

# URBAN WATERFRONT RECREATION TERRITORIES: A DIALOGUE WITH WATER

## Abstract

The Paper investigates the different aspects and possibilities of a dialogue with water in contemporary practice of urban recreation. The place and importance of the value of waterfront territories in complex nature-based solution for the future urban growth have yet to be understood and realized. Now the city is regarded as an open system and, at the same time, the array of its waterfront territories in contemporary urban planning is in the focus of developers. The trends and tendencies of architectural & landscape organization of the urban territories near water are revealed on the analysis of international project practice. This waterfront zones are shown as the most dynamic and claimed objects of planning practice, especially in dialogue with water, where the study of the relation: "the natural qualities of water – the naturally built environment - the psycho-emotional conditions of human beings" are passed over.

Keywords: entrance groups; built-in public service establishments; compositional and spatial structure.

## 1. introduction

The urban waterfront territories become one of the most demanded planning objects today, where architectural-landscape planning, water architecture and creative design meet. Moreover, the attitude to water bodies of landscape changes every day due to challenges of time, technical and constructed possibilities and human needs. One of contemporary trend of landscape architecture is to involve the spatial reorganization of urban territories or outdoor places in connection with water to meet human needs and desires while protecting or enhancing natural environments and processes. Landscape architects aim to create places near water and in dialogue with it that meet social, environmental, cultural, aesthetic and practical requirements. Today territories near water need the efficient ecologically responsible architectural-landscape organization and should be regarded as one unified complex of urban territories in general structure of city based on "basin" planning principal<sup>1</sup>. The banks along water edge (along a see, river or lake) play a significant new urban role both in development of existing agglomerations and in growth of newest fast-growing cities.

## 2. Trends of architectural & landscape organisation of urban waterfront zones

A. One of the modern trends in planning the waterfront recreation areas is the *multi-functional* way of their organization. Waterfront areas, which may occupy quite considerable space of a city along the water break, are often characterized by strong intertwinement of different functional zones: living, recreational, industrial and others. At the phase of project design the following aspects should be considered: evaluation of water areas' and banks' capabilities for recreation,

threshold limits of recreational capacity, recommended quotas, parameters and key figures regarding the management of suburban recreation, etc.<sup>2</sup>

Projects of waterfront recreation areas consider the complexity and multi-functional character of organization of modern urban spaces and converting them into zones of multi-functional purpose with protected or recreated nature environment. It can be illustrated by projects, completed in many cities: London, UK, Kiev, Ukraine, Baku, Azerbaijan, Singapore, Singapore, Leipzig, Germany, Raon L'Étape, France, Krakow, Poland, Guangzhou, China, etc. A lot of objectives have to be achieved during the realization phase, such as optimization of land utilization at the borders of coastal areas, balancing of social, environmental and economic functions development, achievement of a new environment protection, etc. Contemporary world practice gives various approaches to the architectural-landscape organization of waterfront territories: from "classical" or traditional solutions of nature recreation park zones to creation of modern interactive urban environment with public open spaces along watersides.

*Regional Park along river valley through city and its suburb zone.*

In present study it can be shown by the example of London City, the UK. *Lee Valley Regio-*



il. 1. London, UK. Lee Valley Regional Park, 2007: The example of the multifunctional organization of riparian territories for the recreation: with historical-cultural functions, natural protection and active sport usage. (Photos by L. Ruban and from official site).

nal Park in London and its suburbs was created in 2007 along the valley of tributary Lee. Now it is a part of green chain which connects central urban districts with suburbs areas in Essex and Hertfordshire<sup>3</sup>.

This is multi-functional complex of suburban territories, which planning was stipulated by area's natural features. Main construction activities in the park were completed by 2007. Lee Valley Regional Park occupies the area of 4000 hectares and spans 42 km along Lee River. Riverside territory is tessellated by suburban towns, urban and green areas, historical sites, parks, natural conservancy areas, lakes and streams, sport centers, etc. (Fig.1). In particular, open public places, located in Lee riverside are: River Lee Country Park, 400 hectares, Walthamstow and Leyton Marshes, Hackney Marshes, Bow Creek Ecology Park and East India Dock Basin<sup>4</sup>.

