Initial Environmental Examination

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India: Rajasthan Secondary Towns Development Sector Project – Additional Financing (PART A)

Conservation and Development of Heritage Sites in Bharatpur Town

Prepared by Rajasthan Urban Drinking Water Sewerage and Infrastructure Corporation Limited-External Aided Project (RUDSICO-EAP) for the Asian Development Bank.

CURRENCY EQUIVALENTS
(as of 7 February 2023)

Currency unit	–	Indian rupee (₹)
₹1.00	=	$ 0.01
$1.00	=	₹ 82.76

ABBREVIATIONS

ADB	–	Asian Development Bank
BOCW	–	Building and other Construction Workers
CLC	–	City Level Committee
CPCB	–	Central Pollution Control Board
CTO	–	Consent To Operate
DPR	–	Detailed Project Report
EHS	–	Environmental Health and Safety
EIA	–	Environmental Impact Assessment
FCO	–	Fertilizer Control Ordinance
FSSM	–	Faecal Sludge and Septage Management
IEE	–	Initial Environmental Examination
IFC	–	International Finance Corporation
LSGD	–	Local Self Government Department
MOEFCC	–	Ministry of Environment, Forest and Climate Change
PHED	–	Public Health Engineering Department
PIU	–	Project Implementation Unit
PMU	–	Project Management Unit
PWD	–	Public Works Department
REA	–	Rapid Environmental Assessment
ROW	–	right-of-way
RSPCB	–	Rajasthan State Pollution Control Board
RSTDSP	–	Rajasthan Secondary Towns Development Sector Project
RUDSICO-EAP	–	Rajasthan Urban Drinking Water Sewerage and Infrastructure Corporation Limited-Externally Aided Projects
RUDSICO	–	Rajasthan Urban Drinking Water Sewerage and Infrastructure Corporation
SEIAA	–	State Environmental Impact Assessment Authority
SPS	–	Safeguard Policy Statement, 2009
ULB	–	Urban Local Body
WHO	–	World Health Organization

WEIGHTS AND MEASURES

m^3	–	cubic meter
dB	–	decibels
^oC	–	degree centigrade
dia	–	diameter
kg	–	kilogram
kl	–	kilolitre
km	–	kilometre
kmph	–	kilometre per hour
KLD	–	kilolitres per day
ha	–	hectare
HP	–	horsepower
LPCD	–	liters per capita per day
lps	–	liters per second
m	–	meter
mg	–	milligram
mm	–	millimetre
MCM	–	million cubic meters
MLD	–	million litres per day
km^2	–	square kilometre

NOTE

In this report, "$" refers to United States dollars.

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APPENDICES:

Appendix C1 – C25 – common appendices, attached separately, provide statutory standards, guidelines, reporting templates etc. are applicable to all subproject IEEs.

EXECUTIVE SUMMARY

ADB approved a loan for the Rajasthan Secondary Towns Development Sector Project (RSTDSP, Loan 3972: IND) in September 2020. This is currently under implementation and will close by May 2028. The additional financing (the project) will expand the improved access to WSS services in at least ten urban local bodies (ULBs), benefiting 1.2 million people. Important value addition of the proposed project to the ongoing project is that it will provide innovative solutions to address climate change to respond to the growing climate risks and vulnerability and also to improve livability and prosperity through enhancing natural and/or built heritage at least ten ULBs in Rajasthan, benefiting 1.0 million people. The overall project is aligned with the following impacts: (i) access to potable, affordable, reliable, equitable, environmentally sustainable drinking water supply in all urban areas of Rajasthan improved, (ii) health status of urban population, especially the poor and under-privileged improved, and (iii) productivity, livability and prosperity for the citizens in Rajasthan cities and towns enhanced. Reflecting the additional measures to enhance climate resilience and heritage-sensitive urban development of the project, impact statement (iii) was added; the outcome statement is modified as quality, reliability, equity, and sustainability of urban assets and services in project towns of Rajasthan improved; and additional output was also added, resulting in four outputs.

Bharatpur is one of the project towns, and restoration and beautification of the heritage structures/monuments in Bharatpur is proposed under the RSTDSP-AF. Following are the proposed components:

- Conservation & redevelopment of town hall campus and Improvement of façade of this adjoining government school
- Façade minor repair, lighting & illumination of city gates
- Façade lighting & illumination of Laxman temple, Ganga temple & Jama Mosque
- Conservation & redevelopment of Saligram kund & campus
- Conservation & redevelopment of Bijendra Bihari kund & campus
- Redevelopment of Nehru Park

Screening and Categorization. assessment of potential impacts. Bharatpur City Beautification subproject is classified as environmental category B per ADB's Safeguard Policy Statement (SPS), 2009, and accordingly this initial environmental examination (IEE) assesses the environmental impacts and provides mitigation and monitoring measures to ensure that there are no significant impacts as a result of the subproject. As per the Government of India environmental impact assessment (EIA) Notification, 2006, this subproject does not require EIA study or environmental clearance.

Description of the Environment. Bharatpur also known as the 'Eastern Gateway of Rajasthan' was founded in 1733 A.D, is located 180 km from Delhi, and 178 km state capital Jaipur. Geographically it is located very strategic with close proximity to major tourism destinations like Jaipur, Agra, Mathura and Delhi and lies on the major tourist circuit of golden triangle i.e., Delhi-Jaipur-Agra. The city is endowed with a rich history as well as natural and cultural heritage resources. It is renowned Keoladeo National Park and bird sanctuary, a UNESCO World Heritage site, located in its southern outskirts. All subproject sites are located within the town, and nearest component to UNESCO site is 1.7 km. Bharatpur has a number of religious, historical and archaeological places of importance, attract tourists from India and abroad. There are five nationally important monuments protected by Archaeological Survey of India (ASI) and 11 monuments of local / state importance under the protection of GOR. Subproject includes

restoration of town hall and kunds (old water harvesting/storage structures with heritage value) and these are not listed or protected monuments, but are important part of local heritage, and are in neglected stage and improvement will add value to the city. Subproject will provide lighting illumination of city gates (which are state government protected), two temples and a mosque. Subproject will also redevelop a Park, next to the townhall. Town Hall is located within fortification walls. It exhibits a wide variety of architectural styles dating to different time periods. It is a palette of built heritage with a rich and varied vocabulary that has continued over decades. Bijendra Bihari Kund and Saligram Kunds are located within the town, and are in poor condition, needs restoration.

Potential Environmental Impacts and Mitigation measures. In this draft IEE, negative impacts were identified in relation to location, design, construction, and operation of the improved infrastructure. Environmental impacts as being due to the project design or location were not significant as various measures are already included in site planning and preliminary design. All selected works will conserve the historic built fabric and no new type of material or change in design is proposed in the subproject. Heritage impact assessment study conducted as part of IEE reviewed the heritage importance of proposed sites, assessed the impact of the proposed measures, and provided recommendations to ensure that the improvements are appropriate. Measures will be included in the detailed designs. Subproject mainly focuses on heritage structures that are in neglected stage or not properly utilized, such as townhall, kunds and Nehru Park. City gates are on various entry roads to the fortified city, and project involves only lighting and illumination, and heritage impact assessment provided guidelines to avoid negative impacts. Permission from state archaeology and museums department will be obtained. Similarly, illumination and lighting of temples and a mosque proposed, which also have heritage value. No adverse impacts envisaged. As per the regulations, all sites located within 300 m of ASI protected monuments will obtain prior permission from ASI.

Potential impacts during construction are considered significant but temporary and are common impacts of construction in urban areas, and there are well developed methods to mitigate the same. All construction activities will be confined to the selected sites and the interference with the general public and community around is minimal. In these works, the temporary negative impacts arise mainly from construction dust and noise, hauling of construction material, waste and equipment on local roads (traffic, dust, safety etc.), mining of construction material, occupational health and safety (OHS) aspects. Construction works will be conducted along public lakes in an urban area congested with people, activities and traffic. Therefore, these works may have adverse, but temporary impacts arising mainly from the disturbance to residents, businesses and traffic due to construction work; safety risk to workers, public and nearby buildings, disposal of large quantities of construction waste etc.

Environmental Management. An environmental management plan (EMP) including a heritage management plan, has been developed to provide mitigation measures to reduce all negative impacts to acceptable levels, along with the delegation of responsibility to appropriate agency. These will be integrated into project. During construction, the EMP includes mitigation measures such as (i) proper planning and scheduling of works to minimize public inconvenience; (ii) measures to avoid negative impacts on heritage and local architecture of town (iii) barricading, dust suppression and noise control measures; (iv) traffic management measures for works along the roads and for hauling activities; (v) occupational and community health and safety, labour welfare, (vi) reuse of construction and demolition waste to extent possible, (vii) spill and sediment control measures to avoid water and soil pollution, etc.,. EMP will guide the environmentally-sound construction of the subproject. EMP includes a monitoring program to measure the effectiveness of EMP implementation and include observations on- and off-site, document

checks, and interviews with workers and beneficiaries. A copy of the updated EMP/ site environmental management plan (SEMP) shall be kept on-site during the construction period at all times. The EMP will be included in bids and contracts, and implementation shall be binding on contractors.

Implementation Arrangements. The executing and implementing agencies will remain unchanged from the current project, which are Government of Rajasthan's Local Self Government Department (LSGD) and Rajasthan Urban Drinking Water, Sewerage and Infrastructure Corporation (RUDSICO), respectively. The AF project retains the project management unit (PMU) at the implementing agency, as well as the two Zonal Offices in Jaipur and Jodhpur. Project implementation units (PIUs) have been established in project towns. A total of eight PIUs will manage 18 ULBs under the AF Project. Consultants will support the PMU and PIUs. Project Officer (Environment) at PMU and Safeguard and Safety Officer at each of the PIUs will be responsible for environment management and monitoring activities and will be supported by Safeguard support staff from Supervision Consultant, town staff/team and Environment Safeguard Specialist of Supervision Consultants. Contractor personnel will also include an Environment, Health and Safety (EHS) Engineer in the project construction team.

Consultation, Disclosure and Grievance Redress. The stakeholders were involved in developing the IEE. Informal and formal consultation are conducted with local population of the area a total of 219 persons were consulted during the planning phase of which 147 were male and 62 were female. A City Level Committee (CLC) was held and CLC has appreciated and approved the subproject. The IEE will be made available at public locations; this draft IEE will be disclosed to a wider audience via the ADB and RUDSICO websites. Consultation process will continue during project implementation. A grievance redress mechanism (GRM) will be established to redress public grievances.

Monitoring and Reporting. The PMU, PIU and consultants will be responsible for monitoring and reporting. During construction, results from internal monitoring by the contractor will be reflected in their monthly EMP implementation reports to the PIU. PIU with the assistance of CMSC, will monitor the compliance of contractor, prepare a quarterly environmental monitoring report (QEMR) and submit to PMU. The PMU will oversee the implementation and compliance and will submit semi-annual environmental monitoring reports (SEMR) to ADB. SEMRs will be disclosed on ADB and RUDSICO websites.

Conclusions. The proposed project is unlikely to cause significant adverse impacts, and potential impacts are mainly due to construction and can be mitigated or minimized to acceptable levels through measures included in the EMP. The citizens of the Bhaaratpur will be the major beneficiaries of this subproject. The subproject is primarily designed to restore the heritage structures/monuments and their beautification in the which will ultimately improve the heritage and aesthetic value of these places and will enhance experience of citizens and tourists. The benefits arising from this subproject include (i) restoration of heritage structures, (ii) improve city ambiance, (iii) provide recreational avenues in the city and (iv) to restore and beautify the tourist attractions in the city to strengthen its economy from tourism sector. Implementation of project will also help in long term sustainable management of these monuments.

Based on the findings of the IEE, the classification of the project as Category "B" is confirmed. No further special study or detailed environmental impact assessment (EIA) needs to be undertaken to comply with ADB SPS (2009) or GoI EIA Notification (2006). Necessary approvals from the regulatory agencies will be obtained prior to commencement of works.

I. INTRODUCTION

A. Rajasthan Secondary Town Development Section Project – Additional Financing

1. Sector Project (RSTDSP, Loan 3972: IND) from its regular ordinary capital resources on 25 September 2020 and became effective on 4 January 2021. The closing date of the current project is 31 May 2028. This project is on track and has performed well consistently since the first quarter of 2021. Under this project, water supply systems are being improved in eight urban local body (ULB) towns (Output 1), and sanitation systems in 13 ULBs (Output 2). During the implementation, an additional 13 ULBs were added to the project for fecal sludge and septage management system development. Under Output 3, capacity building and training activities on sustainable and resilient water supply and sanitation (WSS) operations, hygiene, gender equality and social inclusion conducted.

2. The additional financing (the project) will expand the improved access to WSS services in at least ten urban local bodies (ULBs), benefiting 1.2 million people. Important value addition of the proposed project to the ongoing project is that it will provide innovative solutions to address climate change to respond to the growing climate risks and vulnerability and also to improve livability and prosperity through enhancing natural and/or built heritage at least ten ULBs in Rajasthan, benefiting 1.0 million people. The overall project is aligned with the following impacts: (i) access to potable, affordable, reliable, equitable, environmentally sustainable drinking water supply in all urban areas of Rajasthan improved, (ii) health status of urban population, especially the poor and under-privileged improved, and (iii) productivity, livability and prosperity for the citizens in Rajasthan cities and towns enhanced. Reflecting the additional measures to enhance climate resilience and heritage-sensitive urban development of the project, impact statement (iii) was added; the outcome statement is modified as quality, reliability, equity, and sustainability of urban assets and services in project towns of Rajasthan improved; and additional output was also added, resulting in four outputs.

(i) **Output 1: Resilient water supply systems developed or improved.** By 2028, the project will (i) At least 1,300 km of water supply pipelines will be commissioned through a district-metered area approach for effective non-revenue water (NRW) management, (ii) at least 79,000 households will be connected to an improved water supply system, including at least 95% below poverty line households, with 100% functional meters allowing for the introduction of volumetric billing, (iii) three new water treatment plants (WTPs) will be commissioned with a total capacity of at least 24 million liters per day (mld).

(ii) **Output 2: Resilient and inclusive sanitation systems developed or improved.** By 2028, (i) at least 500 km of sewers will be constructed; (ii) seven sewage treatment plants (STPs) with co-treatment of wastewater and fecal sludge and with a total capacity of at least 30 mld will be commissioned and one existing STP with 10 mld capacity will be upgraded to meet current effluent standards; and (iii) at least 54,000 new household connections (including at least 95% below poverty line households) to the sewer system will be installed.

(iii) **Output 3: Urban assets to enhance climate resilience and heritage living developed or improved.** By 2028, (i) at least 50 km of drainage networks will be constructed in five ULBs; (ii) at least five either kunds or baories rehabilitated and/or reconstructed in three ULBs that were heritage structures built for drainage, rainwater harvesting, and reuse, but currently are not properly functioning; (iii) five water parks rehabilitated in one ULB to enhance water retention and storage capacity and/or to improve people's well-being, both residents and visitors; and (iv)

at least four heritage structures are refurbished in five ULBs to improve the living environment and attract more tourists.

(iv) **Output 4: Institutional and human capacities strengthened for sustainable service delivery, gender equality, and improved public health**.

3. The executing and implementing agencies will remain unchanged. GOR's Local Self Government Department (LSGD) is executing agency and the Rajasthan Urban Drinking Water, Sewerage and Infrastructure Corporation (RUDSICO) is implementing agency.

4. **Bharatpur City Beautification subproject.** This is one of the subprojects proposed under RSTDSP-AF. It will restore and enhance the heritage structures/ in the town.

B. Purpose of Initial Environmental Examination Report

5. Per ADB's Safeguards Policy Statement, 2009, ADB requires the consideration of environmental issues in all aspects of the Bank's operations. Using rapid environmental assessment (REA) checklist (Appendix 1), subproject is unlikely to cause significant adverse impacts, and classified as category B and per ADB SPS requirements this IEE is conducted.

C. Scope of IEE

6. Bharatpur conservation and development of heritage sites subproject is proposed for implementation under the small works modality. Detailed design of components such as *kunds* and Nehur Park completed. Townhall detailed design is done partially and will be completed after the detailed surveys and investigations. Thus, this IEE is based on partial detailed designs. The IEE is based mainly on field reconnaissance surveys and secondary sources of information. No field monitoring (environmental) survey was conducted; however, the environmental monitoring program developed as part of the environmental management plan (EMP) will require the contractors to establish the baseline environmental conditions prior to commencement of civil works. Stakeholder consultation was an integral part of the IEE.

D. Report Structure

7. This Report contains the following sections:

(i) Executive summary;
(ii) Introduction;
(iii) Description of the project;
(iv) Analysis of alternatives;
(v) Policy, legal and administrative framework;
(vi) Description of the environment;
(vii) Anticipated environmental impacts and mitigation measures;
(viii) Public consultation and information disclosure;
(ix) Grievance redress mechanism;
(x) Environmental management plan; and
(xi) Conclusions and recommendations.

II. DESCRIPTION OF PROJECT

8. Bharatpur also known as the 'Eastern Gateway of Rajasthan' was founded in 1733 A.D., by Maharaja Surajmal in the Braj region. It is situated 180 km away from Delhi, and 178 km from Rajasthan's capital Jaipur. Geographically it is located very strategic with close proximity to major tourism destinations like Jaipur, Agra, Mathura & Delhi and lies on the major tourist circuit of golden triangle i.e., Delhi-Jaipur-Agra. The city is endowed with a rich history as well as natural and cultural heritage resources. It is the house of the renowned Keoladeo National Park, a UNESCO World Heritage site, which is located in the southern outskirts of the town.

A. Proposed Conservation and Development of Heritage Sites under RSTDSP-AF

9. **Conservation & Redevelopment of Town Hall Campus:** Town Hall is located within fortification walls. It exhibits a wide variety of architectural styles dating to different time periods. Therefore, it is a palette of built heritage with a rich and varied vocabulary that has continued over decades. It possesses architectural elements like round arches, stone columns, pilasters, decorative spandrels, pilasters, stone balustrades parapet, triangular pediment, piers, round clerestory window and arcaded balcony. There is a courtyard surrounded by hallways. One of the multi foil arches is designed in a typical haveli temple style where hallway is Jagmohan mandapa of a temple with garbhagriha at the centre, surrounded by a circumambulation path. There is a theatre hall with steps leading down towards the stage.

Figure 1: Town Hall location in Google Map

10. **Existing Condition**: The entire building has been not used for a while; some part was used as a government office, while the other part is seeing dust and has debris. The open space around the building is encroached upon by incongruous construction. The opening panels are broken, and some are replaced with the inappropriate one.

Figure 2: Present Condition of Town Hall and government school (RVPUM) overlooking the road

11. **Scope of work for Conservation & Redevelopment of Town Hall Campus.**

(i) Under the component it has been proposed to conserve and redevelop the existing town hall building and campus with following major activities:
- (a) Adaptive Reuse of the Heritage Building as a Cultural Activity Zone
- (b) Redevelopment of Rang Manch Area as Theatre for visual art performance.
- (c) Conservation & Redevelopment of Main Building as visual art gallery
- (d) Development of Viewpoint/ Watchtower on Terrace
- (e) Site & Outdoor area redevelopment as cafeteria, parking, landscape
- (f) Façade Illumination for night views

(ii) Under the project it has been proposed to conserve the existing heritage building with following Scope of work
- (a) Façade Restoration (Stone Conservation)
- (b) Replacement of damaged & missing stone elements
- (c) Stone Cleaning/ protective coating

(d) Site & building cleaning/ Removal of waste & dump materials
(e) De-vegetation of built form and surroundings
(f) Removal of encroachments & partitions
(g) Repair & restoration of architectural elements like railing, jaali, parapet, cornice, motifs, etc
(h) Repair & restoration of doors & windows
(i) Repair & restoration of masonry walls
(j) Plinth protection of built structure.

(iii) Under the project Site Redevelopment activities are proposed with following Scope of work
(a) Development of walkway/ cobble stone flooring
(b) Development of green spaces
(c) Development of street furniture
(d) Development of activity zone/ craft bazaar/ food outlet
(e) Development of parking for visitors
(f) Site surrounding development as heritage precinct.

(iv) Under the project Building Redevelopment activities are proposed with following Scope of work
(a) Removal & replacement of existing building shade structure
(b) Redevelopment of stage area, green rooms, washrooms & public amenities
(c) Redevelopment of seating zone with flooring & markings
(d) Updating Building services, Acoustics
(e) Façade & internal lighting

(v) Improvement of façade of RVPUMV, government school adjoining to Town Hall
(a) Scrubbing of existing surface, re-plastering and damp proofing and Painting
(b) Fixing of broken architectural elements (e.g. Brackets, Chajjas, etc.)
(c) Ornamental work in plaster to enhance the façade.
(d) Repair & restoration of masonry wall, doors & windows

12. To improve the sanitation and drinking water facility in Raj kiya Vishist Purva Uchha Madhyamic Vidyalaya it is proposed to repair two toilet blocks and provide two water coolers along with RO units under the provisional sum of the contract package.

13. **Proposed Work:** Heritage conservation doesn't only mean to freeze the building in time. In this project before the conservation of this structure; documentation, condition assessment followed with structural restoration of the building will be done. The conservation strategy of the building involves structural restoration, site development and reinventing the historic interiors of the building.

14. The approach is to prevent any further damage to the building and restore it to its former glory.

15. Further intervention will be done in the form of reconfiguring the internal layout best suited to the spaces which ensures regular maintenance of the building:

(i) **Proposed Conservation Work.**
(a) Sandstone cleaning & protective coating

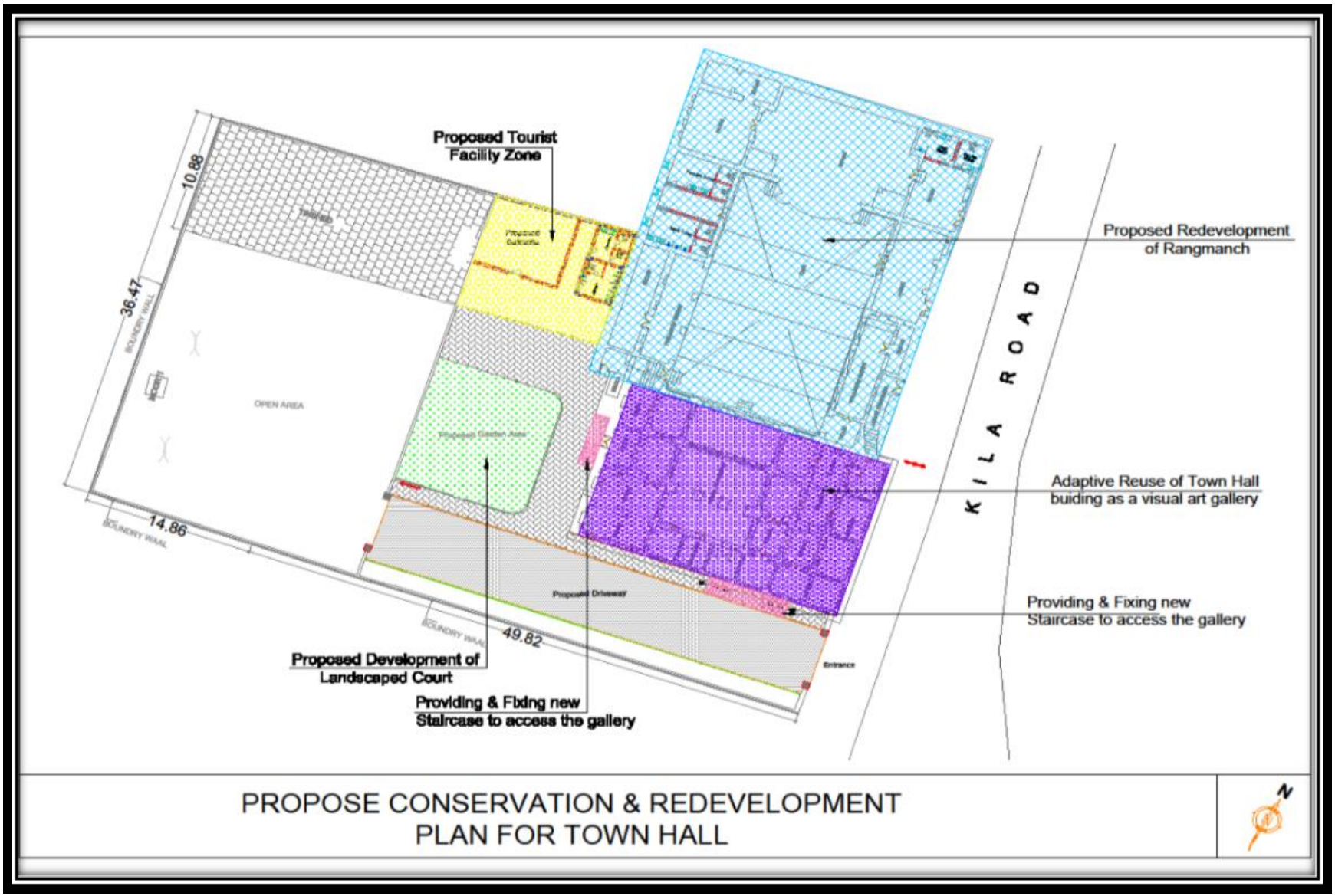
(b) Replacement of damaged stone architectural elements (pillar, bracket, arch, railing, jaali, etc)
(c) Repair & Restoration of Stone Patti
(d) Repair & Restoration of stone chajja
(e) Repair & Restoration of Stone Gardana, moldings, architrave
(f) Repair & Restoration of Stone dasa, stone flooring
(g) Repair & Restoration of Rainwater spouts
(h) Repair & Restoration of Masonry Walls (Stone, Lakori Brick Walls)
(i) Tuman masonry repair works
(j) Restoration of Lime Plaster
(k) Making mehrab, decorative lime plaster
(l) Repair & Restoration of Lime Kada
(m) Repair & Restoration of Lime Aarish work
(n) Restoration of stucco work
(o) Providing and fixing lime Jaali
(p) Lime dhar repair on terrace
(q) Repair and restoration of door & windows
(r) De-vegetation and removal of plants from monument
(s) Plinth Protection
(t) Removal & dismantling of (MS door, window, grill, masonry partition, damage floor, loose plaster, cement plaster, loose wire, conduits, pipes)
(u) Repair & Restoration of Tin Shade Roofing, Truss & MS Frame structure
(v) Restoration of old plumbing lines rainwater drain pipes

(ii) **Propose Development Works (Building Works).**
(a) Construction of Toilet in Rangmanch Hall
(b) Providing and fixing of flooring in Rangmanch hall
(c) Providing and fixing toughen glass partition in openings.
(d) False ceiling in Rangmanch Hall
(e) Acoustic Treatment in Rangmanch Hall
(f) Construction of Staircase for access at upper ground floor
(g) Development of Green Rooms near Stage area
(h) Providing & fixing new plumbing pipes, overhead water tank

(iii) **Propose Development Works (Site Development Works)**
(a) Development of driveway with cobblestone flooring
(b) Installation of Entrance Gateway
(c) Construction of New Toilet Block
(d) Construction of New Cafeteria Site Landscaping & Plantation
(e) Installation of Street furniture in Stone (Bench, Bollard, Signage, Dustbin, Planters, decorative light poles)

(iv) **Propose Electrical Work**
(a) Façade Lighting of Heritage Building
(b) Internal Lighting of the building
(c) Internal Lighting of Rangmanch area
(d) Installation of sound system in Rangmanch Area
(e) Installation of CCTV cameras
(f) Internal wiring, external conducting, switches, MCCB boxes, electrical panel for town hall building.

