REVIVE TO SURVIVE AND DEVELOP.
CITY CENTRES OF SHEFFIELD (U.K.) AND KATOWICE (PL)

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Abstract
In the beginnings of 21 century revitalization by means of public open space planning is becoming more and more popular. The purpose of the paper is to juxtapose (not to compare) two European examples of public open spaces created in areas, which are neglected in urban and landscape way: The revitalized centre of the Sheffield post-industrial steel-city in England and the former coal mine area of the present new Silesian Museum in Katowice, Poland.

The empirical and analytical methods were applied, like in situ analysis in Sheffield: scientific walk, photo-documentation, interviews with experts, and research of professional material from the City Council (2014, 2016–2017). In Katowice: the field work, professional architectural supervision of the investment process, as well as the cooperation with architects and city planners (also by the Master Plan 2010) had been carried out during eight years (2006–2014).

The results show various approaches to public open space planning in post-industrial city-centres. In Sheffield the main attention is paid to the interconnected and safe pedestrian areas. In contrary in Katowice the planning efforts focus on architectural design, while the easy accessible and networked common spaces are missing. These differences are rooted in the urban and landscape strategies, assigned in the master plan (in one case), and the lack of such strategies (in the other case).

Keywords: New public open spaces; Neglected areas; City centres; Urban and landscape transformations; Master plans.
1. INTRODUCTION: OPEN SPACES IN REVITALIZED AREAS IN THE LITERATURE

In the 20th century, the process of renewal of historical but destroyed city markets and squares was important. However, the revival in the sense of re-use refers also to the post-industrial spaces and decides, if the given area or even the whole city will survive and develop or not. The central urban location of many different types of productive areas in cities has been disclosing its degradation since last decades. In the 21st century, the process of transformation of these neglected sites presents the new ways of its land-use. One of them is the recovery for public spaces: New parks, squares, representative zones in front of public buildings, sport areas, landscape points, view towers, etc. in various sizes - from small sites to dimensions of over 100 hectares. There are many examples for that kind of spatial conversion. In Berlin, Germany, the wild nature was carried into the former rail site, placed in the inner-city, which has the form of the Park am Gleisdreieck since 2013 [8]. Since 2005, the harbor in Lyon, France, has been changed into the new water promenade, squares, and parks [3]. Since 2000, the historical steel works in Luxemburg are being redesigned for leisure and free time spending in the surrounding of industrial relics as a trend district [6]. In 2009, the representative place in front of the Maritime Museum in connection with the re-used HafenCity harbour, next to the Hamburg centre, Germany, came into being [1]. Moreover, the landscape-sculpture green-space was created in the former trade fair area on the steel-concrete bridge in Munich, Germany in 2008–2010 [4]. In the 1970s in Geneva, Switzerland, the block houses in one of the inner-city sites had been demolished in order to plan the public park. Though during many years it was used as a car-park. Finally, in 2009, the green space was realized [5]. Summing up, meaningful are the criteria of values of the industrial and cultural heritage connected with social, economical, and cultural transformation from industry to service society of changed mobility and consumption needs, which shape the spatial development of cities nowadays. Moreover, the conversion process should not destroy the traces of the history but it should lead to the development of the context of these sites [7].

2. JUXTAPOSITION OF THE ENGLISH AND POLISH CASE STUDIES

The revitalized centre of Sheffield in England is a case study of the recovery of the traditional public spaces. Though the history of the post-industrial steel-city continuously displays a specific character of some streets and rows of workers' houses even in the central urban parts. The different city parks, squares, the main market, and other kinds of revitalized pedestrian areas seem to be well integrated with each other creating a common route for recreation, commercial use and pedestrian traffic. This process of spatial regeneration of the inner-city is completed. The visible re-arrangement includes improvement of green areas, pavement zones, and necessary street furniture. The general view makes an impression of a traditional English way of urban composition with comfortable and utilisable areas of easy access for inhabitants. Instead, the former coal mine area of the present new Silesian Museum in Katowice, Poland is an example of the post-industrial site, located in the city centre. This specific situation is used to open this formerly closed area to the inhabitants. Though, the urban and functional integration, which is successful in Sheffield, is missing in this case. This new public space has a different architectural and urban style than the other close areas, and most of all is definitely separated from the neighbourhood by intense car traffic. The appropriate secure paths/pedestrian crossings (e.g. over the street level, showing the priority of walking) do not exist. The only possible connection with the "main market" (which is hard to describe as a market in case of this typical industrial city) as a direct, easy and comfortable linkage is not arranged. The official process of the revival of the presented post-industrial area may be described as completed (the first opening to the public: 2015). Although, this recovered single urban tissue will not survive if not joint by pedestrian routes with the surrounding. A total public central zone should be created, which nowadays is neither safe nor easily accessible for inhabitants.

