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**Robert Krzysztofik  
Jerzy Runge  
Iwona Kantor-Pietraga**

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**An Introduction to  
Governance of Urban Shrinkage.  
A Case of Two Polish Cities:  
Bytom and Sosnowiec**



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Sosnowiec 2012

*Robert Krzysztofik*  
*Jerzy Runge*  
*Iwona Kantor-Pietraga*

**An Introduction to Governance  
of Urban Shrinkage.**

**A Case of Two Polish Cities:  
Bytom and Sosnowiec**

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# Introduction

The process of urban shrinkage has numerous causes; the consequences of this phenomenon are also varied. The common ground, both for causes and consequences of the described phenomenon, is the broadly understood urban policy. Under this term the authors of the book understand the whole of the activities conducted at various levels of urban development management, with special emphasis on the role of municipal authorities. Undoubtedly, the role of the authorities is crucial, for they constitute the body appointed in democratic elections (Mayor, Council), as an expression of community support. It is assumed this style, and no other, of urban policy, emphasizing and solving specific problems is acceptable by the local community.

We adopt it after a number of definitions that a style of urban governance based solely on decisions of municipal authorities, or units controlled by the authorities, is of the nature that is referred to as government. Nevertheless, within social and economic progress, the growing role of social, economic and institutional groups, the management model based on the idea of governance is becoming more and more influential (Furmankiewicz, 2002; *Gmina pasywna*, 2007; Lackowska, 2007, 2010; Swianiewicz, 2005, 2007; Swianiewicz et al., 2004). In the Polish environment, established both by administrative legislature and certain traditions or social and political standards, the ideal governance model is a very broad collaboration of municipal authorities with a number of institutions within the framework of a contract which states that urban development is of utmost importance (Gorzalak et al., 2007). The cooperation goes beyond political party preferences, beyond the well-being of individual stakeholders, and beyond an individual need to succeed by the municipal authorities. It is also a cooperation founded on urban development, and in the situation of such cities as Bytom and Sosnowiec (figures: 1, 2), pulling them out of either a negative path of development, or reinforcing them by means of assigning new city-forming or metropolitan functions. We are aware of the fact that an ideal model does not exist anywhere – in any Polish city, and will never exist for various reasons; still we would like to identify the situation in the studied cities, while indicating the possibilities to find certain improvements for the future.

As already mentioned, the shrinkage of urban areas is a multi-aspect phenomenon, yet, from among many causes and consequences of this phenomenon in the analysed cities, two issues seem to be crucial<sup>1</sup>. One of them is the labour market as regards selected economic and social phenomena. We assume that the labour market, or from a different perspective – the volume and nature of the economic base, significantly creates the opportunities of development of Bytom and Sosnowiec, as well as other cities of the Katowice Conurbation. Unemployment is also an element which is directly connected to the labour market and has negative associations (figure 3).

The other problem is the image of cities, and more specifically, perceiving the urban space through the specificity of industrial and post-industrial nature. In that case a special role is played, in both cities, by brownfields, and in Bytom - by technically derelict vacant flats and vacant-housing caused by coal mining activity. A crucial part is played by the run-down, multi-family housing estates in the case of Sosnowiec and, in Bytom, to a lesser degree.

On the basis of private research, the analysis of documents and interviews with people representing various spheres of socio-economic life, as well as interviews with inhabitants of the examined cities, we conclude that the problems of the labour market and unemployment, and, to a lesser extent, the spatial issues are the most crucial and direct regional cause of urban shrinkage.

On the one hand, they have lead to migration outflow and, on the other hand, they significantly block the migration inflow through the real facts and also social reflection. The problems of the labour market do not have a positive influence on the possibilities of family development for the people who stay in the region and, despite difficulties, they have no intention to migrate. Two aspects of the local labour market, namely unemployment and low salaries, determine the phenomena of the lack of new families, of formalized relationships, and marriages of the 2+0 and 2+1 types.

The spatial issues and, in particular, the problems with image, pose one of the two most important factors that block the migration inflow. The negative perception of the cities by inhabitants of other regions, but also the inhabitants of the cities themselves, causes that the migration outflow is in no case counterbalanced by the migration inflow.

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<sup>1</sup> M. Kogut-Jaworska (2008) has presented interesting background of spatial, economic as well as social factors for local and regional development.



The book, in its governance question, therefore, concentrates on two basic aspects:

- the economic , that is the general urban labour market in Bytom and Sosnowiec,
- the spatial, divided into two issues: the functioning of the brownfields in both cities and vacancy housing in the centre of Bytom.

***Figure 1. A view on city of Bytom (the first picture) and view on city of Sosnowiec (the second picture)***



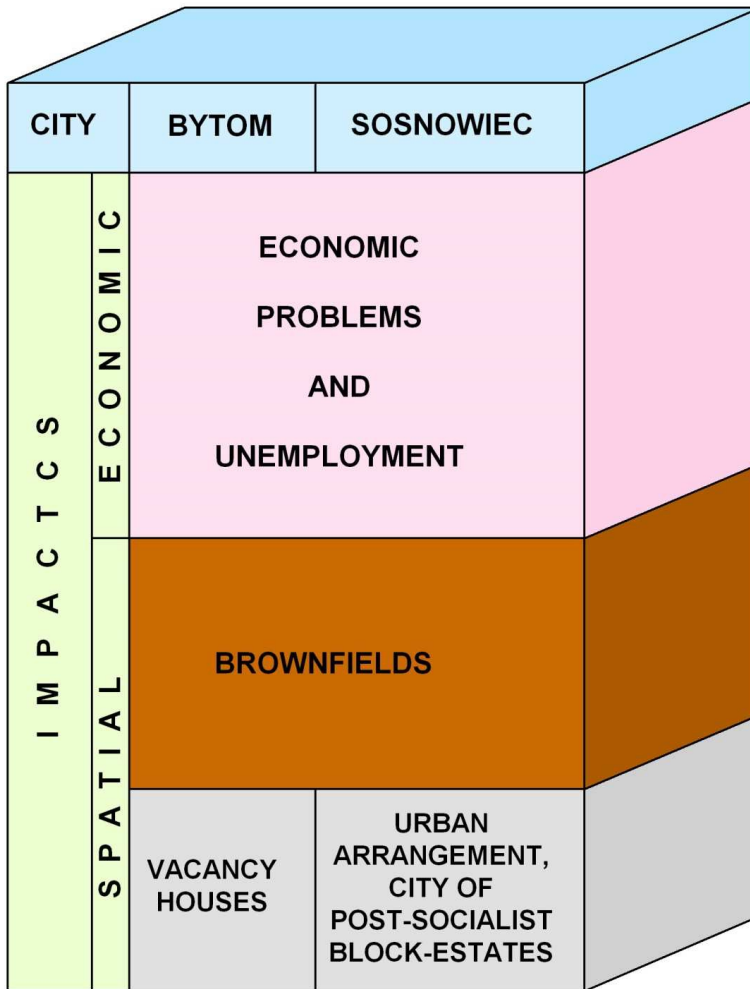
Source: „Armada Development” and R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

***Figure 2. City Marketplace in Bytom (the first picture) and The Centenary Square in Sosnowiec (the second picture)***



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

*Figure 3. Role of some impacts in shrinkage processes. Both – Bytom and Sosnowiec cases*



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

# 1. Determinants of shrinkage (economic aspects) and the impact of shrinkage on urban policy

## 1.1. Problem of Labour Market in Bytom and Sosnowiec

Changes to the labour market in the Katowice Conurbation, including the studied cities of Bytom and Sosnowiec, have been of revolutionary character in the past 20-25 years, both in terms of quantity and quality (*Województwo Śląskie*, 2008). The basic features of the described transformation:

- decrease in the overall number of employed,
- change to economic function of cities from industrial to service and industrial,
- in the 90's, occurrence of the phenomenon utterly unknown to post-war Poland – unemployment,
- breaking free of the mono-functionality of coal mining and iron&steel industry, and complete change of industry structure in the region,
- emerging of utterly new business activities, unknown in the region.

The entire of the above changes took place alongside the violent change to the economic and political system at the turn of the 1980's and the 90's.

Despite a number of coinciding issues as regards shaping of fundamental guidelines of the labour market, such as: the number of economic enterprises, volume of the employed or unemployed, both cities enjoyed different dynamics of changes (table 1). Part of the consequences are apparent in the current shape and image of economies of both cities.

**The 1980's.** Employment in Bytom in 1988 was 94,000, in Sosnowiec the volume was 89,900 (tables: 2, 3, 4). Considering the size of employment, the cities were the largest labour markets in southern Poland. Among the largest industrial establishments, the dominant ones were four hard coal mines in Sosnowiec (“Kazimierz-Juliusz”, „Porabka-Klimontów”, “Sosnowiec”, “Niwka-Modrzejów”, and part of KWK “Saturn” in Czeladź), as well as six in the area of the contemporary Bytom (“Centrum”, “Miechowice”, “Rozbark”, “Szombierki”, “Bobrek” and “Powstańców Śląskich”). Furthermore, each city hosted two steelworks (“Cedler” and “Buczek” in Sosnowiec, and “Bobrek” and “Zygmunt” in

Bytom). Each of the aforementioned hard coal mines employed 3,000-4,000 or even 5,000-6,000 people. Similar proportions were applicable to the iron and steel industry.

**Table 1. Labour Market in the cities of the GZM (a core of the Katowice Conurbation), 1992-2008**

Class			1992-1996	1996-2000	2000-2004	2004-2008	1992-2008
1	2	3					
+	+	+	Piekary Śląskie	Siemianowice Śl.	-	-	-
+	+	-	Mysłowice, Ruda Śląska	Mysłowice, Tychy	Ruda Śląska, Zabrze	Chorzów	-
+	-	+	<b>Bytom</b>	Gliwice, Jaworzno	Chorzów, Jaworzno, <b>Bytom</b> , Siemianowice Śl.	Mysłowice, Zabrze, Piekary Śląskie	Mysłowice, Piekary Śląskie, Zabrze
+	-	-	-	<b>Sosnowiec</b>	-	Ruda Śląska, Świętochłowice	Ruda Śląska
-	+	+	-	Katowice, Ruda Śląska	Katowice, Piekary Śląskie, <b>Sosnowiec</b>	Jaworzno, <b>Sosnowiec</b> , Siemianowice Śl.	Tychy
-	+	-	Gliwice, Katowice, Tychy, Zabrze	Dąbrowa Górń.	Gliwice, Mysłowice, Tychy	Gliwice, Katowice, Tychy	Gliwice, Katowice
-	-	+	Chorzów, Świętochłowice	Piekary Śląskie, Świętochłowice	Dąbrowa Górń., Świętochłowice	<b>Bytom</b> , Dąbrowa Górń.	<b>Bytom</b> , Chorzów
-	-	-	Dąbrowa Górń., Jaworzno, <b>Sosnowiec</b> , Siemianowice Śl.	<b>Bytom</b> , Chorzów, Zabrze	-	-	Dąbrowa Górń., Jaworzno, <b>Sosnowiec</b> , Świętochłowice Siemianowice Śl.

Explanations:

+/- – Dynamics higher/lesser than average for a core of conurbation.

1 – number of economic enterprises, 2 – number of employed, 3 – number of unemployed.

Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

Bytom also boasted well-developed building engineering and building industry, as well as companies contributing to the coal industry. Sosnowiec boasted extremely dynamic textile and clothing and electrical and machine-building industries.

In 1989, in Bytom, employment was 60.8% of the overall employment in the economy. In Sosnowiec this rate was 58.0%. In that rate, approximately half of the employed worked for the coal mining and related industries (53.2% in Bytom and 49.2 in Sosnowiec), and 1/10 for iron and steel (12.6% and 10.4% respectively) (tables: 5, 6).

*Table 2. Structure of employed in cities of the GZM-region, 2000-2007*

Cities	Employed in % of total											
	Agriculture, forestry			Industry, construction			Market services			Non-market services		
	1988*	2000	2007	1988	2000	2007	1988	2000	2007	1988	2000	2007
<b>Bytom</b>	-	<b>0,8</b>	<b>0,3</b>	<b>61,8</b>	<b>46,0</b>	<b>34,7</b>	<b>18,6</b>	<b>29,7</b>	<b>34,7</b>	<b>19,6</b>	<b>23,5</b>	<b>30,2</b>
Chorzów	-	1,4	0,2	58,9	41,2	33,1	20,1	33,1	39,6	21,0	24,3	27,1
Dąbrowa Górń.	-	0,1	0,2	75,8	62,3	54,9	12,0	23,5	29,8	12,2	14,0	15,2
Gliwice	-	0,5	0,5	63,7	41,8	42,8	15,5	37,4	38,7	20,8	20,2	18,0
Jaworzno	-	0,1	0,1	68,2	50,9	48,3	18,8	29,7	28,9	13,0	19,2	22,7
Katowice	-	0,3	0,2	51,4	35,4	28,3	25,8	42,4	48,6	22,8	21,9	22,9
Mysłowice	-	0,3	0,0	68,3	57,5	54,7	17,0	26,0	27,1	14,7	16,2	18,1
Piekary Śląskie	-	0,6	0,0	72,6	58,7	53,1	14,6	19,3	23,2	12,8	21,4	23,7
Ruda Śląska	-	0,2	0,3	72,3	67,9	55,8	14,9	17,2	24,7	12,8	14,7	19,2
Siemianowice Śl	-	0,2	0,2	70,2	49,1	43,0	12,6	30,1	32,7	17,2	20,6	24,1
<b>Sosnowiec</b>	-	<b>0,3</b>	<b>0,3</b>	<b>64,2</b>	<b>43,3</b>	<b>37,3</b>	<b>15,4</b>	<b>30,2</b>	<b>37,8</b>	<b>20,4</b>	<b>26,1</b>	<b>24,6</b>
Świętochłowice	-	0,6	0,3	67,3	50,5	41,3	10,9	24,8	35,0	21,8	24,0	23,3
Tychy	-	0,4	0,1	67,2	50,7	55,9	17,1	31,1	29,8	15,7	17,9	14,1
Zabrze	-	0,1	0,0	66,1	44,3	38,6	12,5	29,0	34,4	21,4	26,5	27,0

Signature: \* - agriculture and forestry were counted with market services. It should be noted that share of these sections probably were lesser than 1% in each of cities.

Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga by Statistical Office in Katowice.

However these markets differed. The labour market in Bytom was of immigration nature, whereas the labour market in Sosnowiec was of emigration character. In 1988 the relation of incoming employees in Bytom to the outgoing ones was 28,000 to 15,600. In turn, the dissimilarity of the labour market in Sosnowiec, at the end of the 70's and in 80's, followed from its vicinity to Katowice – the largest labour market in the area of the contemporary Śląskie Voivodship, and the location of the largest regional industrial investment of the time – “Katowice” ironworks and “Przyjaźń” cookery in neighbouring Dąbrowa Górnicza. Therefore, Sosnowiec became a vital housing base for the economies of the two cities. In 1988, the number of people leaving Sosnowiec for work was 35,000, while only 17,900 would come to work there. The dominant group of commuters comprised people employed in the coal mining, iron and steel, and other industries.

*Table 3. Structure of employed in cities of the GZM-region, 1988-2000. Dynamics*

Cities	Dynamics %			
	Agriculture, forestry	Industry, construction	Market services	Non-market services
	Dynamics 1988-2000	Dynamics 1988-2000	Dynamics 1988-2000	Dynamics 1988-2000
<b>Bytom</b>	-	<b>-15,8</b>	<b>+11,1</b>	<b>+3,9</b>
Chorzów	-	-17,7	+13,1	+3,3
Dąbrowa Górń.	-	-13,5	+11,5	+1,8
Gliwice	-	-21,9	+21,9	-0,4
Jaworzno	-	-17,3	+10,9	+6,2
Katowice	-	-16,0	+16,6	-0,9
Mysłowice	-	-10,8	+9,0	+1,5
Piekary Śląskie	-	-13,9	+4,7	+8,6
Ruda Śląska	-	-4,4	+3,3	+1,9
Siemianowice Śl.	-	-21,1	+17,5	+3,4
<b>Sosnowiec</b>	-	<b>-20,9</b>	<b>+14,8</b>	<b>+5,7</b>
Świętochłowice	-	-16,8	+13,9	+2,2
Tychy	-	-16,5	+14,0	+2,2
Zabrze	-	-21,8	+16,5	+5,1

Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga by Statistical Office in Katowice.

*Table 4. Structure of employed in cities of the GZM-region, 2000-2007. Dynamics*

Cities	Dynamics %			
	Agriculture, forestry	Industry, construction	Market services	Non-market services
	Dynamics 2000-2007	Dynamics 2000-2007	Dynamics 2000-2007	Dynamics 2000-2007
<b>Bytom</b>	<b>-63%</b>	<b>-25%</b>	<b>+17%</b>	<b>+28%</b>
Chorzów	-86%	-20%	+20%	+11%
Dąbrowa Górń.	+100%	-12%	+27%	+8%
Gliwice	0%	+2%	-3%	-11%
Jaworzno	0%	-5%	-3%	+18%
Katowice	-33%	-20%	+15%	+5%
Mysłowice	-300%	-7%	+4%	+12%
Piekary Śląskie	-600%	-10%	+20%	+11%
Ruda Śląska	+33%	-18%	+30%	+30%
Siemianowice Śl.	0%	-12%	+9%	+17%
<b>Sosnowiec</b>	<b>0%</b>	<b>-14%</b>	<b>+25%</b>	<b>-6%</b>
Świętochłowice	-100%	-18%	+41%	-3%
Tychy	-25%	+10%	-4%	-21%
Zabrze	-100%	-13%	+19%	+2%

Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga by Statistical Office in Katowice.

**Table 5. Employment in coal-mines in cities Bytom and Sosnowiec, 1989-2008**

Cities	1989			2008		
	Number of coal-mines	Employment (in thousands and percent of total)	Average employment in 1 coal-mine	Number of coal-mines	Employment (in thousands and percent of total)	Average employment in 1 coal-mine
<b>Bytom</b>	6	27,8 (53,2%)*	4,7	1	3,7 (12%)	3,7
<b>Sosnowiec</b>	4	21,5 (49,2%)*	5,4	1	1,9 (12%)	1,9

Source: M. Tkocz, 2008, p. 213; information from The Katowicki Holding Węglowy, Inc.

**Table 6. Employment in coal-mines in cities Bytom and Sosnowiec, 1989, 1998, 2008**

1989		1998		2008	
CITY OF BYTOM					
Name of coal-mine	Employment	Name of coal-mine	Employment	Name of coal-mine	Employment
Bobrek	3,7	Bobrek-Miechowice	4,1	Bobrek-Centrum	3,7
Miechowice	3,5	-	-	-	-
Powstańców Śl.	7,8	Powstańców Śl.	2,0	-	-
Rozbark	4,7	Rozbark	2,4	-	-
Centrum	4,6	Centrum-Szombierki	2,4	-	-
Szombierki	3,5	-	-	-	-
1989		1998		2008	
CITY OF SOSNOWIEC					
Name of coal-mine	Employment	Name of coal-mine	Employment	Name of coal-mine	Employment
Niwka-Modrzejów	5,5	Niwka-Modrzejów	2,6	-	-
Kazimierz-Juliusz	4,9	Kazimierz-Juliusz	2,5	Kazimierz-Juliusz	1,9
Porąbka-Klimont.	6,5	Porąbka-Klimontów	1,2	-	-
Sosnowiec	4,6	-	-	-	-

Source: M. Tkocz, 2008, p. 213; information from The Katowicki Holding Węglowy, Inc.

During the socialist period – until the end of the 80's - the economy of both cities was highly specialized, or mono-functional, if studied from a different perspective. That was a centrally planned, socialist economy; significant organizational elements in the analysed cities were: excesses of employment that were a partial remedy to technological lags in heavy industry, energy consumption, wastage of materials and half-finished products, lack of rationalisation as regards production organisation which, by principle, resulted from the predetermined plan, not economic calculation, low qualifications and education of personnel employed by traditional industries, and many more. A separate issue was the negative impact of coal mining and industry on the comfort of life, and a degrading influence on the city image, particularly in Bytom.

**The 90s and the 2000s decade.** The period after transformation in 1989, due to the introduced political and economic changes, completely revolutionised local labour markets. During the 90's and at the beginning of this century, Sosnowiec lost almost its entire industry, and at that time did not create any new jobs in new industrial establishments. The dramatic situation was saved only by employment in commerce and services. The new transition came later in the last decade, with seventeen new industrial facilities built within the city, fourteen of which were within the Katowice Special Economic Zone (table 7).

**Table 7. The Industrial Structure of the KSEZ. New Investment in Sosnowiec, 2009**

<b>The KSEZ Areas in city of Sosnowiec</b>	<b>Companies</b>	<b>Type of economic activity</b>	<b>Capital</b>	<b>Employed (2009)</b>
Area 1, „Milowice”	<i>Polskapresse</i>	Printing, editorial office	German	77
	<i>Duda-Silesia</i>	Meat-industry	Polish	1248
	<i>Gimplast</i>	Plastic products (M)	Italian	63
Area 2 „Dańdówka”	<i>Caterpillar</i>	Metal products (M)	American	195
	<i>Ergom Poland</i>	Automotive	Italian	305
	<i>Ergomoulds Poland</i>	Plastic products (M)	Italian	237
	<i>Bitron</i>	White goods industry	Italian	885
	<i>Nadwozja-Partner</i>	Automotive	Polish	75
	<i>Process Electronics</i>	Electronics industry	Canadian	47
Area 3 ”Mikołajczyka”	<i>Magneti Marelli Exhaust Sys.</i>	Automotive	Italian	153
	<i>Watt</i>	Engineering industry	Polish	100*
Area 4 „Narutowicza”	<i>Segu Polska</i>	Automotive	German	219
	<i>Ferrol</i>	Metal products (M)	Italian	210
Area 5 „Zaruskiego”	<i>Automotive Lighting Poland</i>	Automotive	Italian	1042
<b>The KSEZ Sosnowiec - total</b>	-	-	-	<b>4756 (4856)</b>

Explanations: \* – 2010, December, M – Manufactures.

Source: The Katowice Special Economic Zone (The KSEZ) – The Sosnowiec-Dąbrowa Subzone, Sosnowiec.

Although services played a significant and growing role after the economic transformation, changes to the labour market in Sosnowiec after 1989 are to be viewed in the context of heavy industry. Due to the above, two periods can be identified, and their border was the beginning of this century. Over time the character of economic base diversified in a similar manner in the other city – Bytom. However, in Bytom, the emphasis of the discussed process were distributed differently. The 90's were rather a period of restructuring of coal mining and Bytom industry. Closures of industrial establishments were rare; they rather underwent organisational changes as regards management of individual coal mines. The shock associated with closing of coal mines and ironworks came as late as the last decade, on average a decade later than in Sosnowiec. Although closures and restructuring took different paths, in the case of individual coal mines and ironworks, the fact is



that in 2010, only one coal mine operated, and ironworks (principally new entities established on parts of ironworks) are on an inclined plane, despite the restructuring they have undergone.

Division into the indicated sub-periods, and their distinctive character creates a slightly different reality in the labour markets of both cities.

Problems in coal mining that emerged in the 90's focused mainly on huge capital consumption in relation to economic profit, and exhaustion of resources in certain coal mines. The 90's saw a spectacular decision to close down part of hard coal mining in the contemporary Katowickie Voivodship. The main goal of this process was to close down the mining industry in the eastern part of the region – the Dąbrowa Basin, with the centre in Sosnowiec.

The coal mine KWK “Saturn” was closed in 1996, in 1998 KWK “Sosnowiec”, and in 2000 – KWK “Porąbka-Klimontów”. In 2001 the coal mine KWK “Niwka-Modrzejów” also was closed down. In 2010 only a portion of KWK “Kazimierz-Juliusz” was operating, giving employment to a mere 1,500 workers (figure 4). Meanwhile the restructuring processes were started (iron and steel industry), and closures (clothing and textile industry) in other factories. By 2004 almost half of the electromechanical and metal industries (from the pre-1989 period) were closed down – among the closed factories were FMG “Niwka”, FSMM “Silma”, Metal Industry “Sostal”.

***Figure 4. Coal mine "Kazimierz-Juliusz" in Sosnowiec***

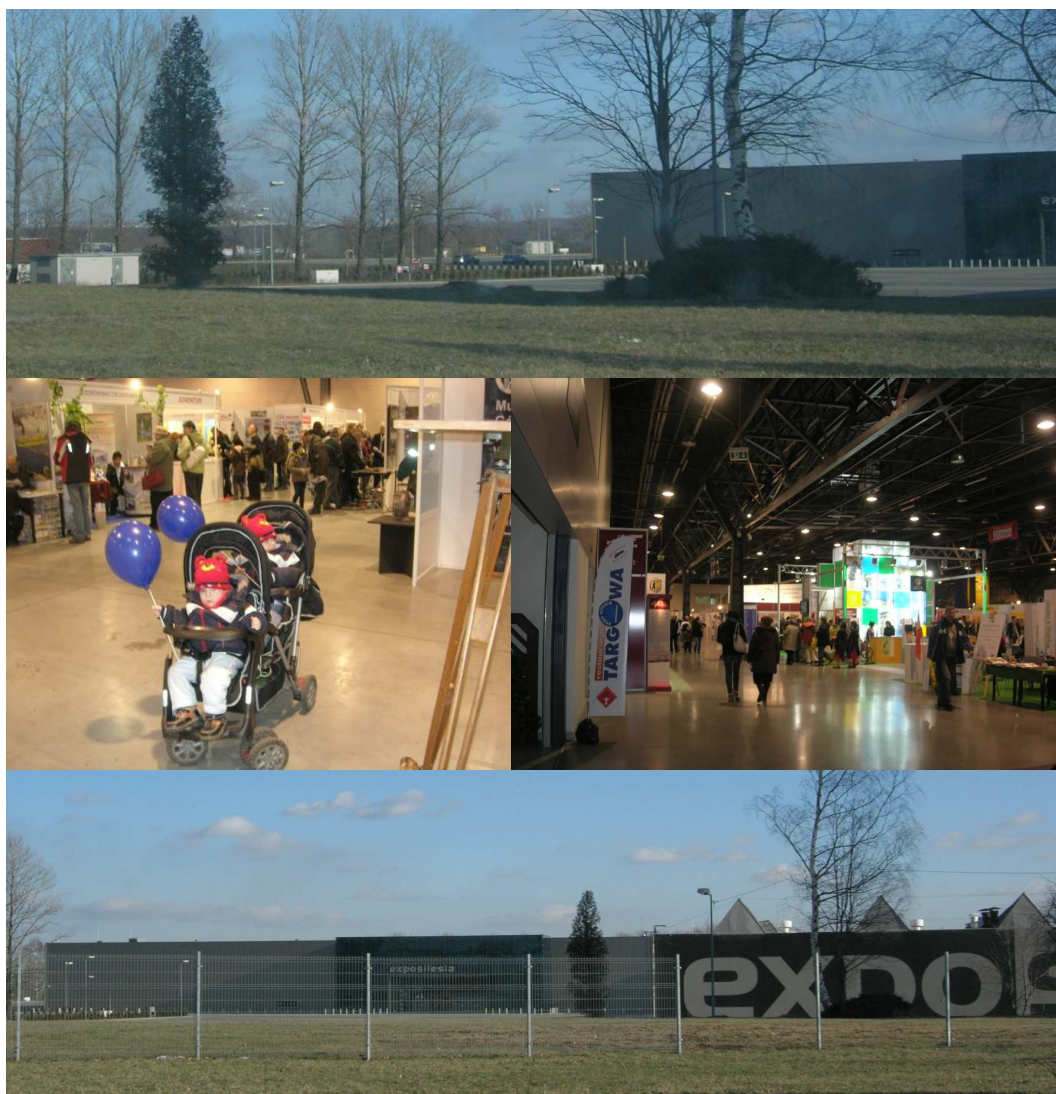


Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

The consequence of the vast restructuring of industries and part of non-market services was a drastic decrease in the total employment from 66,000 in 1992 to 46,000 in 2004, accompanied by an increase in unemployment from 12,700 in 1992 to 22,100 in 2002.

