

The issue of brownfields on the example of the use of the area of the old sewage treatment plant Ostrava - Přívoz

**Conference with an International Participation
„Water and City – Brownfields“**

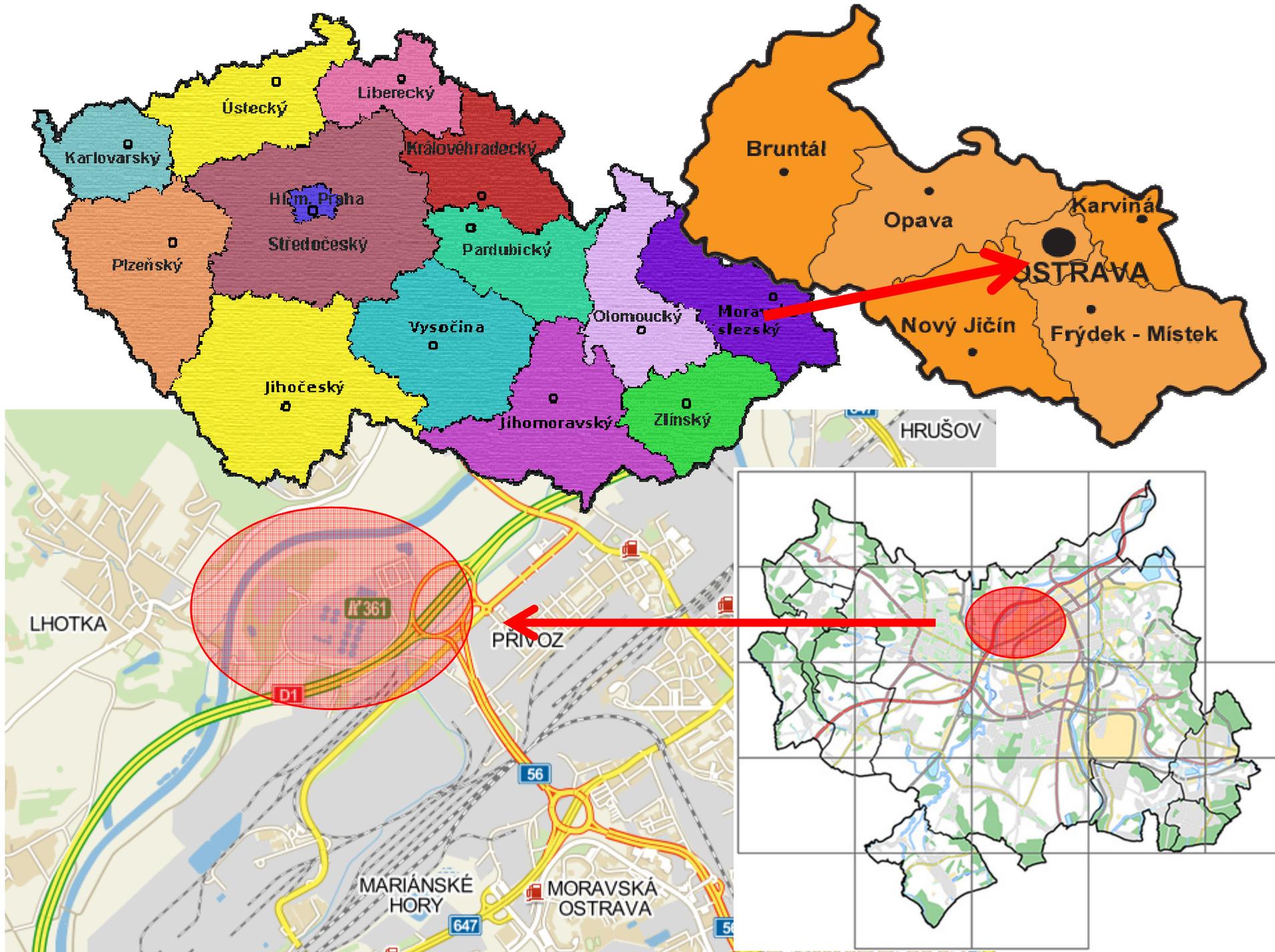


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Eva Berankova, Marek Teichmann, Jiri Kucera

