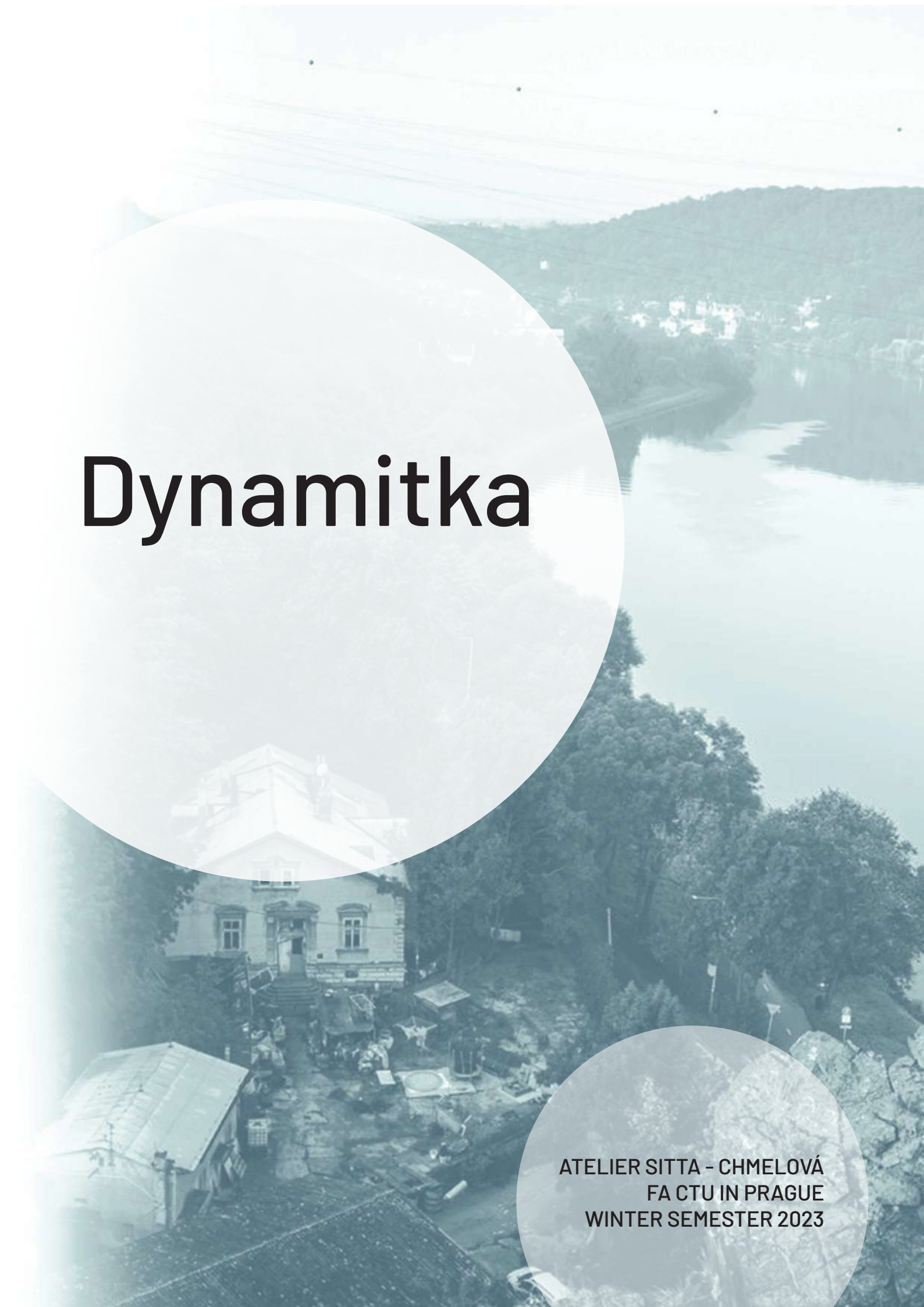
Dynamitka



ATELIER SITTA - CHMELOVÁ
FA CTU IN PRAGUE
WINTER SEMESTER 2023

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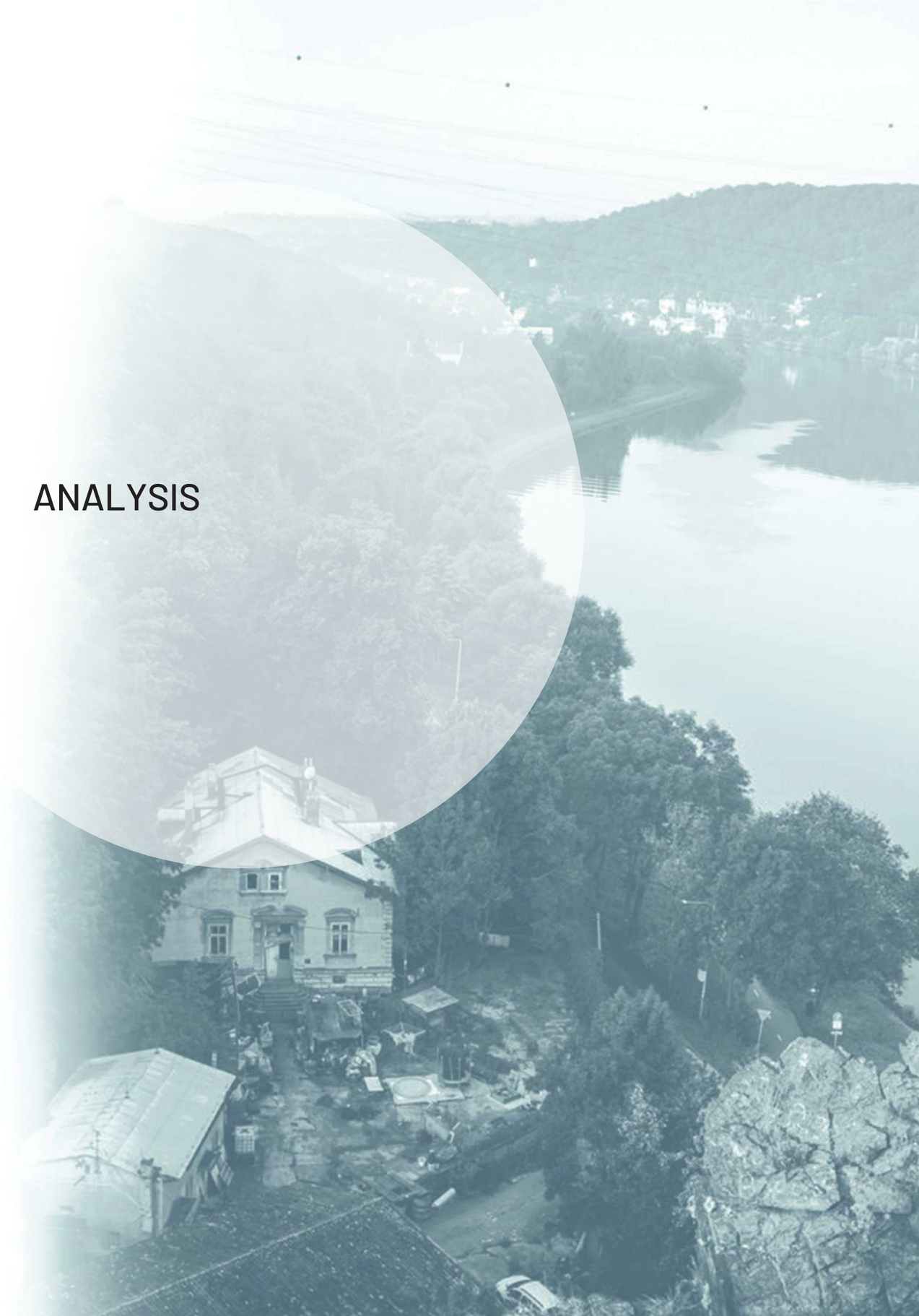
ANALYSIS



Timeline | Nobelova dynamitka

The socio-economic context of the 1850-1870 is characterized by a period during which many areas of human activity are developing rapidly. Major advances and developments in human knowledge are made, as well as the construction of a network of railways which facilitates the transport of goods. Furthermore, the rural exodus of people to urban areas encourages employment and further develops the emerging industry.

1866

Alfred Nobel invents dynamite.

1867

The invention of dynamite is patented. The new product is six times more effective than gunpowder. The use of dynamite provides enormous opportunities for the development of the industry and the construction.

1870

Operations start at the Zámce Dynamitka Factory. Buildings are temporary and made of wood. The site consists of operational buildings but also apartments for workers and other personnel.

1885

The start of the factory's decline. The factory in Bratislava is outcompeting the factory of Zamce. Also, the use of dynamite is starting to become less popular and being replaced by more effective explosives.

1918

By the end of the war and a creation of independent C vakia, the production of dy is stopped and the progra focused on industrial explo

Two explosions occurred within few months after the start of production, destroying the original buildings. The buildings are reconstructed in late 1871. This time, the factory is built stronger and more spacious. Also, the factory received permission to expand its land. This was done for safety reasons, so that individual operations could be separated from each other, resulting in many buildings scattered and placed further apart. They are the remaining buildings we can observe today on the site.

1871

The factory for the production of dynamite is founded by the Alfred Nobel & Company. The site for the construction of the factory is carefully chosen so that, in the event of an accident, the explosion would not endanger the surrounding buildings and population, because it is situated in a ravine. It is also chosen for its proximity to the city and to the railways.

