

A relationship between the verdure system and land use planning of a small town

M. JEBAVÝ

Department of Horticulture and Landscape Architecture, Faculty of Agrobiological Sciences, Food and Natural Resources, Czech University of Life Sciences Prague, Prague, Czech Republic

ABSTRACT: Small towns are defined as towns with the population not exceeding 15,000 (20,000) residents. They are organisms that can be embraced visually, mostly with the clearly demarcated area. Residents know their small town very well, the majority of buildings and structures is constructed at a reasonable scale and architectonic dominants allow easy orientation. Verdure in a small town is either a separate functional space (park, landscaped area, forest, scattered green vegetation) or it is associated with another function (residential green spaces, green spaces of housing estates, line verdure, verdure of self-retained areas – sports grounds, cemeteries, schools, etc.). The verdure of a small town is formed to make up a system. It may be realised but its functionality may be diminished by barriers of different type. Verdure significantly contributes to the image of a small town and its particular spaces. From the recreation aspect it is important to create near and easily accessible green spaces that may be used for the short- or long-time recreation of residents and visitors; the good connection of the urban verdure system with suburban landscape is desirable. To accentuate the basic landscape values and to realise the potential of the verdure system of a small town it is advisable to use the system of land-use planning while the landscape plan becomes its integral part.

Keywords: small town; verdure system; functional and spatial structure; green spaces; urban area; landscape

Small towns are the towns with the population to 15,000 (20,000) residents. They are organisms with the clearly visually demarcated area. Residents know their small town well, the majority of buildings and structures is constructed at a reasonable scale and architectonic dominants allow easy orientation (JEBAVÝ 2001).

The internal structure of a small town comprises the basic urban spaces – squares, streets, embankments in towns lying on water-courses, buildings and facilities of government, cultural and business activities, educational system and services. These spaces have been complemented by ornamental verdure since the end of the 19th century (HORKÝ, VOREL 1994). The residents of the town are in everyday contacts with scenic verdure. Transport in a small town can be based on pedestrian and cycle traffic (MUŽÍK 1984). In the built-up area of a small town a residential area is dominant with verdure accompanying this area. To devise the verdure system of a small town the theories of small towns formulated in the past are very inspiring that were intended to be an ideal form of living combining the advantages of both the town and the countryside (HOWARD 1944). J. Gočár formulated his concept of an ideal town for

10,000 residents in 1937, in the USA W. Gropius presented the concept of a town with traffic based on pedestrian routes with walking distances of 10 to 15 min (HRŮZA, ZAJÍC 1995, 1996). E. Howard's theory of garden city from 1898 had the most significant influence on the creation of the verdure system of a small town. He proposed to create green girdles around the town and to build low detached and semi-detached houses in gardens (the town will be not only surrounded but also penetrated by verdure). Important is also his creation of residential districts with verdure, classification of roads and separation of pedestrian and car traffic (HOWARD 1944). The small town takes advantages of the rural scenic environment (MAREČEK 2005). The landscape character of each specific small town should be taken into account for its future development (VOREL 2000, 2001).

MATERIAL

Verdure system of a small town

The verdure system of a small town is a complex structured system that is a component of the small



Fig. 1. A historical view of the market square in Česká Kamenice



Fig. 2. A historical view of the town of Chlumec nad Cidlinou from its environs



Fig. 3. A historical view of the President Masaryk's Monument in Chlumec nad Cidlinou



Fig. 4. A historical view of the landscape park by the Castle in Chlumec nad Cidlinou

town organism and that performs some fundamental functions. Typical Czech small towns were selected for research purposes. The functional structure of the verdure system of selected towns was analysed and the regularities of the spatial structure of a system were presented (MAIER 1993). The analysis was represented graphically for the studied small towns using a common legend. Based on the valid land-use plans of the studied small towns the future planned disposition of new functional green spaces was also represented graphically. The verdure system was confronted with the historical situation illustrated in historical map and photographic documentation (Figs. 1–4) and with designs of green spaces in the valid land-use planning documentation.

