

Thematic workshop «Solutions for regeneration of degraded territories»

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Benefits of regeneration of degraded territories for regional development and sustainable use of resources

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- The general objective of brownfields revitalization is **to promote the sustainable development of urban and rural area**: maximal elimination of brownfields thus contributing to environmental regeneration.
- This includes solving:
 - of environmental problems
 - and increasing the economic efficiency of territory use,
 - improving visual and structural functional quality of environment,
 - as well as humanization elements of the social environment.

The aim and tasks of study

- The **aim** of this study is to evaluate Latvian and foreign experience in brownfield regeneration on the basis of scientific literature and other information, as well as analyse its benefits.
- To achieve this goal tasks were performed as follows:
 - information on brownfields and their regeneration in foreign and Latvian scientific literature has been gathered and analysed;
 - an overview on possible solutions in regeneration of brownfields and benefits of brownfield regeneration for development and sustainable use of resources has been made.

The experience of brownfields regeneration

- Studying scientific publications on land degradation problems it can be concluded that in the world, especially in Europe, there already has been developed some theory and experience of brownfields regeneration.
- In other countries the issue of brownfield regeneration began to play a prominent role in political programs in the 1970s.
- Now they are closely linked to a wider range of issues of sustainable urban and regional development.
- The regeneration of brownfields not only strengthens the vitality and efficiency of urban area, but also helps to remove the developmental pressures of greenfields located on the outskirts of cities.

Benefit of regeneration of brownfields

Reuse of brownfields has significant impact on sustainable development because it meets all three of its objectives:

- improvement of economy,
- improvement of social cohesion and
- arrangement of the environment.

Improvement of economy

- The regeneration of brownfields helps to return unused land and improves land use economy.
- When economic activities return to degraded areas,
 - firstly, these areas have been significantly improved and,
 - secondly, areas of greenfields are preserved.
- New activities taking place on former brownfields create new opportunities for public, increase employment, income, etc.
- Importantly, renovation of brownfields has positive impact on real estate prices in the territory.
- Further savings are achieved through the opportunities offered by existing resources and infrastructure (buildings, energy, sewerage networks, etc.) and transport options.

Improvement of social cohesion

- Remediation of brownfields can also improve social cohesion, protect cultural and historical values and improve quality of life.
- Customized planning suggestions that take into account public needs can maximize investment in brownfield redevelopment not only for the general public but also for builders and landowners.
- As a result, the sustainability of specific brownfields and the wider area is promoted.

Improvement of environment

- Development of brownfields has the added benefit strongly influencing the surrounding urban environment.
- Analysing foreign experience, it can be concluded that, irrespective of the end use of brownfields, aim is to develop sustainable localities with higher quality of life.
- In the past too little attention was paid to the areas where people live, work and spends their free time.
- One of the key elements of high-quality urban development is accessibility and good connection with open space. Essential importance for design of these public spaces has good quality of pedestrian and bicycle roads and public transport, as well as a great sense of space.

Brownfield regeneration in urban areas

Summarizing and analysing scientific publications on regeneration of brownfield sites and evaluating benefits from it, several regularities and variants of brownfield regeneration can be distinguished:

- Arrangement and construction of shopping centers
- Arrangement of science and technology parks
- Preservation of industrial heritage
- Development of cultural, educational and business centres
- Arrangement of residential and office spaces
- Arrangement of parks for recreation and entertainment, amusement and sports activities

Arrangement and construction of shopping centers (1)

Shopping center Duna Plaza in Budapest (Hungary), opened in 1996 year



Arrangement and construction of shopping centers (2)

The shopping center
Manufaktura in Lodz
(Poland)
Opened in 2006 year



Arrangement and construction of shopping centers (3)

Sary Browar in Poznan
(Poland)
Opened in 2003 year



Arrangement of science and technology parks

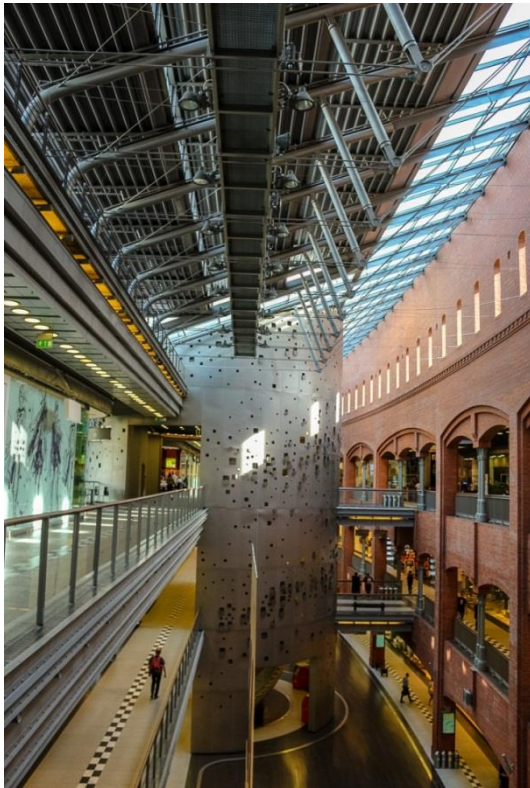
Infopark Budapest (Hungary)