At the beginning of 2000, Sosnowiec became one of the most problem-laden Polish cities in the Silesia Voivodship. The reason for that was the pace of industrial restructuring, the scale of negative phenomena, such as an increase in unemployment, or fall in the number of jobs in the area, and difficult changes to the economic countenance of the city.

*Figure 5. Sosnowiec. Trade Fair and Exhibition Centre “Expo Silesia”*



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

The problematic nature of the situation was mitigated by the establishment of the Katowice Special Economic Zone, and investment activity within the city by bigger entities located in large-format establishments, by industry and services.

As regards large-format shopping centres the process started with the construction of “Macro Cash and Carry” in 1994, and the establishment of the “Bitron” factory at the end of the 90's. The period from the 90's to the beginning of the millennium consisted mainly of the establishment of new shopping centres: “Auchan”, “Real”, “Plejada”, “Fashionhouse Outlet”, and “Plaza”. Particularly desirable exogenous investments, mainly industrial, picked up pace only after 2000.

Until 2010 within the KSEZ alone, fourteen new industrial establishments were created (see: tab. 2). Apart from the above mentioned, other important large-format establishments must be mentioned, such as: the industrial facility of “Cebi”, “Haerus Electronite”, and “Hoermann”, “Salzgitter Mannesmann”, “Chrysler Mercedes Benz” in the wholesale industry, “Prologis Park”, “Śląskie Centrum Logistyczne (Silesian Logistics Centre)” in forwarding, and three crucial investments pertaining to exogenous services: the editorial house of the daily “Polska. Dziennik Zachodni”, Centrum Targowo-Wystawiennicze (trade fair and exhibition centre) “Expo Silesia” (figure 5), and accounts centre of the company “Timken”.

The aforementioned investments, also in the higher education sector and culture, or other non-material services, have significantly altered the structure of employment in the city. To a large extent they formed an alternative to the process of closing traditional industry. However, the issue of dropping employment in the city was a serious one. It is worth mentioning that in 2009 all companies located within the KSEZ employed approx. 4,800 people. That was the level of employment in a single Sosnowiec-based coal mine in the 80's.

A crucial issue to Sosnowiec, and Bytom alike, was competitiveness of labour markets in the neighbouring cities of the Katowice Conurbation, and its surrounding. There were at least ten-odd large and medium-sized cities in the Śląskie Voivodship in a situation similar to Sosnowiec and Bytom. True, spatial vicinity of individual urban centres gave the opportunity of working outside the city limits, which is especially apparent in the Sosnowiec – Katowice relationship, nevertheless a major quality was operation of a new investment in the city.

Revolutionary changes to the labour market in Sosnowiec were different from Bytom. The period of the 90's, although marked with restructuring activities, was rather limited to organisational operations, though decrease in employment in individual large industrial establishments, including coal mines, was already apparent.

The most pregnant effect of the changes to the labour market in Bytom was the fall in the employment numbers from 65,200 in 1992 to 32,700 in 2008, and an increase in unemployment from 4,400 in 1992 to 17,800 in 2002. In 2008, in Bytom, unemployment reached 6,800. Notwithstanding the elements that contributed to the economic development within the city, especially telling is the fact that in 1992-2010, Bytom lost half of the current jobs. Another negative element that accompanies the local labour market is a very high unemployment factor against other county cities in the region (see: tab. 3). Although unemployment dropped in the last decade from 24.6% in 2005 to 16.7% in 2009, it is still high, and, disturbingly, has been rising from 2008 (12.9%). The structure of unemployment is also unfavourable (tables: 8, 9).

**Table 8. Basic data on registered unemployed persons in 2007**

Specification	Registered unemployed persons					Registered unemployment rate in %	Newly registered unemployed persons	Persons removed from unemployment rolls	Job offers	
	Total	Of total							During the year	As of 31 XII 2007
		Women	Previously not employed	Terminated for company reasons	Possessing benefit rights					
<b>Bytom</b>	<b>8935</b>	<b>5661</b>	<b>1865</b>	<b>99</b>	<b>1019</b>	<b>15.9</b>	<b>13739</b>	<b>17145</b>	<b>3024</b>	<b>154</b>
Chorzów	5190	3128	1015	104	596	12.6	9440	12196	972	49
Dąbrowa Górń.	6906	4202	1918	128	734	11.6	10727	13014	1056	1059
Gliwice	5933	3764	1819	466	521	6.2	9412	12164	9024	780
Jaworzno	3968	2682	893	328	329	13.0	6481	7283	1368	57
Katowice	6826	3967	1057	151	734	3.3	15096	19080	7272	373
Mysłowice	2700	1777	623	224	239	9.1	4836	5751	1524	278
Piekary Śląskie	2645	1611	759	143	208	14.5	4289	4874	6840	1555
Ruda Śląska	3196	2105	721	48	367	6.8	8818	10737	2112	335
Siemianowice	2789	1683	561	84	581	13.6	8079	9251	2436	215
<b>Sosnowiec</b>	<b>9854</b>	<b>5876</b>	<b>3774</b>	<b>517</b>	<b>1215</b>	<b>12.0</b>	<b>18358</b>	<b>21671</b>	<b>4128</b>	<b>894</b>
Świętochłowice	1743	1072	309	22	308	12.8	4521	5840	6960	405
Tychy	3091	1954	526	127	468	5.2	6946	8822	4764	1293
Zabrze	7897	5301	1664	782	877	13.0	11278	15120	8196	609

Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga by Statistical Office in Katowice.

Comparing to Sosnowiec, another unfavourable element of the unemployment structure is also its concentration in specific districts (Bobrek, Rozbark), and that in consequence contributes to their being perceived as problem-breeding and social exclusion areas (table 10).

A special place on the map of Bytom is occupied by the district of Bobrek, where accumulation of economic and social problems is greatest, not only in Bytom, but probably in the entire conurbation. The biggest problems in the area are: unemployment, little professional and social initiative of the inhabitants, demanding attitude, alcoholism, low level of education, on average low level of income per inhabitant, low housing comfort, extensive devastation of buildings, up to recently a high level of air pollution.

*Table 9. Unemployment characteristics in cities of the GZM by The Z. Ziolo synthetic indicator*

No	Structure			
	Age of unemployed		Education of unemployed	
	Indicator	Cities	Indicator	Cities
1	<b>15,20</b>	<b>Sosnowiec</b>	<b>15,62</b>	<b>Sosnowiec</b>
2	<b>13,58</b>	<b>Bytom</b>	<b>12,36</b>	<b>Bytom</b>
3	10,98	Zabrze	9,78	Zabrze
4	8,44	Dąbrowa Górnicza	9,20	Dąbrowa Górnicza
5	8,40	Gliwice	9,00	Gliwice
6	7,86	Katowice	8,88	Katowice
7	6,90	Chorzów	5,88	Chorzów
8	5,20	Jaworzno	5,50	Jaworzno
9	4,90	Ruda Śląska	4,80	Tychy
10	4,54	Tychy	4,54	Siemianowice Śląskie
11	4,38	Mysłowice	4,38	Mysłowice
12	4,26	Siemianowice Śląskie	4,34	Ruda Śląska
13	3,28	Piekary Śląskie	3,16	Piekary Śląskie
14	2,46	Świętochłowice	2,54	Świętochłowice

Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

Starting in the 90's Bytom was attracting investments from only small and medium-sized enterprises. New enterprises are being founded on restructured traditional industrial establishments (predominantly iron and steel and metal industry). However, they are not entirely new entities in the economic sphere, they are more a consequence of the process of restructuring. The key element of exogenous function of Bytom is still hard coal mining. Apart from large-format shopping centres (“Plejada”, “Real”, “Tesco”) that period was marked by scarcity of meaningful business investments of large-format nature.

The 2000's did not bring almost any substantial change in that respect. The only difference has been apparent over the past few years, when important documents were developed and implemented to provide investors with freedom of location of their enterprises within the city limits.

Nonetheless the 2000's mainly brought a dramatic loss of jobs in large establishment of traditional industry. From 1994 to 2004 four out of six coal mines in Bytom were closed down (“Miechowice”, “Szombierki”, “Powstańców Śląskich” and “Rozbark”). KWK “Bobrek” was formally merged with KWK “Centrum”. In 2010, mining exploitation was partially resumed in the area of the former KWK “Powstańców Śląskich”. The estimated target employment here, however, will amount to only 300 employees. The restructuring of iron works was not a complete success. Part of the entities founded there went bankrupt.

**Table 10. Employment and unemployment rate by quarters in Bytom and Sosnowiec, 2002**

Quarters	Employment rate	Unemployment rate
<b>Bytom</b>	%	
Sucha Góra	38.1	22.9
Górniki	34.4	24.3
Stolarzowice	39.6	20.8
Stroszek-Os. Gen. J. Ziętka	39.6	23.1
Miechowice	42.4	22.6
Karb	34.3	30.7
Bobrek	26.6	49.3
Śródmieście	35.8	28.2
Rozbark	33.3	31.1
Szombierki	38.3	23.9
Łagiewniki	36.7	26.3
<b>Sosnowiec</b>	%	
Milowice	36.3	25.0
Pogoń	37.8	25.3
Północ	35.1	28.5
Sielec-Środula	37.3	22.9
Zagorze	44.6	23.6
Stary Sosnowiec	44.5	21.2
Środula	50.1	24.7
Klimontów-Dańdowka	35.7	22.1
Kazimierz Górniczy	33.1	25.3
Ostrowy Górnicze	37.1	21.7
Porąbka	25.9	26.6
Maczki	39.6	24.8
Niwka	39.0	24.2

Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga by Statistical Office in Katowice.

The labour market in Bytom is in an extremely difficult position. The fate of traditional industry is sealed. Meanwhile, unlike Sosnowiec, there are no alternative changes in the structure of industry. Bytom has not been covered by the influence of the KSEZ. Advantageous factors of location of large-format industrial

activity, such as transportation convenience (construction of the A1 motorway, among others), and substantial market outlet of the entire conurbation, do not constitute, as yet, a sufficient incentive for significant change of the economic countenance of the city, including the labour market.

## **1.2. Questions of governance on labour market.**

### **The 1970s and the 1980s.**

The socialist economy period in Poland, and in the Katowice region up to 1989, was marked by dominance of management of city sphere by large business institutions, and decision-making at various levels of the Polish United Workers' Party. As regards urban development it was characteristic that the position of a mayor and their deputies was absent from the system. The actual power – perceived as taking key decisions for cities – was yielded by Municipal Committees of the Polish Unified Workers' Party; Municipal Office structures were almost exclusively executive in nature.

Another important issue for development of cities in that period was that decision-making related to certain investments and areas was delegated to the provincial or even national level.

Activity of urban elites as regards spatial, investment and social development could only be made by approval of superior authorities, and never in opposition to the policy realized by them.

Municipal authorities enjoyed independence in the realization of urban policy only in certain aspects of endogenous development of Bytom and Sosnowiec (primary and secondary education, libraries, part of the health care system, and others).

Clusters of large industrial establishments were independent actors, or troupes of actors. In case of Bytom and Sosnowiec it was especially important, due to the role of industry in defining the economic base of both cities. The key role was of course played by individual coal mines subordinate to the Ministry of Mining and Power Industry. Coal mines and organisations of business nature subordinate to them (a supporting role), or social nature (schools, culture clubs, health care centres) created partially independent “urban life”. Organisation of the

majority of the districts of Bytom and Sosnowiec was connected with the activity of coal mines and the Ministry of Mining and Power Industry. A typical element of arrangement of "urban groups" were numerous patrimonial, aka, patron housing projects, inhabited almost exclusively by employees of a single industrial establishment. A similar situation was applicable in the iron and steel industry. In both cities, industry controlled the building and inhabitation of a majority of new flats and housing projects. In the case of Sosnowiec, whose substantial part of inhabitants were employed in Dąbrowa Górnicza ("Katowice" iron works, "Przyjaźń" cookery) there were also additional interactions that went beyond the city limits. Other industries played lesser roles.

The 70's witnessed a growth of understanding between certain entities representing municipal authorities and individual large employers; in principle, the situation lasted until the 80's. It was apparent mainly in the field of municipal and housing economy (joint investments), and environment protection (careful contestation of the rule "goal justifies means" which caused that permitted limits for dust and gas emission were significantly exceeded in Bytom and some parts of Sosnowiec).

Nonetheless it must be noted that the role of municipal authorities was marginalized. Many a decision connected with economic and social investments was made by individual employers. Large-scale industrial establishments also created labour policy, and in turn also the municipal labour market. The needs of large establishments, frequently irrational, to a large extent gave incentive to an increase in employment. This irrationality led to political and economic changes at the end of the 80's, and structural changes that accompanied them.

### **1.3. Questions of governance on the labour market.**

#### **The 1990s and the beginning of the 21<sup>st</sup> century. The 90's.**

The political transformation that came with the 90's completely altered the economic and social situation in Poland and the Katowice region. The role of municipal government increased, while the role of industrial establishments decreased, and the Polish Unified Worker's Party disappeared completely. However, it is noteworthy that municipal authorities were never apolitical after



1989.

Placement of individual decision-makers creating municipal policies towards the labour market and unemployment in Bytom and Sosnowiec was similar to some extent, and different in other respects.

### **1.3.1. Governance arrangements, governance responses and outcomes to economic problems**

Municipal authorities have become the major designers of urban policy in both cities. With increasing economic and social crisis that accompanied the political system transformation in the 90's, it was the method of management and creativity of cities that directly influenced urban development. Earlier - prior to 1989 – large industrial establishments played a vital role, and in certain circumstances they could contest (and often did) the contemporary policy of municipal and political authorities.

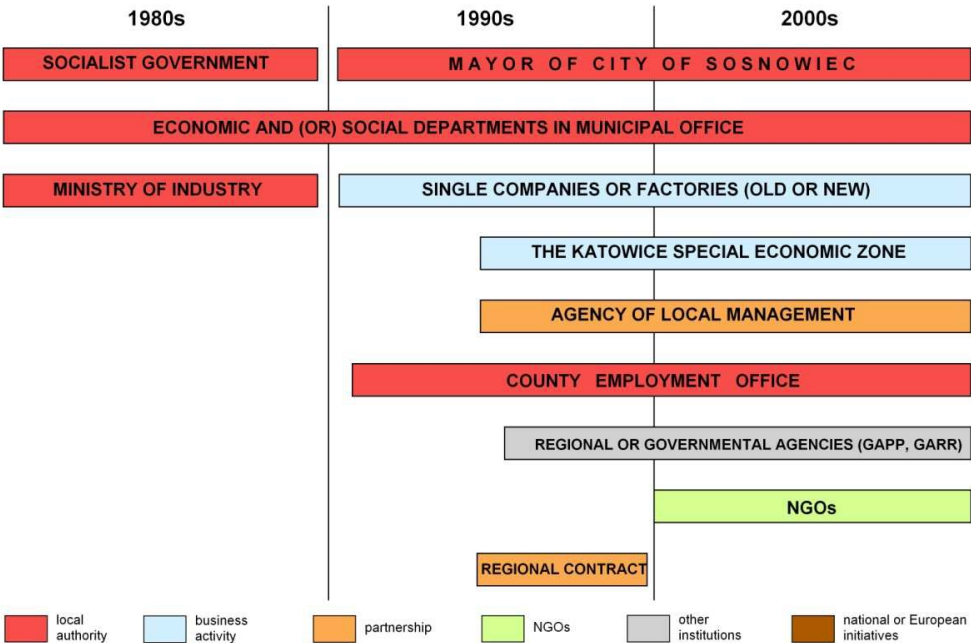
An extraordinary thing occurred when a city found itself in a situation that was not merely problematic, but dramatic – as was the case with Sosnowiec in the 90's.

The current “strong actors” on the cities' “development stage” began more and more to act as “supporting” or even “minor role” actors. The “roles” of other actors “expired”. Alas no new "players” were to be found in this peculiar game. Especially, those who could replace the leaving “actors”. For cities the size of Bytom and Sosnowiec, it is a matter of absolute priority to possess a well-organized and strong economic base. As already mentioned, it underwent, first in Sosnowiec, then in Bytom, a spectacular transformation at a scale unheard of in those cities for decades. In the case of Sosnowiec, it was an unprecedented change. Regrettably, the transformation was accompanied by a number of negative features.

Already, in the 90's the urban policy, especially in Sosnowiec, became principally a “monodrama” (figures: 6, 7). The scale of problems that emerged: liquidation and restructuring of consecutive industrial establishments, and some service organizations, decreased employment, and dramatically increased unemployment, real reductions to the municipal budget forced the authorities to tackle accumulating social problems, often unheard of, such as unemployment. The city was becoming depopulated, economically degraded, and the number of closed, large industrial establishments was rising, followed by a growing number of post-

industrial and post-mining areas. Scarcity of municipal funds, and lack of external funds (regional, national, foreign) caused that the scale of remedial measures, especially those that could constitute a new reality, had to be and were seriously limited during the 90's. It does not mean, however, that the period was completely wasted.

*Figure 6. A timeline diagram of the labour market policy in Sosnowiec, 1980's-2000's*



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

*Figure 7. Municipal office in Sosnowiec*



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

First, the problems were diagnosed, and works were started to develop a strategy to tackle the problems. Guidelines for remedial measures were approved, although it was clear that not every measure would be implemented or executed, almost invariably due to economic reasons, and often due to reasons of legal and organizational nature. Documentation and studies were prepared both at the regional and local (municipal) level.

Since the 1990s, the politics in Sosnowiec have been created by the left-wing authorities, who, during some periods, governed together with central parties. This element, however surprising it may seem, was overall positive, judging from the perspective of twenty years. The mayors of the cities were of extreme importance, especially contemporary mayor and previous mayor. Both mayors applied the politics of total reconstruction of the economic and functional bases of the city with the principle of “building a new house, starting from the foundation.” The grounds were to be the new economy of the city and the modernized and developed technological and transportation infrastructure, that would be a convenience for new industrial operations and large service businesses. This model, even though it was criticized by some political opponents and other stakeholders of socio-economic life and, despite its drawbacks, has been implemented. And in overall reckoning, it shall be considered as the only one that is justified and very positive (planned, logical, creative, consistently implemented, and exemplary in many aspects).

Generally the activities were three-fold: to win new investors, limit degradation of the city economic base, and to solve social problems, including the problem of unemployment. Many issues were utterly beyond the control of the municipal authorities. Some of them were of general nature, e.g. the economic situation for a specific type of industrial production, or the relation of production to the capability to sell with profit. Among others, this element reduced almost the entire textile and clothing industry in Sosnowiec. In that situation, any remedial or aid measures would not generate the expected results. The industry, in the shape inherited from the previous period, was, by and large, doomed. And it happened so. It was used only as the base for a mere few dozen small, often one-person companies in the small and medium businesses sector.

Nonetheless, part of the activities that degraded the economic base of the city were planned at the central level, if based on economic calculations. That was the case with coal mining. In the mid-90's, the final decisions to close down four coal

mines were made. The plan was realised until the beginning of the 21<sup>st</sup> century. The decision was made at the regional and central levels. The municipal authorities, as the local forum representation, could only oppose the decision or delay it. Yet it did not halt the entire process. The local government was left to bear the consequences of those decisions – to solve the manifold problems accompanying the phenomenon. In the case of coal mining, and the iron and steel industry, the two most serious consequences were growth of wastelands, and, most of all, the decrease in tax-generated revenue. The problem of unemployment was mitigated by special umbrella programmes. The following are noteworthy: earlier retirement, granting high individual gratuities and funds whose purpose was to inspire the recipients to start their own business activity, and relocation of employees to still operating industrial establishments.

The nature of the programme was diverse. Some of the activities, although socially debatable (early retirement), were the best-performing elements of the stabilization activities. Other undertakings, such as awarding non-repayable funds, although principally positive – did not serve its purpose.

It still needs to be stressed that lack of umbrella activities for heavy industry, although highly debatable, eased the situation on the labour market. Instead of a catastrophe, the city was undergoing a “mere” tragedy.

A separate problem was growing unemployment, and generally low average pay in all sectors of the economy. If during the 80's we were dealing with budgets of individual employed persons in a family (the model: employed husband, employed wife, employed adult child), and budgets of single-generation families, in the 90's and the 2000's, the key role was played by collective family budgets, very often of a multi-generation family (the model: low pay of one of the spouses, unemployment benefit of the other spouse, unemployment benefit of an adult child, grandmother's pension).

One of the most important figures on the labour market in the 90's was the local employment offices in Sosnowiec and Bytom alike. Their roles grew throughout the 90's. Currently they realize, among others, the following tasks: employment agency, organisation of trainings and courses, intervention and public works, and paying out unemployment benefits. Currently, employment offices constitute a pillar of multi-node cooperation on the local labour market. They continue to evolve to become creative centres for building the labour market in the still difficult economic situation in both cities.

An attempt to solve problems of the unemployed and unemployment as a phenomenon was the implementation of various projects and programmes. The local employment office coordinated a majority of those activities. They were of diverse nature and were addressed to different social and professional groups. A majority of the projects lasted from one up to three years and in their goals they made reference to the current labour market situation or the specificity of the unemployed in a given city, e.g. the programmes: „Postawmy na przedsiębiorczość”, „Inwestycje w kwalifikacje deficytowe na rynku pracy” or „Aktywna kobieta” organised by the Employment Office in Bytom, and the programme „Dobry początek”, the Project „Promocja młodej aktywności” – perspectives for the youth, „Krok do przodu”, and „Postaw na swoim”. Co-partners of the above projects were training companies, enterprise development agencies, and selected business people.

An attempt to solve many problem areas of the Śląskie Voivodship, including the studied cities of Bytom and Sosnowiec in the Katowice Conurbation, was the so called “The Regional Contract for the Katowice Voivodship” established in 1995. It was probably the greatest governance task in the whole of region in the post-war history of Poland, participated by entities from various hierarchical levels: national, regional and local. Even more diversified was the structure of the collaborating entities, or those resulting from implementation of the *Contract* – voivodship authorities, social, economic, and scientific institutions. *The Regional Contract*, through the integration of numerous institutions, economic, as well as, social entities, and people representing the world of science or culture, became an activity that provided momentum for the created image of the region during its infrequently dramatic transformation. It was irreplaceable for the labour market and unemployment problems described here. At least half of the provisions and stressed problems in the *Contract* focus on issues connected with: the new opening to structure of industry and economy as such, restructuring of coal mining and heavy industry, labour and employment market, and the problem of unemployment.

One of the elements of activities and strategies initiated by the *Contract* was establishment of a few sub-regional Development Agencies, and support given to the Katowice Special Economic Zone project (figure 8).

Those institutions’ goal was to provide support to economic growth in those parts of the region that were especially threatened economically and socially. Branches of the two institutions were also founded in Sosnowiec. Today these are

the Local Development Agency and the Sosnowiec-Dąbrowa Subzone of the Katowice Special Economic Zone.

The first institution mentioned plays an integrating and supportive role, especially for small and medium businesses. That is where it is most successful. This entity, despite being organisationally dependent on municipal authorities, is almost completely autonomous in its operations.

Still, establishment of the KSEZ and the determination of investment areas within Sosnowiec was of immense importance. It should be noted here (getting ahead of the text) that the umbrella operations within coal mining and the establishment of the KSEZ in Sosnowiec were the most important activities that limited the dramatic situation on the city labour market (figures: 9, 10).

One of the factors of establishment of the investment areas within the city limits was the dramatically growing unemployment, but also the scarcity of opportunities to tackle other consequences of transformation, such as: scantiness of the municipal budget for pro-development goals, wasteland problems, social exclusion, and others.

Nonetheless it should be noted that by the end of the 90's only organisational and planning operations were being carried out within the city. Yet, in that period, the KSEZ became one of the most important co-partners in the organization of the new vision of economic development in Sosnowiec. The most prominent axis of cooperation was born and established in that period, and, to a large extent, joint decision-making: Municipality Office – the KSEZ – investor(s).

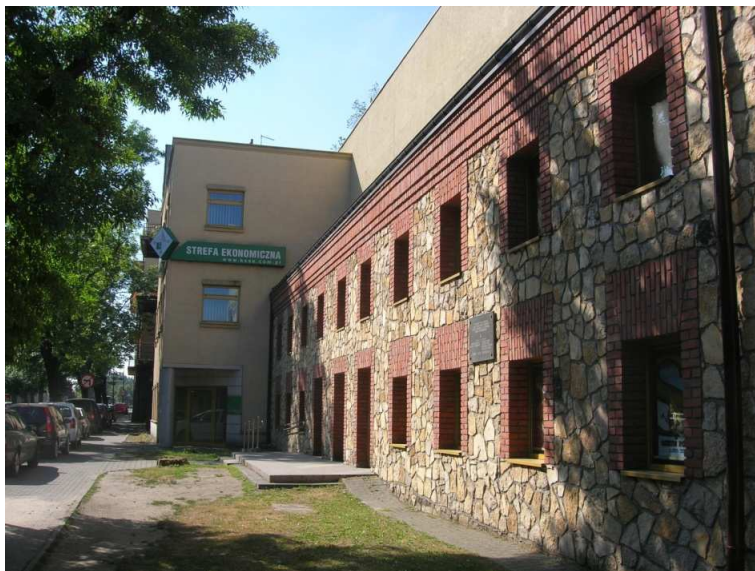
In this arrangement each entity participates equally, although each has a different role to play. The goal of the cooperation is one – to achieve economic success through building of an industrial facility. For the municipal authorities this role is obvious – tax revenue goes up, unemployment goes down, the scale of social problems decreases. For the KSEZ structure each new investor strengthens the role of this institution: economically, organisationally and prestige-wise. At last there is the investor who finds relatively inexpensive investment land, tax relief, and a model-like cooperation with the municipal authorities at every stage of realisation of investment. The common ground that reinforces that arrangement is the economic success which conditions consequences of other, mainly social, nature.

