Designing a New Neighborhood by Retrofitting Szamoty
According to New Urbanism Placemaking Principles

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August 2012
Master thesis, 30 ECTS, Spring semester 2012
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Abstract

The problem of a rapidly growing population and demand to move to urban areas was only one of the reasons that caused the cities’ expansions. Beside this, in pursuit of a better life, many families found their future life in outer city edges which ends in suburban patterns. This confronted some un-intended consequences like dispersing population over suburban areas, climate changes, environmental issues, public and personal health, etc. The problems still exist and it is expecting to continue more in the next 50 years. The issues are calling for reconsiderations of the situation.

Looking back to the cities’ growth after the World War II, and the experience of “Urban Sprawl” phenomenon, makes it crucial to change the trend and study more on placemaking and better adaptive human environment, which was neglected at those years. The raise of new movements in urban designing was a respond to this miss-allocation of energy and human recourses. It was the time when movements of architects, urban designers, thinker and experts began to set out a number of principles for “placemaking” and better environments for human places. They are continuing to study and consult with the developers and prevent the opportunists, in order to not experience the same mistake as before.

New Urbanism is one of those movements which established its principles in order to increase its highly dense development of both the inner city’s abandoned lands and the outer suburban areas. Today, New Urbanism put their priority on supporting the development of current resources in urban areas instead. Its principles have become increasingly influential in the fields of planning, architecture, and public policy.

In Poland, Warsaw is also suffering from losing its population since suburban towns and municipalities have become competitor for growth rather than partners for the Capital City. In order to stop more dispersing population in suburban areas and reverse this trend back, new development plan has marked large amount of vacant land. The city economy has been growing rapidly for several years now, especially in the service sector; therefore shrinking manufacturing output of the city has left the city dotted with numerous degraded or obsolete industrial sites. According to new development plan, new strategies are going to implement on infrastructure investments on obsolete lands within the city’s districts.

After the de-industrialization in Poland – like many Eastern European countries- many old industrial parks was left abounded or underperformed. These lands are providing a great opportunity for creating new dense residential neighborhoods and communities to bring back those left population. The potential locations and existing infrastructures in industrial lands would make the project profitable for developers. For example one of Warsaw’s
development plans is to transforming former industrial and railway sites within the city, into dense residential are, thus locating residents closer their places of work.

“Szamoty” is an old underperforming industrial land, on west Warsaw’s agglomeration border close to suburban towns. According to upper-hand development plans, a new dense mix-used residential area is going to be built in Szamoty site. This thesis has chosen “Szamoty” for implementation of New Urbanism “Placemaking” principles in a new residential area. It is an opportunity to correct the mistakes of the past, and also prevent those for new developments, since we today are smarter in facing the problem of growth and since we better can estimate the future demands.

The aim of this project is to find spatial solution for problems of Szamoty, and do the placemaking by implementing urban design ingredients such as buildings’ forms, open public spaces and street into new spatial design proposal. The evaluation will show to some extend the proposal has respond to the stated problems. In the end, then project will be concluded and new questions will be raised.

**Keywords:**

Urban design, Spatial Planning, New Urbanism, Placemaking Principles, Re-development, Brownfield and Industrial lands, New Neighborhood, Szamoty, Ursus, Warsaw, Poland
Acknowledgment

This thesis has been achieved with the help of many people, which has supported me through my years in the Master of Urban Design program.

First and foremost, I would like to thank my tutor Thomas Hellquist, who has contributed to this project by giving me valuable advice and counseling, patiently. His enthusiasm has motivated me to engage in my work and I am very grateful to have gotten the opportunity to work in his supervision.

I would also like to express my appreciation to my teachers at Blekinge Tekniska Högskola; Gunnar Nyström and Abdellah Abarkand, who planted the seed of this project, and with their cognition, have enriched my knowledge in the urban design field.

I am glad to have got to know my polish classmates, who has helped me several times with introducing Warsaw from every urban aspect, and made the language barrier less pronounced.

Furthermore, my special thanks go to Nina, my beloved parents and sisters; I am ever more grateful for their love and encouragement that have been a great support throughout these months I did my project.
# Table of Contents

Abstract 3  
Introduction 5  

## Introduction 7

- Introduction 8  
- Aim of project 10  
- Research Question /Objectives 11  
- Methodology 12  
- The Concept of Placemaking 13  

## Part I 15

- 1.1. Brownfields 16  
- 1.2. Warsaw Development Plan 19  
- 1.3. Ursus District 24  
- 1.4. Szamoty 36  
- 1.5. Problem Statement 42  

## Part II 43

- 2.1. Main Retrofitting Strategy 44  
- 2.2. New Urbanism 46  
- 2.3. Placemaking Principles 49  
- 2.4. Summery 67  

## Part III 68

- 3.1. From Research to Design 69  
- 3.2. Design Proposal 70  
- 3.3. Evaluation 87  
- 3.4. Conclusion 90  
- 3.5. References 92
Introduction

Introduction to the problem
Research Question
Aim of project
Objectives
Methodology
The Concept of Placemaking
Introduction

Redevelopment of old abounded industrial lands, are a significant part of new placemaking tradition. The location of brownfield sites in cities makes them pivotal in shaping our urban future. With the financial and incentive policies, such sites offer a huge opportunity for urban designers to inject life into neglected urban and suburban areas. In a time of converging economic, social and environmental crises that have global consequences, the reformation of old industrial sites in downtowns or in suburban areas is a great opportunity for building more sustainable, long-lasting and better-performing communities throughout the world.

In Warsaw, industrial lands were spread throughout the city and gave it a very industrial character. There are a number of re-developed or still obsolete brownfields both in central districts or on Warsaw’s boundary were agglomeration is happening. This thesis explores “Szamoty” a brownfield at the edge of Warsaw: a brownfield with both industrial and suburban character. This is a consequence of the industrialization in Eastern European countries, which caused Warsaw to grow to the already existing industrial parks.

In contrast to old factories in closer proximity to downtown, the suburban locations of these sites, makes it hard to expect “gentrification” happens there, since it hard to be adapted for a livable places. “Creative class” and young people who seek low cost accommodation prefer to move to same situation closer to central areas with more access to facilities and services.

On the other hand, due to big size of these lands – Szamoty is almost 180 hectare- entrepreneurs in private sectors have mostly been reluctant to invest in dramatic functional changes, and have mostly preferred to re-use the existing infrastructures and facilities to invest in new smaller industries. This trend continued until authorities approved Warsaw’s new development plans.

Due to economic interests, governments put the priority on selective brownfields in more downtown proximities. (Dunham-Jones & Williamson, 2011) Consequently, in contrast to long term development plans, this led to un-intended ignorance to the suburban brownfields and those at the cities edges.

However, the problem of dispersing population of Warsaw to out of its boundaries and threat of agglomeration with west suburban towns, shift the attentions back to potential vacant lands within the city’s territory. (Bertaud, 2000) With this respect, new dense and mixed-use residential areas planned to be built in these lands to bring the population back to the city.

This plan besides increasing land values, led to increased taxes, and restricts-penalties for polluting industries that where still operating in a growing urban areas. Economically, production in those lands cost too much for factory owners - and forced them to stop their industries one by one.
The following scheme, is simply illustrating how retrofitting “Szamoty” brownfields can prevent more urban sprawl and Warsaw’s agglomeration; in contrast it could become a new potential center for which absorbs people back to new livable areas inside the city.

Figure 1 Retrofitting Szamoty at Warsaw’s edge and population moving

Today, “retrofitting brownfields” is a potential sustainable approach that offers opportunity to solve many suburban problems since it provides new land for essential facilities to enhance the quality of suburban life style. In its best situation, it is a unique opportunity for creating new community and neighborhoods considering the latest spatial planning and placemaking principles in relation to its surrounding residential areas. In other words, it is an opportunity for new centers of development of multicenter urban patterns.
Aim of project:

“Do the Placemaking”

1. According to principles.
2. By means of spatial and urban design ingredients

in Szamoty

As it is stated before, we have confronted many unintended consequences of suburbanization in our urban life. Today we want to avoid those mistakes when designing places for people. A good spatial design could prevent the experience of those mistakes in new developed areas.

This thesis neither presumes, nor claims that good spatial design, could reach placemaking goals alone. This concept could be a solution if other parameters such as financial support before and during the project, development process like cleaning and providing the site, and later district management performing in their best situation. In other words, while it follows placemaking principles, spatial forms, could provide a field for social, environmental and economical sustainability while it could never guarantee its continuity without having other related parameters’ promises.

The aim of this design is to provide this field by fulfilling the “Placemaking” concepts. In this thesis, urban design focuses on problem solving through the ingredients that comprise good urban forms such as squares, streets and buildings.

In short, this project aims to create “spaces” by urban design ingredients and provide living quality in “places” according to placemaking principles and mainly by means of spatial design.
**Research Question:**

*How Could Szamoty Site be Retrofitted According to New Urbanism Placemaking Principles?*

**Objectives:**

To conduct this research and answer this question, this study will explore in detail for three main terms of this question:

1. Upper hand plans and project site situation
2. Interpreting 10 New Urbanism principles to synthesizing with possibilities for Szamoty new spatial design
3. Implementation and illustration of new spatial design proposal which follows the New Urbanism placemaking principles

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1. **Project site**

At first step, Szamoty will be exploring by site observation, and study on documents and literatures, overview the previous development plan and discussion with a personnel in charge, in Ursus Administrative Office. Then, it needs to address the current problems and possible potentials to find out “what is the unique quality of Szamoty?” Or in other words:

*Why should “Szamoty” be retrofitted?*

2. **New Urbanism Principles**

Since there is not such a flexible principles or formula which fit-to-all size project, the role of urban design is to deal with various data and bring out the best solution for this project. Here the objective is to synthesizing these principles with site problems find out:

*How can Urban Design follow current “New Urbanism” theoretical framework regarding spatial retrofitting for the Szamoty?*

3. **Spatial Design**

After study on current frameworks, the conclusion of discussion must be illustrated in a new design proposal. It would propose solutions by means of spatial elements like streets, open spaces; buildings; within the placemaking principles of New Urbanism. In a very short note:

*What is the illustration of a new spatial and formal design for Szamoty?*
Methodology:

Since project aims to do the placemaking, it synthesizing principles which deal with “quality” of life; therefore the research method is based on qualitative approach.

Method: Compare existing principles of New Urbanism with triangulation of Observation, Discourse literature review and interview.

Observation: Explore Warsaw, Ursus district and Szamoty site in order to get better understanding from place.

Discourse review: Data and information for this specific Szamoty mainly based on official websites in polish, like Ursus Administrative office. Polish official articles, newspapers.

There is overview on New Urbanism movement and its placemaking principles. The interpretation of principles is according to the literatures focuses on this topic.

Interview: An oral conversation with Barbara Góryńska personnel in charge of constructions permission in Szamoty development in Ursus Administrator Office

Design: The Chapter of Design proposes a spatial design, in order to solve the problems which has stated before. It uses the drawing concept derived from the recommendations of the analyses and theory readings and follows the placemaking principles derived from the research process.
The Concept of Placemaking

After the World War II, the fast growth of the cities led to a phenomenon called “urban sprawl” that in fact originated from the “Garden Cities” movement in Europe. In United States, moving to the suburban area in order to escape from dirty and polluted industrial downtowns became mainly a desire; initially for upper social levels, and later for middle class families.

The physical separation from where people lived, to where they worked, shopped and frequently spent their recreational time; together with low housing density—which often drastically reduced population density relative to historical norms—, made automobiles indispensable for efficient transportation and contributed to the emergence of a culture of dependency in this new spatial planning. (Dunham-Jones & Williamson, 2011) Privacy of living in villas while it was surrounded by greenery, far from pollution became the American dream. In fact, induction of cheap cars to each family was a respond to this demand. With the advent of cheap automobiles and favorable government policies, attention began to shift away from cities, and towards ways of growth which was more focused on the needs of the cars. This was the time General Motors had to invest on expanding highway networks due to regulations on car selling. (Brown et al. 2009)

That trend went further while deep pocket developers scrutinized new land to build up new neighborhoods in extent of American life style, supported by highways for connection to downtowns. The frequent image of traffic jams in multi-lane highways at rush hours became everyday experience for American families. This new system of spatial development, with its rigorous separation of uses, became known as conventional suburban development or pejoratively as “urban sprawl”, and arose after World War II.

During many years suburban area was not suburbia as it used to be. Not only had lost it quality, but it also started to become problematic for the urban life. Problems like air-pollution; auto-dependence life style, families economic problem due to rise of fuel prices, physical and mental public and individual health problems like diabetes and depression, and changes in social life started to be shown.

Urban Design as a recognized discipline was a respond to these problematic challenges which happened to American cities in 1950s. These challenges which were emerging faster than industrialization caused new crises for cities. Urban design was born from modernism. It was a movement which was a conscious effort from architects and others discipline to change their design methods, which seemed to not be responsive to new economic, social and technological changes anymore. (Brown et al. 2009)

A number of activists and thinkers soon began to criticize the modernist spatial planning techniques which had being put into practice. Social philosopher and historian Lewis Mumford criticized the "anti-urban" development of post-war America. “The Death and Life of Great American Cities”, written by Jane Jacobs in the early 1960s, called for planners to reconsider the single-use housing projects, large car-dependent thoroughfares, and segregated commercial centers that unfortunately had become the "norm." (Wikipedia: New Urbanism)

Over the past 20 years, a “placemaking” tradition of urban design has emerged - a tradition rooted in large part from the works of urban design pioneers. Carmona (2010) says contemporary placemaking urban design, synthesizes two earlier traditions of designing urban place as “physical/aesthetic entities" and
“behavioral settings” which he called “hard city” for buildings and spaces, and “soft city” for people and activities.

In more recent year, Brown et al (2009) in their book: “Urban Design for an Urban Century: Placemaking for People” identify four convergent non-architectural movements, as foundations of “urban renaissance”, which had significant effects on urban designers work toward more “sustainable” designs.

Carmona (2010) put those four lines of thinking in this way: “
  1. Work of Richard Florida (2004) and the arguments he makes that vibrant, walkable neighborhood attract the creative classes;
  2. A parallel transformation in the fortunes of America’s down towns as demand for urban living has increased;
  3. An awareness of the growing obesity crisis in the USA (and elsewhere), which has been linked to the spread of car-dependent urbanism; and
  4. A growing interest in the potential of urban form to reduce the carbon foot-print of mankind. …”

Obviously, none of these four thought is emerged from Architecture or Urban Design disciplines. There were several published researches by all these movements which confirmed Jane Jacobs’s unforgettable attitude and became a new paradigm for new residential areas. Carmona believes that perhaps this is a new emerging tradition of thought and practice in urban design, which is a respond to quest for more sustainable development. (2010)

In this study, these new thoughts have a main ground for organizing the process for design proposal. The main goal in this project is to implementing these placemaking concepts into a potential site and illustrating how spatial elements can provide a place with higher quality of life.
PART I

Brownfields
Warsaw Development Plan
Ursus District
Szamoty
Problem Statement
1.1 Brownfields

The definitions of “brownfields” differ amongst governments. The Environmental Law Institute (ELI) describe the term as:

“An industrial or commercial property that remains abandoned or underutilized in part because of environmental contamination or the fear of such contamination”.

To be more precise: “Brownfields” refers to sites, or to activities of remediating and developing sites, that are idle, unused, or abandoned after former industrial or commercial use, and which exhibit a legacy of contamination of soil, groundwater, surface water, or streams. (Smith, 2008) Small brownfields also may be found in many older residential neighborhoods. For example, many dry cleaning establishments or gas stations produced high levels of subsurface contaminants during prior operations, and the land they occupy might sit idle as brownfields for decades.

