

Kopaszi Dam Project

BME | AUTUMN SEMESTER | 2018.19

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Budapest

2018



⌚ 1km

HISTORY
WATER
URBAN FACTORY

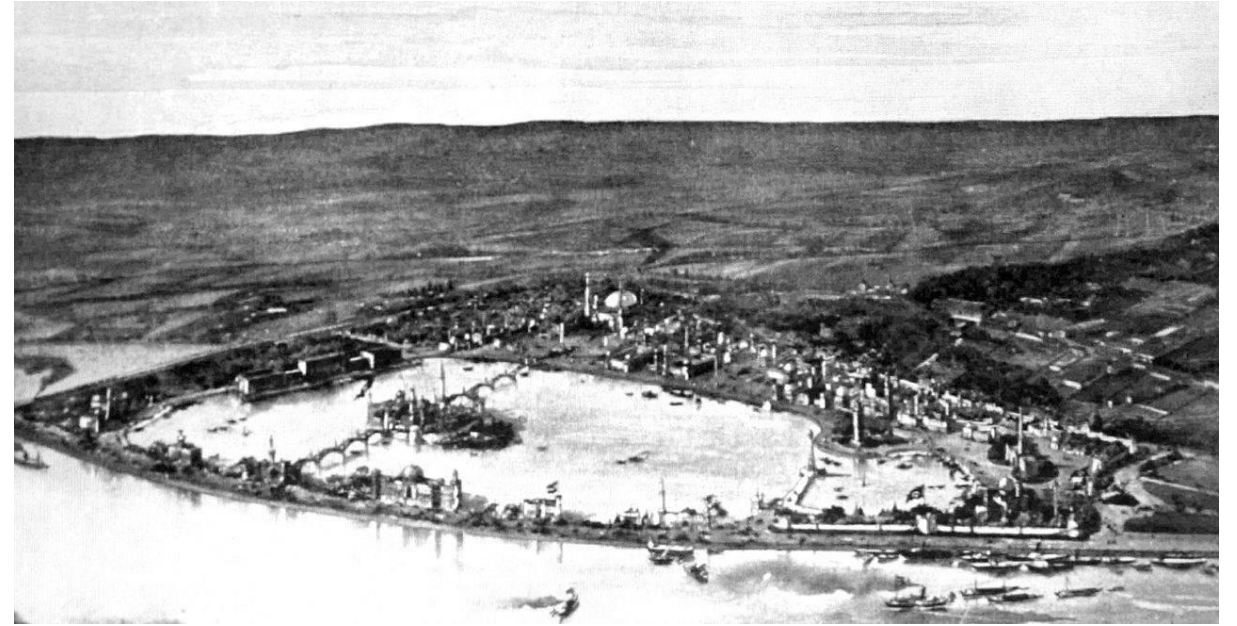
HISTORY

WATER

URBAN FACTORY

18th CENTURY

- Famous garden thanks to its entertainments
- The idea of the university botanical garden



