

# Searching for new spatio-functional housing estate solutions of Witold Cęckiewicz's designs and projects

## Abstract

This paper discusses the search for a new quality of housing environment in the housing estates designed and built by Witold Cęckiewicz in 1961–1983. This was a special period in the history of the formation of the urban fabric in Poland after the Second World War. It involved a departure from the prevailing Socialist Realist city planning concepts toward contemporary Modernist solutions. They were, on the one hand, ideologically open to residential development immersed in greenery and oriented to the needs of residents, but in practice were limited to impoverished spatio-functional layouts with lowered standards, caused by economic and technological determinants. Witold Cęckiewicz's unique explorations are worth analysing, remembering and using in the further evolution of architectural thought.

Keywords: multifamily housing estates, Witold Cęckiewicz's designs, public housing estate space.

## Motto

'(...) Architecture – an idea enchanted in form  
how necessary it is to keep the reins of imagination  
in order to discard superfluous ideas  
leaving those that  
simplicity captivates others (...)'<sup>1</sup>

## INTRODUCTION

Witold Cęckiewicz – a full professor at the Faculty of Architecture of the Cracow University of Technology and an honorary doctor of this University – was a significant figure in the world of architecture in Poland, especially in Kraków. He made key contributions to the post-war history of exploring the forms of built space, as well as throughout almost the entire twenty years of the twenty-first century. As a most prolific designer, he exerted enormous influence on the space around us through his built works – works of architecture, especially monumental architecture, and indirectly through his studies and research, which was integrally connected with his activity as an educator of many generations of architecture students. As the supervisor of more than 600 Master's thesis projects of young architecture students and 30 doctoral theses, he had a direct personal influence on the formation of their creative personalities.

He began his adventure with architecture very early – as early as 1949, before he had even finished his architectural studies at the Kraków Faculty of Architecture – one of the Technical Faculties of the AGH University of Kraków, established immediately after the war. It was then that he obtained a commission for his first architectural design, one which would go

on to be executed – the DOKP Office Building at the Mogilskie Roundabout in Kraków (design 1949-1950; execution 1951-1953) (Cęckiewicz, 2016). This project confirmed his excellent mastery of architectural skills and his ability to create an atmosphere of a monumental form at the crossroads of the city's arterials, which was to be the new gateway to the city at the entrance from Nowa Huta. Almost immediately after his graduation (1950), further commissions – for the Children's Holiday Centre in Kowaniec near Nowy Targ (design 1951-1953; execution 1953-1958) and for the building of the Kindergarten – Preventory in Przegorzały (design 1953; execution 1953-1955) – were a confirmation of Cęckiewicz's artistic talent and ability to place a contemporary interpretation tradition-referencing form into an open landscape context (Cęckiewicz, 2016). It is also noting his submission for the competition for the design of the surroundings of Wawel Castle, jointly developed with Józef and Witold Korsi, which included an urban and architectural study of the redevelopment of a part of Kazimierz and plans for Nowe Dębniaki (1953 – honourable mention) (Cęckiewicz, 2016). These creative achievements and Witold Cęckiewicz's experience as a designer and builder of architectural works led him to be entrusted with the position of Chief Architect of

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the City of Kraków, which he held from 1955 to 1960. An in-depth understanding of the needs of the city as it developed after the war, of its unique determinants related to its historical heritage, the local microclimate, the terrain, the functional linkages with the surroundings – provided the basis for his academic, creative and didactic activity related to urban planning.

Witold Cęckiewicz was head of the Chair of Estates and Green Areas at the Faculty of Architecture of the Cracow University of Technology, and later the founder and head (1970-1994) of the Institute of Urban Design and Spatial Planning, later transformed into the Institute of Urban Design, and head of the Chair of Urban Composition at this institute. The research he and his colleagues carried out at these bodies was integrally linked to teaching and design. During this period, he created numerous competition, technical and ideas designs for housing estates – for Kraków: the Podwawelskie Estate (design 1963; execution 1965-1970), the Mistrzejowice Estate (design 1963-1965; execution 1965-1980), the Lotnisko – Czyżyny Estate (design 1968). A series of competition works for 'Estates of the Future' (1974) were a testing ground for new urban planning standards, developed in the study and research work and used in the designs for the Bytom-Radzionków estate in Katowice, Zegrze-Rataje in Poznań, Chełm-Kowale in Gdańsk, Glinki in Szczecin, and Wieliczka in Kraków. All of these works were awarded prizes or distinctions. Further studies and research allowed the Professor to take up the challenge of designing a new urban design proposal and zoning standards for the Józef Chełmoński Model Residential Unit, to be located in the Bronowice Wielkie Complex in Kraków, as a part of Government Programme PR-5 (1978-1983).

