

## The Revitalisation of Historical Buildings as a Factor Shaping the Development of Sustainable Cities

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**Abstract.** Many Polish cities have objects in them that have ceased to function in accordance with their intended use, for one reason or another. These are often post-industrial objects and former military facilities. As a result of the social, political and economic transformations that have taken place in Poland over the years after the Second World War, these objects have lost the meaning of their existence and functioning. Quite often such objects also have a historical character, which may, under Polish law, serve to hinder the possibility of them being reused. A well prepared revitalisation is often the only way for such objects to regain their earlier functionality, or gain a new one. Selected examples of the revitalisation of historic buildings located in Olsztyn (the capital of Warmia and Mazury, the Voivodeship in North-East Poland) were analysed by the authors in this article, and the effects of such actions, connected to the development of the city, were presented. The study included examples of the revitalisation of post-industrial objects and former military facilities. The analysis was performed in the years 2010–2016. The history and previous functional status of the tested objects were presented, as well as their present form and function. The authors have performed a comprehensive analysis of the compliance of new functions of objects with the idea of the sustainable development of the city. The results show the extent to which the analysed activities comply with the principles of sustainable development, in social, economic and environmental terms.

**Keywords:** city development, revitalisation, sustainable development, historical objects.

**Conference topic:** sustainable urban development.

### Introduction

The idea of sustainable development is nowadays one of the main elements used in the development of cities. Sustainable development is defined in Polish legislation and is considered as a Constitutional Principle of the Republic of Poland. It is defined in the Environmental Protection Act as the socio-economic development integrating political, economic and social actions, balanced with environmental protection and a permanence of basic natural processes in order to ensure the possibility of satisfying the basic needs of individual communities or citizens in both the present generation and future generations. In turn, the Act on Land Development and Zoning (2003) defines sustainable development as the basis for activities related to the scope and ways of proceeding in cases connected with zoning rules.

City planners (Chmielewski 2010) regard sustainable development as a concept of the management of the city. This conception should ensure that the needs of the community are satisfied, taking account of future generations in connection with the importance of the conservation, restoration and development of the environment.

According to the World Commission on Environment and Development (WCED) (1987), sustainable development meets the needs of the present, without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: the concept of needs, in particular the essential needs of the world's poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organisation on the environment's ability to meet present and future needs.

In turn, economists consider sustainable development as a theory of addressing the issue of the long-term capacity of development of the modern economy subject to the criterion of intergeneration justice. According to Pearce (1993), sustainable development is associated with maximising the benefits of economic development, in connection with protecting the quality and usability of natural resources. Such economic development must mean not only an increase in income per capita, but also the comprehensive improvement of other social welfare items. It must also include the necessary structural changes in the economy and in society as a whole.

In the opinion of Næss (2001), sustainable urban development would require considerably more ambitious policies than today in order to limit energy consumption, reduce pollution and protect natural areas and arable land. The re-use of urban areas and the more effective utilisation of building sites is a possible strategy to this end.

Sustainable development is maintaining a delicate balance between the human need to improve lifestyles and a feeling of well-being on one hand, while also preserving the natural resources and ecosystems on which we and future generations depend.

Sustainable development will take different forms in different countries and cities, depending on their size and the degree of socio-economic development. This has been rightly noted by Zavadskas *et al.* (2004). In their opinion,

sustainable urban development has various approaches and different priorities in different countries. It is not surprising that there are widely divergent views and interpretations, with marked differences between countries that have developed market economies, those with transition economies and in developing countries. Not all countries with one of these three development levels understand sustainable urban development in the same way, and so pursue different strategies.

The process of revitalising an area fits very well into this understanding of sustainable development. According to the Minister for Regional Development's guidelines on programming activities related to housing (Wytyczne Ministra Rozwoju Regionalnego w zakresie programowania działań dotyczących mieszkalnictwa, 2008), the process of revitalisation is comprehensive, coordinated, long-term and carried out on a specific area of spatial transformation. It is technical, social and economic, initiated by the local government in order to take an area out of a state of crisis by giving it a new functional quality and creating conditions for its development on the basis of the specific local determinants.

