

Transformation of Modern Period Fortifications into Sanitary Frontier Network

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Abstract: *The territory of what is now Northwest Croatia, which culturally and historically rather belongs to Central European sphere, became one of the key regions in expansion of the Ottoman army to Europe. Selected localities are calculated on some maps as potential defensive points, which, despite their architecture, is given them strategic importance in the landscape. Some localities are calculated as suitable supports in case of combat even in the open countryside. The latest development of border systems is related to the emergence of the so-called sanitary cordon, which aimed to control the movement of goods and people between the Ottoman Empire and the Habsburg territory at the time of the spread of the plague. Areas classified as Rastells or Contumaczs are created. They have their own fortifications and are divided into an administrative officer part and an operational economic part. Castles on the Ottoman side are actively used until the middle of the 19th century, or, until the crisis of the Ottoman Empire and the entry of Austrian-Hungarian troops into Bosnia and Herzegovina.*

Keywords: transformation – fortifications – sanitary – border – Croatia

By the end of the 15th, and the beginning of the 16th century, the network of frontline castles appeared, probably originating from the initiative of major noble houses of Croatia and Slavonia. In the course of time, the stronghold system was complemented by light fortification and lookouts, so-called *chardaks*. The *chardaks*, besides other functions, were used as guardhouses by castles' entrances and one of their benefits is their low cost when building. Later, after the domestic tension between the supporters of the Jagiellonian and Habsburg dynasties had been settled, the borderline defensive mechanisms were actively organised not just at the Ottoman frontier, but also at the borders with the Habsburg Monarchy, in which case, they guarded the access corridors to Styria, Carinthia and Carniola. Gradually, the development continued differently from other areas in Croatian Zagorje (today's bordering area between Croatia and Slovenia) (Procházka 2021, 167 – 172). Aside from sole fortifying functions, more representative features appeared, such as palaces, as tradition feudal layout based on noble house property and their seats. However, at the Ottoman frontier, especially in Vojna Krajina and Unsko-Sanski, all castles were gradually "nationalized", despite until the assembly of Bruck an der Mur, the biggest issue was, besides the lack of money to upkeep all fortifications, regular soldiers' pay. Emphasising mostly on key castles and the city of Bihać, other fortifications are gradually lost and adjusted by the Ottomans to serve their needs. Certain castles are found under constant pressure, and are abandoned with the surrounding territory destabilised. The defence of the Habsburg Empire therefore lost the area of Lika, historic Croatia and the substantial part of the upper Una river. Within Bihaćka kapetanija, castles were significantly reduced to a tight group surrounding the perimeter of the city and castle of Bihać, the centre of Vojna Krajina. Before the fatal loss of Bihać in 1592, the administrative centre of border defence had been moved to the fortress of Karlovac, and the frontier castles of Kordun area (Stanić 2000). Moreover, there were mass demographic changes in the form of population migration either from or to the Ottoman Empire. This period saw the beginning of intelligence service, founded

Fig. 1: Map *Confina Croatiae versus Turcicum* –system of border check points between Croatia and Bosnia, year 1780. <https://maps.hungaricana.hu/en/OSZKTerkeptar/525/> (15.6.2021)

to predict a possible attack, despite the cost of fortification upkeep. However, after the loss of certain vital castles, any information on the Ottoman army movements within originally Christian lands was lost until 1699.

During the construction of frontier castles, the gaps between them were filled with the coherent network of chardaks. Besides their function as lookouts, chardaks serve as gatehouses by castle entrances. The word “chardak” comes from Turkish and is connected to meanings of “guard” or “guardhouse”. The term itself is a word coming from Balkan, Turkish-influenced dialect, and has a Persian-Arabian origin. Although its creation and original use is connected to continental Croatia, it has found its way to other languages (German, Italian, French) due to engineers creating fortifications in other countries (Deanović 1987, 36). Therefore, the term can be used to describe a timber-laced or walled building built on stakes with an overlapping upper floor; an upper floor or floors of such a building itself; a corn warehouse or a lookout/guardhouse (Klaić 2004, 243). As evidenced by the word’s origin, a chardak is a feature adopted from the Ottomans (Klaić 2002, 133).