1896

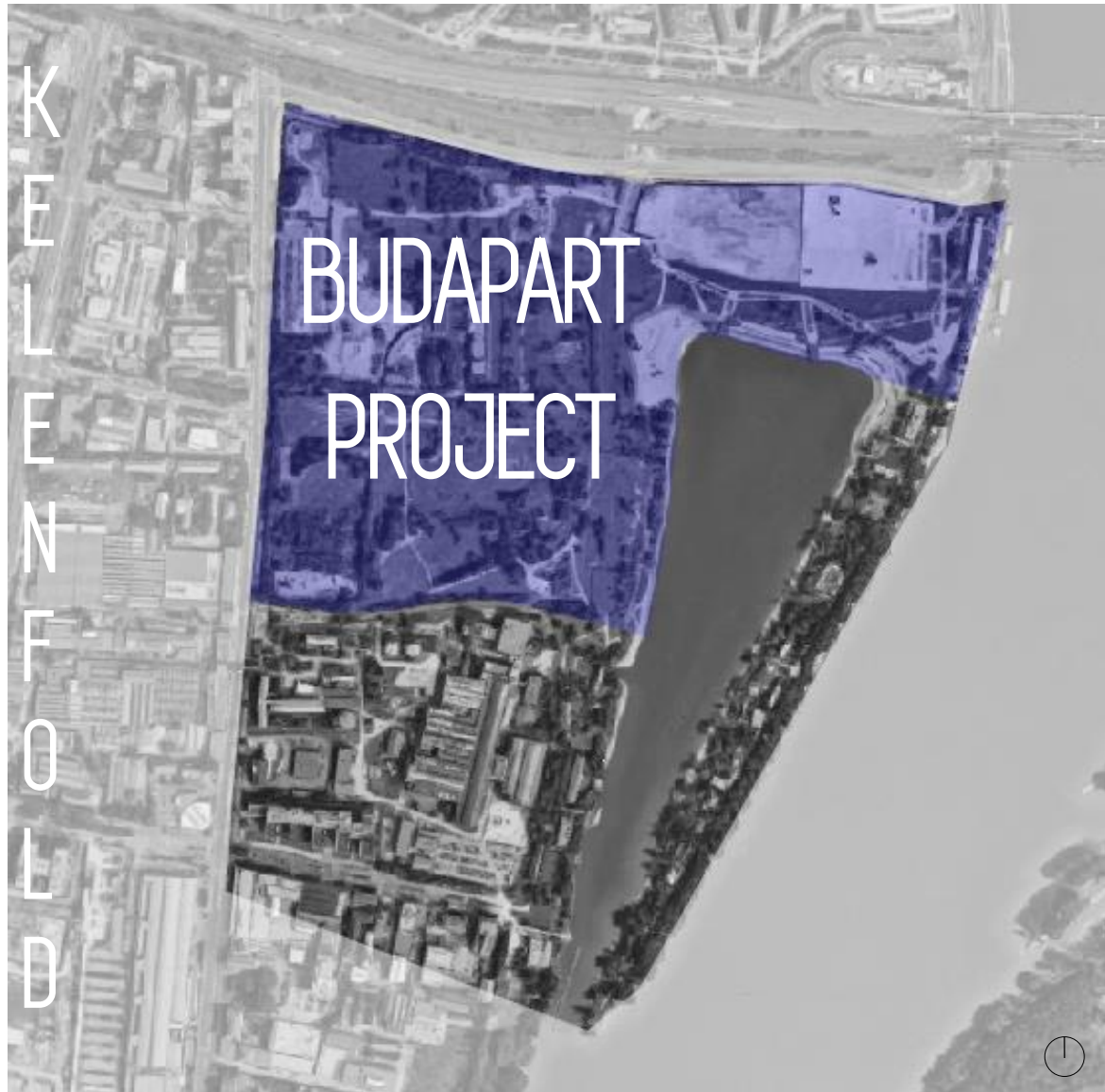
20th CENTURY

- An industrial area which became a wasteland



TODAY

- The modern project of Budapest



HISTORY
WATER
URBAN FACTORY

Budapest



⌚ 1km

Budapest



⌚ 1km

Budapest



⌚ 1km

THE GREAT FLOOD OF PEST

- 13th/18th March 1838



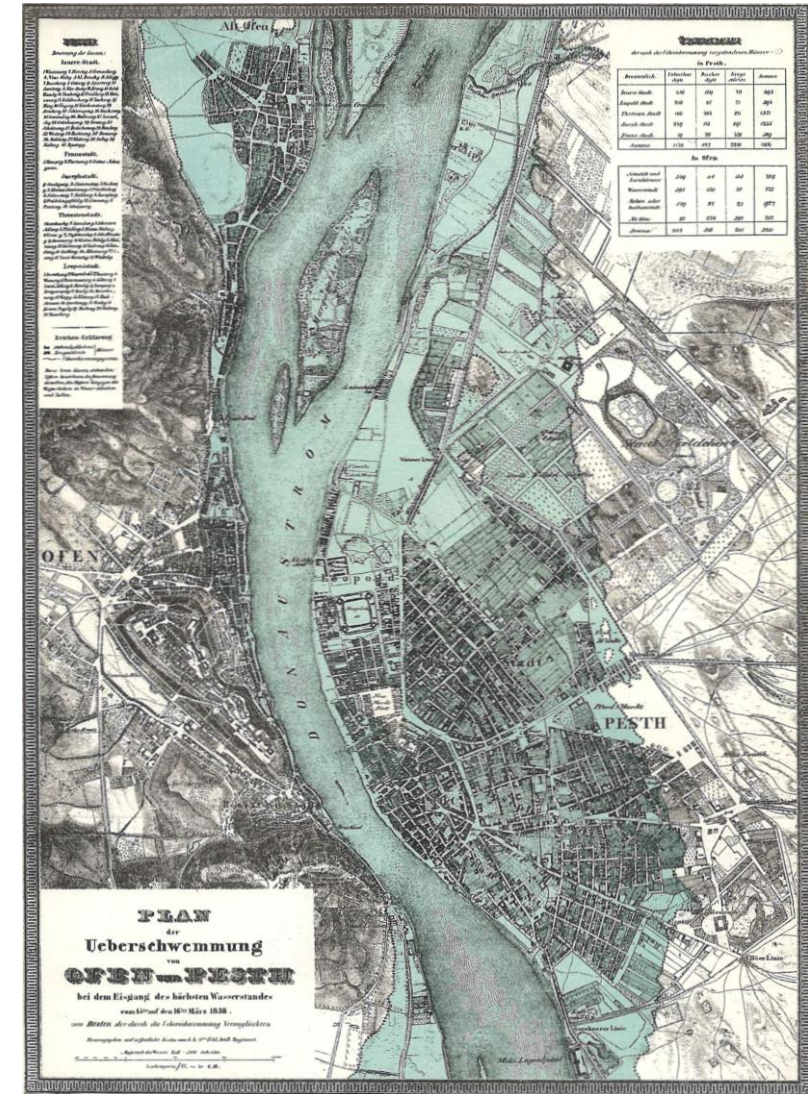
Johann Hürlimann . Árvíz a pesti Színház-téren . 1838

THE GREAT FLOOD OF PEST

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Johann Hürlimann . Árvíz a pesti Színház-téren . 1838