The results of the investigation will reveal, that the English case study presents much more advanced urban regeneration process than the polish example. Sheffield gives the priority of use of the central city space for walking and cycling. The regenerated public spaces are secure, combined in the way, which make the everyday life easier. On contrary, the former mine coal site in the centre of Katowice, reused as the new public space at present, loses its basic intended function because of the missing peaceful (without traffic
conflicts) integration with other public spaces in the neighbourhood. Besides currently (2017), after the short unpaid entry period 2015, the area is open as free of charge during one day a week – Tuesdays only [14], which questions the initially planned function as “public space”. The master plans, analyzed in both cases, show distinctly these problems: The main idea of pedestrianization realized in Sheffield and the missing agreement on the pedestrian priority in Katowice, in favour of developing the car traffic.

3. CASE STUDY: SHEFFIELD CITY CENTRE (U.K.) [16]

The historical steel industry, which is the reason for the existence of the characteristic small-scaled red-brick workers’ houses, affected the degradation of the central spaces of Sheffield. The planning documents have been created for a few years, which include the typical features of the urban, economical, and geographical development of the English city. The Master Plan [10], as a legal act, indicates the three main linear elements, which create the plan (cf. Fig. 1): The Steel Route and the Gold Route, connected with the history of civilization, as well as the Blue Route (connected with the river). Besides there are points, like business areas, universities, and neighbourhood centres, which are cooperating with the linkages. Though, the basic strategy for the recovery of neglected urban spaces in the post-industrial areas in Sheffield is the Breathing Spaces initiative, which begun in 2009. Its main goal is to create new high quality open spaces linked by a network of high quality pedestrian routes in the heart of the city (cf. Fig. 2). There the presented in situ route, shown in the photographs (cf. Figs. 3–10 and 13–14), was connected with the analysis of new and improved city parks and green spaces, proposed as well as existing new and improved hard open spaces, and pedestrian links between city parks.

![The analysis and guidelines for the Master Plan of Sheffield 2013. Sources: The author’s analysis on the map from Sheffield City Council 2014 [10]](image)
Good planning practices are crucial for the public space planning in post-industrial areas. In the case of Sheffield, the city with the steel production heritage, the following programmes are important [9]:

- City Centre Living Strategy (2004),
- City Centre Master Plan (2009),
- Sheffield Development Framework Core Strategy (2009),
- Open Space Provision in New Housing
Development SPG (1999),
All these proposals, dated from different years, have been updated in form of the Breathing Spaces Strategy as the policy and priorities for supplying the City Centre with open spaces.
Moreover, the market, squares, and paths should not only be improved but also expanded.
Good experiences in the regeneration of urban tissue in other post-industrial cities in England, like Manchester, are providing courage to continue the way of spatial revitalization in the centre of Sheffield. In the British cities, where the industry exploited the local resources and destroyed the environment and natural landscape, the urban life of the inhabitants lost the basic values. In order to prevent the losing of population, the improvement of the life conditions are necessary. This is the prior principle, which was suggested originally by E. Howard 1898. His plans of creating, by rotation, the green belts with trees around the workers housing estates started the urban regeneration of the English post-industrial towns by means of natural components. In turn nowadays (since the beginning of 21 century) another breakthrough in the way of thinking about urban revival by means of common space has taken place. In Sheffield it is seen as a way to develop the city in sustainable manner, which is possible thanks to urban and cityscape renewal.
Additionally, the City Centre Masterplan dated 2009 delivers the new and improved parks, green spaces, and hard open spaces. the 2007 intensive public consultation programme in the form of presentations for each of the relevant Area Panels took place, which approved this regeneration context of public space planning for Sheffield.
The Steel Route as the sign of the industrial past is described in the presented detailed plan of the Sheffield city centre as “high quality public pedestrian spaces” (cf. No.1 in the legend in Fig. 11). This characteristic displays the importance of the connection of the post-industrial historical values with the present spatial needs of the city. The combination of the “old” and “new” elements is seen in this case as the new urban potential to attract the inhabitants.

The Charter Square in this plan is shown as “improved pedestrian space” (cf. No. 6 in the legend in Fig. 11) and “public space improvements” are relevant in the Riverside Business District (cf. No. 10 in the legend in Fig. 11).

Figure 6–10.
Different forms of greenery recovering the traditional public squares as breathing spaces. Plants, in these cases, have the basic ecological, but also esthetical (6), compositional (7), spatial (8), planning (9), and sun-protection (10) role. The height and shape of a tree or shrubbery depends on the surrounding architecture, location, function of the space and the plant itself. Introducing the nature into the neglected urban areas is increasingly more popular mean for the spatial recovery. Such landscape way of improvement of public spaces is to be seen for example in the Prenzlauer Berg district in Berlin, Germany since 1990s, as a result of political changes. Photos: The author, 2014
The presented maps (cf. Figs. 11–12) compose parts of the Master Plan for Sheffield dated 2013. The Sheffield City Council pointed out the crucial urban tasks, of which many have been already realized [10]:

– Caring for an accessible city, where the public transport plays the major role (despite the recession in last years the tram passenger numbers have risen and held up; walking and cycling in the city increased by over 18%);

– Extending the tram network in frames of the City Regional Investment (approaching the tram to the new retail centre);

– Improving the Bus Rapid Transit route, connecting the centre of Sheffield with other urban centres, as well as the Tram-Train extension within the city and the Quality Bus Corridor;

– Making walking and cycling safer by reducing the car traffic and keeping the 20 mph speed zone in the centre, as well as planning better cycle and walking connections and cross city routes along, among others, the Steel Route and Sheaf Valley Park.

