

# SEARCHING FOR CONTEXT ARCHITECTURE

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Architect. A graduate of the Faculty of Architecture at the Silesian University of Technology (1981), there a long-term research and teaching employee. Developer and designer of numerous buildings of residential architecture in Bielsko-Biała, Będzin, Busko-Zdrój, Tarnobrzeg), services (Sfera Shopping Mall in Bielsko-Biała, transfer hub in Bielsko-Biała, Sfera Park in Grodzisk Mazowiecki)), hotels, cultural and sports facilities, single-family houses and residences. Interior designer of public utility architecture (shopping malls, hotels, entertainment clubs, offices). Winner of architectural awards and competitions.

**ABSTRACT:** Today's reality poses new challenges that must change our perception and criteria for evaluating architecture and urban planning. Climate change, political conflicts, the COVID-19 pandemic, growing economic problems create a new context for those who search for architectural solutions. The article analyzes a number of factors that, according to the Author, should be taken into account when designing and their impact on architecture.

Examples from the Author's architectural achievements are analyzed according to these criteria. They are investments of various scale (multifunctional commercial, service, hotel and residential facilities, a transfer center, residential complexes, single-family houses, small service pavilions). Author's conclusions from the research can be treated as important recommendations for shaping today's architecture and urban planning.

**KEYWORDS:** Architecture; Context of the place; Urban planning; Critical regionalism; Order; Beauty

## SEARCHING FOR CONTEXT ARCHITECTURE

Today's reality poses some new challenges that should and must change our perception of functioning and, consequently, criteria for evaluating architecture and urban planning. Surely, changes are necessary for development and progress but their scale and pace are unprecedented and require very well-thought and quick responses (are we sure, however, that keeping pace with them all this race is reasonable?). Climate change, political conflicts, the COVID-19 pandemic, threats resulting from the rapid development of Artificial Intelligence and genetics, growing economic problems create a new context for those who search for architectural solutions. The article analyzes a number of factors that, according to the Author, should be taken into account when designing, and their impact on architecture.

The analysis includes:

- location of investment, location context (big city, town, suburbs, rural area and open landscape),
- cultural value of location, historical sites, history, elements of value,
- natural qualities of location,
- scale of the surrounding context, scale of the investment planned,
- functioning of the location's neighborhood,
- communication with surrounding areas,
- cost-effectiveness of investments.

Examples from the author's architectural achievements are analyzed according to these above criteria. They are investments of various scale (multifunctional commercial, service, hotel and residential facilities, a transfer center, residential complexes, single-family houses). Author's conclusions from the research can be treated as important recommendations for shaping today's architecture and urban planning.

Chaos which surrounds us has resulted from a number of factors: legal limitations, selfishness, ignorance and lack of respect for the existing values, what has already been described by the Author. [1]

The examples presented in the article are objects of different size (250 m<sup>2</sup> – 142,000 m<sup>2</sup>), situated in different locations (city center – village) and representing different scales of investment. When analyzing the evolution of architectural ideas, philosophy and tools used in different designs (his own and others'), the Author came to a conclusion that one of the key architectural criteria is taking into account the widely understood location context: urban, architectural, cultural and environmental. Respect for a unique location of a designed building (each place is one of its kind) and humility towards the achievements of others allow an architect to set the design in the reality of the place in which it will be built.

## EXAMPLES – OVERVIEW

### EXAMPLE 1: Galeria Sfera in Bielsko-Biała.

Project team: Ireneusz Hendel (chief designer), Jan Lełątko, Piotr Pawłowski

The design was created in 2000, and the facility was completed in 2001 (38,000 m<sup>2</sup> of total useful floor area, multifunctional purpose: commerce, services, offices, cinema, entertainment club with multifunctional hall, outside parking area for 800 vehicles).[2] When Galeria Sfera I was being designed, the idea to add another part was considered. The design of Sfera II was developed in 2008 and the investment was completed in 2009 (104,000 m<sup>2</sup> of multifunctional floor area including: commerce, restaurants and food court, hotel, 101 residential apartments, underground parking for 1,400 vehicles).[3] The entire investment covers the area of approx. 6 ha. The complex is located in the center of the city which has 180,000 residents, in the spatial protection zone — the post-industrial area along the river Biała. The ruins of old factories posed a threat of collapsing and the buildings were degraded.

