

Vranduk on the Bosna River

Ahmet Hadrovic

Faculty of Architecture, University of Sarajevo, Sarajevo, Bosnia and Herzegovina

Email address: hadrovic.ahmet@gmail.com, ahmet.hadrovic@af.unsa.ba

Abstract— Vranduk is a historical place located in the canyon of the Bosna river, about 10 km from Zenica and about 85 km northwest of Sarajevo (Geographical coordinates: 44°17'30.68"N, 17°54'15.31"E, elevation: 322). The place is located on the main traffic 'backbone' of Bosnia and Herzegovina, next to the current road M17 and the future headquarters of the Bosnia and Herzegovina highway 5C. Vranduk is mentioned for the first time (March 11, 1410) in a letter from the people of Dubrovnik to the Hungarian king Sigismund, where they complain about the actions of his army (commanded by Pavle Besenji) towards their merchants. The Bosnian king Tvrtko II Tvrtkovic (reigned 1404–1409 and 1420–1443) stayed in the suburb of Vranduk (Varosiste) on two occasions (1430). In Vranduk (1449), the Bosnian king Stjepan Tomas (1411-1461) formed a trading company for silver trading with Nikola Testa from Trogir. The Ottomans occupied Vranduk (1463) when it was developing into a kasaba. During the penetration of the Austrian army towards Sarajevo (1697) led by Eugene of Savoy, Vranduk was an impassable obstacle that diverted the direction of the penetration of Savoy bypass roads towards Sarajevo. As a strategic place, Vranduk has been well historically researched. The aim of this work is to show the 'continuity of life in Vranduk' with an emphasis on the present day and its perspectives. In this sense, it is a good basis for a study on sustainable living.

Keywords— Bosnia, Vranduk, Sustainability

I. INTRODUCTION

There are over 300 medieval fortress towns in Bosnia and Herzegovina. Most of them are ruins, and only a few of them today serve as places for occasionally organizing artistic performances (summer days)¹. Some of these cities have been 'preserved', and visitors can visit them as part of 'tourist tours'. The author visited more than twenty fortress cities in order to get to know them and compare them with similar fortress cities² in the world^[1]. These fortress-cities were the subject of his research on other topics ('water and man', 'architecture carved into rocks, for example). The author visited Vranduk several times, for different reasons, in order to focus on 'revealing the details' on different topics (Figure 1).

¹ Among the cities-fortresses visited by the Author are: Visoki (Visoko), Bobovac, Srebrenik, Stjepan-town above Vrelo Buna, Jajce, Doboje, Maglaj, Tesanj, Kljuc, Banjaluka, Buzim, Ostrozac (near Cazin), Havalala (Kulen Vakuf), Ljubuski, Vrnograc...

² These cities are represented in the books:

- Hadrovic, A. (2018). Architecture in the travelogues of an architect. Book 1: The Balkans, Faculty of Architecture, University of Sarajevo (in Bosnian)
- Hadrovic, A. (2018). Architecture in the travelogues of an architect. Book 2: Mediterranean, Faculty of Architecture, University of Sarajevo (in Bosnian)
- Hadrovic, A. (2018). Architecture in the travelogues of an architect. Book 3: Asia, Faculty of Architecture, University of Sarajevo (in Bosnian)

In this paper, the Author deals with the 'continuity of life in the old town of Vranduk'. Following the author's theory on Architecturally Defined Space^[1], the Author tried to answer several questions: 1. What inputs influenced the formation of the city-fort in this place? 2. What kind of history did this fortress-city survive? 3. How and from what do today's inhabitants of Vranduk live? 4. What is the relationship between the people - today's residents of Vranduk and the fortress-city? 5. What are the perspectives of Vranduk in terms of the issue of sustainable living?



Figure 1. The Vranduk old town

Source:

https://visitmycountry.net/bosnia_herzegovina/bh/index.php/turizam/27-vmc/geografija, Accessed: 7.25.2022., left
Google Earth: Accessed: 7.25.2022, right

II. ENVIRONMENT

By 'environment' we mean every possibility in the space in which man can realize his existence^[2].

