

**CONDITION ASSESSMENT OF HISTORIC BUILDINGS: CASE OF
ISA BEY BATH IN NOVI PAZAR, SERBIA**

**TARİHİ YAPILARIN MEVCUT DURUM DEĞERLENDİRMESİ:
SİRBİSTAN, YENİ PAZAR İSA BEY HAMAMI ÖRNEĞİ**

*Gülşen DİŞLİ**

Abstract

The architectural legacy of Ottoman Empire in Balkan Peninsula has been the research area of scholars for long years. Among this legacy, the rich historic buildings belonging to Ottoman period in Serbia, Novi Pazar, in Sandžak region has needed detailed condition survey. In this research, in order to recommend future preventive conservation measures, considering its ruined condition, but still preserving its original structure, authenticity, and integrity, among those historic buildings, Isa Bey Bath, in Novi Pazar city center, has been analyzed in terms of its condition assessment by using European Standard on “Conservation of cultural property - Condition survey and report of built cultural heritage”. Understanding the current state of a historic building by means of such surveys is an important management tool bridging the gap between site investigation and analysis, at the same time serving to determine necessary conservation measures. In addition, field observations, literature, historic, and archival research are conducted. Although there are studies on historic baths in Serbia, they lack a detailed standardized assessment method. Hence, a detailed condition survey of Isa Bey Bath, including property, cultural heritage information, condition records, risk assessment, and recommendations has been conducted, aiming to contribute to documentation of similar buildings and serve as an example for future studies.

Key Words: condition assessment, historic buildings, Turkish baths, Ottoman heritage, Novi Pazar, Serbia

Özet

Osmanlı İmparatorluğu'nun Balkan Yarımadası'ndaki mimari mirası, uzun yıllar, araştırmacıların araştırma alanı olmuştur. Bu miras arasında, Sırbistan, Sancak Bölgesi, Yeni Pazar'da yer alan Osmanlı Dönemine ait zengin tarihi yapılar, detaylı mevcut durum analizi yapılmasını gerektirmektedir. Bu araştırmada, bu tarihi yapılardan harap durumda olan, ancak halen özgün yapı sistemleri, otantiklik ve bütünlüğünü koruyan Yeni Pazar şehir merkezinde yer alan İsa Bey Hamamında, gelecek dönem önleyici koruma önerileri geliştirmek üzere “Kültürel Mirasın Konservasyonu – yapıli kültürel mirasta mevcut durum analizi ve raporu” başlıklı Avrupa Standardı kullanılarak mevcut durum değerlendirmesi yapılmıştır. Tarihi

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yapıların mevcut durumlarının bu tür araştırmalarla anlaşılması, arazi incelemesi ve analiz arasındaki boşluğu dolduran önemli bir yönetim aracı olmasının yanında gerekli konservasyon önlemlerinin belirlenmesine de hizmet etmektedir. Ayrıca, arazi çalışmaları, literatür taraması, tarihi ve arşiv araştırması da yapılmıştır. Sırbistan'daki tarihi hamam yapıları ile ilgili çalışmalar mevcut olmasına rağmen, söz konusu çalışmalar detaylı ve standart değerlendirme metodlarından yoksundur. Böylece, bu çalışma ile İsa Bey Hamamı'nda mülkiyet bilgileri, kültürel miras bilgisi, durum kaydı, risk değerlendirmesi ve önerileri içeren detaylı mevcut durum analizi yapılmış, araştırmanın gelecek dönemde benzer yapıların belgelenmesi çalışmalarına katkıda bulunması ve örnek olması hedeflenmiştir.

Anahtar Kelimeler: mevcut durum analizi, tarihi yapılar, Türk hamamları, Osmanlı mirası, Yeni Pazar, Sırbistan

INTRODUCTION

A comprehensive condition assessment of historic buildings is a fundamental practice and first step in their conservation. Hence, a systematic assessment method is essential for cultural heritage management. This paper uses European Standard UNI EN 16096 (2012) (English) on "Conservation of cultural property - Condition survey and report of built cultural heritage" approved in 2012, for the condition assessment of a fifteenth century Isa Bey Bath in Novi Pazar, Serbia, as the case study, which is in ruined condition today. There are studies related to architecture, history, and repairs of the bath (Koulouri, 2012, p. 47; Ćorović, 2012; Momčilović- Petronijević and Vasić-Petrović, 2015). Among them Petronijević & Petrović gave information on previous interventions and briefly describe the monument (Petronijević and Petrović, 2015, p. 28). Similarly, Premović-Aleksić explains architecture and history of the bath (Premović-Aleksić, 2013, pp. 21-27). Although they include general information, they lack a systematic condition assessment of the building. Hence, this research aims to analyze the case study bath in terms of its current state, repairs, risks, and recommendations in a standardized way. Detailed testing methods is outside the scope of this research, since as suggested in the Standard, further investigations are to be applied for major intervention recommendations.

2 PROPERTY AND CULTURAL HERITAGE INFORMATION

2.1 Building General Information- Identification of the Building

Isa Bey Bath, built in second half of the 15th century by Isa Beg, is located at the city center of Novi Pazar main market area, an area serving for residents and visitors of the city, as well. The bath fronts north onto 7th Jali Street, setting a pedestrian road on front and surrounded with 1st Maj Street on the east. Its parcel number is 10033 and its coordinates are WGS84/UTM

34 N, 0460867, 4776397.¹ The building has Novi Pazar Municipality registration number of 70874, real property page number of 12129 with plan number 23, and cadaster registration number of 731056. The property owner in charge of the building is Islamic Community of Serbia, Office of Sandžak Mufti, with all the rights of its usage and protection status.² In 1970, it is registered as an immovable cultural property of great importance by the Institute for the Protection of Cultural Monuments in Serbia (Ćorović, 2012). The original function of the building is Turkish bath. In 2018 it was used as a café. The bath is known to be used in its original function up till the 1920s (Koulouri, 2012, p. 47).

