



## Documentation and Conservation of Bandar Shahi Mosque, Narayanganj, Dhaka, Bangladesh

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### Abstract

The heritage of Bangladesh is surviving with its own identity and existence. Buildings may sustain damage due to numerous basic reasons. In renovation work it is necessary to find out the damages and repair it with best techniques. Narayanganj is one of the most important historic cities in Bangladesh. It was the important administrative region in the medieval period and established lots of buildings like mosque, tombs, garden houses, temples, guest houses, the fort and Shirmi. In Narayanganj, now a numbers of sultanate and Mughal establishments are the witness of time period. Although lots of local development have been done due to demand and lost its own identity. With the help of governmental organization, or any international organization like ICOMOS, UNESCO, it is possible to save the heritage and the original character of Mughal & Sultanate establishments and turn into them most attractive tourists and archeological site in Bangladesh. This paper deals with the architectural features which focus on construction and possible techniques used for renovation or reconstruction work of Bandar Shahi mosque and what could be the best solution, the possibilities to save the heritage and monuments for the next generation.

**Keywords:** Comparison, Documentation, Maintenance, Photography, Restoration.

### I. History of the Bandar Shahi Mosque

Bandar Shahi mosque is a unique example of Islamic architecture of Bengal, established at medieval period. It is located at the village of Saleh Nagar in Bandar area on the East of the Shitalakshya River.

There are three lines of statements available in Arabic naskha method on the black basalt stone in the inscription. The mosque was founded during the region of sultan Jalaluddin Fateh Shah (1481-1488), Malik al Muazzam Baba Saleh 1 Zilakad 886 AH, 22<sup>ND</sup> December 1481.

Locally this mosque is known as Bandar Shahi mosque or invisible mosque. The original name is Baba Saleh Mosque which is named after the saint and spiritual man Baba Saleh. He built two mosques in the Bandar area, one of them is single domed mosque called Baba Saleh Mosque or Bandar Shahi Mosque and other one is three domed mosque which is called the Haji Baba

Saleh Mosque. The saint was buried near this mosque.

The area is now named as Saleh Nagar of Bandar Police station after Baba Saleh. The madrasa and new mosque surrounded of the Bandar Shahi mosque and some small shops are situated on the other side. The adjacent road is very narrow.

### II. Architectural Layout

Bandar Shahi Mosque is a single domed mosque, the dome being the most sophisticated and popular form of the sultanate period. The interior diameter is 6.2 meters and the exterior diameter is 9.70 meters. There are three entrances, main entrance is located in the center, another towards the east and two others are located on the north and the south. The main entrance is wider than two others and it is 2.2 meters high and 1 meter wide. The four octagonal towers at the four corners are the main structural support for the roof overlaid on it. The towers are not too high on the cornice which reflects the sultanate architecture.

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Figure 1: Existing View of Bandar mosque

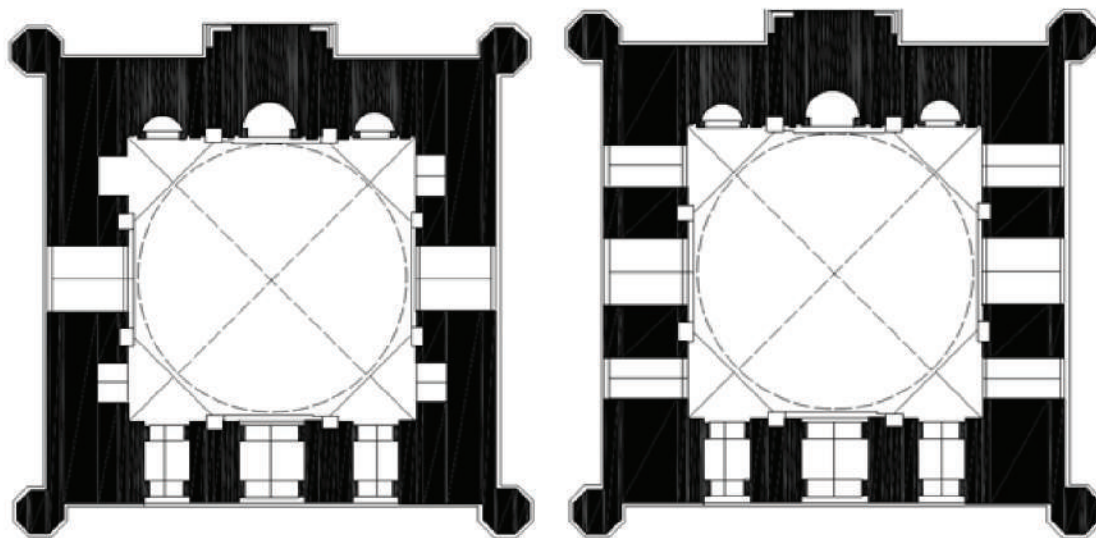


Figure 2: Plans of Bandar mosque

### III. Structural Elements of the Mosque

The main structural material of the mosque is brick and the four towers are made with stone. There are three stoned mihrab pillars and the pillars and the jaw roofing square to facilitate structural support. The stones of the performance

