The Director,
World Heritage Center,
UNESCO, 7, place de Fontenoy
75352 Paris 07 SP,
France.

Subject: SUBMISSION OF STATE OF CONSERVATION REPORT OF LAHORE FORT AND SHALAMAR GARDEN TO THE WORLD HERITAGE COMMITTEE

Dear Madam,

Please refer to the decision adopted by the 42th session of the World Heritage Centre during its meeting held at Manama – Bahrain in July, 2018. The report on the “State of Conservation of Lahore Fort and Shalamar Gardens, Lahore (Pakistan) (WHC 17) 41.COM 7B.Add.2,” is sent herewith after obtaining from the concerned Department of Government of Punjab.

With regards,

Yours sincerely,

(SYED JUNAID AKHLAQ)
Director General

Encl: As above
Report
on
State of Conservation of
World Heritage Property
Fort & Shalamar Gardens
Lahore, Pakistan

January, 2019

Government of the Punjab
Directorate General of Archaeology
Youth Affairs, Sports, Archaeology and Tourism Department
# Table of Contents

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Item of Description</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Executive Summary</td>
<td>1</td>
</tr>
<tr>
<td>2.</td>
<td>Introduction</td>
<td>3</td>
</tr>
<tr>
<td>3.</td>
<td><strong>Part-1.</strong> Report on decision <strong>WHC/18/42.COM/7B.14</strong></td>
<td>5</td>
</tr>
</tbody>
</table>
EXECUTIVE SUMMARY

Fort & Shalamar Gardens in Lahore, Pakistan were inscribed on the World Heritage List of monuments in 1981. The state of Conservation of the Fort and Shalamar Gardens were discussed in the 42nd Session of the World Heritage Committee (WHC) in July, 2018 at Manama, Bahrain. In that particular session the Committee took various decisions and requested the State Party to implement them and submit a State of Conservation Report to the World Heritage Centre for its review in the 43rd Session of the World Heritage Committee.

The present State of Conservation Report consists of two parts. In the first part, progress on the decisions of the 42nd Session of the WHC has been elaborated and the second part of the report deals with the conservation efforts of the State Party for Lahore Fort and Shalamar Gardens.

Regarding implementation of Joint World Heritage Centre/ICOMOS Reactive Monitoring Mission (RMM) recommendations, the State Party convened a series of meetings with all the stakeholders including Federal Department of Archaeology, UNESCO Office Islamabad, President ICOMOS Pakistan, various government departments of the Punjab i.e., Punjab Mass-Transit Authority, Lahore Development Authority, Metropolitan Corporation of Lahore, Zonal Revenue Authorities, Walled City of Lahore Authorities, Technical Committee on Shalamar Gardens and eminent national & international heritage experts and deliberated upon the recommendations of the RMM and way forward for their implementation. Resultantly, various studies have been proposed to check the feasibility, detailed design, cost estimates and then supervise subsequent execution of the recommendations of the consultant while remaining strictly within the confines of the directions of the Honourable Supreme Court of Pakistan. All the stakeholders unanimously agreed for hiring services of reputed consultants for the purpose and the process is underway.

The State Party has also been considering the modification of boundaries of the world heritage property as it involves various factors including dislocation of large number of community, hence, a study will be conducted for an appropriate solution. The World Heritage Centre will be kept informed about the outcome of the studies for review and comments prior to their implementation. Meanwhile following the recommendation of RMM, the restoration/conservation for Aiwan/ summer pavilion, historical gateway, brick pavement, wooden ceiling along with restoration of specific elements of garden etc., have been intensified. Furthermore, the
restoration of external waterways on the eastern side of the perimeter wall being part of the Mughal hydraulic system of Royal Hammam of the Gardens has been initiated after carrying out necessary documentation and cost estimates. Further, the State Party has developed a green area with trees and when these trees will grow to its full height, it will form a natural “mask” for the newly-constructed Orange Line Metro Train Project.

In the light of decision of the WHC and recommendations of the RMM, the State Party realizing the importance of the Outstanding Universal Value (OUV) of the Property has strictly been implementing the decision of the Honorable Supreme Court of Pakistan regarding protection, preservation and conservation of the property through continuous monitoring under the supervision of a high level Special Committee of Experts.

The second part of the report deals with the conservation efforts of the State Party for Lahore Fort and Shalamar Gardens. Comprehensive conservation plans for the preservation and restoration of Lahore Fort and Shalamar Gardens of the cost of PKR- 300 million ($2.89 million) each were chalked out in 2006 and same have been reviewed by the project Technical Committee and Steering Committee to the cost of PKR- 964.087 million ($9.286 million) and PKR.290.90 million ($2.84 million) respectively due to necessary modifications in the scope of work. The conservation works on various historical structures and decorative features of Lahore Fort and Shalamar Gardens are in progress in accordance with the international standard and guidelines for the World Heritage monuments.
INTRODUCTION

Lahore has a long history starting from 2nd century BC to present day. It is the provincial capital of Punjab province of Pakistan with population of more than 11.00 million today. In Mughal period that had started in 1526 and ended at Lahore in 1763, this city turned into jewel of architecture. A number of historic buildings were built by Mughal emperors and among them most famous were Lahore Fort and Shalamar Gardens. Considering their historical significance and architectural value, Shalamar Gardens and Lahore Fort were placed on the World Heritage List in 1981. Since their inscription on the World Heritage List, these monuments have become major tourist attraction for the tourists from homeland and abroad. However, in the year 2000, these monuments were placed on the World Heritage in Danger List as their condition had deteriorated. The Directorate General of Archaeology, Punjab had made concerted efforts to revive the glory of these monuments in accordance with the decisions of the World Heritage Committee.

Soon after assigning the responsibility of their maintenance, the Punjab Government had started two conservation and development schemes prepared under the guidelines given in the UNESCO’s Master Plans prepared in 2006. Govt. of the Punjab had approved Rs.300.00 million each for Lahore Fort & Shalamar Gardens for their conservation, preservation and provision of tourist facilities. These schemes are still ongoing and have been revised to meet the latest requirements for preservation and restoration of these particular monuments.

It is pertinent to mention here that with the strenuous efforts of the Directorate General of Archaeology, Punjab the World Heritage Committee decided to remove the property from the World Heritage in Danger List under Decision 36 COM 7A.28 in its 36th Session held in, 2012 at Saint-Petersburg. It was a great achievement not only for the Directorate General of Archaeology but also for Government of the Punjab. Although these monuments have been removed from the World Heritage in Danger List but still Government of the Punjab has not let up its efforts and is working hard for the betterment of these monuments with the same enthusiasm as it was done.
before their removal from World Heritage in Danger List. As a result of continuous efforts the present State of Conservation of these monuments has further been improved much and more pleasing than what it was in 2012 when it was removed from the World Heritage in Danger List.
Part-1

RESPONSE TO THE DECISIONS OF
THE WORLD HERITAGE COMMITTEE

DECISION -1

Having examined Document WHC/18/42.COM/7B.Add.2

RESPONSE

No response required;

DECISION-2

Recalling Decisions 40 COM 7B. 43 and 41 COM7B.96, adopted at its 40th (Istanbul/UNESCO, 2016) and 41st (Krakow, 2017) sessions respectively;

RESPONSE

No response required;

DECISION-3

Acknowledges the efforts made by the State Party to address the Committee’s recommendations with regard to the conservation of the property;

RESPONSE

The State Party is well aware of its responsibilities and has been implementing the on-going conservation plan for Lahore Fort and Shalamar Gardens in accordance with the international standard and guidelines for the World Heritage monuments.
DECISION -4.