The City Centre population has increased immensely (fivefold: from 3000 in 2001 to over 16,000 in 2011). This popularity is connected with many aspects. This area is the major driver of the City Region economy. Here the sectors of Knowledge, Creative and Digital Industries, Higher Education, Culture and Business Services, and the major focus for Retail, Leisure, and public services is helping by creation of a strong, well-populated, highly liveable, and walkable city core with attractive public spaces, public transport, and ecological/sustainable housing areas [10]. These means of the ongoing urban regeneration are highly connected with the pedestrian traffic/areas, which are given the priority and are supported by new technologies, applied in the adjacent urban sites. The revived central public spaces are planned to be functionally integrated with the post-industrial elements of Sheffield, like the Gold-, Steel, and Blue (River) Routes, designed in the Master Plan. This linkage of the traditional and post-industrial open spaces emphasizes the meaning of the memory of the place. The mentioned traces of the steel-industry will transmit the new quality to the network of the public spaces in the whole city in the future. This new image will be broadcast the same way by combination of the creation of the physical public space supported by the
virtual/digital values of the new technologies. Such a new vision may be the next step towards the urban improvement of post-industrial cities, attracting another new inhabitants and continuously affecting the growth of the local population. The programs of spatial and functional regeneration mean namely the urban actualization, which influences the comfortable life conditions of the inhabitants of cities.

Special means for the urban life improvement in the post-industrial cities are needed. One of methods to achieve it is to provide wide access to “various services and amenities including green or open spaces” [9]. The good quality of public spaces (cf. Figs. 3–10 and 13–14) is the meaningful condition to attract people, not only inhabitants, but also visitors from outside. Besides, the central location is the social and cultural hub, as well as the place of work, the increasing use of the internet, university, commercial functions (shopping), and leisure activities. Therefore, this site becomes the visiting-card for the whole city [10]. Furthermore, the creation of new and enhanced public spaces has been financed through public funding over last decade. Though nowadays, the major supporting by these actors (Regional Development Agency, European funding, Housing Market Renewal) is finished, which means uncertainty over future contribution for the further development of public spaces. Therefore, the Breathing Spaces Strategy considers to apply the funds from private sector developers [9]. This policy objectives are to improve the pedestrian routes to and from the city centre, create schemes, connect signage, as well as take care of the public art. The main goal is to compose the network plan of green spaces and city parks (cf. Fig. 2).

4. CASE STUDY: THE NEW SILESIAN MUSEUM IN THE “CULTURAL ZONE” IN KATOWICE (PL) [17]

Nowadays, Katowice do not remind the city from 1990s, when the leading role in the urban life had the interconnected industrial plants – ironworks or coal mines. The economical changes lasting since the end of 1980s, had introduced a strong diversification of the directions of the economical city development. For a few years the programme of revitalization and rebuilding of the centre is being prepared and carried into effect. The activity connected with the renewal of parks and urban squares is being conducted. The main market of Katowice along with the adjacent main traffic lines and streets is being rebuilt in frames of this project. The conservation services and private investors are renovating and revitalizing the architecture. We are the witnesses of the change of the Upper Silesia capitol into the guiding culture and business tourism centre in Poland.

In the very centre of the city, right next to the well known lounge area of shows and sport “Spodek”, the completely new district, called the Culture Zone, comes into being as a result of revitalization of the former coal mine areas of the KWK Katowice. It is created by the mentioned „Spodek” lounge area and other three large investments, realized 2014 – the International Congress Centre (MCK), the new seat of the National Symphonic Orchestra of the Polish Radio (NOSPR) and the new Silesian Museum. The main vision for this culture zone, suggested by the municipality, refered to its connection with the public space of the main “city market”. This idea was
reflected in the guidelines for conditions for the competition announced for the mentioned buildings. Nevertheless, the implementation of this concept was characterized by a rather stipulated manner of acting. However, the very creation of the Culture Zone, huge and accessible public space, intended to link all the buildings with the “Culture Axis”, in the form of a route binding the main market with the Bogucicki Park.