1868

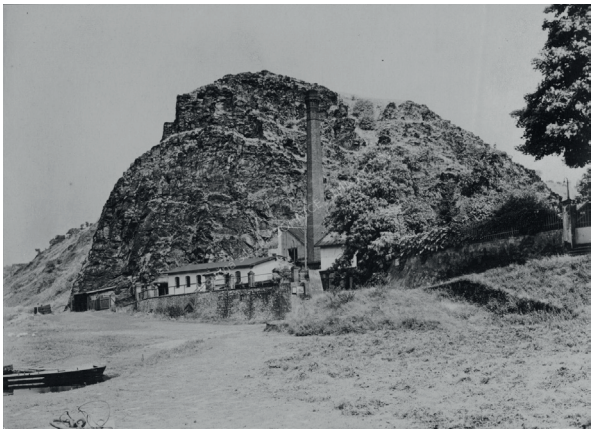
During the First World War, there is a resurgence and bigger demand for dynamite, with 500 workers at the factory.

1914

František Janeček, industrialist, buys t to produce hand gr and other pyrotech

1923

1924



after the
zechoslo-
ynamite
m is now
osives.

1946

During the post-war period of the socialist republic, the buildings of the factory were used for the production of pyrotechnics.

1989

1990

The buildings are bought by the Italian company Dinasta. The area is partly used as a paint and furniture warehouse.

At the start of the Second World War, the German company M. Berker takes over the factory and, together with the WaffenWerke-Brun company, produced gunpowder here.

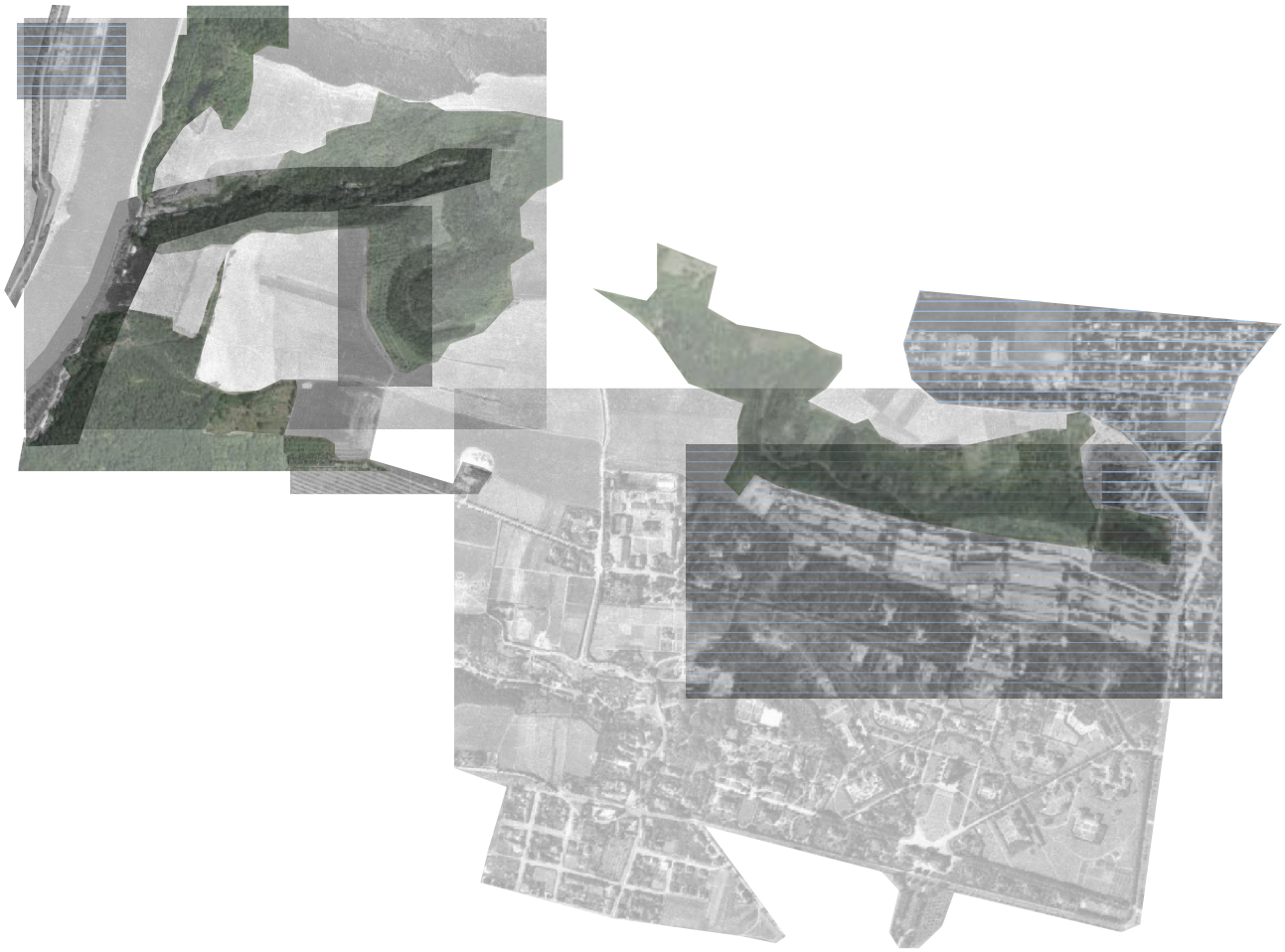
1939

an inventor and
he site. He uses it
enades, fireworks
nics.

The owner expressed interest to change the zoning plan. He plans to use the site as an area for recreational use, more focused on accommodation options and sports, for instance.

2010

Site evolution 1938 - today | Aerial Views



DYNAMITKA REGION AND BOHNIZE -
EVOLUTION 1938-TODAY IN AERIAL VIEWS
1:5000

rural development - 1950s

urban development - 1970s

wooded areas development - 2000s

Dynamitka

- The different buildings and structures of the Zamky valley are from the 1870s.
  They are still in use in 1938 - the factory is owned by Frantisek Janecek.
  The following year, 1939, sees the site taken over by german company M. Berker.

V Zamchich

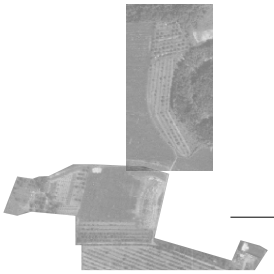
Bohnice

- The population of the area grew from 680 inhabitants to 3200 between 1870 and 1922.
  Bohnice became an official neighborhood of Prague in 1922.

1938 - aerial view

Roztocka

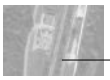
- The surroundings of the road (which did exist prior to 1938) is progressively paved and cleared of vegetation.
  From this, we assume a greater outflow of commuters on the western side of Vltava.



Agricultural / rural development

- Many patches of cultivated land appear in the region between 1938 and 1953.
  Among those a few can be noticed very close to the Zamky valley, on the southern steppe.

1953 - aerial view segments



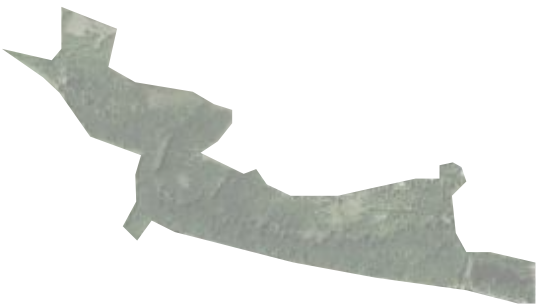
Roztocka

- There is some industrial development on the west side of Vltava

Cimice

Bohnice

1975 - aerial view segments



Abundance of fields and green spaces.
Vegetation takes over the abandoned site.