### Aspects included in design process

Location of investment, its context, scale of the object in relation to its surroundings

Galeria Sfera buildings are integrated into the urban fabric and complete it. The historical frontage of the streets was preserved. The outline of the buildings along the river and from the street's side was strictly replicated. The historical building alignment was re-created in the design. The parts that had not been built-up, were designed as a new city square. The scale of the buildings is determined by the hitherto height of the factory facilities and surrounding tenement houses. New parts which are higher than the original buildings were moved to the back to not interfere with the historical frontage. The façades of the factory buildings along the river were reconstructed. The façades of the factory owners' houses were preserved and revitalized. They were merged with the new building complex. Diverse façade materials were used depending of the context: former factory halls were made of brick (as were the original buildings). The façades of the residential part are composed of natural materials: brick, wood and plaster. The hotel's façade is made of glass while the entertainment club and cinema have metal panels. The façades of the offices are made of plasterwork and glass. The design included renovation of the factory owners' houses. Thus, their historical look, shape and details were reconstructed. During the façade works which, as already mentioned, were done in the spatial protection zone, small elements of old factories were used, e.g. bricks. Thanks to it, Galeria Sfera has been "naturally" incorporated into the city landscape.

Cultural values of the location, historical sites, history, elements of value

The complex was built on the grounds of old textile factories that were closed during the 1990's transformation. Four factories were built between 1836 and 1865, getting their final shape at the turn of the century. The owners' tenement houses were situated from the street's side whereas production halls were located along the river.[4] After the decline of the textile industry, the buildings were abandoned and damaged, some were destroyed in fire. The design included precious structural components (cast iron pillars) which were re-used to form the inside passageways, and reliefs from the 1950's, also built in the buildings' inner walls. The façades of two factory owners' tenement houses were preserved, while the façades of the production halls by the river were reconstructed and arcades were added. This refers also to the façade of the old boiler house at Grażyńskiego Street. The interiors were inspired by industrial architecture.

#### Communication

The building was to become an integral part of the urban fabric, be open to the city. Thus, the design provided numerous entrances which lead the pedestrian traffic to the facility's inner alleys (including 3 bridges on the river and a connector between both buildings). Easy access to the building is one of the important determinants of users' acceptance. Another important factor integrating the buildings with their context is the location of the main internal spaces with the square between the two parts of Galeria Sfera. Visual penetration of the interior-exterior allows to blur the lines between them. The building is optically open and integrated with the square. Bus stops located near Galeria Sfera provide easy access for visitors who use public transportation. Parking spaces are located on the opposite side than the entrance from the city (Sfera I) or underground (Sfera II). The goal was to avoid exposing cars in the urban landscape.

#### Continuation of functional structure of city center

Located in the city center, Galeria Sfera is surrounded with compact buildings, most of them built in the years 1850-1939. They create a dense urban landscape with narrow streets, shops and service facilities. The functional structure of a typical city tenement house was layered. The lower floors were for retail and services, above them were offices and residential apartments were located on the top floors. Galeria Sfera follows this principle. Its primary function is commerce (after all, trade was historically the motor of growth in most cities). The building, however, cannot be empty for the rest of the day. Functions that accompany trade (food services, entertainment, cinema, fitness) as well as offices, hotel and apartments, create a multifunctional conglomerate of buildings that are alive 24/7. Sfera has been also a venue for major cultural events: jazz festival, music concerts (both on the square and in the club), art fairs, photography festival, exhibitions. Thanks to it, the complex has become a part of the living city organism. All these numerous functions required very good operating conditions, therefore one of the solutions was the garden located on the roof of the commercial part, surrounded with three-floor residential complex which created a peaceful enclave in the midst of the city.

#### Relations with environment, concern for nature

The buildings were raised in 2001 and 2009 but the design already took into account the care for natural environment. In the older building of Galeria Sfera I, the debris from the old factory was used (to minimize waste) as well as old cast iron pillars. In Galeria Sfera II, there is a retention tank for rainwater which

is used to water the plants and supply the restrooms. A garden was planted on the roof, using the intensive green roof technology, and the garage walls are covered with green climbers. The garden has 26 trees and about 3,000 perennials (such as rhododendrons, lavender, heaths, roses, vines, quinces). The inner garden has become an advantage of the residential complex, thanks to which the apartment prices on the secondary market are the highest in Bielsko-Biała.[8]

#### Friendly space

Both urban planning and architecture of the building create the framework of everyday life.[5] For this reason, spatial solutions used should be known to users. [6] The form of the passageway is determined by the site's history: it is a post-industrial, stone-paved alley with cast iron lanterns, benches, greenery, light and water. The square is a living place: concerts are held there, people sit on the benches under the plane trees and oaks by Bolek and Lolek statue, the space is lit up in the evenings. The basis for designing the space is its focus on people.[7] It is an inclusive space which is available for everyone.[9]

#### Cost-effectiveness of investment

Due to bank financing mechanisms, the building had to be designed in compliance with economic calculations. All decisions regarding the project had to be made based on cost-effectiveness, analysis of appropriateness of design and search for financially acceptable, good solutions (including materials used). Multifunctional and compact character of the buildings enables reduction of the costs of joint structural components (foundations, roofs, parking places, outside infrastructure – communication lines and networks). Synergy of functions makes them more attractive to visitors/users. All these tangible and non-tangible components determine the positive economic outcome of the investment. Another important factor is the re-use of the post-industrial areas and, consequently, revival of the city structure.