The area of the former coal mine KWK Katowice (cf. Fig. 18), which is the subject of this part of the paper, connected with the creation of the “Culture Axis” as a linear public space, is located in the inner-city of Katowice (The district Śródmieście/City Centre). From the south the coal mine site boarders with the motor way (Drogowa Trasa Średnicowa DTS), from the east with the Bogucicki Park (the former KWK Katowice Park for the workers of the coal mine), from the north it is closed by the H.M.Góreckiego street (the former Olimpijska street), from the west the lounge area “Spodek” and the W. Korfantego avenue is placed.

The many-family multi-storey housing with the accompanying service use dominates in the neighbourhood. The component of this site are the public spaces with its cultural specificity, neglected and left without care, organized in a simple way by the nearby inhabitants of the workers dwellings, called “familoki”. This architecture is distinguished by the form and the external material (cf. Fig. 15). Entering the public space from the “Spodek” side we meet at first a huge car-parking area (cf. Fig. 16).

Furthermore, the history of the industry on this site dates back to 19 century. The coal mine Ferdynand had been araised in Bogucice about 1822. Its first owners were Stanislaw Micorszewski, Ignacy Ferdinand Beym (the mine was called after his name), Izaak Freund, a merchant from Tarnowskie Góry and Wilhelm Wedding from Katowice, the constructor of the mine. However, the connection of the KWK „Katowice” Mine with the KWK „Kleofas” Mine took place place on 1 July 1996. The later close-down of the Katowice Mine is dated March 1999. In July that year the exploitation of carbon was finished after 176 years of the mine activity. In 2001 the mine built elements in number of 86 had been demolished. Only the most valuable historical architecture of monumental walue had been left for preservation. Nevertheless soon, the new idea of the adaptation of the coal mine appeared in order to fulfill the needs of the museum along with the chosen post-industrial architecture as a result of the liquidation of the KWK „Katowice” Mine. In 2006 the „Quarter of Museums” (as the built-up area of the former mine is called) and especially its south part, became the subject of the international architectural competition, won by the Austrian architects Florian Riegelm and Roger Riewe from Graz. The task was to design the architectural concept of the new structure of the Silesian Museum and the land-use of the part of the former „Katowice” Mine site. The goals were announced on 30 October 2006. They were as follows:

- Realization of the architectural and urban concept of the new main structure of the museum and the
The author’s vision of the new Silesian Museum is a specific urban garden of art. The form and composition of the area, the exposition of the historic industrial complex, its background and greenery as the core of the new idea, the spare intervention into the cultural cityscape, the ascetic form of the architecture on the ground as well as the complexity of the solutions for the underground, so the main part of the museum, these are the basic messages of the main structure of the new Silesian Museum. The results of the competition prejudged about the outward vision for 2.7 hectares of the total area of 6.5 hectares of the “Quarter of Museums”. Though, it had neither changed nor given the direction to the urban structure of this part of the city. The competitive new Silesian Museum had still been the island in the surrounding amorphous, formless, and unfriendly post-industrial space. The mentioned Austrian winners, chosen by the international Jury from 18 of other participants, presented the modern design. It assumes the maximal use of the space beneath the ground and at
the same time the small interference into the post-industrial view of the complex. The exposition surface in the main structure exceeds 6000 square metre. Moreover, one can find here, among others, the main rooms for lectures, conferences, workshops, library with the reading room, stores with books’ collections, as well as studios for art, conservation, and photography works. In the former Engine Room the restaurant is situated and the gastronomic place is to be found also in the ground floor of the administrative building. On the ground-surface of the site the glass boxes in the form of skylight are located, which enlighten the interiors with expositions and atriums underground (cf. Fig. 17).

In principle, the site is divided functionally into three zones, placed parallel along the east-west direction (the plan with the details of the main spatial components location: cf. Fig. 18). The first zone (looking from the north) is the right museum with the rooms for exposition and administration. The second zone consists of the traffic, which supplies the linear structure and allows to combine all of the rooms at four underground levels. It is composed of stairs, lifts, air conditioning fittings, and toilets. The third zone, which is the most south space, is created of the two-storey museum magazines underneath the ground. Additionally, apart from the main residence of the new museum, the competition assigned three existing structures more for the purpose of adaptation, like the building of the former Engine Room, re-used as a restaurant, the building of the former Clothes Store, serving now as the seat of the Polish Stage Design Centre and the shaft of the Warszawa tower, which is already functioning as a viewing tower. The former Engine Room was re-used as a restaurant due to its central location in the area of the museum-park and its accessibility, both from the underground garage as well as the direct connection with the museum building, and the specific atmosphere existing inside. Its interior consisting of a one-room space has been divided by the hanging platform enabling the view of the outside cityscape through the windows made in an industrial style.

The site of the museum is composed of two parts, as mentioned before. The first part in the north is destined for revitalization in the coming years. The second part in the south has been already open as a space of the seat of the new Silesian Museum. These both parts should be functionally linked with each other in the future. Today they are joint by the newly constructed Central Hall, which is one of structures, designed in frames of the won competition.

