

THE LANDSCAPE MORPHOLOGY OF CLUJ-NAPOCA RESIDENTIAL NEIGHBOURHOODS

S.O. DEAC¹, I.A. IRIMUȘ², B.N. PĂCURAR³

ABSTRACT. - The Landscape Morphology of Cluj-Napoca Residential Neighbourhoods.

The study at hand set its sights on Cluj-Napoca urban territory, especially its built-up area established through the General Urban Plan. It analyses Cluj-Napoca housing areas, which comprise the city's residential neighbourhoods and presents their territorial position within the city, their main spatial characteristics, the main historical events from their evolution and their urbanistic organization pattern. Furthermore, it portrays the current situation of the neighbourhoods' landscape morphology and the opportunities for their rehabilitation and landscape reconstruction. The main goal of the paper is the morphological evaluation of Cluj-Napoca neighbourhood landscape as a component of the inhabitants' quality of life. A great emphasis was put on the way in which these great housing ensembles assumed, integrated and capitalized the natural potential of their area. In order to do so, we used data from cartographic and topographic sources, geological, geomorphological, historical data, information from the future General Urban Plan and from scientific literature. The results indicate that, with some exceptions, there is a poor landscape and urban comfort quality in Cluj-Napoca residential areas. The advantages offered by the natural framework were in most cases neglected and even annihilated. The new residential areas damaged the city by wasting the natural potential. From now on, the ability to plan these areas can only be summed up as management aspects.

Keywords: Cluj-Napoca, landscape, General Urban Plan, Grigorescu neighbourhood, Mănăstur neighbourhood, Gheorgheni neighbourhood.

1. INTRODUCTION

The emergence and development of the City of Cluj-Napoca is based on a Dacian settlement, Napoca (or Napuca), which kept and increased its economic and strategic role during Roman rule (starting with 220 AD, when it became a Roman "colonia" and was named Aurelia Napoca). Its subsequent development is tightly connected to the complexity of the physical-geographical conditions, and to the economic, political and cultural factors.

Its location, at the confluence of three main waterways, Someșu Mic River, Nadăș and Chinteni streams, the presence of the northern hills (Lombului, Sfântu Gheorghe), of the southern hills (Făget) and of the middle ridge of Hoia-Cetățuia Hill, with a northern and southern slope aspect, awards the city a morphological diversity, a quality which has been poorly capitalized so far.

¹ Cluj County Council, 400094, Cluj-Napoca, Romania, email: simomircea@yahoo.com

² Babeș-Bolyai University, Faculty of Geography, Cluj-Napoca, email: irimus@geografie.ubbcluj.ro

³ Cluj County Council, 400094, Cluj-Napoca, România, email: pacurarbogdan@ymail.com

The city's residential areas created before 1989 neighbour areas of collective and individual housing built in the last 10 years. The traditional housing areas of Cluj-Napoca emerged during the communist era in order to satisfy the increasing demand for housing during the industrialization period, and were located in places free of constructions, at the city's outskirts, on the relatively flat terrains of the meadows and terraces of Someșu Mic Valley. Thus the following neighbourhoods materialized, in chronological order: Grigorescu, Gheorghieni, Mănăștur, Mărăști, Aurel Vlaicu, and Zorilor (Mitrea V., Maxim Danciu I., 2009).

The new municipal housing areas appeared and expanded during the 2005-2010 economic boom, out of a need to change the housing lifestyle of the communist era. There was a need to abandon the city as a traditional housing area and replace it with its outskirts, situated in the surrounding natural areas of the city, or even further, in the adjacent periurban communes. This tendency was speculated by the nouveau riche, who built housing and then sold them without caring about the lack of any facilities, including access roads, electricity, gas, water and sewage, telecommunications or other specific endowments (green areas, retail and services). The investors did not even plan to develop these facilities. They exploited to the full the tracts of land that they owned by building housing units without any correlation with the neighbouring areas. Thus incoherent urban forms emerged, served by poorly established connections, and with a lifestyle on the limit between urban and rural.