Fig. 1.: Galeria Sfera. View of bridges, reconstructed factory halls, hotel corner, Sfera I. (Photo by T. Kuczyński)



Fig. 2.: Garden on the roof. Residential apartments. (Photo by I. Hendel)

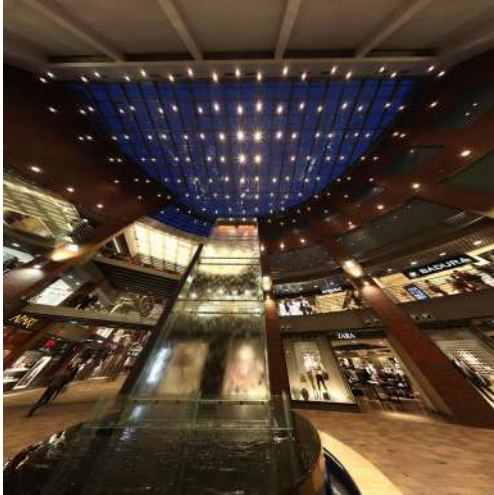


Fig. 3.: Galeria Sfera II interior – hall. (Photo by T. Kuczyński)



Fig. 4.: Square between Galeria Sfera buildings. (Photo by T. Kuczyński)

#### **EXAMPLE 2: Residence in Katowice.**

Designer: Ireneusz Hendel. Interior designer: Marlena Wolnik.

A residential house with three apartments (for the owners, their daughter and a maintenance person) with about 1,000 m<sup>2</sup> total floor area. It was designed in 2007 and completed in 2013. The residence is located on the city outskirts, in a residential area. Part of the land is grown with forest groves. The house has two floors, a basement and a perpendicular wing with the maintenance person's apartment above the garage. The house sits on a 1.5 ha plot where a building from 1960's used to be situated.

#### **Aspects included in design process**

Location of investment, its context, scale of the object in relation to its surroundings

What is unique for this object located in the suburban area increasingly built-in with both individual and developers' investments, are parts of the land grown with

pine groves. The property in this state was purchased by the Investor. The scale and quality of the surrounding buildings represent a suburban standard – mediocre, two-storey houses. The roofs of the houses are



Fig. 5.: Location of residence in Katowice. (Sources: Google Maps 01.07.2023)



Fig. 6.: View on the grove from a room. (Photo by I. Hendel)



Fig. 7.: View on the grove from the bathroom. (Photo by I. Hendel)



Fig. 8.: Residence seen from the grove. (Photo by I. Hnedel)

mostly flat. The same, two-storey scale was used in the design. The most valuable element of the property is the already mentioned pine grove to which the whole house opens. The windows in all living rooms and bedrooms overlook the trees which have become part of the interior, changing its character depending on the season. The neo-modernist architecture fits the suburban-forest landscape thanks to façade materials used: wood, glass, white plaster.

#### Relations with environment, concern for nature

The house was built by the grove and no tree was cut during construction. Only the driveway was paved. Roller blinds were installed to regulate the amount of sunlight entering the house. The façade turned towards the grove is the west façade. The trees shelter the house from excessive sunlight and absorb the heat. Unfortunately, a water plane in front of the southern, glass façade was not completed (its role was to reduce the temperature outside during summer). The heating and cooling system is based on geothermal heat pumps, rainwater is diverted directly to the ground.

#### EXAMPLE 3: House in the Beskids.

Design team: Ireneusz Henedel, Anna Midro-Henedel.

Located in the lower parts of the Beskids' slopes, the building was designed in 2017 and built in 2020. The house of about 350 m<sup>2</sup> was constructed on a plot with a small, 70-year-old summer house and a ruined barn. The large (1.4 ha) property sits on the western slope by foothills of the mountains. The location is a typical brownfield. The neighborhood is a single-family house area with quite accidental layout (old wooden huts, cube houses, catalogue houses, intense "real estate development" houses, individually designed houses). The property is surrounded by old trees growing in ravines. The part of the land designed for construction in the local spatial development plan, located along the street, is grown with an orchard with old fruit trees.

