

**REBIRTH OF POSTINDUSTRIAL ARCHITECTURE
IN POLISH TOWNS.
Adaptation of a historic building of a power station into
a modern art gallery in Radom**

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The transformation of city centres in Poland has taken various forms over the last 20 years. The specificity of the physiognomy and historic-spatial conditions imposes a certain direction of those transformations. They shape the public space of the modern towns and cities starts with glass-sky-scrapers to various forms of revitalisation of old buildings. More and more frequently, the space is enliven with splendor of newly revived industrial facilities. The adaptation of the existing industrial facilities to new functions creates new cultural space thanks to their individual and unique quality.

Keywords: post-industrial architecture, industrial architecture, adaptation, renovation

1. INTRODUCTION

The existing facilities of industrial architecture occur in many Polish towns, and definitely in the bigger ones. Their beginnings in Europe should be searched for in the times of Industrial Revolution. In Poland, though, slightly later – in the period starting from the second half of the 19th century up to the beginnings of the 20th century. They owe their exceptional architectural forms to the functions they were intended for. They housed industrial plants, technical appliances, and machines therefore they were built from modern (as for those times) building materials. Large areas were obtained thanks to the application of large-span elements forced the designers to use the latest structural solutions. Seemingly crude elevations, not devoid of architectural detail though, were often limited to the use of clinker brick walls. A large floor area of these objects extorted the usage of large glazed areas on facades.

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Fig. 1. Centrum Manufaktura in Łódź / source: www.wikipedia.org / HuBar /

Adding considerations for shaping the facade of these facilities in the form of repetitive axial rhythms of window components and technological appliances, accuracy has been achieved while measures have been conserved in dealing with architectural expression.

The traditional form of industrial plant is a high one-storey production hall of a frame construction. It can be concluded that the buildings completed by the 50s of the last century were characterized by a smaller scale of building [1].

The central location of a property and access to the object from all sides allow the use of simple adaptation measures. The location of these objects once on the periphery, today as the progressive urban development processes, has become their undoubted advantage. Being located within the intermediate zone of cities but still in the city centre, they allow better access for the dwellers. Industrial facilities distinguish not only by its architecture, often for many years they served people with their proper brands.

With the development of technical ideas, the equipment of these facilities has become obsolete or sometimes even useless. Technical wear and progressive collapse of the building led to their depreciation in the city structure [8]. Some of them had a chance to be classified as historic monuments and thus to survive, others have been destroyed for the brick. Therefore, in order to restore them to their former glory, it is necessary to carry out technical expertise and implement conservation procedures preceded by adequate research and design studies [2].

2. POST-INDUSTRIAL ARCHITECTURE – A PROBLEM OR A CHANCE?

Abandoned industrial sites common in most Polish cities can be a significant problem for the owners. Significant areas of the parcels and their usable dimensions generate considerable costs, starting with taxes, through exploitation costs to large financial expenditures related to the adaptation of these objects to new functions.

Nowadays, in the times of growing commercialization, it is not easy to find new purposes or roles, which the objects could provide. Small objects are eagerly adapted (finding quickly new owners), due to their function and greater spatial clarity.

The term - post-industrial architecture - is highlighting the unique qualities of objects and granting them new functions. The new value that the buildings present through their presence in the urban development is also a new phenomenon that can best be explained on the example of Silesian towns. Giving these objects new values enables us to use another term – the renaissance, i.e. their rebirth to their new roles.

3. CONTEMPORARY TENDENCIES IN INDUSTRIAL BUILDING RENOVATIONS

As a large-scale objects: steel mills, coal mines with shafts, mills, breweries, power plants, etc., these buildings dictate their application and adaptation possibilities.

Current trends to design cost-effective architecture, i.e. crude not to say minimalistic, present themselves as some kind of opportunity for the development of these facilities. Non-plastered walls with regular joints, exposed bare structural components, steel riveted lintels, segmental lintels, ornamental cast iron cantilever elements all create a unique appearance as well as the unique atmosphere of the interior [6].

Objects of residential architecture created as so-called lofts have long ceased to be the homes for people from elite and avant-garde. They are increasingly becoming apartments for young, creative people, seeking unconventional solutions and innovative adaptation of interior design. At the beginning of the twenty-first century, such apartments were in demand and were more willingly bought than single-family houses. The situation changed radically with the advent of the economic crisis and the impoverishment of the young.

The next group of buildings includes large objects of a commercial nature. Enormous commercial spaces, so-called “galleries”, began to quickly conquer urban spaces forming complexes - centres which, with their

dimensions, go far beyond these industrial facilities. Their task is to create an atmosphere and ambience, to arrange the space, and sometimes even to give them their old known brands. Obtaining a sufficiently large space in city centres can be a problem, hence the adaptation of the whole post-industrial complexes. Supplemented with essential multi-level garages, they are becoming places of social life for meetings, shopping, and sometimes even spending free time, just modern temples of commerce.