1.1. Natural environment

By natural environment, we mean all those features that nature gave, and on which man (mostly) did not exert his influence: geographical location, geomorphology, watercourses and reservoirs, plant and animal life, available soil, climate [2] ... Vranduk is a settlement that, apart from its former military-strategic significance, has its own natural resources, above all water (Bosna river and many natural springs), fertile plains (in the suburbs, along the banks of the Bosna river), hills suitable for fruit growing and pastures suitable for cattle breeding and the forest.

Traffic access to Vranduk is 'complicated'. In the approach to Vranduk via the M17, the punik sees Vranduk on the hill, 'within reach', but the road continues through the tunnel below the settlement. And when the driver, after exiting the tunnel, expects a fork in the road to Vranduk, he will not have such an option. For this reason, many potential guests pass by and do not visit Vranduk. Namely, the access road to Vranduk separates from the M17 highway (and only from the direction of Sarajevo) at the entrance to the tunnel, leads along the right bank of the Bosna river, when, after about 1.5 km, it crosses the bridge to the left bank of the Bosna river and returns 'upstream to Vranduk'. Vranduk is connected to the town of Zenica by a road that leads along the left bank of the Bosna river (Figures 2, 3).

Today, the Vranduk residents produce 'healthy food', vegetables, fruit and dairy products. The proximity of Zenica and its industrial potential have oriented the Vranduk residents towards employment in the industrial plants of Zenica, but in combination with farming in the settlement itself. Inside the walls of the medieval Vranduk, there is still a brick cistern (čatrnja) for water, while in the modern settlement, several taps have been built (Figure 4).



Figure 2. Vranduk

Source: Author (7.24.2011.)



Figure 3. View of Vranduk from the right bank of the Bosna river (from the 'suburb'), left, and view from the old town-fortress on the right bank of the Bosna river ('suburb'), right

Source: Author (7.24.2011.)

Some fountains are modest, typical public village fountains made to be, above all, expedient. On one of these

taps, an inscription was recently 'added' (probably under the influence of new taps with inscriptions that want to convey a message).



Figure 4. Public fountains in today's Vranduk (within the historical core and in the 'suburb' - on the right bank of the Bosna river)

Source: Author (7.24.2011. and 2.29.2016.)

At the very foot of the tower of the Vranduk old town, with access from the main street, perfectly integrated into the natural rock, there is a memorial fountain to the fallen fighters (martyrs) of Vranduk in the 1992-1995 war. Some traditional elements can be seen in the design of the fountain: the use of a triptych (what medieval windows or altars looked like), a massive stone trough (reminiscent of a stecak) and a bench made of solid wood with rustic processing (Figure 4). An inscription [3] is carved into the stone slab of the fountain:

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
 وَلَا تَقُولُوا لِمَنْ يُقْتَلُ فِي سَبِيلِ اللَّهِ أَمْواتٌ وَلَكِنْ لَا تَشْعُرُونَ
 AND DON'T SAY ABOUT THOSE WHO ARE ON
 PERISHED IN THE WAY OF ALLAH
 "THEY ARE DEAD". NO, THEY ARE ALIVE
 BUT YOU DON'T FEEL IT (QUR'AN 2:154)
 MARTYR'S FOUNTAIN OF VRANDUKA

1.2. Social environment

By 'Social environment' we mean everything that man has created and that separates him from the world of other living beings [2]. It includes both physical structures (various material, more or less ordered products of their activity) and the immaterial world that we know with the intellect (science,

philosophy, religion, law, morality) through an ordered system of abstract symbols (letters, signs) [2].

Due to its proximity and administrative affiliation, Vranduk has always had a close relationship with the city of Zenica. Although agriculture (ecological food production) is one of the basic occupations of today's Vranduk residents, the largest number of able-bodied people work in Zenica (mining and metal industry, wood industry, textiles and leather processing). There is a large number of pensioners who earned their pensions in Zenica.

History of Vranduk. An important medieval city-fort in the valley of the Bosna river, situated north of Zenica, today it is a village where, in a rarely seen symbiosis, contemporary residents live in an environment of relatively well-preserved cultural and historical heritage.