#### Aspects included in design process

Location of investment, its context, scale of the object in relation to its surroundings

The mountainous landscape of the Beskids which begin "right at the doorstep", location on the slope, the abundance of old trees and the orchard, inspired the designers' decisions. The road along which the house is built is the highest edge of the plot. The building was situated right along the street, compliant with the local development plan. It is a one-floor house with a small mezzanine serving as a library. The building was partially built into the slope, using the level difference. The green roof was smoothly integrated with the natural shape of the terrain, blurring the borders between the building and its surroundings. Soft, organic lines of the roof refer to the mountainous landscape. The house is open from the inside, onlooking the land and the mountains, while from the street's side there is only the entrance. It is almost invisible from the road – one can see a mound that forms the green roof. The form of the roof merges fluently with the terrain. The retaining

walls covered with the same material as the sandstone façades connect the building with the terrain. Relations with environment, concern for nature

The house is an attempt to apply the principles of the bioclimatic architecture. Geothermal energy was used to heat the building (heat pumps with a ground source deriving energy from 100 meter deep drillings, and setting part of the house into the slope enable utilizing the fixed temperature of the ground to heat it in winter and cool it in summer). Overhangs (together with the old trees and roller blinds) shelter from hot sunlight in summer and enable penetration of heating sunlight in winter. Natural ventilation system formed by the system of window openings creates a system of "ventilation chimneys" that naturally cool down the building. Together with the roof densely covered with green plants (30 cm of substrate), they provide conditions for natural air conditioning. On the hottest



Fig. 9.: Vertical view from drone. House fitting its surroundings (Photo by A. Nowicka)

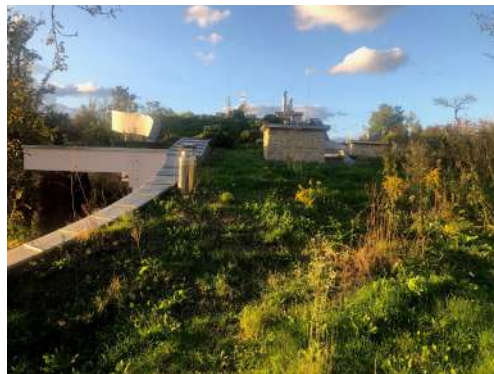


Fig. 10.: Green roof (Photo by I. Henedel)



Fig. 11.: Opening of house in the Beskids to wild garden and flowery meadow (Photo by I. Henedel)

days, the wind chill inside the house does not exceed 26°C. Massive walls accumulate heat in winter and the humidity inside is regulated by the natural, thick (4 cm) clay plasters. The building uses the renewable sun (photovoltaics) and wind (windmill) energy and is equipped with power accumulators. Water from the well is utilized in the garden. Absorbing manholes evacuate rainwater to the ground. The finishing materials (except of some ceramic covers in bathrooms) are natural (unvarnished natural wood floors and furniture, non-impregnated stone, wood wool insulation). The façades are made of local stone (sandstone). The green roofs are covered with naturally self-sown plants forming flowery meadows. The primary goal of the design and its implementation was to incorporate the building in its surroundings and landscape in such a way so that – despite the range of modern architectural solutions used – it seems like it has been always there.

**EXAMPLE 4: Residential complex “Rezydencja Parkowa” in Ustroń.**

Design: Ireneusz Hendel

A complex of 110 apartments was designed including an adaptation of the oldest brick resort building – Hotel Kuracyjny. Located in the center of the health resort, near historic buildings from the 19th and 20th century and a century old park. The architectural concept emerged in 2019 and once the local spatial development plan was modified in 2023, the construction began.

**Aspects included in design process**

Location of investment, its context, scale of the object in relation to its surroundings

Ustroń is a small touristic-spa-industrial town with 16,000 residents. It sits at the foothills of the Beskids. It is an attractive place to live, especially for people who finish their professional activities and want to leave Silesia or simply “get out of the city”. The residential complex consists of two blocks which fit the urban context – buildings on Hutnicza Street and a park (Kuracyjny Park) to the east. There is an inner garden between the buildings, which is a green roof over the underground garage. The neighboring houses are not higher than 3 floors (some have up to 15 m) and were built before the World War II. For this reason, the new project does not exceed the height of the surrounding buildings and its character refers to the most interesting period in Ustroń’s architecture – the interwar modernism. The historical building of the former Hotel Kuracyjny was redesigned to perform new functions while the style of its façades was restored to the one from the turn of the 19th and 20th century.

Cultural values of the location, historical sites, location history, elements of value

There are some historical objects in the neighborhood: the headquarters of Klemens Ironwork (at present, the Museum of Ustroń), an old ironwork rebuilt to serve as a school building, a pond which is part of the 17th-century engineering canal called Młynówka, Kuracyjny Park and villas (including an interwar house designed by Tadeusz Michejda). Built in 1802, Hotel Kuracyjny has lost its historical value due to numerous reconstructions, however, it is still in the historical site register. The object has been out of use since 2015. The grounds and its surroundings have a valuable stand which will remain unchanged. The hotel building forms the frontage of the street. As a reminder of the industrial heritage of Ustroń, the entire complex is important for the identity of the local community. On the ground floor, an exposition space was designed, which will show the history of Ustroń resort and the structural elements of the resort hall (as a green shed), bowling club and baths building will be exposed in the complex.

The historical façades will be restored.