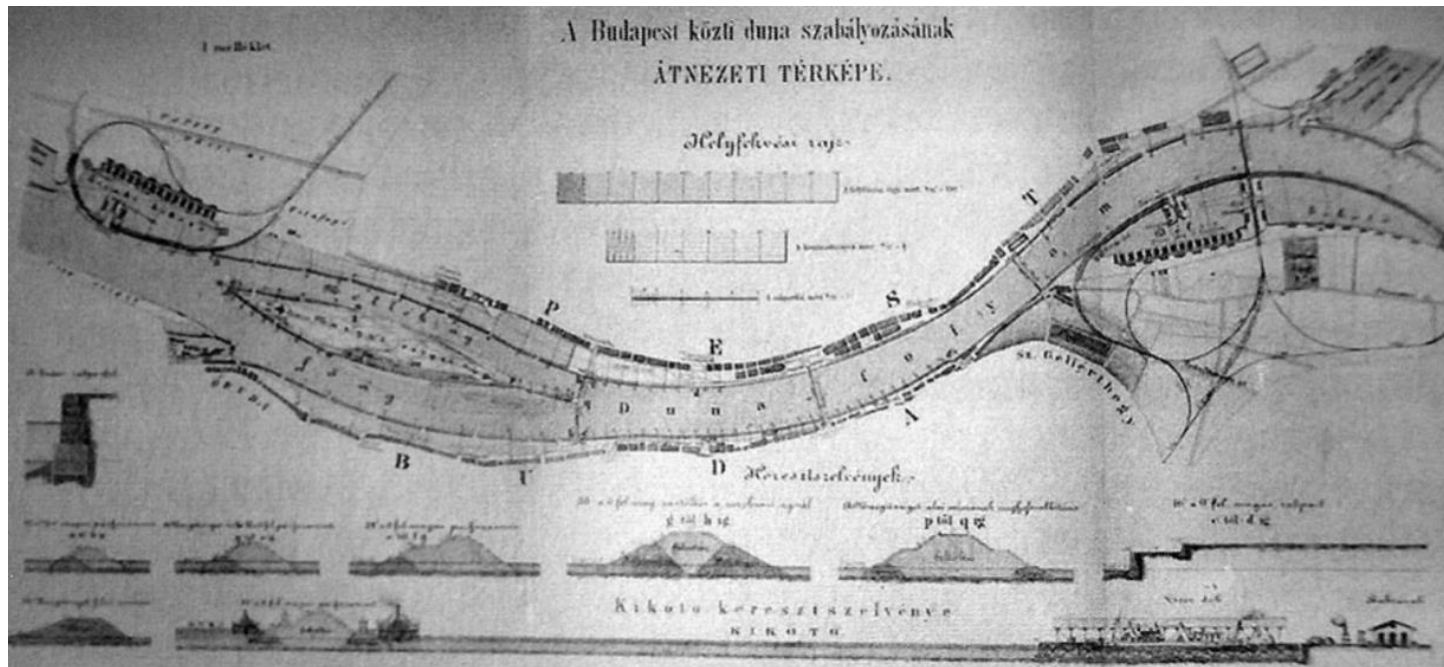
RECONSTRUCTION



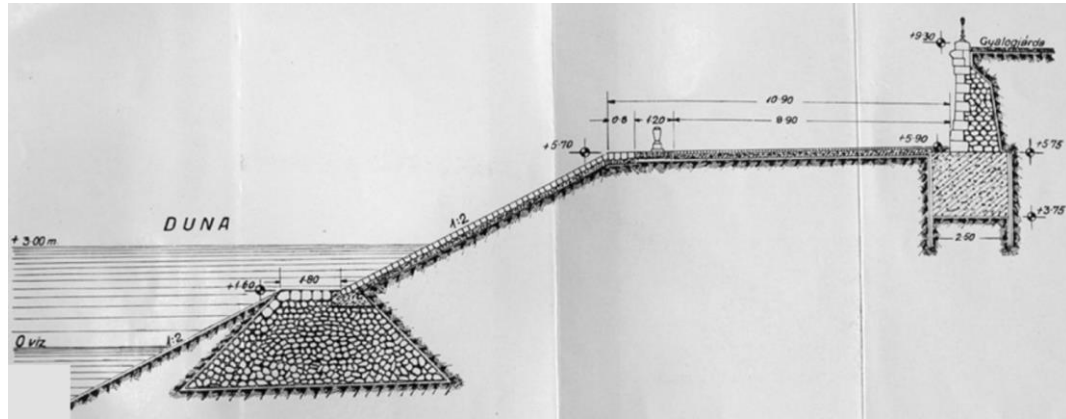
1866

RECONSTRUCTION

