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CONTENTS

| | |
|---|----|
| 1. Basic terminology, objectives and tasks of landscape planning, legislation | 2 |
| 1.1. The objectives of landscape planning | 2 |
| 1.2. Legislation affecting the area of landscape planning | 3 |
| 2. Brief history of rural development and settlements development in the Czech Republic | 5 |
| 3. Landscape planning in the Building Act – landscape planning tools | 10 |
| 3.1. The competence in the sphere of landscape planning according to Building Act . | 10 |
| 4. Decree No. 501/2006 Coll., on general requirements for landscape use..... | 12 |
| 5. Landscape planning and sustainable development – landscape and settlements ... | 14 |
| 5.1. Natura 2000 | 14 |
| 5.2. Landscape System of Ecological Stability (LSES)..... | 15 |
| 5.3. Special protected area (SPA)..... | 15 |
| 6. Landscape planning and sustainable development – brownfields | 17 |
| 6.1. Brownfields´ division | 17 |
| 6.2. Consequences of brownfield formation | 17 |
| 7. Landscape planning and sustainable development – suburbanization | 19 |
| 8. Settlement and infrastructure – social, economic, cultural, public | 20 |
| 9. Settlement and infrastructure – transport..... | 22 |
| 10. Settlement and infrastructure – technical and public space | 24 |
| 11. Housing Estates Issues | 25 |
| 11.1. Advantages of housing estates | 25 |
| 11.2. Major problems of housing estates..... | 26 |
| Literature | 28 |

I. BASIC TERMINOLOGY, OBJECTIVES AND TASKS OF LANDSCAPE PLANNING, LEGISLATION

- urbanism – the doctrine of the human settlements construction
- landscape planning – systematic activity that corrects the landscape development in a way to avoid conflicts and disproportions and to protect public and private interests in the landscape
- landscape development – the process in landscape, where landscape is being valued by change or development of its functional use or by change in intensity of its use; it is the result of investment activity
- built-up area = intravillan – landscape defined by urban plan as a landscape of the municipality
- to-build area – landscape defined by urban plan or the principles of urban development to build
- corridor – area defined for the transport or technical infrastructure location or non-structural measures
- public utility building – building for public infrastructure intended for the development or protection of the landscape, building is defined in the issued landscape planning documentation
- overriding importance area – area, which by its importance, extent or utilization affects the landscape of more municipalities or regions

I.I. The objectives of landscape planning

- are defined in § 18 of Act No. 183/2006 Coll., on landscape planning and building regulations (Building Act)

The objective of landscape planning is to create prerequisites for the construction and sustainable development of the landscape through its systematic and global solution of

the efficient use and spatial arrangement of the landscape. Landscape planning authorities therefore coordinate private and public intentions of changes in the landscape the way that will protect and develop natural, cultural and civilization values of the landscape.

The tasks of landscape planning:

- are defined in § 19 of Act No. 183/2006 Coll., on landscape planning and building regulations (Building Act)

The task of landscape planning is, in particular, to identify and assess the state of the landscape, its natural, cultural and civilization values. In addition, it's to define the concept of development, to assess and check the needs of landscape changes, to determine urban, architectural and aesthetic requirements for the spatial and functional arrangement of the landscape, especially for the location and solution of constructions and the conditions for their realization, including possible implementation phases.

1.2. Legislation affecting the area of landscape planning

Acts

Act No. 183/2006 Coll., on landscape planning and building regulations (Building Act)

Act No. 184/2006 Coll., on the revocation or limitation of the property right to land or building (the Expropriation Act)

Act No. 500/2004 Coll., administrative procedure

Act No. 128/2000 Coll., on municipalities

Act No. 131/2000 Coll., on the capital city of Prague

Act No. 129/2000 Coll., on regions (regional establishment)

Act No. 360/1992 Coll., on the pursuit of the profession of authorized architects and the practice of authorized engineers and technicians in construction

Act No. 344/1992 Coll., on the cadaster of real estates of the Czech Republic (Cadastral Act)

Act No. 100/2001 Coll., on environmental impact assessment (EIA)

Act No. 17/1992 Coll., on the environment

Act No. 114/1992 Coll., on nature and landscape protection

Act No. 254/2001 Coll., on water and the amendment to certain acts (Water Act)

Act No. 334/1992 Coll., on agricultural land fund protection

Act No. 289/1995 Coll., on forests and the amendment and supplementation of certain acts (Forest Act)

Act No. 20/1987 Coll., on state monument care

Act No. 13/1997 Coll., on roads

Act No. 266/1994 Coll., on rails

Act No. 458/2000 Coll., on the conditions of business and state administration performance in the energy sectors and on amendment of certain acts (Energy Act)

Act No. 44/1988 Coll., on mineral resources protection and use (Upper Act)

Act No. 256/2001 Coll., on funeral and on amendment of certain acts

Act No. /2001 Coll., on waste

and others

Decrees

Decree No. 500/2006 Coll., on landscape analytical data, landscape planning documentation and the way of landscape planning activity evidence

Decree No. 501/2006 Coll., on general requirements for landscape use

Decree No. 503/2006 Coll., on more detailed regulation of the landscape proceedings, the public contract and the landscape measure

Decree No. 268/2009 Coll., on technical requirements for constructions

Decree No. 398/2099 Coll., on technical requirement ensuring the barrier-free use of buildings and others

2. BRIEF HISTORY OF RURAL DEVELOPMENT AND SETTLEMENTS DEVELOPMENT IN THE CZECH REPUBLIC

The Younger Stone Age (6000-5000 years BC)

Social organization is ancestral. Neolithic colonies form settlements consisting of family houses, which are often half-buried in the ground. The agricultural economy is cyclical – the family migrate over the landscape and returns to the populated places at 50 – 80 year intervals.

