

# Re-thinking the city in the context of suburban landscapes. The case of Visula River delta water - landscapes and urban transformation processes in Gdańsk

Lucyna Nyka\*

Faculty of Architecture, Gdańsk University of Technology, ul. Narutowicza 11/12, 80-233  
Gdańsk Wrzeszcz, Poland

\* [Inyka@pg.gda.pl](mailto:Inyka@pg.gda.pl)

Received 16 Dec 2009; received in revised form 16 Apr 2010; accepted 26 Apr 2010

---

## Abstract

The text draws attention to the significant role of landscape formations surrounding the city and their role in marking out directions for the transformation and development of urban areas with the particular emphasis on public spaces. The article presents the need for a more conscious design strategies that are based on connectedness of urban spaces, which is built on landscape's characteristics, as an essential starting point for developing a strategy of urban transformation in such a way that development would not contribute to the loss of landscape identity but enhance it. The article refers to the case of Gdańsk, including an analysis of the role of water in its development and its transformations. It stipulates the advantages of re-defining the city and searching for its once-lost relations with the embracing landscapes, particularly with the landscape of the Vistula River delta's polder.

*Key words:* urban landscape; water landscapes; public spaces connectedness; urban development

© 2010 Jan Evangelista Purkyně University in Ústí nad Labem

---

## 1. The city as a landscape

Revealing connections with the surrounding landscape as a starting point for urban transformation processes is still not sufficiently valued. How to recognize and to expose the potential of this landscape, understood in the geographical and cultural aspect? How to transform its features and to transfer them in their most sublime form into urban conditions? The landscape surrounding a city, important in

the past, today once again can be an essential point of departure for urban development projects

The choice of locations for towns resulted from important reasons; apart from the extended connections with the region, it usually had to do with access to water or convenient conditions for building defence fortifications. Geographical characteristics of the land were used naturally in the city's

development; its form was negotiated in the landscape. However, emerging understanding of city planning, especially powerful since the end of 19<sup>th</sup> century, as a work of art subordinated to composition rules, has meant that this connection has ceased to be perceived and finally was neglected.

At present, after a functionalist approach based on many oppositions, a tendency toward joint perception of ecological systems and the built environment can be observed. Objective criteria of space analysis, however necessary, are more often found as insufficient. In effect, analytical approaches are complemented with the value of the direct experience. This kind of thinking seem to dominate today's architectural attitudes and are frequently developed into the concept of the city as a landscape.

It should be emphasized though, that many ideas that have emerged since the beginning of the 20th century can be regarded as a continuously repeated attempt to develop an interpretation of the city as a special kind of landscape. Georg Simmel, strolling through the labyrinths of the metropolis, interpreted it as a landscape in which many heterogeneous elements, through fading some of them and emphasizing others, constitute one coherent whole. The 1960s and 1970s enhanced and developed the concept of the city as a landscape. A city was revealed in the dynamics of the observer's movement and in various environmental impacts – as a result its image was created even by unstable shadow lines and water tides.

Today, in architectural concepts blurring oppositions between the built environment and nature is emphasized once again. It brings spectacular results: rock formations, unstructured topographies are treated as components of architectural form. Even water becomes its powerful constituent (Nyka 2007). The value of the presence of elements is stressed in urban space projects. Various public places are created whose characteristics are based on enhancing and revealing environmental impacts. It triggers a new kind of architectural imagination. In

effect, encompassing nature in public space does not result only from rational reasons but also from aspiring to reveal a deeper layer of the city, where water sounds or half-natural, half-constructed landscapes are an important element of urban experience. Additionally, at the same time many studies confirm that these are not attributes of the built structures but the way in which natural features of the land are transformed into usable urban spaces that builds the identity of the city and determines its identification (Roberts 2001: 39).

