
THE GREEN RING OF TRADITION AND CULTURE IN ŁÓDŹ AS AN EXAMPLE OF A STRATEGIC PLAN TO PROTECT AND SHAPE THE LANDSCAPE OF A FORMER INDUSTRIAL CITY

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ABSTRACT: Natural and cultural heritage co-create the cultural landscape, forming the basis of both local and larger sense of identity. Therefore, protecting and shaping these resources is the major task of currently living generations. It is possible and appropriate to undertake integrated action to protect and shape both natural and cultural heritage together. At the same time, it is important to take into account the specificity of these resources so as to ensure parallel development of both systemic solutions and specialized ones.

The Green Ring of Tradition and Culture is a design proposal for a system of attractive spaces surrounding the city centre of Łódź, which takes into account green areas such as parks and allotment gardens, as well as greenery along the rivers Łódka and Jasioń, cemeteries and post-industrial buildings: factories, residences and factory owners' villas, and palaces or other culturally significant architectural objects of importance for the history of Łódź.

A special place in this layout is held by Piotrkowska Street together with adjacent buildings – a defining component in the layout, which cuts across it and connects all other elements. The Green Ring in Łódź is currently not implemented but could utilize that utilizes the existing, significant potential of Łódź to create an attractive system of public spaces, thus highlighting and preserving the most valuable elements of the city's cultural and natural heritage.

KEYWORDS: cultural heritage; city identity; cultural landscape; spatial planning

Introduction

The phenomenon of forming ring plans for public greenery is characteristic for the defortification of European cities, which occurred mainly in the nineteenth century. These rings would replace existing medieval and modern fortifications. “Areas formed after defortification were basically public property and it became possible to introduce such functions to the city centre that were impossible when it was closed: wide streets were laid out, urban green areas were established and representative public buildings were erected” (Bugalski 2020). The beginning of the process of creating green rings around historic city centres can be traced to France and Germany, and is closely related to the wider process of urban redevelopment, coinciding with the creation of a new approach to urban planning. However, the earliest instances date back to the end of the seventeenth century when urban defence systems changed, leading to the removal of city walls and embankments (Omilanowska 2010, Pawłowski 2017). Defortification intensified at the turn of the eighteenth and nineteenth century, and rapidly accelerated after the Napoleonic Wars. Demolished fortifications were replaced with parks, promenades and boulevards. Remains of moats were also used to establish greenery.

Interesting ways of shaping green systems, including circular layouts as well as leaner ones, emerged in the nineteenth century in North America. Precursory solutions in this area were proposed by an American landscaping architect Frederick Law Olmsted. He designed a number of public areas of greenery, notably including the Emerald Necklace, formed at the end of the nineteenth century in Boston: an interconnected system of public parks and green areas linked with parkways and water roads, its total area amounting to approx. 450 ha.



Fig. 1. The Emerald Necklace in Boston designed by Frederick Law Olmsted in the late nineteenth century. It is consistently expanded to this day. <https://www.emeraldnecklace.org/>

The Green Ring of Tradition and Culture in Łódź, designed as an integral part of the city's spatial policy in 1993, largely resembles Olmsted's Boston assumptions in terms of functionality, spatial structure and design method since it takes into account river valleys and existing areas of greenery in the new layout. Due to the specificity of Łódź, which developed primarily in the nineteenth century and did not have fortifications, the designed system of green areas was shaped by local conditions: the presence of rivers, which determined the emergence of industry as well as numerous industrial and residential complexes, accompanied by green areas (including factory owners' gardens and parks), and other layouts or buildings demonstrating the activity of the city's multicultural society. One of the foundations of Łódź's 1993 development plan emphasized the described area as a key structure and "indicated actions aimed at highlighting existing facilities, green areas and their mutual connection" (Bald 2002).

Protecting and shaping the cultural landscape in public spaces

The European Landscape Convention states that "landscape is an important part of the quality of life of people living everywhere: in both urban and rural areas, in degraded areas as well as in high-quality areas, in areas recognized as being of outstanding beauty and in common areas" (European Landscape Convention, Florence 2000). Our task is therefore to skilfully manage the landscape, which includes protecting resources and their further shaping so that the landscape can be passed on to future generations in the best possible condition. This approach is also echoed in the findings of the Recommendation on the Historic Urban Landscape. It suggests protecting the landscape of historic cities while taking into account the possibility of development, which should be reflected not only in urban policy but also in conservation plans (Historic Urban Landscape 2011).