Takes further note of the decision of the Honourable Supreme Court of the Islamic Republic of Pakistan that has given 31 directions with regard to protection, preservation and conservation of the property;

RESPONSE

The State Party has strictly been implementing the decisions of the Honourable Supreme Court of Pakistan that has given 31 directions with regard to protection, preservation and conservation of the property. The Implementation Report of Judgment / Order of the Honourable Supreme Court of Pakistan is attached (Annexure-A). A broad based Special Committee of Experts has been constituted by the Supreme Court of Pakistan headed by a retired judge of the Supreme Court to oversee /monitor the implementation of directions of honorable Court. A Technical Committee has also been constituted by honourable Court, comprising of professionals having expertise in the field of archaeology, renovation, preservation & maintenance of monuments and structural engineering to work in close liaison with the Special Committee of Experts. The above Committees have met more than 30 times and are frequently paying visits of monuments to monitor the protection, preservation and conservation of the property. Civil works for OLMTP construction in front of Shalamar Gardens has been completed without compromising authenticity and integrity of the Property.

DECISION-5.

Expresses concern that the State Party did not inform the World Heritage Committee of the Orange Line Metro project before any irreversible decision was taken, in accordance with Paragraph 172 of the Operational Guidelines, especially in view of the impacts of the metro line, and notably its route and constructions process, on the Outstanding Universal Value (OUV) of the property;
RESPONSE

The State Party has repeatedly stated during the 40th, 41st and 42nd Session of the World Heritage Committee (WHC) and once again reiterates it here that reporting under paragraph 172 is obligatory when restorations or new constructions may affect the Outstanding Universal Value (OUV) of the property. All of the studies of Orange Line Metro Train Project (OLMTP) like Environmental Impact Assessment (EIA), Heritage Impact Assessment (HIA) including Visual Impact Assessment (VIA), detailed vibration analysis (both for construction and operation phases) do not indicate any unmitigatable adverse impact on the OUV of the property. The critical attributes of the property’s OUV include the plan of the Garden and its terraces, the water tanks, design and decorative features. None of the OUV bearing attributes (plan, water features, garden, decorative elements) has been directly or indirectly impacted by the OLMTP particularly after drastically readjusted alignment in front of the property by developing a special curve. Consequently reporting of OLMTP to World Heritage Centre under paragraph 172 was not required.

The State Party commits to strictly comply with the requirement of paragraph 172 where applicable in future projects.

DECISION-6.

Also expresses concern that despite the Committee’s previous decisions, the Orange Line Metro in Lahore has been almost completed without a satisfactory, comprehensive Heritage Impact Assessment (HIA) for the project;
RESPONSE

All works of OLMTP in front of the property remained suspended from 28.01.2016 to 22.12.2017. In the intervening period, the State Party reported actual facts to the WHC in its 40th Session in July 2016 in Istanbul and 41st Session in July 2017 in Krakow and has strictly been proceeding in accordance with the decisions of the WHC.

The issue of whether project HIA was in accordance with ICOMOS Guidelines has been repeatedly raised by the Advisory Bodies and more particularly during the 41st session of the World Heritage Committee (WHC). The recommendation of the Advisory Bodies reflected in the draft decisions was discussed in detail by the WHC and concluded that there was no infirmity in HIA on this account and the related draft decision was rejected by its deletion by the WHC in the 41st session. The OLMTP stands executed in front of the property and no adverse environmental impacts are noticeable on ground. In fact, when the train is operated, further positive environmental impacts on the property will be realized.

DECISION-7.

Notes the efforts of the State Party in implementing all mitigation measures during the construction phase of Orange Line Metro Train Project (OLMTP) and requests that close monitoring and implementation of vibration control, noise, air pollution and visual mitigation measures directed in the order of the Honourable Supreme Court of Pakistan and suggested in various studies will be ensured during the operation phase of Orange Line;
RESPONSE

The State Party effectively implemented all mitigation measures during the construction phase of Orange Line Metro Train Project (OLMTP) and ensured the close monitoring and implementation of vibration control, noise, air pollution and visual mitigation measures as directed in the order of the Honourable Supreme Court of Pakistan (as already mentioned in the response of decision 4) and suggested in various studies during the operation phase of OLMTP.

It may also be added here that, as per the feasibility study, approximately 245,000 passengers per day are expected to ride in the Train. Through modal shift, during the operation phase, the current levels of vehicular traffic noise and air pollution will drastically reduce in front of the property.

DECISION-8.

Notes the impact on integrity and authenticity of the property;

RESPONSE

The critical attributes including integrity and authenticity of the property’s OUV include the plan of the Garden and its terraces, the water tanks, design and decorative features. None of the OUV bearing attributes (plan, water features, garden, decorative elements) have been directly or indirectly impacted by the OLMTP particularly after drastically readjusted alignment in front of the property by developing a special curve. The Garden was designed as a Royal enclosure with high surrounding walls defining close and restricted space that have not been impacted by OLMTP. Inside the walls the layout is intentionally designed with its pathways, viewing points and water features focusing the Royal gaze and movement with
OLMTP at their back, from the upper terrace downward towards the tank of the middle terrace and beyond, away from the OLMTP.

Present day visitors are equally affected by this orientation of the Property and spend most of their visits looking northward and away from the direction of OLMTP. If the visitors do turn to look toward the OLMTP, they will have different views depending where they are standing within the sites. These minor and in fact ignorable views are being mitigated as suggested by various studies including VIA and RMM recommendation.

In the light of reasons given in the preceding paras, no irreversible impacts on the attributes of the property have been created due to construction of Orange Line Metro Train with no threats whatsoever to its OUV, authenticity and integrity.

**DECISION-9.**

Takes note of the outcomes of the April, 2018 joint World Heritage Centre/ICOMOS Reactive Monitoring Mission to the property, including the evaluation of the current condition of the property, and also requests the State Party to implement the mission’s recommendations;

**RESPONSE**

Regarding implementation of Joint World Heritage Centre/ICOMOS Reactive Monitoring Mission (RMM) recommendations, the State Party convened a series of meetings with all the stakeholders including Federal Department of Archaeology, UNESCO Office Islamabad, President ICOMOS Pakistan, various government departments of the Punjab i.e., Punjab Mass-Transit Authority, Lahore Development Authority, Metropolitan Corporation of Lahore, Zonal Revenue Authorities, Walled City of Lahore.
Authorities, Technical Committee on Shalamar Gardens and eminent national & international heritage experts and deliberated upon the recommendations of the RMM and way forward for their implementation. Resultantly, various studies have been proposed to check the feasibility, detailed design, cost estimates and then supervise subsequent execution of the recommendations of the consultant while remaining strictly within the confines of the directions of the Honourable Supreme Court of Pakistan. All the stakeholders unanimously agreed for hiring services of reputed consultants for the purpose and the process is underway.