2022 - aerial view segments

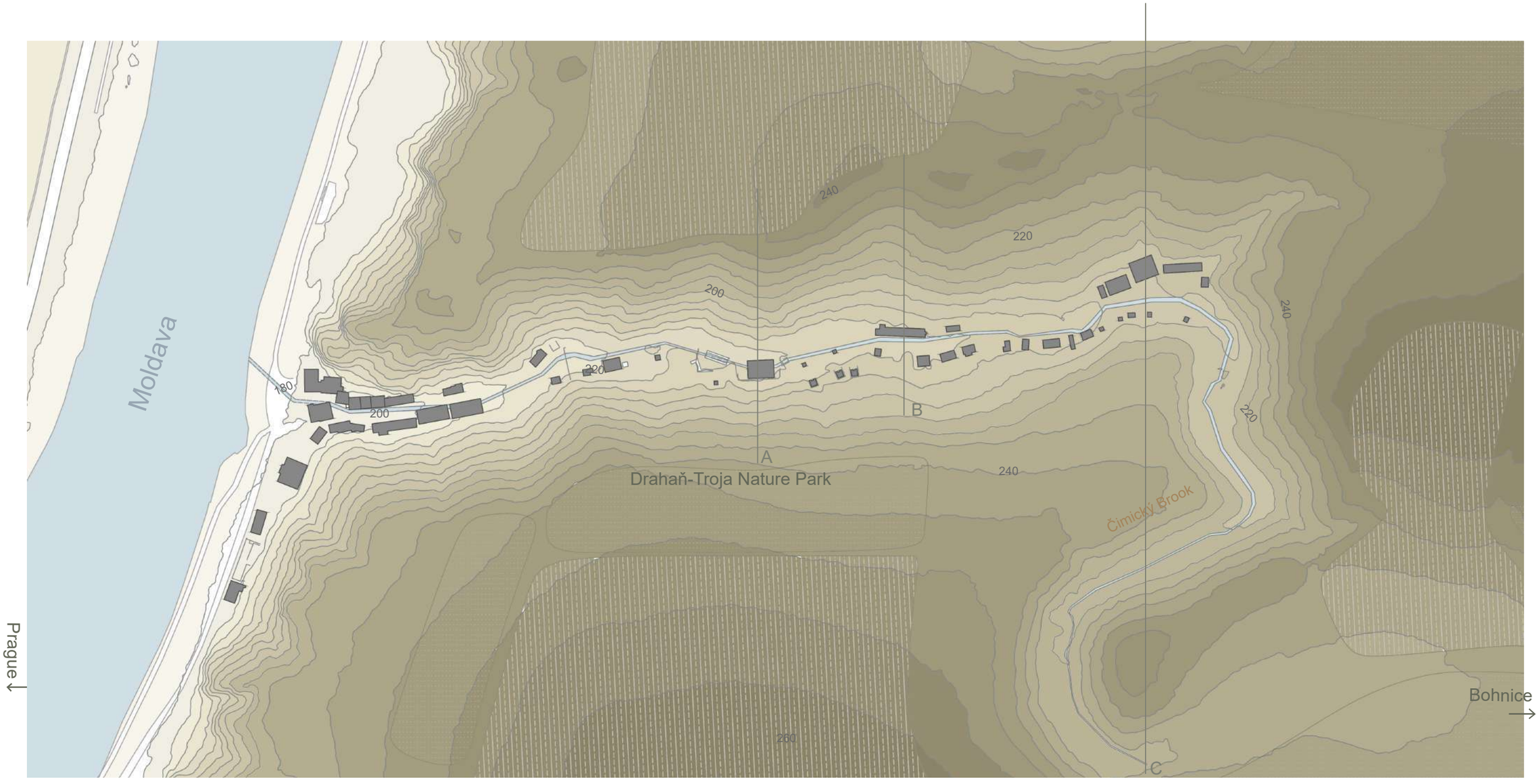
Landscape context

Control line 5m

Crops

GEOGRAPHICAL ENVIRONMENT

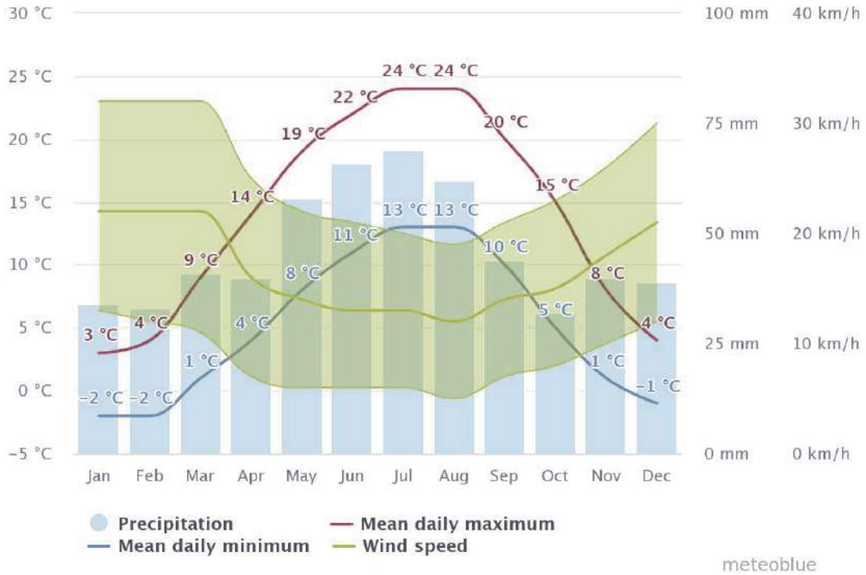
The factory is located close to the city of Prague, close to the River Moldava that flows through Prague, which could have played a significant role in the transportation. It is surrounded by forest areas that would have provided materials for the fabric. The location is placed in a rolling hills that might be a reason for it's location according to the security conditions.



Landscape context

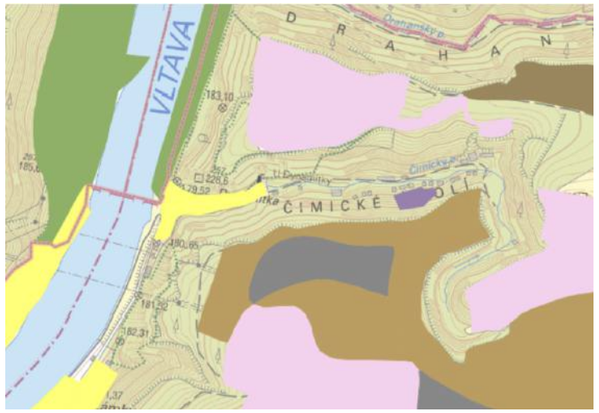
CLIMATE CONDITIONS

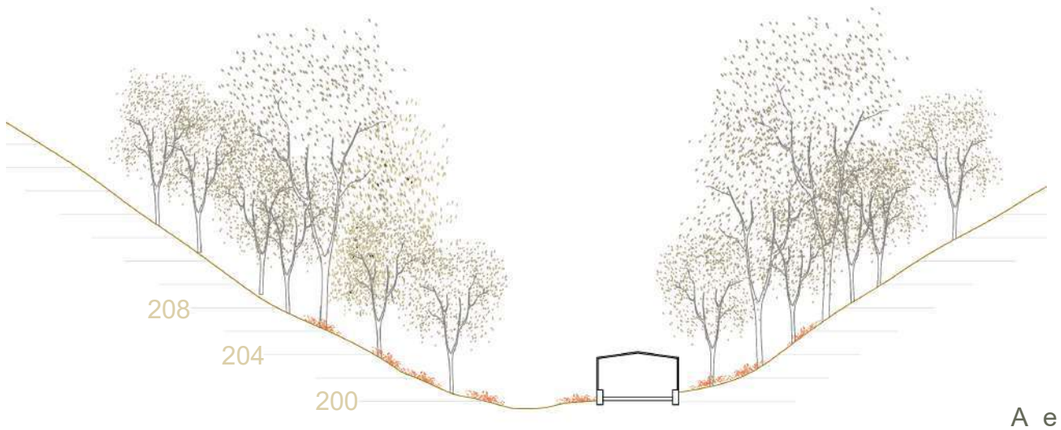
The area has cold winters with under zero temperatures and also some snowfalls.
The summers are much hotter and also humid, between 20 and 30 degrees.



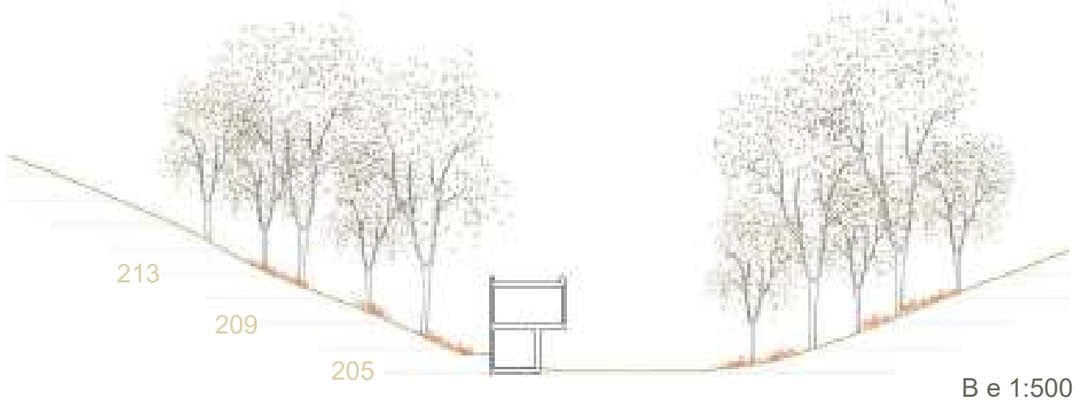
TIPE OF LAND

A Regosol is a type of soil with an underdeveloped profile and undefined layers. Its fertility is low, and it can be found in erosion-prone areas. They are unproductive and require amendments for agricultural use.
Regosols can pose challenges in construction due to their undeveloped soil profile and erosion susceptibility, often requiring soil preparation and specialized foundations for stability.





A e 1:500



B e 1:500

C e 1:3000

Landscape context

OTTENTIAL VEGETATION

The elm oak woodland is mostly a three-storey community. The tree floor is dominated by summer oak (Quercus robur) or ash (Fraxinus excelsior), we also find Tilia cordata and Ulmus minor, with small amounts of maples, Alnus glutinosa in the wetter variants and Carpinus betulus in the drier ones. Maples (Acer platanoides and A. pseudo-platanus) dominate in places in the farm stands.

Quercus robur

Tree up to 40 m tall, with a single stout trunk that can be as much as 11 m

Tila Cordata

Growing to 20–40 m tall, diameter 1/3 to 1/2 the height, with a trunk up to 1 m diameter

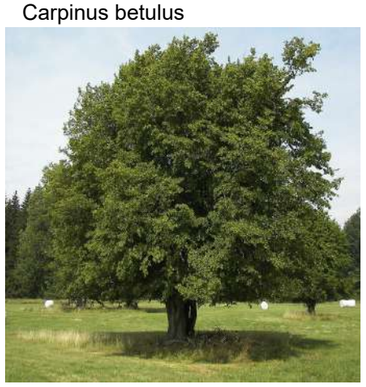
Ulmus minor

The tree typically grows to < 30 m and bears a rounded crown

Alnus glutinosa

Thrives in moist soils, and grows under favourable circumstances to a height of 20 to 30 metres and exceptionally up to 37 m.

