chose the town of Broumov as an example of a border settlement with a very interesting and turbulent story. Formerly a rich industrial regional center with a well-preserved historic center and a majestic monastery, located in a unique natural location. Today, a city of contrasts. In addition to the traditional things that have to be dealt with in Broumov, such as the maintenance of historical monuments or the reconstruction of outdated infrastructure, there are also several topics typical for border areas. It is, for example, an unfavourable demographic curve and the decline of industrial production, and with it also the urban areas that were connected with this production. And these are the two key issues that my project focuses on.

Introduction.

**How to motivate people to live in
Broumov?**

**How to transform former industrial areas into a
modern districts?**

Thesis.

In order to start some physical transformation process and reconstruct a large area, a strong program must first be found. Functions that fill today's empty or only partially used buildings. Functions that will be sufficiently diversified and will also have a socio-cultural overlap. And with this detour I return to the second problem, which is the exodus of people from this region. This whole issue is a complex matter that can hardly be summed up in a few sentences, but to put it simply, the primary problem is the lack of job opportunities. Specifically, work and education, because the outflow of young people is often already after primary schooling, when there is only a gymnasium in the city and other fields, such as apprenticeships, are more inland in larger cities. Few people go back after graduating from high school or college. For this, the local textile industry mainly needs specialists, of whom the Czech education system does not produce many, and for that few, Broumov is not an attractive enough destination.

Arguments.

Based on my research, I have decided that the main program will be a new private university of arts, including modified fields of perspective in the Broumov Region, supplemented by other accompanying functions. All this located in one selected former factory complex, which will see a complete reconstruction and transformation, including the adjacent public spaces. 250 new students will mean more than a 3% increase in the local population, who, in addition to the school infrastructure itself, will use the already existing facilities of the town and support the development of various other commercial and recreational activities outside the school campus. This also applies to accommodation, where student housing is included in my proposal, but only for first-year students and socially vulnerable cases. Other students are thus dependent on accommodation capacities in the town. From the very beginning, I expect that some school premises will be completely or partially open to the public. There will be exhibition spaces where the pupils themselves and local artists can present themselves, as well as community workshops offering a number of different craft courses for local residents. My ambition is that these programs communicate with the outside world as much as possible and that the public space around this institution is cultivated as a result. I perceive this project as an imaginary starter for the transformation of the entire industrial part of Broumov, from which further significant changes will follow in a domino effect.

Urban analysis.

Past.

Broumov boasts a rich history that goes back centuries and contributes to its unique urban fabric. The origins of the city date back to the 13th century, when it was founded as a Benedictine monastery. The iconic Broumov Monastery, founded in 1256, is a testament to the city's religious heritage. Its architectural style, characterized by Gothic and Baroque elements, exemplifies the transitions in design and construction techniques over the centuries. The monastery complex with its courtyards, chapels and ambits provides an insight into the spiritual and cultural life of Broumov through the ages. The historical development of Broumov is closely linked to its strategic location at the crossroads of important trade routes, enabling economic growth and cultural exchange. Over the years, the city evolved from a religious center to a vibrant commercial hub, witnessing the construction of markets, guild houses and residences that reflected the changing socio-economic dynamics. One of the prominent features of Broumov is its well-preserved medieval architecture. Surrounded by graceful pastel-colored buildings adorned with intricate facades, the square served as the focal point of the urban landscape. The arrangement of the square reflects the principles of medieval urbanism, from which narrow winding streets lead, creating a labyrinthine network.

As industrialization swept through Europe in the 19th century, Broumov, like many other cities, underwent significant changes. The establishment of factories, especially textile and woodworking ones, brought about a shift in the economic landscape. The architectural structure of the city adapted to these changes with the construction of larger industrial buildings and warehouses. Factories and mills were located along the banks of rivers that used water power for their operations. These industrial facilities influenced the expansion of the city and the development of new districts dedicated to manufacturing.



Present.

It is the industrial belt along the railway and the river that is today the biggest factor in the beauty of Broumov. It is a paradox that this area was previously the main driving force of urban development and significantly shaped its urban and architectural form. Today, a significant part of this suburb consists of excluded localities with socially poor groups of residents, and this is clearly reflected in the condition of the buildings and the quality of the surrounding public space. Typical features are the fragmentation and poor accessibility of these locations, which further isolates them from their surroundings and contributes to their destruction. This also applies to the already mentioned river, which today runs along its entire urban length through a concrete channel, preventing any closer contact between people and water. At the same time, the rivers and their immediate surroundings are experiencing a renaissance in municipalities of various sizes. The political representation is becoming more and more aware that waterways are an indisputable quality that is worth revitalizing and making accessible. This is how new urban green-blue arteries are created all over the world, used not only for recreation. Broumov is still waiting for these steps.

Future.

In the future, Broumov will have to continue to grapple with issues such as understanding and adapting to changes in population demographics, including population aging, migration trends and urbanization. Furthermore, stimulating economic growth, supporting entrepreneurship and diversifying the local economy with the aim of ensuring long-term prosperity and resilience. Investing in upgrading infrastructure, improving transport networks and improving connectivity to support sustainable urban mobility. Addressing environmental issues such as climate change, resource management and biodiversity conservation through proactive measures and sustainable practices. Protection of the city's rich cultural heritage, historical monuments and architectural heritage, and at the same time the support of tourism, which, of course, is problematic with mass tourism, which is already appearing in Broumov region during the summer months.

Old factory complexes in poor condition, like the one in my project, present a number of challenges to urban communities. Structural decay threatens safety and at the same time risks the loss of historical and cultural heritage. Redevelopment efforts face obstacles, including high costs and regulatory hurdles. However, the revitalization of these buildings offers opportunities for innovative solutions, historic preservation and support for community renewal.

Precedent.

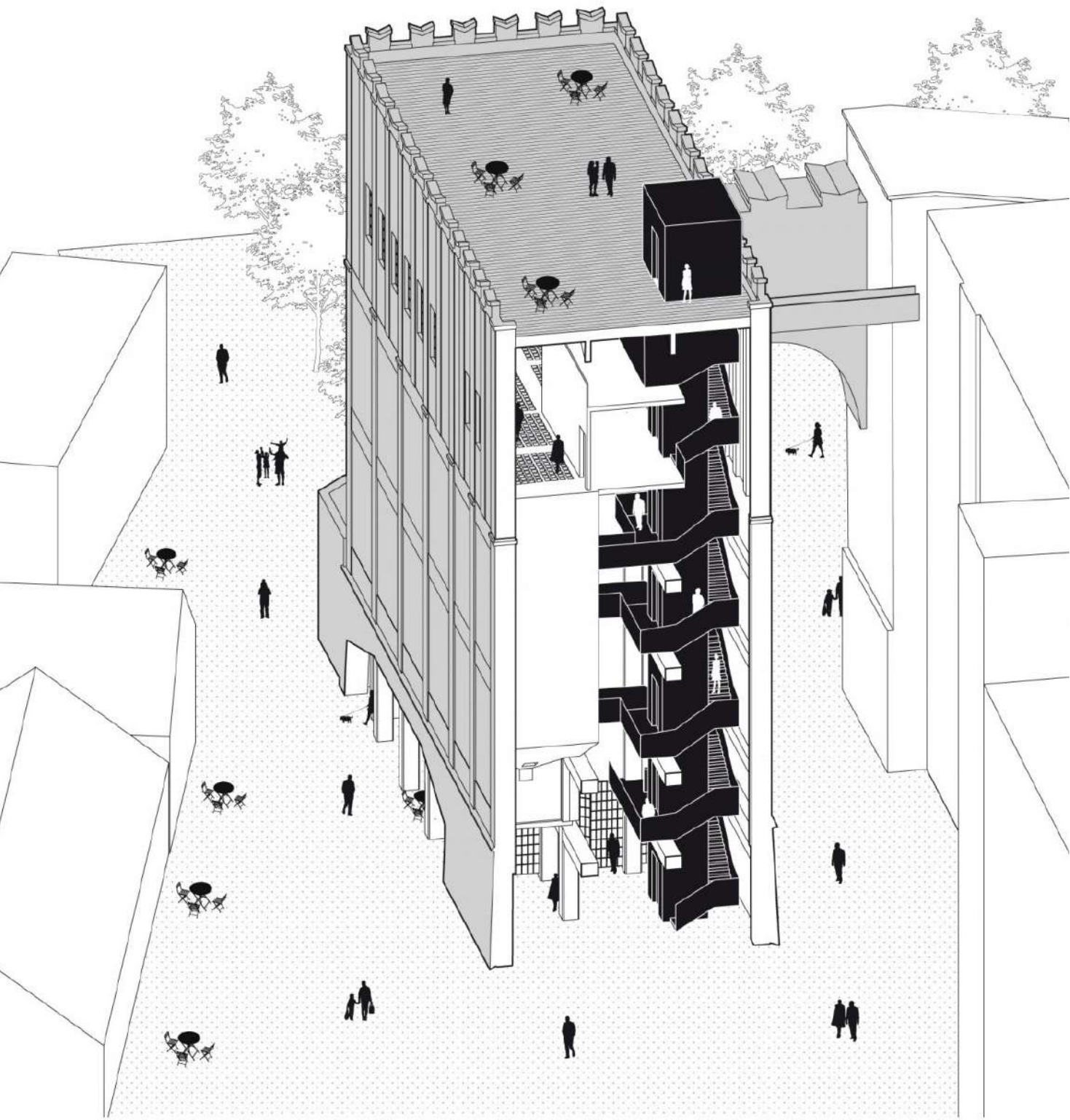
WINTERNITZ MILLS.

As a precedent for my project, I chose the case of the recent reconstruction of the Winternitz mills. As in Broumov and in many other Czech cities, we can find industrial areas, they are calling for new uses. Pardubice also has one such valuable set of industrial buildings. Overlooking the city center, on the opposite bank of the Chrudimka River, are Winternitz's automatic mills. The author of this building with a monumental arch is the famous Czech architect Josef Gočár (1880-1945). Mills are one of his early realizations. The complex, which underwent several other construction modifications during the 20th century, ceased operation in 2013 and after years of searching for a new use, was transformed into a center for art, education and meetings.



Form and function

The primary idea behind the renewal of the site was to build an urban space that would live throughout the day. In essence, it is a multifunctional complex where people will work, live, study or attend exhibitions or other cultural events. The cultural sphere will be represented by three institutions - the East Bohemian Gallery Pardubice, the Pardubice City Gallery and the Smetana Spouse Automatic Mills Foundation. The last of them will find its place in the former grain silo, which is connected to the mass of the mills by a large archway and where a multi-purpose hall will also be located. Adaptation is essentially the replacement of the original mill technology with theater technology. In addition, they will make the entire silo accessible from the basement through the former grain bins to the roof. The East Bohemian Gallery, in turn, will occupy the generous building of the former mills. As in the case of the modification of the silo, the architects also take care to preserve the character and qualities of the original building. The spatial solution of the gallery is based on the layout of individual parts of the building. Entrance areas and exhibitions are located in the mill's spacious halls with steel and wooden load-bearing structures, and especially depositories in the reinforced concrete parts. The ground floor of the East Bohemian Gallery will connect to the newly created Mill Courtyard. The creation of new public spaces and the communication of the new program with its surroundings are absolutely fundamental from the point of view of revitalizing the former mills. Two public spaces are created, which intentionally have a different character and function. In addition to the smaller Mlýnské náměstí, there will also be a larger area right in front of the mills, which will be planted with plane trees and will be used for various community events, such as markets.







The main supporting precedent between the Winternitz mills in Pradubice and my project is the fact that in both cases it is a reconstruction of a former industrial area. The transformation of industrial complexes in architecture today represents a significant trend in the field of urban renewal and development. This approach not only revitalises neglected urban areas, but also celebrates the historical significance of industrial heritage while responding to contemporary societal needs with a new program. Dilapidated and unused places are often converted into new cultural and economic centers of the city. This is the case even in Pardubice and Broumov. In the both of these cities, it is also a question of local identity, which is closely linked to industry. Important aspects of these transformations include the preservation of industrial heritage, the creation of dynamic urban spaces and the promotion of sustainable development practices through the reuse of existing infrastructure. By utilizing the robust structural qualities of industrial buildings and incorporating contemporary design principles, we are able to achieve seamless transitions from past to present, resulting in spaces that are both aesthetically pleasing and functionally efficient. For me, this kind of timeline is one of the supporting principles of these realisations. At the same time, the transformation of industrial complexes is the subject of interdisciplinary research in architecture, which includes fields such as urban planning, heritage conservation, cultural studies and environmental design. All this creates a mix that includes different scales with different impacts on a given location.