Vranduk is a village (with 447 inhabitants) located on a hill above the left bank of the Bosna river at a distance of about 85 km from Sarajevo and 10 km from Zenica (Geographical coordinates: 44°17'30.68"N, 17°54'15.31"E, elevation: 322). A tunnel passes under the settlement (on the M17 road: Sarajevo-Zenica-Doboj). The Bosna river Valley is the 'historical spine' where the first states were formed - the core of modern Bosnia and Herzegovina. Since it is located in the narrow valley of the Bosna river, on the main traffic backbone of Bosnia and Herzegovina that follows the course of the Bosna river, Vranduk was created as a fortress-city of exceptional strategic importance.

Archaeological research so far has not found any traces of fortifications from prehistory or antiquity at the site of the fort [4]. When it was conquered by the Illyrians at the beginning of the 1st century, a road ad Bathinum flumen was built from Salona between the 14th and 20th years, a part of which went through the valley of Bosnia from Zenica to Zepce. This was a military road, 'via munitia'. Downstream from Zenica, no remains of a Roman road have been identified.

Vranduk was mentioned for the first time (March 11, 1410) in a letter from the Dubrovnik government to the Hungarian king Sigismund (1368-1437). The letter shows that the Croatian-Slavonian ban Pavle Bösseny, the commander of the Hungarian army that penetrated into central Bosnia via the Bosna river valley in the fight against King Stjepan Ostoja (1378-1418), was in Vranduk (in March 1410) as a castellan with crewed by mercenaries of the Hungarian army. At the beginning of that same year, the Hungarians conquered Vranduk and handed it over to the Bosnian king Stjepan Ostoja [5]. Since Vranduk was not of immediate interest to Dubrovnik merchants and businessmen, Dubrovnik administrative documents do not record major economic activity. The Bosnian king Tvrtko II Tvrtkovic (reigned 1404–1409 and 1420–1443) stayed in the suburb of Vranduk (Varosiste, Podvranduk) on two occasions (1430).

As a royal fortress, Vranduk was the main target in the campaigns of the Hungarian army against the Bosnian state.

In Vranduk (1449), the Bosnian king Stjepan Tomas (1411-1461) entered into a trading company for the sale of silver with Nikola Testa, a merchant from Trogir. King Stjepan Tomas (1411-1461) built here (1447) the Church of St. Tom. In the suburb of Vranduk there was a Franciscan

monastery (1449). The Ottomans conquered (1463) Vranduk when it developed according to the scheme of oriental-Ottoman urbanism and became a kasaba. During the penetration (1697) of the Austrian army led by Eugene of Savoy (1663-1736) towards Sarajevo, Vranduk was an impassable obstacle that diverted the direction of the penetration of Savoy via bypass roads towards Sarajevo. In the period (1715-1773), Vranduk was the seat of the Vranduk Captaincy with primarily military significance. During the Austro-Hungarian occupation (1878) of Bosnia and Herzegovina, Vranduk, due to new war techniques, was not an obstacle to the penetration of the Austro-Hungarian army. Since then, Vranduk has lost its military-strategic significance.

The architectural, cultural and historical heritage of Vranduk is related to its military and strategic significance. Vranduk is one of the most beautiful medieval towns in Bosnia. It was a very important city-fortress that controlled the route along the Bosna river valley, from the Pannonian plain to the Adriatic bridge. Given that the Bosna valley is narrowest here, he was able to perform his role very effectively. It was mentioned for the first time in 1410. It was a royal city (owned by King Ostoja). King Tomas appointed his brother Radivoje as prince here. The Ottomans captured it in 1463 and it was their military station until 1887 [6].

Mosque of Sultan Mehmed II Fatih-El Fatih. The mosque was built immediately after the Ottoman conquest of Bosnia and Herzegovina (1463-1481). This mosque is first mentioned in written sources in 1472. During its history, the mosque was repaired several times (Figure 5). The mosque is in good construction condition. Due to numerous interventions, especially in the interior, the mosque has lost a large part of its authenticity. This especially applies to the inappropriate use of wooden paneling, which is attached to almost all surfaces - ceilings, floor beams, stairs, and even walls up to a height of 80 cm - and outside, where the slope of the roof is greater. altered and unsuitable material used as lining. The mosque has a rectangular base, dimensions 13.64 x 7.28 m, and consists of a ground floor and an upper floor. The interior of the central prayer space measures 14.10 x 6.54 m. The mosque is oriented north-south, not southeast/northwest, which is the Islamic law (following the isohyps of the terrain and to facilitate placement on the terrain). Since it was built on a very steep place, the eastern wall, facing the Bosna River, is extremely high. One of the characteristics of this mosque is its two entrances - one on the north side and the other on the west side.