Carpinus betulus

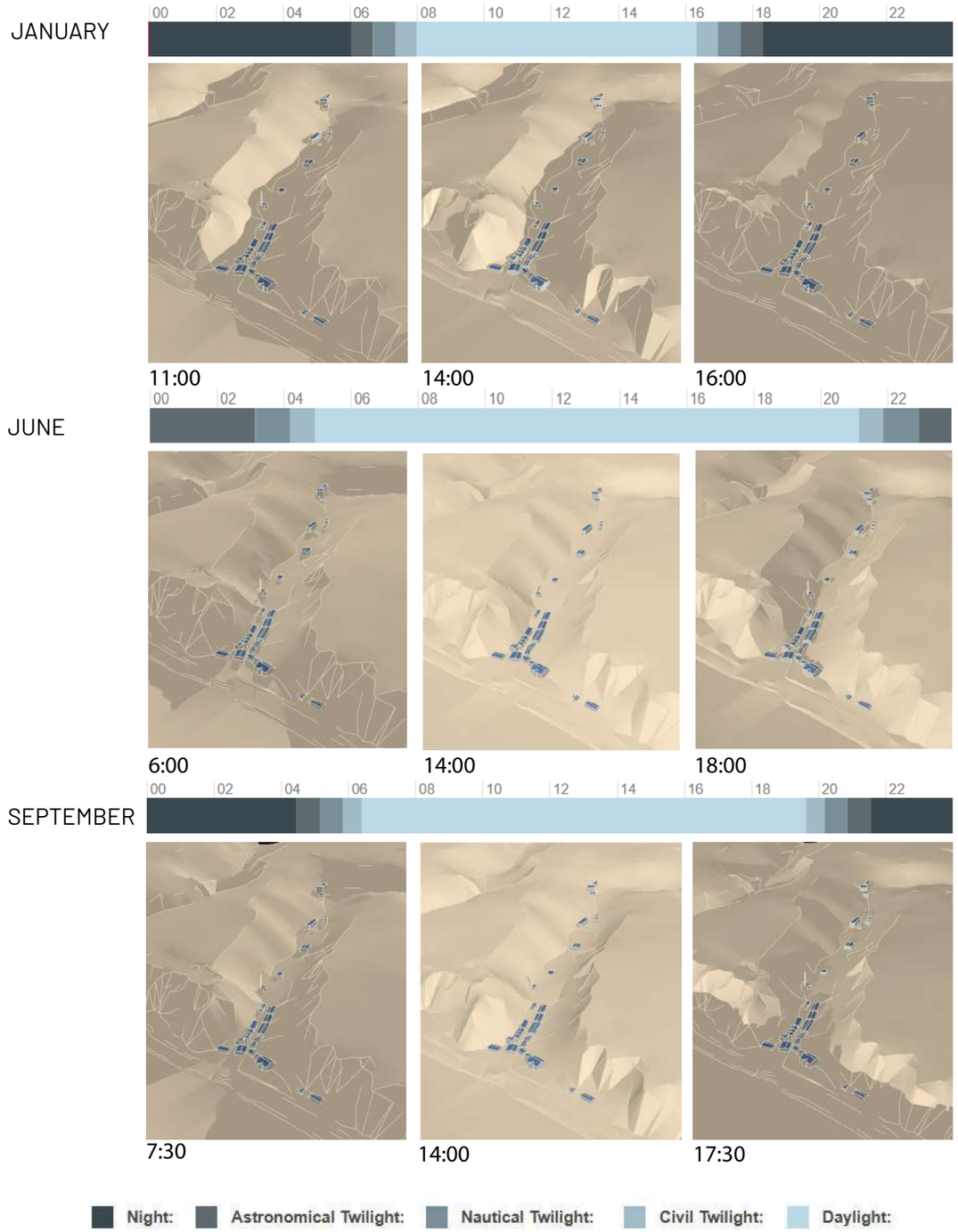


It is a deciduous small to medium-size tree reaching heights of 15–25 metres, rarely 30 m, and often has a fluted and crooked trunk

Acer platanoides

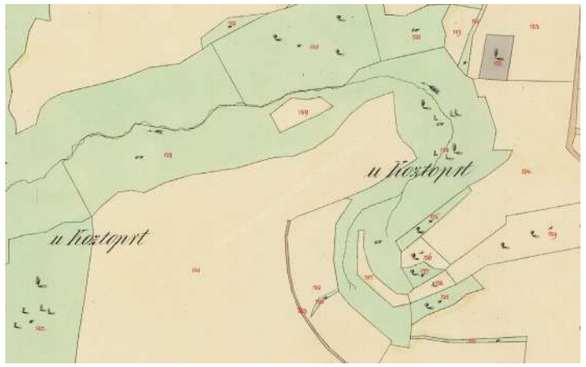
It is a deciduous tree that can reach up to 35 m in height, although it usually does not exceed 25 m

ANALYSISI OF THE SUN AND SHADOWS



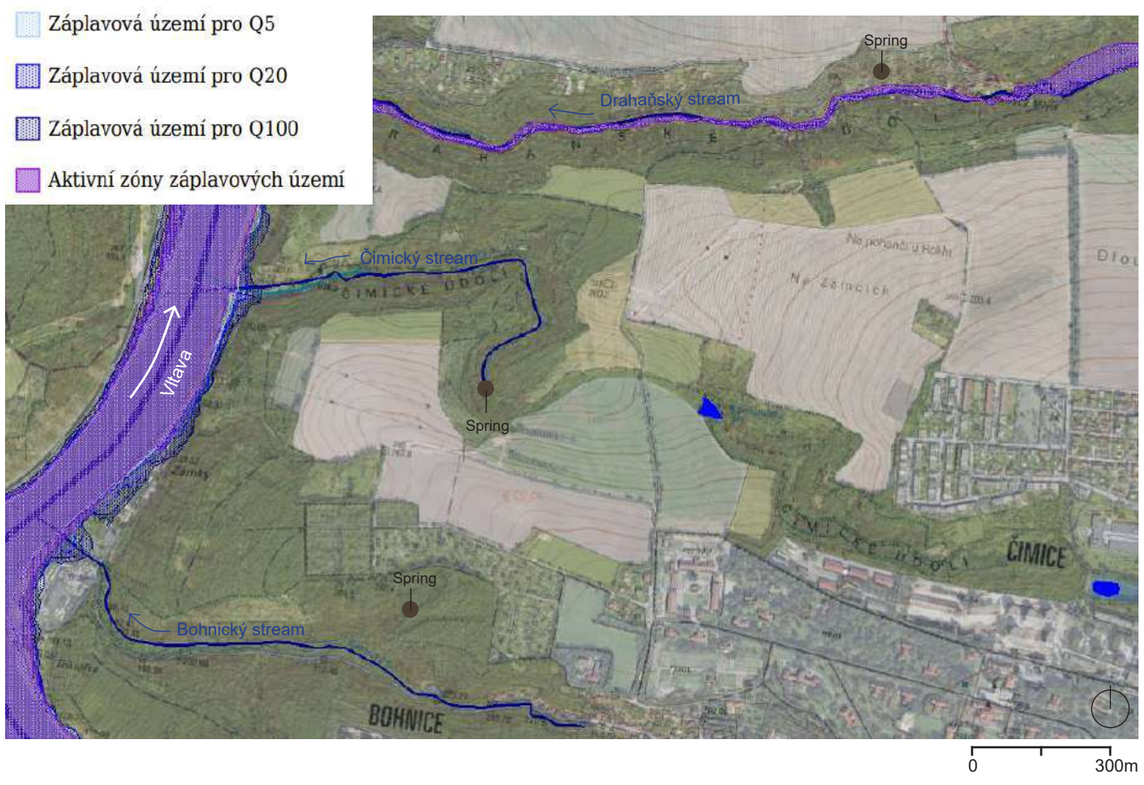
Hydrology

Koztoprtský pond
Around the pond, in 2010, 58 plant species and 125 butterfly species were discovered. The pond's characteristics are especially suitable for amphibians. It is home to the European tree frog, agile frog, occasionally the common toad, and two species of newts.



Imperial Impressions

The now almost imperceptible spring at the upper part of Zámecká Gorge, above the former dynamite factory, was located in a sharp right-hand bend of the valley, at the foot of the slope on its right side. Water only appears further down the valley in the form of puddles and waterlogged terrain without a distinct source.

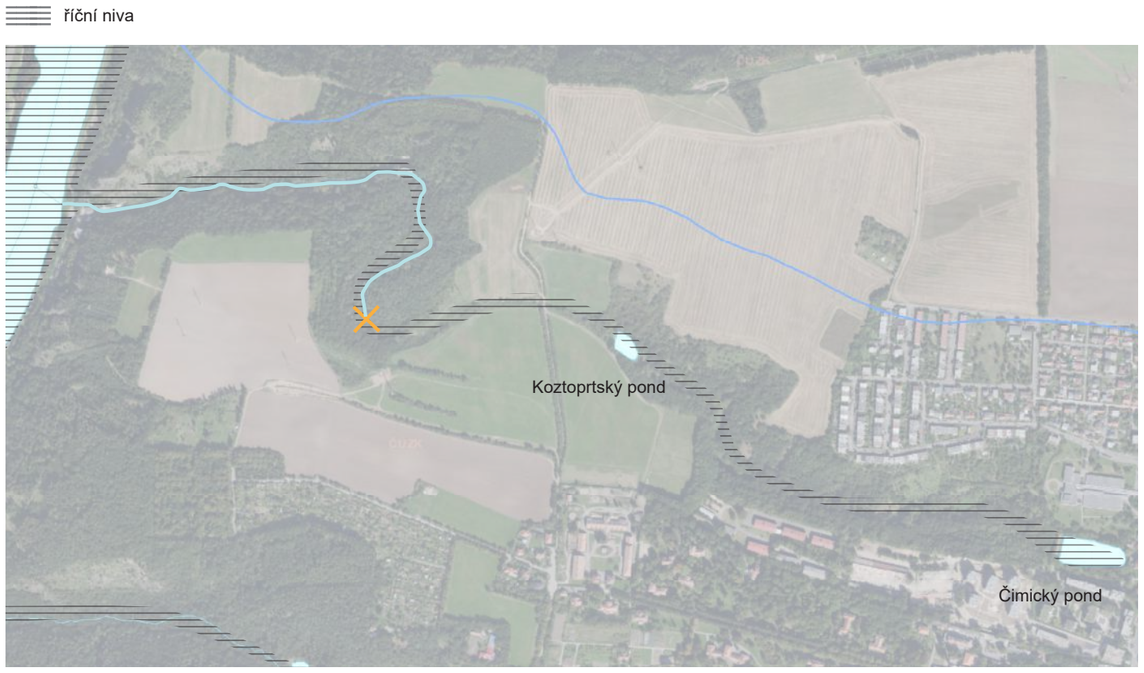


Čimický stream

The Čimice Stream once originated above the Čimice Pond and flowed through the entire Čimice Valley. Due to the construction of villa neighborhoods and housing estates (including underground networks) in the municipality of Čimice in the 1970s, the springs were diverted, and the stream dried up.
During the reconstruction of the Čimice Pond in 2006, most of the original water was successfully returned, and water began to flow through the Čimice Valley again, after many decades of being dry. The stream is now nearly dried up, and in its newly naturalized channel (previously a concrete trough, partially underground), there are places where no water flows. After the restoration, primarily involving the sealing of the sewage pipes, the stream filled the pond and continues westward towards the Koztoprt Pond and further into the Zámecká Gorge. In the lower part of the valley, water now flows in the channel throughout the year.