2.2 Building Description and Protection Information

Isa Bey Bath is a one-story, masonry, classical Ottoman style double bath building with a rectangular plan with domed, vaulted, and gabled rooftops. According to the legal description it is 795 m².³ Height of the building varies in different facades between ≈5,70- 3,65 m. It has alternate bonds of brick and rubble stone masonry wall and rubble stonewall on east façade, rubble stone masonry wall on the north façade, and alternate bonds of brick and rubble stone masonry wall on the south façade. There are building attachments (shopping stores) to the bath on the west side. Yet, it might have the same masonry with the east wall of the building. Exterior facades do not have any plaster covering on, instead grouting is observable between alternate bonds of brick and rubble stone material. The furnace, its chimney, domes, and vaults are constructed with brick.

At present, the interior of the building has been changed substantially because of its different usage at different times. Still the traces of Ottoman style hamam interior could be observable especially at the caldarium and tepidarium space such as the original heating system element-hypocaust section- terracotta pipes inside the rubble stonewalls, floor coverings, original basins, dome transition elements, domes and vaults with oculi opening details, and arched door openings.

Novi Pazar has a four-season climate with long sunny and warm days and rainy, short spring. The city lies in the valleys of the Jošanica, Raška, Deževska, and Ljudska rivers. The site of the building is a commercial, touristic, educational and historic area. It is quite near to Raška River, amfiteatro, historic castle, historic buildings (mosques, houses), and International University of Novi Pazar Faculty of Islamic Studies, together with cafes, shopping stores, groceries, accommodation, and bank facilities. There is neither a lawn area around the periphery of the building nor a yard

¹ This information was retrieved from Republic Geodetic Authority, Serbia, 2015.

² This information was retrieved from Republic Geodetic Authority, Serbia, 2015.

³ This information was retrieved from Republic Geodetic Authority, Serbia, 2015.

belonging to the bath, but the immediate periphery of the building is surrounded with pavement and asphalt-paved streets at the north and east, and with vegetation on the south. Inside the frigidarium sections and furnace part of the bath are also full of vegetable. There is a narrow sidewalk in front of the building (north side) and a larger one on the east side with asphalt alley grades on both sides. There are attached shopping stores on the west façade and the east sidewalk of the building is used as the car park serving for the nearby buildings on the area. The bath with its exterior façade and Ottoman double plan type still preserves its historic integrity though ruined substantially at present. Today its survey and restoration projects are prepared, and after the approval it will be restored by Directorate General of Foundations in Turkey.

2.3 Sources and Management Information

Old historic photos, drawings, foundation/waqf registers, and land registers of the bath have been investigated and the ones that could be reached have been given under this heading (Figures 1-7). Endowment deed of the bath is not existent at present, but remains is a waqf register regarding the mosque of Isa Beg in Novi Pazar. In this document, the bath was counted among the income property of the mosque.⁴