Thus, according to these key documents as well as statutory definitions of landscape, the necessity of an integrated approach to cultural landscape should be emphasized – one that treats natural and cultural heritage equally. This would result in specific actions aimed at protecting cultural landscapes on the one hand, and their responsible shaping on the other, also including the reconstruction of those landscapes which suffered by being transformed or destroyed for various reasons, e.g. industrialization, lack of adjustment of design solutions to the specificity of the area, uncritical imitation of culturally alien patterns, destruction associated with the development of transport layout, warfare, and others. Meanwhile, as the NID guide emphasizes, "protection and development of the cultural landscape serves to maintain the identity of the Polish state, regions and local communities" (Protection issues 2011).

As a common good, the cultural landscape acquires particular significance in public spaces. Public areas have also been indicated in Polish legislation as requiring special consideration and treatment (Planning Act 2003). These are places where common interests can be pursued and safeguarded through sustainable management of cultural space. For this reason, it is the duty of local governments to guarantee the protection of the most valuable elements of the cultural and natural environment, and to further shape city space and its cultural landscape in a balanced and sustainable way.

The following theses and guidelines facilitate a systemic approach to the protecting and shaping of landscape in public spaces:

Natural and cultural heritage co-create the landscape, forming the basis of local and supra-local identity.

Protecting and shaping both of these resources is the task of living generations.

It is possible and highly appropriate to take integrated action, ensuring that both natural and cultural heritage are protected and shaped together. At the same time, it is important to take into account the specificity of both of these resources and to parallelly prepare and implement systemic solutions before planning individual ones.¹

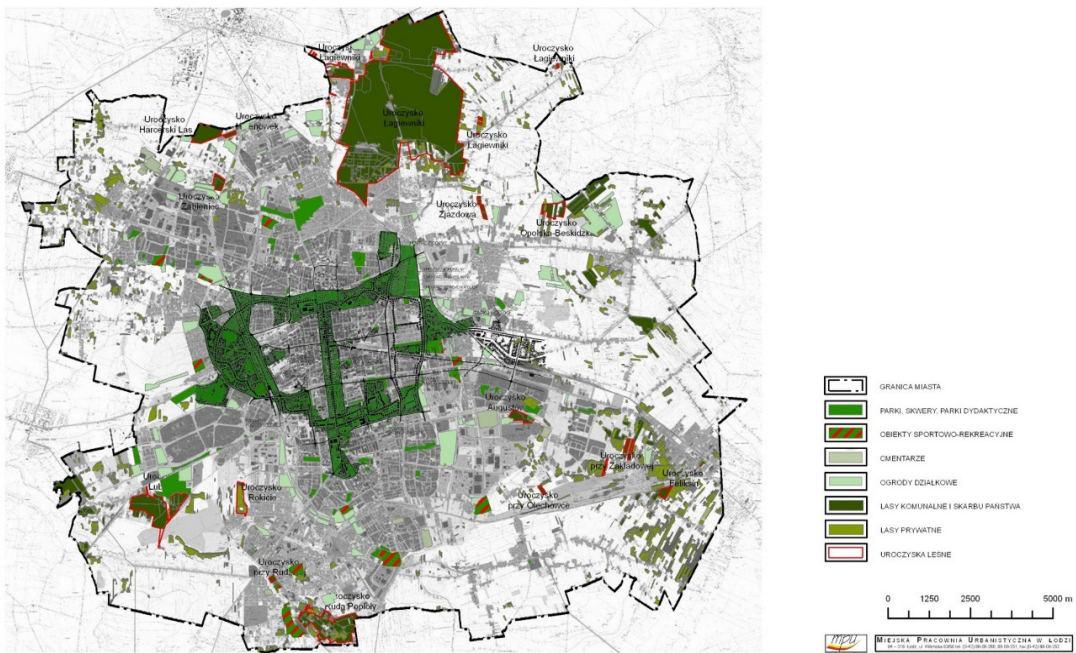


Fig. 2 The Green Ring of Tradition and Culture compared to the natural system of the city of Łódź. Map prepared by the City Urban Office as part of the URBACT II program, using data from the project “Study of conditions and directions of spatial development of Łódź” (2010).

Possibilities and limitations regarding planning and implementation of integrated systems of green areas featuring cultural heritage

Planning documents are a tool that provides an opportunity for systemic inclusion of urban, rural or landscape structures. They also facilitate accounting for many different aspects and components of city, town or village, including physiographic conditions and land cover in both

¹ The following principle should apply in this matter: “from the general to the particular.” For example, a draft of functional and spatial solutions of a square or park should be included as part of a wider and multifaceted concept of public land system. Adopted specific solutions ought to be part of a larger whole in terms of connections between spaces that create a continuity of structures in green areas (e.g. ecological corridors), ensuring such perception of landscape where architectural dominants and accents are not obscured in long viewing axes, panoramas or exposure areas (these are often views from facilities located outside the immediate area of detailed study), etc.

natural form and anthropogenic layers. Spatial planning therefore requires an interdisciplinary approach, where knowledge and experience ensure both proper shaping and protecting of the most important spatial elements.

