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POST-MINING TOURISM IN UPPER SILESIA AND CZECH-MORAVIAN COUNTRY

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Abstract

Europe experiences the development of post-industrial tourism documenting the time of growth of traditional coal basins. Contemporarily, the processes of deindustrialization take place. The material resources of traditional industry are being liquidated – which is expensive, or are adapted for the needs of tourism, which gives a new chance of development for these regions which are by rule in a difficult economic situation. Polish coal basin where many industrial plants and coal mines were closed as a result of restructurizing may serve as an example. Similar processes, although in smaller a scope, occur in the Czech Republic. Some of the industrial objects and coal mines concentrate certain values that predestine them to be included in the group of post-industrial heritage: the Czech and Polish coal mines from the 19th century, or coking plants and steel plants – as Hlubina in Ostrava Vitkovce. The idea of this article is to connect some Czech and Polish objects with one tourist route. The proposed tourist area starts in Czerwionka-Leszczyny and runs to Ostrava, and includes former industrial objects, old mines equipped with steam engines, patronage housing estates, coking plants, as well as mine waste dumps subjected to natural succession of vegetation. Creation of such route will allow to popularize the landmarks of post-industrial heritage for tourists of both countries, as well as will contribute to the development of services based on tourism. The route could become a common training ground for students of polytechnic departments of mining and environment protection, as it illustrates both the former mining technological processes and the processes of renaturalization of dumping grounds. The visiting sites were selected on the basis of unified criteria such as their age, suitability for tourism and education, as well as because of their originality, authenticity and uniqueness. The proposed tourist route will also connect the Polish Industrial Monuments Route with the monuments and mining museums in Ostrava.

Key words

post-industrial heritage, tourist route, cross border, old mines, Upper Silesia, Czech-Moravian country

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1. The post-industrial Heritage space for the post-industrial heritage tourism

Europe was the cradle of the Industrial Revolution. The legacy of the most radical change in economic history is a crucial element in the continent's identity (Richards (ed.), 2001). Yet, as a result of modern structural changes, many parts of Europe have de-industrialised, leaving unemployment and physical dereliction. Dealing with such sites is expensive, calling for innovative solutions; a redundant plant is rarely viewed as a heritage resource, as industrial history is a common European heritage and the protection of such sites is such a difficult task. It was considered an issue that could be appropriately tackled through co-operation between many partners: financial backers, governments, and even international partners (Cizler, 2014; Our common..., 2001). A new cultural and tourist space in Europe has developed over the last 50 years as a result of the joint work of these partners. As a result of the joint work of the partners, a new cultural and tourist space in Europe has developed over the last 50 years. It is marked by material structures, which are already historic, and consist of post-industrial facilities concentrated in the former mining districts constituting the material basis of the post-industrial heritage (Hospers, 2002). In the sphere of the heritage, there are also intangible assets: the history of technical, social and economic achievements of the inhabitants of the continent, the ethos of workers' life and work (Ujma-Wasowicz, Sulimowska-Ociepka, 2017). The areas where the most of those resources have been found and where their civilization and culture-forming role has been recognized as cultural heritage are located in: Great Britain: Midlands, Wales, southern Scotland, France: Nord pas de Calais, Loire coal mining basin, Saar Warndt coal mining basin, Vogeses and Jura coal mining basins, Germany: Saarland and Ruhr, Poland and the Czech Republic: Wałbrzych Basin and Upper Silesia Coal Basin, Belgium and Spain (Cizler, 2014, Pinter et al., 2017).

The process of creating the cultural and tourist value of those facilities and centres consists of several stages, the most important of them are (Ashworth Larkham (eds.), 1994; Lamparska, 2017):

- recognition of their value (for the history of technology, architecture, culture as a settlement document),
- valorising (determining the rank of their value for culture and tourism from the local to the world scale),
- adaptation (reconstruction, a method of constructing information about the object),

- ways of making information about the object available, presentation and marketing (creation of the brand), single product or a chain one.