Based on the word’s origin, the building can be first found in the Ottoman Empire. It can be defined as a building elevated on four or more stakes which can be added by a soffit, holding the upper floor approximately three metres above the ground. The building can usually host 6–12 guards or more in case of more prominent structures. The mutual distance of two neighbouring chardaks is usually thirty minutes of walk, which provides the opportunity of signalling or message sending. The upper floor consists of either open or fully closed space from which the garrison was able to observe its surroundings, but it also served as a provision stock, resting room or a shelter in time of adverse climate conditions. The upper floor room was accessible via a ladder, which could be pulled up to protect the garrison from danger. Apart from this common form, the lower part could be walled. Moreover, some castle towers and belfries also functioned as replacements for chardaks (Babić 1981, 105–107; Kruhek 1995, 36).

Chardaks are features founded as refugial buildings at the turn of the 15th and 16th centuries. They were first used as refugial buildings, later as communication defensive feature, guarding a tower entrance by the first floor. The first chardak mentioned by written sources in 1521 is close to Beograd, mentioned by the report of Grand Vizier Piri Mehmed-Pasha on the participation of Çoban Mustafa Pasha,

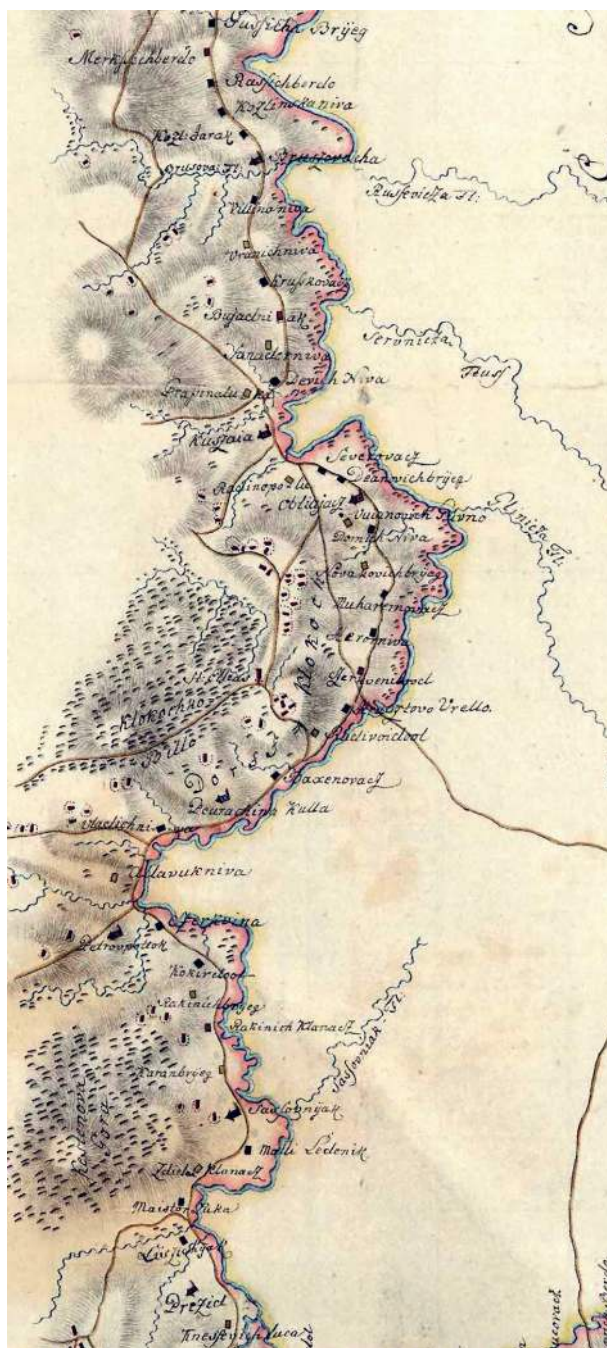


Fig. 2: Illustration of one form of „čardak“ (čardak | Hrvatska enciklopedija, <https://www.enciklopedija.hr/Natuknica.aspx?ID=13180>), 20.11.2020