***Figure 8. Sosnowiec. New investments localised on brownfields in The Katowice Special Economic Zone. The Investment Area “Dańdówka”***



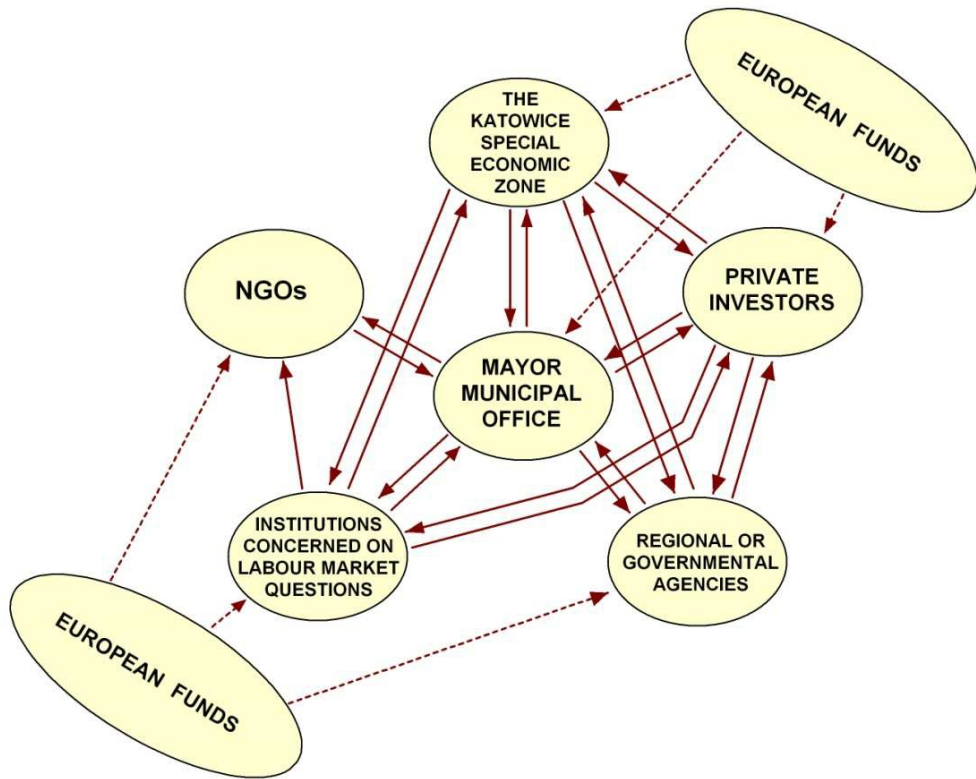
Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

***Figure 9. Sosnowiec. The Headquarter of The Katowice Special Economic Zone – The Sosnowiec – Dąbrowa Subzone at Modrzejowska Street***



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

Figure 10. A diagram of “cut sections” for issue of labour market policy in Sosnowiec



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

The effects of the KSEZ's actions, and interactions between the local authorities, the KSEZ and other companies have been described in detail in the previous chapter. It shall be recalled here that in 2010, 14 medium-size and large companies, employing over 4000 workers, were in operation in Sosnowiec.

A similar understanding can also be found in three-fold relations: the city authorities – Local Development Agency – Entrepreneur. In that case, however, the interrelations between the city authorities – Entrepreneur are noticeably limited.

The actions of the Local Development Agency are mainly focused on the small, and frequently, single-person businesses. The Agency, together with the District Employment Agency, is a kind of safety and support buffer as well the chance to activate all of the more enterprising inhabitants, who intend to take up some economic activity. In this aspect, the role of the institution shall not be underestimated.

From the 90's, both in Sosnowiec and Bytom, the role of direct relations grew between the city authorities and large commercial corporations. In that case the



cooperation was also positive, although not all of the started operations and assumed obligations were finalized. For some time now an unsolved, yet generating relatively little cost, problem is the problem of a grade-separated pedestrian crossing of the two-lane road DK 94 in the immediate vicinity of the hypermarket “Auchan”. Similar problems were present in the vicinity of CH “Plejada” in Bytom.

Shopping centres of renowned European networks built in the 90's were important in solving problems of the labour market, development of wastelands, and modernization of commercial services. Due to its endogenous nature, they are no longer perceived as having such big investment value as was the case in the 90's. Municipal policy towards shopping centres is rather conservative. This pertains to two shopping centres in the city centre – “Plaza” in Sosnowiec and “Agora” in Bytom, though advisable, as regards the location, yet it seems – visually rough.

However, transformation of the economy in the 90's left behind a number of industrial establishments created during socialism, or even before WWII. The role of local governments consisted of providing support to all activities of those companies, so that the period of restructuring would be least painful. It did not always work. Despite various forms of support, the market situation left those establishments in dire straits. Nonetheless, it must be emphasised that there are no untried methods of cooperation with those businesses.

Still, many companies have found their opportunities to develop. A textbook type is the cooperation between the city authorities in Sosnowiec and the company “Timken” and “Foster Wheeler”. The former company, to a large extent, participates in financing and supporting various social ventures.

A special role, certainly a symbolic one for the region, is played by the coal mining industry. If, at the beginning of the 90's coal mining in Sosnowiec played the key role in the city economy, now, it is only of complementary nature. The coal mine KWK “Kazimierz-Juliusz” employs approx. 1,500 people. Generally, though, the problems connected with the liquidation of coal mining are mainly of indirect nature on the labour market.

It is a known conflict between the city authorities, the KSEZ, and the Italian company Ferroli on one side, and the Polskie Sieci Elektroenergetyczne S.A. on the other. The subject of the conflict is a disused power line to the closed down coal mine KWK “Sosnowiec” that has been blocking development of the Ferroli factory.

That, in turn, limits the opportunities to increase employment by the company. The issue of image and spatial perception is a separate one.

Another conflict-generating aspect of the development of Sosnowiec is the policy conducted by the General Directorate of National Roads and Motorways (the Polish acronym GDDKiA). In that case, the economic factor causes GDDKiA to suspend the construction of an important junction with a grade-separated internal road, financed by the city authorities, that is to connect the investment area of the KSEZ – “Dańdówka” with the express way S1. Although the conflict has no immediate impact on the labour market in the city, it seriously undermines further investment capacity, at least in this part of the city (figure 11).

Hard coal mining is still a vital element of the economic structure in Bytom. The coal mine "Bobrek-Centrum" still employs 3,500 people. However, as an important player on the local labour market it is also the most important operating business entity detrimentally influencing the infrastructure, and, to some extent, the image of Bytom.

The relationship between the city authorities and the coal mine, or rather the “Kompania Węglowa” it is a part of, for obvious reasons, cannot be entirely positive. The scale of problems – immediate and indirect – that coal mining caused in Bytom is virtually unheard of on that scale in any other coal mining city. Meanwhile, the coal mine is the largest employer in the city, beside the whole of institutions subordinate to the city authorities.

The 2000's brought further redundancies in the traditional industry in Sosnowiec. And in Bytom it was the time of the declining years of industry. The problem in Sosnowiec in the 90's and beginning of the 2000's surfaced in Bytom with an approximate 10-year delay. The economic situation is strengthened by a substantial sector of small and medium-sized businesses. At the same time it must be noted that in recent years this sector has also been suffering from a minor fall (figures: 12, 13).

Co-participation in management of the labour market in Bytom is based predominantly on good relations with employers' organizations and economic self-government:

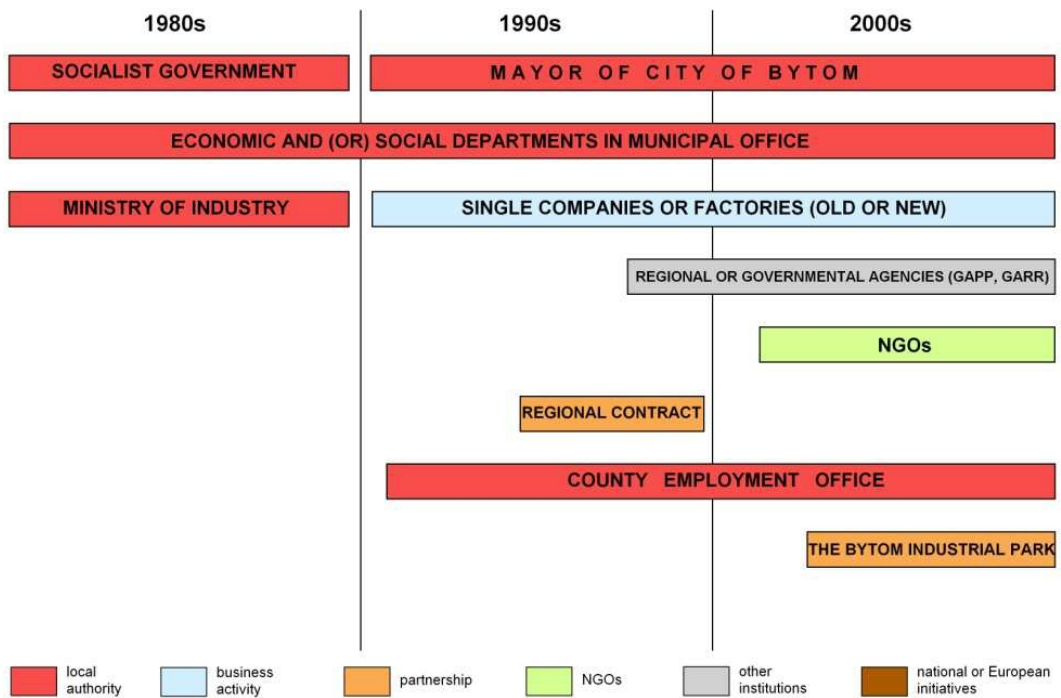
- Bytomska Izba Przemysłowo-Handlowa,
- Związek Pracodawców Miasta Bytomia i Aglomeracji Górnośląskiej
- Regionalna Izba Gospodarcza (delegatura) and
- Cech Rzemiosł Różnych i Przedsiębiorczości.

**Figure 11. Unfinished road to the investment area of the KSEZ – “Dańdówka”**



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

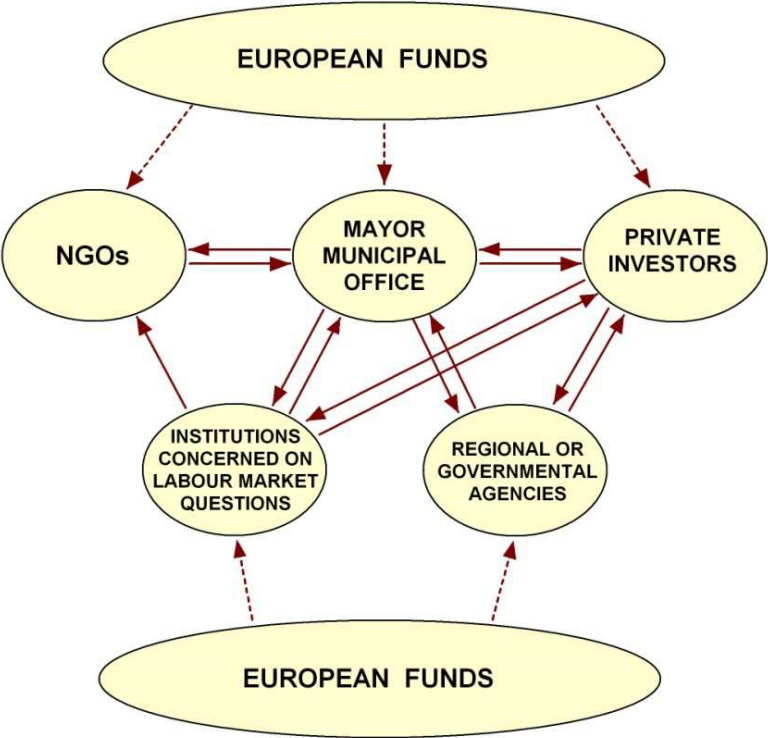
**Figure 12. A timeline diagram of the labour market policy in Bytom, 1980's-2000's**



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

Similarly to the situation in Sosnowiec, in case of the Local Development Agency, the immediacy of relations between the city authorities – entrepreneurs must be limited here. In the case of Bytom and Sosnowiec, subjectivity of the relations grows with the increase in importance of a given business, and its role in the city economic system.

*Figure 13. A diagram of “cut sections” for issue of labour market policy in Bytom*



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

The situation is extremely unfavourable due to the lack of new, significant industrial investments instead of the liquidated ones in the traditional industry. The municipal policy that is to tackle that problem follows good guidelines. Nonetheless it seems that the third element is missing that would support the investment process of the KSEZ.

In the situation of competitiveness of investment areas that follows from vicinity of other cities in the region, it is necessary to have a specialized unit, such as the KSEZ, that forms solid investment conditions. This issue is potentially of developmental character since Bytom possesses investment grounds, and excellent transportation accessibility, especially after opening the A1 motorway.

## **1.4. Regional governance arrangements in the case of Sosnowiec and some cities of the Katowice Conurbation**

The specificity of the Katowice region, especially the core of the conurbation, is spatial vicinity of a number of large and medium-sized cities with their own labour markets. If their general development does not cause significant repercussions, new investments sometimes do cause problems. It must be emphasised that happens only in certain, yet prestigious instances. This is one of the key elements of regional governance within Gónośląsko-Zagłębiowska Metropolia “Silesia” (GZM *Silesia*).

The idea of the GZM *Silesia* was an agreement for region development, also as regards to development of the regional labour market. The most valuable investment trophies are always ventures of exogenous nature that are high-positioned in the metropolitan function hierarchy. In the case of Sosnowiec, it was definitely the establishment of the Expo Silesia trade fair and exhibition centre. The Centre became a competition to the International Katowice Fair (the MTK) in Katowice and Chorzów. The image of the latter trade fair greatly suffered after the tragic building disaster in 2006, where 65 persons were killed.

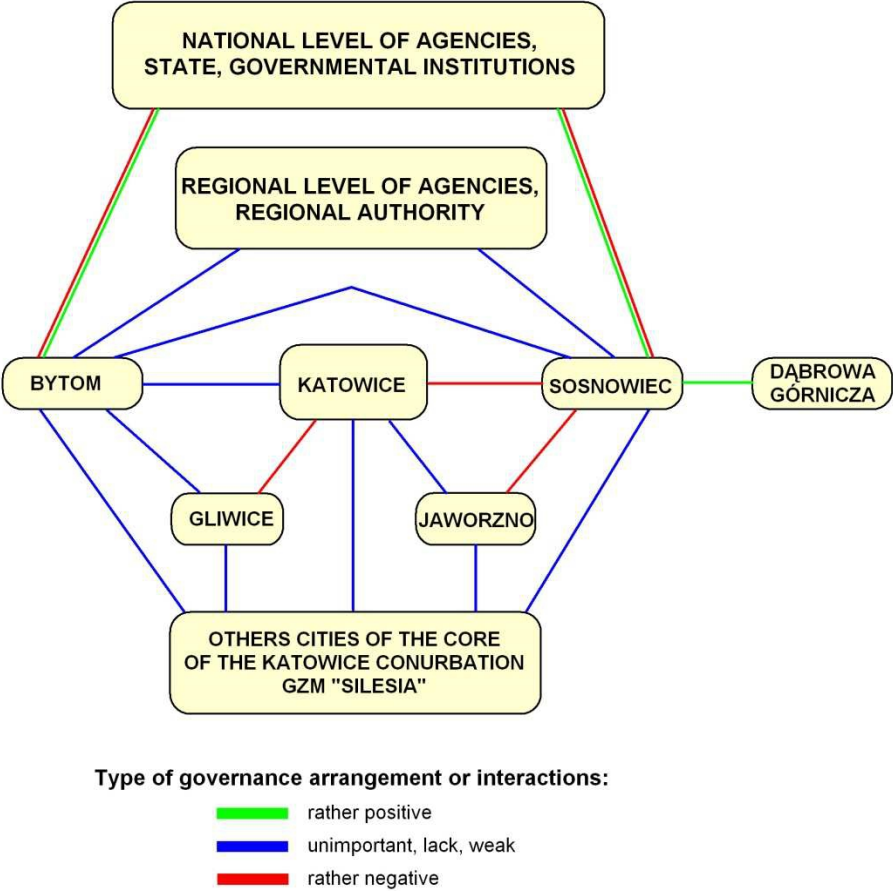
The new investment in Sosnowiec became a hotbed of conflict not only between the two companies, but also at the level of the Mayors of Sosnowiec and Katowice. From another perspective, the problem became a test of cooperation capabilities in the poly-centric agglomeration that, due to its very nature, is prone to various conflict situations. Although the issues of competition were left to the companies that administer the trade fair grounds, a big splinter was driven into the forming of a metropolitan body (figure 14).

The fact that one of the two largest regional dailies “Polska. Dziennik Zachodni” left Katowice did not get that much publicity. The other daily “Gazeta Wyborcza” was earlier relocated to Tychy, i.e. south of Katowice. The fact of moving “Polska. Dziennik Zachodni” out of the city did not mean a lot to the labour market in Sosnowiec. However, the ranking of this action was high, if we consider the type of activity conducted by the editorial staff of an important regional daily.

Another conflict emerged in 2010 in connection with the planned reopening of the KWK “Niwka-Modrzejów” mine, with the participation of German capital. Due to the fact that a majority of coal extraction fields of the potential mine were

located within the neighbouring city of Jaworzno, its local government protested. The protest was supported by the alleged potential mining damages degrading the building development and technical infrastructure in part of Jaworzno. Owing to the vicinity of the potentially reopened coal mine to the north-west districts of Jaworzno, the investment would naturally strengthen the labour market there. At the beginning of 2011, no solution to the problem was to be seen. However, that was yet another proof that regional governance within the Katowice Conurbation, addressing the problem of development of the economy and reinforcement of the regional labour market, is in its initial stages. It definitely does not enjoy a solid framework of reciprocal understanding.

*Figure 14. A diagram of relationships on the regional stage. An issue of labour market*



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

The labour market, and a significant unemployment factor, especially in the 90's and at the beginning of the 2000's, regionally were the most vital reasons of

shrinkage of Sosnowiec, and one of two initial regional issues in the process of the depopulation of Bytom. Over two decades, the cities transformed from centres that attracted, shrinkage, collapsing to some extent, problem-posing cities.

The limited activity of national and provincial authorities contributed to greater individualization of activities of municipal authorities as regards their development. The difficult situation of the cities caused shifting of the gravity centre of municipal management to city halls. At least until the mid-2000's the model of city management should be defined as strong government. It is hard to say whether non-pursuance with the governance model was bad or good. It should be assumed the purpose was for it to be effective. A success of the *government* model has a chance of being fulfilled only if it is pro-developmental, creative and smart management.

Although a majority of the processes started in the 90's, and not having finished yet, from a certain perspective it must be asserted that the policy over the past few years was of a rather positive nature. In the case of Sosnowiec, maybe even a dozen or so years.





## **2. Determinants of shrinkage (spatial aspects) and the impact of shrinkage on urban policy**

The issue of brownfields, in the context of shrinking cities, must be looked at from two perspectives. The first one is brownfields as the consequence of a fall of industrial functions of cities that formed the core of the economic base. Brownfields are ultimate and most apparent manifestation of a city that is stranded or striving to get out of a crisis situation.

Another perspective is the problem of brownfields within a city area, as objects and land that create its image, its townscape. This issue is directly connected with how a city is perceived. An industrial city, with dominants of large industrial establishments, as a rule is a space that lacks perception attractiveness, and is often repulsive. It has one advantage – it draws people for economic and often social reasons. A city amidst industrial crisis, especially traditional industry crisis, with devastated factories emerging in the landscape, joined by urban development voids (traces of dwindling industrial function), becomes repulsive, ugly, disorderly, and unattractive to people. More so since there is no economic incentive to mitigate the aesthetic sensation. One of the most important localization and developmental factors of contemporary economic and social space, and even typically economic, is the so called element of charm of the landscape, as defined by George Benko. A shrinking post-industrial city becomes an antithesis of that principle. This conflict bears a rudimentary cause of self-propulsion and deepening of a negative phenomenon.

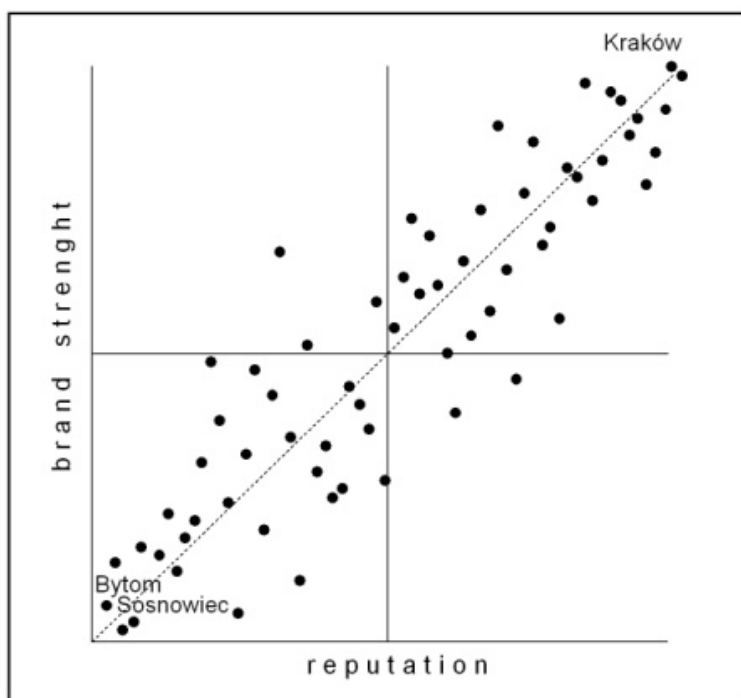
Bytom and Sosnowiec found themselves among other post-industrial cities also undergoing the process of shrinkage. According to 2009 research by BAV Consulting agency, Bytom is among the most repulsive cities in Poland, and Sosnowiec is only a little behind (figure 15). The ranking starts with cities of the Silesia Voivodship, and the post-industrial Wałbrzych in the Sudety mountains.

In our view, the situation is a result of the following:

- multi-centre, often chaotic and difficult to follow settlement arrangement of Sosnowiec,
- significant share of brownfields in the spatial structure of both cities,
- low level of technical and visual modernization of prefabricate buildings, especially in Sosnowiec,

- empty flats, abandoned houses, tenement houses in bad technical condition in the centre of Bytom, and
- some of the still-functioning traditional industrial establishments, degrading the aesthetic image and urban landscape, predominantly in Bytom (the area of Bobrek-Karb, eastern Rozbark).

*Figure 15. Position of Bytom and Sosnowiec in the BAV Consulting's ranking*



Explanations: Only big cities and part of cities with population more than 50000 inhabitants has been taken into consideration in this research.

Source: BAV Consulting.

If part of those elements are durable in their shape (spatial and urban arrangement of Sosnowiec), or paradoxically necessary from the economic perspective (still operating industrial facilities of the old type), some of them should be treated as a priority when considering their elimination from the city landscape. In our opinion, the most serious problem in both cities are brownfields, and in Bytom, also vacancy-housing.

In this book we would like to focus on those two elements, indicating the nature of both phenomena and policy of municipal authorities and other entities towards them.

## 2.1. The spatial aspect.

### The problem of brownfields (Bytom, Sosnowiec)

Brownfields<sup>2</sup> in the spatial structure of Bytom have been visible since the early Modern Era, and in Sosnowiec – since 19<sup>th</sup> century. In Bytom until mid-20<sup>th</sup> century their development was progressing virtually around the entire centre, in all districts. In Sosnowiec, on the other hand, the largest clusters were located in southern and eastern districts. By that time the areas were mainly of the former deep and surface hard coal mining (Bytom, Sosnowiec), and zinc ore (Bytom), as well as surface sand exploitation (Sosnowiec). Exhaustion of deposits resulted in abandonment of the areas. Until the end of the 1970's, as a result of plant succession, most of them turned into forests and greens. Other industrial or service facilities and housing estates were being developed less. In the 1970's and 80's the areas of wasteland rather decreased than not. In 1962 in Bytom wastelands totalled 5.6 km<sup>2</sup> which was 10% of the city area. By 1972 the area decreased by approx. 2 km<sup>2</sup>.

Nonetheless, we must point to huge ambiguity of the term *wasteland* in definitions of the time. This term did not cover part of hillocks and degraded areas overgrown by forests and shrubbery, and treated them as forest areas. Others of similar nature functioned as degraded areas and wastelands. S. Czaja (1994) determined wastelands in Sosnowiec in 1985 as 9.2 km<sup>2</sup>, i.e. 10.1% of Sosnowiec of that time. Their growth in reference to the year 1955 reached approx. 100%.

In Sosnowiec, wastelands constituted significant parts of such districts as Niwka, Dańdówka, Dębowa Góra and Sielec. The most apparent area, approx. 4 km<sup>2</sup>, of wastelands within the city limits was that between Dębowa Góra and Niwka. Those were areas of former coal mining and post-mining hillocks, with filling sandpits here and there (Ziółkowski, 1960). Part of the area was of

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<sup>2</sup> The term *brownfields* we understand as the entire industrial areas, post-mining areas and in rare cases those used by railway transport that have lost their functions, thus forming disused, degraded urban space (predominantly industrial and post-mining buildings, post-demolition sites of industrial buildings and infrastructure or railway infrastructure, hillocks, storage yards, pits, etc.)

We apply the term *blackfields* to the part of degraded areas where the level of degradation overlaps harmful environmental impact, e.g. former coal-slurry tanks, dumping grounds and hillocks that are especially harmful to humans, post-flotation tanks, chemical waste dumps, etc.

We use the term *greyfields* in reference to former commercial and combined commerce-service infrastructure objects (and their surrounding), mainly large-format or multi-storey facilities, both wholesale and retail. In the article the notion also covers abandoned office buildings of transport bases, and other of service character or directly connected with industry, theoretically capable of being used in the future for different or similar activity.

*blackfields* nature, especially the grounds adjacent to the “Cedler” steel mill, part of which is now the municipal cemetery. Among hillocks and pits were sediment traps and sludge tanks. The area also served as an illegal dump for waste from coal mines, power plants and other industrial facilities.

In Bytom the largest wasteland clusters were located in the eastern strip of the city, near the border with Piekary Śląskie, and in the south and south-west, on the border with Ruda Śląska and Zabrze (figure 16). They were predominantly former zinc and lead mines, and partly coal mines. A separate category were different wastelands not subject to development due subsidence.

***Figure 16. Bytom. Post-industrial landscape with plant-succession***



Source: “Armada Development”, Bytom.

The most distinctive element in the wasteland structure in Bytom during the socialist period were various dumping grounds. In 1962 they occupied almost 3 km<sup>2</sup> within the city.

By the end of the 80's the areas of wastelands did not grow. Plant succession even made some areas valuable in terms of natural and landscape qualities. This was especially the case with those areas where industrial and mining activity was ceased in 19<sup>th</sup> and at the beginning of 20<sup>th</sup> century. In Sosnowiec, in the districts of Modrzejów, Ostrowy Górnicze and Bobrek a few complexes of special landscape

and natural value were formed. In Bytom the most precious natural areas were located in the southern part of Rozbark, in Sucha Góra and Miechowice.

Mining (sand and coal) subsidence contributed to the formation of anthropogenic overflow land and water areas. Some of them were components of natural complexes. "Żabie Doły" in Bytom are of special natural value. Other overflow lands and pools such as: "Balaton", "Leśna" and "Stawiki" in Sosnowiec contributed to the creation of leisure and recreation areas. The latter ones were formed only where filling sands were exploited.

Significant growth of brownfields took place in the 1990's, together with the collapse of the industrial and mining function of the city. By the end of the 90's brownfields occupied approx. 11 km<sup>2</sup> in Sosnowiec. In 2005, in Bytom, their area occupied approx. 6%. In the statistics pertaining to land use a number of wastelands were recorded as "other type of land use", "forests" or "grounds for building development". Based on local research and studies in 2010 we estimate that areas formerly used for mining or industrial activity, unused areas and areas that lack investment, make up approx. 12.5-13.5 km<sup>2</sup> in Bytom. Approximately 2/3 are made up of forest or forest and shrubbery complexes. There are 242 hectares of total brownfields per coal mines liquidated in the 2000's.