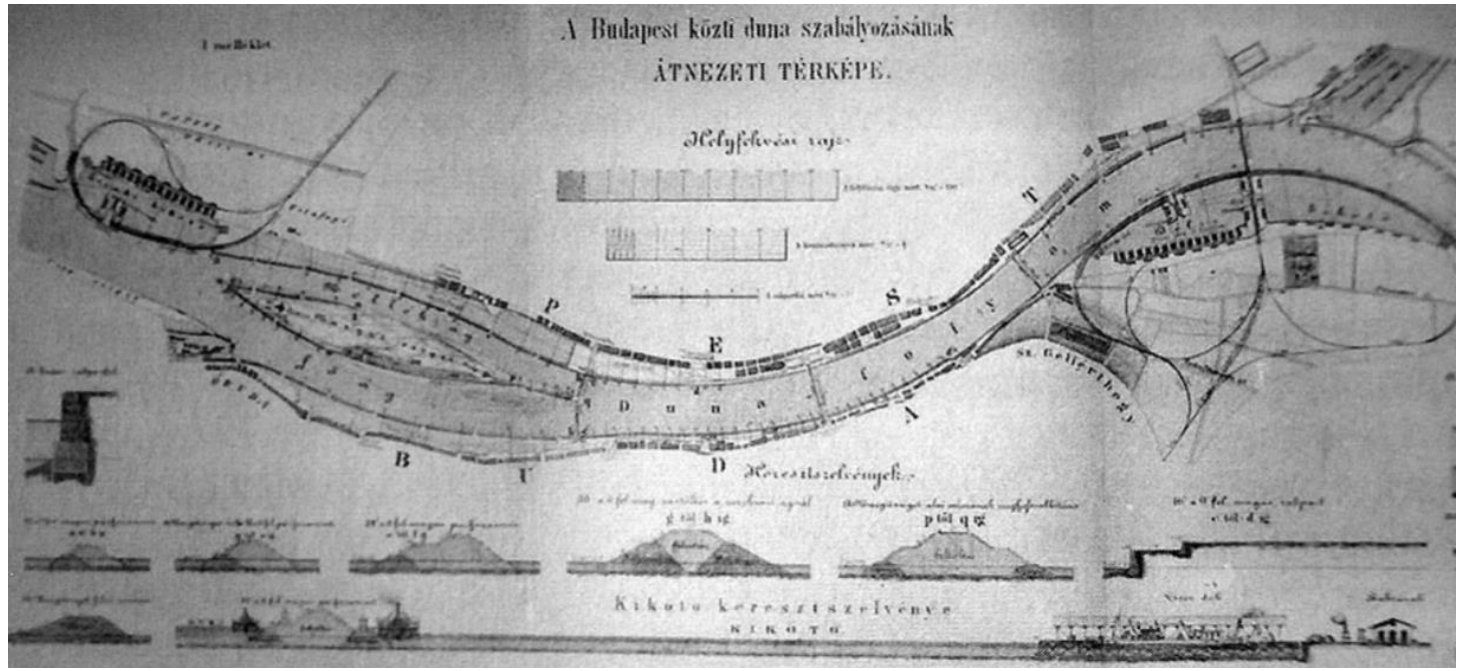
PLAN ⊖



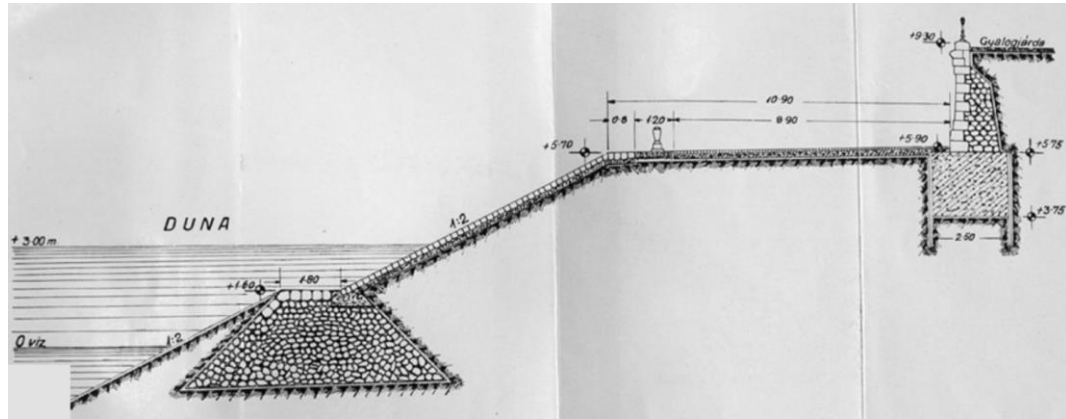
RECONSTRUCTION



SECTION AND PLAN ⊖

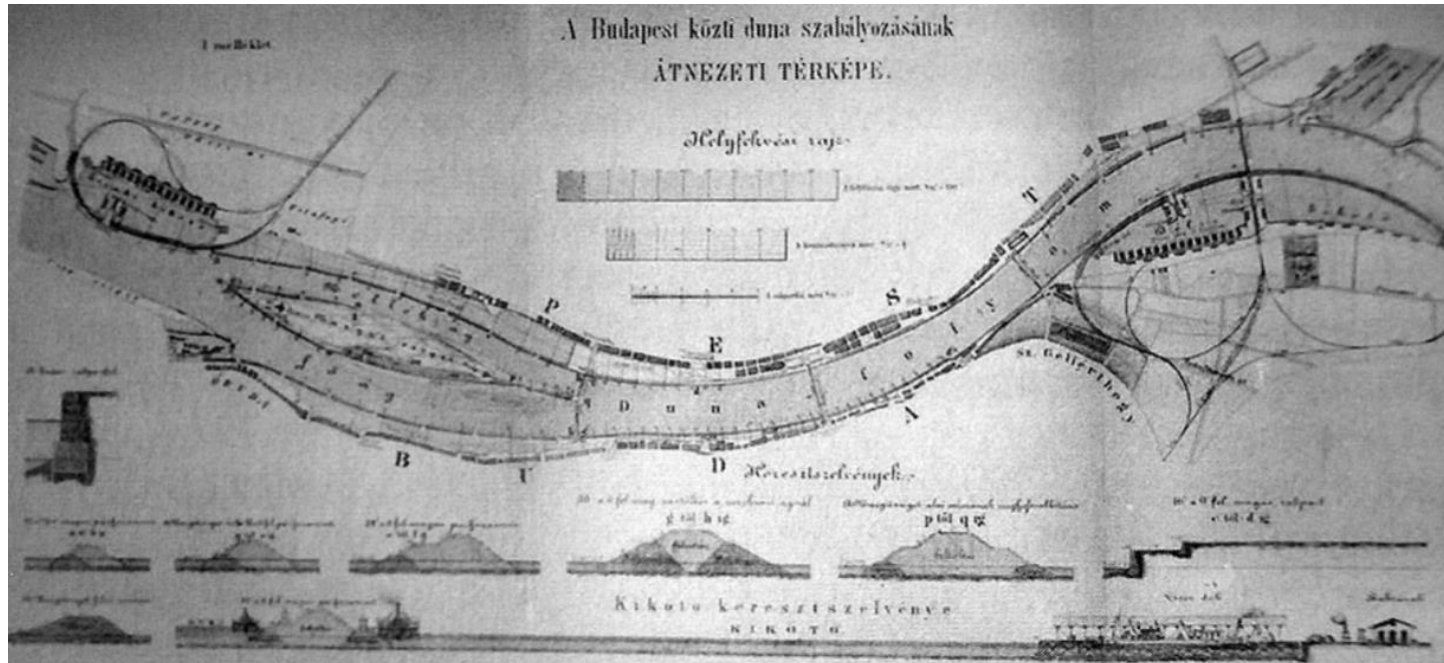