Goals.

Program.

Project Impact.

Methodology.

+ Objectives.

Goals.

Transforming of an excluded locality.

Providing public spaces with varying levels of privacy.

Creating new connections of citywide significance.

Making the river accessible for recreational purposes.

Increasing the attractiveness of the city for young people.

Emphasising the industrial identity of the building.

Opening and making the whole site accessible.

Creating excellent facilities for an educational institution.

Program.

The program includes a school institution for approximately 250 students, with extensive facilities, including classrooms, specialized workshops and studies, a library, an auditorium, offices and rest areas for students, including a gym. This main program is complemented by the school's student cafe/bar and gallery spaces, which are open to the public and which directly connect to the newly created public space. These public spaces will be carefully arranged to attract residents who have no other connection with the school to visit. Last but not least, the campus also houses student housing for part of the students, with a school canteen and common areas such as a large social room and a laundry room.

Project impact.

From a conceptual point of view, it is the introduction of a completely new school institution and thus the strengthening of educational capacity within the city. As a result, Broumov can become attractive in the eyes of young people and become their temporary or even permanent destination, which can reverse or at least slow down the negative trend of the aging of the local population. The retention of young people is then key to a number of other economic and social factors that influence the future development of this region. This project is thus intended to help solve one of the key problems, which exceeds the boundaries of architecture and has a much wider meaning.

City scale.

The project is unique in that it will be the first fully transformed industrial monument within the city of Broumov, thereby following on from extensive investments in buildings in historic center, but with a larger share of the current layer of architecture. The form will follow the original textile factory and neighbouring buildings, with an emphasis on significantly greater openness to its immediate surroundings. Thanks to the accessibility of the entire area, new connections of greater importance will be created, beyond the scope of only the given location. This opening will also concern the river bed and its future use for leisure activities. In the past, a clearing was created next to the main road, right next to the bridge of the factory's main building, where today there is a parking lot. The absence of these buildings significantly degrades the urban structure of this location, so I decided to fill this gap with a completely new construction of student accommodation. It will continue to be one of the dominant features of the city, mainly thanks to the preservation of the 55-meter-high chimney and the use of new distinctive materials, in contrast with the original reconstructed facade. Stone, glass and brick will have the main word and will be repeated in different forms and shapes, both in reconstructed parts and completely new ones. On the one hand, the entire intervention should attract more people to this locality and thus ensure attention for other connected former industrial buildings that are still waiting for their restoration. On the other hand, this place will be cleansed and calmed down. Calming in the sense of a clear space, in different levels of intimacy. All this should create an inspiring environ-

Methology.

Strategy to the site

Before concrete decisions on an architectural scale, it is necessary to know the existing urban structures well. This requires a thorough analysis and understanding of the site's context, including its surrounding transit hubs, public amenities and neighboring development. By acknowledging and embracing these urban elements, the project will not have trouble integrating into the wider urban landscape, thereby improving connectivity and accessibility. This proactive engagement with the site's context not only respects its existing character, but also uses its strengths to inform and enrich the design process.

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There are several essential elements in the vicinity and directly on my treated territory that must be taken into account. Most of my land is shaped by the concrete river bed, the Žižkova street running through it and the nearby Předlacká street, which today functions as a bypass of the historic center. I can only change these three lines of buildings to a very limited extent within my project, and they are the defacto starting points from which my broader urban concept is based. Furthermore, there are existing buildings and their possible historical/architectural value and current condition. In this direction, the former boiler room with large rectangular windows and the northern facade are interesting, where the remains of earlier details and austere decoration, typical of industrial buildings created in the second half of the 19th and the first half of the 20th century, are visible. The most prominent feature is the brick chimney.

Strategy to the program

The project adopts a multi-faceted approach to program and typology and tries to avoid monotony and uniformity. On the other hand, the basic typology is given. They are the original buildings of a textile factory. This skeleton will be cleaned/reconstructed in some places, removed in some places and supplemented with a new current typology somewhere. These interventions and strategies depend on the needs of the new program and on the goals I set for the given spaces. For example, a space-intensive program such as an auditorium or a lobby must be integrated into the existing structure through major construction interventions, including the demolition of existing structures. This also happens when enlarging the inner block and opening the entire building towards the newly created square.

Strategy to the architecture

Central to the project's design philosophy is the use of sustainable building materials, innovative design strategies and sensory experiences to evoke a sense of identity and place within the development. Through a thoughtful consideration of architecture, morphology and materiality, the design tries to create a harmonious relationship between the original and the new architectural form. This focus on creating effective and efficient spaces strengthens the sense of belonging and connects the past with the present.

The project seeks to foster a deep sense of belonging and community among its residents and visitors. By creating welcoming public spaces, facilitating social interaction and promoting inclusivity, the development aims to cultivate strong social ties and a shared sense of identity among its residents. Embracing diversity and celebrating cultural heritage are core principles of the project's vision. By incorporating elements of local culture, art and history into its design and programming, the development seeks to enrich the cultural fabric of the community. The intended effect is to foster creativity and cultivate a deeper appreciation of the unique identity of place. The innovations in the project design encourage creativity and push boundaries in design and technology. The intended effect is to stimulate curiosity and catalyze positive change. The project not only sets ambitious goals, but also provides a compass for navigating the complexities of urban development in similar locations. Ultimately, the project seeks to improve the overall quality of life for Broumov residents. Through design interventions such as access to green and water spaces, quality education, arts and gastronomy, the overall standard of living in the city is enhanced.

Location.
Concept.
Design proposal.
Conclusion.

+ Project.

Location.



BROUMOV.

Broumov is a town in the Náchod district of the Hradec Králové Region and is situated in the extreme tip of north-eastern Bohemia. The Broumov basin, through which the Stěnava River flows, is almost on three sides bordered by the border with Poland. The Broumov region is separated from the interior by the ridge of the sandstone Broumov Walls. The local landscape and the life of its inhabitants have been influenced from the very beginning by the Benedictines of Brevnov, who initiated the colonisation of the then almost deserted Broumov region from the 13th century onwards. The Benedictine order's activity is commemorated by a number of church buildings. The most important one is the Monastery of St. Wenceslas in the centre of the town.

7.145

Inhabitants

22,27 km²

Area

395 m AMSL

Altitude





Town of contrast

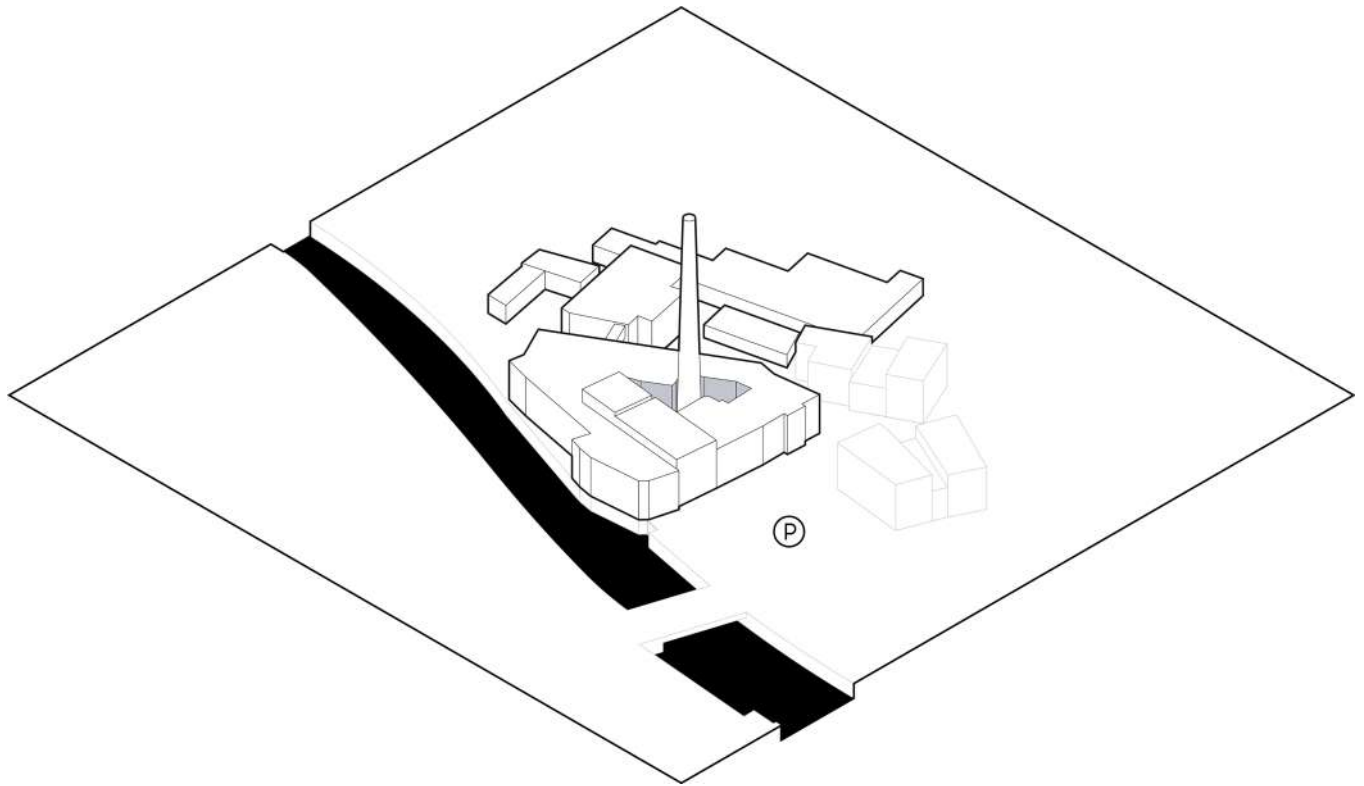
Today, the city of Broumov is in a situation where, on the one hand, many important and architecturally valuable buildings have recently undergone reconstruction, and this mainly concerns the historic center of the city, led by the Baroque monastery. On the other hand, many other buildings, mainly from the industrial past, are in a desolate state and are still waiting for their restoration. After decades, when many industrial buildings in the Czech Republic were irretrievably destroyed, the trend is to save these monuments and awaken them to a new life. They often become new business or cultural centers within formerly industrial locations, and this is exactly what Broumov is waiting for.



Concept.