Five small towns were selected for the analyses. The selected towns are different in their characteristics and are situated in various areas of Bohemia. These towns were analysed: Choceň, a small town in Eastern Bohemia on the Tichá Orlice River, the population of 10,000 residents; Chlumec nad Cidlinou in Eastern Bohemia, lying on the Cidlina River, 6,000 residents; Nové Město nad Metují in Eastern Bohemia, 10,000 residents; Slatiňany in Eastern

Bohemia, lying on the Chrudimka River in the close proximity of the town of Chrudim, 4,000 residents; Česká Kamenice in Northern Bohemia, situated on the Kamenice River between the Protected Landscape Areas Lužické hory and Labské pískovce, 6,000 residents.

To facilitate the mutual explicit comparison of verdure systems in the studied small towns a common legend was developed for the analysis of functional green spaces (Fig. 10). These spaces were taken into consideration: central parts of towns, gardens of detached houses, allotment plots, spaces around blocks of flats, sports grounds, cemeteries, self-contained green areas, green spaces of civic amenities, parks, recreation forests, scenic verdure, orchards, industrial and commercial areas and reserve lands (Figs. 5–9).

A theoretical scheme of the verdure system of a small town was drawn up showing that the most important existing and designed green spaces and areas of a small town should be incorporated into a system that will determine the significance of the particular green spaces and will influence the future sequence of reconstructions and new designs