In general, brownfield sites exist in a city’s or towns industrial section, on locations with abandoned factories or commercial buildings, or other previously polluting operations

Redevelopment in the World

United States

Recently, the activity of the Brownfield is being directed towards an urban renewal and regeneration and there is an ongoing private and public interest in redevelopment of former industrial, commercial and military sites. A strong national effort is being made in the United States to blend environmental cleanup, public health protection, and site reclamation, and to realize opportunities for economic development and community revitalization.

Land use controls are an important aspect of urban regeneration and renewal of Brownfields. Local and state governments are important actors in planning these developments, and in ensuring involvement of the communities in decision-making. Local government planning and economic development offices contribute substantially to the success in bringing Brownfield projects to fruition. (Smith, 2008)

Canada and Australia

Canada and Australia are examples of countries which currently continue to focus on those contaminated sites principally where the benefits of potential future economic activity outweigh the remediation costs. The private sector commonly identifies opportunities due to strong market forces, notably conversion of relatively inexpensive industrial land on foreshores into multi-unit residential developments, with high value water views. (Smith, 2008)

Asia

In Asia there is an increasingly active approach, evident in Hong Kong with respect to Brownfield planning, both to address sites that have a risk to the public health, and to leverage the value of Brownfields remediation in public infrastructure; like the Disneyland Theme park at Penny’s Bay. This coincides with an increase in coastal development in recent years. Brownfields sites, such as Kai Tak Airport, represent opportunity, with appropriate planning regulation and public inclusion, for the Hong Kong Special Administrative Region to secure additional land for development and to facilitate urban renewal through remediation of former industrial sites. (Hong Kong, 2007)

Europe

In Europe, the national approaches to Brownfields have been influenced by the scale and number of contaminated properties, as
well as by land availability, population density, historic preservation objectives and other governmental priorities. The U.K., Netherlands, and Germany are examples of countries which are prominent ‘recyclers’ of older industrial areas, have limited undeveloped land and with a strong desire to preserve their remaining green space. European countries have traditionally placed a high value on spatial planning, with local governments exercising strong planning and land use authorities. Brownfield sites have been addressed as part of an integrated planning and redevelopment framework. Large-scale planning policies that seek to harmonize land use and remediation requirements may enhance economic goals. (Smith, 2008)

Retrofitting in Poland

The process of de-industrialization has an ample impact on the transformation of urban structure in Poland. The collapse, downsizing, and restructuring of large factories resulted in the sudden creation of large “new urban territories” equipped with the urban infrastructure which now is accessible for alternative functions such as retail, business parks, housing shopping centers, and communication. Simply, larger under-utilized or extensively utilized areas of industrial plant have been released for other uses. As a result, the former industrial areas represent important territorial resources for perspective use. (Hamilton et al. 2005)

Łódź Manufaktura

Retrofitting the old industrial sites was one of the significant parts of post-industrial redevelopment planning in Poland. One of the most notable examples is “Łódź Manufaktura” which is not only famous in Łódź and Poland, but also in the rest of Europe. The center opened in 2006, after 6 years of renewing the former textile factory site at Izrael Poznanski in Łódź, 130 km far from Warsaw.

Since 1971 the whole complex with its adjacent palace, has been registered on the list of the most valuable industrial monuments of the city. But like many other factories in Poland, the 1980’s decade passes with a constant decrease in employment and production for the factories. In 1991 the ministry of finance declared the factory bankrupt, and was closed the following year. The negotiations between potential investors and public receivers started immediately. After studying the renewal and its propositions, the city council gave the construction
permission to the developer. Next, the mayor of Łódź won an election on a “No More shopping Centers” policy. During the construction of Manufaktura, local city attorneys did everything to delay the construction, but three years after its opening, it had become one of the main locations of Łódź.

Today, we can see the transformation from a dead industrial site, to Łódź Manufaktura, which is now a major attraction for the inhabitants of Łódź and also for tourist, with a wide range of entertainments that creates a vibrant life both in the day and in the night. It has become the pumping center of Łódź where culture and refined entertainment is combined with the world of trade and recreation.

The project unites the past with the present; it connects the historical look with a modern design, creating a new image. Undoubtedly the most outstanding concept was to retain and revitalize the old atmosphere of the site as the city’s major attraction. To keep the character and dominant architecture, the building exteriors was kept in red bricks.

An overhaul renovation throughout the buildings changed the functions dramatically. The interior has been designed in ways that reminds about the history, and brings together the old industrial architecture with a modern design.

Another successful policy was to create a mixture of functions in the new area. In 2008, Manufaktura won the prestigious ICSC Global Design Award for large mix-use retail. Current facilities in the site is a mixture of, entertainment and recreation, cinema, cultural complexes, museums, shops, hypermarkets, restaurants and cafes, hotels, and an automotive center in a area of more than 350,000 sq. meters.

The image was designed by the Virgile & Stone Company from the IMAGINATION Group in London in cooperation with an architectural firm from Lyon – Sud Architectes. This group of architects had temporarily moved to Lodz. They have spent some time observing the town — its habitants, the culture, events and learning the basics of polish language. They used their newly acquired experience to create the image of the Manufaktura that we can see today.

Manufaktura is a place where the newest construction solutions occur, and in addition to that it also uses the latest technologies in areas like energy supplies, lightning, and management control systems. The air conditioning, light spots and access points are controlled by systems specially designed for these purposes.

Although the latest technology solutions were used in this project, the original historical structure of the place has been preserved. The redevelopment did not change the façades, so the unique atmosphere of the place did not vanish.
1.2 Warsaw Development Plan

The Municipality of Warsaw and a number of suburban towns form the Warsaw metropolitan area. At present, the suburban towns are growing while Warsaw Municipality is losing population. This development trend disperses the metropolitan population over an area significantly larger than the one occupied by greater London but with only 1/3 of the population. (Bertaud, 2000) The implementation of the Municipal strategy will require reversing this trend. In particular it will be important that regulations and infrastructure investments allow the rapid redevelopment of obsolete land use in the central areas of the city and the development of about 100 square kilometers of land – developable but still vacant – located within the Municipal boundaries.

The land use regulations and the infrastructure investments proposed in the Municipal strategy will certainly contribute to reverse this trend. However, the success of the implementation of the municipal strategy depends on a number of immediate actions. First the actions that will affect the municipality but that have to be taken at a higher level of government and second are the actions that can be taken by the Municipality itself.

All strategies of Warsaw Development Plan in not subject of exploring by this thesis and it is mainly focuses on actions related to the spatial development. It will follow two of the fundamental elements of development (Warsaw Voice, 2006) which generated the reason of new spatial design of Szamoty in Ursus District.

Fundamental Elements of Development

Many aspects of the strategy have direct implication on the spatial development of the city. Warsaw lacks balance between its east and west banks. Directing activity aimed at filling in the gaps both in terms of overall development and basic infrastructure on the Praga site of the Vistula River (the east side), including creating a system of efficient transport links connecting the two part of the city, is a priority.

Related to this project, large parts of Warsaw are occupied by “urban Wasteland”. Such as temporary buildings, degraded land located in industrial areas that no longer serve their original purpose and land owned by the state railway company that is no longer needed for operation. More than 10 percent of the city is arable land, and over half of which is not used for agricultural purposes. (Warsaw Voice, 2006)

Disperse of population and obsolete lands

Obtaining the spatial integration of the population living within the metropolitan area of Warsaw will not be a trivial matter. The 2.5 million inhabitants of greater Warsaw are already spread on a radius of about 45 km. (Bertaud, 2000) for example the city has a large labor market. On the 850,000 people working there, a quarter of them live outside of Warsaw. It is estimated that Warsaw can absorb up to 3 million inhabitants, according to an analysis aimed at determining the city’s capacity vis-a-vis the standards and guidelines of sustainable development. (Warsaw Voice, 2006)

But the current trends are not encouraging: the population of the suburbs is growing, dispersing further away while the population of Warsaw’s municipality is decreasing in spite of large amount of vacant land already marked for development (about 110 km2 or about 23% of the total area of Warsaw’s municipality) and the under-utilization of many already developed areas. (Bertaud, 2000) The city economy has been growing rapidly for several years now, especially in the service sector; therefore shrinking manufacturing output of the city has left the city dotted with numerous degraded or obsolete industrial sites.
Figure 1.5 Warsaw - Municipal Boundary and Suburban Expansion

From Municipality of Warsaw – Urban Planning Office
According to The Spatial Development of Warsaw Metropolitan Area (Bertaud, 2000) a simplified version of the Municipal zoning map is shown on (Figure 1.6). The concept of the zoning map is clear and sound. Warsaw municipal territory is divided into 3 basic zones:

1. A zone where development is mostly market driven, (sub-zones C1 and MU), where mixed land use is allowed and with few restrictions on densities, except for a relatively generous height limitations. (48 % of the total municipal area)

2. A special activities area where obviously noxious activities are segregated (sub-zones TP and UT). (14% of the total municipal area)

3. A zone where market forces are seriously constrained to preserve historical, cultural and natural landmarks. (37% of total municipal area)

The proportions of the municipal area that are allocated to the three main zoning categories are consistent with the municipal objectives and their spatial implications. There are many industrial lands like Szamoty on the west boundaries of Warsaw (Figure 1.6) which gives a lot of opportunities to reverse the past demographic trend where the areas outside of the municipal boundaries were developing faster than the municipal area.

Warsaw’s urban structure

According to a study which has published in The Warsaw Voice (2006), in term of shaping Warsaw’s urban structure and its cityscape, changes should ensure the overall quality of the city’s urban development while protecting both its cultural and natural resources. Urban development should emphasize and highlight elements of the city that shape its unique image, as well as protect the overall quality of urban landscape.
The main elements shaping the urban structure and cityscape of Warsaw include:

- The Warsaw Escarpment, together with Vistula, its banks and other waterways.
- The city center, both east and west banks
- The district centers, local centers, multifunctional shopping centers
- The terrain comprising the Warsaw Nature System, forest and green areas.

The above elements tie and bind buildings and entire areas that possess substantial natural, cultural and functional value. From spatial perspective and based on the similarities between buildings and land development, the study (Voice of Warsaw, 2006) divided Warsaw into three basics, functional zones which have their own guidelines for development and change: The city center, the city and the suburban zone

Main areas for development and transformation

The overarching guidelines for managing the development and transformation of areas include the introduction of multifunctional urban structures to create jobs and wide range of services in residential areas, and single-function residential district. A good example is the district of Ursynow and Ken Avenue, where the avenue, which already has green spaces and small buildings in place is now being filled with big city residential complexes that include service outlet, offices, banks, cultural facilities, and so on. At the same time, these new buildings are placed in such a way as to screen out traffic noise for existing residential estates.

Another guiding principles focuses on retrofiting or transforming former industrial and railway sites into - not only parks, as has been the case so far in Sluzewiec Przemyslowy, but also- residential district , thus locating residents closer their places of work and in higher level fulfilling the strategy of bringing back the population inside the city boundaries and prevent more suburban growth. Such solutions have been proposed, for example, in “Ursus”, Sluzewiec and Wyczolki, Zoliborz Przemyslowy, the region of Kasprzaka and Wolska streets, the Czyste-Odolany area and the railway land along Jerozolimskie Avenue. (Voice of Warsaw, 2006)

In this case, the old industrial park of Służewiec close to the airport is an example of spatial redevelopment planning in Warsaw. Figure 1.7 -which have extracted from Google Earth software history archive-, is showing the process of “infill retrofits” during a period of 10 years. Although the project is trying to change the industrial character to a multi-functional area, office buildings still have the dominant ratio. Such projects may be expected to become increasingly attractive as a means of increasing the land supply in urban areas and alleviating pressures for development of natural areas.

Another important area in this policy is Szamoty in Ursus district on the west industrial belt of Warsaw. The development plan for Ursus called “Mikroprogram” has already approved and it is under process of developing. Szamoty is and old industrial land which has potential to place new dense residential area and population according to Warsaw Development Plan strategies. The following pages are introducing the Ursus district and Szamoty; their problems and opportunities of redevelopment.
Until 1994, there were 7 districts in Warsaw. Between 1994 and 2002, there were 11 more districts added to the city including Ursus district. Warsaw is a “powiat” (county), and is further divided into 18 boroughs, each one known as a “dzielnica” (districts), and each one with its own administrative body. Each of the boroughs includes several neighborhoods which have no legal or administrative status. (Wikipedia: Warsaw)

“Ursus” is one of 18 districts of Warsaw with a population of 51,220 people. It is located 10.5 km from center, on the west border of the city. It is the second smallest districts of Warsaw with an area of a 9.36 km². (GUS, 2011)
1.3 Ursus District

Ursus first originated as an independent satellite town of Warsaw at the end of the World War I, with plans to create an engineering-and-weapon industry after Poland regained its independency. The plan for the development of an industrial area and communication infrastructure in the western part of Warsaw at that time, included construction of a large engineering industry center on the site of three existing villages; Czechowice, Skorosze and Szamoty. Construction of the “Ursus” Mechanical Works began in 1923 next to Czechowice and the railway line running through it, first producing machinery for the army, and from the 1930s, armored vehicles and tanks. A process of urbanization, whereby the old individual houses in the area were replaced with new standardized structures, accompanied the developing industry.

After the end of World War II, the Mechanical Works in Ursus started civil production, becoming one of the largest producers of tractors in the world by the 1970s. Ursus, an independent town with its own rights between 1952 and 1977, was now one of the 18 districts of Warsaw. Ursus, with 7,000 inhabitants on the eve of the Second World War, was enlarged twice in the second half of 20th century.

After the transformation of the political system in 1989, along with industrial decline, a major part of the old plants was divided up and leased out to private tenants until 2003. Currently, developers are planning to restructure part of the land occupied by the old factories in the New Town of Ursus – a residential district with fully developed social facilities for 30,000 inhabitants. The district faces the challenge of finding a new identity between the continuation of its industrial past in a new incarnation, and a bedroom-city for those working in the central areas of Warsaw. (Culburb, 2012)

1.1 Ursus District Mikroprogram

Small district of Ursus has an area of 9.36 km², its population density of 5,472 persons/ km² puts it above the Warsaw average (3,219 persons/ km²). (GUS, 2011) 51,220 people live in the district and Ursus is constantly evolving. Currently, people below 40 years of age represent more than half of the Ursus population. The dynamic changes and the rapidly emerging modern housing estates make Ursus one of the fastest-growing districts. (Wolff, 2010)

After start of de-industrialization era in Poland and especially in Warsaw, the form of the suburban workplace is changing again. The lull in building and permitting activities, has allowed local planning offices to shift from a silent posture to deliberate planning towards a more sustainable direction. Today, developers and the municipality are converting outdated suburban offices and industrial parks into walkable, mix-use business district. Several cases are currently under construction in Ursus’ surrounding districts. For example a new project of “Green Italy” for residential communities in Wlochy – east of district- reflect the changing nature of the work in today’s postindustrial economy and the resident’s preferences.

