T.C.
HASAN KALYONCU ÜNİVERSİTESİ
FEN BİLİMLER ENSTİTÜSÜ

MATERIAL ANALYSIS OF HURMAN CASTLE AND RECOMMENDATIONS FOR RENOVATION

İNŞAAT MÜHENDİSLİĞİ BÖLÜMÜ

YÜKSEK LİSANS TEZİ

GÖKHAN GÜMÜŞBURUN

OCAK - 2019

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DANIŞMAN
Prof. Dr. Ömer ARIÖZ

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GAZİANTEP - 2019

FEN BİLİMLERİ ENSTİTÜSÜ MÜDÜRLÜĞÜNE YÜKSEK LİSANS KABUL VE ONAY FORMU

İnşaat Mühendisliği Anabilim Dalı İnşaat Mühendisliği Tezli Yüksek Lisans Programı öğrencisi Gökhan GÜMÜŞBURUN tarafından hazırlanan "Hurman Kalesinin Malzeme Analizi Ve Yenileme İçin Öneriler" başlıklı tez, 08/01/2019 tarihinde yapılan savunma sınavı sonucu başarılı bulunarak jürimiz tarafından Yüksek Lisans Tezi olarak kabul edilmiştir.

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Enstitü Müdürü

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Gökhan GÜMÜŞBURUN

ÖZET

Kahramanmaraş İli, Afşin İlçesi, Dağlıca Kasabası kırsal alanında yer alan, Hurman Kalesi'nin malzeme çeşitliliği ve yapım tekniği bu inceleme raporunda ele alınmıştır. Bu rapor kapsamında kalenin yerinde inceleme, sistematik fotoğraflama belgeleri ve rölöve çizimlerine bağlı olarak ayrıntılı malzeme değerlendirmesi yapılmaktadır.

Malzeme analizleri detaylı olarak yapılmış ve yenileme yapılacak alanlar için bu değerlendirme sonuçları, malzeme kararların verilmesi sonucunda yapılması mümkün olabilecek yenileme çözümlerinin uygulamaya yönelik, sistemli tanımları verilmektedir.

Raporda, kalenin yapımında kullanılan malzeme ve harç çeşitliliği, kullanılan malzemelerin yapısal, kimyasal, biyolojik ve fiziksel özellikleri ele alınmış olup, yeni harç önerilerinde bulunulmuştur.

Anahtar Kelimeler: Hurman Kalesi, Dağlıca Kasabası, Malzeme Çeşitliliği, Harç Önerisi

ABSTRACT

The material diversity and construction technique of Hurman Fortress, located in the rural area of Dağlıca Town in Afşin District of Kahramanmaraş Province, has been discussed in this report. In this report, detailed material evaluation is made depending on the site's on-site inspection, systematic photographing documents and building drawings.

For the areas where material analyzes are carried out in detail and to be renewed, these evaluation results are given systematically definitions of renewal solutions that may be made as a result of material decisions.

In the report, the material and mortar variety used in the construction of the fortress, the structural, chemical, biological and physical properties of the materials used were discussed and new mortar recommendations were made.

Keywords: Hurman Castle, Dağlıca Town, Material Diversity, Mortar Proposal

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ABBREVIATIONS

BD **:** Western Wall

BDU **:** Above the Western Wall

BI **:** Inside the West

bkz. **:** See

C. **:** Skin

DD **:** Eastern Wall

DI **:**Insede the East

GD **:**South Wall

GI **:** Insede the South

KD **:**North Wall

BC **:** Before Christ

s. **:** Page

S. **:** Number

vd. **:** and more

1. INTRODUCTION

History of the Hittites (BC 4000 . 750 is known to have entered into the sovereignty of Assyria. B.C. Persians (Iranians) on 546 then BC. In 333, under the domination of Macedonians, the region was live in Roman times. has been a trading center. Afsin, Byzantine lands after the collapse of the Roman Empire The Arabs were dominant in the region from time to time. With Malazgirt Victory on 1071 Under the command of Afşin Bey, the branch of Oghuz Turks, who started to settle in Anatolia, They established the Seljuk sovereignty in the region by ending the Byzantine rule. Dulkadir Afsin entered into Ottoman sovereignty after 1572 and entered Elbistan district. While it was a connected Bucak Center, it became a district center in 1944 with the law numbered 0242.1944 and 4642 (Afşin Municipality, 2018).

1.1. Goal

Kahramanmaraş Afşin District Dağlıca Town Hurman Castle Survey, Restitution and Material Analysis Within the scope of preparation This report is a survey report explaining the current situation of the castle. This The purpose of the study in the context of the Hurman (Marabuz) Castle, revealing the current situation, to reveal the data that will contribute to the restoration stage..

1.2. Scope

This report Hurman contains information, drawings and photos about the current status and the restitution and restoration projects to be formed after this study expressions (history, old documents and photographs, protection proposals, etc.) It was maintained.

1.3. Method

FARO Focus Integrated in 3D three-dimensional modeling and documentation operations a revolutionary, easy-to-use, touch-operated Non-contact laser scanner. Thanks to its minimal dimensions and weight Focus3D offers high ease of use and scanning compared to conventional three-dimensional laser scanners It is possible to save almost half of the time.

Distance Focus3D X 330	: 0.6 – 330m
Measuring speed	: Up to 976,000 points per second
Distance error	: ± 2mm
Integrated color camera	: 70 mio. up to pixel
Laser class	: Laser Class 1
Weight	: 5,2kg
Multi-Sensor	: GPS, Compass, Height Sensor, Dual Axis compensator
Size	: 240 x 200 x 100mm
Scanner control	: Via Touchscreen and WLAN

In the study, the structure was constructed using 3D Optical Scanner (LaserScanner - Faro), with 90 different sessions. It was measured. 75% of the scan points 4 mm average error of less than n share point clouds combined. Point of the cloud from Faro Sceneve Pointcab2-D plan, section and views are created in Png format. This point 2-D plan, front and cross-section lines It was formed. After that pointcab program again using this point cloud and orthophotos of appearance were formed. These orthophotos Master drawn on AutoCAD main drawings by adding all detail, appearance and boasting completed. With the help of drone, parts that cannot be screened due to rocky terrain taking photographs of missing wall orthophotos using the Agisoft program the drawings were completed to the fullest extent.

2. CASTLE ARCHITECTURE

The fortifications in the defense architecture, the fortifications around the cities, the horoscopes, the gorges, the gates, the observation towers and the observation places and monasteries of the feudal lords. structures. Early in the feudal period, near the streams, rocky high and difficult the fortresses were built for themselves, their families and warriors. Often castles inside, a chapel or church, multi-storey buildings for living or living, with commanders there are places where warriors live. The fortress walls are generally smooth with semi-circular supports and square-planned multi-storey towers. they are also reinforced structures. Entrance openings are small, sometimes with a second external wall They maintained. Fortifications in defense architecture, fortifications around cities, bushes, gorges, passages, observation towers and paths of feudal lords and mana are the structures that protect the stakes (Kadiroğlu and Isler, 2010: 18 et al.) .

3. GENERAL DESCRIPTION AND GEOGRAPHY OF AFŞIN

Afsin district is located in the Mediterranean region and is connected to the province of Kahramanmaras. Area: 1,502 km ^{2} dr. It is the 167th largest district of Turkey. Afsin district of Kahramanmaras The city is 74 kilometers away.

3.1. Location of Afşin, Hurman Castle in the City

Surrounded by a valley surrounded by mountains, the town is a very old settlement. shows. Located on the historical Silk Road, Hurman Castle and 7 church ruins are here is an important settlement and a religious center of the town. The name of the town " Marabu z" in the official records of Maras Tahri r 1563 , local people In between, while passing long as Maraba, after 1960, the official name of the Dağlıca It has been changed. The north border of the town, north of Sivas, constitutes the northern border of Afsin while in Kayseri. Sivas i li Gürün the north, a north of Kayseri Sariz district, Armutalanı Village from the east is adjacent to the Incirli Village, Tanır and Altınelma Towns to the south. Kasaba, which gained municipal organization in 1972, Altunevler, Bahçelievler, Fevzi Çakmak, Kayabaşı consists of Kurtuluş and Pınarbaşı neighborhoods. Town of landforms Depending Yapısan I n A is a scattered placements. Neighborhoods from Hurman Castle Topaktaş To the village, 10 km along the shore of Duck Tea 'r l ike B is spread in the area. State statistics According to the Institute's data; in the village, 5003 in the 1990 census and 2348 in the 1997 census It is stated that the population lives. The town is very mountainous and the agricultural areas are narrow, a large part of the province and districts such as Kahramanmaras, Osmaniye, Kirsehir, Afsin, Dortyol, Payas immigration. Duck River passing through the town of Daglica i la town Throughout the Hurman River; Duck Creek, Hurman It is united with the Hurman Stream under the castle. Town Historic Spice on Road There. The caravans following the spice route, between Dağlıca and Tanır Town after staying in Kuruca Handa, passing through Hurman Castle and arriving in Kayseri. sources.

Figure 1 . Afsin on the map

Figure 2 . Hurman Castle Google Earth Image

Professor Dr. Mehmet Özkarcı's 2007 Turkish Cultural Heritage Inventory According to this, there are five castles in Afşin district of Kahramanmaraş. These castles; Persimmons Hurman Castle, Twin Hill Castle, Lâle Hill Castle, Sütpişiren Castle, Pillow Castles (Özkarcı, 2007 : 752).

3.2. History of Afşin, Hurman Castle

Afşin Hurman-Rumman castle in the town of Marabuz (Dağlıca), on the north side of the district It is built on a hill which consists of a rock and dominates the region. Castle on the main rock, It was built according to the topography of the rock. Date of construction It is unknown. There was no inscription on the building. However, architectural style, construction data from the Roman period is pointing. We do not know the date of construction because the castle does not have an inscription.

Hurman Castle is on the Silk and Spice Road, like a dry house structure. West side of the castle door There. In fact, even the Roman era Arabisos Kangal 'tan (Afşin-Efsus) to Sebestei (Sivas) to the Roman road. Ottoman as in ancient times Kangal-Afşin-Sivas route has maintained its importance. Caesare-Kayseri 21, 10 in Zerez Zamantu water 30 Arabissos (Afsin-Efsus), starting from Karakilise village Melitene (Malatya) v E There is another way to the Euphrates, Tovla, Çarşak and Deli crossing the Maragos-Marabuz (Dağlıca) goes from Tanır-Tanir (Tanadaris). Karakilise with Maragos-Marabuz (Dalıca) 14 Roma Milidir (Aleppo in the Ottoman Province Salname , 2012) .

In the year of 1324 Aleppo province, the fortress of Efsus (Afşin) named Hurman, Çerki and Kız castle There are three ruins of a historical castle. Hurman castle on a small hill in Efsus accident 9 hours away. Hurman River passes through the Hurman River. The walls are about 6 cubits The area occupied by the fortress is approximately 500 m. Many rooms within the castle located. Although the interior walls of these rooms have been demolished in time, the exterior walls are still standing and some of the walls have ancient Greek writings.Have an important place in East-West trade When we look at the history of the city of Afsin in the Euphrates section of Anatolia and Mesopotamia and the Mediterranean at the junction of various roads between Iran. Afsin of Cappadocia It is located on the eastern edge between Kayseri and Malatya. Military as a top in the Late Antiquity is an area. It is on the way from Anatolia to Anatolia on the way of important mountain passes. This Afşin is a part of Anatolia and northern Syria.

Ibn Al Adim 'when in the year 1230 according to statements Eshab-i visited the cave s Seljuk - Ayyubid limit Arabisos-Efsus He was passing north of Afsin. Chewing valley in the north In the book DelaporteLes Hitti voice, which leads Afşin following Maras and AfşinThe southeastern road is one of the ways of the Hittite era. Afsin Hurman (Rumman) Castle as shown in the sources exhibited in the museum and the castle Roman and Byzantine coins found in the excavations that the first

construction of the castle of the Romans Prof stronghold of viewing in person. D r. Mehmet Özkarcı IV of the castle . century the Seljuk, Dulkadir and Ottoman period. and that this day took its form in the Ottoman period, both the military headquarters and the Taurus The eastern guard of the mountains under the control of the castle guard is the base of the guard (Özkarcı, 2007: 752).

The outer surface of some places of the Tower signs in the period of the Ottomans was finely polished. It was coated according r. Even those who did not get rid of those who have stolen and on the outskirts of the castle near the road today only a few remain. Afşin Dağlıca (Marabuz) near them are Hurman tea. Full four a sloping view of the road from a distance of about 20 meters to 100 meters erecting It was. Therefore, both sides of the fortress side and two-and-half side is a very high cliff. Hurman tea flows from under these cliffs and it seems that the fortress has been preserved with water.

According to the Aleppo City Declaration, the largest width and the longest length of the castle are 80 meters. 14 There are signs. The width of the walls is between 250 and 270 cm . On the west side of the north Front, one On the southern front there are two gates.Efsus-Afşin Hurman Rumman Castle According to some people who connect to Anatolia by passing through Afsin plain to Anatolia, both silk and spice The road used as the path of the old Aleppo road on the roof of the movement here at a glance describes the task of control.Very glorious and important to live One of the fortresses is standing still with the remaining walls and bastions and other parts It stands. Memluk Sultan Baybars Afşin's Huni (Hunu-Arıtaş) plain on 15 April 1277 The Mongol army suffered a heavy defeat. Sultan Baybars from Afsin's Huni plain April 16 In 1277 he left to give the order to move to Kayseri. Sultan Baybars Ashabu'l Cave Afşin-Efsus, where the cave is located, moved towards Kayseri. Sultan Located next to Ibn Abdüzzahir near the road they headed towards Kayseri Ashabü'l-Kehfinand that the place in question is the city of Efsus. mag a is Efsus states that the city. The inscriptions of the Inn of Eshab-i Kehf near Afsin It is referred to as Ribat. Ribat in the first Islamic states for the military purposes were safe structures. Afshin large castle in the palm of one of Turkey's leading-Rumman (Marabuz) The castle is located in the inventory of cultural assets. Afşin Hurman Castle during the Romans The people between Afşin and Sarız were lined up and the stones of the castle were handed together. the rumors are made in the castle.Afşin geographic location in the upper Euphrates basin, The historic location of the caravan routes, Famous King roads and on the silk road has been home to various civilizations due to its rich water resources. Efsus-Afsin city Afşin bi is the first city of Eshab-ı kehf. Afşin-our city but also a Efsus is a town of castles. Afşin- Tilafş's (Hüyükl

Castle) in front of the Byzantines, Mongols, and Afşinbey has built a castle in the village of Afsin Huyuklu. Afşin brain grave Hüyüklü It is located in the village (Afşaroğlu, 2000) .