Figure 3: Layout of proposed plan of Town hall



16. **Façade Lighting minor repairs of City Gates:** Façade lighting is proposed on City gates located outside the Lohagarh fort. These city gates are;

1.Mathura Gate	2.Goverdhan Gate	3.Chandpole Gate	4.Surajpol Gate
5.Neemda Gate	6.Anah Gate	7.B Narain Gate	8.Kumher Gate
9.Ketan Gate	10.Atalbundh Gate		

Figure 4: City Gates selected under this subproject

ATALBANDH GATE

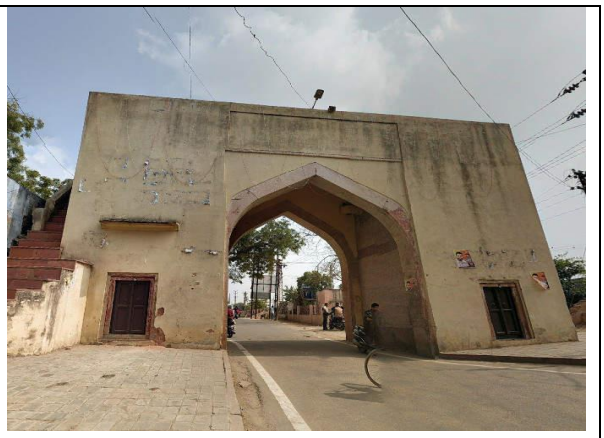
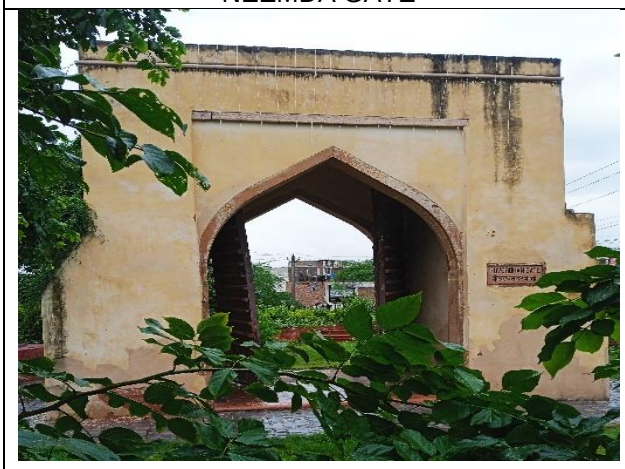
CHANDPOLE GATE

SURAJPOL GATE

KUMHER GATE

MATHURA GATE

KETAN GATE

	
NEEMDA GATE	B NARAIN GATE
	
GOBARDHAN GATE	ANAH GATE

17. **Scope of Work for Façade Lighting & Illumination of City Gates.** Proposed façade lighting of historic gates will be carried out with following theme & scope of works:

(i) The propose lighting will be done only with single color warm white lights
(ii) The propose lighting will be done with theme of Micro & Diffuse façade
(iii) LED light fixtures like Spotlights, Strip lights, linear lights, wall washers, Up-lighter & down lighters will be used for illumination
(iv) Areas to be highlight on façade will be - Door frames, motifs, architraves, Kangooras or gate chajja, Inverted ceilings.
(v) To reduce consumption of power all the proposed lights will be LED.
(vi) Minor repair works as required in city gates include repair of decayed lime plaster, cleaning of wall surfaces, cleaning of vegetation, crack filling, finishing wall surface with lime khemera wash and protective coating.

18. **Proposed Work under illumination of city gates.** The existing façade lights on city gates (Except ASI protected gates) will be replaced with architectural lighting also known as 'element illumination' to enhance their beauty after sunset. While façade lighting simply directs beams towards the front or surfaces of the gates, architectural lighting will cast programmed light on components such as domes, ramparts, minarets, arches and balconies from different directions to highlight their architecture details.

Façade Lighting & Illumination of Laxman Mandir, Ganga Mandir & Jama Masjid

19. **Laxman Mandir:** Lakshmana Temple is located in Bharatpur district, dedicated to Dasaratha's son Lakshmana and his wife Urmila. Rama, Bharat, Shatrughna as well as Hanuman ji are enshrined in the Laxman temple in small idols. All these idols are of Astadhatu. The variety of sculptural work and architecture of the temple is unique. The front portion of the Jagmohan from top to bottom is decorated with relief features, floral patterns and birds. Similarly, the ceiling of the Jagmohan is not less in beauty. This also is a wonderful creation of sculpture.

20. It lies on the proposed heritage route, so it becomes significant to have proper façade lighting that focuses on its architectural features and glorify its existing beauty.

Figure 5: Google location of Laxman Mandir

21. **Existing Conditions:** The temple is made of sandstone of Badami colour from Bansi Phadpur. The temple is located on the high plinth. The front façade is adorned with variety of architectural features. The entrance has Jharokha on both sides adjoined with tibari structure. It has Jharokha windows on both the sides of the entrance. The built structure of entrance has stone chajjas supported by ornamental brackets. The steps inside multifoil arched entrance leads to the temple's Jagmohan Mandapa. Most of the architectural features are adorned with the carvings with patterns of ornaments and flowers**.** Due to later interventions of shops and shutters, the winged portion of the entrance part carrying some architectural features is now hidden facade. Hoardings and advertising boards are defacing the historic façade and hiding architectural features.

Figure 6: Laxman Mandir front facade

22. **Ganga Mata Mandir.** This is a grand temple dedicated to Goddess Ganga, right in front of the historic Lohagarh Fort in Bharatpur. In this the idol of Goddess Ganga is shown sitting on the back of a crocodile. This statue of Ganga Maiya has been carved out of white marble stone. Another amazing sight at the temple is the 4-foot statue of King Bhagiratha. A large number of devotees visit this temple every year on religious festivals like Ganga Saptami and Ganga Dussehra. On this occasion, the temple decoration is also done in a traditional way.

23. Temple was built back in 1845 by the ruler of the city, Maharaja Balwant Singh. The temple is dedicated to Goddess Ganga. The temple has a huge idol of Goddess Ganga with an image of a crocodile. Holy Ganga Water is distributed to all the devotees as Prasad. The temple is known to signify the purity and holiness of Maa Ganga.

Figure 7: Google location of Ganga Maharani Mandir

24. **Existing Conditions:** The temple has two entrance gates, while Lord Krishna stands

holding the mountain of Giri Raj on one side; there are statues of Laxmi Narayan ji and Shiva Parvati on the other gate. The temple is remarkable for its beautiful architecture. Ganga Maharani Temple features a unique mix of South Indian, Mughal and Rajputana form of architecture. The walls and pillars of the temple are decorated with beautiful carvings. On one side of the main entrance, there is a statue of Lord Krishna holding the GiriRaj Mountain, while on the other side, there are Shiva Parvati and Laxmi NarayanJi.

25. The king and queen could have the first sight of Ganga Maharani as a special feature of the temple, and even today, a window in their royal palace opens exactly towards the temple of Shri Gangaji, and the king or queen can have the darshan of Shri Ganga.

Figure 8: Front View of Ganga Mandir

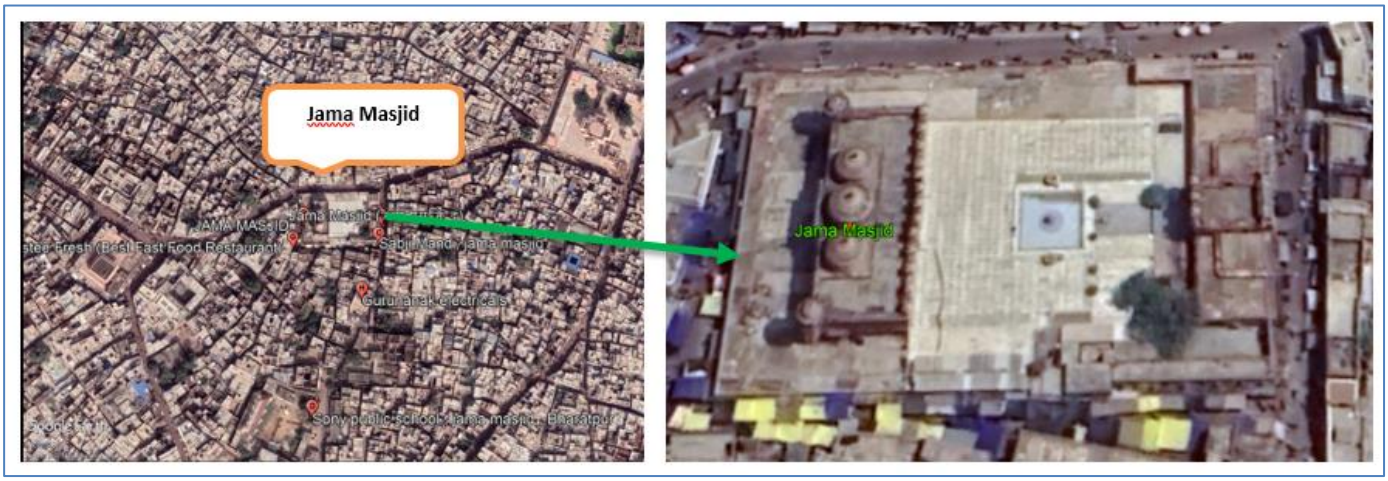
26. **JAMA MASJID:** The Friday Mosque is located south of the fort, across from the city post office. Jama Masjid serves as a prayer ground and religious meetings of Muslims. There is also a madarsa for children, where 100s of children from different background come to learn Quran, Hadis and other Muslim scriptures.

27. Bharatpur was ruled by Jat rulers who had a very bitter relation with Mughals in the past. It was very strange to see a mosque built by them. This is only Muslim jama masjid in India built by Hindu rulers, shows unity in diversity amongst them.

28. Jama masjid shares an interesting story behind its construction. Long-time back there was a drought in Bharatpur, animals were dying, and no crops were growing. Hence, common people and royal family were facing huge crisis of water. Feeling that only god could save them, ultimately the king asked the religious leaders of all community to pray for rainfall. Every spiritual leader from Hinduism and Muslim community started praying as per their traditions. Soon, in few days a heavy rainfall occurred and filled all wells of Bharatpur with plenty water.

29. King became impressed and asked them their wishes. Hindu leaders asked for Ganga Mandir temple, and Muslim leaders asked for Jama masjid. Jat king happily approved and built both monuments near to each other. It lies on the proposed heritage route, so it becomes significant to have proper façade lighting that focuses on its architectural features and glorify its existing beauty.

Figure 9: Google Location of Jama Masjid



30. **Existing Conditions:** The front façade has some shops, while the back façade has incongruous interventions such as hoardings, advertisements boards, and improperly hung electrical and cable wires, which deface the historic façade. The lighting on the façade is inadequate, failing to highlight or focus on the Masjid's beautiful architectural elements.

31. **Scope of Work for Façade Lighting & Illumination of Laxman Mandir, Ganga Mandir & Jama Masjid:** To reduce consumption of power all the proposed lights will be LED.

(i) The propose lighting will be done only with single color warm white lights
(ii) The propose lighting will be done with theme of Micro & Diffuse façade
(iii) LED light fixtures like Spot lights, Strip lights, linear lights, wall washers, Up-lighter & down lighters will be used for illumination
(iv) Areas to be highlight on façade will be stone architectural elements
(v) No large fixtures to be installed
(vi) Wiring of lighting to be hidden

Figure 10: Reference image to demonstrate the lighting of the architectural features like minarets, fenestrations

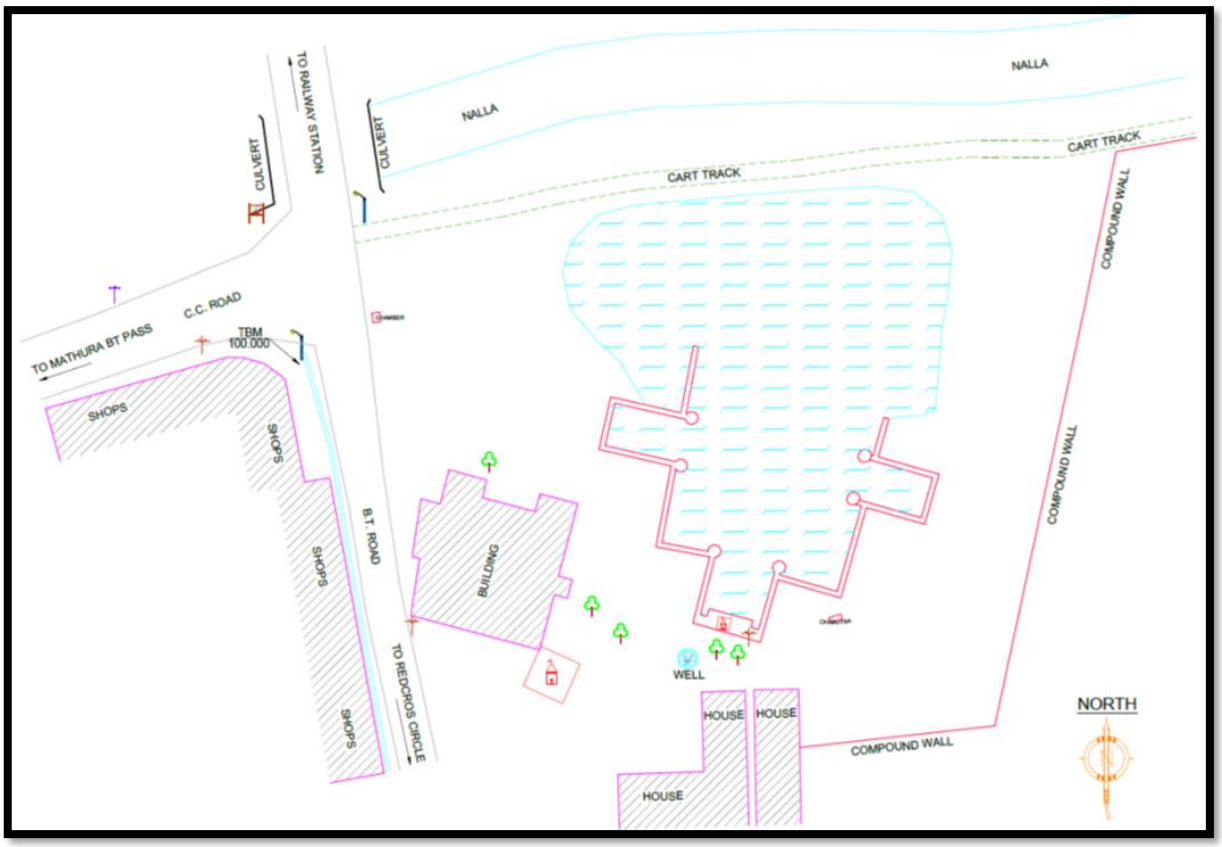
32. **Saligram kund.** This Kund is on the grounds of Saligram Temple. The Maharaj of Bharatpur built the temple 200-250 years ago to commemorate the birth of his son. Lord Hanuman Ji's idol can be found in the temple. This idol was discovered during excavation work for the Kund, making it more sacred and religious to the locals.

33. The temple's first head priest was Mahant Shri Saligram Maharaj Ji, whose name the Kund and temple were named after. There is an old saying about the place that when there was a lack of Ghee (Fat) while making devotional offerings, the water of this Kund was used as Ghee (Fat) in preparation of the same, making this Kund more of a place of belief.

34. The Kunds are an important part of the natural and cultural heritage of Bharatpur. They are not only heritage assets but also represent the ancient knowledge of storm water management. During heavy rains, the Kunds used to act as points of drainage for surrounding areas. In the past, each Kund had a catchment area in its immediate surroundings and were interconnected by underground channels. Because it is located on the station road, this Kund was chosen for beautification. The Saligram Kund also has a well-known Hanuman temple. People who come to worship can sit in silence at the Kund.

35. **Area:** The total area of Kund is 9355sq.m. Pond area – 1824sq. m. The coordinates are 27°13'58.92"N, 77°29'30.85"E.

Figure 11: Survey Map of the Kund



36. **Existing Conditions**: Kund's structure has deteriorated, causing water to flow out of the structure. The Kund is in poor condition; previously, locals from the surrounding area stole soil from the land besides the wall footing of the Kund's structure, causing the entire structure to deteriorate. The water's condition has deteriorated, and green algae has formed on the surface. Kund's surroundings have been transformed into a slum area as a result of garbage collection and temporary parking for heavy vehicles.

37. The people have encroached on Kund's surroundings and built incongruous structures. Piers or the retaining walls of Kund has lost its masonry over the time due to lack of maintenance. The vegetation has outgrown at some parts of the Kund, making some areas inaccessible. The deteriorating condition of Kund has led people visiting the nearby temple to dump garbage here, making it more unhygienic.

Figure 12: Present view of Kund

1. Deteriorated Structure of Saligram Kund

Scope of Work:

38. Under the component it has be proposed to conserve the historical kund structure and redevelopment of surrounding area around the kund with following Scope of Work

Conservation - Scope of Work

- Conservation of kund structure
- Masonry walls conservation & restoration
- Lime plaster & kada
- Restoration & replacement of damage/ missing stone elements
- Restoration of Ghats/ flooring
- Plinth Edge protection
- Reconstruction of damage/ missing wall
- Dirty water raising
- De-vegetation of existing structure
- Façade Restoration of surrounding heritage structures
- Façade lighting

Redevelopment- Scope of Work

- Construction of boundary wall/ site demarcation
- Surrounding development of Kund- Flooring/ plantation/ Street furniture/ Lighting/ Signage
- Development of visitor facility area like Toilets
- Development of Kiosk
- Development of Parking

39. **Proposed Conservation Works.**

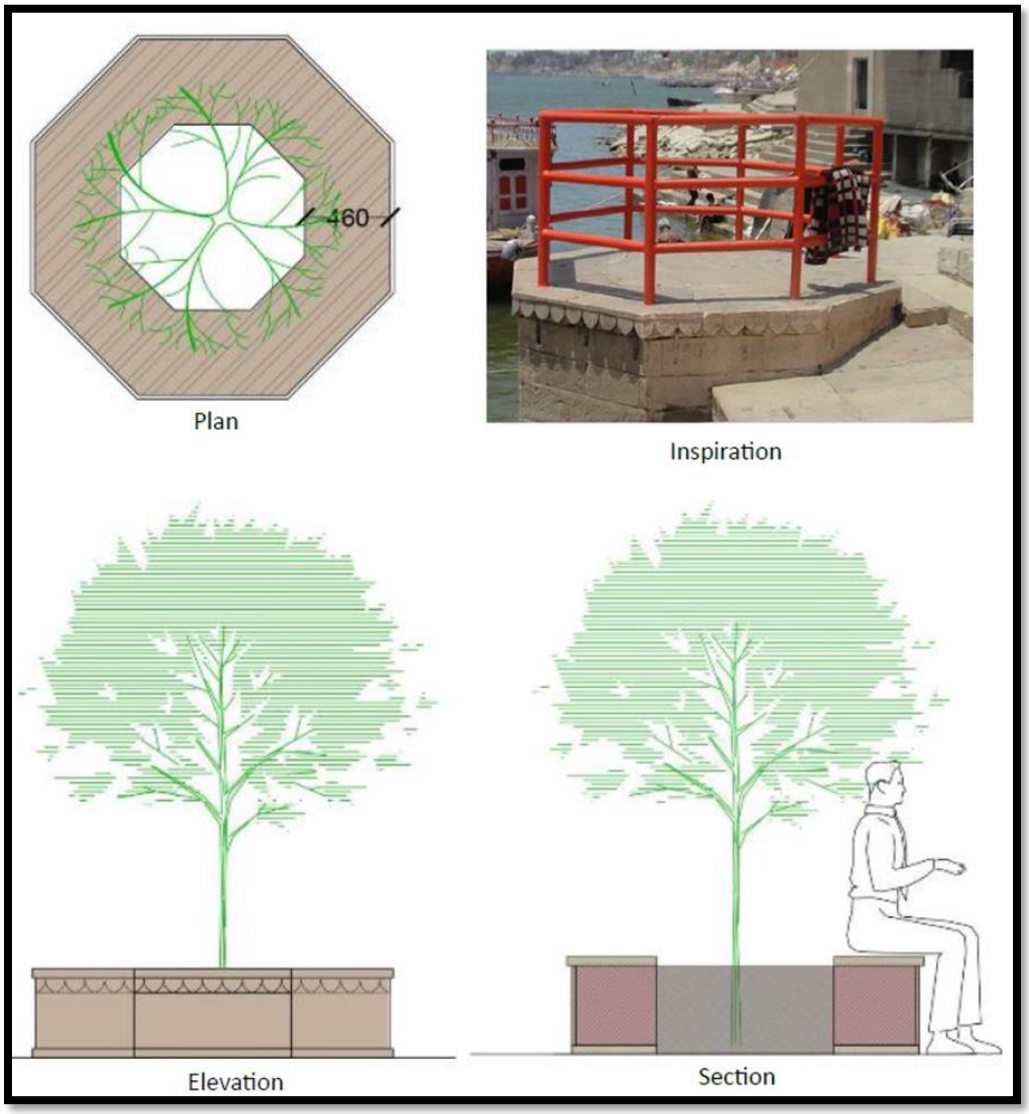
- Restoration of Stone Chattri (Cleaning, repair of missing or damage, elements)
- Sand stone cleaning & protective coating

- Replacement of damage stone architectural elements (pillar, bracket, arch, railing, jhalli etc)
- Repair & Restoration of Stone Patti
- Repair & Restoration of stone Chajja
- Repair & Restoration of Stone Gardana, mouldings, architrave
- Repair & Restoration of Stone dasa, stone flooring
- Repair & Restoration of Masonry Walls of Kund & nearby heritage building (Stone, Lakori Brick Walls)
- Tuman masonry repair works
- Repair & Restoration of existing Kund steps in Lakori bricks with stone cladding
- Restoration of Lime Plaster of Kund and nearby heritage building facade
- Making Mehrab, decorative lime plaster
- Repair & Restoration of Lime Kada
- Restoration of stucco work
- Repair and restoration of door & windows
- De-vegetation and removal of plants from monument
- Plinth Protection
- Removal & dismantling of (MS door, window, grill, masonry partition, damage floor, loose plaster, cement plaster, loose wire, conduits, pipes)
- Restoration of old plumbing lines rainwater drain pipes

40. **Proposed development Works (Site development Works)**

- Construction of Entrance Gate & development of surface Parking (cobble stone pavement)
- Construction of 2meter high Boundary wall in stone masonry
- Construction of new Kiosk (3 number size – 4X3 sqm) & Toilet Block (1 number size – 4X5 sqm)
- Consolidation around water body (dry stone pitching)
- Development of driveway with cobble stone flooring
- Development of Walkways around Kund with 75 mm stone flooring
- Construction of Steps at site for level difference
- Construction of Toe Wall with stone dasa and stone railing around the Kund
- Stone Kurbstone along the Walkway
- Development of Green Space and Plantation
- Installation of Street furniture in Stone (Bench, Bollard, Signage, Dustbin, Planters, decorative light poles)
- Façade Lighting of heritage façade
- Water dressing and cleaning

Figure 13: Reference for seating created around trees

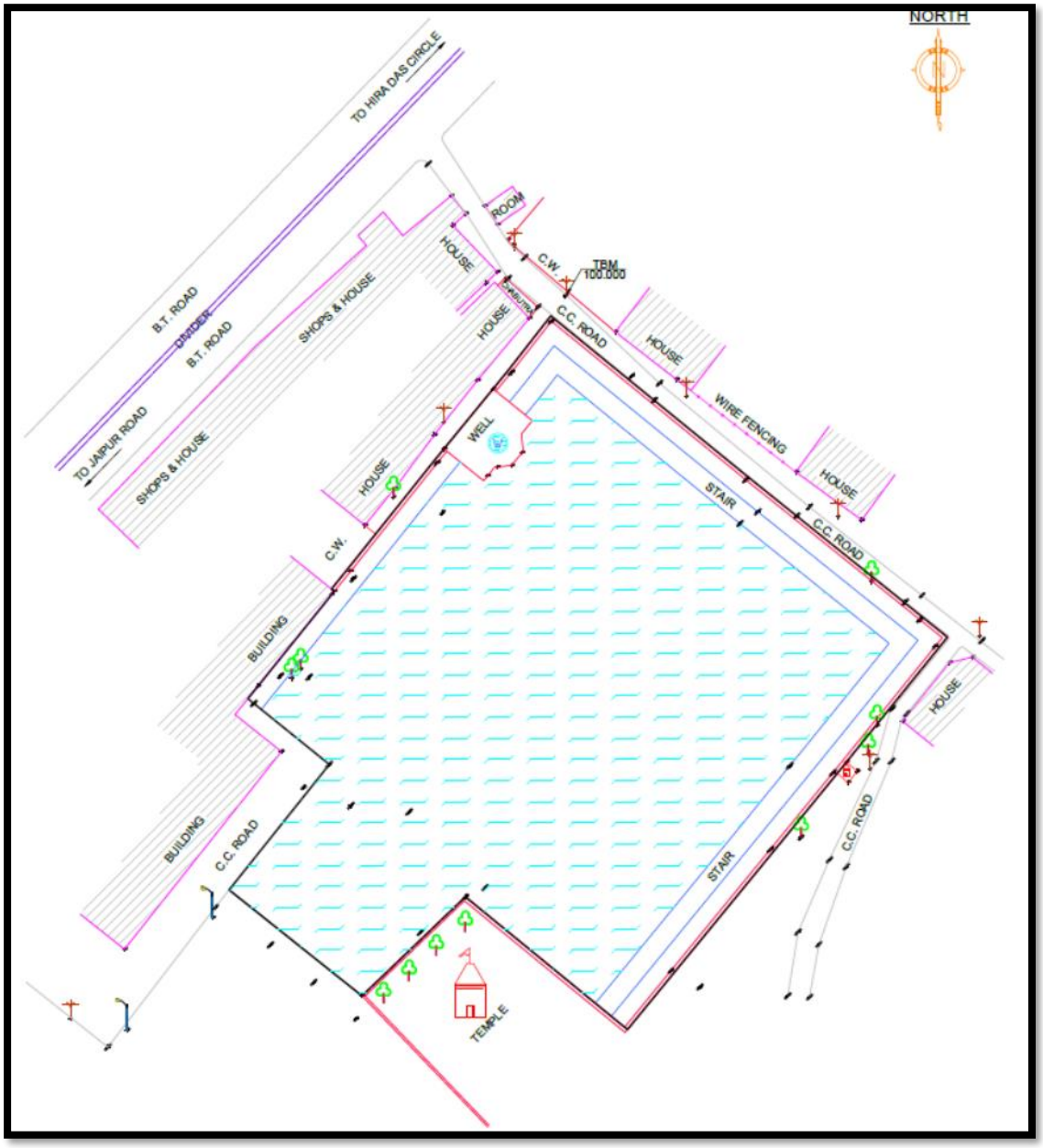


41. **Brijendra Bihari kund.** Brijendra Bihari temple was founded in 1918 by Maharaja Kishan Ji to commemorate the birth of his son "Maharaj Brijendra Singh Ji." Maharaja Brijendra Singh Ji later donated this temple to Mahant Shri Vallabh Acharya Ji. Brijendra Bihari Kund was built in 1918 to meet the Temple's water needs, and it included 6 ghats and 1 well. Later, this Kund was used to provide drinking water for the elephants in the Sewar fort.