Consequently, cities are more often interpreted in categories of the landscape – the environment of natural and anthropogenic features, social processes and ecosystems which intertwine. Detlev Ipsen and Holger Weichler underline that referring to landscape allows one to consider relations between forms, land use, lifestyles, cultural models and the dynamics of ecological systems. The authors demonstrate that urban landscape is not only a metaphor but a useful “theoretical construction that opens an interdisciplinary approach both to analysis as well as city-region planning.” Space, society, build-up forms, nature and environment are presented in this construction not as oppositions but as a new whole (Ipsen 2005: 42). Also Bart Lootsma, introducing the expression “landscape urbanism” indicates failures of strategies based on space fragmentation, which results from the traditional scope of the profession (Schafer 2003: 8). What is important, is the shift in urban planners' attitudes, who start to realise that the traditional tools are more often not sufficient since urban environment is active and susceptible to many not always predictable impacts. The notion of landscape opens new ways to working out adequate tools for this active urbanism.

What is essential, the perspective of a city as a landscape creates new possibilities of defining its connections with the surroundings and in fact is tightening them. Manfred Kuhn even claims that the model of the “urban landscape” is based on and results from the concept of the city and surroundings which interpenetrate (Cultural landscapes... 2005:

120). The need to redefine understanding of cities, to free them from isolation and to show them in a wider context of the environment, is today presented within many disciplines, from archaeology, architecture to the humanities. According to Christopher Tilley's book *A phenomenology of landscape. Places, paths and monuments*, which is groundbreaking for many disciplines, only through the narrative experience of the landscape, it is possible to achieve understanding of a place as well as to present it in a wider sense. By creating continuity with the landscape, sites appear to be more capacious defined; they acquire new values and references (Tilley 1994). This extended understanding of the city in relation to a landscape can be a vital point of departure for developing strategies for its development and urban transformation.

The subject of the research presented in this paper is the case of Gdańsk, an analysis of its transformations and possibilities for improving urban space quality by retrieving interconnections with a wider context of the landscape, in particular the landscape of the Vistula River delta.

## 2. Gdańsk in the context of landscape

Gdańsk came into being and developed on the border of two large ecological systems: moraine hills and fens of the Vistula River delta (fig. 1). These two landscape formations were mainly used for practical and defence purposes. To the west the town bordered with hills which gradually were changed into fortresses. Water from the lowland river Motława filled moats and passed through Gdańsk, becoming the centre of the town's functional programmes as well as the core of its urban structure. Already in the Middle Ages the depression areas of Żuławy started to be reclaimed into a polder. Gradually the characteristic image of the Vistula delta started to appear – crisscrossed with canals with windmills for water pumping and locks (fig. 2). The whole rich canal infrastructure was formed. This was also a settlement area of Mennonites – members of a Dutch minority

who had knowledge and experience with element of water.

**Fig. 1 Cartographic reconstruction of the Vistula River Delta in XIII c. according to Bertram**



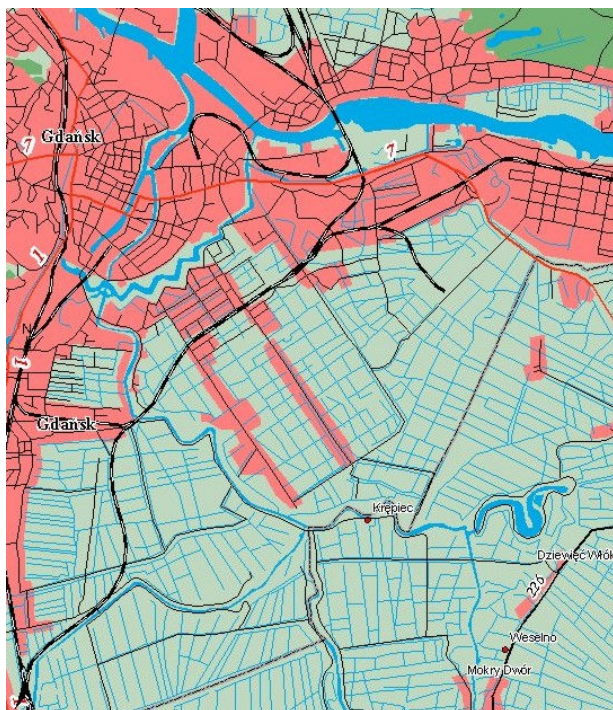
**Fig. 2 System of canals, the Vistula River delta, 1780**