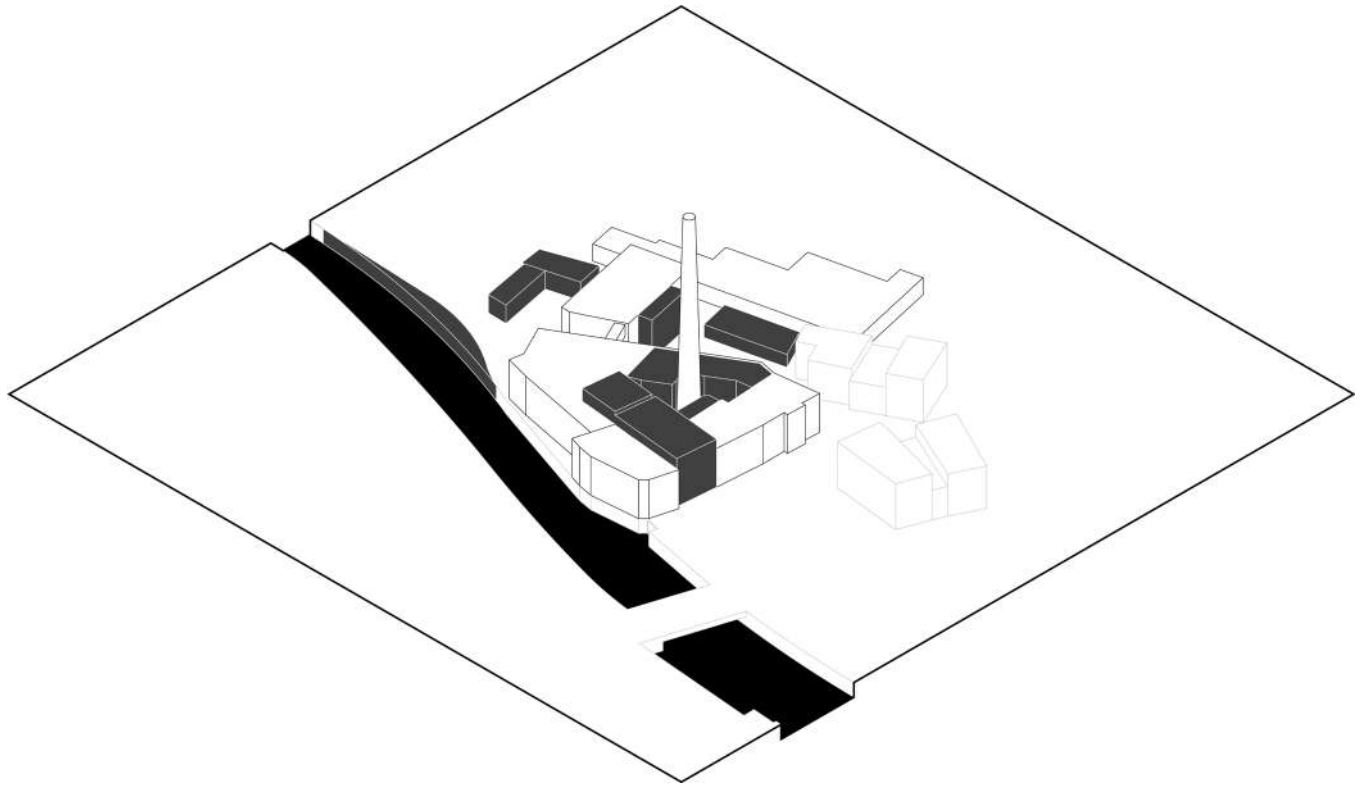


Today, the area is characterized by a rather confusing structure, where additional building layers have been glued onto the original factory building over the course of decades, and today it looks uncompact, even chaotic. This is also evident when looking at the individual facades, where some parts have clearly preserved original decorative elements, in some places they are already in a very bad condition and in other places they have been completely destroyed and replaced by a new facade. It is possible to pass through the area, but this connection does not have the character of a street or any cultivated urban space. Within the main factory building is a narrow inner block with the main dominant feature in the form of a chimney.



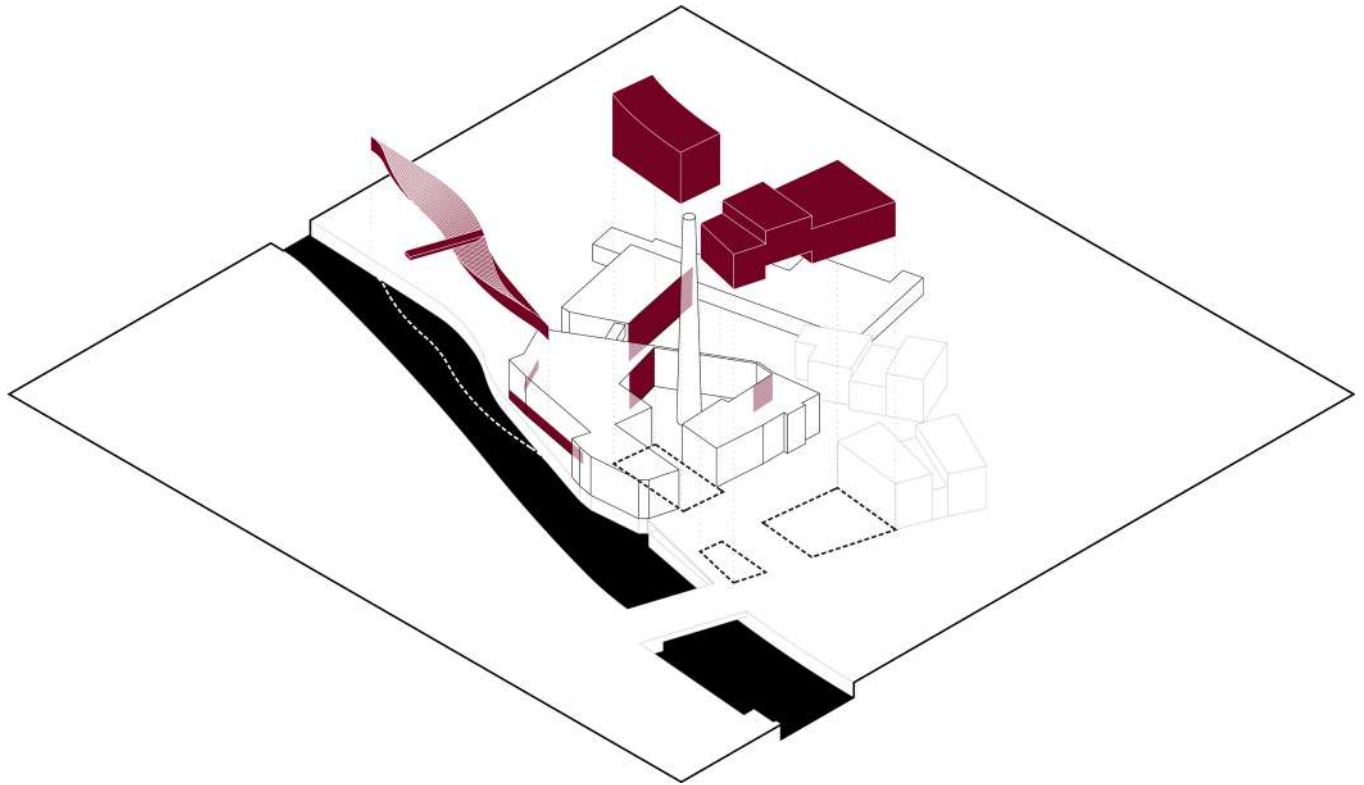
CURRENT STATUS

Based on my goals within the broader city-wide context, the immediate context of my land, and the new programmatic needs, I decided to demolish some buildings and parts of buildings on the site. These interventions are intended to clarify the entire situation and create enough room for the remaining buildings and new adjacent spaces. The modifications also concern the riverbank, which is being structurally prepared to make it accessible.



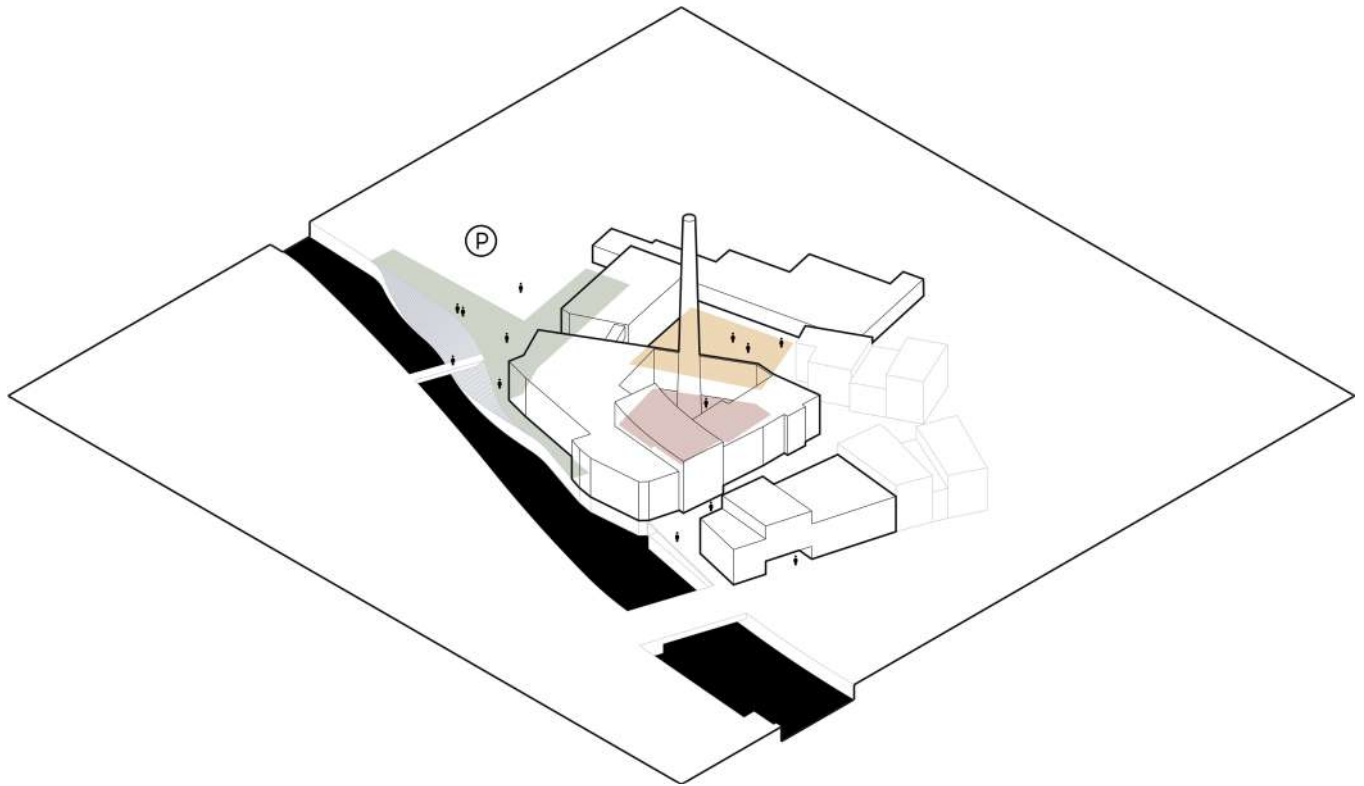
CLEANING UP THE SPACE

As part of a consistent approach to individual buildings, I decided to clearly define and visually distinguish the old from the new. In the place where part of the building was cleared, there is a new contemporary facade, which represents the given section through the materials and colors. Then there are places where I wanted to emphasize greater openness and connection with the outdoor space. This applies, for example, to the new lane on the ground floor to the river. And last but not least, brand new volumes are being added. A new bank with a footbridge, addition of a row of houses on the current hillock and a new main entrance area to the university, where the lobby and auditorium are located.

