Research Project and Concept Design of the Spatial Development of the Area Earmarked for Recreational Functions in Mysłowice-Kosztowy in Poland

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Abstract. This chapter presents the premises and results of a research project conducted by the students of the Faculty of Architecture at the Silesian University of Technology (Politechnika Śląska) in Gliwice, Poland, and a design competition based on pre-design investigations. The above-mentioned research project, investigations and design competition serve as an example of the collaboration of the university with public institutions within the framework of the educational system. The project entitled: 'Time Spent Actively – in Mysłowice-Kosztowy. Research Project and Concept Design of the Spatial Development of the Area Earmarked for Recreational Functions in Mysłowice-Kosztowy” has been implemented since 2019 by the Faculty of Architecture, the Silesian University of Technology in Gliwice. The collaboration between the above-named Faculty and the University Partner resulted in this project. The design process involved not only the students and academic teachers of the Faculty of Architecture, but also the inhabitants of the Kosztowy district in the city of Mysłowice. The project consisted of two main stages. The first stage was of a research nature and involved the recognition of utilitarian and functional needs as well as expectations of the Mysłowice-Kosztowy district inhabitants. This phase involved also the performance of urban-development analyses. The students learned the rules of designing recreational areas in the city and formulated the guidelines for the design phase. The second stage was a competition of design nature. Sixteen concepts were elaborated by the project teams.

1. Introduction
One of the important aspects of the didactic activity of the Faculty of Architecture at the Silesian University of Technology is a collaboration with external partners as well as social and economic surroundings. Within the framework of subjects connected with designing there are real-life tasks brought by institutions or companies willing to collaborate with the university, the so-called University Partners. This fact plays a significant role in the didactic achievements of the Faculty and the preparation of students for their future profession. The process of educating architects includes the development of the ability of creative thinking and solving designing issues in such ways which take into consideration users’ needs. On the other hand, the investment process sets difficult and responsible tasks to architects. That is why, already during the studies, future architects should be learning how to resolve real designing problems in order to successfully meet investment requirements in the future. Such an approach to education adopted by the Faculty of Architecture at the Silesian University of Technology in Gliwice resulted in various design activities and competitions. In this

1Main organizers of the student competition – Dorota Winnicka-Jaslowska, PhD (D.Sc.) Habilitated Eng. Arch., Professor at the Silesian University of Technology – Project Manager, Joanna Tymkiewicz, PhD (D.Sc.) Habilitated Eng. Arch., Professor at the Silesian University of Technology.
case, the project was an effect of an agreement signed by the university with a Foundation which aims to undertake the development of five areas situated in one of the districts of the city of Mysłowice for recreational purposes. Mysłowice is one of the industrial cities located in the eastern part of the region of Upper Silesia (Górny Śląsk). The district of Kosztowy constitutes one of the fifteen districts of the city of Mysłowice. Kosztowy is dominated by individual single family houses. The students worked under the supervision of the academic teachers of the Faculty of Architecture within the framework of consultations and organized design workshops. They had an opportunity to get to know, in practice, real needs of the Mysłowice-Kosztowy inhabitants in the scope of recreation, sport and active leisure time. As a result of this co-operation, sixteen students’ concept projects were created, which will become an inspiration for the implementation of Partner’s investment plans in the future. The project consisted of two stages. Stage I encompassed a research project including pre-design investigations with the participation of inhabitants, whereas Stage II involved the creation of concept designs by students within the framework of the design competition.

In order to complete conceptual designs correctly, the design phase was preceded by qualitative research which constituted an important type of pre-design research. The main organizers were the employees of the Department of Architectural Design and Qualitative Research in Architecture. For more than 20 years they have been perfecting research methods applied in architecture and urban planning. Some of an Author publications concerning methods of predesign research were also applied in the project being described [1]-[5].

2. Chief premises of the research project
The assumptions of the research project provided the basis for the formulation of the objectives and premises of the competition design. Partner defined their expectations connected with the design. They designated some plots in the district of Mysłowice-Kosztowy, which are to become future recreational areas for the district inhabitants. At the same time, it was assumed that the designated plots would be linked by means of traffic and pedestrian circulation becoming thus an attractive multifunctional leisure area for the ‘time spent actively’. Specific circulation and road communications solutions may contribute to the increase in the inhabitants’ mobility and physical activity due to the creation of a circulation loop. While moving along the loop, either on foot, by bicycle or rollerblading, users could access the route at any point, complete the whole loop and come back to the original point. Another attraction is that the loop is accompanied by adjacent recreational plots serving different purposes and featuring various facilities. The design took into consideration all age groups of the inhabitants – small children, teenagers, families with children and senior citizens. As was mentioned in the Introduction, the project consists of two parts: research and concept designs.