area were brought from Rajmahal, India. The doors are made of wood and they were installed later which is situated on top of the main door. The interior is well ornamented, specially the central mihrab.

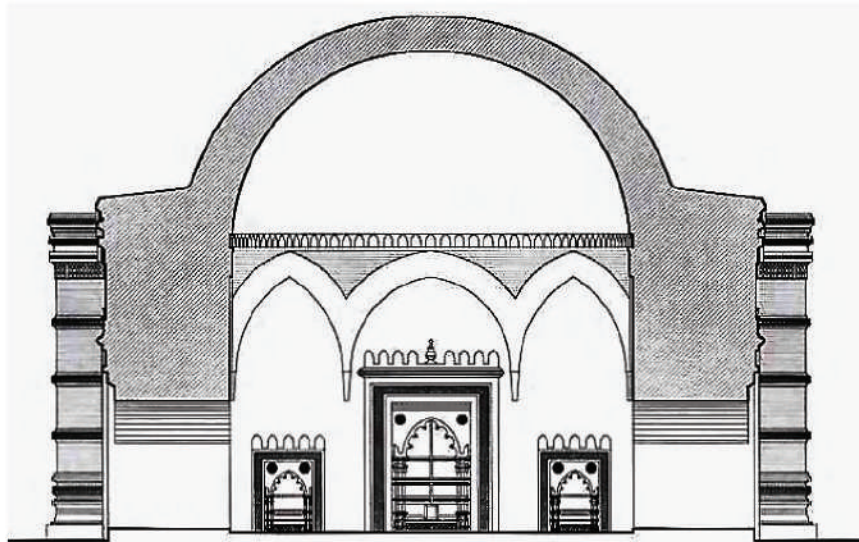


Figure 3: Section of Bandar mosque

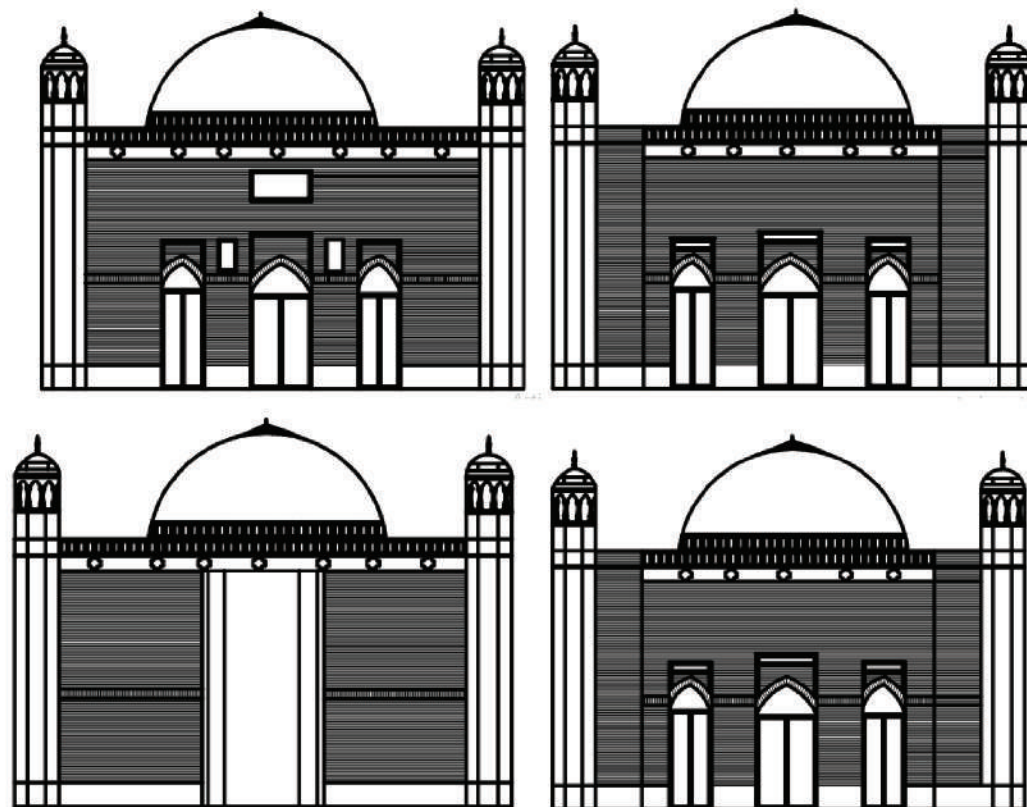


Figure 3: Four Side Elevations of Bandar Shahi mosque

#### IV. The Decoration of the Mosque

Because of the reconstruction the original character has been lost. The decorative elements are not visible anymore, three mihrabs are surrounded by a rectangular structure and the

marlons are decorated in the top of the structure. The central mihrab is redecorated but the other two are not in good condition. The lintel of mihrab is adorned in Arabic calligraphy; rectangular structures are decorated with floral patterns,



leaves. It is said that the color of the mosque makes it more intimate. But now the use of excessive red, blue, turquoise, yellow and black color in the mosque ruined the mosque's original characteristics.

The development starts from there. The traditional pendentive squinch system was the main feature on sultanate of Bengal period. Inside of the dome is normal white wash and on the outside there is no color which indicates the antiquity of the mosque.



Figure 4: Outer surface of the dome without any color

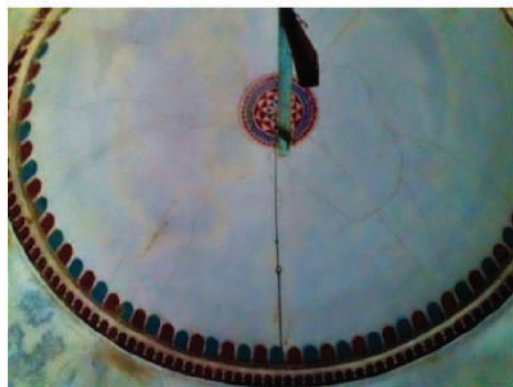


Figure 5: Inner surface of dome with white paint and crack

## V. Architectural decoration and features:

### V.I. Dome

The mosque displays one of the good examples of Sultanate Bengal, Architectural Ornamentations and comprehensive decorative schemes. Dome is one of its Most basic architectural elements and

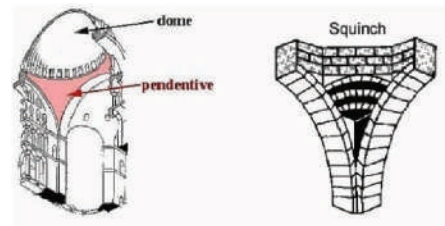


Figure 6: Details of Dome



Figure 7: Present condition of the mosque