Afşin Hurman Castle is a city of Afsin, which has a military importance on the strategic road and narrow straits. Afşin Hurman castle, where the accommodation of the princes architecture and history is an important castle from the beginning. Roman, Byzantine, Seljuk and Ottoman Although there are differences between the castles, the castles have always been made for the same purpose. Afsin Hurman (Rumman) castle in the formation of history and quality of the place is of great importance. Hotels in Afsin the first civilizations of the region were born from the South and between the Mesopotamia and the Mediterranean At the junction of the silk and spice paths from the Mediterranean to the east, north and west, civilization has guided its history. For this reason, the city of Efsus-Afsin from prehistoric times to human communities It was a settlement area and a place of haunting. History of the Silk Road from here Afşin The city has maintained its importance and vitality. Inside the castle with water and food warehouses There are military shelters and churches. Afşin Dağlıca town, Dokuz tay village and Tanır Kirmen It was built on a point of strategic importance where three straits meet in the middle of the stone quarter. it is a great castle. However, this fortress was used as a caravanserai 70 years ago. with horses They spent the night traveling. Dr.ramsay 's in the book of Anatolia Roman Emperor Kostantin Ambassador near Afsin-Efsus-Arabissos A ndreas Demoscos went to Malatya (Melitana) on his way to the Hurman fortress . As in ancient times, Roman and Byzantine period Afşin trade routes through a center stands out. Greek Age in the Aegean The most important roads connecting the coast of Ephesus Malatya roads as this road Ephesus-Aydin-Sultanhisar-Mastavra castle Mastavra Hasköy-Eskihisar Honoz-Dinar-Haydarlı-Yalvac - Ladik-Aksaray-Viranşehir-Serezek- Herpe -Aslanbeyl of-Kurucay - Goksun - Y arpuz(Arabissos) are important roads extending from the back to Malatya. the Turks With the arrival of Anatolia in the 11th century, the city of Efsus attracted attention. Like Kayseri In the expeditions to the north, Afşin Hurman castle is used as a gateway to the north. from here.Afsin old silk road and Mesopotamia and Philistine near Rome Since the path of the king roads is in the plain as a gateway of steep passages maintained. Afsin is the capital city of the Romans. The Romans and the Byzantines If this city is known as the city of Efsus. Political and commercial caravan of Efsus (Arabissos) on maps The main passage of the roads is the great importance of Efsus Afshin for him of the various empires they gave. For more than 13 centuries, the Afsin region was appointed from Konya, the capital of Seljuks. governed by governors. In ancient times it is the most famous and big city and capital of this

region The city was the city of Efsus-Arabissos which was formed with the name Afşin (Okumuş, 2017: 83 et al.) .

Byzantine Emperor Alexios According to the analysis of Komnenos and Bhermund in 1108 the places left in the so-called Bohermunda Afsin Efsus-Yarpuzh region medieval Assyrian, Armenian and Arab sources are named as Cahan district. The oldest city in the region known as Arabisos the city of Efsus in the center of Afsin-Yarpuz. This city occurred in the VI century from the end of two earthquakes was ruined. Aramissos Fortress (located in Little Atlast) Afsin accident (Arabissos Fortress), Afsin Located in the village of Emirilyas (Amira Town Fortress), Afsin the Hüyükl found in the village (Tel Thampson Fortress) Middle Ages in the center of Afsin Hisari and Afsin accident (Khonies Fortress) and (Khonion Fortress) Hunu Fortress) Afşin accident is a town of Hisarlar as well as a fortress city. One the name of the city written in the name of the city's past culture and belongings and historical sources such as the date of writing information about the city, such as significant sources, They will give information about the depth of the city to the past. An evaluation When Efsus was built, Afşin is a sign of the ancient city of ancient times. The fact that the city of Efsus Afşin, Nineveh (Mosul) and Aleppo, are close to each other, that these cities There was an excellent way of connecting. Efsus is an important city of Afsin Since it is in Efsus-Afşin, it passes through Göynük village of Pazarcık to Afşin from steep mountains. near Akçaderbent (now derbent) was reached the road reached the plain. Efsus-Afshin's Arabissos city of political and caravan routes junction where the main passage of various empires Hurman on these roads is the reason why they attach importance to this military and political settlement center. Rumman (Marabuz) Castle and Kuruhan, Aleppo, Nineveh (Mosul) with roads leading to the cities silk and spice road passing through the city of Efsus-Afsin East combines the West with the South The Roman road that joins the north passes through the city of Afsin-Efsus. from the book of the Roman king roads are noted in particular in his notes (Sumer, 1989)

According to sources, Afsin (Arabissos) is one of the important cities of the Byzantine State. Byzantium Emperor Mauricanos It was raised in the hinterland and reconstructed here. When the city was ruined by the earthquake, it was rebuilt with the order of the emperor.Similar places nearby Afşin He was in the possession of the Byzantine State in 668. This is both the military headquarters and the Taurus It was the base of the Castle Guard, which controlled the eastern passages of its mountains. In the Byzantine Period The Afşin-Maraş route has been followed in all the voyages passing through the Taurus Mountains and this is in the Taurus Pass. There have been two important military bases . Again, we learn from the sources that the Hurman Fortress existed in the 960s . 7th century, the mid- 10th century until the end of each year, the

Anatolian ' or done which had been in the first target Afşin in the Muslim raids and the city 10th year of the üzyıl the medium has kept its importance until (YİNANÇ, 1988: 223-224).

Because of the strategic importance of the castle, it was tried to be seized by various states and the structure witnessed many wars. The fortress, which was under Byzantine domination, was captured by the Abbasids in 770 and was later taken by the Byzantines. Afşin and the region after the victory of Malazgirt entered the administration of the Anatolian Seljuk State in 1085. During the reign of Izzettin Keykavus (1211-1220), the Armenians in Cilicia (Çukurova) rebelled from the Seljuk nationality and captured some of the castles in the region. Then, Izzettin Keykavus, in 1216, went on a campaign against the Armenians and Afsin Hurman Fortress, which is important for the stratology of the region. Andırın received Geben Castle again. This event Ibn Bibi, " Kaykaus they a Elbistan after their stay while a huge army of the Merzub (Persimmons) They kept the path to the castle. When they arrived there, they set up the Sultan's throne, and the catapults triggered the arrows and the soldiers. They began to besiege with great effort. Within three days, the fortress was taken, and the honor of the fortress was honored with the flags of the sultan . The Naibs drew the ammunition and other items they seized there. Then there were the soldiers, the guards, a commander of the castle and a talented manager ., Memluklu Sultan Baybars defeated the Mongols in Elbistan in 1277 It was taken from the Armenians and passed to Kayseri. After the Anatolian Seljuks , the Hurman Fortress was governed by the Dulkadir Principality (1337-1522). In 1472 the castle was captured by the Mamelukes. With the help of the Ottoman Empire, the Dulkadir Principality fought in front of the Mamluk army in front of the Hurman Fortress in 1484 and defeated the Mamelukes . In 1522, after the Ottomans had terminated the Dulkadir Principality , the Hurman Fortress along with the region had been replaced by the Ottoman Empire (Yinanç and Elibüyük, 1988: 653) .

Hurman Castle, starting from the Byzantine period, the Anatolian Seljuks, Dulkadir Principality, Mamluk and the Ottoman Empire was used during the time. In this period, additional repairs and repairs are certain. The building took its present form during the Ottoman period. Castle from the Mediterranean Region and Eastern Anatolia, Central Anatolia Region, which provide access to the strategic road gun available on the ITINERARY military and commercial maintenance from the passage of very important is to keep under control. The fortress is also located on the Elbistan - Kayseri caravan road ; Çavlı Han in Af ş in and Kuru Han are close to the castle. Hurman Fortress with these features starting from the Roman period of the Ottoman Empire ' until the end of. The same figure in the Anatolian Seljuk Empire Elbistan from

Kayseri caravan route to the palm's was to pass in front of the castle and the international trade fair location " Yabanl Sunday" of transport has dominated the caravan routes that provide (Aries, 2017: 40 et al.) .

The castle dates, Dağlıca (Marabuz) Tea on the edge of the palm and the eastern side of the town from the road about 100.00 m was built on a rocky hill in height. Hurman River flows on three sides of the hill where the castle is located and surrounds the structure as a peninsula. Historical The building, known as olarak Rumman Castle Kal, is now known as Hurman Castle . At the same time among the people because the former name of the town " Marabuz Castle" shaped and the settlement where the citadel is located is referred to as “Marabuz Mezrası” in the Maraş fortification book of island1563 and it is registered that its annual income is 1000 acres. Again The area where the fortress was located in the Ottoman archives was named man Hurman Kalesi Village Osmanlı . Similarly, it is mentioned as inde Merzuban Castle Kal during the Anatolian Seljuk period due to its name . Mateus, Urfa , recorded as üyük Farsan (Merzuban) castle (Yinanç and Elibüyük, 1988. 653).

Hurman Castle was built in the valley where the Hurman Stream passes. 5 km to the Bad Castle and Sütpişiren Castle is 11 km away. These fortresses are small structures built in the form of a surveillance and a police station . In addition, the village of Afsin-bream İkiztepe and Tulip Hill ' n There are two more in the castle. The Hurman Castle was built with great planning by providing links to the surrounding castles and providing the necessary logistic support. This castle Kayseri ' den from the top of the palm and Sariz-Malatya, in Göksun and Afshar's path to the node is located. It also controls Afşin and Göksun over the mountain road connecting Gürün to Sivas (Özkarcı, 2007: 752-760).

4. INTERVIEW ANALYSIS REPORT

4.1. Location of the Building, Registration and Property Status

4.1.1. Location

Hurman Castle (Marabuz), Kahramanmaraş, Afsin District, is located at the eastern end of Dağlıca Town . Within the boundaries of the town of Dağlıca (Marabuz); 33 km . It is 74 km to Kahramanmaraş and 41 km to Afsin District . Hurman Creek flows right from the edge of the castle. It sits on steep rocks on a small hill . The building style resembles the Byzantine castles. Since the castle was destroyed, a specific plan could not be removed. (Refer to Document 1-2-3-4-5 Allocated Delivery Minutes -Company map-Registration Slip)

TAHSİSLİ TAŞINMAZ TESLİM VE TESELLÜM TUTANAĞI

TAŞINMAZIN			
Taşınmaz No	46020104587	Cinsi	Kale
Fiili Durumu	Hazinenin Özel Mülkiyetinde	Yüzölçümü (m²)	18.239,05
İli	Kahramanmaraş	Hazine Hissesi	Tam
İlçesi	Afşin	Tapu Tarihi	19/02/2010
Mahallesi / Köyü	Dağlıca - Bahçelievler Mahallesi	Pafta / Cilt No	... / ...
Caddesi / Sokağı	/	Ada / Sahife No	204 / ...
Yöresi	HURMAN KALESİ	Parsel / Sıra No	2 / ...

TAHSİS İLE İLGİLİ BİLGİLER		
Tahsis Edilecek Olan İdare	Kültür ve Turizm Bakanlığı / Kültür Varlıkları ve Müzeler Genel Müdürlüğü	
Tahsis Amacı	Hurman Kalesi (Harabe ve arsası)	
Tahsis Süresi / Yüzölçümü	Hizmet Süresince	18.239,05
Yasal Dayanak	178 Sayılı Maliye Bakanlığının Teşkilat ve Görevleri Hakkında Kanun Hükmünde Kararname	
Tahsis Yetkisi	Genel Müdürlük Yetkisinde	
Tahsis Tarih ve No	17/08/2010	28625
Genel Müd. Dosya No		

ÜZERİNDE BULUNAN MUHDESATIN
Cinsi: Hurman kale harabesi Nevi: Tarihi yapı Miktarı: 1 Adet

Yukarıda özellikleri yazılı taşınmaz tahsis amacında kullanılmak üzere ve tahsis amacı kalmadığında idaremize iade edilmek üzere aşağıda adı, soyadı ve görev ünvanı yazılı bulunan şahsa teslim edildiğine dair iş bu tutanak birlikte tanzim ve imza altına alındı. 14/07/2011