RECONSTRUCTION



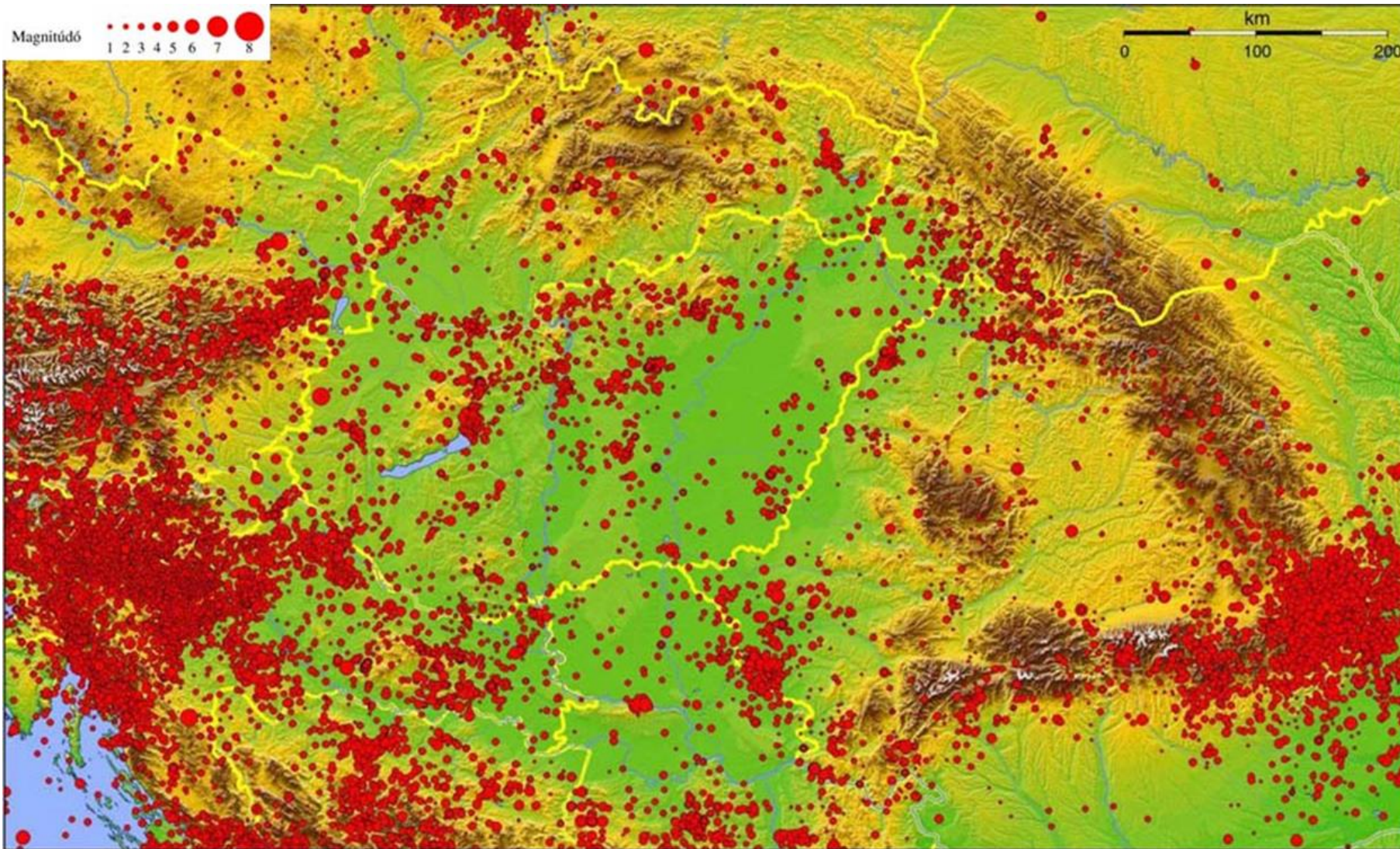
SECTION AND PLAN 

1880



DANGERS - EARTHQUAKE

- Pannonian Basin.