### V.II. Marlon

The interior of the dome and outer part is decorated with marlons. The drum on the outer wall is divided into two parts. There is no color used and many red and turquoise colored marlons are visible inside.



Figure 8: Present condition of the mosque

### V.III. Dome Chain or Glasses

The lotus fluttering in the mosque is one of the unique styles of Sultanate period. The lotus flap which is situated above the dome is decorated with



colors. The narrow striped parts are visible at the top of the head and angular tower of the dome are made of brass.

#### V.IV. Mihrab

Mihrab is one of the important features of mosque. There are three mihrabs on the western wall of the mosque. The central mihrab is larger than the other two adjacent mihrabs, and it's highly ornamented.



**Figure 9:** Three mihrabs and the port of sahar

#### V.V. Cornice:

The small curved module on cornice port is one of the unique characters of Islamic architecture which is visible in this shahi mosque and this character has been seen in many other mosques like Goadi Mosque of Sonargaon. Currently the curve is transformed due to many reconstruction work of time.

### VI. Original Features and Changes of the Bandar Shahi Mosque.

The single domed mosque has a water tank which was used as wudu khana. There is no verandah in the original layout of the mosque even there was no path between the mosque and the adjacent pond. There were many flowers and fruit trees surrounding the pond and mosque.

#### VI.I. First Changes of Mosque

In the 17<sup>th</sup> century a major change was noticed. New construction of the porch and iron sheet roof above the veranda was found. During the reconstruction, the Southern and Northern entrances were closed. After the massive

renovation the original architectural characteristics were destroyed.