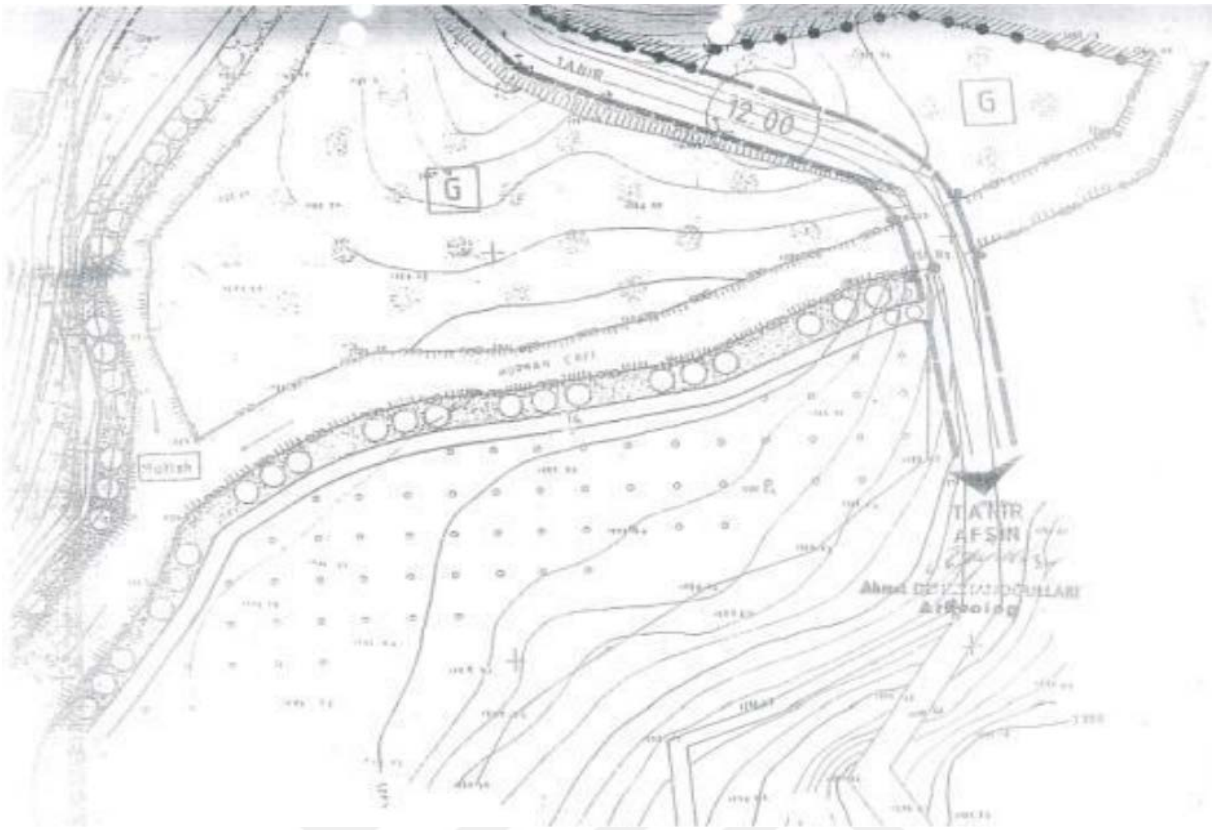
TESLİM EDEN

Hüseyin MÜDÜROĞLU

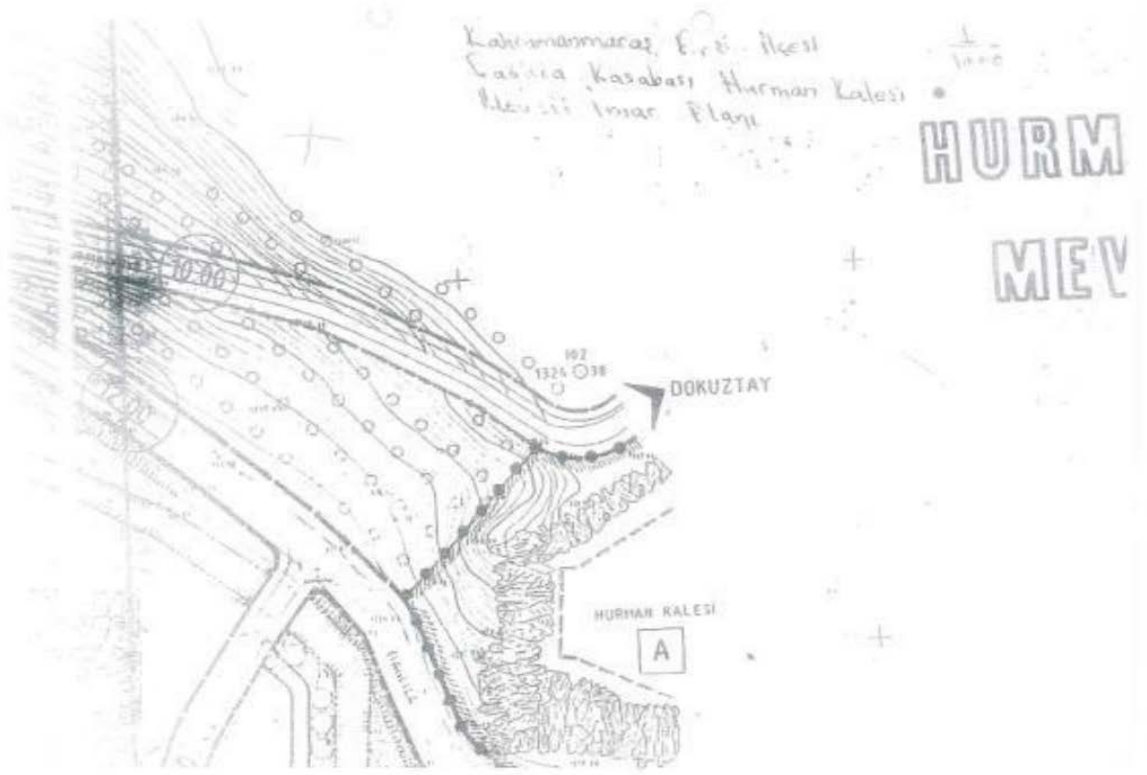
Milli Emlak Memuru

TESLİM ALAN

Document 1 . Hurman Castle Allocation of Delivery



Document 2 . Hurman Castle Registration Map



Document 3 . Hurman Castle Registration Map

Document 4 . Hurman Castle Registration Map

Document 5 . Hurman Castle Registration Map

4.1.2. Registration Status

The Kale structure in Dağlıca Town, Afşin District of Kahramanmaraş province was registered by the decision of the Board of the Regional Board for the Protection of Cultural and Natural Property , Adana, dated 09.09.1992 and numbered 1284.

4.1.3. Property Status

It belongs to the treasure and is in ruins.

4.2. General Description of the Structure; Interior and Exterior

4.2.1. General Description of the Structure

There are many castles in and around Kahramanmaraş. The majority of these fortresses, which are considered to be a must for military architecture , are built on rocky hills. While the fortresses were built, the hillstones were difficult to access , and the topogic rugged structure of the hill was used as well as the sharp rocky walls.

The Hurman (Marabuz) fortress has a plan diagram on top of a steep cliff at the edge of Hurman stream and in the east-west direction . It resembles Byzantine castles as an architectural age . The structure has been destroyed to a great extent. A large part of the interior walls and some parts of the outer walls were destroyed. It is understood that the castle structure was repaired in different periods from the material differences used in the castle .

The fortress was placed on the sloping rocky area in the east-west direction. According to the topographical structure of the land , the planned structure is approximately 42.00x87.00 m. In the construction of the fortress, lime mortar with fine lime, coarse stone and rubble stone material were used and wood beams were included in the walls . The walls of the walls are covered with fine stone. Wall thickness of the wall per 2.70 m ' is. A careful workmanship is seen in the construction of the castle. In the Front cladding of the fortification walls, although thin yellow stone is used in yellowish color, thin stone stones in black and red colors are also found. This The situation shows that the castle underwent repairs and renovations in different periods . Rook water demand of the meandering palm is provided (Photo 1 , 2 , 3 , 4 , 5 , 6 , 7) .

Photo 1. From the East to the Castle

Photo 2 . From the West to the Castle

Photo 3 . South to Castle View

Photo 4 . General View of the Northern Front

Photo 5 . General View of the Southern Front

Photo 6 . General View of the Eastern Front

Photo 7. General view of the Western Front

The fortress has come to our day as a ruin and has been destroyed by treasure hunters. Although the fortification walls of the building are somewhat intact, the interior walls were destroyed. 1318 H / 1900 m . in the saluted city of Aleppo province; An Hurman Fortress is located on a small hill 9 hours away from the Elbistan accident and the Hurman River runs around. This fortress is at an altitude of 50 cubits and estimated at 500 terbata. I Deru in many rooms of transit- time interior walls are walls that I have been around Munha also available. " Chi in the appended is mentioned (Ottoman Provincial Yearbooks Aleppo , 2012: 357). According to this information , it is understood that the rooms inside the castle were destroyed, but the fortification walls were present. The building was constructed by the Ministry of Culture . It was registered with the decision no. 1284 of 1992. However , no studies have been carried out on the preservation and restoration of the fortress (Photo: 5, 6 , 7) .

The fortress is enclosed by a narrow arched door with a height of 2.20 m and a height of about 5.40 m , reinforced by two bushes of rectangular cross section on the western side of the northern façade (Photo : 8 , 9) .

Photo 8 . Wall of KD 9-10

Photo 9 . Wall KI 9

But the door was destroyed. In addition, there is a small gate with a lower arch at the southern front, approximately 1.20 m wide and 2.50 m high (Photo: 10, 11, 12, 13).

Photo 10 . Wall of GD 12-15

Photo 11 . Cross Section AA (South Front) Entrance

Photo 12 . Cross Section AA (South Front) Entrance

Photo 13 . Cross Section BB (South Front) Entrance

The castle has a magnificent view from the outside. The walls, which were built on an average of 2.70 m , were reinforced with a total of fourteen towers, three from the east and the west, two from the south and six from the north . The bushings, whose widths range from 3.00 m to 7.20 m and are made in different sizes , are constructed as triangles, three as semicircles and ten as rectangular sections. The fortification walls were reinforced with a total of fourteen towers , three on the east and west, two on the south and six on the north . Bushes from the walls of 0.58 m to 6.55 m between protruding outwards. also Because of the topographical structure of the rocky hill, the fortress walls are gradually reinforced by a double row of towers that rise gradually as the castle is attacked by the north and west sides . The upper walls and the upper part of the bushes were destroyed and the height of the existing bushes ranged from 5 m to 12 m . The wooden walls in the bastions with the walls of the walls of the bastions and the walls of the bastions have not survived. Because the upper parts of the bushes were destroyed, some of them were filled with stone and soil (Photo: 14 , 15 , 16).

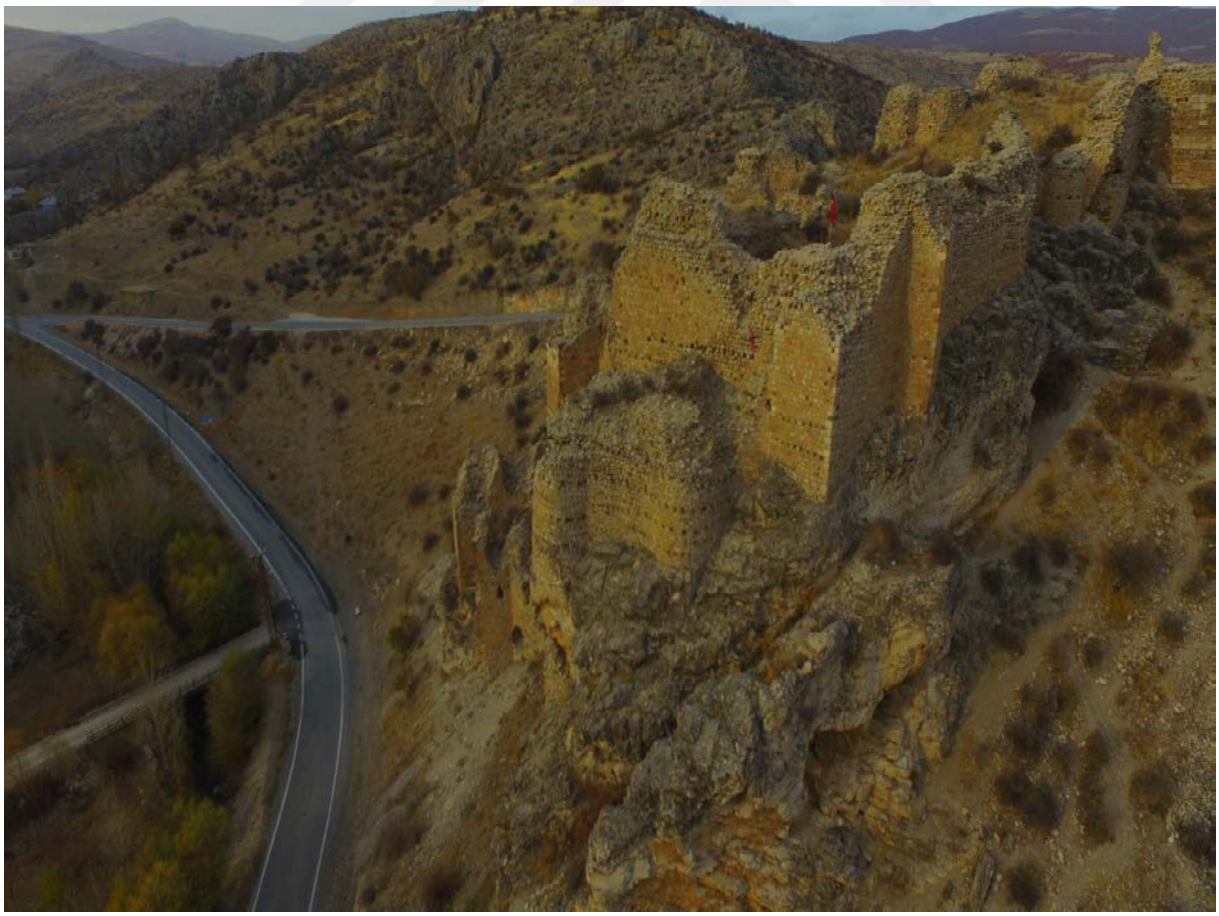


Photo 14 . General view of the Western Front

Photo 15 . South View of the Western Front

Photo 16 . BDU 1-3 BD 2-3-4-5

The places inside the fortress were destroyed and some of the remains of the wall did not survive, so it is not possible to determine what kind of interior arrangement the fortress has. On the north-west side of the citadel , a volume of 5.60x6.70 m inside and covered by a barrel vault remained partially afloat. In addition, the ruins of the water cistern, whose interior walls are plastered on the east side of the fortress, are also noteworthy. Construction of the places inside the fortress is heavily rough and rubble stone used. The castle was simply built (Photo: 17 , 18 , 19 , 20 , 21 , 22 , 23 , 24 , 25 , 26) .

Photo 17 . Wall BI 15

Photo 18 . Tower South Wall (Section 5-5)

Photo 19 . Tower South Wall (Section 5-5) and Stone Vault

Photo 20 . Tower Western Wall (Section 8-8) and Stone Vault

Photo 21 . North Wall (Section 6-6) and Stone Vault

Photo 22 . Tower North Wall (Section 6-6)

Photo 23 . Tower North Wall (Section 6-6)

Photo 24 . Tower Eastern Wall (Section 7-7)

Photo 25 . Tower Stone Vault (East View)

Photo 26 . Tower Stone Vault (West View)

Photo 27 . Hurman Castle General View

4.2.2. Plan Diagram and Interior Features

Hurman Castle is also built on a hill which is difficult to reach. The structure showing the medieval fort structure shows a longitudinal plan in the east-west direction according to the topography of the hill . Only the accessible parts of the eastern side of the citadel, which are accessible to the fortress , were formed by defending the cliffs with the fortification wall. The west side, which was more open to the attack , was completely surrounded by walls and towers. East and West than in the South and North walls of the longer walls of both the defense and surveillance are fortified with towers in order. The hill, where the castle is located, overlooks a wide valley that extends around it and dominates the road passing through its skirts. Entrance to the castle structure North-East and a gate from the South-East. The fortress has 14 bastions. The structure is shaped according to the topography of the hill and there is a remains of a vaulted structure . Although the remains of other buildings stand out in the structure, the mounds inside the castle are the remains of the buildings in the fortress. In order to clarify these structures, archaeological excavation research is required (Photo: 1 , 2 , 3 , 4 , 5 , 6 , 7) .