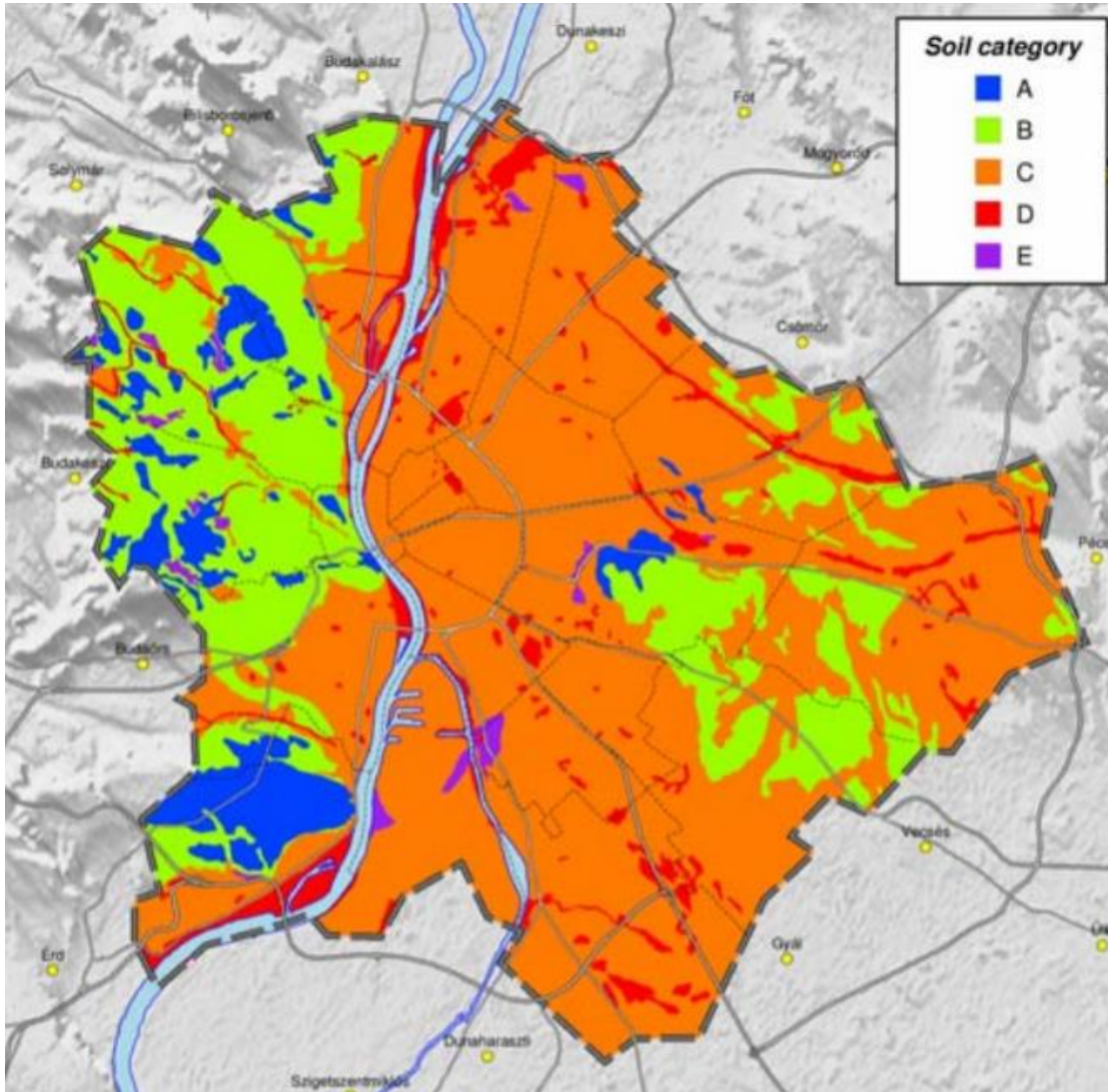


SOURCE: <https://nkfih.gov.hu/hivatalrol/otka-kiadvanyok/2015-augusztus-budapest>



DANGERS - EARTHQUAKE

- Soil category map based on Eurocode 8 standard subsoil types.



A: Triassic, Eocene, Miocene, limestone, Miocene volcanic formations, Pleistocene freshwater, limestone from Pilis and the Buda Mountains are high up parts of the Tétényi Fennsík and Quarry.

B: Eocene Formations, Buda Marga, Kiscelli Clay, oligocenocyclic sedimentary formations.

C: Budapest is the largest wide areas; the holocene and most of Pleistocene sediments.

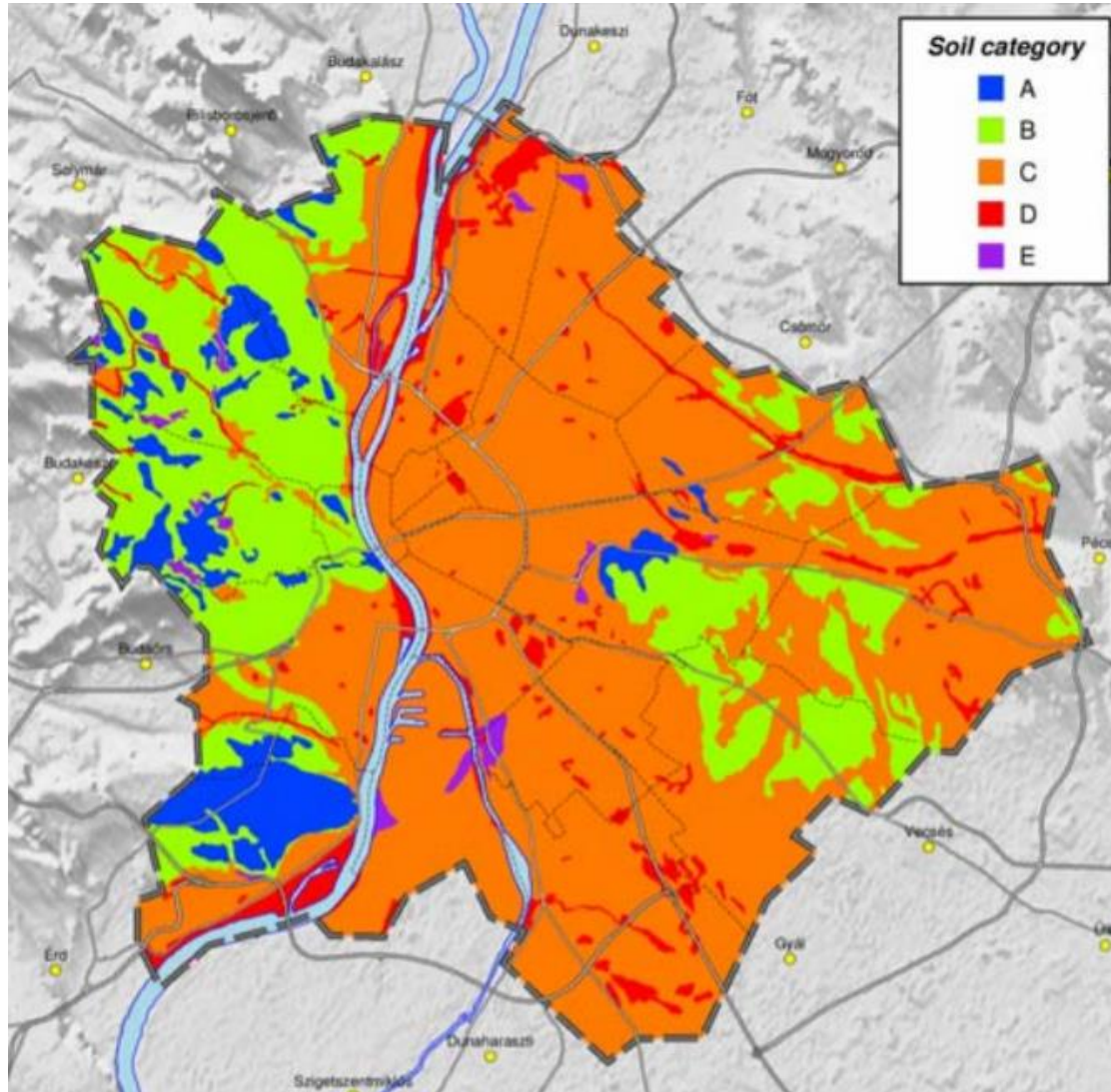
D: Very young, muddy, clay sediments, casting sludges, peaty soils in the floodplains, in streams, running, marshland areas.