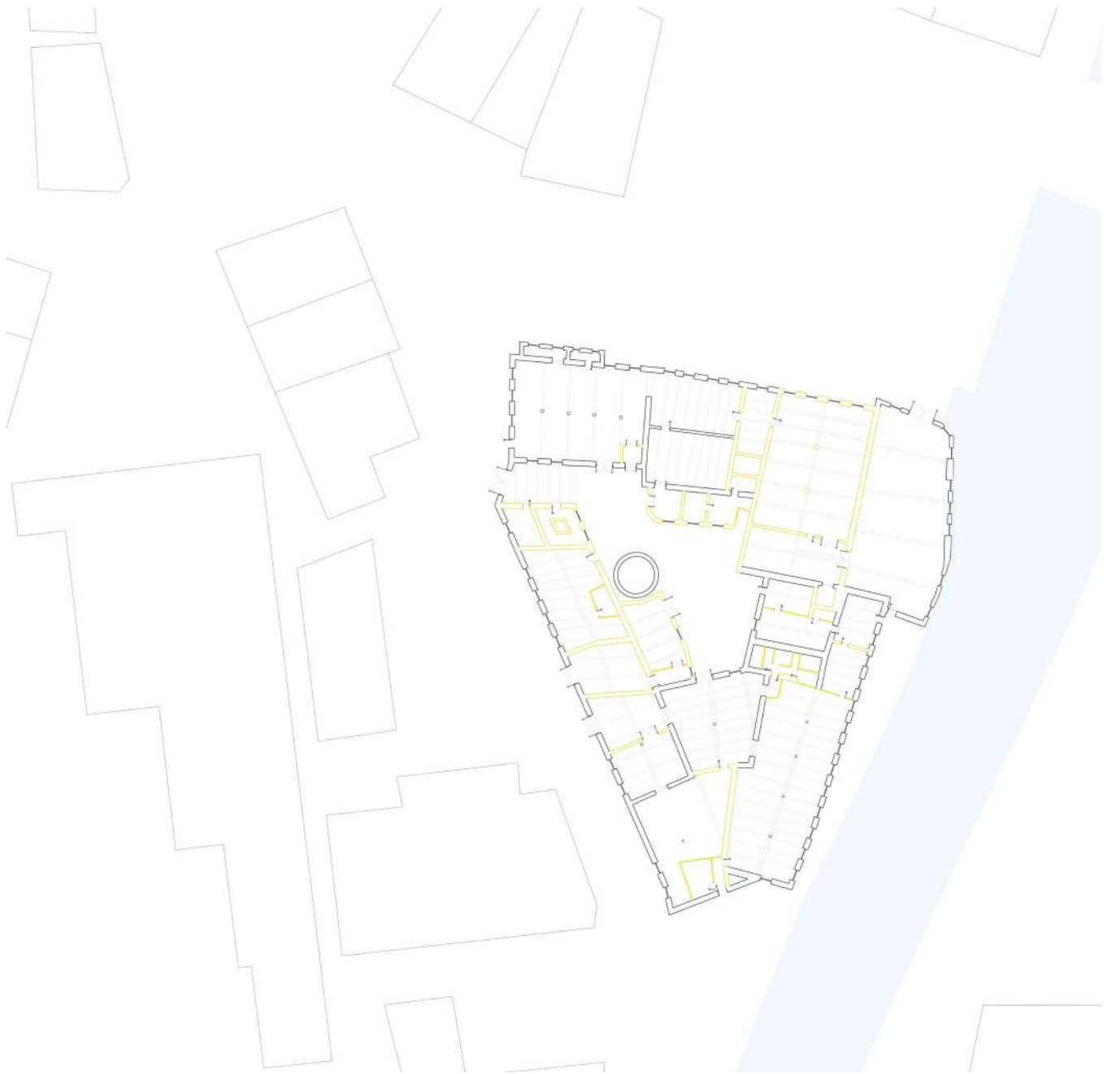


NEW INTERVENTIONS

Thanks to the interventions described on the previous pages, three new, clearly defined outdoor spaces were created, which are, however, continuously open and offer different experiences and levels of privacy. The original discovered courtyard of the factory became a spacious forecourt of the university (red). the visual boundary is created both by the vertical garden on the original perimeter wall of the factory, but also by Žižkova Street, which in these places has the new form of a pedestrian promenade with a cycle path. It is followed by a new square with an adjacent cafe/bar, which is the main vibrant area of the area (yellow). And finally, the new embankment with an avenue and access to the water embodies a more peaceful, relaxing part (green).



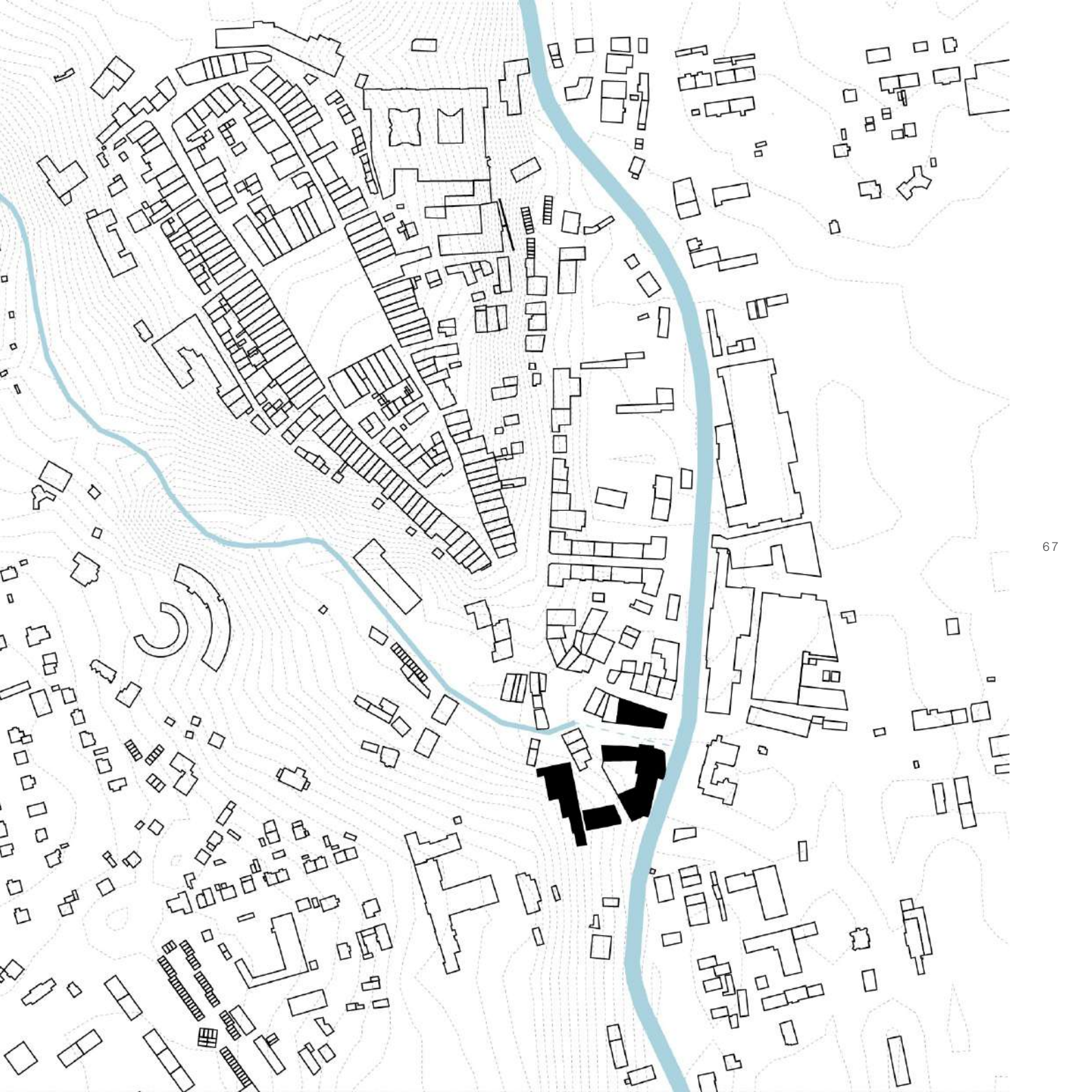
VARIOUS PUBLIC SPACES



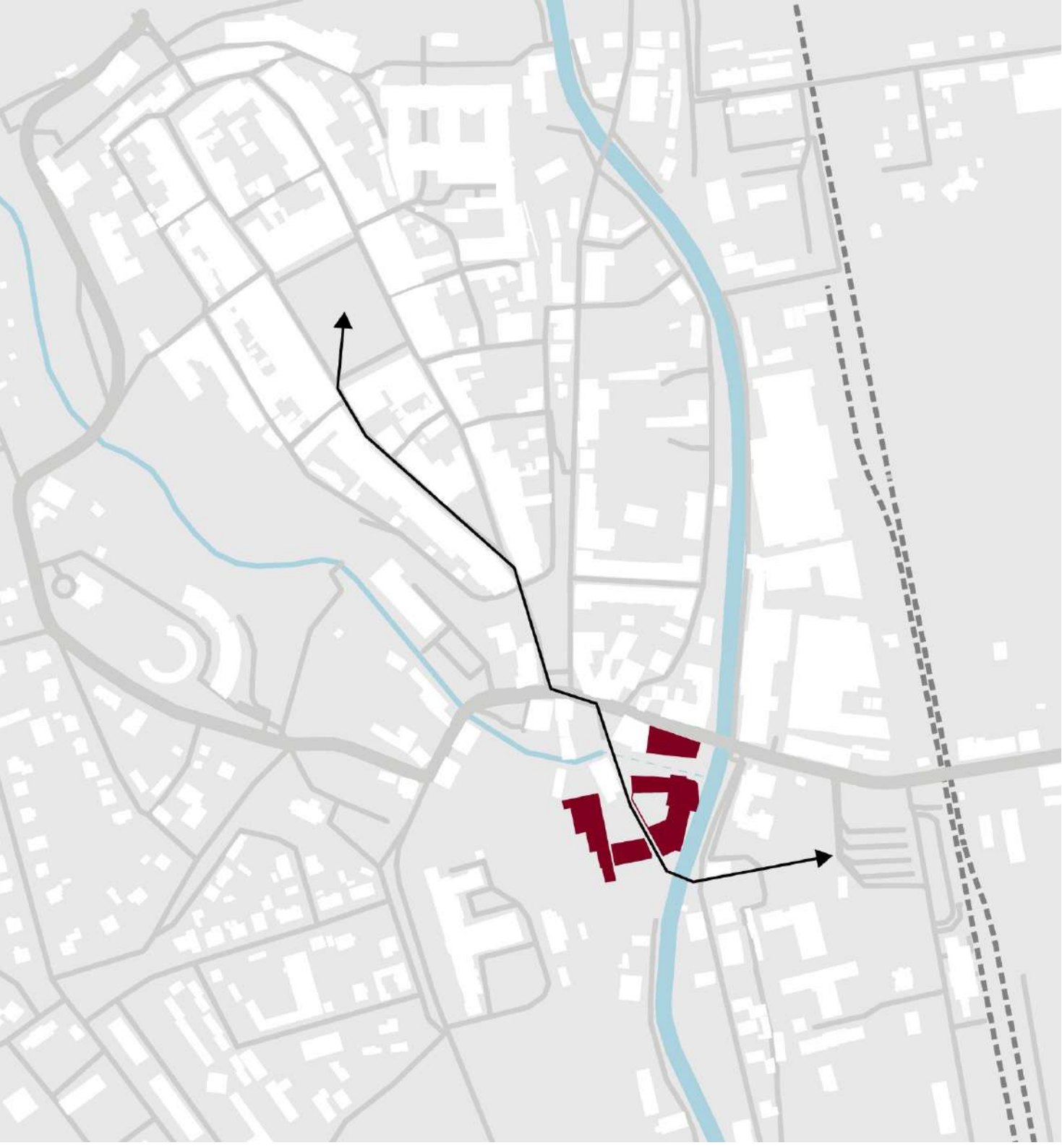


Design proposal.

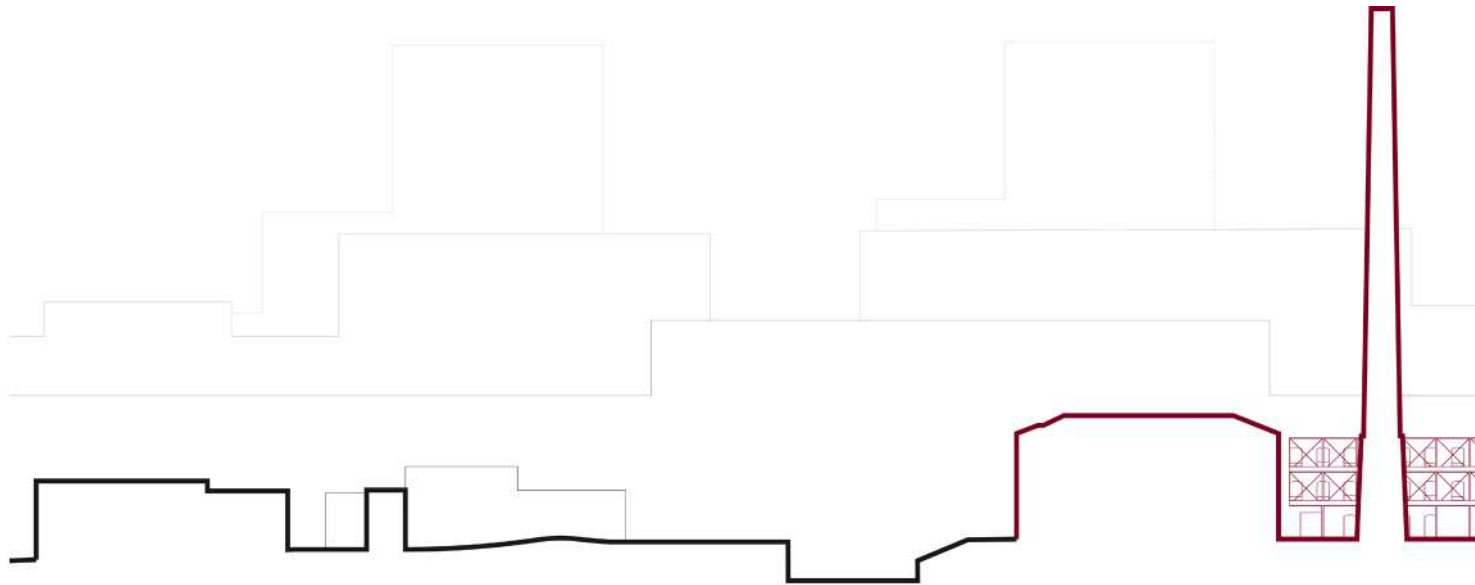
The project is an old-new landmark of Broumov, which is supposed to be the imaginary beacon for a new suburb with an industrial legacy. However, one of the main goals was to connect as well as possible to the surrounding development. To fill in the blank spaces, to make everything clearer and to spread the influence of positive change on your surroundings as far as possible.