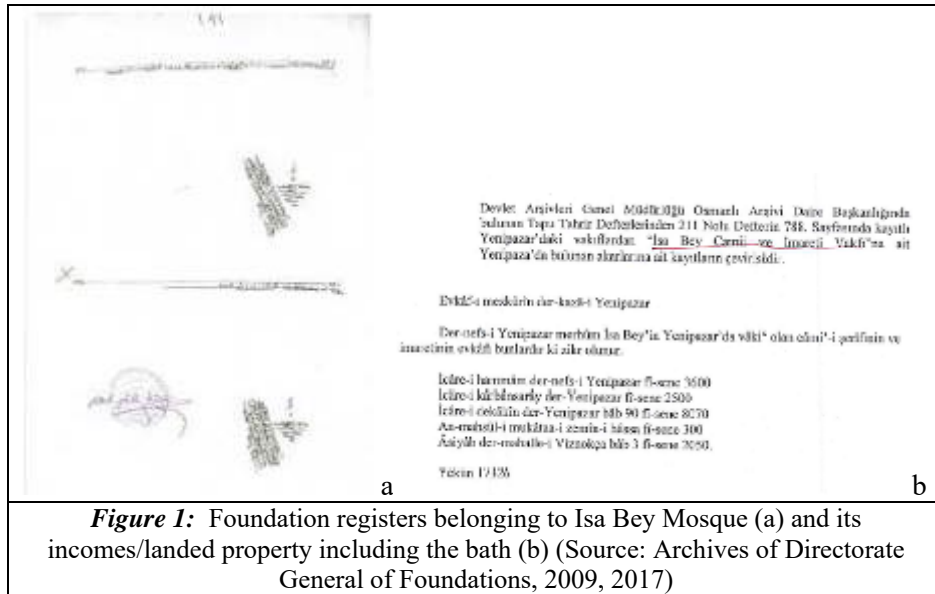
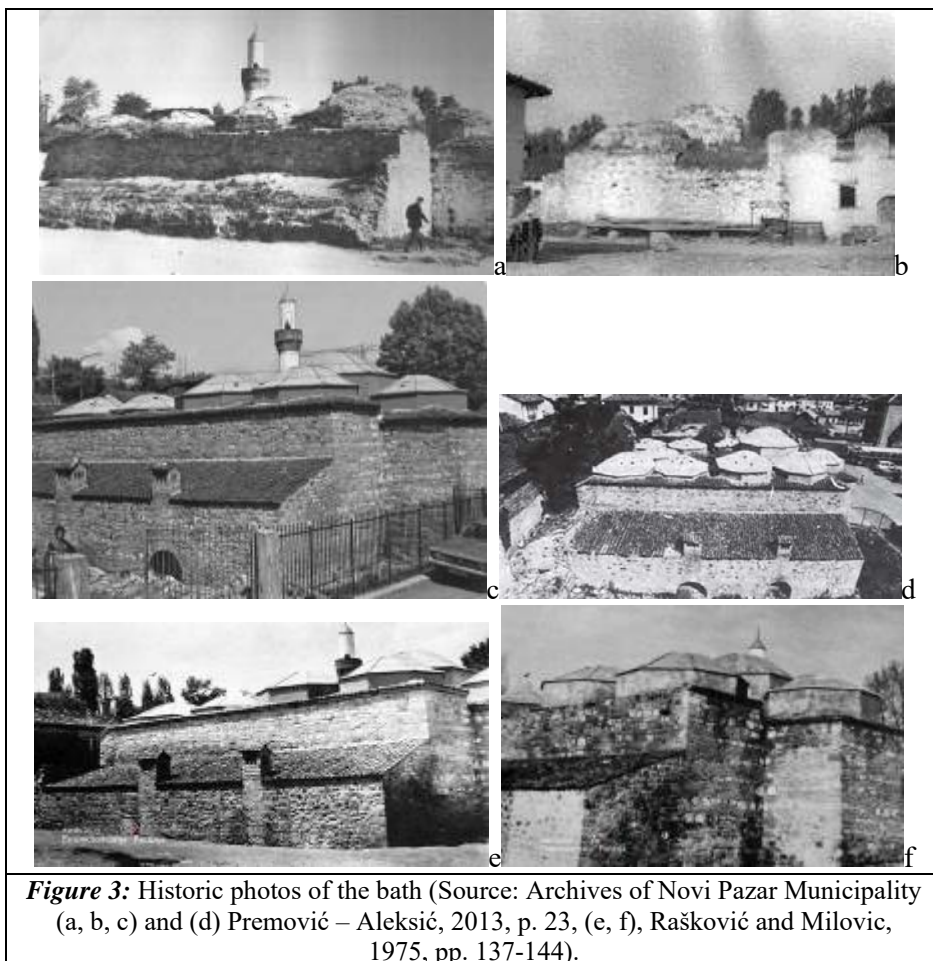
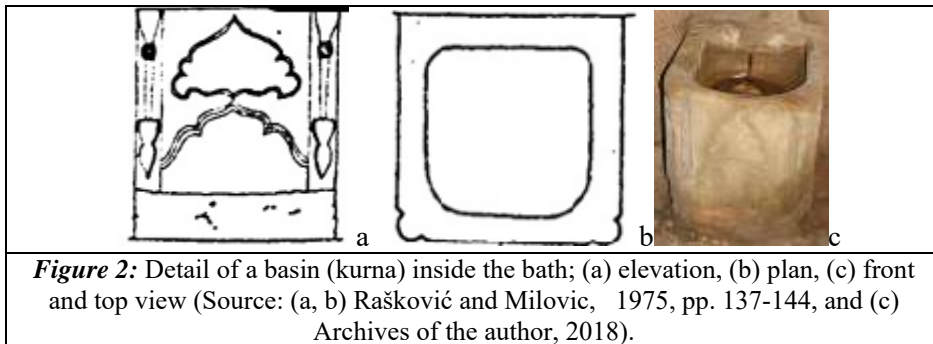


Figure 1: Foundation registers belonging to Isa Bey Mosque (a) and its incomes/landed property including the bath (b) (Source: Archives of Directorate General of Foundations, 2009, 2017)

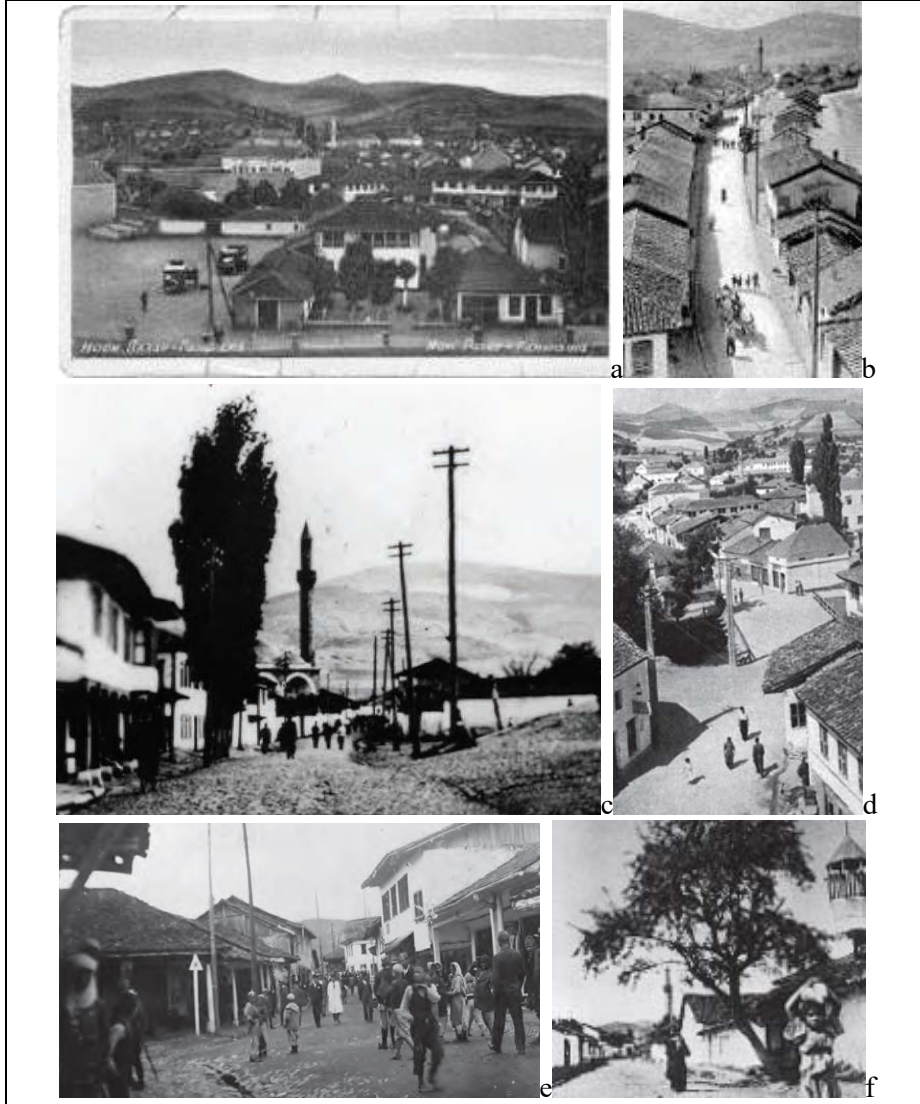
⁴ Foundation registers belonging to Isa Bey Mosque and its incomes/landed property including the bath, Archives of Directorate General of Foundations, 2017.