Alongside with these policies, on 7 December 2007 the Monitoring Committee for the revitalization of the City of Warsaw issued a positive opinion over highly praised revitalization Mikroprogram of Ursus 2007-2013. The document was developed in the District Administrative Office in cooperation with external partners, i.e. Department of Real Estate Management. (Jab, 2009)

According to official website of Ursus District Administrative (2009), the redevelopment leads to improved quality of life for the local community, considering the security, decent housing, and education conditions, improve the environment and cultural
heritage, restoration of urban areas, growth in economic activities and re-making the social bonds. In more precise words, well-conducted process of revitalization should achieve the following objectives: (Jab, 2009)

- revival of socio-economic,
- obtain a spatial order,
- reduce the disparities in spatial planning area,
- improve the image and identity of local residents,
- initiating and strengthening cooperation between different actors in local social activities,
- social participation, and thus enable citizens to decision-making process,
- consulting support and formal social initiative groups for investments in revitalization,
- improving the standard of housing,
- increase in number of events organized in the area of impact of investments,
- increase community participation in cultural life

"... The task of revitalizing the City of Ursus Warsaw is a functional and aesthetic improvement of the urban space, thus creating an interesting place to live and spend leisure time and to create a mechanism to stimulate investment in new and existing buildings in the area revitalized, and the activation of the local community. It is assumed that in the long term revitalization of the districts will contribute to diffusion processes initiated in the neighboring areas, including areas outside Warsaw.

In addition, the revitalization is to raise the standard of living of the poorest people by improving their housing conditions, expand their range of housing targeted to people with disabilities and older workers, so called. "Prevention" of social protection against degradation of individuals and groups at risk of marginalization and exclusion, and "repair", ie the return of persons and groups of the unemployed into the labor market. The purpose of the action taken on revitalized area is also to provide District residents, particularly children, young people and the elderly, access to recreational facilities and care - education and thus to prevent marginalization and social exclusion. Important for living quarter will revitalize transport connections to the rest of the city, and actions to overcome communication difficulties arising from the division of the District railway line into two parts.

Mikroprogram Ursus Revitalization for the City of Warsaw is created to direct the transformation described above. Mikroprogram is a comprehensive document against degradation of the District designated areas and prevents the marginalization of certain social groups. It aims to establish long-term actions for the future by identifying investment projects and their correlation with local and regional policies and available funding sources. It is assumed that the projects to be implemented will affect the target to increase the economic and investment attractiveness of the area covered by Mikroprogram Revitalization..."

1.2 District Analysis

History

Urbanization plans for the western outskirts of Warsaw date back to the second half of the nineteenth century. In the 1930s, those plans were integrated into the plans for “Functional Warsaw”, resulting in the transformation of the neighboring villages and garden estate of Włochy - one of the west districts of Warsaw - (figure 1.8 and 1.9) into part of the western industrial belt of the Warsaw agglomeration with its own infrastructure. The transportation and urbanized zone was intended to integrate Pruszków (as well as other towns within the plan’s reach) (Figure 1.11) to the main city of Warsaw. The “Functional Warsaw” project proposition in the 1930s included the concept of a constellation of settlements in the western part of the city for 10,000-12,000 inhabitants, with their own social and educational infrastructure. The plan was supposed to become an urban framework for the reconstruction of Warsaw into a modern metropolis fulfilling the propositions put forward by the Athens Charter, whose co-creators were also the authors of its concept.

Those plans were only partly realized before the outbreak of the Second World War. In the case of the western zone of Ochota, a great railway infrastructure connecting the Warszawa Zachodnia railway station and the local railway was created. The scattered suburban settlements, i.e. the villages of Skoroszy and “Szamoty”, peripheral settlements based around the central plan (Czechowice) and suburban landowners’ settlements (Gołąbki) were unified. (Piotr Bujaś and Fundacja Bęc Zmiana, 2010)

One of the factors that had a great impact on the spatial development of the district was the linking of the main railway lines in that region in 1932. This created the division of the area into the residential estates that functions to this day.

Figure 1.9 Main road and railway network of district vicinity
Source: Culburb, 2012
During the post-war period, the expansion of the production plants was accompanied by dramatic population and social changes. Ursus was strongly connected with workers movements. In 1976, strikes began in the Mechanical Works as a protest against rising food prices. The strike also extended to the railway lines. Attempts were made to damage the rails in order to sever the rail links. The Communist militia used force to pacify the situation and many protesters and trade union leaders received heavy prison sentences. From there on, Ursus would be regularly visited by opposition and democracy activists as an important center of workers protests and anticommunist uprisings. (Historia Ursusa, 2006)

District Position

The areas surrounding the district are not uniform. Ursus is beginning to lose its status of a separate satellite settlement as it becomes swallowed by other settlements in the suburbanization of the western part of the Warsaw agglomeration. The reasons for this are the increasing populations and encroaching spatial development of outlying areas, including Ursus itself. Currently, the edge of the Niedźwiadek residential estate is merging with the well-developed Piastów estate and a large complex of worker’s allotments. The western belt of the city agglomeration, borders on the town of Pruszków. (Plotr Bujas and Fundacja Bęć Zmiana, 2010)

The borders of the district of Ursus are composed of a suburban landscape to the north and industrial infrastructure to the south, usable green areas between Ursus and Piastów to the west and a continuation of low-built residential estates and individual houses in the Włochy district to the east.

Connection to Center

Ursus is situated in the center of the western industrial belt of the Warsaw agglomeration, 10.5 km from the city as a crow flies. It takes about 15-30 minutes to reach the center and the numerous transport connections, together with the low rents is one reason that have made Ursus an attractive alternative to central districts.

Ursus is exceptionally well-placed in terms of access to transportation links thanks to the construction of national roads and the Warsaw ring road. (Figure 1.12) Apart from the railway line constituting part of the Western Warsaw Mainline, the Express City Railway Line runs through the centre of the district. In addition, the international E-30 west-west and E-67 north-south express roads
are under construction in the vicinity and junctions are being built to link the area with the ring road in Mory and the neighboring residential estate of Niedźwiadek. The southern edge of the district borders on the extension the main artery running westwards from central Warsaw. Ursus is also located near to and has direct transport links with the Frederic Chopin International Airport. (Piotr Bujas and Fundacja Bęć Zmiana, 2010)

From social aspects, there is a chance for a meaningful perspective in the improvement of access to transportation and the possibility of positive change through the activity of the growing younger population.

Current situation - Urban Space

The forms of buildings and structure of Szamoty site will be examine later in the next pages of this part, however, an observation of other parts of district shows varied residential estate architecture throughout the Ursus district. The Goląbki, Czechowice and the old part of the Skorosze estates are dominated by detached or semi-detached houses on small plots with gardens. They are situated on small roads creating quite a dense grid of

![Express Railway connect district to Warsaw center](image)

**Figure 1.13** Express Railway connect district to Warsaw center
residential quarters. Such type of development, deriving from the farming and landowning estates of Gółąbki dates from the period of the most rapid development of the area – from the 1920s to the 1960s. (Piotr Bujas and Fundacja Bęc Zmiana, 2010) (Figures 1-14 and 1.16) However, bigger scale building observed in the former town center in the style of town villas and detached tenement houses, mainly originating from the pre-war period.

Figure 1.14 Residential estate of Gółąbki

The second type is low-rise buildings and residential family homes forming an estate in Skorosze. Its construction commenced in the 1930s and continued throughout the 1950s with small freestanding buildings. Two heating plants, a nursery and a preschool were built here for local needs. In the 1980s, the street-grid structure of this part of the town was extended by the large-scale residential development in the eastern part of the Skorosze estate.

The residential estate of Niedźwiadek, constructed for the workers of the Tractor Factory (or Mechanical Works), was erected in accordance with the functionalist model with a central area of services situated amongst managed green areas. Some of the buildings, particularly those erected in the 1970s, are over 10-storeys high. (Figures 1-15 and 1.16) It was built between 1968-1978 to accommodate over 18,000 people and was the biggest social investment accompanying the extension of the factory in Ursus during that period. The settlement was transformed from one colonized by landowner mansions to one dominated by a huge socialist industry. (Piotr Bujas and Fundacja Bęc Zmiana, 2010)
Figure 1.16  Ursus District connection to the city center
Social Activity

Ursus does not have much to offer culturally. To a certain extent, this is due to its legacy of production-line workers and the effects of being on the periphery of central Warsaw. Most of its social activity is connected with the older inhabitants, for whom activities are organized by cultural centers and the Pensioners’ Centre in the Achera Park. The Arsus Cultural Centre has more on offer in terms of educational and cultural activity. The Centre houses an art gallery and the Youth Academy of Film and Drama. In general, the events are organized locally. The most important nonlocal cultural events are “The Community in Culture” National Polish Festival of National and Ethnic Minorities and the Gospel Music Festival. The inhabitants engage in the activities of non-governmental organizations, in particular where it concerns the future of the post-industrial land, campaigning for communal social space, representing and lobbying for the interests of various groups. (Piotr Bujas and Fundacja Bęc Zmiana, 2010)

Ursus has a sports club. Numerous tournaments and competitions are organized in the local stadium. Cultivating the memory of the workers’ protests and arrests in the 1970s is also an important element of local activity. Anniversary commemorations are organized. Younger members of the community, especially those working in the center, turn to the wider area of metropolitan Warsaw for entertainment.

People

The rapid development and integration of distinct districts into one uniform city structure resulted in dramatic changes in the population structure. The village and landowner settlements dominating at the beginning of the twentieth century, comprised of small entrepreneurs and employees of the railway and outlying industrial plants, were transformed in the second half of the twentieth century into a city connected exclusively with heavy industry.

Currently, as a result of an influx of new residents from outside Warsaw, the social profile has to be redefined. After the closure of the Tractor Factory, some of the former employees found employment in the small businesses operating in their area. The majority took up work beyond their place of residence. There has been a decrease in professional activity, while the number of people living off social benefits has risen and the number of people in permanent work has fallen. At the same time, men continue to constitute a majority among those with a job.

One of the most recent problems is the rise in crime levels, which were previously among the lowest in Warsaw. The services sector is poorly developed. Parallel to the phenomenon of changes in the labor market is the process of an ageing population and the rise of antagonism between groups of young migrant workers coming to Warsaw in search of work and the older ones who have dominated the city up until now.

An interesting demographic aspect is the constant growth in the birth rate since 2000, which is a natural result of young families settling there. Unfortunately, the number of those leaving Ursus is also high, which results in a low level of the population growth. People over 65 years old living in the older residential estates are the most rapidly growing group, now comprising over 6,000 people.

In the second half of the 2000s, that population group grew by almost 15%. At the same time, the percentage of those of a productive age in the entire district has been on the increase and reached 65% of the population in 2006. It is therefore a two-way
dynamic. There are an unusually high number of disabled people living in the district.

One of the greatest problems is the growing conflict with regard to the aspirations and lifestyle between the older generation (particularly the older workers) and that of the younger, influential inhabitants of the district. This also touches on school pupils and the inequality of access to education and career chances. (Piotr Bujas and Fundacja Bęc Zmiana, 2010)

Facilities’ Distribution

Obviously Ursus district suffers from lack of well developing spatial plan. Although district has developed so far, it is the only district that never had a single spatial development plan. One of the consequence problems is lack of balance in distribution of social facilities. For example this district doesn’t have any Health care center at all. Szamoty, with more than 17 hectares has this potential to become a central point of new facilities and make a balance in social needs of district.

Given this, new Spatial Plan should consider social facilities such as education and allocate places for schools, kindergartens and nurseries. Moreover, it should guarantee places for cultural activities, libraries, theatre, and safety places like police station, fire bridges. In next pages, this distribution is shown for a general understanding of situation, and in the end by an overall plan which synthesizing all maps, will show the two central public spaces in Ursus and one in Włochy. (Warsaw Today, 2012)

All the following maps have been derived out from one of the official websites of Capital City of Warsaw. The district will be just overview for distribution condition of social facilities such as healthcare, sport, cultural and safety, etc.
Figure 1.19 Distribution of Libraries and cultural houses

Figure 1.20 Distribution of sport facilities

Figure 1.21 Distribution of Children’s playgrounds

Figure 1.22 Distribution of Bank’s ATMs

All information from: http://www.mapa.um.warszawa.pl.
The squares and parks occupy an important position in the urban structure and so does the services strip of the former Mechanical Works running on the south-east corner of Szamoty site, where a school, the Social Welfare Centre, Cultural Centre, District Administrative office and numerous institutions occupying the administrative buildings of the Mechanical Works are located.

It is concentrated around the key transport hubs close to the railway station, the stops along the City Express Rail Line.

As it can be seen, although express railway has cut the district through its center and as a barrier between south and north part of district, even more, Szamoty area creates push more segregation from west to east, (Gołąbki and Wlochy Center). Different parts of Ursus District have developed over the years separately; therefore it is suffered from a lack of a single spatial plan which can unify whole the area. For example because of mono-functional industrial character of Szamoty, the main only notable public space in the district is situated to the south of the railway line.

This single zone developing has caused many inconveniences problems like access and lack of balance in social facilities distributions. It obviously, needs a spatial plan which can provides those facilities. For example, provide locations for schools, kindergartens and nurseries; and allocate places for health centers, security, and cultural center and sports facilities.

The residential estate which was created in the last few years is an example of intense heterogeneous and not well-structured urban development. Of course private investors have built nice residential areas with dense network of small streets, but completely ignored public open spaces, gathering squares, bicycle paths and sports facilities. Moreover, there is problem for access to the extensive urban street networks connecting different parts of the district with the rest of Warsaw. (Infrastruktura Społeczna, 2011)
The development of the city is inevitable regardless of whether the city and district authorities decide to systematize the process and approve an adopting development plan or not. However, the good side is because the development of Ursus has started to be in its process, there are many institutions and associations that informed their readiness to build these facilities in cooperation with the district administrative, which could end in its budget savings. For example, one university is interested in moving its headquarters to the industrial areas Szamoty in Ursus. All of these actions could have a chance to be implemented, if current development plan have an adoptable spatial plan.

In fact this is the main reason of choosing Szamoty for this project. The unique opportunity for new adoptable spatial plan which could compensate the current shortages and provides urban infrastructure such as educational, cultural, sports, health, communication and technical service which is needed for a normal life of the residents of the district. Industrial area of Szamoty has an area of almost 180 hectare, and is a real potential to be retrofitted and re-developed in order to respond to the current demands of Ursus. Next pages after brief comments on its history and character, the structure and current situation of site will be explored by observations.

Figure 1.24 New development of Skorosze in Ursus District. Source: Google Earth
1.4 Szamoty

The site of this project is called Szamoty and has its main reputation for the Ursus Tractor Factory. It has an area of almost 1,800,000 sq. meters, which is one fifth of the whole Ursus district. Szamoty has severely cut and disconnected by railway tracks from three sides. (Figure 1.27) It has a railway boundary from east with Wlochy district. From south it is segregated by express railway, meanwhile, it has a good inner district connection to west neighborhood.

It has been shown before; this site has a potential location, to be a new center for its surrounding residential areas. Moreover, considering arable lands in north of the site, infilling development in this district is become more crucial in order to prevent more urban expansion toward the green fields.