42. **AREA**: The total area of Kund is 8444 sq.m. The coordinates are 27°11'18.05"N, 77°26'44.34"E.

43. To prevent sewerage entering to Kunds it is proposed to cover catchment area Saligram Kund with sewer networks under ongoing Bharatpur sewerage project of RUIDP phase -IV and catchment of Brijbihari Kund's to be covered under the FSSM scheme of RUIDP Phase -IV.

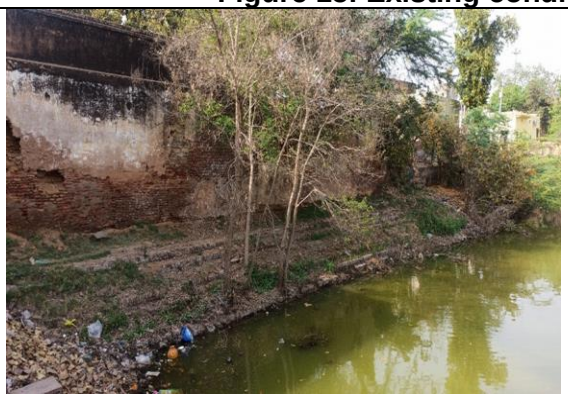
Figure 14: Existing Survey Plan of Brijendra Bihari Kund



44. **Existing Condition**: The following points have been analysed and projected for this site.

(i) **Toilets:** There are no toilet facilities in the campus of the Kund.
(ii) **Parking:** Parking is haphazard and done on the roads as of now, in front of shops and houses and the remaining heritage structure reducing the road width and causing congestion
(iii) **Signage**: Both information and direction signage are lacking in the area. It does not have any demarcation or information panels which will need to be installed. The interventions of shops/warehouse/workshops inside the heritage structure has de-characterised the space.
(iv) **Benches/Seating:** No sitting area in the entire zone where tourists/locals can breakout.
(v) **Water body condition**: Kund is currently in critical condition. The boundary and steps have been broken and must be rebuilt. The Kund is surrounded by residential neighbourhoods. Algae formation with a foul odour occurs as a result of out falss from nearby houses and long-term water logging inside the Kund. The Kund is located 750 m from Sewar Pokhar Kund at the entrance to the city of Bharatpur.

Figure 15: Existing condition of Brijendra Bihari kund.

<table>
<tr><td>  </td><td>  </td></tr>
<tr><td>Damaged boundary wall</td><td>Garbage dumped at bank of Kund</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Broken steps leading towards the Kund</td><td>Later Interventions in the built structure situated around the kund</td></tr>
</table>

45. **Scope of Work:** Under the component it has be proposed to conserve the historical kund structure and redevelopment of surrounding area around the kund with following Scope of Work.

Conservation Scope of Work

- Restoration of historic ghat structure
- Façade Restoration of surrounding heritage structures
- Restoration of water channel
- Retaining wall construction around catchment area
- Restoration of architectural elements on façade
- Façade lighting

Redevelopment Scope of Work

- Redevelopment of compound area/ compound wall
- Flooring & pavement around kund
- Installation of street furniture- stone benches, signage's, light poles, bollards, dustbins, railings
- Landscape development in surroundings
- Kiosk & public amenities development

46. **Works Proposed.** The proposals provided here are to prevent any further damage to the building and restore it to its former glory in a way that it maintains its authenticity.

Proposed Conservation Works

- Restoration of Stone Chattri (Cleaning, repair of missing or damage, elements)
- Sand stone cleaning & protective coating
- Replacement of damage stone architectural elements (pillar, bracket, arch, railing, jhalli etc)
- Repair & Restoration of Stone Patti
- Repair & Restoration of stone chajja
- Repair & Restoration of Stone Gardana, mouldings, architrave
- Repair & Restoration of Stone dasa, stone flooring
- Repair & Restoration of Masonry Walls of Kund & nearby heritage building (Stone, Lakori Brick Walls)
- Repair and Restoration of entrance masonry arch openings
- Tuman masonry repair works
- Repair & Restoration of existing kund steps in Lakori bricks with stone cladding
- Restoration of Lime Plaster of kund and nearby heritage building facade
- Making mehrab, decorative lime plaster
- Repair & Restoration of Lime Kada
- Restoration of stucco work
- Repair and restoration of door & windows
- De-vegetation and removal of plants from monument
- Plinth Protection
- Removal & dismantling of (MS door, window, grill, masonry partition, damage floor, loose plaster, cement plaster, loose wire, conduits, pipes)
- Restoration of old plumbing lines rain water drain pipes

Propose development Works (Site development Works)

- Construction of Entrance Gate & development of surface Parking (cobble stone pavement)
- Construction of 2meter high Boundary wall in stone masonry
- Construction of new Kiosk (3 number size – 4X3 sqm) & Toilet Block (1 number size – 4X5 sqm)
- Consolidation around water body and catchment channel (dry stone pitching)
- Development of driveway with cobble stone flooring
- Development of Walkways around Kund with 75 mm stone flooring
- Construction of Toe Wall with stone dasa and stone railing around the Kund
- Stone Kurbstone along the Walkway
- Development of Green Space and Plantation
- Installation of Street furniture in Stone (Bench, Bollard, Signage, Dustbin, Planters, decorative light poles)
- Façade Lighting of heritage façade
- Water dressing and cleaning

47. **Nehru Park.** It is a developed park near the town hall located in the fort. It has a statue of Nehru ji at the centre of the park at the entrance.

48. **AREA**: The total area of Park is 7173 sq.m. The coordinates are 27°13'17.28"N, 77°29'45.53"E.

Figure 16: Location of Nehru Park on Google Earth

49. **Existing Condition:** This park is already up and running, but there are a lot of improvements that need to be made and a lot of items that need to be renovated.

- **PATHWAY**: Existing pathway is inadequate.
- **SITTING ARRANGMENT**: Benches were there in the garden and no other sitting arrangement is observed.
- **CHILDREN PLAY AREA**: There are no children slides.

- **BOUNDARY:** In Some area boundary wall of the park is completely destroyed and in a condition of rework.

Figure 17. Existing Condition of Nehru Park

	
Pathway in Nehru Park	**Clock in Nehru Park**

50. **Work Proposed:**

- **Pathway**: Redevelopment of pathway in local sandstone.
- **Clock:** Restoration of stone clock in the park.
- **Seating Arrangement**: Few more benches have been proposed in the garden.
- **Children play area**: Facilities of children Play Area, Four-Seater MGR, Wave Slider, Multi Seater See-Saw, four seated Arch Swing are proposed.
- **Fountain:** Umbrella shaped 4 fountains, Wall fountain is proposed on the sloping wall besides the steps.
- **Selfie Point:** Selfie point is proposed inside the park made up of Red sandstone.
- **Boundary:** Restoration of boundary wall.
- **Gazebo**: One circular gazebo of size 6.4 m Dia.

51. **Development of Design Component**: -The project focuses on ways of promoting the conservation of the city's heritage assets as a driver of its growth and development. The components and activities looked at the area in a holistic manner, linking infrastructure and services provision with heritage conservation. Heritage sites or monument areas are expected to become more organized and hazard free, with proper alignment of parking, waste bins, standard signage and the rehabilitation of main heritage properties.

52. Altogether these are expected to increase the overall appreciation and quality of the area under intervention, thus inspiring the rehabilitation of the city as a whole in a way that celebrates and respects its glorious past.

53. **Public Realm and Infrastructure improvements**:

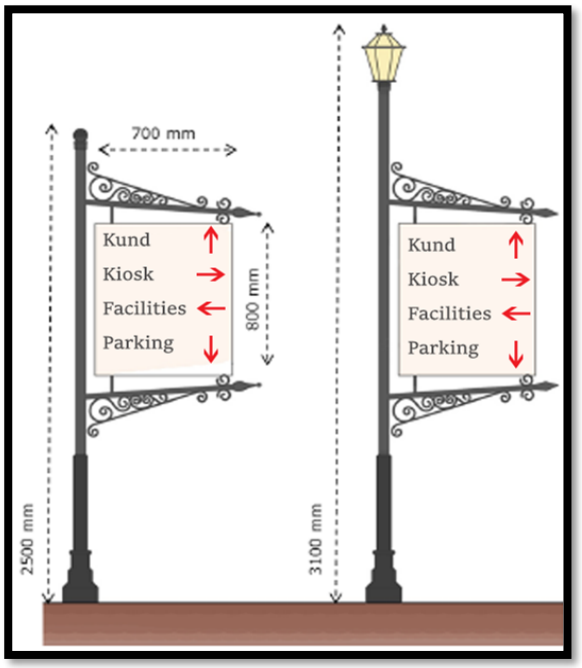
(i) Pavements and pedestrian footpaths
(ii) Street furniture- signages, bollards, dustbins
(iii) Uniform kiosks and tourist/visitors facilities like drinking water and toilets
(iv) Seating arrangements – benches
(v) Improving water quality

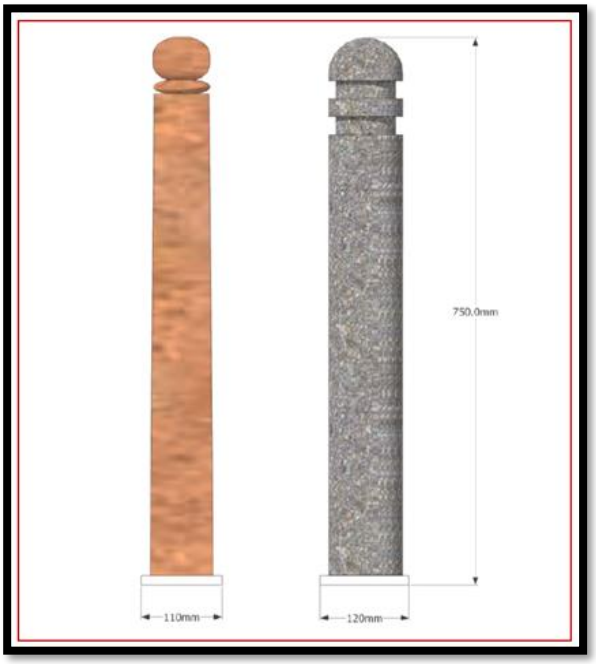
54. **Pavements and pedestrian walkways**: To blend in with the existing heritage site, the stone used for walkway pavement will be Cobalt flooring pattern with local sandstone.

Figure 18: Reference images of proposed pavement material

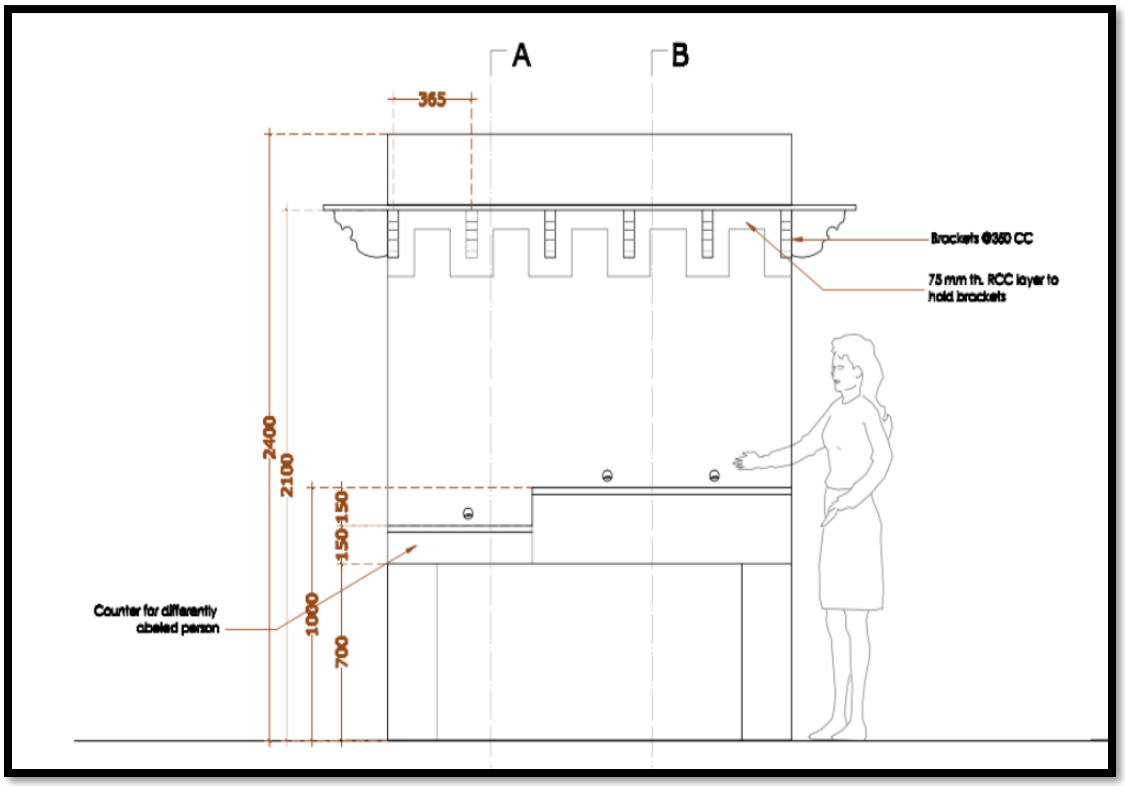
55. **Street Furniture.** An Integrated Signage System for Bharatpur Heritage sites are proposed while facilitating the mobility and access of visitors within site. The design are to be made keeping in mind the pedestrian scale and the local architectural vocabulary and construction material.

Figure 19: Reference images of Signage & Bollard Design





Public amenities



B. Proposed Scope of Work under Beautification redevelopment at Bharatpur

Table 1: Proposed Scope of Work under Beautification redevelopment at Bharatpur

S. No.	Component	Description	Location & Ownership
1	Development & Beautification of Saligram kund	• New boundary wall is proposed in brick masonry • Development of parking proposed. • Steps and pathways are provided for visitors to walk. • Development of driveway with cobble stone flooring • Development of Walkways around Kund with 75 mm stone flooring • Construction of Steps at site for level difference • Construction of Toe Wall with stone dasa and stone railing around the Kund • Stone Kurbstone along the Walkway • Development of Green Space and Plantation • The total area of Kund is 9355sq.m. Pond area – 1824sq. m.	• Location: Near Station Road. • Ownership: Nagar Nigam • Bharatpur. • The coordinates are 27°13'58.92"N, 77°29'30.85"E
2	Development & Beautification of Brijendra Bihari kund.	• Construction of 2meter high Boundary wall in stone masonry • Construction of new Kiosk (3 number size – 4X3 sqm) & Toilet Block (1 number size – 4X5 sqm) • Consolidation around water body and catchment channel (dry stone pitching) • Development of driveway with cobble stone flooring • Development of Walkways around Kund with 75 mm stone flooring • Construction of Toe Wall with stone dasa and stone railing around the Kund • Stone Kurbstone along the Walkway • Development of Green Space and Plantation	Location: Brijendra Bihari. Ownership: Nagar Nigam Bharatpur The coordinates are 27°11'18.05"N, 77°26'44.34"E.

S. No.	Component	Description	Location & Ownership
		• Installation of Street furniture in Stone (Bench, Bollard, Signage, Dustbin, Planters, decorative light poles) • Façade Lighting of heritage façade • The total area of Kund is 8444 sq.m.	
3	Development & Beautification of Nehru park	• Provide all the amenities like Toilets (connected to sewers for discharge), sitting area, Kids play area, Gym and Fountains. • Wall fountain is proposed on the sloping wall besides the steps. • A Gazebo is provided with sitting. renovation of boundary wall in some area • The total area of Park is 7173 sq.m.	Location: - Nehru park is located at Lohagarh Fort. Ownership: Nagar Nigam Bharatpur. The coordinates are 27°13'17.28"N, 77°29'45.53"E
4	Façade Lighting of City Gates	• The propose lighting will be done only with single color warm white lights • The propose lighting will be done with theme of Micro & Diffuse façade • LED light fixtures like Spotlights, Strip lights, linear lights, wall washers, Up-lighter & down lighters will be used for illumination • Areas to be highlight on façade will be - Door frames, motifs, architraves, Kangooras or gate chajja, Inverted ceilings. • Minor repair works as required in city gates include repair of decayed lime plaster, cleaning of wall surfaces, cleaning of vegetation, crack filling, finishing wall surface with lime khemera wash and protective coating.	**Facade Lighting of City Gates.** Location: Different Locations in Bharatpur town. 1.Mathura Gate 2.Goverdhan Gate 3.Chandpole Gate 4.Surajpol Gate 5.Neemda Gate 6.Anah Gate 7.B Narain Gate 8.Kumher Gate 9.Ketan Gate 10.Atalbundh Gate Ownership: Government of Rajasthan.
5	Conservation & Redevelopment of Town Hall Campus	• Development of driveway with cobblestone flooring	Location: Within Lohargarh fort fortification walls

S. No.	Component	Description	Location & Ownership
		• Installation of Entrance Gateway • Construction of New Toilet Block • Construction of New Cafeteria Site Landscaping & Plantation • Installation of Street furniture in Stone (Bench, Bollard, Signage, Dustbin, Planters, decorative light poles) • Improvement of Façade at RVPUMV, government school adjoining to Town Hall	Ownership: Nagar Nigam Bharatpur
6	Façade Lighting & Illumination of Laxman Mandir, Ganga Mandir & Jama Masjid	• The propose lighting will be done only with single colour warm white lights • The propose lighting will be done with theme of Micro & Diffuse façade • LED light fixtures like Spot lights, Strip lights, linear lights, wall washers, Up-lighter & down lighters will be used for illumination • Areas to be highlight on façade will be stone architectural elements • No large fixtures to be installed • Wiring of lighting to be hidden	**1**.Façade Lighting & Illumination of Laxman Mandir & Ganga Mandir. Location: Near Main Bazar. Ownership: Temple Trust 2. Façade Lighting & Illumination of Jama Majid Near kumher gate. Ownership: Jama Mosque Committee

56. All selected works should conserve the historic built fabric and structural strengthening. Retrofitting of selected monuments may be undertaken. No new material or change in design is proposed in the subproject.

Table 2: Coordinates of Sub Project Locations

COMPONENTS	Latitude	Longitude
Laxman Mandir	27°12’53 ”N	77°29’24” E
Brijendra Bihari Kund	27°11’18 ”N	77°26’44” E
Saligram Kund	27°13’58 ”N	77°29’31” E
Nehru Park	27°13’17 ”N	77°29’46” E
Atalbandh Gate	27° 12.60'N	77° 29.50'E
Ketan Gate	27° 13.42'N	77° 29.76'E
Chandpole Gate	27° 13.37'N	77° 29.28'E
Kumher Gate	27° 13.10”N	77° 29.01'E
Delhi Gate	27° 13.49'N	77° 29.58'E
Mathura Gate	27° 13.02'N	77° 30.04'E

COMPONENTS	Latitude	Longitude
Neemda Gate	27°12'36.96"N	77°29'14.95"E
Anah Gate	27°12'49.00"N	77°28'58.36"E
B Narayan Gate	27°12'42.82"N	77°29'47.21"E
Surajpol gate	27°13'19.82"N	77°30'11.90"E

C. Subproject Benefits

57. The subproject is primarily designed to restore the heritage structures/monuments and their beautification in the which will ultimately improve the aesthetic value of these monuments and will provide recreational facilities to its citizens and tourists. The benefits arising from this subproject include: Restoration of heritage structures, improve city ambiance, provide recreational avenues in the city and to restore and beautify the tourist attractions in the city to strengthen its economy from tourism sector.

D. Implementation Schedule

58. Design and estimates are prepared for the subproject and bids are invited in December, 2022 for the subproject to be implemented under the small works modality. After evaluation of Bids work may be awarded to successful bidder up to March / April 2023. Project duration of construction is 18 months. After completion of construction, it will be handed over to Municipal Council, Bharatpur for maintenance.

III. ANALYSIS OF ALTERNATIVES

59. **No Project Alternative**: The 'No project scenario' is analyzed with respect to the Conservation & Development of Heritage Sites Bharatpur City as a requirement of reliable quality infrastructure for sustained growth of economy and consequent well-being of its citizens. Providing a better infrastructure will enhance the aesthetics and increase the number of visitors to the place. In the absence of the proposed subproject, conservation & development of heritage sites subprojects Bharatpur Municipal Corporation will also find it difficult to generate revenue. Therefore, 'project with alternatives' scenario, with its little or no adverse impacts is more acceptable than 'No project scenario' which would mean an aggravation of the existing problems. Potential benefits of the proposed project are substantial and far reaching both in terms of the geographical spread and time.

60. **With Project Alternative**: Alternatives in terms of location (alignment) option is not available as the project is about improving the existing ponds, park and Heritage sites. With the project, the existing area will be improved to more interactive place for citizens and will improve the tourism potential of Bharatpur city. Therefore, this is a timely required project to facilitate the socioeconomic development of the Bharatpur city and ultimately for the development of the country.

61. The ADB SPS (2009) requires an analysis of project alternatives in terms of location, design, technology and components to document the rationale for selecting the particular alternative proposed. Analysis of alternatives provides an opportunity to integrate environmental considerations so that adverse environmental impacts can be avoided or minimized.

IV. POLICY, LEGAL AND ADMINISTATIVE FRAMEWORK

A. ADB Safeguard Policy

62. ADB SPS Requires that during the design, construction, and operation of the project necessary compliance to all applicable laws and international conventions / treaties along with pollution prevention and control technologies and practices consistent with international good practice, are ensured.