Slavic Tribes (5th and 6th centuries AD)

The settlement is mainly in vicinity of the large rivers (Labe (The Elbe), Ohře, Vltava, Dyje, Morava) in the form of village yards and villages, which are arranged either around the central area (village square type), around the path (street type) or both of them (village square street type). Agriculture already knows the triple-field (wasteland) farming, that´s why it´s not necessary to migrate over the landscape.

The end of the 10th century

Change of social organization from ancestral to feudal. Settlements are usually connected to a feudal settlement (castle, fortress, town) or another dominant (church, chapel). The center of the village gravity is the church on elevated place, which can already be made of stone and serves as a place of consolation and shelter.

13th century

New villages, towns and monasteries are emerging – at first, they thicken the original settlement structure, later they gradually expand into the forest landscape (východní Čechy (Eastern Bohemia), Poohří, jihočeská pánev (South Bohemian Basin), Českomoravská vrchovina (Bohemian-Moravian Highlands), Podkrkonoší, ...). This expansion is called 1st Major Colonization. Locator usually establishes new villages as lanes or previously used types (village square type, street type or combination: village square type). In residential buildings, the three-disposal solution alternates one-disposal solution (at first in the castles and fortress, than in the other buildings).

The peak of the Middle Ages

The three-disposal solutions are also used in rural housing, which is constructed as a timber-log house or round-timber-log house with a stack without a chimney, that's why it forms so-called the smoke-room. Towns are fortified by the fortification system, the poorer inhabitants live in the settlement around the castle or suburbs. In this period, 1st Major Colonization ends.

16th century – Renaissance

The original castles and fortresses are abandoned or converted to palaces. Town's suburbs are getting growth, the first urban plans appear. Vacant lots are built-in, farms are divided and cottages are increased in the surroundings of paths near the villages as a result of the population's increase. The smoke room passes through the development, through the smoker to the form of exhausting flue gases through the chimney. Two-room and eminence houses are beginning to appear. The landscape is fitted by farm buildings (haymakers, chalets, summer stables,...). Ponds are established and two large fishpond areas are formed (Pardubicko, Jižní Čechy (South Bohemia)).

Baroque – Raabization

Intentions of representative palaces and gardens (Valdštejnský palác v Praze (Valdštejn Palace in Prague)) are realized in the towns. In the village, count Raab divided the inefficient imperial estates between the individual tenants. It creates the new type of villages (Raabizational village – Josefov na Hodonínsku (Josefov in Hodonín area)), which are characterized by geometrical precision. Buildings are thicken in the villages – large village squares are fitted by houses, there is a massive increase of construction in the surroundings of paths. In the countryside, loneliness (grottoes,...) and lonely courtyards are created. This period is called 2nd Major Colonization or Internal Colonization. Landscaping (alleyways, dominants, vistas,...) is being developed.

19th century

After the industrial revolution, the population from rural area is moving into the towns, where new workers' colonies are created. Neo-styles and romanticism are taking shape in architecture and urban intentions. The development gradually progresses to the advent of modernity. New industrial buildings (cheese shops, breweries, distilleries) appear in the countryside. Construction of roads and railway (until 1880 almost the entire railway network) is under way, the extent of forests is decreasing (development minimum). The beginnings of professional interest in folk architecture and the preservation of monuments are dated.

20th century after the 2nd World War

Changes in social organization to the socialist system managed by centralized decision-making brought with it, in particular, a new unified housing construction (housing estates)

and insensitive interventions into the settlements. Also, historical centers have been significantly neglected and abandoned, while development was centered mainly to the new constructions on peripheries (so-called "green meadows). That brings the increase of people's migration and thus the problems in transport infrastructure. In the countryside, there has happened the multi-stage collectivization and segregation of municipalities into catchment, perspective and non-perspective municipalities. However, it's need to be emphasized, that major investments in transport and technical infrastructure and the realization of availability of civic amenities across the country, especially in the countryside. Huts and cottages occur, as a new phenomenon.

After 1989

In 1989, neoliberalism was introduced as the desire for deregulation was very strong after the rigorous planning during communism (Musil, 2006). "Too much regulation and too much state intervention were seen by neo-liberal politicians as the reasons behind economic stagnation, which needed to be removed. This view continues to be reflected in the pressures on the planning system, which is expected to be reformed so as to facilitate development, rather than stifling it with undue regulation and red tape" (Madanipour, 2006, p.178). Since then, Prague has become more and more a western metropolis, especially in comparison with the other cities in the Czech Republic. It was also the start of a steadily rising number of tourists every year which today resulted in separation: "the touristic Prague" and the remaining "Prague of the locals" (Musil, 2006, p.262). Development of suburbs at a massive scale further changed the shape of the city and its social fabric. What formerly was a very homogenous pattern turned into segregation since the open market economy and some neighbourhoods experience gentrification (p. 263).