### GOAL OF THE STUDY, RESEARCH METHOD

The goal of this study was to draw attention to the original exploration of urban solutions for residential

complexes in Witold Cęckiewicz's designs and built projects, which had been aimed at improving the quality of the housing environment.

The research methodology uses literature research, in situ research, information obtained in working conversations and interviews directly from Witold Cęckiewicz, and the knowledge of one of the Authors of the article, a direct participant in many of the analysed design works – a member of the author's team.

### WITOLD CĘCKIEWICZ'S KRAKÓW HOUSING ESTATE DESIGNS AND PROJECTS FROM THE 1960S AND 70S

Moving away from building a housing environment using classical urban city blocks and adopting Modernist principles required an entirely different approach to thinking about forming space and about design. Multi-storey housing blocks allowed, with high development density, to free up surrounding areas and assign to them a recreational role – as green public spaces. The enticing vision of apartment blocks immersed in greenery became a leitmotif in many housing estates from the second half of the twentieth century. This is also evident in the completed Kraków housing estates designed by Witold Cęckiewicz, with particular sensitivity to context. One example is the Mistrzejowice housing complex, designed for 40,000 residents and selected through a competition in 1963.<sup>2</sup> The proposed pattern of public spaces followed an urban layout that formally referenced a branching tree (Wiśniewski, 2018). The complex was divided into four zones – four separate but interconnected neighbourhoods, whose names initially referred to the four seasons.<sup>3</sup> Paired together, they were 'threaded' onto a main, connecting transportation trunk in the form of a street with a tram line (Ill. 1).

The main value of the housing estates is their landscape character, based on the qualities of their surroundings, and which thus fit the so-called 'landscape trend'

Ill. 1. Conceptual proposal of the housing estates in Mistrzejowice, design by Witold Cęckiewicz and associates. Archive of Witold Cęckiewicz.





III. 2. Model presenting the conceptual design of the Podwawelskie Estate, Design by Witold Cęckiewicz and associates. Photo by Eugeniusz Wilczyk, from the archive of Wojciech Wilczyk.

(Ostrowski, 1975). This is because they are located on sloping terrain, where long five-storey core-type buildings follow the area's soft contour lines, forming cascades. Clusters of tower blocks, located in the highest parts of each estate, form a counterpoint to this. These clusters consist of twelve- and five-storey blocks. The tallest ones offer views of the city's skyline, as well as of distant areas outside the city. Public space consists primarily of a wealth of green areas – recreational and sports spaces and park alleys that connect them, some of which are pedestrian paths separated from vehicular traffic. The green areas form a continuous and legible system, which includes not only inter-block spaces, but also the greenery surrounding the housing estates, including in the form of Planty Mistrzejowickie Park or Tysiąclecia Park. Also integral to this system are the remains of nineteenth-century forts (Batowice and Mistrzejowice) with lush fortress greenery, which function as a park-like public space.

The complex of four housing estates forms a clear functional-spatial system with access to key infrastructure, i.e., schools, kindergartens and nurseries. Services that activate public spaces are located mainly at major traffic routes and public transport stops. The pavilion complex at the Tysiąclecia Housing Estate was designed as a gateway to the estate.

It should be noted that the final implementation deviates somewhat from the initial design, which was a common practice at the time. Among other things, the central zone in the form of a commercial complex, intended to be the 'heart' of the district, was not built. Nevertheless, the project retained the more important guidelines and development directions and is considered one of the more coherent and original ones to have been developed in Kraków after 1956 (Karpieńska et al., 2015a).

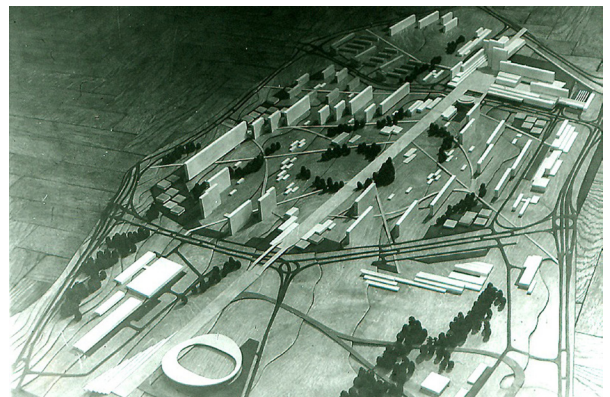
Another housing estate with a distinct formation of public spaces is the Podwawelskie housing estate,<sup>4</sup> where the main 'grid' for these spaces is a composition of three axes (III. 2). The main axis, which passes through the centre of the estate, has the character of a green wedge and is located in the place of a former fortress road. Low and high greenery forms the setting for a strolling route with recreational areas such as playgrounds, sports fields, etc. The church is also an