63. ADB uses a classification system to reflect the significance of a project's potential environmental impacts. A project's category is determined by the category of its most environmentally sensitive component, including direct, indirect, cumulative, and induced impacts in the project's area of influence. Each proposed project is scrutinized as to its type, location, scale, and sensitivity and the magnitude of its potential environmental impacts. Projects are assigned to one of the following four categories:

(i) Category A. A proposed project is classified as category A if it is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works. An Environmental Impact Assessment (EIA) is required.
(ii) Category B. A proposed project is classified as category B if its potential adverse environmental impacts are less adverse than those of category A projects. These impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for category A projects. An initial environmental examination (IEE) is required.
(iii) Category C. A proposed project is classified as category C if it is likely to have minimal or no adverse environmental impacts. No environmental assessment is required although environmental implications need to be reviewed.
(iv) Category FI. A proposed project is classified as category FI if it involves investment of ADB funds to or through a FI.

64. The environmental impacts of conservation & development of heritage sites at Bharatpur subproject have been identified and assessed as part of the planning and design process. An environmental assessment using ADB's REA checklist for City Development (see **Appendix 1**) was conducted, and results of the assessment show that the subproject is unlikely to cause significant adverse impacts. Thus, this IEE has been prepared in accordance with ADB SPS's requirements for environment category B projects.

65. **Environmental Management Plan.** An EMP which addresses the potential impacts and risks identified by the environmental assessment shall be prepared. The level of detail and complexity of the EMP and the priority of the identified measures and actions will be commensurate with the Project's impact and risks.

66. **Environmental Audit of Existing Facilities.** ADB SPS, 2009 requires an environmental audit, if a subproject involves facilities and/or business activities that already exist or are under construction, including an on-site assessment to identify past or present concerns related to impacts on the environment. The objective of this compliance audit is to determine whether actions were in accordance with ADB's safeguard principles and requirements for borrowers/clients, and to identify and plan appropriate measures to address outstanding compliance issues.

67. **Public Disclosure.** The IEE will be put in an accessible place (e.g., local government offices, libraries, community centres, etc.), and a summary translated into local language for the project affected people and other stakeholders. The following safeguard documents will be put up in ADB's website so that the affected people, other stakeholders, and the public can provide meaningful inputs into the project design and implementation:

(i) For environmental category A projects, a draft EIA report at least 120 days before Board consideration;
(ii) Final or updated EIA and/or IEE upon receipt; and
(iii) Environmental monitoring reports submitted by the PMU during project implementation upon receipt.

68. **Consultation and Participation.** ADB SPS, 2009 requires borrower to conduct meaningful consultation[1] with affected people and other concerned stakeholders, including civil society, and facilitate their informed participation. The consultation process and its results are to be documented and reflected in the environmental assessment report.

69. **Grievance Redress Mechanism.** ADB SPS, 2009 require borrowers to establish a mechanism to receive and facilitate resolution of affected people's concerns, complaints, and grievances about the subproject's performance. The grievance mechanism shall be scaled to the risks and adverse impacts of the subproject.

70. **Monitoring and Reporting.** Borrower shall monitor, measure and document the implementation progress of the EMP. If necessary, the borrower shall identify the necessary corrective actions, and reflect them in a corrective action plan. Borrower shall prepare and submit to ADB semi-annual environmental monitoring reports that describe progress with implementation of the EMP and compliance issues and corrective actions, if any. For subprojects likely to have significant adverse environmental impacts during operation, reporting will continue at the minimum on an annual basis until ADB issues a project completion report.

71. **Unanticipated Environmental Impacts.** Where unanticipated environmental impacts become apparent during subproject implementation, ADB SPS, 2009 requires the borrower to update the environmental assessment and EMP or prepare a new environmental assessment and EMP to assess the potential impacts, evaluate the alternatives, and outline mitigation measures and resources to address those impacts.

72. **Occupational Health and Safety.** ADB SPS, 2009 requires the borrower[2] to ensure that workers[3] are provided with a safe and healthy working environment, taking into account risks inherent to the sector and specific classes of hazards in the subproject work areas, including physical, chemical, biological, and radiological hazards. Borrower shall take steps to prevent accidents, injury, and disease arising from, associated with, or occurring during the course of

[1] Per ADB SPS, 2009, meaningful consultation means a process that (i) begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle 1; (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people; (iii) is undertaken in an atmosphere free of intimidation or coercion; (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of affected people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues.

[2] In case where responsibility is delegated to subproject contractors during construction phase, borrower shall ensure that the responsibilities on occupational health and safety are included in the contract documents.

[3] Including nonemployee workers engaged by the borrower/client through contractors or other intermediaries to work on project sites or perform work directly related to the project's core functions.

work, including: (i) identifying and minimizing, so far as reasonably practicable, the causes of potential hazards to workers; (ii) providing preventive and protective measures, including modification, substitution, or elimination of hazardous conditions or substances; (iii) providing appropriate equipment to minimize risks and requiring and enforcing its use; (iv) training workers and providing them with appropriate incentives to use and comply with health and safety procedures and protective equipment; (v) documenting and reporting occupational accidents, diseases, and incidents; and (vi) having emergency prevention, preparedness, and response arrangements in place.

73. **Community Health and Safety.** ADB SPS, 2009 requires the borrower to identify and assess risks to, and potential impacts on, the safety of affected communities during the design, construction, operation, and decommissioning of the subproject, and shall establish preventive measures and plans to address them in a manner commensurate with the identified risks and impacts.

74. **Physical Cultural Resources.** Borrower is responsible for siting and designing the subproject to avoid significant damage to physical cultural resources. ADB SPS, 2009 requires that such resources likely to be affected by the subproject are identified, and qualified and experienced experts assess the subproject's potential impacts on these resources using field-based surveys as an integral part of the environmental assessment process. When the proposed location of a subproject component is in areas where physical cultural resources are expected to be found as determined during the environmental assessment process, chance finds procedures shall be included in the EMP.

75. **ADB SPS International Best Practice Requirements**. ADB SPS, 2009 requires that, during the design, construction, and operation of the project, the executing agency shall apply pollution prevention and control technologies and practices that are consistent with international good practice, as reflected in internationally recognized standards such as the World Bank Group's Environment, Health and Safety (EHS) Guidelines. (IFC's General EHS Guidelines[4] and Sector Specific [Water and Sanitation] Guidelines[5]). These standards contain performance levels and measures that are normally acceptable and applicable to projects. These standards contain performance levels and measures that are normally acceptable and applicable to projects. When Government of India regulations differ from these levels and measures, the PMU and PIUs will achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific project circumstances, the PMU and PIUs will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented in ADB SPS, 2009.

B. National Laws

76. The implementation of the subprojects will be governed by Government of India and State of Rajasthan and other applicable environmental acts, rules, regulations, and standards. These regulations impose restrictions on the activities to minimize or mitigate likely impacts on the environment. It is the responsibility of the project executing and implementing agencies to ensure subprojects are consistent with the legal framework, whether applicable international, national, state or municipal or local. Key standards include those related to drinking water quality, air quality, effluent discharge, and protected areas. Compliance is required in all stages of the

[4] https://www.ifc.org/wps/wcm/connect/554e8d80488658e4b76af76a6515bb18/Final%2B%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES

[5] https://www.ifc.org/wps/wcm/connect/e22c050048855ae0875cd76a6515bb18/Final%2B%2BWater%2Band%2BSanitation.pdf?MOD=AJPERES

subprojects including design, construction, and operation and maintenance.

77. **Environmental assessment.** The Government of India EIA Notification of 2006 (replacing the EIA Notification of 1994) sets out the requirement for environmental assessment in India. This states that environmental clearance is required for specified activities/projects, and this must be obtained before any construction work or land preparation (except land acquisition) may commence. Projects are categorized as A or B depending on the scale of the project and the nature of its impacts.

78. **Category A** projects requires environmental clearance from the central Ministry of Environment, Forests and Climate Change (MOEFCC). The proponent is required to provide preliminary details of the project in the prescribed manner with all requisite details, after which an Expert Appraisal Committee (EAC) of the MOEFCC prepares comprehensive terms of reference (TOR) for the EIA study. On completion of the study and review of the report by the EAC, MOEFCC considers the recommendation of the EAC and provides the environmental clearance if appropriate.

79. **Category B** projects require environmental clearance from the State Environment Impact Assessment Authority (SEIAA). The State level EAC categorizes the project as either B1 (requiring EIA study) or B2 (no EIA study) and prepares TOR for B1 projects within 60 days. On completion of the study and review of the report by the EAC, the SEIAA issues the environmental clearance based on the EAC recommendation. The Notification also provides that any project or activity classified as category B will be treated as category A, if it is located in whole or in part within 10 km from the boundary of protected areas, notified areas or inter-state or international boundaries.

80. None of the components of this conservation & development of heritage sites subproject falls under the ambit of the EIA Notification 2006, and therefore EIA Study or environmental clearance is not required for the subproject.

C. Environmental Regulatory Compliance

81. Applicable environmental regulations. Besides EIA Notification 2006, there are various other acts, rules, policies and regulations currently in force in India that deal with environmental issues that could apply to infrastructure development. The specific regulatory compliance requirements of the subproject are shown in Table 3.

Table 3: Applicable Environmental Regulations

Law	Description	Requirement	Relevance to Project Phase
National Environment Policy (NEP), 2006.	NEP is a comprehensive guiding document in India for all environmental conservation programs and legislations by Central, State and Local Government. The dominant theme of this policy is to promote betterment of livelihoods without compromising or degrading the environmental resources. The policy also advocates	RSTDSP should adhere to NEP principle of "enhancing and conservation of environmental resources and abatement of pollution".	All phases of project

Law	Description	Requirement	Relevance to Project Phase
	collaboration method of different stakeholders to harness potential resources and strengthen environmental management.		
Rajasthan State Environment Policy, 2010 And Rajasthan Environment Mission and Climate Change Agenda for Rajasthan (2010-14)	Follows the National Environment Policy, 2006 and core objectives and policies are: -Conserve and enhance environmental resources; assure environmental sustainability of key economic sectors; and improve environmental governance and capacity building - it recommends specific strategies and actions to address the key environmental issues: water resources, desertification and land degradation, forest and biodiversity, air quality, climate change: adoption and mitigation, mining, industry, tourism, energy, urban development, etc. - Establishment of Environment Mission under the chairpersonship of the Chief Minister and a Steering Committee under the chairpersonship of Chief Secretary, Government of Rajasthan Tasks force set up for six key areas	Project implementation should adhere to the policy aims of: conservation and enhancement of environmental resources, integration of environmental concerns into projects/plans, and capacity building in environmental management. Relevant recommendations for the project include control of losses, integrated water resources management, control of raw water pollution[18], reuse and recycling. Avoid/minimize use of forest lands. With reference to climate change adoption and mitigation following should be considered in the project: (i) diminishing flows in surface water bodies, and groundwater depletion, and revival traditional water bodies as water sources (lakes/tanks); (ii) equal stress on demand side management in water; and (iii) minimize energy use - design energy efficiency systems.	All phases of project
EIA Notification,2006	Projects indicated in the schedule of this notification require EIA study and environmental clearance.	None of the components of this subproject falls under the ambit of the notification; no EIA study or environmental clearance required	Not applicable
Central Ground Water Authority Public Notice 2/100	Public Notice specifies districts and areas where there are restrictions on the construction and installation of any new structure for extraction of groundwater resources without specific approval from the CGWA	Subprojects belonging to the Notified Areas in the Public Notice and will require new structures on extracting groundwater should seek the permission from the Central Groundwater Authority	Not applicable

Law	Description	Requirement	Relevance to Project Phase
Public Health Engineering Department Office Order P5 (1) PHE-2010 dated July 14 2020	PHED Office Order states that the State Government is instructed that permits for any new tube wells, bore wells or any structures extracting ground water shall be secured from the District Collector	Subprojects with components shall secure permits from the District Collector for components that include any new tube wells, bore wells or structures extracting groundwater	Not applicable
Guidelines for compensatory tree plantation in RUIDP works – Circular 10 dated 13.04.2018	Official Guidelines for Compensatory tree plantation in RUIDP work	Subprojects involving tree cutting to follow guidelines setup in RUIDP's Circular – 10, for compensatory plantation, trees specification, post plantation care etc. (Appendix C-11)	Construction and Operation
Water (Prevention and Control of Pollution) Act of 1974, Rules of 1975, and amendments (1987)	Act was enacted to provide for the prevention and control of water pollution and the maintaining or restoring of wholesomeness of water, by Central and State Pollution Control Boards and for conferring on and assigning to CPCB/SPCBs powers and functions relating to water pollution control. Control of water pollution is achieved through administering conditions imposed in consent issued under provision of the Water (Prevention and Control of Pollution) Act of 1974. These conditions regulate the quantity and quantity of effluent, the location of discharge and the frequency of monitoring of effluents. Any component of the subproject having the potential to generate sewage or trade effluent will come under its purview. Such projects have to obtain Consent to establish (CTE) under Section 25 of the Act from Rajasthan State Pollution Control Board (RSPCB) before starting implementation and Consent to Operate (CTO) before commissioning.	All relevant forms, prescribed fees and procedures to obtain the CTE and CTO can be found in the RSPCB website. (http://environment.rajasthan.gov.in)	Not applicable
Air (Prevention and Control of Pollution) Act of 1981, Rules of 1982 and amendments.	This Act was enacted to achieve prevention, control and abatement of air pollution activities by assigning regulatory powers to Central and State boards for all such functions. The Act also establishes ambient air quality standards.	The following will require CTE and CTO from RSPCB: (i) Diesel generators (more than 15 KVA); (ii) Batching Plant hot mix plants; and (iii) stone crushers, if installed for construction.	Construction

Law	Description	Requirement	Relevance to Project Phase
	The projects having potential to emit air pollutants into the atmosphere have to obtain CTE and CTO under Section 21 of the Act from RSPCB. The occupier of the project/facility has the responsibility to adopt necessary air pollution control measures for abating air pollution.	All relevant forms, prescribed fees and procedures to obtain the CTE and CTO can be found in the RSPCB website (http://environment.rajasthan.gov.in) If ready mix concrete and hot mix bitumen is procured from third party, contractor has to ensure that the plants, from where material is being purchased is having CTE/CTO and copy should be collected from third party and submitted in PIU	
Biodiversity Act of 2002	This Act primarily addresses access to genetic resources and associated knowledge by foreign individuals, institutions or companies, to ensure equitable sharing of benefits arising out of the use of these resources and knowledge to the country and the people.	Not Applicable	Not applicable
Wildlife Protection Act, 1972 and amendment 1991	This overarching Act provides protection to wild animals, birds, plants and matters connected with habitat protection, processes to declare protected areas, regulation of wildlife trade, constitution of state and national board for wildlife, zoo authority, tiger conservation authority, penalty clauses and other important regulations.	Keoladeo Bird Sanctuary is situated in Bharatpur at approx. 3 Km aerial distance from proposed subprojects areas of Bharatpur. None of the components of the subproject are located near or within the protected Area. Therefore, this act is not applicable	Not Applicable
Forest (Conservation) Act, 1980	The Forest (Conservation) Act prohibits the use of forest land for non-forest purposes without the approval of Ministry of Environment Forests & Climate Change (MoEFCC), Government of India	Not applicable; none of the components of the subproject are located in forest.	Not Applicable
Environmental (Protection) Act, 1986 amended in 1991 and the following rules/notifications:	This is an “umbrella” legislation that empowers the Central Government to take all necessary measures to protect and improve the quality of the environment and prevent, control and abate environmental pollution. Empowers central government to enact various rules to regulate environmental pollution, including	There are rules / notifications that have been brought out under this Act, which are relevant to RSTDSP, and are listed below	Construction

Law	Description	Requirement	Relevance to Project Phase
	standards for quality of air, water, noise, soil; discharge standards or allowable concentration limits for environmental pollutants, handling of hazardous substances, locating/prohibiting industries, etc.,		
Environmental Standards (ambient and discharge).	Emissions and discharges from the facilities to be created or refurbished or augmented shall comply with the notified standards	**Appendix C-2** provides ambient air quality standards; **Appendix C-5** provides emission limits for vehicle exhaust and **Appendix C-3** provides emission limits of DG sets and **Appendix C-4** provided emission stack height requirements for diesel generators	Construction
Noise Pollution (Regulation and Control) Rules, 2000 amended up to 2010.	Rule 3 of the Act specifies ambient air quality standards in respect of noise for different areas/zones.	**Appendix C-6** provides applicable noise standards	Construction
Solid Waste Management Rules 2016	Responsibility of Solid Waste Generator segregate and store the waste generated in three separate streams namely bio-degradable, non- biodegradable and domestic hazardous wastes in suitable bins and handover segregated wastes to authorized waste pickers or waste collectors as per the direction or notification by the local authorities from time to time; store separately construction and demolition waste, as and when generated, in his own premises and shall dispose off as per the Construction and Demolition Waste Management Rules, 2016; (iii) No waste generator shall throw, burn or burry the solid waste generated by him, on streets, open public spaces outside his premises or in the drain or water bodies.	Contractor to follow all the rules during construction works	Construction
Construction and Demolition Waste Management Rules 2016	I Every waste generator shall segregate construction and demolition waste and deposit at collection centre or handover it to the authorized processing facilities II Shall ensure that there is no littering or deposition so as to prevent obstruction to the traffic or the public or drains	Disposal site shall be identified and allotted by Municipal Council after mobilization of contractor (during SIP period) and can't be mentioned at this time. Contractor to follow all the rules during construction works.	Construction

Law	Description	Requirement	Relevance to Project Phase
	III Large generators (who generate more than 20 tons or more in one day or 300 tons per project in a month) shall submit waste management plan and get appropriate approvals from the local authority before starting construction or demolition or remodelling work, IV Large generators shall have environment management plan to address the likely environmental issues from construction, demolition, storage, transportation process and disposal / reuse of C & D Waste. V Large generators shall segregate the waste into four streams such as concrete, soil, steel, wood and plastics, bricks and mortar, VI Large generators shall pay relevant charges for collection, transportation, processing and disposal as notified by the concerned authorities;	Sludge or any material if classified as hazardous waste / material is to be handled and disposed according to this Rules	
Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016,	Responsibilities of the occupier for management of hazardous and other wastes - (1) For the management of hazardous and other wastes, an occupier shall follow the following steps, namely:- (a) prevention; (b) minimization; (c) reuse, (d) recycling; (e) recovery, utilization including co-processing; (f) safe disposal. (2) The occupier shall be responsible for safe and environmentally sound management of hazardous and other wastes. (3) The hazardous and other wastes generated in the establishment of an occupier shall be sent or sold to an authorized actual user or shall be disposed of in an authorized disposal facility. (4) The hazardous and other wastes shall be transported from an occupier's establishment to an authorized actual user or to an authorized disposal facility in accordance with the provisions of these rules. (5) The occupier who	Contractor to comply all the requirements of this Act during construction works.	Construction

Law	Description	Requirement	Relevance to Project Phase
	intends to get its hazardous and other wastes treated and disposed of by the operator of a treatment, storage and disposal facility shall give to the operator of that facility, such specific information as may be needed for safe storage and disposal. (6) The occupier shall take all the steps while managing hazardous and other wastes to- 6 (a) contain contaminants and prevent accidents and limit their consequences on human beings and the environment; and (b) provide persons working in the site with appropriate training, equipment and the information necessary to ensure their safety.		
Wetlands (Conservation and Management) Rules, 2017	The Rules specify activities which are harmful and prohibited in the wetlands such as industrialization, construction, dumping of untreated waste and effluents, and reclamation. The Central Government may permit any of the prohibited activities on the recommendation of Central Wetlands Regulatory Authority.	Not applicable as subprojects components are not located in or near to designated wetland area.	Not applicable
Ancient Monuments and Archaeological Sites and Remains Act, 1958 and Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010.	The Act designates areas within 100 meters (m) of the “protected monument/area” as “prohibited area” and beyond that up to 200 m as “regulated area” respectively. No “construction” is permitted in the “prohibited area” and any construction activity in the “regulated area” requires prior permission of the Archaeological Survey of India (ASI).	Following monuments are falls within 300 m from ASI protected monuments and required prior permission from ASI. • Shi Ganga Ji temple – 150 m from Moat surrounding the fort wall comprising part of Khasra No. 1881 • Town hall and Nehru Park – within 100 m from Moat surrounding the fort wall comprising part of Khasra No. 1881 • Ketan gate– within 100 m from Moat surrounding the fort wall comprising part of Khasra No. 1881 • Mathura gate - within 100 m from Moat surrounding the fort	Applicable

Law	Description	Requirement	Relevance to Project Phase
		wall comprising part of Khasra No. 1881	
The Rajasthan Monuments, Archaeological Sites and Antiquities Act, 1961; the Rajasthan Monuments, Archaeological Sites and Antiquities (amendment) Act 2007	Any construction/excavation work in the 'protected area' (as declared by GoR under the Act) requires priori permission of Department of Archaeology & Museums -Application under the Rules shall be submitted to Director, State Archaeological Department, at least 3 months prior to the work. Department provides conditional permission, including time for completion, procedures to be followed during the work and for chance finds	Façade lighting proposed in State protected City Gates (Mathura gate, B. Narain gate, Atalbandh gate, Anah gate , Kumher gate, Goverdhan gate, Neemda gate, Chandpol gate, Surajpol gate) and need to seek NOC from the department of Archaeology & Museums, GOR, prior to start of repair works or installation of lights.	Construction
The Building and Other Construction Workers (BOCW) Act 1996 and Rajasthan Building and Construction Workers Rules 2009	**Employer shall-** 1. Provide and maintain, at suitable point, sufficient quantity of wholesome drinking water, such point shall be at least 6 meters away from any washing areas, urinals or toilets 2. Provide sufficient urinals and latrines at convenient place, easily accessible by workers 3. Provide free of charge, temporary living accommodations near to work sites with separate cooking place, bathing and lavatory facilities and restore the site as preconditions after completing the construction works 4. Provide crèche with proper accommodation, ventilation, lighting, cleanliness and sanitation if more than fifty female workers are engaged 5. Provide first aid facilities in all construction sites **For safety of workers employer shall provide-** 6. Safe access to site and workplace 7. Safety in demolition works 8. Safety in use of explosives 9. Safety in operation of transporting equipment and appoint competent person to drive or operate such vehicles	Contractors are required to follow all the provisions of BOCW Act and Rajasthan BOCW Rules. Salient features of Rajasthan BOCW Rules are- Chapter III, section 17- Registration of establishments Chapter VIII, section 61- Hours of works, intervals or rest and spread over, overtime Section 62- weekly rest Section 63- night shift Section 67- registers of workers Section 68- Muster roll, wages register Section 70- latrine and urinal facilities Chapter XI- Safety and Health Section 78- fire protection Section 79- emergency action plan Section 80- fencing of motors Section 81- lifting and carrying of weight Section 82- H&S policy Section 83- dangerous and harmful environment Section 84- Overhead protection Section 88- eye protection Section 89- PPEs Section 90- electrical hazards Section 97- use of safety helmets and shoes Chapter XIII-lifting appliances and gears	Construction

Law	Description	Requirement	Relevance to Project Phase
	and equipment 10. Safety in lifting appliance, hoist and lifting gears 11. Adequate and suitable lighting to every workplace and approach 12. Prevention of inhalation of dust, smoke, fumes, gases during construction works and provide adequate ventilation in workplace and confined space 13. Safety in material handling and stacking/un stacking 14. Safeguarding the machinery with fly-wheel of moving parts 15. Safe handling and use of plants operated by compressed air 16. Fire safety 17. Limit of weight to be lifted by workers individually 18. Safety in electric wires, apparatus, tools and equipment 19. Provide safety net, safety sheet, safety belts while working at height (more than 1.6 m as per OSHA) 20. Providing scaffolding, ladders and stairs, lifting appliances, chains and accessories where required 21. Safety in pile works, concrete works, hot asphalt, tar, insulation, demolition works, excavation, underground construction and handling materials 22. Provide and maintain medical facilities for workers 23. Any other matters for the safety and health of workers	Chapter XV- transport and earth moving equipment's Chapter XVI- concrete works Chapter XVII- demolition works Chapter XVIII-Excavation and 41 tunnelling Chapter XX- ladders and step ladders Chapter XXII- structural frame and formworks Chapter XXIV- medical facilities and first aid box	
Contract Labor (Regulation and Abolition) Act, 1970; The Inter-State Migrant Workmen (Regulation of Employment and	Provides for welfare measures to be provided by the Contractor to contract labor and in case the Contractor fails to provide, the same are required to be provided by the Principal Employer by Law. The principal employer is required to take Certificate of Registration and the Contractor is required to take a License from the	Applicable to all construction works in the project Principle employer (RUDSICO-EAP) to obtain Certificate of Registration from Department of Iabour, as principle employer Contractor to obtain license from designated labor officer Contractor shall register with	Construction

Law	Description	Requirement	Relevance to Project Phase
Conditions of Service) Act, 1979	designated Officer. The Act is applicable to the establishments or Contractor of principal employer if they employ 20 or more contract labor. The inter-state migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, traveling expenses from home up to the establishment and back, etc.,	Labor Department, if Inter-state migrant workmen are engaged Adequate and appropriate amenities and facilities shall be provided to workers including housing, medical aid, traveling expenses from home and back, etc., **Appendix C-12** provides applicable labor laws including amendments issued from time to time applicable to establishments engaged in construction of civil works.	
The Child Labour (Prohibition and Regulation) Act, 1986	Prohibits employment of children below 14 years of age in certain occupations and processes Employment of child labor is prohibited in building and construction Industry.	No child labour should be employed	Construction
Minimum Wages Act, 1948	Minimum wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of buildings, roads and runways are scheduled employment.	Applicable to all construction works in the project All construction workers should be paid not less than the prescribed minimum wage	Construction
Workmen Compensation Act, 1923	Provides for compensation in case of injury by accident arising out of and during the course of employment.	Compensation for workers in case of injury by accident	Construction
Equal Remuneration Act, 1979	Provides for payment of equal wages for work of equal nature to male and female workers and not for making discrimination against female employees in the matters of transfers, training and promotions etc.	Equal wages for work of equal nature to male and female workers	Construction
Rajasthan Forest Act, 1953 and Rajasthan Forest Rules, 1962	This Act makes the basis for declaration of Reserved Forests, constitution of village forest committees, management of reserved forests and penalties and procedures.	Not applicable; none of the components are in reserved or community forest areas.	Not applicable
International conventions and treaties			
Ramsar Convention, 1971	The Ramsar Convention is an intergovernmental treaty that provides the framework for national action and international co-operation for the conservation	Keoladeo National Park is a Ramsar site in Bharatpur and it was notified on October 1981 but no project components is within the protected site.	Not applicable

Law	Description	Requirement	Relevance to Project Phase
	and wise use of wetlands and their resources. India is one of the signatories to the treaty. The Ramsar convention made it mandatory for the signatory countries to include wetland conservation in their national land use plans.		