One of the aspects that must be taken into account in spatial planning is cultural landscape. It is co-created by both public spaces (or commonly and generally available ones) as well as private ones with fully or partially restricted access. Strategic planning refers primarily to common spaces and constitutes a systemic framework for the entire development system. It mainly consists of public spaces such as squares, parks and systems of streets (including not only wide avenues and boulevards but also pedestrian routes). The remaining elements of the city's landscape play a complementary role to strategic spatial planning, although important components of the landscape often appear on real estate, without which it would be difficult to define the specifics of any particular urban layout. These include, among other elements, constructions facing squares and streets: residential houses, service buildings, facilities typical of everyday city landscape as well as distinctive sites that are important for history and local, collective memory (historic buildings). Other valuable components include small architecture, e.g. sculptures and fences. Green areas play a systemic role in the proper functioning of the entire "urbanized organism." They cover both public greenery and arranged public spaces as well as accompanying greenery in the form of lanes, groups of trees (or single ones) and shrubs, located both in public spaces and on private plots.

In systemic design of public spaces it is important to take care of and compose not only the whole layout but also individual public spaces, and to suggest guidelines for individual aspects of their development. This article focuses primarily on systemic planning, while acknowledging that the effectiveness of implementing such broad ideas largely depends on the comprehensiveness and consistency of actions in particular public spaces. It is therefore a task that needs to be completed in the long term with regard to both the whole and its individual components. This requires special operational tools and the cooperation of a wide range of industries and stakeholders.

One interesting example of a systemic approach to shaping public space is the idea of the Green Ring of Tradition and Culture (hereinafter abbreviated as GRTC), which was introduced in the 1993 Spatial Development Plan of the City of Łódź. It subsequently appeared in scientific and expert studies as well as in strategic city documents, including an Atlas of Łódź (Atlas 2002), in the Strategy Development of Tourism in Łódź (2006), in a study by the Society of Polish Town Planners, Branch in Łódź, titled "Łódź – Downtown System of Public Spaces, The Green Ring of Tradition and Culture" (Łódź 2007), and also in the city's policy documents, e.g. in the Study of Conditions and Directions of Spatial Development in the City of Łódź (2010). The idea of GRTC has also become the leading theme in the interdisciplinary project of the Local Support Group realized by the city of Łódź under the EU URBACT II programme in the thematic network Creating Healthy Communities.

The idea of a ring connecting natural and cultural heritage also became an inspiration for wider-scale activities and plans in metropolitan and voivodship area (e.g. Development Plan of the Łódź Voivodeship; the Development Strategy for the Łódź Metropolitan Area – ŁOM), where the ring appears in extended version, with green areas surrounding the city and co-creating

a larger natural system called the Cultural and Natural Ring ŁOM.² The idea was also used in the project “The Blue-Green Network” developed by the Department of Applied Ecology at the University of Łódź and the International Institute at the Polish Academy of Sciences – European Regional Centre of Ecohydrology, under the auspices of UNESCO (ERCE PAN).