important compositional accent,<sup>5</sup> designed on the site of a former fortification rampart (Włodarczyk, 2014), taking advantage of the site's gently varied topography. The green 'spine' of the estate is also a link to public spaces outside of it. This is because to the north it leads onto the River Vistula, while to the south it leads to the green spaces along the River Wilga. The other two axes are formed by internal vehicular and pedestrian routes, to which five-storey long blocks of flats are located perpendicularly. Each of the axes, in the southern direction, leads to a group of eleven-storey tower blocks freely embedded in the greenery as well as service facilities and a school. In addition, in the strip perpendicular to the aforementioned axes, a complex of facilities such as kindergartens, a nursery and a service facility was located, which further strengthens the logic and legibility of the urban composition, increasing the quality of the estate's public spaces.

Also noteworthy is the design proposal for the Czyżyny housing estates,<sup>6</sup> selected through a competition in 1968, based on the former runway of the Rakowice Czyżyny Airport<sup>7</sup> located in this area. The runway was the key axial element in this design's urban composition, as well as the main recreational public space with housing estates located on both sides: 2 Pułku Lotniczego and Dywizjonu 303. Both ends of the runway were also highlighted – on the eastern side, the dominant feature was to be a group of tower blocks and a saucer-shaped building, while on the western side – a stadium. Residential buildings with an oblong shape were to duplicate the direction of the strip (III. 3) (Karpieńska et al., 2015a).

The implementation of the housing developments did not begin until the late 1970s, and although it was based on guidelines from the competition, it was incomplete and fraught with many changes. However, the idea of the runway as the main public space remained. Although it did not become attractively developed, it functioned as an open space. The only completed element is the Church of St Brother Albert, designed by W. Cęckiewicz, which is the compositional accent of the urban layout. However, the second decade of the twenty-first century brought significant and undesirable changes to this space, when, with the emergence of a new complex of buildings constructed by real estate developers, the

III. 3. Model presenting the conceptual design of the Czyżyny Estate. Design by Witold Cęckiewicz and associates. Archive of Witold Cęckiewicz.



essence of the former runway as the main public space was irreversibly lost (Szczerek, 2019).

The housing estates under discussion, created in the spirit of Modernism, are characterised by an emphasis on functional and spatial logic and taking advantage of site-specific potential. This increases the attractiveness of the residential environment and its public spaces, which gain legibility and diversity. A kind of hierarchy is also being created, where alongside the main public spaces, more intimate spaces are being created, such as those between the five-storey linear multi-core blocks in the Podwawelskie or Mistrzajowice housing estate. All estates are also accompanied by well-developed transportation services.

Undoubtedly, from the time the estates were established until now, their spaces have changed in character. Their beginnings were often associated with certain inconveniences. A common rule was that residents settled housing estates that were not yet finished. Besides, areas intended for local services, as well as recreational areas, were developed only many years after the start of an estate's occupancy (Basista, 2001). At present, the tall greenery that has grown over the years densely fills the spaces of the estates and provides a scenic setting to the residential blocks. Playgrounds, recreational and sports areas are an integral part of the presented urban layouts. However, as in many housing estates in Poland, the observable annexation of space by cars is an undesirable phenomenon. The insufficient number of organised parking spaces was noticed as early as in the 1970s, the response being a standard that regulated the ratio of such spaces to apartments (Basista, 2001). However, the following decades, and especially the twenty-first century, have seen the further development of motorization and thus the character of the estates' space has significantly changed, as in some parts they have been visibly dominated by cars.

Another disturbing trend, resulting from strong real estate developer pressure and characteristic not only of the presented housing estates, is their chaotic densification with new development. It ruins the functional-spatial logic of the estates' urban layouts and, above all, deprives them of their key potential – green areas. This applies both to the spaces inside estates and their outskirts, which were often designed as peripheral green areas.<sup>8</sup> Therefore, bearing in mind the value of such housing estates as structures that are a testimony to the achievements of late Polish Modernist urban planning, it appears reasonable to place them under due statutory conservation (Gyurkovich, 2021). They have their own unique character and many valuable spatial and functional solutions that enhance the quality of the housing environment.

#### **ESTATES OF THE FUTURE – EXPERIMENTAL PROGRAMMATIC, FUNCTIONAL AND SPATIAL PROPOSALS**

In the chair headed by Professor Witold Cęckiewicz at the Institute of Urban Design and Spatial Planning in the 1960s and 1970s, studies were carried out on residential development standards and principles. These were both studies on mixed development systems – combining various forms of housing, including multi-family

and single-family housing – and studies on standards and principles of housing unit design, aimed at formulating academic foundations for qualitative changes in the programming and construction of housing development in Poland. The studies were commissioned by, among others, the Institute of Environmental Design in Warsaw and were an important voice in the discussion on the future of Polish housing estates. The findings were also used in teaching, during the supervision of course and thesis design projects at the Chair.