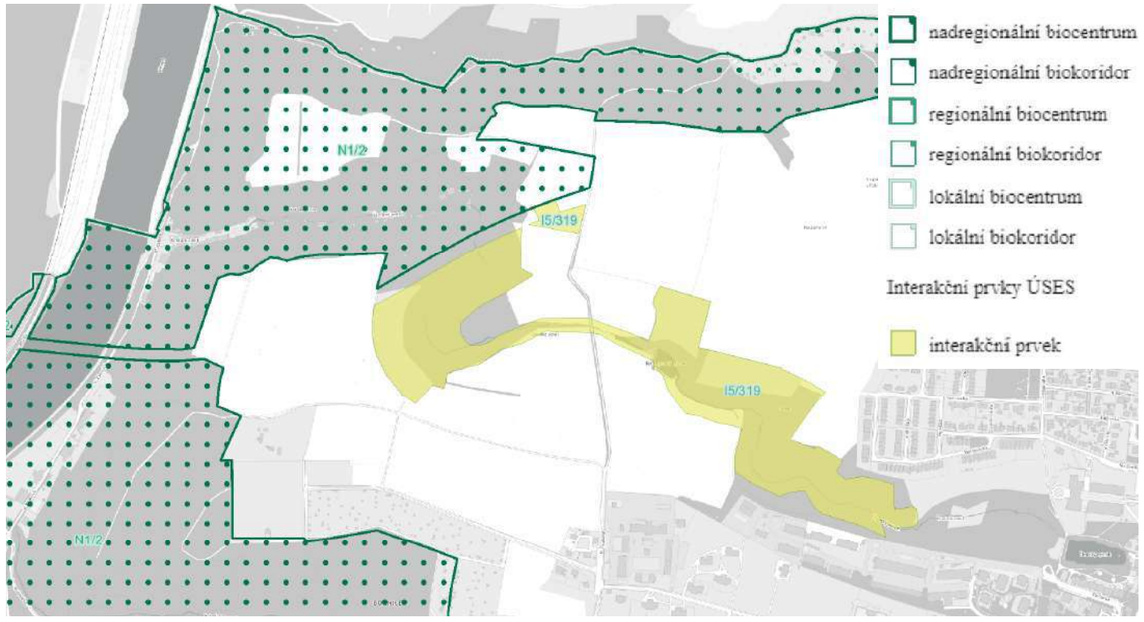
BASIC INFORMATION
Source: The Čimice Stream emerges from a small pond on the outskirts of the Čimice housing estate.
Length of the stream: 2.5 km.

The Čimice Stream can be divided into two sections. The upper part flows through the Čimice Valley Nature Park, following the blue hiking trail, and is very accessible. The second section, below the Čimice Valley Nature Park, heads towards the upper part of the former dynamite factory area.
Characteristics
The source has already disappeared. In the valley, a small watercourse appears, disappearing at many points. The source may have been one of the surface springs of the stream. It has been entirely without water for a long time, and its location cannot be precisely identified. Water reappears further down the valley in the form of puddles and waterlogged terrain without a distinct source.

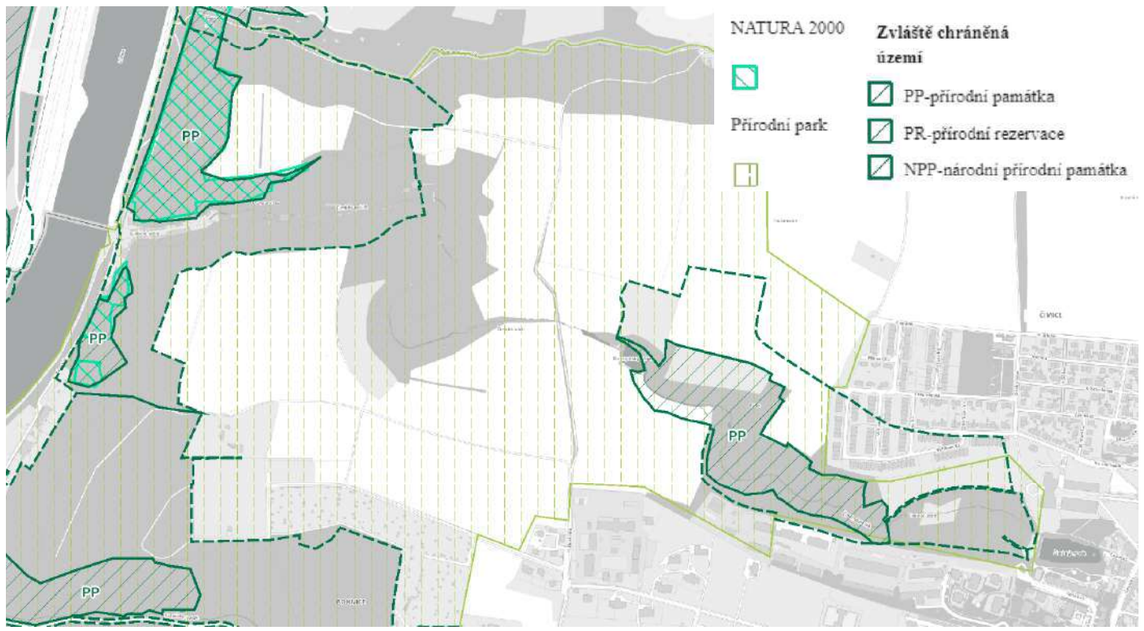


https://stezkabohnice.cz/voda/?fbclid=IwAR3F91pJsQk8jAljBeUAR6qpn8c050MpZggEGeDIthXP3waYJrrN9JhLSJw

Protected area



Supraregional Functional Biocenter Zámky, Sedlecké Skály, Vltava Valley, Drahaňské Valley, Functional Interaction Element Čimické Valley.



PP Zámky:Reason for protection - A significant geomorphological phenomenon with communities of rocks and rock steppes containing protected and endangered plants and animals; a protected archaeological site.
PP Čimické údolí: Reason for protection - Preservation of exposed rocky outcrops with warm-loving plant and animal communities.

Types of land parcels according to the land registry

The predominant land use in the area is arable land, followed by forested land, with the remainder being built-up areas.

Demography

Tab. č. 3 Srovnání věkového složení obyvatelstva, 2015

Region	Obyvatelstvo ve věku			Celkem	% obyvatel ve věku			Index stáří
	0 – 14	15 – 64	65 a více		0 – 14	15 – 64	65 a více	
MČ Praha 8	15 303	65 083	22 389	102 776	15 %	63 %	22 %	146