After the change in political-economic structure to the democracy and the market economy, negative phenomena can be identified: massive development of suburbanization in suburban areas, creation of brownfields in settlements of all sizes and landscapes at the edge of society's interests (they serve just as source). In addition, the polarization of the company can be traced. However, positive phenomena can also be observed, such as: regeneration of historic centers, restoration of monuments, gradual revitalization of housing estates and development of landscape planning.

Prague today

Prague, with 1.25 million inhabitants, has about half a million less than Vienna (ČSU, 2014) and is located about 300 km further north-west.

The recently established design guidance and a new spatial plan for the metropolitan area in combination with the new building regulations, provide a more regulated basis for the planning system in Prague. Vienna's development plan served as template for its formulation and therefore had great influence (IPR Praha, 2016).

The work of Luděk Sýkora (1999), professor for social geography at the Charles University in Prague, significantly influenced the research of recent history. He discusses how the city emerged from the suppression of the communist regime in social, spatial and political aspects. The influence of the communist regime between 1968 and 1989 and the following period of more or less uncontrolled neoliberalism on the physical structure of the city as well as the mindset of its inhabitants should not be neglected. Extensive privatisation and limited control over development resulted in massive suburbanisation, touristification of the centre and further deprivation of more remote areas. This specific time period drove a wedge between Prague and Vienna which developed in different directions, which they are trying to overcome today (Sýkora, 1999).

Due to their common history, the composition of the historic centres of Prague and Vienna are very similar. Medium rise residential areas surround the historic core, which are further surrounded by low density residential areas, stretching out even beyond the metropolitan border into Central Bohemia. In between the more central and more suburban areas of Prague, clusters of prefabricated housing estates were established during communism and shape the view of the city until today. Neoliberalism after 1989 resulted in major suburbanisation, eventually resulting in deterioration of some more inner-city areas. Vienna's cityscape is similar, though it does not share the trend of prefabricated housing development and suburbanisation (UN Habitat, 2013). However, suburbanisation is not the only outcome of neoliberalism. Large amounts of foreign investment into refurbishment of the historic building structures and establishment of businesses especially targeting tourists, led to a sharp increase in prices in the area, unaffordable for the majority of former residents who eventually moved elsewhere. Lack of control and intervention by the state resulted in this high degree of gentrification which continues until today. The differences between Prague and Vienna might have occurred only recently when looking at their long common history, but influences were significant.

Short History of Vienna

For an analysis of the city of Vienna as a whole, the city profile from the professor of geography and regional research at the University of Vienna Gerhard Hatz (2008) and statistical analyses published by municipal departments of the city, provided the foundation for getting insights on the historical, political and current economic situations. The international attractiveness of Vienna, indicated by its growing population reaching a total of 1.75 million inhabitants (wien.gv.at, 2015), has brought significant change to the city. Net migration in recent years saw an influx of about 15,000 people per year and a rising number of tourists, amounting to 6.2 million in 2014 (wien.gv.at, 2015). Pull factors responsible for these constantly rising numbers are, amongst others, rankings indicating highest quality of living and a twice as high purchasing power as the EU average, in combination with a low unemployment rate.

Historically, the city was the centre of the Habsburg empire, encompassing land of today's Czech Republic and the city of Prague as well. Wealth of the ruling monarchs during these

times led to very similar architecture, shaping the cities up until today, with Gothic and Baroque being the most important building styles (Staňková, Štursa, Voděra 1990). From a more contemporary European view, Vienna's position shifted from centre to periphery several times, managing to regain its reputation after the fall of the iron curtain which affected Vienna by its close proximity. Today it has turned out to be an opportunity for the city to function as a gateway between the East and the West, although the competition for foreign investment with the rising Eastern European capitals is still on-going (Hatz, 2008, p.312).

Brownfield redevelopment is one of the cities major goals due to a continuously growing population and a simultaneous attempt to make the city more compact. Participatory planning approaches and an integrated system among planning institutions, targeting every aspect of the city are based on long-established experience.

The inherited urban fabric is a challenge for integration of the expectations of a global metropolis on the one hand (Hatz, 2008, p.313) and its preservation and retrofitting on the other hand, which is what makes Vienna distinctive today. Supported by EU initiatives like the URBAN-II and Objective 2, brownfield redevelopment in the early 2000s led to an upgrade and refurbishment of large inner city areas (Hatz, 2008, p.316). The city of Vienna established the first urban zoning plan in 1893, which neatly regulates the purpose and height of all new development in the city (Castonguay, Evenden, 2012). To this day, the plan has gradually become more detailed and resulted in the "Bebauungsplan". This type of regulatory planning system provides security for developers, investors and the public (Punter, 2007, p.168).

Organisation in the city is provided by 23 individual districts, each with its distinctive character and socioeconomic fabric. Physically, the round inner historic centre and its major circular road system provides a concentric pattern. Quality of public spaces in the central area is far higher than in some surrounding areas, which are on the agenda to be refurbished, depending on the local authority (Madanipour, Knierbein, Degros, 2014).