*Blue-green diameter (belt) of the city: the system of historical parks, historic and modern buildings, virgin natural islands in river valley.*

Another example of more traditional approaches may be found in the capital of Ukraine Kiev with its unique nature-topographic base. In fact, the city is located on two borders of great river Dnieper. So, its town-planning organization is determined by water surface of Dnieper traversing the city from north to south. General town landscape is formed by the waterway, the contrast of two riverbanks (right bank is high, left – sloping shore), water panoramas with historical architecture dominants in the greenery surrounding of right

hillside, the group of islands in the middle of river stream, the left bank's modern building (area reclamation), etc. (Fig. 2). Such planning tradition of system of historical parks on right bank of Dnieper, which is a cornerstone of planning solution, was expanded on planning of modern developments on both sides of the river. All these characteristics of topographic base emphasize the uniqueness and the atmosphere of the area<sup>5, 6</sup>. In particular, Kiev is the only European capital that enjoys original virgin greenery of river valley, located within the historical city center borders. Waterside territories of Kiev were taken under protection by municipal authority in 2010 as a part of protected object "Historical landscape Kiev's mountains and the valley river Dnieper (IX-XX century)"<sup>7</sup>.

*General renovation of city's historic seafront boulevard.*

The capital of Azerbaijan gives the example of combination of modern architecture, large wide open spaces of embankment with the context of historic city and its natural landscape. Historical old city center meets with nearby residential and administrative districts together with wide passageway to sea

il. 2. Kiev, Ukraine. The banks of Dnieper: with nature protection territories, historical heritage UNESCO sites etc. (Photos by L. Ruban).





il. 3. Baku, Azerbaijan. Modern construction of historical Seafront area (1909) at the banks of Baku Bay in Caspian Sea. (Photos by L. Ruban)

bay – this is the main features of multi-functionalism in Baku<sup>8</sup>. Numerous modern hotels, museums, restaurants and cafes, theaters, music halls, yacht clubs, cinemas, park areas with fountain squares and attractions are located along the wide pedestrian promenade and historical city center (Fig. 3). During last decades, and especially, after 2009, step by step implementation of general renovation project of historic embankment is carried out. The territory of the Seafront Park was recently increased 5 times. Significant part of the renovation was completed in 2015. Currently its length is about 16 kilometers and it expects further extension to 24 kilometers.

*Newest Contemporary city near water: a system of open public spaces along river, bay and open sea*

The experience of Singapore as a major 21st century metropolis gave the example of contemporary urban environment of newest urban center. Here are numerous waterfronts that combined in one unit by water transport and walking passes throughout the entire city (Fig. 4). Modern Singapore developed around its trade rivers in pass (the rivers were centers of trade for centuries before) - Singapore River and Kallagan River. "Through thoughtful planning, our waterfront today still retains important heritage buildings that are conserved and repurposed for modern uses. This is in recognition of their architectural and historical significance in recording the development of our country, and as landmarks of our city and repositories of our collective memories as a nation."<sup>9</sup>

The new icons such as the Marina Bay Financial Centre, Gardens by the Bay, and the Marina Bay Sands integrated resort were erected. The construction of the Marina Barrage transformed Marina Bay and the Kallang River Basin into a vast urban

reservoir. "Marina Bay has become the heart of the new Singapore, a 'new Padang', a place for both work and pleasure, and a setting for big events that unite the community"<sup>10</sup>.

B. Especially worth mentioning *the usage of new technologies* for creative a dialogue with water in contemporary megapolis.

One of currently topical trends is the relation of contemporary life to modern technologies in various areas: in architecture and construction, landscape design, digital graphics, engineering equipment, utilizing of modern polymer materials, etc.<sup>11</sup> Demands of creation of the "dynamic" urban space, are performed, in particular, with assistance of modern digital multimedia technologies, results in filling the city areas with new modern functions<sup>12</sup>.

Techno-creative activities regarding the conduction of art festivals, light shows, musical-singing marathons, etc. are often performed at waterfront areas in various cities. It is possible to distinguish permanent measures and temporary events. The examples of conducting the permanent measures are the following waterfront recreation areas: river South Bough bankside near the Roshen factory in the city of Vinnitsa, Ukraine; Madrid-Rio along the Manzanares River watercourse in Madrid, Spain<sup>13</sup>, waterfront area of Caspian Sea in Baku, Azerbaijan, etc. (Fig. 5).

il. 4. Singapore, Singapore. The beautification of Singapore's River banks and the main embankment near Marina Bay Sands complex. (Photos by L. Ruban)





il. 5. Baku, Azerbaijan. The meaning of new dominant “The Flames Tower” in waterfront panorama of city in day and in night, (photos by L. Ruban).



il. 6. Singapore. Marina Bay Harborough, inter active waterside environment at night, (photos by L. Ruban).