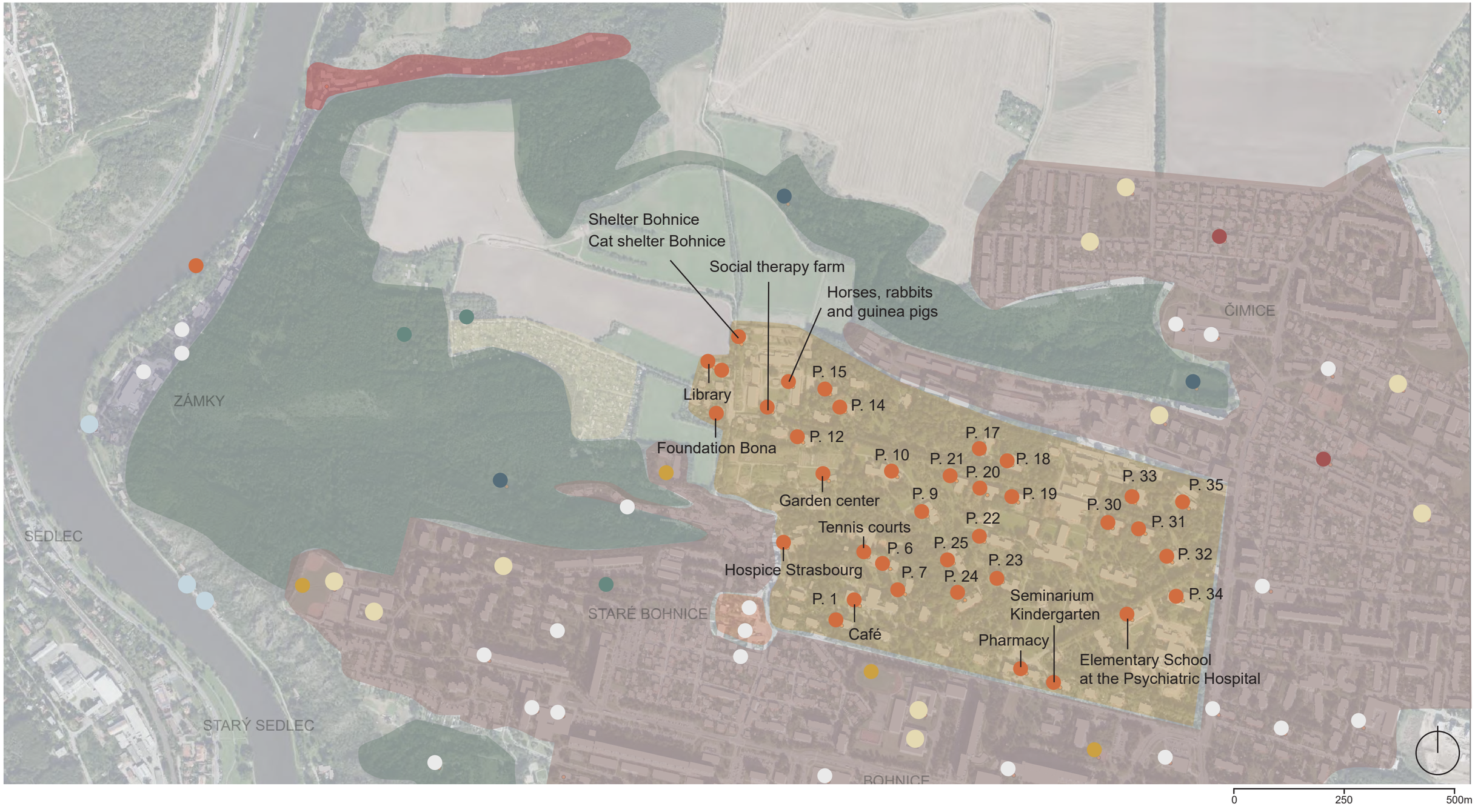
Functions / Current use

- Forest
- Housing estate the 1970s/1900s
- Psychiatric hospital
- Gardening colony
- Diverse housing developments
- Old town
- Industrial zone

- Bohnice are consists by the urban composition of the 1970s prevails, predominantly in the form of panel houses
- The complex of the Bohemian Psychiatric Hospital, was built in 1905
- Old Bohnice dates back to the 14th century
- The landscape of this area is defined by forested areas and vegetation to the west
- Čimice was constructed in the 19th century
- Along the banks of the Vltava River, you can see a diverse architectural character of family houses, from different historical periods and styles
- There is also an industrial zone, a former dynamite factory

Amenities in the hospital area

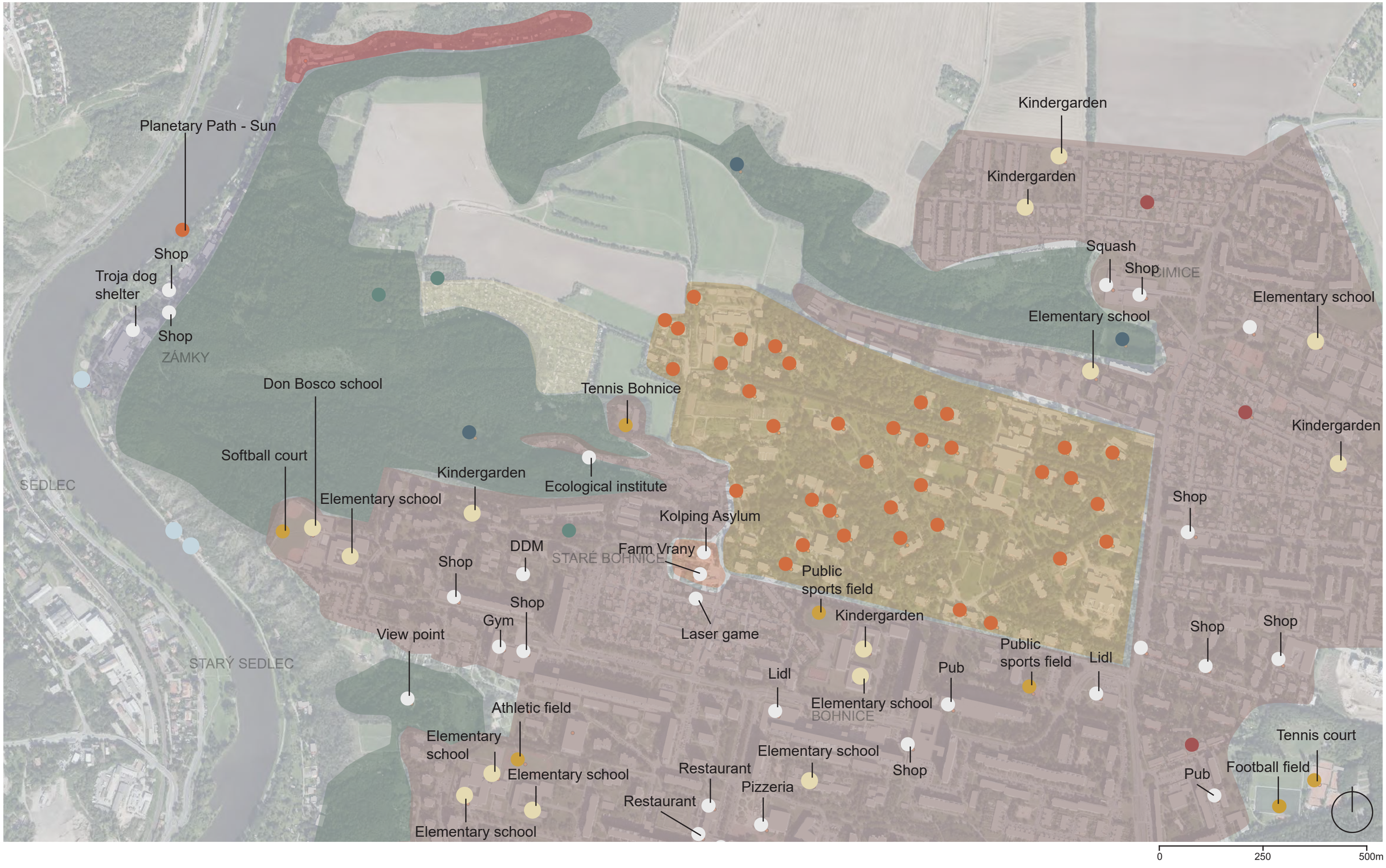
- he Psychiatric hospital has its own school and kindergarten, with a café and a nursery in the complex, along with an animal shelter serving the hospital's purposes.



Amenities

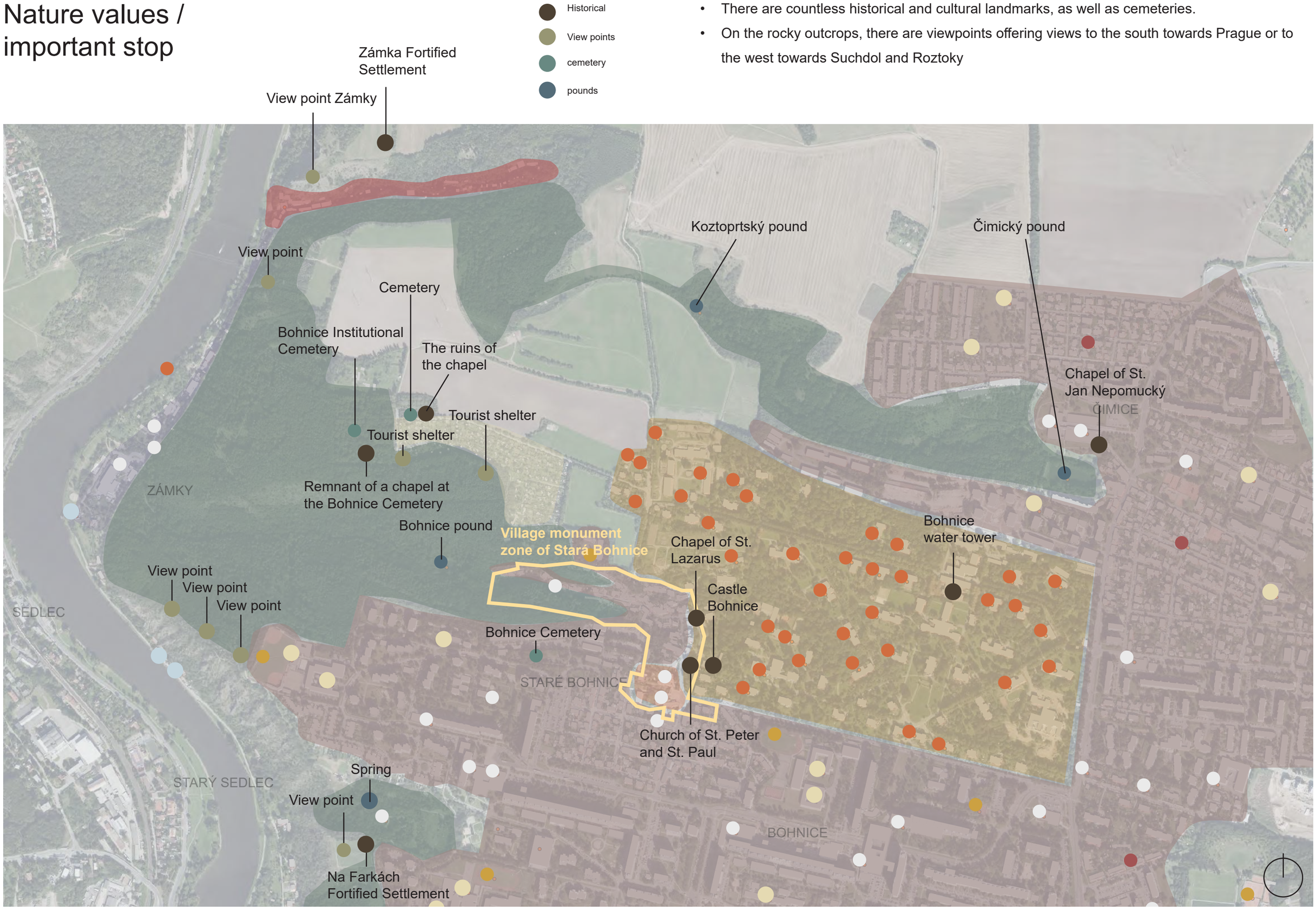
schools
sport fields
pension

- The built-up area is full of basic civic amenities
- There are many schools and kindergartens with sports facilities, grocery stores, several restaurants, and a few guesthouses/pensions.
- The area suffers from a lack of cultural facilities and resources.