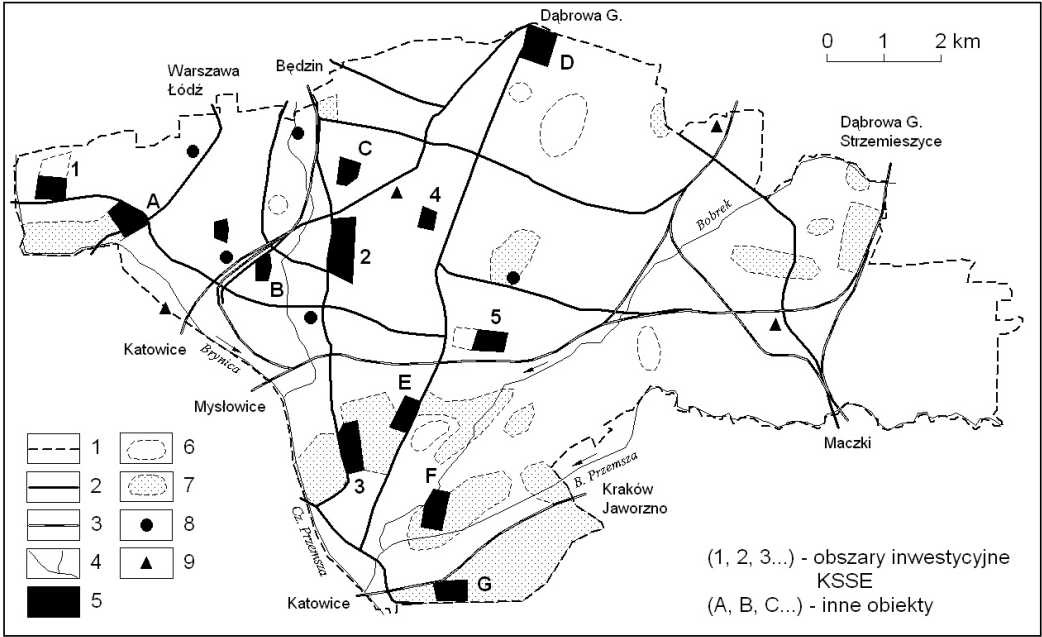
In both cities, new wastelands were emerging in all districts, although in Sosnowiec the growth was greatest in central (Sielec), southern (Niwka, Dańdówka), eastern and north-western districts. In Bytom the process was most apparent in southern and western districts (Rozbark, Dąbrowa, Łagiewniki, Szombierki, Bobrek).

In Sosnowiec, at the beginning of the 2000's 4 hard coal mines were closed, and a few large industrial establishments (mainly electrical and machine-building and textile and clothing industries). In 2005, in Bytom, 7 coal mines were operating. After numerous transformations and, most of all, liquidation of coal mines, currently only the KWK "Bobrek-Centrum" still remains. If by the end of the 80's the townscape consisted mainly of industrial areas, from the 90's the city image started to "gain" more and more devastated and deserted buildings and technical devices. Some of them were soon demolished, others, like former ZPD "Wanda" in Sosnowiec, or former KWK "Rozbark", are still degrading the city image.

Brownfields are of varied character. In Bytom, the most visible are those objects, and what is left of them, which were formerly connected with hard coal

mining and the steel industry. In Sosnowiec the most evident are post-mining areas (no buildings), and buildings of the former clothing and textile industry. Areas and buildings connected with other industries have the least negative impact on the city image. In this case, we observe the most advanced spatial regeneration and assignment of new functions to those areas (figure 17 and tables: 11, 12, 13, 14).

**Figure 17. Post-mining and post-industrial areas in Sosnowiec, 1995-2010**



Explanations: 1 - city limits, 2 - main streets and roads, 3 - main railways, 4 - rivers, 5 - wastelands developed in 1995-2010, 6 - areas of industrial post-mining wastelands, 7 - wastelands overgrown by forests and meadows, 8 - refurbished individual objects and lesser areas of regeneration (up to 10 areas), 9 - recreation and rest areas based on former post-mining wastelands.

Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

**Table 11. New enterprises localized on brownfields in Sosnowiec. Functions and localization**

<b>Name of enterprise</b>	<b>Function of enterprise</b>	<b>Type of land use before</b>	<b>Part of city</b>
<i>Aldi</i>	Retail	Brownfields	Pogoń
<i>Automotive Lighting Poland</i>	Automotive	Brownfields	Zagórze
<i>Bitron</i>	White goods industry	Brownfields	Dańdówka
<i>Caterpillar</i>	Automotive	Brownfields	Dańdówka
<i>Cebi</i>	Electronics industry	Brownfields	Niwka
<i>The Jehovah's Witnesses Convention Centre</i>	Religious functions	Brownfields, Greyfields	Niwka
<i>Centrum Handlowe ul. 1 Maja</i>	Shopping centre	Greyfields	Sielec
<i>Duda-Silesia</i>	Meat-industry	Brownfields	Milowice
<i>Ergom Poland</i>	Manufacture of metal products	Brownfields	Dańdówka
<i>Ergomoulds Poland</i>	Manufacture of plastic products	Brownfields	Dańdówka
<i>Expo Silesia</i>	Exhibition	Brownfields	Zagórze
<i>Fashionhause Outlet</i>	Shopping centre	Brownfields	Niwka-Jęzor
<i>Ferrolti</i>	Manufacture of metal products	Blackfields	Sielec
<i>Gimplast</i>	Manufacture of plastic products	Brownfields	Milowice
<i>Haerus Electronite</i>	Electronics industry	Brownfields	Sielec
<i>Hoermann</i>	Manufacture of metal products	Brownfields	Milowice
<i>Magneti Marelli Exhaust System</i>	Automotive	Brownfields	Zagórze
<i>Nadwozia-Partner</i>	Automotive	Brownfields	Dańdówka
<i>Netto</i>	Shopping centre	Brownfields	Stary Sosnowiec
<i>Okraglak</i>	Hotel, 3-stars	Greyfields	Sielec
<i>Plejada</i>	Shopping centre	Brownfields	Śródula
<i>Polskapresse</i>	Printing, editorial office	Brownfields	Milowice
<i>Process Electronics</i>	Electronics industry	Brownfields	Dańdówka
<i>Real</i>	Wholesale	Brownfields	Milowice
<i>Saltzgitter Mannesmann</i>	Shopping centre	Brownfields	Bór
<i>Segu Polska</i>	Automotive	Brownfields	Sielec
<i>Silesian Logistics Centre</i>	Logistics	Brownfields	Niwka-Jęzor
<i>Silesian University of Medicine</i>	High Education	Brownfields	Dańdówka
<i>Watt</i>	Engineering industry	Brownfields	Niwka

Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

**Table 12. Economic activity in Sosnowiec – today, yesterday and before yesterday**

<b>Name of enterprise</b>	<b>Function of enterprise</b>	<b>Type of land use or economic institution before</b>
<i>Aldi</i>	Brownfields	Meat industry
<i>Automotive Lighting Poland</i>	Partly brownfields	“FSM”
<i>Bitron</i>	Brownfields	Coal mining (before 1945)
<i>Caterpillar</i>	Brownfields	Coal mining (before 1945)
<i>Cebi</i>	Brownfields	Coal mining (before 1945)
<i>The Jehovah’s Witnesses</i>	Brownfields	“Transgóř” – logistic company
<i>Convention Centre</i>	Greyfields	post-mining areas
<i>Shopping Centre at 1 Maja street</i>	Greyfields	Cotton-industry (before 1945)
<i>Duda-Silesia</i>	Brownfields	KWK “Saturn”
<i>Ergom Poland</i>	Brownfields	Coal mining (before 1945)
<i>Ergomoulds Poland</i>	Brownfields	Coal mining (before 1945)
<i>Expo Silesia</i>	Brownfields	“Silma”
<i>Fashionhause Outlet</i>	Brownfields	Railway areas
<i>Ferrol</i>	Blackfields	KWK “Sosnowiec”
<i>Gimplast</i>	Brownfields	KWK “Saturn”
<i>Haerus Electronite</i>	Brownfields	KWK “Sosnowiec”
<i>Hoermann</i>	Brownfields	KWK “Saturn”
<i>Magneti Marelli Exhaust System</i>	Brownfields	Coal mining (before 1945)
<i>Nadwozia-Partner</i>	Brownfields	Coal mining (before 1945)
<i>Netto</i>	Brownfields	Manufacture of metal products
<i>Okraglak</i>	Greyfields	Local clinic at KWK “Sosnowiec”
<i>Plejada</i>	Brownfields	Former mine slag heap
<i>Polskapresse</i>	Brownfields	KWK “Saturn”
<i>Process Electronics</i>	Brownfields	Coal mining (before 1945)
<i>Real</i>	Brownfields	Sand pit
<i>Saltzgitte Mannesmann</i>	Brownfields	KPP “Maczki-Bór”
<i>Segu Polska</i>	Brownfields	KWK “Sosnowiec”
<i>Silesian Logistics Centre</i>	Brownfields	Coal mining (before 1970)
<i>Silesian University of Medicine</i>	Brownfields	Waste-land
<i>Watt</i>	Brownfields	Coal mining (before 1945)

Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

**Table 13. Sosnowiec. Non built-up areas localized on former brownfields**

<b>Name of enterprise</b>	<b>Function of enterprise</b>	<b>Type of land use before</b>	<b>Part of city</b>
<i>Recreation-Sport Centre (figure 18)</i>	Recreation	Brownfields	Śróduła/Zagórze
<i>Cmentarz Komunalny</i>	Cemetery	Blackfields	Niwka
<i>„Leśna”</i>	Recreation	Brownfields	Kazimierz Górniczy
<i>„Stawiki”</i>	Recreation	Brownfields	Stary Sosnowiec

Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.



**Table 14. Sosnowiec. Enterprises under construction (11.2011)**

Name of enterprise	Function of enterprise	Type of land use before	Part of city
<i>The Climbing Centre</i>	Recreation	Brownfields	Sielec
<i>3-stars hotels at historical power station</i>	Hotel	Brownfields	Sielec
<i>“Wrzosowe Ogrody” („Heather Gardens”)</i>	Housing estate	Brownfields	Sielec
<i>Silesian University of Medicine (continuation)</i>	High Education	Brownfields	Dańdówka
<i>Sosnowiec Park of Science and Technology</i>	Researches & Technology	Brownfields	Niwka
<i>“Aldi” Supermarket</i>	Retail	Brownfields	Sielec

Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

Currently, in Sosnowiec, the biggest and almost undeveloped post-mining area is the former KWK “Porąbka-Klimontów”. This pertains to the exploitation area in Klimontów and Zagórze. Part of the former administration and technical buildings are still in use. Most of the technical installations have been liquidated. The area has been partly levelled. Plant succession has appeared here and there.

**Figure 18. Sosnowiec. Recreation-Sport Centre „Środula”**



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

The former hard coal mine “Niwka-Modrzejów”, in the district of Niwka-Pawiak, on the border of the Bobrek housing estate, is of similar character. The other part of the area occupied by the former coal mine, on the border of districts of Niwka and Modrzejów, has a different nature. A majority of post-mining buildings were adjusted to the requirements of the organized *Sosnowiec Park of Science and Technology* (figure 19).

The greatest transformation took place in the former coal mines of “Sosnowiec” in the district of Sielec and “Saturn” in the district of Milowice. The two brownfields were included in the investment grounds of the Katowice Special Economic Zone, with an eye to having them transformed from coal mining to industrial function (Milowice), and service and industrial function (Sielec). Time has showed the plan has been rather successfully realized. The following

enterprises have been located in the investment area “Milowice” and in its vicinity: “Polskapresse” (figure 20a), “Duda-Silesia”, “Gimplast” and “Hoermann”.

**Figure 19. Sosnowiec-Niwka. Post-mining buildings on the area of “Sosnowiec Park Science and Technology”**

*2010, December*



*2011, November*



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

More diverse in character is the investment ground “Narutowicza” that covers the area of the former hard coal mine “Sosnowiec”. The first to pave the way (except the KSEZ) was the factory of “Haerus-Electronite”. Other investments followed shortly. In 2005, in the northern part of the region, the factory “Segu Polska” was built, and “Ferrol Poland” has been operating there since 2008 (the centre of the area). New development stimulus in this part of the city was given to the city in 2010. A new restaurant and hotel complex was established on the revitalized former hard coal mine “Sosnowiec”. Prior to the regeneration, the area was considered greyfields.

*Figure 20. Sosnowiec. Some investments on browfields: A - “Polskapresse”, B – “Silesian Logistic Centre”, C - Silesian University of Medicine*

A



B



C



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

In 2010 three new investments were started there: a hotel that integrated historic buildings of a power station, a recreation centre with the largest climbing wall in that region (figure 21), and a multi-family housing estate called “Wrzosowe Ogrody” (figure 22).

Each of the investments is of an important city-forming nature. The two first private investors (Polish capital) are building their services investments with the supra-regional character here. A three-star hotel is absolutely necessary in the city-centre zone. A recreation centre around the historical mining shaft, will have a climbing wall as its main attraction.

An extremely interesting project being currently being built by “Piecceksport”, is the large housing complex called “Wrzosowe Ogrody”. It is the

first investment in Sosnowiec and probably in the region being realized on the area of brownfields, since the 1980s. Its importance, from the point of view of city shrinkage, lies in several aspects discussed in the book:

- development of brownfields as a space with a negative image,
- regeneration of a significant part of the area comprising an urban vacancy,
- building new flats, especially required by the potentially new inhabitants of the city.

**Figure 21. Sosnowiec-Sielec. Investments under construction on the base of post-mining buildings (New hotel on left and the largest climbing wall in the southern Poland on right)**

2011, January



2011, November



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

**Figure 22. Multi-family housing estate – “Wrzosowe Ogrody” localized on the area of former coal-mine “Sosnowiec”, Sosnowiec**



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga (the first picture), and also *Consortium “Pieceeksport”*, investor of multi-family housing estate – “Wrzosowe Ogrody” (the second picture).

From among activities undertaken on brownfields formed in the 90's and the 2000's, there are also noteworthy investments not connected with coal mining. The biggest success was the transformation of the former electro-technical factory “Silma” into the exhibition facility “Expo Silesia” – one of the largest exhibition and trade fair centres in Central and Eastern Europe.

Many new investments were located in Sosnowiec on older brownfields. Six new enterprises were founded in the investment area “Dańdówka” located on a former coal mine: “Bitron”, “Caterpillar”, “Ergom Poland”, “Ergomoulds Poland”, “Nadwozia-Partner” and “Process Electronics”. Close by is a new building of the Pharmaceutics Faculty of the Medical University of Silesia, currently being extended.

In the district of Niwka, on former coal mining grounds, two large factories were founded in the past two years – “*Magneti Marelli Exhaust System*” (figure 23) and “*Watt*”. Both of the facilities were built as part of the KSEZ – Area “*Mikołajczyka*”. South of the “*Watt*” establishment is a factory of “*Cebi Poland*”, built there even earlier.

However, the very beginning of regeneration of the post-mining and post-industrial space in the area was the establishment of the Jehovah’s Witnesses Convention Centre (figure 24). It was built partly on post-mining grounds, and partly based on buildings and the car-fleet base of the former company “*Transgór*”. Older (here: post-mining) example is a Catholic church in Sosnowiec-Porąbka (figure 25) .

**Figure 23. Sosnowiec. Company “Magneti Marelli Exhaust System” localized in the KSEZ**



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

**Figure 24. Sosnowiec. The Jehovah’s Witnesses Convention Centre built up partly on brownfields**



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

Apart from the printing house and editorial staff offices of “*Polskapresse*” in Milowice, and the trade fair centre “Expo Silesia” in Zagórze, it was undoubtedly one of the most spectacular ventures not only as regards the change to spatial

function, but also in terms of assigning to it highly aesthetic values which, unfortunately, is not that common in the city.

**Figure 25. Sosnowiec-Porąbka. Former post-mining building conversed into a Catholic church**



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

Brownfields were also in the scope of interest of the shopping centre capital: “Geant”, currently “Real”, “Plejada” Shopping Centre, “Salzgitter Mannesmann” and “Fashionhouse Outlet”.

In Bytom, the situation is much worse. A majority of large industrial facilities that collapsed in the 90's and during the 2000's, have not been developed in any way so far. Hard coal mining is in the most dramatic situation.

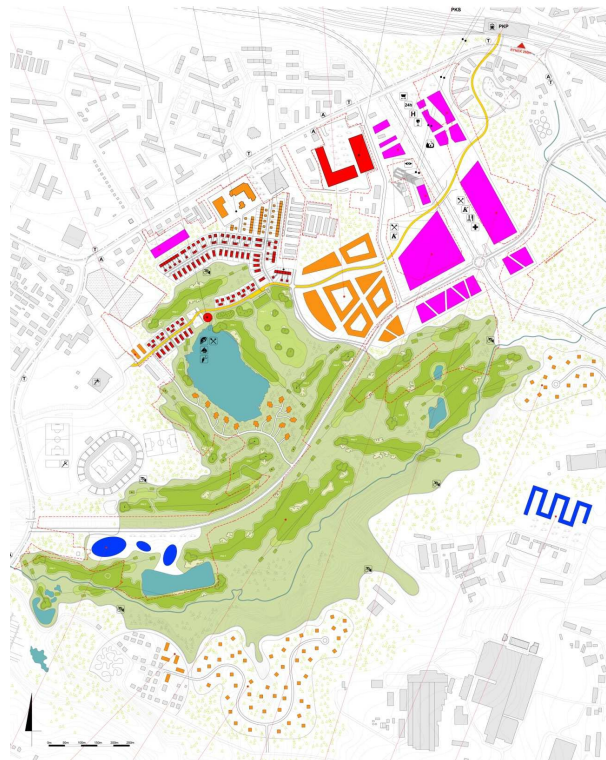
Infrastructure of the hard coal mine “Powstańców Śląskich”, to the north of the city centre, has been demolished almost completely. The area that covers approx. 30 hectares, adjacent to a forest, is considered interesting investment ground, as it lies close to the currently constructed motorway A1. In 2010, the area was still not developed. Due to demolition and party regeneration works, its image impact is mildly disadvantageous.

No investor stepped forward (end of 2011) to develop the area and buildings of the former coal mine “Rozbark (closed down in 2004). As regards to the image and perception of the city, the area is important as it is adjacent to the city centre. The areas of both former coal mines are currently managed by the local authorities in Bytom.

In 2005, the coal mine “Miechowice” was finally closed. The infrastructure and buildings were demolished. The area that has already been affected by plant succession are typical brownfields in this part of Upper Silesia.

The former coal mine “Szombierki” is in the best disposition. Since 2008, the coal mine has been owned by a private enterprise “Armada Development”. The company intends to transform the area into a multi-function service facility (figures: 26, 27).

**Figure 26. Company “Armada Development”. New master-plan (2011) for brownfields on the area of former coal-mine “Szombierki”**



Explanations: green – recreational or sport areas, violet – new service or commercial areas, red and orange – housing areas, orange.

Source: “Armada Development”, Bytom.

The following elements are emphasised: development of housing, recreation and leisure (golf course), and shopping and services. The regeneration shall also cover the retained post-mining buildings.



*Figure 27. Former coal-mine “Szombierki” in Bytom. Company “Armada Development” reclaims post-mining brownfields toward recreational, cultural and also housing functions. Some of pictures present The “Krystyna” Shift – monument of industrial architecture from the interwar period*



Source: “Armada Development”, Bytom. Visualisation: “Armada Development” and “Medusa Group”, Bytom.

The most advanced is regeneration in the former coal mining facility “Orzeł Biały” on Siemianowicka Street in the eastern part of Rozbark. This area (4.6

hectares) is home to Bytom Industrial Park that integrates new service and manufacture enterprises. It is essential that the historic industrial buildings have been brought back to life. Current works consist of land reclamation to the east of the already developed area.

In the 2000's, the iron and steel works "Zygmunt" and "Bobrek" were partly liquidated. The part of the works that was excluded from production, as a result of the restructuring, was soon demolished, ruined, and only partly developed. Those areas form the least desirable element of the city image.

Brownfields were used as foundations of 2 out of the 3 largest shopping centres - CH "Real" and partly CH "Plejada". Those brownfields were, to a large extent, of older origin.

The specificity of transformation of post-mining and industrial wastelands in Bytom is to put them to recreation and leisure use (e.g. "Dolomity – Sportowa Dolina"), and grant some of them (e.g. "Żabie Doły", "Suchogórski Labirynt Skalny") the status of protected areas. They all cover the areas that were excluded from exploitation prior to 1945, or even before 20<sup>th</sup> century.

The most distinctive and disadvantageous townscape element in Bytom are dumping grounds and hillocks. The most apparent are dumping grounds in the area of the hard coal mine "Bobrek – Centrum", dumping grounds in Siemianowicka street, and in the area of the former coal mining activity "Nowy Dwór" in north-east and north part of the city. Since 2009 the material from those dumping grounds has been used to build e.g. the motorway A1. Due to that a limited land reclamation is conducted there as well.

Wastelands in Sosnowiec and Bytom cover extensive parts of both cities. From the functional and image perspective they can be divided in the following manner:

- a) Brownfields and grey-fields that require immediate intervention, and that visibly affect the city image – the former hard coal mine "Rozbark" in Bytom; the former ZPD "Wanda" in Sosnowiec, abandoned office building of the Medical University of Silesia on Ostrogorska Street in Sosnowiec, and the dumping grounds by the coal mine "Bobrek-Centrum", the area of the former hard coal mine "Porąbka-Klimontów" in Zagórze (Sosnowiec), the former iron and steel works: "Bobrek" and "Zygmunt" (Bytom), buildings in the vicinity of the former FMG "Niwka" (Sosnowiec);

- b) Brownfields that require immediate intervention, having a limited negative impact on the city image – the former hard coal mine “Porąbka-Klimontów” in Klimontów (Sosnowiec); the former hard coal mine “Powstańców Śląskich” (Bytom); the post-mining area of “Nowy Dwór” (Bytom), the former factory “Politex” and “Intertex” in the district of Pogoń (Sosnowiec), the post-mining areas on Siemianowicka Street (Bytom), the southern part of the former KPP “Maczki-Bór” (Sosnowiec);
- c) Brownfields that do not require intervention and do not harm the city image – greens in the former post-mining and industrial areas in Niwka, Dańdówka and Juliusz (Sosnowiec), greens in the former post-mining areas in Dąbrowa Miejska, Sucha Góra, partly Rozbark (Bytom).

## **2.2. Questions of governance on brownfields.**

### **The period before 1990**

The city policy in Sosnowiec and Bytom towards brownfields was clearly diverse, and depended on the level of industrial function development, and the existing political and economic systems.

**The period before 1945.** The first period, until 1945, was full of spatial mismanagement located outside the very centre of cities, and resulting from ownership fragmentation, the significant role of industrial and coal mining enterprises, the limited role of local authorities, and lack of economic policy of cities that was replaced by policies of individual entrepreneurs and investment capital. The Sosnowiec of that time saw the formation of the largest (to date) wasteland clusters in the southern part of the city – they have been gradually developed from the 1990's. Part of the wastelands in the south-east districts of Bytom are from the same period.

In Sosnowiec, regeneration activity focused only on the city centre (building of a new centre in the area of Mościckiego and Zwycięstwa Streets). Industrial areas and buildings were mixed with re-developed areas. There were two directions at that time – extension of the existing industrial facilities and housing. In the latter case, housing was often of substandard level (e.g. Dębowa Góra, Sielec).

A more common case in Bytom and Sosnowiec was abandonment of finished mining or industrial activity without their redevelopment. The consequence was the formation of numerous greens and forests as a result of plant succession (figure 28). The local authorities, although aware of the degeneration of the spatial form of the city, did not have the economic means or, more often, legal and administrative capacity to react to those phenomena.

*Figure 28. The Katowice Conurbation. Examples of plant succession on post-mining areas. Coal mining has been finished here 10 years ago (the first picture). Coal mining has been finished here 60 years ago (the second picture)*



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

Since the existence of both cities was strongly dependent on entrepreneurs and investment capital, local authorities, in that respect, were at the mercy of efforts by individual companies. Positive regeneration ventures were rare and focused on city centres.

In the period between the wars, the problem of Bytom was the planned translocation of the city by the contemporary German authorities to a new site in the area of Pyskowice. Due to that, the expected coexistence of the cities and mining was being violated more and more. The city area was to become a predominantly industrial and extensively exploitation area. The problem of wastelands was of secondary importance.

**1945-1989.** The second period of development, from 1945 to 1989, i.e. the socialist economy, was a period of intensive investment activity in Sosnowiec, both in industry and municipal economy. Wasteland management policy consisted mostly

in using wastelands as the basis for investment activity, or leaving them without any organizational activity according to the assumption that after some time they would naturally transform into greens.

The former took place if industrial facilities were built or extended in the vicinity of wastelands. Those activities were not focused on the need to introduce order to that space, but to temporarily attract investment (e.g. southern Dańdówka in Sosnowiec). Part of the wastelands, especially where interference with the geographical space was smallest, were used for housing and other forms of development (e.g. the housing estate Naftowa).

At that time, little interest in wastelands being used for investment purposes resulted from some things:

- the cities possessed a certain reserve of greenfields that were cheaper and safer to use. In 1975 the reserve was strengthened by the inclusion of not-well-developed land on the eastern outskirts of Sosnowiec and southern outskirts of Bytom;
- secondly, many wastelands were burdened with legal and ownership complications. Many of them were owned by various businesses that saw no interest in their sale, lease or surrender. Paradoxically, almost all of the entities, especially the large ones, were nationalized at that time, and theoretically, the procedure ought to have been easier;
- in Bytom the process of new industrial and municipal investments was very limited. Mostly greenfields were used for that purpose;
- in Bytom the regeneration activities were conducted only within selected post-mining areas. The need to complement the economic base and to tackle the problem of negative impact of dumping grounds and post-mining hillocks were combined into one solution. Positive examples: extension of sports and recreation facilities on hillocks in Łagiewniki, Rozbark and Karb (Bytom, 1979 pg. 574).

## **2.3. Questions of governance on brownfields.**

### **The 1990s and the beginning of the 21st century**

In the 90's and the 2000's, at least 200 hectares of industrial areas were added in Sosnowiec. An important issue to solve was that nearly all new degraded areas were not owned by the city, which posed substantial legal and administrative limitations as regards their change of use. Although the local spatial development plan imposed the character of the new form of development, the institutions and entities (mainly the Spółka Restrukturyzacji Kopalń S.A., the State Treasury, accountant in bankruptcy, and private companies) that owned the land exhibited little regeneration or re-industrialization activity.

Brownfields became a difficult topic faced only by municipal, and partly, by provincial authorities. It is noteworthy that apart from vague guidelines, the problem was not treated as a serious one at the national level.

The municipal policy of that time was focused in two directions. The first one consisted in the establishment of tools and undertaking preliminary actions in order to revitalize. They were mostly limited to the development of documentation of the areas, graded regulations, purchase of land or taking over debts and the creation of long-term strategies of wasteland development.

The other element of the municipal policy was systematic regeneration of a portion of the wastelands, new and old, degraded even before WWII. Regeneration procedures were financed from municipal budgets and private funds. From the mid 90's the EU co-financing has been most desirable. In opposition to preceding decades, the use of reclaimed land was rationalized with regards to the social and economic needs of the cities.

#### **2.3.1. Governance arrangements, governance responses and outcomes to brownfield spatial problems**

In the case of Sosnowiec privatization, and the further fragmentation of land, numerous legal land ownership complications caused that it was becoming more and more difficult to find extensive, over 20-hectares grounds, for municipal and commercial investments located on greenfields. Virtually the only solution to that

problem was a policy aimed at winning new post-mining and industrial wastelands.