Figure 5. Sultan Mehmed II El Fatih Mosque

Source: Author (7.24.2011.)

Source: <https://www.mojdzemat.com/foto-dzemat-vranduk-vranducka-dzamija-dzamija-sultan-mehmeda-ii-el-fatiha/>, Accessed: 7.25.2022.

III. MAN

Space acquires meaning only if it stands in some relation to man. This relationship ranges from the relations of the already known dimensions of space, through those that can be sensed, to those that are currently beyond the reach of human imagination. In other words, man is a being on the way, a being who continuously learns, a being of open possibilities. The term 'man' is a huge question, the essence of which he himself is trying to decipher within his limits, within the limits of the Earth and the limits of the Universe [2]. Together with the rest of the living world, it participates in the process of circulation of matter and energy in nature, sharing the same fate with it, being born and dying against its will. Endowed with reason, will and feelings, he is the only one in the living world who can discover the given laws of the organization of nature.

In several visits to the old fortress-city of Vranduk, the Author paid special attention to its inhabitants and inquired about their connection with the fortress-city. They do not benefit materially from the fortress-city (only one person, the museum curator, is employed there), but they perceive the city as part of 'their own being', 'as their distant ancestor' and 'as part of their future generations'. The 'embodied energy' of the city-fortress is their heritage which 'gives them faith in the continuity of life'. The Vranduk inhabitants follow religion (Islam) and manifest it in their daily life (Figures 6-10). They visit the El Fatih Mosque for five daily prayers, they socialize every day, and while talking about their daily work, they inform each other of their plans to perform the Hajj, for example³.



Figure 6. The main square of the Vranduk settlement (next to the walls of the old town-fortress)

Source: Author (7.24.2011.)



Figure 7. Commemoration of 'Martyrs' Day' in Vranduk (May 3, 2022)

Source: <https://www.zenicablog.com/foto-obiljezen-dan-sehida-u-dzematu-vranduk/obiljezen-dan-sehida-u-dzematu-vranduk-11/>

³ During one of the visits to Vranduk, a gathered group of people introduced the Author to a man who is preparing to perform the Hajj for the third time. When asked by the Author why he does this, since it is an Islamic obligation (if a believer is able) to do it once, the man said that it is his greatest pleasure and gives meaning to his life. The author was especially pleasantly surprised when one of the hosts 'invited him to lunch, or at least to coffee'.

Accessed: 7.25.2022.



Figure 8. Holding the Evening of the Qur'an in the old town-fortress Vranduk
Source: <https://muftijstvo.ba/foto-odrzana-vecer-kurana-u-vranduku/>,
Accessed: 7.25.2022.



Figure 9. Night of Rock'N'Roll in the old town-fortress in Vranduk (July 28, 2018)

Source: <http://zenicasummerfest.org/2018/07/28/foto-odrzana-9-noc-rocknrolla-na-tvrđavi-vranduk/>, Accessed: 7.25.2022.



Figure 10. 'Night of Sevdah' in the old town-fort Vranduk

Source:

http://2.bp.blogspot.com/_vi9X3pVVD-g/SISOk2hcmnI/AAAAAAAAATkw/qF2OKi4t0r8/s1600-h/vransev2.jpg
<https://www.zenicablog.com/odrzana-festival-sevdaha-vranduk-2017-pobjednica-emina-sinanovic-iz-vranduka/>
Accessed: 7.25.2022.

IV. BOUNDARIES: ARCHITECTURE AS A FRAMEWORK OF LIFE

Boundaries are those places in the environment where the situations encountered are controlled according to very specific human needs. Conditions are all those discovered and undiscovered phenomena in space that have a stimulating or degrading effect on humans. Boundaries, therefore, have the task of enabling the selection of influences. In the architectural sense, they enclose, but also include a person in the conditions of a certain environment [2]. The physical structure of the Vranduk old town-fort was largely defined by the geomorphology of the location (Figure 2). The fortress was built on a natural and artificially leveled rocky stone plateau, and the fortress walls were built on its slopes. It rises above the Bosna river valley by about 25 m (Figure 11).