Mercer (2016) lists Vienna as the most liveable city, while Prague leads among all cities in eastern Europe. Although Vienna joined the trend of focusing on public spaces relatively recently, it "can be considered an outstanding example [...], as the municipality currently modernises and recreates vast parts of the city with public spaces promoted as catalyst for change" (Madanipour, Knierbein, Degros, 2014, p.37) which further serves as a link between the Social-Democrat and Green Party who govern the city in coalition since 2010.

3. LANDSCAPE PLANNING IN THE BUILDING ACT – LANDSCAPE PLANNING TOOLS

The objectives and tasks of landscape planning (already described in Chapter 1), as well as tools, are defined in the third part of Act No. 183/2006 Coll., on landscape planning and building regulations.

3.1. The competence in the sphere of landscape planning according to Building Act

- Municipal authorities – (municipal office with extended competence - MEC, municipal office, building office, municipal council, municipal board)
- Regional authorities – (regional office, regional council, regional board)
- Ministry for Regional Development – (MRD)
- Ministry of Defense – (MD, military regional authority)

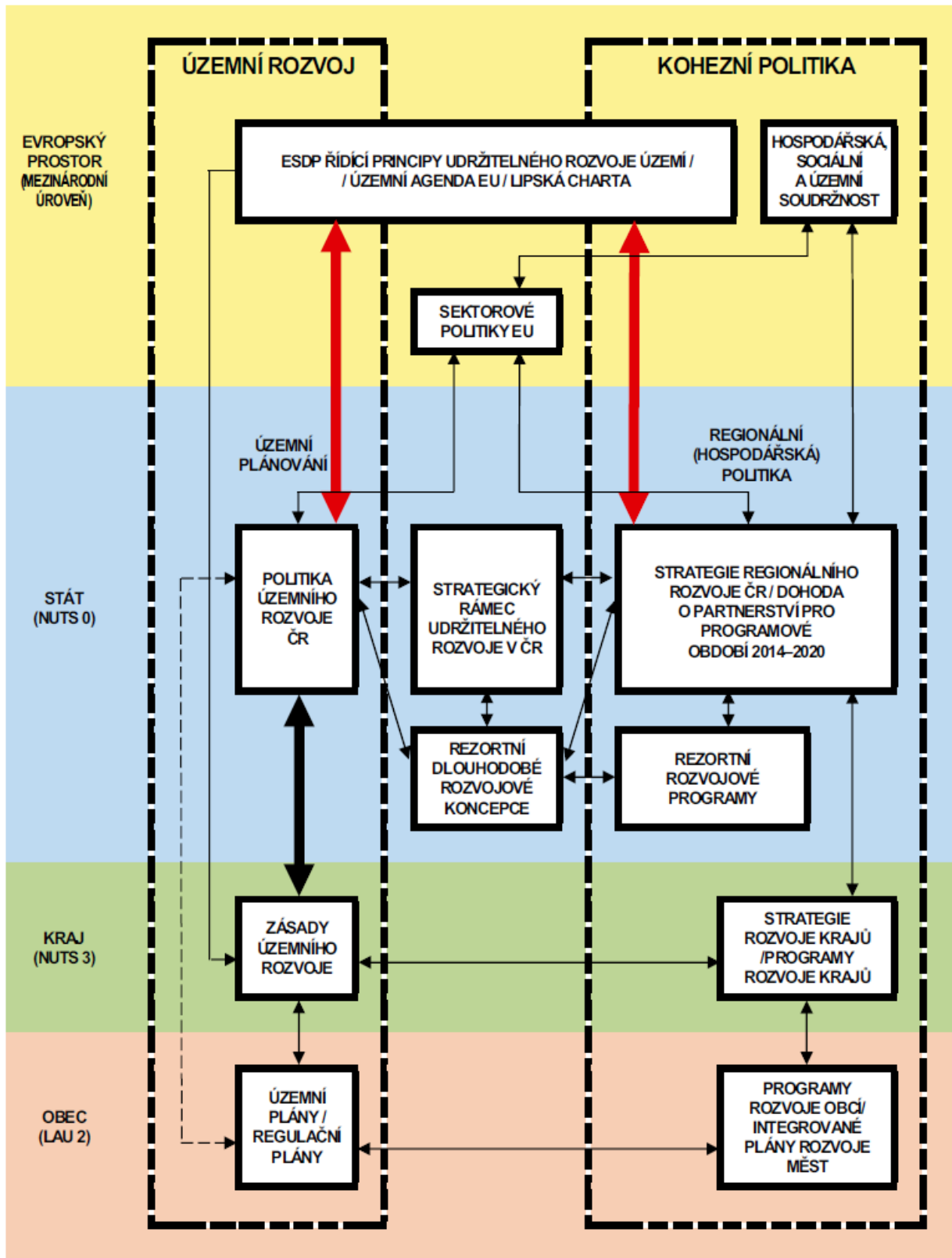


Figure 1 - Illustrative Diagram of the Czech Republic's PLD Links (Source: Ministry of Regional Development, Institute for Landscape Development: Policy of the Czech Republic's Landscape Development as amended by Update 1)

4. DECREE NO. 501/2006 COLL., ON GENERAL REQUIREMENTS FOR LANDSCAPE USE

Decree No. 501/2006 Coll., on general requirements for landscape use solves:

- defining buildings for housing, recreation and accommodation
- rules for defining areas
- rules for the use of the areas according to functional use
- rules for land delimitation
- rules for the location of structures on lands

Buildings for housing are apartment buildings and family houses. Family house is a building in which more than a half of the floor area meets the requirements for permanent family housing and is designed for that purpose. Building can have max. 2 above ground floors, 1 underground floor and 1 attic. At the same time, it must not include more than 3 separate apartments. Apartment building is building with more than a half of the floor area meets the requirements directly intended for permanent housing.

