

Sheet XLVII: Spatial development framework for the city of Lódź, part 2.
general principles of urban space engineering and use

Miroslaw Wiśniewski

Directions of spatial development in Lódź. General principles of urban space engineering and use: 1) zonal division and general directions of organising future development processes of the city's spatial structure, 2) zonal division and development potentials, 3) functional and spatial structure, 4) transformations and development of the city's spatial structure subsystems, 5) historic cultural heritage protection, 6) natural heritage protection, 7) directions of the technical infrastructure development – the city's communication layout, 8) directions of the technical infrastructure development – utility infrastructure, 9) general principles and methods of the spatial policy implementation, 10) competencies distribution – urbanised zone (U) non-urbanised zone (N), 11) aspects of the spatial policy implementation, 12) specific spatial policies.

Zonal division and general directions of organising future development processes of the city's spatial structure. Having identified the existing circumstances, it is acknowledged reasonable and expedient – so as to eliminate the threats, develop Lódź's assets, bring spatial order, and stimulate essential concentration of the implementation processes and harmonise the municipal economy with the natural environment – to distinguish within the city's territory: the urbanised zone (U) and non-urbanised natural zone (N).

The urbanised zone - U – covers the areas with urban characteristics of their spatial development organisation, and urban development standard, physiognomy, and functions, infrastructural retrofit (urban transport system and appropriate technical utilities infrastructure) whose standard is sufficient for further investments in conformity with the surrounding conditions. The U zone comprises the major areas with compact urban development, and minor dispersed development areas.

The non-urbanised natural zone - N – covers open landscape areas with prevalence of natural activity, extensively developed and used – greenfields or developed with dispersed buildings or loose building compounds with rural and exurban characteristics and negligible spatial organisation – generally poorly equipped with technical infrastructure.

Zonal division and development potentials... The boundary that separates the urbanised zone U from the non-urbanised zone N and indicates the alteration of the principles of land use for construction purposes – coincides with the course of the boundary encompassing the existing developed areas with prevalent urban characteristics. Consequently **the building development sites earmarked for investment purposes – development or redevelopment without any special terms and conditions** – are the areas in the compact and dispersed urbanised zone (U) of the city and in the non-urbanised zone NB-U to be incorporated in the urbanised zone, which can be built up as previously established in the spatial development plans. The areas in the urbanised zone have a priority with respect to the retrofit complementation and equalisation of the technical infrastructure standards. **The remaining part of the city – the non-urbanised natural zone (N)** those serving the temporary use of land – are prohibited. To keep up the obligations ensuing from the spatial planning process to date, and in conformity with the principle that new building develop – by its nature is not a building development area and, therefore, all forms of buildings – including ment areas in the city should be those that have adequate retrofit – especially the sewerage network – within the non-urbanised zone delimited have been the areas of the non-urbanised zone NBA (or NBAN) with unfinished and uncoordinated development processes, and the areas of the non-urbanised zone NA (or NAÑ) – that to date are free of any developments or have sporadic developments, and in the spatial development plans are earmarked for building purposes, provided that certain requirements are met – which may be available for building purposes, however, only after they have been fitted out with adequate infrastructure (one condition for investing in these zones may in particular be a pre-emptive sewerage network construction) and public areas have been organised, and following the adoption – in the form of local legislation – of the terms and conditions of planning permissions for the entire area so delimited within the zone. **The delimited areas of the non-urbanised zone - NDAK** (with high landscape quality), **NDAW** (river valleys), **NDAL** (forests) – exposed to degradation by the land uses and developments found in their surroundings – may be available for limited building development purposes only in conjunction with the restoration of the entire zonal areas.

Transformations and development of the city's spatial structure subsystems. The zonal division provides the general spatial organisation framework for development processes and methods of the spatial policy implementation. The scope of necessary transformations and extensions of the essential communication networks so indicated creates opportunities for a launch of new economic activity zones, and for recovery of the existing zones. The spots with particularly favourable location potential are, within the non-urbanised zone, the vicinities of Janów and Olechów in the east (this area is particularly good for economic developments surrounded by parks – the Olechówka River valley), and Smulsko and Lubliniec in the west (council land in the vicinities of the Collective Sewage Treatment Plant and the new location in the vicinities of the existing Special Economic Zone Nowy Józefów – also with valuable landscape surroundings).

The areas with the highest transformation potential within the urbanised inner zone include: the vicinities of Lódź Fabryczna Station (provided that the course of Targowa Street meets the urban development standard) together with the sites of Polesie Widzewskie – in view of the location benefits of the new centre's function – and the strip of land linked to the communication route in Wojska Polskiego Street which represents a special urban planning challenge – in view of the scale of the existing needs and possible spatial effects of adapting the architectural and natural heritage of the adjusting areas, mostly linked to the historic Lódź River valley.