In turn, on 15 February 2008, the Scientific Committee of the Institute of Urban Development defined revitalisation as a coordinated process conducted jointly by the local government, the local community and other participants as part of development policy with a view to preventing the degradation of the urban space and crisis phenomena, boosting development and quality changes by increasing social and economic activity, improving the environment and the protection of national heritage, while also maintaining the principles of sustainable development. In accordance with the Revitalisation Act (2015), revitalisation is a process for deriving from a state of crisis in degraded areas, carried out in a comprehensive manner through integrated activities for the local community, space and economy, geographically concentrated and led by revitalisation stakeholders based on a municipal regeneration programme. Concerning revitalisation, it is often the case that historical buildings are protected by law, which may cause some difficulties connected with the Polish system of protecting monuments. Not every historic object can be freely rebuilt, not every historical space can be developed in an unrestricted way. In Poland, any such action must be in accordance with the provisions of the Act on the Protection of Monuments and the Care of Historical Monuments (2003) and must comply with the zoning rules specified in the Act on Land Development and Zoning (2003).

Selected examples of revitalisation of historic buildings located in Olsztyn (the capital of Warmia and Mazury, the Voivodship in North-East Poland) were analysed by the authors in this article, and the effects of such actions, connected to the development of the city, were presented. The study included examples of the revitalisation of two post-industrial objects and two former military facilities. Their previous functions are indicated, along with the functions and state after revitalisation. The authors have evaluated the validity of the revitalisation process in these places, and the potential benefits and losses arising from it. In addition, the analysis covered the revitalisation of these areas as a part of the idea of the sustainable development of the city.

## Materials and methods

Olsztyn is the capital of the Warmińsko-Mazurskie Voivodship. The Warmińsko-Mazurskie Voivodship was created on 1 January 1999 and is situated in North-Eastern Poland. The region is adjacent to: the Pomorskie, Kujawsko-Pomorskie, Podlaskie and Mazowieckie Voivodships. It covers an area of 24 202 km<sup>2</sup> and is inhabited by about 1.5 million residents. The Warmińsko-Mazurskie Voivodship has a very rich history, with part of the land being native to Polish people and other areas forming part of East Prussia before World War II. This rich history is commemorated today by a large number of historical objects. At the end of 2015, the register of monuments contained 5900 monuments, most of which were: residential (2041), religious (900), cemeteries (585), farms (524) and natural (449). There are historical objects located in each of the 116 municipalities forming the Warmińsko-Mazurskie Voivodship. Olsztyn's history begins in the 14th century as the town was founded around 1334 by Jan of Łajsy. Initially, the city functioned under the German name Allenstein, which comes from the Prussian name of Łyna River – Alna or Alle. Olsztyn received city rights in 1353. Early constructions included the castle and the gothic church of St. James. To this day the network of streets and part of the fortifications have survived, and many of the houses in the old town have medieval foundations. In terms of the formation of industrial investments and the military, an important period was the end of the 19th century and the first half of the 20th century. Many military and industrial objects were built at that time. Because of the large number of barracks located in Olsztyn before World War I, the town was nicknamed "the city of the barracks", or "city of soldiers". The formation of the barracks in Olsztyn was an important factor in the formation of the city. The city authorities were aware of the benefits of the operation of a large garrison, and therefore were glad of more military units in the town. In East Prussia, only Królewiec had a bigger garrison on that time. The authors of the article have focused on such objects.

Four objects were analysed:

- Object 1 – the area of the former brewery on Wojska Polskiego St.
- Object 2 – the area of the former furniture factory on Jagiellońska St.
- Object 3 – the area of the former infantry barracks on Jagiellońska St.
- Object 4 – the area of the former infantry barracks on Artyleryjska St.

These objects were selected as representative of the actions taken in recent years within the city by the local authorities and private investors in the field of revitalisation of the city.

It should be pointed out here that in Olsztyn enacted the Urban Revitalisation Programme Olsztyn 2020. Such a document has been obligatory in Poland since 2015, with only a few cities having insigated revitalisation programmes before that time. Olsztyn was one of them. The analysed objects were included in the Lokalny Program Rewitalizacji Obszaru Miasta Olsztyn na lata 2007 – 2015 (Local Revitalisation Programme of Olsztyn for 2007–2015). The areas with objects 1, 3 and 4 are in Action 4.3: “The restructuring of the Former Military and Post-industrial Areas”. The specific objective of this activity was to increase the economic and investment attractiveness of former military and post-industrial areas, and to give them a new social and economic function. Whether these effects were obtained, and how they fit into the sustainable development of the city, has been examined by the authors of the article.