The building of the accommodation facility is a building where accommodation and related services are provided.

These buildings are categorized as:

- hotel
- motel
- guesthouse
- other accommodation facilities (e.g.: hostels, dormitories, campsites,...)

Areas in landscape plan are divided into units of min. area 2000 m² and they are defined:

According to the existing or required use (built-up area)

According to the importance:

- to-build areas
- territorial reservation areas
- areas to change of existing buildings
- areas for the restoration or re-use of degraded land
- areas of reconstruction and reclamation interventions into the area

According to the use of the area, the areas are divided into areas with different use:

- housing areas
- recreation areas
- civic amenities areas
- public spaces areas
- mixed living areas
- traffic infrastructure areas
- technical infrastructure areas
- production and storage areas
- mixed production areas
- water areas and water management areas
- agricultural areas
- forest areas
- natural areas
- mixed unbuilt-up areas
- minerals´ mining areas
- specific areas

The distance between family houses must not be less than 7 m. In very tight conditions, this distance can be reduced up to 4 m, if there are no rooms for living in any of the opposite walls. At the same time, the distance from the common land borders must be greater than 2 m and the distance between windows from rooms for living and the road must be at least 3 m. The distance between the buildings for family recreation must be greater than 10 m. In the case of buildings, where are windows from rooms for living, must be the distance of the opposite facades at least the height of the higher building of these. These rules do not apply to the buildings in building loops.

5. LANDSCAPE PLANNING AND SUSTAINABLE DEVELOPMENT – LANDSCAPE AND SETTLEMENTS

„We are also, where we live” - Václav Cílek: Makom, the book of places

Sustainable development – a development that meets the needs of the present generation in such way as to be enabled to meet the needs of future generations

Seat – territorial group of permanent human dwelling

Landscape – set of ecosystems = geosystem; a part of the Earth´s surface with a distinctive relief, which consists of a set of mutually interconnected ecosystems and civilizational elements

Nature – all matter and energy, especially in basic humanly unaffected form

Environment – a set of terms and conditions, tangible and intangible, that surround us; it´s the nature and the results of human activity

Non-renewable resources = exhaustible resources – resources, that a society has a limited/final quantity, one of the most important non-renewable resources is the landscape, others are oil, coal....

Renewable resources = inexhaustible resources – resources that are periodically renewed, e.g.: wood, water or wind energy,...

5.1. Natura 2000

It is a set of protected areas created by the Member States of the European Union. The intention is to preserve biodiversity. Areas are selected based on the exact criteria. Natura 2000 consists of bird areas and sites with the European importance.

5.2. Landscape System of Ecological Stability (LSES)

An interconnected set of natural and altered ecosystems, but close to nature, that maintain the natural balance. It is made up of biocentres, biocorridors and interaction elements. It may be in local, regional and supraregional categories. Biocentres are biotopes that ensure the existence and reproduction of fauna and flora by their conditions – thus ensuring species diversity. Biocorridors are areas that connect the biocentre and allow migration – thus ensuring genetic diversity. Interactive elements are landscape segments, which at the local level mediate the beneficial effects of the other elements of the LSES.

5.3. Special protected area (SPA)

- pursuant to Act No. 114/1992 Coll., on nature and landscape protection:

National Parks (NP) - the most important category of large-scale SPAs, they are divided into 3 zones of protection, there can't be no settlements on these areas

Czech Republic:

- Krkonoše (Giant Mountains) National Park – the oldest
- Šumava National Park – the largest
- the National Park Podyjí - the smallest
- The National Park České Švýcarsko - the youngest

Austria:

- National Park Donau Auen
- National Park Gesäuse
- National Park Hohe Tauern
- National Park Kalkalpen
- National Park Neusiedlersee
- National Park Thayatal

Protected landscape areas (PLA) - large-scale SPAs are divided into 4 zones of protection, in the Czech Republic there are 26 areas

National Nature Reserve (NNR) - The most important category of small-scale SPAs, the protection of small-scale areas at international or national scale

Nature Reserve (NR) - small-scale SPAs, small-scale area protection on a regional scale

National Nature Monument (NNM) - Small-scale SPAs, a natural unit of international or national importance

Natural Monument (NM) - small-scale SPAs, a natural entity of regional significance

Memorial tree

These are exceptionally important solitary trees, tree groups or row of trees or alleys. They are declared according to Act no. 114/1992 Coll., on nature and landscape protection. A protection zone with a radius ten times the diameter of the trunk at a height of 1,3 m above the ground is set around them.