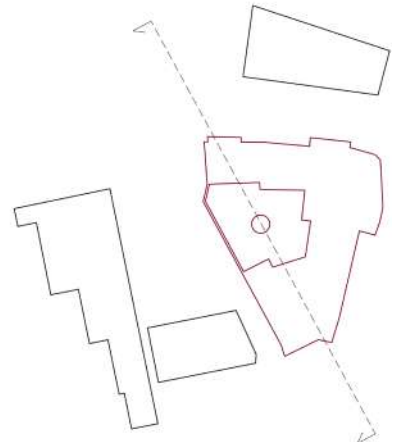


The position of the entire area directly suggests that this place should be a new important intersection of Broumova. Close proximity to the river, the main road, the southern entrance to the historic center as well as the location on the axis between the center and the train/bus station. All of this creates excellent conditions for people not only to pass by, but also to stop here, and from a transport intersection to a cultural dimension as well.



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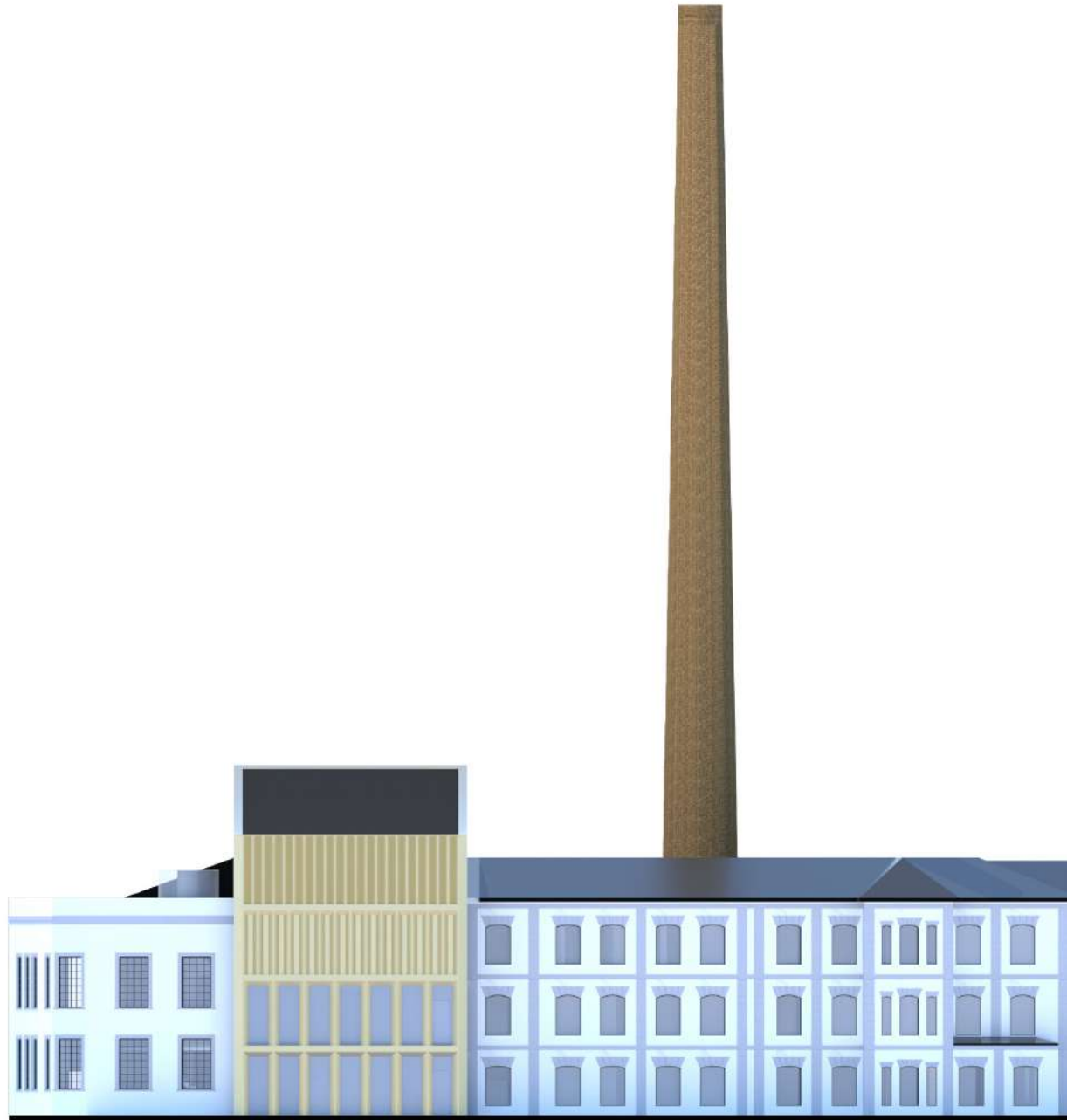


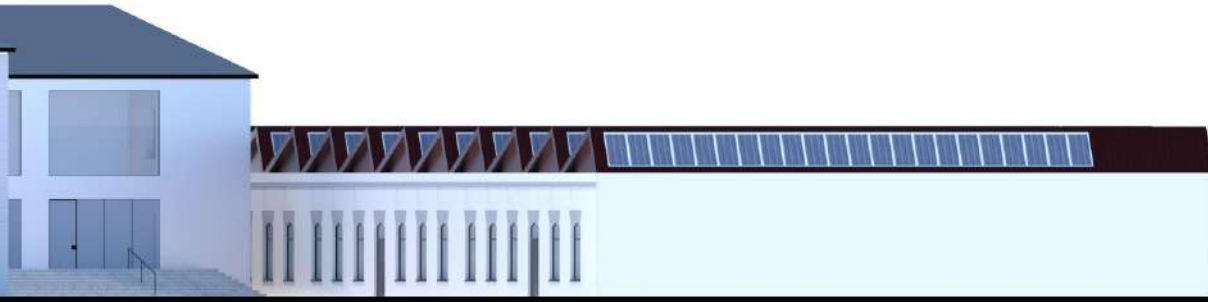


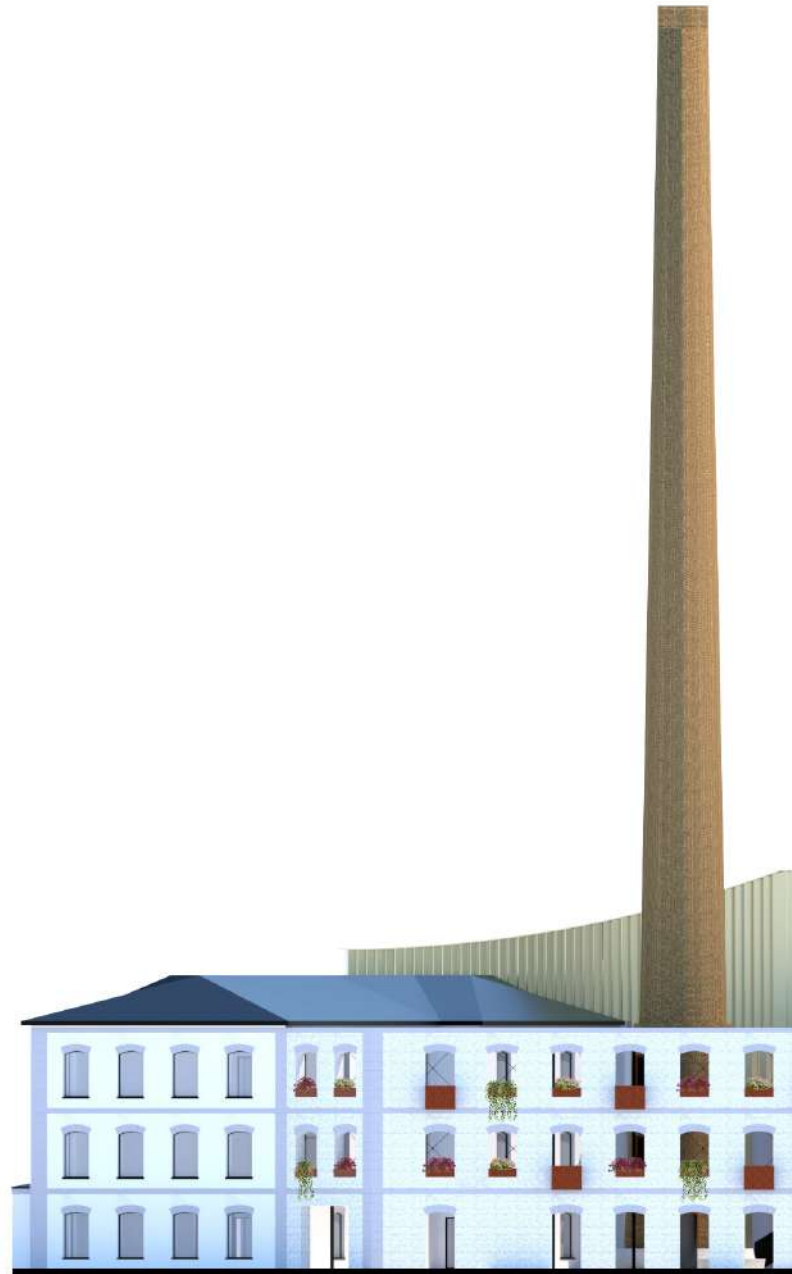
I use three main surfaces throughout the site. Large-sized smooth paving stones, for the most flexible walking and cycling, paving of smaller square cubes, delimiting the space of the school courtyard and the new square, and bright polished concrete on the new embankment.