The RMM recommendations will be implemented as far as possible based on outcome of the above mentioned studies. The World Heritage Centre will be kept informed of the recommendations of the studies for their review and comments prior to their implementation.

Meanwhile following the recommendation of RMM, the restoration/conservation for Aiwan / summer pavilion, historical gateway, brick pavement, wooden ceiling along with restoration of specific elements of garden etc., have been intensified. Furthermore, the restoration of external waterways on the eastern side of the perimeter wall being part of the Mughal hydraulic system of Royal Hammam, Restoration of resting chamber, corner tower of the lowest terrace & perimeter wall of the Gardens have been initiated after carrying out necessary documentation and cost estimates. Further, the State Party has developed a green area with trees and when these trees will grow to its full height, it will form a natural “mask” for the newly-constructed Orange Line Metro Train Project.

**DECISION-10.**

Further requests the State Party, in line with Paragraph 172 of the Operational Guidelines, to submit, in relation to future projects,
detailed project studies to the World Heritage Centre for review by the Advisory Bodies and to ensure that implementation only start after positive feedback has been received from the World Heritage Centre and the Advisory Bodies;

RESPONSE

The State Party stands committed to paragraph 172 of the Operational Guidelines of UNESCO Convention in relation to future projects and will submit details / recommendations of the studies to the World Heritage Centre for review by Advisory Bodies for their comments and feedback prior to implementation of future projects.

DECISION-11.

Finally requests the State Party to submit to the World Heritage Centre, by 1 February, 2019, a report on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 43rd session in 2019.

RESPONSE

The State of Conservation Report has been prepared in accordance with the advice and decision of the World Heritage Committee and being submitted to the World Heritage Centre for its review and assessment.
Part-2

STATE OF CONSERVATION
LAHORE FORT

Lahore fort is the only monument in Pakistan represents a complete history of the Mughal architecture. The architecture of Akbar’s period in the fort is characterized mainly by the use of red sandstone and cut brick work. The use of animal figures such as lion, elephant, and peacock as well as sculptured gargoyle, as brackets to support the chajja shows the Hindu elements in the Mughal architecture of Akbar’s period. More or less the same style continued in the buildings of Jahangir. The buildings of the period of Shah Jahan and Aurangzeb provide a striking contrast with the former. The use of marble in place of sandstone and exuberance of the Persian motifs, pietradura and tile mosaic work are the chief characteristics of the buildings added by Shahjahan known as prince architect of South Asia. The fort is situated north east corner of the city. It contains irregular shape in surroundings and very symmetrical Mughal foot prints in garden and balance geometry can be seen in the monuments. Acknowledging the pinnacle of Mughal aesthetic, design and artistry and masterpiece of human genius, in 1981, the fort was added to the UNESCO World Heritage List along with the Shalamar Gardens. The administrative, operational and functional responsibilities were shifted from the Archeology Department to Walled City Lahore Authority on 20th October, 2014.

Since inception, State Party truly felt that the necessities of the monument are high while an intensive research work in the form of documentation of individual historic components, condition assessment surveys of structures and spaces and conservation reports are required. The ongoing activities are dominantly includes: research work, condition assessment surveys, conservation proposals, removal of debris, upgraded tourist facilities, and consolidation & maintenance works. Some of the factual details are additionally enclosed in report in the form of description and images. Considering the facts and needs of the site Conservation staff is more leading research work and receiving assistance from alleged international and national organizations as well.
It was observed that the allocated previous budget of PKR 300 million in 2006 was insufficient to achieve set goals of conservation therefore; it was decided in 2014 - 15 to revise PC-I on the basis of requirements. Considering the fact and nature of activities revised PC-I with framed cost of PKR- 964.087 million has been approved by competent forum of local government office and conservation activities have been initiated.
1. Conservation of Picture Wall Lahore Fort:

The Picture Wall is the longest mural wall in the world, decorated by exquisite tile mosaic work and depicting various figurative scenes of the Mughal era. This project comprised of the documentation, research and analysis of the Western Façade of the Picture Wall. The survey and documentation creating a scaled elevation using EDM and photo rectification techniques, a damage analysis of the facade, material testing, geotechnical investigation, structural stability analysis, history of interventions, interpretation and analysis of images and historical identification of geometric patterns.

The technical, aesthetical and historical findings were shared in a workshop and an in-house publication.
Introduction:

The Picture Wall is the most exquisite feature of Lahore Fort. It is one of the largest murals in the world (450 meters long with an average height of 15 meters) and is extensively embellished with tile mosaic and fresco panels, brick imitation and filigree work. This wall is mainly responsible for the Fort's World Heritage status as it is a classic example of the exceptional craftsmanship of the Mughal period. Many efforts in the past have been made to restore and preserve this outstanding symbol of Mughal culture.

Since September 2015 Aga Khan Trust for Culture/Aga Khan Cultural Service Pakistan (AKTC/AKCSP) has been in partnership with the Walled City of Lahore Authority (WCLA) for the documentation of Picture Wall as part of the larger Lahore Fort conservation project. The purpose was “engage with the special site-specific conditions, to define possible approaches, and identify locations and types for prototypical conservation interventions” for the conservation of the Picture Wall (PW) and a 10m wide and 15m high segment of the western wall of the PW was selected for prototype conservation.

This area, located in correspondence with the Naulakha Pavilion and the marble screen to the south, was selected, because it shows a broad range of visual, chemical, physical and structural problems as well as former interventions that can be seen all across the wall. It is therefore expected that findings in this area will be representative for the conservation of the entire Picture Wall. For an in-depth analysis of the ongoing issues and for the selection of suitable conservation efforts, six missions involving international experts from different fields have been carried out so far. A greater emphasis has been placed on conserving the original remains and reconstruction has only been done where the evidence of the details of the missing parts is strong enough and reference data was available.
Conservation Tasks Completed:

It is estimated that the total damage on the Western facade is around 20% in total which testifies to the impressive quality of the historic materials and techniques used for the craftwork. The loss of adhesion between the glaze and the tile body is the most visible aspect of the deterioration on the wall. In addition, a significant amount of fresco wall paintings have been lost and large sections of the horizontal frieze of filigree work is missing which was filled up with cut and dressed brickwork during the British era (1858-1947). There are a large number of micro-gaps in the joints between tile bodies on mosaic panels. In addition to the loss of the artwork, there is a rich layer of biofilm covering many areas of the wall. This can be most clearly observed on top of the plaster surfaces, in between tile bodies on mosaic panels, on the bedding mortar in between the bricks and can also be observed behind the white translucent glaze as dark patches. The first and foremost part of the Prototype Project was to conduct a detailed digital documentation, condition survey and analysis of the physical and chemical problems relating to the artwork. This made it possible to experiment with possible conservation efforts on the prototype, ensuring minimal damage and maximum preservation during all interventions. An important part of this process of experimentation was to establish a logical sequence of conservation treatments. Throughout this process, many unforeseen problems were dealt with and these unexpected challenges have directed the final sequence of treatments.
Excavation Work:

The objective of the excavation work was to expose and study the original Mughal era floor level around the Picture Wall. For this purpose an exploratory pit was dug out under the selected prototype area so that examine the structure stability, and perform a complete study of the traditional construction techniques that consist of cut and dressed brick work, brick imitation work, and fresco painting underneath wall. These investigations made it possible to analyze the various interventions and changes made to the Picture Wall area during the post-Mughal Era including the British Raj and the Sikh Rule.