6. LANDSCAPE PLANNING AND SUSTAINABLE DEVELOPMENT – BROWNFIELDS

Brownfield is unused or ineffective area. This area may consist of a part, one or more buildings or lands or the combination of them. These properties are operationally, economically, or territorially interconnected so as to form a whole. Brownfield or a part of it may be contaminated.

6.1. Brownfields' division

According to:

- size (small-area = microbrownfield, medium size, large)
- original use (industry, storage, agriculture, army, residential, commerce, services, sports, cultural, housing estates, ...)
- brownfield's structure (object, set of objects, grounds, lands)
- construction-technical Condition (excellent condition ~ building remains)
- economic Profit (economically viable, borderless, non-viable)
- and others

6.2. Consequences of brownfield formation

- direct (unemployment, environmental degradation)
- indirect (population outflow, outflow of investment from the area, decline in property prices, extinction of small business, the emergence of socially excluded localities, increase of crime, reduction of aesthetic and ethical feeling in the population)

Examples of successfully solved brownfields in the world are La Fabrica in Catalonia, Spain; Residential built-in into the gas jugs in Vienna, Austria; Magna – science and industry center in Rotherham, United Kingdom; ... Examples of domestic brownfields are Galerie Vaňkovka (Vaňkovka Gallery) in Brno, Czech Republic; Sovovy mlýny (Sov's Mills) in Prague;...

Each brownfield needs a completely individual approach to revitalization, which depends on the location, its previous use, local conditions (transport a technical infrastructure, morphology, limits and regulations in the area,...) and the current needs and potentials of the area, including the sociodemographic structure in the area. Despite all the differences, the process of successful revitalization can be generalized:

- area identification and its subsequent cataloging
- looking for an investor and selecting new appropriate feature
- processing of project documentation for the purpose
- authorization processes for the implementation of the project
- realization of the intention
- new use of the area and realistic return on investment which were invested

7. LANDSCAPE PLANNING AND SUSTAINABLE DEVELOPMENT – SUBURBANIZATION

Suburbanization is the spatial expansion of cities into the surrounding natural and rural landscape. This expansion is understood as the transfer of functions, activities, population and lifestyle from the core of the residence to the peripheries and beyond. Very negative form of suburbanization is urban sprawl.

We recognize the kinds of suburbanization according to the period: prime (the formation of the settlement around the castle or suburbs behind the walls), classical or modern (construction of workers colonies after the industrial revolution) and the current or post-modern.

Postmodern suburbanization is further divided into types – residential and commercial.

Residential suburbs consist almost exclusively monofunctional areas of individual housing (family houses). The main problems are the lack of public space, monofunctionality of the areas (so-called lying down housing estates; without civic amenities), the problematic possibilities of pedestrian traffic (e.g.: lack of walkways, there is now reason to go anywhere, ...), insufficient transport infrastructure including missing public transport, minimal or no public green areas resulting in great individualization of individuals, increase of aggressiveness and divorces, poor communication.

Commercial suburbanization has a central focused on production areas, warehousing (logistic centers) and trade (shopping centers). Their main problems are the lack of public space including greenery, problematic pedestrian traffic outside the buildings, poor transport infrastructure including missing public transport, lack of contact with sky and nature, and a lack of contact with sky and nature and the resulting lack of quality rest, overload, increase of aggression.

Suburbanization can't be completely stopped, but it can be reduced and suburbs can be improved. It can be achieved by:

- fixed boundaries of the seat
- multifunctional areas with plenty of space for civic amenities
- adding and improving the public space with plenty of greenery
- planning infrastructure in advance (mainly transport) with areas for public transport, walking and cycling
- optimization of regulations in the area
- support of brownfields' re-using and making the city core parts more attractive

8.SETTLEMENT AND INFRASTRUCTURE – SOCIAL, ECONOMIC, CULTURAL, PUBLIC

Potential of the settlement - environment´s ability or its components to perform a certain function or to provide certain values; this ability is quantitatively measurable; examples: production, cultural, recreational, transport, tourist, technical, ecological,...

Settlement´s components – basic functional units of the settlement; housing, work, recreation, transport

Settlement´s aspects – mostly intangible units shaping the settlement´s environment; philosophy, politics, socio-culture (history, aesthetics, urbanism, architecture, ...), sociology, demography, economy, ecology, ...

Infrastructures – systems (subsystems) providing a certain function in the area; transport infrastructure, technical infrastructure, energy supply, waste disposal, economic infrastructure, ...

For infrastructure, landscape planning distinguishes two basic types. The first group is defined by the Building Act as the public infrastructure in §2. According to the act, it is made up of land, buildings and facilities for transport infrastructure, technical infrastructure, civic amenities and public spaces set up and used in the public interest. Furthermore, the Act states that publicly beneficial works (which can be expropriated for it) must be just the construction of public infrastructure. The second group is infrastructures without definition in the legislation. Here belong the other infrastructures – social, economic and cultural. In addition, other infrastructures can be track in the area, but they are usually introduced as intended by the processor. Most subsystems of the above-mentioned infrastructures are formed in the necessary combinations.

Social infrastructure – includes housing (individual, collective, special – for seniors,...), civic amenities (administrative and management buildings, shops, services, catering, health and educational facilities, social care, leisure activities, ..., spiritual services, protection of the population, cemeteries, ...), spa – its recreation and sport part (physical education, individual and collective recreation, daily and long-term recreation,...) and greenery.