Nature values / important stop

- There are countless historical and cultural landmarks, as well as cemeteries.
- On the rocky outcrops, there are viewpoints offering views to the south towards Prague or to the west towards Suchdol and Roztoky

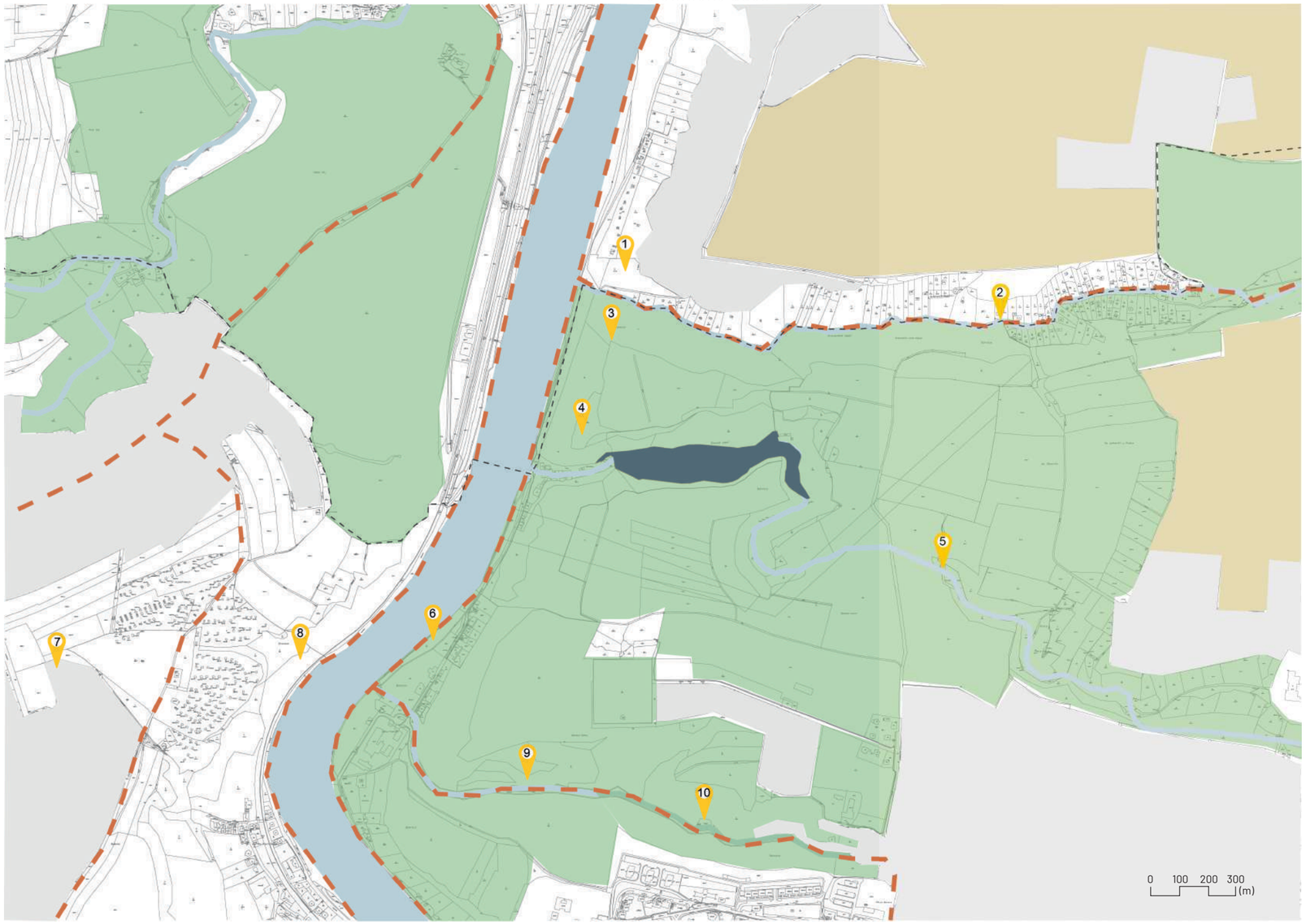


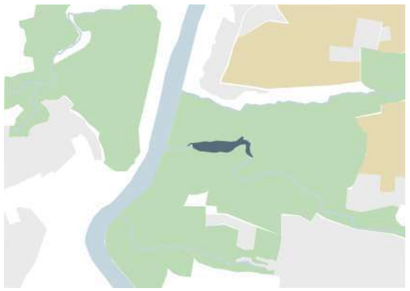
WIDER CONNECTIONS

forest
water
residential area
wasteland

Boundary
cycle road
tourist attraction

1 Kaňon Vltavy u Sedlce
2 Draháňské údolí
3 Vyhlídka Špička
4 Zámky
5 Čimické údolí
6 Planetární stezka
7 Komunitní zahrada Suchdol
8 Sedlecké skály
9 Bohnické údolí
10 Čimické údolí





Rich natural environments such as forests and rivers are located around the site.

Many places with various historical and cultural values are distributed within a 500m, 1km radius of the target site.

National Bicycle Road
Bicycle Roads by Region
Regular bicycle lane

Cycling Route
The red tourist sign 0005 from Prague-Troj to Kralupe nad Vltavou leads around the dynamite. The route starts from the Zoological Garden in Troja towards the Vltava River, where it turns west and follows the right bank of the Vltava River as far as Kralup nad Vltavou, with most of the route running directly along the river bank (or at most a few meters from it).

Transport and Infrastructure

main roads

bike roads

Bus/Boat station

Woods

Train station

Trainway

Lines

S 340/350

PS S4/S49

R 107/147

Z 236/350

Infrastructure

- Dynamitka part of Praha pid Zone
- located on northern site of Prague near Roztoky u Praha
- poorly connected to the city
- lots of bike lanes

Connections

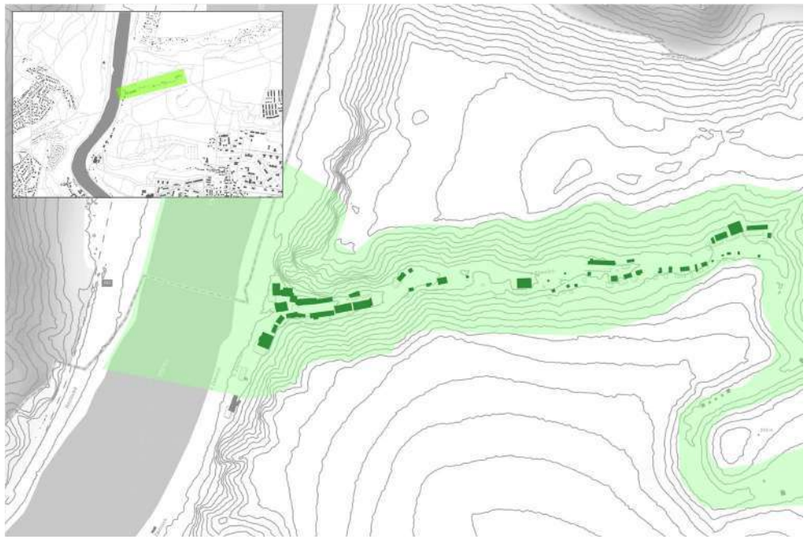
- Boat: Zamky and Sedlec (crossing Moldau)
  - 14 min by foot to Dynamitka
  - last boat 19:56
- nearest bus stop to Dynamitka: 1) Sedlecky privoz 17 min by foot a
  2) Zamky 9 min by foot
- nearest bus stop to city: 1) Roztocka 35 min by foot and boat
  2) Zamky 9 min by foot

Duration

- 50 min - 1.15h to get to the city center
  - after 22:30 1.40h to city center
- nightbus straight to city center

- nearest Pharmacy 31min by bus (BenuPharmacy Sutka)
- nearest ATM Rostocky u Praha 30 min by bus
- nearest Supermarket 19 min by bus (Alberts)
- nearset train station 36 min by foot (Praha Sedlec)
- CTU 55 min by bus
- Airport 1.30h by bus/ 42 min by car

SWOT Analysis



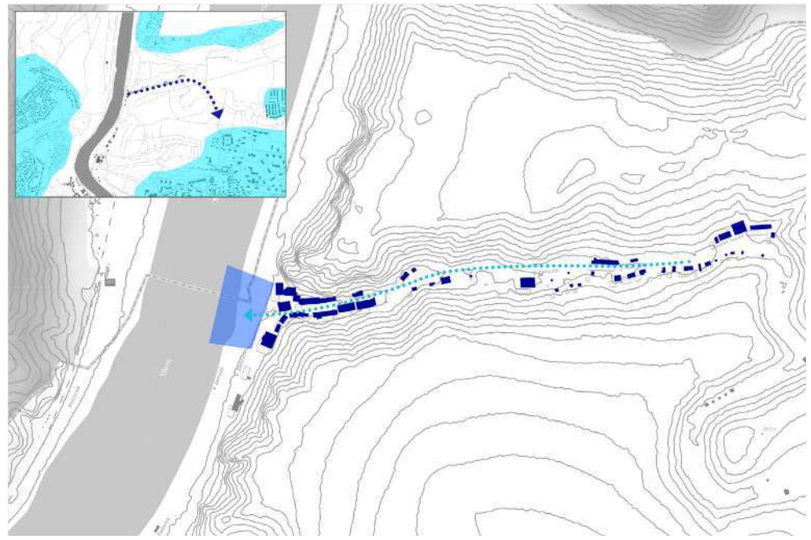
STRENGHTS

Historical Significance: Dynamitka has a historical background as a former dynamite factory.