Now as a part of display, original floor level of Picture Wall which is more than 2 meters below the ground level has been displayed. This will help the wall to dry up as well as expose the whole length and proportion of the Picture Wall.

Conclusion:

A project of this nature where focus is conservation and presentation of decorative surfaces of unprecedented nature is quite challenging. Being a World Heritage Site, Lahore Fort Picture Wall also necessitated employing all best possible opportunities to restore this unique mural wall in the world. In the process of prototyping the key principle followed was “less intervention and maximum retention”. The focus of the project was to consolidate the original remains by introducing some of the pioneering methods in Pakistan. The project was success as both local and international experts work hand in hand. This synergy has also helped to develop a team of young conservators which is also very first in the Pakistani context. This project is a good balance
between international and local conservation practice. Still nothing is final as whatever approach is adopted for restoration only presents conclusions that seemed most suitable according to various studies and experiments conducted. The upcoming workshop will be used to assess and review the work done so far in terms of the various aspects of documentation, and the approach and methodologies adopted for the recommended conservation interventions and presentation of the Picture Wall prototype, to arrive at a course of action for conservation of the whole Picture Wall that adheres to conservation principles, is authentic and is in consonance with the context.

2. **Conservation of Royal Kitchen**:

   The Royal Kitchen was built around 16th C by the *Mughal ruler Shahjehan*. It was designed as *Royal Kitchen* to serve kings / inhabitants of the fort. It is located in the southwestern corner of the fort. According to historians the *Mughal rulers* used this building as the center of all imperial feasts, *Sikh* used this complex as food storage.

   The Royal Kitchen was a single storey building contains 1470.0 Square meters area when it was built, it was a collection of about 40 internal connected rooms but with the effect of time 34 inter-connected rooms are left. A rectangular open courtyard was located in the middle of building and an inviting entrance was located at center of presently located north compound wall. The breakdown of the north structure carried many modifications i.e. historic entrance was blocked and shifted north east corner as well as geometrical form of central courtyard altered containing other modifications as well.

   A major part of masonry work of the Royal Kitchen is decayed and undermined at different places while a major portion of eastern and southern walls (external) are buried inside soil. A certain level of buried walls are the result of inappropriate interventions of the past. The burial wall may undoubtedly causing destructive salts to form on and within the bricks veneer but in the same time it support raising dampness in walls. A detailed investigation of soil tests of the site have been conducted to know the bearing capacity.

   Exploratory works to understand the exact condition of buried structures and elements were carried out which have been divided into three stages. Excavation and exploratory works of outer side Excavation and exploratory works of Courtyard area.
REMOVAL OF WILD VEGETATION:

The growth of wild vegetation has deteriorated the appearance and character of the royal kitchen but certain species caused direct and indirect damage elements of construction. As it has been noticed from the site that the growth of wild vegetation directly harming structures and architectural finishes. The external parts of building where ground level been raised also become the dense location of wild vegetation as result, some a substantial part of structure damaged and become a big cause of dampness.
Roof:

The roof of royal kitchen is constructed in bricks covering with thick layer of lime. The load bearing walls and arches are supporting inner domes and load of the roof. Some of the parts of building roof, found in dilapidated condition while a sufficient area of southern and western part is completely missing.

Stages of Documentation:

The stages of documentation are:

- Video & Photographic documentation.
- Graphical Documentation of building. (Existing condition)
- Condition assessment surveys will be carried out for understanding existing issues of structure and finishes.
- Prepare conservation proposals.
- Prepare Re-use proposals.
Re-Use:

In view of its history, its intrinsic architectural qualities and its elegant character, it is proposed that the building is turned into the *kitchen with Night time restaurant* with some other relevant facilities.

As more and more domestic and international tourist flux is increasing to see the Lahore Fort but the demanding traditional eating and recreational facilities which are still lacking. The re-use of the building will therefore contain such facilities in it.

**Architectural Interventions:**

It is proposed that the building should be turned into an enclosed and climatically conditioned building, with the addition of an internal circulation system that is protected from the weather. Illumination, air-conditioning etc. will be added to meet the requirements of the users.

The external buried wall will also be open for structural & finishes investigation, and illumination purposes. This would also help to reduce moisture level in structure, enhance its appearance and accommodating future maintenance works.
BEFORE CONSERVATION

AFTER CONSERVATION
3. Conservation of Barood Khana

According to Plaque laid on Barood Khana it can be assumed that this building was built in 1857 during British era, for the purpose of storing gun powders. In this Arms depot, British had been storing the gun powders as well as all kinds of arsenal.

According to historic map of Lahore Fort, it was found that there was a garden with arcades around before construction of Barood Khana. The structure was the part of Alamgiri gate and Musamam darwaza. Later on in British era road was constructed in between to connect the Hathi gate with Diwan-e-Aam. Before road it was a complex as shown in the old plan shown below.

The internal dimension of Barood Khana is 42’9” x 16’11”. However the external dimensions are 49’3” x 29’3”. The difference in internal and external dimension shows that the width of East and West wall i.e. long wall is 6’ approx. while the width of North and South wall i.e. short wall is 3’6” approx. It was found during documentation of the monument that the width of roof at apex is 7’ approx. The doors and windows were totally injured because of aging factor, termites, others woodworms.
The Barood Khana is the special formation of British era but no literature is found specifically written on this building. The monument is a witness of the incomparable use of spaces, valued formation and application of geometric proportions during the well-known era of British. It is completely a sole combination of history, culture and architecture.

The previous conservation schemes for the Lahore fort, the Barood Khana could not get the required attention as a result this marvelous monument lost its historic function, and diluted architectural appearance. The walled city Lahore authority (WCLA) has acknowledged the importance of the monument and decided for its proper conservation and rehabilitation. In this regard, visual inspections were made by the conservation team, existing drawings has been prepared.
Damaged Flooring

The damaged flooring of the Barood Khana needs to be repaired where required. At the southern entrance of the building, the floor has been damaged due to percolation of water. Floor inside the building seems to be fine. However, minor damages can be repaired.

Architectural Proposals
BEFORE CONSERVATION

DURING CONSERVATION
Archeological Findings in Barood Khana
4. Preservation and Restoration of Musamman Gate:

Musamman Gate is an emblem of Mughal architecture. Musamman Darwaza (Gate) is situated near Alamgiri Gate on left side of the passage from Alamgiri Gate to Maidan-e-Dewan-e-Aam. Presently this gate is not in use. According to a historic map of Lahore Fort, it is believed that Musamman Gate held entry to a Mughal garden with arcades where now the Barood Khana exists. Amendments in the plan and circulation of the fort by the British significantly affected the use of Musamman Gate, making it a cornered site, which eventually became disused. Over the years the site became a dumping ground for debris from surrounding construction sites and was largely colonized by natural vegetation. Musamman gate has faced serious damages. Environmental factors and human deeds combined were the serious causes of decays for Musamman gate.