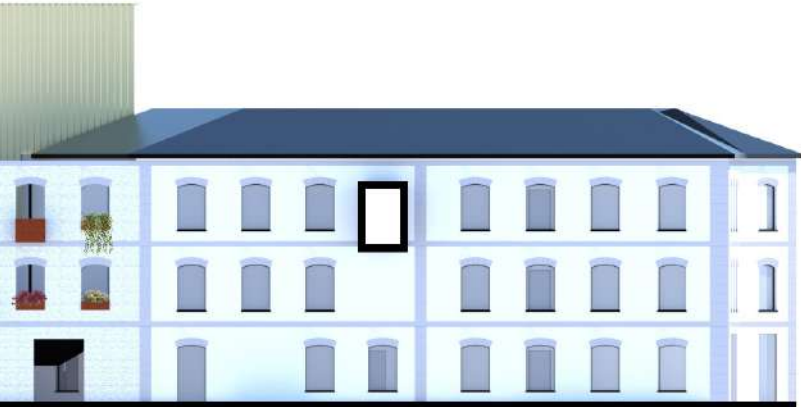
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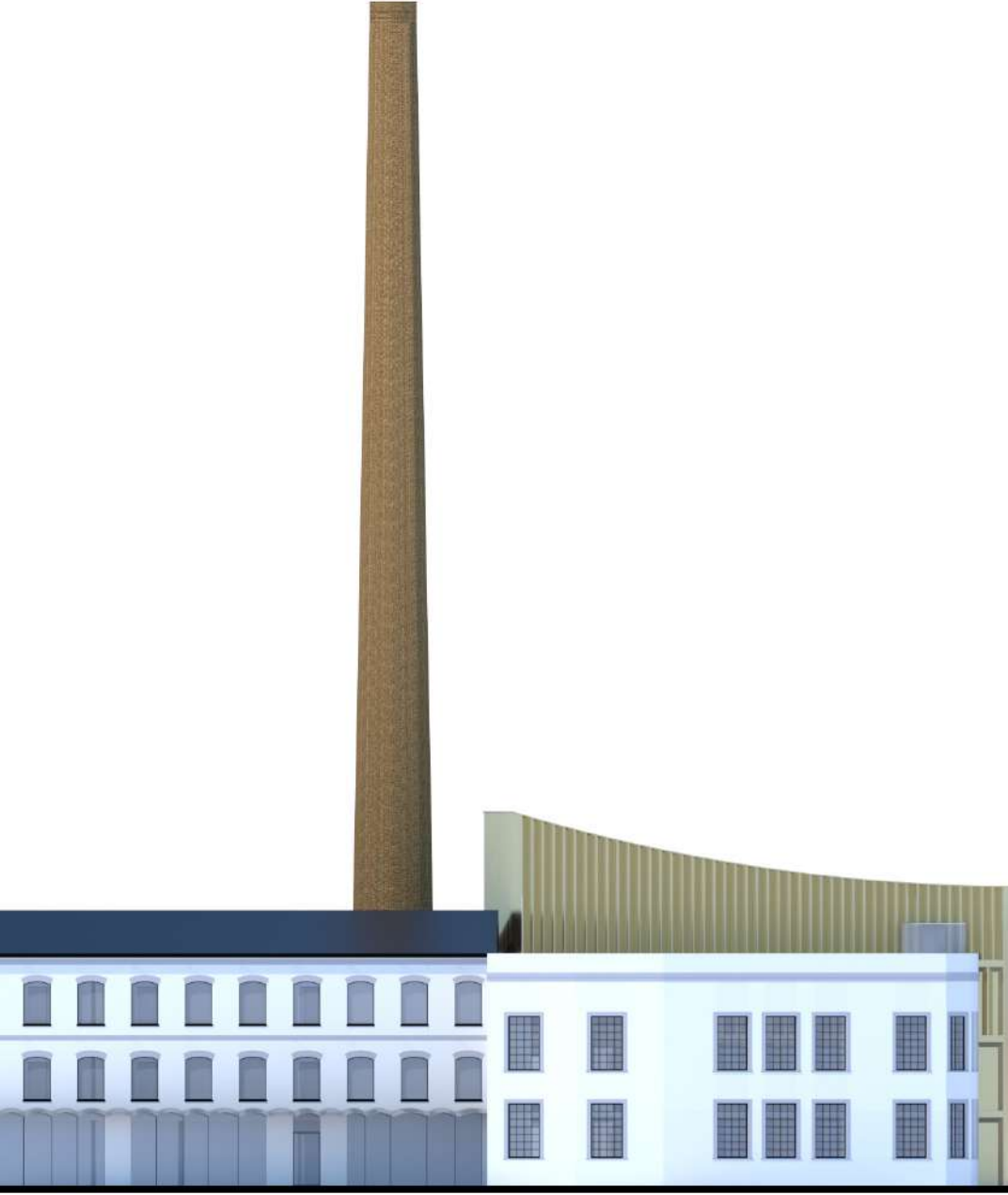