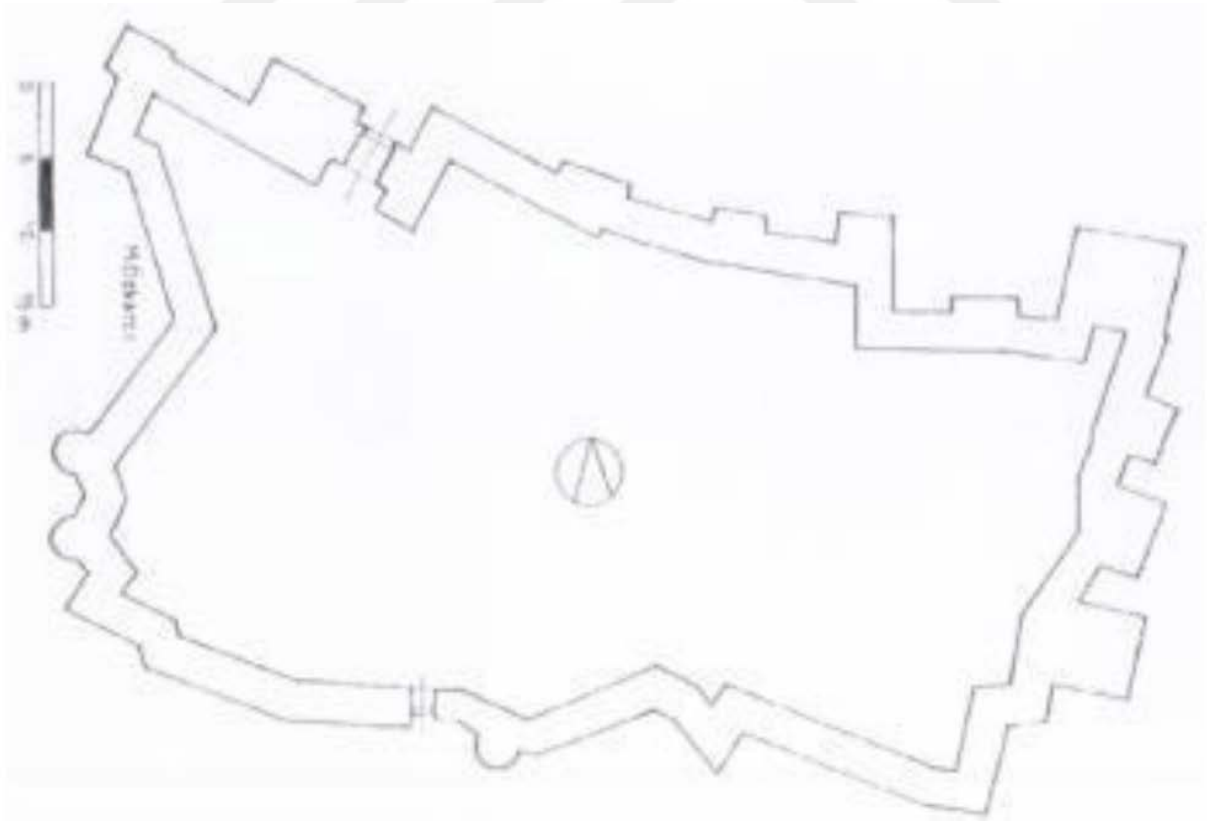


Figure 3 . Hurman Castle Plan
Source: Özkarcı, 2007: 752

4.2.3. Fronts

4.2.3.1. Main Front

4.2.3.1.1. Western Front; I. Body (Bottom Wall)

The Western Front is shaped according to the rocky area where the topographic structure of the hill is used well and the rocky walls are used as the two walls. From the north-west direction, in the lower body of the building, it is a square-shaped bush, approximately 4.94m.x4.49 m. The upper part of the sign is completely destroyed. As a material, rubble and lime mortar were used. The outer surface of some parts of the bush is covered with finely cut, smooth cut stones. There are two rows of wooden beams in the structure . The remains of the remains are collapsed from the base and the upper part and the material is rubble stone and lime mortar as in the whole fortress structure. wall On the surface of the wall, shiny smooth cut stones are found. There are two large openings in the main section and the middle section on the wall remains . From the foundation wall of the wall of the three wooden timber draws attention. In the northern part of this wall is a crib arched door opening with a width of 1.98 m . Rubble stones on the surface of the door have been poured, and there is a loophole of 0.31 m x 0.32 m in the west direction of the door . The fortification walls of the fortress entrance were destroyed to a large extent. In this section, rock mass is seen. Ruined fortification walls at the base level of rock mass continues in the upper part of 1:35 m x 1.63 m in dimensions to a large opening is observed. In the continuation of the rock mass, as can be seen from the material, approximately 10.00 m long masonry is observed. On the wall, a circular opening and the subsequent wall weave system are seen to have collapsed from the upper section. In this section, the rock cave formed a space. This venue is still the continuation of the rock mass as a whole, we see that

(Photo: 28 , 29 , 30 , 31 , 32 , 33 , 34 , 35 , 36 , 37 , 38 , 39 , 40 , 41 , 42 , 43 , 44) .

Photo 28 . BDU 1-3 BD 1-2-3-4-5

Photo 29 . BDU 1-3 BD 2-3

Photo 30 . BDU 1-3 BD 1-2-3-4-5

Photo 31 . BDU 1-3 BD 2-3-4-5

Photo 32 . BDU 1-3

Photo 33 . BDU 1-2-3-4-5-6

Photo 34 . BDU 4-5-6-7-8-9

Photo 35 . BD 6 (LOWER) -9

Photo 36 . BD 6 (LOWER)

Photo 27. BD 7-8-9-10-11

Photo 38. BD 7-8

Photo 39. BD 8

Photo 40. BD 9-11

Photo 41. BD 7-8

Photo 42. BD 10-11

Photo 43 . A North View of the Lower Western Wall

Photo 44. BD 11

4.2.3.1.2. B at the Front II. Size (Middle Wall)

Starting from the north-west direction, in the upper body, it is seen that the structure of the tower, which has a shiny smooth cut stone with a square plan located on the rock mass, is seen as being collapsed . Located inside walls made of doğru4.36m.girint continue on and near the square 0:55 m x 0.70 There is an opening in dimensions m . Afterwards, the fortification walls were completely demolished and the walls of the walls continued to the south west direction . Again in this direction, two round towers are observed by following the shape of the rock mass . The tower structures, which were largely demolished, are a continuation of each other. The first of the cylindrical towers is 5.72 m in length and 5.60 m in height and 4.28 m in length and 6.78 m in height . Building walls horizontal The four-storey wooden siding placed in it is noticeable. Although rubble stone and lime mortar is seen as a knitting system , in some parts thin cut stones are seen. The upper part of the cylindrical towers completely collapsed and consists of rubble and bushes (Photo: 45, 46, 47) .

Photo 45. BDU 8-9

Photo 46. BDU 8-9 KD 4

Photo 47. BDU 8 KD 4

4.2.3.1.3. Western Front III. Bed en (Top Wall)

The western wall of the sign with a square plan is located in the north. The upper part of the bush is completely destroyed. 5.76 m in size, as material, rubble stone and lime mortar used. The outer surface of some parts of the bush is covered with finely cut, smooth cut stones. Smooth cut stones appear to have been cast in place. There are two rows of wooden beams in the structure . There are heaps of stones in the structure. This shows us that the structure continues in the west direction. The building continues at the end of the rubble stone piles . 4.93 remnant space between two m ' is. In the rock mass where more planned according to the shape, the frame structure for a bush-shaped 4:41 x 4:49 m in size structure of the upper portion are extant. Burcun construction material across the castle used as rubble stone lime mortar and bright cut stones on the outer surface. It is seen that the walls were destroyed in places. In the upper body of the structure , a row of wooden beams is seen. There is an opening of 0.32 x 0.34 m near the square in the north direction of the sign structure . In the upper part of this

opening is another square with a size of 1.07 x 1.45 m . According to the topography of the rock mass, the walls continue to break inward and end in the south . From the point of its breaking, the fortification wall is 2.58 m wide and 16.65 m long. Although the wood surface is seen in three rows on the wall surface, the continuity of the wooden beams along the surface is not seen. 1.11 m on the wall x 1:48 There is an opening near the square where m is less than 0.30 x A further opening of 0.32 m is seen. The upper part of the fortification is completely destroyed, but as the castle structure, The material repeats the material seen in the entire fortress structure (Photo: 28, 29, 30, 31, 32, 33, 34, 48, 49, 50, 51).

Photo 48. BDU 4-5-6

Photo 49. BDU 4-5 BD 6 (TOP)

Photo 50. BDU 1-2-3-4-5-6-7-8-9

Photo 51. BDU 4-5-6-7-8

4.2.3.1.4. Western Front Interior

The inside of the building is filled with rubble and rubble stones poured from the structure and thus the ground is raised. There is not much information about the interior space because it is filled with rubble pile inside the bushes on the western front. The ruins of the walls, which are thought to be inside the fortress, appear in places within the castle. In the construction of the places inside the fortress, rough roughing and rubble stone were used (Fig. 4, Photo: 52, 53, 54, 55, 56, 57, 58, 59, 60, 61).

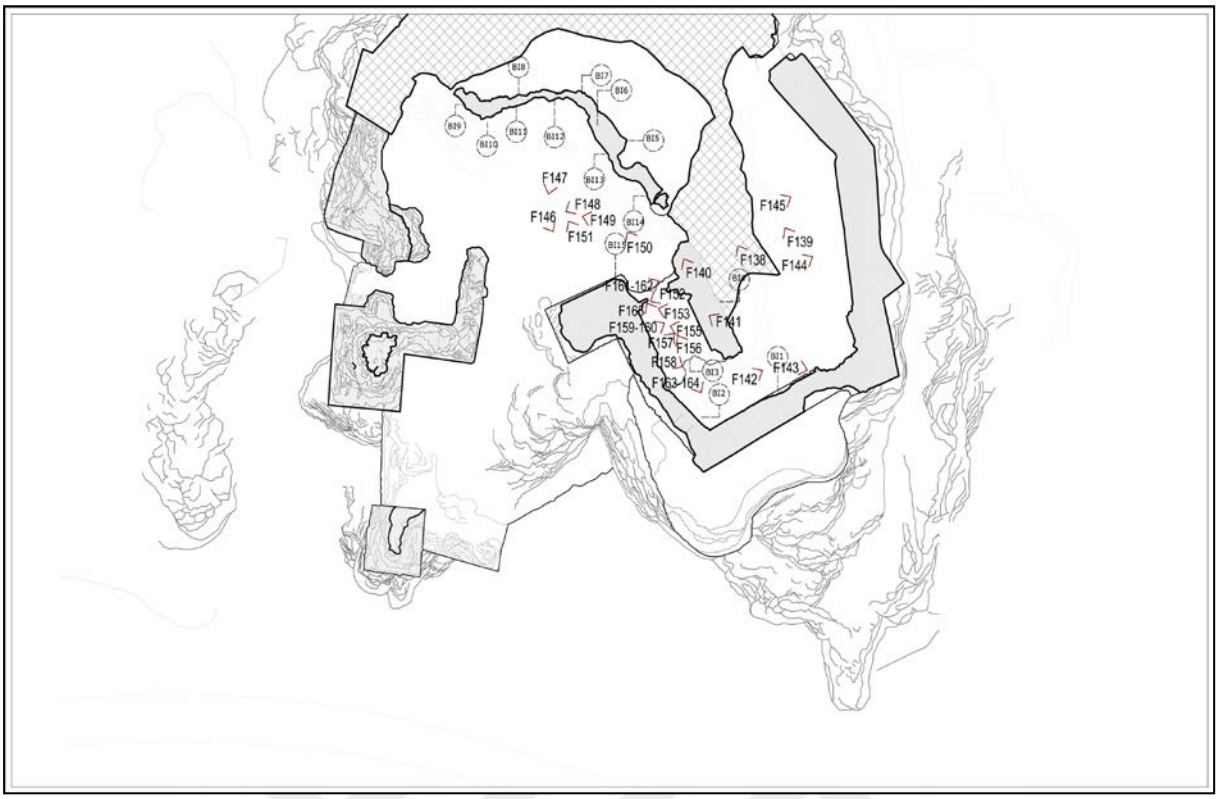


Figure 4 . Western Front Interior Walls and Wall Coding Photo Orientation

Photo 52 . Hurman Castle Western Front

Photo 53 . Wall BI 1

Photo 54 . Wall BI 2

Photo 55 . Wall of BI 3-4

Photo 56 . Wall of BI 4-5-6-7

Photo 57 . Wall BI 4

Photo 58 . Wall of BI 9-10-11

Photo 59 . Wall of BI 9-10-11-12-13

Photo 60 . Wall of BI 12-13

Photo 61 . Wall of BI 13-14

4.2.3.2. Eastern Front

The Front facing the road has a plan shaped according to the topography of the rock mass. Three towers can be seen along the eastern wall . From the south-east, the upper part of the structure of the tower, which was built on a rock- sized 6.10 x 4.55 m square, is in ruins. In the horizontal plane, six rows of wooden beams are seen along the wall surface. Knitting system is rubble stone and lime mortar and smooth cut stones are used on the wall surface. In the continuation of the sign structure, the fortification wall continues for 4.00 m . Shaped frame, the second bushing structure of 3.20 m in height and 5.60 m width of the top walls of the part of the structure more bush-ruined 5.00 m continues. Next, another square structure with a square plan appears. Upper section and part of the base part of ruined structure of the horoscope 4.36 x 1.15 m in dimensions. Two rows of wooden roofs are seen in the western wall . On the south facing wall of the burial structure, a row of wooden beams is noted. In the continuation of the sign structure, the fortification wall is 4.25 m. Along the wall surface there are five rows of wooden beams . Knitting system is rubble stone and lime mortar

and smooth cut stones are used on the wall surface . The eastern Front is located on the rock mass and has taken its shape by drawing zigzags according to the shape of the rock mass (Figure 5 , Photo : 62 , 63 , 64 , 65 , 66 , 67 , 68 , 69 , 70 , 71 , 72 , 73 , 74 , 75 , 7 6 , 77) .