Relations with environment, concern for nature

The roofs were designed as intensive green roofs. There will be a garden between the buildings, with trees, bushes and perennials, a flowery meadow will cover the roofs. Rainwater will be retained on the roofs and its excess will be directed to the historical canal serving as a retention pond. Energy will be produced using photovoltaics, while heat pumps will provide heating and cooling.



Fig. 12.: Visualization of the Park Residence. (Draw. A. Gacek)

**EXAMPLE 5: House in Kraków-Częstochowa Upland.**

Design team: Ireneusz Hendel, Krzysztof Hendel

Located in a single-street village, on a hitherto built-up plot, a new residential house was designed to replace a damaged barn. The previous residential building was turned into an art studio. A utility-garage part is a connector between the two buildings. The house was designed in 2021 and is now under construction.

**Aspects included in design process**

Location of investment, its context, scale of the object in relation to its surroundings

The village where the house is located is a typical single-street village with contemporary, two-floor buildings with steep roofs. The layout on the plot refers to a farm typical for this region, and the set of façade materials (local limestone, wood) are modern reference to the traditional, regional architecture. The scale of the building, its height and size of particular construction components are designed to keep the intimate, cottage scale.[10]



Fig. 13.: Drawing of the facade of the house in Kraków-Częstochowa Upland. (Draw. K. Hendel)



Fig. 14.: Drawing of the facade of the house in Kraków-Częstochowa Upland. (Draw. K. Hendel)

Relations with environment, concern for nature

Natural, local materials have been used (limestone, wood from the old barn as façade material). Extensive, green roofs to protect from overheating, photovoltaics, rainwater retention and biological sewage treatment plant have been included in the design. The house is to become an integral part of the local, upland landscape. And old lime-tree is the main spatial focus of the place.

#### EXAMPLE 6: Transfer Center in Bielsko-Biala.

Project team: Ireneusz Hendel (chief designer), Krzysztof Hendel, Agnieszka Nowicka, Anna Midro-Hendel

The architectural and urban planning concept was completed in June 2023. The neighborhood of the main train station in Bielsko-Biala is a degraded area where no new investments have been made in the last 50 years. Apart from the passenger station, there are railroad switches and unloading ramps of the cargo terminal. On the other side of the busy entry road to the city is a bus station situated among the residential buildings. Communication between the two stations is possible via the bridge connecting the post-industrial quarter and the bus station. The goal of the project is to arrange the railway area where an integrated transfer center for different communication means will be created (trains, long distance buses, city buses, cars, bikes, pedestrians) and, at the same time, to merge two parts of the city divided with the railway tracks and throughway. Ultimately, conditions will be created for changing the paradigm of the city functioning: from car-based to pedestrian city, and the prerequisites will be formulated for financing the investment from the EU funds in the spirit of New Bauhaus.

#### Aspects included in design process

Location of investment, its context, scale of the object in relation to its surroundings

The junction of the city center, the post-industrial and railway quarter is the best location for a communication node inside the city. The project utilizes the area which has already been modified to serve the needs of people, the so called brownfield. The buildings designed have been integrated into the urban layout, creating new frontages of the streets and the square. The height of the buildings is up to 13.5 m, in the scale of the surrounding post-industrial facilities. Only the clock tower is slightly higher and closes the perspective of the neighboring streets and the square in front of the transit center. The goal is to create a landmark in the train station and city area.

#### Continuation of functional structure of city center

The service building is a multifunctional object. It will activate the forgotten, abandoned part of the city. Apart from the passenger zone (waiting hall, checkpoints, information desk, ticket machines, luggage room, restrooms), a small passageway is provided with a commercial part on the ground floor, multifunctional space of cultural activation center on the first floor (exhibition hall, workshops, projection hall etc.) and a kindergarten on the second floor with a playfield on the roof. Above the railway platforms, a park is designed as a connector between the two parts of the city fabrics divided by the railway.

#### Communication

For the purposes of the transfer center, new access roads have been planned and some existing streets have been modified. In the old railway area, a road connecting the new city bypass with the investment area has been proposed (in a spatial form of a tree alley). The concrete and asphalt surface of the train station square will be reconstructed to add greenery and a pedestrian zone. New walkways over the railway



Fig. 15.: Location of transfer center, view from old train station. (Draw. A. Nowicka, K. Hendel)



Fig. 16.: Transformation of train station square into walking zone. (Draw. A. Nowicka, K. Hendel)



Fig. 17.: New transfer center building. (Draw. A. Nowicka, K. Hendel)



Fig. 18.: Arcades in new transfer center building. (Draw. A. Nowicka, K. Hendel)



Fig. 19.: Entrance to transfer center with clock tower. (Draw. A. Nowicka, K. Hendel)

tracks should integrate the city space. The entire project should contribute to limiting individual car traffic and promote walking, cycling and public transportation, for example by reducing the number of lanes for cars and turning them into bus lanes.