Characteristics of this landscape were transferred to the city of Gdańsk, determining its spatial development. Water gates, locks of different construction and boats crowding the Motława canal, waiting for entry to the harbour were typical attributes of the city. Gdańsk expanded beyond its former area and drained

marshes, transforming them into an urban landscape. The numbers of consecutive causeways have remained in the street names until today. In the 17<sup>th</sup> century bastion fortifications were built together with moats filled with Motława's waters. The area of Dolne Miasto (Low Town), crisscrossed by canals, was drained by windmills. In the depressed area situated behind the bastions a settlement started to grow, today Gdańsk's district of Olszynka, which is a direct continuation of the polder landscape of Żuławy (fig. 3).

**Fig. 3 Gdańsk and environs. A current land use map with urban and sub-urban canals** (Source: Gdańsk Municipal Office 2006)



In the 19<sup>th</sup> century when both the fortified hills as well as the bastions started to lose their military significance, they became a part of urban public space, and as green areas they were used for recreation purposes (Nyka and Szczepański 2004). In Joseph Stüebben's project, a green alley, which was planned in place of former city walls, linked the fortress areas with distant parts of the city as far as Motława canal (fig. 6). At the same time, the city dwellers walking along canal boulevards

could reach the bastion fortifications whose moats were changed into urban beaches. The water routes linking Gdańsk with other towns of the Żuławy region were functioning very well. Vistula River delta canals network entering the city brought the broader sense of connections with the region. In this way, as the town was being developed and new perspectives of public space and recreation areas were marked out, they were subordinated to the logic of wider relations with the landscape.

### 3. Re-gaining water-landscapes for urban development

After the wartime destruction, only isolated parts of Gdańsk were restored. Due to functionalist concepts the issue of water was marginalised – once the centre of the city, it suddenly became its peripheral edge. Former green alleys linking different distant urban spaces were made into dual carriageways, a barrier to pedestrians. Lack of understanding of the potential resulting from the integration of surrounding landscapes led to their neglect. They are cut off and unfrequented, outside the system of public routes. The ratio of green areas to build-up areas is high in Gdańsk, but the green areas are patches that do not make a whole. The subject of Żuławy was suppressed after the war for political reasons, mainly regarding their German history. Additionally, it should be emphasised that the Żuławy area was severely damaged during wartime: the main polders were flooded and their drainage took over two years (Klim 2008).

When the water became the city's periphery and was deserted it also lost its power to create connections. Many areas of Gdańsk, despite their natural, cultural and historical values, became out-of-the-way places. Isolated from the city centre, they were degraded in a material and social sense. Today they are considered to be the most dangerous territories in the city. Gdańsk as a city started to consist of disconnected parts.

Methodologies of revitalization which are static and view the city in terms of separate

areas are a deterrent to improvement. Additionally, and paradoxically, water in these studies is usually a border of the delineated research area. As a result, the bastion fortifications have been undergoing regeneration for some years now, profiles of earth formations have been improved, characteristic flora has been restored, but nobody comes to visit those places. A historical fortified hill Gradowa Góra with unique redoubt started to serve as an educational and cultural centre, the Hevelianum centre was created there, but due to the lack of visible natural connections these places remain empty. Water systems exist, indeed, but nobody can reach them as they are not integrated within the system of public spaces. Due to their fragmentary nature they do not encourage efforts to establish continuity of the urban landscape, either in the natural or in the spatial aspect. There is a lack of comprehension of the necessity of joint management of natural forms and the built environment. In effect, despite their direct proximity and even overlapping they are treated separately and developed by different project teams.