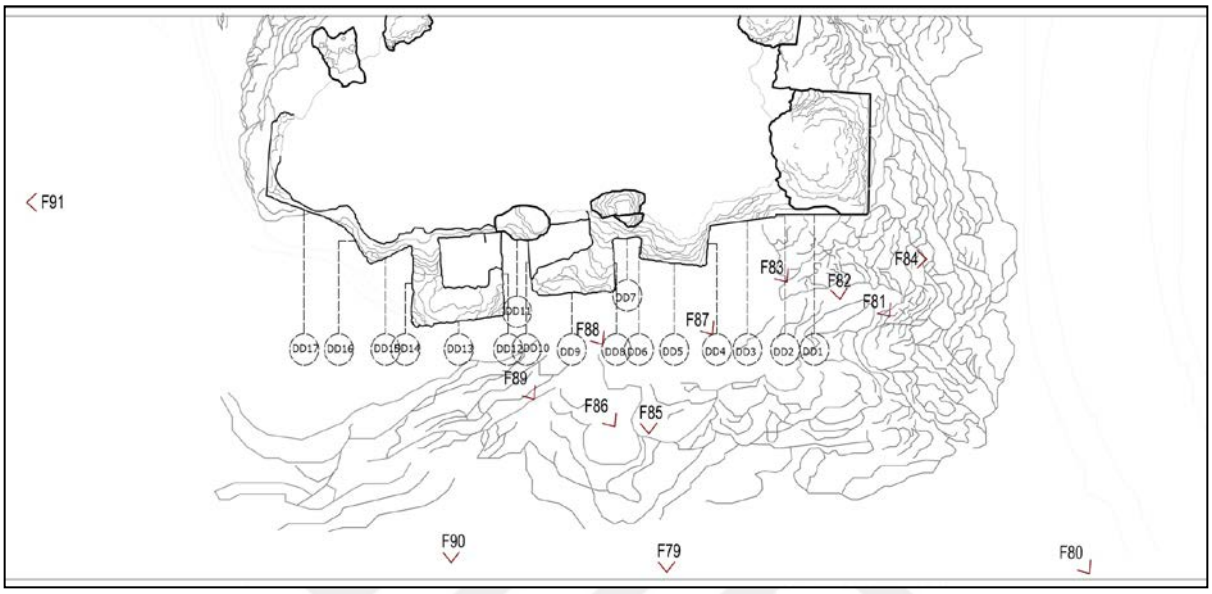


Figure 5 . Eastern Front Exterior Walls Photo Aspects and Wall Encodings

Photo 62 . Hurman Castle East Front

Photo 63 . General View of the Eastern Front

Photo 64 . Wall of DD 1-2-3

Photo 65 . Wall of DD 1-2

Photo 66 . Wall of DD 3-4

Photo 67 . Wall of DD 4-8-12

Photo 68 . Wall of DD 1-3-5-7-8-9-11-12

Photo 69 . Wall of DD 1-3-5-7-8-9-11-12-13

Photo 70 . Wall of DD 7-8-9

Photo 71 . Wall of DD 9-11-12-13

Photo 72 . Wall of DD 12-13

Photo 73 . Wall of 9-11-13-17

Photo 74 . Wall of DD 14-16

Photo 75 . Wall DI 1

Photo 76 . Wall DI 2

Photo 77 . Wall DI 3

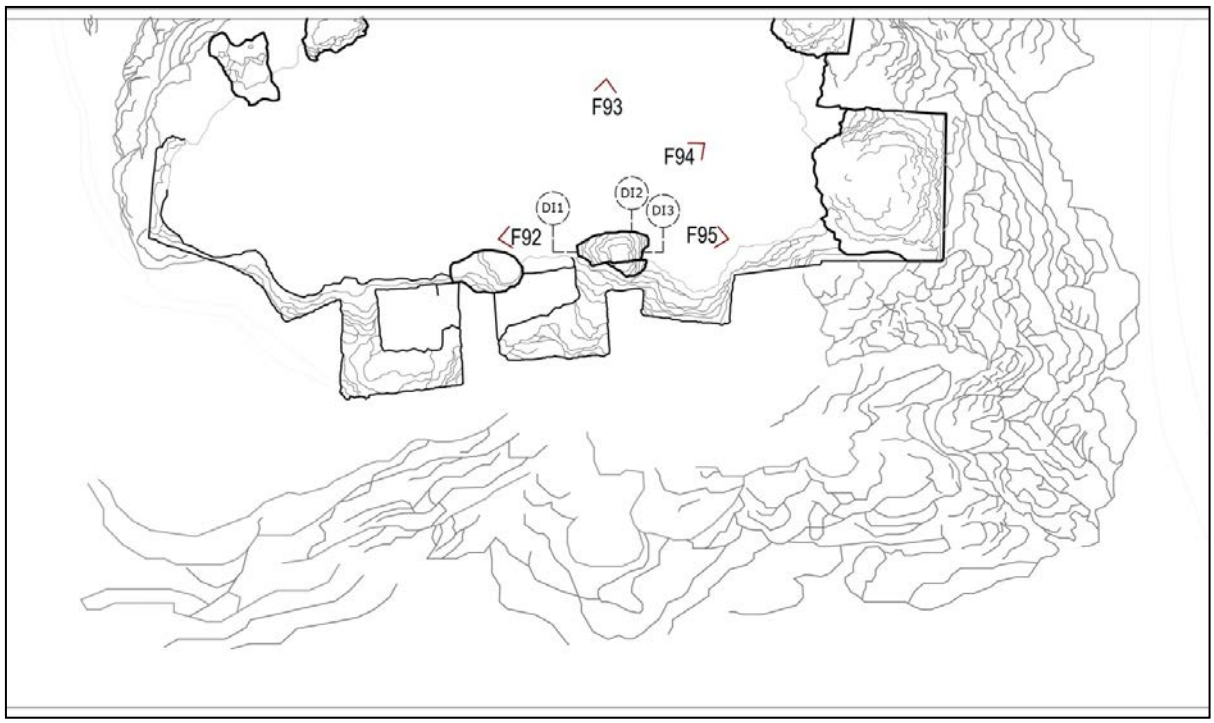


Figure 6 . Eastern Front Interior Walls Photo Aspects and Wall Encodings

4.2.3.3. South Front

The natural rock overlooks the Hurman Stream on the southern facade of the rocky site. If we start from the South West direction, in the south wall of the tower building, which starts with the southern fortification wall, the upper part of the fortification wall is completely ruined and filled with rubble. On the wall surface there are five wooden beams on top of each other. This section, which continues for 5.96 m, continues at 2.02 m. According to the shape of the rock mass, after the fortification wall continued for 5 m, a second break is made and the fortification structure is continued for 3 m. In some parts of the walls of the walls, which have been completely demolished in the upper part of the fortification walls, it is observed that the stones are poured in places. The upper part of the fortification walls is filled with rubble. There are three rows of wood beams on this surface (Figure 7, Photo: 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91).

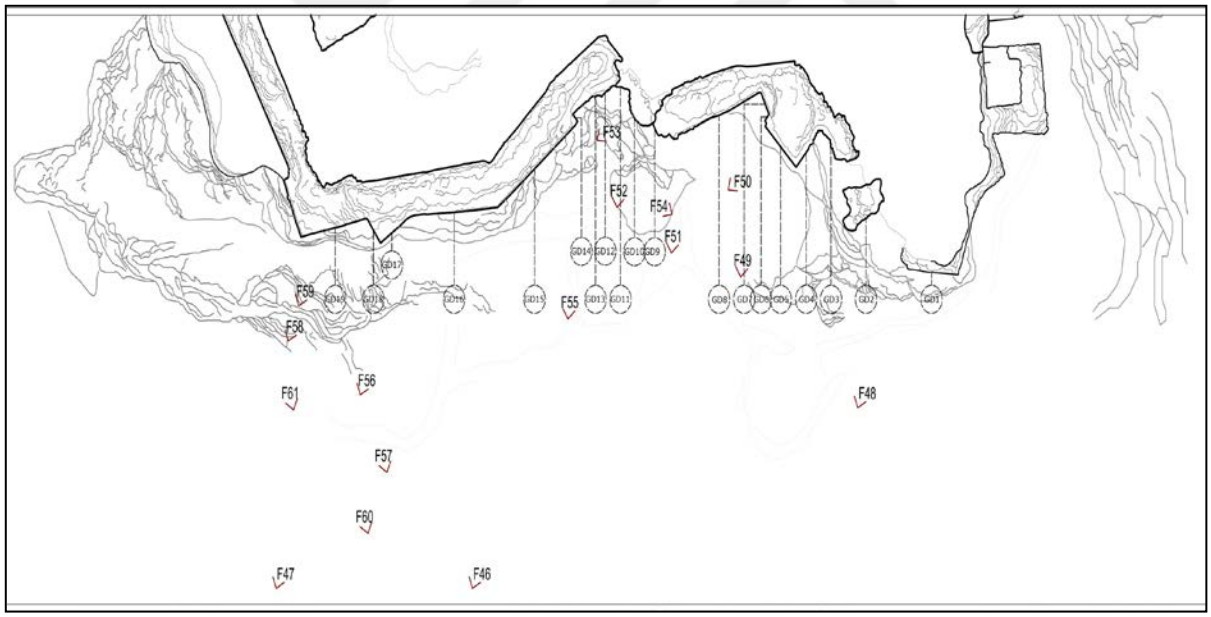


Figure 7 . South Side Exterior Walls Photo Aspects and Wall Encodings

Photo 78 . South Side of Hurman Castle

Photo 79 . General View of the Southern Front

Photo 80 . Wall of GD 1-2-3

Photo 81 . Wall of GD 3-4-5-7-8

Photo 82 . Wall of GD 5-7

Photo 83 . Wall of GD 5-7-8-9-10-11-12

Photo 84 . Wall of GD 8-9-10-11-12

Photo 85 . Wall GD 10

Photo 86 . Wall of GD 12 - 15

Photo 87 . Wall of GD 9-10-11-12-15-16

Photo 88 . Wall of GD 15-16-17-18-19

Photo 89 . Wall of GD 15-16-17-19

Photo 90 . Wall of GD 18-19

Photo 91 . Wall of GD 15-16-17-18-19

4.2.3.4. Secondary Door

A pathway leading from the rocks towards the south reaches this door. In the south-west direction, the door does not take place symmetrically from the topography . 2.10 m width from the outer side of the door beam heights of up to 2:53 m ' is. The arch of the door which was observed to be arched and the stones in the body part were poured (Photo: 86).

From the entrance gate, the fortification wall continues for 3.83 m . At the end of fortification, 3.60 m diameter round tower built form, an arc 1:37 m ' like a wall to the south-east wall is attached to the wall. In the horizontal plane, a single row of wood beams is seen. Built as a storey as the tower, which has a wall thickness of 4.86 m , is now largely destroyed . The exterior of the tower, which is constructed from rustic and coarse stones, has been casted. Afterwards, 90 cm progressing towards the inner wall of the fortification 5 m morecontinues. 2.30 m wide with a square plan at the end of the 2 m straight upright wall towards the interior . 3 m . From this section, the remains of the fortification wall remain on the rock mass for a further 5 m. The wall remains at the end point (South-East) are stronger than the others.

According to the topography of the rock mass, it is seen that the South Fortification walls continue with zigzags. Coarse rubble stone was used in the knitting system. Rock mass supports the walls. The length of the southern fortification wall was 54 m in total and was built with rough stones (Photo: 79).

4.2.3.5. North Front

The north façade facing the Afşin Dağlıca road route is planned according to the topography of the rock mass . The main entrance of the castle is in this direction . From north-east direction 6.41 x The square structure of 7.26 m in height is on the rock mass . Five rows of wooden beams are seen on the wall surface of the horoscope structure, whose upper section is completely destroyed . Knitting system, rubble stone and lime mortar. On the surface of the fortification wall, shiny smooth cut stones are found. From the end of the eastern wall of the tower structure, the fortification wall continues to be 2 m straight in an oval context towards the interior . At the end of the fortification wall , a second building with a square plan is seen at 4.00x4.19m. In this section, where two rows of wood beams are observed, the masonry has been demolished by the side sections and the upper section. Wall mesh system is rubble stone and lime mortar and basic cutting stone mesh system Seen. The fortification wall at the end of this space 70 cm continues and the third bushing structure

is reached. The bush is 5.44 x 3.92 m in dimensions. In the section up to this, the upper parts of the structure were completely destroyed, the upper part of the fortification walls were covered with bushes and filled with rubble (Fig. 8, Photo: 92, 93, 94, 95, 96, 97, 98, 99, 100).

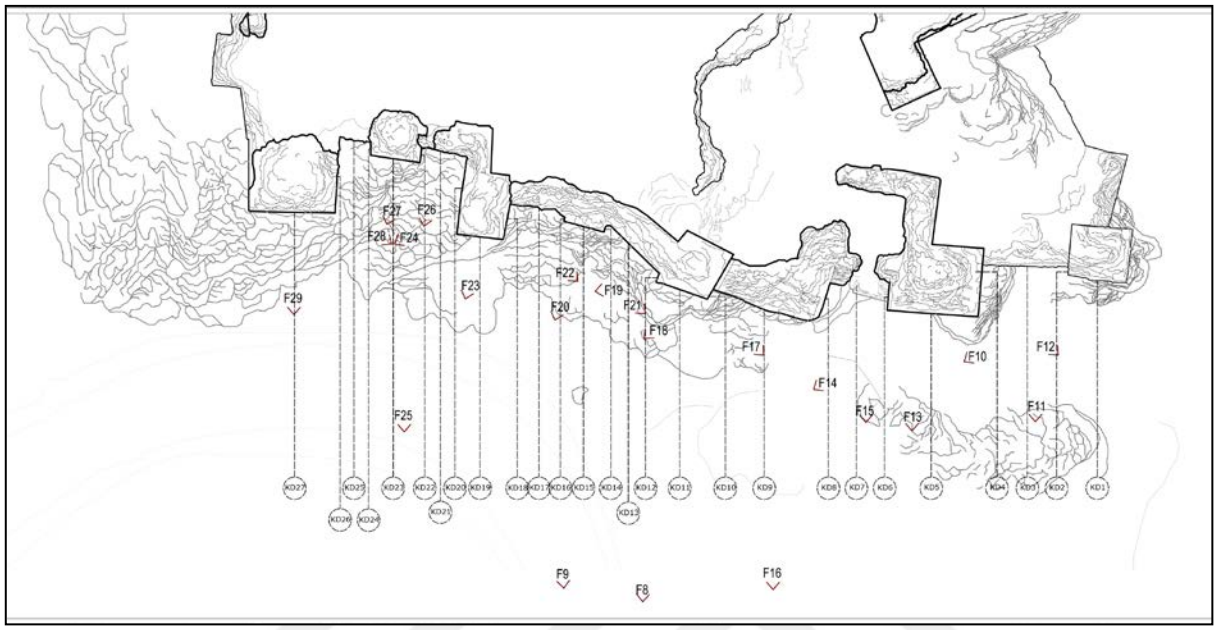


Figure 8 . North Side Exterior Walls Photo Aspects and Wall Encodings

Photo 92 . General View of the Northern Front

Photo 93 . North Side East Section

Photo 94 . Wall KD 1

Photo 95 . Wall of KD 1-2-3

Photo 96 . Wall KD 4

Photo 97 . Wall KD 15

Photo 98 . Wall KD 6

Photo 99 . Wall KD 7

Photo 100 . Wall of KD 9-11

From the end of the western wall of the third horoscope structure, the fortification wall, whose flat part continues to be 4.74 m , has been destroyed. Meanwhile 60 cm collapsed wall space there. 3:13 x 3.48 m tall upper section completely collapsed and the basic part of the fourth square structure with a strong square plan is seen. A row of wood beams on the wall surface is observed. Tower from the end of construction of the west wall of 5 m at the end of the straight walls ongoing 4.69 x A fifth-aisle structure with a height of 4.53 m is seen. The upper part of the structure, which we see that the stones have been poured in its basic parts, is completely ruined and is full of rubble . According to the shape of the rock mass, the fortification wall advances in this section . This part, which was in ruins, consisted of rubble. At the end of this section which is 7 m long, there is the main entrance gate of the Kale structure (Photo: 101 , 102 , 103 , 104 , 105 , 106).

