

# 16. Spatial-functional transformation of the metropolitan area of Ljubljana

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In this chapter we provide an overview of the current state, trends, and major processes in the spatial and functional development and transformation of Ljubljana over the last ten years. The analysis of spatial development and transformation of the city is divided into five sections:

- internal development of the city,
- derelict urban areas,
- areas of dispersed urbanization,
- functional transformation and rational use of land and
- housing.

For each section an analysis of the current state, trends, and latest processes is presented. The processes of spatial and functional transformation are evaluated from the standpoint of sustainable spatial development as well.

## 16.1. Internal development of the city

Spatial development of settlements in Slovenia has for the most part been extensive, with villages and towns expanding mainly into previously unbuilt upon surrounding areas, most often in the form of dispersed settlement. This is true also of the Ljubljana urban region. Nevertheless, after 1995, with the upswing in private housing construction and the development of business, retail, and service activities, there has been a noticeable increase in the use of available land within Ljubljana. Private capital and its investments became a major actor in the transformation of the city and its built structures. In Ljubljana private capital has been invested intensively in housing construction, retail and service centers, and business zones. In this respect two patterns have been established in the spatial development of Ljubljana. On the one hand, the expansion, both planned and unplanned, of urbanized areas in the suburban and rural parts of the urban region has continued, particularly in the form of dispersed construction of single-family houses, groups of multi-family dwellings, shopping centers, and economic development zones. On the other hand, there has been a strengthening of the “internal or infill development of the city” in the form of construction and increasing density of urban structures within the compact urban area, and especially at the edge of the city center and in existing housing, business-industrial, and retail and service zones and in degraded urban zones. Most frequently infill development is characterized by individual multi-dwelling buildings and less frequently also smaller residential neighborhoods and areas intended for businesses and services are developed. In this way there is an increase in the density of urban

structures and in the use of unused or underused areas within the city, which is one of the fundamental guidelines directing the spatial development of cities in the strategic documents of Slovenian spatial development; however, this “internal development” is left in its entirety to private initiative, which is frequently reflected in inappropriate, poorly adapted and uncoordinated interventions in the space which reduces the overall quality of the living environment, and cause new traffic flows and the additional degradation of urban areas. Redevelopment of derelict urban areas and vacant land within the city takes place for the most part in the form of isolated buildings, most often in the form of individual multi-dwelling buildings (“villa blocks of apartments”). Construction is often done in a way which is not in accordance with the morphological characteristics of areas (for example the construction of two- and three-storey apartment buildings in areas of single-family dwellings). The utilization of the plot of land is often excessive, which reduces the quality of the living environment or puts too heavy a load on the traffic network in a particular part of the city. In this connection we note a lack of appropriate urban norms and values in spatial planning legislation and other documents.