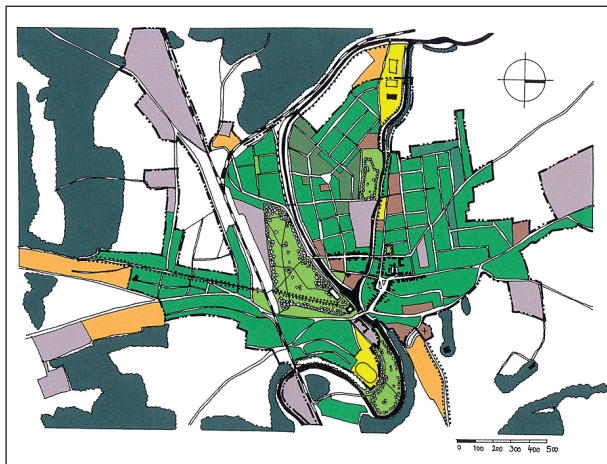


Fig. 5. Choceň – the analysis of functional green spaces

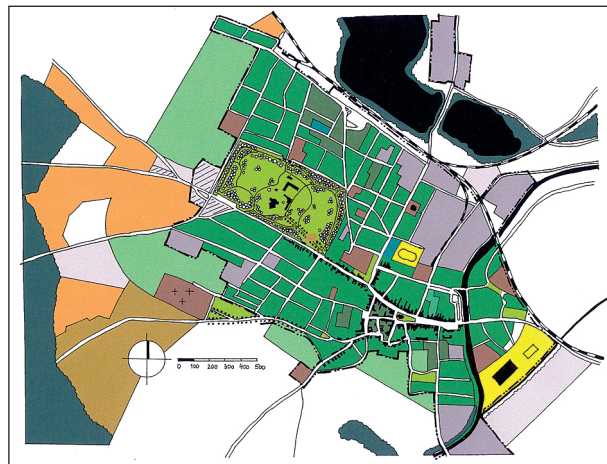


Fig. 6. Chlumec nad Cidlinou – the analysis of functional green spaces

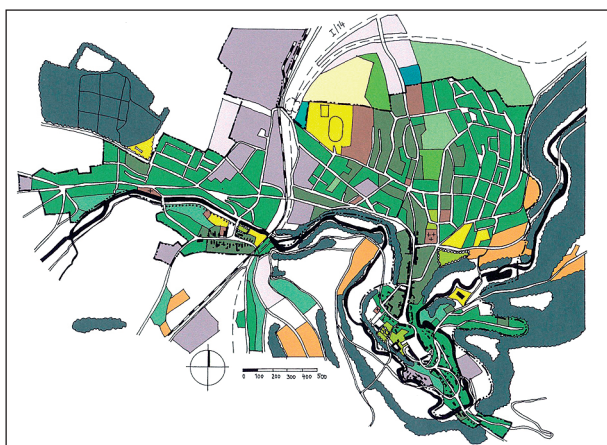


Fig. 7. Nové Město nad Metují – the analysis of functional green spaces

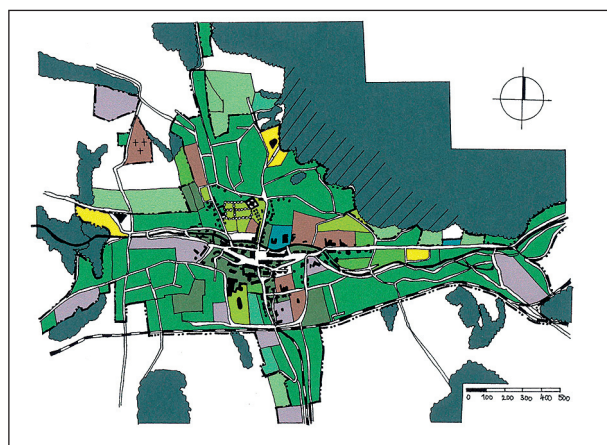


Fig. 8. Česká Kamenice – the analysis of functional green spaces

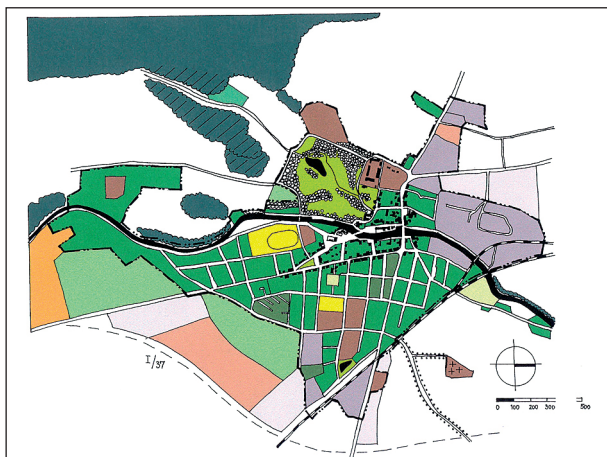


Fig. 9. Slatiňany – the analysis of functional green spaces

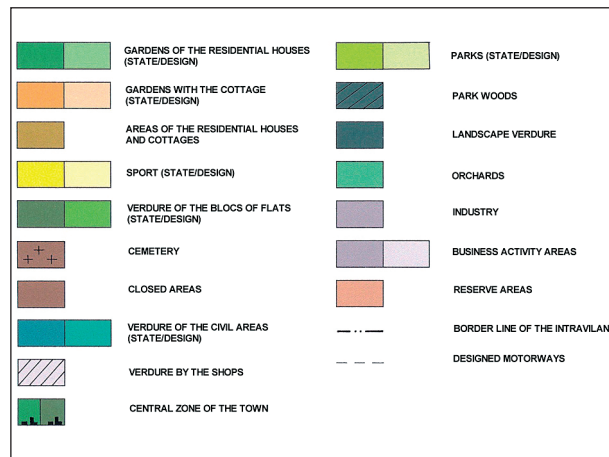


Fig. 10. Explanations

of these spaces (Fig. 11). After the most important pedestrian and cycle routes have been delineated, passing through the urban (built-up) area of a small town and after crossing its border leading to the adjacent country, these lines will become the skeleton of connecting elements in the verdure system.

It will result in the priority architectonic design of main places and routes of people's movement within the organism of a small town. It is shown how to exploit the potentials of verdure system in the framework of land-use planning of a small town (KOUČKÝ 2005).