Photo 101 . Wall of KD 19-21-23-25-27

Photo 102 . Wall KD 21

Photo 103 . Wall KD 23

Photo 104 . Wall KD 26

Photo 105 . Wall KD 27

Photo 106 . Wall KI 11

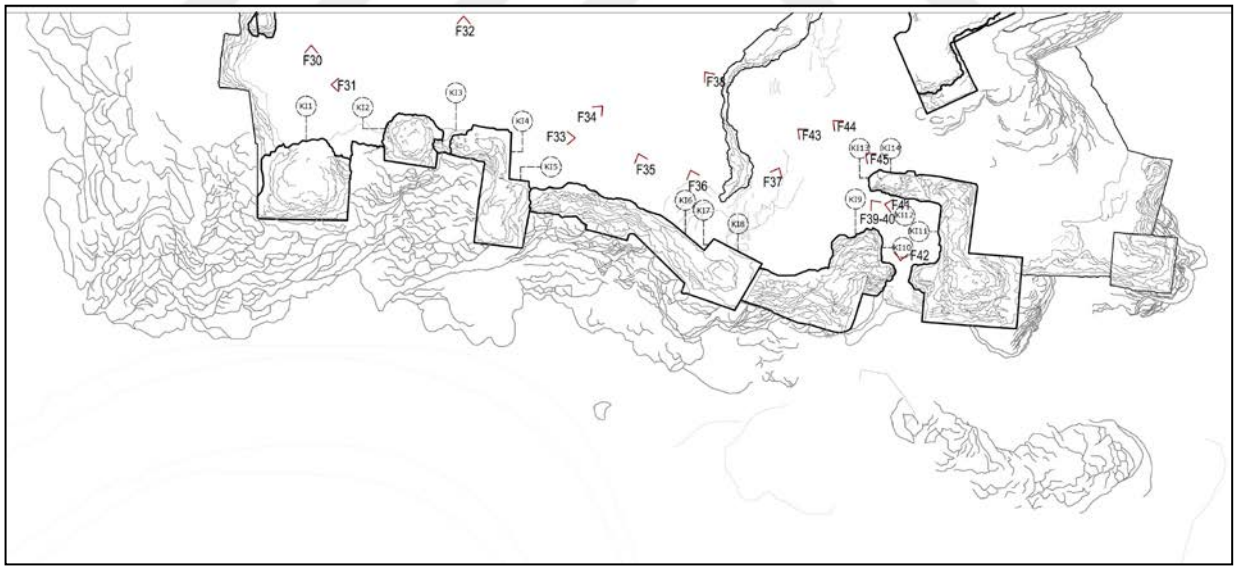


Figure 9 . North Side Interior Walls Photos Aspects and Wall Encodings

4.2.3.5.1. Main Entrance Door

The path from the north direction reached 1.33 m. In the width of 6.50mboy, the arches on the entrance door and the jambs made using smooth cut stones are seen. The

walls of the main entrance door, whose upper part has been demolished, are in ruins. Stones are spilled and this façade is terminated by a square plan of the north-west direction. In the north-west direction, the upper part of the square-planed horoscope structure, which is 7.65 x 5.67 m tall, protruding 2.34 m out of the main entrance gate, has been completely destroyed and is in the form of a rubble. It is seen that the main part is more stable than the upper part and it is covered with smooth cut stones. It is observed that the bush structure of the smooth stone pavement on the surface of the fortification wall has been poured at the foundation level (Photo: 8, 99).

From this section, the fortress structure is inclined to the west direction according to the structure of the rock mass. On the surface of the wall 1.03 x 0.87 m. There is an opening close to the square. Just above this opening, wooden beams are remarkable. The upper part of the fortification wall where rubble stone and lime mortar mesh system is seen is completely destroyed. The fortification wall ends at 1.00 m and ends with the north wall of the tower in the west. The material is the same as the whole castle. The upper part of the building is collapsed and is in the form of a rubble. In some places, cut stone material is seen on the wall surface (photo: 8, 97, 98, 105, 107).

Photo 107 . Wall of KD 14-15-17-18

4.2.3.5.2. Interior

The interior of the fortress structure, which consists of about 2000 square meters, consists of rubble heaps, mounds and bushes, and remains of the walls of buildings that are thought to exist in the fortress. The mounds inside the fortress are the remains of the buildings found in the fortress (Photo: 1, 2, 3).

Located in the west direction of the historical fortress structure, in the direction of the East-West, the wall with a cradle vault cover system not exceeding 1.40 m. arched niches. In the east, there is a clearance of 1.69 m at 2.00 m width and the building is completely demolished. The material of the building is the tombstone and the binding system is lime mortar (Photo: 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27).

Photo 108 . Hurman Castle North Front

4.3. Construction System

According to the topographical structure of the main rock, the fortress, which has a plan diagram in the East-West direction, dominates the road passing through its skirts, as it overlooks a wide valley that extends around the hill. Access to the gates to the north and south is provided by a path. In the whole structure, rubble and bricks are formed by using stones, bright cut stones on the wall surface and lime mortar as binding material. There is no data on the cover system of the building, and there is a backdrop of rocky and weeds. In fact, data on how the flooring is not found (Photo: 1, 2, 3). The only structure in the castle structure that has survived to the present day is the barrel vaulted space in the west direction. There are four crib arch niches in the space. There is no data on the flooring of the building and archaeological research is required as in the whole structure.

4.4. Analyzing Problems

The analysis of the carrier system, material problems, color changes and accumulations and biological formations of the registered works of the subject matter has been prepared as a result of two stage studies in place and in the laboratory.

During the field work; the information obtained from the building site was analyzed with scans on the analytical drawings.

In this process, the problematic areas of the building were photographed in detail.

The problems identified as a result of the study in the field were transferred to the drawings on the computer using the ’Mapping Method‘ (mapping).

In the Mapping method, each problem and structural damage are indicated by scanning in a separate color, and these scans are defined by a legend in which the problems on the letterhead are elaborated. Thus, it is aimed to identify similar and different problems in various regions of the structure.

According to the legacy of the historical building; structural problems for the carrier system, material degradation, color change and accumulations and biological formation are coded under the headings.

4.4.1. Problems Related to Carrier System

In the historical fortress structure, it was found that the structure was collapsed due to the fact that the structure was in a derelict condition and was not repaired . The most important structural problem observed in the structure is the masses seen in the walls of the walls and the masses resulting from the material losses in the inner and outer walls.

4.4.2. Material Problems

Due to the collapse of the building, serious material problems were detected throughout the building. In the stone walls of the building, deteriorations such as internal debris filling and outer wall material losses, surface erosions and joint discharges and some building blocks have been identified as regional pores.

4.4.3. Color Change and Accumulations

Due to the exposure of the building to atmospheric conditions, color changes due to moistening and work, dirt and dust accumulation are also observed.

4.4.4. Biological Formation

It is thought that the plant seeds carried by wind, rain, animal and people on the walls of the building have developed at various times in the landfill inside the fortification wall and continue to evolve out of the surface . In addition, microbiological formations can be observed on the Fronts which are exposed to atmospheric external conditions and lack of top cover of the building.

4.4.5. Indifference and Vandalism

Since the building has been abandoned for a long time and the necessary maintenance and repair work has not been carried out, the building has entered into a demolition process.

5. BUILDING MORTAR ANALYSIS REPORT

5.1. First Sample Supply

The samples taken from the building mortar were tried to be obtained from the place while the survey work was done. So I tried to catch the best possible points. I tried to be as rigorous as possible in order to provide mortar samples that were likely to be used during the initial construction.

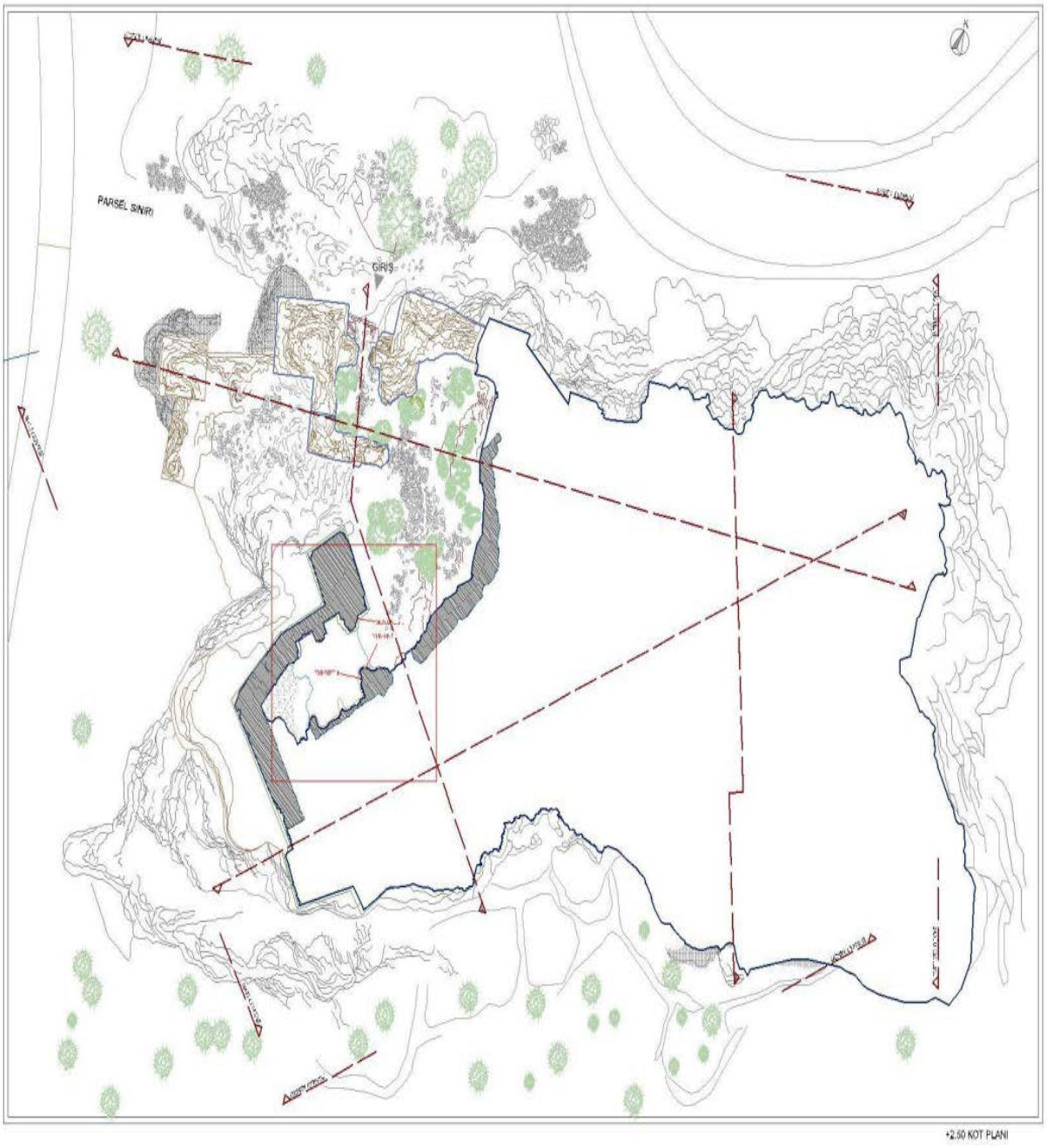


Figure 10 . Plan View of the Places Taken at the Bottom Floor + 2,00

Figure 11 . Upper Floor So + 15,00 In The Plan View Of Specimen Places Taken

The fortress consists of two main floors. These floors are shown as detailed and elevated in the survey project. The plan images of the samples taken from the lower and upper floors are as shown above. The detail images of the locations of the sample locations are as follows.

Other samples other than the sample number 5 consist of horasan mortar samples. The sample number 5 consists of wood. The samples are listed and the experiments planned to be carried out on the samples after their first arrival in the laboratory are listed. In these experiments, the wood sample was separated and the wood sample was processed as dry as possible.

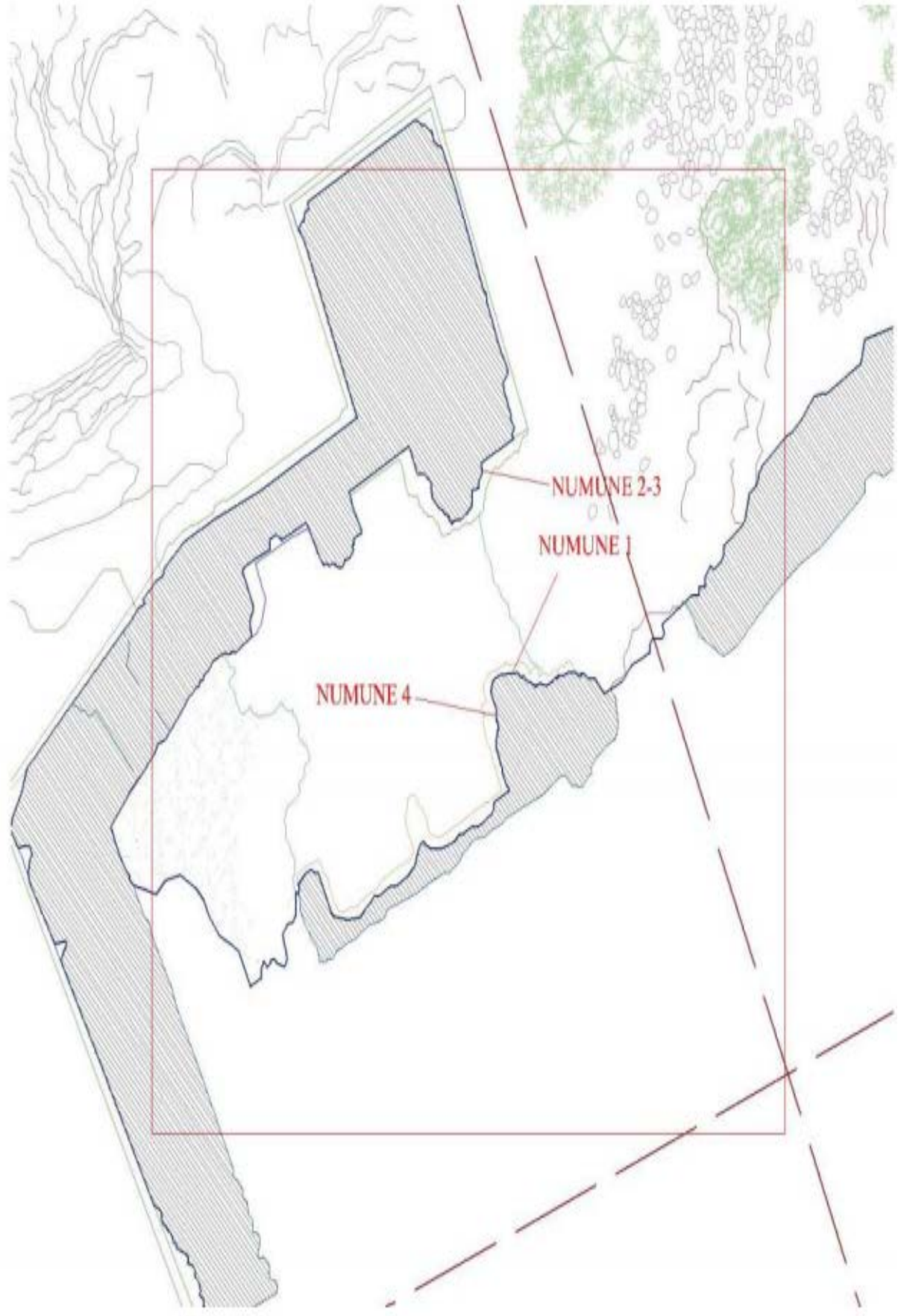


Figure 12 . Top Floor So + 2.00 The Sample Detail of the Plane Sample in the sample