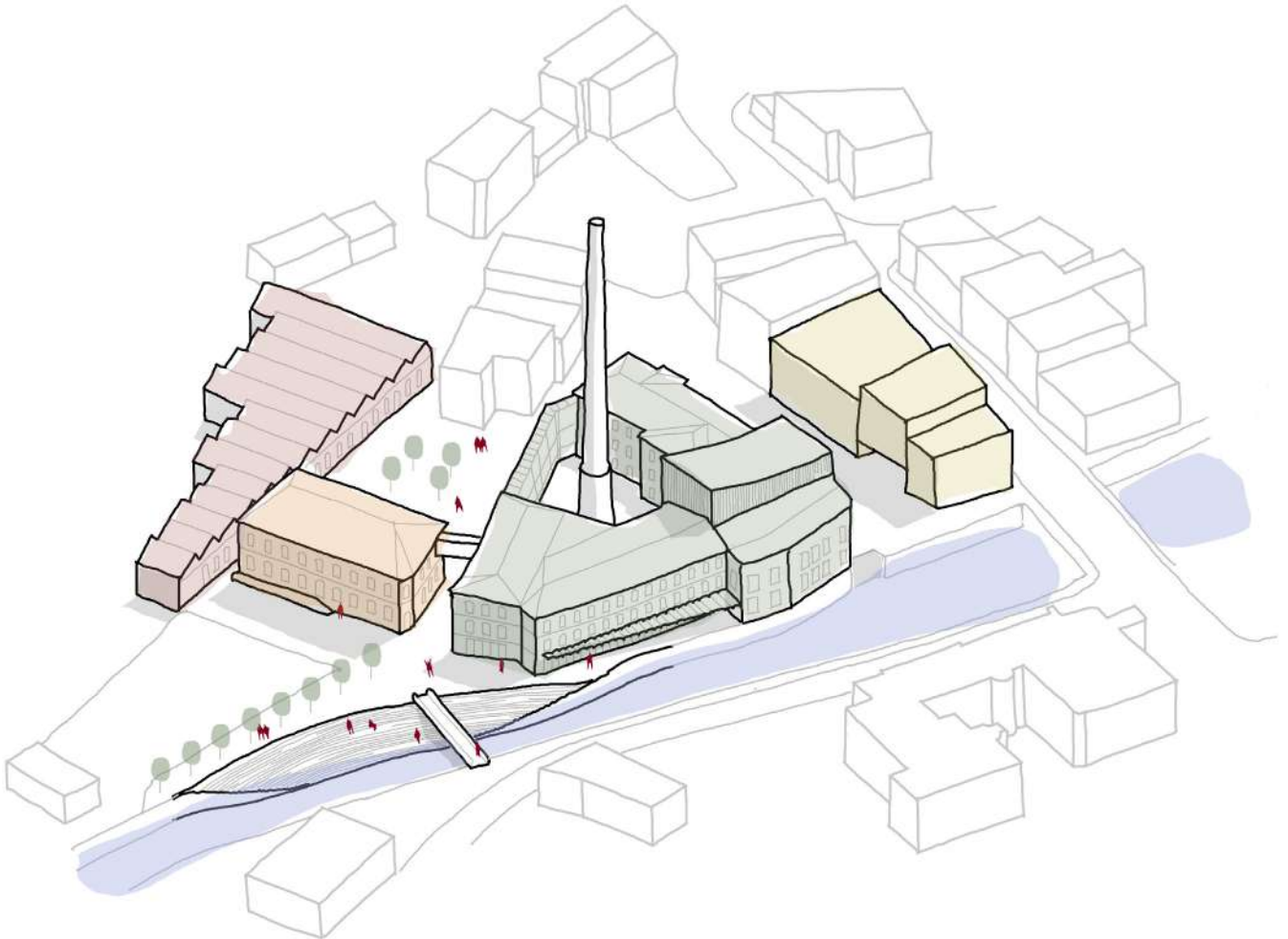




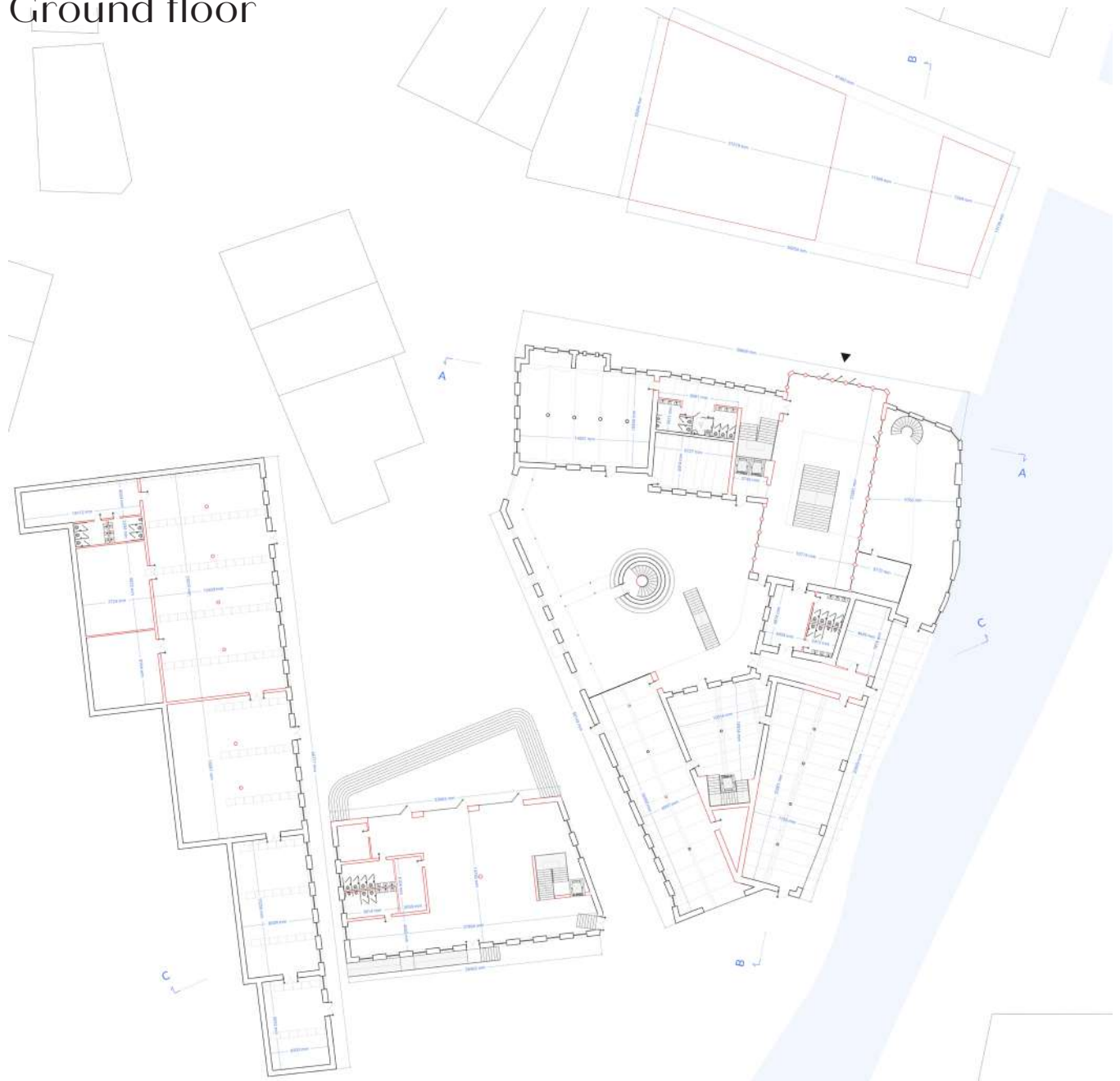


Town of contrast

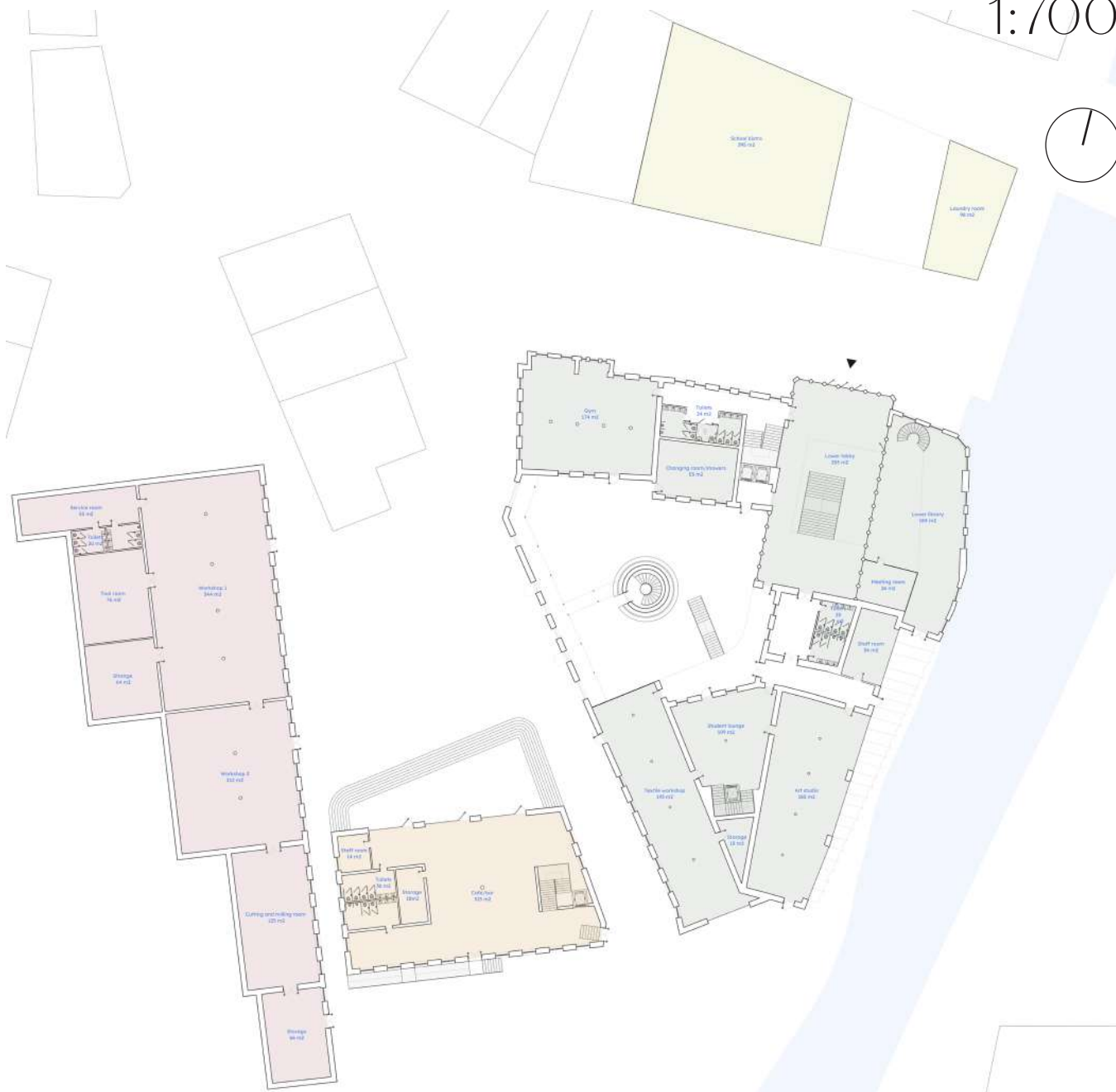
The layout of the program is based on the spatial layout of individual existing buildings, in which the internal spaces have been rationalized and managed. I put great emphasis on their logical connection, not only within the interior, but also with the new public spaces of the exterior and that they do not interfere with each other. For example, you can enter all three main parts of the university from the Lobby, the Café directly connects to two new outdoor public spaces for greater activation, and the library, for example, is as far away from the workshops as possible. There is a bistro and laundry on the ground floor of the new student residence, which are functions that can be used by other residents of the city. At the same time, this house further isolates the rest of the campus from the busy street, which the students don't mind.



Ground floor



1:700



1st floor

84



1:700

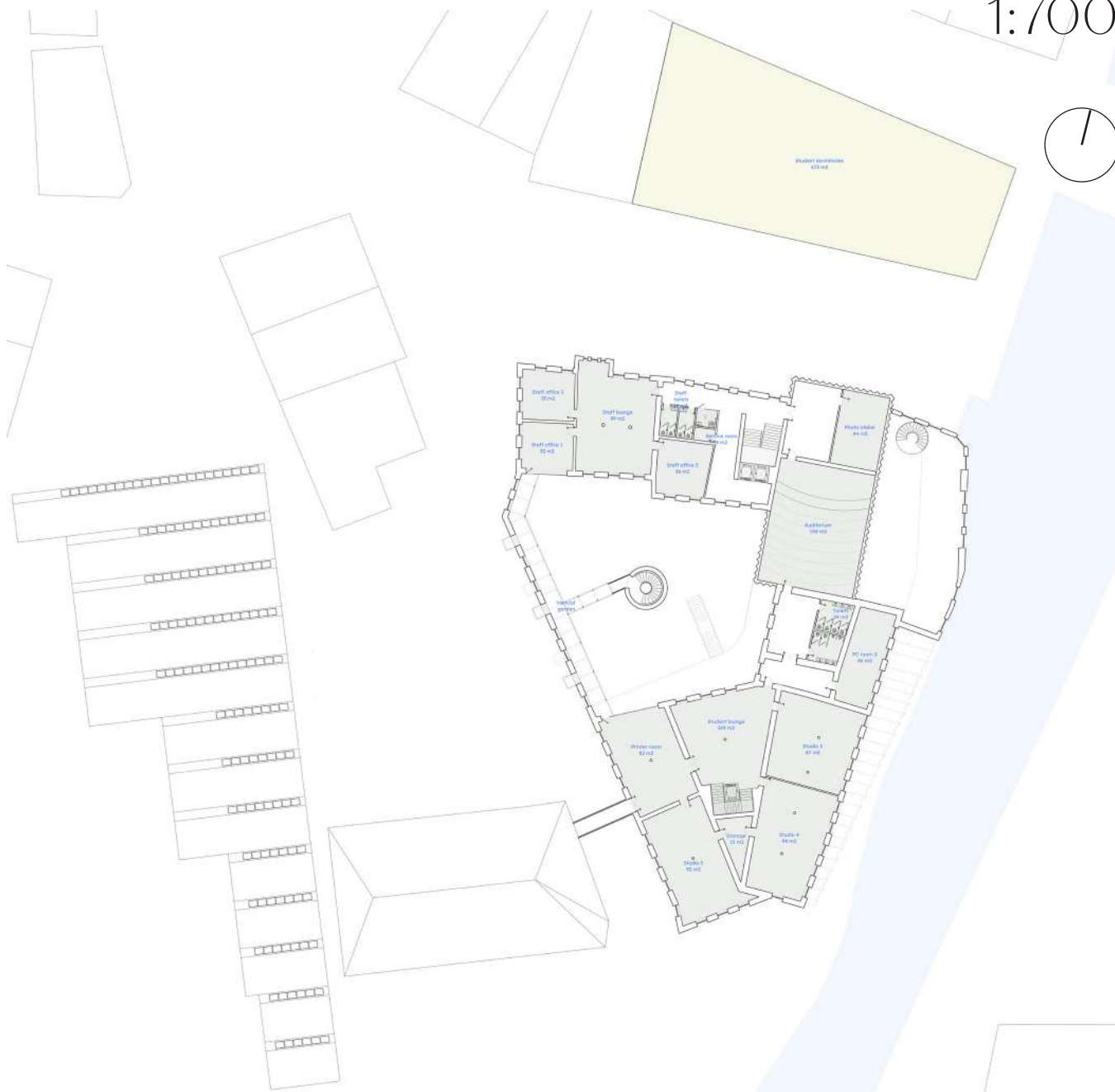


2nd floor

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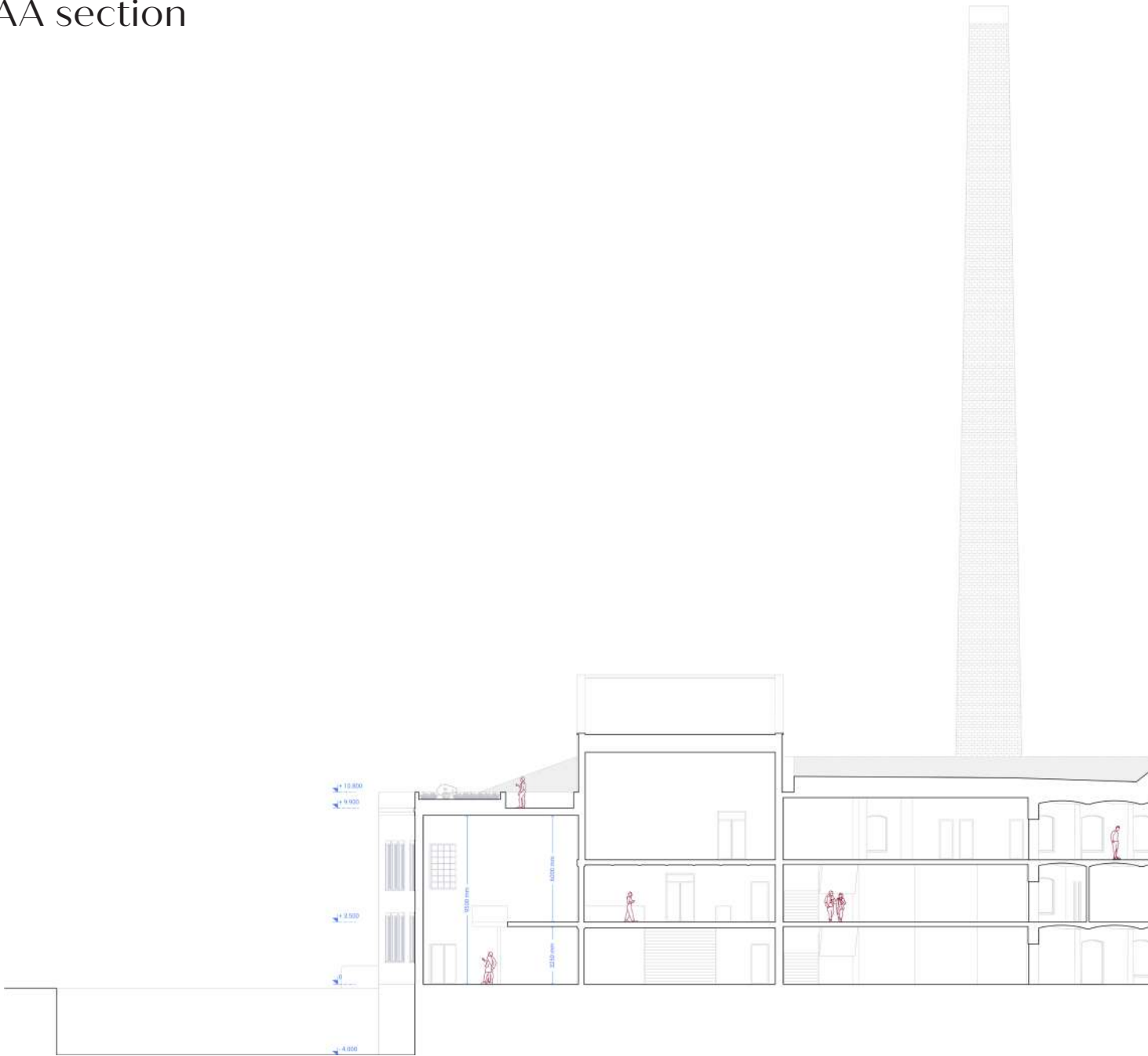


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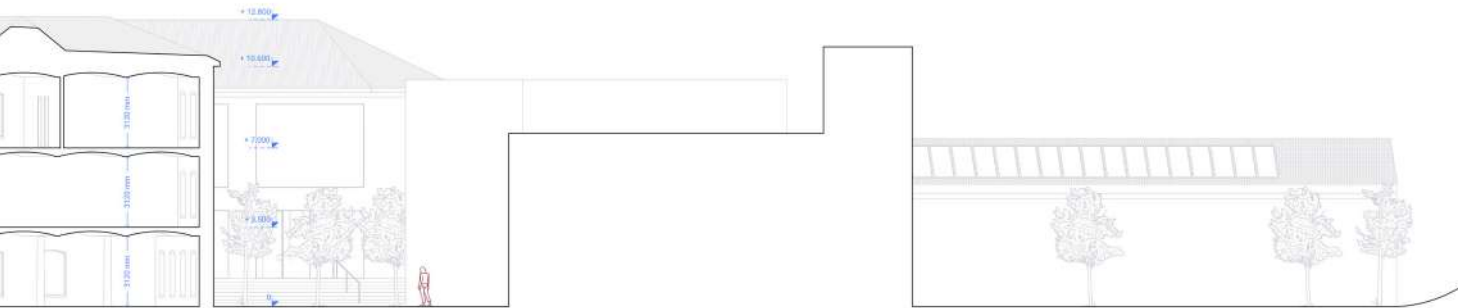
AA section