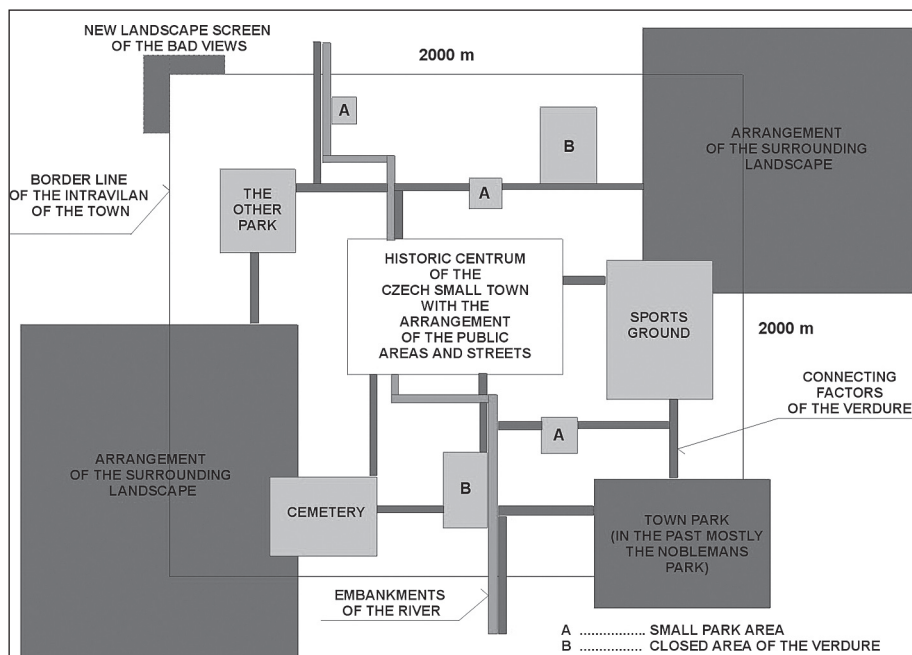


Fig. 11. Theoretical scheme of the verdure system of a small town

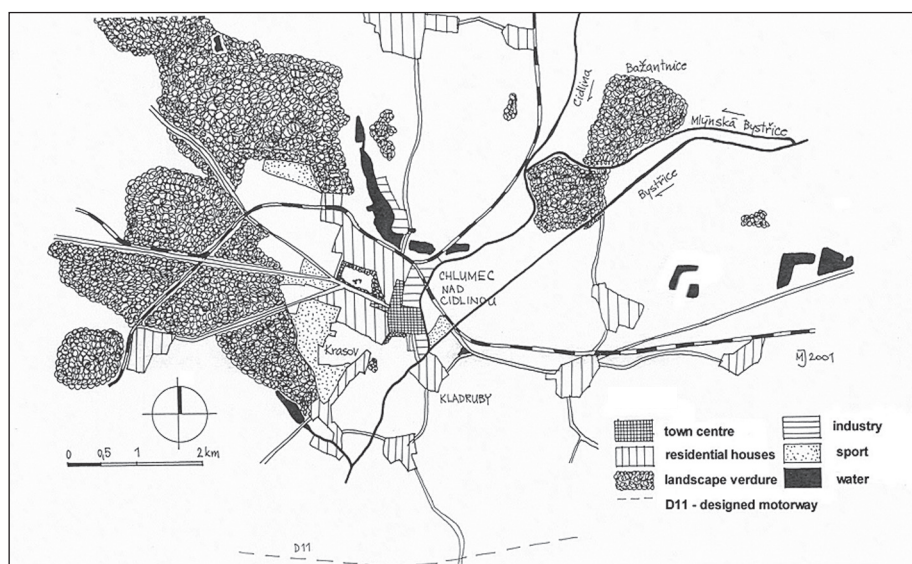


Fig. 12. Chlumec nad Cidlinou and the landscape of the town at present – the town is situated in flat landscape