Experience from the design and construction of housing estates in Kraków, from academic research on housing environment formation, and competition works, including the Studies on the Model of the Strip System in Warsaw – Ursynów (second prize – 1969; authors: W. Cęckiewicz, W. Seruga, A. Wyżykowski) and Vienna (Wien-Süd Housing Complex, 1970; authors: W. Cęckiewicz, St. Deńko, H. Grabowska, M. Stiasny, W. Susuł), (Cęckiewicz, 2016), were the basis for the formulation of new urban planning ideas and standards that were different from those then in force in our country (in the 1960s and 1970s). They mainly concerned the formulation of new housing and urban planning standards and use programmes, including the provision of housing estates with the necessary uses – commercial services, healthcare services – nurseries, clinics and pharmacies, educational services – kindergartens, primary and secondary schools, facilities for sports and recreation – including buildings and open-air features, recreational greenery near buildings and park and estate greenery. Different principles for the formation of housing complexes and transport services with a collision-free system of access roads and parking zones were also proposed in relation to pedestrian routes connecting residential buildings with an estate's use programme and recreation and leisure areas (Cęckiewicz et al., 1970–1974). The researchers headed by Professor Witold Cęckiewicz were prepared to formulate new principles for shaping the spatial and functional structures of housing complexes that could make a significant contribution to improving resident quality of life. When the open competition for the 'Estates of the Future' was announced, Witold Cęckiewicz and his team of collaborators set about developing design solutions for five sites selected from the seven themes set out in the competitions. All five works were awarded (commended) first, second or third prizes (Cęckiewicz, 2016).

The Professor was always very sensitive to the surrounding landscape of each design task. Among his many sketches depicting urban fantasies, the Professor wrote: 'Every natural landscape, even a seemingly uninteresting one, hides a secret. The essence of the architect's work in transforming it is to bring out its depth or charm, not to destroy its sometimes difficult-to-discover values. Multifunctional buildings serving various forms of recreation create – in harmony with the landscape – an architecture in which the relief of the terrain is its inspiration....' (Cęckiewicz, 2016, p. 150).

In 1974, seven competitions for 'Estates of the Future' were announced on 7 July for the following locations: Chełm-Kowale in Gdańsk, Glinki in Szczecin, Bińki in Bełchatów, Zegrze-Rataje in Poznań, Tarchomin in Warsaw, Radzionków in Katowice and Wieliczka near

Kraków. The organisers of the competition were SARP, TUP, the Minister of Construction and Building Materials, the President of the Central Association of Housing Cooperatives, the Minister of Land Management and Environmental Protection, and the President of the Board of the Polish Association of Construction Engineers and Technicians (Kiecko, 2018). The competition was related to the findings of the Fifth Plenary Convention of the Central Committee of the Polish United Workers' Party (PZPR), where Edward Gierek's new political administration, realising the population's increasing dissatisfaction with the majority's standard of living, especially in terms of living conditions, intended to address this. The dream of changes in housing fascinated many progressive architects (Gądek, 1971). The programme of 'building a second Poland' seemed to be an opportunity to improve Polish housing estates. The 1960s and 1970s in our country can be considered the apogee of the erection of new housing estates and residential buildings. However, there was still a pervasive housing shortage, as the housing construction programme was not keeping up with social demand. Most families did not have self-contained flats – dwellings often housed two or even three generations together. Although the planned amounts of housing construction were exceeded several times, they did not keep up with social needs. For example, in the years 1971-1975, 1,125,000 flats were built in Poland, and the goals of the five-year plan were exceeded by 45,000 flats (Szafer, 1979). The wait for new dwellings in housing cooperatives generally lasted more than ten years, and often much longer. In order to accelerate the development of Poland's housing programme and its execution, as in other People's Democracies, the concrete, stylised panel and block construction, built with industrialised technologies, was introduced between 1966 and 1970. However, the amount of housing built still did not keep up with the demand. There was also widespread dissatisfaction with the standard of housing in newly built housing estates. Five-storey buildings were erected without lifts, the concrete slabs prefabricated in the 'house factories' were far from technically correct – wide gaps were visible between the slabs in the external facades, and sometimes the interiors too were chipped at the corners and edges. Plasterless facades were left unfinished for years. The areas surrounding the buildings, in spite of more favourable urban planning standards than today (Bartnicka, 2010) – the distances between the buildings were initially 2, then 1.5 times the height of a nearby building – did not sufficiently increase the comfort of living, as they were undeveloped for a long time, and access roads or pedestrian routes were left unfinished. The area and functional standards of the flats were difficult to accept (Basista, 2001). In urban planning projects, construction technology imposed great constraints, due to the economy dictated by, among other things, the routes and reach of construction cranes. Professor T. Przemysław Szafer, a well-known critic of contemporary architecture, wrote about this period in housing construction as follows: 'The poor quality of construction processes becomes a measure of not only the quality of housing, but also the general