3. Research process and investigation methods applied
The project was carried out by the Faculty of Architecture of the Silesian University of Technology within the scope of the subject of a research nature, i.e. Survey and Examination Methods of the Quality of Buildings and Urban Spaces. The investigations involved 85 students, who formed 16 design teams consisting of 5-6 persons. The research work was divided into phases in accordance with the schedule of practical classes assigned to the subject. This was accompanied by lectures which discussed methods, techniques and investigation tools used in participatory research on architectural and urban-development spaces.

3.1. Stage I of Research
Part I involved the assessment of the existing state of research, which means that the reviews and analyses of available subject literature were conducted as well as presentations were made showing Polish and international examples of implemented projects of urban recreational spaces dedicated to

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2 The subject called Survey and Examination Methods of the Quality of Buildings and Urban Spaces, at the level of full-time, first-degree studies, in the winter term of the academic year 2018/2019.
various groups of users and their different needs. The above-mentioned examples became an inspiration for this project.

In this part, the researchers used a method of logical argumentation which consists in descriptive analyses of the features of selected aspects of the studied problem. The following research techniques were used during investigations: description, explanation, logical interpretation, as well as tools such as: subject literature, architectural and urban-planning documentation, computer and graphic software programmes. During Stage I the guidelines for the concept designs were developed. The recognition of the needs of the Kosztowy district inhabitants and urban-development analyses provided the basis for the formulation of the above-mentioned guidelines for the project.

Part II involved a students’ field study trip to Mysłowice–Kosztowy in order to carry out in situ investigations to gather approximate data and familiarize themselves with local conditions. The students used elements of the qualitative research method and case study method. During the on-site visit to the study areas, observations were made and interviews were conducted with the representatives of the Kosztowy district inhabitants. In addition to that, urban-development analyses of the areas earmarked for recreation were performed. Students made on-site visits to each plot. They made initial drafts on the background maps indicating points and functions essential for the project. They also made a photographic documentation along with descriptions, which were assigned to specific points on the map. The next step was to prepare for workshops with the participation of Kosztowy inhabitants and officials from the Municipal Office of the City of Mysłowice.

Part III Workshops were carried out after the field study trip to Mysłowice. The objective of the workshops was to do research on the inhabitants’ functional needs in the scope of spending their leisure time outdoors (sport, recreation, children’s plays and games) in the context of the designed areas. Prior to the workshops, scenarios of focus meetings had been devised and questionnaire forms to interview inhabitants had been prepared. The workshops took place at the Faculty of Architecture involving students and invited guests – representatives of inhabitants of the Kosztowy district and officials from the Mysłowice Municipal Office. (Figure 1) The workshops were carried out using a technique of Design Thinking. Students presented graphic materials, which had been earlier elaborated by them. That facilitated the discussion greatly. Guests took part in ‘brainstorming’. All participants were divided into small design teams, which produced inspirational boards, the so-called mood boards. In the end, some conclusions were drawn and summarized. (Figure 2, 3) On the basis of the data collected during the field study as well as interviews and discussions with the inhabitants during the workshops, the guidelines for the project were developed.

3.2. Stage II of Concept design
This stage involved the development of students’ concept designs. The designs were entered for a competition for the best design solutions for the development of the areas earmarked for recreational functions in the district of Mysłowice-Kosztowy. The competition was organized by the Faculty of Architecture and the Foundation being the Project Partner.

Part IV involved work in designing teams under the supervision of academic teachers conducting the classes. This phase of the investigations was of a ‘Research by Design’ nature.

The competition task related to a concept design of the spatial development of the areas earmarked for recreational purposes in Mysłowice-Kosztowy. As a result of the competition, sixteen architectural and urban-development concept designs were created. Their common objective was to tackle the study

*Tymkiewicz J. – On the basis of the description of the research project.*
problem, in other words, how to organize recreation in Mysłowice-Kosztowy, in 5 locations, in such a way so that an attractive and cohesive concept would be created in order to meet the users’ needs.4

The main assumptions of the project were as follows:

- Application of functional solutions in accordance with the inhabitants’ needs, which were previously determined at Stage I of the Project;
- Diversity of proposed functions and their localization on five plots as well as their mutual relations and connections;
- Aesthetic solutions creating a friendly character of the designed areas;
- Originality of solutions taking into considerations the needs of different age groups of the district inhabitants.
- Students’ designs included urban-planning analyses of the subject area, infographics presenting the idea of the project along with a description, a concept of development of the group of areas and their connections at a scale of 1:5000, a concept of development of individual fragments of the 5 areas at a scale of 1:500, as well as a visualization of adopted solutions.