The incentive that strengthened the pro-investment activity of municipal authorities was the assignment and formal establishment of the Katowice Special Economic Zone in 1996-1998, together, with the establishment of the Sosnowiec-Dąbrowa Subzone. Sosnowiec, due to the problem of growing structural unemployment, was selected as one of the main centres to realize that venture. Originally three investment areas were formed within the city limits: “Milowice”, “Dańdówka” and “Kazimierz” of total area of 63 hectares.

The area of “Milowice” and “Kazimierz” were established on former hard coal mines. The area “Dańdówka” was localized within the pre-war post-mining wastelands. The owner of the lands earmarked for business activity was, in most cases, the State Treasury, liquidated coal mining companies and a private company (PP-U “Dańdówka” under liquidation). In the 2000's, with the establishment of three new areas - “Zaruskiego”, “Mikołajczyka” and Narutowicza”, the change of localization of investment grounds of the KSEZ in Sosnowiec was finally made. Meanwhile, the area “Kazimierz” was liquidated. As a result of the changes, the KSEZ investment grounds in Sosnowiec covered a total of 95 hectares, of which 76 hectares were developed to meet business activity needs (data: the KSEZ in Sosnowiec).

With regards to the municipal policy, it is particularly noteworthy that the city and the Katowice Special Economic Zone realized the concept of directly taking over the land, mainly through purchase. Considering the budget restrictions in the 90's, and the beginning of the last decade, it was an audacious policy, as it was not bound to succeed. On the other hand, those activities were supported by the participation of the KSEZ, with regards to legal, administrative and organizational issues.

The initial concerns, or even social and political resistance was deepened by the fact that employment by companies at the KSEZ in Sosnowiec commenced as late as 2000. Commitment of the city authorities to development investment grounds is apparent in the investment amounts spent on building the necessary roads and technical infrastructure. In 1996-2009 the investment input reached an amazing 18.47 million PLN, i.e. 63.3%. The respective investors' and the KSEZ's share was 6.99 million PLN and 3.96 million PLN (data: the KSEZ in Sosnowiec). The idea of the local authorities' participation in organization of degraded areas and their adjustment to new functions in Sosnowiec revolved around three activities:

- full reclamation of degraded land, including the so called blackfields,
- levelling of land consisting in adjustment of a given plot of land to serve a specific investment, drainage,
- building of road infrastructure where it was needed. Those activities consist in junction road investments (e.g. the area “Milowice”) and by-pass roads (e.g. the area “Narutowicza”), or even arterial roads that improved transport around the investment areas and rendered their accessibility better (the district of Niwka, planned: the investment area “Dańdówka”).
- construction of complete technical and municipal infrastructure – service connections are located within specific investment plots (Krzysztofik R., Runge J., Kantor-Pietraga I., 2010, and data collected from Economic Policy Department and the Design and Urban Laboratory at the Municipal Office in Sosnowiec).

Depending on specific cases the city authorities undertook the activities alone or in partnership with the KSEZ, or individual investors. Among the earliest large-format investments connected with the development of post-industrial and post-mining areas that made references to participation within the broadly understood idea of governance are regeneration and investment activities in the area of Baczyńskiego (1998), Staszica (1999), and Orłat Lwowskich Streets (2001).

To summarize that period of wasteland development in Sosnowiec, we find that it was of rather passive nature as regards the scale of *in situ* ventures. Nonetheless, they constituted a vital step of a well-conducted planning and building strategy of future development. It was also crucial to win an important partner in those activities – the Sosnowiec-Dąbrowa Subzone of the Katowice Special Economic Zone.

In the case of Bytom the situation was quite different. The 90's were a period of continued existence of a majority of traditional industry, including hard coal mining.

Formation of new wastelands was very limited. Unfortunately, limited economic sources stopped enterprises for brownfields reclamation. The shock of urban voids within the city space, after closing down of large industrial facilities, occurred in the following decade.

In the past 50 years the period was most effective as regards the municipal policy of Sosnowiec in conjunction with post-industrial areas. The basic features of the period are dynamism of real activities, partnership participation and decision-



making (governance), and generally extensive realism of plans and strategies.

The period was generally a continuation of municipal activities from the 90's, yet more active in comparison to the preceding decade.

The issue of immense importance is *governance* of investment areas where the key partner has become the Sosnowiec-Dąbrowa Subzone of The Katowice Special Economic Zone (KSEZ). The activity partnership was also visible in cooperation with municipal authorities and individual investors outside the KSEZ, and provincial authorities. In the KSEZ area alone, approx. 50 hectares of post-industrial and post-mining, as well as, wastelands of older origin have been brought back to life. That constituted approx. 0.5% of the city area, approx. 3.5% of wastelands, and approx. 25% of the so called new wastelands (1990-2000) whose impact on the city image and its spatial and functional structure was particularly negative. Governance in Sosnowiec was of extremely specialized economic nature. Networks of connections in that system were based on typically economic activities and entities or combined economic and political. From the perspective of importance of the economic base in each city, it was blatantly obvious, especially in a city undergoing unprecedented economic transformation.

The key player of the changes in the area of brownfields development were city authorities. A city mayor acted as a stimulus and creator that set the pace and character of the changes. Since brownfields investments were a priority, they became the focal point of interest of the Department of Economic Development in Sosnowiec City Hall, and Pracownia Projektowo-Urbanistyczna, Informacji i Promocji Miasta (Design and Planning Workshop, Department of Information and Promotion of the City). Those units, as well as other departments of the City Hall, in cooperation with the City Mayor, were all in favour of comprehensive development and facilitated new investments. The activities were aimed at winning investors and providing them with the best opportunities to conduct business activity. However, cooperation with other entities (the Katowice Special Economic Zone, the Local Development Agency) interested in development of industrial areas, frequently with regards to the economic aspect, was of varied character.

The City Hall enjoyed the most favourable relations with business entities, the worst with some of the NGO's that contested legitimacy of certain activities (Forum dla Zagłębia Dąbrowskiego, Zielony Ring Przemysłowy). The main problems with NGO's revolved around the manner of development of certain wastelands (the issue of the former KPP "Maczki-Bór" addressed by the

association "Zielony Ring Przemysły" (figure 29) and rationality of certain investments that reinforced the localization potential of a few investment areas addressed by the Forum dla Zagłębia Dąbrowskiego.

Cooperation between the City Hall, the KSEZ and a few other entities (land and property owners) is of various nature. From very positive, where the city participated and supported individual investors or the KSEZ in acquiring new brownfields (a majority of industrial and commercial investments), to conflict situations, as the problem of liquidation of the aforementioned power line owned by PSE S.A. that blocks development of the Ferroli factory complex and further development of wastelands.

The role of other entities providing support to the urban economic development, including, indirectly, the development of brownfields through new investments, was rather of secondary importance, albeit very positive (figure 30 and table 15).

The role of NGO's was of opinion-forming, contesting and sometimes a supportive nature. Generally, NGO's interested in the subject of the cities spatial development were attentive to the activities, and looked for the most optimal solutions. The influence of the political opposition on NGO's is not entirely clear. NGO's, mostly unaware of it, may be the tool of political critique of the city authorities. Nonetheless, it must be stressed that all political forces operating in Sosnowiec treat it as their absolute priority to further economic and spatial development of the city, bearing in mind the development of brownfields. The differences are sometimes about methods or cost-bearing of certain investments.

The overall relations between individual groups of players concerned about the problem of brownfields and their transformation has been depicted in table 15. The table is based on the available data concerning individual interactions. Part of the information is secret. The information has been compiled from press notes, interviews and available documents.

By the end of the 1990's, the areas of wastelands grew in Bytom by 320 hectares. As opposed to Sosnowiec, the majority of post-industrial areas in Bytom have not been developed (table 16). The first reason is the fact that brownfields were formed as late as the 2000's, and some of them even at the end of the previous decade. Nearly all areas, before they were taken over by the local authorities, who are competent to prepare plans of their development, functioned or still function as private property or property of the coal mines restructuring company called Spółka

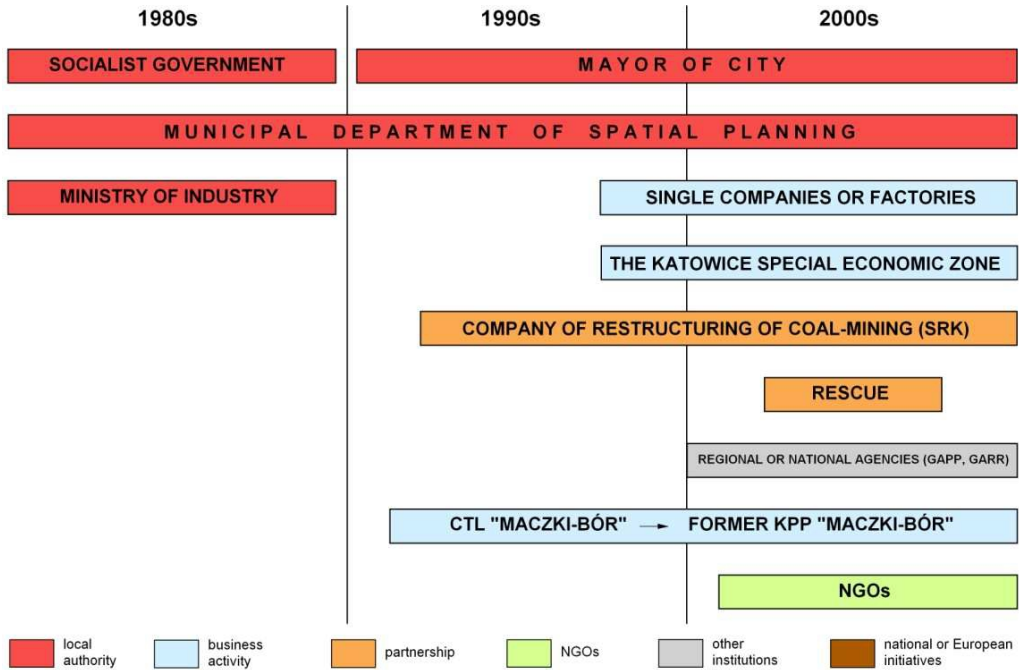
Restrukturyzacji Kopalń S.A. (Company of Restructuring of Coal-mining) That period, as proved by Bytom and other cities of the region, is nearly almost lost.

Figure 29. Salzgitter Mannesmann is localized on the area of former KPP “Maczki-Bór”



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

Figure 30. A timeline diagram of the brownfields policy. A case of Sosnowiec



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga

**Table 15. Relations between actors interested in the question of brownfields in Sosnowiec**

	MUN	KSEZ	COM	ILO	OEI	NGO
MUN	-	4-5	3-5	2-5	4-5	1-4
KSEZ	4-5	-	4-5	2-5	3-5	-
COM	3-5	4-5	-	3-5	3-5	1-4
ILO	2-5	2-5	3-5	-	2-5	-
OEI	4-5	3-5	3-5	2-5	-	2-5
NGO	1-4	-	1-4	-	2-5	-

Explanations: MUN – Municipal authorities, KSEZ – The KSEZ, COM – economic companies, ILO – other institutions land owners, OEI – other economic institutions or organizations, NGO – non-governmental organizations.

1 – very negative, 2 – negative, 3 – neutral, 4 – positive, 5 – very positive.

Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

**Table 16. Bytom. Key brownfields for land use regeneration**

Name of enterprise	Type of land use	Part of city	Personal perception
<i>Former – KWK ROZBARK</i>	Brownfields	Rozbark	Very negative
<i>Post-mining areas ORZEL BIALY</i>	Brownfields	Rozbark	Very negative
<i>Former – STEELWORKS BOBREK</i>	Brownfields, blackfields	Bobrek	Very negative
<i>The KWK BOBREK-CENTRUM</i>	Brownfields, blackfields	Karb	Very negative
<i>Former – KWK MIECHOWICE</i>	Brownfields	Miechowice	Negative
<i>Former KWK POWSTAŃCÓW ŚLĄSKICH</i>	Brownfields	Dąbrowa Miejska	Negative
<i>Former KWK SZOMBIERKI</i>	Brownfields	Szombierki	Negative
<i>Former – STEEL WORKS ZYGMUNT</i>	Brownfields	Łągowniki	Negative
<i>Post-mining areas NOWY DWÓR</i>	Brownfields	Dąbrowa Miejska	Negative

Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

Due to delays in the heavy industry restructuring process, Bytom is at the same stage as Sosnowiec at the end of the 90s or beginning of the 2000s. As opposed to Sosnowiec, and fortunately for Bytom, the restructuring processes are more evolutionary than revolutionary. Nonetheless, there is an urgent need to develop post-industrial and post-mining areas in at least 6 to 8 places within the city limits.

The development creator, similar to Sosnowiec, is the City Hall (figure 31). However, the operational tools are, among others, *Program Rewitalizacji Bytomia na lata 2007-2020 (Bytom Regeneration Programme 2007-2020)*. It is worth mentioning that the City Council has passed a resolution that temporarily releases potential investors from real estate tax.

As was the case in Sosnowiec, cooperation of a potential investor with the City Hall has been institutionalized, to optimally improve legal and administrative

procedures connected with the commencement of an economic activity within the city limits.

The Programme assumes three principal directions: attracting new investors, land reclamation for recreation and leisure function, and formation of greens, and placing the existing ones, in justified cases, under legal protection.

Bytom's problem is that there are no investment areas assigned for the KSEZ. The example of Sosnowiec shows they can be the key element in solving the brownfields problem.

Principally, two major players are responsible for the activities: the City Hall and individual enterprises, both from industry and services. Unfortunately, these activities have been of limited industrial scale. Regeneration of wastelands occurs selectively, it does not cover entire areas. The exception is shopping centres built on wastelands: Real, Plejada (partly), Tesco and Obi.

A significant part of wastelands and post-mining areas have been reclaimed and transformed as part of the construction of the A1 motorway. The investor and later administrator of the motorway is the General Directorate of National Roads and Motorways. Transformation took place in the post-mining district of Dąbrowa Miejska, also covering the area of the former coal mine "Nowy Dwór".

The City Hall policy towards post-mining areas manifests itself through large-scale liquidation of all surface forms of former exploitation. The already started liquidation of post-mining hillocks in the streets of Jana Pawła II, Siemianowicka and Wrocławska are most important from the perspective of the city image.

Another, and not really expected element of townscape, is specific overflow land formed as a result of mining subsidence. Only some of them are of natural value. Others degrade the city image. Therefore it was a priority to remove them. Re-cultivation of the area near Zgorzelec housing estate was a success (overflow land and illegal dumps); re-cultivation works have also been started in the area of Cicha Street. Liquidation of illegal dumps is a large-scale programme. The programme covers the streets of Zabrzańska, Frycz-Modrzewski, Strzelców Bytomskich.

In Bytom, the following are the City Hall's partners in regeneration projects: "Kompania Węglowa", "Spółka Restrukturyzacji Kopalń", private entities. The construction of the A1 motorway has created a favourable situation, as material from liquidated post-mining hillocks is partly used for building purposes.

*Figure 31. The City Hall in Bytom*



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

The establishment of the Bytom Industrial Park was an attempt to coordinate activities for enterprise development on brownfields (figure 32). The Project was realized in 2004 with the participation of following regional institutions: Górnośląska Agencja Przekształceń Przedsiębiorstw (GAPP), Spółka Restrukturyzacji Kopalń SA, the Industry Development Agency, and the enterprises of Orzeł Biały SA and PUMECH-Orzeł Sp. Z o. o. The activities were coordinated by the City Hall in Bytom, and the executive company is the GAPP. The Park covers an area of 4.6 hectares and is being extended by new post-mining areas. The historic buildings within the park are also undergoing regeneration.

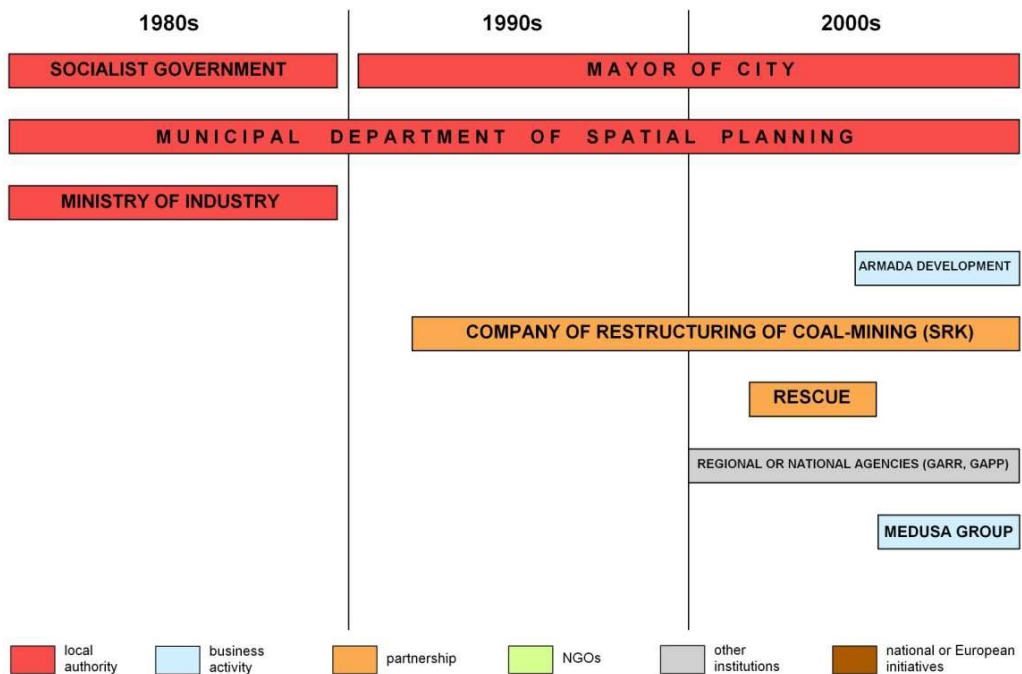
The regeneration of the former coal mine KWK “Szombierki” is an interesting venture realized by a private entity. The project is conducted by the enterprise “Armada Development”. The concept of development of the post-mining area provides for participation of various private entities and institutions interested in investments within the area. The investor conducts negotiations with various partners, however, the investor is the main entity that undertakes real actions. The project is also supported by the City Hall in Bytom. The quality of the venture follows from three elements:

- vast regeneration area,
- taking into consideration the historic and interesting post-mining buildings while revitalizing the area,
- the changes are aimed at above-local functions (a golf course, interesting sports

and recreation facilities).

The “Medusa Group” – a small architectural studio – plays an extremely important role in the transformation of post-mining areas, especially of historic buildings. The main goal of the architects connected with regeneration is functional transformation of the former hard coal mine KWK “Rozbark” into colourful “Gardens” that make references, through its spatial arrangement, to a coal mine underground. The studio has received assistance of world-famous architects and artists: Elizabeth Diller, Jean-Paul Ganem and Ricardo Scofidio.

**Figure 32. A timeline diagram of the brownfields policy. A case of Bytom**



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

In reference to Bytom and Sosnowiec it is a separate issue how the problem of brownfields is perceived by central and provincial authorities. Or to be honest, by provincial authorities. The first substantial and most legible address of the issue of post-industrial wastelands was its inclusion in the aforementioned Contract for the Katowice Voivodship, and subsequent strategies of development for the Silesia Voivodship. However, generally, the participation of regional authorities was limited to substantive support, and in some cases – economic, to ventures realized by individual cities, including Bytom and Sosnowiec. The most measurable effect of those activities was coordination, and to some extent consultation of

development plans of the KSEZ within the Silesia Voivodship.

The aid funds from the regional and national level aimed at the mitigation of the negative effects of the restructuring of industry and coal mining are insufficient. The company Spółka Restrukturyzacji Kopalń S.A., formerly Bytomska Spółka Restrukturyzacji Kopalń S.A., as the authority (owned by the State Treasury) supervising the post-mining property, and also in charge of that issue, has been only partly successful in fulfilling their mission.

Due to insufficient supervision, a number of objects have deteriorated, are devastated and robbed. The former coal mine KWK "Rozbark" in Bytom finally taken over by the city from the Bytom Mine Restructuring Partnership is but one of many such examples.

## **2.4. Vacancy-housing in Bytom**

The problem of vacancy houses, and especially buildings in a poor technical state, appeared on a larger scale in Bytom (figure 33) in the post-war period, however, it had been present here before World War II (Szczyпка-Gwiazda, 2003). This is the reason why there were plans to move the whole city to the suburbs of the conurbation and "devote" the city space to mining purposes. An intermediate solution, the worst of all, was found - the mining exploitation was still continued and mostly no precautions were taken. The main effect of this has been the negative influence of coal mining in land settling. In the period of November 2008 to November 2009, for instance, the following places settled by:

- Municipal Office - 0.5 cm
- Swimming Pool - 0.5 cm
- Secondary School of Construction - 8.0 cm
- St. Barbara Church - 20.0 cm
- St. Mark Street - 80 cm
- Primary School no. 21 - 63 cm – 68 cm
- Łanowa Street - 43 cm
- the cross-road of Falista and Konstytucji streets - 106 cm
- Evangelic Church – 27 cm, (*Raport o stanie miasta*, 2010).



*Figure 33. City of Bytom. A view on city centre*



Source: “Armada Development”, Bytom.

This negative phenomenon was accompanied by even more threatening earthquakes, that lead to multiple building damages and also damages in the technical and transportation infrastructures. Some flats have been vacated due to demographic reasons (migration), social reasons or others (figure 34).

*Figure 34. Bytom. Abandoned flats and shops in city centre*

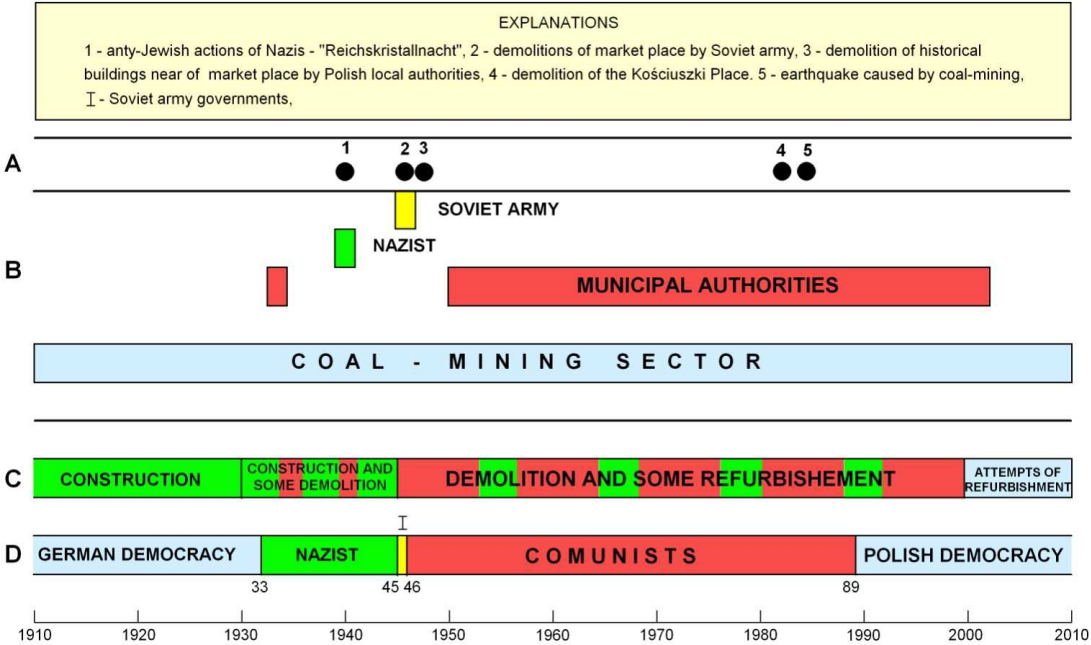


Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

In June 1982, powerful rock mass movements caused the damage of over 600 buildings in the inner centre. After that, several hundreds of houses in Bytom were demolished. In the period of 1994-1999 only, the total number of approximately 150 buildings with 1500 rooms disappeared from the urban landscape, which comprised about 5% of the total housing infrastructure governed by the Municipal Authorities (Drabina, 2010, p. 435). In the period of 1945-1982 in Bytom, 650 buildings, with the total number of 3700 flats, were demolished, including the high number of 93 buildings in the period of 1970-1982 (Drabina, 2010, p. 411).

The first demolitions took place even before World War II resulting from the interaction of both mining and also other factors, such as the ravage of Jewish buildings by the Nazis or urban reconstruction. In 1945, the Soviet army unreasonably destroyed substantial parts of the Old Town, including the city square area (figure 35). The actions of Polish authorities after World War II, lead to the further demolition of old buildings and occasional complementing with residential buildings and residential-commercial buildings that significantly clashed with the historical image of the tenement houses next door.

Figure 35. A timeline diagram of vacancy-housing genesis in Bytom



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

Currently, and in the past, a problem of no less importance for the image of Bytom has been the issue of buildings, which collapse due to the earlier mentioned reasons. In the period of the first three months of 2011, as many as two buildings in the inner city zone have collapsed. In February, it was a building at Korfantego Street (figure 36) and a month later - one at Piekarska Street.

*Figure 36. Bytom. Construction disaster at Korfantego Street. Just before and just after*



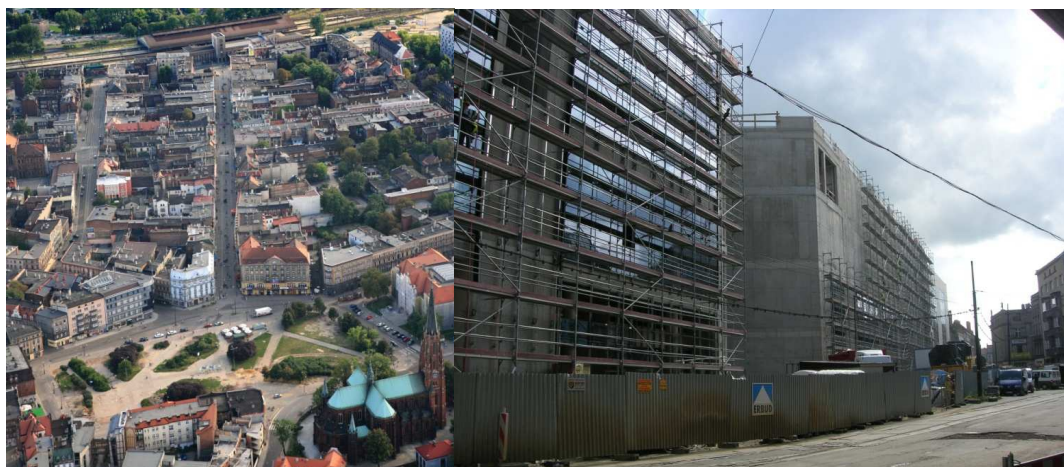
Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

Some buildings in poor technical state due to the war, were destroyed after World War II. A spectacular example of the effect of destruction in Bytom is the creation of the “new” Kościuszko Square in the 1980s, which is a large city centre square. The previous one was several times smaller; and the town square increased two-fold.

The demolition of buildings to create the “new” Kościuszko Square was one of the most destructive, conscious and intended actions of the communist government in Bytom. In 2010, Kosciuszko Square was developed by the building of the “Agora” shopping centre, which was the first large and successful attempt at revitalizing the inner city area. It shall be stated, though, that the modern architectural image, contrasting with the historic tenement houses and the functions of new establishments have brought about vivid discussions among the inhabitants and other actors of social and economic life (figure 37).

The ruined buildings are mainly located outside the main viewing point of the streets, they are mostly utility buildings; in the area of Wałowa and Józefczaka Streets, however, one may find an entire complex of ruined residential buildings.