a military specialist, during Suleiman the Magnificent's march on Hungary. Such signal places are also mentioned elsewhere, like in Styria from 1522, Slavonia from 1539 and Croatia from 1553 (Klaić 1909, 31–32). In 1798, Johann Christian von Engel defined the features: *“at the very outer border with the Turks, a line of chardaks or lookouts can be found, each for 5, 6, 8 or 12 soldiers. A chardak is made of timber and comprises of what the garrison needs; oven, place for cooking, pallets and benches ... all was built on four large stakes taller than two people. The entrance is protected by a ladder. (Von Engel 1798, 339; Matijaško 2018; translated by Šimek 2018).* Therefore, chardaks can be categorized as features located on elevated terrains, in the river valleys, or as auxiliary features next to other fortifications. In the case of primary guardian and refugial functions, they are garrisoned structures linked to borderline, and create a consistent network together with fortresses. Chardaks were built in several phases. The oldest can be dated back to the turn of the 15th and 16th centuries, followed by the second half of the 16th century until 1699, the last horizon being the era between 1699–1790. After 1770, the chardaks were incorporated into so-called sanitary corridor and it is safe to assume that



during the peace times, guarding the border also consisted of securing illegal border crossing and disease spreading. Together with “contumacz” and “rastell” features, they formed the unitary borderline system until the dissolution of the Military Frontier (“Vojna Krajina”) in 1881 (Škiljan 2007).

Besides their military-guard function, the garrison also overlooked the border crossings, prevented desertion and oversaw the settling of Ottoman defectors. In case of epidemic spread, the chardak garrison also prevented its cross-border transmission (for more detail see Contumacze). Later, certain chardaks also exerted post service (Kruhek 1995, 36, 246). However, all the above mentioned functions were valid for the frontier chardaks solely. Consequently, in modern period, they were added by other so far neglected features such as “contumacz” or “rastell” along prominent communications. These features were founded in order to halt plague spread from the Ottoman Empire into the Habsburg

Empire. These objects had been established by the “Pest Contumaz” patent in 1710, which was later extended by another patent in 1738, and Maria Theresa’s “Sanität Normativ” patent from 1770. With this act, the so-called “sanitary cordon” was established and delineated at Zemun-Sáva-Una-Srb. Even existing chardaks were incorporated into the service with each of them having a garrison of 6–8 men (soldiers or peasants). Moreover, each border garrison had to operate 6–8 chardaks.

Features of higher quality are represented by “raštels” (ger.: Rasstell, Rastell). they were fortified trade posts for selling and exchanging goods, mail forwarding and overseeing gold trade. The goods were separated into infected and uninfected, without any direct contact between the buyer and the seller. Such a post was commanded by, in current terminology, a “disinfector” who oversaw the process of disinfection using acetic water, vapouring, or by other means. Besides common goods, some letters were also disinfected. Since 1837, chlorinated lime has been used instead as the acetic method held many disadvantages.

The so-called “contumacz” features were used for passenger transitioning and their sole purpose was to quarantine both people and their goods. The complex was made by several building within a single encircled area. The areas were encircled by a stockade at first, however, stone or brick walls were used later on. The whole area was also protected by a large and deep ditch.