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Condition Assessment of Historic Buildings: Case of Isa Bey Bath in Novi Pazar, Serbia

Tarihi Yapıların Mevcut Durum Değerlendirmesi: Sırbistan, Yeni Pazar Isa Bey Hamamı Örneği



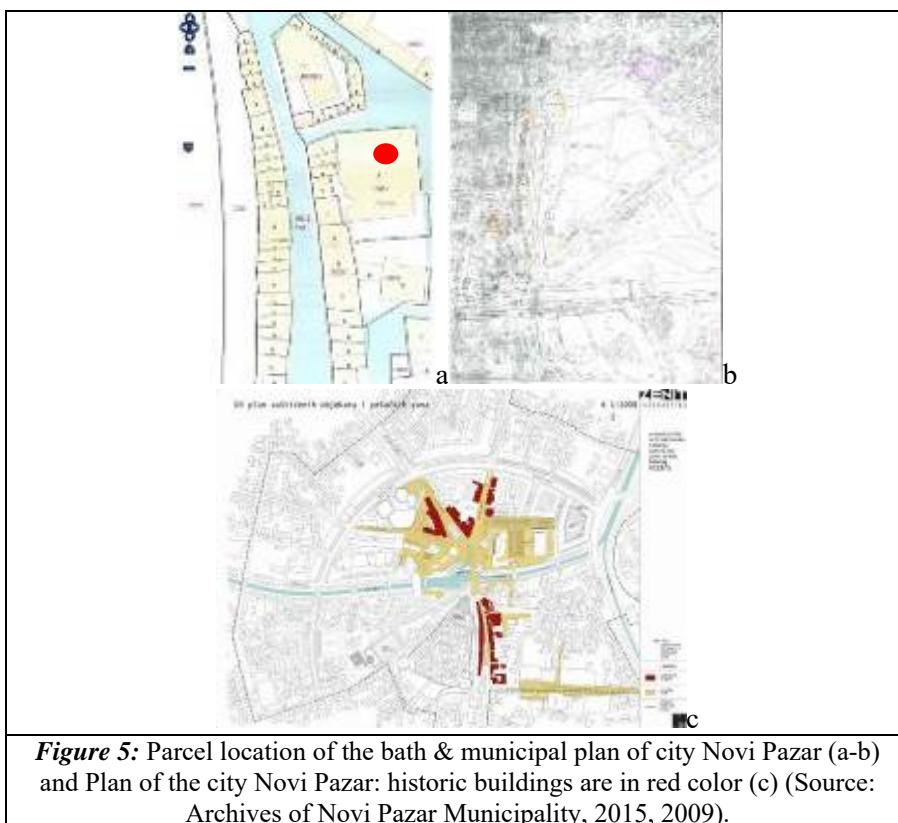
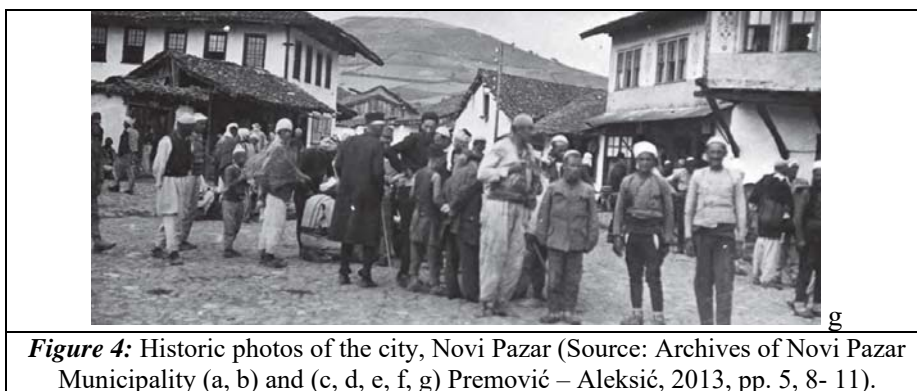




Figure 6: Plan drawing (a) and South facade (b) of the building and drawing of the east facade of the building (c) (Source: Archives of Novi Pazar Municipality, 2009, prepared by Ukić Redžep in 1994)