The main aim of this research is the morphological evaluation of the landscape of Cluj-Napoca residential areas, which will be attained in the following manner:

- the presentation of Cluj-Napoca geological structure;
- the location and demarcation of residential areas within the city;
- the identification of the morphological main characteristics;
- the indication of major historical moments in their emergence and evolution;
- the presentation of the planning and landscape organisation;
- the identification of future perspectives.

2. MATERIAL AND METHODS

The urban landscape is defined by the city's features, models and structure, including in this case the biological component, the physical environment and the man made elements. In terms of its structure, the city is the result of a continuous stratification of major political projects and minor individual projects, that follow each other in time and overlap in space (Ioana Tudora, 2009). Ioana Tudora considers that the urban landscape "forms a stratified memory of all the social groups that used space over time" (Ioana Tudora, 2009).

In order to attain the objectives of the above mentioned research, we used the following methods and techniques:

- from the specialised bibliography (geological maps), we extracted information regarding the geological structure of Cluj-Napoca terrain and we described the geology of the studied area;

- in order to locate and demarcate Cluj-Napoca residential areas, we used the city street map, up to date satellite imagery, topographic maps, the fiscal delineation of the city's neighbourhoods and the general urban plan of Cluj-Napoca (the current plan and the one to be completed);
- the main characteristics of Cluj-Napoca residential areas were identified through field research and consulting the specialised references;
- the crucial historical moments in the evolution of each area were identified by consulting the documents of the time, scientific papers and photographic documents;
- the identification of the planning and landscape organisation was made by studying the general urban plan (the current plan and the one to be completed), the legislation and through field work.

3. RESULTS AND DISCUSSIONS

In the evaluation of the morphological landscape, the geological structure of the territory and the main landform types are crucial.

The bedrock of the City of Cluj-Napoca is made of the following types of deposits: Paleogene (Late Eocene, Oligocene) along the valleys of Someșu Mic, Nadăș and Căpuș and Neogene (Early and Middle Miocene), while the superficial deposits are mainly Quaternary (Pleistocene and Holocene) (C. Baci, S. Filipescu, 2002)

On Cluj-Napoca territory the following genetic landform types have been uncovered (Stoian, 2011):

- *the structural landforms* are represented by the structural surfaces dominated here and there by erosion inselbergs, the most representative being Cetățuia Hill. From a geotechnical point of view, these areas suitable for buildings, avoiding however the escarpment faces due to their susceptibility to gravitational processes;
- *the sculptural landforms* include two erosion levels and prequaternary erosion surfaces found on the northern slope of Feleacu Hill (situated at altitudes of 600 – 650 m and 450 – 550 m). The two surfaces are mainly shaped in the Sarmatian sands of Feleacu Hill and are affected by gully erosion, ravines, torrents, and superficial landslides. Taking into account their geological structure, composed of brittle deposits (Sarmatian sands, clays, marl), there is a slight geomorphological vulnerability. These processes currently affect built-up areas in Bună Ziua and Zorilor, as well as the new housing establishments in Făget;
- *the denudation landforms* include the morphology caused by the action of the semipermanent water flow on slopes, mainly on the northern slopes of Feleacu Hill;
- *the fluvial landforms* include the valley corridor and the terraces of Someșul Mic River.

As the natural context is subjected to a type of human activity, in our case, habitation, it leads to specific urban forms.

The delineation of functional areas within a city is the operation in which the city is divided into certain zones according to the dominant activity of each zone. The legal document through which this operation is enacted is the city's general urban plan, an extremely important strategic project, established for a period of utmost 10 years. The main activities within the city, which represent the main criterium for the

delineation of functional areas, are set in the legal framework that every general urban plan must abide by and can be classified as follows (Methodological Guide, MLPAT, 1999): industrial and storage activity, agricultural activities, housing, communication and transports, green and sport areas, communal management, edilitary works, services, special destination, other (agricultural land with the built up area, lands occupied by forests, waters, idle land).