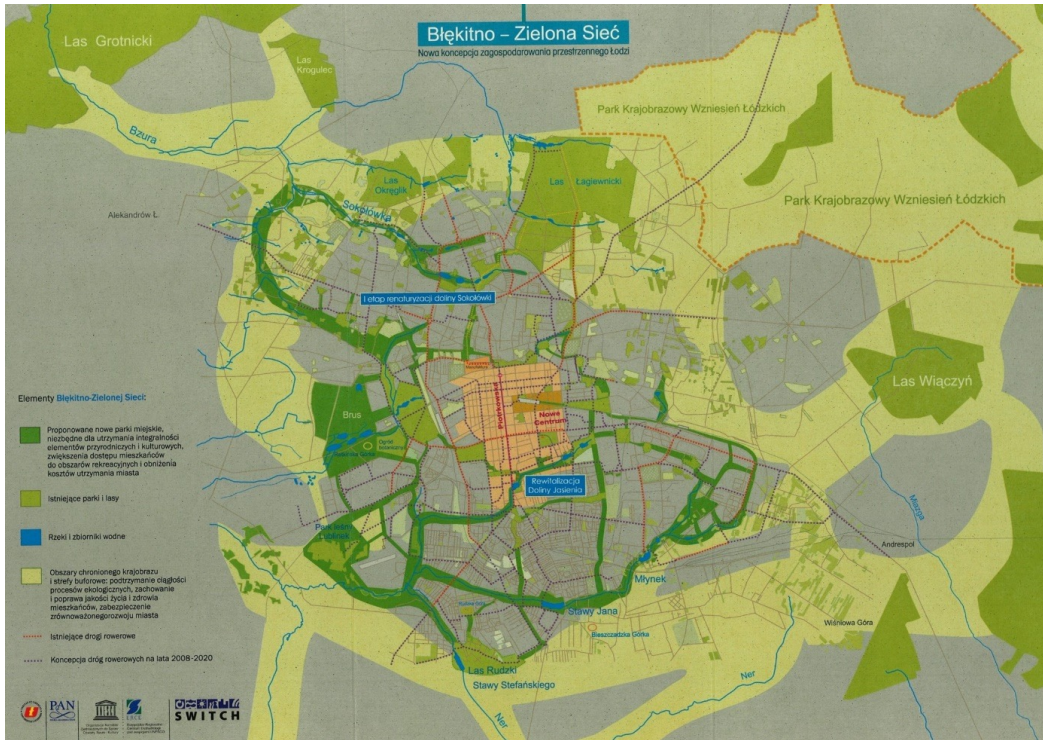


Fig. 3 The Blue-Green Network for Łódź and its surrounding areas, designed by the Centre of Ecohydrology at the Polish Academy of Science in Łódź. Its central element is the area of the Green Ring of Tradition and Culture. Importantly, it is a network that facilitates ecological connections, which are especially important to ensure proper functioning of natural systems.

Green Ring of Tradition and Culture in Łódź

The Green Ring of Tradition and Culture links places related to the history and tradition of this industrial city into an attractive system of public spaces. These include, among others, the river valleys of Jasień and Łódka. The presence of rivers was one of the factors behind the choice to make Łódź the industrial area of the Kingdom of Poland. Further, the Ring covers public green areas, including former factory residences from the nineteenth century, along with parks, gardens as well as palaces and villas, industrial facilities, cemeteries of various

2 In larger systems of green areas associated with land and objects of cultural heritage, the idea of the ring takes on a different rank as an element that co-creates a wider ecosystem. At the same time, planning of the landscape’s ecological systems takes place on a larger scale and is based on “the guiding principle of harmonizing the structure’s natural functions with anthropogenic components of these systems” (Chmielewski 2013).

denominations, public facilities, and other sites. Individual elements of the Ring, differing in form and function, form a circle of cultural areas with a large share of greenery, surrounding a highly urbanized downtown area with compact and regular buildings predominantly from the second half of the nineteenth century. Piotrkowska Street in the centre of Łódź was designated as a “bracing” element that holds together the system of public spaces.

The Ring forms an attractive system of public spaces, enhancing the functional and ecological values of the formerly industrial city. However, most of all, GRTC enables highlighting and preserving key elements of the city’s identity by creating a ring of memory and tradition, passed on to subsequent generations of residents.

The chief designer of the 1993 Spatial Development Plan for Łódź described the role of GRTC in the following way: “The idea of a green ring of tradition and culture included in the spatial development plan of the city is a proposal for a new presentation of landscape as well as the cultural and natural values of the city. It creates a two-way relationship:

- on the one hand, the attractiveness of individual facilities or complexes will increase because they will form a coherent system,
- on the other hand, the attractiveness of the whole ring will increase thanks to the value of its individual elements” (Bald 2002).

This is primarily an example of incorporating an integrated system of protecting monuments and nature into the city’s spatial planning policy. At the same time, the Ring has also become a tool for shaping the cultural landscape of the city, taking into account and respecting the already existing valuable monuments in Łódź.