## 16.2. Derelict urban areas

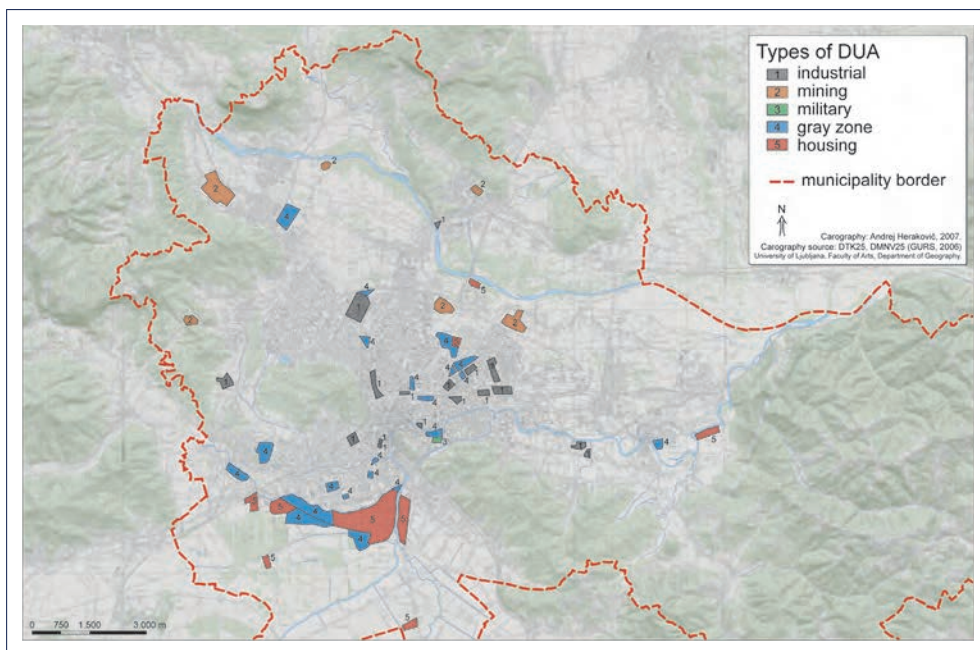
“Derelict urban areas” are a kind of byproduct of processes associated with the economic, functional, social, and spatial transformation of cities. Derelict urban areas are thus a “temporary” state accompanying the transformation of any urban system. Degradation or devaluation of the urban area is a process of reducing the value of plots of land, buildings and installations there from a higher to a lower state of utility. This leads to the less adequate use of an urban area or a complete abandonment of use. An extreme degree of devaluation is a state in which it is no longer possible to establish any renewed use of a given location without a total reclamation or reconstruction of the area. We can also refer to the degradation of an urban area when the existing use is not in keeping with the expected or optimal use—the assessment of degradation thus arises from the assessment of the unutilized development potential or the comparative advantages of a given area. Koželj cites an average of 15 % of the area of Slovenian cities as being degraded areas (Koželj, 1998).

Derelict urban areas in Slovenian cities are primarily the result of their constant economic, social, traffic, and spatial transformation. In Ljubljana the extent of derelict areas in the form of abandoned industrial areas has especially increased due to the process of deindustrialization and the relocation of older industries to industrial areas at the edge of the city. Derelict urban areas in Ljubljana are also partly the result of the abandonment of some other activities (for example military installations, gravel pits) or are the result of inadequate spatial planning (the designated use of land is not in keeping with the needs and interests of investors), land speculation, or unclear ownership relations (due in particular to incomplete denationalization procedures). The following types of derelict urban areas, as defined by Koželj (Koželj, 1998, 29), are especially typical of Ljubljana:

- industrial areas: abandoned or unsuitably located industrial and other manufacturing areas or premises, warehousing areas, gravel pits and areas in the environs of the railway;
- military areas: abandoned military barracks;

- gray zones: vacant and unbuilt areas or areas with unsuitable use as a consequence of inadequate spatial planning, land speculation, or unclear land ownership relations;
- derelict housing areas: housing areas with a poor quality living environment, equipped with deficient infrastructure, and dispersed construction.

Figure 57: Derelict urban areas in Ljubljana.