Fig. 1. In the foreground – the land on which Grigorescu neighbourhood will later be built; in the background - Calvaria Church and the area currently occupied by Mănăștur neighbourhood. Date of photo unknown.
(Source: Sebastian Moga Collection, "Vechiul Cluj" Association)

We grouped the residential areas of Cluj-Napoca according to their location related to Someșul Mic River, the main axis in the city's historical and spatial evolution, a corridor along which most of the circulation is organized and the area through which the connection between the city's residential neighbourhoods is realized. Therefore, on the left banks of Someșul Mic (fig.1), one can find the older Grigorescu area, situated on the river floodplain, at the base of the Someșul Mic - Nadăș watershed, then Gruia, located on the eastern and northern slopes of the above mentioned watershed, and Dâmbu Rotund – Iris, located along the Nadăș corridor, on its left banks, in the lower sector of Lomb - Steluța Hill southern slope. New housing areas can be found in West Grigorescu – extensions of Eremia Grigorescu – Donath, Valea Seacă Street – Dâmbul Rotund, Lomb – Steluța areas, Oașului Street.

On the right banks of the river, as well as on the northern slope of Feleacu Hill, one can identify the following neighbourhoods (from west to east): Mănăștur - Plopilor, Zorilor, Andrei Mureșanu, Gheorghieni, Mărăști, Aurel Vlaicu, Someșeni (the last two situated on the lower terraces of Someșul Mic), with "expansions" towards Feleacu Hill, as new housing areas, much more extended than in the northern part of the city: Valea Gârbăului, South Câmpului, Făget, South Zorilor, Europa, Bună Ziua, Borhanci, Becaş, South Alexandru Vaida-Voevod and Sopor - Budunuș.

In the following pages, we will analyze the morphology of the landscape of these areas, emphasizing their location within the city, the main morphological characteristics, a short history of their development, their urbanistic and landscape organization and the plans for their future.

3.1. The neighbourhoods on the left banks of Someșul Mic

Grigorescu neighbourhood is situated in the western part of the city, along Donath, General Eremia Grigorescu, Alexandru Vlahuță, Fântânele and Octavian Goga streets. The general aspect of the morphology is given by the flat area situated on the first terrace (relative altitude of 2 – 6 m) of Someșul Mic. The natural environment offers conditions for a good habitation in this area. The extensions on the south facing slopes of Cetățuia – Hoia watershed are sporadic compared to the total area traditionally covered by the neighbourhood. The housing establishment is composed of individual houses built under difficult geotechnical conditions, on a steep escarpment face, with slopes exceeding 20° near Cetățuia – Hoia Hill, mostly unsuitable for constructions.

The neighbourhood was built during 1960-1962 (fig. 2) and represents the first attempt to create a functional residential area in Cluj-Napoca, being planned according to the standards of the time. It was structured into three complexes and suffered slight densifications. The current image of this neighbourhood has its roots in 1937, when the area was subjected to an urbanization project which created the main streets and a good built-up area (according to Mitrea V., Maxim-Danciu I., 2009).

The legend of the shepherd named Donath, who saved the city from the Turks, is also connected to the place now called “The Turk’s Cut”. This is also the origin of the old name of the area, Donath. In 1960, the name of Donath was replaced with that of Eremia Grigorescu. Today, the eastern sector of the neighbourhood is dominated by single family houses, while the western part by collective housing. Grigorescu is a beautiful residential area with houses as well as with blocks of flats, plenty of green areas, playgrounds for children and low levels of noise pollution. The banks of Someșul Mic River were converted in this area into green spaces and recreational areas.