In this three-storey hall the lowest underground level is united with the main seat of the new Museum. There are exposition rooms inside of broad dimensions, which permit to organise different types of exhibitions or installations. Shows and various accompanying events in the building of the MCK and in front of it may take place. The activity of these structures (MCK and NOSPR) is united also with its nearest surrounding as an urban public space of rich offer.

The basic elements characterizing the strong and weak sides of location of the analyzed area are as follows [15]:

Strong sides (the advantages of the site):
- Profitable location in the inner-city of Katowice,
- The reserve of the unbuilt space for the needs of investments,
- The area is well situated as far as the traffic connections are concerned due to the DTŚ and Korfantego avenue.

Weak sides:
- Location in the post-industrial area (after coal mine exploitation) – investments may demand the specialist research (the need of strengthening of construction),
- The neighbourhood of the traffic – the motor way – arduousness of the traffic,
- Lack of the easy access for the users of the public transport and lack of the traffic connection with the city centre by cycling roads, foot paths and tramway,
- Lack of the master plan for this area, which enables speculations / lawlessness of building.

Opportunities:
- The site is suitable for investments – the development of public and commercial services is profitable,
- Modernization of the existing architecture and its completion with new buildings, improvement of the spatial order,
- Economical and spatial activation, which is not burdensome for the environment in the areas appointed for housing estates and others, which demand to be protected against noise.

Threats:
- The site is affected by the coal mine exploitation, where blanks, fore-shafts, and discontinuous deformations exist in the ground,
- The concept functions as an isolated specific “cul-
ture island” next to the city centre / safe and comfortable pedestrian connections are missing.

Though, what was lacking is the spatial coordination of the architecture both, during the recovery works as well as during the realization of tasks. Moreover, the lack of coherency of the newly designed space and lack of integration between the structures, which in the competition had been assigned to be interconnected, is visible even after finishing the building process. The separate decisions about Conditions for Building have been issued for the location of these structures, avoiding the formulation of the Master Plan for this site (cf. Fig. 19). The realization of this Master Plan [12], in spite of its beginning, had been stopped by the City Council of Katowice. The Municipality claimed namely, that it would block the visions of the land-use development of the area. Currently, this kind of acting, so building without prior preparation of master plans, is applied in Katowice.

The most important buildings of the region of culture-creating targets have been located on the Culture Axis. This places will always attract people and there will always be the tendency to go out into the public space.

At present the problems with composition and function as well as the missing vision for its seamless integration is observed in this moment and at this stage of realization of all three structures (2015), even though this concept has been called Culture Axis for long time. These buildings exist next to each other but they have no features of the architecture planned for the common use of culture (like technology of exploitation, subsidiaries, and green spaces). Besides, the very axis does not exist in the space, because it is efficiently spatially divided by the temporary car parking. Today it is known, that the residence of the Silesian Opera House will be arised in the future also in this space.
There are discussions about the lack of legitimacy of placing such meaningful structures for the region in one area. The reason may be the real expenses, which the authorities of the city and the voivodeship had to carry for the one space of the city and region at one time. Besides the costs of use of the site are also serious. There are opinions, that this kind of architecture could be located in several various places of the city, which would make it more valuable and would revitalize other urban spaces in agglomeration, which also, or even more, need recovery. Considering the economic aspect, the residence of the NOSPR and the MCK is supported by the budget of the Katowice city and the new seat of the Silesian Museum by the Marshall of the Silesian region. The total amount of costs of all these projects together with the rebuilding of the traffic system, exceeds one billion of Polish zloty and its realization was financed by European fundings as well. All these investments have been realized also by the use of financial means from the European Union, modest grant from the Ministry of Culture (when it comes to Silesian Museum) and the so called Norwegian means for the revitalization of the monumental buildings of the former KWK coal mine in Katowice, which are owned by the Silesian Museum in eternal lease of the area of the Treasury. The revitalization was financially supported in one-third by Norwegian means, in one-third by city means, and in one-third by means of the Marshal of the Silesian Voivodeship.

It is necessary to consider the possible situations and variants of the Culture Zone in order to avoid the problems, which occurred in la Défense in Paris. Maybe the so called missing fourth element - the seat of the Silesian Opera House – should be simply a well designed structure, which will integrate the new and architectonically precious urban area. Perhaps the solution will be to design it accordingly to the place, with the set of buildings’ quarters with the system of, among others, car parkings placed beneath the ground (for various groups of users, parkings to rent), services, offices, high quality housing estates with appropriate space of urban gardens as well as public open spaces for realization of outdoor entertainments. Such an urban arrangement could open the Culture Zone into the north direction to the area of Koszutka and Bogucice, which once had been connected to the site.

Some authors [2] suggest introduction of well-thought-out acting in the design and revitalization, but with the full support of the society and additionally with the delay during its implementation. The reason for it is that people usually do not accept the changes, even if it comes to positive changes. Therefore, the revitalization of such a big area in the city centre can not be estimated objectively by the inhabitants at this moment.