Ursus Tractor Factory (In Polish: Ursus zakłady mechaniczne)

In 1893 three engineers founded the Mechanical Works in the Ursus area near the Warsaw. Its economy had fluctuated during different periods such as economic recession in 1930’s, World War II, communist period and de-industrialization time. During the Second World War, there were expanding in manufacturing due to need of tanks and troops equipment. Later, as a result of modernization’s and development policies, Mechanical Work starts to expand more and establish new factory with bigger capacity of production. The expansion program in 1980’s, made the factory undergo an enormous debt which had led to decline in production in about almost one fourth of in production from 1980 to 1995. (Wikipedia, Ursus Factory, 2011) In order to optimize the fix cost of company and paying the debt, the owners start to restructure the company and establish a new limited and smaller one. (Zmiany w Ursusie)

Ursus tractor factory declared bankruptcy and due to their responsible to their stock holders, the bankruptcy administrator started to sell the lands to private sector and new tenants. In fact, the changing in industrial face of the site was started in 1990’s, despite of factory’s working meanwhile. Eventually, after five times attempt of oral auction the last and only remained land were sold. Currently, the major part of this area is in private hands and in operation of light industries and distributors warehouses. (Zmiany w Ursusie)
**Szamoty and its buildings’ conditions**

Observations show the area mainly houses industrial facilities and warehouses with a low to medium-low adverse impact on the environment. Buildings complex are mainly comprised of the brick, multiple-span beam production halls with skylights (characteristic of the machine industry) and the nearly 300m long production halls from the period of the post-war rebuilding of the complex. According to the archive pictures of Google Earth software, most of the halls in the southern and central parts of the former factory have already been demolished. (See figure 1.28)

On next page Figure 1.29 is showing the functions and condition of buildings in site. Many buildings have abandoned or demolished. Some of them have been renovated and reused in commercial purposes. Many offices like “Ursus Administrative Office” have occupied the old office buildings of Factory on south east side of site. Beside those, there is potential green area in its center which has never been constructed during its history and it was always used as open green space. The following maps will show the current situation and structure of site through its roads and components.

Post-industrial land remaining after the dismantling of some of the production beside assembly halls constitutes a substantial part of Szamoty. The huge, centrally located area with various enterprises - even though in small scales- still are operating within it and they are one of the main problems for the district’s spatial development.

A large-format shopping Centre has built on the eastern side of the main communication route, Traktorzystów st. at the beginning of the twenty-first century is an important establishment impacting community life in Ursus. Shopping in the boutiques and cafes has become a popular way of spending time among the district inhabitants, as well as those of other districts of Warsaw. It can also contribute to a potential gathering open space for future residents of Szamoty.
Figure 1.29  Current Function and Condition of buildings and open spaces in Szamoty
Current Development Plan

After passing study of Conditions and Directions of Regional Planning by the City of Warsaw Resolution on 19 October 2006, the next step was to prepare a local harmonious and sustainable development plan for post-industrial sites of the Szamoty. This new plan is based on the study of data and records adopted by the municipal authorities to develop, and have been shown to the public in November 2009, in District Administrative office which is located in Szamoty. (Plan Zagospodarowania, 2011)

The “Celtic Property Development” is in charge of developing the project. Their main activities are to purchase lands for new constructions, or purchasing existing properties and give them additional values by changing their function or increasing their standards to optimize the area. (Celtic, 2010) The company owns more than 50 hectares in the former factory of Ursus tractors which has been listed on the Polish stock exchange and as a part of a major European investment group. The company aims to construct offices and new residential area for 25,000 people (Different sources confirmed 21,000 and 22,500 population). Such use of the land is consistent with the study of the city and the project management plan, which was commissioned by municipality. (Wojtczuk, 2011)

However, observations show Szamoty site is in a slow progression in development. The slow process of attaining lands is one of the main reasons for the delay of this program. Obviously, it needs a comprehensive research on that why the land owners are reluctant to cooperate with the authorities; this would not be subject to study by this paper.

During a discussion with “Barbara Górzyńska” – personnel of Ursus Administrative Office- about possible obstacle in the process of the program, she mentioned two prominent problems. Firstly,

Figure 1.30 Szamoty Development plan – model

Szamoty was designed in a way which might resemble an individual isolated island without any contextual relation to its surroundings, neither had a good solution for its severe segregation from other neighborhoods.

Another missing point was the ignorance of the land owners’ economical benefits. There is no doubt that “sustainable economy” will be a continuous stable motivation to push forward
the redevelopment projects. According to Dunham-Jones & Williamson (2011) while the economy recession in these days has made governments reluctant to invest in costly developing programs compare to before, the private sector is the next momentum sources for projects. Therefore it is important for the design proposal to be incentive enough in order to meet the land owners’ demands; otherwise it might confront their lack of support and causing obstacles in the process. These obstacles have been experienced in the case of Szamoty which did not happen in Lodz Manufaktura project. The sizes and locations of the lots make the lands highly valuable, and the owners are able themselves to develop their lands by their own. According to Górzynska, this has caused conflicts between land owners who are in developmental disputes, and has lead to lawsuits and trials. It has been shown to be problematic to encourage some of these owners to sell their land; consequently, it has caused a slow process in first steps of the development.

Obviously there are many cons and pros over this proposal. Since this project is still in the marketing and has not experienced by people yet, it is hard to find their opinion and critics over it. Most of the documents which are about this project are in polish and they are on description of mostly advantages of project.
Advantages of retrofitting Szamoty

Like many old industrial park, extensive infrastructures is already present at the site. This reduces the costs of bringing facilities to the future settlements.

- Connections to other parts of the city, is by road traffic and two railway lines. Aside from this, it has a direct connection to the future ring-road of Warsaw, which is currently under development.
- Industrial lands are usually built on flat grounds. The same goes for Szamoty, which generally consists of flat and well-drained land.
- Observations show that the demolition of some of the buildings has started already, and this creates spaces for infill sites. Moreover, it would be a good opportunity for designing greeneries in different scales, from local parks to big wetlands, which would improve the water quality and soil contaminations.
- There are many buildings currently under construction, which are in good shape for renovation and being re-used for other functions. This would be a significance asset for the retrofitting strategies, which will be discussed later in chapter 2.
- Last but certainly not the least, Ursus district is a poor district with a noticeable population density compare to other city’s districts. It suffers from lack of facilities like school and education, and health clinics. From “social justice” perspectives, and due to the location of Szamoty, authorities would find it easier to bring facilities to the district, while serving other neighborhoods and making it accessible for everyone.
1.5 Problems Statement

**Szamoty Spatial Segregation:** One of the main spatial problems is the fragmentation of the district caused by the railway lines cutting through the site. This causes isolation and demands for a safe network of bicycle and pedestrian path to connect surrounding neighborhood through the Szamoty in future. This could make it easier for district resident to access facilities in other parts of district.

**Abounded big industrial buildings:** There are several buildings that are abandoned and not in use anymore. Most of them are suitable for renovation. Like in many other retrofitting projects, reusing these kinds of buildings is a sustainable approach both in economy and environmental aspects of redeveloping the sites.

**Uneven balance of social facilities:** According to the analysis, the distribution of facilities at the site is poor and uneven. From a social sustainable point of view, social facilities should be accessible to people in order to create a dynamic and vibrant urban space. The location and condition of Szamoty has the potential of new spatial design for allocating lacking facilities in scale of district to reach “social justice”.

**Contamination and Pollution** One issue and also barrier in retrofitting Szamoty is its soil contaminations. There are many abandoned factories that still haven’t been cleaned from their old chemical materials and toxics. From environmental aspects, these contaminations, aside from the pollution from a coal power plant are the main threat to the inhabitant’s health and could potentially cause harm to their health.

**Lack of Attraction:** Another problem for the district is the lack of local attractions that could facilitate better use of space. The central situation of the post-industrial wasteland hampers the integration of the space into town fabric (including transportation) and adds to the deteriorating image of the area.

**Traffic congestion** lack of effective connection to highways and main arterial roads of Warsaw is a big problem which residents are dealing with already. According to observations, there is a huge traffic jam on weekend’s day, due to peoples shopping from outlet factory.

**Revive the Character of Ursus:** Ursus has lost its character during years. New development plan should bring the social confidence of residents back to area. Removing the barriers for more relations, provide places for socializing; revive the history, industrial character and everything which identify real character of Ursus to its residents should implemented in district.

**Shift from mono-functional area to a mix use:** Currently, no one is living in Szamoty. In order to revitalize the area in relation to whole district, it is necessary to have high population in a dense and mix-function area. This mixture can bring and support various social facilities into district.
PART II

Main Retrofitting Strategy

New Urbanism

Placemaking Principles

Summery
2.1 Main retrofitting strategy

A short study on all retrofitting project shows that there is no “one-size-fit” strategy to all forms of retrofitting. Numerous conditions within each retrofitting area are always unique, even if distinctive characteristic of the sites are stripped away during the redevelopment.

The best redevelopment is to (re)establish a vital connection to the existing place, whether by providing affordable space for local community activities, connecting a new mix-use neighborhood to the existing street networks, or by revitalizing the ecology in areas that should never have been built in the first place. As Dunham-Jones & Williamson (2011) categorized, there are three approaches for retrofitting the projects:

- Re-development
- Re-inhabitation
- Re-greening

Sequentially these approaches are mainly based on physical and spatial, social and environmental aspects. This broad categorization is defining a framework for all projects, but in lower scales they are elaborated to solve more details in the projects.

Re-development: This strategy is mainly relying on spatial design; replacing existing structures and/or building on existing lots, generally with a compact, walkable, connected mix of uses and public spaces that supports a less auto-dependent and more socially engaged lifestyle.

Re-inhabitation: The adaptive reuse of existing structures for more community-serving purposes, often as a third place for social interactions.

Re-greening: Demolishing of existing structures and revitalization of lands such as parks, community gardens, and wetlands.

Each of these points addresses different opportunities, and together they provide communities with a useful range of approaches to what to do with underperforming properties.

During periods of slow development, like with New town of Ursus, it is a particularly good time to strategically target metropolitan areas to decide which retrofit they want, to where, and to prioritize investments accordingly.

For example, revitalization of a public space or a city center which is in a good physical condition is more related to Re-inhabitation compare to a redevelopment plan of a factory site or a dead mall and its parking lots in the outskirt of a city. Re-greening is sometimes a last phasing strategy for redevelopment.

The case of Szamoty is an old industrial land which still contains its old infrastructures and buildings. Undoubtedly, creating a new neighborhood in this site demands a fundamental development and huge constructions throughout the site. Moreover, analysis of site is addressing mainly spatial problems which need a solution which primarily deals on physical aspect of site compare to social and environmental issues. Therefore it requires careful and comprehensive “Re-developing” strategies for spatial elaboration.

Suitable guideline for Re-development strategy

All of those strategies must be oriented into practice, and it needs frameworks to control, or guidelines to direct this process carefully. In the introduction, it had discussed that, as a part of making tradition places, a number of theorists and practitioners has sought to identify desirable qualities of successful urban places. Many frameworks and guidelines for that purpose exist and each
has a different degree on prescription regarding desirable spatial forms.

Carmona (2010) has overviewed some of these frameworks critically. He has explored and commented on guidelines of Kevin Lynch, Allan Jacobs and Donald Appleyard, Francis Tibbalds, Oxford Polytechnic’ Responsive Environment, Nan Ellin and Congress for New Urbanism. Then he defined their degrees of focuses on spatial and physical forms as well.

For example Lynch’s identified five performance dimension of urban design which is Vitality, Sense, Fit, Access and Control. This frameworks is the least prescriptive and is essentially a series of criteria to “guide and evaluate” urban design, while leaving others to determine physical form.

Another example is Jacobs and Appleyard’s (1987), which suggest seven goals essential for the future of good urban environment: 1. Livability, 2. Identity and control, 3. Access to opportunities, imagination and joy, 4. Authenticity and meaning, 5. Community and public life, 6. Urban self-reliance, and 7. Environment for all. Compared to Lynch’s, this framework is more prescriptive, their criteria suggesting the vibrant, lively ad well, integrated urban form of cities such as San Francisco and Paris.

Meanwhile, the New Urbanism principles are focused on physical and spatial forms and this is probably the most suitable principles for Szamoty project. In 1993 a Charter for New Urbanism were published advocating restructuring public policy and development practices to support the following:

- Neighborhoods divers in use and population
- Communities designed for pedestrian and transit as well as the car
- Cities and towns shaped by physically defined and universally accessible public spaces and community institutions
- Urban places framed by architecture and landscape design that celebrate local history, climate, ecology and building practice

The charter also asserts a detailed set of principles to guide public policy, development practice, urban planning and design.

Knowing these ideas can give us a general understanding over New Urbanism policies. In order to define the best guidelines for this project, it is required to know this movement from all aspects and its perspective. The following pages will introduce New Urbanism and its principles in more details.
2.2 New Urbanism

In the introduction of this study, a series of problems were addressed that arose as consequences of urban sprawl. It was discussed how new studies, both in and out of the urban design field, triggered movements to react against those problems.

Many policies to solve those problems were mainly originated from former design trends before World War II. However, while cities expansion and use of energy became an important issue in urban areas, new policies were involved mostly on changing the direction of growth of the cities and re-using current sources.

For example, in order to change the direction of cities growing from its outskirt to the inner urban sites, a concept called “smart growth” emphasized on redeveloping the abandoned, former industrial land, and revitalize old suburban areas, instead of destroying new green and untouched outskirt environment. These strategies intended to bring back the energies into urban areas, while introducing a new sustainable growth in suburban and urban areas. (Brown et al. 2009)

The current strategies using in urban design projects are based on new policies originating from the 1980s and 1990s. These strategies were actually a respond to a “gap” that existed in the cities development plan. In one hand it targeted mainly the development of cities economies, and on the other hand creating dynamic and livable places in human scale, that had been neglected for many years. (Brown et al. 2009)

From there on, urban designers gradually began to change their urban design standards and started to use these strategies in their work to revitalize urban areas. Many honorable urban designers, who work today, were integrated in those declining and later changing days. Reaction to that situation brought a “thought” in them and made them determined to focus more on human feelings and experiences, instead of responding to the cars- or as in Jon Gehl words, “car friendly” areas! - These reputable strategies are currently becoming prominent in New Urbanism movement.

One of the movements that placemaking studies are based upon; is “New Urbanism”, which is strongly influenced by urban design standards that were central until the rise of the automobile in the mid-20th century. (Douglas, 2002) New Urbanism has its roots in the works of famous town planners, namely, Ebenezer Howard, Raymond Unwin and Clarence Stein.

The Movement

During 1990s in the United State, “New Urbanism” developed from two earlier concepts of TOD and TND (Brown et al. 2009):

Transit-oriented development (TOD), a mixed-use residential or commercial area designed to maximize access to public transport. A TOD neighborhood typically has a center with a transit station or stop (train station, metro station, tram stop, or bus stop), surrounded by relatively high-density development with progressively lower-density development spreading outward from the center.

Traditional Neighborhood Development (TND) refers to the development of a complete neighborhood or town using traditional town planning principles. TND may occur in infill settings and involve adaptive reuse of existing buildings, but often involves all-new construction on previously undeveloped land. These projects include a range of housing types, a network of well-connected streets and blocks, humane public spaces, and have amenities such as stores, schools, and places of worship within walking distance of residences.
Rise of New Urbanism

In 1991, the Local Government Commission, a private nonprofit group in Sacramento, California, invited many architects to develop a set of community principles for land use planning; named the “Ahwahnee Principles”. Later these invited members founded the body of movement, the Chicago-based Congress for the New Urbanism (CNU) in 1993. The CNU has grown to more than 3,000 members, and is the leading international organization promoting New Urbanist design principles. It holds Congresses in various cities of the United States annually.

Today, New Urbanism has become a broad movement that spans a number of different disciplines and geographic scales. While the conventional approach to growth remains dominant, New Urbanism principles have become increasingly influential in the fields of planning, architecture, and public policy.