Fig. 2. Grigorescu neighbourhood in the 1960's
(Source: Sebastian Moga Collection, "Vechiul Cluj" Association)

The architecture of many houses situated here is a reminiscent of the old city. For example, “Tătaru House” was built in 1921, by the Italian architect Gio Ponti, being one of the most expensive villas in the city. Close to Grigorescu neighbourhood one can find Hoia Forest, which hosts the open air section of the Transylvanian Museum of Ethnography. All these advantages, as well as its interesting history and beauty, make Grigorescu neighbourhood the perfect residential area.

Gruia neighbourhood lays east-northeast to the above mentioned neighbourhood, between Horea Street to the east, Hoia Forest to the west, and the railway to the north.

The morphology comprises the fifth (60-75 m) and the fourth (30-45 m) terraces and generally stable slopes between 2 and 5 degrees (sporadically) and mostly between 5 and 15 degrees, facing east and north. The area also contains sliding processes, some ravenes and gullies, and Pleistocene landslide waves. Housing is predominantly individual in nature, capitalizing the site which offers a beautiful view of the city. One disadvantage for the landscape of this area is the extension of "Dr. Constantin Rădulescu" football stadium, a site which leads to major functional shortcomings due to the lack of parking spaces and by blocking traffic during important venues.

Dâmbul Rotund-Iris neighbourhood is situated in the northwestern part of the city, between the railway to the south, Oașului Street – Chintău Valley to the east, and Popești Valley to the west. The morphological characteristics are the south facing slopes, between 2-5 degrees and 5 - 15 degrees, exceeding 15 degrees in some small areas. The slopes of Lomb Hill host fragments of the fourth (30 – 45 m), fifth (60 – 75 m), sixth (100 – 110 m) and seventh (125 – 140 m) terraces of Someșul Mic and Nadăș rivers, but the neighbourhood is situated on the fourth and fifth terraces. In this area, the tributaries of the two main valleys sank, creating secondary watersheds that end in structural precipices. The features of the isolated watersheds repeat the general physiognomy of the main watershed, leading to a specific aspect called *round hills* ("dâmburi rotunde" in Romanian) by the locals. These tributaries have short, gradual streams, with high slopes affected by landslides. Such phenomena pose a great threat to the constructions situated there (T. Morariu, I. Mac, 1969), alongside gravitational processes, some recent slides and creep (S. Poszet, 2011).

This is an area dominated by individual households. In the last few years, the neighbourhood heavily expanded northwards, the new constructions "attacking" the slopes of Lomb-Steluța Hill. One aspect that induces some dysfunctions is the fact that the new streets have been constructed along the slopes, transforming them into torrents during heavy rains, which flow into Maramureșului, Giordano Bruno, and Partizanilor streets, where the sewage system cannot cope with the flow of water.

There are almost no recreation and sports facilities or green areas, the habitation bordering the rural, with its characteristic way of life.

3.2. The neighbourhoods on the right banks of Someșul Mic

Mănăștur-Plopilor neighbourhood is situated between Someșul Mic to the north, Gârbăului Valley to the west, Mănăștur Forest to the south, the right slope of Popii Valley to the east. Its morphology is made of a floodplain area to the north and slopes facing northeast, hosting in their profiles fragments from all seven terraces of Someșul Mic River, the area being located on the first five terraces. Geomorphological processes are missing. The neighbourhood has a history that has coincided time and time again with Calvaria Church (fig. 3) and begins in the 11th century.

At that time, around the Benedictine church of Calvaria and the eponymous hill, the village of Mănăștur was established, inhabited by farmers that served the convent. The name of the hill and of the current area comes from the word monastery.

In 1895, the convent's village was integrated in Cluj, while in 1965 the houses were demolished to make room for a new residential area for the working class according to the plans of North Korean planners.

The actual construction began in 1971, but the neighbourhood continued to be "improved" and extended until 1989. From the start, it has been a residential area lacking in facilities and green areas, but had a record density of 466 inhabitants/ha (Mitrea V., Maxim Danciu I., 2009). Being heavily populated area, with a high construction density, it was connected to the eastern industrial area of the city through a tram line.