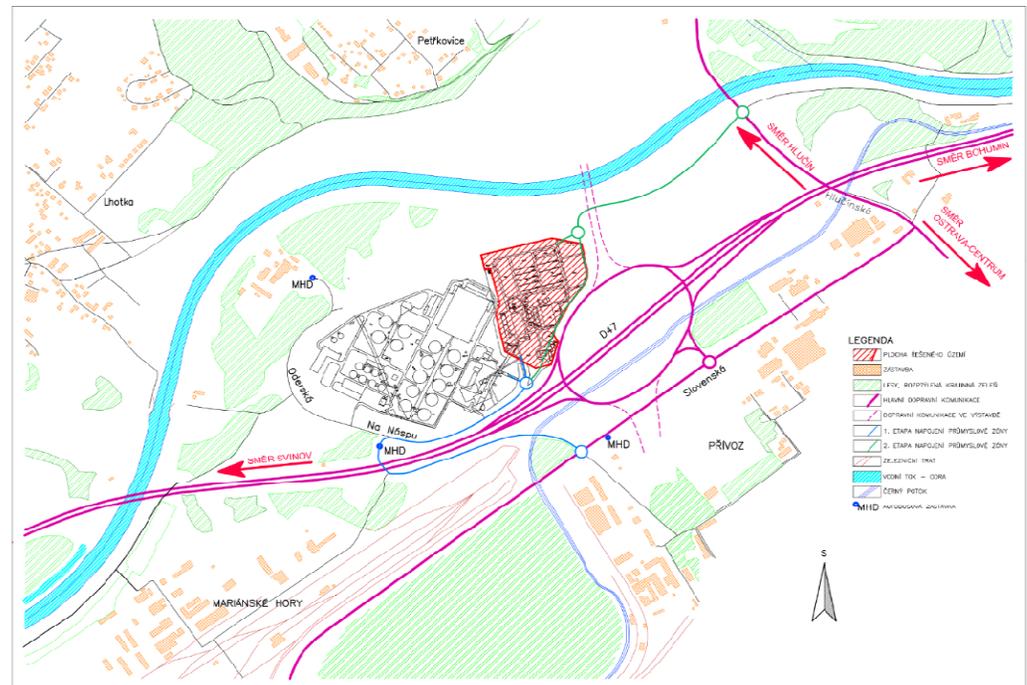
Introduction

- Brownfields are usually old and neglected areas, but they often possessed high-quality operational execution in the past.
- Investors often attempt to completely clean the area of brownfields to be able to dispose the territory and situate there new buildings, including the transport and technical infrastructure.
- From this perspective, however, this procedure seems very uneconomical, not only due to an effort to remove all existing buildings, but also because of the absolute ignorance of existing utilities in particular, which are located at a territory, and these pipes and lines often remain in the ground unnoticed.



The example - the old sewage treatment plant in Ostrava – Privoz

- The area of the old wastewater treatment plant is located near the highway D1, which is one of the main routes in the direction of Prague - Brno - Ostrava – Poland.
- The studied area is the site of a former sewage treatment plant, whose operation was canceled in the late 90s.
- Today, a part of the area is used to stockpile of soils and landfill of bio-degradable waste from maintenance of green.
- The total area is 7.9 ha.



The example - the old sewage treatment plant in Ostrava – Privoz

- There are maintained asphalt roads.
- There are two sludge lagoons of rectangular plan with concrete bottoms and walls.
- All above-ground structures were removed in the past.
- Technical infrastructures have been canceled after the termination of the operation of the WWTP.
- The transit sewage discharge through the western and northern edge of the area has been maintained.
- The terrain is flat, except for the aforementioned sludge lagoons.