Europe as continent, is very attractive for tourists – many of the tourist attractions here are classified as classics of the genre, and a large number of them have been tourist attractions since the times of the Grand Tour. There are Greek and Roman ruins, famous European museums, pearls of architecture such as Venice in Italy, Vatican City, and Paris, and their museums and cabarets. All of them have been visited many times since the 18th century (Richards (ed.), 2001; Urry, 2002). Mines were also among these attractions. We should remember that the 18th century was also the time of the industrial revolution. Back then, tourists admired the achievements of engineering genius in mines (Dorstewitz, 2014).

Modern Europe has once again "given" something new to the world – for example, experience in closing down large-scale traditional industries and the creation of new functional spaces, as well as a new brand of tourist attractions (Berger et al., 2018).

Nowadays, tourism is becoming an important part of the existence of a multicultural, multi-ethnic society. D. MacCannell (1989) wrote about tourism as "the new world religion". The altars of this "new religion" are the countless tourist attractions; and pilgrimage, which is a form of worship – the journey to the place of attraction. A post-industrial mindscape?

However, the essence of the tourist experience is in consumption of the tourist product, which must be novel and original. In Europe, in the post-industrial societies, the centres of former industrial fame have been turned into such places. They are frequently visited and they have become a part of the culture of touristic choices of the inhabitants of the continent (Parinello, 1993). These products are mining and post-mining landscapes, underground tour routes, and cultural and entertainment events taking place in the historic halls of the old factories or in underground areas in the old mines. This is an integral part of the material and immaterial heritage which has been shaping up for the past 250 years. The heritage, very diverse one, has been recognized as a tourist resource, which is the youngest group of historical monuments of culture identifying cultural and civilizational identity of the European continent (Terlouw, 2011, Górmár et al., 2019). Their importance is also significant for the history of culture and industry in the whole world. Several objects have been inscribed on the UNESCO World Heritage List. They include the Nord pas de Calais complex in France, the Zollverein Coal Mine Industrial Complex in Germany, the zinc, lead and silver ore mine in

Tarnowskie Góry in Poland (Rautenberg, 2012; Lamparska, 2017).

Heritage tourism is a special form of tourism in which tourists explore and commune with the past by experiencing historical artifacts and living environments during their trips (this definition emphasizes and characterizes a difference in tourist experience in this kind of tourism) (Edson, 2004; Timothy, Boyd, 2006). Industrial heritage tourism combines tourist activities and industrial culture relics which present and preserve the historical, technological, social, and architectural values of industrial traditions. Post industrial heritage tourism is an important part of cultural tourism. This last one involves visits to cultural attractions and events. The currently most accepted definition is given by the Association for Tourism and Leisure Education (ATLAS): "Cultural tourism is the movement of persons to cultural attractions away from their normal place of residence, with the intention to gather new information and experiences to satisfy their cultural needs" (Richards, 2000, p. 3). In addition, it at the same time can educate and raise tourists' appreciations, bring up nostalgic affections for local sites, project the image of glorious industrial achievements, and revitalize local economy (Alonso et al., 2010). By stressing the value of the industrial past and present, an industrial area's shift from a site of active production to a tourist attraction may also enhance the local community's sense of identity. C. Ryan (2002) perceived heritage tourism as a type of alternative tourism where "sustained value creation" aims to benefit communities, environments, businesses and tourists. D. MacCannell (1989) annotated it as "a museumization of work", which he terms "work display", as a post-construction of conventional production culture on marking the death of industrial society.