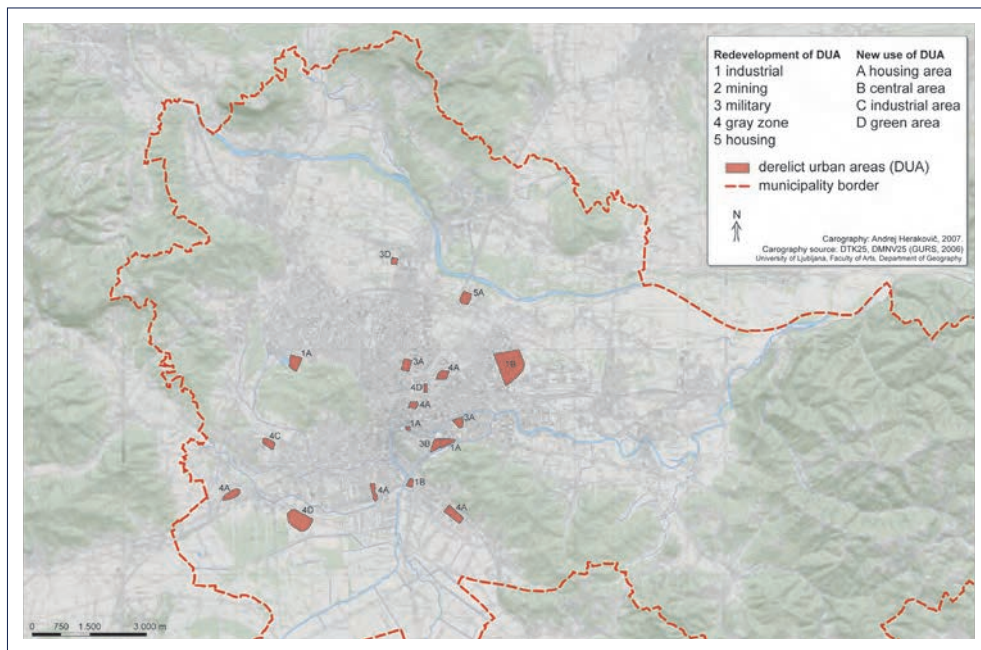
Source: Rebernik, 2007, 27.

In the last ten years there has been intensive reclamation, revitalization, and renewal of derelict urban areas. Most commonly the new spatial organization is undertaken by private investors, but some cases have come about as the result of public investment. The most common forms of renewed use of derelict urban areas are as areas of housing and shopping centers, less frequently also new economic development zones or business activities. In the case of derelict urban lots these are usually contiguous areas and hence larger housing neighborhoods are built in the form of organized housing construction, major shopping centers, or business zones. This is in accordance with most objectives and guidelines of the Spatial Development Strategy of Slovenia (2004). Still needed are coordinated and integrated programs and incentives of redevelopment and revitalization of derelict urban areas (subsidies, tax breaks, land consolidation, pre-emptive purchasing rights, private-public partnership).

In the continuation we cite some of the most extensive and typical cases of the redevelopment of urban areas in Ljubljana:

- derelict industrial areas: the BTC and City Park shopping center, the residential neighborhood of Mostec, the residential neighborhood of the Poljane Embankment (Poljansko nabrežje), the Savski kamen block of apartments, the residential neighborhood of Zelena jama (along Pokopališka Street), and the residential neighborhood of Tivoli;
- derelict military areas: the residential neighborhood of Bežigranski Dvor, the residential neighborhood of Nove Poljane;
- gray zones: the residential building Trubarjev kvart, the residential-business area of Novi Tabor, the block of apartments on Glonarjeva Street, the block of apartments on Bobenčkova Street, the residential neighborhood of Trnovska vrata, the “villa” block of apartments along Jurčkova Street, the block of apartments along Trnovska Street, the Antonov trg block of apartments (along Tržaška Street), Severni park, the Brdo technological park;
- derelict housing areas: the Tomačevo settlement of row houses.

Figure 58: Redevelopment and new use of derelict urban areas in Ljubljana.



Source: Rebernik, 2007, 29.

