

## The Proposal of Investigation and Restoration of Historical Kastamonu Castle's Architecture

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**Abstract:**-Historical places and constructions are important forms of expressing of the cultures and identities of societies. The enurement of the sustainability of the Kastamonu Castle, which shelters the experiences of the regional and the country's history inside and which briefly has witnessed history, emerges as the most important value. In this study; characteristic properties of The Historical Kastamonu Castle, used materials and the reasons of the constructional deterioration of the castle have been suggested. The Historical Kastamonu Castle is important in terms of the transfer of the cultural heritage of the region to the next generation, by conserving the original features of this heritage.

**Key Words:** *Historical Construction, sustainability, constructional deterioration.*

### I. PROLOGUE

Culture can be acceptable as a complete of all abstract and concrete life properties and values of a specific community. All these values are alive just like the people who form the culture, differ according to the conditions, develop and effect their environment. Roots of Turkish culture which lasted to the beginning of global culture, have taken an effective part in shaping all values of society in high developed and dominating geographies along the time. One of the most important value of these social values is house which provides basic needs of human beings.

### II. Kastamonu and Its History

Kastamonu is an ancient settlement. Ruins which belong to prehistoric ages were found. Between B.C. 1780-1200 Kaskas, a branch of Sumerians, ruled over this region. It was inside Hittite Empire's boundaries who was the first political union in Anatolia. After Hittites, Kimmerians ruled over this region. Subsequently Frigians and Lydians conquered the area. In the B.C. 6th century it was invaded by Persians and in the B.C. 4th century it was invaded by Alexander, the King of Macedonia. Some Ion sites were settled in the coast of Kastamonu by Macedonia invasion and subsequently Pontus Kingdom, Persian originated, conquered this region. In the B.C. 1st century when Romans removed Pontus Kingdom and annexated themselves, this region owned by Rome Empire. In A.C. 395 when Rome Empire was divided, this region was fallen to East Rome's (Byzantium) share like the other regions of Anatolia. Byzantines called this region "Paflagonya". Komnenian who are from Byzantium Empire Family, come from this region. Turks conquered Kastamonu like all Anatolia after 1071 Malazgirt Victory. After the First World War Kastamonu which hasn't been exposed to infestation, did good services in the War of Independence. Weapon and ammunition were reached from İstanbul to Ankara via İnebolu and Kastamonu. After the proclamation of the Republic Atatürk proclaimed the Hat Revolution in this city in 23rd August of 1925. In Republican era many people immigrated from Kastamonu to big cities and especially to İstanbul. (<http://www.kastamonukultur.gov.tr/20.04.2016>)

Kastamonu is an old settlement since old ages. Turkish-Islam Culture is dominated in Kastamonu where has been under control of Turks since the beginning of 11th century. Before the 11th century the other cultures had all been forgotten. Local Foods: The most famous food of Kastamonu is tarhana soup called "kiren". Annual tarhana soup of Ottoman Palace and plum of compote had been sent from Kastamonu. Mint, dill and basil are used to make tarhana. Etli ekmek in tin plate, pastırmalı ekmek, çekme helvası, gözleme, katmer, büryan kebabı, bardak kebabı, kuskus pilavı, fruit delight are some of food and deserts. (<http://www.cografya.gen.tr/kastamonu/iklim.html,15.05.2016>).

### III. Kastamonu Castle

Kastamonu Castle which is on 112 m high rocky hill on the southwest of Kastamonu, was built in the period of Byzantium Emperor Komnenos at the end of the 12th century. Outer walls which surround the city and extend to the valley are unable to survive. Only a part of a tower belonging to outer walls is still standing today. Even though inner castle was built in Byzantium Period, sections which are still standing were built in the period of Candaroğulları. This castle which was repaired in the Ottoman Period, was largely damaged in the earthquake in 27th November of 1943. The castle is 115 m long, 30-50 m wide, planned as a rectangle. In the

first construction, it was strengthened with 15 big donjons and towers. Stone, lime and wooden beams were used in building. Door jambs, vaults and arches are made of cut stone. Round donjon was covered by tiles. The first and the second door of the castle are low arches. There are vaults which are pointed arches. It is possible to go to the castle through a steep road in the northeast. There is another door in 50 m north of the door which is protected by a rectangular donjon. The road between two doors is protected by donjons. There are ruins of some structures inside the castle. Road shaped corridor which is in the middle of the castle, is reached to outer walls from the Castle Door Area. This corridor was used for either supplying or sheltering people during a siege. An important material will be brought to Kastamonu tourism which is covered by a grate today by opening to visitors (<http://www.kastamonukultur.gov.tr/>, 18.05.2016).



Picture 1. North Side [Author Archive]

**Vault;** is a structure part which usually acts as a roofing and keeps arches together in architecture. It is commonly built by brick and grout and it is seen as potholes and half cylinder from the bottom.

**Donjon;** is a part of a castle which is built to increase the defending effect at defense castles and to attack easily. These structures are built as offsets in front of castle walls. Soldiers who deployed there, start to defend the castle easily during an attack. In history these structures were used to pour hot oil, throwstone and ignite gunpowder to enemy ([http://tr.wikipedia.org/wiki/Kale\\_burcu](http://tr.wikipedia.org/wiki/Kale_burcu), 06.06.2016).