Fig. 3. Aerial view of Calvaria Church during the 1950s (Source: Sebastian Moga Collection, "Vechiul Cluj" Association)

After 1990, the area extended south, and developed a wide range of services and trade. Being a bedroom community that hosted a population of roughly 68000 people (Dana Vais, 2006), the neighbourhood is one of the largest in the country and the largest in the city. With the exception of Plopilor (which benefits from a sports park with restricted access), the neighbourhood has a deficit in green areas (only 5.31 sqm/inhabitant), public places for rest and recreation, playgrounds, and parking lots.

Situated between Govora, Gheorghe Dima, and Movile streets, Mănăştur cemetery is also inadequate from a landscape point of view, as it covers a large area and offers a distressing view. This area requires a massive aforestation in order to subdue its disturbing image.

The neighbourhood was the subject of an urban rehabilitation study, drawn up by the Planwerk company (E. Pănescu, 2011), which proposed the creation of a second predominantly pedestrian network of circulation. At the intersection of the two networks, several tracts of land were identified for the missing functions: markets, shops, recreation areas, parking lots. Moreover, a diagonal connection was proposed as a new green axis, which would also connect the neighbourhood with Făget forest.

Zorilor neighbourhood was in 1989 the residential area of Cluj-Napoca located at the highest altitude (465 m), above the temperature inversion layer that occurs in winter, which meant major benefits in terms of urban comfort. It has a beautiful feather shape, and the streets were designed in such a manner that they follow the terrain configuration. It is situated between Gheorghe Dima, George Bacovia, Eugen Ionesco, and Calea Turzii streets. The morphology is characterised by the presence of

terraces (the sixth - 100-110 m relative altitude) and by the existence of north facing slopes of 5 to 15 degrees. These slopes fully integrated in the built up area are temporary stabilized, covered by shallow deposits currently affected by creep. North Zorilor began its construction in 1979, while South Zorilor - Europa is still expanding, developing on the seventh terrace (125 - 140 m) and on the surrounding north facing slope. South Zorilor somewhat lacks green spaces and recreational areas, but North Zorilor has a neighbourhood focal point, a centre (the turnaround and the square situated at the end Pasteur street) and also rather extended green areas - "Alexandru Borza" Botanical Garden, the newly established "Iuliu Prodan" Park, parts of the main cemetery, etc.

The southern part of the neighbourhood went through a process of "urbanistic chaos". The access towards downtown is hampered by the terrain configuration and by the abrupt streets: Calea Turzii, Republicii, Pasteur and Păstorului streets. The Zorilor - Mănăştur road connection was planned to ensure a proper circulation speed even though the western slope of Popii Valley is extremely steep.

One of Cluj-Napoca best residential areas is *Andrei Mureşanu*, situated in the southern part of the city, between Constatin Brâncuşi, Fagului, Becaş, Calea Turzii streets, and the intersection between Observatorului Street and Calea Turzii. The morphology is characterised by the existence of a large fragment of the fourth terrace (30 - 45 m), measuring sometimes 800 m in width, without active geomorphological processes. The habitation is primarily individual, with villas and houses of great architectural value, with true examples of stylish living, and streets that ascend the slopes of Feleacu Hill. It is a genuine garden-city, created through a major mobilisation of the local authorities during the interwar period. The municipality acquired the entire tract of land, planned and replotted the area, drew the street layout, inserted all the necessary facilities and finally resold the plots, which were later built up. Some researchers consider absolutely necessary to declare the neighbourhood a protected area (E. Pănescu, 2009). South of here, climbing the steep middle sector of the northern slope of Feleacu Hill, one can find the residential area named *Bună Ziua*, currently under development, on both sides of the eponymous street, with a chaotic, incoherent structure.