Architectural documentation:
DURING CONSERVATION

AFTER CONSERVATION
5. **Preservation and Restoration of Western Dalan**

Western Dalans are located in Jahangir quadrangle in Lahore fort was built in Jahangir era. Walled City Lahore Authority (WCLA) has acknowledged the importance of the western Dalan and has taken the responsibility of sustainable conservation.

Structural consolidation of broken stone to be replaced. Providing and laying flat tile roofing over wooden battens including sealing of joints with mud mortar. Wooden preservation through anti termite chemicals. Provision of doors and windows of deodar wood. Provision for 4” thick gola in lime.

Kankar lime plaster. Provision for conserve and consolidation of original components of surface including edging and supporting to subsided portion, pointing masonry etc. Electrification in the basement of old rest house.
6. Illumination of Huzori Bagh and Lahore Fort
7. **Conservation and Restoration of Old Wells**

There are about seven wells inside the Lahore Fort. These wells are now abandoned, however still are important historical evidences which reveal the source of water supply to the earlier inhabitants of Fort. Brick masonry of the wells is getting loose due to removal of mortar from joints and has decayed at places. Kankar lime pointing of the wells of main store is proposed to consolidate the masonry. Dismantled portions are proposed to be restored using the same size bricks in Kankar lime mortar. Apron around the well will be provided to protect any seepage from adjoining area. It is also proposed to remove debris and garbage around and inside from the well.
8. Removal of Debris From Jahangir Quadrangle Wall
9. **Ramps for Disables & Other Amenities**

The Management and Technical teams are well aware about penetrated issues of the tourists and convinced to deliver additional facilities especially for Disables than the visitors at Lahore Fort. Understanding the factual issues the following tasks including, construction of ramps for disables, construction of water purification plant, bath rooms and wooden seating have been provided. The provision of ramps for disables was vital in some of the locations of the fort which have been completed.
SHALAMAR GARDEN

Shalamar Gardens, a marvel of Mughal garden architecture, is one of the greatest gardens in the world, representing of the Islamic concept of Paradise. The Shalamar Gardens built in 1642, is a grand manifestation of the ingenuity and craftsmanship of a group of architects, hydrologists, horticulturists, engineers and master craftsmen. The Emperor Shah Jahan intelligently selected a site to build a garden, naturally-terraced to allow for the complex flowing-water system, with fountains, falls and pools, which were fundamental to a Mughal garden. With the passage of time deteriorations in different parts of the gardens were quite significant. Shalamar Gardens was transferred from Federal Government to Punjab Government in 2004 and since then the Directorate General of Archaeology; Punjab has been doing its level best for its proper upkeep, maintenance and conservation. The Government of the Punjab also approved a major conservation plan for preservation and restoration of Shalamar Gardens” amounting to PKR- 300 million in 2006-7 and works for preservation and restoration of various areas inside the gardens remained continued till 2016. Different parts of the Shalamar Gardens have sufficiently been conserved, restored and stabilized to avoid further decay. In the light of the decisions of the Steering Committee and Technical Committee constituted for the smooth execution of conservation works, the scheme has been revised amounting to Rs. 290.590 million to incorporate the missing elements for further execution.

Following preservation and restoration works have been executed during the year 2018.

1. **Preservation and Restoration of Walkways at Upper Terrace**

   Some of the walkways of the upper most terraces of the Gardens were either missing or badly decayed due to constant weir & tier, weather condition and age. In the light of the recommendation of the technical experts, the preventive conservation of dilapidated portions of walkways and restoration of the missing walkways was required to be done on top priority basis. The restoration of missing walkways of upper terrace has been executed with original materials likespecial brick tiles of size 8”x4”x1” laid with lime mortar in geometrical pattern after carrying out architectural and photographic documentation. Preventive Conservation of decayed walkways has also been done with traditional materials as per original.
PLAN SHOWING DETERIORATED WALKWAYS AT UPPER TERRACE

Floor Pattern
2. **Preservation and restoration of Summer Pavilion**

Summer pavilion/Aiwan of Shalamar Garden is located at the junction of the upper most and middle terrace which is a master piece of Mughal Architecture. The ceiling of this pavilion is decorated with delicate small pieces of wood work arranged in geometric designs called *Terseem-bandī*. Some parts of the ceiling have been decayed with the passage of time and due to termite attack. The plaster and pucca qalai work of some portions of parapet, walls and lime terracing have been badly deteriorated and needs to be conserved.

To restore the decayed parts of Summer Pavilion, a conservation proposal was prepared after detail documentation and work was started in 2018. Decayed lime plaster and pucca qalai on wall and parapet have been restored as per original. Wooden *Terseem-bandī* as per original geometric designs pattern finished with painting has been completed. Lime terracing has also been applied on the roof top of Summer Pavilion to protect it from water penetration.

---

![Plan and Elevations of Summer Pavilion](image_url)
Before Conservation

After Conservation
3. **Preservation and Restoration of Water Channel and Tank**

A large water tank is located in the centre of middle terrace of Shalamar Garden with the 152 fountains and a raised Central platform called as *Mahtabi*, approached through causeways. The side section of middle terrace is divided by water channels and path. This water tank is 5 feet deep and its floor & walls have badly been deteriorated and have serious cracks causing leakage of water. The water penetration from the floor and walls was serious hazard to the adjoining structures. Hence, there was a dire need to make it water tightened and further to protect the tank and surrounding structures. The fountains of the central tank were also in a poor state of conservation and need immediate repair.

The central tank and water channels at Middle terrace have been preserved with traditional materials and methodology after proper documentation and study. The old cracked concrete floor of the tank has been restored with 3” thick traditional lime terracing and the side walls of tank were finished with lime plaster. The attached water channels of middle terrace have also been preserved. Decayed fountains have been repaired in same design and missing / corroded brass nozzles were either replaced or fixed to make them operational.

![Plan of 2nd Terrace](image_url)
Plan of Tank, Mehtabi and Causeway

Fountains Details
4. **Cleaning of Cascade:**

A large white marble cascade richly carved and inlaid with black stone lining located in middle of northern wall of summer pavilion. The water from the upper most terrace rippled over the marble cascade and discharged into the main tank on the middle terrace. Cascade had defaced due to accumulation of growth of Algae and black marble inlaid work was missing at some places. Scientific cleaning and careful restoration of the cascade in its original condition was necessary to be carried out. Scientific cleaning work has been done by an expert team under the supervision of Archaeological Chemist to avoid any harm to the original material. The missing inlay work with black marble lining has also been restored as per original pattern.

![Before Cleaning](image1.jpg)

![After Cleaning](image2.jpg)
5. **Beautification and horticulture work around hydraulic Structure**

The remains of historical hydraulic structure located on southern side of Shalamar garden, were kept protected and preserve during the construction work Orange Line Metro Train Project (OLMTP). After the completion of construction phase of OLMTP, the area around the Hydraulic Tank has been improved by extensive landscaping and horticulture work.
Conservation works planned or being executed in 2019.

