



# Environmental and Social Screening and Environmental Management Plan

## Provision/Improvement of Toilet Blocks at Selected Sites of Central Punjab

(September 2022)



Project Management Unit  
(PTEGP) Planning and  
Development Board  
Government of Punjab



*A project In collaboration with Pak Green Enviro-Engineering Pvt. Ltd*



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## Abbreviations

Acronym	Definition
BOQs	Bill of Quantities
DG	Director General
DGA	Directorate General of Archaeology
EP	Environmental Protection
EPA	Environmental Protection Agency
ESMF	Environment and Social Management Framework
ESMP	Environment and Social Management Plan
E&S	Environmental and Social
E&SS	Environmental and Social Screening
BHU	Basic Health Unit
EA	Environmental Assessment
GOP	Government of Pakistan
GOPb	Government of Punjab
NA	Not Applicable
NOC	No objection certificate
OHS	Occupational Health and Safety
OP	Operational Policy
Pb	Punjab
PCR	Physical Cultural Resources
PDO	Project Development Objective
P&DD	Planning & Development Department
PMU	Project Management Unit
PTEGP	Punjab Tourism for Economic Growth Project
RAP	Resettlement Action Plan
RHC	Rural Health Centre
SAA	Same as Above
SDO	Sub-Divisional Officer
TDCP	Tourism Development Corporation of Punjab
TMA	Tehsil Municipal Administration
UNESCO	United Nation, Education, Scientific and Cultural Organization
USD	United States of America, Dollar
WB	World Bank

## 1 Introduction

### 1.1 Overview

The Government of Pakistan (GOP) development agenda (Vision 2025) stresses the objectives of boosting economic growth, job creation and regional cooperation in addition to bolstering the country's image abroad. Tourism is highlighted as one of the sectors of the economy that could help stimulate economic growth. Cultural and heritage tourism is a large and growing international market that Pakistan could leverage to create more and better jobs<sup>1</sup>.

The Planning & Development Department, Government of Punjab (GOPb) with the financial assistance of the World Bank (WB) has launched the Punjab Tourism for Economic Growth Project (PTEGP) to increase the contribution of the tourism and related sectors to the local economic development of the province. The objectives of the project are to strengthen institutional capacity, increase private sector participation and improve infrastructure services for the tourism sector growth in the Province of Punjab<sup>2</sup>. The total funding of the Project is 55 million USD with a World Bank contribution of USD 50 million over the five-year time frame<sup>3</sup>.

The Project consists of four major components<sup>4</sup>:

- Component 1: Policy, Institutions and Governance for Tourism Development
- Component 2: Private Investment and Entrepreneurship Promotion
- Component 3: Public Investment Facility
- Component 4: Project Management, Monitoring and Evaluation

The project is being implemented by a dedicated Project Management Unit (PMU) PTEGP since October 2017. The project is financing some low-scale physical interventions to provide improved access, better road conditions and public convenience facilities in selected tourists destinations located throughout the Punjab Province.

### 1.2 Project Environmental and Social Management Framework

The detail of sub-projects to be executed under the PTEGP was not available during the project initiation, so an Environmental and Social Management framework (ESMF) was prepared for PTEGP in December 2016 according to WB Operational Policy (OP) 4.01.

The project ESMF has been approved by the WB and is available on the WB and PTEGP website for public disclosure (refer to footnote no. 4 and 5 for the web link to ESMF available on PTEGP and WB website respectively). The overall project has been assigned Category B, due to the limited environmental and social impacts only during the construction phase. The ESMF concluded that;<sup>5</sup>

- Environmental and Social Screening (E&SS) shall be carried for each sub-project intervention/s in order out to determine the appropriate Environmental and Social category as per WB Operation Policies.

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<sup>1</sup> Combined project information documents / integrated safeguards data sheet (PID/ISDS) concept stage, May 23, 2016. The document is available at <https://documents1.worldbank.org/curated/en/841201468290413656/text/PIDISDS-CON-Print-P158099-05-29-2016-1464517363920.txt>

<sup>2</sup> Financing Agreement PTEGP between Islamic Republic of Pakistan and International Development Association, dated; August 2, 2017. The document is available at <https://documents1.worldbank.org/curated/en/337281506350830259/pdf/ITK171540-201708251045.pdf> <sup>3</sup>  
Adapted from [https://ptegp.punjab.gov.pk/project\\_overview](https://ptegp.punjab.gov.pk/project_overview)

<sup>4</sup> <https://ptegp.punjab.gov.pk/system/files/ESMF%20Manual.pdf>

<sup>5</sup> <https://documents1.worldbank.org/curated/en/916261483004112382/pdf/SFG2802-EA-P158099-Box396342B-PUBLIC-Disclosed-12-28-2016.pdf>

- Category-A sub-project will not be financed under this project. If Category-A sub-project is identified, sub-project will be either dropped or replaced with a Category B or C sub-project.
- Environmental and Social Management Plans (ESMPs) will be prepared for category 'B' sub-projects and clearance from WB will be a prerequisite before initiating the sub-project. The guidelines for the preparation of ESMPs are attached as Annex-8 of project ESMF.
- Sub-projects categorized as Category C, no further activity beyond screening would be required.
- PMU PTEGP will obtain necessary NOCs from the relevant departments before commencing works of any sub-project.

### 1.3 Purpose of this Document

The sub-project "provision of new and improvement of existing toilet block/s at selected tourism sites. There will be 18 blocks of toilets at different sites i.e. Shalimar Gardens, Jahangir Fort, Hiran Minar, Noor Jehan Tomb, Sheikhpura Fort, TDCP Changa Manga Resort, TDCP sightseeing Bus Terminal", all sites has a prior requirement of Environmental and Social Screening (E&SS) which is based on three aspects; viz., nature of the project, size of the project and location of the project that is a sensitive area as stated in the project ESMF. Based on this assessment, sub-projects with potentially significant environmental and social impacts are identified at an early stage for detailed environmental and social assessment.

This Environmental and Social Screening (E&SS) and Environmental Management Plan (EMP) has been prepared for the recently shortlisted/ newly added sub-project provision and improvement of toilet blocks at the above-mentioned locations. It is pertinent to mention that no land acquisition will be involved as all sites proposed by the Director General (DG), Directorate General of Archaeology (DGA) are owned by the DGA or a property of TDCP or Forest Department.

#### **List of Proposed Toilets Block Central Punjab Province, Pakistan**

<i>Sr. No</i>	<i>Location</i>		<i>District</i>	<i>Land Ownership</i>
1	Shalimar Gardens		Lahore	Archeological Department
2	Noor Jahan Tomb			Archeological Department
3	TDCP Sightseeing Terminal			TDCP
4	Jahangir tomb			Archeological Department
5	Hiran Minar		Sheikhupura	Archeological Department
6	Sheikhupura Fort		Sheikhupura	Archeological Department
7	Changa Manga		Kasur	TDCP

### 1.4 Methodology for E&SS and EMP

Methodology for E&SS and EMP is already defined in the project ESMF. While the relevant forms/checklists to be adopted during the E&SS process have been provided in the following sections of the project ESMF;

- Environmental and social screening form has been provided as Annexure-6.
- An involuntary resettlement screening checklist has been provided as Annexure-9.
- Guidelines for an environmental management plan EMP/ESMP (if required) has been provided as Annexure-8.
- Physical cultural resource management framework and chance find procedures (if required) has been provided in Annexure-10.

The data required for completing above mentioned forms/checklist has been obtained from both primary (field visit/s, consultations, project engineering document/s, designs etc.) and secondary sources (literature including documents/ reports/ papers/ dissertations/ encyclopaedias both available online and in printed format/s etc.).



Stakeholders' consultations have been conducted with relevant person/s, affectee/s (if any) and organisation/s during the field surveys according to WB and Pakistan Environmental Protection Agency (EPA) guidelines. Moreover, relevant applicable legislation and policies have been reviewed according to the scope of the sub-project. In the end, the conclusion of E&SS and EMP has been drawn and appropriate recommendation/s has been made (where applicable).

## **1.5 The Team**

The PTEGP staff that participated in the preparation of this E&SS and EMP report includes; Ahsan Bela (Environment Specialist), Tajwar Saeed (Social Safeguard and Gender Specialist) and Arif Mukhtar Rana (Civil Engineer). Moreover, PTEGP hired Pak Green Enviro-engineering Pvt. Ltd. as a consultant to provide support in order to expediate the process of E&S screening, the team of Participants from Pak Green included, Ahmad Raza (Senior Environmentalist), Faiza Anjum (Junior Environmentalist), and Sabeera Tauheed (Junior Environmentalist).

## 2 Project interventions

### 2.1 Shalamar Gardens

The Shalimar Gardens (SG), constructed by Shah Jahan in 1641-2 is located in the City of Lahore (Figure 1). It is an outstanding example of Mughal artistic expression at its height, as it evolved during the 16th and 17th centuries. The SG is on the UNESCO World Heritage list since 1981 (UNESCO Reference No. 171).<sup>6</sup>

**Figure 1: Location map of Shalamar Gardens, Lahore**



Source: Google Maps, 2021. [Accessed 08 November 2021].

The Mughal Garden is characterized by enclosing walls, a rectilinear layout of paths and features, and large expanses of flowing water. The SG cover 16 hectares and is arranged in three terraces descending from the south to the north. Selected views of SG are provided in Figure 2.

No land acquisition is involved, the site proposed for the construction of toilet blocks is owned by the Archaeology Department

**Figure 2: Different views of Shalamar Gardens**



#### 2.1.1 Proposed Interventions at Shalamar Gardens

The sub-project involves the construction of two (2 No.) new toilet blocks (single storey) and the improvement of the existing toilet block in Shalamar Gardens (SG), Lahore. The boundary of SG

<sup>6</sup> Adapted from <https://whc.unesco.org/en/list/171/> [Accessed 03 November 2021]

registered with UNESCO as a World Heritage Site (WHS) is marked with yellow colour while the boundary of SG marked by the Directorate General of Archaeology (DGA) is marked with red colour in Figure 3. The area marked with the blue line is the facilities/ parking area of SG. This facilities/ parking area (Figure 3) was purchased by AD in the 1990s for the development of various facilities for the tourists i.e. parking space for visitors with boundary wall, ticketing booths, canteen, toilet block (to be improved in current sub-project), souvenir shops, tourist information centre, office etc. All these facilities were developed gradually by AD from the 1990s era onwards<sup>7</sup>. Director General (DG) AD has proposed the site in this area right next to the existing toilet block. The location of existing and proposed toilet blocks is presented in Figure 3. A picture of the site proposed for new toilet blocks and existing toilet blocks to be renovated is provided in Figure 4.

**Figure 3: Location of existing and proposed toilet blocks**



<sup>7</sup> Primary information obtained from Deputy Director, Archaeology Department during consultation process.

**Figure 4: Picture of proposed toilet blocks site at Shalamar Gardens**

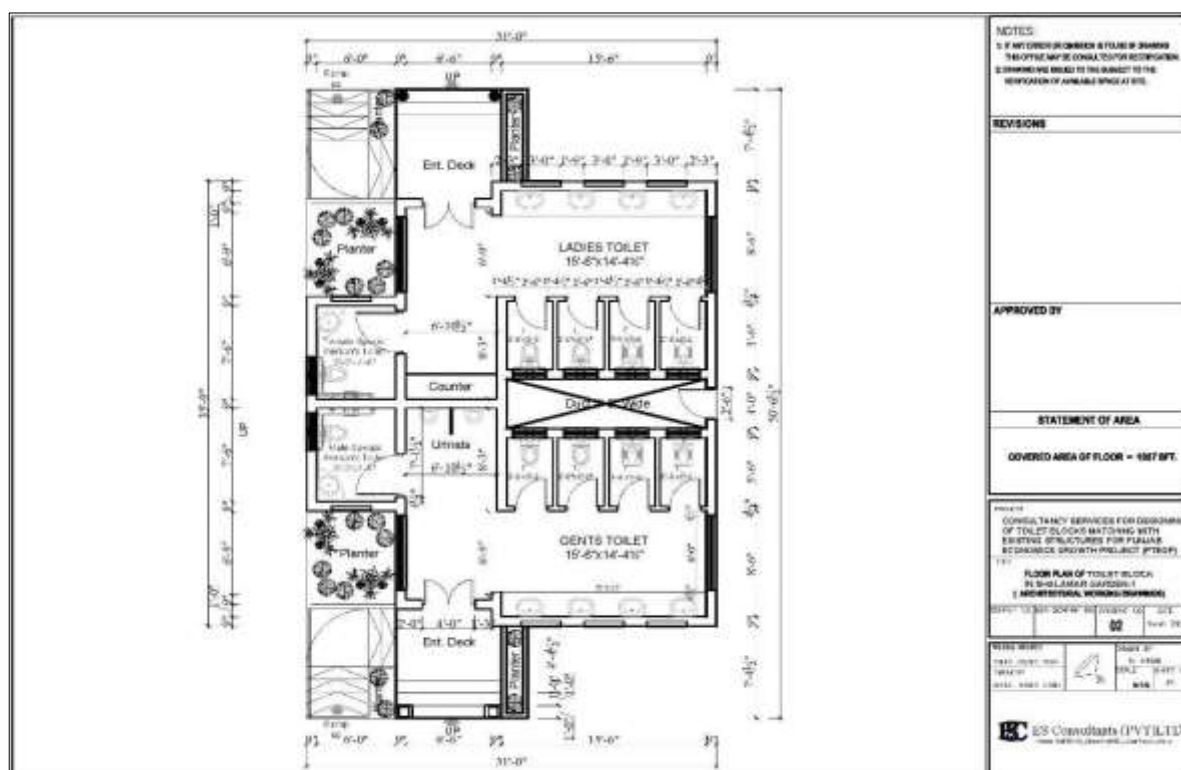


The wastewater from new toilet blocks will be discharged into the existing sewer connection of the Water and Sewerage Authority (WASA), Lahore.

**2.1.2 Layout Plan of Proposed Toilet Block/s**

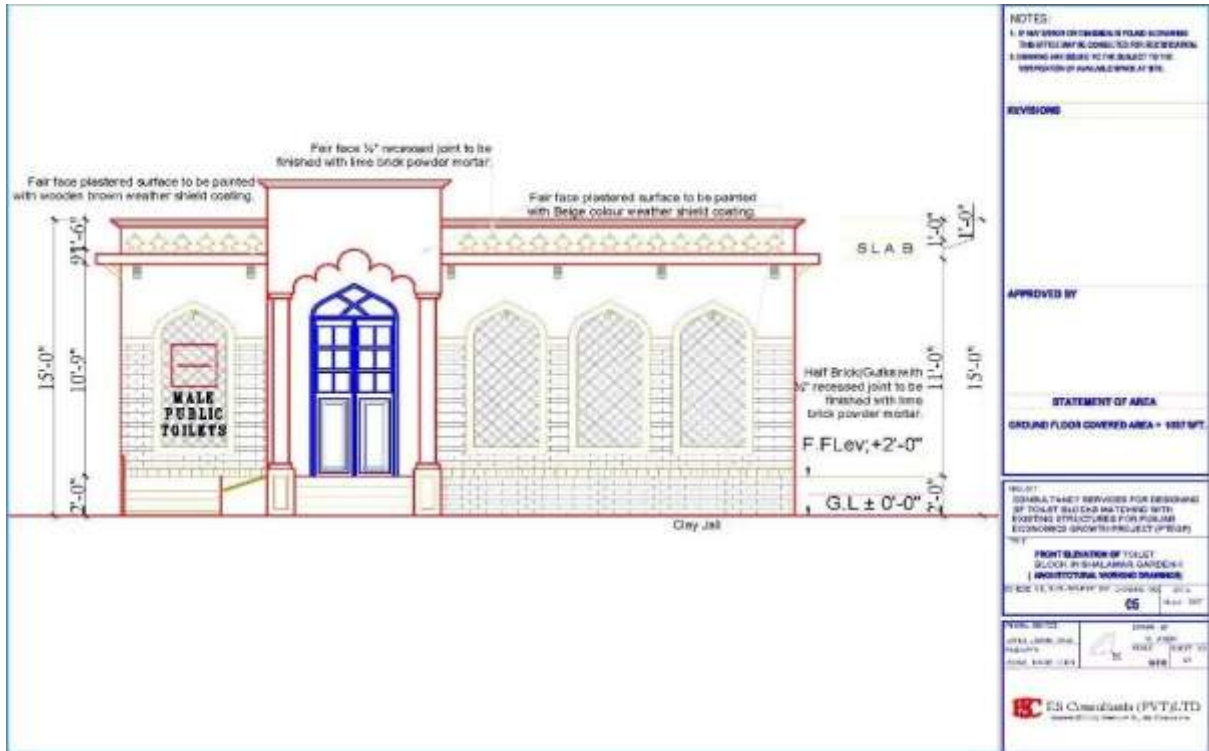
The cumulative covered area of two new proposed toilet blocks is 2074 sq. ft. only (1037 sq. ft. each). Each new toilet block will have two partitions, one partition each for males and females with separate entrances. Each partition will have five (05) toilets, with one specifically designed and reserved for persons with disabilities. The layout plan of the proposed toilet blocks is the same and presented in Figure 5. The front elevation plan is presented in Figure 6. The 3D elevation of the toilet block is presented in Figure 7.