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1:400

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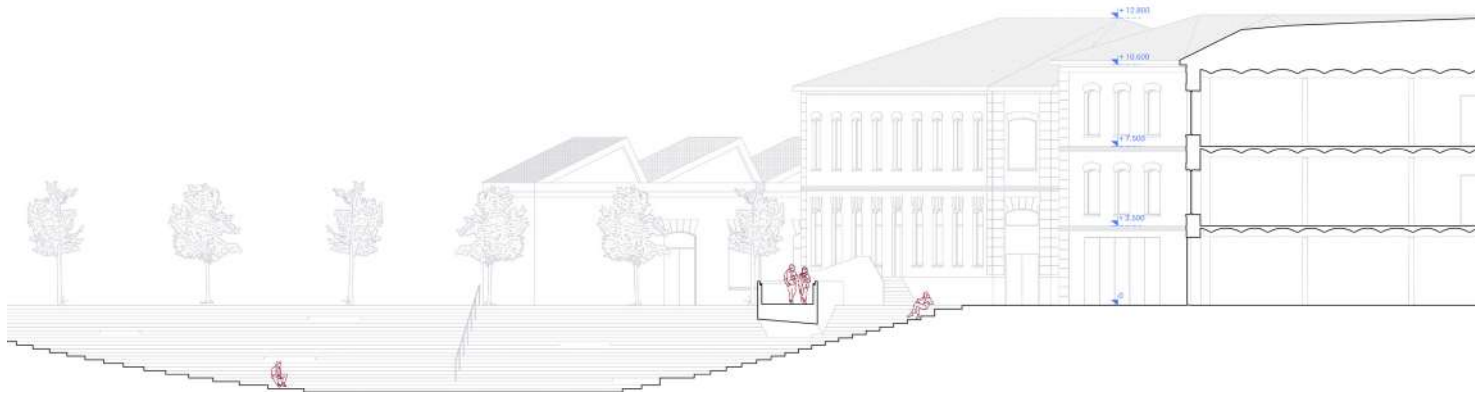




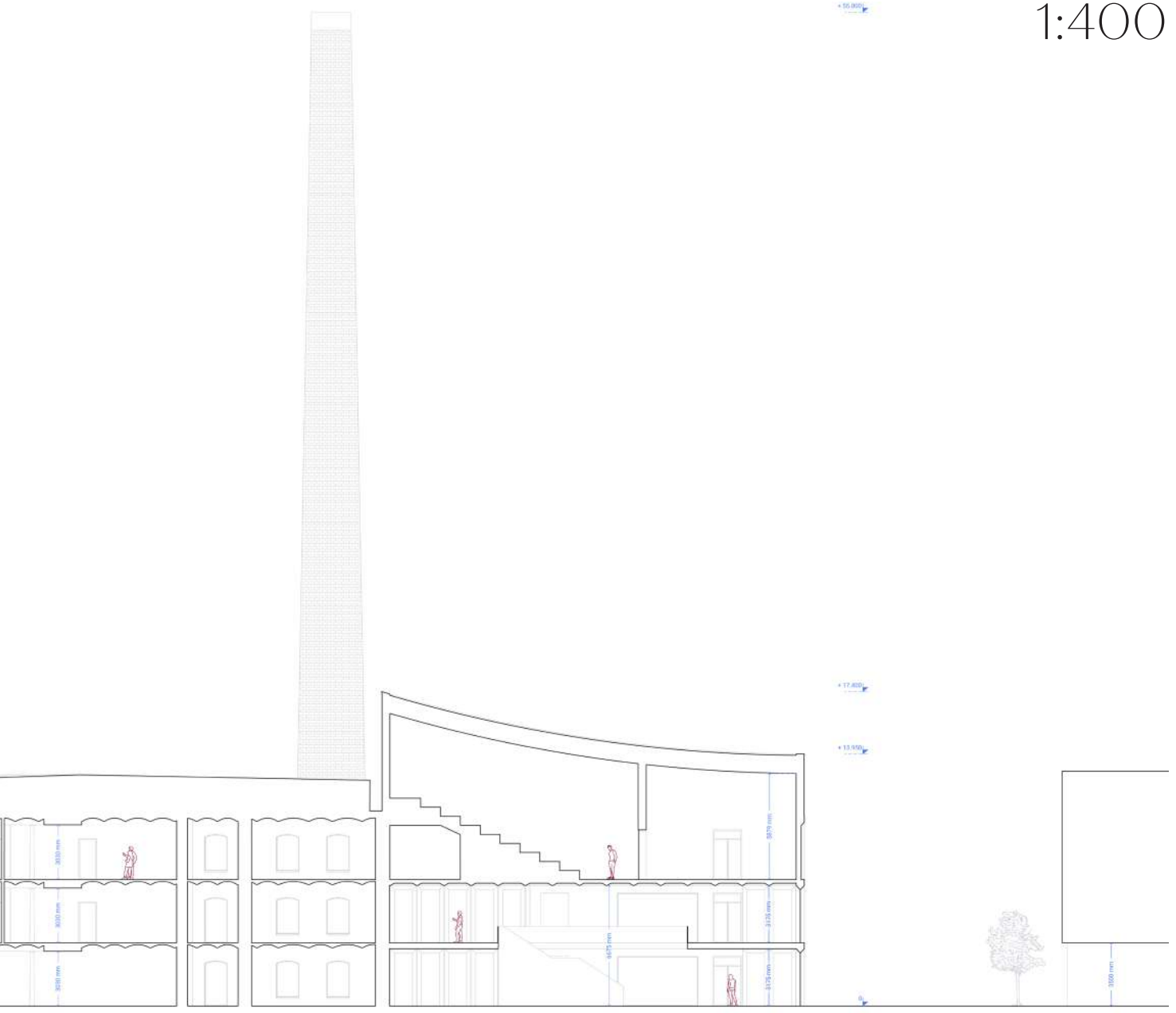


BB section

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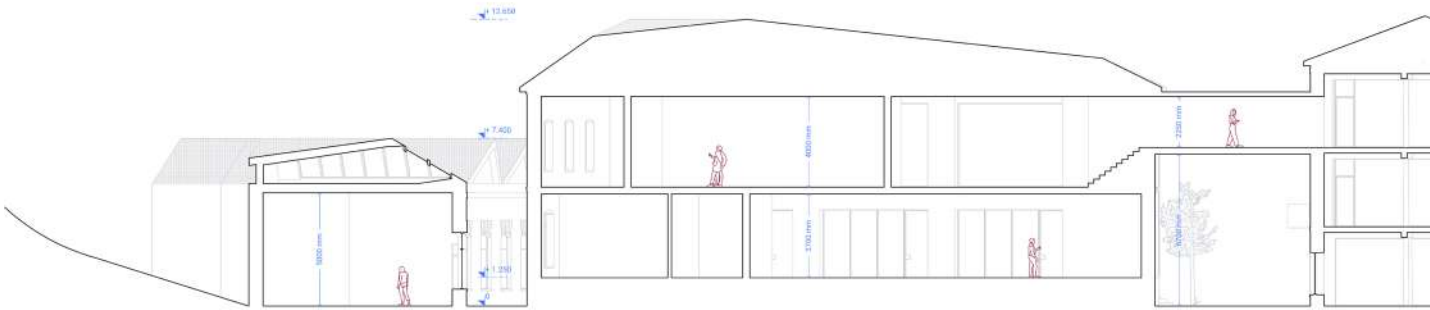




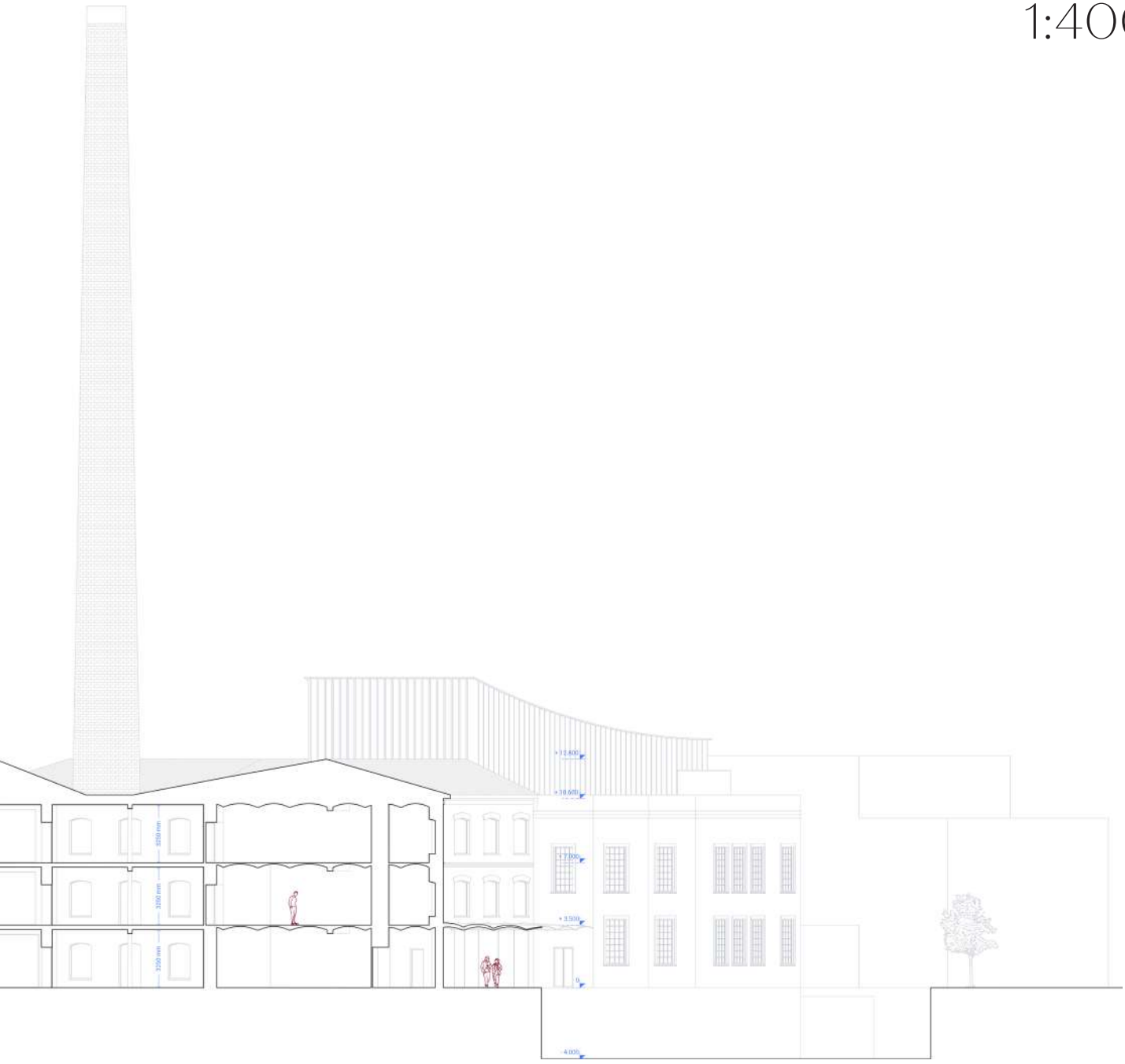


CC section

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This project has been conceived from the beginning so that it is not just a reconstruction of a building in poor condition, which has a certain historical and architectural value, but that this intervention has a positive impact on the whole city. And there are many towns like Broumov in the Czech Republic. And it is precisely these projects that can start a new wave of transformation of formerly industrial parts of towns that are today spinning in a dismal spiral. Architecture can show a direction and trend that will not only be visual, but will change the mindset of the inhabitants.

Conclusion.