Relations with environment, concern for nature

Introduction of the green-blue infrastructure is one of the main means of architectural expression. The following design decisions have been made to facilitate users' comfort:

- Green roofs, green stops, green walls, preserving the existing tree stands (some trees will be replanted), flowery meadows, new tree plants, tree alleys, pocket parks are the elements to prevent urban heat island effect;
- Total retention of rainwater, using retention tanks to collect water for re-use and rain gardens help improve

environmental conditions;

- Removing concrete from the existing surfaces, using shadowing surfaces to protect against overheating;
- The project utilizes renewable energy sources (photovoltaics and heat pumps) to minimize the need for primary external energy.

Friendly space

New buildings must be user-friendly. Good spatial orientation and easy communication are crucial for well organized public space. All principles of accessibility have been applied, including the needs of people with mobility disfunctions, sensory limitations, mothers with children and foreigners.

#### Analysis of solutions used in presented examples

Architectural and urban planning characteristics of the

|  | Galeria Sfera  | Residence in Katowice                              | House in the Beskids                               | Rezydencja Parkowa Ustroń   | House in Kraków-Częstochowa Upland                                 | Transfer Center   |
|--|--|--|--|---|--|---|
| Function   | Multifunctional complex: service, commercial, cultural, entertainment, office, hotel and residential buildings.            | Residential house                                  | Residential house                                  | Residential complex with museum   | Residential house  | Multifunctional complex: bus station, commercial, gastronomy and cultural buildings, and kindergarten.                  |
| Type of settlement                                   | Center of a mid-size city  | Big city suburbs                                   | Small town suburbs                                 | Center of a small health resort   | Village  | Edge of a mid-size city center  |
| Location   | Two city quarters along a river  | Edge of a grove                                    | Among other residential houses                     | Edge of a park  | Farmstead  | Between a city, factories and rail facilities   |
| Type of investment                                   | Brownfield   | Brownfield   | Brownfield   | Brownfield  | Brownfield   | Brownfield  |
| Urban fabric lines                                   | Strictly preserved and completed (square)  | Scattered houses                                   | Aligned with existing lines                        | Aligned with existing lines   | Aligned with existing lines  | New communication network created   |
| Development scale – relation with surrounding areas  | Height similar to surrounding buildings  | As in neighborhood                                 | As in neighborhood                                 | As in neighborhood  | As in neighborhood   | As in neighborhood  |
| Cultural environment                                 | Spatial protection zone, valuable historical relicts of post-industrial era (factory owners' houses, factory hall details) | N/A  | N/A  | Spatial protection zone of the first resort, ironworks, water canal with a pond | N/A  | Historical train station and cargo station buildings  |
| Communication services                               | Cars, buses, pedestrians, bikes  | Cars, pedestrians                                  | Cars, pedestrians                                  | Cars, pedestrians, rail   | Cars, bus  | Rail, bus, car, bike, pedestrians   |
| Relations with surrounding areas                     | Accessible from every side, multiple entrances, passageway in arcades along the river                                      | Private house                                      | Private house                                      | Green areas of park and garden overlap one another                              | Private house  | Access from each direction and with all communication means   |
| Public space   | New city square, inside passageways – city streets   | Private object                                     | Private object                                     | Social space – garden for residents   | Private object   | New city square, restoration of Dworcowy square for pedestrians   |
| Interior – exterior relationship                     | Visual penetration of the square and hall. Continuity of internal and external surface (paving stone)                      | Visual penetration of interior and adjacent forest | Visual penetration of interior and mountain meadow | Large, high windows overlooking the park or garden                              | Visual penetration with the field landscape, opening to inner yard | Visual penetration of the passageway and the arcade (pocket park, large windows overlooking the surroundings, greenery) |
| User-friendliness, accessibility, ease of navigation | Accessible building, multiple sitting places and social interaction facilities   | Accessible building                                | Accessible building                                | Accessible building, multiple sitting places and social interaction facilities  | Accessible building  | Accessible building, multiple sitting places and social interaction facilities  |

Tab. 1.: List of references to the context in the presented projects. (Author's original compilation)

examples presented above are compared in the table below.

Regardless of the scale, form, features, function and location of a building, a range of common architectural and urban planning characteristics can be identified that show the directions of creative explorations of the Author. These common features refer mainly to different aspects of the relationship between the object designed and its surroundings, and imperatives resulting thereof.

• **Urban planning regulation.** This wide term includes, for example: frontages, visual tramlines, space continuity, continuation of the scale of surroundings (height, mutual proximity between urban elements, angle of the urban interior), subordination of the form the design to the existing urban form, localization of spatial dominants and accents according to the logics of the place.[11] Practical application of these terms enables merging new buildings with their location.