**Figure 5: Layout plan of proposed toilet blocks**



Source: Detailed design of toilets

**Figure 6: Front elevation of the toilet block**



Source: Detailed design of toilets

**Figure 7: 3D elevation of the toilet block**



Source: Detailed design of toilets

### 2.1.3 Construction activities

The quantum of work and activities to be performed during the construction phase is presented in Table 1 below;

**Table 1: Activities/ tasks and estimated quantities of construction works at Shalamar Gardens**

Sr. #	Activity/ Task	Total Quantities
1	Dismantling brick work in lime or cement mortar.	---
2	Dismantling of glaze tile Flooring and Skirting	---
3	Removing a door with Chowkat, windows, skylights, cement and lime plaster, ventilators; scrapping of distemper and paint of wall etc.	---
4	Excavation for foundation maximum up to 5 feet.	4,972.8 Cft.
5	Brickwork	9,186.5 Cft.
6	Installation of steel Chaukat	2 No.
7	Fabrication of mild steel reinforcement for cement concrete i/c cutting, bending, laying in position, making joints and fastening.	7,369.8 kg
8	RCC works in roofs, beams, columns and girders	2,076.9 Cft.
9	Ceramic tile laying work	8,908.88 sft.
10	Providing and fixing aluminium fly screen comprising of Fibber/aluminium wire gauze fixed in the aluminium frame.	360 sft.
11	Woodworks/ doors	128 sft.
12	Applying emulsion paint (3 coats)	5,362.52 stf.
13	Providing and laying of tuff pavers	300 sft.
14	Electrical work i.e. installation of PVC pipes; copper wires; switches; ceiling fan (4 No.); exhaust fan (10 No.); tube lights; water geyser (1No.) etc.	---
15	Installation of water supply, plumbing and sanitary i.e. washbasins (6 No.); water mixer (6 No.); plastic flush tanks (4 No.); installation of tube well (1 No.) at 100 ft. depth; laying, cutting, jointing of PPRC and UPVC pipes etc.	---

Source: Sub-project BOQ.

## 2.2 Jahangir Tomb

The tomb of the 4<sup>th</sup> Mughal Emperor, Noor-ud-Din Muhammad Jahangir (1569-1627 A.D) was built in the middle of an enormous garden on the right bank of River Ravi at Shahdara town on the north-western outskirts of Lahore (Figure 8) <sup>8</sup>. The mausoleum dates from 1637 <sup>9</sup>. When Jahangir died in 1627 he may have initially been buried in Shahdara in one of its many gardens. His son, Shah Jahan, ordered that a mausoleum befitting an Emperor be built as a permanent memorial<sup>10</sup>. The tomb and its garden are enclosed by a high brick wall with an imposing gateway on the western side linking the Akbari Sarai <sup>11</sup>.

The Jahangir tomb along with the adjacent Akbari Sarai and the Tomb of Asif Khan are part of an ensemble and on the tentative list for UNESCO World Heritage status since 1993 (UNESCO Reference No.: 1279) <sup>12</sup>.

<sup>8</sup> Adapted from <https://archaeology.punjab.gov.pk/jahangir-tomb>

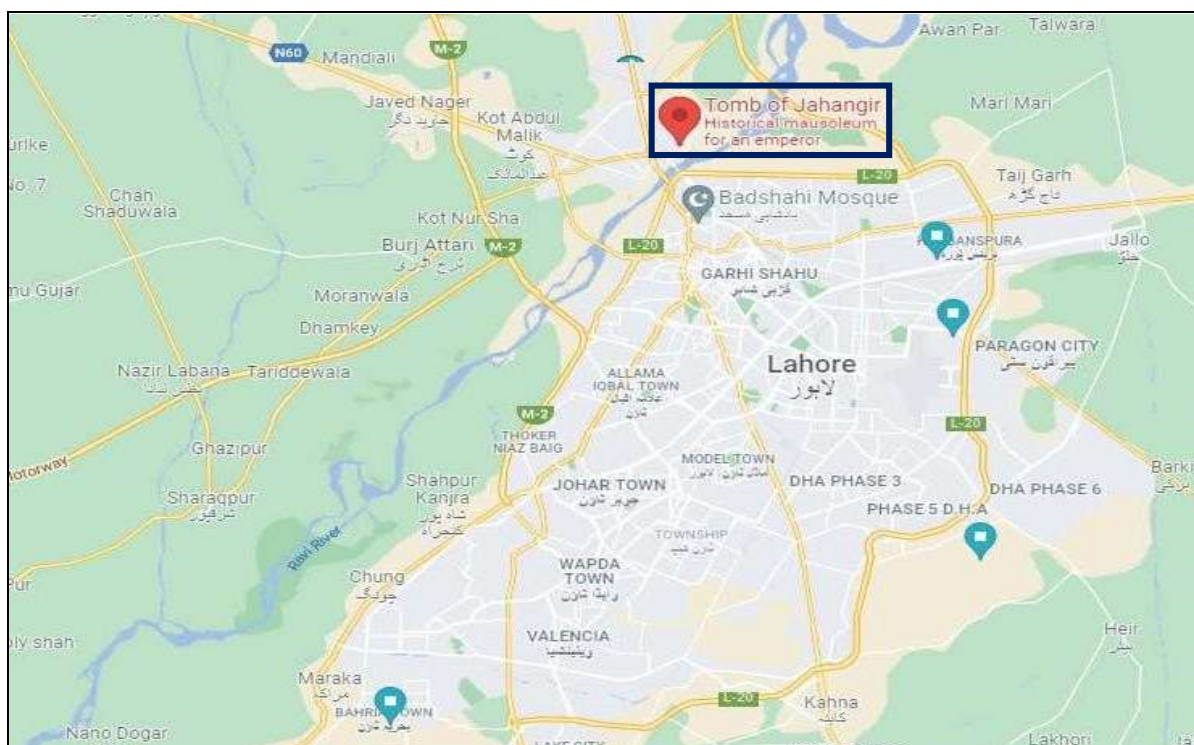
<sup>9</sup> Adapted from [https://en.wikipedia.org/wiki/Tomb\\_of\\_Jahangir](https://en.wikipedia.org/wiki/Tomb_of_Jahangir)

<sup>10</sup> Adapted from [http://ghn.globalheritagefund.com/uploads/documents/document\\_1705.pdf](http://ghn.globalheritagefund.com/uploads/documents/document_1705.pdf)

<sup>11</sup> Adapted from <https://www.orientalarchitecture.com/sid/569/pakistan/lahore/jahangirs-tomb>

<sup>12</sup> Adapted from <https://whc.unesco.org/en/tentativelists/1279/>

**Figure 8: Location map of Jahangir Tomb**



Source: Google Maps, 2021. [Accessed 15 November 2021].

The gardens surrounding the tomb are vast and laid out in the Persian Chahar Bagh, or Paradise garden. Selected views of the Jahangir Tomb (JT) are provided in Figure 9.

No land acquisition is involved, the site proposed for the construction of toilet blocks is owned by the Archaeology Department

**Figure 9: Different views of Jahangir Tomb**



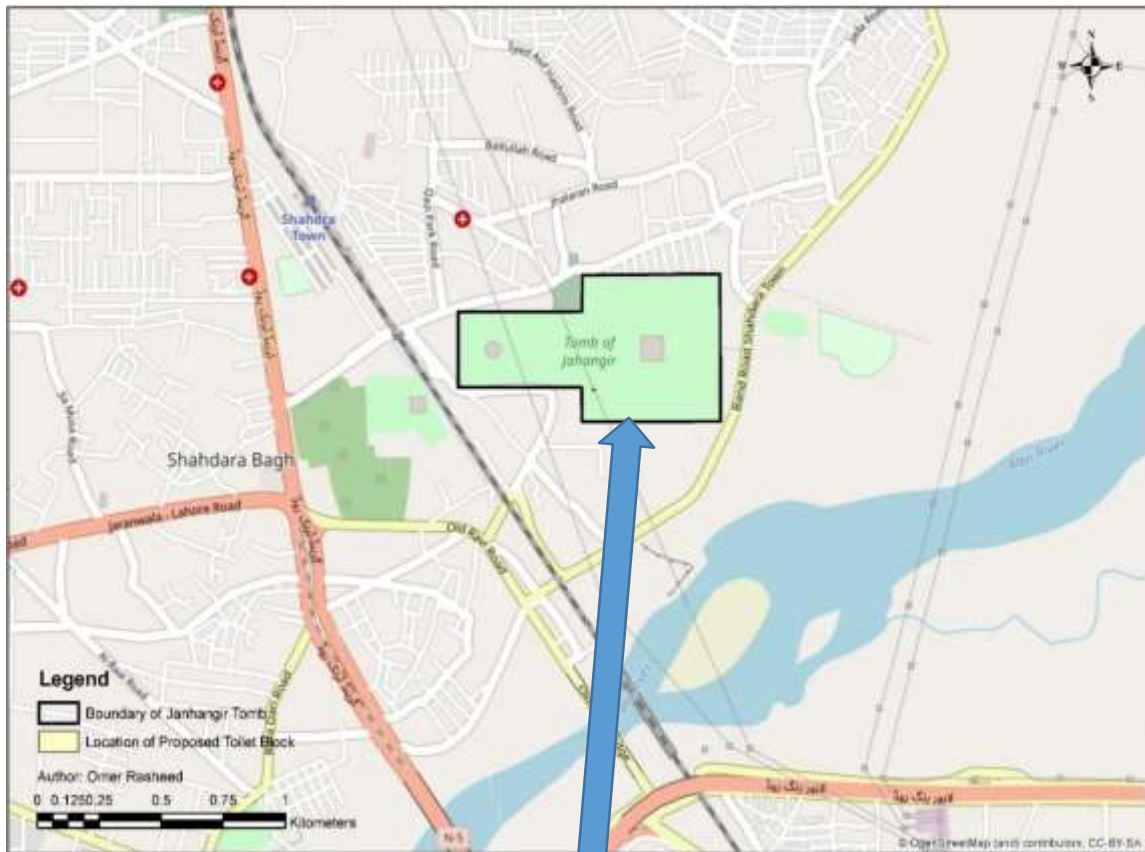
Source: This study

### 2.2.1 Proposed Interventions at Jahangir Tomb

The sub-project involves the construction of one (01 No.) new toilet block (single storey) in Jahangir tomb (JT), Lahore. The land required for the construction of the toilet block is the property of AD. The boundary of JT and the location of the proposed toilet block is shown in Figure 10, while the picture of the site proposed for the new toilet block is provided in Figure 11.



Figure 10: Location of the proposed toilet block in Jahangir Tomb



**Figure 11: Proposed site toilet block at Jahangir Tomb**



The wastewater from the proposed toilet block will be discharged into the existing sewer connection of the Tehsil Municipal Administration (TMA), Lahore.

### 2.2.2 Layout Plan of Proposed Toilet Block

The covered area of the new proposed toilet block is 1037 sq. ft. is similar to that of Shalamar Gardens. Moreover, the layout plan, front elevation and the 3D elevation of the proposed toilet block is also similar to Shalamar Gardens as presented in Figure 5, Figure 6 and Figure 7 respectively.

### 2.2.3 Construction activities

The quantum of work and activities to be performed during the construction phase is presented in Table 2 below;

**Table 2: Activities/ tasks and estimated quantities of construction works at Jahangir Tomb**

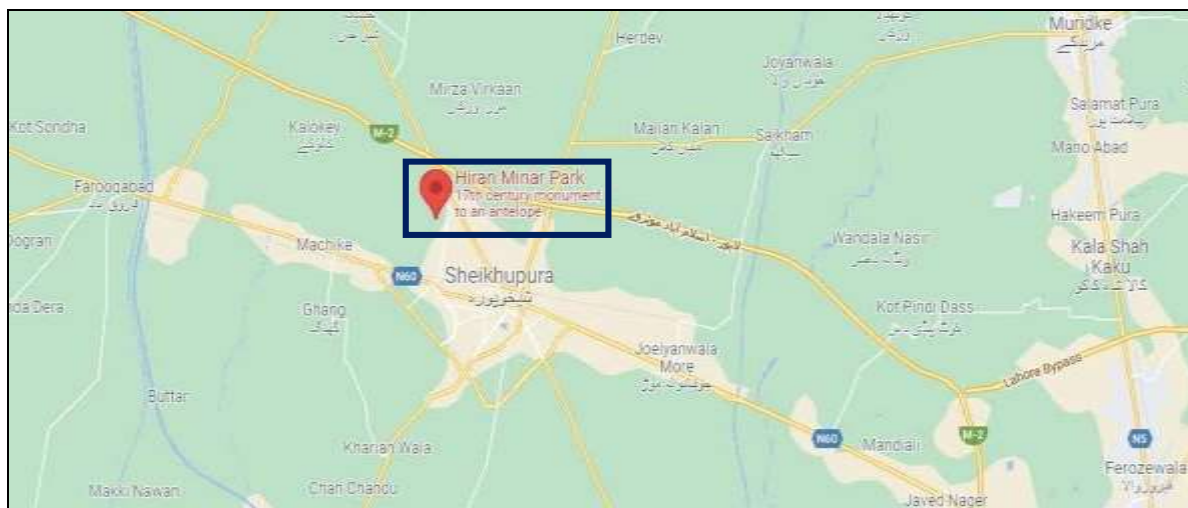
Sr. #	Activity/ Task	Total Quantities
1	Excavation for foundation maximum up to 5 feet.	2486.4 Cft.
2	Brickwork	4593.25 Cft.
3	Installation of steel chaukat	1 No.
4	Fabrication of mild steel reinforcement for cement concrete i/c cutting, bending, laying in position, making joints and fastening.	3684.9 kg
5	RCC works in roofs, beams, columns and girders	1038.45 Cft
6	Ceramic tile laying work	4454.44 sft
7	Providing and fixing aluminium fly screen comprising of Fibber/aluminium wire gauze fixed in the aluminium frame.	180 sft.
8	Woodworks/ doors	64 sft.
9	Applying emulsion paint (3 coats)	2681.26 sft
10	Providing and laying of tuff pavers	300 sft.
11	Electrical work i.e. installation of PVC pipes; copper wires; switches; ceiling fan (4 No.); exhaust fan (10 No.); tube lights; water geyser (1No.) etc.	---
12	Installation of water supply, plumbing and sanitary i.e. washbasins (6 No.); water mixer (6 No.); plastic flush tanks (4 No.); installation of tube well (1 No.) at 100 ft. depth; laying, cutting, jointing of PPRC and UPVC pipes etc.	---

Source: Sub-project BOQ.

### 2.3 Hiran Minar

The Hiran Minar is located in the city of Sheikhupura, about 40 kilometres northwest of Lahore (Figure 12). The Minar was constructed under the orders of Emperor Jahangir in about 1606 A.D.

**Figure 12: Location map of Hiran Minar, Sheikhupura**



Source: Google Maps, 2021. [Accessed 16 November 2021].

The Hiran Minar was built in the loving memory of Emperor Jahangir pet antelope named Mansraj, which was captured somewhere in this area originally a royal hunting reserve. It is a massive, tapering and high brick-built tower of four storeys excluding the top one which is missing. The existing height is 95'-4".<sup>13</sup>

About 275 feet east of the Hiran Minar is a suitable double-storey gateway of the usual Mughal style leading to the Daulat Khana or baradari situated in the centre of a big tank and is approached by a long cause-way built on 21 pointed arches erected from the middle of the west side of the tank right up to the Baradari.<sup>13</sup>

The Hiran Minar and the tank are on the tentative list for UNESCO World Heritage status since 1993 (UNESCO Reference No.: 1281)<sup>14</sup>. Selected views of Hiran Minar are provided in Figure 13.

No land acquisition is involved, the site proposed for the construction of toilet blocks is owned by the Archaeology Department

**Figure 13: Different views of Hiran Minar**



Source: This study

<sup>13</sup> Adapted from <https://archaeology.punjab.gov.pk/hiran-minar>

<sup>14</sup> Adapted from <https://whc.unesco.org/en/tentativelists/1281/>

### 2.3.1 Proposed Interventions at Hiran Minar

The sub-project involves the construction of one (01 No.) new toilet block (single storey) in Hiran Minar. The boundary of Hiran Minar and the location of the proposed toilet block is shown in Figure 14. The land required for the construction of the toilet block is the property of DGA. A picture of the site proposed for the new toilet block is provided in Figure 15.

**Figure 14: Location of the proposed toilet block at Hiran Minar**



**Figure 15: Proposed site for new toilet block at Hiran Minar**



Septic tank (01No.) and soakage pit (01No.) will be constructed to treat the wastewater to be discharged from the proposed toilet block.

### 2.3.2 Layout Plan of Proposed Toilet Block at Hiran Minar

The covered area of the new proposed toilet block is 1037 sq. ft. is similar to that of Shalamar Gardens. Moreover, the layout plan, front elevation and the 3D elevation of the proposed toilet block is also similar to Shalamar Gardens and presented in Figure 5, Figure 6 and Figure 7 respectively.