Cultural infrastructure – is made up of cultural and natural protected features (e.g.: Český Ráj), monuments protected objects and sets (e.g.: UNESCO monuments, historical center of České Budějovice), historical and contemporary attractions of the settlement (e.g.: Karlovy Vary - Goethe´s visit, film festival) and natural and artificial aesthetic values (e.g.: Liberec - Ještěd - mountain and transmitter); all of which is complemented by an intangible component – genius loci.

Genius loci - "the spirit of the place", the atmosphere of the place

UNESCO historical monuments in the Czech Republic – tangible heritage (the historical center of Prague, the historical center of Telč, the historical center of Český Krumlov, the historical center of Kutná Hora and cathedral of the Assumption of the Virgin Mary in Sedlec, the Lednice-Valtice campus, the pilgrimage church of St. John of Nepomuk at Zelená Hora near Žďár nad Sázavou, Holašovice, gardens and chateau complex in Litomyšl, Trinity Column in Olomouc, Villa Tugendhat in Brno, Jewish Quarter and St. Prokop's Basilica in Třebíč) and intangible heritage (Slovácký Verbuňk, carnival on Hlinecko, falconry, Riding of the Kings in Slovácko and Haná, puppetry). UNESCO monuments in the Czech Republic - tangible heritage (city centres Vienna, Salzburg, Graz, Hallstatt etc.) intangible heritage (cultural landscape Wachau, Neusiedlersee etc.)

Economic infrastructure – it consists of traditionally resource-bound resources – raw materials (water, sand, stone, wood, soil,...), industry, agriculture, production and storage (production and logistics, agricultural cooperatives, ...), tourism (aquaparks, zoo, botanical gardens, dino-parks, castles and chateaux, ...), recreation and spa tourism – their commercially used components belonging to tourism, science and technology parks and business incubators.

9. SETTLEMENT AND INFRASTRUCTURE – TRANSPORT

The transport infrastructure is a part of public infrastructure, it is possible expropriate for its construction in the Czech Republic according to Act No. 183/2006 Coll. and Act No. 186/2006 Coll. Infrastructure itself consists of land, buildings and facilities. Its subsystems are:

1. Structure of roads:

Act No. 13/1997 Coll., on roads, categorizes these roads on highways (D.; marked in red with a thick black framing), speed roads (R.; marked in red with a thin black framing), first class roads (I/..; red), second class roads (II/...; blue), third class roads (III/.....; green), local roads I. - IV. (marked in dark grey – light grey), purpose roads (marked with white with a thin black frame) and “traffic at rest” = parking (P.; marked in gray). Furthermore, there are parking houses, bridge construction and tunnels and supporting walls, ...

2. Structure of railways:

The railway network is dealt with in Act No. 266/1994 Coll., on railways. It categorizes the individual tracks on nationwide tracks, regional tracks, sidings and special tracks. Another legally used division is based on the maximum speed of passing assembly to high-speed (over 200 km/h) and conventional (up to 200 km/h).

3. Structure of airports and related facilities:

Constructions of the airports are dealt with not only in Act No. 49/1997 Coll., on civil aviation but also in Regulation L14. They define not only airspace, civil aviation and airport facilities, but also protection zones of aviation buildings and facilities. Buildings that would interfere with the airspace (e.g.: wind turbines, columns and masts of telecommunication, high-rise buildings, ...) are expressed by the Civil Aviation Authority and the Ministry of Defense. Airports in the Czech Republic are divided into three groups – the airports of national importance (Letiště Václava Havla Praha (Václav Havel Airport Prague)), regional airport of major importance (Brno, Ostrava, Pardubice a Karlovy Vary) and regional airports of minor importance, so-called aeroclubs and sports airports.

4. Structure of waterways:

Categorization of waterways and ports is provided by Act No. 114/1995 Coll., on inland navigation and by Decree No. 222/1995 Coll. The waterways are here divided into the monitored (waterways with traffic importance and purpose waterways) and not monitored. The ports are public and non-public. In the Czech Republic are as used waterways

the streams of rivers Labe (The Elbe), Vltava and Morava, and as usable waterways they are rivers Labe, Bečva, Odra, Ostravice, Berounka a Ohře.

5. Pedestrian and bicycle structures:

Structures for pedestrian and cyclist are dealt with in Act No. 13/1997 Coll., on roads. This act characterizes sidewalk in § 12 as a separate communication or as a component of local communication. The municipality is responsible for the sidewalks.

10. SETTLEMENT AND INFRASTRUCTURE – TECHNICAL AND PUBLIC SPACE

The technical infrastructure is called piping and constructions and operational related facilities for technical equipment. Subsystems of technical infrastructure are:

- systems for the transport of matter – water systems, systems for drainage and cleaning of waste water, collection and disposal of waste, transport of flammable and non-flammable gases, pipelines – gas pipelines, oil pipelines, ...)
- systems for power distribution – electric distribution, hot water pipelines, steam pipelines, and other heating
- systems for communication lines – telecommunication, radiocommunication, TV signal coverage, data transmission, ...
- constructions to reduce the threat of territorial natural disasters – flood protection measures, systems, fire tanks, ...