82. **Clearances / permissions to be obtained prior to start of construction**. **Table** 4 shows the list of clearances/permissions required for project construction. This list is indicative and the contractor should ascertain the requirements prior to start of the construction, and obtain all necessary clearances/permission prior to start of construction.

Table 4: Clearances and permissions required for Construction activities

S. No	Construction Activity	Statute under which Clearance is Required	Implementation
1.	Land for project activity	Allotment and approval for specific land use	Nagar Nigam Bharatpur
2.	Establishment of construction camps	Allotment and approval for specific land use	Contractor
3.	Tree Cutting	State forest department/Revenue (Tehsildar)	PIU
4.	Hot mix plants, Crushers, Batching plants and DG Set	Consent to establish and consent to operate under Air Act, 1981 from RSPCB	Contractor
5.	Storage, handling and transport of hazardous materials	Hazardous Wastes (Management and Handling) Rules. 2016 Manufacturing, Storage and Import of Hazardous Chemicals Rules, 1989 from RSPCB	Contractor
6.	Sand mining, quarries and borrow areas	Permission from District Collector/ State Department of Mines & Geology	Contractor
7.	New quarries and borrow areas	Environmental clearance under EIA Notification 2006	Contractor
8.	Use of vehicles and equipment	Pollution under control certificate (PUC) form RTO	Contractor
9.	Temporary traffic diversion measures	Temporary traffic diversion measure including use of alternate road from District traffic police	Contractor
10.	Archaeological Survey of India	Permission under Ancient Monuments and Archaeological Sites and Remains Act, 2010	Nagar Nigam Bharatpur
13.	Department of Archaeology and Museum, Government of Rajasthan	The Rajasthan Monuments, Archaeological Sites and Antiquities Act, 1961; the Rajasthan Monuments, Archaeological Sites and Antiquities (amendment) Act 2007	Nagar Nigam Bharatpur

83. PMU will be overall responsible for supervision in getting all clearances and provide details to ADB through semi-annual report. PMU will ensure all necessary regulatory clearances and approvals are obtained prior to commencement of works. Respective PIUs, with support of project consultants and Contractors, are responsible for obtaining the clearances/permits and ensuring conditions/specifications/provisions are incorporated in the subproject design, costs, and implementation. The PIUs shall report to PMU the status of compliance to clearances/permits as part of the regular progress reporting.

V. DESCRIPTION OF ENVIRONMENT

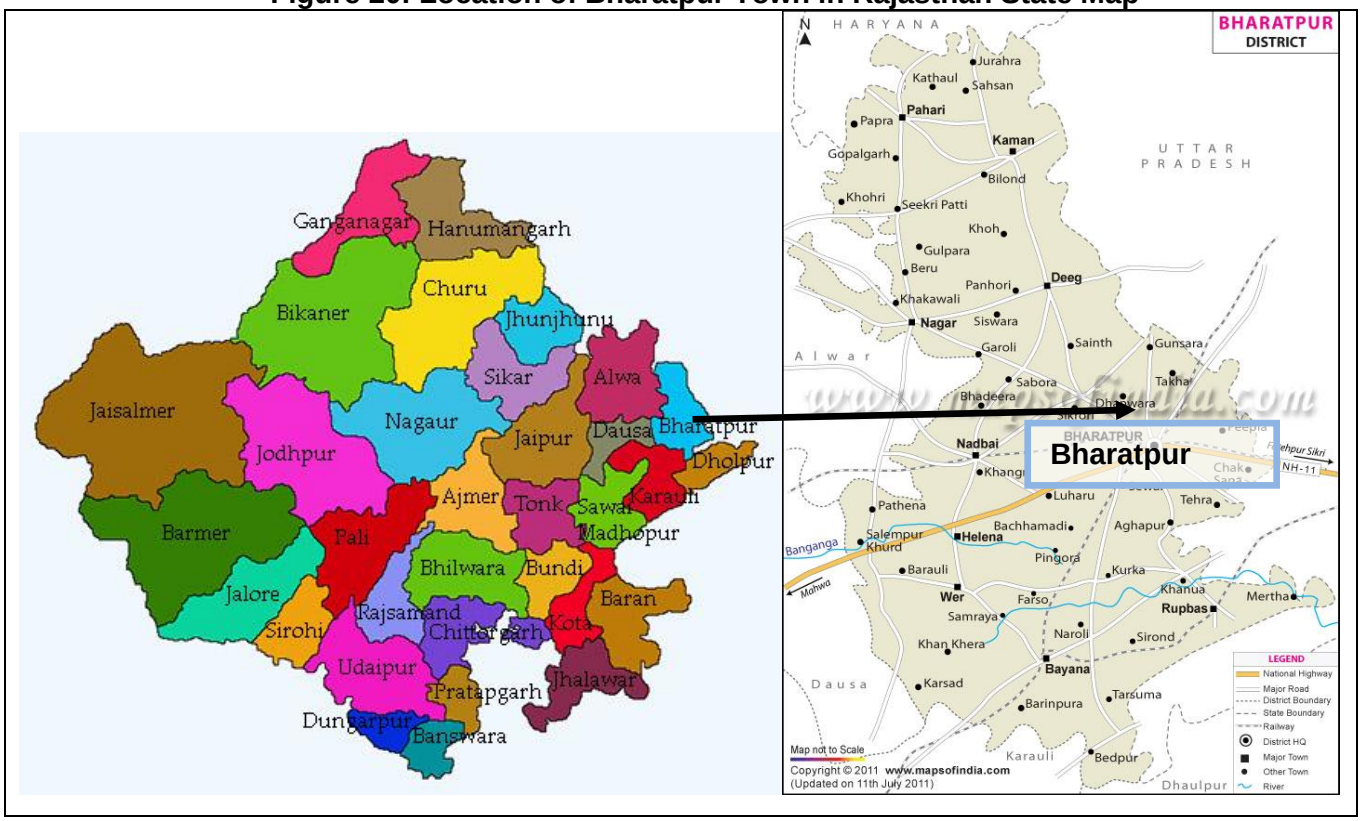
A. Physical Resources

1. Location, Area & Connectivity

84. Bharatpur, also known as 'Eastern Gate of Rajasthan', is located in the Braj region 180 km away from Delhi. Geographically, the district is situated between 26° 22' and 27° 83' N and 76° 53' and 78° 17' E and its average height above sea level is around 183 m. Bharatpur city is the district headquarters and is also known by the name of Lohagarh. It is situated very close to the main cities of Rajasthan and other states. Distance between Jaipur and Bharatpur is around 178 km whereas Agra lies at a distance of 55 km from the district. Mathura is located at a distance of 34 km. Bharatpur touches Gurgaon of Haryana in the north, Mathura in the east, Agra of Uttar Pradesh and Dholpur of Rajasthan in the south and Dausa and Alwar in the west.

85. Presently, Bharatpur is district headquarter and is also administrative head quarter commissioner, covering other three district under it namely Dholpur, Karauli and Sawai Madhopur. Municipal Services in the existing areas of the city are managed by local self-government body "Bharatpur Nagar Parishad". Development of upcoming areas of the city is looked after by UIT. Location of Bharatpur town in Rajasthan State map is shown in Figure 20.

Figure 20: Location of Bharatpur Town in Rajasthan State Map



86. The general physical character of district comprises of sand and rocky land in the major part. It is situated on an average altitude of 250 m above mean sea level.

2. Topography, Soils and Geology

87. **Topography:** the district is situated between 26° 22' and 27° 83' N and 76° 53' and 78° 17' E and its average height above sea level is around 183 m. Topographically Bharatpur, is levelled and saucer in shape. The general Topography of the city is low lying & marshy with black cotton soil. Looking at topography the town is like a saucer in shape, except inner mort portion, which have highest ground level from other site. Topography is marked by undulation without any regular slope pattern. There are several depressions scattered all over the city which get filled with Rain Water/ Waste Water. Two annular shape water bodies called inner mode (Sujan Ganga) and outer mode are interesting part of city's landscape. Besides inner mode and outer mode there are four other channels, namely CFCD, Giriraj Channel, Goverdhan Canal and RFCD which are draining the rainwater from the city. A canal starting from Ajan Bandh dam come up to Ranjit Nagar & Sujan Ganga.

88. **Soils.** The soil is generally alluvial, prone to water logging. The nature of recently alluvial calcareous has been observed. Nutrient level in the Bharatpur soil including area coverage of saline and sodic soil. The nutrient status of the Bharatpur soil is graded as low to medium level.

89. **Drainage:** The peculiar topography of the town provides natural drainage pattern. The area has been divided into two river drainage basins, namely Barah river basin towards north and Banganga river basin towards south.

90. **Geology:** The rock types of district exposed are grouped under Alwar and Ajabgarh Groups belonging to the Delhi super group (Lower to Middle Proterozoic). The rocks of Alwar group comprising quartzite, basic volcanic tuffaceous sandstone, shale etc. are well exposed in the south-western part of the district around Khankhera. The major parts of the district are occupied Quaternary alluvium and blown sand which conceal the hard rock geology. Hydrogeological domains of unconsolidated and consolidated rocks formation with varying ground water potential. Different formations belonging to Alwar super group, Delhi super group, Vindhyan group and Quaternary alluvium form the geological framework of the district. About 85% area of the district is occupied by alluvium and windblown sand.

91. **Geomorphology.** Geo-morphologically the district classified into seven geomorphic units namely hill and valley, younger flood plans, ravine, obstacle dunes and pediment / pediplain. On an average 90% of the district area covered with unconsolidated porous formations.

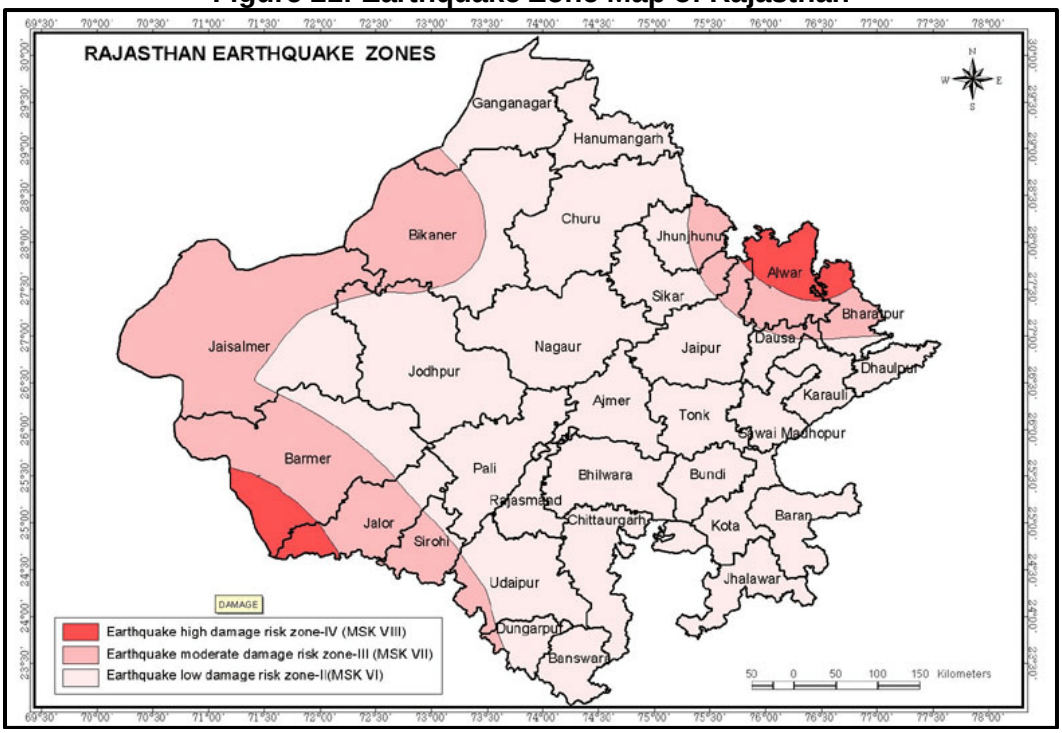
92. **Mineral Resources.** Barytes, buildings stones, and quartz are the important minerals of the district. Barytes closely associated with the basic intrusive occurs in the rocks of the Delhi Super group. Barytes veins occur as fissure filling in quartzite. Occurrences are reported from Hatori (27°00' :77°06'), Karwar (27°00' :77°03') etc. Small deposit of copper with an indicated reserve of 1 million tone with 1% Cu is located near Khankhera (26°55' :77°08'). Minor occurrence of lead is reported from Jotri (27°35' :76°58'). Quartz is available at many places in the district. Quartzite and sandstone are quarried at Bansi Paharpur (26°56 :77°03'), Dig (27°27' :77°19') etc. White spotted, reddish sandstone of the Bhander Group is in great demand as building Stone.

3. Seismology

93. According to the Vulnerability Atlas of India, Bharatpur Town falls in "Earthquake Moderate damage risk zone-III so all structures will be constructed as per resistant of earthquake high damage risk zone-IV. Although Rajasthan has not experienced a major earthquake in the recent past, there have been 37 events with a magnitude of 5-7 since 1720, with the most recent occurring in 2001.

94. This measured 6.9 on the Richter Scale, but because the epicentre was in neighbouring Gujarat, there was only limited damage in Bharatpur. Earthquake Zone Map of Rajasthan is shown in **Figure 21**.

Figure 21: Earthquake Zone Map of Rajasthan



4. Climatic Conditions

95. The climate of Bharatpur Town is quite dry. The summer season is hot, but milder than most of the other Rajasthan cities. The maximum temperature during summer months (April to June) goes above 49°C quiet frequently and has reached up to 43°C during peak summer. The temperature during winter months (December to February) normally touches 25°C and the lowest minimum temperature recorded is 9°C.

96. Average annual rainfall of the district is 582.9mm. Major portion of rainfall is received in the monsoon season. In the last year 2021 actual rainfall received is 596.3 mm while normal rainfall 545.2.

Table 5: Rainfall Statistics of Bharatpur District

Duration	Cumulative Rainfall Statistics Of Bharatpur District				
	SR NO.	Name of district	Actual rainfall (mm)	Normal rainfall (mm)	Departure from normal (%)
01/06/2021 to 30/09/2021	1	Bharatpur	596.3	545.2	9

01/06/2020 to 30/09/2020	2	Bharatpur	468.9	545.2	-14
01/06/2015 to 30/09/2015	3	Bharatpur	393.1	557.6	-30

Source: IMD Jaipur (End of season report 2021, 2019 and 2015)

5. Surface Water

97. There are only three main seasonal rivers in this District, namely Ban Ganga, Rooparel and Gambhir. Ban Ganga starts from Ramgarh Dam of Jaipur district , passes from Bharatpur and meets in river Gambhir near tehsil Bayana of District Bharatpur. Gambhir river starts from Panchna Dam of district Karauli and after passing from Bharatpur meets River Yamuna in Uttar Pradesh. Rooparel River starts from hills of district Alwar and enters into Bharatpur from tehsil Kaman. Instead of this, a Dam, namely, Bandh Baretha is situated near the village Baretha on river Kakund which starts from the hills of district Karauli. The water of this dam is used for drinking and irrigation purpose for this district. The capacity of this dam is 684.00 million cusik feet (29 Gaze feet).

98. Bharatpur City flood Control Drain is an earthen drain and is the main drainage line for Bhartpur town. Entire domestic waste water not collected through Sewer lines and storm water runoff within the circular road and around Bharatpur town, discharged into this drain. It start from Kali Bagichi where storm water of south of Bharatpur. The alignment of this drain starts from Kali Bagichi and passes through Atal Bandh Gate, Neemda Gate, Anah Gate, Kumher Gate, Chandpole & upto Jaghina Gate. It consists of 25 nos. storm water inlets on left and 12 nos on right side.

6. Groundwater

99. For broadly grouping geological formations from ground water occurrence and movement considerations, the various lithological units have been classified into two groups on the basis of their degree of consolidation and related parameters. These are,

(i) Unconsolidated porous, quaternary formation
(ii) Fissured formations – consolidated sedimentary rocks.

100. On an average 90 % of the district area covered with unconsolidated porous formations. Ground water quality of Bharatpur is assessed by examine various physico-chemical parameters of open wells, bore wells and hand pumps. The results reveal that the water of most of the sampling area is hard and contaminated with higher concentration of total dissolved solids.

101. Because of the sandy soils and lack of rainfall, the water table is very deep around Bharatpur Town, ranging from 38-46 m below ground level. The main aquifer lies below this depth, comprising Lathi formations from the Lower Jurassic Age, composed of mainly sandstones and some lime stones in the upper levels. The aquifer is tapped by a number of wells, but the yield is reported to be low. Bharatpur Municipal Board (BMB) has developed a well field at Dabla Village 12.5 km from the town, where the aquifer is around 85 m below the surface. There are 12 tube wells of 200 m depth providing an average yield of 18,000 l/h, producing a total of around 3 million litres per day.

102. The chemical quality in the district is fresh to brackish; and quality of ground water varies from place to place. Most of the area shows higher values of fluoride and nitrate in the drinking water samples some other samples have higher values of TDS, Alkalinity, Hardness and chloride while remaining parameters are within the permissible limits.

103. Ground water and surface water quality monitoring will be done during the pre-construction activities of this sub-project.

7. Air Quality

104. Ambient air quality in Rajasthan is monitored by Rajasthan State Pollution Control Board (RSPCB). In Bharatpur, ambient air quality is monitored at one location within the city (at Khadi Gamoday Samiti). As presented in the following table, in Bharatpur town there are no major polluting industries and therefore level of pollution of gases like NO_x and SO_x are within both national standards and WHO guideline values. However, particulate matter concentration (PM_{10}) is high due to presence of dust. Transport also adds pollution load in air in city.

105. The contractor is required to conduct ambient air quality of Bharatpur in the pre-construction phase to establish the baseline at project sites, and will continue periodic monitoring as per the environmental management plan.

Table 5A: Ambient air quality of Bharatpur (annual average)

Yes	PM10 (μg/m3)	NO2 (μg/m3)	SO2 (μg/m3)
2022	179	34.8	15.91
2021	179	32.59	14.95
2020	182	35.74	14.24
2019	194	36.55	12.69
2018	207	35.83	10.39
2017	159	33.72	8.38
2016	159	32.66	8.68
2015	201	25.73	10.08
Standards			
NAAQS (annual)	60	40	50
WHO guidelines (annual)	20	40	20

NO2 = Nitrogen Dioxide
NAAQS = National ambient air quality standards
PM10 = Particulate Matter size less than 10um or
SO2 = Sulphur Dioxide
WHO = World Health Organization
Source: RSPCB

106. **Noise Quality.** Noise level quality of Bharatpur is not available and contractor is required to conduct baseline noise level monitoring of Bharatpur at selected project sites in the pre-construction phase and will update in IEE report.

B. Ecological Resources

1. Forest areas

107. The urban area in Bharatpur is surrounded by land converted for agricultural use. There is no natural habitat in the town, and the flora is limited to artificially planted trees and shrubs, whereas the fauna comprises of domesticated animals (cows, goats, pigs and chickens), plus other species able to live close to man (urban birds, rodents and some insects). There is no protected area nearby the subproject site.

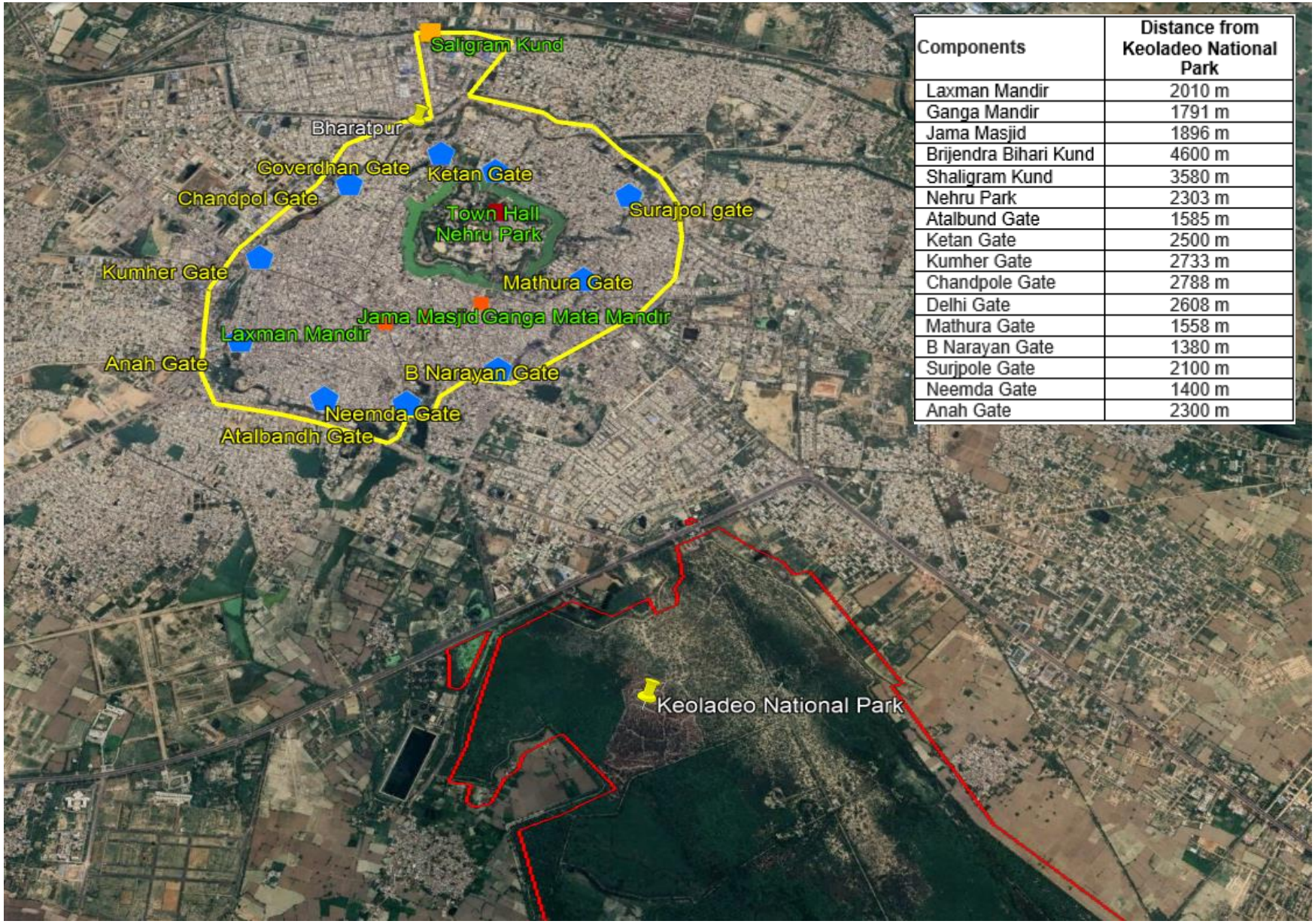
108. Vegetation is sparse and comprises mostly of domesticated species, with limited fauna. There are fishes in most of the rivers and irrigation tanks outside the towns, but no aquatic species are of protected category. Rohu (Labeo rohita) and sanwal are the most common fish species.

2. Forest and Protected area in Bharatpur.

109. Bharatpur town is famous for **Keoladeo National Park** (KNP) formerly known as the Bharatpur Bird Sanctuary which was created 250 years ago. Situated at South of Bharatpur, Keoladeo is named after (Shiva) temple within its boundaries of National Park. Initially, it was a natural depression; and was flooded after the Ajan Bund was constructed by Maharaja Suraj Mal, the then ruler of the princely state of Bharatpur, between 1726 to 1763. The bund was created at the confluence of two rivers, the Gambhir and Banganga. Keoladeo was declared as a Ramsar site under the Convention on Wetlands of International Importance in year 1981. In 1985 The park was declared as World Heritage Site by UNESCO under the World Heritage Site Convention. The Subproject is proposed at the heart of the town in northern direction of KNP as the KNP is situated at Southern side of town. The nearest component to KNP is Lighting and illumination of Mathura Gate situated at about 1340 m aerial distance form outermost boundary of national .

110. **Bandh Baretha wildlife Sanctuary** - **Bandh Baretha is another wildlife Sanctuary** in Bharatpur district. Bandh Baretha is situated in the Bayana Tehsil of Bharatpur district of Rajasthan, about 50 km from Bharatpur. This is old wildlife reserve sanctuaries which are currently under the administration of the Forest Department. The construction of the dam on Kukund River was started by Maharaj Jaswant Singh in 1866 AD and completed by Maharaj Ram Singh in 1897 AD. The Basant Darbar Mahal was built by Maharaj Kishan Singh and is the private property of the Bharatpur royal family. Band Baretha is a bird watcher’s paradise because of over 200 species of birds, including the elusive Black Bittern.