### 2.3.3 Construction activities

The quantum of work and activities to be performed during the construction phase is presented in Table 3 below;

**Table 3: Activities/ tasks and estimated quantities of construction works at Hiran Minar**

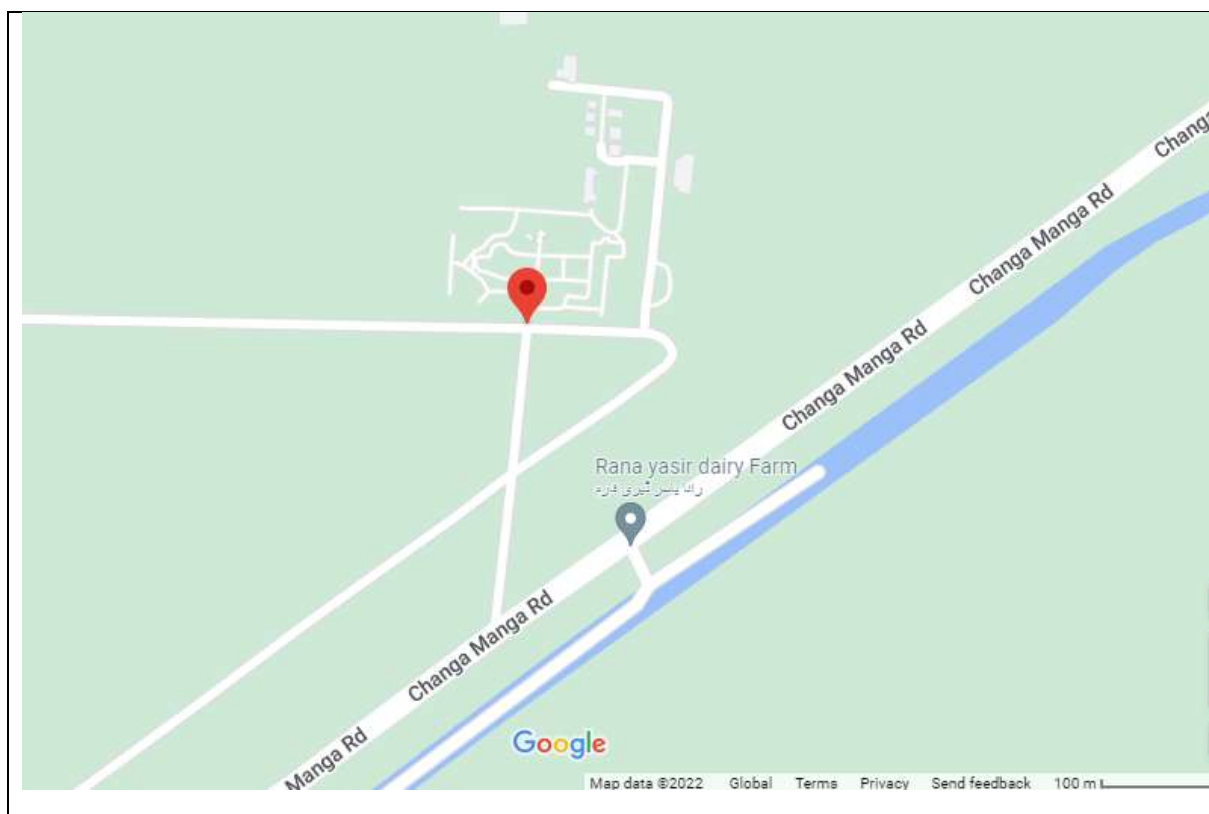
Sr. #	Activity/ Task	Total Quantities
1	Excavation for foundation maximum up to 5 feet.	2486.4 Cft.
2	Excavation for Soakage pit (9'3"x20') and Septic tank (13'x5'6"x8')	1306 Cft.
3	Brickwork	5067.75 Cft.
4	Installation of steel Chaukat	1 No.
5	Fabrication of mild steel reinforcement for cement concrete i/c cutting, bending, laying in position, making joints and fastening.	4156.07 kg
6	RCC works in roofs, beams, columns and girders	1054.8 Cft
7	Ceramic tile laying work	4454.44 sft
8	Providing and fixing aluminium fly screen comprising of Fibber/aluminium wire gauze fixed in the aluminium frame.	180 sft.
9	Woodworks/ doors	64 sft.
10	Applying emulsion paint (3 coats)	2681.26 sft
11	Providing and laying of tuff pavers	300 sft.
12	Electrical work i.e. installation of PVC pipes; copper wires; switches; ceiling fan (4 No.); exhaust fan (10 No.); tube lights; water geyser (1No.) etc.	---
	Installation of water supply, plumbing and sanitary i.e. washbasins (6 No.); water mixer (6 No.); plastic flush tanks (4 No.); installation of tube well (1 No.) at 100 ft. depth; laying, cutting, jointing of PPRC and UPVC pipes etc.	---

Source: Sub-project

## 2.4 Changa Manga Resort

Changa Manga Irrigated Plantation covering an area of 12510 acres (5065 ha) is situated in Kasur district, 74 Km south-west of Lahore. It is a popular picnic spot spread over 50 acres with a TDCP Resort, motorboats, children's park, and ample opportunities for outdoor sports. The TDCP Resort here has been recently upgraded for tourist facilitation.<sup>i</sup> No land acquisition is involved, the site proposed for the construction of toilet blocks is owned by the Forest Department.

Figure 16: Location map of TDCP Changa Manga Resort, Kasur



Source: Google Maps, 2022. [Accessed 09 March 2022].

**Figure 17: Different views of TDCP Changa Manga Resort**

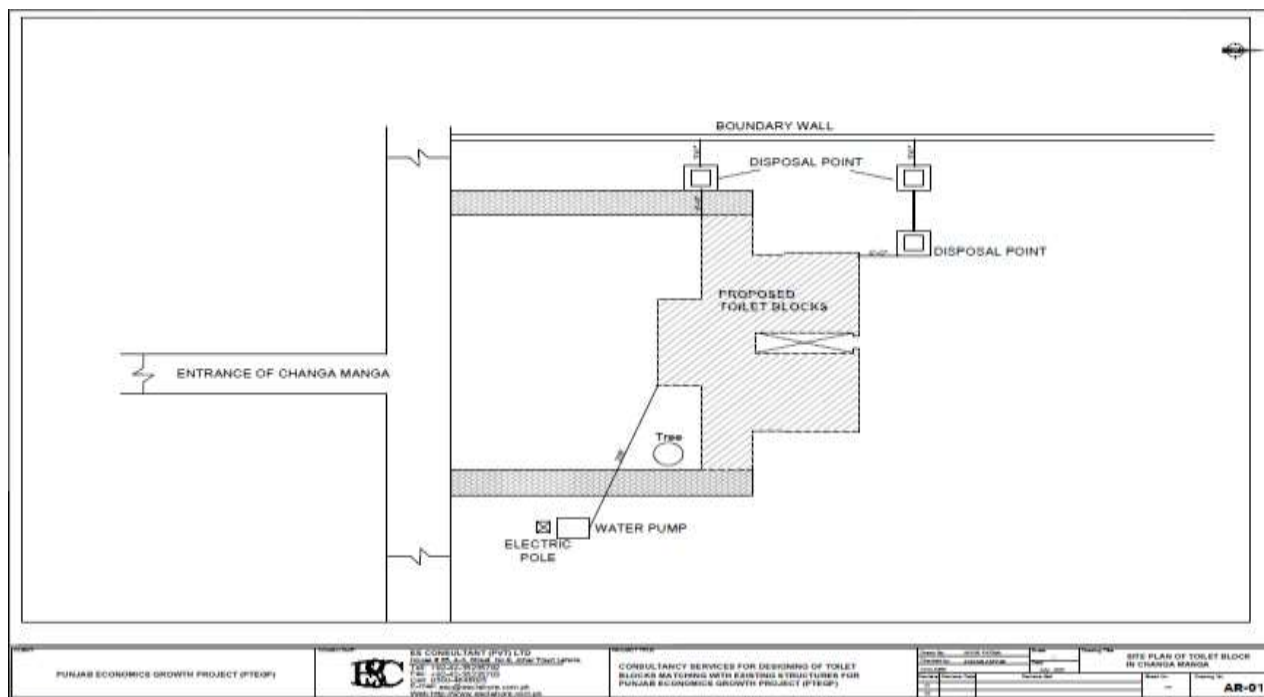


Source: This study

**2.4.1 Proposed Interventions at TDCP Changa Manga Resort**

The sub-project involves the construction of one (01 No.) new toilet block (single storey) in TDCP Changa Manga Resort. The boundary of Changa Resort and the location of the proposed toilet block is shown in Figure 14. The land required for the construction of the toilet block is the property of Forest Department. A picture of the site proposed for the new toilet block is provided in Figure 15.

**Figure 18: Location of the proposed toilet block at TDCP Changa Manga Resort**



**Figure 19: Proposed site for new toilet block at TDCP Changa Manga Resort**



### 2.4.2 Layout Plan of Proposed Toilet Block at TDCP Changa Manga Resort

The covered area of the new proposed toilet block is 1037 sq. ft. is similar to that of Shalamar Gardens. Moreover, the layout plan, front elevation and the 3D elevation of the proposed toilet block is also similar to Shalamar Gardens and presented in Figure 5, Figure 6 and Figure 7 respectively.

### 2.4.3 Construction activities

The quantum of work and activities to be performed during the construction phase is presented in Table 4 below;

**Table 4: Activities/ tasks and estimated quantities of construction works at TDCP Changa Manga Resort**

Sr. #	Activity/ Task	Total Quantities
1	Excavation for foundation maximum up to 5 feet.	2682.94 Cft.
3	Brickwork	3291.16 Cft.
4	Installation of steel Chaukat	1 No.
5	Fabrication of mild steel reinforcement for cement concrete i/c cutting, bending, laying in position, making joints and fastening.	3401.04 kg
6	RCC works in roofs, beams, columns and girders	945.82 Cft
7	Ceramic tile laying work	4454.44 sft
8	Providing and fixing aluminium fly screen comprising of Fibber/aluminium wire gauze fixed in the aluminium frame.	180 sft.
9	Woodworks/ doors	64 sft.
10	Applying emulsion paint (3 coats)	1803 sft
11	Providing and laying of tuff pavers	300 sft.
12	Electrical work i.e. installation of PVC pipes; copper wires; switches; ceiling fan (4 No.); exhaust fan (10 No.); tube lights; water geyser (1No.) etc.	---
	Installation of water supply, plumbing and sanitary i.e. washbasins (6 No.); water mixer (6 No.); plastic flush tanks (4 No.); installation of tube well (1 No.) at 100 ft. depth; laying, cutting, jointing of PPRC and UPVC pipes etc.	---

Source: Sub-project

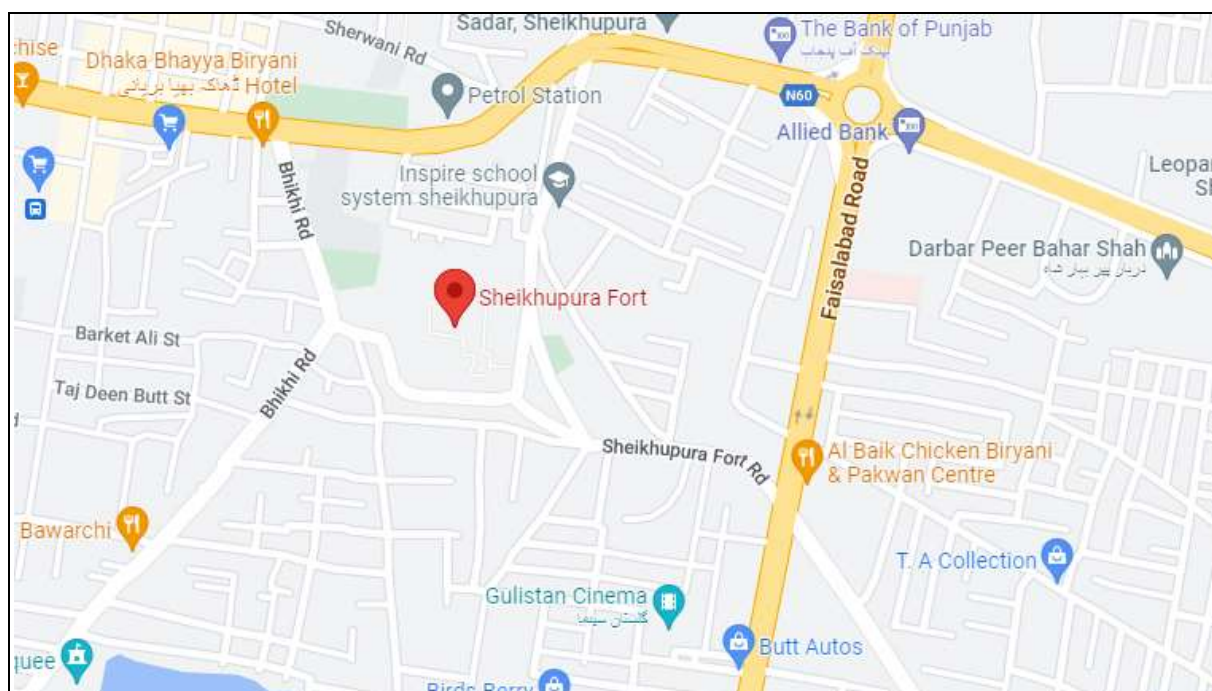
## 2.5 Sheikhpura Fort

The construction of Sheikhpura Fort is traditionally accredited to Emperor Jahangir, but there is no conclusive evidence of this. The fort certainly dates from at least the early Mughal era or earlier, and is the product of numerous modifications over the centuries. In its present form, the fort is a rough square measuring 128 meters north to south and 115.5 meters east to west, with walls averaging 11.5 meters in height. It presents a formidable appearance, and rises easily above the cityscape in southeastern Sheikhpura where it remains a distinctive landmark<sup>ii</sup>. No



land acquisition is involved, the site proposed for the construction of toilet blocks is owned by the Archaeology Department.

**Figure 20: Location map of Sheikhpura Fort, Sheikhpura**



Source: Google Maps, 2022. [Accessed 09 March 2022].

**Figure 21: Different views of Sheikhpura Fort, Sheikhpura**

<sup>1</sup> <https://www.orientalarchitecture.com/sid/872/pakistan/sheikhpura/sheikhpura-fort>

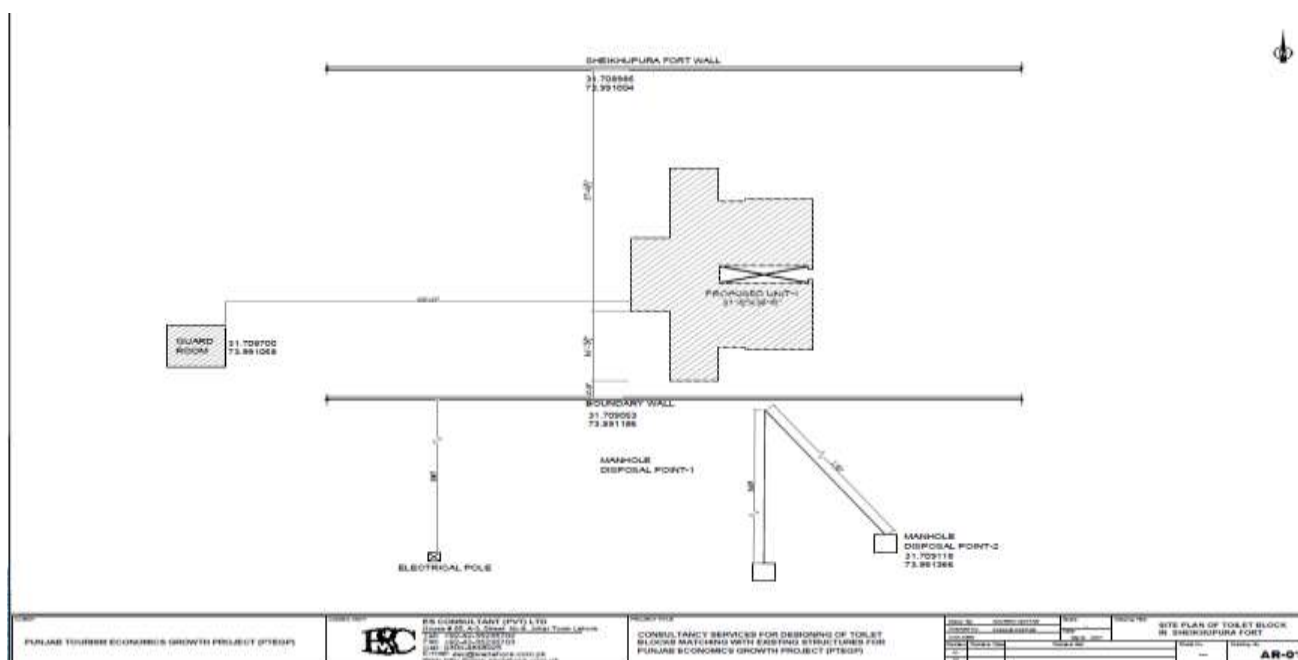


Source: This study

### 2.5.1 Proposed Interventions at Sheikhpura Fort

The sub-project involves the construction of one (01 No.) new toilet block (single storey) in open area in front of Sheikhpura fort. The boundary of Sheikhpura Fort and the location of the proposed toilet block is shown in Figure 14. The land required for the construction of the toilet block is the property of Archeology Department. A picture of the site proposed for the new toilet block is provided in Figure 22.

**Figure 22: Location of the proposed toilet block at Sheikhpura Fort**



**Figure 23: Proposed site for new toilet block at Sheikhpura Fort**



### 2.5.2 Layout Plan of Proposed Toilet Block at Sheikhpura Fort

The covered area of the new proposed toilet block is 1037 sq. ft. is similar to that of Shalamar Gardens. Moreover, the layout plan, front elevation and the 3D elevation of the proposed toilet block is also similar to Shalamar Gardens and presented in Figure 5, Figure 6 and Figure 7 respectively.

### 2.5.3 Construction activities

The quantum of work and activities to be performed during the construction phase is presented in Table 3 below

**Table 5: Activities/ tasks and estimated quantities of construction works at Sheikhpura Fort**

Sr. #	Activity/ Task	Total Quantities
1	Excavation for foundation maximum up to 5 feet.	2486.44 Cft.
3	Brickwork	3916.87 Cft.
4	Installation of steel Chaukat	1 No.

5	Fabrication of mild steel reinforcement for cement concrete i/c cutting, bending, laying in position, making joints and fastening.	3961.54 kg
6	RCC works in roofs, beams, columns and girders	1040.61 Cft
7	Ceramic tile laying work	4554.21 sft
8	Providing and fixing aluminium fly screen comprising of Fibber/aluminium wire gauze fixed in the aluminium frame.	180 sft.
9	Woodworks/ doors	64 sft.
10	Applying weather shield paint (2 coats)	728.00 sft
11	Providing and laying of tuff pavers	300 sft.
12	Electrical work i.e. installation of PVC pipes; copper wires; switches; ceiling fan (4 No.); exhaust fan (10 No.); tube lights; water geyser (1No.) etc.	---
	Installation of water supply, plumbing and sanitary i.e. washbasins (6 No.); water mixer (6 No.); plastic flush tanks (4 No.); installation of tube well (1 No.) at 100 ft. depth; laying, cutting, jointing of PPRC and UPVC pipes etc.	---

Source:BOQ

## 2.6 Noor Jahan Tomb:

The Tomb of Nur Jahan is a 17th-century mausoleum in Lahore, Pakistan, that was built for the Mughal empress Nur Jahan. The tomb's marble was plundered during the Sikh era in 18th century for use at the Golden Temple in Amritsar. The red sandstone mausoleum, along with the nearby tomb of Jahangir, tomb of Asif Khan, and Akbari Sarai, forms part of an ensemble of Mughal monuments in Lahore's Shahdara Bagh. The mausoleum is located in Shahdara Bagh, across the River Ravi from Lahore. The tomb is part of an ensemble of nearby monuments, including the Tomb of Jahangir, Akbari Sarai, as well as the tomb of Asif Khan.