![Figure 1. Research and design workshops at the Faculty of Architecture of the Silesian University of Technology involving students and invited guests.](image)

4 Winnicka-Jasłowska D., Tymkiewicz J. – Description of the Research Project: ‘Time Spent Actively – in Mysłowice-Kosztowy. Research Project and Concept Design of the Spatial Development of the Area Earmarked for Recreational Functions in Mysłowice-Kosztowy’– material summarizing the project, unpublished.
3. Students’ designs as an effect of pre-designing investigations and competition workshops
It was assumed that the Competition would concern design concepts of the spatial development of the area earmarked for recreational functions in Mysłowice-Kosztowy. As mentioned before, the study area involved five plots of different sizes. When linked by means of the existing traffic and pedestrian circulation, the plots could become an attractive recreational area for this district of Mysłowice.

The premises of the project defined by the Partner involved the functional diversity of the five plots in order to make them attractive to users at different ages. With relation to the above, in the scope of pre-designing investigations, four main age groups of potential users were distinguished, namely children and parents, teenagers, and senior inhabitants. Propositions of functional solutions for individual plots took into account attractions for each age group. The above-mentioned solutions make it possible to use each plot by everybody. For the group of children and parents, the plots are supposed to include arrangements typical of playgrounds, such as: play devices and structures (swings, slides,
climbing ladders and others), benches, green belts and access paths. For older children and the youth: skatepark areas, sitting places, bonfire space and others. For adults, including seniors: places enhancing social contacts, resting places, zones for playing team games and board games, and others.

It was assumed that the designed recreational areas should have various facilities and be attractive in terms of solutions. They should also be linked to one another by means of some circulation routes in such a way so as to provide equal access for all inhabitants. Each plot should be functionally diverse and attractive to everybody irrespective of their age. Moreover, the aesthetics of the place is to create a friendly character of the designed areas, therefore the solutions applied should be original, innovative and contemporary.

In their designs, the students adopted solutions which, in their opinion, could transform the Mysłowice-Kosztowy district into a friendly neighbourhood both for life and leisure. Kosztowy is a pleasant place to live in and has a great potential for development. Its inhabitants form a strong, conscious and integrated local community. These features were highlighted by the students who wanted to create personalized designs for a given plot.

One of the designs, which fully incorporates the above-mentioned assumptions, is a concept called Kosztowy Love. The name given by the authors suggests that solutions proposed by the design will make this district a special place, loved by its inhabitants.

4. Students’ project named ‘KOSZTOVE LOVE’

A concept design named ‘Kosztove Love’ assumes individuality of plots located along the main traffic and cycling route. Each plot was assigned its colour and is identified by it both on the poster (Figure 4 and 5) and in reality as a dominant colour. A map located at each plot is to inform the inhabitants about types of attractions situated there. The design assumes that the plots will serve the purpose of sports activities related to play and leisure.

4.1. Proposed functional programme and formal solutions of locations in Mysłowice-Kosztowy

- **Location 1 – Plot by the school.** A zone of leisure was proposed here. The zone was equipped with hammocks and installations on the trees. There is also a proposition of a school cultivation garden, where lessons could take place. The last attraction provided for in this plot is a small pond, the so-called water zone, which serves the purposes of relaxation and playing less demanding sports, such as ping-pong or chess (played on specially installed tables). The entrance zone was designed next to the school sports field. The design shows that the entrance zone is located in the place constituting a part of the existing escarpment, where a spectators stand is situated. In addition to that, in the eastern part of the plot, a route for rollerblading was proposed. The route is to be located on a newly built escarpment in order to decrease the degree of the slope of the rollerblading zone and separate it from the sports field by means of the existing escarpment. Another advantage of levelling a part of the existing escarpment is the creation of an entrance zone which refers in its assumptions to the water zone in the school yard adjacent to the Sports Club plot. This area is ideal for meetings. The water zone highlights an axial character of this place and divides it into circulation zone and meeting zone.