Location : Very near to the centre of Prague but situated in a place where people can escape from the noise and "pressure" of the city

Landscape : Natural environment and picturesque place thanks to the valley and the river.

Preexisting building



OPPORTUNITIES

Cultural and Creative Hub: The area can become a cultural and creative hub

Spirit: The space already offers a spirit gives allure to future projects in the space

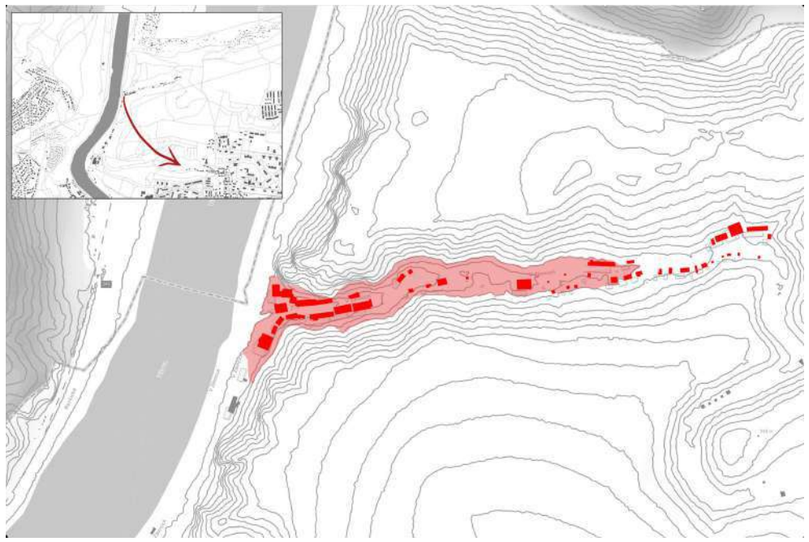
Adaptive Reuse: Dynamitka offers plenty of spaces to reuse and re-adapt

Collaboration with Local Community

Link: Making the link between two the front of the site and the village

Water path: Create a path for water coming from upstream of the site

River Front:



WEAKNESSES

Structural Decay: The existing buildings may have deteriorated over time

Zoning and Regulatory Hurdles: Dealing with local zoning laws and regulations, especially in a historically significant area, can be a complex process.

High Renovation Costs: Rehabilitating industrial sites can be costly

Area : in terms of location it is accessible but it's not a place you can randomly stumble upon and discover but a place you purposefully reach.

THREATS

Environmental Damage: The renovation process might harm the surrounding ecosystem.

Resident resistance: Opposition from the local resident

Flood Risk: Dynamitka is located near a river or in a flood-prone area

Limited tools due to site limitations: Limitation in construction due to the site's nature (narrow valleys, rocks, etc.)

Heritage Preservation Obstacles: Strict historical preservation requirements and limitations could hinder design and development options.

CASE STUDY

ZOLLVEREIN PARK

ESSEN, GERMANY

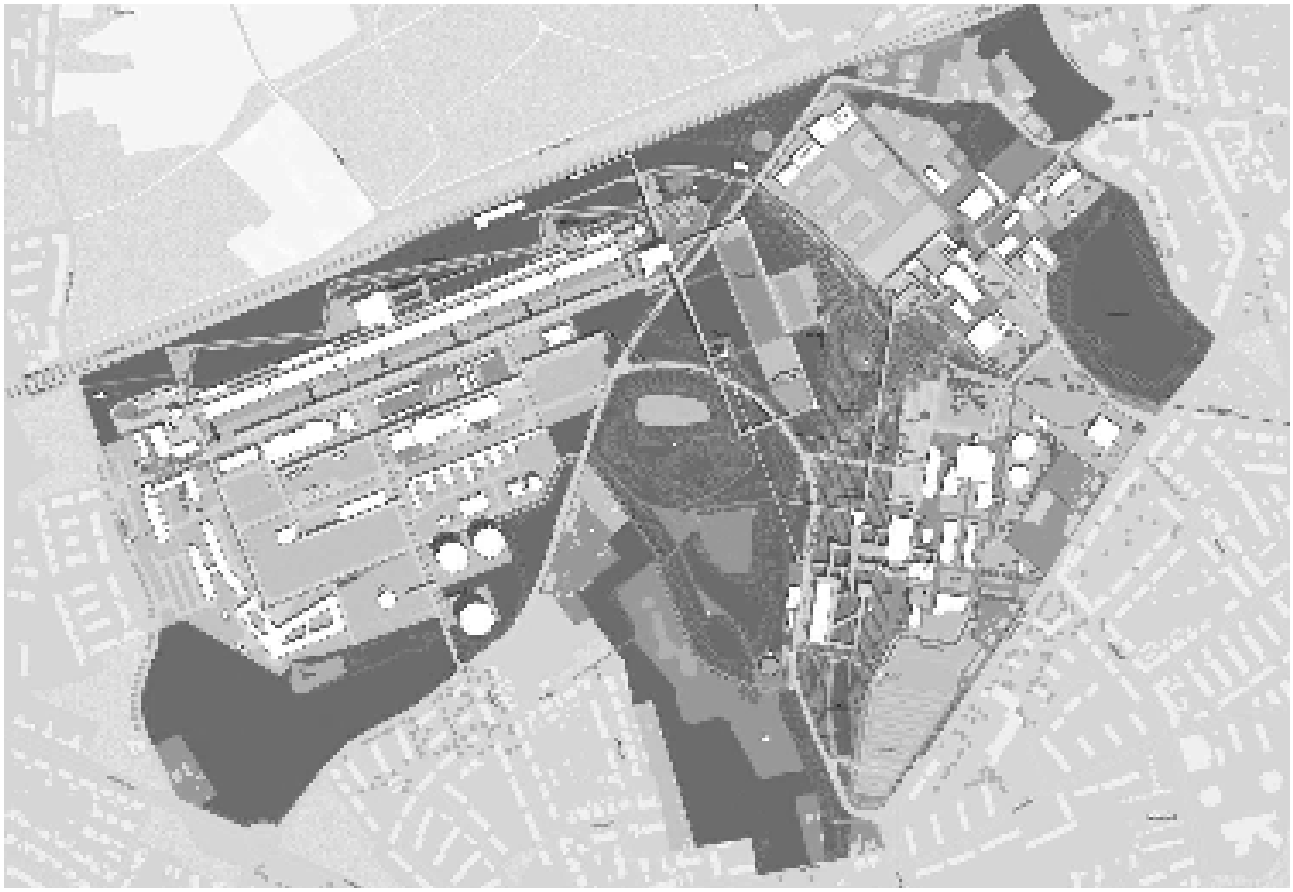
At the heart of Zollverein Park lies the unmistakable coal settling pond, a diverse open space nestled amidst the extraordinary industrial backdrop. Here, light birch groves intermingle with shadowy thickets, and water surfaces mirror the surroundings, while expansive areas rest upon the dark substrate. It's a captivating terrain, a topography shaped by mounds, ditches, peaks, slopes, and plateaus, embraced by the towering silhouettes of chimneys, electric pylons, cooling towers, and the rugged brickwork of Fritz Schupp and Martin Kremmer's coal processing machinery.

This previously forgotten landscape where flora and fauna flourished, undisturbed by the human presence, is now home to an important on-going public park project. The approach is to carefully emphasize the genius loci of this former no-man's-land while creating new infrastructure for community activities.

As part of the envisioned plan, designs have been proposed for the track boulevard and circular promenade, along with playgrounds and furnishings. Viewpoints and gardens have been strategically positioned, and a comprehensive strategy for the ongoing maintenance and development of existing vegetation has been implemented. Additionally, an intricate orientation system featuring entrance pavilions crafted as sculptures and a well-defined lighting concept with varying levels of intensity have been meticulously integrated.

The strategy embraces a living industrial landscape, not a museum-like one. It harmonizes history and present elements, leaving room for future interpretations. «Design by maintenance» gently tends to existing vegetation and minimizing major interventions. The park offers a unique, inviting experience for tourists and locals to explore at their own pace.

Presently, around one million individuals annually visit and enjoy the park.



TIMELINE

1847
The Zollverein mine is operative and the complex occupies 80 hectares, where coal shafts and a coking plant can be found.

1930
A series of Bauhaus-inspired buildings by architect Fritz Schupp compose the view.

1945
The complex is not damadeg by the Second World War and becomes Germany's most productive mining site.

1970
Extensions to the mine are made and it becomes one of the world's most important coke producers.

1993
Closure of the complex after a world drop in coke demande, the depletion of accessible coal deposits and the conversion of the Ruhr valley into a highly populated metropolitan region. The premises are protected from intrusions by a fence around its perimeter.

2001
The entire complex is declared a UNESCO World Heritage Site.

2002
OMA / Rem Koolhaas create a masterplan for the complex.

2003
Agence TER / Henri Bava expand the masterplan, for the regeneration of its industrial nature.

2005
The interdisciplinary team of landscape architects (Planergruppe Oberhausen), artists (Observatorium), communication designers (F1rstdesign) and lightning planers (Licht Kunst Licht) win the international architectural competition for the implementation of Zollverein Park on basis of the existing masterplans. Opening of Zollverein Park in accordance with the principle of "development through maintenance".

2006
Inauguration of the iconic red escalators by Rem Koolhaas. The Zollverein School of Management and Design, by SANAA, is completed.

2008
Transformation of the old coal washing plant into the Ruhr Museum by Heinrich Böll / Hans Krabe / OMA.

2018
Hororable mention for European Prize for Urban Public Space