At the same time a need for wider perception of the city emerges, a need to regard

it not only as a built environment but also in a wider context of topographic and landscape conditions. The rejection of Gdańsk's inclusion on the UNESCO World Heritage List initiated a discussion on what constitutes a city's identity. The discussion clearly revealed how important it is to redefine a city and to show it in the context of the landscape. For many years the World Heritage List has included "natural sites", "cultural sites" or so-called "mixed sites". At present, and this is something Christopher Pound pays attention to, these categories are more deeply analysed, which resulted in the acceptance of sites described as "cultural landscapes". These are sites where "cultural and natural values mix together and erase borders of earlier judgements" (Pound 2001: 90).

Regeneration of relations with the landscape would allow the linking of broken parts of urban space, simultaneously enhancing the most important, constitutional characteristics Gdańsk's identity is made of. And these are, first of all, the unique connections with water, canals, with urban polder areas and the anthropogenic landscape of Żuławy region. Redefining the city and showing it in this wider environment could be a base for developing more specific concepts of its urban transformations (fig. 4).

**Fig. 4 Polder area within the city – Olszynka district, on the left The Stone Lock – the water gate to the city (foto: L. Nyka)**



Emphasizing the role of water, and integrating the public space system with it, is a starting point for the processes of re-defining the city and changing it into well-connected environment. Apart from other advantages, it

would allow for encompassing peripheral areas, for a long time neglected. The bastions and their surrounding moats are unique European monuments and acknowledged landscape heritage site. This is the place, where

sophisticated engineering constructions steer water flow and where city canals have their beginning. On the polders a special type of settlement is still visible which is characterized by the relation of buildings to canals. It is neither possible to understand the city without it nor to write a scenario for its further development. Development strategies for these areas are of crucial importance since the polder part of the city will find itself within the new city ring so the investment pressure on it is steadily growing (fig. 5).

**Fig. 5 Gdańsk. A connection strategy for the polder area, fortifications and the centre of the city. The concept developed in frames of the Erasmus IP *Bridging the City – Water in Architecture, Urban Spaces and Planning, Gdańsk 2007* (Source: Bridging the City archives)**



There are many such sites that gain deeper understanding in the perspective of the landscape-water relationship. For many years the connectivity between them was hindered by industry, but today their isolation can be broken. One of the results of the Polish-Dutch workshops *Water in the City* which took place in 2006 in Gdańsk was to show how much the spatial and landscape integration of the city is dependent on integration of existing water systems. To link them, apart from connecting of the city, would re-introduce these very special areas. This includes, for example, the city district of

Przeróbka, where buildings stretch down as far as the water line, just like in Dutch towns, or Martwa Wisła, the river entering the city, together with quays and in future also houses on water. At present these sites are not included in the city's walking tour routes and are not part of the urban experience. The lack of appropriate relations impoverishes the city and leaves the urban spaces of Gdańsk torn apart.

After many years of neglect the water landscape of Żuławy Wiślane, a unique area of cultural and natural heritage, is being restored. Former water routes leading to Gdańsk and connecting the whole area of the Vistula River delta are being regenerated. Thanks to many hydro-engineering devices and equipment which are situated here, such as flood banks, locks, pump stations and other water and land reclamation equipment, the whole region gains a much wider perspective. The landscape's regeneration is accomplished in natural historical, cultural, economic and social categories at once, which gives a chance for long-term sustainable effects (Gola 2008).

It is distinctive that integrating Gdańsk's water systems and looking for their relations with the landscape is largely stimulated by regional programmes. Thus, planning defects on the scale of the city itself, too focused on isolated areas, are compensated by planning on the regional scale, which in a sense encourages comprehensive thinking. It could be significant that regional programmes are very often European Union supported initiatives which generally require one to exceed the local dimension and favour an integrated approach – including natural, social and cultural issues.