Under its principles, it promotes the creation and restoration of diverse, walkable, compact, vibrant and mixed-use communities; composed of the same components as conventional development, but assembled in a more integrated fashion, in the form of complete communities. These principles can be applied increasingly to projects at the full range of scales from a single building to an entire community. New Urbanism charter generally declares:

“We advocate the restructuring of public policy and development practices to support the following principles: neighborhoods should be diverse in use and population; communities should be designed for the pedestrian and transit as well as the car; cities and towns should be shaped by physically defined and universally accessible public spaces and community institutions; urban places should be framed by architecture and landscape design that celebrate local history, climate, ecology, and building practice.”

Significance

From many aspects, it resembles the CIAM congress of international architecture modernism, and like CIAM, it became a center point for critics who believed it should go beyond the formulas which dominated urban design during the last twenty years.

By the evolution of congress, during the last two decades, several new urban design rules were formed. Today, professional standard sources, like Architectural Graphic Standard, integrated New Urbanism principles and standards to their policies and replaced them in principles related to suburban planning and administrating. Regardless of their opinion and goals, there might be a few planner or designers that ignore New Urbanism’s immediate influence over planning and urban designing, particularly on suburban areas.

New Urbanism in Europe

New Urbanism is closely related to the “Urban village” movement in Europe. They both occurred at similar times and share many of the same principles although urban village has an emphasis on traditional city planning. In Europe many brownfield sites have been redeveloped since the 1980s, following the models of the traditional city neighborhoods rather than Modernist models. (Wikipedia: New Urbanism)

The Council for European Urbanism (C.E.U.) formed in 2003, shares many of the same aims as the United State's New Urbanism. C.E.U.’s charter is a development of the Congress for the New Urbanism Charter, revised and reorganized to relate better to European conditions.
The urban planning principles of New Urbanism are not unlike the principles of the European city, even though putting them into practice produces a totally different picture and different spaces.

New Urbanism is also of interest for Europe, since the strategic focus on urban development for the post-industrial city and the struggle against urban sprawl is extraordinarily fruitful. (Rob Krier, 2006)

There are a number of projects, mainly in United State but also in Europe, that follows New Urbanism ideas. Jakriborg, in Southern Sweden, Heulebrug in Netherland, Fonti di Matilde in Italy, part of Knokke-Heist in Belgium and Val d’Europe in east of Paris, France are just a few cases which show its significance in Europe.

Although Rob Krier (2006) had some critics against New Urbanism, he had a positive view over its practical orientation. He note this in his book: Town Spaces, Contemporary Interpretations in Traditional Urbanism in this way: “ [...] From the European perspective, the most interesting thing is the movement of New Urbanism itself, its practical orientation, expressed in numerous experiments, and its discursive orientation, expressed in a wide-ranging, comprehensive debate that takes in all the professions and lobbying groups concerned”

However he believes: “ [...] we cannot simply imitate this movement. Our culture, our conditions are different. Architects and planners, environmental and social activists, politicians and investors - in Europe all these groups have their own circles, associations and institutions in which they all more or less successfully go round in circles with each other. This is a great weakness that we must recognize and work on, picking up the thread from our own experience, but also analyzing the experience of New Urbanism.”

Principles

From the beginning, this movement established its principles in order to increase its highly dense development of both the inner city’s abandoned lands and the outer suburban areas. Today, New Urbanism put their priority on supporting the development of current resources in urban areas instead. In order to issue these standards, The Congress encoded many of Jane Jacobs’ principles such as high density, mix of functions, short and walkable blocks and old buildings. These principles can be applied increasingly to projects at the full range of scales from a single building to an entire community.

Next pages will discuss each principle in detail, and in many cases it will consider the situation and conditions of Szamoty in particular, to find solution for its problems.
2.3 Placemaking Principles

2.3.1 Walkability

Walkability is a broad concept which is considered as an important aspect in urban life. Compact, pedestrian-friendly communities allow residents to walk to shops, services, cultural resources, and jobs and can reduce traffic congestion and benefit people’s health and enhance social life in a neighborhood.

Increased walkability has proven to have many other individual and community health benefits, such as opportunities for increased social interaction, an increase in the average number of friends and associates where people live. One of most important benefits of walkability is the decrease of the automobile footprint in the community. Carbon emissions can be reduced if more people choose to walk rather than drive. Walkability has also been found to have many “economic” benefits, including accessibility, cost savings both to individuals and to the public, increased efficiency of land use, increased livability, economic benefits from improved public health, and economic development, among others. (Litman, 2011)

Litman (2011) in his “Economic Value of walkability” evaluates the economic value of walking and concludes: “... Conventional planning practices may conclude that walking currently receives a fair and efficient share of transportation resources. However, this reflects an undercounting of walking trips, an undervaluation of walking benefits, and undervaluation of motor vehicle costs. More comprehensive evaluation indicates that walking receives less than its appropriate share of transportation resources, and that walkability improvements can provide a high economic return on investment....”

While auto-focused designs diminish walking and "eyes on the street" concept (Jacobs, 2002), walkable area reduced crime (with more people walking and watching over neighborhoods, open space and main streets).

**Enough Room for walking:** An important prerequisite for a comfortable and pleasurable walk is room to walk relatively freely and unhampered, without having to weave in and out and without being pushed and shoved by others. People pushing strollers, shopping carts and walkers also need plenty of room for walking.

Studies of urban streets in London, New York, ad Sydney illustrate the problem of narrow sidewalk for large crowds of pedestrians, on streets where most of the area is designed for car traffic, despite the fact that the number of drivers is far less than the number of pedestrians crowded together on the sidewalk. (Gehl, 2010)

**Keep block size walkable:** Without careful modulation, the hybridization of suburban building types and car parks into urban blocks and streets can lead to oversized blocks and monotonous building fronts. Most blocks must be short, that is, streets and opportunities to turn corners must be frequent.

![Figure 2.1 Short Blocks increase Walkability](Source: Jacobs (2002))

“The advantages of short blocks are simple.”Jacobs notes.”Walkers in such neighborhood frequently encounter corners, each offering an opportunity to follow an alternate path. These options create more places for commerce and for encouraging neighbors, and thus contribute to the social and economic life of a neighborhood.”(2002)
Situation in Szamoty:

Walkability in future community of Szamoty is highly depended on current building and road structure of site. Because of industrial character of Szamoty and its huge lots, there are several massive boxes that are over 350 meters. This makes it crucial to make some buildings shorter in length to create shorter walking-distances, and encourage people to walk. This could be varying from 60 to 120 meters, depending to the block sizes.

Walkable accesses

What is important here is, to have effective network of walkable area, which not only make everything accessible within the Szamoty, but also connect to other neighborhood and districts – particularly Wlochy district center.-

Because of the typical flat character of industrial sites, there is no topography problem for moving on surface in Szamoty. The only barrier to Wlochy districts is the train railway track which is more than 6 meters high. (Figure 2.3) From human dimension aspect, it is better to avoid designing pedestrian bridges which is not motivating pedestrians, and in contrast, providing direct crossing at street level would be more effective. (Gehl, 2010) Reforming existing tunnels and making more – depend on connections plan- in short walking distances, would be a practical solution to have a walkable connection between these two areas.

For this case, the connection network of surrounding neighborhood and their level of streets, would have some influences on future pattern of Szamoty. While next placemaking guideline of New Urbanism will focus more over this connectivity, this would discussed in more detail later.

As it has discussed, this proposal will mainly focusing on spatial aspects of walkability and aims to enhance this concept by dealing with streets and forms. Surely there are many other broad approaches which can invite people to walk in the city, which are not subject to be covered in the scale of this project. For example the “maintanance” of streets and pavements, keeping the convinience walkability conditions during cold temperatures and winter months, proper and enough light in all pavements, and providing street safety for pedestrains should be concidered all in the next steps of creating a more walkable city.
2.3.2 Connectivity

This term could be examined at two levels of “inner and outer connections”

**Outer site connections:** As stated before, New Urbanism has developed partly from TOD (transit oriented development) concept; therefore, Szamoty could follow TOD concepts too, especially, when we know the potential location of train station on two sides of site. These stations – particularly the district central one – not only providing a good access to Warsaw downtown – and other districts – but also affecting the spatial formation of Szamoty alongside the TOD concept.

Moreover, anticipating the new residents and their needs for transportation, a new traffic node will be crucial for district. This traffic node and train station should lie in proximity of each other in order to be accessible easily for residents, especially for commuters who work in other districts.

**Inner site Connections:** In neighborhood scales, the public transport should cover all important nodes such as main open spaces, public squares, main parks, churches, train stations, schools, health care centers etc. Secondly, it should be in walking distance from houses. Around 300 to 500 meters would be reasonable walking distances for residents in order to reach the nearest public transport station.

High quality pedestrian network makes walking pleasurable. According to New Urbanism policies, network design should improve connectivity for drivers, bicyclist and pedestrians, by building interconnected street networks to shorten distances and overall kilometers per trips, increase walkability and public safety (street safety aspect, because more people are in the streets), while distributing the traffic.

**Street Network:** An irregular cul-de-sac street pattern has very long blocks and a lot of dead ends. This makes it more difficult for people to reach their destinations. Connected street networks provide multiple ways for emergency vehicles to access a particular location and multiple evacuation routes. In addition, a connected...
system encourages slow, cautious driving since drivers encounter cross traffic at frequent intervals.

In Szamoty, long industrial factories and wheelhouses should be cut into shorter blocks, to increase the number of streets and the connections through them. It should not be mistaken with making more roads, or with considering it a waste to make new streets. This false idea is rooted in the “Garden City” and “Radiant City” theories, which considered using lands for streets a worthless effort. (Jacobs, 2002)

**Designing streets for people:** Proper street design is a key element of smart development. Streets are considered to be the place where land-use and transportation connect. The major components of street design are
- Width of the street
- Pattern of the street network
- Physical elements along the streetscape.

Streets are key determinants of neighborhood livability. They provide access to homes and neighborhood destinations for pedestrians and a variety of vehicle types, from bicycles and passenger cars to moving vans and fire apparatus. They provide a place for human interaction: a place where children play, neighbors meet, and residents go for walks and bicycle rides. The design of residential streets, together with the amount and speed of traffic they carry, contributes significantly to a sense of community, neighborhood feeling, and perceptions of safety and comfort.

**A hierarchy of narrow streets, boulevards, and alleys:** New Urbanists decry the street hierarchy’s deleterious effects on pedestrian travel, which is made easy and pleasant within the subdivision but is virtually impossible outside it. Residential subdivisions usually have no pedestrian connections between themselves and adjacent commercial areas, and are often separated from each other by high masonry walls intended to block noise. Jane Jacobs (2002) believes modern suburban design—of which the street hierarchy is a key component—is a major factor in the sedentary lifestyle of today's children.

**Residential Streets:** Residential streets are complex places that serve multiple, and at times competing needs. Residents expect a place that is relatively quiet, that connects rather than divides their neighborhood, where they can walk along and across the streets relatively easily and safely, and where vehicles move slowly. Other street users, including emergency service providers, solid waste collectors, and delivery trucks, expect a place they can safely access and maneuver in order to perform their jobs.

They should be important considerations in the inner residential street areas. Designing streets so that driving cars must occasionally yield between parked cars before moving forward, as shown below, permits development of narrow streets, encourages vehicles to move slower, and allows for periodic areas where a 5-6 meter wide and clear area is available for parking of emergency apparatus.

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**Figure 2.6**

**Figure 2.7**
2.3.3 Increase Density

During the period of suburbanization, people had limited choices for their life styles. At the present, conditions for changing this trajectory is placed, and the number of alternatives for individual choices are increasing. Densification concepts support more alternatives for choices. Low dense residential areas or monofunctional buildings only offer a few choices for people that have to satisfy with fewer alternatives compared to people in higher dense areas.

The increasing density alternatives is an advantage for Szamoty re-developing project; in order to accommodate a high population inside the city’s boundaries, and prevent more suburban growths. It is an opportunity to correct the mistakes of the past, since we today are smarter in facing the problem of growth and since we better can estimate the future demands.

According to Warsaw development plan (Bertaud, 2000) new neighborhood must invite a high population to live here, and this can be done by proposing a large range of housing types, social facilities, dynamic and vital social life, good accessibility, etc. All of these opportunities can be found in an urban area with a high density.

As it has defined as aim of this thesis, the proposal focuses mainly on ingredients that comprise good urban forms by means of streets, open squares and buildings’ forms. The main spatial ideas of designing new communities in Szamoty are based in “Towards an Urban Renaissance” by Lord Rogers (1999). The following discussions on density, mix-use, diversity and mix-use housing areas, owe much to what Cliff Moughtin explained from this report in his book.(2003, pp 193-196)

Figure 2.8 Compact Urban area: Clear Urban District and Distinct Neighborhoods
Source: Towards an Urban Renaissance (1999)
structure for such a compact city, and Figure 2.9 illustrates the linkage for the structure. Lord Rogers’ Task Force describes the compact city in this way: “Urban areas are organized in concentric band of density, with higher densities around public transport nodes (rail, bus and underground stations) and lower densities in less connected areas. The effect of this compact layout is to establish a clear urban boundary, contain urban sprawl and reduce car use”. (Towards an..., 1999)

According to Lord Rogers (1999) sustainable urban forms require densities much higher than the 20-30 dwellings per hectare. Developments where densities are in the region of 70-100 dwellings per hectare would use significantly less land, and consequently, reduce the distance between home and local center with its transport hub. For Example, a neighborhood of about 7,500 people could be housed at densities of about 70 dwellings per hectare on piece of land where the furthest distance from the center is just over 500 meters, a reasonable walking distance. The population of 7500 people would support a viable core of activities at its center. (Figure 2.9) Grouping such neighborhood, as also shown in Figure 2.9 would support a larger and more vibrant range of social facilities and warrant more extensive bus services.

The plan for new town of Ursus indicates a 25,000 people for future community of Szamoty. Considering 180 hectare of area, it shows a 138 dwelling per hectare which indicate a fairly compact density. Later, in Part IV, there would be more explanation of this population and its effects on design proposal.

As stated previously, the theme of this thesis is the spatial design focusing on street, squares and buildings. All these are important elements of spatial design and have its own individual identity and design requirements. Considering 22,000 new residents in this area, it promotes a high residential density with mixed land uses.
Figure 2.10 Land Requirement: Communities of 7,500 and 22,500 people

Assumes 5ha of communal area/400 dwellings – DETR (LDW) land use study – at 2.2 persons per dwelling is 42ha of communal space/7,500 persons

Large land take
Dispersed facilities – no centre
Bus may not be viable

Population to support good neighbourhood facilities

Important urban neighbourhood facilities and their reasonable support population

- Primary school: 2,500 - 4,000
- Doctor: 2,000 - 3,000
- Corner shop: 2,000 - 5,000
- Public house: 5,000 - 7,000
- Group of shops: 5,000 - 10,000
- Post office: 5,000 - 10,000

About 7,500 might people support a viable local hub of facilities

Source: UWE for DETR - from Gamble, in Planning and Urban Development
Greater London Council (1973 and 1980, 3rd)

7.5km affects about 7.5km is supported by a view due to community

Reduced land take
Clear central facilities
Bus should be viable

Good public transport needs adequate density

A density of 100 p/ha is the density necessary to support a good bus service, given a socially mixed population


Everyone can walk
Usage of local facilities increases
Bus routes are more regular

Everyone should be able to walk to their local centre

Local social facilities better public linkages

At more compact densities centres are more vibrant
Key additional local facilities become viable, fall within walking distances and alternative public local links are affordable

Source: Towards an Urban Renaissance (1999)
One of important problems – that has stated - in such a new developing area is the morphology of new dense forms and their relations to the context. In Part I it has shown that many part of surrounding areas are consisted of single family housings, however, recent policies changed the situation and showing new construction neighborhood to Szamoty. Some have been finished already and some are under constructions. Therefore a dense area, consisted of multi-level buildings would enforce the linkage between Szamoty east and west, spatially.