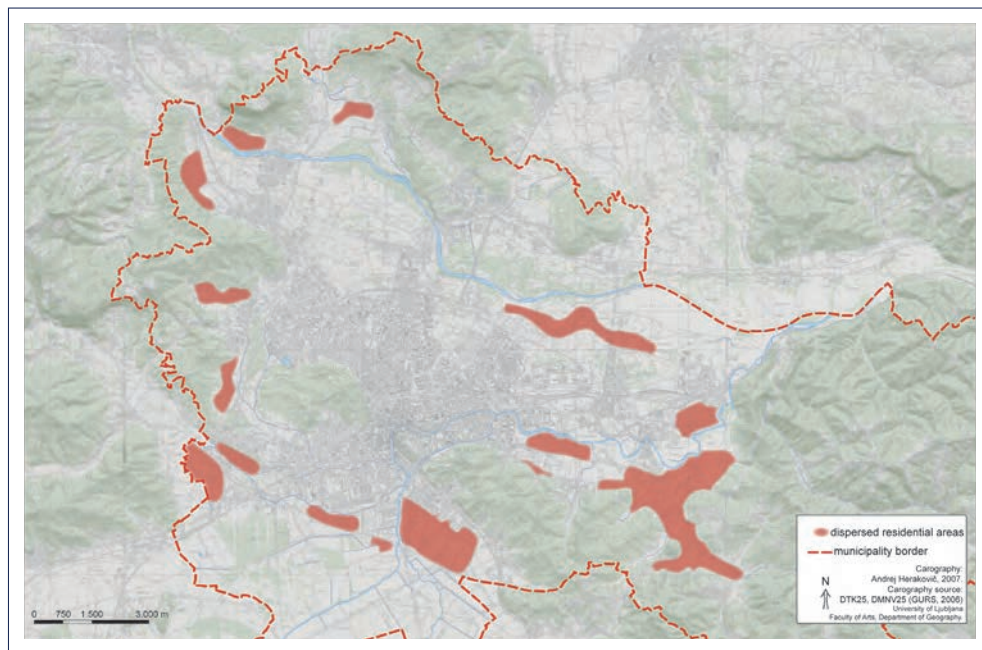
### 16.3. Areas of dispersed urbanization

Preventing the continuation of dispersed urbanization as well as reclaiming selected areas of dispersed settlement is possible only if there is sufficient supply of land for building within the areas for which urban planning documents (municipal spatial plans) have been prepared, and with the consistent prevention of building on all other plots of land—the prevention of the practice of changing the categories of land use for plots, for example from agricultural to housing, based on the initiatives and interests of local residents and private investors. This would require that local communities actively prepare spatial plans for areas of housing construction (with a suitable type and density of building for the particular type of settlement). This must be accompanied by an active land use policy in the form of measures and instruments for guiding the development of settlements (tax, market, financial, administrative, and regulatory instruments).

Intensive suburbanization also continued to take place in the Ljubljana urban region after 1991. The relocation of population from Ljubljana to suburbanized areas around the city is still intensifying: the population of Ljubljana decreased by 9000 inhabitants, or 3.5 %, between 1991 and 2002. The Urban Municipality of Ljubljana has a negative migration balance, whereas all the other municipalities in the Ljubljana urban region have a positive migration balance. An especially large rate of population growth from migration is shown by the municipalities of Domžale, Grosuplje, Ivančna Gorica, Medvode, Škofljica, Ig, Brezovica and Trzin. After 1995 the greatest growth in population was typically shown by small rural settlements in the Ljubljana urban region. Compared to the period from 1981 to 1991, the area of population growth has expanded spatially from the densely settled suburban areas to the rural areas in the region. New settlement in the countryside is markedly dispersed, frequently outside existing rural settlements or at their edges. The phenomenon is taking on all the characteristics of “urban sprawl.” Pronounced examples of the pattern of settlement described are rural areas in the municipalities of Škofljica, Ig, Brezovica and Vrhnika. It consists of exclusively new construction in the form of single-family houses, most often “individual self-construction.” New buildings are located individually or in small clusters. This kind of settlement is engendered by the scarcity and high prices of housing and building lots in Ljubljana as well as in suburbanized areas.