Normally, the quarantine lasted for 21 days, the extended one for 28 days, and in the time of danger, it lasted full 42 days (Višacki 2000). Later, the period was lowered to 10 days and the extended one for 21 days. The disinfection procedure was identical to the one in raštels. The time allotted for goods treatment was 6 weeks with the exception of metal and bottled liquid, where only the surface was disinfected. There was a military unit administering kontumacz, each of which was complemented by a medic. A single regiment was formed by twelve companies with two medics. Moreover, the frontier guards sent weekly reports to the central sanitary commission (Prpić 2019, 121–142).

In terms of founding history, we have information on many sites within the observed region thanks to written sources, although their number often varies as well as their specific placement. However, the most frequently mentioned sites in 1768 are: Kuk (Lička pukovnija), Rakovica (Ogulinska pukovnija), Tiševo (Otočka pukovnija) and Gnojnica (Slunska pukovnija). The raštel of Kuk is located nearby the village of Donji Lapac, guarding a road leading to Kulen Vakuf. In the case of Rakovica, we are not certain if the list mentioned the site of Prosićeni kamen as the source also mentioned the southernmost raštel of Srb (Procházka 2021, 86). The sanitary cordon was cancelled in 1872 in connection with the minimal plague hazard in Europe because of which it had been established (Bakić 2011). Besides some written sources, there is also a rare verbal description of Contumacze Zavalje (today’s Bosnia and Herzegovina, Bihać district). However, the most accurate material for studying the form and frequency of specific features is represented by the Franciscan cadastre, which provides precise picture. The facts resulting from map analysis of individual military mappings and the Franciscan cadastre are provided separately for individual sites. Today, the sites are either completely defunct or lost under current building development.

The sites mentioned below are one of the prominent ones, and are best observable thanks to old maps and the sites’ current status. In the case of chardaks, their identification and archaeological knowledge is undeveloped as their exact localisation represents a problem.

Prosićeni kamen

The “Prosićeni kamen” site is located on a promontory, to which a road leading from Drženik and Rakovice to Tržace (Bosnia and Herzegovina) turns. The promontory is situated over the Korana river which has always formed a frontier between Croatia and Bosnia. On Bosnian side, there is an original stronghold, the Frankopan castle of Tržac.

Fig. 3: One of advanced type of čardak (čardak | Proleksis enciklopedija (lzmk.hr) <https://proleksis.lzmk.hr/16462/>), 20.11.2020