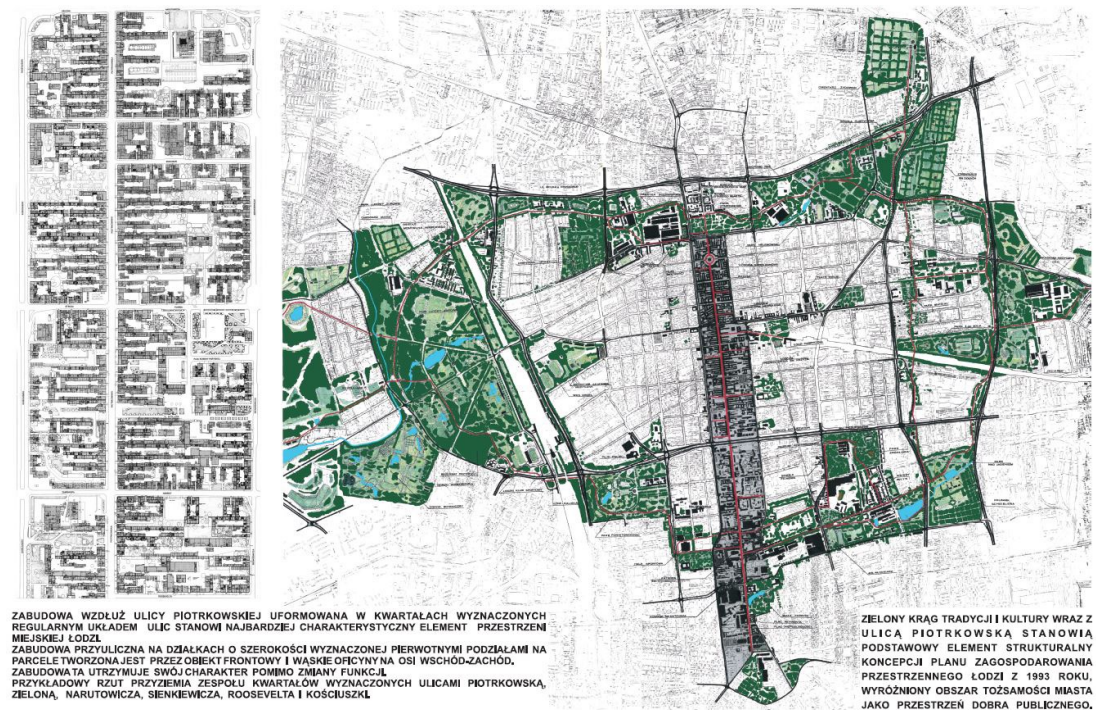
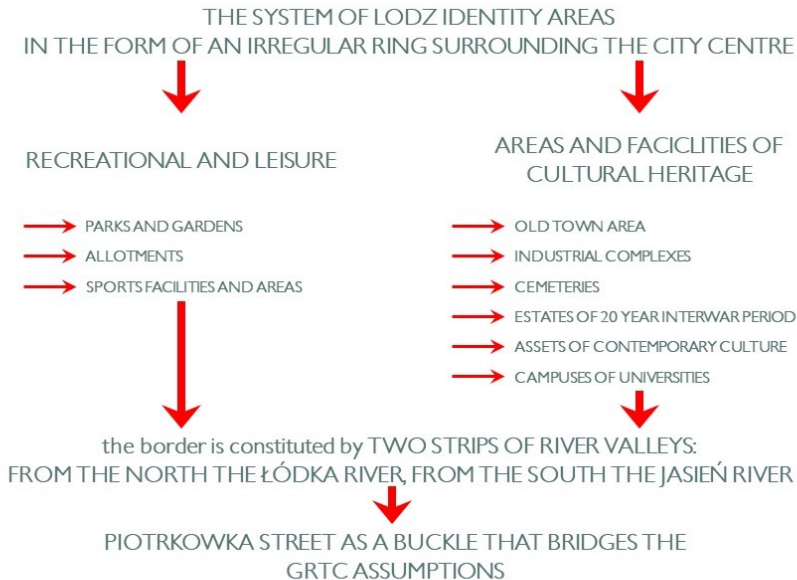


Fig. 4 The Green Ring of Tradition and Culture introduced in the Łódź Spatial Development Plan of 1993 (Bald 2002).

At the core of the GRTC public space system there are unique, world-class complexes of nineteenth-century architecture: compact and carefully planned downtown structures from the first half of the century, notably Piotrkowska Street, which features public facilities and buildings, Art Nouveau monuments and eclectic architecture combined with urban greenery (Łódź 2007). The city centre is highly urbanized but surrounded by a circle of slightly less developed areas. This outer green ring crystallizes the layout of Łódź. These two zones contrast not only in terms of composition but also their functional and spatial structure. Regularly planned, the checkerboard street network of the city centre is surrounded by areas of significantly freer layout, adapted to the shape and course of river valleys from the south and north, featuring numerous linking areas on the eastern and western side. Although the Łódź ring of green areas bases on different principles than most similar circular assumptions in Europe, it shares a similar design idea. Firstly the spatial layout is premised on creating a green ring around the dense city centre of Łódź. With the passage of time in new planning acts and designs the Łódź ring is a much more extended structure, to which additional external areas were added (additional places). The assumption is that the ring is supposed to act as a buffer zone that protects valuable natural areas (especially river valleys), providing access to recreation and leisure as well as linking the historic city centre and suburbs. In this way, it would foster the growth of cultural identity among the inhabitants of Łódź.