qualities of estates, their spatial form, the number and accessibility of services [...]. The changes in estate design at the construction stage were caused by the limited skillset and authority of architects, and the abolition of designer and project sponsor supervision deprived them of influence on the quality of the construction work' (Szafer, 1988, p. 7). The former Chief Architect of the City of Kraków, Andrzej Wyżykowski, claimed in 2000 that the problem of housing construction, persisting since the end of the Second World War, has still not been solved in our country, as there is a permanent shortage of 3 million flats (Wyżykowski, 2000). Attempts to save the panel-block estates, made in our country in the 2010s, referenced Western European housing environment standards (Gronostajska, 2010).

The construction of the estates designed via the competition was planned for the 1980s. Although none of them were built, and the previously announced subsequent competitions for 'Estates of the Future' were not held, the designs were keenly commented on in both architectural and planning circles. It was also decided to publicise the competition as an exhibition of the works took place in the still unfinished, but already freshly rebuilt halls of the Royal Castle in Warsaw (Kiecko, 2018). A total of 78 designs were submitted for the competition, of which 37 received awards and distinctions. The competition entries' designers were not constrained by any spatial standards in the layout of the flats, nor by building-to-building distance standards. There were also no restrictions on the use of building technologies. New functional and spatial solutions were expected, and the entrants were free to propose entire use programmes for the estates and to determine land use density and thus the number of inhabitants. The areas for the planned housing estates varied considerably in size; for example, the Bytom-Radzionków housing estate in Katowice had an area of around 90 ha, and Warsaw's Tarchomin an area of around 920 ha. Not all the land assigned for housing estates was free of existing development.

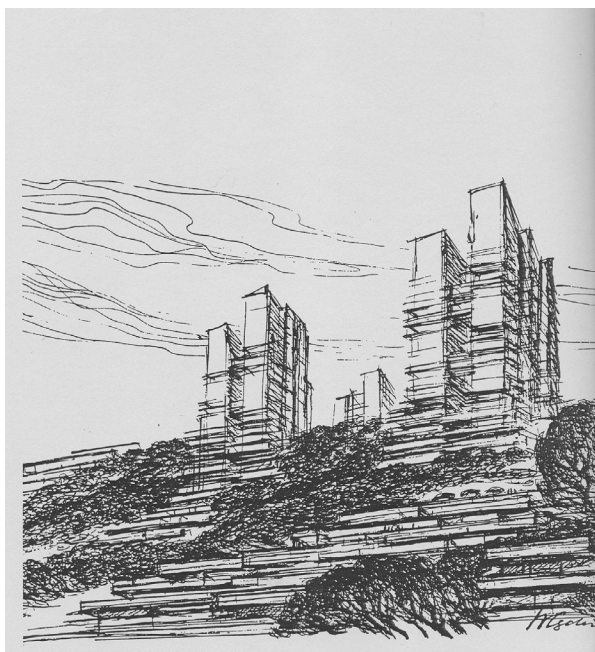
W. Cęckiewicz's team, consisting of Stanisław Deńko, Hanna Grabowska, Jacek Gyurkovich, Wacław Seruga, in cooperation with: Andrzej Lorek and Andrzej Ogorzałek, construction: Jan Grabacki and Jan Gugulski, as well as Andrzej Rudnicki as transport specialist,<sup>9</sup> presented designs for housing estates to five large cities: Gdańsk, Szczecin, Poznań, Katowice and Kraków, all of which were awarded. These were the awards received: Katowice – Bytom-Radzionków estate – tied for first prize, Poznań – Zegrze-Rataje estate – second prize (the first and third were not awarded), Gdańsk – Chełm-Kowale estate – third prize (the second not awarded), Szczecin–Glinki estate – tied for second prize, Kraków – Estate in Wieliczka – third prize (no first and second prizes were awarded in this case); perhaps this is why after the competition the jury awarded this work an additional first-degree honourable mention (*Architektura*, 1975).

For a detailed discussion of the competition proposals for estates of the future, two of the five submissions were selected, whose location is associated with highly varied terrain, which makes it possible to highlight the authors' sensitivity to landscape qualities in the spatial and programmatic shaping of the settlements.