Gheorghieni neighbourhood was built on lands occupied by semiurban houses with large plots of land, and orchards of vegetable gardens. It is currently located between Constantin Brâncuşi, Nicolae Titulescu streets, Slănic alley and Alexandru Vaida-Voevod street. The third (20 - 24 m) and fourth terraces (30 - 45) are present, connected by slopes. These lands are suitable for construction, with no



Fig. 4. Gheorghieni neighbourhood – immediately after construction (Source: Sebastian Moga Collection, "Vechiul Cluj" Association)

geomorphological processes and slopes below 2 degrees. Between 1964 – 1965, two microdistricts were built (I and II, considered by specialists as the best implemented urbanistic plans, according to a study of “Arhitectura” Magazine, 1979, in Pănescu, 2012, as we can see in fig. 4), followed in 1969 by two more - the third and the fourth-South Alverna microdistricts.

The principles that governed the plan were those of functionalist urbanism, the facilities being distributed equally and hierarchically, offering kindergartens, schools, markets, healthcare centres and polinuclei – Mercur, Diana, and Hermes. South of the neighbourhood, an extensive park was planned, established in 1970, but reduced as several collective housing units were finished in 1995. The eastern part of the neighbourhood is dominated by collective housing (blocks of flats), while the western part by individual housing along streets that radiate towards the middle sector of Feleacu Hill.

Mărăști neighbourhood was built in several stages between 1976 and 1996. It is situated in the eastern part of the city, between the railway to the north and Traian Moșoiu, Semenicolui, Coastei streets to the south, on the first and second terraces of Someșul Mic River, on a flat morphology where compaction phenomena occurred on a large scale. Its construction partially ignored the principles of urban comfort, mainly in terms of facilities and green spaces, focusing instead on the collective living quarters required at the time. Continuous fronts with first floors for services and retail predominate, with little recreation and parking spaces. The cohabitation of collective housing and single family houses led to a density of just 264 inhabitants/ha (V. Mitrea, 2009) and a total population of 53500 people (Dana Vais, 2006).

Mărăști was built due to the need of housing for the increasing number of workers of the Heavy Machinery factory. Also called the Lower Town, it used to be an area of houses, an extension of the city centre.

The inhabitants of old Mărăști served the centre, by providing fresh foods, as well as labor and several services. The current location of 1st May Square was the place of residence for many workers, while the area surrounding St. Peter Church and Dorobanților was where the farmers lived, the so-called “hostezeni” (fig. 5)

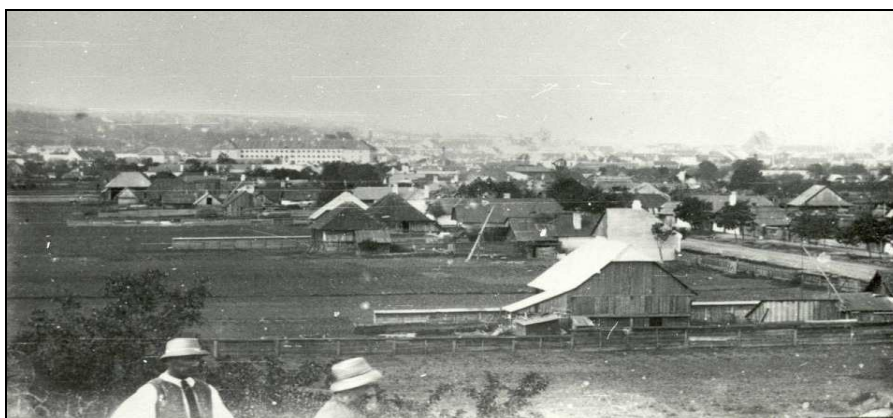


Fig. 5. Dorobanților Street (Source: Sebastian Moga Collection, "Vechiul Cluj" Association)

At the end of the 19th century and the beginning of the 20th century, *Hostat neighbourhood* was a residential area with a high degree of qualitative emancipation. That is why some specialists (L. Popa, 2011) consider the creation of the new neighbourhood “one of the most unfortunate urbanistic decisions of the last century”. Today, it is an area with a high degree of air pollution due to heavy traffic.