Notably, the ring contains areas of discontinuity, where no land development had taken place or was mismanaged. They are gradually being transformed.

Fig. 5 Diagram characterizing types of areas in the project of the Green Ring of Tradition and Culture in Łódź. It also shows the interpenetration and complementary character of natural and cultural values that co-create the cultural landscape of the designed complex.

The Łódź ring consists of a chain of areas around characteristic historical sites in the city. The first and one of the oldest is the Old Town, the former agricultural settlement, along with the oldest square in Łódź – the Downtown Market. After the Second World War, an urban architectural complex of residential and service buildings was created there, with characteristic arcades on the ground floor of the buildings surrounding the square. The main traffic lane and at the same time the transverse axis of the ring is Piotrkowska Street. Its historic architectural layout determines further links in GRTC, which cover the northern part, starting with the New Town Square (now Liberty Square), and the southern part, which ends in two places – the former Upper Market Square (now the Reymont Square) and the former Leonhardt Market Square (now the Independence Square). Piotrkowska boasts the largest number of nineteenth-century representative buildings.³

The Ring surrounding the downtown area also begins in the Old Town area, starting from the Downtown Park, now one of the frontages of the Old Town Square (in former areas of the Old Town which used to comprise the ghetto during World War II and now host a park).⁴ Moving further east, along the valley of the Łódka River, the former loop of suburban trams is situated, currently the headquarters of the Chamber of Architects, located next to the former residential buildings of the Biederman family. The next one is the Helenowski Park (former garden of the Anstadt brewers' family). Behind it stands the recently planned Park of the Survivors, which commemorates victims of the Holocaust. The last unit of the Ring located in the valley of the Łódka River is the building of the Academy of Fine Arts, which is recognized as a landmark of contemporary culture. To the north we find the Jewish Cemetery and the Radegast Station Monument, both being important elements in the multicultural landscape of the city as well as places of national remembrance.

Situated along the eastern side of the Ring are: a complex of cemeteries in Doły, campus of the University of Łódź, complexes of interwar buildings at the Radio Station Centre with the 3 May Park. One recent realization (in the area of GRTC's discontinuity) that has been made available to the residents of Łódź is the Monopolis service complex located in the former industrial buildings of the Monopol Wódczany arrangement.

Another important part of GRTC is the valley of the Jasień River and directly adjacent areas. Extending from its eastern to the western side is one of the largest Łódź industrial complexes that forms the so-called water-factory properties. These include the factory and residential complex of the Scheibler family, where the Centrala structure deserves special attention, Źródlika Parks I and II (formerly the Walking Garden and the garden of the Scheibler residence), the Księży Młyn complex, and the New Weaving Mill complex with its Art Nouveau power station. Other areas are historically related to the industrial ventures of the Grohman family. Further along Piotrkowska Street lies the Geyer Factory Plant (one of

3 A detailed description of the Ring's units can be found in the article "Areas of Lodz Identity – The Green Ring of Tradition and Culture" (Dankowska 2008).

4 More information on the history of these areas, including reconstruction plans of former layouts and their development, can be found in the Historical Atlas of the City of Łódź, available both online and in print (Historical Atlas 2022); see: <https://atlas.ltn.lodz.pl/>.

its most important facilities being the Central Museum of Textiles, located in the buildings of the so-called White Factory). This section of the ring contains numerous factory owners' residences, along with parks and gardens, which are now mostly part of the public greenery system, including city parks. West of Piotrkowska Street there are smaller industrial and residential complexes, including the outstanding complex of the Richter family. Today, this area hosts the campus of the Łódź University of Technology.

The southern range above the Jasiń Valley is closed by the Józef Poniatowski Park. It begins in the western zone, which consists mostly of large recreational complexes including, above all, the Zdrowie Park, along with the adjacent zoological and botanical gardens as well as an area extending to the west: Błonia Łódzkie, which links with the valley of the Łódka River. It contains a park complex as well as a historic, modernist housing estate named after Montwiłł Mirecki. This is the second area of discontinuity of the ring. It could be connected in the future with the new local railway station Łódź Koziny. Towards the east, there is a complex of historic cemeteries in Ogrodowa Street, and the Manufaktura complex at the site of former factories of the Poznański family. This part of the river valley marks the closing of the ring.

The inspiring character of this idea is demonstrated by a number of private ventures such as tourist trails, a guide to GRTC, a calendar developed and published by the Municipal Urban Planning Studio in Łódź in 2010, as well as master's or bachelor's thesis defended at universities in Łódź and elsewhere. One of the most interesting initiatives connected with the Łódź ring was the implementation of the EU program European Territorial Cooperation Urbact II as part of the project titled "Creating Healthy Communities." Its motto became the motto of Łódź: "a healthy mind in a healthy body – healthy inhabitants in a healthy city." As part of the program, a number of activities for various age groups were developed in GRTC's green areas, along with a number of popularizing and educational events.