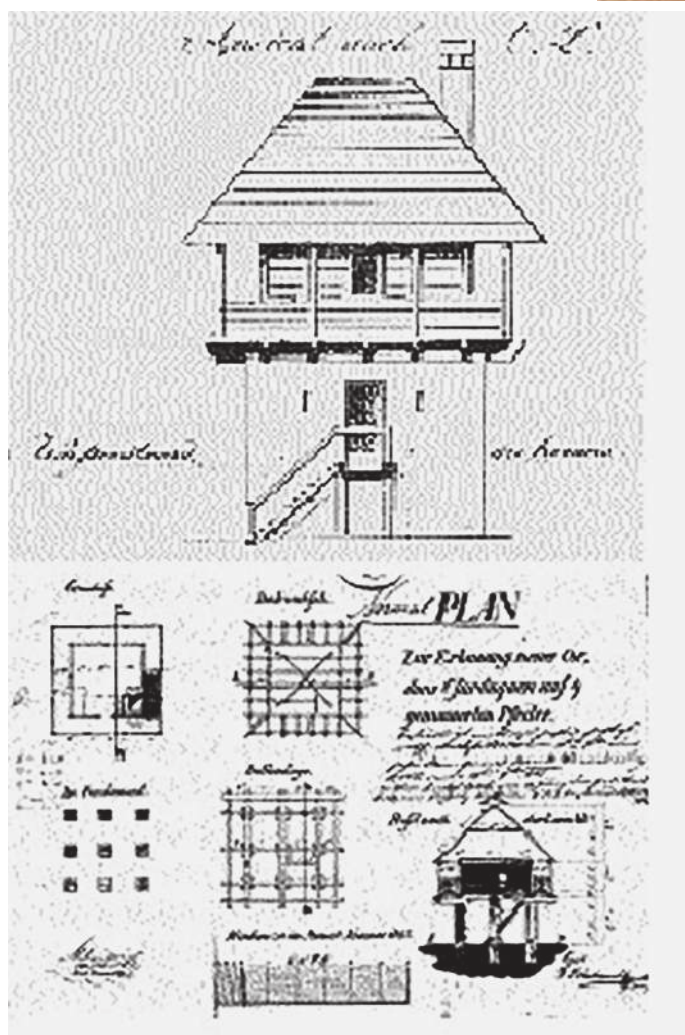
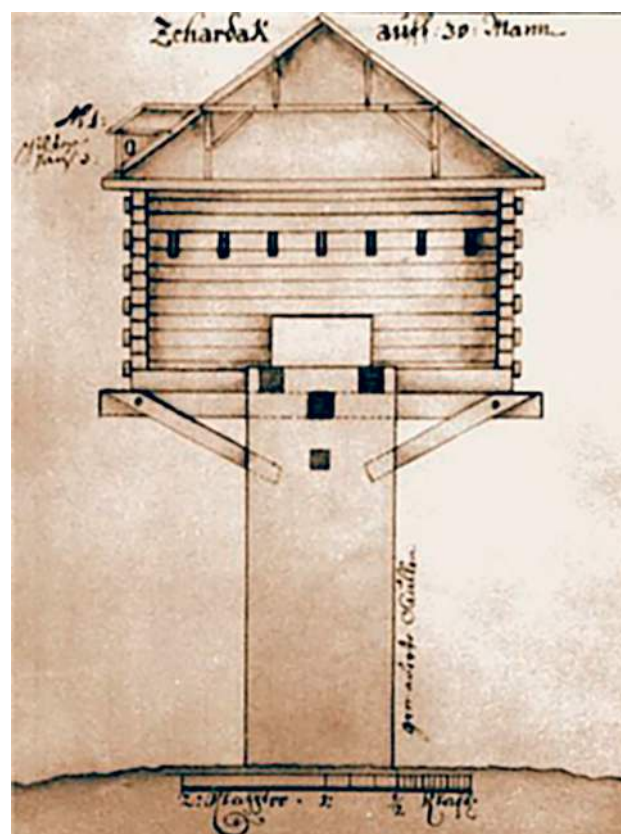


Fig. 4: Illustration of high level type of čardak – Povijest – Vojna krajina (gospodarstvo-petricicevic.hr) <https://www.gospodarstvo-petricicevic.hr/povvkrajina.php> (20.11.2020)

The site is depicted in the First Military Survey (1774–1775) as “Contumacz”, when the main triangular-shaped building is drawn. In the Second Survey (1865–1869), it is described as “Rastell”, however, the site is depicted as a large area and can be, according to the Franciscan cadastre, further divided into two main sections. The front section is located at the most exposed part of the promontory and lays on a six-pointed star-shaped earth body with the original triangular building positioned in the middle. The rear section was formed by a smaller and polygonal section which contained a few small redoubts. Within this section, four long buildings were placed in a square formation. According to information provided by the current owner of the property, the remains of all walls and frontal walls of the six-pointed fortification were deconstructed in the 1950s by JNA units (Jugoslavenska narodna armija) in order to build a barracks several kilometres away. Currently, the area is grassed and overgrown with self-seeded trees as well as the original garden vegetation. In the area of the rear polygonal area, there is probably a remnant of the original brick architecture, together with the remains of family houses razed down during the civil war in the 1990s (Procházka 2021, 87).

