

LANDSCAPE PLANNING IN THE CZECH REPUBLIC – OPPORTUNITIES, VISIONS, AND LIMITS

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Abstract

Spatial planning processes including landscape, physical, and branch plans belong amongst basic tools of the protection of environment in connection with the sustainable development. Main goals of the landscape planning ought to be harmonic development and purposeful optimisation of the relation between the man and nature in a given space, as well as conservation and support of an identity of the landscape and of the man in it. At present, the landscape planning is missing in the Czech Republic and therefore big problems arise with the application of the serious landscape protection. In the given work the main reasons for the completion of the system of spatial planning in the Czech Republic as well as for the implementation of the landscape plan into the practice are presented. The authors settle the basic items of the landscape plan contains and its suggested position in the whole system of the landscape management.

Key words - landscape planning; Czech Republic; Mikulov

The spatial layout of landscape (represented by spatial planning processes) belongs to basic tools of human environment protection in the sense of its sustainable development. Together with economical tools and regional policy, this is the real means of the so-called landscape “creation” and its further development and formation. Spatial planning (in our practice this mainly means regional planning) should be a synthesis of social, environmental, economical, technical, cultural, and aesthetic approaches to the human environment. However, despite these theoretic statements, certain limitation of the contemporary system of local planning in the Czech Republic is apparent, especially in relation to the execution of requirements for sustainable development, and the protection of the identity of our landscape. Additional “innovations” of land use planning, which were established in Czech legislation after 1989 (so-called ÚSES – local systems of ecological stability, EIA and SEA processes, landscape character protection, strategic plans of sustainability, new land consolidation schemes, etc.) are very difficult to integrate in the already running planning system. These new systems still lack proper methodological instruments and definition of relations to other parts of the planning process. In relation to the change of legislation (Act No 183/2006 Coll. On spatial planning and the building process procedure), reacting to the need for the implementation of European regulations in the national legislation system, again opens a space for a wider expert discussion on the contents of landscape and spatial planning tools in the Czech Republic.

Until 2007, spatial planning (Act No 50/1976 Coll. on spatial planning and the building process procedure) clearly accented the planners’ technical perspective of the solution of the functional organisation of the landscape. After 1989, the act was amended many times with the aim to implement new social requirements for the development of landscape including requirements for landscape protection; however, these were only limited to the

aspect of creating the ecological networks (ÚSES) without a complex effort aiming to understanding other landscape and environmental relations. The technical perspective of spatial planning in the Czech Republic is, to a great degree, a traditional one, influenced by several factors:

- societal requirements (Czech Government, local and regional authorities) prefer the development of large building investments, which are seen as a real guarantee of regional development (the region is developed in short, not long-term perspective),
- due to pertaining conservative approach of the environment protecting bodies, landscape protection is generally perceived by the society as a barrier of any kind of development of the country,
- planning of landscape development is carried out mainly by civil engineers and urban planning experts, who lack the elementary education in nature and environmental sciences. Nature and environmental science experts enter the process of landscape and spatial planning only rarely, and usually after the proposals and drafts are already done,
- the state bodies of environment and landscape protection do influence the initial requirements for the contents of a spatial or land use plan, but mainly with regards to so-called “specially protected areas” (national parks, nature reserves, etc.). The requirements for general protection of landscape, represented e.g. by landscape character protection or the respecting of sensitivity and capacity of landscape, are executed only as proclamations without greater effort invested in their actual implementation.

The described problems have been perceived by the expert public since early 1990's. Since then, intensive discussions were held about the necessity of changes in landscape planning (conferences Landscape planning and landscape ecology 2006, Czech landscape – roof of Europe 2004, Flood-protecting measures and landscape planning 2003, Sustainable development of Czech landscape 2002, The face of our country 2002, Concept of complex landscape planning 2000, Integrated approach to landscape 1999, Landscape planning in Germany and possibilities of its utilisation in the Czech Republic 1992), which have issued in a very detailed analysis and proposal for the changes in legislation, the planning process, and the contents of planning documentation. Baseline information carried out by work groups organised by the Czech Association of Landscape Planners, Czech Chamber of Architects, Academy of Sciences of the Czech Republic, and CZ-IALE are nowadays in the form of a complex material, which can be used for innovations of the planning processes used in the Czech Republic.