The example of Singapore waterfront has united both approaches. Every evening the landscape-recreational area of Marina Bay presents the fantastic view to decorative lighting of littoral buildings and multimedia fountain shows and it is possible to enjoy the atmosphere of temporary art festival of lights, which usually takes place for not longer than a month. In such way the modern interactive surrounding is being created (Fig. 6).

C. All examples, discussed above, are regarded to significantly extended waterfront areas in cities. Thus, 42 km long of waterfront along tributary Lee from center of London to its suburbs in Essex and Hertfordshire. In fact, Lee Valley Pathway, spreading from Luton to Thames River for more than 80 km (50 miles), connects all structure elements of Lee Valley Regional Park with assistance of pedestrian walkway

along banks of Lee River. Or another project 24 km long of new seafront territories along Caspian Sea’s shore in Baku.

But there are numerous other examples that give *another town planning scale* of “dialogue with water”. It concerns more “chamber” original solutions which involve, in particular, *micro-spaces*, created inside the existing town layout.

The example of Austrian city of Graz<sup>14</sup> gives a new, exceptional building site where the river not only divides the city, but also connects it. The fascinating idea of integrating the river Mur into the life of the city was realized as a floating platform into the river between the

il. 7. Mur Island Bridge, Graz, Austria, 2003 by Acconci Studio (Photos by Acconci Studio).





il. 8. Kumamoto, Japan. Kiriake Miniature Water Park by Takao Shiotsuka. 2012. (photos from <http://www.novate.ru/blogs/161012/21714/>)

historic city center and Mariahilferplatz, created a simple look-out at an unusual location. This “artificial joint”, which links nature and city, helps visitors to enjoy new viewpoint and provides access to previously not accessible areas.

The island in the Mur features a small café, an open-air theatre and a playground for children - a small local urban culture and leisure center, established in an area, which previously did not belong to a town territory (Fig. 7). So, each part, no matter whether closed or open, has been assigned certain functions depending on its specific spatial character.

“...island for Graz must also be seen in this context – an interplay of forms and elements, a play of communication in isolation. The island is an exciting place, a lively and pleasurable experience, built for the new millennium for people to meet and communicate, to play or simply daydream and relax. And all this takes place by the water, on the water and in the water.”<sup>15</sup>

Kiriake Miniature Water Park, created in the neighborhood of Kikuchi, a city in Kumamoto, Japan, has even smaller scale and lesser dimensions. This public space is kind of miniature water park, where water is collected in three puddles, creating a composition, which brings to mind a slight association with Japanese traditional rock garden. While children play in shallow pools, adults may relax by soaking their feet into breezy water<sup>16</sup>. Authors believe that absence of greenery is compensated by shading awning and presence of water, which together create feelings of freshness. On the way of revitalization an old area of the city with “a new stream of people.” (Fig. 8).

D. *Role of contemporary art installations* in dialogue between a community, town environment and water surfaces can be

show on the example of new art work by Christo for small town Sulzano in northern Italy, completed in 2016. The new project, the “Floating Piers” comprises two miles of marigold-yellow walkways floating on the surface of Lake Iseo, a small lake in northern Italy, connecting the waterside town of Sulzano with two small islands<sup>17</sup>. Author suggests the “floating piers” as an extension of the street, that belongs to everyone and hope that public will receive the new experience and enjoy from the dialogue with lake water surface (Fig. 9). This is a new possibility of shaping identity of small historical town and its natural surrounding with water design possibilities.

### 3. Conclusions

The urban waterfront territories become the one of the most demanded planning objects today, where architectural-landscape planning, water architecture and creative design meet. Moreover, the attitude to water bodies of landscape changes every day due to challenges of time, technical and constructed possibilities and human needs.

Today territories near water need the efficient ecologically responsible architectural-landscape organization and should be regarded as one unified complex of urban territories in general structure of city based on “basin”

il. 9. Sulzano, Italy. Art installation in lake Iseo. Christo’s “Floating piers”: from streets to lake water surface, 2016. (Photos by wolfgang volz © Christo)



planning principal. The banks along water edge (along a sea, river or lake) play a significant new urban role both in development of existing agglomerations and in growth of newest fast-growing cities.