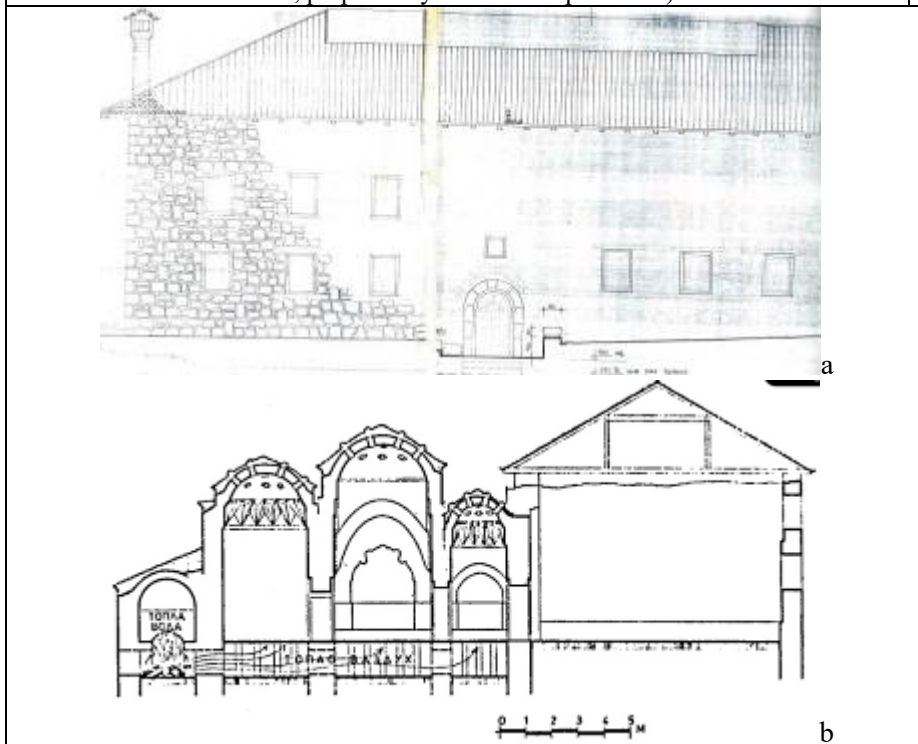


Figure 7: North façade drawing of the bath (a) & its longitudinal section (b) (Source: (a) Archives of Novi Pazar Municipality 2009, prepared by Ukić Redžep in 1994, (b) Rašković and Milović, 1975, 137-144).

3 RECORDING THE CONDITION

3.1 General

The survey was performed by the author first in 2009 and then in 2016, 2017, and 2018, respectively in winter and spring seasons. The time used to complete the in situ surveys, including observation, investigation, and recording, changed between two and three days in each visit. Visual survey, photographic documentation, measurements, and archival research were the primary methods. All the halvets, iwans, caldarium, frigidarium and tepidarium sections of both women's and men's parts and water storage depots were inspected. There was access problem only for the cold water storage depot and substantial safety risks at the parts that the ground level was collapsed.

3.2 Description of the conditions

The property is in ruined condition and has had substantial exterior and interior alterations. Primary repairs and conditions of facades, interiors, and roof structure are outlined below.

3.2.1 Repairs

In late 15th century, when it was first constructed as an endowment of Isa Beg Ishakovića, the Isa Bey Bath was measured approximately 23 m by 26 m with a most probably wooden construction fire wood storage section on the south façade of the building (Premović – Aleksić, 2015, p. 21). Today this part is not existent, but original location of the furnace is still observable. Frigidarium sections of the women's and men's parts on the north side measuring 23 m by 9.20 m were 18th century reconstructions and can be considered as the major alteration to the building (Momcilović-Petronijević and Vasić-Petrović, 2015, pp. 21-32; Nešković, et. al, 1988). The original frigidarium sections, which might have been built with wooden construction, must have been built at the same date with the building itself, but demolished for some reason and reconstructed with more durable stone masonry in the 18th century. In addition, in 1969-70, Kraljevo Institute for Cultural Heritage Preservation conducted extensive cleaning and conservation works on the bath (Aruçi, 2013, p. 471; Momcilović-Petronijević and Vasić-Petrović, 2015, pp. 21-32). During the same interventions, the bath and some parts of its roof lost its function (Momcilović- Petronijević and Vasić-Petrović, 2015, pp. 21-32).

3.2.2 North Facade

Women's entrance faces north. It is a highly plain façade without any decorations on it. It is constructed with rubble stone with wooden beams and without any plaster on it. Corners are built with cut stone. Women's and men's frigidarium sections constitute the north façade of the bath. On this facade there are two doors, opening to the frigidarium section of women's part and an 18th century corridor addition to the building (Momčilović-Petronijević and Vasić-Petrović, 2015, pp. 21-24). On this facade there is an arched door in the middle, which might have been the original entrance door of the women's section and there are three rectangular window openings on east and west sides of this door opening. There is also one more window, which is square in shape with wooden beams at the top and below, located above the arched door. The door on the very west side of the north façade providing entrance to the frigidarium section of women's part is a later addition. First level windows have wooden lintels at the top and bottom, and some of them have wooden frames and iron grills. At the top levels of this façade there are severe material loss of stone, mortar and repointings. Previous period interventions with cement based mortar are also observable on the whole façade. Wooden windows, their lintels, and missing windows all have severe symptoms and need urgent/immediate preservation.