• **Respect towards existing cultural values of the place.** Protection of the cultural heritage is the foundation of our identity and the evidence of the architect's culture. Finding answers to the question "How to respect the history and values of the place?" often guarantees a good design.[12]

• **Respect towards existing environmental values.** We are part of nature and our design activities and decisions must reflect this fact. It takes less time to con-

struct a building than to grow a tree. We shall respect the landscape, the environment and nature. Our ideas cannot clutter the landscape. Our relationship with nature is also a reflection of our culture (including the design culture).

• **Continuation of urban fabrics.** It refers to both the urban form and, first of all, its utility aspect. New objects should continue the function of their surrounding, e.g. the inner city fabric is a multifunctional, content-rich structure attractive to users. Synergy of functions makes them more attractive. The hierarchy of functions must be taken into account in relation to the proximity from the city center. High intensity of such location is crucial for attractiveness of the space. New buildings should replace the ones already used up, increase the density of the existing buildings or transform the degraded areas (brownfields). Due to environmental reasons, one should not build on "greenfields".

• **Local architectural tradition.** Each object should originate from the place where it is being built. Not every building is designed, for example, for Dubai, Shanghai or New York. Emphasizing the place form which a certain architectural tradition comes from, using local (and recycled) materials and modern interpretation of the architectural context should contribute to the positive reception of the building. Architecture should not be the architecture of contrast separating itself from the local environment.

|                                  |   |   |  |   |   |  |
|----------------------------------|---|---|--|---|---|--|
| Road safety, parking             | Separation of walking and driving traffic, underground garages  | Private house   | Private house  | Separation of walking and driving traffic, underground garages  | Private house   | Separate walking and driving traffic, tiered garages   |
| Ease of communication            | Lack of architectural barriers such as stairs, vertical communication with escalators and elevators                       | Lack of architectural barriers such as stairs, vertical communication with elevator | One-floor house, slipways connecting different levels  | Lack of architectural barriers such as stairs, vertical communication using escalators and elevators      | Slipways connecting different levels                        | Lack of architectural barriers such as stairs, vertical communication using escalators and elevators |
| Façade materials used            | Brick, wood, glass, concrete  | Wood, plaster, stone  | Stone, glass, wood   | Plaster, glass, wood  | Stone, glass  | Brick, sheets  |
| Relation with historical objects | Restored façade of the factory owners' house, restored façades of factory halls, historical elements used in the interior | N/A   | N/A  | Restored façade of historical hotel, architectural references to neighboring early-modern tenement houses | Front of the old house renovated                            | Using bricks as façade material (like in neighboring historical buildings)                           |
| Local materials                  | Brick, wood   | Wood  | Stone, wood, clay plaster  | Original stone (recycled from demolition), wood   | Stone, recycled wood  | Brick  |
| Relations with environment       | Partially preserved tree stand, new tree plants   | Tree stand preserved  | Landscape composition, old orchard and tree stand preserved  | Old trees preserved   | Tree stand preserved  | Tree stand preserved, wasteland transformed into parks   |
| Green architecture               | Green roofs – garden: trees, bushes and perennials, green walls – climbing plants   | ---   | Green roofs, climbing plants on walls, blurring the building-landscape line  | Green roofs, climbing plants on walls, garden on the roof   | Green roofs   | Green roofs, climbing plants on walls  |
| Blue infrastructure              | Retention tank, utilizing rainwater   | Water retention   | Water retention  | Retention tank, utilizing rainwater   | Water retention   | Retention tank, utilizing rainwater  |
| Renewable energy sources         | Heat pumps  | Photovoltaics, ground source heat pumps   | Photovoltaics, ground source heat pumps, bioclimatic architecture  | Photovoltaics, ground source heat pumps   | Photovoltaics, heat pumps                                   | Photovoltaics, heat pumps, bioclimatic architecture  |
| Bioclimatic architecture         | ---   | Roof covered with gravel  | Shadowing overhangs, partially underground building, natural regulation of temperature, ventilation, shadow zone (patio) | Shadowing overhangs in summer, building passivity in winter   | Shadowing overhangs in summer, building passivity in winter | Shadowing overhangs in summer, building passivity in winter, natural ventilation                     |

Tab. 1.: List of references to the context in the presented projects. (Author's original compilation) - continued



- **Shaping user-friendly environment.** During the design process, users' reception of a building should be considered. Friendly architecture is the architecture which is accessible, comfortable, intuitive and safe. Users appreciate not only access to main functions but also, for example, window view, shading, sun exposure, safety or widely understood peace (noise, chaos including chaotic built-up). This kind of architecture meets the psychophysical needs of people.