#### VI.II. Significant Changes in Mughal Era

During the mughal era the simple parapet was constructed and extra short curvature cornice was removed. At this period the blinds on the parapets are made with plaster and marlons are decorated around the drum.

#### VI.III. Present Situation of the Mosque

The mosque has already lost most of its own architectural features and there is no effort to preserve its own history. A new mosque has been built along with the main mosque and the adjoining veranda. Natural ventilation and lighting is completely absent due to the new addition of the madrasha and mosque. The market and small shops have also been built which also disregards the heritage.

This mosque has been occupied by the local mosque community. the owners don't have enough power or funding to save original mosque with its original features.

The dark and dirty water damaged the original materials of the mosque and the area is full of snakes, worms and leeches. Now this is not safe for occupants. Due to the penetration of water the walls are damp and the religious books are swollen and severely damaged and it is also difficult to photograph the mosque from the outside.

The local people and authorities are taking no steps to improve the situation and there is no initiative to renovate it.

#### VII. The Amount of Light inside the Mosque

Insufficient natural light and ventilation has led to a very unhealthy environment for the occupants of the building.

The lux meter is used to measure the light of the indoor space:

Time and duration: 30 minutes at 10 am.  
Maximum amount of light=1 lux  
Minimum amount of light=0 lux.  
Average amount of light = 0 lux.



**Result:** The north, south and the east part are slightly enlightened during the daytime and when the door is opened. But the western side of the mihrab and mimber is always dark due to inefficient light.

The lighting is also calculated during the daytime with the main door open.

Time and duration: 3 minutes at 10 am.

The maximum amount of light: 1 lux

Lowest amount of light: 0 lux

Average amount of light: 0 lux

Thus it can be concluded that the lighting is not efficient for the mosque.

### VIII. Instruction Regarding Renovation

According to the international law and department of archeology the original building should be kept and only the function can be changed because of the need of times. The restoration should be done respecting the main monuments and the surrounding should be in minimum distance to respect the historic building. The conservation of monuments is always facilitated by making use of them for some socially useful purpose. Such use is therefore desirable but it must not change the lay-out or decoration of the building. It is within these limits only that modifications demanded by a change of

function should be envisaged and may be permitted. Thus we can establish the limits to which we can change the building. We must aware that how much we can show the main building materials, main construction system and others to introduce the historic techniques of the building. It must be kept. [(Charter of Venice Artical 4 and 5 , 1964)

### VIII.I. Building Materials and Damage Monitoring

The walls are extremely vulnerable. Because of dampness the plasters are almost falling down. The best solution could be to check out the dampness, cleaned the walls and re plaster them. We must be careful that, the original material and structure will not be lost.

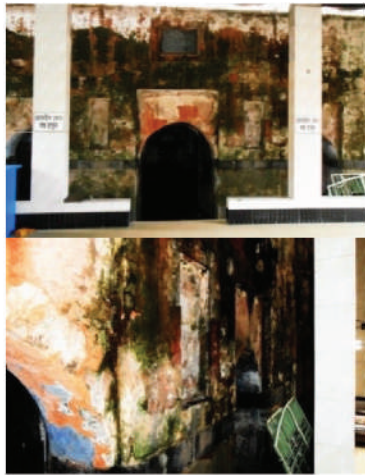
### VIII.II. Outer Wall Monitoring and Possibilities

The outer wall between the old mosque and the newly built mosque is damaged due to moisture. The eastern wall is completely closed and there is no way of facilitating natural ventilation and sunlight. It is suggested to remove the dirt, dampness, harmful material from the damaged walls and demolish the new extended mosque. It will then help to circulate adequate light and ventilation. If the extension is important for more accommodation, it is suggested to plan in proper way.



**Figure 10:** The damage found in the mosque





**Figure 11:** The fungal and mouse grew on wall and the new structure built without respecting the monument

#### VIII.IV. Missing Parts of the Mosque

Some parts of the mosque almost broken specially the pillars which was decorated with fruits and floral patterns. The missing ornamentations and missing part can be recreated but it has to be distinguishable from the original by color or material. the main objective is to save the maximum heritage value not only to make a new one. It must be also to be by the restoration work. It is the main aim to save the maximum heritage value not only to make a new one.

Care must be taken techniques and color will use for painting and follow like the same as it is possible.



**Figure 12:** Missing parts of the mosque.

Items of sculpture, painting or decoration which forms an integral part of a monument may

only be removed from it if this is the sole means of ensuring their preservation.