In order to fully develop Lódź's assets, it is necessary to comprehensively restructure the central zone and resolve the issue of parking spaces inside the quarters (with the ban on street parking). One inseparable part of this process must be the organisation of an integrated system of public spaces forming the living framework for the urban community and defining the city's identity. The spots that should dominate the system of public spaces in the "old Lódź" should be the vicinities of: Niepodległości Square, Bałucki Market, Barlickiego Square, and Lódź Fabryczna Station that has all the makings of one of the city's centres, and industrial architecture complexes linked to the Lódźka and the Jasień River valleys, earmarked for the all-city and regional service functions. The layout of Piotrkowska Street should remain the culminating point of the system of public spaces in the city. The culminating po-

int of the system of urban greenery and areas assigned for recreational functions – the complex comprising the Park na Zdroju, the Botanic Gardens, and the Zoo – also including the areas of Brus and Złotno. The culminating point of the city's natural system – Łagiewnicki Forest together with the river valleys and open areas of the non-urbanised zone.

Public space. Development of public spaces (also – „social”, „semi-public”, etc.) should be one of the key purposes of the spatial policy and considered – especially in the central zone – as a stimulator of restructuring and restoration processes, or – at least – as an inseparable element of such activities. To equalise historical deficiencies by implementing the programme designed to almost double the system's range is requisite for the city's "urban" character, whose significance for the city – and especially for the integration of its urban community – cannot be overrated

Development and land use standards Participation in co-creating the urban life framework determines the public character of the architectural function and the requirement to subordinate spatial and architectural development forms to the needs of engineering public spaces. Especially in the central zone – within the historic heritage protection zone and even beyond – the size and form of development should maximally reflect the local spatial context, however, without clouding its contemporary character. Within the intensively developed zones (with the floorspace ratio equal to or higher than 1,0), the share of naturally active sites (or their equivalents) in the overall developed property surface should be no smaller than 20% of the land plot.

Greenery. Lódź has any and all possibilities of gaining the image of a „green” city – a city abundant in greenery. Within the urbanised zone, one purpose of the spatial policy should be to exploit and organise the existing greenery compounds and incorporate them – to the highest extent possible – into the system of public spaces. Another essential purpose should be to supplement – or set up – urban greenery layouts: avenues of trees along major streets, on free sites of extensively built-up areas, as part of new public spaces inside the restructured quarters, etc. Within the non-urbanised zone – the purpose of the spatial policy should be to introduce into the destroyed landscape of Lódź's surroundings such development elements as parks, roadside tree stands, and to correct the landscapes in proximity to the entrances to the city, etc.

Historical heritage protection. One of the fundamental purposes of the spatial policy with respect to the urbanised zone should be to ensure protection of the endangered cultural and natural heritage, and revitalise (restore) the urban environment assets which are exposed to degradation. Such measures should be harmonised with modernisation and conservation of the historical construction substance, the process of complementing the developments, and the process of revitalising and restructuring public spaces that serve to connect the old and new parts of the city. To fulfil these purposes – apart from satisfying the requirement to protect the cultural heritage – it will take to ensure communication accessibility and complement the retrofit, especially in the central parts of the U zone.

The desirable scope of protection (relative to the site location) of the historical heritage in the central part of Lódź covers approx. 1 550 ha; beyond this area, protection should be extended to the zones within the boundaries of natural and landscape complexes: Nowosolna, Mieszki, Stare Złotno, and minor dispersed zones (the surroundings of the monastery in Łagiewniki, single- and multifamily development compounds.

Natural heritage protection. The key purposes of the spatial policy within the non-urbanised zone (N) should be to effectively protect the existing greenfields. This entails stopping the agricultural land divisions, withholding the progressing roadside developments – it is possible to protect the areas in the N zone by giving them the status of eclands, natural and landscape complexes, or protected landscape.

The principles of developing – as well as restoring and restructuring – the cultural and natural heritage protection should be defined in the local legislation (local spatial development plans) or other appropriate legal acts).

Directions of the technical infrastructure's development – the city's communication layout. Air connections. It is acknowledged that Central European air connections should be served by the Lublinek airport, while freight and chartered flights by large planes should utilise the airport in Lask. Regular transcontinental flights should be served by the Okęcie Airport (or another airport located between Lódź and Warsaw), with fast motorway and railway access.