- **Using climate-resilient architecture.**[13] Using blue-green infrastructure is a necessary means to adapt a design to the changing external conditions. Introduction of green elements to the portfolio of architectural forms, e.g. green roofs and walls, trees and plants, creates a new value of architecture that fits the context.[14] Respecting natural resources, including rainwater and its retention within the investment instead of distributing it to river basins is very beneficial for the environment. Skillful application of the principles of passive and bioclimatic construction are the trends architects cannot ignore.[15]

- **Cost-effectiveness of investment.** Respect for the resources, including using materials recycled from demolitions and natural local materials, is the key aspect of post-consumptionist society (the era of which is approaching). Construction complications resulting from purely formal ideas which will be out-of-date in several years from now (e.g. complicating the building structure by placing shifted blocks on top of one another) is an example of wasting materials and money. Also, the so called "conceptual ideas" which, for example, pierce historical buildings with sharp forms or a pile of bended titanium-zinc plates called iconic, are some examples of wasting material and funds to satisfy the architect's (sometimes investor's) ego.

- **Beauty in architecture.** It is something that sets apart architecture from construction. It creates an added value. Concern for the quality of our work is the reflection of respect to the users, investors, observers and future generations. Beauty does not shout, it does not have to. Beauty defends itself. Functional needs and esthetic standards change but quality architecture will survive as the image of our times.

## SUMMARY

The Author's search for design principles which would be adequate to modern times are presented above. They focus on the context of location of the designed buildings. The design rules used are based on well known, yet often forgotten or ignored principles. The analysis of the design principles applied in the presented examples shows a number of well known trends. Urban planning in the spirit of New Urbanism,[16] continuity in architecture, urban composition rules, critical regionalism[17],[18], eclectic forms, organic architecture, feng shui, traditional, local construction rules and other are the main principles of good design, which in old times were passed on to architecture students by professors-modernists. These are the principles of good, timeless design regardless of style.

Each building is set in a certain urban space. Thus, design solutions influence the spatial and functional transformations of cities. All presently popular urban trends (city for people, happy city,[19] 15-minute city, soft city,[20] cycling city,[21] climate-resilient city etc.) further develop the principle of good design which focuses on people and their needs,[22] not on recognition (for the investor or the architect). The designer must be sensitive to human needs, respect the place and solve design problems with humility.

Well designed architecture with green components defends itself even many years since completion. One of the examples is northern Ursynów quarter (Warsaw) built over 40 years ago, which today is one of the most wanted addresses (even though they are "old"

blocks). It is not by accident that old residential complexes adapted to modern needs (19th and mid-20th century) are good places to live. It is not by accident that we like visiting Italy, a country which respects its heritage – we feel well there and no one says that Italians live in ruins.

Particular attention should be paid to the above mentioned conditions resulting from the building location. Architecture of new objects should be thoroughly modern but it should consider the widely understood context.[23] It is not about the references to tradition which use the recently popular statement of "modern interpretation of form". It is a buzzword used to justify unclear and often clumsy designs. The new architecture cannot be a pastiche of the historical or regional architecture.[24] Setting a building in its location, in relationship with nature and history, reflection upon the local tradition which is an inspiration but it is not followed blindly, good proportions, façade composition, logical solutions, modern materials and techniques, context continuation – this is what I would expect from the best designs.[25]

To implement the above listed design principles on a wider scale, activities in the four following areas are necessary: education, legal, professional ethics and social culture.

- **Education.** Prospective architects should be taught that the very first step in every design involves exploring the object's location. Identification of the place's characteristics and learning how to merge the new object with the existing context – these topics are ignored in today's education. How can beginners approach their designs and locations with respect and humility if there is no one helping them? The trend of creating extraordinary, "iconic" forms should be replaced with architectural designs set within its spatial context.

- **Legal.** I believe that some changes are necessary in architectural design and urban planning regulations. They should be introduced in several areas: urban planning as a means to introduce the principles of good spatial continuity, harmony and order; urban composition; binding social negotiations regarding investments that exceed the surrounding scale; limiting urban sprawl (for the benefit of urban planning based on indicators and functional role symbols). As for architectural design, adjusting solutions planned to the character of location should be mandatory. In its initial phases, the formal aspect of a design should be also discussed on the local level (a practice already introduced in several European countries). In this case, the limits of creative "freedom" are very much desired because the lack of restrictions leads to iconization of every designed object and results in spatial chaos. Context should be one of these limiting factors.

- **Professional ethics.** It should be a designer's duty to raise investors' awareness of the spatial values of the given location and not only of the potential return of investment. Respect toward the place where the designed object is to be built should be one of the designer's ethical criteria.

- **Social culture.** The Author's dream is to live in times when every citizen knows what is acceptable and where their construction plans can be implemented. Not so long, 30-40 years ago, no one would even think to destroy native green areas for a short-term profit. It was part of the social cultural code. The same refers to respecting nature, historical objects, neighbors...

Architecture is not designed to gain temporary acclaim but to last for years. It has no expiry date. In order to not become another "Solpol" (Wrocław), it should defend itself with its values. In my opinion, architecture set in the context of location (urban, architectural, cultural and environmental), is the right direction of

development of architect's creativity and skills.

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