As industrial heritage culture set for tourism purposes, "work watching" becomes a normative practice, in which both landscape and labour become interpreted and marketed for tourists (Wanhill, 2000). These definitions show how important post-industrial heritage tourism is in cultural life of the European society. Post-industrial heritage tourism is developing in Europe. This tourism crosses borders (in Saarland and Lorraine regions there are post-industrial routes). A set of revitalized industrial facilities located in the area of the geological unit known as the Upper Silesian Coal Basin is a great example of such tourism, focusing on the regions of southern Poland and northern Czech Republic. On the Czech-Polish border there are post-industrial monuments that can become the basis for establishing an international tourist route. Creation of the European network of ERIH routes www.erih.net in the 1990s, which

documents historical monuments of the continent's industry, is the most important proof of importance of the post-industrial tourism. Below, there is a proposal of such a route, because the author assumes it should be included in the list of the routes of the project which have been marked out so far. This paper introduces an idea to create a thematic tourist route in the south-western part of the Upper Silesia coal basin, between Czerwionka-Leszczyń near Rybnik and Ostrava. The key tourist values will be old mines and mining and post-mining landscapes, steel works, and coking plants. The goal of creating such a route is to preserve and show tourists places of historical and cultural significance, created as part of the development of traditional industry in this part of the Industrial Region called Upper Silesian Coal Mining Basin. I would like to characterize selected historic buildings in the mines areas, mine shafts, workers' settlements, mining machinery and equipment, reclaimed land (former brown fields) and reclaimed old dumps as tourist attractions. These sites are very popular with "3E" tourists (3E: environment, education, entertainment). While this type of tourism is relatively new, it is not a small niche.

2. Why the thematic route in this cross-border region?

Thematic routes are very popular trends of post-industrial heritage tourism development in today's world (Berti, 2013). The popularity of thematic tourist routes has increased over the last two decades, and has shown an enormous potential for tourists, offering intercultural dialogue, and promoting the image of European traditional regions. However, the idea of thematic routes is at least as old as the Grand Tour. The postindustrial heritage routes encourage tourists to participate in historical and cultural activities raising awareness of our past (Regional Routes..., 2001). Established on post-industrial objects and respecting social and cultural principles, the postindustrial heritage routes linking sites represent the „living past" (Moulin, Boniface, 2001).

There are many places in the Region of Upper Silesia which can be considered milestones of European industrial history. Poland has the "Industrial Monuments Route" which links the Silesian and Polish post-industrial heritage sites (Lamparska, 2017). However, Poland shares the Upper Silesia Coal Basin with the Czech Republic (Jureczka et al., 2005). Unfortunately, there is no existing international post-industrial tourist route in this area. The route proposed in this article will link landscapes and sites which have left their mark on European industrial history

in this part of Europe and this part of the Upper Silesia Coal Basin. The route, running from Czerwionka-Leszczyny in Poland to Ostrava in the Czech Republic, illustrates the development of industry sites in the Czech and Polish parts of the Industrial Region. The route could become a common training ground for learning, as well as research for students of Polish and Czech universities and polytechnic departments of mining and tourism. The route could also stimulate the economic development of the service sector and tourism in both countries. Western countries have for a long time been making efforts to preserve important monuments of the industrial period from demolition and to provide them with new roles in contemporary economies (Lamparska, 2017; Pinter et al., 2019). Outstanding examples of former industrial activity – industrial buildings, areas, and exceptionally landscapes, have in some cases come under international protection as world heritage sites (Kolejka, 2016).

The main attraction of these objects is included in their history. The history of coal mining in the area has more than 200 years. The oldest mines are: "Ignacy" in Rybnik, „Orlova" colliery and „Azelm" near Ostrava. The mine in Michalkowice is about 150 years old. The mines in Ostrava-Vítkovice and Ostrava-Petrkowice are 150 years old as well. These old mines are no longer operational, but they serve as monuments to old mining. Presently, the Upper Silesian Coal Basin is home to some of the most modern mines in this part of Europe. These are mine "Frydland" in the Czech Republic and mine "Morcinek 1" or "Budryk" in Poland. In the early nineteenth century the south-western part of the basin was divided between the Austrian Empire and the Kingdom of Prussia. It was a time of rapid development of traditional industries. Coal was the primary energy source which gave an impetus to the development of the mining industry. Further intensification of production was affected by the expansion of railroads in the mid-nineteenth century. These railroads linked the areas of exploitation with export markets in Europe (Dzieła techniki..., 2002; Jaros, 1975). After World War I, the northern part of the basin was shared by Southern Poland and Czechoslovakia. Coal mining from the basin supplied industrial plants of both regions. In that time, the north-western part of the basin was more important for Polish economy than the southern part. Intensification of the Rybnik coal basin development began after the Second World War. In addition, existing mines were modernized (Coal Mine "Anna-Rydultowy", Coal Mine "Marcel", Coal Mine "Chwałowice", Coal Mine "Jankowice", Coal Mine "Dębieńsko") and several new, very modern, were built (KWK "Morcinek" liquidated in 2002