Another group comprises objects for exhibitions and museums. They have recently been willingly erected because of the possibility of obtaining a grant from EU programs. Here also providing an appropriate architectural expression must be combined with the specific nature of the interior design and with the detail reproduction. Huge areas of former halls, supplemented by natural and artificial lighting are ideal for this function.

Industrial complexes of an urban-nature character, seem to be completely different objects. Factories hidden on the outskirts of the city or beyond their borders, pose a challenge for designers in relation to the created cultural theme parks. The connection of individual objects into a group surrounded by greenery while providing them with new ideas, causes that they may be used for various purposes such as staging of historical events or conducting a lesson.

The last group consists of individual objects such as water towers, gas tanks, small production workshops, forges, which are often appreciated by private investors. Often used as a catering points or small hotels are a real pride of the city. In the case of water towers one can not forget about the unique composition features such as:

- clarity in the landscape and the silhouette of the city as the spatial and altitude dominant
- as a convenient central location in the city
- often a combination of functions and viewpoints.

Table.1. Systematics of objects with their attributes and location.

Group of post-industrial objects	Scale and features	Location within the town borders	Examples of realization
1	2	3	4
Lofts and dwelling houses	Multi-storey objects with numerous communication tracts or single objects	Throughout the entire city	Throughout the entire country, vast majority in big cities
Commercial and service centres	Multi-storey objects with numerous communication tracts or complexes of objects	Outskirts but also downtown	- "Centrum Manufaktura" in Łódź - "Stary Browar" in Poznań - "Alfa" in Białystok

Exhibition – museum	Multi-storey objects with numerous communication tracts	Throughout the entire city	- Museum of Warsaw Uprising - “Fabryka Drutu” in Gliwice - “Fabryka Trzciny” in Warsaw - WSP Gliwice
Industrial complexes of urban-nature character	Complexes of objects surrounded by greenery	Outskirts or outside the city	Explozeum w Bydgoszczy
Catering and hotels	Single, small, sometimes combined with a viewpoint	Outskirts but also downtown	Throughout the entire country e.g. water tower in Wrocław

4. THE IMPORTANCE OF POST-INDUSTRIAL OBJECTS FOR URBAN SPACE

Functioning for decades, these objects are identified with their particular location. Clear and recognizable in their distinctive architectural form, they create public spaces.

Through their functional features they indirectly influenced their surroundings. Therefore, it is possible to differentiate separate industrial zones of the city, sometimes whole town districts. Larger industrial facilities were surrounded by housing districts but also by the necessary social infrastructure. More recent extensive industrial units built in the last 50 years were characterized by scale only.

Today, after the period of economic transformation, these urban areas may present a problem of extensive revitalization. Single older objects are in a slightly different situation. There is a number of investors who often and gladly place their businesses and offices there. The distribution of industry on Polish map allows identification of specific areas with a large concentration of these objects such as Silesia, Łódź and surroundings, Poznań and Białystok.

The Silesian agglomeration can even be referred to as a post-industrial city which is positively being transformed before our eyes, improving its public space by applying individual innovative solutions involving these objects [4]. Modern objects with heterogeneous functions located in defined zones or town districts may, however, be understood as „hybrid buildings” without a strong leading function [7]. These are the discussed group of objects, among which it is impossible to distinguish specific mono-functional buildings. Their immediate vicinity, spatial and transportation relationships lead to the transformation of the public space.

In the case of higher concentrations of such objects, the phenomenon can be defined as space hybridization. The new urban phenomenon, which has been poorly researched, can be perceived as both positive and negative. However, the scale of the newly built hybrid buildings may give rise to much controversy.

5. MODERN ART CENTER “ELEKTROWNIA” IN RADOM

Medium-size towns with up to 250 thousand inhabitants preserved their character of urban building in most cases in Poland while maintaining an appropriate scale. The industrial objects, built decades ago, are mostly single buildings.

One such example is the building of the former power plant in Radom. Located in the city centre, it managed to establish its position in the town's cultural landscape. Surrounded by tenement houses, it exhibits its architectural qualities characteristic for industrial architecture.

Due to the lack of ideas of how to use it, on the one hand, and the lack of a large showroom or a museum on the other hand, Local Authorities of Mazowieckie Voivodship decided to create an exhibition centre of contemporary art. The main part of the historic building consists of three interconnected blocks, two of which are interconnected buildings, several meters high, which form the main body the object. It was extended by a bungalow building with a lean-to roof. The subject building, made of brick, with thick solid walls with characteristic large areas of glazing, is a monolith [5] of a characteristic recognizable lofty silhouette.