Aurel Vlaicu is the eastern extension of Mărăşti neighbourhood, covering the top part of the second terrace, intensively modified by human intervention, and a part of the floodplain terrace. The connection slopes between the two terraces are steep and contain green areas (Expo Transilvania) or are part of the new constructions (“Octavian Goga” County Library – Nokia Building area). It is composed of two ensembles divided by Aurel Vlaicu street, continued by Traian Vuia Avenue. In 1992, it had a density of 250 inhabitants/ha (Mitrea V., 2009). It was built as a new residential area of the city without taking into consideration the functionalist principles of the 1960s.

The area contains a string of small lakes created by the mass compaction of river deposits found in the floodplain of Someşul Mic River, with intercalated green areas that are affected by constructions from all directions. Any future improvement project is doomed to fail due to the lack of space as the buildings push till the edge of the lakes. The area is a lost opportunity to establish new green areas within the city. There were several amazing projects for a neighbourhood garden in the southern part of the area (on the current location of ACE factory) and also for Între Lacuri garden, but they never came to fruition.

Moreover, there is no neighbourhood centre, this function being poorly provided by Iulius Mall. The lands of this area, that were occupied before 1989, did not come into the attention of investors after the threshold moments of 1989-1990, with the single exception of Teodor Mihali street.

Heavy vehicle traffic and especially the low flying airplanes raise the noise pollution levels to record highs. The area is situated close to Cluj-Napoca International Airport, which is currently building a 3500 m runway, meaning that noise levels will continue to rise.

Someşeni neighbourhood (fig. 6) is the product of including the village with same name in the city perimeter.



Fig. 6. Someşeni, Someşfalău, Szamosfalva, Mikelsdorf. The settlement was first attested in 1280. The German name of the settlement (mentioned on the map of Johannes Honterus) comes from the name of Mikola family. Until the 20th century, it neighbored the city of Cluj-Napoca.

In the background, St. Elisabeth Roman-Catholic Church (16th century) (Source: Sebastian Moga Collection, "Vechiul Cluj" Association)

It is located on a fragment from the top of the second terrace and on the Someșul Mic River floodplain, where some 10 m thick fillings cause the instability of building foundations due to compaction. The area still keeps its rural characteristics, dominated by individual housing, with gardens and even animal shelters.

3.3. The new residential areas are former agricultural lands, which were not included in the city's development policies in terms of street network and infrastructure. In terms of terrain configuration, these lands are quite difficult to build on, having steep slopes, numerous geomorphological processes, and challenging foundation requirements. Such lands have been the object of poor notary procedures which led to the emergence of "an ad-hoc urban fabric (fig. 7) and an amalgamation of weird, heterogenous, conflictual urban forms, each resulting architectural complex ... lacking any assembly, association and urbanistic adaptation relation with the surroundings, with the area or with the city" (L. Popa, 2011).



Fig. 7. Habitation unit on Câmpului Street (left) and apartment buildings in Făget Forest (right) (<http://ziuadecj.realitatea.net>, accessed on 24.04.2013)

The legislation allowed for deviant urban plans (ZUP-DUP) to legalise this type of constructions. The terrain landscape valences are forests or agricultural land set for recreation or agriculture and comprise Cluj-Napoca green belt (Popa L., 2011), along waterways, tributaries of Someșul Mic, with beautiful views of the city and its surrounding areas. These advantages were annihilated by the shrill nature of the isolated constructions, with exaggerated height levels or by the rows of houses that are not integrated into a coherent urban body.

4. CONCLUSIONS

The large collective residential areas are considered (Dana Vais, 2006) the most visible heritage of the communist era. They are and will be for a very long time an essential part of the urban landscape, a defining framework of urban culture. Due to the fact that currently they constitute private property, the landscape rehabilitation processes, as a part of the larger rehabilitation policies, will have to wait, as these plans are impossible to be put into effect right now. Therefore, the future of these neighbourhoods is difficult to foresee, from all points of view, not only from a landscape perspective.