Infopark is the first innovation and technology park of Central and Eastern Europe. It is an innovation centre primarily for IT, telecommunication and software development companies where such multinational companies as Lufhansa Systems, Hungarian Telekom, IT-Services Hungary as well as young innovative companies found a place for their head office. The seat of the European Institute for Innovation and Technology (EIT) is found in the Infopark Building E. The office park has nearly 100,000 m² space to rent, offering high quality office and working environment for about 7,000 employees.



Preservation of industrial heritage (1)

Sary Browar in Poznan
(Poland)

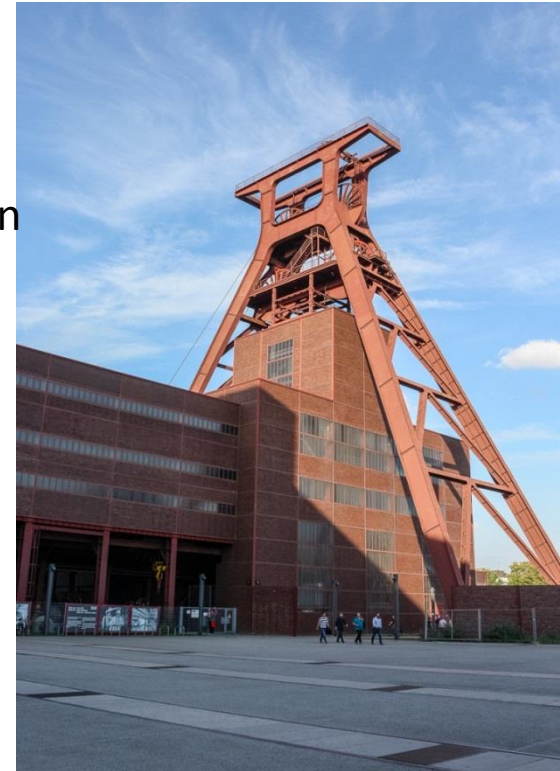


Preservation of industrial heritage (2)



Zollverein Coal Mine Industrial Complex in Essen (Germany)

Słoty Browary in Poznań



Development of cultural, educational and business centres (1)

- The use of industrial buildings for culture in Europe began in the 1960s and 1970s, coupled with large-scale publicly funded architectural and cultural prestige investments (Pompidou center, the Musee d`Orsay in Paris, Millenium Dome in London).

Pompidou center in Paris (France)



Development of cultural, educational and business centres (2)

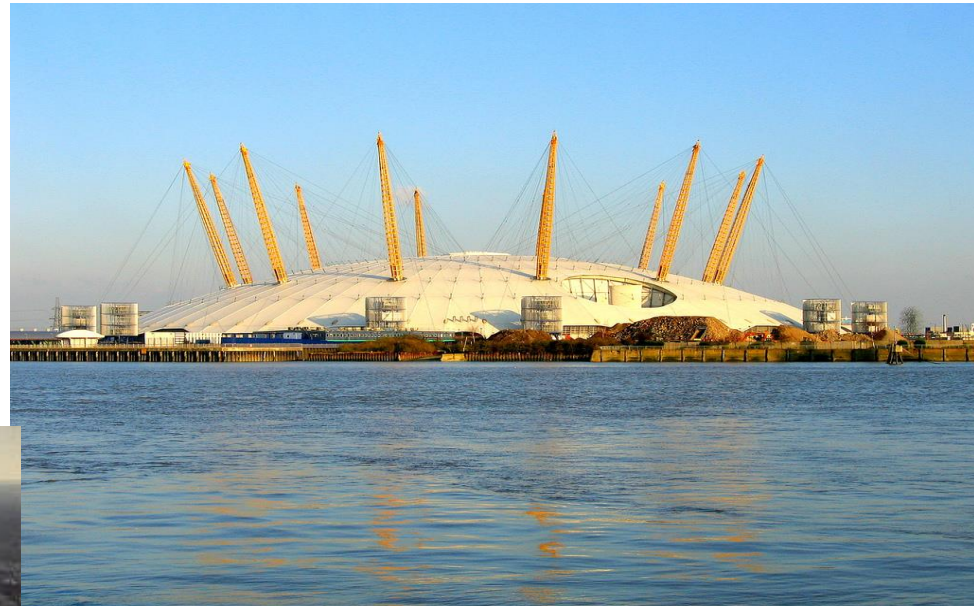


The Musee d`Orsay in Paris (France)