KWK "Pniówek", KWK "Krupinski," KWK "Zofiówka" and KWK "Borynia" Coal Mine "May 1", closed down in 2001. The Czech part of the basin (called the Karviná-Ostrava Basin) has gained great economic importance after the establishment of independent Czechoslovakia (Jureczka et al., 2005). A significant part of the energy sector and steel industry sector was based on coal from Ostrava. A large-scale industrialization has changed the image of the entire region (Uhelné hornictví..., 1985). Access to local coal had particular importance for the growing industry. Currently operating mines in the Czech Republic are located in the area of Karvina and Frydek-Mistek. They are: "Karvina Mine" with two establishments. "CSM Mine", "Mine Darkov" mines in Paskov and Frenštát. Nowadays both regions are experiencing similar problems related to landscape changes precipitated by 200 years of mining activity. Issues related to the closure and liquidation of mines are also common, although they affect the Polish part of the basin on a larger scale. Units of mining and post-mining landscapes are commonplace throughout the basin, documenting the various methods of reclaim (Produkcja skały..., 2018). Development of mining technology and digging methods also had a great impact on the rate of transformation and industrialization of landscape in neighborhoods of mines in Poland and in the Czech Republic. These changes were mainly visible in: high concentration of industrial and residential infrastructure, growing density of road infrastructure and vanishing or marginalized farmland in favor of dumping grounds.

3. The route project

In selecting objects that, in the author's opinion, are the most interesting, both indoor and outdoor research was conducted. The outdoor research allowed to assess the diversity of landscape in the presented areas. The indoor research consisted of querying libraries, archives and museums, where various current and archived materials have been studied to enable the reconstruction of these sites' history. Interviews with the curators of museums in Rybnik were conducted, and web pages pertaining to mining in Poland and the Czech Republic were retrieved. A photographic documentation of selected historic buildings located in mining complexes, as well as landscapes, has also been kept.

The selection criteria of those objects are:

- exceptional historical importance in terms of industrial heritage which also offer a high quality visitor experience,

- historical authenticity with symbolic value and (ideally national) importance in Europe's industrial history,
- recounts its history with imaginative interpretation and exhibitions – this includes on-site visits, demonstrations of factory operations,
- illustrates processes of natural reclaim,
- site is a part cultural landscape of this region,
- the age of the mine,
- the presence of listed buildings under legal protection,
- the presence of archives, memorial halls, and museums on the site's premises.



1. The Dębieńsko coal mine in Czerwionka-Leszczyny, Poland.
2. The old dumping ground in Czerwionka-Leszczyny, Poland.
3. The historic patronage housing estate of the coal mine "Dębieńsko", Poland.
4. The mine "Ignacy" in Rybnik-Niewiadom (Rydułtowy), Poland.
5. Mining Museum, situated on Anselm mine area, Ostrava, the Czech Republic.
6. Michal Mine in Ostrava, the Czech Republic.
7. Hlubina, Dolní Oblast Vitkovice, Ostrava, the Czech Republic.

Fig. 1. The plan of proposed route

Source: Lamparska, 2017.