Regarding the new residential areas, they will undergo a massive urbanisation process stipulated in the upcoming General Urban Plan (GUP Cluj-Napoca, 2009). These planning endeavours are, in our view, significant urban and landscape rehabilitation actions that must be immediately implemented in Cluj-Napoca, thus insuring a proper planning direction for this city.

REFERENCES

1. Baciu, C., Filipescu S. (2002), "Structura Geologică" în Cristea, V.; Baciu, C.; Gafta, D. "Municipiul Cluj Napoca și zona periurbană. Studii ambientale". Edit. Accent, Cluj Napoca, p. 25 – 36.
2. Irimuș, I.A., Petrea, D., Rusu, I., Corpade, A., (2010), *Vulnerabilitatea spațiului clujean la procesele geomorfologice contemporane*. Studia UBB Geographia, Cluj-Napoca.
3. Mitrea, V, Maxim Danciu I., (2009) *Cluj-Napoca, un oraș în mișcare*, Tribuna, Cluj-Napoca.
4. Morariu T., Pascu Șt. (1957), *Considerații geografico-istorice asupra etapelor de dezvoltare a orașului Cluj*, in Studia UBB Geographia, Cluj-Napoca.
5. Morariu. T., Mac, I., (1969) *Regionarea geomorfologică a teritoriului orașului Cluj Napoca și împrejurimilor*, Studia UBB Geographia, Cluj-Napoca.
6. Pănescu E. (2009), „Urbanismul clujean, lipsuri și realizări” în „Cluj-Napoca în proiecte, 50 de ani 1960 – 2010”(2012), coordonator Virgil Pănescu, album publicat sub egida Uniunii Arhitecților din România, pag 595.
7. Pănescu, V. - coordonator (2012), *Cluj-Napoca în proiecte, 50 de ani 1960 – 2010*, album, Uniunea Arhitecților din România.
8. Popa L. (2011), „Clujul sub vremuri de febrilitate imobiliară” în „Cluj-Napoca în proiecte, 50 de ani 1960 – 2010” (2012), coordonator Virgil Pănescu, album publicat sub egida Uniunii Arhitecților din România, pag. 427.
9. Poszet, S.L., (2011). *Studiu de geomorfologie aplicată în zona urbană Cluj-Napoca*, Teză de doctorat. Facultatea de Geografie, UBB, Cluj-Napoca.
10. Stoian L. C., (2011), „Impactul antropic asupra calității mediului în municipiul Cluj-Napoca”, Teză de doctorat, Universitatea Babeș – Bolyai, Cluj-Napoca, Facultatea de Geografie.
11. Tudora, Ioana (2009), *Teoria peisajului. Definierea interdisciplinară a peisajului*, USAMV București.
12. Vais Dana (2006), „Spatiul urban in post- socialism: Cluj” în „Cluj-Napoca în proiecte, 50 de ani 1960 – 2010”(2012), coordonator Virgil Pănescu, album publicat sub egida Uniunii Arhitecților din România, pag. 422.
13. ****Plan Urbanistic General al Municipiului Cluj-Napoca, Memoriu General* (2009), proiectant general Universitatea Tehnică Cluj-Napoca, vol. Memoriu General, pag.109.
14. ****Actualizare Plan Urbanistic General Cluj-Napoca, Studiu de fundamentare pentru protecția mediului, capitolul "Geografie, morfologie, hidrologie, climatologie, studii regionale"* (2009), elaborator Universitatea Babeș – Bolyai Cluj-Napoca, director de contract prof. univ. dr. Vasile Surd.
15. ***Ghidul privind metodologia de elaborare și conținutul – cadru al planului urbanistic general, reglementare tehnică, indicativ GP038/99 aprobat prin Ordinul MLPAT nr. 13 N/1999.
16. *** Colecția de fotografii Sebastian Moga, Asociația *Vechiul Cluj*, Cluj-Napoca