Development of cultural, educational and business centres (3)

Millennium Dome in London (England)



Development of cultural, educational and business centres (4)



Geyer 'White factory' (Biala Fabryka Geyera) currently Museum of Textile, Lodz, Poland

In pictures - White Factory in past and today



Arrangement of residential and office spaces (1)



Karol Scheibler Fabryka in
Lodz (Poland) -



Arrangement of residential and office spaces (2)



Gypsum Factory in Riga (Latvia)



Arrangement of parks for recreation and entertainment, amusement and sports activities (1)

- There are many examples of parks that have been created as sites of former industrial or other economic sites, mainly from the 1980s to the 1990s.
- However, as one of the first architects of this landscape architecture, **Tilerie Park** in Paris, which was established in **1564** instead of a tile manufacturing factory, should be mentioned.

Arrangement of parks for recreation and entertainment, amusement and sports activities (2)

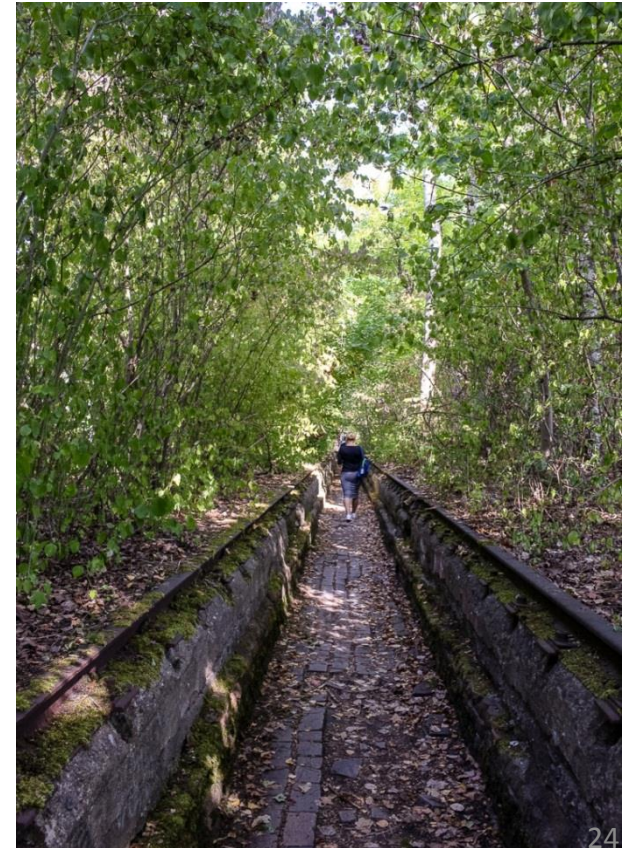
Gleisdreieck park in Berlin (Germany),
established in 2011 year



Arrangement of parks for recreation and entertainment, amusement and sports activities (2)



Natur-Park Schöneberger
Südgelände in Berlin (Germany)



Involvement of degraded areas in the economy in rural areas (1)

- Several examples of land use following the recultivation of brownfields have been analyzed in Latvian and foreign literature
- Emphasis is placed on the cleansing of areas using plants (willows) in the energy sector. Economic research on brownfields has shown that the involvement of these areas in the economic cycle is important, but there is also a need for large financial resources.

Willows planting in Ignalina



Involvement of degraded areas in the economy in rural areas (2)

It has also been concluded that there are all the prerequisites for the development of brownberry and lingonberry berry growing and processing (frozen berries, jams, jams, additives for other products) in the degraded territories in Latvia.



- Creation of lingonberry plantations, industrial cultivation has been recognized as one of the most promising measures to acquire peatlands.
- Investment in lingonberry production is beginning to pay off in the third year and is a good export product to European, American and Asian countries.

In conclusion...

- It can be concluded that one of the main factors for the regeneration of brownfields is the **economic and environmental aspect**. The **cultural and social aspect** is also important.
- Sustainability in this context means appropriate land use and spatial planning, which brings social, economic and environmental benefits.

Potential benefits and synergy of surrounding areas after brownfield regeneration are:

- opportunities for rest and health improvement;
- sports facilities;
- closer distances for goods and services and access to fields;
- recreation & entertainment (e.g. restaurants, pubs, cinemas);
- education and social infrastructure (schools, youth centers, sports clubs);
- family and child friendly environment
- property value increase
- security, reduced crime rate
- identity (preservation and reuse of historic buildings for other purposes)
- growing population.

However, the negative effects of regeneration of brownfields should also be considered:

- noise, vibration;
- service interruptions (water, electricity, etc.);
- dust;
- fumes (health problem);
- potential pollution / pollutants;
- odors;
- aesthetics / perceived visual pollution;
- damage to the natural environment;
- increase in rent;
- new competitors for existing companies.

Thank you for your attention!

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