Railway connections The southern and western part of the railway node – including the spatial consequences of the projected rail route Wrocław – Lódź – Warszawa via the central Lódź Kaliska station – is considered to link the entire Lódź railway node. It is assumed that regional connections will be served based on the existing rail network, provided that the tracks and stations are modernised. For international services, the need is acknowledged to take the opportunity to connect Lódź with the TGV main railway line, postulated to run along the A2 motorway, and to consider the possibility of building a second TGV line Prague – Wrocław – Lódź Kaliska – Warsaw. Additionally, the necessity is indicated to improve – by building railway sidings – the technological service of the Lódź Olechów freight depot and to define the use of the ring railroad (including Lódź-Widzew station, to ensure an alternative line for the Warszawa – Wrocław route).

Directions of developing the all-city street layout. Vehicle and pedestrian communication areas – the all-city street layout – on the entire territory of the city represent a separate system of public spaces that concurrently is the location of other elements of the technical infrastructure, in particular including underground retrofit. It is assumed that the city's „communication model”, formed by two essential layouts – external, which functions outside the central zone, and internal – within the central zone. The role of both of these essential layouts is to relieve congestion in the central zone. The primary internal layout – which forms a system of major streets inside the ring railroad – has been linked to the street layout that serves the urban districts located outside the railroad “barrier”, and further to the network of domestic and regional roads (existing and projected) that connect Lódź with the region and the rest of the country.

With respect to developing connections with the external road system, the most important for the efficient operation of Lódź's all-city street layout is its good interconnection with the domestic roads network (existing or projected, including the A1 and the A2 motorways, and the express roads S8 and S14 – being toll roads).

Public transport development directions... It is considered reasonable and feasible for Lódź to choose the option of having public transport services provided by an integrated tramway and bus transport system with the maximum use of the existing infrastructure. This does not preclude – future and with a view to upgrading public transport service standards in the central zone – the possible vertical segregation (underground tramway, a premetro), while for interdistrict travels it is possible to go back to the idea of utilising the ring railroad.

Development directions of public transport services in the central zone. It is assumed necessary to ensure access to the central zone of the city on the level of the incoming throughput (i.e. approx. 19000 – 23000 vehicles/peak hour). This – apart from the absolutely requisite complementation of the central bypass roads – requires quieter vehicle traffic and a traffic organisation that would discourage transit (but make it possible to access evenly distributed car parks), improved penetration of urban quarters with additional local access stre-

ties (internal) and local modernisations of the central streets layout. It is assumed necessary to introduce unconventional public transport for travels within the city's central zone.

Cycling roads development... It is necessary to introduce as desirable the requirement to build cycling roads within newly built or redeveloped transport routes. Outgoing roads to the outer zones of the city should interconnect, form an all-city system. The projected boundary between the U and N zones being an explicit public space – a road (at least a cycling path or a street with a cycling path) constituting the primary element of cycling roads in the city is an important direction of implementing the spatial policy.

Directions of the technical infrastructure development – utility infrastructure. The main purpose of the spatial policy – with a view to developing Lódź's assets and stopping and reversing the extensive land use tendency that informs collective capital investment projects and weakened impact of the utility infrastructure – is to remove from the entire urbanised zone any and all deficiencies and irregularities of utility infrastructure, and to equalise and upgrade the retrofit standards to a level that would make it absolutely possible to connect in new investment projects, and in the non-urbanised zone – to provide conditions for the urban technical infrastructure to develop into the NA and NBA subzones. This means the necessity to complement the deficient technical infrastructure (especially the sewers) in the area of 2 771 ha and – so as to upgrade the service standards – to complement the deficient technical infrastructure in the area of 2 428 ha, and to modernise – and extend – the existing parts of the technical infrastructure within the U zone (7 582 ha).

It is acknowledged expedient to make the process of developing areas in the non-urbanised zone N conditional upon whether they can be connected to the urban sewerage network that carries away liquid waste to the Collective Sewage Treatment Plant, and to constrain this process to the NA and NBA subzones (and NAN and NBAN subzones) which may be prepared for development purposes as part of organised activities being subject to the regulations stipulated in the local development plans. The municipality's priority should be to integrate with the urban zones structure the areas with already ongoing developments.

General principles and methods of the spatial policy implementation. The city is a public property and the common property of the entire local government. It is in the interest of the local government to: put in place the best possible spatial organisation, high land use and civilisational standards in the urbanised zone and farthest reaching preservation of the integral natural environmental heritage, i.e. exclusion of the non-urbanised zone from building developments and any forms of intensive urbanisation. Such a framework is determined by the purposes and scope of the municipality's spatial policy. The principle of balanced benefits – assuming the existence of the category of public property and public interest, and the category of social costs – consequently leads to the imperative to keep the sustainable balance between the two categories which arise in effect of the spatial policy applications. Another consequence of this principle is – in line with the rules of partnership – the separation of the competencies and responsibilities of the Municipality from those of the other participants in the development processes.