Figure 2.11 New Construction in area
Source: maps.google.com
2.3.4 Mixed-use and Diversity

This idea of mixed uses, rather than large areas within the city devoted entirely to a single land use is a suggestion, which is a common feature of many books written on sustainable development and urban design. The densities should not be uniform throughout the city. For example, there is a sound argument for increasing densities in areas close to important transport interchanges. Such nodes of activity could support higher population densities, and mix of diverse land uses becoming pyramids of intensity within the urban scene. (Moughtin, 2003)

There must be a possibility of mixture of functions in single buildings or/and blocks. Retail shops on the ground floor, should face the sidewalks; and residential or offices should be on the next floors. However, this mixture of residential and offices would also be possible in neighborhood scales. In this situation, people could walk or ride bikes to their jobs in short times. It has been reported that employers believe that the number of clerks who want to walk to the offices are growing continuously, and this also demands multi-functional buildings. (Brown et al. 2009)

In Lord Rogers (2000) words: “...One of the main attractions of city living is proximity to work, shops and basic social, educational and leisure uses. Whether we are talking about mixing uses in the same neighborhood, a mix within a street or urban block, or the mixing of the uses vertically within a building, good urban design should encourage more people to live near to those services which they require on a regular basis”.

Therefore, design should consider the diversity in building locations and their functions, accessibility to facilities, proximity to public spaces and traffic nodes, combination of functions in buildings and blocks and many other items which can bring a better quality of life to their residents.

2.3.5 Mix-used housing

Within closer proximity in neighborhoods, a broad range of housing types, sizes and price levels for a population of diverse ages, cultures and incomes can provide for self-sufficiency and social sustainability, while promoting compact cities and regions. Community stability is enhanced if the neighborhood is one with a variety of house types and where there is a mix of tenures. A mix of house and tenure types also gives more flexibility for families to change properties to meet changing needs, without necessarily having to move out of the neighborhood. (Moughtin, 2003) A further requirement of the self-sustaining, or autonomous neighborhood is a population drawn from families with a wide range of incomes, occupying properties of mixed-tenure.

A region should be a combination of various types of buildings in different ages and conditions. (Jacobs, 2002) A region of only newly constructed buildings can accommodate only residents who can afford the high rate of charge and prices. This could be a threat for Szamoty, while it is a type of retrofitting projects which would go under heavy new constructions. Because of buildings demolition in the site, some new neighborhoods would emerge which contain mainly new buildings. To prevent the problem of their affordability, authorities should predict this in their developing plans and obligate developers to allocate percentage of housings for lower income families. Study on some cases in the United State shows an allocation range of 10 to 20 percent for lower housing prices. (Dunham-Jones and Williamson, 2011) Such mixed-income neighborhoods are able to support viable neighborhood facilities and there is a possibility that spending is recycled within the neighborhood by the purchase of local goods and services.

From morphology aspect, different architectural urban forms can express same density in a specific site. The accommodation can be arranged as a single high raised building in the middle of the site,
dispersed in parallel rows of two-story terraced blocks or arranged as four-storey perimeter development around the edge of the site. (Figure 2.12) This kind of perimeter development is already implemented in EŝĞĔǍǁŝĂĚĞŬ and Skorosze in Ursus District.

People are representing a diverse demography of the society. The new residential area should satisfy various types of future inhabitants. The number of young and elderly couples is increasing, and with not having any children, they have different demands compared to normative families. Responding to these demands, will make people contribute to a more dynamic, vibrant and durable society. All of these approaches can contribute to changing people’s lifestyles into a more sociable trend. Satisfying diverse interests in a mix-used area is a golden step for reaching a social sustainability.

2.3.6 Quality Architecture and Urban Design

The most successful and sustainable retrofit will be beautiful, durable, culturally significant, and built to meet high standards of environmental performance both for the public spaces and for the buildings. Architectural design should derive from local, time-honored building typologies. Buildings must be designed to be enduring parts of the public realm. Yet internal building configurations must be flexible and easily adaptable over the years.

In design of Szamoty, special placement of civic uses and site within community, emphasizing on beauty, aesthetics, human comfort, and creating a sense of place; would bring enjoyment for new residents. A careful spatial design considering human scale architecture and beautiful surroundings, which could nourish the human spirit, is another pace to do the placemaking in area.
2.3.7 Traditional neighborhood structure

One of the most important elements of city design is the squares or plazas; and it is possibly the most important way of creating a good setting for public and commercial buildings in cities. (Moughtin, 2003)

To change both the suburban and industrial character of Szamoty – and somehow the whole Ursus district- the project need to design a variety of urban spaces and places that meet the present demands. Examples such as; blocks of civic building; the central and principal meeting places; places for great ceremonies around buildings, theatres, shopping streets, arcades and market, space which office are groups, space of semi public nature around which residential accommodation is arranged; and, finally the spaces associated with urban traffic junction are all existing demands.

In the era of growing cultural and economic diversity, streets, parks, open spaces and the other public realms are the center core of residential areas. (Brown et al. 2009) Szamoty project is not going to only propose a number of mere open spaces that will separates them from private areas, physically. To creating place to gather people via its visual attraction, it is important to enhance the quality of public realms and for their vitality to encourage and invite people to use those squares and public spaces. These invitations can be done by means of ceremonies, concerts, exhibitions, performing shows and other entertaining activities. More policies to have vital open spaces would benefit retails shops, food provider such as restaurant, bars and café –especially in Poland, where people tend to drink bear -, store fronts and small kiosks, and stalls in parks and open spaces. Public spaces are alive as long as people use them, and people should find them interesting to use.

These places should be organized to create a field of more social interactions. According to Szamoty potentials, by a network of well oriented “connections”, this project aims to converge all public spaces (indoor and outdoor), into a central open space. There is a significant relation between open spaces and networks of outdoor activities. These connections will encourage different kinds of people with common interests to socialize more. These socializations could easily take place near a simple fountain or in small parks. It can be at local performing theaters or in culture houses where people are commenting on art. However, this doesn’t necessarily mean that spatial and physical design would be enough to bring dynamic and vital open spaces into neighborhoods, and the need for planned activities at these spaces are of great importance.
2.3.8 Green Transportation

The concept of sustainability as it applies to cities is broad, with the energy consumption and emission of buildings being only one concern. Another main component is the transport management. Car transport is particularly harmful to the environment according to evidence as it is responsible for massive energy consumptions and resulting heavy pollution and carbon emission. (Jan Gehl, 2010). In the United States, transportations accounts for no less than 28% of the carbon emission. (Newman, 2009)

People are realizing the economic, social and environmental costs of relying on cars and they now demand other alternatives for transportation. It is therefore a good time to make a shift from an auto-dependent life to a more sustainable life style by introducing effective public transportations.

People are learning to reduce the effects of carbon monoxide emissions and preventing climate changes. These aims will come to the field by supporting the “smart growth policies” which encourages the walkable neighborhood with functional mixture and different types of transport. Pedestrian and bicycles use less resources and affects the environment less than any other form of transportation. Users supplies the energy, and this form of transport is cheap, silent, and without air pollution.

Gehl (2010) compares the energy ratio of biking to walking to driving a car for a given distance and says: “Biking will take you three times further than walking using the same amount of energy. A car consumes 60 times more energy than a bicycle and 20 times more than walking.”

According to Gehls (2010) survey and according to the table below, typical bike paths can transport five times as many people as car lanes.

<table>
<thead>
<tr>
<th>Transport</th>
<th>Path</th>
<th>Measurements</th>
<th>Users / hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walking</td>
<td>2 Sidewalks</td>
<td>2x3.5 meters</td>
<td>20000 pedestrian</td>
</tr>
<tr>
<td>Biking</td>
<td>2 Bicycle path</td>
<td>2x2 meters</td>
<td>10000 biker</td>
</tr>
<tr>
<td>Driving a car</td>
<td>2 lane street</td>
<td>7 meters</td>
<td>1000-2000 cars (peak load)</td>
</tr>
</tbody>
</table>

Table 2.1 Pedestrian and bicycle traffic takes less space – information from “Cities for People” – Jan Gehl (2010)

In terms of parking, there is enough space for ten bicycles in one ordinary parking slot. Thus, in addition to reducing pollution, pedestrian and bicycle traffic saves space and makes a positive contribution to the overall green society.

Figure 2.14 Spaces occupied by public transport and individual cars – Mashhad - Iran
Public Transport for Szamoty:

Access to the public transport is one of the advantages of Szamoty due to its industrial character which has been discussed in Part I. Here, the map is showing the city railway network and catchment area at 800 meters from railway stations. It is obviously shown that Szamoty is unique land according to its position toward the railway tracks, especially when we know that there are only 15% of Warsaw population are located within 800 meters of railway. (Bertaud, 2000). This opportunity would raise the access to other part of city, without relying on automobiles and reduce the pollution.

Alain and Marie Agnes Bertaud, in their paper for the World Bank (2000) analyzed the use of public transport in Warsaw. They believe: “... if public transport has to stay the main mean of transport in Warsaw, tramway will continue to play a major role and will continue together with buses to carry the bulk of passenger load. Tramway will be more efficient than buses if the city is able to maintain its monocentric pattern. In Warsaw, tramlines are mostly built on their own right of way and therefore will not be greatly affected by the congestion produced in the future by the higher use of private cars.

Buses, on the other hand, have the advantage of being more flexible to accommodate the decentralization of activity centers that may occur in the future. For instance if the construction of the ring road and the bypass triggers a dispersion of jobs and retail locations, buses would be the only mode of public transport able to carry passengers to their new destination but they will have difficulties in competing with private cars. ...”

This analysis, adding to effects of new ring road on Ursus living scope, make the design of effective bus routes as a main public transport facility crucial. Like today’s situations, Ursus and Szamoty can not only rely on train transport. New development design for Szamoty should highly consider its bus stations locations, and route relations to other district.

Figure 2.15  Catchment areas at 800 meters from railway stations
2.3.9 Sustainability

The term of sustainability is a broad concept in environment, economy, and sociology. However, the objectives for an agenda of "urban design" in a regime of sustainable development would emphasize conservation of both the natural and the artificially built environments. (Moughtin, 2003)

There is a need of using already developed areas in the most efficient and effective way, while making them more attractive for living and working. In fact Re-developing Szamoty like all projects could in this way contribute to building better foundations for sustainability.

Many goals of sustainable development could be approached through a smart spatial design. Urban designer can prepare a field for sustainable community – from different aspects- by preserve, re-develop or create elements such as, streets, squares, buildings forms, green areas, open and public spaces, etc.

Here the possibilities of Szamoty which can help a sustainable development will be explored. Chance of using old road structure, buildings, moving old coal power plant out, conserving green areas and ways of reducing gas emission according to current situation of project site are coming next. Later, more specific ideas, for reaching this sustainability would be discussed, and propose by illustrations in design part.

Reuse of existing street structure and buildings:

Szamoty has many streets that are not use for connections and mainly became an access to few operating factories. Beside this there are many abandoned buildings which have the possibility of renovation. Principles of sustainable urban design place priority on the adaptation and re-use of existing buildings, infrastructure and roads, together with the re-use of recycled building materials and components. (Moughtin, 2005) Adaptive re-use of vacant commercial buildings for new, often community-serving uses, such as sport facilities, libraries or medical clinics, is both socially desirable – from distribution aspects - and reduces waste of materials.

Energy efficiency

In order to save as much energy as possible, blocks and building should be designed in ways that benefits from sun light and heat. In
North of Europe, the standard width for blocks is between 9 to 13 meters in 4 floors; however the linier blocks are taller with 4 to 6 floors. (Moughtin, 2005) The same goes for Warsaw but with a width of 15 meters for housing and offices. Roofs follow the same rules; however they may differ in detail codes for isolation. Flat roofs should be covered with double thermoweldable roofing paper. (Design standards, 2009)

From another aspect in savings energies, using local materials in construction will reduce transportation energies and costs. This will also show the significance of keeping and reusing old buildings, or at least some parts of them, to save time, money and energy. (Moughtin, 2005)

Reduce pollution by Eco-friendly technologies, respect for ecology and value of natural systems

One of the main problems in Szamoty is the pollution of coal power plant which threatens its surrounding environment. According to my conversation with Barbara Górzyńska, there is a plan to stop this power plant and built a new one with higher technology on the north part of site. This will reduce the pollution dramatically while still serving the region.

Throughout the Ursus Tractor Factory life, a central green area was a place for recreation of its labors and residents. Today these lands are not preserved considerably and mainly waste plants are growing in it. Beside this, while there is lack of concern on it, it gradually becomes a place for getting rid of daily garbage. The central position of this site is a potential for a new central green park, with concept of “loose-fit” (Thomson, 2002) park, while there is not any architectural design in it yet.

Preserve greeneries
New Urbanism put emphasize on protecting and conserving prime and unique farmland. In areas with little or declining growth, additional agriculture, parklands and habitat restoration should be promoted on already urbanized or underutilized land. (New Urbanism)

More walking, less driving, less use of finite fuels

Ignorance of the impacts of the industrial and urban development on the environment has led to ecological catastrophes in some industrial regions. The effort in planning sustainable cities are growing- and for good reasons. The depletion of fossil fuels, escalating pollution, carbon emission and the resulting threats to the climate are strong incentives for trying to increase sustainability in cities around the world (Hamilton et al. 2005) Such efforts could be implementing in spatial design for these industrial lands. Dense, less auto-dependent, mix-used area beside a comprehensive network of bicycle and pavements and a good connection to public transports, would encourage people to follow the goal of reducing gas emission and air polluting.
2.3.10 Quality of life

Placemaking: Making a place for the “people”
To follow these principles is of little value unless the people are satisfied with the places. Here, we face one the most critical question about places. What kind of places do people actually prefer to use? As the matter of fact, there is still no clear answer to the question. There have been several efforts to outline a number of important criteria which contributes into making “good” places. This project will examine these criterions from “human sensation views” and in five topics:

1. Incremental growing
2. Historical Character
3. Respect the nature
4. Public health
5. Safety (Public and Personal)

Incremental growing: A survey in the United States on the places which people admire and frequently use shows that people generally like to use places that have emerged from its context. (Brown et al. 2009) People like the cities with incremental growing on its context and environment during a considerable period of time, which creates history for them. The living styles in Venice for example, are a respond to its unique environment. The reason why high-raised buildings are not welcomed by Parisians and people from Washington DC is because of its historical atmosphere. Another example where the growth are not from its context, is high skyscrapers erected like mushrooms in the skyline of Dubai, where even the ingredients for the concrete is imported from other countries.

The import of desirable forms and shapes, from other cities or countries, regardless of the original concepts and context would create a shallow character that does not belong to the new area. Industrialization, changing in construction materials, progress in civil engineering, new methods of construction, economic developments and challenges of philosophies and thoughts led to this situation during time.

Sometimes this import is going further, where the Chinese for example, have secretly copied an Austrian village called Hallstatt, to the south of China and its border with Hong Kong. This stirred the emotions of the Austrian inhabitants, and they felt robbed of their history and context. (Bell, 2012) (Urquhart, 2011) We now have wait and observe how a new city without any history, context and nostalgic feeling for its resident, can be loved by people.
History

The preservation and renewal of historical buildings, districts and landscapes will save embodied energy, as the same time as contributing to cultural continuity.