### WIELICZKA HOUSING ESTATE

The spatial proposal of the multi-family development took the form of two strips, running in the northern part of the site, where an extensive service centre was located in the central section. The residential development varied in height. The mid-rise buildings (3–6 storeys) were designed as linear blocks: either core-, corridor- or gallery-type developments. The buildings were characterised by elongated floor plans, which in the urban layout created south-facing interiors with soft curved lines, immersed in an extensive park and recreational zone running east–west through the centre of the complex. Educational facilities – schools and kindergartens – were in direct contact with this zone. It terminated from the west by sports facilities, both buildings and open-air. The residential development was dominated by tall (twin blocks of 10-16 storeys) of varying height, in the form of twin tower blocks, which were situated on a hill in the southern part of the site, constituting a significant dominant feature on the urban scale (Ill. 4). Low-rise, mainly courtyard and terraced development was provided in the central and south-eastern parts of the site. Prefabricated frame construction formed the basic structural system for all the estate's buildings. The ring road system surrounding the estate was integrated into the city's expressway arterials by several interchanges. The main carriageway crossing the site from north to south was delineated underneath the main service centre, providing the necessary technical access and parking for employees and users. The access road system leading to the buildings and car parks was organised in a collision-free manner in relation to the internal recreational spaces in the spatially separated residential complexes and the pedestrian path system, allowing safe access to all elements of estate's use programme. The entire area is surrounded by greenery,

Ill. 4. Conceptual drawing for the housing estate in Wieliczka. Design by Witold Cęckiewicz and associates. Archive of Witold Cęckiewicz



isolating the residential development from the peripheral, external roads (Cęckiewicz, 2016).

### GLINKI HOUSING ESTATE IN SZCZECIN

Residential development is concentrated in three bands: one in the west part of the site, one in the east, and one in between. The basic principle, clear in all the competition urban planning proposals by Witold Cęckiewicz's team, is the use of the terrain's qualities: the buildings emphasise the characteristic features of the contour system and local elevations are emphasised by a group of tall tower buildings. Recessed areas are used for green park zones and recreational areas. A service centre was proposed in the south-west corner of the site. The spatial arrangement in this solution provides for the majority of the amount of single-family courtyard development. A large part of the site has been allocated to sports and recreation areas. The area intended for the housing estate is surrounded by urban arterial roads. An internal bypass road runs outside the plot, at an intersection with the urban arterial roads, to which it is connected by junctions and entries at several points. Access roads with parking zones are located outside the residential complexes, without interfering with the green recreational interiors. Elementary and primary schools, high schools, vocational schools, nurseries, health clinics and playgrounds were envisaged. W. Cęckiewicz's team also designed a separate residential development for seniors in the estates in question, located in a green area (Kiecko, 2018).

In all five 'Estates of the Future' proposals Witold Cęckiewicz's team, the public green park zone penetrates into the interiors in residential complexes, creating semi-public green spaces near dwellings. The whole creates an ecosystem that is consistent in its layout, which, united by public pedestrian paths that are collision-free in relation to vehicular traffic, connecting residential buildings with space intended for leisure and recreation and all elements of the use programme of the estate, constitutes the overarching thought behind the spatio-functional schemes of the estates.

The competition was actually judged positively, although the jurors expected more futuristic solutions in some cases, but the announcement of plans to build these housing estates in the near future in the 1980s in our country may have limited the designers' imagination (Sumień, 1975).

Professor Cęckiewicz believed that designing a large housing estate, i.e., a piece of a new city, was a dream come true for any architect and urban planner, especially one with a track record of building large housing complexes. Four teams from all over Poland had just such an opportunity in 1979: the housing estate in Nowe Tychy was entrusted to Hanna and Kazimierz Wejchert, the housing estate in Białołęka near Warsaw to Hanna Skibniewska, the Zamość-Południe housing estate to Bogdan Jezierski, and the Bronowice Wielkie housing estate (including the Chełmońskiego housing estate) in Kraków to Witold Cęckiewicz. These were to be housing complex projects with new, higher area standards, concerning both the area of the flats and the urban layout (Cęckiewicz, 2016).

### CHEŁMOŃSKI MODEL HOUSING UNIT IN KRAKÓW

Since the time of the construction of Nowa Huta, the development of housing in Kraków was concentrated along an east–west band which stretched along the northern side of the city. The construction of the estate in Bieńczyce and later in the already mentioned Mistrzejowice and Czyżyny gave an impulse to the development of a linear city that would run for almost 10 km. After the creation of housing estates in the districts of Prądnik Czerwony and Prądnik Biały, this composition was to be completed by the Bronowice Wielkie estate. The Modernist complex was to be built along the route of Josepha Conrada and Walerego Eliasza Radzikowskiego streets. The first element of this layout was to be the Józef Chełmoński housing unit, located in the northern part of the area under development, and intended for about 10,000 – 12,000 inhabitants (Ill. 5). The site, shaped like an irregular trapezoidal, bounded from the south by Josepha Conrada Street and from the west by Jasnogórska Street, was to be developed with a diversified residential fabric, including both single-family houses and multi-storey residential towers; the whole was to be equipped with a service complex with an extensive use programme. The axis of this complex was to be the Józefa Chełmońskiego Street, cutting through the area and Sudół Creek. The modern housing estate was to be a development of the ideas used in the competition for the 'Estates of the Future'.