Maljevac

The site is situated on an indistinct plateau over the Korana river, near the road heading to Velika Kladuša. In the First Military Survey, it is described as “Rastell” (Rebicha Lug) with the symbol of a triangular building. However, the Second Survey uses the term “Rastellamt” (Maljevac), when its form resembles a complicated disposition limited by a road junction located in its vicinity. Again, the main section of the area comprises of a triangular-shaped building, and a polygonal service section containing two longitudinal buildings. The whole area is supplemented by a few smaller buildings nearby the main building. There are also some indistinct redoubts in the perimeter walls, especially in the frontal forefield of the main building. Currently, the area has been fully absorbed by local development, and even The Franciscan Cadastre does not bring any light into its original form (Procházka 2021, 87–88).

Zavalje

After the Treaty of Sistova in 1791, the Ottomans had to cede a long but narrow strip of land 11 square miles large to the Hapsburg Empire. The fortified site was established there in 1795 by local authorities as a large, raštel complex near Bihać to overlook the regained land. It is located in a wide rocky valley ended by a flat-topped mountain, bounding Bihać from the West. The site itself is located between the village of Zavalje and Bihać, near the road junction. In the First Military Survey, the site is described as “Contumacz” and its main triangular building is depicted. In the Second Survey, it is still called “Contumacz”, but the map shows a large scale of surrounding buildings of different size and quality character. The front side in front of the main building was fortified by a triangular redoubt of low quality (see lower). The site is specific for its three-way junction which met in the central part of the area between the main building and the service area, which was also fortified by several small redoubts. Today, the site is inaccessible due to its location in Bosnia and Hercegovina near the frontier, and serves as a temporary refugee camp.

Moreover, some private houses were built around the raštel, to which the Christians from the neighbouring Lika moved. In the same year, Church of Saint Francis Seraph was founded. However, the Bosnian Turks attacked the village of Zavalje in 1809 and torched all the houses along with the church. Although the village was plundered, it was soon rebuilt and the church was re-established in



Fig. 5: Aerial view of present condition – Raštel Zavalje (www.mapire.eu) (20.11.2020)



Fig. 6: Cadastral map view with position of Raštel and village Zavalje (www.mapire.eu) (20.11.2020)

1816. Two years later, it became a parish church with a small parry adjacent to it. There is a written source dated back to 1817 describing the quality of the raštel; the encirclement was only made of timber until 1817, when the Turks arrived in the raštel to ambush it and steal all the goods which had been stocked in its warehouse. However, the Turks met with a fierce resistance led by a frontier unit and its commanding officer Stevan Grbića, and ran away. A part of the Turkish force, however, split from the main group and fought Serresaner lance corporal Lacko Babić, who was leading seven other Seressaners (members of a military police placed in Lika). Both groups skirmished in Zavaljská draž, in which some Turks fell, and Babić was personally distinguished by Emperor Joseph I. during his visit in Otačac in 1818. Thanks to these event, the raštel saw some long needed adjustments. In 1819, a new concept of the main building was introduced, adding another floor for better defence. Moreover, the wooden palisade around the area was razed, and, instead of it, a stone wall was built with loopholes for rifles and