The basis of all the discussions about the necessary innovation of spatial planning process was the statement that the overall care of landscape is a structured system (e.g. SALAŠOVÁ 2003), which consists of the following steps:

1. Creation of information database on the landscape (data collection, monitoring, creation of landscape information system)
2. sorting and evaluation of data (landscape diagnostics, assessments)
3. interpretation of data for the purposes of planning, assessment of the landscape character, development trends, potential, and limits of the landscape, and proposal for its optimum spatial arrangement (**landscape plan**)
4. local planning process (local and regional policy, strategic planning, local planning documentation, land consolidation schemes)

5. design and implementation of concrete measures in the landscape (e.g. reclamation)
6. care and maintenance of the designed areas
7. monitoring of the area after the implementation of changes

Not only the existence of the stated steps itself is important, but mainly their compatibility and mutual inter-relation. While the Czech spatial planning system slowly aims to the establishment of all these steps into practice (except the key point No 3), their mutual inter-relation and concentration in a single centre point (maintenance and care of the landscape in question) are still far away. One of the key tasks for the near future shall be the creation of these thin lines into a functioning network – creation of a landscape care **system**. Some of its principles have already been presented (SALAŠOVÁ 2000, HRNČIAROVÁ 2001). Together with the creation of basic system tools, the contents of the individual steps must be redone and reorganised as well (SALAŠOVÁ 2002).

The entire planning system can be simplified into three main problem areas, which must be closely tackled in the Czech Republic (as well as elsewhere) during the landscape planning process: landscape research, legislative adjustment of the planning processes, and follow-up landscape care and maintenance.

Landscape research and landscape assessment for the purposes of planning.

Landscape is a complex and sophisticated system, which can be variously defined by different scientific disciplines. Landscape is the main object of interest also in the process of spatial planning or local management. For the purposes of planning, landscape must be studied as (compare with RUŽIČKA 2000):

- a) geosystem that is united in its main spherical components – atmosphere, lithosphere, pedosphere, hydrosphere, biosphere, and anthroposphere (noosphere). This approach allows for the understanding of landscape structure.
- b) ecosystem – the study focuses on the relations in the system, and
- c) space perceived by humans – with close relation to axiological assessment of landscape.

For the purposes of research and planning, two main problem areas, which are in mutual interaction, are defined in the landscape:

- environmental-ecological, natural
- cultural (socio-economical) and anthropic

In the contemporary landscape research, the key problem is, apart from the insufficient institutional and financial support of landscape and ecological research, the theoretical and methodological command of the multi and interdisciplinary synthesis. Whereas landscape analyses on the level of the individual disciplines are relatively well covered, the overall synthesis of cultural landscape still has some reserves. This insufficiency is determined by the complicated object of the research and the unpreparedness of a system team research (in terms of organisation and methodology). Another great problem is the asymmetry in the analyses of natural and socio-economical disciplines. In other words, while the anatomy of the landscape we know relatively well, we know very little about its spirit – i.e. about what makes the given landscape characteristic and typical through mental relation of the local

people. The complexity of the research object – landscape – issues from its very essence, its structure, genesis, and spatial relation organised in various dimensions (time, space, socio-cultural, etc.), which are bound by synergetic relations.

Within each dimension, various scientific disciplines find their use, while every one of them prepares its own analyses and evaluations. These assessments are expressed in a specific “language” and coding characteristic for the respective discipline. The first problem is therefore the comprehensibility of the conclusions and assessments for experts from other disciplines. Other problems, very much discussed nowadays, include the co-ordination of the individual outputs and their subsequent unification and interpretation in a language that would be comprehensible for the purposes of regional and local planning.

Due to the described reasons the utilisation of scientific results and research outputs is often rather limited in the contemporary planning practice. A common trend is a mere citation of the basic descriptive characteristics of the area without attention to the aspects of relations, analysis of cause and effect, and mainly the stating of the **diagnosis** of the landscape. The definition of landscape potentials and limits, as well as of the determining landscape-creating processes is missing, as are missing their real and model consequences. In foreign countries, these final evaluations are carried out for the landscape, along with follow-up alternative solutions, as a part of the landscape plan, which is still missing in the Czech legislation.