The technical infrastructure is divided according to the territorial scope and capacitive importance according to the CSS (Czech State Standard) 73 6005:

- 1st category – overhead conduit, remote or transversal conduit (interstate or national conduit)
- 2nd category – local, regional or supply (distribution to the individual settlements)
- 3rd category – subsidiary, consumer or street (street distribution)
- 4th category – secondary (buildings' connections)

Principles of technical infrastructure solutions in landscape planning:

- decision on geometric structure
- decision on the way of technical infrastructure laying
- decision on basic parameters
- ensuring coordination in built-up area

Public space is a place, where people are in contact and in communication. It is accessible to the general public, without limitation of age, nationality, gender, religion,... - therefore to general use regardless of ownership to this space. The definition of public space is enshrined in Act No. 128/2000 Coll., on municipalities (municipal establishments). Its concept can be generous or picturesque, harmonious or contrasting, including greenery and city equipment (lightning, benches, trash bins, bicycle racks, information signs, ...). In the public space – the areas are included squares, streets, market places, sidewalks, public greenery, parks and other spaces.

II. HOUSING ESTATES ISSUES

The concept of a housing estate is essentially of two dimensions. Either it is a historical settlement, which is a place that has long been inhabited by people for a certain continuous period of a time, i.e. a grouping of dwellings or settlements (e.g.: celtic settlement = fortification, ...). The second meaning is the housing estate of the present, i.e. the new part of cities designed primarily for housing in the meaning of groupings of apartment buildings, predominantly understood as panel buildings.

The predecessors of today's housing estates were the original walled houses or the brick block of flats with courtyards.

The first idea of implementation was probably from 1920 by Walter Gropius (director of Bauhaus) "to concentrate the population into high buildings in order to make a free space". Then in 1924, Le Corbusier presented a plan for the rebuilding of Paris as "the city of modern times" (a group of tower houses where there were no basic city-forming elements – streets and squares). The first panel houses are known from the Netherlands (after World War I), Germany (1923) and Paris (1939). For their fast and cheap housing concept, they have spread rapidly throughout Europe. Western Europe has gradually dropped of the panel type of construction in 1970s, in Eastern Europe until the early 1990s. Nowadays, the construction of panel apartment buildings is realized in altered form – the assembled skeleton with a brick core is used by the vast majority of developers.

II.I. Advantages of housing estates

- home for thousands of families
- mixed social structure of the population – problem groups do not dominate (in the Czech Republic)
- looseness of the area – the growth of the free landscape
- you can see the horizon from the upper floors of the house
- possible proximity of nature - possibilities of recreation (on the peripheries)
- calmness, better air – out of traffic peaks
- comfortable "carefree" housing, anonymity
- lower intensity of advertisements
- quiet for concentration on work

- lower-level apartments suitable for families with children
- new aesthetic (light effects of large areas of home at eclipse)

II.2. Major problems of housing estates

Functional solution:

- absence of job opportunities
- inappropriate transport connection with the center
- lack of civic amenities

Landscape planning solution:

- looseness of the space
- selection of functions led to uniformity, stereotype, monotony, to "chaos"
- the spaces are "out of order" - the street network has no memorable scheme, dramatic gradation and climax
- there are no streets, squares, urban scene – places of social contact are the areas around shopping centers
- only exceptionally is respected landscape, natural terrain and greenery
- lack of areas for the "traffic at rest"

Architectural design:

- inappropriate scale
- the poor architectural expression of objects and spaces
- unresolved parter

Layout solution:

- flats – a small flat standard
- poor air exchange in flats without opposed facades

Construction solution:

- deficiencies in building-technical conditions of objects
- lack of solution in construction details
- worse acoustics, lightening, ventilation...

Aesthetic effect:

Psychologically unpleasant environment has an adverse effect on the mental health of people, the quality of social relationships and work performance.

Objective of generation from the perspective of landscape planning:

The aim is to create a residential environment, that would encourage the emergence of a community, i.e. to remove the monofunctional way of integration by integrating functions, activities, new transport concepts, creating job opportunities not only in the tertiary sector (services).

LITERATURE

ČESKO. 2006. Vyhláška č. 501/2006 Sb., o obecných požadavcích na využívání území. Praha

ČESKO. 1997. Zákon č. 13/1997 Sb., o pozemních komunikacích. Praha

ČESKO. 2006. Vyhláška č. 500/2006 Sb., o územně analytických podkladech, územně plánovací dokumentaci a způsobu evidence územně plánovací činnosti. Praha

ČESKO. 2006. Zákon č. 183/2006 Sb., o územním plánování a stavebním řádu (stavební zákon). Praha

MEDEK, F. Technická infrastruktura měst a sídel. Praha: Vydavatelství ČVUT, 2005, ISBN 80-01-03303-1

Politika územního rozvoje České republiky ve znění Aktualizace č.1. Praha, Brno: Ministerstvo pro místní rozvoj ČR, Ústav územního rozvoje, 2015, ISBN 978-80-7538-006-7(Praha), 978-80-87318-32-2 (Brno)

SÝKORA, J. Územní plánování vesnic a krajiny, Urbanismus 2. Praha: Vydavatelství ČVUT, 2002, ISBN 80-01-02641-8