5. FINAL DISCUSSION

The urban processes in the both analyzed post-industrial city centres posses some characteristic features. In Sheffield the researched public spaces have been mainly renewed, since most of them have already been existing there before. Nevertheless, the main historical, geographical, and natural features of that city are related to industry and that aspects are used for linking and better use of public spaces in an urban scale at present. These sites received an improved image, since their functioning and visual forms were missing connections and attractivity in the industrial times. Nowadays, many types of public spaces, like squares, parks, city gardens, the main market, trade streets, and avenues create a network of well organized and frequently used urban areas.

On contrary, in Katowice the new public space has been created in the former coal mine area. However, it is only one zone in the city. The potential of joining the analyzed case with the other post-industrial areas of interesting historical background with meaningful Silesian heritage of heavy industry, existing in the other parts of the city and in the city centre, as well as with the main space (“market square”) is not considered. Focusing on the aesthetical and architectural aspect only, introducing new function in a form of an isolated island, additionally with the paid entrance, is not bringing the expected results of better urban service to the inhabitants. Katowice possesses few and hard to reach squares and narrow pavements with trade and services, isolated from each other firmly by the car and public traffic.

The above described problems of (missing) integration and easy access to public spaces are resulting from the concepts included in the revitalization programs and (missing) master plans mentioned in the table (Tab. 1). The brief juxtaposition of the industrial history of the both presented cities at the beginning of this table should help to understand the following urban challenges and suggestions for the revival of the post-industrial tissue.
### Table 1.
The brief chronological juxtaposition of the main information, referring to the urban, industrial, and revival processes in Sheffield and Katowice [11 and 13]

<table>
<thead>
<tr>
<th>Case study</th>
<th>Year</th>
<th>Urban and industrial history followed by revival/recovery interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheffield</td>
<td>829</td>
<td>The Anglian kings of Northumbria and Mercia settled the boundaries at Dore. From this boundary the Sheaf river, and later Sheffield, derives its name.</td>
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<tr>
<td></td>
<td>1297</td>
<td>Growth of trade and industry. Medieval layout of the urban tissue: The market was placed between the church and the castle. Nowadays, this medieval pattern is to be recognized in the street names, like Haymarket, Westbar, Fargate.</td>
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<td></td>
<td>1624</td>
<td>Setting up the Company of Cutlers in Hallamshire, working similarly as guilds (with registered stream of immigrants from Derbyshire and the surrounding districts to work in the basic trades).</td>
</tr>
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<td></td>
<td>1740</td>
<td>Invention of the crucible method of making steel. By the end of the 18th century Sheffield was supplying the engineering and tool steel in the world's scale. Invention of Old Sheffield Plate through the fusion of silver and copper, which started the production of tableware and ornaments.</td>
</tr>
<tr>
<td></td>
<td>1780s</td>
<td>The urban growth exceeded the ancient limits of Sheffield. A clear geometric layout of new streets was set up.</td>
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<tr>
<td></td>
<td>1800</td>
<td>Sheffield, under industrial expansion, reached the population of 45000.</td>
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<tr>
<td></td>
<td>1819</td>
<td>Full use of steam power and the new opened Sheffield Canal, creation of schools, hospitals, Botanical Gardens.</td>
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<tr>
<td></td>
<td>1820s</td>
<td>Revival in trade and improvements in the town.</td>
</tr>
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<td></td>
<td>1832</td>
<td>Cholera epidemic, caused by inadequate or nonexistent sewers in the workers houses; Smoke menace, increasing with the number of industrial chimneys.</td>
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<td></td>
<td>1840s</td>
<td>Coming of the railways as new opportunities for Sheffield manufacturers.</td>
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<td></td>
<td>1860s</td>
<td>The new method of steel production and export of steel to the world – massive scale of new works.</td>
</tr>
<tr>
<td></td>
<td>1870s</td>
<td>Making the city centre the public property, widening of streets, making transport of people cheap.</td>
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<td></td>
<td>1893</td>
<td>The Sheffield town became a city.</td>
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<td></td>
<td>1897</td>
<td>Extending electric trams through the town centre.</td>
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<td></td>
<td>1900</td>
<td>Sheffield's boundary extensions.</td>
</tr>
<tr>
<td></td>
<td>Early 20th century</td>
<td>Moving the bulk steel production away from the city. At the same time keeping the high speed, self-hardening, and alloy steel production on an inland side, as more profitable and convenient location in this case.</td>
</tr>
<tr>
<td></td>
<td>About 1916</td>
<td>A programme of public works became the main feature of the city life. Providing the City Hall and the Central Library in the city centre. Realization of new parks and start of the 10 miles &quot;round walk&quot; (private donation). The public space became the method for ordering the city.</td>
</tr>
<tr>
<td></td>
<td>1960s</td>
<td>International reputation for development of traditional housing estates and spectacular landscapes (after the destructions of the WWII in 1940).</td>
</tr>
<tr>
<td></td>
<td>1966</td>
<td>Sheffield recognised as the world's cleanest industrial city through: – the virtual elimination of industrial and domestic smoke, – enforcing of the clean air acts, – the major shift from coal to oil and electricity as industrial fuels, – pioneering the dust collecting plants in the main steel works.</td>
</tr>
<tr>
<td></td>
<td>1974</td>
<td>Further extensions of the city boundaries, existing until today.</td>
</tr>
<tr>
<td></td>
<td>1986-2006</td>
<td>Intense decline of steel industry and closing of many famous firms.</td>
</tr>
<tr>
<td></td>
<td>1998</td>
<td>Preparing the Sheffield Unitary Development Plan in order to: – regenerate the neglected and used up urban areas of the (post)industrial city, winning them back for new functions, – make the better living, working, studying, and resting conditions, keeping and attracting inhabitants, – improving the infrastructure, access to nature, and economy of the city.</td>
</tr>
<tr>
<td></td>
<td>1999</td>
<td>Open Space Provision in New Housing Development SPG.</td>
</tr>
<tr>
<td></td>
<td>2004</td>
<td>Idea of the City Centre Living Strategy.</td>
</tr>
</tbody>
</table>
The prepared table (Tab. 1) displays the crucial message about the long-term and advanced processes of revival attempts in Sheffield. It considers the problems with the early sanitary living conditions, destruction of environment, and the later consequences in the urban space, resulting from the industrial exploitation. Following, several revitalization programs were proposed and realized, where the interconnected and attractive public spaces became the method for ordering the city (one of the most important instruments was the Master Plan of Sheffield prepared by the Sheffield City Council). Thereby, the historical factor of the distinctive medieval composition of the inner-city is certainly a helping aspect for