**Figure 24: Location map of TDCP Noor Jahan Tomb**



**Figure 25: Different views of Jahangir Tomb**



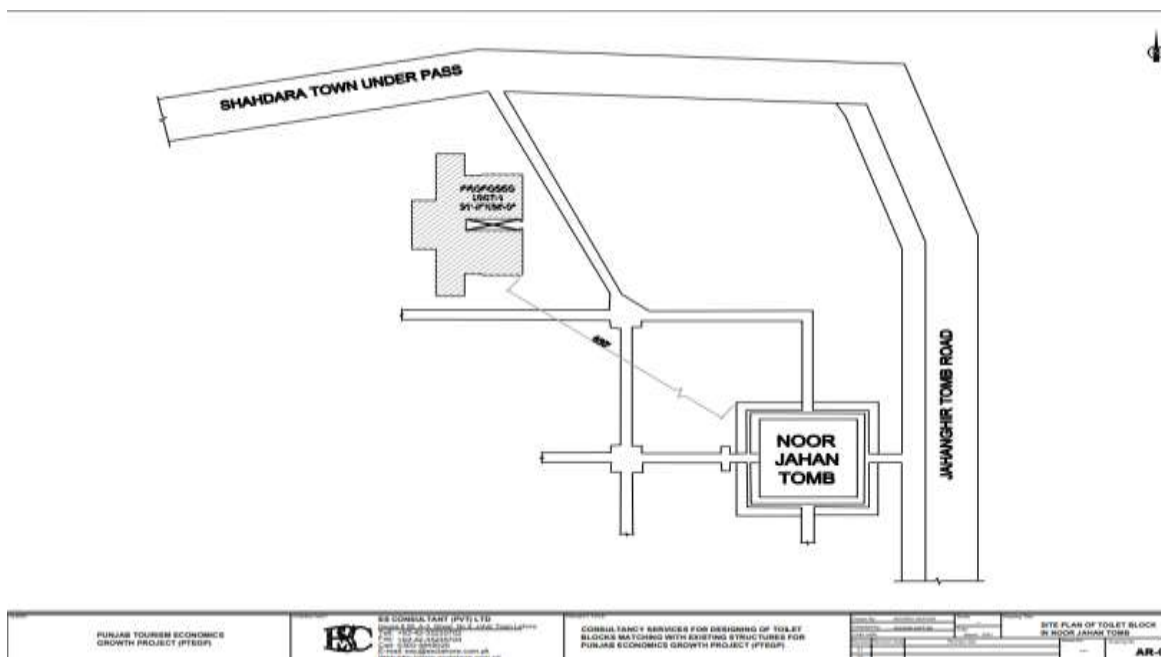
### **2.6.1 Proposed Interventions at Noor Jahan Tomb**

The sub-project involves the construction of one (01 No.) new toilet block (single storey) in Noor Jahan Tomb (NJT), Lahore. The land required for the construction of the toilet block is the property of AD. The boundary of NJT and the location of the proposed toilet block is shown in Figure 3, while the picture of the site proposed for the new toilet block is provided in Figure 4. No land acquisition is involved, the site proposed for the construction of toilet blocks is owned by the Archaeology Department.

**Figure 26: Proposed site toilet block at Noor Jahan Tomb**



**Figure 27: Location of the proposed toilet block at TDCP Noor Jahan Tomb**



### 2.6.2 Layout Plan of Proposed Toilet Block at Noor jahan Tomb

The covered area of the new proposed toilet block is 1037 sq. ft. is similar to that of Shalamar Gardens. Moreover, the layout plan, front elevation and the 3D elevation of the proposed toilet block is also similar to Shalamar Gardens and presented in Figure 5, Figure 6 and Figure 7 respectively.

### 2.6.3 Construction activities

The quantum of work and activities to be performed during the construction phase is presented in Table below;

**Table 6:** Activities/ tasks and estimated quantities of construction works at Noor Jahan Tomb

Sr. #	Activity/ Task	Total Quantities
1	Excavation for foundation maximum up to 5 feet.	2486.44 Cft.
3	Brickwork	2741.46 Cft.
4	Installation of steel Chaukat	1 No.
5	Fabrication of mild steel reinforcement for cement concrete i/c cutting, bending, laying in position, making joints and fastening.	3691.04 kg
6	RCC works in roofs, beams, columns and girders	1040.61 Cft
7	Ceramic tile laying work	4454.44 sft
8	Providing and fixing aluminium fly screen comprising of Fibber/aluminium wire gauze fixed in the aluminium frame.	180 sft.
9	Woodworks/ doors	64 sft.
10	Applying emulsion paint (3 coats)	1803 sft
11	Providing and laying of tuff pavers	300 sft.
12	Electrical work i.e. installation of PVC pipes; copper wires; switches; ceiling fan (4 No.); exhaust fan (10 No.); tube lights; water geyser (1No.) etc.	---
	Installation of water supply, plumbing and sanitary i.e. washbasins (6 No.); water mixer (6 No.); plastic flush tanks (4 No.); installation of tube well (1 No.) at 100 ft. depth; laying, cutting, jointing of PPRC and UPVC pipes etc.	---

Source: Sub-project

## 2.7 TDCP Sightseeing Terminal:

TDCP has launched sightseeing Double Decker bus in the city of Lahore. The sightseeing is the activity of visiting the famous or interesting places of an area, and a sightseeing terminal is the point where a bus route starts or ends, where vehicles stop, turn or reverse, and wait before departing on their return journeys place. TDCP sightseeing provide services like city tour guides for lahore tour guides for Wagha Border. This bus tour starts from Gaddafi Stadium and takes you through the city. It stops at Wagha Border for 2 Hours. It is very enjoyable if the weather is pleasant. Sitting on the roof top of the bus is fun.

Figure 28: Location map of TDCP Sightseeing Terminal Lahore

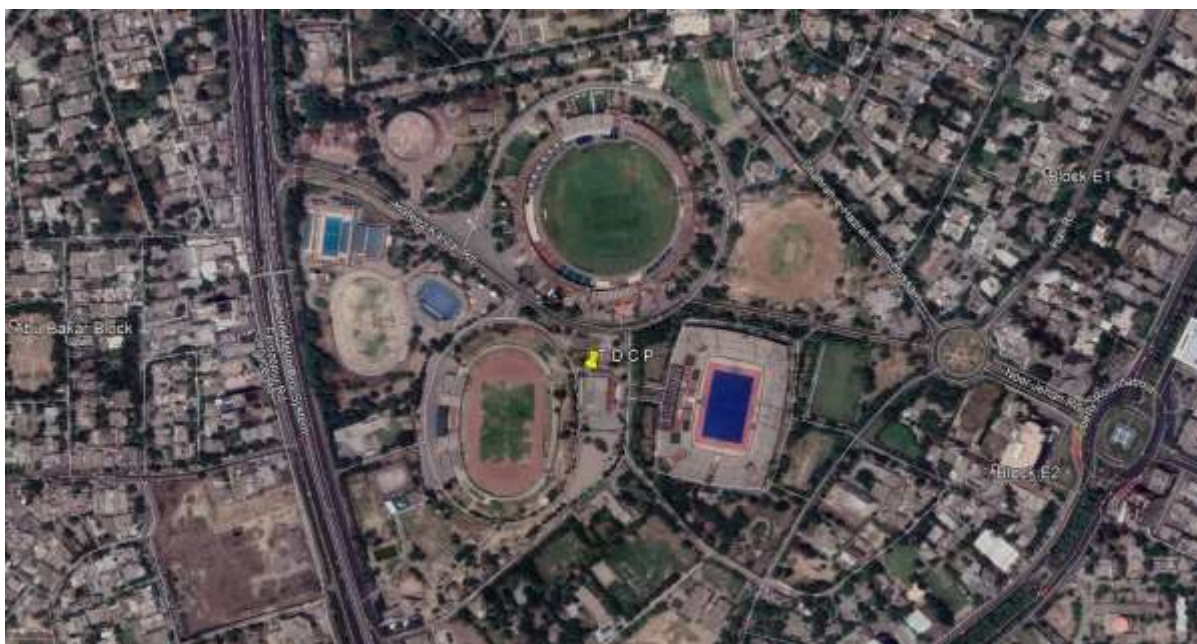


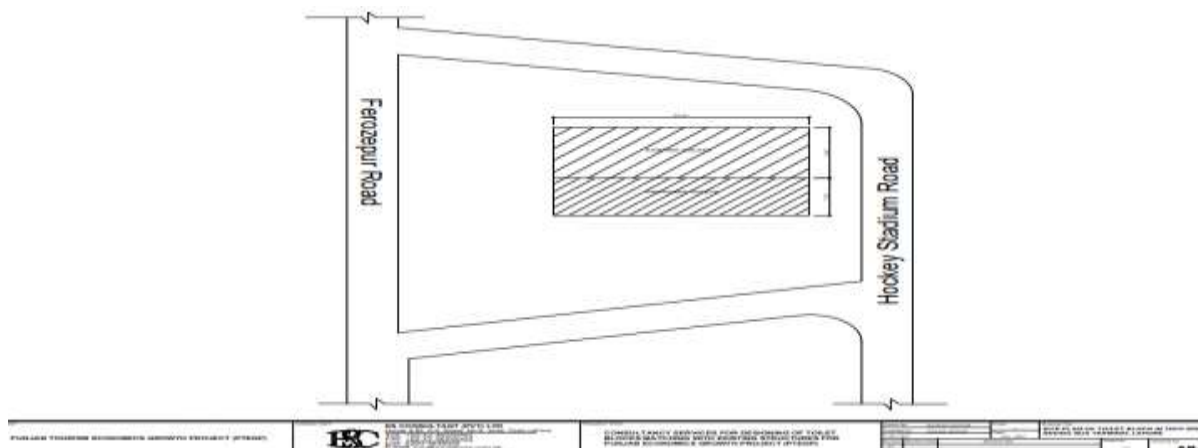
Figure 29: Different Location of Sightseeing Bus Terminal



### 2.7.1 Proposed Interventions at TDCP Changamanga Resort

The sub-project involves the construction of one (01 No.) new toilet block (single storey) and renovation of existing toilet block in TDCP Sightseeing Terminal. The boundary of Sightseeing and the location of the proposed toilet block is shown in Figure. The land required for the construction of the toilet block is the property of TDCP. A picture of the site proposed for the new toilet block is provided in Figure. No land acquisition is involved, the site proposed for the construction of toilet blocks is owned by the TDCP.

**Figure30: Layout Plan of Proposed toilet block at TDCP Sightseeing Terminal**



**Figure 31: Existing toilets and proposed site for new toilet block at TDCP Sightseeing Terminal**



### 2.7.2 Construction activities

The quantum of work and activities to be performed during the construction phase is presented in below table;

**Table 7: Activities/ tasks and estimated quantities of construction works at TDCP Sightseeing Terminal**

Sr. #	Activity/ Task	Total Quantities
1	Dismantling brick work in lime or cement mortar.	---
2	Dismantling of glaze tile Flooring and Skirting	---

3	Removing a door with Chowkat, windows, skylights, cement and lime plaster, ventilators; scrapping of distemper and paint of wall etc.	---
4	Excavation for foundation maximum up to 5 feet.	557.25 Cft.
2	Excavation for Soakage pit (9'3"x20') and Septic tank (13'x5'6"x8')	-
5	Brickwork	1182.563 Cft.
6	Installation of steel Chaukat	-
7	Fabrication of mild steel reinforcement for cement concrete i/c cutting, bending, laying in position, making joints and fastening.	363.861 kg
8	RCC works in roofs, beams, columns and girders	118.734 Cft.
9	Ceramic tile laying work	887.5 sft.
10	Providing and fixing aluminium fly screen comprising of Fibber/aluminium wire gauze fixed in the aluminium frame.	10 sft.
11	Woodworks/ doors	-
12	Applying emulsion paint (3 coats)	383 stf.
13	Providing and laying of tuff pavers	300 sft.
14	Electrical work i.e. installation of PVC pipes; copper wires; switches; ceiling fan (4 No.); exhaust fan (10 No.); tube lights; water geyser (1No.) etc.	---
15	Installation of water supply, plumbing and sanitary i.e. washbasins (6 No.); water mixer (6 No.); plastic flush tanks (4 No.); installation of tube well (1 No.) at 100 ft. depth; laying, cutting, jointing of PPRC and UPVC pipes etc.	---

Source: Sub-project

### 3. Preliminary Environmental and Social Impacts

A survey has been conducted by PMU PTEGP Environmental and Social (E&S) staff and Pak Green Consultant team to collect the necessary information required for the E&SS and EMP of the sub-project. The detail of potential environmental and social (E&S) impacts of each site of the sub-project is presented in Table 8.



**Table 9: Potential E&S Impacts identified during E&SS process**

Sr. #	Screening Criteria	Site Name	Yes	No	Explanation (In-case of Yes)	Assessment of Category
<b>Environment</b>						
1	Is the subproject in an eco-sensitive area or adjoining an eco-sensitive area or monument? (Yes/No) If Yes, which is the area? Elaborate impact accordingly.	Shalamar Gardens	✓		<p>The existing toilet block to be renovated and proposed two new toilet blocks are not located in or within the vicinity of any eco-sensitive area.</p> <p>However, these are located within the vicinity of a monument – Shalamar Gardens that is a World Heritage Site (refer to Section 2.1 for detail). The particular site/land where the new toilet block will be built and the existing toilet block to be renovated is outside the main gate of Shalamar Gardens and was purchased by Directorate General of Archaeology (DGA) to build facilities in the 1990s (refer to Section 2.1 for detail).</p> <p>The location of proposed toilet blocks is suggested by DGA ensuring it does not violate Punjab Antiquity Act 1975 and amendments thereafter i.e. 2012. Moreover, NOC has also been granted by DGA (refer to Annexure A) for the proposed activities. The material used for the front elevation of the toilet blocks will be compatible with the heritage sites. The architect will make onsite visits and ensure that aesthetic of the site is not distorted. Also, most of the points selected are at a distance from main structure, or somewhat hidden.</p> <p>In addition, the construction activities/quantum of work for the renovation of the existing toilet block and construction of two new blocks as explained in Section 2.1.3 above are minimal and will not result in any negative impact i.e. destruction/demolition, wear, removal, burial, modification, change of use, neglect, flooding, denial of access and desecration of the Shalamar Gardens.</p>	-

		Jahangir Tomb	✓	<p>The site for the proposed toilet block is not located in or within the vicinity of any eco-sensitive area.</p> <p>However, it is located within the boundary of the consolidated boundary of Jahangir Tomb and adjacent Tombs – that is a World Heritage Site (refer to Section 2.2 for detail).</p> <p>The location of the proposed toilet block is suggested by DGA ensuring it does not violate Punjab Antiquity Act 1975 and amendments thereafter i.e. 2012. Moreover, NOC has also been granted by DGA (refer to Annexure A) for the proposed activities. The material used for the front elevation of the toilet blocks will be compatible with the heritage sites. The architect will make onsite visits and ensure that aesthetic of the site is not distorted. Also, most of the points selected are at a distance from main structure, or somewhat hidden.</p> <p>In addition, the construction activities/quantum of work for construction of a new block as explained in Section 2.2.3 above are minimal and will not</p>	-
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Sr. #	Screening Criteria	Site Name	Yes	No	Explanation (In-case of Yes)	Assessment of Category
					result in any negative impact i.e. destruction/demolition, wear, removal, burial, modification, change of use, neglect, flooding, denial of access and desecration of the Jahangir Tomb.	
		Hiran Minar	✓		<p>The site for the proposed toilet block is not located in or within the vicinity of any eco-sensitive area.</p> <p>However, it is located within the vicinity of Hiran Minar – which is a World Heritage Site (refer to Section 2.3 for detail).</p> <p>The location of the proposed toilet block is suggested by DGA ensuring it does not violate Punjab Antiquity Act 1975 and amendments thereafter i.e. 2012. Moreover, NOC has also been granted by DGA (refer to Annexure A) for the proposed activities. The material used for the front elevation of the toilet blocks will be compatible with the heritage sites. The architect will make onsite visits and ensure that aesthetic of the site is not distorted. Also, most of the points selected are at a distance from main structure, or somewhat hidden.</p> <p>In addition, the construction activities/quantum of work for construction of a new block as explained in Section 2.3.3 above are minimal and will not result in any negative impact i.e. destruction/demolition, wear, removal, burial, modification, change of use, neglect, flooding, denial of access and desecration of the Jahangir Tomb.</p>	-
		TDCP Changa Manga Resort	✓		<p>The site for the proposed toilet block is not located in or within the vicinity of any eco-sensitive area.</p> <p>However, it is located within the vicinity of Changa Manga Forest Park</p> <p>The location of the proposed toilet block is suggested by TDCP, in order to provide better facilities for tourism near to the Forest reserve for leisure</p> <p>In addition, the construction activities/quantum of work for construction of a new block as explained in Section 2.4.3 above are minimal and will not result in any negative impact i.e. destruction/demolition, wear, removal, burial, modification, change of use, neglect, flooding, denial of access and desecration of the TDCP Changa Manga Resort</p>	
		Sheikhupura Fort	✓		The site for the proposed toilet block is not located in or within the vicinity of any eco-sensitive area.	