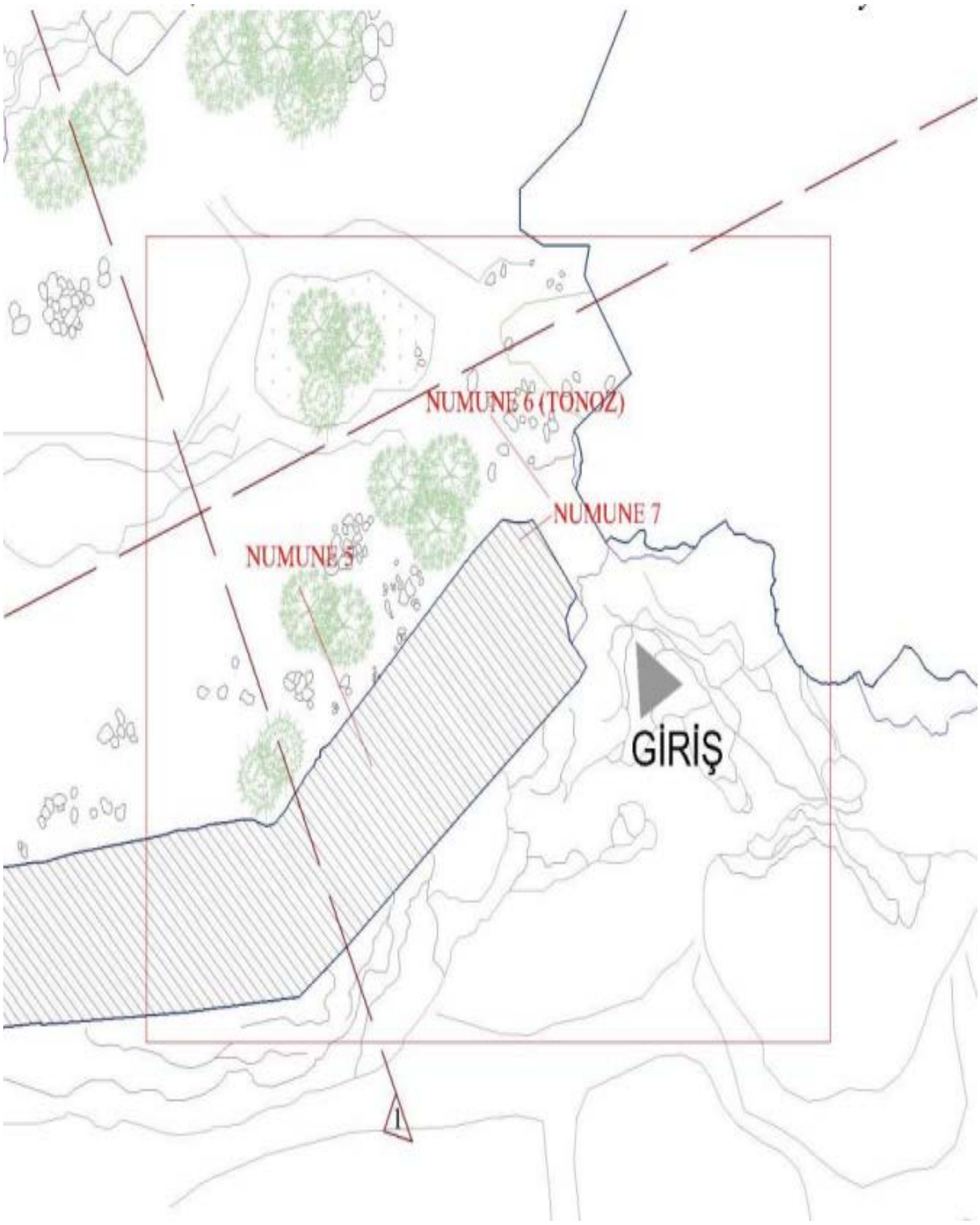


Figure 13 . Detail Detail of the planes at the upper floor ie + 15,00

5.2. Bringing the samples to the laboratory and preparation of the experiments

All samples are photographed for use by bringing the labels in the field to the laboratory and also recorded in the registry.

Photo 109 . Number 1 of the sample taken and the first view of the laboratory environment

Photo 110. Number 2 and 3, of the sample taken and the first view of the laboratory environment

Photo 111. Number 4 of the sample taken and the first view of the laboratory environment

Photo 112. Number 5 of the sample taken and the first view of the laboratory environment

Photo 113 . Number 6 of the sample taken and the first view of the laboratory environment

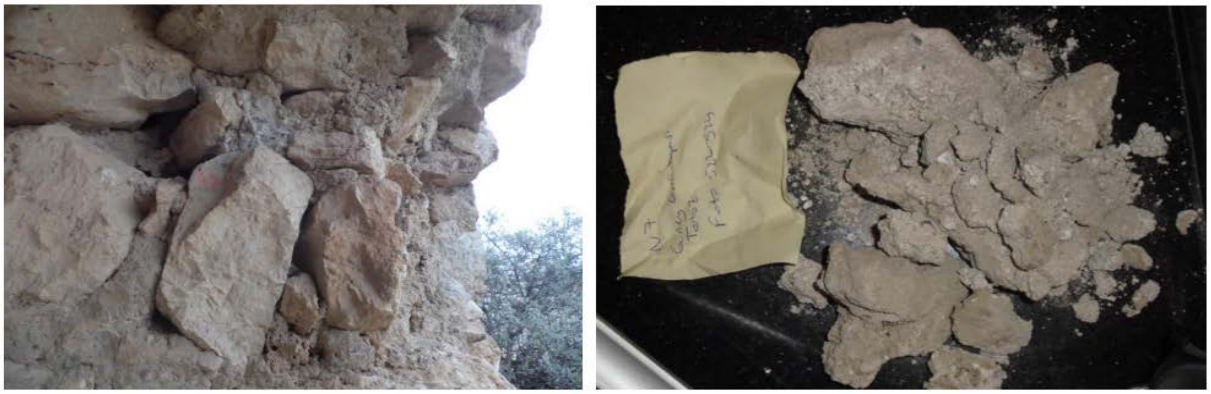


Photo 114 . Number 7 of the sample taken and the first view of the laboratory environment

As can be seen from the initial images of the samples in the laboratory, all samples were not obtained as a whole . In addition, wood nu m un e was tried to be obtained from the left in the wall.

5.3. Building Mortar Related Studies

5.3.1. Visual Analysis

In the analysis of Khorasan mortar, it is seen that while the lime is used intensively, it has been tried to provide support with sulfur or sulphate containing materials. We think that these materials are ash. A mortar model obtained from the mixture of stream sand and lime material is observed according to the possible period of wood ash.

In the analysis on experimental samples, we can talk about the silt material, which we think is also found in small amounts of sand. However, this material is not important because of the amount of trace.

Therefore, according to the results obtained from the experimental specimens, it was tried to increase the carrying power and adherence properties of the burnt lime by using well unburned stream aggregate safety properties (unwashed and undrawn) in horasan mortar.

However, as the sifting process is not performed correctly and completely, the unburned wood residues are also in the mortar. They can be considered as charred woods or charcoal. Although it is not a very good choice as a pozzolan, it is the best solution according to the conditions of the day. Wood charcoal or charred wood particles have also been used as fiber and used as a strength enhancer in a different format. In this format, the materials which serve as fiber increase the strength while also increase the ductility.

In light of this information, let's look at the samples in more detail.

Photo 115 . Image with 100 times and 250 times the magnification of the sample number 1

Sample No. 1: Sample contains lime and coarse-grained aggregate aggregate . No substance was found as puzolon.

Photo 116 . Image with 100 times and 250 times the magnification of the sample number 2 and 3

Sample 2 and 3: The information we can get from the stone part of the sample above is that it is a sedimentary carbonate rock with crystal features. Renlekme is due to differences in mineral structure. Hardness degree is high but shows rigid properties. Due to the formation of the metamorphism on the rock and due to the properties of the interconnectors caused a vascular structure.

Photo 117. Image with 100 times and 250 times the magnification of the sample number 2 and 3

The part of the building mortar consists of mixing the stream aggregate with a poor granulometry with lime. In addition, wood ash was used as puzolon. This structure is intensely seen in Anatolia before the Seljuk mortar mortars. Later, instead of baked clay powder was used. Although the strength of the clay is low, the clays which were cooked at high temperatures were used. This type of material gives strength to the mortar and added to the stiffness.

Photo 118. Image with 100 times and 250 times the magnification of the sample number 4

Sample No. 4: The sample contains lime and wood-ash together with fine-grained stream aggregate . The structure of the amorphous lime structure under the microscope shows how pure the structure is.

Photo 119 . Image with 100 Times and 250 Times Enlarged Cases of Wood Material

Sample Number 5 (Wood): It was observed that wood material was resinous and deformed over time according to fiber structure. It has been found that it is under the effect of shear force according to deformation shape.

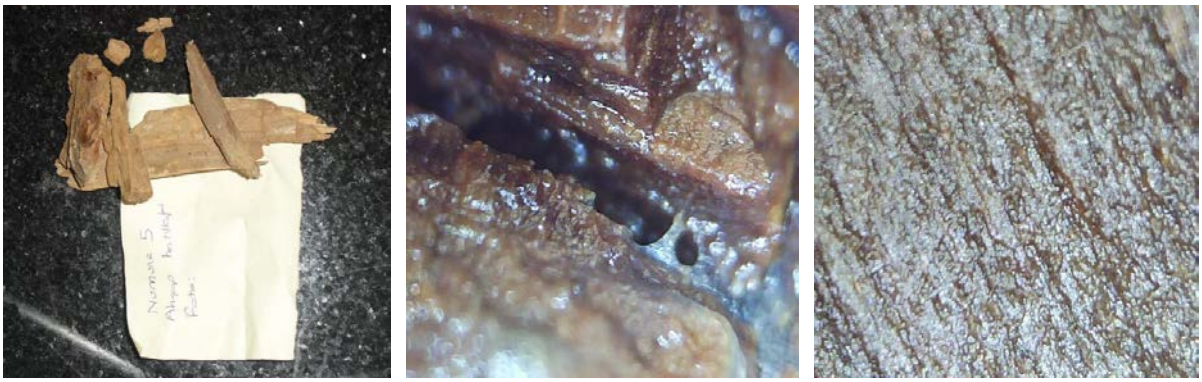


Photo 120 . Image with 100 Times and 250 Times Enlarged Cases of Wood Material

This situation can be said to be parallel to the acceleration of gravitational forces where wood material is located . On the contrary, if there had been a situation in the wood material, force formation would be observed to shift the fibers . This would tell us about the moment. The moment state in the masonry structures is considered to be an undesirable situation. It is avoided as much as possible.

Photo 121 . Image with 100 times and 250 times the magnification of the sample number 6

Sample No. 6: The sample contains lime and wood ash together with fine-grained stream aggregate. As wood ash is used without good sieving, it is seen as relatively coarse pieces.

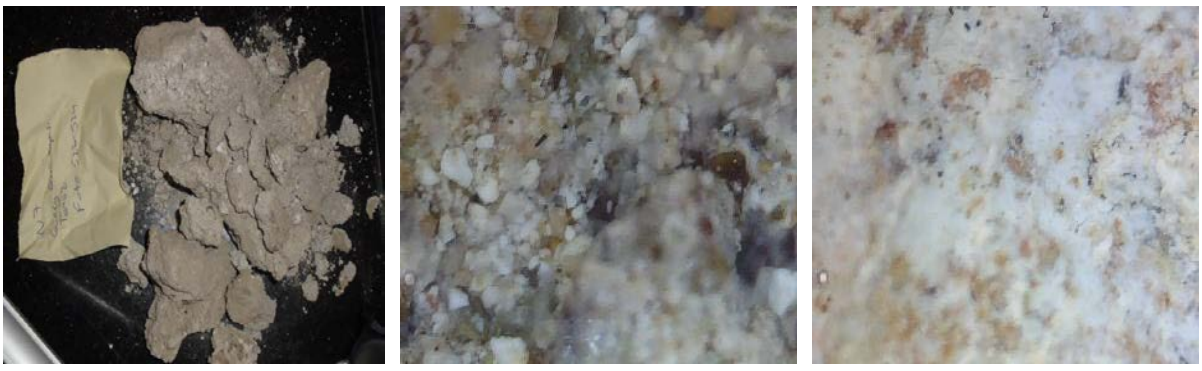


Photo 122 . Image with 100 times and 250 times the magnification of the sample number 7

Sample No. 7: The sample contains lime and wood ash together with fine-grained stream aggregate. As wood ash is used without being eliminated properly, it is seen as relatively large pieces. However, these parts are thinner than the number 6 material.

5.3.2. Physical Analysis

5.3.2.1. Strength Analysis

Samples taken from construction mortar in laboratory environment were tested on point load instrument. At the end of the experiment, the point load strength of the building mortar was measured and recorded. The result obtained is shown in tabular form in the test form. This table will help us to give information about the strength of the mortar to be redesigned.

Photo 123 . Specimens subjected to point load test in laboratory environment

In terms of average strength, the new mortar design must also be close to the existing mortar, so that the old mortar and the new mortar are adapted. This situation is important in terms of the life of the structure in many respects and most importantly the difference between the new mortar to be applied together with the old mortar.

If the mortar to be redesigned is stronger than the existing mortar; some of the parts built with the existing mortar will remain intact due to the force against the new mortar and may cause damage to other places, perhaps undamaged places today. On the contrary, the repaired places will be destroyed again by damage.

The following point load test results are also provided in the appendix.

KİBELE

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YÜKLENİCİ	ARBO YAPI	*Deney Tarihi*	10.04.2018
İŞİN ADI	HURMAN KALESİ		
ŞANTİYE ADRESİ	Afşin / KAHRAMANMARAŞ	*NUMUNEYİ ALAN*	Tuğba GÜNEY (Mimar)
NÜMUNENİN MENŞEİ	Horasan Harcı Yapı Malzemesi Numunesi	*Deney No*	

NOKTA YÜK DAYANIM ENDEKSİ HESABI

Numune No	AÇIKLAMA	Numunenin Boyu	Numunenin Eni	Numunenin Yüksekliği	Numunenin Çapı	Numunenin Ağırlığı	Numunenin Doğal Yoğunluğu	Numunenin Kırılma Dayanımı	Eşdeğer Karot Çapı	De^2	Düzeltilmemiş Nokta Yükü Dayanım Endeksi	Boyut Düzeltme Faktörü	$Is_{(50)}$
							γ	P	De		$Is=(P*10^3)/De^2$	$F=(De/50)^{0.45}$	
		mm	mm	mm	mm	g	g/cm^3	kN	mm	mm^2	Mpa		kg/cm^2
1	Horasan Harcı	61	37	17	49	24	0.63	0.098	49	2401	0.041	0.9909	
2	Horasan Harcı	50	24	30	37	46	1.28	1.990	37	1369	1.454	0.8733	
3	Horasan Harcı	69	30	10	49.5	32	1.55	0.333	49.5	2450.25	0.136	0.9955	
4	Horasan Harcı	75	47	32	61	113	1.00	0.559	61	3721	0.150	1.0936	
5	Ahşap Numune												
6	Horasan Harcı	65	72	9	68.5	41	0.97	1.059	68.5	4692.25	0.226	1.1522	
7	Horasan Harcı	59	31	34	45	74	1.19	1.736	45	2025	0.857	0.9537	
8													
9													
10													
ORTALAMA		63.1667	40.1667	22	51.6667	55	1.10	0.96	51.6667	2669.44	0.477	1.0149	

* Bu rapor laboratuvarımızın izni olmadan kısmen veya tamamen değiştirilmez veya kopya alınamaz.
* Bu sonuçlar sadece deney yapılan numunelere aittir.