The basic themes, which have the priority from the perspective of the landscape planning needs, include the methodological covering of:

- landscape and ecological differentiation of the Czech Republic and its regions, which shall enable for the setting of landscape management principles upon the landscape’s ecological properties,
- pointing out of the determining landscape-creating processes (methods for the understanding of the way the landscape system functions),
- indications of the landscape’s quality (landscape indicators, definition of a target quality of the landscape),
- sensitivity, vulnerability, and capacity of the landscape (environmental, economical, social, institutional, and perceived),
- the modelling of landscape changes and their impacts on the social and economical sphere,
- evaluation of the landscape potentials and limits for further use.

The creation of the spatial planning process and the way of implementing the landscape-ecological methods.

If we want to have some influence on the direction of development of a landscape area, we mostly use local planning means to achieve this – local planning is a landscape design tool with good legislative basis.

Until 2007, local planning was defined as deliberate and consistent conceptual activity, which deals with the functional use of a landscape area, determines the principles of its organisation, as well as complex and time co-ordination of construction and other activities that influence the development of the area. The new amendment of the Building Act (No 183/2006 Coll.) brings a shift in the understanding of the main aims of local development planning. Local planning aims to create conditions not only for construction, but also for sustainable development of the area, which satisfies the contemporary human needs without representing a threat to the quality of life of the future generations (§ 18, Art. 1).

The new legislative amendment brought changes to aims and tools of the spatial planning, as well as the implementation of the EIA and SEA processes in the land use planning. Despite extensive expert discussion and suggestions of numerous institutions, landscape plan has not been yet established in the legislation, although its implementation is referred to as a necessary condition of providing sustainable development of landscapes in the Czech Republic. (BOHÁČ ET AL. 2002)

The use of landscape-ecological approaches in practice will therefore still depend on the individual decision of the client and/or the person carrying out the local planning (land use planning) documentation (e.g. local analytic studies, area research studies, analyses, and evaluations for the land use plan, principles of local development and policy, etc.). None of the stated planning tools deals with the given problem in such a complex way like the landscape plan could do.

Landscape planning in principle is a spatial planning that accentuates the landscape-ecological (nowadays also the socio-economical) approaches to landscape together with overall cultivation of the space. Its result is the landscape plan, which represents a proposal of the so-called **optimum** spatial organisation of the landscape. It has a different character than the land use plan, which aims mainly to the **consensually feasible** proposal of a functional use of the landscape (that can substantially differ from the optimum) and the fulfilment of local technical and legislative requirements on the development of the area. Both approaches are necessary and irreplaceable, and should be in mutual interrelation. The land use plan, from the perspective of its character and time horizon of its validity, cannot replace the landscape plan in any way. Similarly, it cannot be replaced by the documentation carried out for ecological networks (ÚSES), as these are not documents of a complex character.

The existence of a landscape plan should substantially facilitate the work on the preparation of a land use or spatial plan, and enhance its quality (the planner will not be allowed to make mistakes that are nowadays common due to a lack of knowledge of the landscape system functioning). The state administration bodies, on the other hand, would get a good quality material for argumentation and to support their locally made decisions and policies.

From the previously stated it is clear that a landscape plan is:

- a. a tool of preventive (conceptual) protection of landscape (and should therefore be one of the main planning tool used by the Ministry of Environment, as well as a key document for local planning)
- b. expert document (with public participation features) for all causal local decision-making processes (e.g. EIA, subvention programmes, new developments and investments in the landscape, etc.)
- c. baseline document for the correct management of the landscape (the proposal for measures and regulations contains also suggestions of potential financial resources).

A landscape plan can be theoretically implemented in the planning process as:

- a) separate process independent of the local planning
- b) separate document implemented in the local planning process, which has the function of a local planning baseline document, or a part of the local planning documentation

c) a set of methods for landscape-ecological planning that can be used for the creation of a land use plan draft proposal.

With regards to the legislative conditions in the Czech Republic, the most suitable and feasible alternative seems to be the point b). Despite the fact that the landscape plan has no legislative backing yet, so-called landscape plan standards were carried out in 2002. The aim of these was not to determine an exact methodology for carrying out the landscape plan, but the effort to standardise the content of the individual planning steps (phases), and of the planning documentation itself (KUČERA, SALAŠOVÁ 2002).