Picture 2. East Side [Author Archive]



Picture 3. West Side [Author Archive]



Picture 4. Inner Castle [Author Archive]



Picture 5. Tunnel, secret connected road with city [Author Archive]

#### **IV. Restoration Suggestion**

Evaluation and intervention decisions should be adopted as a principle because Kastamonu Castle includes document, unity, historical, continuity values. In this context structure and open areas of the castle;

- Can be used guardedly for providing continuity
- The castle which is in a rural place and topography, can be used an image as archaeological data in this topography. For this aim functions should be located in open area under the castle.
- Period interventions can be protected as a document of reparation date,
- Structures which disturb area's and structures' integrity and incompatible interventions can be removed
- Problem resources causing material corruption and structural problems can be removed by necessary interventions
- Using modern materials and constructing technics can be decided principally.

In intervention of restoration-protection / preparation the main approach is to prevent damaging the structure, remove structural problems, interfere the structure's urgent problems

- Exterminate the problems causing corruptions in the structure
  - Strengthen structure's parts prevent continuation of collapse
  - Take protective preventions to protect the structure
- interventions to urgent problems of Culture property Structure.

Consolidation of castle and places and ruins inside the castle, repairing structural problems and introducing as an archaeological object has been foreseen. Works should be continued by digging in some periods and regions under the control of museum.

## **1.1. Intervention Decisions**

### **1.1.1. Physical Surface Cleaning**

Grout and layers of dirt on castle walls and floorings should be cleaned by carding method firstly. And then they should be cleaned by micro sandblasting method.

### **1.1.2. Herbal Cleaning**

There is intensive vegetation on castle walls and on the floor of the castle. Plants which are near the wall and environment should be cleaned not to damage the castle walls. During repairing all sutures protective prevention to plant creation should be done by spraying in necessary places. For cleaning these types of plant roots, agricultural drugs (wild plant killer) which don't damage the surfaces of original stones can be used. Monsanto mark Roundup Ultra and Roundup Super can be suggested as herbicides that is necessary for this aim. It should be adulterated for 20%-25 in water and applied to fresh leaves of grass and ivy by spraying which is sold as liquid.



Picture 6. Inner Castle [Author Archive]

### **1.1.3. Suture Reparation**

All cementitious grouts on inner and outer surfaces of the castle should be scraped carefully without damaging original stone body wall. In the repairing adhesive, vapor-permeable, not containing soluble salt, slaked lime origin grout should be used.

### **1.1.4. Stone Surface Reparation**

Stone surfaces of the castle should be re-sutured after extracting cementitious reparation. Stone surface shouldn't be plastered.

### **1.1.5. Stone Wall Completion**

Generally in castle restoration completion hasn't been foreseen. A completion limited with original material has only been foreseen because structure can withstand to natural conditions.

### **1.1.6. New Floor Building**

After restoration to visit the castle more comfortable and safely, new Stone flooring is suggested which is harmless to original structure. Final wall heights and pavement steps should be decided in the area according to altitude of area.

### **1.1.7. Keeping Making**

Places on the castle body walls on which won't be made completion walls should be finished by hydraulic lime compost as given in the Project after cleaning covers.

### **1.1.8. New Metal Stairs and Parapets Building**

Visitors should be provided to use the castle safely by making new metal stairs and parapets in necessary places in addition to Stone stairs. Metal elements should be made less harmful to assembly details.



Picture 7. Entrance of the Castle [Author Archive]

#### **1.1.9. New Roof Building**

Roof structure should be removed safely without damage, a new roof which is harmless to original structure and suitable for castle should be made.

#### **1.1.10. Research Digging**

In Kastamonu Castle there hasn't been done enough research yet. In the castle research digging is suggested under the control of museum.

#### **1.1.11. Building Security Cabin**

In Kastamonu Castle there isn't any security precaution. With restoration studies a portable security cabin is suggested to build which doesn't damage the castle. A simple portable unit is suggested to build because of being protected area and harmless for the environment.

#### **1.1.12. Landscaping**

After the security precautions around the castle, visiting the castle more productively and comfortably should be provided by ordering the units like parking area, transportation, WC, gift shops in cooperation with governorship and municipality in the entrance of the castle. It is just suggested here because of being out of the Project area and including different ownerships.

#### **1.1.13. Opening the Closed Donjon**

Nowadays the entrance of the highest donjon is closed. During the application restoration of the donjon should be done by entering the donjon by means of removing excess like concrete and similar elements with not damaging the original structure. During the application according to new findings survey and restoration projects should be updated if it is necessary.

#### **1.1.14. Removing Excess Elements**

All excess elements in the castle (electric cable, nail, lighting elements) should be removed carefully by not damaging the original structure.

#### **1.1.15. Reparation of Wooden Beams**

In the entrance of the castle reparation and protection will be done in wooden beams, they will be resistant to natural conditions by impregnation by means of reparation with wooden paste by experts.

#### **1.1.16. Reparation of Floor**

All the floors will be completed, protected by healing. During the application original floor elements will be protected by healing, missing elements will be completed according to the original sample.

## V. RESULTS

Traditional Turkish Culture has been forgotten as in most of traditional cultures because of the universalization design concept and pioneer design trends. Traditional Turkish culture which is an inspiration to many civilizations and design concepts, can not cherish only with protection of extant culture properties. These works should be provided to continue their functions strongly with necessary methods in modern life (Gökdemir vd., 2014, s.39-50; Gültekin, Uçar, 2010, s.241; Gökdemir, Demirel, 2016, s.1-11). At the same time it is important for cultural persistence to be compatible with modern life conditions, providing needs and designing of traditional new structures and reinforcement. Many reinforcement elements of traditional Turkish houses like inert cabinet, door, door frame, ceiling hub were taken under protection and they have become necessary reinforcement in a modern structure for today. It has been mentioned that cultural persistence can be provided by designing modern structures with traditional design concept. (Gökdemir vd., 2014, s.39-50; Gökdemir, Demirel, 2016, s.1-11; Hidayetoğlu, 2013, s.291-301)

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