Areas of dispersed settlement with a low population density, a predominance of stand-alone single-family houses and low density of population are also typical of certain parts within the city of Ljubljana. Frequently these are areas of houses that were built without planning permission and then retroactively legalized, or “urbanized” rural settlements which arose through the gradual transformation of former farming villages in the vicinity of the city. Such areas develop in an unplanned and unregulated way, without a uniform urban planning or morphological design. Typical of them is the intertwining of different forms of land use (one-family dwellings, farmland, small businesses and service activities), extremely poor municipal and other infrastructure (inadequate sewage system, traffic routes, and public spaces), a lack of retail and service activities, and as a rule poor quality construction and a relatively low socioeconomic status of the population. Areas of dispersed construction thus have certain characteristics of derelict housing areas. The largest and most typical areas of dispersed settlement are within the city of Ljubljana, for instance the areas of Sibirija, Rakova Jelša, Ilovica, Galjevica, Dobrunje, Sostro, Zadvor, Spodnji Kašelj, Šmartno, Glince and Kozarje.

Figure 59: Location of low density and dispersed residential areas in Ljubljana.



Source: Rebernik, 2007, 31.

## 16.4. Functional transformation and rational use of land

In the conditions of a market economy and predominantly private ownership of capital and real estate, the actual use of space is dependent not only on the planned and designated use of space as specified by plan categories (housing, production, retail and services and other areas), but also on the interests of private investors. In the case of private investments a particular intervention in a space is done only if there is a demand by the market for a particular type of land use in a given location. Since it is very difficult to anticipate the needs and interests of investors, which are constantly changing with the development of the city and with respect to market circumstances, a rigid zoning in the form of strict separation of land uses in existing spatial planning documents has led to numerous difficulties in the spatial development of Slovenian cities and other settlements. On the one hand numerous instances arise where in certain locations there is insufficient interest in carrying out some intervention in accordance with the designated and planned use. In this case land remains unutilized. This can serve to deter investors and represents a serious obstacle to the development and competitiveness of particular towns and entire regions. On the other hand there is pressure from investors to change the existing planned use of a particular plot of land, which often leads to the partial changing of spatial documents and to inappropriate and damaging interventions in the space. A new orientation towards a more “flexible” determination of the intended use of land, particularly in the form of “mixed use”, in which an intertwining of functions and forms of land use which do not come into conflict with one another is permitted, and

expected to solve the problems cited. Moreover, this intertwining of functions and shift from a monofunctional zoning has other positive effects, in particular the reduction of the distances between places of residence, work, and shopping, which reduces the volume of traffic.

An analysis of the functional transformation of Ljubljana after 1995 highlights different processes. There have been some significant changes in the functional structure of the city. Among private investors, interest is greatest in housing construction and in some places construction of shopping centers and office buildings. Due to the scarcity of land that can be built on there have been changes in the designated use of particular plots of land, which enable the forms of land use cited. Moreover, over the past two decades there has been an abandonment of certain types of land use, in particular for manufacturing, warehousing, and military purposes. As a result of this process there are derelict or inappropriately utilized urban areas. Depending on the location, the demand among private investors is predominantly for housing construction, partly also for retail and services outlets (shopping centers) and business activities. The planned designated use in these areas often does not allow this kind of land use, and so some changes in the designated use are made. The result of these processes is the increasingly heterogeneous functional structure and mixed use of land in many parts of the city, as noted already in articles by Pak (Pak, 2000, 2002). The next characteristic of the functional transformation of Ljubljana is the creation of large retail and services areas, especially shopping centers at the outskirts of the city. In addition to retail activities, other specific service and business activities are also located in these centers. Due to the development of shopping centers there is often a decline in retail and other services in city center as well as in local retail centers within housing areas. Retail, services, and business activities are located in these new retail-business centers due to numerous advantages and benefits: good access, low cost of land, economies of scale, low overheads and so on. There is thus a spatial concentration and separation of particular urban functions, which is in contradiction with the desired intertwining and mixed use of land. The distances between places of residence, work, and shopping are increasing, and this also has an effect on the volume of traffic. At the same time there are two processes under way in the functional transformation of the city: on the one hand we see an increase in the functional heterogeneity and on the other a spatial concentration of activities.