				<p>However, these are located within the vicinity of an Archaeological Site of Sheikhpura Fort is not yet listed as World Heritage Site (refer to Section 2.5 for detail).</p> <p>The location of proposed toilet blocks is suggested by DGA ensuring it does not violate Punjab Antiquity Act 1975 and amendments thereafter i.e. 2012. Moreover, NOC has also been granted by DGA (refer to Annexure A) for the proposed activities. The material used for the front elevation of the toilet blocks will be compatible with the heritage sites. The architect will make onsite visits and ensure that aesthetic of the site is not distorted. Also, most of the points selected are at a distance from main structure, or somewhat hidden.</p> <p>In addition, the construction activities/quantum of work for construction of a new block as explained in Section 2.5.3 above are minimal and will not result in any negative impact i.e. destruction/demolition, wear, removal, burial, modification, change of use, neglect, flooding, denial of access and desecration of the Archaeological Site of Sheikhpura Fort</p>	
	Noor Jehan Tomb	✓		<p>The site for the proposed toilet block is not located in or within the vicinity of any eco-sensitive area.</p> <p>However, it is located within the boundary of the consolidated boundary of Noor Jehan Tomb and adjacent Tombs – that is a World Heritage Site (refer to Section 2.6 for detail).</p> <p>The location of proposed toilet blocks is suggested by DGA ensuring it does not violate Punjab Antiquity Act 1975 and amendments thereafter i.e. 2012. Moreover, NOC has also been granted by DGA (refer to Annexure A) for the proposed activities. The material used for the front elevation of the toilet blocks will be compatible with the heritage sites. The architect will make onsite visits and ensure that aesthetic of the site is not distorted. Also, most of the points selected are at a distance from main structure, or somewhat hidden.</p> <p>In addition, the construction activities/quantum of work for construction of a new block as explained in Section 2.6.3 above are minimal and will not result in any negative impact i.e. destruction/demolition, wear, removal, burial, modification, change of use, neglect, flooding, denial of access and desecration of Noor Jehan Tomb</p>	
	TDCP sightseeing bus terminal	✓		<p>The site for the proposed toilet block is not located in or within the vicinity of any eco-sensitive area. New toilet block is being built with existing toilet block.</p>	

	Noor Jehan Tomb	✓	No vegetation clearance nor any tree uprooting will be involved (refer to	
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					<p>The location of the proposed toilet block is suggested by TDCP, in order to provide better facilities for the tourist visiting the sightseeing bus terminal</p> <p>In addition, the construction activities/quantum of work for the renovation of the existing toilet block and construction of one new block as explained in Section 2.7.3 above are minimal and will not result in any negative impact i.e. destruction/demolition, wear, removal, burial, modification, change of use, neglect, flooding, denial of access and desecration of the TDCP sightseeing bus terminal.</p>	
2	Will the subproject create significant/ limited/ no environmental impacts during the construction stage?					
	<ul style="list-style-type: none"> <li>Clearance of vegetation/ tree-cover/other</li> </ul>	Shalamar Gardens		✓	No notable vegetation clearance nor any tree uprooting will be involved (refer to Figure 4). Construction will take place in a 2,174 sq. ft. area already reserved for the development of tourist facilities.	-
		Jahangir Tomb		✓	No notable vegetation clearance nor any tree uprooting will be involved (refer to Figure 11). Construction will take place in a 1037 sq. ft. only.	
		Hiran Minar		✓	No notable vegetation clearance nor any tree uprooting will be involved (refer to Figure 15). Construction will take place in a 1037 sq. ft. only.	
		TDCP Changa Manga Resort		✓	No vegetation clearance nor any tree uprooting will be involved (refer to Figure 19). Construction will take place in a 1037 sq. ft. only.	
		Sheikhupura Fort		✓	No vegetation clearance nor any tree uprooting will be involved (refer to Figure 23). Construction will take place in a 1037 sq. ft. only.	
			TDCP sightseeing bus terminal		✓	Figure 27). Construction will take place in a 1037 sq. ft. only. No notable vegetation clearance nor any tree uprooting will be involved (refer to Figure 15).
	Direct discharge of construction run-off, improper storage and disposal of excavation spoils, wastes and other	Shalamar Gardens		✓	Total 4,972.8 Cft (approx.) of spoil will be generated during excavation and all of it will be reused during backfilling. Therefore, this risk is ruled out.	-
		Jahangir Tomb		✓	Total 2486.4 Cft (approx.) of spoil will be generated during excavation and all of it will be reused during backfilling. Therefore, this risk is ruled out.	-
		Hiran Minar		✓	Same as Above	-
		TDCP Changa Manga Resort		✓	Total 2682.94 Cft (approx.) of spoil will be generated during excavation and all of it will be reused during backfilling. Therefore, this risk is ruled out.	-
		Sheikhupura Fort		✓	Total 2486.4 Cft (approx.) of spoil will be generated during excavation and all of it will be reused during backfilling. Therefore, this risk is ruled out.	-

	construction materials adversely affecting water quality and flow regimes.	Noor Jehan Tomb	✓	Total 2486.4 Cft (approx.) of spoil will be generated during excavation and all of it will be reused during backfilling. Therefore, this risk is ruled out.	-
		TDCP sightseeing bus terminal	✓	Total 557.25Cft (approx.) of spoil will be generated during excavation and all of it will be reused during backfilling. Therefore, this risk is ruled out.	-
	• Flooding of adjacent areas.	Shalamar Gardens	✓	The sub-project activities are on a very limited scale, no major excavation is involved nor does the sub-project involve the construction of any reservoir/dam or water regulating structure therefore the risk of flooding of the adjacent area is ruled out.	-
		Jahangir Tomb	✓	Same as Above (SAA)	-
		Hiran Minar	✓	SAA	-
		TDCP Changa Manga Resort	✓	SAA	-
		Sheikhupura Fort	✓	SAA	-
		Noor Jehan Tomb	✓	SAA	-
	• Improper storage and handling of substances leading to contamination of soil and water.	TDCP sightseeing bus terminal	✓	SAA	-
		Shalamar Gardens	✓	The sub-project does not involve the use of any substance that could contaminate soil or water. Moreover, the quantities of construction material to be used during construction is very limited therefore the risk of soil and water contamination is ruled out.	-
	handling of substances leading to contamination of soil and water.	Jahangir Tomb	✓	SAA	-
		Hiran Minar	✓	SAA	-
		TDCP Changa Manga Resort	✓	SAA	-
		Sheikhupura Fort	✓	SAA	-
		Noor Jehan Tomb	✓	SAA	-
		TDCP sightseeing bus terminal	✓	SAA	-
		Wah Gardens	✓	SAA	-
• Elevated noise and dust emission.		Shalamar Gardens	✓	No heavy machinery (impact devices) will be required for the construction work. The construction will involve masonry works using handheld tools.	-
		Jahangir Tomb	✓	SAA	-
		Hiran Minar	✓	SAA	-
		TDCP Changa	✓	SAA	-

		Manga Resort				
		Sheikhupura Fort		✓	SAA	-
		Noor Jehan Tomb		✓	SAA	-
		TDCP sightseeing bus terminal		✓	SAA	-
•	Disruption to traffic and visitors' movements.	Shalamar Gardens		✓	The sub-project has a very limited scope, so do the quantities of material (refer to Table 1 for quantities of material). Therefore, it is location and material transport will not be an issue for the visitor movement and or the traffic.	-
		Jahangir Tomb		✓	SAA (refer to Table 2 for quantities of material)	-
		Hiran Minar		✓	SAA (refer to Table 3 for quantities of material)	-
		TDCP Changa Manga Resort		✓	SAA (refer to Table 4 for quantities of material)	-
		Sheikhupura Fort		✓	SAA (refer to Table 5 for quantities of material)	-
		Noor Jehan Tomb		✓	SAA (refer to Table 6 for quantities of material)	-
		TDCP sightseeing bus terminal		✓	SAA (refer to Table 7 for quantities of material)	-
•	Damage to existing infrastructure, public utilities	Shalamar Gardens		✓	No significant excavation is involved that could damage existing infrastructure and or public utilities nor the construction is spread over a large area therefore chance of this happening is ruled out. The area is in the custody of the Archaeology Department.	-
	and amenities.	Jahangir Tomb		✓	SAA	-
		Hiran Minar		✓	SAA	-
		TDCP Changa Manga Resort		✓	SAA	-
		Sheikhupura Fort		✓	SAA	-
		Noor Jehan Tomb		✓	SAA	-
		TDCP sightseeing bus terminal		✓	SAA	-
•	Failure to restore temporary construction sites.	Shalamar Gardens		✓	Temporary construction sites/ facilities i.e. labour camps etc. will not be required for the sub-project. Moreover, the construction activity itself is very limited therefore this risk is ruled out.	-
		Jahangir Tomb		✓	SAA	-
		Hiran Minar		✓	SAA	-
		TDCP Changa Manga Resort		✓	SAA	-

		Sheikhupura Fort		✓	SAA	-
		Noor Jehan Tomb		✓	SAA	-
		TDCP sightseeing bus terminal		✓	SAA	-
•	Possible conflicts with and/or disruption to local community and/or visitors.	Shalamar Gardens		✓	The site is owned and in the custody of the Archaeology Department. Furthermore, see explanation in Sr. No 2, bullet 6 of this table.	-
		Jahangir Tomb		✓	SAA	-
		Hiran Minar		✓	SAA	-
		TDCP Changa Manga Resort		✓	SAA	-
		Sheikhupura Fort		✓	SAA	-
		Noor Jehan Tomb		✓	SAA	-
		TDCP sightseeing bus terminal		✓	SAA	-
•	Health risks due to unhygienic conditions at workers camps.	Shalamar Gardens		✓	No labour camp is required for the work, daily labourers will be employed (14-15 labourers maximum approx.).	-
		Jahangir Tomb		✓	SAA	-
		Hiran Minar		✓	SAA	-
		TDCP Changa Manga Resort		✓	SAA	-
		Sheikhupura Fort		✓	SAA	-
		Noor Jehan Tomb		✓	SAA	-
		TDCP sightseeing bus terminal		✓	SAA	-
•	Safety hazards during construction.	Shalamar Gardens	✓		Minor occupational health and safety issues are perceived based on the scope of work (refer to Section 3.1 for detail)	-
		Jahangir Tomb	✓		SAA	-
		Hiran Minar	✓		SAA	-
		TDCP Changa Manga Resort	✓		SAA	-
		Sheikhupura Fort	✓		SAA	-
		Noor Jehan Tomb	✓		SAA	-
		TDCP sightseeing bus terminal	✓		SAA	-
•	Other, specify.	Shalamar Gardens		✓	Not Applicable (NA)	-



			Jahangir Tomb		✓	NA	-
			Hiran Minar		✓	NA	-
			TDCP Changa Manga Resort		✓	NA	-
			Sheikhupura Fort		✓	NA	-
			Noor Jehan Tomb		✓	NA	-
			TDCP sightseeing bus terminal		✓	NA	-
3	Will the subproject create significant/ limited/ no environmental impacts during the operational stage? (Significant / limited / no impacts)						
	•	Flooding of adjacent areas	Shalamar Gardens		✓	Not applicable therefore the risk of flooding of the adjacent area is ruled out.	-
			Jahangir Tomb		✓	SAA	-
			Hiran Minar		✓	SAA	-
			TDCP Changa Manga Resort		✓	SAA	-
			Sheikhupura Fort		✓	SAA	-
			Noor Jehan Tomb		✓	SAA	-
			TDCP sightseeing bus terminal		✓	SAA	-
	•	Impacts to water quality due to effluent discharge	Shalamar Gardens		✓	Wastewater from toilet blocks will be discharged into the existing WASA connection. Sewerage system will be provided to connect the sewer generate at proposed toilet blocks and connect with nearest existing sewerage pipeline for wastewater disposal.	-
			Jahangir Tomb		✓	Wastewater from toilet blocks will be discharged into the TMA, Lahore connection. Sewerage system will be provided to connect the sewer generate at proposed toilet blocks and connect with nearest existing sewerage pipeline for wastewater disposal.	-
			Hiran Minar		✓	A Septic tank will be constructed to treat the effluents from toilets. Sewerage system will be provided to connect the sewer generate at proposed toilet blocks and connect with nearest existing sewerage system for wastewater disposal. If there is no existing sewerage	-

					system close to the new proposed toilets, a soaking pit will be constructed for the wastewater disposal.	
		TDCP Changa Manga Resort		✓	Wastewater from toilet blocks will be discharged into the TMA, Kasur connection. Sewerage system will be provided to connect the sewer generate at proposed toilet blocks and connect with nearest existing sewerage pipeline for wastewater disposal.	-
		Sheikhupura Fort		✓	Wastewater from toilet blocks will be discharged into the TMA Sheikhupura connection. Sewerage system will be provided to connect the sewer generate at proposed toilet blocks and connect with nearest existing sewerage pipeline for wastewater disposal.	-
		Noor Jehan Tomb		✓	Wastewater from toilet blocks will be discharged into the TMA, Lahore connection. Sewerage system will be provided to connect the sewer generate at proposed toilet blocks and connect with nearest existing sewerage pipeline for wastewater disposal.	-
		TDCP sightseeing bus terminal		✓	Wastewater from toilet blocks will be discharged into the TMA, Lahore connection. Sewerage system will be provided to connect the sewer generate at proposed toilet blocks and connect with nearest existing sewerage pipeline for wastewater disposal.	-
•	Gas emissions	Shalamar Gardens		✓	NA	-
		Jahangir Tomb		✓	NA	-
		Hiran Minar		✓	NA	-
		TDCP Changa Manga Resort		✓	NA	-
		Sheikhupura Fort		✓	NA	-
		Noor Jehan Tomb		✓	NA	-
		TDCP sightseeing bus terminal		✓	NA	-
•	Safety hazards	Shalamar Gardens		✓	Negligible safety hazards relating to daily cleaning of the facilities. Material safety data sheet (MSDS) to be prepared during the operational stage of the sub-project by the archaeological department.	-
		Jahangir Tomb		✓	SAA	-
		Hiran Minar		✓	SAA	-
		TDCP Changa Manga Resort		✓	SAA	-
		Sheikhupura Fort		✓	SAA	-
		Noor Jehan Tomb		✓	SAA	-
		TDCP sightseeing bus terminal		✓	SAA	-

•	Visual Adverse impact on cultural heritage sites	Shalamar Gardens	✓	<p>Sites for new toilets block are selected with consensus of Archeological Department and concern persons at TDCP. It was ensured that new development have no adverse impact on aesthetic and historical values of heritage sites.</p> <p>Selected locations are well away and out of sight while standing next to the heritage sites.                      Design and material to be used for the construction were selected with care and efforts are made to match the look of new structure with heritage sites view.</p>	-
		Jahangir Tomb	✓	<p>Sites for new toilets block are selected with consensus of Archeological Department and concern persons at TDCP. It was ensured that new development have no adverse impact on aesthetic and historical values of heritage sites.</p> <p>Selected locations are well away and out of sight while standing next to the heritage sites.                      Design and material to be used for the construction were selected with care and efforts are made to match the look of new structure with heritage sites view.</p>	-
		Hiran Minar	✓	<p>Sites for new toilets block are selected with consensus of Archeological Department and concern persons at TDCP. It was ensured that new development have no adverse impact on aesthetic and historical values of heritage sites.</p> <p>Selected locations are well away and out of sight while standing next to the heritage sites.                      Design and material to be used for the construction were selected with care and efforts are made to match the look of new structure with heritage sites view.</p>	-
		TDCP Changa Manga Resort	✓	<p>Sites for new toilets block are selected with consensus of Archeological Department and concern persons at TDCP. It was ensured that new development have no adverse impact on aesthetic and historical values of heritage sites.</p> <p>Selected locations are well away and out of sight while standing next to the heritage sites.                      Design and material to be used for the construction were selected with care and efforts are made to match the look of new structure with heritage sites view.</p>	-
		Sheikhupura Fort	✓	<p>Sites for new toilets block are selected with consensus of Archeological</p>	-

					<p>Department and concern persons at TDCP. It was ensured that new development have no adverse impact on aesthetic and historical values of heritage sites.</p> <p>Selected locations are well away and out of sight while standing next to the heritage sites.</p> <p>Design and material to be used for the construction were selected with care and efforts are made to match the look of new structure with heritage sites view.</p>	
		Noor Jehan Tomb		✓	<p>Sites for new toilets block are selected with consensus of Archeological Department and concern persons at TDCP. It was ensured that new development have no adverse impact on aesthetic and historical values of heritage sites.</p> <p>Selected locations are well away and out of sight while standing next to the heritage sites.</p> <p>Design and material to be used for the construction were selected with care and efforts are made to match the look of new structure with heritage sites view.</p>	-
		TDCP sightseeing bus terminal		✓	<p>Sites for new toilets block are selected with consensus of Archeological Department and concern persons at TDCP. It was ensured that new development have no adverse impact on aesthetic and historical values of heritage sites.</p> <p>Selected locations are well away and out of sight while standing next to the heritage sites.</p> <p>Design and material to be used for the construction were selected with care and efforts are made to match the look of new structure with heritage sites view.</p>	-
4	Does the subproject involve any prior clearance from the State Forest Department for either the conversion of forest land or for tree-cutting? (Yes/ No).	Shalamar Gardens		✓	It is unlikely that uprooting of mature trees require for the proposed development. Exact location of toilet structure can be adjusted to avoid uprooting of mature tree on site. However, if uprooting is essential than prior approval is required from relevant authority i.e. Archaeological Department	-
		Jahangir Tomb		✓	SAA	-
		Hiran Minar		✓	SAA	-
		TDCP Changa Manga Resort		✓	No tree will be uprooted, nor any clearance is required from the Forest Department. The proposed site is the property of the Forest Department	-
		Sheikhupura Fort		✓	SAA	-
		Noor Jehan Tomb		✓	SAA	-