The landscape plan draft proposal should contain mainly the following:

- solution of wider context in the landscape
- evaluation of the landscape quality (including landscape character)
- proposal of optimum spatial organisation of the landscape and principles of its management
- determination of ecological risks and limits for the use of the landscape
- collection of special drawings (sustainable way of using the natural resources, spatial organisation of the ecological networks, changes of landscape protection regime, landscape character protection, reconstruction of the hydrological balance of the area, proposal for erosion control measures, land reclamation measures, and general rehabilitation).
- collection of drawings relating to infrastructure (proposal for transport networks structure, extent of built-up area and future plan for urbanisation, proposal of main corridors for technical mains, etc.).

The extent of this article does not allow for a detailed description of the Standards content. All the necessary information is available from the author of this paper.

The Landscape Plan Standards are currently tested on pilot studies, which are organised mainly by local authorities (towns, villages, or their associations) as a baseline document for a correct future decision-making. The projects carried out to this day include also landscape plans for highly valuable landscape areas, such as the Lednice-Valtice Heritage Complex, (urban development study) and Mikulov-Falkenstein (landscape plan).

The follow-up care of the landscape and its monitoring.

From the evaluation of the first two problem areas it is clear that landscape research, as well as its relation to land use planning is not going to be trouble-free. The least serious problems include the follow-up care and maintenance of the subject landscape.

Whereas in the feudal era (until 1918 in the Czech Republic), the system of “design and maintenance” of landscape was relatively stabilised – at least in peace times, and at the dominions owned by enlightened families (the Liechtensteins, Dietrichsteins, Buquois, Schwarzenbergs, etc.) – after the end of this era the situation gets complicated by the increase of owners number, their uneven wealth, education, and personal approach and sensitivity to the landscape. Social changes in the first half of the 20th century did not enable the stabilisation of the new planning systems. Paradoxically, the good conditions for a systematic and planned care of the environment came about much later – during the socialist era (the system of central planning of expert character, 1948 – 1989), but were used more in a negative sense. Planning issued from a single preference of high profit of the resources exploitation without regards to possible damage to the environment, or the social and health impacts. Nowadays, the system of landscape care and maintenance is only

beginning again. Without the stabilisation of contemporary ownership relations to the soil and the creation of financial resources of the owners, we cannot even expect a functioning system of complex care.

In case of small areas concentrated around a single village, this care falls (sometimes literally) on the heads of the local authorities, or the state administration bodies. It is necessary to bear in mind that the remedy of ecologically disrupted landscape requires a lot of time, as well as human, technical, and mainly financial resources, which most of the local authorities lack. On the other hand, the local authorities are perhaps most interested in caring of their respective areas. The quality of landscape care and maintenance is then directly proportionate to the enthusiasm of the mayors and councils, and to their feeling of responsibility for the area they are in charge of. From this point of view, the establishment of participative planning features in practice is very important, as the interest of the public in the quality of landscape, in which they live, is great. However, participative planning is a topic that is covered only by a small number of authors in the condition of the Czech Republic (e.g. SALAŠOVÁ ET AL. 2006).

Thanks to governmental programmes (Rural Areas Reconstruction Programme, Landscape Care Programme, River Systems Revitalisation Programme) and partly also to carried out complex land consolidation schemes, at least a small portion of remedial measures were implemented. The question is, however, whether the system of landscape care can issue only from the governmental or EU subvention schemes in the future. Environmental policy in this area is supposed to be based mainly on the support of creating local financial resources. And these should be determined by the landscape plan.

A special position within the overall landscape care and maintenance is held by the monitoring of the landscape and of the indicators of qualitative changes in the landscape. Similar monitoring was not yet established in the state administration, but without its existence, the fulfilment of the European Landscape Convention (object quality of landscape) cannot be achieved. According to contemporary legislation, the duty of monitoring lies upon the state administration bodies (local and regional authorities, state bodies), but from a methodological perspective, the system is still incomplete.