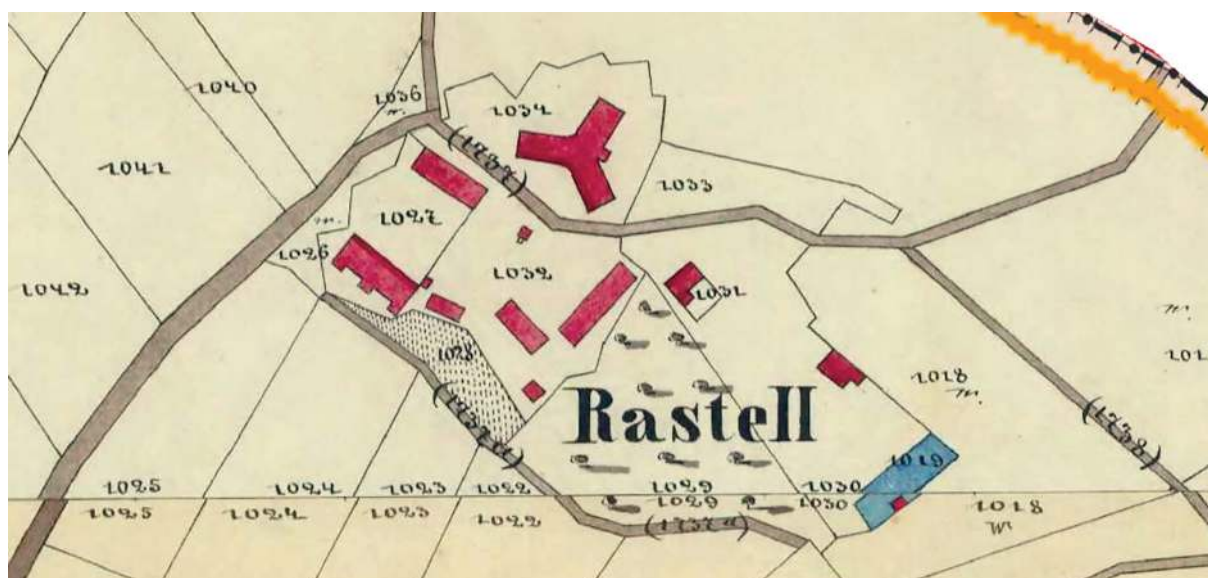


Fig. 7: Detail of cadastral map with view of fortification – Zavalje (www.mapire.eu)(20.11.2020)



Fig. 8: Position Contumacz Zavalje on the Second Military Survey (www.mapire.eu) (20.11.2020)

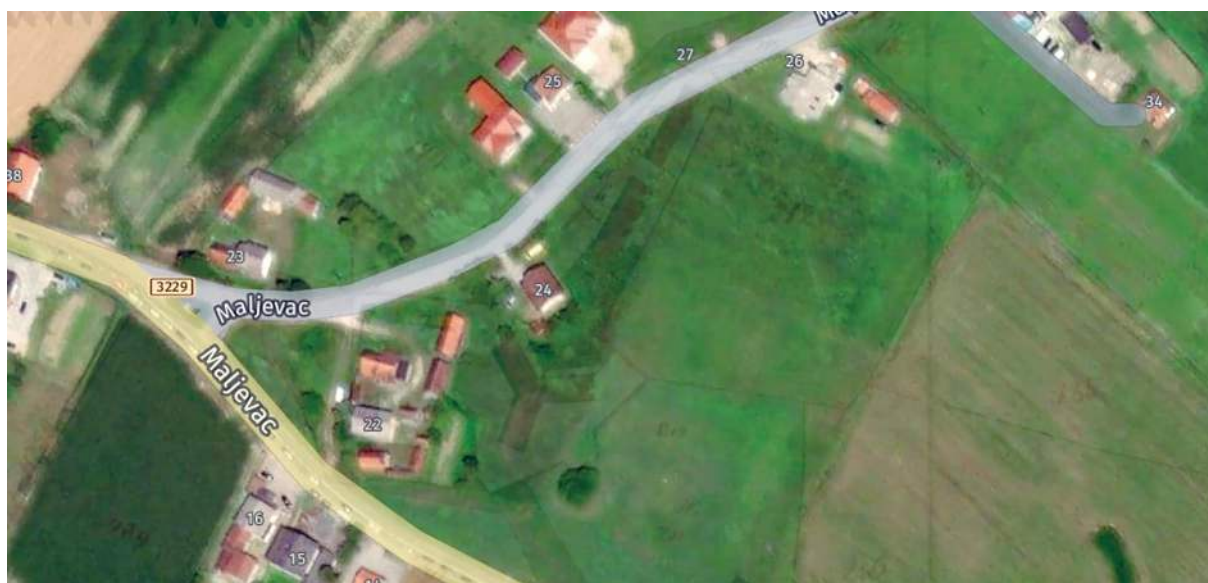


Fig. 9: Rastell Majevac – Aerial view on present situation (www.mapire.eu)(20.11.2020)