In case of old dump areas and old pits, ecological assessments have been used to determine those objects' value in the natural reclaim process, as well as their aesthetics. It was acknowledged that certain dumps have been incorporated into the cultural landscape. The idea and the initial draft of the route have emerged after a series of field exercises organised by geographers of Earth Science Faculty of the University of Silesia, to Rybnik and Ostrava. It has been directed at the local governments where the mines are located. The proposal has also been presented at an international conference dedicated to historic technological objects in Zabrze, and its abstract was published in "Industrial Patrimony" n. 12, anno VI, 2004, Part II, published by The International Committee for the Conservation of the Industrial Heritage (TICCIH; <http://ticcih.org/>) in Paris. It has also been presented to museums and societies who promote and preserve mining traditions in the Polish part of the Industrial Region. The tourist facilities described in the article were included in the "tourism among mining shafts" trail, running through the entire area of the Upper Silesian Coal Basin. Therefore, they were among the 100 most important and most characteristic objects documenting the cultural identity of Silesia and the Moravian Region (Lamparska 2017). Brief characteristics of potential post-industrial tourist values and cultural events in the Polish-Czech border area is presented in tab. 1.

The first group of objects included in the suggested tourist route comprises several sites in the direct neighbourhood of coal mine "Dębieńsko" in Czerwionka-Leszczyny (number 1 on fig. 1, tab.1).

The mine was put into liquidation in 2001, after 102 years of operation. For all that time, the mine has had a tremendous impact on the transformation of landscape of the Czerwionka-Leszczyny region, giving it typically mining-related features (Jureczka, 2005). During the earliest period of work, coal had been mined using open-pit or shallow shaft methods, as outcrops of coal seams, situated in the area of Dębieńsko. The beginnings of the colliery date back to 1853, when Wilhelm Schneider started a mine named "Dubensko". During the Nazi occupation, it belonged to Herman Goering's armaments concern. After World War II, this mine worked as a very important colliery in this region, where coking coal was mined. Currently, after 12 years of inactivity, there are proceedings aimed at reopening the mine. A dip-heading is being built, which will make it possible to access rich coking coal deposits. Buildings on the surface have been modernized; of all 19th-century buildings, only the pithead has been preserved. As it is situated within the area of an operating mining

plant, it is only accessible to guided tourist groups (fig. 2).

Another site worth seeing is the old dumping ground in Czerwionka-Leszczyny, where old shafts of mine Dębieńsko were located (number 2 on fig. 1, tab. 1, fig. 2). The dumps have been present there for over 100 years and are an integral element of the landscape of this part of Czerwionka-Leszczyny. The dumping ground originally included 5 dumps, deposit tanks and a flat heap. Conical dumps reached the height of 351m above sea level. The relative height of the highest one is about 75 metres. Post mining waste (rock mixed with fine coal fractions) and coal washer tailings were stored there. Deposit tanks collected slush. The contents of hard coal in waste are estimated at 10 to 12%. Pyrite concentrations in the chemical contents of waste reach 0.9%, so the dumps show thermal activity. Currently, two cones are being deconstructed in order to recover coal and obtain building material for roads and highways. The other three cones have been subject to reclamation processes. Trees and shrubs were planted in the 1980s. Research carried out in the recent years suggests continuous natural succession of vegetation on the waste dumps. Lower parts of the dumps are dominated by deciduous trees (including silver birch), and upper parts by black cherry and black locust. There are a few species representing vegetation in the uppermost part of the dumps (Zajac, Zarzycki, 2013). Dumps of post-floatation waste and coal washer tailings, which belong to the mine and take up the area of about 100 ha, are also gradually being overgrown with vegetation. Conical dumps have high landscape values, creating specific culminations in the rural landscape of Czerwionka. They have grown into the cultural landscape of the neighborhood, emphasizing the mining nature of this part of region. During periods of barometric depression, gas emissions, mainly of carbon dioxide from carboniferous shales burning inside, are reported in some dumps, even those which are completely overgrown with vegetation. Nevertheless, the dumps are an interesting element among the agricultural and forest landscapes of the Czerwionka region (Lamparska-Wieland, Waga, 2002).