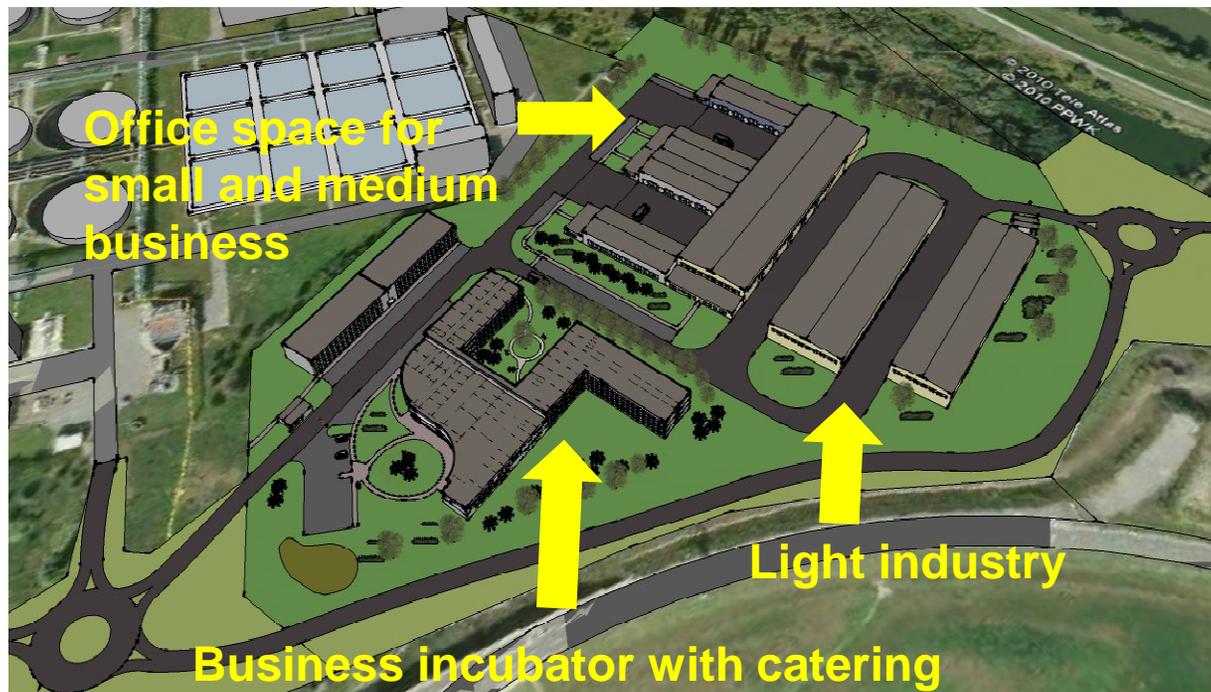
Description of the designed solution

- Business incubator objects with catering facilities placed on the south side.
- Spaces for small business companies are designed in the northwestern part.
- Production facilities are located near the southern entrance. These areas are designed to operate businesses with greater production capacity.



Description of the designed solution

- This variant provides areas for both large manufacturing enterprise and for small and medium businesses.
- It includes business incubator and office space.
- The proposed catering facility covers not only the needs of the area, but also the wider neighborhood.



Preparation of the area

- The designed solution considers the heightening of the whole terrain. The heightening of the terrain will be in the range of 0.55 to 2.0 m. Lateral inclination of the new terrain is designed to 0,5%.
- First, you will need to cut down mature trees including removal of stumps.
- The next step involves the removal of bio-degradable waste dumps.
- Before heightening the terrain in the area, compressible layer of soil will be necessary to remove of unpaved surfaces. The soil will be later used in landscaping.
- All original roads, paved areas and remnants of fencing will be removed.
- Removing sludge dams will be necessary in the next phase of the preparation.

Connection to the technical infrastructure

- As mentioned above, all utilities were canceled.
- Only the transit pressure sewer pipe led along the northern and western edge of the area operates.
- The newly designed utility lines will be connected to the existing lines of technical infrastructure located nearby.
- The planned number of employees in industrial area is 700.

Drinking water supplies

- Existing water lines DN100 is located near the entrance to the complex on the southern border of the area. The proposal calculates with the reconstruction of the existing pipes to DN150 using trenchless technology.

Disposal of waste water

- Drainage of the area will be ensured by separate gravity sewers.
- Rainwater from paved areas will be drained by proposed rain sewers. This rainwater will be discharged into the Černý potok using existing WWTP object.

Power supply

- The territory will be attached to the existing substation 22/110 kV.

Gas supply

- Due to the challenging investment needed for the site connection to the existing network, the proposal doesn't consider the use of gas.
- If required by future investors to build gas connections, it will be necessary to invest approximately 12 million CZK.



**Production
facility**

**Offices for small
and medium
business**

**Business
incubator
and catering**





**Business
incubator
and catering**

**Offices and
production
facilities**



Conclusion

- The location has currently no effective use and is neglected.
- This area has the potential for future development due to the simple property rights and the ideal position.
- A proposal of possible land use is based on surveys conducted, the available information and it respects all the identified land use limits and the current Master plan of Ostrava.

Thank you for your attention!

Eva Berankova, Marek Teichmann, Jiri Kucera