The project emerged as one of four model concepts being implemented in parallel in different parts of the country. Professor Witold Cęckiewicz described the confrontation of these works years later:

'Our project was clearly different from those proposals, because it had everything: total segregation of vehicular and pedestrian traffic, access to all services in such a way that if someone had a small child, they would of course walk them to the kindergarten themselves, but if they already had both a small and a bigger child, the older one could walk the younger one to the kindergarten on the way to school. All cars arrived not along pedestrian routes, but the pedestrian routes led to the transport stops or to garages, which were also placed outside pedestrian zones. Residents did not have to cross the main roads at all; inside the housing estate we designed only traffic-free cul-de-sacs. The entire central core had underground car parks, which were accessible via a multi-level interchange leading from the main road. We planned to equip the estate with all possible services: from nurseries and kindergartens to schools of various levels and retirement homes' (Karpińska et al., 2015a, 65-66).

The Chełmoński model unit was intended as a response to the inconvenience of the housing environment of estates built in the 1960s and 1970s. The rapid development of prefabricated building technology, especially the development of panel technologies during this period, left a strong imprint on the public's perception of the then emerging housing environment. The high pace of construction and the unprecedented scale of the development of the housing fabric was fraught with numerous limitations. The poor quality of workmanship, especially of the common spaces, corridors, staircases,



Ill. 5. Model presenting the conceptual design of the Chełmoński housing unit. Design by Witold Cęckiewicz and associates. Archive of Witold Cęckiewicz.

lifts and entrance areas, was criticised. At the time of handover, new complexes often lacked basic infrastructure, pavements, greenery and service buildings. All these phenomena created a negative image of housing estates.

Design work began in 1977 and took over six years. Several separate versions were prepared, in each the main axis was the line of the Sudół, in one version it was to pass into a floodplain of several watercourses, in another it was to form a pond, yet each time the water was to be accompanied by an extensive green park. On the northern side, courtyard and single-family housing was planned, on the southern side taller buildings were envisaged. The whole was complemented by a strip running from the park to Josepha Conrada Street, where the main service centre was envisaged, with the tallest dominant tower buildings in its vicinity. Particularly impressive was the design featured in one version for the community centre, in the form of a compact block, which to some extent may evoke associations with the religious building designs by Professor Witold Cęckiewicz created in the following two decades.

The diversity of building forms was to be accompanied by a great variety of housing types. Professor Witold Cęckiewicz's team identified three basic problems of Modernist housing in post-war Poland. It was decided to eliminate the bedroom function from living rooms, to introduce a kitchen combined with a dining room and to provide dedicated storage space (Karpińska et al., 2015b). Nearly a hundred different types of flats were

prepared as part of the project, ranging from small flats for one person to flats for large families with an area of nearly 100 m<sup>2</sup>. The project stood out in every respect against the background of housing estates based on typical designs built in Kraków in the period in question (Karpińska et al., 2015a).

The layout was not built. At the time when work on the project began, Poland was already in the midst of a deep economic crisis, which inhibited the possibility of residential development for many years. The imposition of martial law finally ruled out any chance of building the complex, and the site on Chełmońskiego Street remained empty for many years. It was not until two decades later, in the 1990s, that large commercial buildings began to be erected there, and with time also housing developments, yet their urban layout had nothing to do with the proposals of Professor Witold Cęckiewicz's team (Wiśniewski, 2021).

Today, the Chełmoński model unit can be seen as the summation of many years of creative and academic exploration by Professor Witold Cęckiewicz's team within the field of housing. The ambitious project showed that a Modernist housing programme could stand above the functional and formal barriers typical of the period. The unbuilt project also represents an important achievement in the history of the Faculty of Architecture of the Cracow University of Technology. Established in 1945, the university reached a very high academic level during the difficult period of the 1970s and 1980s. Several, competing teams that researched housing development worked there in parallel. It is worth noting that during this period, the university's work included a programme for the development of housing in Iraq (Wiśniewski, 2022). The Chełmoński unit was one of the most advanced proposals of its kind to be developed as part of the university's work.