3.2.3 East Facade

Men's entrance faces east. There was a market area in front of this façade by mid-20th century (Premović-Aleksić, 2015, p. 21). There are major symptoms at that façade. Towards the south, at the caldarium and tepidarium sections of the men's part, the façade has alternate bonds of brick and rubble stone layers. Brick rows lying between the rubble stone layers; do not have any integrity, such that in some parts they lie horizontally as three rows and some others four even six rows of brick layers could be observable on the same façade end with three rows of brick eaves at the top level. All those inconsistencies prove that the building had severe previous period interventions. The repointings between the stone and brick units seem to be haphazardly done and at some parts there is severe material loss at the repointings. Material detachment and loss is also observable on brick and stone materials on the wall surface. There are five windows and one door opening on this façade on the frigidarium section of the men's part and no openings on the caldarium and tepidarium walls. There are traces of wooden gable roof covering on the frigidarium section, which is vulnerable to all climate conditions at present. Hence, a roof construction has to be built as soon as possible. At this façade, caldarium and tepidarium sections are covered with high-drum small domes above the halvets and iwans and hot water storage room is covered with a barrel vault. The domes, and flat areas were all covered with concrete during previous period interventions.

Wooden windows, their lintels, and missing windows all have severe symptoms and need urgent and immediate preservation.

3.2.4 South Facade

South façade of the building is constructed with alternate bonds of brick and rubble stone material with variable rows of brick and stone layers. There must have been fire wood storage room on this part of the bath, which might have been built with wooden construction. But there are no remains of it at present. On this façade there are two fireplaces with brick chimney extensions. The stone and brick walls on this façade were left as bare without any mortar or painting. There are no decorative details, secondary entrances, doors, porches, or window openings on this façade except for an opening on the very east side of the facade. The interior vaulted roof of the hot water storage room is covered at the top with concrete, slightly sloped in one way. Traces of previous interventions could easily be observable on this façade; such as material renewals, cement repointings, and concrete topping. Biological development, material loss and detachment, and false interventions are the primary deteriorations.

3.2.5 Roof Structure

Isa Bey Bath has different roof structures with different geometries and drainage. At frigidarium sections at present there is a severely demolished wooden roof only above the corridor in the middle, and other parts are open to sky. These sections might have wooden roofs with/or without a lantern at the center. It is also not possible to talk about a roof drainage at those sections, thus vulnerable to wreathing conditions. Caldarium and tepidarium sections are covered either with dome or vault above which is a concrete layer. The brick structure beneath the concrete layer of some of the domes could be observable. This slightly sloppy roof does not have an appropriate and adequate drainage, either at the eaves of the walls or at the eaves of the domes. There are severe biological developments on this roof, especially at the eaves level. The roof of water storage depot is also covered with 6 cm thick concrete. But, it is understood from the old photos that originally it was covered with tile. The concrete layers nearly on the whole roof structure of the bath increase the dead load of the structure, damage the roof drainage, and at the same time cause moisture and efflorescence problems.

3.2.5 Interior

Interior of the building is circumscribed with alternate bonds of brick and stone main body walls. The structure inside the one-story interior is stone-brick masonry system with brick domes and vaults above the caldarium and tepidarium sections. Either brick Turkish triangles or

pendentives on the four corners provide transition to the brick dome upper structure. The building is a typical Ottoman double bath and has nearly the same plan organization both at the men's and women's sections. Stone floor covering with different dimensions are used as the floor covering at interiors. In both parts of the bath there are three main spaces called as caldarium (hot area), tepidarium (warm area), and frigidarium (changing room/waiting room) as well as service spaces as toilets and shaving rooms. Hot water storage room attached to the south side, and cold water storage room attached to west, as well as fire wood storage room (on the south) which is not existent today are the common spaces used by both women's and men's sections. Originally hypocaust heating system was used in order to heat the bath. Brick foots of this system lay approximately 0.80 m underneath the stone floor covering of tepidarium and caldarium sections and because of the collapse on stone floors and brick foots could still be observable at some parts of the bath. Furnace is located beneath the hot water storage room. Traces of original two-row terracotta water pipes could be followed inside the walls of caldarium and tepidarium sections. But, they were partially broken and decayed to a great extent. During the in situ observations, dimensions of one of the terracotta pipes in hot water storage room located $\approx 0,50$ m above the floor level were as follows: ≈ 10 cm* ≈ 12 cm inner and outer diameter and ≈ 1 cm in thickness. Dimensions of another pipe in men's sections are; ≈ 9 cm* 11 cm inner and outer diameters and ≈ 0.5 cm in thickness. In Isa Bey Bath tuteklik pipes inside the walls of caldarium and tepidarium sections could not be observable.

Stone and marble basins are still existent in some of the rooms of the bath. For instance, in women's section there is one in tepidarium section, and in total four in the halvets of caldarium section. In men's section, there is one on the raised platform of the caldarium section, and in total five in the halvets. Inside the bath, open waste water collection channels were made of stone and either located along the bottom of the wall or beneath the raised platforms. Waste water was directed to those open channels by means of floor slopes to that way and drained via floor drains or directed towards the toilets for the drainage. For instance, in men's section diameter of one of the floor drains in tepidarium section was measured to be ≈ 9 cm. Waste water collection and drainage channels also differ in dimensions in different parts of the bath. As an instance, in men's tepidarium section, dimensions of waste water drainage channel lying through the toilet and shaving room has been measured to be ≈ 5 cm in width and 1,2 cm in height. In another channel lying through the door opening between tepidarium and frigidarium parts of men's section, these dimensions have been measured as ≈ 9 cm in width and 1,7 cm in height. In caldarium of men's section these dimensions are ≈ 6 cm in width and 1,5 cm in height. Dimensions of waste water drainage channels are measured to ≈ 6 cm in width and 1,7 cm in height and

≈5 cm in width and 1,2 cm in height in women's tepidarium section, and ≈4,5 cm* 1,1 cm in width & height and ≈5,5 cm in width, 1,5 cm in height in women's caldarium section.