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>Creation of the City Centre Master Plan.</td>
</tr>
<tr>
<td>2009</td>
<td>Sheffield Development Framework Core Strategy.</td>
</tr>
<tr>
<td>2009</td>
<td>Starting the Breathing Spaces initiative - the basic strategy for the recovery of neglected central urban spaces in Sheffield. The main goal: To create new high quality open spaces linked by a network of pedestrian routes.</td>
</tr>
<tr>
<td>2013</td>
<td>Issuing the Master Plan, indicating its three main linear post-industrial, historical, and geographical elements: The Steel Route and the Gold Route, connected with the history of civilization, as well as the Blue Route, connected with the river, joined with points, like business areas, universities, and neighbourhood centres, cooperating with the linkages.</td>
</tr>
<tr>
<td>2014</td>
<td>Realization of the central public spaces recovery along with -restorations, redevelopment, returning, and converting of the former industrial buildings and infrastructure, considering the ongoing changing spatial and functional needs of the city.</td>
</tr>
<tr>
<td>Katowice</td>
<td>XIV and XVI century</td>
</tr>
<tr>
<td>1598</td>
<td>The first information about “Katowice countryside” in the written sources. Though, the origins of the name “Katowice” are not clear.</td>
</tr>
<tr>
<td>Since 1742</td>
<td>Development of industry – mostly coal mine and foundries (under Prussian domination).</td>
</tr>
<tr>
<td>1846</td>
<td>Development of the Katowice countryside thanks to the railway engineering from Mysłowice to Berlin (Germany).</td>
</tr>
<tr>
<td>1865</td>
<td>The Katowice countryside had received the city rights.</td>
</tr>
<tr>
<td>1882</td>
<td>A raising the coal mine Ferdynand in Bogucice.</td>
</tr>
<tr>
<td>1996</td>
<td>Connection of the KWK „Katowice” Mine with the KWK „Kleofas” Mine.</td>
</tr>
<tr>
<td>1999</td>
<td>Close-down of the Katowice Mine.</td>
</tr>
<tr>
<td>2001</td>
<td>Demolishing of 86 coal mine built elements and keeping only the most valuable historical architecture of monumental worth. Compare: The main idea of the project is to keep the cultural heritage of the Upper Silesia through adaptation of two monumental buildings [19].</td>
</tr>
<tr>
<td>2006</td>
<td>International architectural competition for the „Quarter of Museums” (the built-up area of the former mine) and especially its south part. The task: Architectural concept for the new structure of the Silesian Museum and the land-use of the part of the former „Katowice” mine site.</td>
</tr>
<tr>
<td>October 2006</td>
<td>Announcing the goals of the competition (the winners: Architects Florian Rieglem and Roger Riewe/Austria).</td>
</tr>
<tr>
<td>2010</td>
<td>The Master Plan for the former KWK coal mine site and for the new city centre of Katowice, assigning the guidelines for the network of public open spaces (refusal of the plan by the Katowice City Council).</td>
</tr>
<tr>
<td>2015</td>
<td>Opening of the new Silesian Museum area to the public.</td>
</tr>
<tr>
<td>Since XX century until now</td>
<td>Intense industrial and urban development of Katowice connected with neglect of the technical and social infrastructure. Focusing on single architectural projects and fashionable design effects. Missing integrated city parks, urban gardens, natural river banks, and other easy accessible public spaces, which were (re)created in English cities, since the problems of industrial devastation and worsening of living conditions had been recognized.</td>
</tr>
</tbody>
</table>
the urban regeneration.