In effect, regional and multiregional projects have a major impact on changing the way of thinking about urban spaces of Gdańsk, linking them with the landscape and first of all with the Vistula delta water route system. Preparations for such programmes as *Infralandscape* and *Floating Architecture* showed the development potential for Gdańsk and Żuławy, resulting from taking advantage of landscape's characteristics, its cultural, topographic, physiological and functional

values. The project *In-Water*, which has been implemented for some years now, reveals Żuławy, Martwa Wisła, Gdańsk, and Motława embankment as unique travel environments and stopovers on the water ways connection Antwerp – Berlin – Gdańsk – Kaliningrad (fig. 11). Instead of planning isolated areas a new logic for creating continuity has appeared.

Redefinition of the city form through the category of the landscape which presents a city as a complex environment and shows it in the perspective of relations with the “outside” is an essential starting point for integrating diversified urban geography. Such an approach allows the city to be shown in terms of its characteristic topography, ecological systems, build forms, as a meeting place of many cultures and supporting them economies. Planning which presents the city in the perspective of enhancing relations with a wider context of the landscape is nowadays necessary and it is the most authentic means of the city’s development, a way which brings sustainable and long-term effects.

#### 4. Conclusions

In the case of many cities their relations with features of the broadly understood landscape have been erased. Gdańsk is a good example of how such relations are lost. The exchange of population, the deliberately overlooked subject of Żuławy, many years of a functional approach to water and reducing the city image merely to a built environment, brought serious consequences. The public space which had grown around water and topographic systems that embraced the city for many years were cut off and fragmented and their meaning are difficult to understand. Redefinitions, the approach in which the built and natural environment are one whole, redefinition of the city by looking for its relations with the landscape, is an opportunity to create a sustainable project of public spaces and to start a process of spatial and cultural integration of the city. Undertaking an attempt to redefine cities by reconstructing their relations with the landscape is very important today. It is a starting point not only for improving existing

public spaces but also for determining directions and characteristics of further urban development of cities. Preliminary concepts based on applying this approach in studies and urban project have brought promising results. However, apart from theoretical recognition, the important objective is to introduce these values into formal procedures of urban planning. This is a task and a challenge for the nearest future.

#### References

- Nyka, L. (2007): Architecture and Water – New Concepts on Blurring Borders. In: Water for urban strategies. (Ed. L. Nyka). Verlag der Bauhaus-Universität Weimar 2007, pp. 20-27.
- Nyka, L. (2006): Od architektury cyrkulacji do urbanistycznych krajobrazów. Gdańsk University of Technology.
- Roberts, M. (2001): Making Convivial Places. In: Approaching Urban Design. (Eds. M. Roberts, C. Greed). Pearson Education, Essex, pp. 39-45.
- Ipsen, D., Weichler, H. (2005): Landscape Urbanism. Monu 02 – Middle class urbanism, 1, pp. 40-45.
- Schafer, R. (2003): Changing European Cities. Shrinkage, Perforation, Growth in the Periphery: Searching for a new Image of the City, Architecture and Urbanism 6, pp. 8-10.
- Cultural landscapes are protagonists’ landscapes, a conversation. In: Changing Places, Contemporary German Landscape Architecture. (Ed. BDLA). Birkhauser, Basel-Berli-Boston, pp. 120.
- Tilley, C. (1994) A Phenomenology of Landscape. Places, paths and monuments. Berg, Oxford.
- Nyka, L., Szczepański, J. (2004): Poznajmy fortyfikacje Gdańska. In: 30 dni, Gdańsk, 3/4, pp. 3.
- Klim, J. (2008): Żuławska żegluga śródlądowa-zapomniane dziedzictwo. In: Rocznik Żuławski, pp. 30-35.
- Pound, Ch.(2001): Authenticity Continued. In: The Identity of the Rebuilt City: Authenticity-Integrity-Continuation. (Ed. R. Cielątkowska). Gdańsk, pp. 90-98.
- Gola, G. (2008) Żuławy – laboratorium tożsamości. In: Rocznik Żuławski, p. 8-11.