In this context the question should be raised as to whether an orientation towards a "mixing of activities" and dictation of mixed land use by the plan makes sense or whether it will only bring additional problems. Numerous newly built business and residential buildings, in which business premises frequently remain unsold and unused, draw attention to possible problems and discrepancies between planning guidelines and the interests of the market and investors. Urban planning documents prescribe mixed land use with a combination of retail and business activities, even if there is no demand for business premises in a given location. A further problem with the concept of mixed use is maintaining the quality of the living environment and an intertwining of activities which is not disturbing. The highest quality of living environment is undoubtedly created in "pure" residential areas. Residential neighborhoods offering the highest quality living environment and the most favorable economic status of residents of Ljubljana are "pure" residential neighborhoods. In such residential neighborhoods it is possible to achieve less transit traffic and fewer environmental disturbances (noise, air pollution, etc.), in-

creased safety, higher identification with and care for the living environment on the part of residents, greater tidiness and cleanliness, fewer conflicts between the local population and non-residential activities and their users, and similar.

## 16.5. Housing

Due to the higher standard of living, changes in the structure of households, and still relatively low area of housing per capita (according to the estimate of the Spatial Plan of the Urban Municipality of Ljubljana 23.5 m<sup>2</sup>), particularly in certain characteristic parts of the city (residential neighborhoods consisting of blocks of apartments) and among certain characteristic groups of residents (young families) we can expect greater demand for new housing despite a decline in the population of Ljubljana. The average number of persons per apartment in Ljubljana has declined from 3.3 in 1971 to 2.4 in 2002 (Spatial Plan of the Urban Municipality of Ljubljana, 2010). It is estimated that by the year 2015, 15,000 new apartments will be needed in Ljubljana: 4000 due to the depreciation of existing apartments, 4000 due to an increase in the number of households, and 7000 due to a rise in the standard of living (Spatial Plan of the Urban Municipality of Ljubljana, 2010). The most recent trends in housing construction show two spatial patterns: a continuation of individual dispersed construction in settlements at the edge of the city and urbanized rural settlements in the Ljubljana urban region, with low densities and oversized one-family houses, and construction of multi-unit buildings within the city, most often in the form of smaller multi-unit houses ("villa blocks"). Housing construction in Ljubljana has gradually increased over the last ten years. In 1995 there were 282 new apartments built in the territory of the Urban Municipality of Ljubljana (44 % by legal entities), after 2000 the number ranged between 900 and 1300, of which about 75 % were built by legal entities (Statistical Yearbook of Ljubljana, 2006, 96). Due to the lack of larger consolidated building lots, especially characteristic are individual multi-unit dwellings (or small groups of multi-unit dwellings) which are frequently located in neighborhoods of single-family dwellings. This changes the existing morphological structure of housing areas. Due to the economic interest of investors, overuse of the lot is typical, which reduces the quality of the living environment in particular residential neighborhoods. Examples of the organized building of larger and contiguous residential areas with a uniform urban planning and architectural layout are more common after 1995, for example, the neighborhoods of Bežigrasjski dvor, Nove Poljane, Mostec, Nova Grbina, Dolgi most (Ramovševa Street) and Beli gaj (Kozarje). We also see the organized construction of single-family houses, particularly in the form of dense low-rise construction (row houses or atrium houses), which ensures a high quality environment and the advantages of living in a one-family dwelling, but at the same time has a high population density (between 60 and 100 inhabitants per hectare), for example, the smaller residential neighborhoods in Galjevica, Podutik, Vižmarje, Tomačevo, Snebrje, Črnuška gmajna, Polje, Bizovik and Hrušica. Due to the high quality of residence these row and atrium houses are sold for very high prices and are accessible only to people with above-average incomes. Newer housing construction in Ljubljana can thus be divided into two main groups: unorganized construction in the form of individual buildings or small groups of buildings located in existing residential or mixed-use areas, and organized housing construction in the form of residential neighborhoods following a uniform urban planning and architectural plan.