			TDCP sightseeing bus terminal		✓	No tree will be uprooted, nor any clearance is required from the Forest Department. The proposed site is the property of the TDCP.	-
5	Will the subproject create significant/limited/ no cultural properties impacts?						
		<ul style="list-style-type: none"> <li>Involve significant excavations, demolition, movement of earth, flooding or other major environmental damages.</li> </ul>	Shalamar Gardens		✓	The sub-project does not involve any of these risks i.e. significant excavations, demolition, movement of earth, flooding or other major environmental damages. (refer to Section 2.1.1 and 2.1.3 for the detailed scope of work and associated construction activities)	-
			Jahangir Tomb		✓	The sub-project does not involve any of these risks i.e. significant excavations, demolition, movement of earth, flooding or other major environmental damages. (refer to Section 2.2.1 and 2.2.3 for the detailed scope of work and associated construction activities)	-
			Hiran Minar		✓	The sub-project does not involve any of these risks i.e. significant excavations, demolition, movement of earth, flooding or other major environmental damages. (refer to Section 2.3.1 and 2.3.3 for the detailed scope of work and associated construction activities)	-
			TDCP Changa Manga Resort		✓	The sub-project does not involve any of these risks i.e. significant excavations, demolition, movement of earth, flooding or other major environmental damages. (refer to Section 2.4.1 and 2.4.3 for the detailed scope of work and associated construction activities)	-
			Sheikhupura Fort		✓	The sub-project does not involve any of these risks i.e. significant excavations, demolition, movement of earth, flooding or other major environmental damages. (refer to Section 2.5.1 and 2.5.3 for the detailed scope of work and associated construction activities)	-
			Noor Jehan Tomb		✓	The sub-project does not involve any of these risks i.e. significant excavations, demolition, movement of earth, flooding or other major environmental damages. (refer to Section 2.6.1 and 2.6.3 for the detailed scope of work and associated construction activities)	-
			TDCP sightseeing bus terminal		✓	The sub-project does not involve any of these risks i.e. significant excavations, demolition, movement of earth, flooding or other major environmental damages. (refer to Section 2.7.1 and 2.7.3 for the detailed scope of work and associated construction activities)	-

•	Is located within or in the vicinity of a recognized cultural property conservation area or heritage site.	Shalamar Gardens	✓	The sub-project is located in the buffer zone of a world heritage site (refer to Figure 3), but will not result in any negative impact i.e. destruction/demolition, wear, removal, burial, modification, change of use, neglect, flooding, denial of access and desecration. (refer to Section 3.2.1, 3.2.2 and 3.3 below for detail)	-
		Jahangir Tomb	✓	The sub-project is located within the earth land of a world heritage site (refer to Figure 10), but will not result in any negative impact i.e. destruction/demolition, wear, removal, burial, modification, change of use, neglect, flooding, denial of access and desecration. (refer to Section 3.2.1, 3.2.2 and 3.3 below for detail)	-
		Hiran Minar	✓	The sub-project is located in the buffer zone of a world heritage site (refer to Figure 14), but will not result in any negative impact i.e. destruction/demolition, wear, removal, burial, modification, change of use, neglect, flooding, denial of access and desecration. (refer to Section 3.2.1, 3.2.2 and 3.3 below for detail)	-
		TDCP Changa Manga Resort	✓	The sub-project is located within the earth land of a world heritage site (refer to Figure 19), but will not result in any negative impact i.e. destruction/demolition, wear, removal, burial, modification, change of use, neglect, flooding, denial of access and desecration. (refer to Section 3.2.1, 3.2.2 and 3.3 below for detail)	-
		Sheikhupura Fort	✓	The sub-project is located away from the world heritage site and the Museum (refer to Figure 23). The construction activities will not result in any negative impact i.e. destruction/demolition, wear, removal, burial, modification, change of use, neglect, flooding, denial of access and desecration on the museum. (refer to Section 3.2.1, 3.2.2 and 3.3 below for detail)	-
		Noor Jehan Tomb	✓	The sub-project is located several kilometres away from Taxila world heritage sites and the Museum (refer to Figure 26). The construction activities will not result in any negative impact i.e. destruction/demolition, wear, removal, burial, modification, change of use, neglect, flooding, denial of access and desecration on the museum. (refer to Section 3.2.1, 3.2.2 and 3.3 below for detail)	-
		TDCP sightseeing bus terminal	✓	The sub-project is located in the buffer zone of a national heritage site (refer to Figure 31), but will not result in any negative impact i.e. destruction/demolition, wear, removal, burial, modification, change of use, neglect, flooding, denial of access and desecration. (refer to Section 3.2.1, 3.2.2 and 3.3 below for detail)	-

•	Is designed to support the management or conservation of cultural property.	Shalamar Gardens	✓		The sub-project is designed to support the management of tourists visiting the site by providing toilet facilities.	-	
		Jahangir Tomb	✓			-	
		Hiran Minar	✓			-	
		TDCP Changa Manga Resort	✓			-	
		Sheikhupura Fort	✓			-	
		Noor Jehan Tomb	✓			-	
		TDCP sightseeing bus terminal	✓			-	
•	Other, specify.	Shalamar Gardens		✓	NA	-	
		Jahangir Tomb		✓	NA	-	
		Hiran Minar		✓	NA	-	
		TDCP Changa Manga Resort		✓	NA	-	
		Sheikhupura Fort		✓	NA	-	
		Noor Jehan Tomb		✓	NA	-	
		TDCP sightseeing bus terminal		✓	NA	-	
	Does the subproject involve any prior clearance from the Archaeology Department for either the conservation or management of heritage sites or vicinities? (Yes/ No). If yes, which?	Shalamar Gardens	✓		The site is proposed by the Director-General (DG) DGA. NOC has already been granted by the DG DGA. (refer to Section 3.2.1 for detail)		-
		Jahangir Tomb	✓		SAA	-	
		Hiran Minar	✓		SAA	-	
		TDCP Changa Manga Resort		✓	N/A	-	
		Sheikhupura Fort	✓		SAA	-	
Noor Jehan Tomb	✓		SAA	-			
TDCP sightseeing bus terminal		✓	N/A	-			
<b>Social</b>							
	Will the subproject create significant/limited/no social impacts?						

•	Land acquisition resulting in loss of income from agricultural land, plantation or other existing lands.	Shalamar Gardens	✓	No land acquisition is involved, the site proposed for the construction of toilet blocks is owned by the Archaeology Department. (refer to Figure 3 above for detail).	-
		Jahangir Tomb	✓	No land acquisition is involved, the site proposed for the construction of toilet blocks is owned by the Archaeology Department. (refer to Figure 10 above for detail).	-
		Hiran Minar	✓	No land acquisition is involved, the site proposed for the construction of toilet blocks is owned by the Archaeology Department. (refer to Figure 14 above for detail).	-
		TDCP Changa Manga Resort Sheikhupura Fort	✓	No land acquisition is involved, the site proposed for the construction of toilet blocks is owned by the Forest Department. (refer to Figure 19 above for detail).	-
		Harappa Museum	✓	No land acquisition is involved, the site proposed for the construction of toilet blocks is owned by the Archaeology Department. (refer to Figure 23 above for detail).	-
		Noor Jehan Tomb	✓	No land acquisition is involved, the site proposed for the construction of toilet blocks is owned by the Archaeology Department. (refer to Figure 26 above for detail).	-
		TDCP sightseeing bus terminal	✓	No land acquisition is involved, the site proposed for the construction of toilet blocks is owned by the TDCP. (refer to Figure 31 above for detail).	-
•	Impact on livelihood and economic activity.	Shalamar Gardens	✓	NA	-
		Jahangir Tomb	✓	NA	-
		Hiran Minar	✓	NA	-
		TDCP Changa Manga Resort	✓	NA	-
		Sheikhupura Fort	✓	NA	-
		Noor Jehan Tomb	✓	NA	-
		TDCP sightseeing bus terminal	✓	NA	-
•	Land acquisition resulting in the relocation of households.	Shalamar Gardens	✓	NA	-
		Jahangir Tomb	✓	NA	-
		Hiran Minar	✓	NA	-
		TDCP Changa Manga Resort	✓	NA	-
		Sheikhupura Fort	✓	NA	-



		Noor Jehan Tomb	✓	NA	-
		TDCP sightseeing bus terminal	✓	NA	-
•	Any reduction of access to traditional dependent communities (to areas where they earn for their	Shalamar Gardens	✓	NA	-
		Jahangir Tomb	✓	NA	-
		Hiran Minar	✓	NA	-
		Rohtas Fort	✓	NA	-
		Harappa Museum	✓	NA	-
		Taxila Museum	✓	NA	-
			primary or substantial livelihood).	Wah Gardens	✓
•	Any displacement or adverse impact on tribal settlement(s).	Shalamar Gardens	✓	NA	-
		Jahangir Tomb	✓	NA	-
		Hiran Minar	✓	NA	-
		TDCP Changa Manga Resort	✓	NA	-
		Sheikhupura Fort	✓	NA	-
		Noor Jehan Tomb	✓	NA	-
		TDCP sightseeing bus terminal	✓	NA	-
•	Adverse impacts to women, including economic and safety concerns.	Shalamar Gardens	✓	NA	-
		Jahangir Tomb	✓	NA	-
		Hiran Minar	✓	NA	-
		TDCP Changa Manga Resort	✓	NA	-
		Sheikhupura Fort	✓	NA	-
		Noor Jehan Tomb	✓	NA	-
		TDCP sightseeing bus terminal	✓	NA	-
•	Impact on infrastructure (roads, water supply, any	Shalamar Gardens	✓	No impact on roads and water supply and or any other infrastructure are perceived.	-
		Jahangir Tomb	✓	SAA	-
		Hiran Minar	✓	SAA	-

		other type of infrastructure)	TDCP Changa Manga Resort		✓	SAA	-
			Sheikhupura Fort		✓	SAA	-
			Noor Jehan Tomb		✓	SAA	-
			TDCP sightseeing bus terminal		✓	SAA	-
	•	Other, specify.	Shalamar Gardens		✓	NA	-
			Jahangir Tomb		✓	NA	-
			Hiran Minar		✓	NA	-
			TDCP sightseeing bus terminal		✓	NA	-
			TDCP Changa Manga Resort		✓	NA	-
			Hiran Minar		✓	NA	-

Sr. #	Screening Criteria	Site Name	Yes	No	Explanation (In-case of Yes)	Assessment of Category
		TDCP Changa Manga Resort		✓	NA	-
		Sheikhupura Fort		✓	NA	-
		Noor Jehan Tomb		✓	NA	-
		TDCP sightseeing bus terminal		✓	NA	-
<b>Overall Assessment</b>						
•	Subproject is declined	Shalamar Gardens		✓		-
		Jahangir Tomb		✓		-
		Hiran Minar		✓		-
		TDCP Changa Manga Resort		✓		-
		Sheikhupura Fort		✓		-
		Noor Jehan Tomb		✓		-
		TDCP sightseeing bus terminal		✓		-
•	Subproject is accepted	Shalamar Gardens	✓			-
		Jahangir Tomb	✓			-
		Hiran Minar	✓			-
		TDCP Changa Manga Resort	✓			-
		Sheikhupura Fort	✓			-
		Noor Jehan Tomb	✓			-
		TDCP sightseeing bus terminal	✓			-
•	The subproject is classified as environmental Category A and requires an in-depth	Shalamar Gardens		✓		-
		Jahangir Tomb		✓		-
		Hiran Minar		✓		-
		TDCP Changa Manga Resort		✓		-
		Sheikhupura Fort		✓		-

	Environmental and Social Impact Assessment and an Environmental Management Plan.	Noor Jehan Tomb		✓		-
		TDCP sightseeing bus terminal		✓		-
•	The subproject is classified as environmental Category B and requires an Environmental Management Plan.	Shalamar Gardens	✓			B
		Jahangir Tomb	✓			B
		Hiran Minar	✓			B
		TDCP Changa Manga Resort	✓			B
		Sheikhupura Fort	✓			B
		Noor Jehan Tomb	✓			B
		TDCP sightseeing bus terminal	✓			B
•	The subproject is classified as environmental Category C and does not require an Environmental Management Plan.	Shalamar Gardens		✓		-
		Jahangir Tomb		✓		-
		Hiran Minar		✓		-
		TDCP Changa Manga Resort		✓		-
		Sheikhupura Fort		✓		-
		Noor Jehan Tomb		✓		-
		TDCP sightseeing bus terminal		✓		-

### 3.1 Occupational Health and Safety (OHS) Risks

Occupational Health and Safety (OHS) risks perceived during the execution of various sub-projects tasks/activities are presented in Table 9 below;

**Table 9: Task/s and associated OHS risks**

Sr. #	Activity/ Task	H&S Risks
1	Excavation for foundation of the toilet blocks up to 5 feet.	<ul style="list-style-type: none"> <li>- No risk of cave in during excavation is perceived as the maximum excavation is up to 5 ft.</li> <li>- Low risk of falling into the excavated area during the night.</li> <li>- Low risks associated with the use of small excavator (3 ft. wide bucket), if mentioned in contractor's work plan.</li> <li>- Low risk of abrasion on hand/ feet during use of handheld tools/equipment.</li> </ul>
2	Excavation up to 10 feet. (for Septic Tanks and Soakage Pits only)	<ul style="list-style-type: none"> <li>- Minor to moderate risk of cave in during excavation.</li> <li>- Risk of falling into the excavated area during the night.</li> <li>- Risks associated with the use of a small excavator (3 ft. wide bucket), if mentioned in the contractor's work plan.</li> <li>- Low risk of abrasion on hand/ feet during use of handheld tools/equipment.</li> </ul>
3	Brickwork	<ul style="list-style-type: none"> <li>- Low risk of abrasion/cut on hand/ feet during use of handheld tools/equipment.</li> <li>- Low scaffolding related risks as the building are single storey with a maximum height of 11 ft.</li> </ul>
4	Installation of steel chaukat	<ul style="list-style-type: none"> <li>- Low risk of abrasion on hand/ feet during use of handheld tools/equipment.</li> </ul>
5	Fabrication of mild steel reinforcement for cement concrete i/c cutting, bending, laying in position, making joints and fastening.	<ul style="list-style-type: none"> <li>- Low risk of abrasion/cut on hand/ feet during use of handheld tools/equipment.</li> </ul>
6	RCC works in roofs, beams, columns and girders	<ul style="list-style-type: none"> <li>- Low scaffolding related risk as the building is single storey with a maximum height of 11 ft.</li> <li>- Ladder safety issues.</li> </ul>
7	Ceramic tile laying work	<ul style="list-style-type: none"> <li>- Low risk of abrasion/cut on hand/ feet during use of handheld tools/equipment.</li> </ul>
8	Providing and fixing aluminium fly screen comprising of Fibber/aluminium wire gauze fixed in the aluminium frame.	<ul style="list-style-type: none"> <li>- Low risk of abrasion/cut on hand/ feet during use of handheld tools/equipment.</li> </ul>
9	Woodworks/ doors	<ul style="list-style-type: none"> <li>- Low risk of abrasion/cut on hand/ feet during use of handheld tools/equipment.</li> </ul>
10	Applying emulsion paint (3 coats)	<ul style="list-style-type: none"> <li>- Low risk of irritation of skin, eyes and throat from emulsion fumes.</li> <li>- Low risk of abrasion/cut on hand/ feet during use of handheld tools/equipment.</li> <li>- Ladder safety issues.</li> </ul>
11	Laying of tuff pavers	<ul style="list-style-type: none"> <li>- Low risk of abrasion/cut on hand/ feet during use of handheld tools/equipment.</li> </ul>
12	Electrical work i.e. installation of PVC pipes; copper wires; switches; ceiling	<ul style="list-style-type: none"> <li>- Low risk of abrasion/cut on hand/ feet during use of handheld tools/equipment.</li> </ul>

Sr. #	Activity/ Task	H&S Risks
	fan (4 No.); exhaust fan (10 No.); tube lights; water geyser (1No.) etc.	- Risk of electric shock during connection to the mainline.
13	Installation of water supply, plumbing and sanitary i.e. washbasins (6 No.); water mixer (6 No.); plastic flush tanks (4 No.); installation of tube well (1 No.) at 100 ft. depth; laying, cutting, jointing of PPRC and UPVC pipes etc.	- Low risk of abrasion/cut on hand/ feet during use of handheld tools/equipment.
14	Various works activities/interactions of labourers may result in the spread of COVID-19	- Risk of COVID-19

### 3.2 Applicability of Clearances/ NOCs

#### 3.2.1 Clearance/ NOC from Directorate General of Archaeology

The majority of sub-project sites are either located; within the earthen ground of world heritage site and or national archaeological site; or within the buffer zone of the world heritage site and or national archaeological site, therefore owned and protected by the Directorate General of Archaeology under The Antiquities Act. 1975 of the Government of Punjab<sup>25</sup>.

According to the Antiquities Act. 1975 “no development plan or scheme or new construction on, or within a distance of two hundred feet of, a protected immovable antiquity shall be undertaken or executed except with the approval of the Director-General, Archaeology department.”

Keeping in view the above requirement under Antiquities Act. 1975, the No objection certificate (NOC) has already been issued by the DG Directorate General of Archaeology. Moreover, the locations of new toilet blocks have also been provided by the DG Directorate General of Archaeology ensuring these do not violate the Antiquities Act. 1975 (refer to Annexure A for detail).

#### 3.2.2 Applicability of UNESCO, World Heritage Convention (WHC) 1972,

According to the UNESCO, World Heritage Convention (WHC) 1972, each State Party (national government) is responsible for protecting its cultural and natural World Heritage properties through the development and implementation of national law/s<sup>26</sup>. The national government can delegate its powers depending upon the particular country's form of government <sup>26</sup>. In the case of the Government of Pakistan and Punjab in particular these powers are delegated to the DGA, Government of Punjab. The DG DGA is the officer authorised to ensure the implementation of The Antiquities Act. 1975 <sup>27</sup> and The Punjab Special Premises (Preservation), Ordinance, 1985 <sup>28</sup>.

As mentioned above the NOC required for the execution of the sub-project at all selected sites has already been issued by the DG DGA. Moreover, the locations of new toilet blocks have also been provided by the DG DGA ensuring these do not violate the Antiquities Act. 1975 (refer to Annexure A for detail).

<sup>25</sup> [https://archaeology.punjab.gov.pk/list-of-monuments-museums?field\\_district\\_value=17&field\\_category\\_value=4](https://archaeology.punjab.gov.pk/list-of-monuments-museums?field_district_value=17&field_category_value=4)

<sup>26</sup> <http://whc.unesco.org/en/conventiontext/>

<sup>27</sup> <http://punjablaws.gov.pk/laws/1432a.html>

<sup>28</sup> <http://punjablaws.gov.pk/laws/366.html>

### **3.2.3 Clearance/ NOC from Punjab EPA**

The proposed sub-project does not fall in Schedule – I and II of the Punjab Environmental Protection Act; 2017 therefore no approval from EPA is required for the execution of this sub-project.