Fig. 10: Rastell Maljevac – view of the cadastral map and typical building layout (www.mapire.eu) (20.11.2020)



Fig. 11: Rastell Prosićenikamen on the Second Military Survey (www.mapire.eu) (20.11.2020)

heavy weapons. Thanks to these additions, the symbolic fortification became functional. The upgraded fortification brought some certainty for the future that the Turks would never try to raid the area again. Later on, there was a commander of the whole Otočac cordon living in the raštel of Zavalje. Usually, it was a major responsible for the country guard of Kordun. Moreover, the raštel also served as a contumacz. In 1872, the military frontier of Kordun was dissolved as well as the border guard in Zavalje, and the chardaks were gradually razed down. In 1857, the village of Zavalje had 33 houses, 453 inhabitants (all of which were Roman Catholics), and was possibly one of the most developed agglomerations neighbouring such a frontier station (Procházka 2021, 88–90).

In 1849, a unique description of the area was written by a British diplomat and traveller Andrew Archibad Paton, who travelled through south-western Croatia, Vojna Krajina (Lika, Karlovac), Dalmatia and Bihać to visit many different places along the way between 1846 and 1847; and Zavalje was one of



Fig. 12: Rastell Prosičeni kamen on cadastral map with detail of fortifications (www.mapire.eu) (20.11.2020)



Fig. 13: Rastell Prosičeni kamen – view of the position of the site, photo Milan Procházka 2020

those places. According to his description, the commander's headquarters resembles a villa, surrounded by a park. According to Paton's travelogue, "Zavalje is not a traditional fortress, but a fortified military camp, a quarter mile from the frontier itself, a regimental headquarters, and if the need arises, a signal place from which a warning flare can be fired. The goods exchange was carried out in a "bazaar" inside the raštel. It was built as an eight-pointed star used not only for defence, but also as quarters for officers in charge of the quarantine process." The description further mentions that the cultural life for the officers and their families, mostly coming from Vienna, was very limited. Adjacent to the officers' building was an oval-shaped hospital and on its front veranda, there was a bazaar (Lokmer 2018, 387–390). The specification of a military function of a camp is very important as Zavalje played a crucial

role during the bloody battle of Žegar over the city of Bihać in 1878. While fighting around the Debljača, general Zach's brigade suffered heavy losses with over 600 dead or wounded. The brigade's main camp was placed next to Zavalje fortress and its surrounding village. Furthermore, a court was held with several "rioters" and instigators of resistance against the unity of Austria-Hungary (Krpal 1882, 1).

In connection with the above mentioned facts it is safe to assume that the sanitary cordon overtook a certain part of the chardak system, added checkpoints and headquarters of the quarantine process, goods exchange and post service between Bosnia (the Ottoman Empire) and the rest of Europe. However, their military function cannot be neglected, as evidenced in the case of Zavalje.

Concerning both their modern origin and relatively short period of existence, the relicts of the above mentioned features have not been given any attention, and it is necessary to alert the local researchers to their very existence and need of protection. From today's point of view, the Contumacz / Rastell features can be seen as similar to modern border crossings, and also hold many of their functions. Although they represent unified features created according to a single regulation and hold many similarities such as a triangular main building (mostly single-storey) and an oblong service area, there are many manifestations of individual solutions. Apparently, they were the result of the specific location, such as "Prosićeni kamen", located on a promontory and fully fortified, or Zavalje where a park was founded near the main building by one of the commanders. With Zavalje, we possess valuable information on the first phase of rather symbolic enclosure and its later conversion into a regular fortification, however, Prosićeni kamen had its fortification from the very beginning. After the sanitary cordon, or rather the whole military frontier, had been disbanded, the objects were turned into administrative points, post offices or barracks, however, they still had a role to play in modern military operations such as the military intervention in Bosnia in 1878.

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