Fig. 6 Elements of the implementation of the Green Circle of Tradition and Culture: T-shirt promoting the idea of the circle and its plan, 1993 (left); materials designed as part of the URBACT II program – calendar (right) and guidebook (centre).

Outline of assumptions and recommendations regarding the introduction of integrated systems of protecting monuments and nature

The basic assumption of the system is that the protection and use of cultural heritage must be an integral part of the local development strategy.

- Monuments are a common good and should be protected as a social value and the legacy of past generations.
- The natural environment is an integral part of towns and villages, and co-creates their cultural landscape.
- The purpose of nature protection is, among other goals, to protect landscape values, trees and greenery in towns and villages, and to shape appropriate attitudes towards nature through education, information and promotion in the field of nature conservation.⁵
- A sense of identity, which is shaped, among other factors, by the use of cultural and natural heritage, is a vital condition for a sense of belonging as it concerns multifaceted development of a given place and community.
- Investments, including adaptations of cultural heritage objects, can be one of the methods of their protection and preservation as long as decisions are made with respect for historic values.
- Cities should develop in a sustainable way, meeting various social needs, including the need for a sense of belonging and shared identity (assuming the preservation of the most valuable objects of cultural heritage).

An integrated landscape management strategy is therefore necessary. It ought to base on multifaceted recognition of resources and the pursuit of objectives defined in doctrinal documents by combining protection, management and planning.⁶

Thus, integrated management simultaneously preserves and maintains important or characteristic features of the landscape, ensuring its sustainable development by taking into account social, economic and environmental processes, as well as helps to plan actions “aimed at enlarging, restoring or creating landscapes” (European Landscape Convention 2000).

The Green Ring of Tradition and Culture performs a significant portion of tasks defined in the above-mentioned Landscape Convention. It is a systemic and long-term solution that assumes simultaneous protection of characteristic elements of the landscape in the post-industrial city and includes proposals for corrective actions (revalorisation and revitalization) and further implementations (development of linking areas). It also helps to strengthen social bonds and foster a sense of identity. What is more, as a “recreational and tourist product,” it also proposes improvements in the quality of life among residents and boosts the image of the city.

Kazimierz Bald, co-creator of GRTC and general designer of the 1993 plan thus captured the project’s special role: “Spatial development plans of Łódź attach special importance to the

5 Based on the legal regulations concerning nature conservation.

6 Undertakings in the field of landscape protection, management and planning are specified in the European Landscape Convention (2000).

possibility of identifying with the city among its inhabitants and increasing the scope of its promotion. An area connected with the city's identity consequently becomes an area of public good, regardless of its ownership and condition, due to its larger function and the role it may play in the spatial structure of the city" (Bald 2002).

Summary

"The complexity of protecting historic cities in the era of market economy and progressing globalization calls for a transition from conservation and targeted protection to systemic heritage planning. [...] heritage is increasingly becoming an attractive resource and factor of development" (Purchla 2005).

Fostering systemic spatial development that includes culturally valuable objects and surrounding green areas may be one of the answers to the issue of adapting cities to climate changes while preserving and respecting cultural heritage. Forming green circles and rings in cities is not a new idea. However, the resurgence of such assumptions may be important also today. Implemented in a new version, the idea may turn into a conscious and multifaceted spatial concept. The Emerald Necklace in Boston, implemented consistently since the end of the nineteenth century, and the Green Circle of Tradition and Culture in Łódź designed in the 1990s are two examples.

Unfortunately, the Łódź ring is currently not being developed. It consists of a system of existing but not fully interconnected sites and urban areas. However, hopefully it will be developed in the future, enabling the connection of individual elements and allowing the ring itself to complement the dense centre of Łódź in spatial, functional, environmental, social and cultural terms.

Bibliography

Journal articles:

Chrząński T. (1891). Korespondencye z wycieczki komisji kwaciarstwa do Łodzi. (156-158) In: *Ogrodnik Polski*. Nr 7.

Omilanowska M. (2010). Defortyfikacja Gdańska na tle przekształceń miast niemieckich w XIX wieku. (293-334) In: *Biuletyn Historii Sztuki*. Nr 72.

Books:

Atlas historyczny miasta Łodzi (2022). eds. M. Dankowska, M. Koter, Łódzkie Towarzystwo Naukowe. Łódź.