Fig. 2. Modern Art Centre “Elektrownia” in Radom,
view from Traugutta Street /source www.wikipedia.org /Gazelle/

The building is a place where electricity and heat for the town were produced for many years.

Its origins date back to 1901 when the town was lit with electricity from this power plant. Most of the technical equipment i.e. generators and other were sent to Russia yet before the outbreak of the First World War.

The property was taken over by the Radom Community was not until after the end of World War II. In the years 1956 to 1963, the abandoned building fell into disrepair. From 1963 to 1998, it served as a municipal heating plant. In the subsequent years, it functioned as conference facilities of the city's enterprise Radomskie Przedsiębiorstwo Energetyki Ciepłej, until 2005 when its ownership was transferred to the Management Board of Mazowieckie Voivodeship.

5.1. Design solutions for competition

The aim of the project selected in competition was to combine the existing historic building with modern architecture.

Static heavy masonry hall was supplemented by a number of smaller black dynamic elements made of perforated black sheet in the new part.

The created kind of counterbalance between the old representative part and the modern exhibitional part can be felt both in the spatial composition of solids and in the interior design. The entity is united with the conception according to which the exhibitional part enters the open space of the cinema terrace and further with the open landscape of the park on a slope.

The intermingling art and street spaces should be realised by transparent forms of the passageways in a form of blocks based on triangles.



Fig. 3. A winning model of the design competition - CSW "Elektrownia" in Radom / source www.elektrownia.art.pl /

The historic brick building is designed to serve as the building entrance. A skylight, clearly underlined with a longitudinal axis in the ceiling, is designed to emphasize the external axis of the composition.

The interior of the facility should be read as an element unifying the particular blocks of buildings. Compositional axis of the skylight leads the visitor to a place which is probably the most important i.e. education part. The intermingling of the spaces in this part is coupled via a staircase lit from above. Going further we have a chance for a wider opening onto the park.

After analysing the project, it can be stated that the authors' aim was to create an attractive friendly place in the city, which would be designed not only for art celebration but also for relaxation and education.

6. SUMMARY

The apparent fashion for postindustrial style allows restoration of the architectural splendour of many objects.

The success of the adaptation project is determined by such factors as: the size, and the scale of building area, the location in the town's structure, the future function and financial expenditure on renovation of the facility.

The most appreciated fact is that, apart from public functions, the new objects are given more and more frequently residential functions. The popularity of post-industrial architecture can be explained not only in terms of fashion for frugal style but also in terms of the use of natural building materials, designed open interiors as well as of the external decoration rich in details. The restored architectural details may receive their second lives in new adaptations, thus proving the craftsmanship of their builders and the contribution to the cultural heritage of the towns.

The described characteristics of the facility in Radom in light of general background, presents a less-known example of the development of post-industrial buildings and its specificity.

Summarising, it should be stated that the new realisations of post-industrial architecture provide a modern look to the restored facilities, raising at the same time their status, and serve as positive examples of the revitalization of the towns. New functions of post-industrial architecture result in its ennoblement and sometimes its appreciation. From the point of view of utilitarian architecture, these buildings are entering into the world of art architecture [3].

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RENEANS ARCHITEKTURY POSTINDUSTRIALNEJ W POLSKICH MIASTACH

Adaptacja zabytkowego budynku elektrowni
na Centrum Sztuki Współczesnej w Radomiu

Streszczenie

Referat stanowi próbę podsumowania tendencji w renowacji i adaptacji architektury przemysłowej w Polsce .Na wstępie autor odnosi się do zastosowanej terminologii i uzasadnia tytuł referatu. Jest to również próba dokonania systematyki nowych obiektów oraz ich lokalizacji w obrębie miasta (architektura przemysłowa czy poprzemysłowa). Wprowadzane nowe funkcje stają się szansą w tworzeniu nowych przestrzeni publicznych, ale również kreacją w budowaniu nowych form architektonicznych (renesans architektury). Pozytywne ale również negatywne zjawiska związane z alokacją poszczególnych obiektów stanowią podstawę do kształtowania przestrzeni miejskiej. Niezależną częścią referatu jest próba oceny rozwiązania architektonicznego realizacji konkursowej adaptacji budynku elektrowni na potrzeby centrum sztuki współczesnej jako przykładu realizacji w miastach mniejszych. Stanowi to również potwierdzenie tendencji do odradzania się architektury poprzemysłowej w zupełnie nowych odsłonach i nowych wartościach przestrzennych.