Following conservation works have been planned in the year 2019 in the light of the recommendations of the Technical Committee and Reactive monitoring Mission of UNESCO (RMM):

1. **Preservation and Restoration of Perimeter Wall at Upper and Lowest Terrace**

The masonry and lime plaster work of perimeter walls of the upper most & lowest terrace are in dilapidated condition due to seepage of water from outside of the gardens. Major components of conservation works includes restoration of marlons, brick tile moulding, brick masonry and lime plaster. The wooden gate 3” thick will also be restored to its original design as per recommendations of RMM.
2. **Preservation and Restoration of Corner Towers of Lowest Terrace**

There are six corner towers in the enclosure wall of the Shalamar Garden. The upper story of these towers have domed pavilion built in red sand stone. The floor, walls and ceiling embellished with lime plaster, fresco painting and stucco tracery work. The preventive conservation of corner towers of the lowest terrace has also been proposed by technical members and RMM. The preservation and restoration works includes lime plaster, moujpa, cusps of arches, vaulted roof and lime terrace flooring.
3. **Preservation and Restoration of Aram-gah Shah Jahan**

Aram-gah Shah Jahan located at the southern side of the upper terrace was the royal resting chambers. Aram-gah building is fronted with a deep verandah having three cusped arched opening. Conservation plan includes restoration of kankar lime plaster, decorative panels, repair of cusp of arches etc.

Documentation of Aram-gah
4. **Preservation and Restoration of Main Entrance Gateway at the Lowest Terrace.**

The original entrance of Shalamar Gardens was made through two elegant gateways provided in the centre of East and West enclosure walls at the lowest terrace embellished with enameled tile work, fresco painting and brick imitation work. Main entrance of Shalamar Garden will be preserved and restored with lime plaster and tile mosaic work in floral designs to make it presentable condition.

![East and West Entrances of Shalamar Garden](image-url)
5. **Preservation and Restoration of Royal Hammam**

Royal hammam is located at the eastern wall of the middle terrace, comprising a cold bath, hot bath and a large dressing room. Decayed Kankar Lime Plaster, Pucca Qali, Fresco painting, kankar lime pointing and restoration of water channel are major items of work planned for preservation and restoration of royal hammam.
6. **Horticulture renovation / development of Green area**

A development scheme has been planned and reflected in Annual Development Programme, 2019 to redress the green area of Shalamar Gardens. The existing grassy lawns will be refreshed with best quality grass to make it more presentable and tourist attractive. Indigenous species of trees, shrubs and flowers will be planted after detail research work. Irrigation system will be upgraded and necessary garden implements for maintenance work will be procured under the scheme.
Monitoring of Safety Measures Adopted during Construction Phase of Orange Line Metro Train

Monitoring Visit of Special Committee of Experts

Bracing & Netting / Sheeting Arrangements at Shalamar Gardens
Monitoring of Safety Measures Adopted during Construction Phase of Orange Line Metro Train

Bracing & Netting / Sheeting Arrangements at Hydraulic Tank

Bracing & Netting / Sheeting Arrangements at Shalamar Gardens
Monitoring of Safety Measures Adopted during Construction Phase of Orange Line Metro Train

Vibration and Noise Monitoring Equipments Installed at Site

Deflection Gauge & Base Plate for Accelerometer
## Implementation of Judgment / Order of the Honorable Supreme Court of Pakistan

### Conditions & Directions of the Honorable Supreme Court of Pakistan for 11 monuments including Shalamar Gardens

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Conditions &amp; Directions</th>
<th>Compliance Status for Shalamar Gardens</th>
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</table>
| i)     | The appellant shall make all necessary arrangements to ensure that the monuments remain stable and undamaged in all respects during the execution of the Project as specified in the HIA and Study of Control of Vibration, Noise and Foundation. | i) All the measures as specified in H.I.A and Study of Control of Vibration, Noise and Foundation report have been implemented. Mitigation measures already implemented are:-  
  a. Documentation & Mapping of Baseline Condition.  
  b. Use of Non Displacement Piles (132 piles and 18 piers in case of Shalamar Gardens).  
  c. Locating delivery entry and exit points farther from the Property to reduce vibrations caused by heavy construction machinery.  
  d. Vibration and Noise Monitoring (three vibration measuring instruments during construction and one currently after construction. One noise measuring instrument installed before start of construction and is still in position after completion of construction) in case of Shalamar Gardens.  
  e. Use of Avongard Tell Tales on structural Cracks (8 on Shalamar Gardens).  
  f. Barriers and warning signage around the Property.  
  g. Protective netting over exposed facades  
  h. Bracing System was meticulously planned and executed before start of construction.  
  i. Monitoring of potential settlement and displacement. (2 plumb lines and 2 deflection gauges in the case of Shalamar).  
  j. Regular watering of dust producing surfaces and materials close to historic properties in order to suppress the dust  
  k. Covering stockpile to prevent dust movement (No stock pile in front of... |
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<td>l.</td>
<td>Safety equipment and procedures as part of the overall safety policy of the project (HSE policy in place).</td>
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<td>m.</td>
<td>Special care when using portable heating equipment; cutting, welding and use of torches.</td>
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<td>n.</td>
<td>Control of matches and smoking.</td>
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<td>o.</td>
<td>In case of all sites where noisy equipment was to be operated in front of Shalamar Gardens, such equipment/machinery was always located and operated on far side of the Property.</td>
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<td>p.</td>
<td>During construction phase noisy and heavy construction machinery was operated in a sequenced manner i.e. only one machinery at a time, in front of Shalamar Gardens.</td>
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<td>q.</td>
<td>Selection of quietest piling methods (reverse rotary and/or dry augur)</td>
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<td>r.</td>
<td>Use of specially quieted equipment and muffde engines (state of art machines that were less noisy)</td>
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<td>s.</td>
<td>Use of temporary noise barriers, shields and loaded vinyl curtains (steel sheets around construction site)</td>
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| ii) | Vibration monitoring shall be undertaken as a part of the monitoring plan using the crack measures devices such as Avongard Standard Tell-Tale throughout the construction period and for an additional period of 10 weeks from the date of commencement of commercial operation of the train or such further time as may be directed by the Director General, Archaeology. In case, it is found that vibration levels at any stage of the construction or operation are exceeding safe limits, construction work/operation shall immediately be discontinued and remedial action shall be taken to ensure that such levels are brought down to acceptable limits. Such actions may inter alia include use of one piece of equipment at a time, during the construction phase, adjustment of train speed, addition of buffer and such other remedial and |