3.2.6 Women's section

Women's section of the bath is entered via a later addition rectangular door on the North facade of the building. The original entrance to the frigidarium section is an arched door in the middle of the North facade. Frigidarium section, the biggest floor area (changing/waiting room) in women's part, is used as a tea shop at present. Mortars on the walls of this section are mostly lost, and the floor is covered with floor tile underneath is most probably lies the original stone covering of the bath. At this part, wooden roof is totally lost. Since there is an adjacent building on the west side to this section, all the windows are closed on the west wall of the frigidarium section. There are also niches on this Wall which are also closed today. Wooden beams between the stone walls are decayed, and wooden frames of the windows are ruined to a great extent. Interior walls of the women's section have still preserve the original mortars at some parts. But, because of the high moisture, there are material loss and detachments on the walls. Tepidarium section of the women's part is reached via a flat arched door on the south wall of the frigidarium section. It is covered with brick domes. On the east side of tepidarium, toilet and shaving room is located. In this section original stone floor covering is preserved to some extent but there are also severe material losses and cracks. Original waste water discharge channels are observable on the stone floor covering. At this section there is just one stone basin. Tepidarium section of the women's part is followed with caldarium section with three halvets; one on the west and two on the south side and a central part in the middle. One of the halvets on the south side has an observation window opening to the hot water storage room, used to control the water level in hot water storage room. In this halvet there are two original stone basins. There is one more stone basin in the halvet adjacent to it, and traces of another one, though not existent today. The halvet on the west side of the caldarium section has one original stone basin and a stone pool. On the west wall of this halvet there is a later addition opening, and closed with stone material. Halvets and the central area of the caldarium section are covered with brick domes with Turkish triangle or pendentive transitions. Illumination is provided with octagonal oculi openings located at certain intervals inside the domes.

3.2.7 Men's Section

Men's section of the bath is entered via a flat-arched wooden door with stone frames on each side located on east facade of the building. Two-wing wooden door has severe deteriorations. There is material loss in wall plasters, and severe decays in wooden beams of stone walls in frigidarium

section. Window frames, are similarly in bad condition. This part does not have a roof construction, hence totally vulnerable to weathering conditions. Tepidarium section is entered via a flat-arched door on the south wall of frigidarium section. It has also stone frames on each side. Toilet and shaving room opens to the tepidarium section on the east side. Original marble floor covering of tepidarium section has been preserved to a great extent, but there are local material loss, cracks, and broken parts. Original waste water drainage channels can also still be observable on the marble floor. Tepidarium and caldarium domes and their drums are made of brick material and walls are constructed with stone and brick layers. Caldarium section has three halvet and a main central space. There is an observation window located above the stone basin on the south wall of the east halvet. In this halvet, there is one original basin and traces of another one. In the halvet on the south west corner of caldarium section there are two stone basins, and similarly in the halvet on the west side, there are two more basins, and in caldarium main area above the raised platform, a one more stone basin is observable. In south-west halvet, stone floor covering and the hypocaust brick foots have been collapsed to a great extent. All the marble floor coverings have partial deteriorations and collapses. Original waste water drainage channels are observable all through the marble floors, and two-row of terracotta pipes, some of which are in broken and decayed condition, could be detected on walls.

3.2.9 Water Storage Depots

Hot and cold water storage depots, furnace and fire wood storage room (not existent at present) constitute the service sections of the bath. Hot water storage room has a brick vault covering at the interior with a severe crack along the whole length of this vault. The side walls of the depot are also made of brick. Traces of horosan plaster could be observable at some parts but missing to a great extent. Its floor is covered with cement mortar at present. Location of copper boiler is nearly at the center of hot water storage depot, but it is not existent today. There are two observation windows (in women's section and the other is in men's part) opening to hot water storage depot, in order to control the level of water in the storage room and to further heat halvet rooms by means of the water vapor coming from the depot when it was used in its original function. There is no water, and no vapor at present since the bath is not in its original use. Cold water storage room is next to hot water storage on the west side, but was not accessible.

4 CONDITION CLASSIFICATION AND RISK ASSESSMENT

Condition classification and risk assessment of structures, ancillary components, surfaces, functional systems, and outdoor structures have been carried out according to four condition classes and urgency categories as specified in UNI EN 16096 (2012). Condition class "CC0/no symptoms"

means no symptoms, “CC1/minor symptoms” refers to “paint is worn, moss on roof tiles and a few broken roof tiles”, “CC2/moderately strong symptoms” designates “localized damage caused by minor wet rot infestation in panel boards requiring improvement and partial replacement”, and “CC3/major symptoms” refers to “leaking roof with consequent damage and major damage caused by fungal or rot infestation, structure collapse, and total functional failures”.⁵ Similarly, in the same standard, urgency risk classification has been explained as; “UC0” refers to “long term”, “UC1” means “intermediate term”, “UC2” means “short term” and “UC3” refers to “urgent and immediate”.⁶ Isa Bey Bath has been evaluated according to the conditions of its building components and risk assessment, and recommendations, and the results are shown in Table 1.

5 RECOMMENDATIONS

UNI EN 16096:2012 Standard is a guiding, systematic method of condition survey. Hence, “maintenance, preventive measures and simple repair can be recommended by using this standard”⁷ alone, and for detailed restoration intervention this survey is to be accompanied with other testing methods. According to this Standard “RC0” refers to “no measures”, “RC1” refers to “maintenance/preventive conservation”, “RC2” means “moderate repair and/or further investigation” and “RC3” means “major intervention based on diagnosis”. For the foundations, roof structure of frigidarium section, and other parts (covered with concrete), and for the wall and floor reintegration, further investigations are necessary. Based on this condition survey, project and restoration cost estimation has also been carried out. Building components specified with urgency risk UC3 in Table 1, are to be prioritized during any restoration intervention.