In the studies, the authors analysed the Lokalny Program Rewitalizacji Obszaru Miasta Olsztyn na lata 2007 – 2015 (Local Revitalisation Programme of Olsztyn for 2007–2015). This document identified areas in which former military and post-industrial objects were located, and for which revitalisation was recommended. Out of a dozen or so possibilities, the authors chose the four aforementioned objects for further examination. The specific guidelines in the field of urban revitalisation were checked for them. To determine their current state, a terrain interview with photographic documentation was performed. For an objective assessment of the analyzed objects interviewed environmental was realised by the authors with their owners, residents, and concerned people met during the field vision. In any case, the authors were talking with about 30 people. The survey included the following questions: 1. How do you evaluate the revitalisation of the object (possible answers: very positive, positive, negative, very negative); 2. Please indicate the positive effects of the work carried out; 3. Please indicate the negative effects of work carried out. Thanks to that, it was possible to draw up a relevance rating and the effectiveness of the revitalisation work carried out. Their opinions were helpful for authors to know the social point of view on the effects of the revitalisation of these objects. To ensure the assessment was fully objective, the authors also found information on local media. Expert method was used here, because the authors used opinions expressed about the analysed objects, by such people as city planners, architects and many other people not associated with the revitalisation. So obtained opinions have been treated as expert opinions. The final score was the result of a combination of carried out surveys, expert opinions and the authors conclusions obtained through analysis of objects. Special emphasis was placed on the assessment of the effects of the spatial, social, economic and environmental, to determine the extent to which the analysed activities comply with the principles of sustainable development, in social, economic and environmental terms.

Object 1 – the area of the former brewery at Wojska Polskiego St.

The brewery on Wojska Polskiego St. in Olsztyn was opened in 1878. The brewery was expanded and modernised in the years: 1881, 1886, 1888 and 1896, when the administration building was also built. The malt house was built in 1881, the malt drying house – with its distinctive chimney – ten years later. The brewery equipment was operated by steam engine. Olsztyn brewery was destroyed during World War II. However, part of the equipment was preserved. After World War II, the property underwent a complete refurbishment and production was continued. In 2007, the brewery suspended production and was closed. All the equipment was dismantled and sold, and the buildings and area were bought by Ostródzkie Przedsiębiorstwo Budowlane (a private developer). Some buildings were demolished and in their place a housing estate was built with apartment blocks, named “Breweries Park”. The former malt house was adapted for housing; the administration building remains partially used and intended for sale; the preserved brewery buildings were entered to the register of monuments in 2008. The current state of the object is shown in Figure 1.



Fig. 1. Housing estate “Breweries Park”  
Photo by Rzasa K. 12.2016

In an abandoned industrial area a modern housing estate was created. The new buildings relate architecturally to the old ones, and the old ones have been renovated and given a new function. The investment, due to the very good location relative to the centre of the city, was met with great interest, and the area has been developed in a very aesthetic way, together with the green areas. The new buildings fit in the surrounding objects very well and the revitalisation has been met with a very positive response by both urban planners and the inhabitants of Olsztyn.

The above photo shows the renovated building of the former malt house (visible on the left side of photo) and in the vicinity is one of the modern buildings with 215 flats.

Object 2 – the area of the former furniture factory on Jagiellońska St.

The furniture factory on Jagiellońska St. was established after World War II. In the 1970s it was one of the better manufacturers in the city. The market transformation and increasing competition led to its collapse in 2002. It was not a monument protected by law. The object fell into disrepair by several years, and was acquired by private developer IPB. After obtaining the required permits, it began the implementation of a new housing estate “Estate Przylesie”. It is a complex of eight apartment buildings including 420 apartments with 65 individual underground garages, 27 business premises and 16 semi-detached houses on Borowa St. At present, work is underway on the last apartment building, which will be finished at the end of 2017. The rest (the remaining seven apartment buildings and detached houses) have already been built and are inhabited. The current state is shown in Figure 2.

This abandoned and neglected area has been transformed into a modern, friendly residential object, with complete infrastructure, ample parking places and areas for relaxation and recreation. The apartment blocks are unique, somewhat styled on old, art nouveau tenements, finished with pastel colors and fine facades and staircases. An interesting solution comes in the form of the inner courtyards, which are well-designed and very good places to relax and rest. These are secure areas for the youngest residents to play there too. The courtyards also have various elements of small architecture and pedestrian routes and everything is completed the proximity of a pine forest, creating a unique, friendly microclimate. The location of investments is characterised by its convenient communication routes, complete infrastructure, the availability of services and shopping facilities, the proximity of schools and kindergartens, good public transport connections with the rest of the city by bus lines, and the proximity of sports and leisure facilities, bike paths and the forest. This area was not directly mentioned in the Local Revitalisation Programme, but the changes that have made and are continuing, do fully correspond to the recommendations for this type of object. The carried out changes have been very positively accepted by the inhabitants of the city.