Mine "Dębieńsko" includes a complex of historic housing estates built for the miners. The historic patronage housing estate of the coal mine "Dębieńsko", in Czerwionka-Leszczyny, is one of several workers' settlements established in Upper Silesia (number 3 on fig. 1, tab.1.). It was built between 1899 and 1916. The houses there still have their residents. The building material was red brick. The houses have wooden gable roofs and are distinguished by high architectural diversity. The complex, set on the rectangular

Tab. 1. Brief characteristics of potential post-industrial tourist values in the Polish-Czech border area

Number of object in fig. 1.	Object name and address	Short description	Tourist attraction and values	Homepage and interesting links
1.	The Dębieńsko coal mine in Czerwionka-Leszczyny, Poland, Czerwionka Leszczyny 3 maja 15 str. Poland	Working coal, limited access for tourists, accessible to guided tourist groups	Architecture of buildings, and Museum for Memory Liquidated Mines in this region, post-mining landscape	https://fkzrow.pl/kopalnie/czerwionka-leszczyny/debiensko www.twgs.pl
2.	Old dumps areas, Chrobrego str, Czerwionka Leszczyny. Poland	Living laboratory of biological process of reclaim, open access	Landscape of dumps (the iconic landmark of Silesian landscape), natural reclaim process, space open for tourists and walkers	https://pl.wikipedia.org/wiki/Kopalnia_W%C4%99gla_Kamiennego_D%C4%99bie%C5%84sko www.twgs.pl
3.	The historic patronage housing estate of the coal mine "Dębieńsko", Czerwionka-Leszczyny, streets: Wolności, Słowackiego, Generała Hallera, Kombatantów, Mickiewicza, Szkolna. Poland	The district is a part of the town The houses there still have their residents, open access for tourists	Urban tourism, landscape, architecture, local events, markets, Corpus Christi celebration in local church	http://familoki.com.pl/sample-page/jak-dojechac/
4.	The mine "Ignacy" in Rybnik-Niewiadom (Rydułtowy), Rybnik – Niewiadom, Mościckiego 3 str., 44-273 Rybnik. Poland	The oldest colliery in this region, available for individual tourists and groups, open access	Two steam machines, (XIX century), The tower was erected on a 306-metre-high above sea level hill, architecture values, post-mining landscapes, local events, markets	http://kopalniaignacy.pl/ www.twgs.pl
5.	Landek Park, Mining Museum Pod Landekem 64, 725 29 Ostrava — Petřkovice. The Czech Republic	Former Anselm Mine, open air museum, underground tourist route, open access for tourists, hotel, cafeterias, restaurants	A unique exhibition of the Mining Museum highlights the evolution of coal mining in the Ostrava-Karvina region, as well as mining technology, and rescue services. It is the largest exhibition of its kind in the world. Local cuisine, events, landscape	http://www.landekpark.cz/pl www.twgs.pl
6.	Michal Mine, Nám. Armády 95 str, 715 00 Ostrava – Michálkovic. The Czech Republic	National Cultural Landmark of the Czech Republic, open air museum, open access for tourists	Michal Mine: extremely valuable authentic industrial site in terms of construction and technical equipment	www.dul-michal.cz www.twgs.pl
7.	The Vítkovice complex Dolní Oblast Ruská 2993 str., 703 00 Ostrava-Vítkovice. The Czech Republic	The Vitkovice steel works, metallurgy and machine engineering	An industrial open air museum, open access for tourists, The giant gas container for blast furnace gas (around 70 m wide and 33 m high) has been modified into a concert hall for 1,500 visitors, a gallery, café, hotel, concerts, events	http://www.dolnivitkovice.cz/pl/ www.twgs.pl

Source: Lamparska, 2017



Fig. 2. The "Dębieńsko" mine in Czerwionka -Leszczyny

Source: own study.

plan, consists of about 90 multi-family or public buildings with ridge roofs parallel to the road. Due to its high historic and architectural values, the whole concept has been entered into the register of historic monuments.