Table 1: Condition and urgency risk classification of building components

Building components	Component description (materials location, construction)	Condition description and Condition Class (CC)	Risks/Probable Causes/Consequences /Urgency Class (UC)	Recommended measures (RC)
Structures				
Foundation	Not observable	-	-	RC2
Walls	Stone, brick, alternate bonds of stone and brick, with or without plaster on it.	CC3: Material loss: stone, brick, plaster, painting Material detachment, biological	UC3: Weathering, loss of roof, lack of roof drainage rain/ snow penetration from oculi openings,	RC3: Roof drainage, consolidation, reintegration, strengthening, cleaning

⁵ UNI EN 16096 (2012) (EN), p. 10.

⁶ UNI EN 16096 (2012) (EN), p. 11.

⁷ UNI EN 16096 (2012) (EN), pp. 11-12.

		development, cement based mortars and repointings	moisture, previous period interventions	
Arches/vaults/domes	Interior rooms are covered with dome or vault, arched doors (interior) and arched observation window, arched fire places	CC2: Loss of material: plasters, repointings, cracks, new additions: concrete topping	UC2: Weathering, lack of roof drainage, rain/snow penetration from oculi openings, moisture, previous period interventions	RC3: Roof drainage, consolidation, reintegration, strengthening
Floors	Stone covering above the brick foots in caldarium and tepidarium sections	CC3: Collapse, loss of material, abrasion, new additions	UC3: Moisture, raising damp, material fatigue/loss, cracks, collapse, fractures	RC3: consolidation, reintegration, strengthening Cleaning
Roof structure covering	Concrete on domes and vaults and brick on gable roof (only partially)	CC3: Not original, or not existent, original material loss, or no roof	UC3: Previous period interventions, natural events, war destructions	RC3: Cleaning of concrete & biological development, consolidation, reintegration, renewal
Ancillary Component				
Windows/doors	Arched observation window and wooden rectangular windows on façades	CC3: Facades: missing windows, wooden parts are lost, decayed or detached	UC3: Previous period interventions, natural events, material fatigue	RC2: Renewal, consolidation, reintegration
Lantern, chimney, oculi	Brick chimneys above the furnaces of fire place and oculi openings in caldarium & tepidarium sections	CC2: Tuteklik chimneys are not observable material loss on furnace chimneys, glass parts of oculi are not existent	UC3: Previous period interventions, natural events	RC2: Addition of new glass parts on oculi, Reintegration of chimneys, new roof construction in frigidarium parts.
Eaves	Some brick eaves are observable	CC3: Mostly not existent, material loss, biological development	UC3: Previous period interventions, moisture, weathering	RC2: Renewal and reintegration, cleaning
Surfaces				
Plaster	No plaster on the façades,	CC3: Severe material loss at	UC2: Previous period	RC2: Reintegration,

	traces of plasters on the interior walls	interior & water storage depot walls and on domes and vaults	interventions, natural events, moisture	consolidation, rasping at some parts,
Paintings	Traces of lime painting on the interior walls	CC3: Mostly not observable	UC1: Previous period interventions moisture, weathering	RC1: Renewal, reintegration, and rasping
Functional systems				
Heating system	Hypocaust underfloor heating systems, and tuteklik pipes in the walls (wall heating)	CC3: Not functioning, brick foots of hypocaust section are missing at some parts	UC2: Abandonment, previous period interventions, fatigue moisture, lack of drainage, weathering	RC3: Renewal and reintegration of missing brick foots, and stone covering of the floors (cleaning)
Waste water and roof drainage	At the roof brick eaves, no traces of water spouts, on the interior floors waste water drainage channels and drains	CC3: Roof drainage is not functioning, floor water drain channels and drains of interior spaces are mostly original	UC3: Previous period interventions, moisture	RC2: Renewal and reintegration of eaves, cleaning and reintegration of waste water drainage channels
Ventilation and illumination	Oculi opening in the vaults and domes, windows on the frigidarium section	CC2: Oculi openings are original but glass parts are missing	UC3: Previous period interventions, natural events	RC2: Glass on oculi, renewal, reintegration of wooden windows consolidation
Water supply, distribution	Hot and cold storage rooms, terracotta pipes, basins	CC3: Not functioning, but some basins and terracotta pipes are still observable and storage depots are existent	UC0: Abandonment, previous period interventions, moisture, weathering	RC2: Broken pipes are to be consolidated, cleaning, reintegration and renewal (for missing basins)
Outdoor Structures				
Roads, spaces	Asphalt on north and east, earth on south	CC2: Periphery drainage is missing	UC3: Previous period interventions	RC1: Immediate periphery drainage
Courtyard	No courtyard	CC1	UC0	-

6 SUMMARY

Though there are many additions and subtractions at the interior and exterior of the bath, the building is still conserving its authenticity and integrity to a great extent. But because of its being out of use in its original function nearly for a century, it is in bad condition at present and needs to be preserved as soon as possible. Its projects have been prepared, and after the approval process, the bath is planned to be restored with the financial support of Directorate General of Foundations, Turkey. In term of overall recommended class for the whole structure, major interventions based on diagnosis are required. Urgent measures are necessary especially for the roofs, floors, and walls. Particularly for foundations and for original roof structure of frigidarium sections, and roof covering of the whole building, further investigations are necessary. This research was a first step before comprehensive restoration decisions in order to analyze the building in terms of its conditions, risks, and recommendations in a systematic way with the application of UNI EN 16096:2012 European Standard and aimed at exemplifying how to use this standard with a case study building. At present day, there are twelve Turkish baths belonging to the 15th-18th centuries in Serbia with different status of preservation, and varying current usage. This research also aimed at contributing as an example to the condition assessment of those still preserved baths in the country and in Balkan Peninsula in long term.

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