For many years, after the fall of the communism in Poland, the Palace of Culture in Warsaw was the subject for demolition. Even recently, Poland’s foreign minister repeated a call for demolishing the building and replace it with a new park. (Bernatt, 2009). However, the majority of the polish people want to keep it, even though it was a symbolic gift from Stalin during the communist period. People have nostalgic feelings to their historical elements, and regardless of its origin in the history; they still want to live with their memories and their ancestor’s belongings. There is no question that the world’s great cities exemplify incremental urbanism, and that both respecting the existing urban structure and evolving advanced cultures over time contribute to great places. (Dunham-jones & Williamson, 2011)

William H. Fain believes like the relation between form and space; there is another item which is the time dimension. The relation between these three is important to create an identity and memory. There are defining places of everyday life. It is this “time-form” that establishes the contextual field of the city, which buildings are parts of them and civilization was built on them.” (Brown et al. 2009)

The morphology of the buildings in Szamoty has grown over the industrial history of Ursus. Although many buildings have already been demolished, there are still opportunities to keep some of them according to the “time-form” idea. For this purpose and along the retrofitting tactics, some boxes could be redeveloped for keeping or to gain new “character” derives out from its functions, such as libraries, theatres, culture houses etc. This character and history are what people want to have the feeling of belongings and be proud of what they “had and still have”.

History of Ursus has tied to the tractor factory in Szamoty. Many residents of district have worked for factory for many years. The new development plan should revive the historical elements, and introduce what this area had before, as a valuable asset to new residents. These elements could be buildings, any elements reminding factory productions, light railway track which connected to each factory and also central park which should be untouched and keep its function as before.

Respect and engage the nature

Ursus is at the edge of Warsaw and in order to remain agricultural lands beyond its northern boundaries, the city should stop sprawling more to suburban area. Moreover it would stop wasting money, time and energy on spreading, if it instead could be spent on infilling the city edges. This coming back of wealth into
urban areas would able investments on existing infrastructures and facilities, and as a result, retrofitting old industrial park in a more sustainable way.

One method could be inspired by experience of green belt of London and plant trees as barriers in these agricultural lands, to prevent city sprawling at their borders. Revising the role of the environment in urban living scopes and allocating more funds and credits to it would provide better foundations to reach the sustainable goals.

Another spatial approach is to bring the greenery back into the dense residential area. While Szamoty is suffering from soil contamination, bringing the nature back into the site would not only diminish soil pollution, but would also provide new landscapes and greenery to people sensations.

**Improve public health**

In 2000, Dr. Richard Jackson issued series of books and articles which documented “growing obesity crisis” and related it to excessive suburbanization and new lifestyles which discouraged people from walking. (Brown et al. 2009) Obesity is also triggering a great increase in heart diseases and diabetes rates. The rates are not only increasing in adults, but also escalating for children that are not walking to the school due to the urban developing pattern. Additionally, pollution, soil and water contamination are threatening people’s health that are living in proximity to the brownfields. Lung cancer and heart attacks for elder people are the most common hazardous problem in polluted areas.

Studies documenting the profound negative human health impacts of driving and sedentary lifestyle, confirms the benefits of designing places that promote physical activity, are more socially engaging, and less polluting. It had been recognized that the primary health threats of the twenty-first century are chronic diseases, such as diabetes, heart diseases, asthma, and depression, that can be modified by the way we carry out the design of our environments. (Dunham-Jones & Williamson, 2011) The interest in retrofitting suburban areas by the public health sector is also a relatively new and very welcomed catalyst for changes.

This project is following the spatial methods to improve the public health by designing effective walking and cycling network. A careful location of a district hospital in a strategic node would create better access for everyone. This is also helps public health by enhancing facility accessibility. People, who live in extreme poverty, are suffering more diseases, however, because of lack of access to health care centers; it is less probable to escape form their sufferings compared to people who live in more mix-income areas. (Brown et al. 2009)

Dense areas which accommodate a combination of different social classes provide an even distribution of facilities and would eliminate deprivation. Moreover, surveys show the rate of death from traffic accidents in downtown areas is much lower than in suburban areas. This confirms that living in a more dense area not only improve people’s health by walking and cycling more, but also reduces the needs for cars and associated health issues.

**Enhance public and personal safety**

Jane Jacobs in her first chapter in “The Death and Life of Great American Cities” discusses the importance of safety on the streets. She describes the crime-preventive effect of life on the street, by mixing functions in buildings and of residents care for common spaces. (Jacobs, 2002) Her expressions “street watchers” and “eyes on the street” have come to be integral to the city planning terminology.
As she discusses, street safety is promoted by pavements clearly demarcating a public/private separation and by spontaneous protection by the eyes of both pedestrians and those watching the continual flow of pedestrians from buildings. A small café in the corner of a street junction has a more practical role in the night street safety than a 20 floors tall building, and it is more probable to respond to a shout for help from a pedestrian who is cornered in the street. To make this eye protection effective at enhancing safety, there should be “an unconscious assumption of general street support” when necessary, or an element of “trust”. As the main contact venue, pavements contribute to building trust among neighbors over time. Moreover, self-appointed public characters such as storekeepers enhance the social structure of the sidewalks. She also argues that such trust cannot be built in artificial public places such as a game room in a housing project. Sidewalk public connection and safety together, prevent segregation and racial discrimination.

From another point of view, Enrique Penalosa, mayor of Bogota (1998-2001) explains his idea about how new sustainable design policies in Bogota, caused the society to bring the crime rate down. He believes that amongst many reasons, the single most important reason was that the social organizations gained a lot of legitimacy since people believed that the city was honest, efficient and improved their quality of life. Hence, when the system is legitimate, people obey the laws more and even denounce those who break the law. (YouTube: Bogotá: Building a Sustainable City)

From the social justice aspects, by providing the same opportunities for all races and ethnic groups, cities can prevent the formation of ghettos and consequently, gangs. This will enhance social interactions and consequently the safety, since people will start to get to know each other better and make new relationships.

2.4 Summary

A short study on all retrofitting project shows that there is no “one-size-fit” strategy to all forms of retrofitting. There are three approaches for retrofitting the projects: Redeveloping, Re-inhabiting and Re-greening.

Szamoty is an old industrial land which still contains its old infrastructures and buildings. Undoubtedly, creating new neighborhoods in this site demands a fundamental development and huge constructions throughout the site.

All of those strategies must be oriented into practice, and it needs frameworks to control, or guidelines to direct this process carefully.

Many frameworks and guidelines for that purpose exist and each has a different degree on prescription regarding desirable spatial forms. The New Urbanism principles are focused on physical and spatial forms and this is probably the most suitable principles for Szamoty project. This movement established its principles in order to increase its highly dense development of both the inner city’s abandoned lands and the outer suburban areas. Today, New Urbanism put their priority on supporting the development of current resources in urban areas instead.

Then placemaking principles of New Urbanism are: walkability, connectivity, density, mix-use and diversity, mix-used housing, quality architecture and urban design Traditional neighborhood structure, green transportation, sustainability and quality of life. Some solutions for Szamoty problems have been suggested by exploring these principles. In next part, this effort will be propose and illustrated in a new development design for site.
3.1 From Research to Design

As it has discussed in beginning of this booklet, today people wants to live in dense and walkable areas. This demand is reminding the period, which peoples thirst to live in suburban areas seeking a better life style. Experience of “urban sprawl” and its problematic consequences, is now putting urban designers in more urge to following new principles and theories.

Designing a new neighborhood is a big challenge with a wide range of items that has to be considered, especially when there is a limited time. According to Carmona(2010) in projects like this, i.e – neighborhood scales in a specific site and with a limited time – the related type of contemporary urban designer is an “All-of-a-Piece-designer”; a single designer or firm that prepares a master plan. While time limitations put the project in constraints, Following well known and reliable principles where helpful; firstly in controlling the direction of the project, and secondary, by evaluating the outcomes of the design.

Similar as many other contemporary urban design frameworks, New Urbanism principles have a holistic and broad prescription for placemaking. Those principles can be implemented in many projects such as city center revitalization, suburban projects, waterfront redevelopment and like this project, retrofitting industrial land. Here the role of urban design is to interpreted the principles according to its project’ site analysis and in framework of defined guidelines in order to be sure that design is following both urban design principles and site conditions. . Taken together the considerations, these principles create places that enrich, uplift, and inspire the human spirit, and create quality of life.

The main problems which outlined in first part were:

- Spatial segregation of Szamoty
- Lack of effective connections
- Abounded big industrial buildings
- Contamination and Pollution
- Bring greenery back
- Revive the Character of Ursus
- Lack of attraction
- Shift from mono-functional district to a mix use area

The design part will illustrate those placemaking concepts with relation to site analyses and stated problems by a new design proposal. It focuses on the ingredients that comprise good urban design for proposing the solution. This project is mainly, therefore, will focus on the spatial planning, buildings compositions, streets and squares within a framework of sustainable development.
### Design Proposal

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</thead>
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</tr>
<tr>
<td>Zone B</td>
<td>196462</td>
<td>37%</td>
</tr>
<tr>
<td>Zone C</td>
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<td>20%</td>
</tr>
<tr>
<td>Total</td>
<td>535801</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Figure 3.1 Street lights in night view of Szamoty*
Density

- Designed is based on analysis on density, population and land requirement concluded from placemaking principles. (part II) it has presumed to design 8400 Apartment for 25000 new residents.

- According to the nowe misesta development plan (Culburg. 2012) Mikroprogram of Ursus District is based on 30,000 people.

- This design plans to create area for 25,000 people; considering the Area of Szamoty with almost 1,800,000 square meters, population density would be 138 per hectare.

- According to Towards an Urban Renaissance (1999), are with this rate (more than 120 per hectare) indicates a fairly compact density.

- 7500 people in a neighborhood where the furthest distance is 540 meters, can support a viable local hub of facilities. (Figure 2.10)

- According to Figure 2.10 this will be a compact density with more vibrant centers which allows to have viable additional local facilities in walking distances, and also support alternative public local connections.

- This density would make walking possible for everyone, increase usage of local facilities, and prepare a more regular bus transport.

Figure 3.2 New Development Plan for Szamoty
Zonings

- Area is a combination of three neighborhood $A$, $B$ and $C$ created around a central park.

- **Neighborhood A** has the highest population dense in area among these three. The most significance part of this part is the linkage between two train stations. Second, the linkage between “outlet factory” and “Szamoty Central Plaza”

- The main commercial parts of Szamoty is planned to be in this neighborhood according to its commercial potentials.

- Because of buildings’ demolishments in this part, streets pattern are less relied on buildings and site structure. Therefore it provide spaces for better connectivity according to important nodes.

- **Neighborhood B** is severly designed on existing big industrial buildings.

- Main strategy of this part is to cut buildings into short blocks, in order to increase walkability.

- Considering the mix-functions policies, some buildings are precieved to operating as light and non-polluting and non-noxious industries in north parts of site.

- **Neighborhood C** is mainly combination of differenent residential blocks. It has a wide range of housing types, from villas, to apartment blocks and high rised buildings.

- Its position on oppisite side of commercial areas, relating to central park, can make more calm area for people who have demands different living atmosphere.

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**Figure 3.3** Three neighborhoods forming the whole Szamoty area.
Buildings’ Heights

- There is a higher urban capacity in neighborhood A, especially on its hub’s proximity.

- Buildings have higher height—six floors—as they are closer to commercial and central open spaces. Most of forms are in four floors. Some villas have 1 or 2 floors.

- The reason for high rised building on C side of central park is to give economic incentive to land owners in order to adding most of their lots to central park. Therefore the density is same, but will change to different architectural form.

Figure 3.3: Density around the centers
Source: Towards an Urban Renaissance (1999)

Figure 3.4: General height of buildings are 4 floors

Figure 3.5: Buildings’ heights
Neighborhood Hubs

- Each neighborhood's hub is at least in a catchment area of 300 meters.

- A catchment area of 500 meters has perceived for central Hub in neighborhood A, the aim was to converge most attentions into a central commercial point.

- It could act as a collector and distributor for pedestrians to prominent nodes of, train stations, Szamoty central park and outlet factory.

Figure 3.6: A mix-type residential area in Neighborhood C
According to observation (Figure 2.11) which is shown by satellite picture from Google Earth software, the constructions of new dense residential estates have been started in adjacent neighborhoods. Warsaw Development Plan supports developing dense area in boundaries of Warsaw; therefore, the future of this region would be considered to have more harmonic dense forms. Therefore, the spatial segregation of district would gradually turn to uniform dense areas.
Connections – Street pattern

- Analysis confirmed that, new development plan should keep the current structure of site due to its sustainable policies.

- Old streets have been kept, and new streets designed in related to those.

- Large abandoned blocks would be cut into smaller buildings in order to increase walkability in site.

- This pattern promises a totally walkable and bikeable area throughout the site. Moreover, it has proposed a good access to all arterial roads outside of Szamoty. These will provide a good connection to other neighborhoods and districts.

- Train stations and traffic nodes (Central Plaza) have accessible locations, in order to provide connection to other districts of Warsaw.

- Design proposes an effective connection network for pedestrian and bicycles and an easy access to green public transport. Through this spatial design it encourages people to use public transport more for a less air polluting compare to their individual cars.
- This proposal prioritizes preserving and re-using of old industrial buildings for a sustainable approach. This would reduce the cost of demolishing buildings, new construction and new material transportations.

- These cuts were in same direction as buildings beams’ structure. These caused a grid pattern mostly in neighborhoods B and C and in south parts of A.

- Many of old warehouses and factories would change to new offices and houses. It could happen by adding floors and new structures in buildings, for build multi-level buildings.

Figure 3.9 Forms and Streets – Old and new buildings
Streets’ hierarchy

- According to Part I, recent evaluation on New Urbanism projects, is addressing the problem of traffic congestion in neighborhood since more cars is coming to area due to its high population. The impact of this problem is so high which has counteract the advantage of increasing in using more public transport. Planning policies which increase population densities in urban areas do tend to reduce car use, but the effect is a weak one, (Melina et.al, 2011) Sub-arterial streets of this proposal have designed in a close distance to Szamoty boundaries and all of them exit outer site, in order to prevent this problem.

- Sub-arterial streets are laid throughout the site. Their main role is to connect three neighborhoods as a strong inner-site connection. Beside this, there have to directing cars to Arterial roads out of site, immediately, especially in peak hours.

- Distributers/Collectors are connection of houses to sub-arterial streets.

- No wide street or is designed in area (See Streets sections), therefore, only drivers who have intention to come to site will drive here and would not use it as a car passage.

- Area is more welcome to bikes and pedestrian with an effective path network throughout the site. It can make the site an interesting path for bikers and pedestrians, who want to avoid those “car friendly” arterial roads and passing through a “people friendly” neighborhood.

- Because of short different height level of railway and street, the new connection must be an underground tunnel – like the older one;- therefore, it demands to occupy a large area. Since the residential area is almost reached the railway tracks from south side, it should be better to find a new way from south-east corner of Szamoty, where there is potential land for a new tunnel construction toward Skorosze area.
**Bicycle Paths**

![Bicycle Path Diagram](image)

*Figure 3.11* Bicycle path

**Street’s Sections**

![Street Sections Diagram](image)

*Figure 3.12* Street Sections
**Axis and Access**

- Every start and endings point of paths is important. The directions should be toward important nodes.