Replacements of missing parts must integrate harmoniously with the whole, but at the same time must be distinguishable from the original so that restoration does not falsify the artistic or historic evidence.(Charter of Venice Article 12, 1964)

#### VIII.V. Analysis of the Interior

For interior restoration it is necessary to keep and respect the original material and the aesthetic values. It cannot be justified to remove all the historic evidence and made it totally new. The concept of restoration and conservation is to save the old and heritage values.



**Figure 13:** Interior view of the mosque

The valid contributions of all periods to the building of a monument must be respected, since unity of style is not the aim of a restoration. When a building includes the superimposed work of different periods, the revealing of the underlying state can only be justified in exceptional circumstances and when what is removed is of little interest and the material which is brought to light is of great historical, archaeological or aesthetic value, and its state of preservation good enough to justify the action. Evaluation of the importance of the elements involved and the decision as to what may be destroyed cannot rest solely on the individual in charge of the work.(Charter Of Venice , Article 11, 1964)



## IX. Restoration and Conservation Techniques

### IX.I. International Conservation Technique and Examples

This heritage site in Bangladesh shows disregard towards the conservation value. The new techniques and technology should be done in accordance with in the law. The Bandar shahi mosque is surrounded by the madrasa and extended part of the mosque. This creates the insufficient light inside the mosque. It's also illegal to build a new structure just close to the old building. In that case the illegal building should be demolished and the original should be renovated properly. The Extension is possible but it has to be in accordance with international renovation rules.

Excavations should be carried out in accordance with scientific standards and the recommendation defining international principles to be applied in the case of archaeological excavation adopted by UNESCO in 1956. Ruins must be maintained and measures necessary for the permanent conservation and protection of architectural features and of objects discovered must be taken. Furthermore, every means must be taken to facilitate the understanding of the monument and to reveal it without ever distorting its meaning. All reconstruction work should however be ruled out "a priori". Only anastylosis, that is to say, the reassembling of existing but dismembered parts can be permitted. The material used for integration should always be recognizable and its use should be the least that will ensure the conservation of a monument and the reinstatement of its form. (Charter Of Venice article 15, 1964).

The conservation of a monument implies preserving a setting which is not out of (Charter of Venice Article 4 and 5, 1964) scale. Wherever the traditional setting exists, it must be kept. No new construction, demolition or modification which would alter the relations of mass and color must be allowed. (Charter of Venice, article 6, 1964)



Figure 14: Stone conservation

On the other hand of restoration, we can use the new technology if the traditional techniques fail to save the heritage but at certain extent. And the process of restoration is very difficult to preserve and reveal the aesthetic and historic value. Some examples of proper restoration in many countries those are following the international rules.

#### 1. Kaiser-Wilhelm-Gedächtniskirche (The Protestant Kaiser Wilhelm Memorial Church).

It is a memorial. Inside the fall of 1943, the church became sustain damage after a bombing assault. Ruins of the tower were preserved and today are used as one of the symbols of Berlin.

In Bandar Shahi mosque the main mosque should be kept and new mosque can be proposed as per present demand.

### IX.II. Growing Awareness and Maintains

To keep the heritage, growing public awareness is very necessary. Without respect no heritage, no building could be maintained. This building is the symbol of a history, so awareness of renovation should start as early as possible to get its originality and cost effective also.

In order for the restoration of the mosque, several steps will be needed. First structural and architectural investigations are needed. It is necessary to train the crafts men. Regular Monitoring and investigation is also necessary thereafter.





**Figure 16:** Stone conservation

## X. Conclusion

Conservation of heritage, it is necessary to determine the appropriate techniques of construction available, identifying the defects and damages, availability of Materials and minimize the cost. Damage can be repaired when the actual defects are diagnosed correctly. Damage assessment and repairmen on a regular basis will decrease the overall cost.

Documentation, such as, taking photographs, monitoring and maintenance are the continuous process of restoration, renovation work. This is not only for the documentation of the mosque, it will also be helpful to grow the

awareness, stop constructing illegal structure and respecting the heritage and preserving it for the next future generation.

## References

(Charter of Venice , 1964)Stone Conservation, 2<sup>nd</sup> addition, by Eric Doehne and Chlifford A. Price.

(Charter Of Venice , Article 11, 1964)

(Charter of Venice , article 6, 1964)

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## Acknowledgements

Article “Making Space for the present and the Local-Creativity in Heritage Conservation” – Prof. Dr. Sudarshan Raj Tiwari. Inaugural Conference of the Association of Critical Heritage Studies, Guthenburg University, held at Guthenburg, Sweden (June 5 – June 8, 2012)

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