Another object which could be included in the suggested route is mine "Ignacy" in Rybnik-Niewiadom (Rydułtowy) (number 4 on fig. 1, tab. 1).

This colliery started operating in 1792, thus being one of the oldest mines in this part of the coal basin. Mines "Sylwester", "Biertułowy", "Carolus" and "Laura" were opened in its neighbourhood in years 1834–1870. Between 1922 and 1936, and later between 1939 and 1945, the mine was named "Hoym" to honour the Prussian minister (governor) of the Silesian province, in years 1871–1922 it was named "Hoym-Laura". From 1936 until 1939, it was called "Ignacy" to honour the Polish President Ignacy Mościcki. Mine "Ignacy" with two shafts: "Głowacki" and "Kościuszko" is now part of Coal Mine "Anna-Rydułtowy". The story of spatial development of Mine "Hoym-Laura" is a classic case of a "wandering mine", which transformed into a modern multi-shaft multi-level mine with specialist mining, draining, transporting and sorting functions (Dzieła techniki..., 2002). Mine "Ignacy" has an origin similar to mines developed

in mining centres with centuries-long traditions. An analogous process of mine development can be observed in the region of Kutna Hora in the Czech Republic, where large specialist mines developed in 16th and 17th century, along with the developing industry in the region. These were mines with a well-developed infrastructure for transportation, drainage and ventilation of workings based on the shaft system. In the south-western part of the Upper Silesian Coal Basin, these mines developed during the turn of the 20th century; the best example of this, besides mine "Ignacy", is mine "Michał" situated in Ostrava Michałkowice (Dzieła techniki..., 2002; Jaros, 1975). The concept of preservation of mining objects of mine "Ignacy" emerged in the late 1990s. It is an expression of local initiatives created with the development of tourist traffic and economic activation of the region in mind. Shaft "Głowacki" and the water tower are available for guided tours. What is worth particular attention is a steam engine on shaft "Kościuszko", and another steam machine on shaft "Głowacki". This complex of shafts and steam machines is over a hundred years old, and includes historic, but still working, technical facilities (fan, diffuser). The complex of buildings has also been preserved, including the lamp room, baths, the shift



Fig. 3. The colliery Ignacy Hoym in Rybnik

Source: own study

token room, transformer and compressor buildings, storehouses and the 46-metre-high water tower. The tower was erected on a high hill, 306 metres above sea level, which is the highest point in the area and offers the best views in the neighbourhood (fig. 3). Mine "Ignacy" with post-mining landscapes varying in age may become a center of tourist traffic which could record the history of hard coal mining, where tourists could learn about the whole technological process of coal exploitation (Konceptja..., 2000; Lam-parska-Wieland, Rybałowski, 2003).

Ostrava is the third city of the Czech Republic, and in the 19th and 20th centuries was the centre of a heavily industrialised region, similar to that in Silesia to the north. Some of the largest and most tour-istically interesting industrial companies are located in the city of Ostrava. Located on the former Anselm Mine (one of the first to be established at the end of the 18th century in what is today the Petřkovice District of Ostrava), the Mining Museum was opened in the early 1990s (number 5 on fig.1, tab.1, fig. 4). A unique exhibition of the Mining Museum high-lights the evolution of coal mining in the Ostrava-Karvina region, as well as mining technology, and rescue services. In fact, it is the largest exhibition of its kind in the world. With the collection of miner's

lamps and hand tools, visitors get a real taste of the hard work and dedication the men of the mines had. The tour includes a view of mining in the original seams with wooden braces, mining machines and conveyor belts. The Mining Museum, opened in 1993 but incorporating collections dating back to 1905, is based in a range of red brick colliery buildings, designed by Viennese architects between 1890 and 1915 (Fragner, 2006; Hluščíková (ed.), 2001–2004).