Competencies distribution – urbanised zone (U) non-urbanised zone (N). The essential competencies distribution is reflected in the statutory imposition on the municipality (in broader dimension – the state) of the scope of responsibilities to satisfy public needs (which obligation is implemented - *ex definitione* – with the use of public funds expended, e.g. for a whole range of protections of the natural and cultural heritage, projects to develop infrastructure and organise greenery, and the necessary urban planning measures within the central zone).

Such distribution of competencies – as part of the most important spatial policy implementation tool, i.e. the local spatial development plan – is reflected in the city's division into the urbanised and non-urbanised zones, including any and all further formal and legal implications of this fact, followed by the ensuing zoning plan. Within the general framework of this distribution – the municipality's obligation is to protect – as a public property (national heritage) – the natural and cultural heritage and to provide favourable conditions for development (investment) purposes and use of the land within the urbanised zone U. To this end, the municipality expends public funds paid in taxes by all members of the local government. Owners of the land within the urbanised zone benefit – as part of such a “social contract” – from the effects of the municipality's activities, subject to the various restrictions that are necessary in view of the existing state of affairs and the neighbourhood's needs. On the other hand, within the non-urbanised zone, when the land's allocation for development conforms with public interests, in view of the fact that this will cause large increases in land value – such operations should be carried out in an organised manner and on the municipality's initiative, and strictly to the adopted procedure (e.g. land integration) and principles defining the scope of financial liabilities. Also, it should be possible for individuals and mixed (public-private) partnerships to carry out likewise operations.

Specific spatial policies. For the purpose of accurately attributing specific spatial policies to the given areas – as well as specifying the spatial policy's tasks – the city has been divided into 58 units (referred to as specified spatial units) which contain the sites (site complexes) distinguished by their specific natural environmental characteristics (or prevalence of one characteristic), similarities of the existing developments and land use (or prevalence of a single form), or similar development conflicts, problems, and barriers. The spatial units so specified, characterised by the common development objectives, lend themselves to the same objectives and require the same spatial policies

Range of public interest areas (scope of responsibilities) requiring organised investment activities. The broad range of responsibilities concerning public interest and spatial management comprises at least three categories of measures diversified both in terms of their key theme – objective aspect, and formal and organisational structure – subjective aspect. The object of the activities – always correlated with the functions of the local spatial development plans – is: the sphere of protection (of the natural and cultural heritage), the sphere of maintenance and functionality (including adjustments to the changing situation – restructuring, restoration, revitalisation, and modernisation of the existing developments) of the urban systems – structures, and the sphere of creating new tangible assets (construction of the city's physical structure – land retrofit, public spaces organisation). The implementing subject in the sphere of protection is the local government or the state (government administration), while the outstanding spheres may also involve private investors. The competencies of the implementing bodies are regulated by the existing laws and regulations. The obligations towards the object of the activities are relatively accurately defined in the spheres of protection and creation of new spatial structure assets, however with respect to the sphere of maintenance and functionality they still need to be explicitly formulated.

Needs and circumstances of executing urban planning documentation being part of the local legislation The needs to execute local spatial development plans are determined – in line with the existing laws and regulations – by the scope of programmes and responsibili-

ties concerning public purposes. It will take to execute a local spatial development plan for the municipality to exercise its powers to protect the areas with natural environmental heritage (surroundings of listed natural sites and objects, eclands, river valleys, forests, open agricultural landscapes, urban greenery, allotment gardens), areas with cultural environmental heritage (surroundings of listed natural sites and objects, zones with the most valuable historic heritage).

Also, it will take to execute a local spatial development plan in order to ensure protection of the areas which, in view of their natural environmental (or natural and cultural) heritage, are earmarked to be listed landscapes or natural and landscape complexes.

Additionally, it will take to execute a local spatial development plan to exercise the municipality's powers to regulate the issues concerning the areas earmarked to be subject to organised investment projects which will actually serve public purposes (preparation of new development areas of the city, restoration, revitalisation, modernisation of the existing developments) related to yet undefined competencies.

The exercise of the municipality's powers – by adopting local spatial development plans – to implement its spatial policy of protecting natural and cultural heritage and procuring organised investment projects and regulating the implementation processes will apply to most of the areas in the non-urbanised zone and large portions of the urbanised zone. It should be concurrently assumed that it is possible to work out a single plan covering the entire territory of the city.