E: the Buda Hills, Újpest, Kobánya, Pesterzsébet and the Smaller areas of Csepel Island.



DANGERS - EARTHQUAKE

- Soil Liquefaction



D : Very young, muddy, clay sediments, casting sludges, peaty soils in the floodplains, in streams, running, marshland areas.

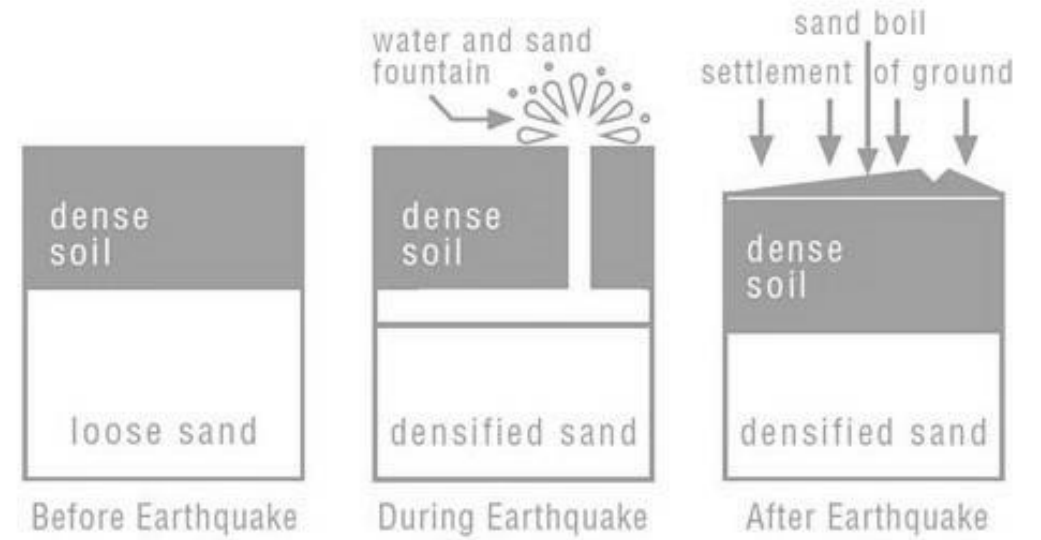


DANGERS - EARTHQUAKE

- Soil Liquefaction



The place of dug up sand volcano generated during 1911 Kecskemét earthquake (photo from MTA CSFK GGI Archive)



“How vulnerable is Budapest?

Let's look at our wider environment first. Fortunately, we do not live in California or Japan; the Pannon Basin is one of the most endangered areas. It is more threatened than Northern Europe, and much less than the Mediterranean. As I have mentioned, the highest magnitude is 6.1-6.3, but the magnitude over magnitudes of magnitude 5 is statistically averaged every fifty years in Hungary. For example, in 1911, he was in Kecskemét at 5.6, in 1925 in Eger at 5, and in 1956 in Dunaharaszti again at 5.6. Since then he was not over 5.

It's been nearly sixty years since ...

It may only be 80 years later, but it may also be tomorrow. And we do not know where it will be in the country.”