Fig. 2. Housing estate “Estate Przylesie”  
Photo by Rzasa K. 12.2016

There are no preserved remnants of the earlier industrial object on the area of the newly established housing estate.

Object 3 – the area of the former infantry barracks on Jagiellońska St.

The military barracks on Jagiellońska St. were built between 1906 and 1911. The object was intended to station 151 Infantry Regiment. The barracks were located on the edge of an existing urban area. The buildings were situated around a rectangular square. These were a three-storey building with upsized wings, covered hipped roofs with small

turrets made of red ceramic brick and yellow plaster. Some barracks housed workshops, garages and a gym. After enlargement, a building was constructed for families of non-commissioned officers and a staff block. The barracks stopped functioning at the end of the 20th century. Although the barracks complex was included in the municipal records of monuments and was protected by law, the buildings underwent systematic devastation.

In 2012, a supermarket and car park were built on the edge of the object, and on the former parade ground a private developer built a four-storey apartment block with 236 flats (“Wawel Estate”). One of the buildings (visible on the left side of photo in Figure 3) was completely renovated and turned into a commercial building. Two other smaller buildings also are used for commercial purposes. Other buildings of the former barracks (unfortunately most of them) are deteriorating further. The current state is shown in Figure 3.

The area of the devastated military barracks established the perfect investment for people who value comfort. The estate on Jagiellońska St. is very well developed in terms of infrastructure. It is an excellent transport hub, located close to the centre of city, and close to kindergartens and schools. All these things mean the estate is an ideal place for families. Each apartment has its own parking space in the underground garage, which is nowadays an important asset. A supermarket was built near the residential buildings, and now enjoys great popularity among the locals. This part of the city had previously lacked such a facility. Adapting commercial premises in old renovated buildings is also worthy of praise. There are a variety of services on offer to the all residents there. The only potential cause for concern is that there are still the old decaying military buildings fairly close to the new done-up ones, but much more funding would be required to transform these too. This last element is a downside to the area. Some experts have stated that the existing buildings should be renovated first, and only then new ones should be built. This is certainly a sensible suggestion, and one has to hope that in the coming years these buildings will be subject to revitalisation.



Fig. 3. Housing estate “Wawel Estate”  
Photo by Rzasa K. 12.2016

Object 4 – the area of the former infantry barracks on Artyleryjska St.

The barracks were built between Artyleryjska St. and Leśna St. in 1897–1898. They were extended in the period from 1910 to 1911. There were buildings for a regiment of machine guns, a gunsmith building, garages and warehouses of ammunition, as well as workshops. The barracks were divided into two parts, one of which (on the corner of Forest St. and Artyleryjska St.) was called “Hindenburgs barracks”. After World War II, the barracks were partially used by the military, but, especially after the political changes in Poland, were systematically dilapidated. Starting from 2003, further buildings were entered to the register of historic monuments. An important date for the object was the year 2004. One of the two largest buildings was bought by a private university – the Kotarbiński Higher School of Computer Science and Management (OWSIiZ). The building was completely renovated, but without changing its architecture, which was one of the recommendations of the Provincial Cultural Heritage Inspector. The building was adjusted to its current needs and regained its former glory. In April 2005, the university bought another big building on the area of the former complex of the barracks. In May 2007, thanks to funds obtained by the university and earmarked for the project called the “Revitalization of the Powojkowego Building for Teaching OWSiZ in Olsztyn”, this building also started the overhaul process in order to be adapted for teaching purposes. Today the building has also regained its former glory (it is shown in Fig. 4). In turn, the building previously bought by the university today houses the

headquarters of the District Court in Olsztyn – V Commercial Division. The current state of University building is shown in Figure 4.

This unused object has been turned into a popular educational establishment and a valid administrative building. The great advantage of that place is the nature of the existing historic buildings, as they have been adapted to completely new purposes. The analysed object is in a great location, very close to the railway station and also well connected with the city centre. The remaining buildings of the barracks are being systematically renewed and used for a variety of functions (services and residential). In the vicinity of the analysed object a new housing estate has been constructed. The area is developing a whole new and improved image. It turned out that the revitalisation of the analysed object really kick-started the process of revitalising the entire barracks complex in the area. The effects of that are already being seen today. Service objects and modern flats are being created in historical buildings, and within a few years, the area will certainly have changed beyond recognition.



Fig. 4. The Kotarbiński Higher School of Computer Science and Management  
Photo by Rzasa K. 01.2017

## Conclusions

The rules included in the Local Revitalisation Programme of Olsztyn for 2007–2015 have been implemented in all the analysed objects. In all these cases, you can see the increased economic and investment attractiveness of former military and post-industrial areas. There are new social and economic functions too. Detailed conclusions about the individual objects are provided below:

Object 1 – the area of the former brewery on Wojska Polskiego St.