Design of waterfront territories should follow the principles related to the preservation of nature, water protection and recovery functions; it should reflect the comprehensive approach to the issue combined with multidirectional further development of these areas; it should be connected with the world latest technologies and progressive tendencies to unleash the full potential of these territories. Every particular case of incorporation of water objects into urban infrastructure results in unique planning. It was illustrated by analysis planning practice of such cities as London, Kiev, Singapore, Baku and others. This waterfront zones are shown as the most dynamic and claimed objects of planning practice, especially in dialogue with water, where the study of the relation: "the natural qualities of water – the naturally built environment – the psycho-emotional conditions of human beings" are passed over.

The importance of conducting the dialogue with water in contemporary megalopolis demonstrates the demand of a visitor to immediate contact with water, as a one of main and most flexible natural environment components, which provides emotional comfort and relaxation. Approaches to answering this issue of creation of unique environment in a dialogue with water are extremely versatile.

Today territories near water need the efficient ecologically responsible architectural-landscape organization due to necessary protection of the environment from one side and accelerated urbanization process from the other with necessary creating of comfortable living conditions in the general trend of climate change and the highly rapid development of smart technologies in modern world.

#### ENDNOTES

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- <sup>2</sup> T.F. Panchenko, L.I. Ruban, A.A. Golub, P.S. Bayandin, G. Omshanska, A. Zvaigintseva, V.O. Zelenskiy & A. Gudzenko, 2014. 'Functional planning organization of landscape and recreational objects, the materials of 75-th Scientific and Practical Conference KNUCA 15–18 April 2014', Architectural Journal KNUCA, vol.3. P. 177.
- <sup>3</sup> L. Ruban, The Architectural-Landscape Organization of Streamside Territories: the tutorial. Edited by Panchenko TF. Kiev, KNUCA, 2013. P.23
- <sup>4</sup> <http://www.leevalleypark.org.uk>
- <sup>5</sup> L. Ruban, The Principles of Town-Planning Use of Territories under the Conditions of Degraded River. Kiev National University of Construction and Architecture (KNUCA), 2000. P.42.
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- <sup>9</sup> Singapore. Historic waterfront. 2013. [https://www.ura.gov.sg/uol/publications/research-resources/books-videos/2013-09\\_historic\\_waterfront.aspx](https://www.ura.gov.sg/uol/publications/research-resources/books-videos/2013-09_historic_waterfront.aspx)

<sup>10</sup> T. Auger, A River Transformed: Singapore River and Marina Bay. 2015 [https://www.ura.gov.sg/uol/publications/research-resources/books-videos/2015-11\\_a\\_river\\_transformed.aspx](https://www.ura.gov.sg/uol/publications/research-resources/books-videos/2015-11_a_river_transformed.aspx)

<sup>11</sup> S. Kuc, Techno-kreacja a architektura krajobrazu. Wybrane zagadnienia. Monografia 392. Krakow: Politechnika Krakowska, 2011, p.186.

<sup>12</sup> T.F. Panchenko, L.I. Ruban, A.A. Golub, P.S. Bayandin, G. Omshanska, A. Zvaigintseva, V.O. Zelenskiy & A. Gudzenko, 2014. 'Functional planning organization of landscape and recreational objects, the materials of 75-th Scientific and Practical Conference KNUCA 15–18 April 2014', Architectural Journal KNUCA, vol.3. P. 177.

<sup>13</sup> L. Ruban, The Architectural-Landscape Organization of Streamside Territories: the tutorial. Edited by Panchenko TF. Kiev, KNUCA, 2013. P.50.

<sup>14</sup> Building an Island Vito Acconci/Acconci Studio. Mur Island, Graz/Austria. Edited by Graz 2003 – Kulturhauptstadt Europas, ART & IDEA, Texts by Oliver Elser, Wolfgang Lorenz, Robert Punkenhofer, interview with Vito Acconci, et al. by Heike Faller. German, English. 2003. 112 pp.

<sup>15</sup> The Island in the Mur. Plaza For The New Millennium / [http://www.graz03.at/servlet/sls/Tornado/web/2003/content\\_e/8FCE673302F9BE61C1256B81005CED38](http://www.graz03.at/servlet/sls/Tornado/web/2003/content_e/8FCE673302F9BE61C1256B81005CED38)

<sup>16</sup> Grozdanic L., Kiriake Miniature Water Park / Takao Shiot-suka. / <http://www.evolo.us/architecture/kiriake-miniature-water-park-takao-shiotsuka/>

<sup>17</sup> <http://www.designboom.com/art/floating-piers-christo-and-jeanne-claude-lake-iseo-italy-06-18-2016/>

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