ONAY

5.3.2.2. Sieve Analysis

In this study, it is an important study in terms of ensuring the lifespan of the building and its new adaptation. The building mortar obtained for this study should be started by ensuring that all possible grains are separated from each other without deforming the ceramic mortar.

ELEK NO	1 Nolu Numune	2-3 Nolu Numune	4 Nolu Numune	6 Nolu Numune	7 Nolu Numune	ORTALAMA
mm.	%	%	%	%	%	%
4	11.24	13.32	6.91	14.51	15.90	12.37
2	23.27	19.31	14.73	16.78	17.66	18.35
1	21.11	22.40	24.35	24.04	19.34	22.25
0.5	13.51	14.81	16.23	16.70	12.95	14.84
0.25	12.71	14.29	12.83	13.30	16.48	13.92
0.125	8.97	8.82	9.42	7.56	10.09	8.97
0.063	6.47	6.35	10.32	5.14	6.90	7.04
Beg	2.72	0.71	5.21	1.97	0.67	2.26

The point to be considered here is that the impact is not made to cause the deformation of the mortar. The mortar in this way can be passed through the sieves of various sizes and material decomposition in the building mortar can be achieved. In this way, we can have information about material design.

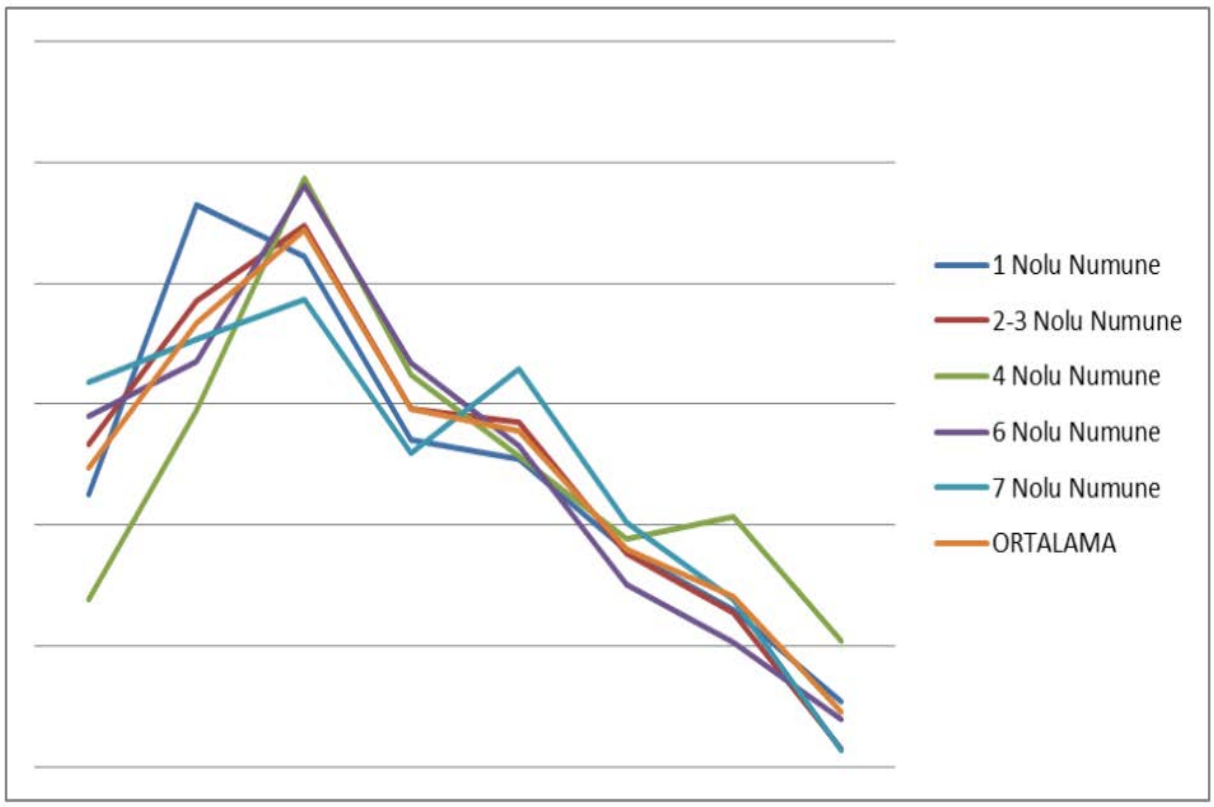


Figure 14. Comparative Graph Representation of Sieve Analysis Y-axis sieve diameter-X-axis overlay material

This table will enable us to have information about the biggest grain diameter of the mixture materials which will be used in the design of the new mortar mortar.

The above graphs allow the sieve analysis to be displayed collectively in proportion to each other. As it is understood from here, mortar samples contain a repetitive table in many respects. However, some detail points should not be overlooked. The material no. 4 started with a very fine material and the number 1 sample had a larger aggregate. They may be different from those who prepare the mortar, or the possibility of segregation at the sample point taken in the mortar should not be ignored.

5.3.3. Chemical Analysis

Photo 3. Image of Acidic Tests of Sample Number 1

Photo 125 . Acid Treatment of Sample No. 2

Photo 126 . As a result of acid treatment of sample number 4

Photo 127 . As a result of acid treatment of sample number 6

Photo 128 . As a result of acid treatment of sample number 7

For this experiment, the scoured mortar mortar, which is completely fragmented in ceramic mortar, is first weighed in the oven at 60 tamamenC for 24 hours. After this, the scouring mortar is measured by weight. They are reacted with the HCl (Hydrochloric Acid) in a ceramic container according to the molar amount equivalent to the weight of the building mortar. This reaction time should be waited for 24 hours until the gas outlet is exhausted. At the end of this situation, the losses in the re-weighed horasan mortar will be lost after reaction with the acid when it is proportional to the first mass.

If we analyze the above table, the high rate of losses is due to low aggregate content in the material.

Generally, other samples show close values with each other, except for the number 7 sample for the results of the samples. It is seen that the region with the number 7 sample has a difference if it is evaluated as periodic or master difference.

Table 1 . Acid Loss Test Results Table

Explanation	**Units**	**1. Sample**	**2. Sample**	**4. Sample**	**6. Sample**	**7. Sample**
First Sample + Cap	gr.	324	324	226	269	346
Last Sample + Cap	gr.	294	291	195	238	296
Cap Weight	gr.	287	279	182	229	292
First Sample	gr.	37	45	44	40	54
Last Sample	gr.	27	32	33	29	24
Difference	gr.	10	13	11	11	30
Lost Rate	%	27.03	28.89	25.00	27.50	55.56

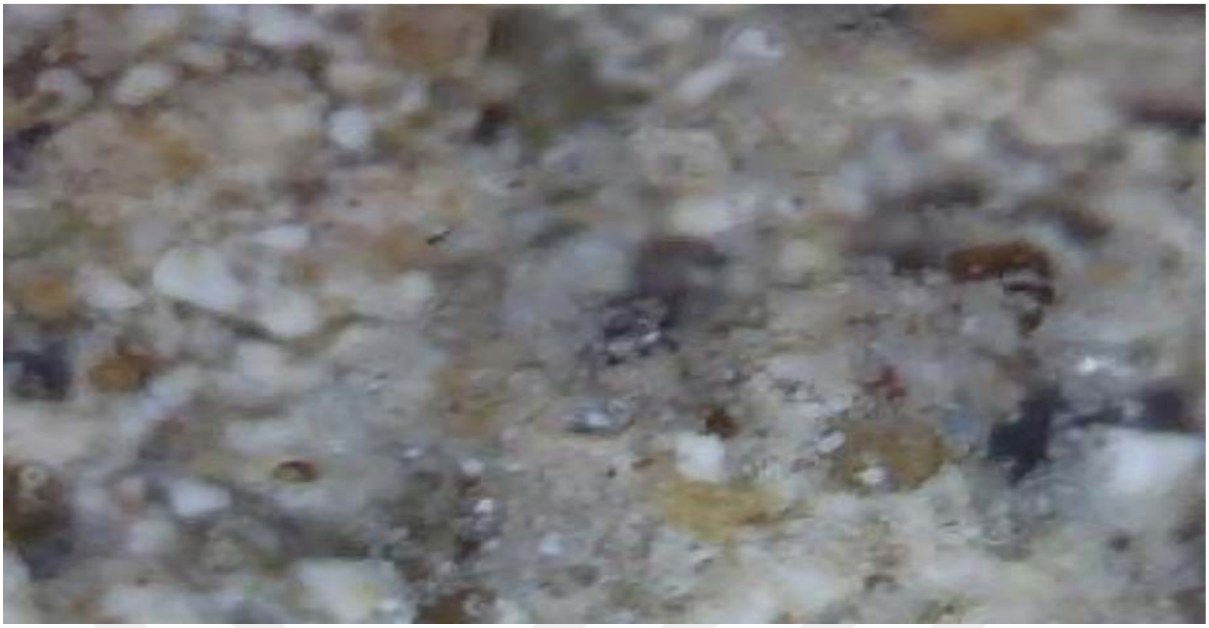
Whether the difference is periodic or for other reasons can be examined within the history of art. For these reasons, we are content to indicate that there is only difference.

Calculating the average loss sample No. 7 obtained irrespective of if we average loss rate was calculated to be 27.105, we make calculation by including the No. 7 sample loss rate is emerging as 32.796%.

The rate to be taken as the account value here should be considered as 27.105%.

5.3.4. Biological Analysis

In this study completely paçacıklandırıl ceramic mortar was magnified 200 times with horasan the three samples taken from various mortar results in a simple visual inspection of biological residues or marks on the observation result of the examination is required. This may not always be possible to find traces.



In the materials in question, wood ash and complete unburnt wood particles were found as biological material in the samples which were considered as original or closest materials. We need to evaluate the charcoal particles as biological material.

A view of the pure water - treated mixture to see organic matter

5.4. Reporting

The results obtained in the laboratory studies are checked for the final calculations to be processed on the test form. After these controls have the opinion that there are no computational errors, the reporting process is completed by making these results in a clear form. The results of the experiments on the displaced samples were tried to be put together.

Physical Properties:

• Medium hardness

• There are lumps in place

• Light colored (White)

Chemical Properties:

• HCl Loss Rate (Acid Losses) % 27,105 (32,796)

Organic Analysis:

• Organic matter was found.

• Straw and hair were not found.

Table 2. Granulometric Analysis

SİEVE NO	**AVERAGE**
mm.	%
4	12.37
2	18.35
1	22.25
0.5	14.84
0.25	13.92
0.125	8.97
0.063	7.04

Water Absorption Rate:

• Water absorption rate of 14%

6. CONCLUSION AND RECOMMENDATIONS

The new mortar design is made in parallel with the results. In this design, for the sensitive adjustments, the experimental productions are made before the application and after the experiments on these products, the mixture of horasan mortar is finalized.

NEW HORASAN MORTAR ADVICE

Table 3 . Recommended New Khorasan Mortar Mixture Table (By Weight Proportional)

GRAİN DİAMETER	MIXING RATIO	TYPE OF MATERIAL
2-4 mm	20 %	Aggregate and (3% Wood Charcoal Ash)
1-2 mm	30 %	Aggregate, (Brick Powder% 5+ 3% Wood Charcoal Ash)
0,500-1 mm	36 %	Aggregate, (Brick Powder% 5+% 2 Wood Charcoal Ash)
0-0,500 mm	14%	Washed River Sand
	Enough	Slider Lime
	Up to 30% of Slime Lime	Hydraulic Lime

The above-defined values are weighted and should be finalized after the tests to be carried out following the trial production.

NEW INJECTION MORTAR PROPOSAL

The gaps between the stones, the rubble inner filling and the wall surfaces are closed; Low pressure (1 bar), uncharged (or silt grain filled) hydraulic lime mortar should be injected.

Table 4 . New Injection Mortar Proposal (Weight Weighted)

GRAİN DİAMETER	MIXING RATIO	TYPE OF MARERIAL
0-0,125 mm	10 %	Silt
	30%	Slider Lime
	60 %	Hydraulic Lime

6.1. Investigation of Stone Specimens

Stone samples were selected from the stones that came together during the removal of horasan mortar. This would also mean that the stone sample would be unique if the mortar was original. Therefore, it is certain that the stone sample taken is also the original material.

Stone specimens consist of limestone and a small amount of crystallized limestone. For this reason, the water absorption rate of the material was observed to be low. In addition, the point load strength of the stone material is higher than the amorphous limestone material, but it is observed to be lower than the totally crystallized limestone (marble, etc.).

Photo 129 . Stone Specimens

If stone materials are needed during the reconstruction or restoration, the quarry should be investigated based on the basic features listed below and these tests should be tried on the quarry material and its compatibility should be investigated.

The water absorption rate is 1.5% by weight and the average of both samples is average. 465 kg in the point load strength sample and 656.5 kg in the number two sample. as determined. In order to calculate the real strength, a much more diverse sample of stone will be needed. These procedures should be repeated in more detail during restoration.

Various investigations and comparisons can also be made for stone samples in the region. It is known that there is an old quarry used by the regional directorate of highways in Kayseri province.

The technical properties of the materials can be examined in detail and the stone materials which are planned to be used in restoration works can be determined more easily and easily. Of course, in existing quarries, the stone capacities should be calculated and calculated whether they meet the needs.

Because a small number of stones can be found in many abandoned quarries.

6.2. Investigation Of Wood Samples

We have already mentioned in the previous chapters that wood samples have been obtained from a resinous tree. Tree species that can be grown in this region should be investigated. According to the art history report, pine species should be investigated in the vegetation of the close environment of the building.

Photo 130 . Wood Sample from Resin Wood

According to the date of construction, pine species can be examined according to the vegetation cover of the region and the results obtained can be compared with the existing samples.

In light of this information, it will be more accurate to obtain wood material that will be used permanently during restoration works from coniferous models. It is seen that coniferous trees were used in the previous construction.

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