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<td></td>
<td>ii) Vibration monitoring is being done continuously as explained above. Vibration values were well within allowable limits during the construction stage. The vibrations will also be measured during the operation stage. Crack measuring devices like Tell-Tale already installed as explained above.</td>
</tr>
<tr>
<td>iii)</td>
<td>Technical experts shall be present at the sites during the construction phase in the vicinity of the antiquities and special premises with all necessary equipment for monitoring vibration levels. In case, vibration levels exceed the acceptable limits, work shall immediately be stopped, remedial measures taken to the satisfaction of experts and further work shall not commence unless written clearance for resumption of work is given by the experts.</td>
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<td>iii)</td>
<td>Technical experts of M/s NESPAK-CEC JV and LDA have monitored the construction activities round the clock in front of Shalamar. A technical team nominated by the Director General of Archaeology also oversaw the construction activities and were satisfied.</td>
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<td>iv)</td>
<td>An independent and experienced Conservation Engineer shall be appointed to monitor the Project, both during the construction and operation phases. He shall submit monthly reports to the Advisory Committee which shall make such further recommendations to the Director General, Archaeology as may be required to ensure that the Project as a whole is meeting all technical requirements meant to preserve, protect and conserve the antiquities or protected premises.</td>
</tr>
<tr>
<td>iv)</td>
<td>An experienced Conservation Engineer has been appointed who has regularly been monitoring the project during construction phase and will continue in the operation phase.</td>
</tr>
<tr>
<td>v)</td>
<td>On completion of the project, the train shall be operated on experimental basis for at least 2 weeks on the entire length of the route and the vibration levels shall be monitored to ensure that the same are within the acceptable limits. Commercial operation shall not commence unless written clearance is given by the experts confirming that vibration levels have consistently been found to be within acceptable limits.</td>
</tr>
<tr>
<td>v)</td>
<td>The project is still in construction phase. It will be ensured during operational phase of the project.</td>
</tr>
<tr>
<td>vi)</td>
<td>The speed of the Train shall be reduced while passing near the monuments as recommended by the Directorate General of Archaeology from time to time on the basis of data made available to it.</td>
</tr>
<tr>
<td>vi)</td>
<td>The project is still in construction phase. The speed of the train will be reduced near the monuments during operational phase of the project.</td>
</tr>
<tr>
<td>vii)</td>
<td>State of the art vibration measuring equipments shall permanently be installed at suitable places in and around the antiquities and special premises to monitor levels of vibration created by operation of the train. Records of the same shall be</td>
</tr>
<tr>
<td>vii)</td>
<td>State of the art vibration measuring equipment has been installed and monitoring being done as already explained in Para i) above. The same procedure will be followed during the operation of the Project.</td>
</tr>
</tbody>
</table>
| viii) | Special teams consisting of qualified experts will be set up which will periodically inspect all antiquities and special premises to detect any damage or deterioration at the sites. Proper records and logbooks shall be maintained for this purpose. | viii) Senior engineers from the consultant and executing agency along with team of experts from Archaeology department & UET, Lahore frequently visit and inspect all heritage sites including Shalamar to detect any damage. Team of Experts are:-

1) Dr. Rizwan Riaz (Asst. Professor, PHD Civil Engineering, MSc Structural Engineering UET Lahore.)
2) Mr. Maqsood Ahmad (Deputy Director, Punjab Archeology Department, Conservation Expert).
3) Muhammad Afzal Khan (Deputy Director, Punjab Archeology Department, Archeologist). |

| ix) | Any damage or deterioration shall be reported to the Director General, Archaeology in writing who shall take remedial steps necessary to ensure safety of the buildings and structures. | ix) No damage noticed/reported during construction phase. |

| x) | Recommendations of the Advisory Committee (already set up) shall be placed before the Directorate General of Archaeology, who shall take necessary step to ensure that the same are complied with in letter and spirit by all concerned agencies, contractors, sub-contractors and operators. | x) Advisory Committee under Section 3 of the Antiquities Act, 1975 has already been constituted. Recommendations of the Advisory Committee are being complied with in letter and spirit. |

| xi) | Where excavation is necessary it shall be carried out in a way that it would not affect any structure or foundation of the antiquities or special premises. Where necessary special arrangements shall be made to stabilize and strengthen the structure of the antiquities and special premises. All necessary safety arrangements shall be made in accordance with the best engineering expertise during excavation, construction and execution phases of the Project. | xi) No deep excavation in front of Shalamar gardens has been carried out. All necessary special/precautionary measures were taken during the construction and execution stage in front of Shalamar gardens and kept the monument stable and unharmed as mentioned in Para i) above. |

<p>| xii) | The executing agency shall install accelerometers, velocity transducers, noise detectors and vibration measuring equipment. | xii) All necessary monitoring equipment installed as mentioned in i) above. Additional mitigation measures as mentioned in reports |</p>
<table>
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<tr>
<th>xiii) Excavation would be carried out in a way that would not affect any of the exposed or buried structure of the Special Premises.</th>
<th>xiii) It was ensured in letter and spirit.</th>
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<tr>
<td>In case of any adverse impact to the antiquities or special premises during excavation, construction or execution, the appellant and all other related agencies shall immediately and forthwith stop and discontinue further work, take all possible actions to protect and conserve the antiquities and special premises and in this regard, involve such experts and consultants as may be necessary to ensure that the causes and effects of the adverse impact are effectively removed.</td>
<td>xiv) All precautionary and preventive measures were effectively taken in the vicinity of Shalamar Gardens and no adverse impact was observed / reported.</td>
</tr>
<tr>
<td>A dedicated hotline shall be set up, telephone numbers whereof shall be prominently displayed in public areas around all antiquities and special premises for reporting damage or deterioration observed by members of the public or tourists.</td>
<td>xv) A Telephone number as dedicated hotline installed in the DG Archaeology office was set up with effect from 20.12.2017 by the Director General, Archaeology and advertised in the press for information of the general public for reporting, if any. This call center continues to operate round the clock.</td>
</tr>
<tr>
<td>In case, any information/ report is received by the Director General, Archaeology the same shall be investigated within 7 days and after receiving recommendations (if any) from experts repairs/ renovation work shall be commenced within 30 days.</td>
<td>xvi) Being complied.</td>
</tr>
<tr>
<td>No building material or equipment shall be stored/ stockpiled within protected area of the monuments.</td>
<td>xvii) It was ensured that there is no stockpiling of any material or equipment within the protected area of the monuments.</td>
</tr>
<tr>
<td>No change shall be made in the alignment of the track which brings any part of it nearer to the monuments than the distances set out hereinabove.</td>
<td>xviii) No change has been made in the alignment of the track.</td>
</tr>
<tr>
<td>Dust pollution during construction shall be controlled through extensive sprinkling of water on regular basis and taking such other steps including but not limited to water sprinkling was done regularly during construction and the Shalamar monument was duly covered with protective sheets/netting to avoid damage from dust.</td>
<td>xix)</td>
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<td>No.</td>
<td>Proposal/Action</td>
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<tr>
<td>xx</td>
<td>Covering the monuments with protective sheets in order to avoid any damage from dust.</td>
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<tr>
<td>xxi</td>
<td>The design of the viaduct and nearby stations in terms of colour and designing shall be in harmony with the setting and appearance of the monuments.</td>
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<tr>
<td>xxii</td>
<td>The Hydraulic Tank of Shalamar Garden shall be restored, as far as possible, to its original position and the surrounding area will be converted into a green area.</td>
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<td>xxiii</td>
<td>Structures on the southern side of the Shalamar Garden shall be camouflaged through construction of a wall in consultation with the Directorate General of Archaeology. All practicable efforts shall be made to create a Buffer Zone around Shalamar Garden as per proposal already pending in the Directorate General of Archaeology and other competent forums.</td>
</tr>
<tr>
<td>xxiv</td>
<td>The decorative motifs of Shalamar Garden would be replicated on the train station near the Shalamar Garden to create harmony with the Garden.</td>
</tr>
<tr>
<td>xxv</td>
<td>The tile mosaic motifs of the Gulabi Bagh Gateway would be replicated on the nearby station of the Gateway to create a harmony with the historic Gateway.</td>
</tr>
<tr>
<td>xxvi</td>
<td>The decorative motifs of the Chauburji Gateway would be replicated on the nearby station of the Chauburji Gateway to create a harmony with the historic Gateway.</td>
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<tr>
<td>xxvii</td>
<td>The area around the Chauburji Gateway would be properly attended and developed into a greenbelt.</td>
</tr>
<tr>
<td>xxviii</td>
<td>The decorative motifs of the Zaib-un-Nisa’s tomb would be properly attended and developed.</td>
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nearby station of the Zaib-un-Nisa’s Tomb to create harmony with the historic.