Figure 23: Various project components in Bharatpur city and their distance from KNP



Components	Distance from Keoladeo National Park
Laxman Mandir	2010 m
Ganga Mandir	1791 m
Jama Masjid	1896 m
Brijendra Bihari Kund	4600 m
Shaligram Kund	3580 m
Nehru Park	2303 m
Atalbund Gate	1585 m
Ketan Gate	2500 m
Kumher Gate	2733 m
Chandpole Gate	2788 m
Delhi Gate	2608 m
Mathura Gate	1558 m
B Narayan Gate	1380 m
Surjpole Gate	2100 m
Neemda Gate	1400 m
Anah Gate	2300 m

111. The project areas of Bharatpur have been also screened to determine critical habitats which includes presence of Key Biodiversity Areas (KBAs) and Protected areas (PAs) using the Integrated Biodiversity Assessment Tool (IBAT). As per the Proximity report generated by IBAT, Keoladeo national park is the only Protected area and Key Biodiversity area within 3km of project town and Sur Sarover Bird Sanctuary is another KBA within 50 km radius from subproject town. None of the project components are falling within protected or forest areas and no wildlife has been reported within the proposed area. Biodiversity Assessment Report (IBAT Analysis) of town has been attached with this report as Appendix 9.

C. Economic Development

112. Economic base of a town reflects its prosperity. Bharatpur town, being the districts headquarter, has been functioning as administrative centre. Bharatpur is known not only for agriculture production but also for oil industries. It has also sustained growth in tertiary economic activities. The major economic activities are trade and commerce; thus, it offers a number of wholesale and retail markets which act as a distribution centre for nearby towns and villages. Tourism income contributes very much towards economic generation of the town on the contrary household industries play a big role in providing employment and income generation.

113. The socio-cultural and economic factors have significantly influenced over land use both in rural and urban areas. Land forms, slope, soils and natural resources are some of the important which control the land use pattern of the town. Data are based on bharatpur statistics outline, 2012-13. The land use pattern of district is presented in **Table 6** below-

Table 6: Existing Land Use of Bharatpur

S. No.	Land Use	year 2001 area(acre)	year 2001 Proposed area (%)	Proposed total area - 2023	Proposed total Developed area (%) - 2023	Proposed total urbanised area (%) - 2023
1	**2**	**3**	**4**	**5**	**6**	**7**
1	Residential	1864	48-77	5414	46-24	42-46
2	Commercial	206	5-40	618	5-28	4-84
3	Industrial	344	9-00	585	4-99	4-58
4	Government, Semi-Government	41	1-07	191	1-63	1-49
5	Public and Semi Public	576	15-07	1215	10-38	9-52
6	Recreation	166	4-34	1251	1251	1251
7	Circulation	625	16-35	2298	19-63	18-02
8	Special Planning area			136	1-16	1-06
	Total Developed area	**3822**	**100-00**			
	Total area for development			11708	100-00	91-78
9	Afforestation	802		435		3-42
10	Vacant land			195		1-54
11	Government reserved	215		215		1-69
12	Water bodies	254		198		1-57
13	Urbanised Area	5093				

114. **Water supply.** The total combined available water from the ground water and surface water is 24.03 MLD out of which 22.0 MLD is used for residential purpose and 2.03 MLD is used for other purposes. Current supply per capita is 60 liters per capita per day (lpcd) as against the standards of 135 LPCD. The existing water supply system comprises mainly of asbestos cement pipes.

115. **Sewerage and Sanitation**. At present, most of the Bharatpur town is covered with sewage networks and house service connections are being done for most of the house. Two projects has already been executed in town one under RUIDP, Phase-II (Funded by ADB) and other under AMRUT. Sewerage system in left over and new areas of Bharatpur is proposed in RUIDP Phase-IV, which will further strengthen the sanitation scenario in the city. Works on two Kunds are proposed in this subproject and the catchment of Saligram Kund is proposed to be covered under the sewerage network under RUIDP Phase-IV and the Brijbihari Kund under the FSSM scheme under the same scheme.

116. **Drainage**. Presently there exists a minimal network of storm water drains. These drains are also receiving the sludge and waste through domestic sewer. The existing drainage system is a piece-meal construction without proper designs of open nallahs (drains) that are irregular and insufficient. The wastewater along with sewage is discharged into the fields towards west of the town through open drains.

117. **Solid Waste**. The total waste generation in the town is about 116.74 MTD. the waste is collected door to door and processed in designated landfill and waste processing area of Bharatpur Nagar Nigam funded by ADB in RUIDP Phase - II. Biomedical wastes are collected and transported to Alwar for incineration.

118. **Storm Water Drainage:** Bharatpur town is facing severe drainage problem resulting water logging on roads and low lined areas during the rainy season, even though the rain is moderate. The problem gets aggravated due to low water percolation as account of presence of higher percentage of silica clay formation in the sub soil which renders it less permeable and prone to moisture retention. The surface runoff from the town finally gets accumulated in every monsoon season in the outskirts of town in low lying areas.

119. **Transport.** Transport in the city is mainly by personal vehicles (motorcycles and bicycles) and auto- and private taxis. The Rajasthan State Road Transport Corporation (RSRTC) runs public buses to neighbouring villages and towns and to larger towns farther afield, such as Jaipur, Alwar, Dhaulpur, Dausa , with which there are good road connections. Bharatpur is also connected to Agra, Jaipur and Delhi by the national railway. National Highway no. 21 passes through the town to which State Highway no. 01,14,22,43,44,44A crosses in town. Roads are broad (about 60 feet) in city area which crosses at rectangle to each other. Broad gauge railway line and railway station exist in Bharatpur which connects Bharatpur with all the major districts of Rajasthan and other part of country.

D. Socio Cultural Resources

1. Demography

120. Bharartpur as of 2011 India census, had a population of 252342. The major languages spoken are Dehati and Hindi. The town has been growing steadily since 1951. The growth of the town has been phenomenal during 1961-71 when there was an influx of population of immigrants

to this town. However, thereafter also the growth was not stable. The average decadal increase is 37.78%. However, the last decadal (2001-2011) growth is only 22.95%.

2. History, Culture and Tourism

121. Bharatpur the Eastern Gateway to Rajasthan was founded by Maharaja Suraj Mal. It was once an impregnable well-fortified city, carved out of the region formerly known as Mewat. The trio of Bharatpur, Deeg and Dholpur has played an important part in the history of Rajasthan.

122. The place was ruled by an tribal community of Sinsinwar clan, who came to India in 100 AD. Gohad city was built in 1505 AD and developed as a famous Jat state which was later ruled by the Marathas. In 1733 AD, Maharaja Suraj Mal built the city of Bharatpur. It is believed that it was a well-fortified city under his rule. Bharatpur was carved out from Mewat and got its name from Lord Bharat (Lord Rama's brother).

123. From the point of tourism, the Bharatpur town has a number of religious, historical and archaeological places of importance. These places mainly attract the tourists from within the country as well as abroad. The historical places include Lohagarh fort or the Iron Fort ‘‘and other places like Keoladeo National Park, Kamra Khas Palace, Deeg fort, and Purana Mahal which attracts domestic and foreign tourists. A famous breeding water bird sanctuary called ‘Keoladeo Ghana bird sanctuary near Bharatpur.

124. **ASI Protected Monuments in Bharatpur** – Bharatpur town has 5 following ASI protected monuments.

(i) Fateh Burj near Anah Gate
(ii) Moat surrounding the fort wall comprising part of Khasra No. 1881.
(iii) Fort walls including Chowburja gate and approach bridges at the Chowburja and Ashtadhatu gates together with adjacent land comprised in part of survey plot No. 1881
(iv) Jawahar Burj and Ashtadhatu Gateway.
(v) Delhi Gate (Outside fort)

125. **Fateh burj,** built of earthwork is of strategic importance for the Jat rulers of Bharatpur due to location of the famous cannon over it, which perhaps played an important role in the victory of the rulers. The cannon is 6 m long with frontal diameter of 0.68 m. The perimeter on rear side is 2.67 m. The diameter of the slot is 16.5 cm. The cannon is placed over two stone shafts in east-north-east west-southwest alignment. The cannon bears engravings of rows of continuous arches, floral designs, a Swastik design and figure probably of a dog in dotted lines. The cannon is possibly made of wrought iron. The date is assignable to eighteenth century A.D.

126. **The fort wall** is massively built of stone rubbles in lime mortar with occasional use of *lakhauri* bricks at top and is surrounded all around by a deep and wide moat filled with water. The fort has only two gateways i.e. Chowburja Gate on the south flanked by round bastions on either side and Ashtadhatu Gate on the north. Both the gateways are approachable through long bridges. The bridge in front of Chowburja Gate is approximately 50 m long and 12 m wide. The other bridge is comparatively longer. It is datable to the eighteenth-century A.D.

127. **Moth Wall -** The city of Bharatpur and its fort are said to have been founded about 300 years ago by Rustam, a Jat of the Sogariya clan. Maharaja Surajmal took it from Khemkaran, the son of Rustam in A.D. 1733 and refurbished it by constructing a big fort and moat surrounding it. This historical fort, also known as Lohagarh, is rectangular in shape and has eight bastions with

a high wall surrounded by a deep tapering moat (18.3 m wide). The outer wall got damaged at places but has now been repaired on the Gopalgarh side. Roads leading to the fort through its two gates i.e. Chawburja Gate and Ashtadhatu Gate, cross the moat by masonry bridges. The moat always remains filled with water.

128. **Delhi Gate** - A small gateway in comparison to others facing north-northeast has an arched passage flanked by thick walls (1.5 m x 6 m) on either side. The gateway is built of stone rubble in lime mortar with lime plaster over it. The date is assignable to eighteenth century A.D.

129. The **Jawahar Burj** was constructed by Maharaja Suraj Mal (A.D. 1756-63) but the structures over it were raised by Maharaja Jawahar Singh (A.D. 1764-68) in commemoration of his victory of Delhi. Three mandapas were erected here, one painted with epic scenes. An inscribed Iron pillar bearing genealogy was recently erected here by the ex-ruler Maharaja Brijendra Singh. An Ashtadhatu Gate was brought from Delhi by Maharaja Jawahar Singh in A.D. 1765 as a trophy.

130. **Jawahar Burj** and stand erect within the glorious ramparts of the Lohagarh Fort. This site was considered as a coronation site for all the Jatrulers. This place is considered as victory towers and, are decorated with deteriorating frescoes. It is different from the other forts in the state in that there is no flamboyance associated with the fort. However, it generates an aura of strength and magnificence.

131. There are 5 ASI protected monuments in Bharatpur town which are: 1. Fateh Burj near Anah Gate, 2. Moat surrounding the fort wall comprising part of Khasra No. 1881, 3. Fort walls including Chowburja gate and approach bridges at the Chowburja and Ashtadhatu gates together with adjacent land comprised in part of survey plot No. 1881. 4. Jawahar Burj and Ashtadhatu Gate and 5. Delhi Gate (Outside fort). No project component is proposed on these protected monuments. Following monuments are falls within 300 m from ASI protected monuments and required prior permission from ASI.

(i) Shi Ganga Ji temple – 150 m from Moat surrounding the fort wall comprising part of Khasra No. 1881
(ii) Town hall and Nehru Park – within 100 m from Moat surrounding the fort wall comprising part of Khasra No. 1881
(iii) Ketan gate– within 100 m from Moat surrounding the fort wall comprising part of Khasra No. 1881
(iv) Mathura gate - within 100 m from Moat surrounding the fort wall comprising part of Khasra No. 1881

132. Similarly, there are 11 State protected sites in Bharatpur Kishori mahal's complete premises, Kamara Khas Kachahari Kala, Kothi Khas, Hansarani palace, Chaman Bagichi, Hamam and adjoining structure area and open land till boundary of the fort including three wells and gates of mudwall, Mathura gate, B. Narain gate, Atalbandh gate, Anah gate , Kumher gate, Goverdhan gate, Neemda gate, Chandpol gate, Surajpol gate, The mud bastion with canon and platform situated near Surajpol gate on North side of mud wall and the surrounding area of 100 Sq. feet of the plate form. Conservation of these state protected monuments (Mathura gate, B. Narain gate, Atalbandh gate, Anah gate , Kumher gate, Goverdhan gate, Neemda gate, Chandpol gate, Surajpol gate) are selected by state government under this subproject, and prior permission for the working on these subprojects will be required from Department of Archaeology & Museums government of Rajasthan prior to start of repair works or installation of lights.

133. State Protected monuments in Bharatpur

(i) Kishori mahal's complete premises, kamara khas kachahari kala, kothi khas, Hansarani palace, chaman Bagichi, Hamam and adjoining structure area and open land till boundary of the fort including three wells and gates of mudwall.
(ii) Mathura gate
(iii) B. Narain gate
(iv) Atalbandh gate
(v) Anah gate
(vi) Kumher gate
(vii) Goverdhan gate
(viii) Neemda gate
(ix) Chandpol gate
(x) Surajpol gate
(xi) The mud bastion with canon and platform situated near Surajpol gate on North side of mud wall and the surrounding area of 100 Sq. feet of the plate form.

134. **Kishori Mahal** - This place is built by by Maharaja Surajmal during the early half of 18th century A.D. for his family residence. Since Maharani Kishori, beloved wife of Maharaja Surajmal use to live in it. Hence his highness Sawai Brijendra Singh named it as Kishori Mahal and it is known such till now. The palace carries the characteristics of mediaeval architecture. Cenotaph situated on the roof are an attraction of the palace. Creepers motif are inscribed on both entrance doors.

135. There are mainly two squares in the palace. The construction of the upper front part of this palace with the features of medieval architecture is incomplete. Chhatris are built on both sides above the east facing palace. There are several classrooms in the second square of the palace. This part of the palace is three storeyed. The palace has beautiful jaalis, windows with large rectangular design, etc. There are sights. There was a stable at the back of the palace. Belbute and lettering are engraved on both the four entrances of the palace.

136. The lattice structures built in the second square of the palace had fountains. Small doorways are built in the walls of the South Daul of the ground floor. In these lamps were kept and there was a provision of water flow from their upper part. A well was also built for water supply in the outer south-west part of the palace went.

137. Maharaja Surajmal Memorial and Panorama have been established here in 2008. The statue of Maharaja Surajmal and its local history have been carved on the stone in the east direction in front of the palace. Many galleries containing photographs, sculptures and manuscripts have been constructed inside the palace.

3. Other Important monuments of Bharatpur

138. The Lohagarh fort is the most distinguishable monument of Bharatpur district. It is also referred to as the iron fort and was founded and designed by Suraj Mai, the ruler of Bharatpur, in 18th century A.D. It took nearly twenty years for the fort to be completed. The name suggests the invincible nature of the fort. It stood firmly in face of repeated attacks by the British. More than splendour or lavishness, it is the air of magnificence and might that is associated with it. The Lohagarh fort of Bharatpur district is one of the best architectural monuments in Rajasthan. There are two gates in the fort, the one facing the north is called the Ashtdhaatu that is eight metalled gate. It is decorated with paintings of elephants. The gate in the south is known as Chowburja or

the four pillared gate. There are also some enthralling towers and monuments inside the Lohagarh fort. The tower Jawahar Burj was erected to celebrate the triumph of the Jats over the Mughals and the Fateh burj tower marked the defeat of the British army in the year 1803 A.D. The monuments like the Kishori Mahal, Mahal khas, Kothi khas and Moti Mahal inside the Lohagarh fort adds to its grandeur.

139. The Lohagarh fort in Bharatpur district at present has been transformed into an extensive museum. Articles like swords, daggers and guns and antiques like hunted tigers, bear kids, wood articles, vessels, jewellery boxes and ornaments have been put into display for tourists. There are also some inscriptions and historical pieces that are exhibited. The Lohagarh fort is breathing evidence to the gallantry and courage of the Jat rulers of Bharatpur

140. Another monument of Bharatpur is its palace. The Bharatpur Palace is next to Lohagarh fort in terms of magnificence and elegance. It is a medieval monument in the old city of Bharatpur in Rajasthan. It was built at different phases by different Jat maharajas of Bharatpur. The royal palace is a radiant combination of Rajput and Mughal architecture. The splendid apartments have beautiful carvings and are embedded with marvelously designed floor tiles. It gives us a vivid idea of the royal lifestyle of the Jat rulers

141. Bharatpur palace houses a museum which has a collection of antique that dates back to 2nd century. These specimens provide important historical evidence of the ancient culture of the region. The palace is located near to the museum and is within easy reach of the tourists. The designer floor tiles and the stylish furnishings are all reflective of the grace and splendour of the majestic lifestyle of the Jats

142. **Shri Banke Bihari Temple** - Built during the Mughal rule in Bharatpur, the Bankey Bihari temple in Bharatpur is a delightful temple inside the Lohagarh Fort.

143. The peace and silence that hang around the temple, as well as the soothing gongs that reverberate the still air inside the temple, make for an auspicious and serene atmosphere. The temple is dedicated to Lord Krishna and houses several idols celebrating his power and virtue. This temple is one of the best places to visit in Bharatpur.

144. **Government museum,** Bharatpur was established on 11th November, 1944. There is massive collection of antiquities of historic and artistic importance.

145. In archaeological section of museum there are several sculptures and artful slabs of stone related to Jainism, Shaivism, Vaishnavism, Shakrism and other sets. These sculptures show the religion development and sculpture art in this region.

146. On the upper storey of museum's gallery miniature paintings of various s locals and Mughal styles of Rajasthan are displayed. Manuscripts various types of artifacts of local handicrafts and stuffed animals wild animals also displayed. In arms section of the museum many kinds of arms and armoury are displayed beautifully which were used by Jat warriors and some were acquired from Britishers. These arms shows the contemporary technique of war. Artistic work on the guns and swords is very attractive.

147. Besides the exhibited material in the galleries, the baradari of lifty six pillars on the roof and bath of Indo-Irani also known as "Persian Bath" of Mughal period (Hamam) are other main attractions of the museum.

148. **Gayatri Temple** is located inside Lohagarh fort. This temple is built under the directions

of Pandit Shri Ram Sharma Acarya Ji. Here Gayatri Pillar is also located. In this temple hand written 1.25 crores Gayatri books are present. This is the centre of “The Gayatri Parivar” on divisional level under which Dholpur, Karoli, Alwar and Bharatpur is included. The fire continuously burning from last 750 years is used to start daily “YAGYA” to start the Day.

149. **Brijendra Bihari temple** was founded in 1918 by Maharaja KishanJi to commemorate the birth of his son "Maharaj Brijendra Singh Ji." Maharaja Brijendra Singh Ji later donated this temple to Mahant Shri Vallabh Acharya Ji. Brijendra Bihari Kund was built in 1918 to meet the Temple's water needs, and it included 6 ghats and 1 well. Later, this Kund was used to provide drinking water for the elephants in the Sewar fort.

150. **Saligram Temple** -. The Maharaj of Bharatpur built the temple 200-250 years ago to commemorate the birth of his son. Lord Hanuman Ji's idol can be found in the temple. This idol was discovered during excavation work for the Kund, making it more sacred and religious to the locals. The temple's first head priest was Mahant Shri Saligram Maharaj Ji, whose name the Kund and temple were named after.

151. There is an old saying about the place that when there was a lack of Ghee while making devotional offerings, the water of this Kund was used as Ghee in preparation of the same, making this Kund more of a place of belief.

152. Consultation with the Archaeological Survey of India, In its Jaipur office and consultation with State Archaeology and Museum Department in its Jaipur Head office and Bharatpur circle office was done and attached in Appendix 3 of this IEE.

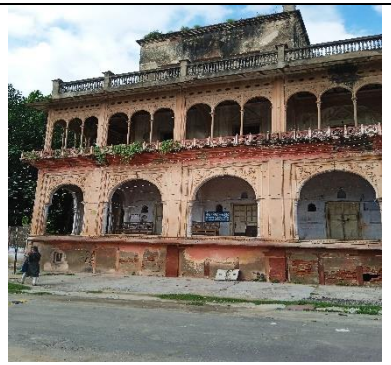
E. Environmental Settings of Investment Program Component Sites

153. Heritage monuments and sites are magnets in the city landscape which attract an influx of visitors and are often centres of intense activity. The use within these sites and their ‘pull factor’ are also far beyond the carrying capacities of the site.

154. a methodology was adopted where heritage of the city was identified, mapped and analysed to arrive at the needs for their protection, conservation and enhancement for the benefit of the communities. The components of subprojects are mainly confined to development and strengthening of Heritage sites. If any tree cutting will be required during execution mitigation measures shall be adopted.

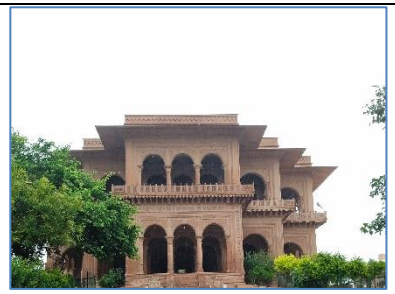
155. Site environmental features of all subproject sites and photographs are presented in the following Table 7.

Table 7: Environmental Features of Project sites

Subproject component	Environmental Features of the Site	Photographs
Conservation & Redevelopment of Town Hall Campus **The coordinates are 27°13'16.59"N , 77°29'46.86"E**	Town Hall is located within fortification walls. It exhibits a wide variety of architectural styles dating to different time periods. Therefore, it is a palette of built heritage with a rich and varied vocabulary that has continued over decades. It possesses architectural elements like round arches, stone columns, pilasters, decorative spandrels, pilasters, stone balustrades parapet, triangular pediment, piers, round clerestory window and arcaded balcony. There is a courtyard surrounded by hallways. One of the multi foil arches is designed in a typical haveli temple style where hallway is Jagmohan mandapa of a temple with garbhagriha at the centre, surrounded by a circumambulation path. There is a theatre hall with steps leading down towards the stage. The entire building has been not used for a while; some part was used as a government office, while the other part is seeing dust and has debris. The open space around the building is encroached upon by incongruous construction. The opening panels are broken and some are replaced with the inappropriate one. . There are no tree within the town hall premises, adjoining area have following plant species *Aegle marmelos, Acacia chundra, , Azadirachta indica , bauhinia racemose, Acacia nilotica, Morus alba, Eucalyptus sp., Millettia pinnata and Prosopis juliflora etc.* **Presently Owned by Nagar Nigam Bharatpur.**	  Town Hall

Subproject component	Environmental Features of the Site	Photographs
Development & Beautification of Saligram kund **27°13'58.92"N ,77°29'30.85"E**	The Kund site is situated near station road and Kund land is under the ownership of Municipal Corporation of Bharatpur. This Kund is on the grounds of Saligram Temple. The Maharaj of Bharatpur built the temple 200-250 years ago to commemorate the birth of his son. The Saligram Kund also has a well-known Hanuman temple. Total area of Kund is 9355sq.m. Pond area – 1824sq. m. Kund's structure has deteriorated, causing water to flow out of the structure. The Kund is in poor condition. The water's quality has deteriorated, and algae blooms has formed on the surface. Kund's surroundings have been transformed into a slum area and used as garbage disposal point and temporary parking for heavy vehicles. The people have encroached on Kund's surroundings and built incongruous structures. Piers or the retaining walls of Kund has lost its masonry over the time due to lack of maintenance. The thorny vegetation has outgrown at some parts of the Kund, making some areas inaccessible. The deteriorating condition of Kund has led people visiting the nearby temple to dump garbage here, making it more unhygienic. The ASI protected fort wall is at 900 m distance from the Kund and is at 3600 m distance from Keoladeo Bird sanctuary. No fish was found during the field visit in Kund and major source of water to the Kund is Girraj Canal, that drains water in the kund through a lateral sluice. Adjacent areas to kund have bushy vegetation (prominently with *Prosopis juliflora*) and a few trees of *Millettia pinnata* . No tree cutting is required for implementation of project component at Saligram Kund.	  Saligram Kund
Development & Beautification of Brijendra Bihari kund. **27°11'18.05"N, 77°26'44.34"E.**	Brijendra Bihari temple was founded in 1918 by Maharaja Kishan Ji to commemorate the birth of his son "Maharaj Brijendra Singh Ji." Kund has 6 ghats and 1 well. The Kund area is located in the outskirts of city in its western proximity 156. Total area of Kund is 8444 sq.m. Proper shore line demarcation structures are not available and the kund is in savvy condition. There is no toilet facilities in the campus of the Kund. Parking is haphazard and done on the roads as of now, in front of shops and houses and the remaining heritage structure reducing the	

Subproject component	Environmental Features of the Site	Photographs
	road width and causing congestion. **No** information and direction signage in the area. No sitting area in the entire zone where tourists/locals can breakout. Kund is currently in critical condition. The boundary and steps have been broken and must be rebuilt. The Kund is surrounded by residential neighbourhoods. Algae bloom with a foul odour occurs as a result of out falls from nearby houses and long-term water logging inside the Kund. Steps are proposed on all sides of the kund with planters in between steps randomly. The ASI protected fort wall is 5600 m away and Keoladeo National Park is situated at about 4800 m aerial distance from the project site. Source of water to the Kund is a well situated within the Kund in its northern shoreline. No trees are present on the site except few shrubs. Adjoining areas (hillock) has the *Prosopis juliflora* species as dominate plant along with *Millettia pinnata.*	  Bijendra Bihari Kund
Development & Beautification of Nehru park **27°13'17.28"N, 77°29'45.53"**E	It is a developed park near the town hall located in the fort. It has a statue of Nehru ji at the centre of the park at the entrance. The total area of Park is 7173 sq.m. • **The park has pathway but** is inadequate for number of persons visiting park. • Benches for sitting are there in the garden but not adequate all visitors. • There are no children slides • In Some area boundary wall of the park is destroyed and required immediate restoration. • Stone Clock is broken • Fountains are not working .	