Atlas Miasta Łodzi (2002). ed. S. Liszewski, techn. ed. J.M. Czajkowski, Urząd Miasta Łodzi – Łódzkie Towarzystwo Naukowe. Łódź.

Bugalski Ł. (2020). Planty promenady ringi, Śródmiejskie założenia pierścieniowe Gdańska, Poznania, Wrocławia i Krakowa. Fundacja Terytoria Książki. Gdańsk.

Chmielewski T.J. (2013). Systemy krajobrazowe struktura-funkcjonowanie-planowanie. Wydawnictwo Naukowe PWN, Warszawa.

Ciszewska A. (2019). Green belts. Zielone pierścienie wielkich miast. Wydawnictwo Akademickie SEDNO sp. z o.o.: Warszawa.

Kaczmarek J., Liszewski S., Wodarczyk B. (2006). Strategia rozwoju turystyki w Łodzi. Łódź.

Parki Łodzi (1962). ed. J. Mowszowicz, Łódzkie Towarzystwo Naukowe: Łódź.

Paszkowski Z. (2011). Miasto w perspektywie europejskiej i jego związku z urbanistyką współczesną. Universitas: Kraków.

Pawłowski K. (2017). Urbanistyka „à la française”. Tysiąc lat doświadczeń i europejskich innowacji. Dopełnienie obrazu, vol. II: Francja nowożytna. Od narodzin absolutyzmu do epoki oświecenia. Towarzystwo Autorów i Wydawców Prac Naukowych „Universitas”, Kraków.

Purchla J. (2005). Dziedzictwo a transformacja. Międzynarodowe Centrum Kultury. Kraków.

Rozmarynowska K. (2017). Ogrody Odchodzące...? Fundacja terytoria książki: Gdańsk.

Book chapters:

Bald K. (2002). Przestrzeń dobra publicznego – obszar tożsamości miasta Łodzi. In: Atlas miasta Łodzi. (p. XLIV) Łódź: Łódzkie Towarzystwo Naukowe & Urząd Miasta Łodzi.

Dankowska M. (2008). Obszary tożsamości Łodzi – Zielony krąg tradycji i kultury. In: Zieleń miejska naturalne bogactwo miasta. (81-96): Toruń: Polskie Zrzeszenie Inżynierów i Techników Sanitarnych Oddział Toruń.

Solarek K. (2008). Funkcje terenów zieleni kształtujących przestrzenie publiczne we współczesnym mieście. In: Zieleń miejska naturalne bogactwo miasta. (69-80): Toruń: Polskie Zrzeszenie Inżynierów i Techników Sanitarnych Oddział Toruń.

Szulczewska B. (2008). Zieleń w mieście: identyfikacja, planowanie, zarządzanie. In: Zieleń miejska naturalne bogactwo miasta. (23-34): Toruń: Polskie Zrzeszenie Inżynierów i Techników Sanitarnych Oddział Toruń.

Documents

European Landscape Convention (Europejska Konwencja Krajobrazowa) (2000). Florencja, podana do publicznej wiadomości w Polsce, Dz.U. nr 14, poz. 98 (Journal of laws no. 14, item 98).

Historic Urban Landscape Recommendation (2011) Zgromadzenie Generalne UNESCO.

Planning Act (2003) Ustawa z dnia 27 marca 2003 r. o planowaniu i zagospodarowaniu przestrzennym Dz.U. poz. 977.

Protection issues (Problematyka ochrony dziedzictwa kulturowego i zabytków w studiach uwarunkowań i kierunków zagospodarowania przestrzennego gmin oraz miejscowych planach zagospodarowania przestrzennego) (2011).

Poradnik dla planistów i samorządów lokalnych. Narodowy Instytut Dziedzictwa, Warszawa.

Unpublished sources

Łódź – Śródmiejski system przestrzeni publicznych – zielony krąg tradycji i kultury. (2007).
Towarzystwo Urbanistów Polskich oddział w Łodzi, manuscript in the collection of MPU in Łódź.

Web sources

<https://atlas.ltn.lodz.pl/>

<https://www.emeraldnecklace.org/>

https://en.wikipedia.org/wiki/Emerald_Necklace

https://en.wikipedia.org/wiki/Frederick_Law_Olmsted

https://pl.wikipedia.org/wiki/Park_Ocala%C5%82ych_w_%C5%81odzi

https://pl.wikipedia.org/wiki/Park_im._ksi%C4%99cia_J%C3%B3zefa_Poniatowskiego_w_%C5%81odzi

https://pl.wikipedia.org/wiki/Park_na_Zdrowiu

https://pl.wikipedia.org/wiki/Cmentarz_Do%C5%82y_w_%C5%81odzi