RELATIONSHIP WITH THE RIVER



Balkányi László / We Love Budapest

HISTORY

WATER

URBAN FABRIC

URBAN FACTORY

- In progress

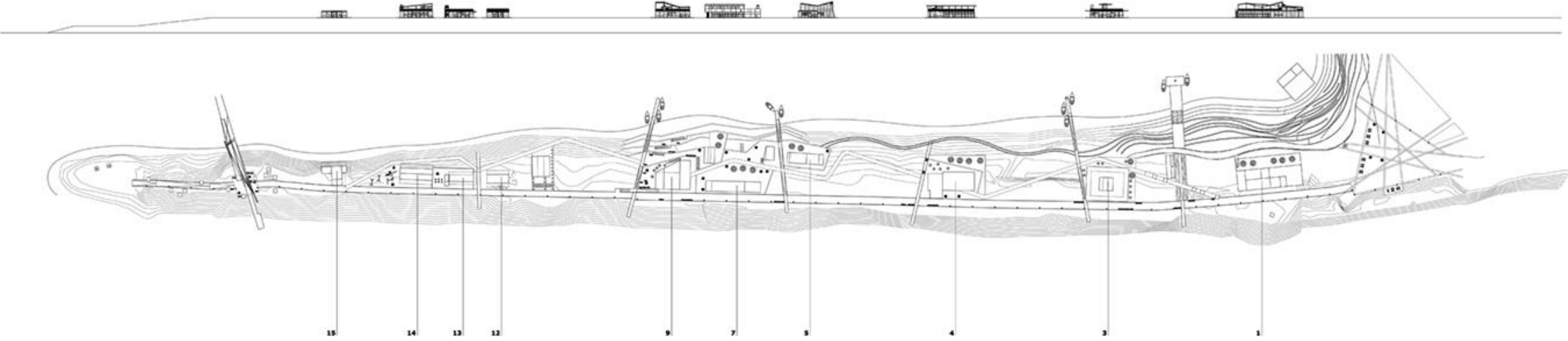


THE PARK

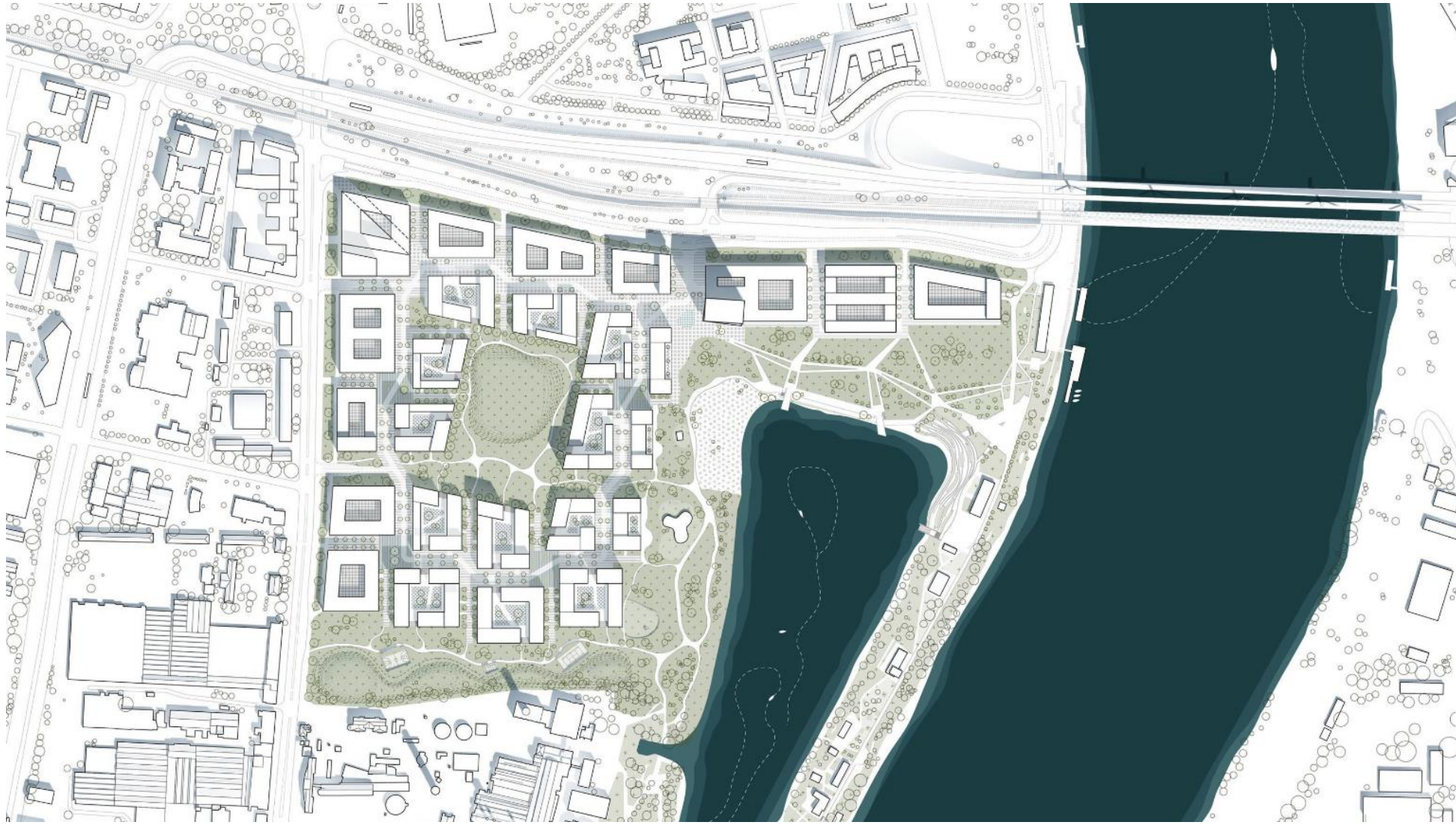


- In progress
- public lighting completely replaced
- 18 000 m² of parking space
- 4700 m² and 840 m² reconditioned
- Improvement of the 600 m² green area
- 1600 plants collected

THE PAVILLONS



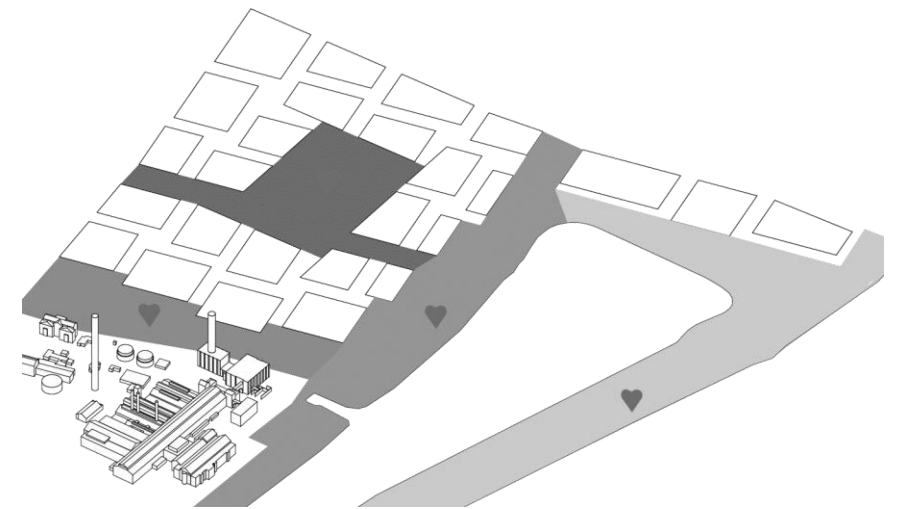
THE BUDAPART PROJECT



THE BUDAPART PROJECT



- combining the rigid urban grid with the irregular historic city
- innovative building solutions maintaining some green areas



THE SKYSCRAPER