Subproject component	Environmental Features of the Site	Photographs
	No tree cutting is required for implementation of project. The plant species in park and its surrounding are; *Aegle marmelos, Acacia chundra, , Azadirachta indica , bauhinia racemose, Acacia nilotica, Morus alba, Eucalyptus sp., Millettia pinnata and Prosopis juliflora etc.* Nehru park is situated at about 2300 m aerial distance from the Keoladeo National Park.	Clock at Nehru Park
Façade Lighting of City Gates	1. Mathura Gate, 2. Goverdhan Gate, 3. Chandpole Gate, 4. Surajpol Gate, 5. Neemda Gate, 6. Anah Gate, 7. B Narain Gate, 8. Kumher Gate, 9. Ketan Gate and 10. Atalbundh Gate. The gates are located in the existing Roads in the different places of city. Mostly these gates are in good shape but requires minor repair works like vegetation removal and replastering with mortar and lime.	
Façade Lighting & Illumination of, Ganga Mandir	**Ganga Mata Mandir** is a grand temple dedicated to Goddess Ganga, right in front of the Lohagarh Fort in Bharatpur. In this the idol of Goddess Ganga is shown sitting on the back of a crocodile. This statue of Goddess Ganga has been carved out of white marble stone. Another amazing sight at the temple is the 4-foot statue of King Bhagiratha. A large number of devotees visit this temple every year on religious festivals like Ganga Saptami and Ganga Dussehra. On this occasion, the temple decoration is also done in a traditional way. The temple has two entrance gates, while Lord Krishna stands holding the mountain of Giri Raj on one side; there are statues of Laxmi Narayan ji and Shiva Parvati on the other gate. The temple is remarkable for its beautiful architecture. Ganga Temple features a unique mix of South Indian, Mughal and Rajputana form of architecture. The walls and pillars of the temple are decorated with beautiful carvings. On one side of the main entrance, there is a statue of Lord Krishna holding the Giriraj Mountain, while on the other side, there are Shiva Parvati and Laxmi Narayan Ji. The king and queen could have the first sight of Ganga Maharani as a special feature of the temple, and even today, a window in their royal palace opens exactly towards the temple of Shri Ganga ji, and the king or queen can have the darshan of Shri Ganga.	 Ganga Mandir

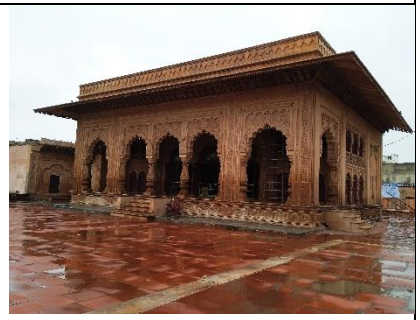
Subproject component	Environmental Features of the Site	Photographs
Façade Lighting & Illumination of Laxman Mandir,	Lakshman Temple is to Dasaratha's son Lakshman and his wife Urmila. Rama, Bharat, Shatrughna as well as Hanuman ji are enshrined in the Laxman temple in small idols. All these idols are of Astadhatu. It lies on the proposed heritage route, so it becomes significant to have proper façade lighting that focuses on its architectural features and glorify its existing beauty. The temple is made of sandstone of Badami colour from Bansi Phadpur. The temple is located on the high plinth. The front façade is adorned with variety of architectural features. The entrance has Jharokha on both sides adjoined with tibari structure. It has Jharokha windows on both the sides of the entrance. The built structure of entrance has stone chajjas supported by ornamental brackets. The steps inside multifoil arched entrance leads to the temple's Jagmohan Mandapa. Most of the architectural features are adorned with the carvings with patterns of ornaments and flowers**.** Due to later interventions of shops and shutters, the winged portion of the entrance part carrying some architectural features is now hidden facade. Hoardings and advertising boards are defacing the historic façade and hiding architectural features.	
Façade Lighting & Illumination of Jama Masjid	The Friday Mosque is located south of the fort, across from the city post office. Jama Masjid serves as a prayer ground and religious meetings of Muslims. There is also a madarsa for children, where 100s of children from different background come to learn Quran, Hadis and other Muslim scriptures. The front façade has some shops, while the back façade has incongruous interventions such as hoardings, advertisements boards, and improperly hung electrical and cable wires, which deface the historic façade. The lighting on the façade is inadequate, failing to highlight or focus on the Masjid's beautiful architectural elements.	