## CONCLUSIONS

The crisis of the Modernist idea and the advent of Post-modernism coincided in Poland with a political crisis. Multi-family blocks of flats built using prefabricated elements became, in the public view, synonymous with social crisis. Through this lens, Modernism was seen as a cognitive error and a failed experiment. The perspective of a few decades and the change of paradigms that determined the development of housing, the privatisation of housing construction and the subordination of urban design to the rules resulting from ownership divisions made it possible, years later, to take a new look

at the proposals and designs created in the 1960s and 1970s. A full picture of this phenomenon is not possible without analysing the work of Professor Witold Cęckiewicz's team.

Witold Cęckiewicz's designs are an example of a creative and original exploration in search of architectural and urban planning solutions. They had a significant impact both on the surrounding space enriched by completed projects and on the way of thinking about how the built environment is shaped. This was given additional importance by the fact that creative activity was strongly supported by research and also integrated with teaching.

Particularly noteworthy in Professor Cęckiewicz's work is his formulation of new principles for shaping spatial and functional structures of residential complexes. This was reflected in numerous competition, implementation and ideative designs that formulated, tested and implemented new housing and urban planning standards. In the post-war period, at a time when there was a departure from the prevailing Socialist Realist concepts of city planning towards contemporary Modernist solutions, this was an important voice in the discussion on the future of Polish housing estates.

The housing estates that are still in operation today are characterised by their individuality and originality, despite the fact that they bear the stigma of certain constraints resulting from the lower standards caused by the economic and technological conditions of the times in which they were built. They are also residential spaces characterised by a wealth of green public spaces and a sensitive dialogue with the existing context. This makes them a valuable testimony to post-war urban planning and an equally valuable housing environment. However, the present has us face new challenges unique to the twenty-first century. The need for a renaturalisation of cities has been increasingly highlighted in a wide range of urban policies, and terms such Blue-Green Infrastructures or biophilic cities are well established categories in both research and professional praxis. The need to connect our living spaces with the European Green Deal<sup>10</sup> calls on all of us to imagine and build together a sustainable and inclusive future that is beautiful. Witold Cęckiewicz's work can be inspiring in this process, and housing developments immersed in greenery seem to have significant potential in the context of urban ecosystem services<sup>11</sup> and bring us closer to pursuing goals aimed at shaping sustainable, healthy, nature- and resident-friendly housing environments.



## ENDNOTES

- <sup>1</sup> Excerpt from a poem by Witold Cęckiewicz entitled 'Poetry and Architecture', [from:] Witold Cęckiewicz, *Twórczość*, Wydawnictwo PK, Kraków, 2016 p. 385.
- <sup>2</sup> Conceptual design: W. Cęckiewicz, M. Czerwińska, J. Gradulski, M. Rekaszys; execution design: M. Chronowska, J. Chronowski, O. Krajewski, T. Bagiński, S. Golonka, E. Podolak.
- <sup>3</sup> The first to be created, starting in 1967, were the Wiosenne (now Tysiąclecia) and Letnie (now Złotego Wieku) estates, followed in 1974 by two more, namely Jesienne (now Bohaterów Września) and Zimowe (now Piastów).
- <sup>4</sup> Built in 1967–1976 based on an urban design competition (1965 – first prize). Authors: W. Cęckiewicz; in association with: B. Drynda, S. Lewczuk, R. Molin, J. Ślapa, S. Szolc, M. Chronowska, J. Chronowski.
- <sup>5</sup> Church of Our Lady of Fatima; design authors: dr inż. arch. P. Gawor, mgr arch. M. Grabacka, dr inż. J. Grabacki.
- <sup>6</sup> Authors: W. Cęckiewicz and associates (S. Deńko, A. Wyżykowski, K. Bieda, W. Seruga).
- <sup>7</sup> The airport, built by the Austrians, before the First World War, was closed in 1963 due to the expansion of Nowa Huta. This created

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a large, empty and developed area, opening up new investment opportunities.

- <sup>8</sup> Developer pressure and the related problem of overdevelopment with new buildings is affecting many housing estates from the late twentieth century, annihilating their potential. This topic is present in the literature, such as: Szczerek, 2019, 2021, Gyurkovich, et al., 2021.
- <sup>9</sup> Andrzej Wyżykowski collaborated on the Chelm-Rataje estate design and Andrzej Gonciarz on the Zegrze-Rataje estate.
- <sup>10</sup> The European Green Deal is a set of policy initiatives by the European Commission with the overarching aim of making the European Union climate-neutral in 2050. It is a response to the climate crisis and strong environmental degradation processes. Vide: [https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal\\_pl](https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_pl) (accessed: 04.09.2023)
- <sup>11</sup> Urban ecosystem services are defined as the benefits that urban residents may obtain from the nature-based solutions in urban environments. The term, popularised after the Millennium Ecosystem Assessment in the early 2000s, has gained traction among designers, but is still poorly known among the general public.

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