Finally it can be stated that thanks to consistent and systematic care of a broad spectrum of experts, Czech Republic has a basic proposal for a landscape care system, which can represent suitable baseline information for the landscape policy pursued by the Czech government. It includes the proposal for the establishment of landscape planning as one of the tools of spatial planning used at the moment, and carrying out of its content. The Landscape Planning Standards are recently tested on pilot case studies.

Case study – Mikulov-Falkenstein Landscape Plan

The information on the contents of the landscape plan for the Mikulov region was presented at the CZ-IALE conference in 2006 (KUČERA, SALAŠOVÁ, ŠTĚPÁN ET AL. 2006). This document, carried out upon the order of the town of Mikulov and co-financed from the INTERREG IIIA programme, can be considered a pilot project, which aims to test the methodological potential of landscape plan preparation, and its implementation in the overall process of landscape management (together with the recently running complex land consolidation schemes, and the change of the local plan).

The subject area is situated on both sides of the Czech-Austrian border. It is an area exceptionally rich in natural and cultural values with unique renaissance and baroque designed landscape of a European importance. The security regime of the “iron curtain” caused dilapidation of some of the compositional features, but it also, rather paradoxically, contributed to the preservation of its basis (no larger investments were supported within the

area). The Mikulov landscape is nowadays a very attractive area for the development of residential housing, technical infrastructure, as well as various commercial activities. In the southern part of the territory, the interests clash between the preservation of good quality arable land, biodiversity protection, and the protection of harmonious cultural landscape character.

The aim of the landscape plan was the determination of quantitative and qualitative criteria for the use of the landscape, which shall issue mainly from the following:

- protection or reconstruction of the Mikulov-Falkenstein designed landscape and its landscape character
- protection of the natural values in the area (Natura 2000, designated nature protection areas, ecological networks and their parts, significant landscape features within the Lower Moravia biosphere reserve)
- protection and reconstruction of valuable natural resources: hydrological regime of the area and soil
- protection of public access to the landscape – paths and ways

From the methodological point of view, the working team issued from a meticulous analysis of the primary, secondary, and tertiary landscape structure. Typological study of cultural landscape was carried out, as well as landscape character assessment, and a detailed study of the development and recent state of the landscape composition. At the same time, the ecosystems and their condition were closely analysed, with the determination of risk factors in soil and water, as well as the capacity of the landscape for recreation. Upon the evaluation of *land use*, necessary changes and measures were proposed.

During the work on the landscape plan, the interests of nature protection were confronted as well as the complex land consolidation schemes, the creation of ecological networks, erosion control measures, compensation measures related to the planned motorway, and the need for the protection of landscape aesthetic qualities. A substantial part of the work was represented by the analysis of visual relations within the area, based on the evaluation of landscape dominants and over 700 views and vistas selected upon their historic context, value, and situation within the landscape. The result of all this is the proposal of a complex *land use* organisation, proposal for vegetation features design, measures aiming to reconstruct the landscape composition, and carrying out regulations for further management of the area. The data was produced using GIS. After the preliminary discussions about the landscape plan with the interested public, there shall be a possibility of incorporating the proposal in all the planning documents that will feature the subject area in the future.

VISUAL SENSITIVITY OF THE AREA

CURRENT SITUATION

The aesthetically positive objects in an area are not perceived separately but, if they are close together in the field of view, then as a cluster. The part of the field of view containing these objects is called a sector.

The sectors are rated according to the overall value of the views they include, where:

100 points.....every view 3–3 (for the explanation of view classes see map number 5)

10 points.....every view 2–3 (for the explanation of view classes see map number 5)

1 points.....every view 3–2 (for the explanation of view classes see map number 5)