### **3.3 Applicability of WB OP 4.11 Physical Cultural Resource**

The majority of sub-project sites are either located; within the earthen ground of world heritage site and or national archaeological site; or within the buffer zone of the world heritage site and or national archaeological site (refer to relevant –sub-project sites information in Section 2) therefore WB OP 4.11 is triggered (Physical Cultural Resources – PCR). Following Mitigation measures are proposed in the project WB approved ESMF;

- A PCR plan in accordance with World Bank OP 4.11 will be prepared if required.
- A chance find procedure included in the ESMF will be adopted.

The negative impacts to any Cultural Heritage site include; destruction, wear, removal, burial, modification, change of use, neglect, denial of access and desecration, as defined in Section 6.5 of project ESMF (refer to Table 10 for detail about each site and associated negative impact). However, none of these negative impacts are perceived from the sub-project construction activities at any site.

However, as some of the sub-project sites are located within close proximity of the built heritage therefore, a Physical Cultural Resource Management Plan (PCRMP) has been prepared and provided as Annexure C. This PCRMP will be made part of the Civil Work Contract Agreement of all sub-project Sites Works.

**Table 10: Impact Assessment on Physical Cultural Recourse**

Sub-Project Site	Will the project will result in any of the following negative impacts on Tangible/Physical Cultural Resource (Artistic Creations, Built Heritage i.e. Buildings and Monuments)									Will the project involves conservation of Tangible/Physical Cultural Resource	Will the project involve management of tourist visiting cultural heritage resources that in turn will help in generating well-known advantages i.e. Visitor fees, concessions and donations that will ultimately help in providing funds for restoration and protection efforts of cultural resource
	Modification	Wear	Removal	Burial	Destruction	Change of Use	Neglect	Denial of Access	Desecration		
Shalamar Gardens	No	No	No	No	No	No	No	No	No	No	Yes through the provision of toilet facilities.
Jahangir Tomb	No	No	No	No	No	No	No	No	No	No	Same as Above (SAA)
Hiran Minar	No	No	No	No	No	No	No	No	No	No	SAA
Sheikhupura Fort	No	No	No	No	No	No	No	No	No	No	SAA
Noor Jehan Tomb	No	No	No	No	No	No	No	No	No	No	SAA



### 3.4 Stakeholders Consultation/s

Stakeholders' consultations were undertaken with officials of DGA and tourists during the site visits conducted on November 12, 15, 16 and 22, 2021 and March 12 2022. The outcome of consultations with officials of DGA and tourists is presented below;

- Better and well-maintained toilet facilities will be a good relief for the elderly and the families with children.
- Toilet facility is essential in public places as the condition of existing toilets is poor.
- The condition inside the existing toilets is unhygienic, especially for the kids.
- Better facilities will help tourists to spend quality time at the site.

The list of persons consulted during sites visits is provided in Table 11, while the pictorial presentation of the consultation process is presented in Figure 32.

**Table 11: List of persons consulted**

Sr. #	Name	Designation
1.	Atiq-ur-Rehman	Deputy Director, DGA, Lahore
2.	Mukhtar Ahmed	SDO DGA at Shalamar Gardens
3.	Muhammad Waqas	Sub-Engineer, Hiran Minar
4.	Qazi Ashraf	Conservator, Jahangir Tomb
5.	Rai Naseem Ullah	Resort Incharge
6.	Irfan	Sub-engineer Archeology Sheikhpura
7.	Beenish	Tourist
8.	Shaukat	Tourist
9.	Muhammad Shabir	Tourist
10.	Ali Ashraf	Tourist
11.	Muhammad Luqman	Tourist
12.	Shabbir Ahmad	Tourist
13.	Shehzad Munir	Tourist
14.	Shahid	Tourist
15.	Wasim	Tourist
16.	Muhammad Rafiq	Tourist
17.	Ahmed	Tourist
18.	Shafiq Ahmed	Tourist
19.	Ammara	Tourist
20.	Zareena	Tourist

21.	Nasreen	Tourist
22.	Sana	Tourist
23.	Ali Shehzad	Tourist
24.	Mrs. Ali Shehzad	Tourist
25.	Mohammad Usman	Tourist
26.	Sadia Atif	Tourist
27.	Rubab Tanveer	Tourist
28.	Ayesha Sarwar	Tourist
29.	Mamoonna Ali	Tourist
30.	Sana Sohail	Tourist
31.	Ali Ahmed	Tourist
32.	Hamza Farooq	Tourist
33.	Syed Shayan	Tourist
34.	Mujtaba	Tourist
35.	Sidra	Tourist

**Figure 32: Pictorial Presentation of Consultations**



### **3.5 EHS Risks during Operation and Maintenance (O&M) of the Sub-Project**

Low risk of handling and use of detergents is perceived during the O&M of the sub-project sites. These could be easily mitigated with the use of appropriate PPEs and preparation of material safety data sheet and its implementation by the officials of DGA deputed at particular sub-project site. O&M staff of DGA already deputed at respective sub-project site will be responsible for day-to-day cleaning, repair and maintenance.

## 4 Environmental Management and Monitoring Approach

Beyond general OHS minor risks, no further impacts are perceived during the execution of the sub-project at all sites. The environmental management and monitoring approach to be adopted during the construction and operational phase of the sub-project sites is presented in Table 12 below. Approximate cost of implementation of EMP during construction phase of the project is 2% of the total project cost (toilets block for northern zone of Punjab) i.e. 3.8million PKR. Approximate cost per site is 0.21million PKR (total number of sites under northern zone is 18).

**Table 12: Environmental Management and Monitoring Approach**

Sr. #	Activity/ Task	Mitigation/ Monitoring requirements	Responsibility	
			Implementation	Monitoring
<b>Construction Phase</b>				
1	Excavation up to 5 feet.	<ul style="list-style-type: none"> <li>• General excavation related SOPs to be adopted i.e.                             <ul style="list-style-type: none"> <li>- provision of barricading around the excavation,</li> <li>- no unauthorised entry,</li> <li>- use of PPEs</li> <li>- housekeeping</li> <li>- green cover around the excavated area to avoid unauthorised entry and avoid visual access.</li> </ul> </li> <li>• Implementation of COVID-19 SOPs for construction sites issued by GOPb.</li> </ul>	Contractor	Daily by Supervision Consultants & monthly or quarterly by PTEGP E&S Staff.
2	Excavation up to 10 feet.	<ul style="list-style-type: none"> <li>• Permit to Work System to be implemented in case of excavation for septic tank and soakage pit.</li> <li>• General excavation related SOPs to be adopted i.e.                             <ul style="list-style-type: none"> <li>- provision of barricading around the excavation,</li> <li>- no unauthorised entry,</li> <li>- use of PPEs</li> <li>- housekeeping</li> <li>- green cover around the excavated area to avoid unauthorised entry and avoid visual access.</li> </ul> </li> <li>• Implementation of COVID-19 SOPs for construction sites issued by GOPb.</li> </ul>	Same as Above (SAA)	SAA

3	Brickwork	<ul style="list-style-type: none"> <li>• General occupational H&amp;S SOPs related to masonry works i.e. Use of PPEs, housekeeping etc.</li> <li>• Implementation of scaffolding safety SOPs i.e. installation of scaffolding on a level and hard surface, prior inspection by a competent person.</li> <li>• Ladder safety SOPs i.e. placing on a hard and level surface, three-point contact etc.</li> <li>• Green cover around the construction site to avoid unauthorised entry and avoid visual access.</li> </ul>	SAA	SAA
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Sr. #	Activity/ Task	Mitigation/ Monitoring requirements	Responsibility	
			Implementation	Monitoring
		<ul style="list-style-type: none"> <li>Implementation of COVID-19 SOPs for construction sites issued by GOPb.</li> </ul>		
4	Installation of steel chaukat	<ul style="list-style-type: none"> <li>General occupational H&amp;S SOPs related to masonry works i.e. Use of PPEs, housekeeping etc.</li> <li>Implementation of COVID-19 SOPs for construction sites issued by GOPb.</li> </ul>	SAA	SAA
5	Cutting, bending, laying and fastening of mild steel bars.	SAA	SAA	SAA
6	RCC works in roofs, beams, columns and girders	SAA	SAA	SAA
7	Ceramic tile laying work	SAA	SAA	SAA
8	Fixing aluminium fly screen.	SAA	SAA	SAA
9	Woodworks/ doors	SAA	SAA	SAA
10	Providing and laying of tuff pavers	SAA	SAA	SAA
11	General electrical work i.e. installation of PVC pipes; wires; switches; ceiling fan etc.	<ul style="list-style-type: none"> <li>General occupational H&amp;S SOPs related to electrical works i.e. Use of PPEs, housekeeping etc.</li> <li>Ladder safety SOPs i.e. placing on a hard and level surface, three-point contact etc.</li> <li>Implementation of COVID-19 SOPs for construction sites issued by GOPb.</li> </ul>	SAA	SAA
12	Applying emulsion paint (3 coats)	<ul style="list-style-type: none"> <li>Ladder safety SOPs i.e. placing on a hard and level surface, ensuring three-point contact etc.</li> <li>Use of appropriate PPE i.e. gloves and mask etc.</li> <li>Implementation of COVID-19 SOPs for construction sites issued by GOPb.</li> </ul>	SAA	SAA
<b>Operational Phase</b>				
1	General cleaning	<ul style="list-style-type: none"> <li>General OHS SOPs relating to cleaning i.e. use of appropriate PPEs, preparation of material safety data sheet and its implementation.</li> </ul>	Site staff of DGA	Incharge of site deputed by DGA
2	Wastewater, Solid Waste, adequate drainage, Cleaning Issues	<ul style="list-style-type: none"> <li>Land owner of the site i.e. Archeological Department or TDCP are responsible of maintaining improved or new toilet block constructed under this project.</li> <li>Toilet blocks should be inspected on regular basis by the above authorities and ensure that they are in working conditions in hygienic way.</li> <li>Septic tank should be pumped</li> </ul>		

		as per the recommendation of the designer. • Soild waste bins should be provided at toilets. These bins should be empty at end of every busy day (usually busy during weekend and public holidays).		
--	--	--	--	--

#### 4.1 HSE Training and Associated Cost

On site hands-on training will be provided by the Environmental Expert (EE) of Construction Supervision Consultants (CSC) to Contractor's staff during mobilisation of contractor at each sub-project site therefore no additional cost is perceived beside regular remuneration of EE CSC. Detail of training/s to be imparted during the construction phase of the sub-project is provided in Table 13 below.

Two percent of total sub-project cost has been added as EMP implementation cost in all Contract Agreement. However, it is pertinent to mentioned here the contractor and or every employer is bound to provide its employees necessary PPEs and training free of cost according to The Punjab Occupational Safety and Health Act 2019. The Punjab OHS Act 2019, clearly states that *“Every employer shall; take all possible and reasonably practicable measures to ensure safety and health of the employees at the workplace; arrange for training of safety and health representatives every year to attend health and safety training as approved by the Government and shall bear all expenses thereof; and, provide where necessary to the employees, at his own expense, if hazards cannot otherwise be eliminated or controlled, adequate protective clothing and protective equipment as may be approved by the Government, to prevent every risks of harm and of adverse effects on health.”*

##### Training Plan

Sr. #	Topic	Duration	Trainees	Trainer
1	EMP Training	Once during contractor's mobilisation at each sub-project site for maximum 1hr.	Contractor Staff & Labourers	Environmental Expert of Supervision Consultants
2	Toolbox Talk	Twice a week for maximum of 10 min on selected topics based on site observations made by Environment Specialist of PTEGP.	Labourers	Contractor's Senior Staff/ Site Incharge



## 5. Findings

Following are the finding of the E&SS process;

- The majority of sub-project sites are either located; within the earthen ground of world heritage site and or national archaeological site; or within the buffer zone of the world heritage site and or national archaeological site but will not result in any negative impact whatsoever i.e. destruction, wear, removal, burial, modification, change of use, neglect, denial of access and desecration. However, keeping in view the requirement as per WB OP 4.11, a Physical Cultural Resource Management Plan (PCRMP) has been prepared and provided as Annexure C. This PCRMP will be made part of the civil works contract agreement of all sub-project site works.
- NOC required for the execution of the sub-project is already issued by the DG DGA. The site/s for new toilet block/s in all sub-project sites are proposed by the DG DGA.
- The proposed sites are government land/ the property of the Directorate General of Archaeology; therefore no land acquisition is involved.
- The sub-project will have no adverse environmental and social (E&S) impacts. General OHS related issues are perceived as limited to masonry works.
- All proposed toilet blocks have access to disabled.
- The execution of the sub-project will not involve any tree cutting and removal of vegetation.
- Effluents generated during the operation phase will be disposed into the existing WASA/TMA connection and or into the septic tanks that will be constructed for its treatment.

In addition, the proposed sub-project does not fall in Schedule – I and II of the Punjab Environmental Protection Act; 2017 therefore no approval from EPA is required for the execution of this sub-project.

## Annexure A: NOC from Archaeological Department



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E Mail: [arch.punjab@gmail.com](mailto:arch.punjab@gmail.com)

Secretary Tourism:  
Dy. No. 1526  
Dated: 24/9/21  
\* ADDL. SECRETARY  
\* DY. SECRETARY (ADMN)  
\* DY. SECRETARY (PI)

No. DGA- I (225)/Arch/2021/1869  
DIRECTORATE GENERAL OF ARCHAEOLOGY  
GOVERNMENT OF THE PUNJAB  
TOURISM DEPARTMENT  
OLD FORT LAHORE

Dated the 13th September, 2021

To,

The Secretary,  
Tourism Department,  
Government of the Punjab,  
Lahore.

Dr. No. 2/cg.  
Date 14/09/2021  
R&I Tourism Department

Subject: - PROVISION AND IMPROVEMENT OF TOILETS, CAFÉ, SOLAR PANELS,  
TOURIST INFORMATION CENTERS AND ROHTAS MUSEUM GALLERY

Kindly refer to meeting held under the Chairmanship of Secretary Tourism Department in the Committee Room of Tourism Department dated 10.03.2021 on the subject cited above.

It is submitted that during the meeting the Chair directed as follows:

- i. PTEGP will provide new toilets (international standard) and make improvement in the existing ones. The design of toilets will be in harmony with specific heritage site.
- ii. The Director General of Archaeology will provide locations for new toilets (international standards) at Shalamar Garden, Jahangir's Tomb, Harappa Museum, Hiran Minar, Rohtas Fort, Taxila Museum and Wah Garden.
- iii. The PTEGP will also make a plan for the improvement of Rohtas Fort museum gallery in consultation with Archaeology department which includes improvement of the museum gallery building, display of objects and lighting system etc.
- iv. The PTEGP will also design and provide tourist information centers (TICs) at key heritage sites for which Directorate General of Archaeology will specify location and provide requisite area for the purpose.

- v. The Directorate General of Archaeology will also nominate focal person for identifying locations for Washrooms, Cafe, Solar Panel and TIC to facilitate the PTEGP for an early execution.

In pursuance of the directions of the Chair, the Directorate General of Archaeology has no objection for provision of above tourist facilities at above mentioned sites and the detail of various activities alongwith location coordinates are submitted herewith for kind perusal, please.

*sd/p 13/10/21*  
 DIRECTOR GENERAL ARCHAEOLOGY

The detail of various activities alongwith location with coordinates are as under:

Name of the Activity	Shalamar Gardens	Jahangir's Tomb	Birsa Minar	Rohtas Fort	Harappa Museum	Taxila Museum	Wah Garden
	1	2	3	4	5	6	7
Provision for New Toilet Blocks	31.58524 74.38472	31.62138 74.30119	31.44103 73.95742	32.96403 73.57461	30.628894 72.86908	--	33.80072 72.83182
Improvement of Existing Washroom	31.58524 74.38472	--	--	32.96403 73.57461	30.628894 72.86908	33.74595 72.81838	--
Solar Panels	31.58410 74.38072	31.62181 74.29823	31.73994 73.95665 & 31.741065 73.95369	32.9636 73.5744	30.62529 72.86117	33.74801 72.81821	33.800561 72.69856
Cafeteria	31.58623 74.38362	31.62100 74.30103	Improvement of existing	32.96378 73.57321	30.62579 72.86610	30.627003 72.86797	33.80701 72.83092
Tourist Information Centre	--	--	--	32.9625 73.5736	30.62511 72.86687	33.74595 72.81844	33.80102 72.69872
Focal Person	Mr. Atiq-ur-Rehman Deputy Director E&M./Mr. Mukhtar Ahmad SDO	Mr. Atiq-ur-Rehman Deputy Director E&M./Mr. Qazi Ashraf Archaeological Conservator	Mr. Atiq-ur-Rehman Deputy Director E&M./Mr. Waqas Sub-Engineer	Mr. Imran Zahid, SDO	Muhammad Hassan Deputy Director/ Mr. Aluzaid Nawaz, Assistant Curator	Mr. Iqbal Khan, Deputy Director/ Mr. Ali Gohar, Archaeological Conservator	Mr. Iqbal Khan Deputy Director/ Mr. Ali Gohar Archaeological Conservator

## NOC from TDCP

**FAX/URGENT**



**042-99059304**

No.22(23)PTEGP/RP/P&D/2022  
**GOVERNMENT OF THE PUNJAB  
PLANNING & DEVELOPMENT BOARD**

Dated Lahore, the 23<sup>rd</sup> February, 2022

To

The Secretary, -  
Government of the Punjab,  
Finance Department,  
Lahore.

*Attention: Section Officer (P&D)*

**Subject: DDSC MEETING OF SCHEME TITLED "CONSTRUCTION /  
RENOVATION OF TOILET BLOCKS AT DIFFERENT HERITAGE &  
TOURIST SITES IN CENTRAL, NORTH & SOUTH ZONES UNDER  
PUNJAB TOURISM FOR ECONOMIC GROWTH PROJECT  
(PTEGP)"**

I am directed to enclose herewith minutes of subject meeting for your  
information and further necessary action.