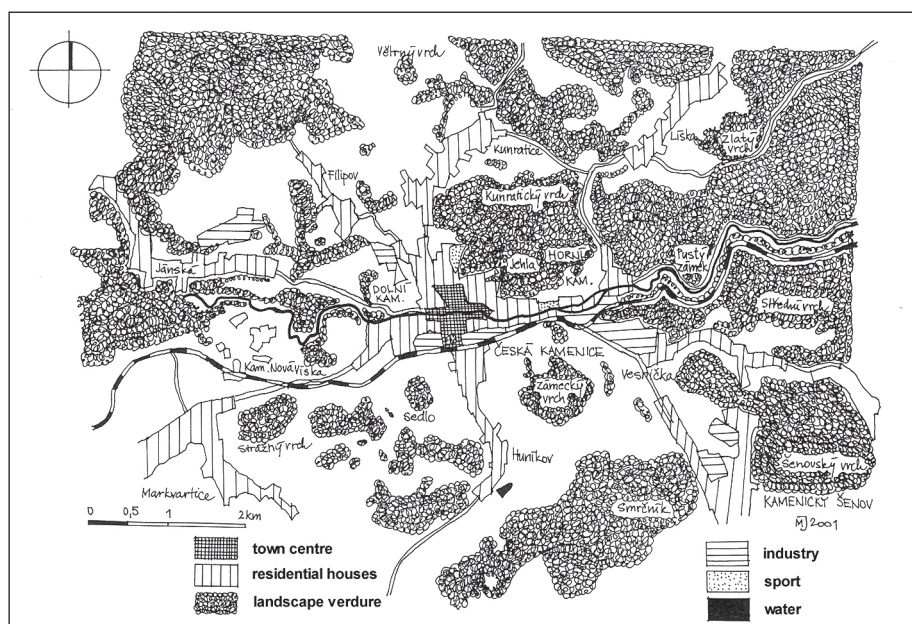


Fig. 13. Česká Kamenice and the landscape of the town at present – the town is situated in the mountain area

DISCUSSION

Verdure in a small town is either a separate functional space (park, landscaped area, forest, scattered vegetation) or it is associated with another function (residential green spaces, verdure of housing estates, line verdure, verdure of self-contained areas – sports grounds, cemeteries, schools, etc.). The verdure of a small town is formed to make up a system. This system may be realised but its functionality can be diminished by barriers of different type. Verdure participates in the image of a small town and of its particular spaces. From recreation aspects it is essential to build near and easily accessible green spaces that are used for the short- or long-time recreation of residents and visitors, and it is necessary to ensure the possible continuity between the urban verdure system and the suburban landscape. Similarly like other natural components (terrain configuration and water) verdure is a very important factor of the compositional structure of a small town. It plays its role not only by its external appearance in the visually perceived spatial relations but also by its town-planning structure thanks to the functions performed by the particular functional green spaces. Natural factors and civilisation factors acting in different historical epochs that influenced the development of a small town have had fundamental impacts on the organisation of green spaces in the studied small towns.

The verdure system of a small town should be organised from the aspect of functional green spaces. The planned routing of regional traffic – main roads and motorways – is drawn with regard to the walking and cycling accessibility of the area and potential future abandonment of some existing transit roads in favour of traffic-free architectonic designs of street parterres (Figs. 12 and 13).

The verdure system of a small town is considered as an open system in relation to the surrounding country. The verdure system penetrates the settlement to continue in the environs of a small town, being conceived both on the global and on the detailed level when designing the specific green space. Each small town has a specifically created verdure system in relation to the scenic environment in which it is situated. The verdure system of towns in flat landscapes is created differently from towns in mountain areas where the surrounding country takes over a major part of the recreational function of the system (Figs. 12 and 13).

CONCLUSION

Some generalisations can be made on the basis of the analyses (Fig. 11). The presence of functional

green spaces in the town structure is specific to small towns. Gardens of detached houses are the most important spaces, accounting for about a half of the total area of a small town (50.0%). Public parks, the most important green spaces in the main function, take up 7% of the area of small towns. In mountain and broken terrains it is rather difficult to create larger areas of parks in small towns; this is the reason why they have a higher number of small landscaped spaces and make use of the green vegetation of surrounding country to a great extent (Česká Kamenice). Towns in the flat landscape usually have one larger municipal park – many times originally established by aristocracy (Chlumec, Choceň and Slatiňany). The green vegetation of housing estates, self-contained areas, sports grounds and recreation areas significantly contributes to the total balance of small town verdure (Figs. 5–10).