- Prominent ending points identify streets, give them character and give a vivid picture in peoples’ mental maps.

- Design allocated the shortest distances between important nodes to pedestrian streets. Buildings are close to streets; all shops and restaurants face to tree-lined streets and their garages are in rear streets.

- Major Axes in site are converging to the Szamoty Central Plaza. Church is the pivot point of all axes and needs space around it so that can be appreciated as unique composition. This church has located in way that standing in isolation within a landscape which can led to be appreciated in a same way as a sculpture, that is, by walking around it and viewing from all sides.

- Different functions and facilities are distributed in a walkable distance from pedestrian streets.
Central Park – Open spaces

- As a method of spatial planning in this project, the orthogonal – to some extend grid-pattern is developed, so that some point like squares, church, central plaza gain added significance to set up axes and subsidiary axes which determine those location.

- Giving a commercial function to some lands, could be a reasonable incentive for land owners in order to create open spaces, like parks, central plaza, squares, etc.

- Open spaces has a significance role in traditional European urban spaces. Here the open spaces and their relation to commercial buildings are illustrated. All these open spaces are connected together by mainly pedestrian streets.

- Central park is designed as a loose-fit landscape (Thompson, 2002) which can move around over time within Szamoty urban fabric. It can be a loose, semi-wild - not necessarily the extensive “wild” spaces, in contrast to intentionally, neat, safe and decorative open space, next to it.

Figure 3.14 Commercial functions with direct relation to public open spaces
An effective public transport is needed to connect Szamoty to other districts. It should transfer passengers easily to important nodes of site.

Possible Bus stations with catchment area of 400 m have been proposed in Figure 3.21.

Two possible routes have been recommended according to Bus routes of Warsaw. No 177 and 194 (direct line to city center). These routes are only checked for possible station inside the Szamoty area, obviously, it needs more and various traffic data to choose the best routes.

Location of stations have been chosen in a way to cover most parts of area by short walkable distance. They mainly located in important traffic nodes and public open spaces.
Another advantage of density is providing various functions in a more proximity due to its compact pattern. This will also enhance people ability in choosing various alternatives. According to this diversity in Szamoty proposal, houses become more close to shopping and work places which makes it easier for residents to walking more instead of long everyday commuting to their work places.

Many activities can exist in close proximity: most businesses and urban services can live harmoniously in a residential area, there are, of course, exceptions: noxious industries, and those generating high traffic volumes or noise, will need careful location.

Distribution of facilities in all part of site, such as, Health care center, Pension, Sport facilities – indoor and outdoor – shopping mall, educational buildings, culture house, library, etc. in accessible distances, will bring a social justice for people and enhance their quality of life. This will prevent their moving to other parts of cities.

Moreover, these facilities can serve in broader scale of a Szamoty area and bring people from other neighborhoods here. This can enhance social interaction with other neighborhoods in one hand, and help the economy of these facilities in order to continuously improve their services.

One of the most important momentums for retrofitting a brownfield is economic interest. In order to have a continuously successful society, it needs to provide enough jobs in the neighborhoods. What this project is doing under New Urbanism perspective, is to design various work spaces by reliance on mixed-use formulas that depends exclusively on retail or office spaces. This concept could potentially accommodate a great range of clean, productive work spaces in a variety of urban building forms. (Figure 3.23 and 3.24)
Figure 3.19  Buildings functions – Ground Floor

Figure 3.20  Buildings functions – Upper Floors
**Mix-housing areas**

- A range of types, sizes, age and prices in closer proximity

This illustration is showing a pleasant housing area with its own open space, next to central park and a commercial street. A range of housing types like, villas, detached houses, apartments and high raised buildings would satisfy different desire and bring diversity of people - of ages, races, cultures and income level in same area.

*Figure 3.21* : A mix-type residential area in Neighborhood C
History of Szamoty

- One concept is to characterizing the neighborhood. Good side is, Szamoty has a more than a century history from when it was a simple village, to when it became a working place for local labors, to when it declined, and now is going to be retrofitted and become location for new neighborhood.

- From spatial aspect, project keeps the last remain buildings which is still serves Tractor Factory. Its function would change to museum of Szamoty to keeps Ursus history alive.
- Factory’s central yard will become central park of Szamoty.
- Some elements like some rail tracks will be kept; here one sub-arterial street lies on this railway. One linier park is also design around another rail track.

Bring greenery back

- There are some green spaces in Szamoty, currently. The policy is to keep those, besides, adding new greeneries such as public open spaces, street greeneries and parks. All green spaces – as it has shown in figure 3.26- are connected together.
3.3 Evaluation:

Solution for each stated problem will be revised in the followings:

**Szamoty spatial segregation**

*To South:* New bicycle and walkable path, preferably tunnel is designed to connect Szamoty to its south side. New road connection is also predicted on south-east of site at the junction of four neighborhoods.

*To North:* a new bridge is under construction which connect Ursus to the Warsaw ring roads. Since there are mostly farming lands, only a new bicycle path is proposed.

*To East:* Despite of existing tunnels, design intentionally added two new tunnels in order to have direct connection to Włochy district. Considering future traffics, using U-Turn in arterial street will make the traffic of that area problematic. Existing tunnels will be redesigned with new pavements and materials to improve older connections for bikes and pedestrians.

*To West:* There is not any problem with west neighborhood and there are good connections currently, however, not in use usually. One older weak connection is blocked by residential blocks to flow the car traffic toward south-west in order to prevent traffic in narrow dense residential streets. New bicycle paths have also created.

**Abounded big industrial buildings**

Following sustainable development policies, old buildings will become renovated, re-structured and will be re-used by different functions. In fact, main structure of design is highly based on current components’ structure. Using older buildings would reduce the expenditure on its maintenance, therefore, it could accommodate people will lower incomes.

In same extend, giving different functions is could also be a proper place for different shops, services and other social facilities like a small grocery or local small shops. New buildings are mostly affordable for chain restaurants, banks and prosperous sectors. This could put divers function to mix-used buildings, blocks and neighborhoods.

Furthermore, re-structuring and turning those buildings into short buildings would increase walkability in whole area.

**Uneven balance of social facilities**

Facilities have been distributed throughout the site. Many older buildings are suitable to gain new function, like schools, libraries, sport facilities, health care and new shopping center.

Bus stations are almost serve people in whole area and provide connection to city center both directly and by transfer them to train stations and then city center.

Each neighborhood has its own small square which predicted to have commercial – or non-residential function in first floor- on its surrounding. These could be proper place for commercial and educational and other local services in short distance of residential areas.

**Contamination and Pollution**

According to Ursus Mikroprogram, the power plant will move to north side of site with more Eco-friendly technology.
New bicycle and walkable path, effective public transport, and due to its density, reasonable walking distance between works, shops and houses, design encourage people not to use cars and change their auto-depend life style, consequently reduce air pollution.

The design, propose a relatively green area, with green open spaces, small parks, big semi-wild central park which all connected together by green paths and linier parks. These areas are also useful for soil decontamination and air pollution reduction.

Lack of Attraction

Undoubtedly, there would be uncountable approach to attract people to an area, meanwhile, in this design; first a church has gain significant role to attract people, due to catholic religious of people.

Second, effective connection between current prosperous outlet factory with church and central square is proposed. Those connections have improved by pedestrian streets and especially public transport to connect these nodes to other districts.

Third, by proposing new museum of history, new shopping mall, sport facilities, new educational facilities and a loose-fit landscape of semi-wild central park with its scenery lake, the lack of attraction would be compensated and attract more peoples to area.

Traffic congestions

Observations show the most prob lematic traffic congestions occur near outlet factory. New proposal considered a new multi-level junction at south-east corner of Szamoty, where four neighborhoods meet.

As it has discussed before, four sub-arterial streets were designed both close to residential areas and Szamoty boundaries to have immediate connection which is prevent traffic in Szamoty.

Revive the Character of Ursus:

The spatial suggestion of this development plan for this concern is keeping historical elements which remind memories of industrial period of site and allocating some cultural functions to buildings to keep and revive the character of Ursus. All historical moments, like strike for food prices in Ursus should show and introduce to people. Older residents, who have worked in factories, should become proud of their district again.

Shift from mono-functional area to a mix use:

High population of 25000 people in a 180 hectare would create a dense and mix-function area. This mixture can bring and support various social facilities into district and change the mono-industrial character of Szamoty.
Future Parameters

The revitalization of Brownfield has its own complicated and special process. Contribution of several sectors beside a careful management must control this process in order for it to be successful project in future. Beside the Spatial Planning, there are lot of various data, regulations and restrictions, potentials and possibilities, personal and public interests of new residents in retrofitting projects. Given this:

Is there any guarantee that the new design will create a contemporary livable and vital neighborhood that would enhance the quality of people’s life?

Actually, no single actor can guarantee this alone. Obviously many disciplines beside urban design are playing important roles; they need to contribute to create a livable and dynamic space that will improve many aspects of human life. We should also consider other important factors on the next phases, such as continuity of financial sources supports, time and users. For example the development of an effective public transport system may take up to 20 years, which are four or five parliaments. Competition between political parties means that no Government, of whatever political persuasion, can afford to alienate too many voters. (Moughtin, 2003) Different policies – and also voters’ opinions- would change during time; and therefore they would support or become reluctant to prioritize investment in transport development or other service sectors. This could also generalize to other items such as density indication, functions’ allocations and construction permissions.

In contrast to those outside problems, some problems would be generated by Szamoty project itself and would open new broad discussions. For example considering dramatic growth in the number of inhabitants (25,000 people) a further limitation of the industrial production zone will be a serious side effect. The communities in Szamoty with its dedicated social program – no matter how attractive the development may seem – will result in overpopulation, an increase in the contrast among social groups and a division of the town into “old” and “new” Ursus. Long period of construction would allow the authorities to study on future of development plan, for new revisions or new solution to prevent this new social segregation in district.

Another problem would be raised is related to social sustainability and mix income residential areas. Considering the background of communism economic structure and new high economic growth of Warsaw, distribution of wealth in society has changed dramatically. In smaller scales, there is a big gap between incomes of governmental and private jobs. Therefore a question might be what kind of families with what ranges of incomes would prefer to live in a dense residential area? Could they find their desires – for example in entertainment - in Szamoty, or they should seek in other districts. It is more realistic to consider different types of services for in different values; but could this differences cause new social segregation? Or like what is happening in China, would cause “gated residential estates” with “doormen and guards” in very dense mixed residential areas with is extremely against social sustainability.

“Time” is also an item which would cause or solve problems too. This project is designed on a very limited time, but implementing all of its aspects to reality, will take a significant longer time. Many obstacles and new opportunities will emerge during this time, and will sometimes change the development direction dramatically. Urban designers should predict situations’ change, and do flexible designs for different unprecedented situations. In this case two approaches to make Szamoty project more flexible will be mentioned:
The north side of the site is covered with short vegetation in order to be flexible for future design. As it is already stated, a new decision has already been taken place to build a new power plant on this site. Even if it would be changes in the decision, this project is predicting the situation and other situations like this, by putting that area for future policies. In other words, this “waiting lot” could be space for Szamoty’s future probable needed functions.

One of the biggest central abandoned buildings next to Central Square is not designed and re-structure in more detail. Due to its structure and wide indoor space without columns, it can adopt many different functions, like sport facilities, theatre, shopping mall, etc; therefore, design proposal is providing its future readiness to be used for possible new functions, whilst in the center, accessible for everyone.

**Role of People:** What is important in placemaking is role of “People” in keeping it vital. Contemporary urban design is focusing on placemaking for people more and more, and all concerns are in relation to what people’s demand. However, this is a two way relation. In next phases, when a project becomes in use, people and authorities need to concerns their demands by their continuously supports; in order to “keep” the neighborhood livable, authorities should bring facilities for people and people need to support these, financially. This Circulating will cause a continuously relation between government and its people. What is important is, a high population can support these facilities easier and therefore a high dense area is crucial for their accommodation to have a dynamic neighborhood.

Enrique Peñalosa , Mayor of Bogota, Colombia who has a successful projects of placemaking in Bogota, says: “Everything in Bogota start to change beyond our expectation. How it changed? It is because WE start to make place little more for people... People behaving and responding in the way they are treated... People started to be honest when they felt city is honest to them.”

**3.4 Conclusions**

The design has proposed some solutions to prevent problems which have been recognized by many architects and town planers in different projects. This solution could be more valuable while it has followed one of the most influential movements in urban design. Findings from site analysis were synthesizing into Placemaking principles of New Urbanism, and the conclusions were implemented and illustrated into the new development plan.

Some proposed solutions were for current problems of site like pollutions and poor facilities distributions; some deal with preventing predictable future problems, such as personal disease, affordability of rising fuel prices, and social life and some problems
left without solution which needs further study like problems of mixed-income residential area which could threat social sustainability.

The aim of this project was to see how spatial design ingredients can do the “placemaking” in Szamoty. Each proposed solution – even those seemingly trivial ones- can contribute to a placemaking goal. For an example related to Szamoty:

Imagine a new connection through the south railway barriers; in first step it will make a convenience access for people to reach their house and work place. After some it might use as a path to a new interesting area in under developing Szamoty- maybe small shop, grocery, newspaper stall, etc- compare to what people were used to go before. Next steps this new path would connect some people to new restaurant, cinema, or bigger shopping stores. They would even start to visit some places that would visit them rarely in past.

Next phase is when people use this path as their everyday passage because of using public spaces where they have start to socializing with their old or new friends, have short chat, conversation, discussion, and maybe analytical critics over a movie, piece of art or any other common interest.

After some times, more people using this path and start to realizing and recognizing new social life in that square. Gradually this trend can make a vibrant neighborhood with dynamic squares which attracts different people from different ethic and social classes.

This will also enhance the economy of neighborhood, while they start to more using their local products and services. Public transportation will improve, more people encourage coming and maybe living in this area; therefore’ new wealth will come and new social facilities like schools will come to area due to high demands.

This paragraph did not aim to prove that a single bicycle path will cause such a prosperous neighborhood, but wanted to show the little but importance role of each ingredients of spatial designing for the aim of this project: Placemaking.

It is worth to mention again that, this thesis did not explore the costs of cleaning and decontamination of sites. Moreover it did not take to account many re-developing problems. For example, there is a need of civil engineering study on each buildings structure in order to turn them into shorter blocks. While aim of this project was “creating” new neighborhoods, it was mainly focuses on “putting more efforts on preventing already recognized and predicted problems, which might happen again in next 50 years if not following new placemaking principles, rather than merely find solutions for current problems of an area” This a character of these lands which providing new fresh lands with its valuable infrastructures, and giving opportunities to solve many current and future urban problems —almost from beginning- in different scales.

Szamoty was a good opportunities to replace some of those inappropriate, out of scale factories, by development in tune with- and inspired by- great traditional cities patterns, and make a place for people of 21st century, related to their life style. They can become paradigms, and models for their neighboring surroundnings and districts, to start change their policies toward new sustainable development plans. These is following Warsaw’s Development plan and its “transforming old industrial sites” policies, which would cause to bring back the population back to Warsaw and preventing the city’s agglomerations. Good spatial planning can trigger this process by providing livable places for people and later allow them to take the control of development process. Many of finest neighborhoods of the past have been developed over many generations. Perhaps, in the future, we should be measuring success of this design; not simply in terms of mentioned problems and solutions that thesis developed, but by comparisons to the many fine neighborhoods that still exists in Warsaw or other cities.
3.5 References

Books:


Published articles:


Websites:


Observation of site and its components