(MUHAMMAD SALEEM ILYAS)  
ASSISTANT CHIEF (RP)

**No. & Date Even:-**

A copy is forwarded for information and further necessary action to the:-


1. Sr. Chief (YASAT), Planning & Development Board, Lahore.
2. Chief (Tech.), Planning & Development Board, Lahore.
3. Chief (ECA), Planning & Development Board, Lahore.
4. Project Director, Punjab Tourism Economic Growth Project, 184-A Upper Mall, Lahore.

ASSISTANT CHIEF (RP)

**C.C:**

Secretary, P&D Board, Lahore.

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	<b>GOVERNMENT OF THE PUNJAB          PLANNING &amp; DEVELOPMENT BOARD          (RP/P&amp;D SECTOR)</b>
<b>MINUTES OF DBSC MEETING OF SCHEME TITLED "CONSTRUCTION /          RENOVATION OF TOILET BLOCKS AT DIFFERENT HERITAGE &amp; TOURIST          SITES IN CENTRAL, NORTH &amp; SOUTH ZONE UNDER PUNJAB TOURISM FOR          ECONOMIC GROWTH PROJECT (PTEGP)" HELD UNDER THE CHAIRMANSHIP          OF SECRETARY, P&amp;D BOARD ON 17.02.2022</b>	
Venue:	CR-III
Participants	List Attached at Annex-A

**Agenda Item 1: "Construction / Renovation of Toilet Blocks at Different Heritage & Tourist Sites in Central Zone Under Punjab Tourism for Economic Growth Project (PTEGP)"**

Opening the discussion, Chief (RP), P&D Board informed that Punjab Tourism for Economic Growth Project (PTEGP) is a World Bank funded project for generating the economic activities through rehabilitation/construction of Tourism spots in Punjab. The instant case has been submitted by PTEGP to construct / renovate the toilet blocks at different heritage and tourist sites in the 4 districts of Central Zone i.e. Lahore, Sheikhupura, Kasur, Sahiwal with the technical support of C&W Department. The cost estimates/PC-Is were prepared by C&W Department in consultation with Archaeology Department. These estimates are based on 1<sup>st</sup> Bi-Annual 2022 MRS rates at total cost of Rs.88.103 million with gestation period of 6 months (April, 2022 to September, 2022). The required funds would be provided out of the ADP 2021-22 allocation of the umbrella PC-I of PTEGP.

2. The site wise cost of each PC-I is as under: -

Sr. No.	No. of Sites	Location	Districts	No. of Sets	No. of Seats	Cost (M)	Remarks
<b>Central Zone</b>							
1.	1	Shalamar Gardens	Site-I	2	10	10,449	1- One Set for Ladies and Gents  2- One set in each set is for Special Persons and remaining for Normal Persons.
2.			Site-II	2	10	10,548	
3.	2	Jahangir Tomb	Lahore	2	10	10,449	
4.	3	Noor Jahan Tomb		2	10	10,001	
5.	4	TDCP Sightseeing Bus Terminal		2	2	3,836	
6.	5	Hiran Minar		2	10	9,291	
7.	6	Sheikhupura Fort	SKP	2	10	9,264	
8.	7	Harappa Museum	Sahiwal	2	10	14,327	
9.	8	TDCP Changa Manga Resort,	Kasur	2	10	9,938	
<b>G. Total-</b>				<b>18</b>	<b>82</b>	<b>88,103</b>	

*Handwritten signature*

Printed with Confidential

3. On the query of Member, PSD/Sr.Chief (YASAT), P&DB regarding the NOC of Archeology Department and O&M of these facilities, Project Director (PTEGP) apprised the house that all the proposed facilities and respective location have been proposed by the Archeology Department and the future O&M would also be the responsibility of their Department. Member, PSD/Sr.Chief (YASAT), P&DB has inquired about the final sewage disposal of these toilets. PD, PTEGP responded that disposal facility available at the site would be used, whereas, on sites where the sewage disposal system is not available, it would be constructed, which results in variation in cost at different proposed locations. He further informed that the detailed designs were prepared by the Design Consultant of PTEGP in consultation with all the stakeholders as per their demand.

4. Chief (RP), P&DB further apprised that in compliance to observations of P&D Board, PTEGP has submitted amended PC-I and cost has been reduced from Rs.88.103 million to Rs.81.458 million after deletion of 1% horticulture charges, 2% Design consultancy charges, 12.5% Departmental charges and 2% Supervision consultancy charges.

5. Member, (Edu.)/Sr. Chief (RP), P&DB inquired whether the proposed gestation period i.e. 6 months would be sufficient to complete these assignments. The representative of C&W Department replied that although the quantum of each facility/construction work is not a lengthy process but the proposed gestation period does not seem justified. Member (PSD/Sr. Chief (YASAT), P&DB endorsed the point of view of C&W Department and recommended to enhance the gestation period from 6 to 8 months.

#### Decision

The scheme was approved at total cost of Rs.81.458 million subject to the following conditions: -

- i. Gestation Period may be increased from 6 to 8 months (April, 2022 to November, 2022).
- ii. Operation & Maintenance would be the responsibility of Tourism/ Archeology Department.

#### *Agenda Item 2: "Construction / Renovation of Toilet Blocks at Different Heritage & Tourist Sites in North Zone under Punjab Tourism for Economic Growth Project (PTEGP)"*

6. Chief (RP), P&DB informed the house that under the instant project PTEGP has planned to provide the toilet facility in 5 districts of Punjab of Northern Zone i.e. Attock, Rawalpindi, Jhelum, Chakwal, Mianwali. The district wise details of cost estimates are as under:-

Sr. No	No. of Sites	Location	Districts	No. of Sets	No. of Seats	Cost (M)	
1.	1	Lala Rukh Tomb	Attock	2	6	6.339	
2.	2.	Wah Gardens	Rawalpindi	2	6	4.652	
3.	3	Sirikap Taxila		2	6	5.066	
4.	4	Mohra Muradu Taxila		2	6	4.906	
5.	5	Dharam Rajika Taxila		2	6	5.470	
6.	6	Patriate Hill Station		Start-point	2	6	9.557
7.				Mid-point	2	6	9.557
8.				Top-point	2	6	9.557
9.	7	Mall Road Murree		GPO Chowk	2	8	9.821
10.	8				2	6	6.601
11.				Site-II	2	6	6.686
12.	9	Tench Bhatta Bazaar		Site-I	1	5	2.679
13.		Taxila Museum (Male Set)		-	1	5	2.050
14.	10	TDCP Dhanio Rest House Kotli Sattian			2	6	9.685
15.	11	TDCP Khajot Stopover		Male	1	4	8.910
16.				Female	1	3	7.157
17.	12	TDCP Sight Seeing, Bus Terminal,		Site-I	2	6	6.494
18.				Site-II	2	6	6.514
19.	13	Dharabi Lake		Chakwal	2	10	14.085
20.	14	Katas Raj	2		10	14.336	
21.	15	TDPC Resort Kallar Kahar,	2		5	4.475	
22.	16	TDCP Dhok Tulian,		2	10	14.341	
23.	17	Rohtas Fort	Jhelum	2	10	11.430	
24.	18	TDCP Daud Khel,	Mianwali	2	10	10.579	
		<b>Grand Total</b>		<b>44</b>	<b>158</b>	<b>190.951</b>	

7. Cost has been reduced from Rs.190.951 million to Rs.182.836 million due to deletion of 1% horticulture charges, 2% Design consultancy charges, 12.5% Departmental charges and 2% Supervision consultancy charges.

**Decision**

The scheme was approved at total cost of Rs.182.836 million subject to the following conditions:

- i. Gestation Period may be increased from 6 to 8 months (April, 2022 to November, 2022).
- ii. Operation & Maintenance of these toilets would be the responsibility of Tourism/ Archeology Department.

**Agenda Item 3: "Construction / Renovation of Toilet Blocks at different Heritage and Tourist Sites in South Zone under Punjab Tourism for Economic Growth Project (PTEGP)"**

8. PTEGP is going to provide the subject facility in 2 districts of Southern Zone i.e. DG Khan and Bahawalpur. The district wise details of cost estimates are as under:-

*(Rs. in million)*

Sr. No.	Location	District	Cost
1	Derawar Fort	Bahawalpur	10.997
2	Tomb Bibi Jiwandi	Bahawalpur	10.921
3	TDCP Lal Suhanra	Bahawalpur	5.997
4	Barthi	Bahawalpur	15.405
5	Mubarki Top	DG Khan	16.353
6	Gulki Top	DG Khan	14.740
<b>Total</b>			<b>74.414</b>

8. The scheme was discussed in detail and it was agreed to provide the facility on the same analogy as it is planned in Central and North Zone. Cost has been reduced from Rs.74.414 million to Rs.67.208 million due to deletion of 1% horticulture charges, 2% Design consultancy charges, 12.5% Departmental charges and 2% Supervision consultancy charges.

**Decision**

The scheme was approved at total cost of Rs.67.208 million subject to the following conditions:

- i. Gestation Period may be increased from 6 to 8 months (April, 2022 to November, 2022).
- ii. Operation & Maintenance of these toilets would be the responsibility of Tourism/ Archeology Department.

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## Annexure B: COVID-19 SOPs for Construction Sites



Communication & Works Department  
Government of the Punjab  
Lahore

### احتیاطی ہدایات برائے (COVID-19) کو روکنے والی اقدامات

یہ احتیاطی ہدایات تمام کنسٹرکشن سائٹس پر نافذ العمل حوالوں کی اور محکمہ تعمیرات و مواصلات کے کنٹریکٹر زاور سپروائزرز ان پر عمل درآمد کو یقینی بنائیں گے۔

۱۔ یہ ہدایات، تمام کنسٹرکشن سائٹس جن پر کام جاری ہے، یہ نمایاں طور پر پینٹڈ اور سبز رنگ کی صورت میں آویزاں کی جائیں گی۔

۲۔ تمام ٹھیکیداران اپنی کنسٹرکشن سائٹس پر جسمانی درجہ حرارت چیک کرنے کیلئے ٹھیکہ گن کی دستیابی یقینی بنائیں گے

۳۔ کنسٹرکشن سائٹس پر کام کرنے والے تمام عملے بشمول مزدور، چیکنگل سٹاف، ڈرائیور، سپروائزرز، سٹاف کا ٹھیکہ رولڈ روزانہ کام شروع کرنے سے پہلے چیک کیا جائے گا اور انہیں پھوڑا کھنا جائے گا۔

۴۔ کسی بھی مزدور یا دیگر عملے میں وائرس کی علامات ظاہر ہونے کی صورت میں فوری طور پر ضلعی انتظامیہ کو مطلع کیا جائے گا۔

۵۔ ایسے کسی بھی شخص کو جس میں گلے پانک کی بیماری مثلاً زکام، کھانسی، نزلہ وغیرہ ہو کو کام پر آنے کی اجازت نہ ہوگی۔

۶۔ کنسٹرکشن سائٹس پر ہاتھ دھونے کے انتظامات بشمول پانی و صابن کی دستیابی متعلقہ ٹھیکیدار کی ذمہ داری ہوگی۔

۷۔ ٹھیکیداران اس بات کو یقینی بنائیں گے کہ صبح کام شروع کرنے سے پہلے تمام عملہ صابن سے ہاتھ دھوے گا۔ اور ہر ایک گھنٹے بعد کام پر موجود ہر فرد اپنے ہاتھ صابن سے دھوئے گا۔

۸۔ جس جگہ پر عملہ کام کر رہا ہو وہیں پر گلوہیں لٹے پانی سے روزانہ سپرے کیا جائے گا تاکہ وہ علاقہ جراثیم اور وائرس سے پاک رہے۔

۹۔ جہاں تک ممکن ہو اس بات کو یقینی بنایا جائے کہ مزدور اور دیگر عملہ کام ختم ہونے کے بعد گھر جاتے سے پہلے صابن سے لہا کر جائے اور کام والے کپڑے وغیرہ چھوڑ کر جائے

۱۰۔ اگر مزدور یا دیگر عملہ کنسٹرکشن سائٹس پر ہی رہائش پذیر ہے تو ان کی رہائش پر مناسب صابنی فاسٹے کو یقینی بنایا جائے۔

۱۱۔ کنسٹرکشن سائٹس پر جراثیم کش مٹل (Hand Sanitizers / Hand Wash etc) کی دستیابی اور استعمال یقینی بنایا جائے گا

## **Annexure C: Physical Cultural Resource Management Plan (PCRMP)**

### **Executive Summary**

The sub-project activities will not have any negative impacts to any Cultural Heritage site i.e. destruction, wear, removal, burial, modification, change of use, neglect, denial of access and desecration.

As the majority of sub-project sites are either located; within the earthen ground of world heritage site and or national archaeological site; or within the buffer zone of the world heritage site and or national archaeological site therefore WB OP 4.11 is triggered (Physical Cultural Resources – PCR).

Keeping in view the requirement under WB OP 4.11, this Physical Cultural Resources Plan has been prepared and will be made part of the Civil Contract Agreement of all sub-project sites.

### **Mitigation Measures/ Precautions**

#### **Pre-Construction:**

- Technical Design: Incompatible layout plan, engineering design and improper repair methods of the subproject's structures can undermine the historical value of PCRs, overall aesthetic beauty and ambience of the subproject areas. Therefore, the technical design of the proposed subprojects must incorporate the historical and aesthetic considerations meeting the local context and best international practices in project design; and the proponent must review and validate all the design and repair works considering the possible impacts before the start of civil works.
- Seismic Hazard Consideration: The proposed structures should be designed to withstand high intensity earthquakes. Contractor should adopt Seismic Building Code of Pakistan 2007 (SBC-07) to mitigate the seismic hazard for subprojects design. This code specifies minimum requirements for seismic safety of buildings and has to be applied and used by engineers in conjunction with the necessary understanding of the concepts of structural, geotechnical and earthquake engineering.

#### **Electrical Hazard Consideration**

- Appropriately grounded and double insulation of every single piece of equipment, machine and device should be kept in the design.
- Proper installation checks and periodic maintenance by a competent electrician should be planned; and
- All power strips should be planned in the design to place in well-ventilated areas for adequate heat dispersion

#### **Ecological Consideration:**

During design, sites should be properly selected to avoid and minimize the cutting of trees, shrubs and herbs;

- The critical areas of animal breeding and nests should be avoided (if any);
- Tree plantation must be formulated; and
- It should be properly planned in the design to avoid any impacts on green cover of the subproject sites which may be direct or indirect.

## **Construction Phase**

### **Cordon Off**

- Cordon off work areas of civil works where necessary. Visitors should not be allowed in the subproject site area during civil works.

### **Civil Works:**

- Inventory of PCR close to the subproject area of influence, to be at risk of damage or disturbance should be prepared.
- Avoid, redirect the activities so that they do not endanger any archaeological site;
- Avoid extensive demolition works near or within the PCRs;
- Ensures that the relevant signs for protection of known PCRs are displayed where and when required; and
- Experienced skilful agent will be responsible for conducting the demolition activities, if any.
- Issues of Soil Erosion and Contamination, vibration, noise, air quality, wastewater and solid waste should be handled as per given in ESMP report prepared for the sites.
- For excavation works Chance find procedure as given below will be adopted for the site.
- All excavation is to be carried out with great care in order that any old masonry or other remains buried in the earth may not be damaged., any such remain should be left untouched when found and if liable to weather decay, it should be covered;
- It is important that responsible person from DGA, as mentioned by DG DGA in his NOC (refer Annexure A) must be present whenever excavations are carried out in or around the PCR, in case of discovery of any immovable antiquity during execution of work, he shall take charge and register it to further inform higher ups. Secure the site to prevent any damage or loss to movable objects. In cases of movable antiquities or sensitive remains, a night guard shall be present until the responsible authorities take over.

### **Chance Find Procedures**

Project may involve deep excavations. Therefore, the possibility of chance find is not ignorable. In case of any chance find, the contractor will immediately report through Supervision Consultant to DG Directorate General of Archaeology, Punjab, to take further suitable action to preserve those antique or sensitive remains. Representative of the Director will visit the site and observe the significance of the antique, artefact and Cultural (religious) properties and significance of the project. The report will be prepared by representative and will be given to the Director. The documentation will be completed and if required suitable action will be taken to preserve those antiques and sensitive remains.

In case any artefact, antiques and sensitive remains are discovered, chance find procedures should be adopted by contractor workers as follows:

- Stop the construction activities in the areas of chance find.
- After stopping work, the contractor must immediately report the discovery to the Supervision Consultant.
- The Director decides to take over the antiquity for purposes of custody, preservation and protection, the person discovering or finding it shall hand it over to the Director or a person authorized by him in writing.
- Delineate the discovered site or area.
- Consult with the local community and provincial Archaeological Department.
- The Director shall, constitute a team of archaeologists for undertaking preliminary investigation and will decide about further course of action in light of findings of the team.
- The suggestion of the local communities and the concerned authorities will be suitably incorporated during taking the preventive measures to conserve the antique, artefact and cultural (religious) properties; and
- Secure the site to prevent any damage or loss of removable objects. In case of removable antiquities or sensitive remain, a night guard shall be arranged until the responsible local authorities take over.

- Avoid the use of heavy construction machinery during the excavation process; and
- The Contractor staff must have relevant qualification and experience of similar projects.

**Plaster and Painting Works:** New Plaster, painting walls and other roof treatment should consider the original colour scheme, layout and design to keep the aesthetic and visual impact of the site.

**Operational Phase:** The authority responsible for the O & M of sub project activities will be responsible for housekeeping of the facilities and shall prepare and adopt SOPs for O & M of the subproject facilities. PTEG E&S experts/specialists will ensure that O&M plan is operationalized and will do monitoring visits for compliance of O & M plans.

**Training and Capacity Building:** The civil work activities shall be carried out by Pre-qualified trained Contractor under supervision of technical staff of DG AD. The Contractors shall contain team of skilled labours having past experience in similar works. Trainings of the work force should be conducted before start of civil works and during project implementation by the PMU safeguards specialists and Contractor's as per training plan given in ESS report.

**Monitoring and Supervision:** Strict Monitoring and supervision as per monitoring plan given in ESS report should be enforced during works.

**GRM:** The record of any complaints as per GRM mechanism of the project should be implemented.

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**Annexure-D: Septic Tank Design**