About 95% of respondents rated revitalisation of this object very positively, indicating as the most positive effects: the behavior of historical architecture, fit new objects to the historical buildings and good location for new housing. Similar conclusions can be drawn from the opinions of experts. Having regard to these opinions and their own conclusions authors evaluate this revitalisation very positively.

Object 2 – the area of the former furniture factory on Jagiellońska St.

About 75% of respondents rated revitalisation of this object positively, indicating as the most positive effects: a good location for the new housing, using plants in land use, the use of previously unused and neglected areas. As minus, also indicated by experts, respondents indicated a deterioration of travel conditions to the center of the city, due to an increase in the number of commuters. Having regard to these opinions and their own conclusions authors evaluate this revitalisation positively.

Object 3 – the area of the former infantry barracks on Jagiellońska St.

About 70% of the respondents rated revitalisation of this object positively, indicating as the most positive effects: a good location for new housing and increased the number of available commercial services. As minus they pointed out lack of comprehensive revitalization of the entire barracks. Experts have confirmed these results. Having regard to these opinions and their own conclusions Authors evaluate this revitalisation positively.

Object 4 – the area of the former infantry barracks on Artyleryjska St.

About 90% of the respondents rated revitalisation of this object very positively, indicating as the most positive effects: the location of the objects near the train station and the behavior of historical architecture. The experts opinions

look similarly. Having regard to these opinions and their own conclusions authors evaluate this revitalisation very positively.

All the analysed objects, having undergone revitalisation bringing them properly in line with the ideas of sustainable development. Analysed areas prior to carrying out the work of revitalisation were unused and neglected, so their value was very low. As a result of the changes made, the areas have grown in value, in terms of both economic (investors have sold or use most of the resulting objects) and socially (positive feedback from residents of Olsztyn and experts), offer social functions and environmentally-friendly modern buildings. As of today, in the described objects over 90% of the flats were sold, about 85% of business premises were used (informations from investors). There are new jobs, and new services in the area – both commercial and social – have increased the amount of housing. These objects are a response to the needs of existing and new residents of Olsztyn. Thanks to the use of land on the city's area, the local authorities no longer need to look for new areas on the outskirts of Olsztyn to develop. These areas are in many places environmentally valuable, so it is also an aspect of sustainable development – it can be one of the forms of environment protection for future generations. It is worth, in the end, also indicating that the described objects are not the only ones of their kind in Olsztyn. Recent years have seen various other examples of positive investments being implemented in Olsztyn. Here you can indicate such objects as: the revitalisation of Central Park, the revitalization of the boiler house at University of Warmia and Mazury in Olsztyn, the revitalization of the Raphaelsohns' Sawmill, the revitalization of the surroundings the Castle and many more. This makes the city of Olsztyn an example to follow for a variety of other cities in Poland as well as in Europe.

## References

- Chmielewski, J. M. 2010. *Teoria urbanistyki w projektowaniu i planowaniu miast. Wydanie 3*. Oficyna Wydawnicza Politechniki Warszawskiej.
- Næss, P. 2001. Urban planning and sustainable development, *European Planning Studies* 9(4): 503–524.
- Lokalny Program Rewitalizacji Obszaru Miasta Olsztyn na lata 2007–2015*. Urząd Miasta Olsztyn.
- Pearce, D. 1993. Sustainable development and developing country economies, in R. K. Turner (Ed.). *Sustainable Environmental Management*. London: Bellhaven Press.
- World Commission on Environment and Development (WCED). 1987. *Our Common Future*. Brundtland Report.
- Wytyczne Ministra Rozwoju Regionalnego w zakresie programowania działań dotyczących mieszkalnictwa. Narodowe Strategiczne Ramy Odniesienia 2007 – 2013*. 2008. MRR/H/18(2)/08/08. Minister Rozwoju Regionalnego. Warszawa 13-08-2008
- Zavadskas, E. K.; Kaklauskas, A.; Vainiūnas, P.; Šaparauskas, J. 2004. A model of sustainable urban development formation, *International Journal of Strategic Property Management* 8(4): 219–229.
- The Act on Revitalisation*. 2015. Parliament. Journal of Laws from 2015, No 1777
- The Act on the Protection of Monuments and the Care of Historical Monuments*. 2003. Parliament. Journal of Laws from 2014, No 1446 as amended
- The Act on Land Development and Zoning*. 2003. Parliament. Journal of Laws from 2015. No 199 as amended.