*Figure 37. Bytom. Demolished in the 1980s built-up area right by The Kościuszko Square in the foreground. New shopping-centre CH “Agora” has been opened in this place in 2010*



Source: “Armada Development”, Bytom and R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

The technical problems of development, the perception of the city centre, the ownership and social problems have lead to the situation that, in the beginning of 2010, were reported in the central district (Śródmieście) and the adjacent district of Rozbark, are 506 vacant flats (47 of which were privately owned), and 829 rooms have been excluded from use due to technical reasons. A total of 1,335 flats were excluded from use. 1,178 of the aforementioned flats managed by Zakład Budynków Miejskich (ZBM), a company established by the municipal authorities.

The situation is exceptionally difficult with regards to buildings in bad technical condition (tables: 17, 18, 19, 20). Some of the buildings, as already mentioned, are only fit for demolition. Currently there are eighteen such buildings, and in the entire province – only 49.

*Table 17. Bytom. Some indicators of social questions by quarters*

No	City quarter	Percentage of buildings constructed before 1989	Social assistance benefits. Percentage of beneficiaries in each quarter
1	Centrum	99,39	18,3
2	Karb	99,96	22,0
3	Szombierki	99,74	10,1
4	Łagiewniki	96,50	14,9
5	Miechowice	95,37	8,5
6	Stroszek	98,02	11,5
7	Os. Gen. Ziętka	89,38	5,2

Source: Program Rewitalizacji Bytomia na lata 2007-2020, 2009.

**Table 18. Bytom. Technical condition of buildings**

Condition	Council flats	Housing cooperative flats
Very good	8,0	29,3
Good		
Satisfactory	58,0	58,3
Bad	34	12,4
Very bad		
		2,0

Source: Program Rewitalizacji Bytomia na lata 2007-2020, 2009.

**Table 19. Bytom. Age of housing-buildings**

Age of buildings	Council flats	Housing cooperative flats
Before 1918	59,1	92,4
1918-1945	33,3	
1946-1959	4,6	7,0
1960-1980	2,4	
1981-2009	0,6	0,6
		63,5
		32,2
		4,3

Source: Raport o stanie miasta, 2009.

### **2.4.1. Governance arrangements, governance responses and outcomes to vacancy-housing spatial problems**

The question of housing areas is an important point that different actors and urban authorities interested in (*Mieszkania dla ubogich...*, 2005; Cesarski, 2007). The problem of vacant houses and buildings in poor technical condition pertains to a few groups of stakeholders. The first group is made up of building owners and administrators – the municipal authorities, Kompania Węglowa, Spółka Restrukturyzacji Kopalń and other entities. The second group consists of approx. 3,000 persons on waiting lists for flats owned by the city. The third party to that problem is the public opinion that manifests itself through debates on the issue of vacant houses in the city. The public opinion was most clearly expressed through a private venture of an internet website with a meaningful name [www.ruinybytom.pl](http://www.ruinybytom.pl) (ruins of Bytom). A totally new initiative (2011) is also the association of mainly young inhabitants of Bytom, who formed a group on Facebook (“Project Bytom”). The group's aim is to monitor and analyse the situation connected with the problem of vacant houses in the city.

The pivotal point in dealing with the problem is the City Hall whose task, on the one hand, is to protect the city aesthetics (vacant houses degrade it to the greatest extent), and on the other – to secure the needs of the city inhabitants – and a city that continuous to lose its inhabitants.

Activities by the municipal authorities towards the problem of improvement of historic buildings, especially in central districts, focus on two elements: improvement of the conditions of the buildings and their surroundings (figure 38). An interesting example is the modernization of a building at 58 Katowicka Street, and its adaptation to the requirements of a replacement flat.

**Table 20. Bytom. Technical infrastructure in flats, 2009**

<b>Type of infrastructure</b>	<b>Council flats</b>	<b>Housing cooperative flats</b>
<b>Plumbing instalation</b>	98,4	99,8
<b>Bath-room</b>	49,3	90,8
<b>W.C.</b>	56,3	95,3
<b>Gas fittings</b>	57,2	96,5
<b>Hot water (system)</b>	No data	4,0
<b>A central heating system</b>	25,9	14,6

Source: Raport o stanie miasta, 2009.

The procedure of vacant-housing liquidation consists of:

- identification of legal status of a flat (if it is not city property, initiation of judicial and administrative procedures aimed at including it in the municipal housing resources),
- inclusion of the flat in the social flat resources administered by the city, and specifically to the municipal company Zakład Budynków Miejskich (ZBM);
- total repair of flats,
- renting the flats to person on the waiting list for social flats.

The procedure of commercial vacant-buildings liquidation consists of:

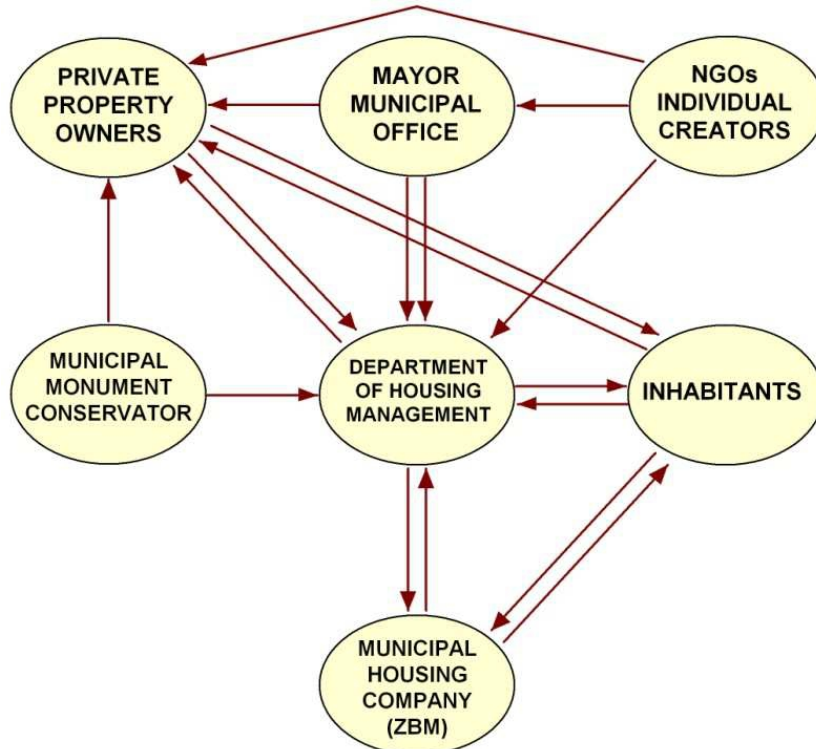
- identification of legal status of a property (if it is not the city property, initiation of judicial and administrative procedures aimed at including it in the municipal real estate resources),
- inclusion of the rooms in the social flat resources administered by the city, and specifically to the municipal company - ZBM;
- renting the rooms or selling at auction,
- if consecutive auctions are not effective, transforming the rooms into a flat, if possible (figure 39).

*Figure 38. Bytom-Rozbark. The mining damages effects on pictures from the winter of 2010. Tilting building (on left) as well as cracked walls in other (on right). Building on left picture has been demolished finally in 2011*



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

*Figure 39. A diagram of “cut sections” for issue of vacancy-housing in Bytom*



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

There is also an interesting project, in progress, called “Colourful Backyards” (Wolnego, Elsnera, Poczтовая, Palińskiego, Streets and Pokój Square). Considering that there are a few hundred such places in the city, the project ought to be continued as one of the most creative ways to improve the housing estates, and to attract potential buyers or tenants (figure 40).

The total of activities relating to the development and settlement of vacant houses was included in crucial documents and actions, such as: the Programme of Urban Regeneration, ReRoS, Urban Housing Policy – “Persons Essential for City”.

**Figure 40. Bytom. Refurbishment of houses in city centre. Slowly refurbishment**



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

Concluding, liquidation of vacant houses in our view is one of the two most crucial activities, apart from improvement of the labour market, aimed at halting the process of contraction of the cities.

The municipal authorities are aware of that and it is apparent in their activities. Those activities have a number of variants, depending on the participants:

*The city and entities connected with coal mining* (Kompania Węglowa, Spółka Restrukturyzacji Kopalń) – here the city is the entity that exerts pressure on those institutions that, due to their negative coal mining activity, are obliged to provide material input and to take actions to secure the buildings and to repair them. Independence of the coal mining entities often makes the relations tough. However, generally speaking, the companies fulfil their obligations, although not entirely to the extent that is desired (figure 41).

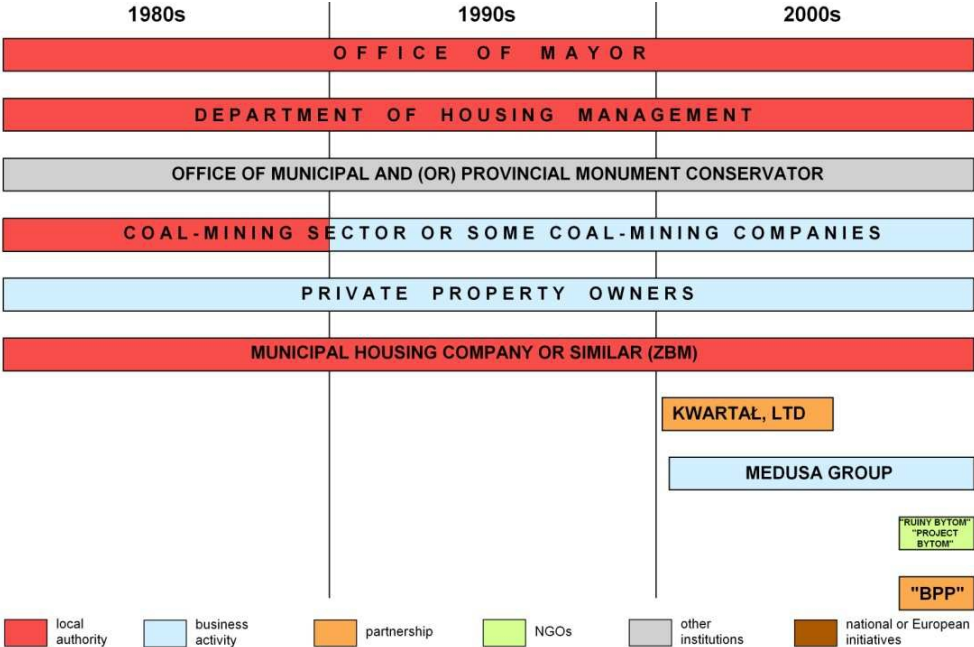
*The city vs. inhabitants awaiting assignment of flats.* Here the cooperation varies. Still, two major problems can be blamed on City Hall officials of the



previous terms (major negligence and malfeasance), and on certain groups of inhabitants:

- enrolling on the waiting lists without actually being interested,
- lack of information about resignation from the intention to use a social flat. Verification of the situation by the City Hall officers, also by means of on-site interviews, showed that only approx. 3,000 persons are actually interested in flats included in the city housing resources, not the reported 6,000.
- overestimation of capacity when declaring own investment and repair of a rented or sold flat,
- demanding attitude as regards the assigned flat. Dissatisfaction often results in negligence towards the assigned flat.

Figure 41. A timeline diagram of vacancy-housing policy in Bytom



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

*The city vs. private building owners.* Here, the quality of cooperation is extremely varied. In fact, it is exclusively dependent on the intention and economic capacity of private tenement owners. Especially over the past few years, the City Hall has introduced a number of conveniences and incentives to invest and recapitalize the owned houses. The most complicated situations take place when owners of tenements, clearly thinking of their own benefit and capacity,

consciously infringe on the city interest as a public and common space. Those are frequently public safety issues, as in the case of the historic infamous tenement on Chorzowska Street, that is in danger of collapsing (figure 42). Negligence and harmful activities are labelled as complexities, ambiguity of the law and rather liberal jurisdiction in situations that are obviously harmful or even dangerous.

**Figure 42. Bytom. The last three months of the most “famous” (in the negative context) abandoned private tenement at Chorzowska Street**

*2011, the beginning of August 2011, the beginning of September*



*2011, the end of September 2011, the beginning of October*



*2011, the beginning of October 2011, the end of October*



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

By the mid 2000's the problem of vacant-housing was acknowledged by the City Hall, yet left to be solved by itself due to the overwhelming scale. From that time, the issue has been a top priority to municipal authorities, one that is being realized overtly (regeneration) and covertly (regeneration plans, the so called *REROS*, jurisdiction and administrative activities, stock-taking, among others).

Meanwhile, inhabitants express their concern at and irritation with the state of the city, as they are vitally interested in a spruced-up image of their city. Thus, two waves are rising. The first one is the growing visibility of activities of the municipal authorities that bring order to that issue. The other is manifested by the rising frustration of social groups caused by the way they and visitors perceive the city. Against that background, is the explicitly negative reception by the City Hall of all actions that propagate the difficult situation of the city.



### **3. Cities after shrinkage (Bytom and Sosnowiec).**

#### **Governance context**

The municipal authorities play the key role in governance interactions, both in Bytom and Sosnowiec. The city is not able to bear the enormous consequences of the economic and political changes of the end of the 20<sup>th</sup> century in any case, including the examined economic, social and spatial problems.

It shall be stated that the budgets of both cities are modest, which mainly results from the limited number of businesses (the CIT tax) and the employed (the PIT tax). Sosnowiec is in a slightly better position, hence it increases the tax income by the increase of new work places in the KSEZ. It shall be remembered that the zone generates numerous expenses in the city, which are covered by the municipal authorities (i.e. the technical infrastructure, transportation, and documentation).

The income structure for both cities is unfavourable as well. In Bytom, for instance, grants and subsidies amounted to 44.5% in 2009. The contribution from taxes paid by inhabitants and businesses has constantly been decreasing. In the period of 2005 to 2009, it plummeted from 24.1 to 21.5%. This element might reflect the intensified and disadvantageous economic situation connected with the crisis of the labour market.

Almost all enterprises, however, both the ones resulting from the improvement in location conditions of the Zone as well as enterprises outside the zone are co-financed by the EU or state funds. The participation system varies, depending on the Programme and the Task; it shall be pointed out, though, that the city itself could not afford any of the enterprises.

With respect to municipal governance towards issues of the labour market, both cities have a slightly different structure. In reference to aid funds in Bytom, the most important issue appears to be the improvement of the labour market through the activation of the so-called “human factor” and the general investment activities in the network of roads, which aim at the improvement of transportation availability. It is treated as one of the main bargaining elements in attracting investors.

In 2009, financial aid for the Projects realized from European funds in Bytom and concentrating mainly on the tasks relating to the improvement in the labour

market, its support, creating new possibilities, amounted to 5.5 million Euro, with the total project value of 6.6 million Euro.

The District Employment Agency was an important institution in the city for support and finance acquisition from the EU and the state and it was, next to the Department of Social Policies, the main actor of changes in the scope of positive reconstruction of the labour market in the city.

In Sosnowiec, pro-investment activities are more highlighted, and they are realized towards the specific investment zones, and mostly connected with the operations of the KSEZ, but not only (e.g. the development of the former area of the KPP “Maczki-Bór” for new investments).

These means are not sufficient in any case. Unfortunately, the actions of both cities are not met with the proper understanding among some public institutions, and especially those at the nationwide level.

The previously mentioned conflict between the GDDKiA, city authorities and also the KSEZ, regarding the financing source for the connection of the “Dańdówka” investment area with the express road no.1 poses the best example of it. It seems that the governance of investment support is partly dependent on the current political situation and the non-formal and not totally transparent lobbying, which determine the order and support priorities coming from the central institutions.

This issue presents a good example that breaching an agreement between a governmental agency and city authorities might lead to the lack of stability for many actors of economic life, and also the inhabitants as a community. The lack of the mentioned connection has a negative impact on the comfort of life and safety due to the increased lorry traffic and the heavy traffic of passenger vehicles of the employees of various companies in the Dańdówka district. Most of all, it is a limitation to the possibility for the expansion of the investment area. The new road built by the city authorities only partially solves the problem. It connects with the network of city roads and not with the express road. The lorry and to some extent passenger vehicle traffic has not been taken away from the city road network. It puts a heavy burden on the network. The lack of mentioned crossroads depreciates the investment plans of city authorities as well as attempts to gain new investors. Therefore, new, alternate plans are being made, that are not always beneficial. Their implementation will lead to the intensification of social conflicts.

One of the most important questions asked, in the examination of governance, and relating to the phenomenon of urban shrinkage, is whether the available means and ways of their usage by specific actors are able to improve the current state.

It shall be stated that the answer is negative in each case. One may even say that city authorities manage the city with a notorious lack of means for the most essential undertakings relating to alleviating or limiting the consequences of urban shrinkage.

This element is visible in the politics of other actors as well, including owners of land and real estate, small and large private companies, and institutions such as the KSEZ. Due to this reason, many undertakings have been abandoned or only partially implemented and stages have been extended in time.

In the case of the cities, a considerable part of subsidies received by the cities has been devoted to the implementation of basic stabilizing and endogenous tasks, such as hospitals or schools. There are no distinct plans of financial support for communes with problematic nature, like Bytom or Sosnowiec.

Due to this fact, governance relations in both cities frequently lead to conflicts. There are too many groups of actors and, among the groups, many are dissatisfied with the method and/or form of outside means application. Economic and financial factors are key to determining the nature of the relations in the governance system. In this system, the regional authorities are of importance, and also central governmental institutions. City authorities here act as a keystone of interaction at the local level (inner-city) and regional, or beyond regional.

Insufficient means to implement key tasks for the city and the battles for subsidies fought with institutions and superior authorities lead to a situation in which the city authorities are less likely to participate in the governance idea. Even if they decide to do so, their position has to be definitely dominating, which is more characteristic of the government model. The prevailing principle is: my merit - my decisions.

*Governance* is mostly visible in the case of economic investments in Sosnowiec. It is due to the fact that there exist at least three financially strong subjects: city authorities, the KSEZ and the most important, present or a potentially more powerful investor. The driving force of the relationship triggers something, which may be defined as task-related know-how, the action towards the positive investment finale. It shall be highlighted that each actor is driven by different

principles. The investment, or the expected income, becomes an element that unifies the actors to perform a specific task.

In talks with representatives of all three groups, some premises of interest in the city area are apparent. The city authorities point to the element of financial gain (taxes), spatial gains (the development of brownfields), social gains (the suppression of unemployment and poverty), and prestige (the location of the institution intensifying the role of the city on the map of the Conurbation and beyond). The representatives of the KSEZ underline the economic element. If they can do something for the region in the process, it is only an additional element. The ruthless market game does not leave room here for any location mistakes.

A mandatory element, which acts as a binder in the process of locating economic enterprises and a regeneration element of the shrinking cities is, on the other hand, the investment climate of the city (it is positive in Bytom and very positive in Sosnowiec).

This aspect sets the tone for the economic dimension of the governance idea. Interviews conducted show that the structure and dynamics of governance, as well as its arrangement, are directly proportional to the overall attitude of city authorities, and also the clerks at various stages of investment completion, to the investor, including small and medium-sized businesses.

As mentioned, an investment tool is also the support within the framework of outside sources from various funds, such as European, national, purpose or structural ones. This element works quite well at the stage of promoting particular programmes and projects. It is not as good at the stage of direct acquisition and application of EU funds. The cooperation between the institutions granting or redistributing funds and the entrepreneurs is not always positive. It is highlighted that clerks are indolent, punctilious and they do not always perceive the overriding, social purpose of the investment. Unfortunately, the authors of this book, on the basis of performed interviews, became familiar with cases in which this nature of action has already led to some limitations in the possibilities of employment for a higher number of people.

Nevertheless, the cooperation of many actors and the application of varied sources of financing is an optimal solution and definitely conditioning investment success or, in a broader sense, economic success.

An excellent example is the production hall of the company called Watt – the most recent (2010) industrial investment within the KSEZ in Sosnowiec (figure



43). The result of the participation of the investor, the KSEZ, city authorities and also funds generated from various sources (the National Programme for Refurbishment of Local Roads, 2008-2001 and Programme Accelerator of Green Technologies – Project: GreenEvo as well as Programme - Innovative Economy coordinated by the Polish Agency for Enterprise Development and The Upper Silesian Regional Development Agency) came to be one of the largest and most state-of-the-art solar panel factories in Europe.

***Figure 43. Sosnowiec. “Watt” Company localised in the investment area “Mikołajczyka” of the KSEZ***



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

The violation of proportions in economic expectations, connected with the value or the way of the city's engagement, might have an adverse effect. An attempt to put pressure on city authorities to spend too many funds on pro-investment activities (even if the purpose is rightful) leads to a blurring of the initial actions towards development, that might be described as economic governance. Such examples are known in the examined region and they constitute a good background in the complicated system of management and organization of space. They are always an important lesson of inner-city governance for all the parties.

Another binder is the one of credit possibilities of investors and the successes achieved here. Unfortunately, in Polish realities, investment capital is of a limited nature and is not always sufficient. This matter frequently introduces a specific

anxiety in city-investor relationships. Are plans going to be successful? Are they going to be implemented at all? Unfortunately, in some circumstances, it causes a decrease in the level of contacts between particular actors.

Relationships of different types take place when finances are low. It is clearly visible in the system of co-management of vacant houses in Bytom. Most buildings, including the vacant houses in the centre of the city belong to the city of Bytom or private owners. In this matter, three types of governance apply:

- the city towards its own real estate,
- private owners towards their own real estate, and
- the city towards the real estate of private owners.

The three interactions have their own, quite visible, economic, legal and administrative conditionings. The low land rent and the range of devastation on one hand, and limited funds destined for renovation on the other, cause the pace of regeneration of the centre of Bytom to be slow (figure 44).

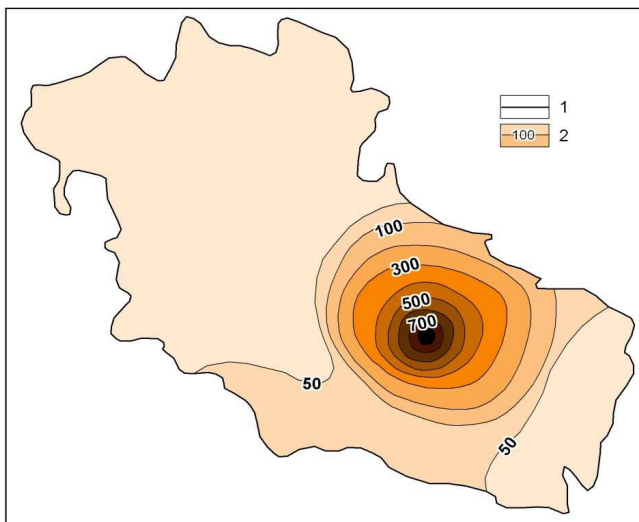
The difficulty of the situation lies in the fact that investing for rent here is of a limited nature (low rent, negative perception of the area, not attractive for families with children). It creates a barrier against the widespread repurchase of tenant houses with the prospect of their commercial rent or the resale of individual flats. The profitability of such an enterprise in Bytom is much more spread out in time than in other Polish cities.

The most depreciated centre of a large Polish city is not a subject of economic interest for the Voivodship or central authorities. The lack of subsidies and aid funds is even more surprising, considering that the problems of the city came as a consequence of the decisions made by socialist authorities in Warsaw, or Katowice, after World War II. City authorities, being the inheritor of the decisions made by the socialist authorities, both central and regional, both political and economic, are truly the only actor in this relationship.

Considering the number of vacant buildings in the centre, their exposure and influence on the perception of the whole city, Bytom is in a disastrous state. The destruction of the housing substance is mainly an effect of natural processes extorted by irrational human activity. The same situation takes place in reference to the more and more frequent floods in other cities, including Silesian Voivodship.

**Figure 44. Bytom. Concentration of vacancy-housing. Data for council flats only**

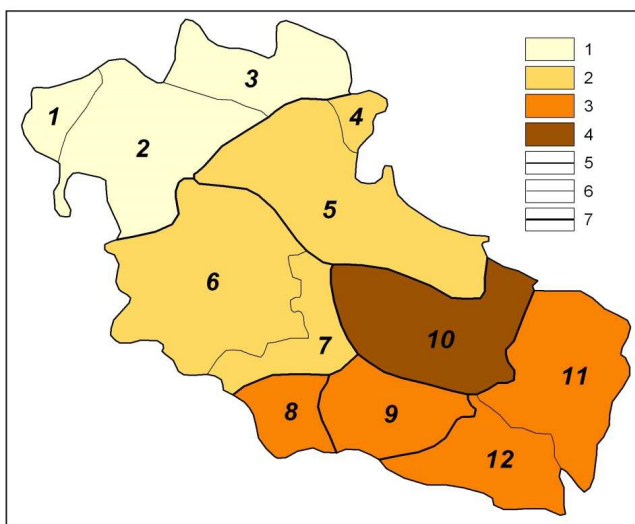
A)



Signatures for figure 44B): 1 – city limits, 2 – isolines of vacant flats concentration.

Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

B)



Signatures for figure 44B):

Number of vacant flats: 1 – (0-1), 2 – (2-30), 3 – (31-100), 4 – (101-887), 5 – borders of quarters, 6 – borders of the ZBM's districts, 7 – city limits.

Signatures of quarters (fig. 44B): 1 – Górniki, 2 – Stolarzowice, 3 – Sucha Góra, 4 – Os. Gen. J. Ziętka, 5 – Dąbrowa Miejska, 6 – Miechowice, 7 – Karb, 8 – Bobrek, 9 – Szombierki, 10 – Centrum, 11 – Rozbark, 12 – Łagiewniki.

Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

In contrast to the problems in Bytom, the consequences of damage in housing developments are, in each case, alleviated by the financial support for the inhabitants, the local government authorities and institutions. In the case of Bytom, its problems resulting from the destructive interference of the environment, namely the geological surface, are solved almost completely with the use of municipal funds. Some charges due to the mining damages, are covered by Kompania Węglowa, the owner of KWK “Bobrek-Centrum”, which performs mining activities. It mainly refers to the areas beyond the inner-city.

A majority of private tenement houses constituting vacant buildings came about as an effect of either insufficient financial means or a game played by private owners in the city space and orientated to purchase a devastated tenement house cheaply, tearing down a part of it (a part of it collapses by itself) and reselling the land, making a profit. The actions against the procedure were only started several years ago. Firstly, the possibility of demolition was limited, pointing out the need to revitalize the buildings, a majority of which are of historic nature. Secondly, in the case of the purchase of a tenement building by a private owner, he or she should show a sufficient own financial contribution to ensure that such a renovation will take place. Unfortunately, the majority of dilapidated tenement buildings had been bought out earlier.

Failures connected with revitalising a substantial quarter of the city by a company called “Kwartal” should be linked to financial problems, as well as the low level of ground rent. The company was established in 2000 as an effect of the so called Public and Private Partnership PPP. The idea of the company was to develop the quarter of the city between Jainty, Kwietniewski, Weber, and Browarniana streets, which had been demolished in prior years, with modern residential housing and services.

“Kwartal” was created as an effect of a legal agreement of the municipal company – Bytomskie Przedsiębiorstwo Komunalne (BPK) and several private builders and developers. Unfortunately, after several buildings were erected as shells, the regeneration actions in this part of the Old Town have ceased. Currently, the area of Kwietniewskiego Street requires urgent and further urban interference. The selected fragment of this part of the city was developed by a multi-storey car park, built for the purposes of the neighbouring “Agora” shopping centre. The investor of both establishments - already completed - was the company called Braaten Pedersen plus Partners (BPP).