Michal Mine, which history goes back to 1843, is an extremely valuable authentic industrial site in terms of construction and technical equipment (number 6, fig. 1, tab.1). The museum provides visitors with a chance to look over all of the above-ground work areas that a miner would have to go through to get to his shift. The tour includes the dressing rooms, washrooms, registry, dispatching, and most importantly, the machine room, with its original and unique equipment that had worked until 1993, when the mine was permanently closed. The scene, intentionally left intact, without any artificial arrangements being made, gives the impression as if work there has just ended. Some of the rooms in the Museum house also other kinds of temporary exhibitions, often displaying works by foreign artists. Michal Mine underwent several changes. Its



Fig. 4. Landek in Ostrava. Anselm Shaft

Source: own study

appearance was significantly affected by its reconstruction which was completed in 1915. The first electric mining machinery, compressors and rotating converters were put into operation here in 1912. The buildings have been preserved in near-authentic form, as they looked at the turn of the 20th century. Thanks to this, the area was declared a National Cultural Landmark in 1995 (Hluščíková (ed.), 2001–2004).

The Vitkovice steel works, located in the suburb of the same name near the city center, focuses on metallurgy and machine engineering (number 7, fig. 1, tab.1. fig 5). The Vitkovice Ironworks was built in Ostrava from 1828, following a suggestion made some 18 years earlier by the Scottish engineer John Baidon. Much of its finance was provided by Salomen Mayer Rothschild. The first iron was produced from its blast furnaces in 1832. A rolling mill for rails was completed in 1847, a Bessemer steel plant in 1866, and a tube mill in 1883. There were extensive engineering shops and by-product plants. In 1938 the plant employed 18,860 people, a total that rose to 33,477 by 1944. The blast furnaces were blown out in 1998, and the remaining parts of the business, concerned chiefly with mechanical and constructional engineering, were privatized 2003. Much of the disused plant, the Hlubina Colliery, the coke ovens and blast furnaces along Mistecka Street and the steel plant and rolling mill on Ruska Street, including many 19th century buildings, have been declared



Fig. 5. The Vítkovice complex, Dolní Oblast

Source: own study

a National Cultural Monument, and are in process of conservation. This is one of the most substantial projects of its kind in Europe, comparable with Volklingen or Duisburg-Meiderich. The Vítkovice complex Dolní Oblast underwent extensive reconstruction. The giant gas container for blast furnace gas (around 70 m wide and 33 m high) has been modified into a concert hall for 1,500 visitors, a gallery, café, etc., based on design by leading Czech architect, Josef Pleskot. Blast Furnace no. 1 has become the start of a tour route, and the sixth energy central office has become an industrial museum (project authored by Václav and Helena Zemánkovi). The expected date of completion of the reconstruction was set for 2015.

4. Conclusion

Restoration of old industrial plants, including mines as historic objects is a very valuable local initiative with trans-local impact and international significance. It activates creative industries, economy and education, especially in border areas. In many European regions, including the Czech Republic and Poland, where a number of industrial plants are put into liquidation because of economic conditions or complete exploitation of deposits, the mining industry is gradually becoming a history for people who live there.

Preserving those objects as tourist attractions is of great importance for tourism, which supports budgets of communities, and also makes visitors familiar with the mining history, tradition and technology, creating at the same time Europe-wide cultural heritage.

The scale of tourist traffic in the objects is not of a uniform character. The objects in the Czech Republic are more popular and more frequently visited by tourists, all thanks to a well-considered marketing strategy. It can be verified through, to mention one thing only, visiting web pages. A part of the Polish objects, especially the ones undergoing revitalizing – as “Ignacy” mine – is also visited by tourists. However, unless all of the places and objects mentioned above are merged into one tourist route and promoted by the Poles and the Czech, it will not bring the desired advantages, just as will not allow to develop integrated, international tourism. This route ought to be incorporated in the ERIH route list.

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