- **Location 2 – Plot by the church.** The design takes into account the community aspect. The church is an important place for the inhabitants of the Kosztowy district. Students proposed to create the Way of the Cross on the escarpment marking the boundaries of the plot. This place will serve the purpose of walks, contemplation and prayer. Below the path with the Stations of the Cross, the students devised a playground and a relaxation zone with greenery in the form of hexagonal flower beds. The nursery school, which is located next to the church, will be

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5 Project named Kosztowe Love - Authors: Karol Subotowicz, Ewa Sarna, Michal Mirosławski, Anna Maj, Paulina Kluska. The design was made under the supervision of Dorota Winnicka-Jasłowska, PhD (DSc) Habilitated, Eng., Arch, Professor at the Silesian University of Technology.
provided with a new playground. Senior citizens will have arbours at their disposal and a designated place for the bonfire. In this way, they will be able to spend time together around the bonfire. However, this proposition is directed at all age groups.

- **Location 3 – Plot in Migdalowa street.** In the middle of the plot, the design provides for a centrally located playground. Unusual equipment in the climbing park will be an interesting offer for the youngest. There will be hammocks around the playground. This will serve as a relaxation zone for all taking care of small children. Two courts for the game of boules built on the hardened surface 4x15m are a proposition for families, youth groups and seniors. There is also going to be a body-building gym in the open air. The aficionados of calmer sports will be able to devote their time to chess at two special tables. Due to the fact that the plot is large and will feature numerous attractions for all inhabitants, the students proposed to additionally introduce twelve parking spaces.

- **Location 4 – Plot in Fików street.** The design of this plot provides for a sensory park, which is directed at all age groups, including senior citizens. Benches are located in the best viewpoints so that the seniors could feel well and safe. Aesthetic greenery and fountains contribute to a calm atmosphere of this place.

- **Location 5 – Plot in Fabryczna street.** A longitudinal layout of the plot creates favourable conditions for a park. The students proposed a walking path through the greenery. At its one end, there is going to be a playground featuring different attractions than playgrounds located on other plots. At the other end, there is going to be a court for paddle tennis. This area is a place for leisure, meeting friends and children’s games.

![Location 3 - Migdalowa street](image1)

![Location 4 - Fików street](image2)

![Location 5 - Fabryczna street](image3)

**Figure 4.** The final project named Kosztowe Love - designed by students: Karol Subotowicz, Ewa Sarna, Michał Miroslawski, Anna Maj, Paulina Kluska, elaborated under the supervision of Dorota Winnicka-Jasłowska. Poster 1.
Figure 5. Final project named Kosztove Love - designed by students: Karol Subotowicz, Ewa Sarna, Michał Mirosławski, Anna Maj, Paulina Kluska, elaborated under the supervision of Dorota Winnicka-Jasłowska. Poster 2.

4.2. Author’s final conclusions and project guidelines

- Each plot is to draw users by its uniqueness and variety of attractions;
- Design should, first of all, promote outdoor activities and spending time in the open air;
- Additionally, it should integrate the Kosztowy community;
- District is to become friendly to all inhabitants, irrespective of age;
- Solutions proposed may be modified and developed in the future.

5. Conclusions

While summarizing the student competition, the following key aspects should be taken into consideration:

- **Didactic aspect** – Collaboration with an external partner enabled the implementation of a real-life project based on real needs and requirements of users. Pre-designing investigations with the participation of the users made it possible to determine the above-mentioned needs. The field study trip and then workshops involving the inhabitants made it possible to get to know the needs and expectations of the future users. Some problems and design limitations came into the picture.

- **Practical aspect** – Students’ designs involved modern and innovative solutions for urban spaces. They broadened the inhabitants’ awareness of the development and the arrangement of the space in an attractive way for each age group. New proposals of inhabitants’ outdoor activities came up in the discussions and they were included in the designs.

- **Social aspect** – during the project work, there was an interaction between the designing party (students, academic teachers) and the representatives of the Partner (inhabitants, Municipal Office officials) consisting in the exchange of information, expectations, ideas and experience. This interaction brought positive effects and contributed to the creation of a new vision, both in the scope of the development of the designed space and the ideas for new types of outdoor activities which could be done by the inhabitants in their district. Brainstorming during the workshops resulted in many interesting opinions and conclusions, which were used in the concept designs. What was particularly important was the consideration of the assumption that the designed space should integrate all inhabitants, irrespective of age.

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6 Chapter 4 based on students’ projekt description, elaborated by Authors: Karol Subotowicz, Ewa Sarna, Michał Mirosławski, Anna Maj, Paulina Kluska.
Acknowledgments
Special thanks to the foundation Allecco with which we carried out the competition and thanks to whom we could work on the project. Words of gratitude also to professors: Joanna Tymkiewicz, Anna Szewczenko, Iwona Benek and others, who cooperated on the project, took care of students and helped to organize workshops and the student competition.

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