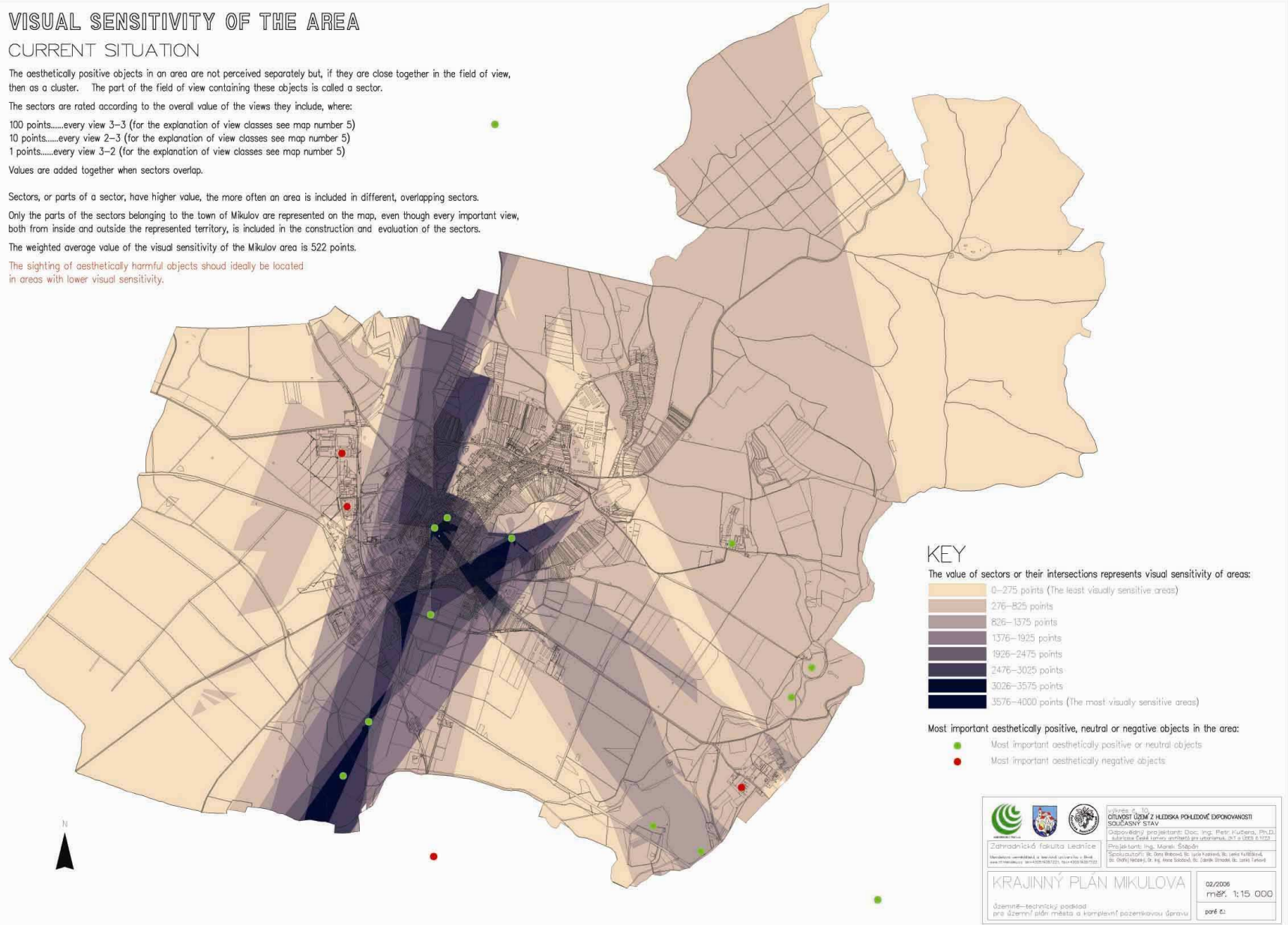
Values are added together when sectors overlap.

Sectors, or parts of a sector, have higher value, the more often an area is included in different, overlapping sectors.

Only the parts of the sectors belonging to the town of Mikulov are represented on the map, even though every important view, both from inside and outside the represented territory, is included in the construction and evolution of the sectors.

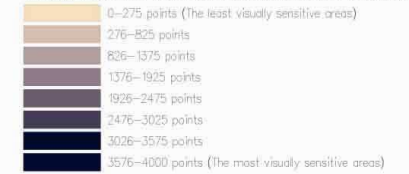
The weighted average value of the visual sensitivity of the Mikulov area is 522 points.

The sighting of aesthetically harmful objects should ideally be located in areas with lower visual sensitivity.



KEY

The value of sectors or their intersections represents visual sensitivity of areas:



Most important aesthetically positive, neutral or negative objects in the area:

- Most important aesthetically positive or neutral objects
- Most important aesthetically negative objects

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