Basic principles applicable to the verdure system of small towns are specified and differences of this system from the verdure system of a village or large city are identified. The verdure system of a small town is characterised mainly by these features:

- (a) connection with the surrounding country that satisfies many of the recreation needs of its residents,
- (b) residents' identification with the small town environment is very high,
- (c) larger green spaces are used by the whole small town and their use is not strictly hierarchised,
- (d) dominance of the original historical centre when viewing the town from its environs,
- (e) a system of pedestrian and cycle routes may lead through the whole town while they cross the border of the existing urban area and enter into the surrounding country framework of a small town (in the form of verdure connecting elements).

In the Czech Republic the verdure system has not been solved in a complex way in any of the studied small towns by a particular document (e.g. by a master project of the verdure system). It is advisable to solve the problem of the verdure system of a small town and its relationship to the surrounding country in the framework of land-use planning of a small town – in the land-use plan of a municipality and in the regulatory plan and in their part – landscape plan. In these documents it is possible to apply a highly specialised approach to the verdure system as well as an approach aimed at general needs of development of the small town organism. They will become obligatory after their approval, and the new construction of the town will

take place on the basis of these documents. They can protect the existing landscape values present both in the urban area of a small town and in its scenic environment. It is necessary to protect the existing values of the verdure system of a small town whereas its further development is crucial. The land-use plan of a municipality, worked out for small towns, should define the verdure system of the town and propose its connection with the adjacent scenic environment by means of a landscape plan. Besides the functional organisation the basic spatial structure of a small town and its main spaces and green areas will be considered in this plan. The regulatory plan, and the more detailed landscape plan elaborated with it, will define in greater detail the principles formulated in the land-use plan and will further specify the particular elements of the verdure system of a small town. The project documentation of the new design of a green space or verdure connecting element will implement and develop the principles formulated previously in the land-use plan of a municipality or in the particular regulatory plans.

Specific projects should conceive the creation of a verdure system from the aspect accepting the small town as an entity that is in direct contact with its natural environment and *genius loci* (NORBERG-SCHULZ 1994). It is to be aware of the uniqueness each small town is hiding in itself that should be realised and accentuated on the level of the small town entity while its relationships with the surrounding country are projected (Figs. 12 and 13), and when the specific design of a public or private space is proposed.

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Vztah systému zeleně a územního plánování malého města

ABSTRAKT: Malá města jsou charakterizována jako města, jejichž počet obyvatel nepřesahuje 15 000 (20 000) obyvatel. Jsou zároveň organismem vizuálně zvládnutelným, většinou s jasně vymezeným plošným rozsahem. Malé město je důvěrně známé jeho obyvatelům, zástavba města si ve své většině zachovává lidské měřítko, architektonické dominanty umožňují doposud snadnou orientaci. Zeleň na malém městě vystupuje jako samostatná funkční plocha (park, parkově upravená plocha, les, rozptýlená zeď) nebo se sdružuje s další funkcí (plochy pro bydlení, zeď sídlištní, liniová, zeď uzavřených areálů – sportovních areálů, hřbitovů, škol apod.). Zeleň malého města je formována do systému. Ten může být naplněn, jeho funkčnost ale může být snížena bariérami nejrůznějšího typu. Zeleň se významně podílí na tvorbě obrazu malého města i jeho jednotlivých prostorů. Z rekreačního hlediska je důležité vytvořit blízké a snadno dostupné plochy zeleně, které mohou sloužit ke krátkodobé nebo dlouhodobé rekreaci obyvatel a návštěvníků, je nutné zajistit vysoké propojení systému zeleně města s příměstskou krajinou. Pro

podchycení základních krajinných hodnot a naplnění potenciálu systému zeleně malého města je vhodné využívat systém územního plánování, jehož součástí se stane krajinný plán.

Klíčová slova: malé město; systém zeleně; funkční a prostorové členění; zeleň; intravilán; krajina

Corresponding author:

Ing. MATOUŠ JEBAVÝ, Ph.D., Česká zemědělská univerzita v Praze, Fakulta agrobiologie, potravinových a přírodních zdrojů, katedra zahradnictví a krajinářské architektury, 165 21 Praha 6-Suchbát, Česká republika
tel./ fax: + 420 241 725 615, e-mail: matous.jebavy@atlas.cz