However, the difficult living conditions in the naturally and spatially devastated (post)industrial Katowice city are not enough cared-for. The official and comprehensive documents about any programmes on this subject are not receivable in open-access. Moreover, the mentioned concept of the Master Plan for the Katowice Centre, prepared 2010 [18], outlining the network of various types of public spaces as a key for the integration and better functioning of this area, was mostly not realized. The dominating city centre structure is missing in this case, since it is developed of individual urban units, which grew in rapid and chaotic way in the time of industrialization. Although, the presented new Silesian Museum with the new public space on the area of the former coal mine was open 2015, and meanwhile the so called city market was renewed, the centre of Katowice does not function as an integrated and coherent entirety of safe and easy accessible urban spaces. It seems rather as a random collection of single projects.

Moreover, the both researched study cases were intensely used up by industrial activity. However, solely the authorities of Sheffield have been working on the complex urban recovery plans for the whole city, introducing them even yet before the decline of industry, in 1960s. The consequence was the recognition of Sheffield as the world’s cleanest industrial city already 1966. Instead, the industrial and urban development of Katowice is connected with neglect of the technical and social infrastructure until now.

Furthermore, there is a place for discussion about the sense of collecting of all the most important cultural buildings in one place of the city, recognized as an island, which is to be noticed in the Katowice case study. Is this way of the monofunctional cumulation on the one hand, and the impoverishment due to the lack of this use in the rest of the urban areas on the other hand, the appropriate approach to the public space planning in the central post-industrial areas? Or, is it rather the english way of dispersing the new and renewed public spaces, joined with culture and other city services, more optimal for its easy access and everyday attraction in varied urban locations (cf. Fig. 20)? What is, in this sense, the right way to revive and develop the neglected city structure and to improve its climate?

6. SUMMARY

The case study in Sheffield shows the possibility to create the local system of public open spaces, basing on the main wealth of the industrial traces and geographical elements, which makes the skeleton of the city centre in its Master Plan. Therefore, the “culture island” in Katowice, as the described revitalized coal mine area may be called, could develop these english ideas of public space, since no urban area is an island (as the City Council in Zurich, Switzerland claims), especially in central locations. It must be integrated with other city places. Therefore the guidelines for the network of public open spaces in postindustrial areas, involved in the refused Master Plan from 2010 for the Katowice case study, had been prepared, in order to create the safe and friendly interconnected common spaces for inhabitants.

To sum up, the central areas of industrial cities have been transformed since the end of the industrial epoch. It shows that the present service society has different mobility and consumption needs. The social, economical, and cultural breakthrough of European cities shows the importance of the presence of the heritage traces in urban life. The history should be visible in the new public spaces, indicated in the master plans of the re-used areas. Accessibility, good location, various forms of landscapes, materials used, limitation of traffic, natural components, amenity and pleasure of use are the conditions for the attractive public spaces in the neglected areas. Furthermore, not only the very creation and keeping of squares and parks in the post-industrial areas is important. Crucial is also to extend it physically on the surrounding sites, to guarantee the architectontical security and peace, as well as to preserve it legally in the master plans. Last but not least is the urban context and the easy connections with the close and
farther neighbourhood. These spatial and functional conditions of the urban revival, considering the (re)creation of public open spaces, if appropriately implemented, should guarantee the survival and development of neglected cities and its centres. Finally, the urban culture in Sheffield is obviously more advanced than in Katowice. However, this should give hope that in the future also the comfortably integrated, easy accessible, and safe public spaces with natural components will become the way of the urban recovery.

REFERENCES


[15] SWOT analyses describing strong (S) and weak (W) sides, opportunities (O) and threats (T) of the analyzed subject.

[16] The author: Anna Marta Włodarczyk. In situ investigation in Sheffield 2014: Photo documentation, official materials and interviews with experts in the Sheffield City Council and at the University of Sheffield. Cooperator in the design of the Master Plan for the area of the Olimpijska street in Katowice 2010, analyzed in the paper.


[18] The Concept of the Master Plan for the area of the Olimpijska street in Katowice (today the “Culture Zone”), prepaired by Arch-Urbs Design-Research Office in Katowice: The City Council of Katowice resigned of this plan in order to develop the site using solely the simplified form of Conditions of Building, which gives more freedom to investors and permits to build without official form of legal urban regulations. The results are, that today the public open space on the analyzed “culture island” in Katowice is not interconnected and makes only the marginal percentage of the revitalized post-industrial area. It does not exist in form of a network and have no relations with the neighbourhood.