The fort has its longer axis facing northwest. The main elements of the fort are: the ramparts and the main entrance, the corral with the cistern, the main towers or forts, the guardhouse (built on the tower) and small towers. The city is entered by a series of stairs through a passage in the northeastern part of the ramparts of the enclosure. Outside the

entrance gate is a paved plateau to which stone steps lead. The main tower is located at the highest point of the town-fortress, north of the enclosure. It was built on a rock base, the layers of which descend from north to south. The floor plan of the tower is approximately square, the outer sides are 9.25 m long, and the inner sides are about 5.85 x 5.80 m. The tower is built of pieces of crushed stone with a binding of lime plaster. The walls differ in thickness: the north-west and north-east are the thickest, for strategic reasons, in places from 1.95 m to 2220 m. The upper part of the tower differs from the lower, with the thickest walls facing the pen towards the north-west and south-east, while the north-east and north-west, where openings were left, somewhat thinner, ranging from 1.10 m to 1.20 m thick. The entrance to the tower is in the southwest wall. Here, the wall is 1.53 m thick. The gate is 80 cm wide and about 2.20 m away from the southern corner of the tower. The fortress probably had three floors, the lowest of which was used for storage, and the upper two for housing the garrison and for combat purposes.

hard brown soil. They were used as rampart corridors. 27 loopholes (profile 1.00 to 1.55 m) were penetrated in the upper, outer part of the western rampart. The height of the rampart ranges from 4.50 to 7.50 m (in the east), 9.50 to 12 m (in the west), 9.50 m (in the north) and 12.00 m (in the south) [4].

The cistern and filter well are located in the northwestern part of the corral, cut into the rock to a depth of 6 m. The shaft of the well dug into the rock has a diameter of 5.5 m. It was first covered with a layer of water-tight gray-green clay 0.5 m thick. This was followed by a 1.2 m thick layer of river gravel and sand. The central shaft of the well is circular in shape, 2.50 m in diameter, and is lined with carefully placed tufa blocks of different sizes. On the northern edge of the cistern there was a low wall made of crushed stone with mortar binding [4]. Later, a small tower was built about 1.80 m from the northeast corner of the tower. This tower is irregularly rectangular in plan, whose western wall has external dimensions of 4.75 m, eastern wall 5 m, northern wall 4.7 m and southern wall 4.5 m. The walls vary in height from 5.35 m in the west to as much as 8.30 m in the east [4].

V. CONCLUSION (PERSPECTIVES)

By the term 'Perspectives' (within the framework of the theory of Architecturally Defined Space) we mean "that dynamic relationship that connects now - future, existing - possible, achieved – desired" [2].

Since conservation and restoration work on the old Vranduk fortress was carried out on several occasions by the Institute for the Protection of Cultural, Historical and Natural Heritage of Bosnia and Herzegovina and the Museum of the Zenica City, which initiated archaeological research on the fortress in 1968, it can now be said that the fortress in relatively good condition. In 1999, work began on the realization of the fortress rehabilitation project - the first phase, in which urgent repairs to the ramparts, small towers and large towers were carried out. The conservation and restoration works carried out in 2002 removed all the risks to which the fort was exposed. At the same time, damage to the eastern side of the outer rampart was monitored and repaired [7].

Although most of the population of today's Vranduk is made up of elderly people, its physical structure (buildings outside the walls of the city-fort) is being renovated and new houses are being built. Most of the newly built structures were built 'out of context', like anywhere else in Bosnia and Herzegovina. The only commendable thing in this sense is the reuse of wood from old (demolished) buildings, which is rational, but also in line with the 'reuse of materials' in new constructions. Vranduk Fortress is actively involved in all cultural events in Zenica and Bosnia and Herzegovina (European Heritage Days, Plum Days, cultural events as part of the ZEPS fair, theater performances...). As part of improving the tourist offer of the city and canton, the Tourist Board included the locality in its program [7] (Figures 12, 13).

The greatest potential of Vranduk, in addition to its well-preserved physical structure, is its 'embodied spiritual energy', which its future generations will perceive as 'something of



Figure 11. The Vranduk old town-fortress

Source: Author (7.24.2011.)