**xxix) The Respondents shall in consultation with UNESCO and other international agencies prepare phase-wise plan to control and monitor urban encroachments and the process of creating buffer zone around the Shalamar Garden.**

The Archaeology Department, Government of Punjab has put in place a comprehensive management mechanism under the provisions of the Antiquities Act 1975. The issue of existing encroachment is being carefully handled by the Archaeology Department. In the Master Plan for conservation and preservation of Shalamar Garden a provision of PKR 85.000 million has been kept for acquisition of land to create sufficient open space around the property. Recently, the Government of the Punjab has constituted a Committee for the revision of boundaries of the property and is working for the modification of boundary of the Property in accordance with the directions of the Honorable Supreme Court of Pakistan. However, this action involves displacement of large number of people residing in the neighborhood of the property and studies are being proposed to recommend solutions.

**xxx) All future projects which directly, indirectly and incidentally involve antiquities or heritage sites shall in the first instance by widely publicized through print and electronic media at least 6 months prior to proposed date of commencement of the project and public hearings shall be conducted to hear objections, if any against such project and**

**xxx) Noted for Strict Compliance**

**xxxi) For all future projects NOCs, licenses, approvals and permissions as required by law shall be obtained before work on the project site is commenced.**

**xxxi) Noted for Strict Compliance**

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2. In addition to the above, we direct the Government of the Punjab within a period of 30 days from the date of this judgment to take the following steps:-

**a) Set up an Antiquity and Special Premises Fund with the sum of Rupees One Hundred Million which shall be dedicated to monitoring, renovation and reconstruction work of 11 protected and special premises mentioned hereinabove. It shall be a revolving fund and shall be replenished on**

**a) In compliance with the orders of Honorable Supreme Court of Pakistan, Finance Department, Government of the Punjab has released funds amounting to Rs. 100.00 million for monitoring, renovation and reconstruction work of protected monuments. The proposals in this regard are being prepared**
yearly basis. It shall be utilized firstly for the maintenance, preservation, restoration and renovation work of the protected and Special Premise, subject matter of this list and thereafter on other Antiquities and Special Premises situated in Lahore as may be recommended by the special Committee of Experts constituted under this Judgment. By DG Archaeology and shall be placed before Special Committee of Experts for approval before commencing conservation & restoration works.

<table>
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<tr>
<th>b)</th>
<th>A broad based Special Committee of Experts consisting of Director General, Archaeology Department; a Professor of the Department of Archaeology, University of the Punjab; Head of Department of Structural Engineering, University of Engineering and Technology, Lahore; a Senior Professor nominated by the Chairman of Board of Directors of National College of Arts; chaired by a retired Judge of this Court nominated by the Chief Justice of Pakistan shall be notified which shall oversee implementation of the judgment of this Court and the directions issued herein. This Committee shall also make such further recommendation to the Chief Minister Punjab to undertake such measures as may be necessary to implement and enforce the directions and recommendations made in this judgment. The tenure of the Committee shall be one year from the date of its notification.</th>
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<tr>
<td>b)</td>
<td>A broad based Special Committee of Experts has been notified and is working since 20.12.2017 for this purpose.</td>
</tr>
<tr>
<td>1)</td>
<td>Mr. Justice Syed Zahid Hussain. (Former Judge of Supreme Court of Pakistan, Islamabad)</td>
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<td>2)</td>
<td>Director General Archaeology Punjab</td>
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<td>3)</td>
<td>Prof. Dr. Murtaza Jafferi (Principal, NCA, Lahore)</td>
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<tr>
<td>4)</td>
<td>Dr. Asad Ullah Qazi (PhD Structural Dynamics, Head of Structure Engineering, UET, Lhr.)</td>
</tr>
<tr>
<td>5)</td>
<td>Dr. Muhammad Hameed (Incharge Department of Archaeology, Punjab University).</td>
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<td>The above Committee is overseeing the implementation of the orders of the Honourable Supreme Court of Pakistan. This Committee also carries out frequent visit of site and monuments.</td>
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c) The Government of Punjab shall retain the services of at least three Experts having expertise in the field of archaeology and renovation, preservation and maintenance of antiquities and special premises. One of the experts shall be a person having expertise in structural engineering. All three experts will work as a Technical Committee with tenure of one year. The Technical Committee shall report to advise and assist the aforesaid Special Committee of Expert. The Committee shall, if required and with the approval of Director General, Archaeology retain services of such other experts as it may consider necessary to undertake its work more effectively regarding the steps required to be taken to c) Technical Committee has been constituted as of 22.02.2018 comprising following members: |
| 1) | Prof (R) Khurshid Ahmed (Visiting Professor, NCA, Lahore) |
| 2) | Dr. Rizwan Riaz (Asst. Professor, PHD Civil Engineering, MSc Structural Engineering UET Lahore.) |
| 3) | Mr. Maqsood Ahmad (Deputy Director, Punjab Archeology Department, Conservation Expert). |
| 4) | Muhammad Afzal Khan (Deputy Director, Punjab Archeology Department, Archeologist). |
| | The Technical Committee is working in close
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<tr>
<th>monitor the protected and Special Premises all over Lahore and suggest remedial measures that may be necessary to ensure the safety of all protected and special premises in Lahore and;</th>
<th>liaison with the Special Committee of Experts.</th>
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<tr>
<td><strong>d)</strong> We also emphasize the fact that the present condition of the protected and special premises calls for major preservation, renovation, reconstruction and repair work. The Government of Punjab shall take immediate steps and we have been assured by learned Advocate General, Punjab that such steps shall immediately be taken to start repair and renovation work for which the requisite fund will be made available within thirty days from the date of this judgment.</td>
<td><strong>d)</strong> In addition to the revolving fund of Rs. 100 million indicated at para 2 a) above, the Directorate General of Archaeology, Punjab is under taking following conservation schemes for Shalamar Gardens and other monuments:- 1. Master Plan for the conservation and restoration of Shalamar Gardens, Lahore. 2. Conservation of Hydraulic Tank of Shalamar Gardens, Lahore. 3. Conservation of Historical Monuments Near the Metro Train Orange Line Track</td>
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