Part III. Purposes and directions of development in specified spatial units in Lódź
 (contains specific purposes and tasks of the spatial policy in respect of the 58 specified spatial units)

The *Spatial Development Framework For the City of Lódź* is a document executed in the performance of the Lódź Assembly's Resolution no. XXXI/340/96 of 17.04.1996 on launching the works to execute the framework. The works commenced on 15.10.1997.

The essential documentation of the *Spatial Development Framework For the City of Lódź* – respectively to the issues agreed in August of 1997 – contains 2300 pages in A3 format (including over 250 thematic maps of the city) collected in ten volumes developed by December of 1998, and supplemented with subsequent editorial approximations of the final document which was subject to the Lódź Assembly's resolution. The various parts of the Framework were prepared:

– General (Volume I – thematic issues and bases – discussion of the purpose and principles of working out the Framework, the methodology and issues contained in its various parts) – mgr inż. arch. Miroslaw Wiśniewski, Chief Designer.

– Diagnosis of the existing state of affairs with respect to the general socioeconomic situation in the city (Volume II) – the team being: dr hab. Jerzy Dzieciuchowicz, dr Jolanta Grotnicka-Leder, mgr Maria Horbačewska, dr hab. Aleksandra Jevnuchowicz, mgr Barbara Kłysik, dr hab. Elżbieta Michałowska, dr Barbara Nowakowska, dr Andrzej Suliborski, prof. dr hab. Bogusław Sulkowski, prof. dr hab. Wielisław Warzywoda-Kruszyńska.

– Diagnosis of the State of the natural environment (Volume III) the team being: mgr Anna Diehl, mgr Witold Gąsiorek, mgr inż. Małgorzata Banasiak, mgr inż. Mirosław Caban, mgr inż. arch. Jan Gorgul, mgr inż. Wojciech Górecki, mgr inż. Bogdan Janicek, mgr inż. Ireneusz Kujawa, mgr inż. Wiesław Ornat, mgr inż. Katarzyna Sroczyska, mgr inż. Elżbieta Szmielińska, inż. Jan Szymczak, mgr inż. arch. Miroslaw Wiśniewski, mgr inż. Jan Wójcik.

– Diagnosis of the State of the urbanised environment (the city's technological infrastructure) – Volume IV – the team being: mgr inż. Zbigniew Aleksandrowicz, techn. Włodzimierz Banasiak, mgr inż. Mirosław Caban, mgr inż. arch. Jan Gorgul, mgr inż. Wojciech Górecki, mgr inż. Bogdan Janicek, mgr inż. Ireneusz Kujawa, mgr inż. Wiesław Ornat, mgr inż. Katarzyna Sroczyska, mgr inż. Elżbieta Szmielińska, inż. Jan Szymczak, mgr inż. arch. Miroslaw Wiśniewski, mgr inż. Aleksander Śliwiński, mgr inż. Andrzej Waligóra.

– Diagnosis of the State of the urbanised environment – the city's spatial structure (Volume VI) – the team being: prof. dr hab. Marek Kotek, dr inż. arch. Jan Salin, mgr inż. arch. Jacek Wesolowski, dr inż. arch. Weronika Wiśniewska, mgr inż. arch. Miroslaw Wiśniewski.

Further, Volume VII spatial planning in the city's development process contains texts written by: mgr inż. arch. Wacław Bald, mgr Eugenia Jastrzębska, dr inż. arch. prof. PL Henryk Jaworowski, prof. dr hab. Ryszard Karłowicz, mgr inż. arch. Zdzisław Lipski, mgr inż. Wojciech Walczak, dr inż. arch. Weronika Wiśniewska, mgr inż. arch. Barbara Sierow, mgr inż. Aleksander Śliwiński, mgr inż. Andrzej Waligóra.

– The Synthesis of the Existing State of Affairs (Volume VIII – major directions of the city's development and restructuring) – containing a set of formulations, conclusions, observations, or summaries of more detailed study papers presented in Volumes II, III, IV, V, and VI was prepared by mgr inż. arch. Miroslaw Wiśniewski.

– The Issues of the City's Spatial Policy Implementation (Tom IX – synthesis of the existing state of affairs) were formulated by: dr inż. arch. Weronika Wiśniewska, mgr inż. arch. Miroslaw Wiśniewski, mgr inż. arch. Anna Woźnicka.

The *Directions of Lódź's Spatial Development* - draft - Volume X and subsequent editions of the final document (Volumes 11 through 14) – were formulated by mgr inż. arch. Miroslaw Wiśniewski, in collaboration with z

Maps: mgr inż. arch. Małgorzata Hanzl and Tomasz Szeler. Chief designer of the Framework (concept and coordination of the entirety