South of the tower is an ellipsoidal courtyard (inner courtyard), about 37 m long and 12 m wide. The walls of the enclosure were built in two stages. First come the outer ramparts, about 1 m thick, on the outer edge of the rocky plateau and built into the cliff. When they were first built, they did not have crenellated openings with loopholes at the top of the walls. Later, on the inner side of the ramparts, walls up to 1.80 m thick, of poorer quality, were built on a layer of very

their own', as energy for continuous life. It is interesting that at the beginning of 2017, the construction of a hydroelectric power plant on the Bosna River, immediately upstream from the old town of Vranduk, began. The construction of the power plant (designed capacity of 19.6 MW with an annual production of about 100 GWh) was supposed to be completed by November 11, 2019. The lake created by the hydroelectric dam would be up to 6.1 km long behind the dam and would have an area of 420,000 m² at the highest water level. The feasibility study showed that the accumulation of the hydroelectric power plant would not have a negative impact on the old fortress-city of Vranduk, and would bring benefits to Vranduk, Zenica and the whole of Bosnia and Herzegovina. After a series of controversies in the socio-political life of Bosnia and Herzegovina, the construction of this hydroelectric power plant was suspended already in mid-2017.

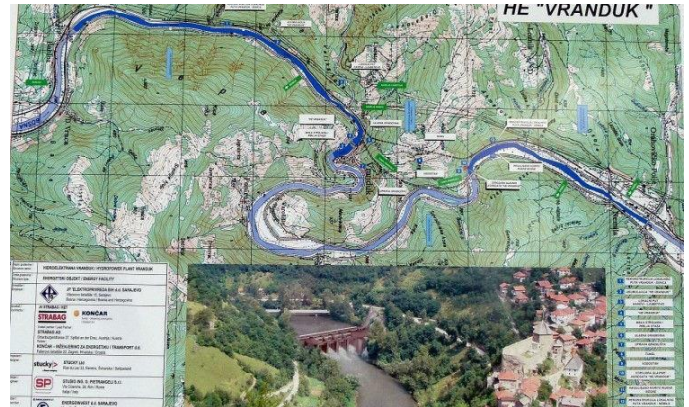


Figure 14. Planned hydroelectric power plant on the Bosna river near Vranduk
Source: <https://www.akta.ba/vijesti/bih/69374/pocela-gradnja-hidroelektrane-vranduk-kod-zenice>, Accessed: 7.25.2022.

REFERENCES

- [1] Hadrovic, A. (2018). Architecture in the travelogues of an architect. Book 1: The Balkans, Faculty of Architecture, University of Sarajevo, pp. 637-643 (in Bosnian)
- [2] Hadrovic, A. (2007). Defining Architecrural Space on the Model of the Oriental Style City House in Bosnia and Herzegovina, Serbia, Montenegro, Kosovo and Macedonia, Booksurge, LLC, North Charleston, SC, USA, pp. 8-14
- [3] Hadrovic, A. (2014). Water and man in autoshtonous symbiosis in Bosnia and Herzegovina, Sarajevo, Avicena, pp. 1205-1210
- [4] Raunig, B. (1973). Initial Report on Excavations of the Mediaeval Vranduk Fort 1968) In Papers from Symposium "Mediaeval Bosnia and European Culture", Proceedings III, publ. Museum of the City of Zenica, Zenica, pp. 453-469 (in Croatian)
- [5] Andjelic, P. (1984), The Mediaeval Period – the time of the old Bosnian State) in: Visoko and environs through History 1). Municipality Visoko, Visoko, pp.103-309 (in Croatian)
- [6] Kresevljakovic, H. (1991). Selected works, book II, Veselin Maslesa, Sarajevo, p. 405 (in Croatian)
- [7] The Commission for the Protection of National Monuments of Bosnia and Herzegovina has declared the Building Complex - Old Town Vranduk in Vranduk, municipality of Zenica, a national monument of Bosnia and Herzegovina by decision no. 05.2-2-274/04-4, dated January 25, 2005. Years
http://old.kons.gov.ba/main.php?id_struct=6&lang=1&action=view&id=2528
Accessed: 7.25.2022.



Figure 12. A cafe next to the outer walls of the Vranduk fortress town
Source: Author (7.24.2011.)



Figure 13. Museum in the attic of the burial tower of the Vranduk town-fortress
Source: Author (7.24.2011.)