The limitations in the development of governance interactions previously referred to, in this case, next to the economic, are also of a legal and legal-organizational character. It seems, though, that it has the best chances for improvement.

To conclude, Bytom is the only city in Poland, where the decisions of a governmental institution dating back to the socialist times, that is the Ministry of Industry and Mining, have lead the centre of the large city to a disastrous state. The contemporary central authorities do not want to bear the financial consequences of the past decisions.



## Conclusions

Bytom and Sosnowiec are in the group of the most problematic Polish cities. This term, undoubtedly, is connected with the shrinking nature of the cities. In the 1980s, both cities constituted significant pro-development centres. Since the 1990s, they have become areas of multiple and overlapping problems: economic, demographic, social, infrastructural and spatial.

In both cities, problems of the labour market, including the largest unemployment in the Silesia Voivodship, were the direct cause of shrinkage. Another important factor, which has blocked migration inflow has been the perception of both centres, as well as the conurbation as a whole. In the case of the two cities, the main image depreciating factors are the post-industrial and post-mining areas. In Bytom, it is additionally caused by the de-capitalization of the buildings in the Central district.

These problems are solved by governance arrangements in a two-fold manner. The first one takes into account regional representation. The role of this interaction is quite insignificant, though. The tendency that has been prevailing since the end of the 1990s, is the tendency towards city self-development, the limitation of the role of voivodship authorities or central authorities in supporting the key problematic issues for the city, especially in terms of finances. The problems might even be caused by the decisions of the previous central authorities. One exception is the beyond-municipal structure of the KSEZ, which is of an economic dimension. The regional and national levels in financing enterprises are much lower than the level of interaction between the city and the European Union.

There are no visible formal support structures within the self-government city association of the Katowice Conurbation - GZM "Silesia". The more noticeable elements are those of destabilizing rivalry, rather than solving specific problems.

Governance arrangement is seen at the local, intra-urban level. It shall be stated here, though, that the governance structures in the region are rather feeble and developing.

City authorities still maintain a strong position in solving problems relating to urban shrinkage. They are determined creators of various enterprises. This role in both cities deserves a positive response. For various reasons, the effects of these actions are more visible in Sosnowiec:

- the catastrophic situation of Sosnowiec was of a revolutionary, and incredibly dynamic nature and such were the authorities' reactions in the 1990s and the first decade of the 21<sup>st</sup> century. Until the mid-first decade of the 2000s, the counteractions were not very noticeable.
- in Sosnowiec, there is a continuity in holding power by one political party, which consistently fulfils the plans created in the 1990s (not without obstacles or mistakes). They have clear experience and have created a form of capital in municipal governing in crisis. In Bytom, the municipal governance relating to the key problems generated by shrinkage was only started in the mid-2000s. The previous period was rather chaotic, incidental and poor. In this respect, Bytom is following the path of Sosnowiec from the 1990s.

It is confirmed by the situation and evaluation of the actions taken, and interactions on the governance forum. Apart from some selected NGOs and opposition parties openly critical towards the authorities, the arrangement of interactions is quite open, positive, pro-developmental and dynamic. The interviewees, with no exception, admit that the president of the city has charisma. In Bytom, which is a more advanced stage overcoming problems, one may notice steadiness, discernment, minuteness, concentration and sometimes carefulness. This kind of political atmosphere is typical of the crucial moments that might change the face of the city and the principles of its functioning. The arrangement of governance is also weaker, mostly due to the lack of a strong independent institution, such as the KSEZ in Sosnowiec. A similar nature of power exercising, and the arrangement of governance, were present in Sosnowiec in the mid-1990s, on the eve of breakthrough changes for the city.

Another important actor present in Sosnowiec only, are the structures of the KSEZ and the network of new localized investors. The culture of cooperating with economic partners has established a clear arrangement of governance, even in the case of other actors, frequently non-economic ones. Surely, it is due to the fact visible in the urban space. There are 14 new industrial plants working within the KSEZ. Outside the zone, more than ten large industrial enterprises or services have been established, with the clear indication of the location within the post-industrial, and especially, post-mining areas.

Sosnowiec constitutes a model city, which is exemplary in its way of using the post-mining areas and transforming them into new places of economic activity.



Nowhere in Poland have so many of them been established and nowhere is their structure so diverse, and frequently even more spectacular (Niwka, Sielec).

The basic problem of development in both cities, as far as the arrangement of governance is concerned, is the limitation, and often even lack of finances to implement the assumed objectives, plans or arrangements. It seems that this factor is the cause of a majority of tensions between the specific actors of social and economic life. The limitations of financial means leads to frustration, disappointment, irritation, disenchantment and action below the expected consensus.

A crucial element in both cities is the creativity of thinking. Particular people, who know what development and positive functioning in development should look like, represent various environments in the arrangement of governance. They constitute crucial and solid capital in both cities. They are the ones that presently develop the power of governance and will certainly remain to do in the future.



## Post scriptum

In the middle of 2011, in the area of the Karb district in Bytom, there took place an enormous engineering disaster caused by mining activities of the “Bobrek-Centrum” coal mine. Several multiple-level housing estates (blocks) were damaged as well as a part of road and municipal infrastructure (fig. 45).

These activities came as an effect of mining work performed with the “collapse” method, and also connected with the incorrect description of how such a method might effect on buildings. The final consequence of these activities was the event of the need to evict about 600 people. Until the end of October, approximately 400 had been evicted.

Due to this fact, a series of new interactions of governance arrangement have been created, which almost literally refer to the problem of city “shrinkage.” Their basis was formed by municipal authorities, Kompania Węglowa, which is the owner of the “Bobrek-Centrum” coal mine and also the local community.

Two key issues emerged in this arrangement. The first one referred to ensuring housing for the evicted, especially in the context of the upcoming winter season. It was realized in the form of renting hotel rooms (119 persons), renting other temporary housing (24 households), and moving the evicted to their families in other parts of the city (345 persons)<sup>3</sup>. Kompania Węglowa covered the financial costs of these actions. At the same time, there should be new blocks of flats built for these citizens in the Szombierki district within the next 24 months. The cost of this enterprise amounts to approximately 6 million Euro (24.6 million Polish zloty).

Unfortunately, this event initiated a larger problem, which is connected with the activities of the “Bobrek-Centrum” coal mine in the nearest future. These activities will consist in further exploitation of coal, in a similar manner, and this time in three other district, including the western part of historic Śródmieście (Central Quarter). Due to this, about 650 buildings, a majority of which are houses, are under threat of technical degradation, and, to a large extent, also demolition. Many of those are historic (tables 21, 22 in Annex).

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<sup>3</sup> Data: 2011, November 10.

At present (November 2011), there is a certain deadlock in solving the problem. On the one hand, everyone is aware of the economic role of the “Bobrek-Centrum” coal mine in Bytom. It is the main employer in the business sector, connected with various fees and taxes, which end up in the municipal budget as direct or indirect payments. The lack of possibilities of exploitation under the designated areas might lead to the threat of closing down the mine as early as 2012.

*Figure 45. Completely abandoned housing-blocks in Bytom-Karb.*



Source: R. Krzysztofik, J. Runge, I. Kantor-Pietraga.

On the other hand, these activities expose about 5% of a heavily populated, and strongly invested in territory of the city to threat of total disintegration. Damages caused by mining activities in this area will probably never be able to be compensated for.

Since August 2011, there has been an enormous conflict in connection with the fact, where one party consists of Kompania Węglowa, the “Bobrek-Centrum” coal mine and its employees and trade unions, and the mining lobby in Upper Silesia, but, most importantly, the government of Poland, represented by the

Ministry of Economy. The other party is composed of municipal authorities of Bytom, urban community and all local and regional social communities.

Since mid-2011, in connection with the above, the activities of various individuals, institutions and associations have increased for the benefit of both the Karb district and Bytom itself. Various actions have been taken, including the media, who aimed at supporting municipal authorities as well as the most disadvantaged citizens of the Karb district. Many famous people have also been engaged in actions, including Polish celebrities. This extremely dramatic situation has also caused the reinforcement of various relationships in the governance arrangement, and it was connected with finding the best solutions to the problem.

Coalitions, “getting together” and intensification of opinions is also apparent in the mining lobby. At the time of editing of this study (November 2011), it is difficult to predict the course of events in 2012.

One thing is certain, whatever they are, they will be dramatic for the city. They may be a decisive factor in the city's future, and in its broader meaning.



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# Annex

**Table 21. Index of buildings and technical infrastructure with the resistance category equal or lower than influences of coal mining. Company: Kompania Weglowa, Branch: KWK "Bobrek-Centrum", Mining Area: Bobrek**

No.	Address		Type of building or object	Capacity (m <sup>2</sup> )	Number of storeys	A year of construction	Resistance category	The impact category
	Name of street	Nr						
1	Konstytucji	101ab	residential	6216	4,5	1920	0	II
2	Pocztowa	2	residential	720	3	1930	0	II
3	Braci Śniadeckich	4	residential	1620	5	1950	1	II
4	Kołatąja	1	residential	1914	3,5	1925	1	II
5	Kołatąja	3	residential	4914	3,5		1	II
6	Kołatąja	21	residential	1287	3,5		1	II
7	Kołatąja	23	residential	1269	3,5		1	II
8	Kołatąja	25	residential	1269	3,5		1	II
9	Kołatąja	27	residential	1269	3,5		1	II
10	Konstytucji	123c	commercial or service	2460	3,5		1	III
11	Konstytucji	129	residential	672	2,5	1889	1	II
12	Miechowska	42/42a	residential	5500	4,5	1950	1	II
13	Młodzieżowa	2	residential	1400	2	1905	1	II/III
14	Pocztowa	1	residential	1595	3	1946	1	II
15	Św. Marka	2	residential	2231	3,5	1905	1	III
16	Św. Marka	7	residential	5850	5	1960	1	III
17	Tomasza	5abc	residential	3600	3		1	II/III
18	Braci Śniadeckich	2	residential	4180	4,5	1950	2	II
19	Braci Śniadeckich	6/G4	commercial or service	540	1	1950	2	II
20	Braci Śniadeckich	6/G1	commercial or service	540	1	1950	2	II
21	Falista	2a	public	2298	1	1930	2	II
22	Falista	3a	residential	1452	3,5	1940	2	III
23	Falista	3b	residential	1452	3,5	1940	2	III
24	Falista	5a	residential	1925	3,5	1940	2	III
25	Falista	5b	residential	1925	3,5	1940	2	III
26	Falista	5c	residential	1925	3,5	1940	2	III
27	Falista	7b	residential	1925	4	1940	2	III
28	Falista	7c	residential	1925	3,5	1940	2	III
29	Falista	15	residential	3060	4	1908	2	II
30	Falista	26	residential	5462,5	4	1932	2	II
31	Kołatąja	2	residential	2880	3,5		2	II
32	Kołatąja	4	residential	2760	3,5		2	II
33	Kołatąja	12	residential	2024	3,5	1975	2	II
34	Kołatąja	16	residential	1089	3,5	1933	2	II
35	Kołatąja	18	residential	2178	3,5		2	II
36	Kołatąja	20	residential	1485	3,5		2	II
37	Kołatąja	22	residential	1205	3		2	II
38	Kołatąja	24	residential	1205	3		2	II
39	Kołatąja	26	residential	1205	3		2	II

No.	Address		Type of building or object	Capacity (m <sup>2</sup> )	Number of storeys	A year of construction	Resistance category	The impact category
	Name of street	Nr						
40	KoŃątaja	28	residential	1205	3		2	II
41	Karlika	1-5	residential	11055	4,5	1940	2	II
42	Karlika	2-8	residential	7012,5	3,5	1940	2	II
43	Konstytucji	92-96	residential	9405	4,5	1950	2	II
44	Konstytucji	100	residential	3990	4	1970	2	II
45	Konstytucji	103	residential				2	II
46	Konstytucji	123b	commercial or service	2208	3,5		2	III
47	Konstytucji	126	residential	3000	3	1920	2	II
48	Konstytucji	141a	commercial or service	4200	1		2	II
49	Krańcowa	1	residential	1716	3,5		2	II
50	Krańcowa	2	residential	2244	3,5		2	II
51	Krańcowa	3	residential	1716	3,5		2	II
52	Krańcowa	4	residential	2244	3,5		2	II
53	Krańcowa	5	residential	2244	3,5		2	II
54	Krańcowa	6	residential	2244	3,5		2	II
55	Krańcowa	7	residential	2244	3,5		2	II
56	Krańcowa	8	residential	2244	3,5		2	II
57	Krańcowa	9	residential	1716	3,5		2	II
58	Krańcowa	11	residential	1716	3,5		2	II
59	Młodzieżowa	9	residential	960	3	1920	2	II
60	Młodzieżowa	9a	residential	1152	3	1920	2	II
61	Młodzieżowa	11	residential	960	3	1920	2	II
62	Młodzieżowa	11a	residential	960	3	1920	2	II
63	Młodzieżowa	13	residential	1080	3,5	1933	2	II
64	Młodzieżowa	13a	residential	1080	3,5	1933	2	II
65	Orkana	1	residential	2079	3	1930	2	II
66	Orkana	3	residential	2079	3	1930	2	II
67	Orkana	5	residential	2079	3	1930	2	II
68	Orkana	7	residential	2079	2	1930	2	II
69	Pocztowa	4	residential	720	3	1930	0	II
70	Pocztowa	5	residential	1287	3	1960	0	II
71	Pocztowa	6	residential	720	3	1930	0	II
72	Pocztowa	7	residential	1287	3	1960	0	II
73	Pocztowa	8	residential	720	3	1930	0	II
74	Pocztowa	9	residential	2448	5	1960	0	II
75	Pocztowa	10	residential	720	3	1930	0	II
76	Pocztowa	11	residential	2448	5	1960	0	II
77	Pocztowa	12	residential	720	3	1930	0	II
78	Pocztowa	13	residential	2448	5	1960	0	II
79	Pocztowa	14	residential	1344	3,5	1930	0	II
80	Pocztowa	15	residential	2448	5	1960	0	II
81	Pocztowa	16	residential	1344	3,5	1930	0	II
82	Popiełuszki	4	public	26200		1909	2	II
83	Popiełuszki	4	residential	3840	3	1924	2	II
84	Popiełuszki	5	residential	3300	4	1970	2	II
85	Popiełuszki	5a	residential	1822,5	5	1970	2	II
86	Popiełuszki	9	public	4937	2	1951	2	II
87	Raławicka	2	residential	3060	4	1908	2	II
88	Raławicka	4	residential	3960	3,5	1908	2	II

No.	Address		Type of building or object	Capacity (m <sup>2</sup> )	Number of storeys	A year of construction	Resistance category	The impact category
	Name of street	Nr						
89	Raławicka	4/1	commercial or service	180	1	1910	2	II
90	Raławicka	4/2	commercial or service	100	1	1910	1	II
91	Raławicka	4/3	commercial or service	100	1	1908	2	II
92	Raławicka	10	residential	1422	3,5	1920	2	II
93	Raławicka	10/1	commercial or service	500	1,5	1910	2	II
94	Raławicka	10/2	commercial or service	225	1	1910	2	II
95	Raławicka	10/3	commercial or service	140	1		2	II
96	Raławicka	16	residential	3375	4	1920	2	III
97	Raławicka	17	public				3	III
98	Raławicka	18	residential	3375	3,5	1920	2	III
99	Raławicka	20	residential	945	3		2	III
100	Raławicka	22	residential	948	3		2	III
101	Raławicka	24	residential	945	3		2	III
102	Raławicka	26	residential		3		2	III
103	Raławicka	28	residential	1402,5	3	1930	2	III
104	Raławicka	30	residential	1275	3		2	III
105	Św. Marka	5	residential	5850	5	1970	2	III
106	Techniczna	7	residential	1881	3,5	1893	2	II
107	Techniczna	7a	commercial or service	222	1,5	1893	2	II
108	Techniczna	9	residential	1889	3,5	1940	0	II
109	Techniczna	10	residential	1440	3,5	1930	0	II
110	Techniczna	11	residential	1886,5	3,5	1930	0	II
111	Techniczna	13	residential	1903	3,5	1940	0	II
112	Techniczna	15	residential	1886,5	3,5	1930	0	II
113	Techniczna	17	residential	1870	3,5	1940	0	II
114	Techniczna	18	residential	1496	3,5	1920	0	II
115	Techniczna	19	residential	2046	3,5	1930	0	II
116	Techniczna	20	residential	1776,5	3,5	1920	0	II
117	Techniczna	21	residential	2065	3,5	1920	0	II
118	Techniczna	22	residential	1760	3,5	1920	0	II
119	Techniczna	24	residential	1804	3,5	1940	0	II
120	Tomasza	5,7,9	residential	4500	3,5	1930	2	II
121	Tomasza	12/1,2,3	residential	6435	5	1930	2	II
122	Falista	7a	residential	1100	3	1940	3	III
123	Konstytucji	118	residential	1268	3		3	III
124	Miechowicka	20	residential	495	1	1980	3	III
125	Miechowicka	20a	service	4830	1	1960	3	III
126	Miechowicka	20b	service	4830	1	1960	3	III
127	Miechowicka	20c	service	495	1	1960	3	III
128	Miechowicka	20d	service	282	1	1980	3	III
129	Św. Marka	1	residential	1980	4	1910	3	III
130	Św. Marka	2a	commercial or service	324	2	1955	3	III
131	Bończyka	15	residential	3240	3,5	1900	0	II
132	Chroboka	9.9a	residential	3993	4	1927	0	III
133	Chroboka	7	residential	2580	4	1910	1	II

No.	Address		Type of building or object	Capacity (m <sup>2</sup> )	Number of storeys	A year of construction	Resistance category	The impact category
	Name of street	Nr						
134	Chroboka	13,15	residential	4620	2,5/3	1945	1	II
135	Dąbrowskiego	5-7	residential	2592	3,5	1900	1	III
136	Feliksa	7	residential	4370	3,5	1900	1	III
137	Ks. Frenzla	25	residential	3430,5	3,5	1910	1	II
138	Ks. Frenzla	93	commercial or service	2940	2,5	1936	1	II
139	Hutnicza	10	residential	483	2	1919	1	II
140	Hutnicza	16a	residential	1620	2	1936	1	II
141	Hutnicza	24	residential	1950	2	1986	1	III
142	Jaskółcza	10	residential	680	2	1960	1	II
143	Jaskółcza	15	residential	2700	2,5	1910	1	I
144	Lipowa	3	residential	2600	2,5	1925	1	II
145	Ogrodowa	6	residential	1105	2,5	1936	1	III
146	Plac Słoneczny	1	residential	2652	4	1920	1	II
147	Pogodna	5	residential	1300	4	1910	1	II
148	Pogodna	11	residential	2970	3,5	1924	1	II
149	Przelotowa	4	residential	5687,5	3,5	1920	1	II
150	Stolarzowicka	19	public	9317	2,5	1907	1	I
151	Wolnego	2	residential	3666	3	1900	1	III
152	Wolnego	13	residential	6000	3,5	1904	1	II
153	Wolnego	13a	residential	360	2	1904	1	II
154	Wolnego	17	residential	3600	3,5	1900	1	II
155	Wysoka	5	residential	1912,5	2,5	1920	1	III
156	Alberta	1a	residential	1980	2,5	1900	2	III
157	Alberta	4	residential	540	1,5	1910	2	III
158	Alberta	8	residential	1375	2,5	1910	2	III
159	Alberta	8a	commercial or service	161	1,5	1910	2	III
160	Andersa	2b	residential	2660	3,5	1920	2	III
161	Andersa	4	residential	1760	4	1900	2	III
162	Andersa	6a	residential	2268	3,5	1902	2	III
163	Andersa	6b	commercial or service	150	1	1902	2	III
164	Andersa	11	residential	2349	3,5	1900	2	II
165	Andersa	14	residential	1740	2,5	1898	2	II
166	Andersa	23	residential, commercial or service	1207,5	3	1920	2	II
167	Andersa	23/1	commercial or service	346,5	1,5	1910	2	II
168	Andersa	30	residential	1596	2	1905	2	II
169	Andersa	30/1	commercial or service	525	1	1905	2	II
170	Andersa	32	residential	3625	2,5	1900	2	II
171	Andersa	34	residential	3900	2,5	1870	2	II
172	Bluszczowa	4	residential	1600	2,5	1935	2	II
173	Bluszczowa	5	residential	1920	3,5	1935	2	II
174	Bończyka	2-6	residential	6885	3	1920	2	II
175	Bończyka	5	residential	2932,5	3	1910	2	II
176	Bończyka	10	residential	2700	2	1910	2	III
177	Chroboka	X7	commercial or service	1320		1910	2	II



No.	Address		Type of building or object	Capacity (m <sup>2</sup> )	Number of storeys	A year of construction	Resistance category	The impact category
	Name of street	Nr						
178	Chroboka	7/1	commercial or service	201	2	1910	2	II
179	Chroboka	9a	commercial or service	783	1	1910	2	II
180	Chroboka	16	residential	1200	3,5	1935	2	II
181	Chroboka	21-25	residential	5400	3,5	1920	2	II
182	Dąbrowskiego	2	commercial or service	5265	4	1930	2	III
183	Daleka	2	residential	4488	3,5	1900	2	II
184	Daleka	2a	commercial or service	340	1	1900	2	II
185	Daleka	2b	commercial or service	135	1	1900	2	II
186	Daleka	4	residential and service	1651	2	1940	2	II
187	Daleka	5	residential	1400	2	1930	2	II
188	Daleka	6a	commercial or service	110	2	1930	2	II
189	Daleka	8	residential	1320	1,5	1910	2	II
190	Daleka	10	residential	630	2	1910	2	II
191	Drobczyka	2	residential	1176	3	1900	2	III
192	Drobczyka	2a	commercial or service	124	1	1900	2	III
193	Drobczyka	15	residential	864	2,5	1940	2	III
194	Elsnera	1	residential	4785	3,5	1900	2	III
195	Elsnera	5	residential	4340	3,5	1910	2	III
196	Elsnera	7	residential	2700	3	1910	2	III
197	Elsnera	8	residential	3540	3,5	1920	2	III
198	Elsnera	10	residential	2550	3,5	1920	2	III
199	Elsnera	12	residential	2640	3,5	1900	2	III
200	Feliksa	1	residential	2322	2,5	1910	2	III
201	Ks. Frenzla	2	residential	1912,5	2,5	1920	2	III
202	Ks. Frenzla	4	residential	1912,5	2,5	1920	2	III
203	Ks. Frenzla	6-8	residential	2250	2,5	1925	2	III
204	Ks. Frenzla	7	residential	5200	4	1900	2	III
205	Ks. Frenzla	17	residential	5184	3,5	1920	2	II
206	Ks. Frenzla	23	commercial or service	609	2	1923	2	II
207	Ks. Frenzla	25a/1	commercial or service	384	1	1920	2	II
208	Ks. Frenzla	25a	residential	1800	3,5	1926	2	II
209	Ks. Frenzla	25a/2	commercial or service	60	1	1920	2	II
210	Ks. Frenzla	42	public				2	II
211	Ks. Frenzla	42a	residential	784	2,5	1910	2	II
212	Ks. Frenzla	42e	commercial or service	45	1	1910	2	II
213	Ks. Frenzla	46	commercial or service	2400	1,5	1920	2	II
214	Ks. Frenzla	48	residential	4092	3,5	1900	2	II
215	Ks. Frenzla	56	residential	1728	3,5	1873	2	II
216	Ks. Frenzla	58	residential	1760	3	1900	2	II

No.	Address		Type of building or object	Capacity (m <sup>2</sup> )	Number of storeys	A year of construction	Resistance category	The impact category
	Name of street	Nr						
217	Ks. Frenzla	58a	commercial or service	90	1	1900	2	II
218	Ks. Frenzla	60	residential	4712,5	4,5	1900	2	II
219	Ks. Frenzla	62	residential	3762,5	4,5	1900	2	II
220	Ks. Frenzla	94	residential	1550	2	1930	2	II
221	Ks. Frenzla	94a	commercial or service	624	2	1930	2	II
222	Gołabka	1-1a	residential	2673	2	1900	2	III
223	Gołabka	3-3a	residential	2673	2,5	1920	2	III
224	Gołabka	4	residential	990	2	1900	2	III
225	Hutnicza	16a/1	commercial or service	69	2	1936	2	II
226	Jaskółcza	1	residential	1500	2	1930	2	II
227	Jaskółcza	5	residential	1400	2,5	1909	2	II
228	Jaskółcza	7	residential	1848	2,5	1910	2	II
229	Karbowska	9	residential	1235	2	1902	2	III
230	Karbowska	9/I	commercial or service	168	1	1900	2	III
231	Karbowska	9/II	commercial or service	127	1	1900	2	III
232	Karbowska	13a	commercial or service	54	1	1920	2	III
233	Karbowska	25	residential	864	2,5/3	1900	2	III
234	Karbowska	18	residential	1950	3	1925	2	III
235	Karbowska	18a	commercial or service	45	1	1900	2	III
236	Karbowska	22	residential	1500	2,5	1911	2	III
237	Matki Ewy	1	public	3636		1896	2	III
238	Nowa	15	residential	1520	3	1941	2	II
239	Opolska	8-14	residential	3825	3	1940	2	II
240	Plac Słoneczny	1a	public	12407	3,5	1905	2	II
241	Plac Słoneczny	2	residential	2652	4	1925	2	III
242	Plac Słoneczny	3	residential	2750	4	1900	2	II
243	Plac Słoneczny	7	residential	1008	2	1900	2	III
244	Plac Szpitalny	1	public	3744	2	1905	2	II
245	Plac Szpitalny	1	residential and service	4766	3,5	1955	2	II
246	Plac Szpitalny	1/2	residential and service	1322	2,5	1955	2	II
247	Plac Szpitalny	1/3	residential and service		3	1955	2	II
248	Plac Szpitalny	1c/3	commercial or service	346	1,5	1955	2	II
249	Plac Szpitalny	1/4	commercial or service	119	1	1955	5	II
250	Plac Szpitalny	3/3a	residential	3129,5	3,5	1968	2	II
251	Pogodna	2	residential	2772	3,5	1909	2	II
252	Pogodna	4	residential	2898	3,5	1905	2	II
253	Pogodna	4/1	commercial or service	1020	2	1905	2	II
254	Pogodna	4/2	commercial or service	367,5	1	1940	2	II
255	Pogodna	10	residential	2700	3,5	1910	2	II

No.	Address		Type of building or object	Capacity (m <sup>2</sup> )	Number of storeys	A year of construction	Resistance category	The impact category
	Name of street	Nr						
256	Pogodna	12	residential	2700	4	1930	2	II
257	Pogodna	12/1	commercial or service	495	1,5	1938	2	II
258	Pogodna	13	residential	2016	3,5	1913	2	II
259	Pogodna	18	residential	1800	2	1920	2	III
260	Pogodna	19	residential	1400	2	1870	2	III
261	Pogodna	20	residential	1800	2	1935	2	III
262	Pogodna	24	residential	370	1	1940	2	III
263	Przelotowa	6	residential	3619	3,5	1910	2	II
264	Przelotowa	8	residential	2240	3,5	1930	2	II
265	Przelotowa	8c	commercial or service	218	1	1930	2	II
266	Racjonalizatorów	3a	residential	1920	3,5		2	II
267	Racjonalizatorów	5	residential	2040	3,5	1945	2	II
268	Reptowska	1	residential	3600	3	1900	2	II
269	Reptowska	2	residential, commercial or service	1519	3,5	1900	2	II
270	Reptowska	2a	residential	1250	2,5	1920	2	II
271	Reptowska	3	residential	1088	2,5	1900	2	II
272	Reptowska	4	commercial or service	3874	4,5	1920	2	II
273	Reptowska	10	residential	720	1,5	1898	2	II
274	Reptowska	11	residential	1955	3,5	1927	2	II
275	Reptowska	11	commercial or service	58	1/1,5	1927	2	II
276	Reptowska	11a	residential	749	2	1890	2	II
277	Skośna	1/1	commercial or service	65	1	1900	2	III
278	Skośna	1a	residential	432	3	1910	2	III
279	Skośna	1b	residential	432	3	1910	2	III
280	Stara	5	residential	1782	2,5	1955	2	II
281	Stara	5a	commercial or service	375	1	1955	2	II
282	Stolarzowicka	6	residential	975	2,5	1860	2	II
283	Stolarzowicka	6a	residential	708	2,5	1910	2	II
284	Stolarzowicka	12	public	3699	2	1890	2	II
285	Stolarzowicka	13	public	12000		1910	2	II
286	Warszawska	8	residential	2299	3,5	1938	2	III
287	Warszawska	12-14	residential	2880	3	1930	2	III
288	Warszawska	16-18	residential	4500	3,5	1930	2	III
289	Warszawska	19	residential	1512	3,5	1920	2	III
290	Wolnego	13c	commercial or service	540	2	1900	2	II
291	Wolnego	16	residential	1825	3,5	1910	2	II
292	Wolnego	29a	commercial or service	408	1	1940	2	II
293	Wysoka	3	residential	1875	2,5	1925	2	III
294	Wysoka	7	residential	1875	2,5	1925	2	III
295	Zamkowa	2	commercial or service	1440	1,5	1940	2	II
296	Zamkowa	3	residential	5320	3	1909	2	II

No.	Address		Type of building or object	Capacity (m <sup>2</sup> )	Number of storeys	A year of construction	Resistance category	The impact category
	Name of street	Nr						
297	Zamkowa	3a	commercial or service	240	2	1909	2	II
298	Zamkowa	24	residential	384	1,5	1900	2	III
299	Zamkowa	24a	residential	1683	2,5	1900	2	III
300	Zjednoczenia	2	residential	1792,5	2,5	1900	2	II
301	Zjednoczenia	3	residential	1112	2,5	1900	2	II
302	Zjednoczenia	5	residential	2376	4	1920	2	II
303	Alberta	1	residential	304	1,5	1900	3	III
304	Alberta	2	residential	1147	2,5	1939	3	III
305	Alberta	4/1	commercial or service	144	1	1910	3	III
306	Andersa	2b	commercial or service	100	1	1920	3	III
307	Asnyka	2	residential	1237,5	2,5	1940	3	III
308	Asnyka	2a	commercial or service	90	1	1940	3	III
309	Asnyka	4	residential	1500	2,5	1940	3	III
310	Asnyka	6	residential	1680	2,5	1940	3	III
311	Bończyka	11/2	commercial or service	200	2	1900	3	III
312	Dolna	2	commercial or service	2843,5	2,5	1940	3	III
313	Drobczyka	6	residential	1512	2,5	1940	3	III
314	Drobczyka	3b	residential	1575	1,5	2003	3	III
315	Drobczyka	4	residential	693	2,5	1900	3	III
316	Drobczyka	9	residential	800	2,5	1940	3	III
317	Drobczyka	10	residential	1152	2	1920	3	III
318	Drobczyka	13	residential	1250	2,5	1938	3	III
319	Drobczyka	13a	commercial or service	60	1	1938	3	III
320	Drobczyka	15a	commercial or service	162	1	1940	3	III
321	Drobczyka	17	residential	1080	2,5	1938	3	III
322	Drobczyka	17a	commercial or service	127	1	1938	3	III
323	Drobczyka	18	residential	552	1,5	2004	3	III
324	Drobczyka	19	residential	1694	2	1978	3	III
325	Drobczyka	19a	commercial or service	84	1	1978	3	III
326	Drobczyka	21	residential	1495	2,5	1936	3	III
327	Drobczyka	29	residential	360	2,5	1930	3	III
328	Elsnera	5/1	commercial or service	192	2,5	1910	3	III
329	Elsnera	7/1	commercial or service	87,5	1	1910	3	III
330	Elsnera	8/1	commercial or service	147	2	1910	3	III
331	Elsnera	10/1	commercial or service	120	2	1910	3	III
332	Elsnera	10/2	commercial or service	60	1	1910	3	III
333	Feliksa	1/1	commercial or service	2890	2	1910	3	III

No.	Address		Type of building or object	Capacity (m <sup>2</sup> )	Number of storeys	A year of construction	Resistance category	The impact category
	Name of street	Nr						
334	Feliksa	1/2	commercial or service	300	1	1910	3	III
335	Feliksa	5	residential	2373	4	1920	3	III
336	Feliksa	6	residential	864	2,5	1920	3	III
337	Feliksa	8	residential	665	2	1930	3	III
338	Feliksa	8a	commercial or service	390	2	1900	3	III
339	Ks. Frenzla	9	residential	2040	4	1900	3	III
340	Ks. Frenzla	9/1	commercial or service	280	2	1940	3	III
341	Gołębka	2	residential	1380	2,5	1920	3	III
342	Gołębka	6	residential	920	2,5	1936	3	III
343	Gołębka	6	commercial or service	105	1	1900	3	III
344	Gołębka	6ab	commercial or service	162	1	1980	3	III
345	Hutnicza	5	residential	3888	4	1932	3	III
346	Hutnicza	7	residential	3888	4	1930	3	III
347	Hutnicza	9	commercial or service	4076	3	2007	3	III
348	Hutnicza	26	residential	1600	2,5	1980	3	III
349	Hutnicza	26/1	commercial or service	920	1	1998	3	III
350	Karbowska	13	residential	1680	3,5	1920	3	III
351	Karbowska	17a	commercial or service	416	1	1979	3	III
352	Karbowska	24	residential	945	2,5	1938	3	III
353	Karbowska	26	residential	945	2,5	1920	3	III
354	Ogrodowa	4	residential	1690,5	2,5	1920	3	III
355	Plac Słoneczny	6	residential	1600	3,5	1910	3	III
356	Skośna	1	residential	1056	4	1940	3	III
357	Warszawska	11	residential	1020	2,5	1974	3	III
358	Warszawska	13	residential	966	3,5	1930	3	III
359	Warszawska	19a	commercial or service	147	1	1920	3	III
360	Warszawska	21	residential	1980	3,5	1930	3	III
361	Warszawska	21a	commercial or service	48	1	1930	3	III
362	Warszawska	21b	commercial or service	252	1	1930	3	III
363	Warszawska	22	residential	840	2,5	1920	3	III
364	Warszawska	24	residential	1200	3	1910	3	III
365	Warszawska	24a	commercial or service	45	1	1910	3	III
366	Warszawska	30	residential	1305	3,5	1910	3	III
367	Wolnego	3	residential	939	2	1903	3	III
368	Wolnego	3a	residential	550	2,5	1903	3	III
369	Wysoka	1	residential	1912,5	2,5	1920	3	III
370	Zamkowa	23	residential	1710	2,5	1905	3	III
371	Zamkowa	23a	commercial or service	195	1	1900	3	III
372	Zamkowa	24a	residential	372	1,5	1900	3	III

Source: www.bytom.pl

**Table 22. Index of buildings and technical infrastructure with the resistance category equal or lower than influences of coal mining. Company: Kompania Węglowa, Branch: KWK "Bobrek-Centrum", Mining Area: Centrum**

No.	Address		Type of building or object	Capacity (m <sup>2</sup> )	Number of stories	A year of construction	The resistance category	The impact category
1	Al. Legionów	2	public	14456	3	1908	1	I
2	Al. Legionów	6	public	24161	4	1913	1	I
3	Al. Legionów	10/3	public	47336	4 i 1	1911	1	I
4	Al. Legionów	10/12	public	10285	3	1911	1	I
5	Al. Legionów	10/5	public	10382	3	1911	1	I
6	Al. Legionów	5-15	residential	9318	3	1920	1	I
7	Al. Legionów	37-39	residential	7350	4,5	1910	1	I
8	Al. Legionów	45	residential	3118	4	1920	1	I
9	Al. Legionów	47	residential	3118	4	1920	1	I
10	Al. Legionów	49	public		4		1	I
11	Axentowicza	7	residential	5040	4	1900	1	I
12	Axentowicza	11	residential	4479	5	1900	1	I
13	Chełmońskiego	2-14	residential	16536	3,5	1926do36	1	I
14	Chełmońskiego	15-25	residential	20250	4	1930	1	I
15	Chełmońskiego	18	residential	3552	1 i 2,7	1937	1	I
16	Chełmońskiego	18/1	public	30150	1	1931	1	I
17	Chełmońskiego	5/1	industrial and commercial or service	840	1	1960	1	I
18	Chrobrego	32	residential	5608	5	1900	1	I
19	Chrobrego	28	residential	11158	5	1900	1	I
20	Chrobrego	26	residential	6766	5	1900	1	I
21	Chrobrego	24a	residential	4320	4,5	1910	1	I
22	Chrobrego	24	residential	7440	4,5	1910	1	I
23	Drzymały	5	residential	4875	4,5	1915	1	I
24	Drzymały	2	residential	5457	4,5	1910	1	I
25	Drzymały	9	residential	7650	5,5	1915	1	I
26	Dworska	6	industrial and commercial or service	1987	1,5	1940	2	II
27	Dworska	6/1	industrial and commercial or service	848	1	1940	2	II
28	Dworska	6/2	industrial and commercial or service	11563	2	1940	1	II
29	Dworska	5a/2	industrial and commercial or service	1102	1	1971	2	II
30	Dworska	5D	residential	140	2	1932	2	II
31	Dworska	5d/1	industrial and commercial or service	138	1	1932	1	II
32	Dworska	7	industrial and commercial or service	1496	2,5	1927	2	II
33	Dworska	9	public	1056	2,5	1900	2	II

No.	Address		Type of building or object	Capacity (m <sup>2</sup> )	Number of stories	A year of construction	The resistance category	The impact category
34	Dworska	15	industrial and commercial or service	1200	1	1960	2	II
35	Dworska	15B	industrial and commercial or service	430	1	1910	2	II
36	Fałata	10-10b	residential	17946	5	1920	1	I
37	Fałata	16	residential	4285	5	1920	1	I
38	Fałata	16a -16d	residential	13079	5	1940	1	I
39	Fałata	20 - 20a	residential	6160	4	1920	1	I
40	Grottgera	7	residential	3736	4,5	1905	1	I
41	Jaworowa	5,7	residential	2362	2,5	1939	1	I
42	Jaworowa	15	residential	1330	2,5	1939	1	I
43	Kędzierzyńska	7-9	residential	2016	2	1936	1	I
44	Kraszewskiego	1	residential	7210	4,5	1919	1	I
45	Kraszewskiego	5	residential	3770	4	1930	1	I
46	Krucza	17	residential	784	2,5	1890	1	I
47	Kruszcowa	2	residential	2300	3	1940	1	I
48	Kruszcowa	4/5	service	936	1,5	1910	1	I
49	Kruszcowa	4/5/1	service	3040	1,5	1910	1	II
50	Kwiatowa	1	residential	780	2	1900	2	II
51	Kwiatowa	2	vacant house	94	1	1978	1	II
52	Kwiatowa	3/1	residential	1359	2,5	1920	2	II
53	Kwiatowa	5	vacant house	185	1	1933	1	II
54	Kwiatowa	6	vacant house	165	1	1932	1	II
55	Kwiatowa	10	residential	539	1	1933	2	II
56	Kwiatowa	10a	commercial or service	100	1	1933	2	II
57	Kwiatowa	10b	commercial or service	45	1	1933	2	II
58	Kwiatowa	12	vacant house	200	1	1932	1	II
59	Kwiatowa	16	residential	765	1	1933	2	II
60	Kwiatowa	17	residential	806	1	1933	2	II
61	Kwiatowa	23	residential	420	2	1938	2	II
62	Kwiatowa	23b	commercial or service	69	1	1940	2	II
63	Kwiatowa	25	residential	2513	2	1938	2	II
64	Kwiatowa	27	residential	1120	2	1933	2	II
65	Kwiatowa	27a	commercial or service	60	1	1933	2	II
66	Kwiatowa	27b	commercial or service	36	1	1933	2	II
67	Ligonia	2	residential	3264	3	1920	1	I
68	Ligonia	2/1	public	17760	1	1936	1	I
69	Mickiewicza	9	residential	3036	3,5	1907	1	I
70	Mickiewicza	10	residential	7784	4	1905	1	I
71	Mickiewicza	13	residential	7296	4,5	1912	1	I
72	Mickiewicza	15	residential	4879	5	1912	1	I
73	Mickiewicza	17	residential	5974	4,5	1905	1	I
74	Mickiewicza	23	residential	7134	4,5	1910	1	I
75	Mickiewicza	28	residential	7995	5	1905	1	I
76	Mickiewicza	33	residential	8440	5,5	1925	1	I
77	Mickiewicza	35-39	residential	7638	4	1910	1	I

No.	Address		Type of building or object	Capacity (m <sup>2</sup> )	Number of stories	A year of construction	The resistance category	The impact category
78	Mickiewiczza	75	residential	185	1	1932	2	II
79	Mickiewiczza	77	residential	252	1	1933	2	II
80	Mickiewiczza	52	industrial and commercial or service	344	1	1975	2	II
81	Mickiewiczza	52	public	810	1	1965	2	II
82	Mickiewiczza	52	public	1254	1	1965	2	II
83	Mickiewiczza	52	public	1548	1	1965	2	II
84	Mickiewiczza	52	industrial and commercial or service	990	1	1965	2	II
85	Mickiewiczza	52	industrial and commercial or service	1015	1	1965	1	II
86	Mickiewiczza	54	industrial and commercial or service	968	1	1970	1	II
87	Mickiewiczza	56	industrial and commercial or service	758	1	1968	2	II
88	Mickiewiczza	56	industrial and commercial or service	886	1	1968	2	II
89	Mickiewiczza	56	public	215	1	1970	2	II
90	Mickiewiczza	56	industrial and commercial or service	541	1	1970	1	II
91	Mickiewiczza	60	industrial and commercial or service	2079	1	1970	1	II
92	Morcinka	1	residential	7360	5	1900	1	I
93	Nawrota	5	residential	6375	5,5	1915	1	I
94	Nawrota	11	residential	7607	4,5	1910	1	I
95	Nawrota	13	residential	5460	4,5	1920	1	I
96	Nawrota	16	residential	7706	5	1915	1	I
97	Nawrota	17	residential	1701	4	1930	1	I
98	Nawrota	20	residential	3840	4	1930	1	I
99	Nawrota	22	residential	4420	4	1915	1	I
100	Nawrota	34-38	residential	10200	5	1930	1	I
101	Odrzańska	2A	garages	600	1	1973	2	II
102	Odrzańska	3	garages	608	1	1973	2	II
103	Odrzańska	4	garages	616	1	1973	2	II
104	Odrzańska	5	garages	690	1	1973	2	II
105	Odrzańska	6	garages	817	1	1973	2	II
106	Odrzańska	7	garages	858	1	1973	2	II
107	Odrzańska	8	garages	886	1	1973	2	II
108	Odrzańska	9	garages	483	1	1973	2	II
109	Odrzańska	11	garages	437	1	1973	2	II
110	Orląt Lwowskich	2	residential	4901	4	1900	1	I
111	Orląt Lwowskich	4	residential	6705	5	1906	1	I



No.	Address		Type of building or object	Capacity (m <sup>2</sup> )	Number of stories	A year of construction	The resistance category	The impact category
112	Orląt Lwowskich	5A	residential	3584	4,5	1905	1	I
113	Orląt Lwowskich	7A	residential	5760	5	1907	1	I
114	Orląt Lwowskich	7A/12	industrial and commercial or service	1577	2,5	1905	1	I
115	Orląt Lwowskich	11	residential	4536	4	1900	1	I
116	Orląt Lwowskich	17	residential	3407	4	1910	1	I
117	Orląt Lwowskich	21	residential	3407	4	1910	1	I
118	Oświęcimska	1	residential	6582	4,5	1900	1	I
119	Oświęcimska	3-3a	residential	11700	4,5	1900	1	I
120	Oświęcimska	7	residential	5984	4,5	1900	1	I
121	Oświęcimska	10	residential	4045	4,5	1907	1	I
122	Oświęcimska	19	residential	12726	3,5		1	I
123	Oświęcimska	20	residential	7260	4,5	1925	1	I
124	Oświęcimska	33	industrial and commercial or service	19344	4	1913	2	II
125	Oświęcimska	33	industrial and commercial or service	5969	3	1946	2	II
126	Oświęcimska	33	industrial and commercial or service	4646	4	1913	1	I
127	Oświęcimska	33	industrial and commercial or service	6345	3	1913	1	I
128	Oświęcimska	33	industrial and commercial or service	8710	1	1913	1	II
129	Oświęcimska	33	industrial and commercial or service	2104	1	1913	2	II
130	Oświęcimska	33	industrial and commercial or service	1895	1	1913	1	I
131	Oświęcimska	33	industrial and commercial or service	2799	1	1955	2	II
132	Piekarska	41	public	1275	1	1915	1	I
133	Piekarska	42	residential	5239	4,5	1923	1	I
134	Piekarska	54	residential	2340	3,5	1920	1	I
135	Piekarska	57	residential	3292	4	1910	1	I
136	Piekarska	59	residential	6900	4	1900	1	I
137	Piekarska	59/2	residential	1801	2	1900	1	I
138	Piekarska	72	residential	824	2	1900	1	I
139	Piekarska	78	residential	3666	4	1900	1	I
140	Piekarska	77	residential	10350	4,5	1900	1	I
141	Piekarska	79	residential	2317	3	1880	1	I
142	Piekarska	90-92	residential	7216	4/4	1900	0	I

No.	Address		Type of building or object	Capacity (m <sup>2</sup> )	Number of stories	A year of construction	The resistance category	The impact category
143	Piekarska	97	residential	5385	4	1920	1	I
144	Piłsudskiego	1-1a	residential	5456	4	1910	1	I
145	Piłsudskiego	5	residential	5447	5	1910	1	I
146	Piłsudskiego	7	residential	5151	5,5	1915	1	I
147	Piłsudskiego	9	residential	2366	3	1910	1	I
148	Pl. Słowiański	1,2	residential	11088	4,5	1900	1	I
149	Pl. Słowiański	3,4	residential	11592	5/5		1	I
150	Pl. Słowiański	8	residential	6732	5,5	1900	1	I
151	Pl. Słowiański	9	residential	7038	5,5	1900	1	I
152	Poswtańców Śląskich	1	residential	3635	4	1920	1	I
153	Poswtańców Śląskich	25-27	residential	9072	4	1938	1	I
154	Poswtańców Śląskich	10	public	43350	2,3,4	1910	1	I
155	Powstańców Warszawskich	60	residential	5460	4	1910	1	I
156	Powstańców Warszawskich	62	residential	9198	4	1910	1	I
157	Północna	2	residential	824	2	1938	2	II
158	Północna	4	residential	488	2	1933	2	II
159	Północna	10	residential	823	2	1933	2	II
160	Północna	12-14	residential	1517	2	1933	2	II
161	Północna	17	residential	488	2	1939	2	II
162	Północna	30b	commercial or service	144	1	1940	2	II
163	Północna	52a	commercial or service	144	1	1933	2	II
164	Północna	74i	service	2720	3	1970	2	II
165	Północna	74/7	service		2	1970	2	II
166	Północna	74/6	service		1	1970	2	II
167	Północna	18	residential	468	2	1933	2	II
168	Północna	19	residential	468	2	1933	2	II
169	Północna	20	residential	468	2	1933	2	II
170	Północna	28	residential	468	2	1933	2	II
171	Północna	29	residential	1277	2	2004	3	III
172	Północna	30	residential	468	2	1933	2	II
173	Północna	32	residential	468	2	1933	2	II
174	Północna	36	residential	468	2	1933	2	II
175	Północna	38	residential	468	2	1933	2	II
176	Północna	40	residential	468	2	1932	2	II
177	Północna	42	residential	398	2	1933	2	II
178	Północna	44	residential	398	2	1933	2	II
179	Północna	46	residential	546	2	1933	2	II
180	Północna	48	residential	231	2	1933	2	II
181	Północna	50	residential	488	2	1933	2	II
182	Północna	52	residential	462	2	1933	2	II
183	Północna	56	residential, vacant house		2	1933	1	II
184	Północna	58	residential	546	2	1933	2	II
185	Północna	60	residential	420	1,5	1933	2	II
186	Północna	62	residential	931	2	1933	2	II

No.	Address		Type of building or object	Capacity (m <sup>2</sup> )	Number of stories	A year of construction	The resistance category	The impact category
187	Północna	62a	commercial or service	160	1	1933	2	II
188	Północna	70	industrial and commercial or service	2170	1,5	1982	2	II
189	Północna	70	industrial and commercial or service	1950	1,5	1981	2	II
190	Północna	70	industrial and commercial or service	918	1	1981	2	II
191	Północna	70	industrial and commercial or service	918	1i2	1981	2	II
192	Północna	70	industrial and commercial or service	918	1	1981	2	II
193	Prusa	18	residential	3860	4,5	1900	1	I
194	Prusa	20	residential	6240	5	1900	1	I
195	Prusa	26	residential	13688	4,5	1900	1	I
196	Prusa	28	residential	9758	4,5	1900	1	I
197	Prusa	30	residential	6463	5	1900	1	I
198	Prusa	32	residential	6804	4	1900	1	I
199	Prusa	34	residential	12960	5	1930	1	I
200	Prusa	34	residential	9162	5	1900	1	I
201	Prusa	36	residential	7038	5	1900	1	I
202	Prusa	36	residential	4400	6	1911	1	I
203	Słoneczna	3	residential	231	2	1933	2	II
204	Słoneczna	5	residential	823	2	1933	2	II
205	Słoneczna	7	residential	231	2	1933	2	II
206	Słoneczna	9	residential	468	2	1933	2	II
207	Słoneczna	10-12	residential	1648	2	1933	2	III
208	Słoneczna	10-12	commercial or service	653	1	1940	3	III
209	Słoneczna	11	residential	824	2	1933	2	II
210	Słoneczna	13	residential	824	2	1933	2	II
211	Słoneczna	14	residential	420	2	1933	2	III
212	Słoneczna	14/1	commercial or service	424	1	1933	3	III
213	Słoneczna	16	residential	468	2	1933	2	III
214	Słoneczna	16a	commercial or service	100	1	1933	3	III
215	Słoneczna	18	residential	231	2	1933	2	III
216	Słoneczna	18a	commercial or service	120	1	1933	3	III
217	Słoneczna	20	residential	824	2	1933	1	III
218	Słoneczna	20a	residential	1200	3	2000	2	III
219	Słoneczna	24	residential	420	2	1933	2	III
220	Słoneczna	23-25	residential	1648	2	1933	2	III
221	Słoneczna	23-25	commercial or service	219	1	1940	3	III
222	Słoneczna	27	residential	1190	2,5	1933	2	III

No.	Address		Type of building or object	Capacity (m <sup>2</sup> )	Number of stories	A year of construction	The resistance category	The impact category
223	Słoneczna	27a	commercial or service	90	1	1940	3	III
224	Słoneczna	27b	commercial or service	240	2	1940	3	III
225	Słoneczna	29	residential	469	2	1933	2	III
226	Słoneczna	31-33	vacant house	561	1,3	1934	1	III
227	Słoneczna	35	residential	1552	2	2002	3	III
228	Smolenia	9	residential	11284	4,5	1900	1	I
229	Stawowa	7	residential	4116	4	1920	1	I
230	Strzelców Bytomskich	18	residential	6375	5,5	1900	1	I
231	Strzelców Bytomskich	23	residential	5346	4	1900	1	I
232	Strzelców Bytomskich	29	residential	4784	5	1910	1	I
233	Strzelców Bytomskich	30b	residential	6736	5	1920	1	I
234	Strzelców Bytomskich	31a	residential	1766	3	1910	1	I
235	Strzelców Bytomskich	31b	residential	1766	3	1910	1	I
236	Strzelców Bytomskich	31c	residential	1766	3	1910	1	I
237	Strzelców Bytomskich	31d	residential	2464	3	1910	1	I
238	Towarzyska	5	residential	468	2	1933	2	II
239	Towarzyska	6	residential	488	2	1933	2	II
240	Towarzyska	7	residential	468	2	1933	2	II
241	Towarzyska	8	residential	488	2	1933	2	II
242	Towarzyska	10	residential	488	2	1933	2	II
243	Towarzyska	12	residential	348	2	1933	2	II
244	Towarzyska	14	residential	488	2	1933	2	II
245	Towarzyska	16	residential	468	2	1933	2	II
246	Towarzyska	16a	commercial or service	144	1	1933	2	II
247	Wesoła	14	residential	1092	2,5		1	I
248	Witczaka	115	residential	5184	3,5	1895	1	I
249	Witczaka	148	residential	4980	5	1900	1	I
250	Woźniaka	1/1a	residential	1296	2,5	1930	1	I
251	Woźniaka	36-36b	residential	6058	3,5	1930	1	I
252	Woźniaka	42-42a	residential	3024	3		1	I
253	Woźniaka	53	residential	7439	40	1900	1	I
254	Woźniaka	55	residential	4631	3,5	1915	1	I
255	Woźniaka	61	residential	5321	4,5	1910	1	I
256	Woźniaka	73	residential	2834	4	1910	1	I
257	Woźniaka	77	residential	3080	4	1915	1	I
258	Woźniaka	79	residential	3080	4	1915	1	I
259	Zielona	3	residential	412	1,5	2002	2	II
260	Zielona	4	residential	714	2	1900	2	II
261	Zielona	9	residential	231	2	1933	2	II
262	Zielona	11	residential	468	2	1933	2	II
263	Zielona	13	residential	468	2	1932	2	II
264	Zielona	14	residential	478	2	1890	2	II

No.	Address		Type of building or object	Capacity (m <sup>2</sup> )	Number of stories	A year of construction	The resistance category	The impact category
265	Zielona	15	residential	468	2	1933	2	III
266	Zielona	15a	commercial or service	120	1	1933	2	III
267	Zielona	15b	commercial or service	120	1	2000	3	III
268	Zielona	17	residential	231	2	1933	2	III
269	Zielona	17a	commercial or service	100	1	1933	3	III
270	Zielona	17b	commercial or service	120	1	1990	3	III
271	Zielona	19	residential	824	2	1933	2	III
272	Zielona	18-20	vacant house	541	1,3	1934	1	III
273	Zielona	21	residential	468	2	1930	2	III
274	Zielona	21a	service	400	1	1933	2	III
275	Zielona	21b	service	72	1	1950	2	III
276	Zielona	22	residential	824	2	1930	2	III
277	Zielona	22/1	commercial or service	250	1	1940	3	III
278	Zielona	23	residential	824	2	1930	2	III
279	Zielona	23/1	commercial or service	182	1	1940	3	III
280	Żeromskiego	12	residential	3206	3,5	1900	1	I
281	Żeromskiego	22	residential	3036	3	1900	1	I
282	Żeromskiego	7/1	public	14500	3 i 1	1910	1	I

Source: [www.bytom.pl](http://www.bytom.pl)



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