Figure 24: Location map of Brijendra Bihari Kund

Figure 25: Location map of Saligram Kund

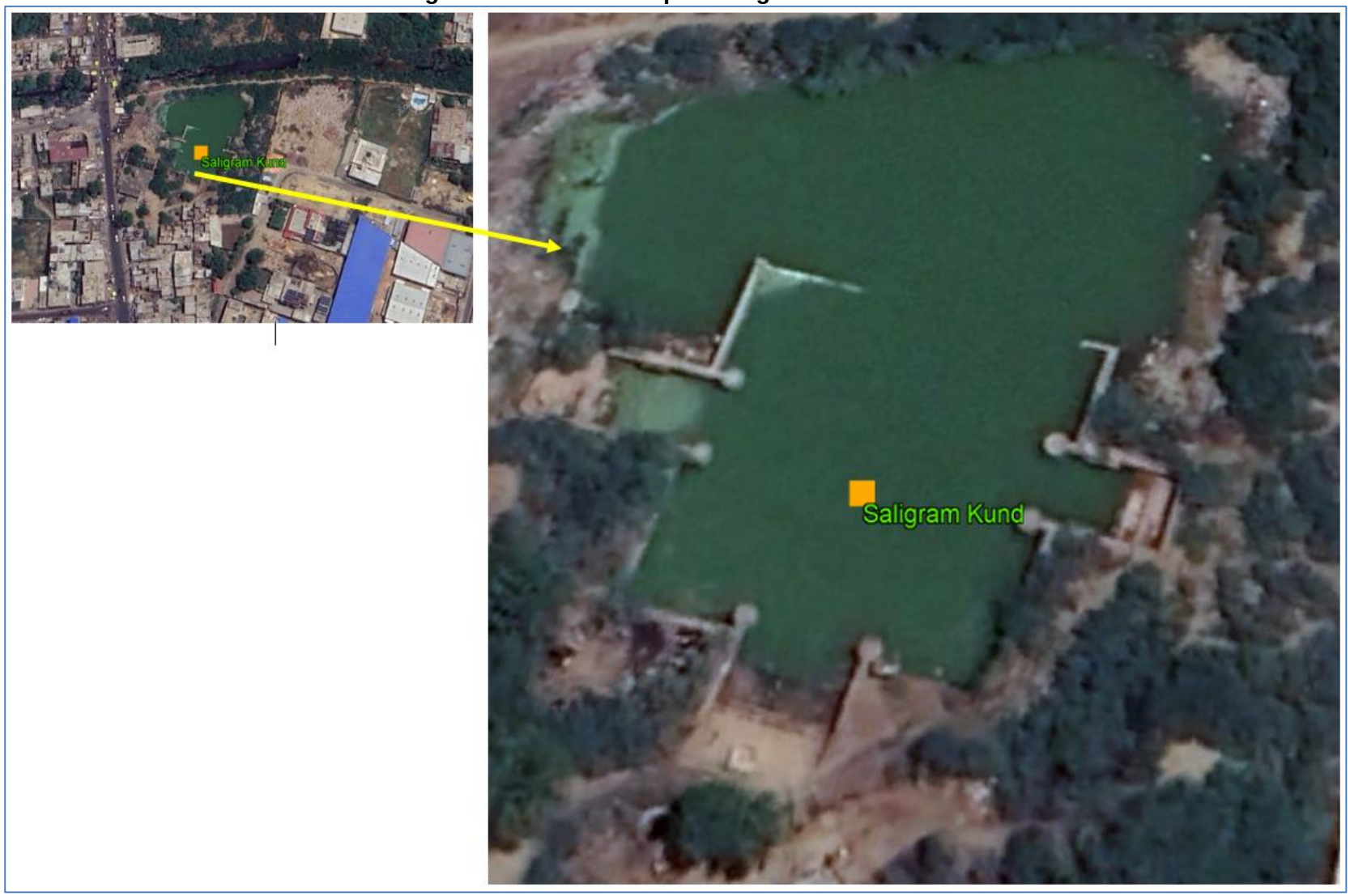


Figure 26: Location map of Nehru Park

Figure 27: Location map of Anah City Gate

Latitude: 27.213621 **Longitude: 77.482756**

Figure 28: Location map of Atal Bund City Gate

Latitude: 27.210106 **Longitude: 77.491818**

Figure 29: Location map of Chand Pol City Gate

Latitude: 27.222877 **Longitude: 77.488169**

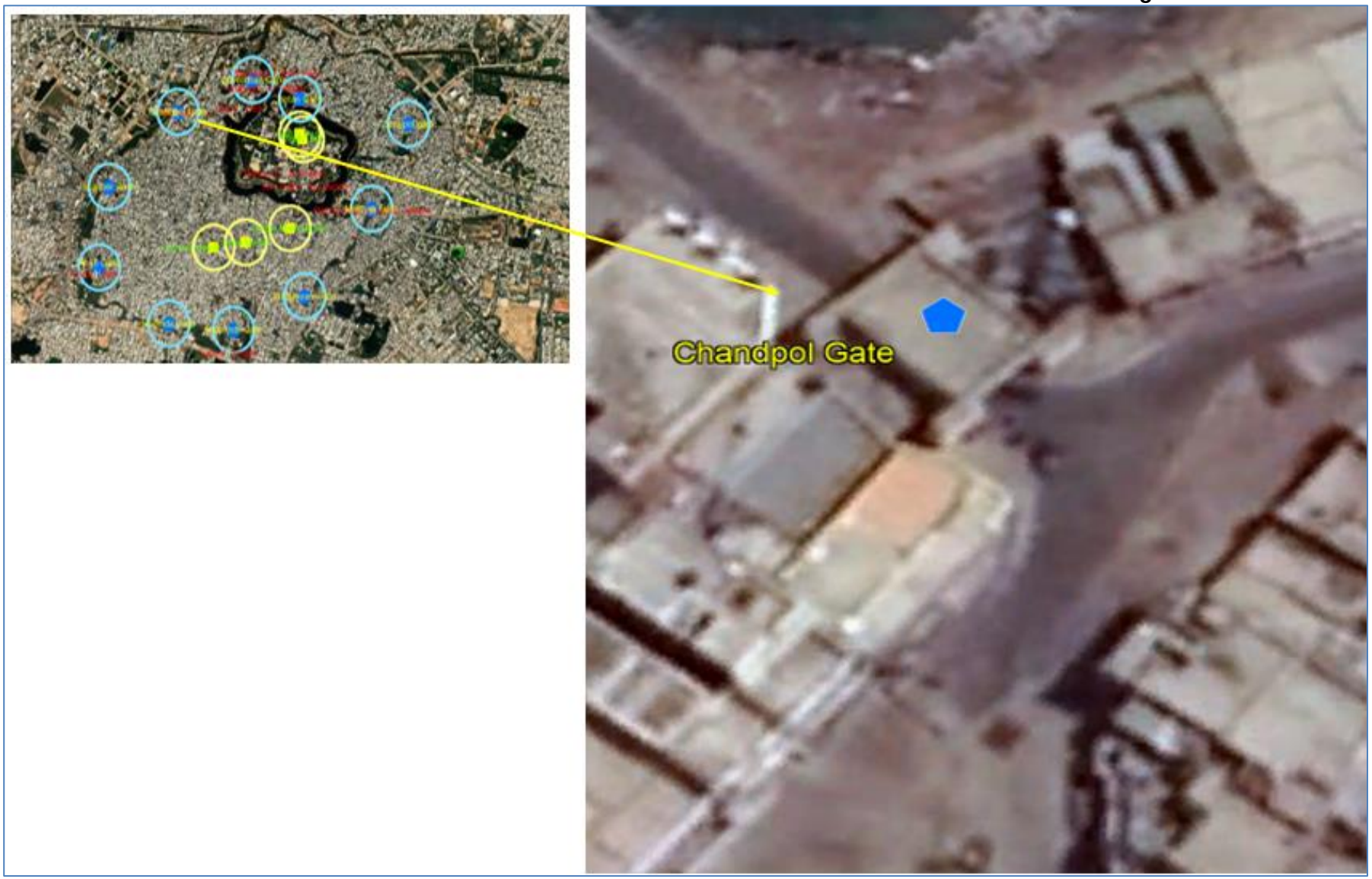


Figure 30: Location map of Kumher City Gate

Latitude: 27.218408 **Longitude: 77.483583**

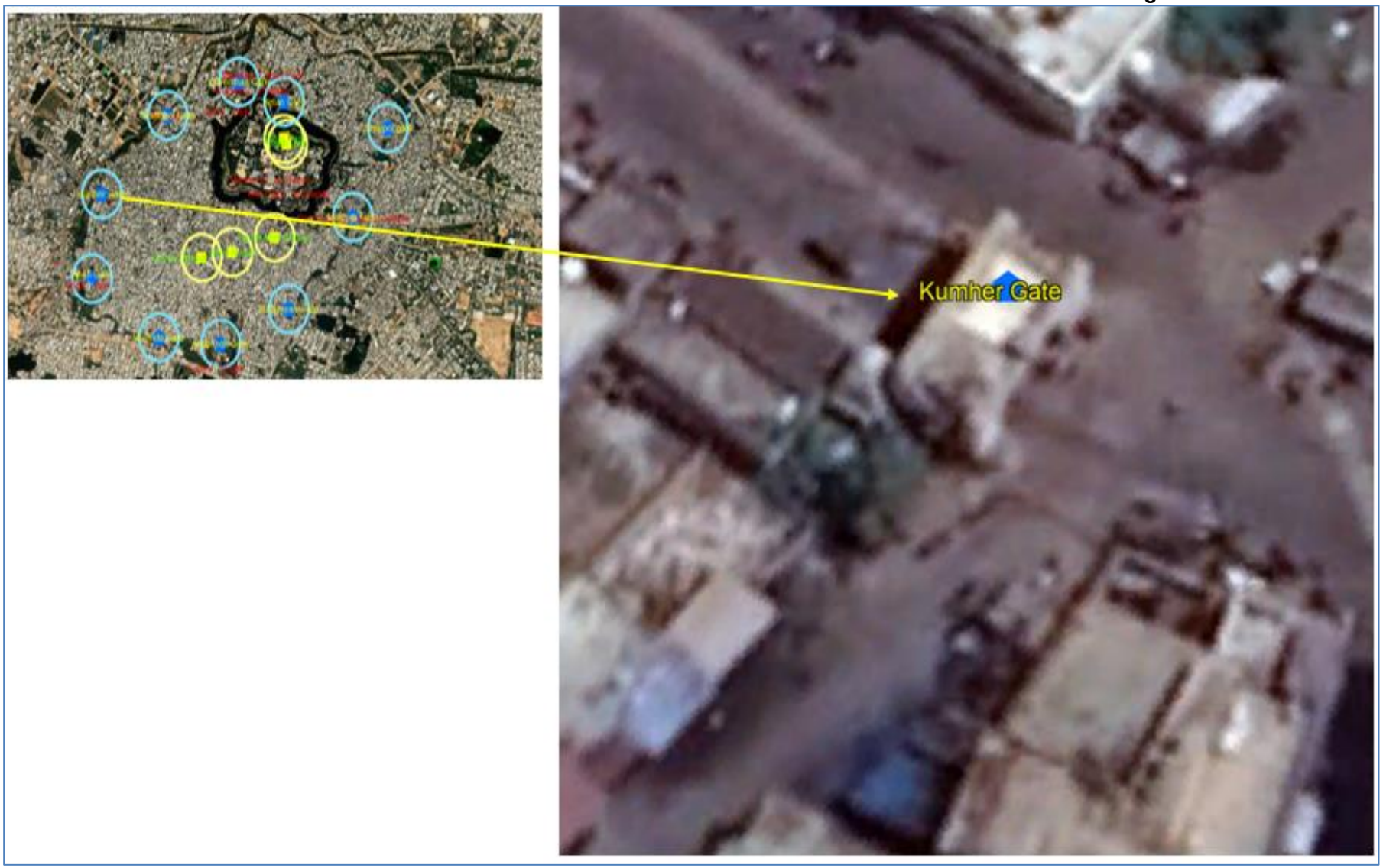


Figure 31: Location map of Goverdhan City Gate

Latitude: 27°13'29.27"N **Longitude: 77°29'34.85"E**

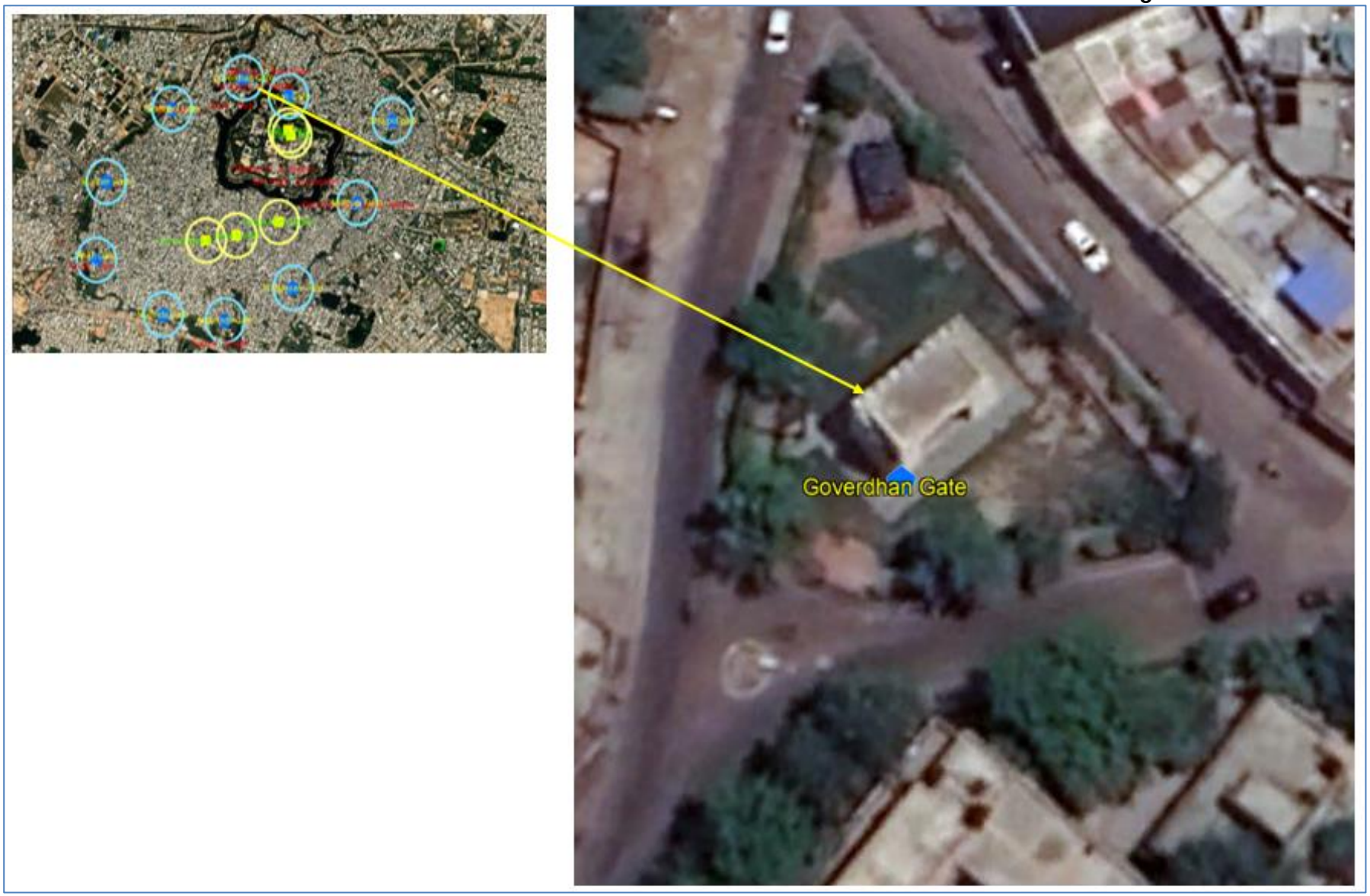


Figure 32: Location map of Surajpol City Gate

Latitude: 27°13'19.82"N **Longitude: 77°30'11.90"E**

Figure 33: Location map of Keten City Gate

Latitude 27°13'25.29"N **Longitude: 77°29'45.68"E**

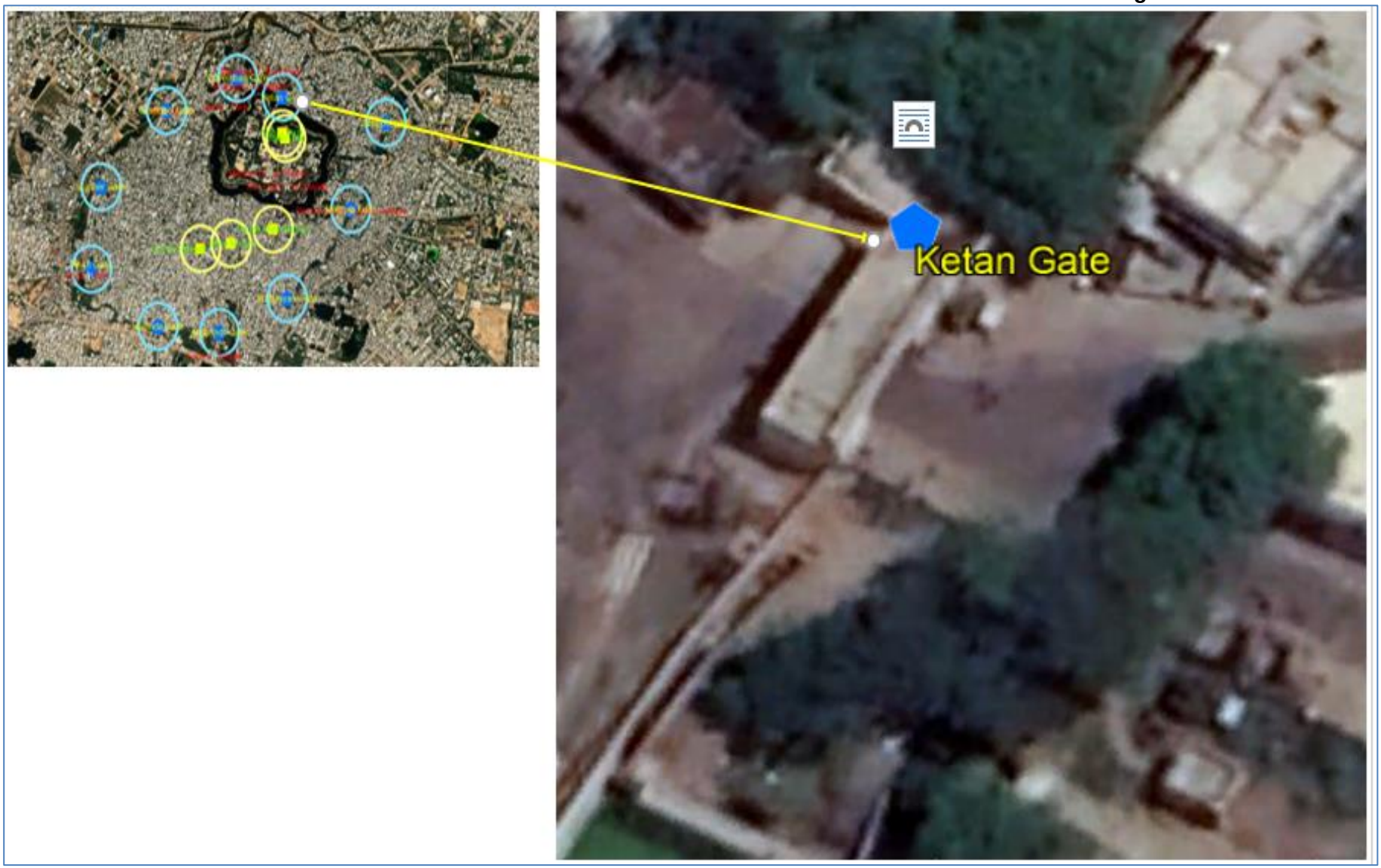


Figure 34: Location map of Mathura City Gate

Latitude: 27°13'1.60"N **Longitude: 77°30'3.14"E**

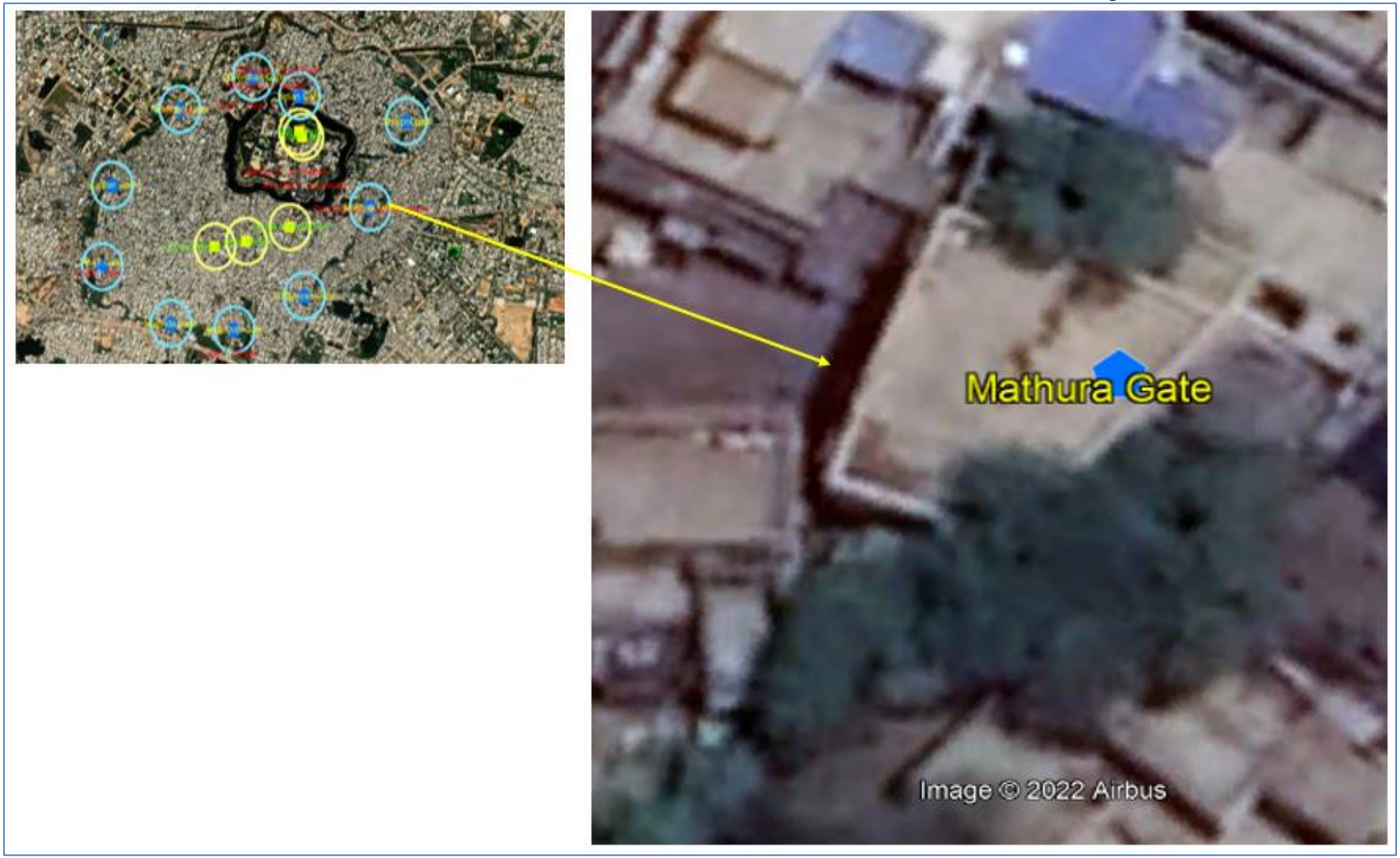


Figure 35: Location map of B Narayan Gate City Gate

Latitude: 27°12'42.82"N **Longitude: 77°29'47.21"E**

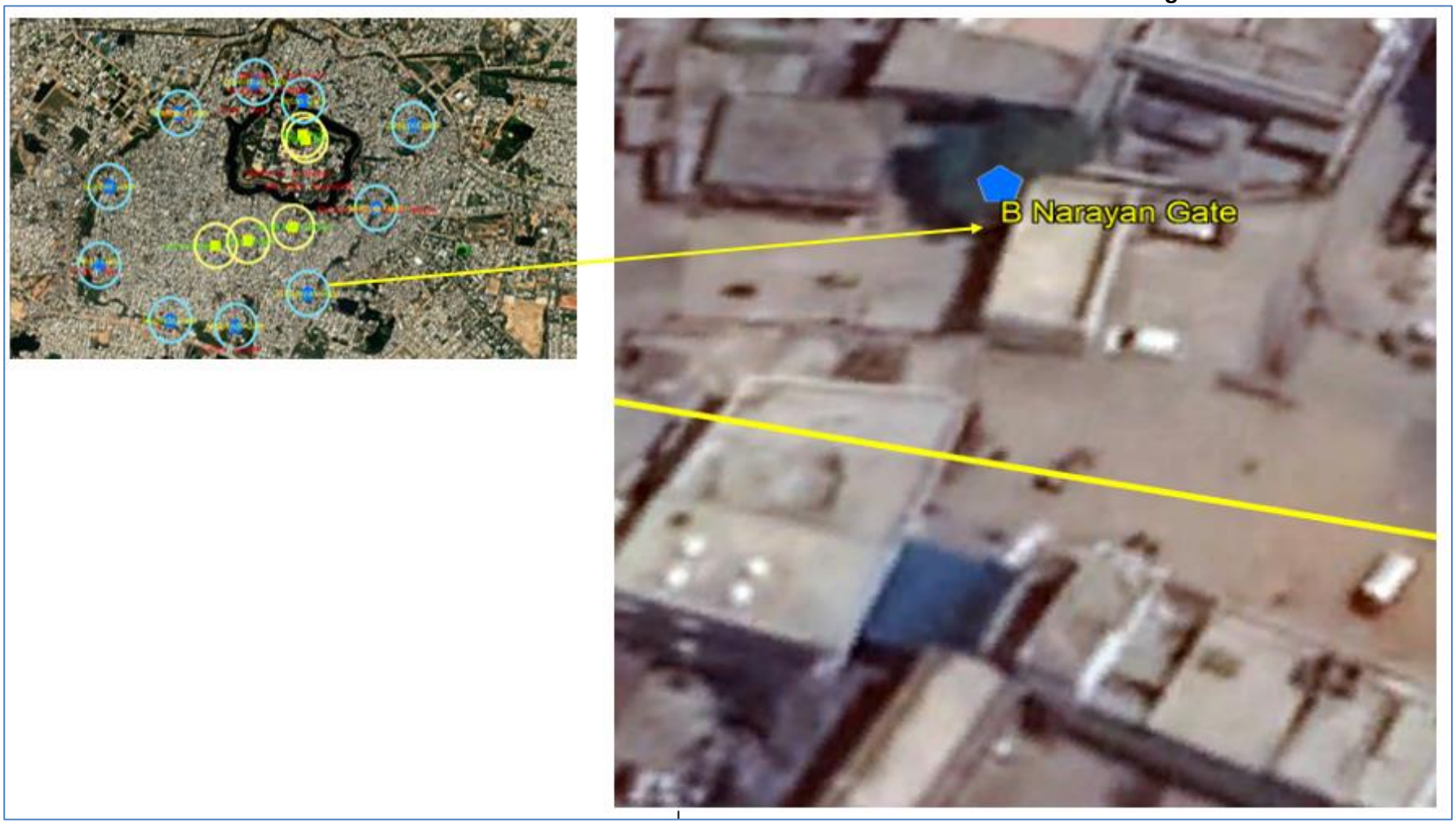
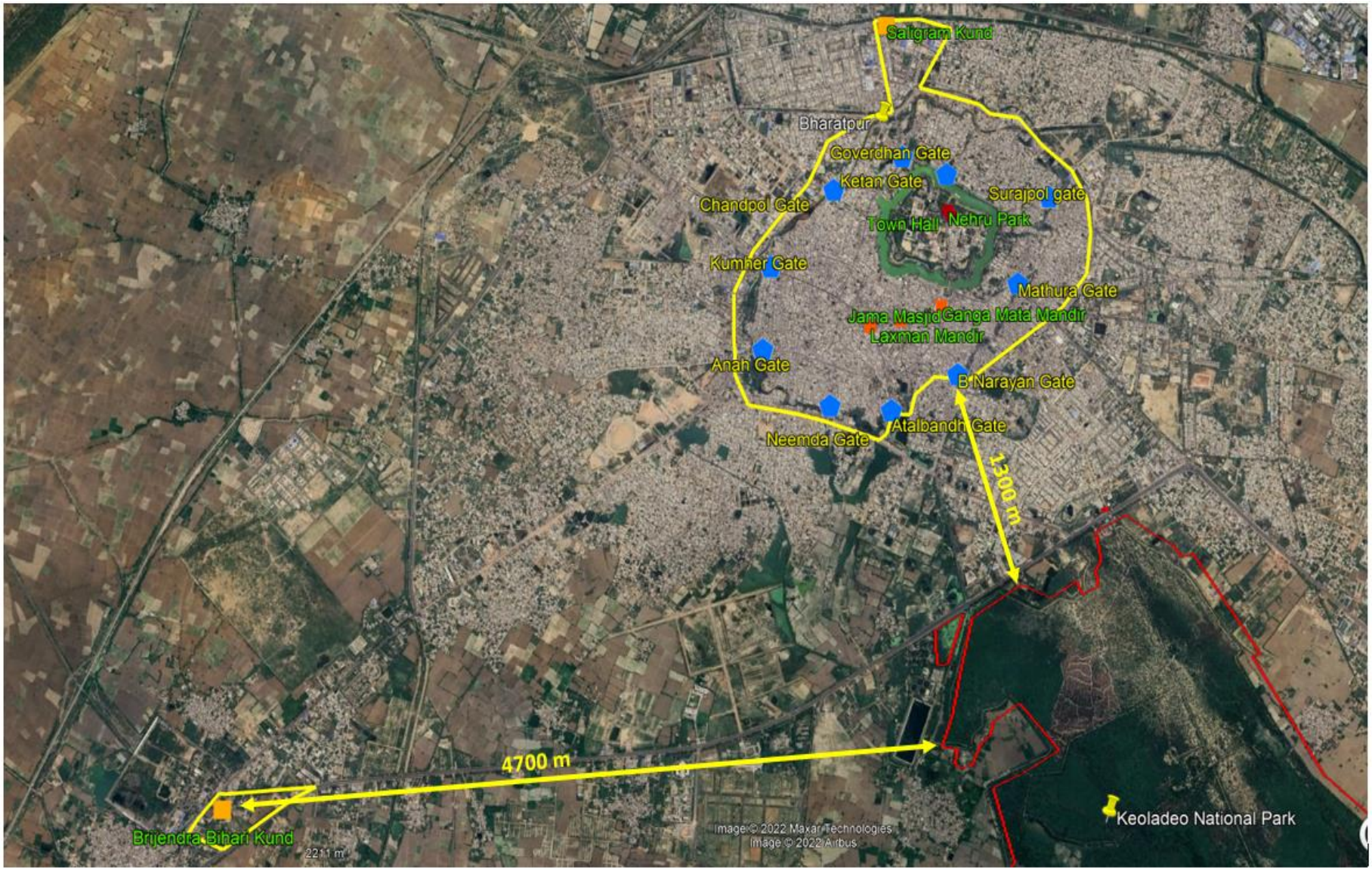


Figure 36: Location map of Neemdah City Gate

Latitude: 27°12'36.96"N **Longitude: 77°29'14.95"E**

Figure 37: Distance of Project components from Keoladeo National Park



VI. ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

A. Introduction

157. Potential environmental impacts of the proposed infrastructure components are presented in this section. Mitigation measures to minimize/mitigate negative impacts, if any, are recommended along with the agency responsible for implementation. Monitoring actions to be conducted during the implementation phase is also recommended to reduce the impact.

158. **Expected Benefits from the Project.** The tourist inflow in Rajasthan is constantly increasing, and being the headquarter of the district, a large number of people visit Bharatpur due to which it sets the record for one of the highest footfalls in the state of Rajasthan. Some of them stay there while some go to Agra. Bharatpur is connected by road to the state capital and important cities, railway connectivity is via metres gauge line and broad-gauge rail route. In the 70s and 80s, Bharatpur used to witness a heavy influx of tourists – 70% of tourists travelling from Agra to Jaipur used to halt or stay here overnight, as per the older residents of the city. Unfortunately, with the passage of time, the tourist infrastructure has degraded, there is a shortage of basic services, utilities, and fundamental resources like water. Due to this, the numbers of tourists have been falling over the last few years. Tourists travelling from Agra visit the Keoladeo National Park and Lohagarh fort on their way to Jaipur. Restoration and improvement of heritage structures in Bharatpur and development of public amenities will also lead to economic development of the city and will significantly contribute to the economy of the state. In recent times, the government has started undertaking several projects to ensure uninterrupted water supply, proper drainage and sewerage in the city. The current 'Bharatpur Tourism Beautification Project Proposal' is envisioned to act as a catalyst to increase tourism footfall in the city.

B. Design & Location Impacts – Heritage Impact Assessment

159. An heritage impact assessment (HIA) study was conducted as part of IEE by an experienced conservation architect and a heritage management plan prepared for implementation. Summary of this study is presented below, and HIA reports is appended at Appendix 2.

160. **Heritage Significance of Bharatpur:** Bharatpur was named after Bharat, Lord Rama's brother. The name 'Laxman' was engraved on the state's arms, seals, and other emblems. Aside from its association with the Ramayana, there is a belief that the Pandavas, the five brothers central to the epic of Mahabharata, had spent their 13th year of exile in Bharatpur around 3,500 years ago. The city and fort of Bharatpur was founded by Rustam, a Jat chieftain belonging to the Sogariya clan. Heritage significance and existing condition of heritage structures proposed in the subproject area presented below.

1. Heritage Significance and existing condition of subproject sites

161. **Town Hall.** Conservation and redevelopment of Town Hall campus is proposed under the subproject. Town hall is historic in nature with a distinctive medieval architecture style. It has been built in two phases which is evident from its architecture and use of materials. It comprises a raised pavilion like structure with an extension of a hall evidently built for performances. The entire building has been unused for several years – a part of the building was used as a government office; another part was used as a storage facility. Adjacent to the Town, along the principal access road is the Raj kiya Vishist Purva Uchha Madhyamic Vidyalaya (RVPUMV). This

building is of heritage value and was possibly built during the same time as the construction of the Town Hall building.

162. **Laxman Mandir, Ganga Mandir & Jama Masjid.** Under the subproject, it is proposed to provide façade lighting and Illumination of these religious/cultural places. Ganga Maharani Temple features a unique blend of South Indian, Mughal and Rajputana architectural styles. The temple has two entrance gates, while Lord Krishna is seen holding the mountain of Giri Raj on one side; there are statues of Laxmi Narayan and Shiva Parvati on the other. The walls and pillars of the temple are decorated with beautiful carvings. The temple is located across the moat, opposite the principal gateway of the citadel. The king and queen could have the first sight of Ganga Maharani, and even today, a window in the royal palace opens exactly in the direction of the temple. The building is built of Bansi Paharpur stone and gets its distinctive character from the open arcade which are present on all its sides. A long grand staircase with shallow treads leads to the temple court from the road. The building is in a good state of conservation.

163. The Jama Masjid is a monumental building, built of the Bansi Paharpur stone and is in the heart of the market street, and is located between the two temples. The three domes of the mosque tower over the other lesser significant buildings on the market street. The front façade has some shops, while the back façade is marred by incongruous elements such as hoardings, advertisements boards, and improperly hung electrical and cable wires. The lighting on the façade is inadequate as it fails to highlight the Masjid's beautiful architectural elements. The local people explained that the streetlights are inadequate, and they are frequently found in a state of disrepair.

164. Laxman Mandir is made of sandstone, Bansi Paharpur. The temple buildings are built on a high plinth, with its front façade adorned with a variety of architectural features – the entrance has gokha adjoining tibari structures, flanked by jharokha windows on both sides; and stone chajjas supported by ornamental brackets. The steps inside multifoil arched entrance leads to the temple's Jagmohan Mandapa. Due to later constructions of shops around the periphery of the building, some architectural features and embellishments such as the winged portion of the entrance façade are now hidden. Additionally, hoardings and advertising boards are detracting from the historic façade and hiding its architectural features. In recent years, the floor of the temple court, along its periphery have been provided with stone paving.

165. **Saligram & Brijendra Bihari Kund.** Subproject included restoration of these two kunds (water storage tanks). Saligram kund is cruciform in shape, the kund has remanent of masonry which define three of its four sides. Built primarily of brick masonry in lime mortar with decorative features in red sandstone. The kund is currently in a poor condition with deteriorating masonry and extensive vegetation growing around it. A temple is located on one of the sides of the kund and a small informal settlement has developed on the other edge.

166. The Brijendra Bihari kund is one of the historic water structures in the town located adjacent to an important temple. Water from the Kund was used for rituals in the temple but due to pollutants in the water from sewage, this water is no longer used for ritual purposes. The temple is situated on one of the Kund's edges, recently developed residential neighbourhoods can be found on two of its sides, and a raised mound with a Goddess shrine is on its fourth side along agricultural fields. The extent of the property (water tank with the open space and temple in the setting) requires to be defined. This is necessary for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future. The source of water in the tank is a well which is located on its inner edge, with the principal source possibly being storm water contaminated by untreated sewage from the area around. The water

from the tank overflows into a drainage channel which is currently overgrown with vegetation.

167. **Nehru Park.** Redevelopment of Nehru Park, a public park located within the citadel adjacent to the Town Hall building is proposed in the project. The park has provisions of pathways, benches, children's play area all enclosed by a boundary wall. The forecourt has several vendors addressing the needs of the local visitors. The features within the park are in a state of disrepair.

168. **Façade Lighting & Illumination City Gate various City gates (except ASI protected gate) at different location in town are proposed for façade lighting are** 1. Mathura Gate, 2. Goverdhan Gate, 3. Chandpole Gate, 4. Surajpol Gate, 5. Neemda Gate, 6. Anah Gate, 7. B Narain Gate, 8. Kumher Gate, 9. Ketan Gate and 10. Atalbundh Gate.

2. Heritage Impact Assessment of Proposed Works and Recommendations

169. **Town Hall**. Town Hall is proposed to be used as a Centre for Performing Arts. From the architecture of this historic building it is evident that the building has been built in two phases. Phase 1 of the building comprises a building comprising an arcade around an inner pavilion chamber enclosed within a single bay deep rooms and verandas on two sides. This is a two-storeyed building built over a raised plinth. The second part or phase of the building is a large hall towards the rear of the building which is built of relatively modest materials – brick masonry walls and corrugated iron sheets. This hall with sloping roof houses a stage towards the rear, it is evident that the hall was used as a multipurpose hall. The building is currently used as a storage facility by the urban local body and is in a poor state of conservation.

170. The building is of architectural significance and merits its conservation and reuse as a space for performing arts as recommended in the proposed project. This is in accordance with the available spaces in the historic building. The hall shall be used considering the architectural typology, its features of pavilion-like form with embellished few walls.

171. Details on conservation to be worked out prior to implementation by contractor. Conservation works must be carried out by a specialised contractor who has prior experience in undertaking such works. Special terms in the contract should be included that the contractor be required to have a conservation architect overlooking the design development process and detailing along with the MEP (Mechanical, Electrical and Plumbing) consultants, in the event that the PIU/PMU may not have the required specialisation.

172. The building is within the 300 metres buffer zone of the ASI protected monument of the citadel gate and moat and therefore the conservation and reuse plan would require to be approved by the National Monument Authority.

Observations

(i) Reuse of spaces and parts of the building to ensure appropriate interventions to protect the integrity of the monument. Provision of services can cause distress in the historic building as chases are made to provide electrical cables etc.

(ii) Use of modern materials for conservation and repair can be incompatible with historic materials and lead to loss of authenticity in the historic building.

Mitigation measures

(i) Prepare detailed conservation plan based on detailed documentation of materials, condition, and conservation planning. Detailed design of adaptive reuse with detailed design of engineering services including electrical, plumbing, and

mechanical.

(ii) Conservation to be carried out by specialised contractor who has prior experience in such works.

(iii) The special terms in the contract are recommended to include that contractor is required to have in his team, a conservation architect for design development and detailing along with the MEP consultants.

(iv) Prior applicable permissions from ASI, Government of India

(v) Structural engineer to be part of the project team to provide details for structural repair and retrofitting. All design to be reviewed by a conservation architect.

(vi) Avoid any additional structure within the town hall.

173. **Nehru Park** is in the Citadel adjacent to the fortification wall which forms the inner edge of the moat. The moat and the two gates of the Citadel are protected monuments by Archaeological Survey of India and hence development within 100 metres and 200 m are prohibited and regulated areas. Any work to be undertaken in the Nehru Park would solicit NOC/approval by National Monuments Authority. The project components are for the repair of clock built in the landscape, provision of street furniture, pathways, enhancement of children's play area, and boundary wall repair. As Nehru Park and Town Hall share a boundary, it is recommended that the park be considered for interlinking through gates with the Town Hall through landscape design– as Town Hall as a Centre for Performing Arts would merit some open space – possibly as an outdoor space for performing arts. In the current condition there is very little open space within the Town Hall complex. The landscape plan for Nehru Park could be reorganised responding to the need. Further, the edge of Nehru Park and Town Hall is recommended to be reorganised to include a proper parking facility as the building of Town Hall borders the road and use as the Performing Arts (Rangshaala) would generate traffic. Proper management of the edge would facilitate efficient and safe vehicular and pedestrian movement.

Observations

(i) The park is within a historic citadel and in close proximity to ASI protected monuments; the fortification wall of the citadel defines one of the edges of the park, bold and over decorative interventions can compromise the spirit of the place and loss of authenticity of the historic setting.

Mitigation measures

(i) Low impact interventions which do not overpower the historic attributes of the setting.

(ii) Use of local/ historic / natural materials which are similar in colour, texture with the historic materials and techniques used in the historic buildings (for instance random rubble stone masonry in walling, rough sandstone etc.)

174. **Façade lighting & Illumination of City Gates (Chandpole Gate, Surajpol Gate, Kumher Gate, Mathura Gate, Ketan Gate, Neemda Gate, Atalbandh Gate, B Narain Gate, Gobardhan Gate And Anah Gate)-**The city gates are proposed to be illuminated under subproject. The Gates proposed for façade lighting are state protected monuments. Details on illumination to be worked out prior to implementation by contractor. Implementation of this work must be carried out by a specialised contractor who has prior experience in undertaking lighting on historic buildings. Special terms in the contract should be included that the contractor be required to have a conservation architect overlooking the design development process and detailing along with the Electrical consultants. Works on the city gates would need permission from the state department of archaeology and Museum.

Observation

(i) Cables and fittings mounted on the surface of the monument are invasive and will cause irreversible damage to the historic surfaces

Mitigation measures

(i) Following Illumination fittings guidelines may be used in detail designing:
   (a) Provide on independent floor mounted or pole mounted structures.
   (b) No fixtures should be visible on surface
   (c) No wiring to be visible on surface
   (d) Prior applicable permissions from ASI/Department of Archaeology and Museum, Government of Rajasthan

175. **Façade lighting& Illumination of Laxman Mandir, Ganga Mandir & Jama Masjid;** The buildings are of considerable architectural and historic significance. These are built of stone exterior surfaces. The courtyard/open spaces around a central/building have stone paving. Details on illumination to be worked out during the detailed design / prior to implementation by contractor. Implementation of this work must be carried out by a specialised contractor who has prior experience in undertaking lighting on historic buildings. Special terms in the contract should be included that the contractor be required to have a conservation architect overlooking the design development process and detailing along with the Electrical consultants.

Observations

(i) Cables and fittings mounted on the surface of the monument are invasive and will cause irreversible damage to the historic surfaces

Mitigation measures

(i) Following Illumination fittings guidelines may be used in detail designing
   (a) Provide on independent floor mounted or pole mounted structures.
   (b) No fixtures should be visible on surface
   (c) No wiring to be visible on surface
   (d) Project team may re-consider the proposal for number of proposed lightning.
   (e) Prior applicable permissions from ASI and state archaeology and museum department.

176. **Conservation & Redevelopment of Saligram Kund & campus and Conservation & Redevelopment of Bijendra Bihari Kund & Campus;** The historic town of Bharatpur has a unique system of water channels, and water bodies. The water channels include a complex system of flood management and irrigation canals and drains. The moat of the Citadel is part of this complex system which was found to be filled to its brim in the month of August 2022. Other than these there are water tanks which were of historic and cultural significance.

177. Saligram temple Kund: Evidently cruciform in plan, built of brick masonry set in lime mortar of which only three wings are visible. The fourth wing was explained by the local resident to comprise of a ramp which provided for animals to access water. The source of water was explained by a local resident to be from a well, in the past it was apparently from a canal which continues to exist but does not supply any water now. The canal was found to be overgrown with vegetation and with debris and garbage. The water is contaminated by sewage water and the extent of property of this historic tank is not clear and all the four edges have different edge conditions. Edge 1 – a temple, open four court of temple with informal parking of trucks. A road is

present on the outer edge; Edge 2 – Bushy vegetation at the edge of the tank; Edge 3 – high wall of an adjoining semi-industrial plot; Edge 4 – The overgrown canal. The extent of the property (water tank with the open space and temple in the setting) requires to be defined. This is necessary for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future.

178. The scope of the project is conservation of historic fabric of tank and landscape interventions. The extent of the property (water tank with the open space and temple in the setting) requires to be defined. This is necessary for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future. It is further recommended that a hydrologist and environmental engineer be part of the team for detailed planning for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future. Also, that the planning addresses appropriate ecologically responsive techniques for both the quantity and quality of the water in the Kund. It is recommended that the contractor be required to provide conservation and detailed landscape design as part of his scope of work.

Observations

- Conservation and repair with modern materials and structural details will cause loss of authenticity of the historic structure. 'Beautification' needs to be based on understanding of the historic attributes of the water body and its setting, more specifically the relationship with the temple absence of which will lead to loss of authenticity and integrity of the structures and its setting

Mitigation measures

- The contractor be required to provide detailed conservation and landscape design as part of his scope of work.
- The scope of the project is conservation of historic fabric of tank and landscape interventions.
- The extent of the property (water tank with the open space and temple in the setting) requires to be defined.
- This is necessary for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future.
- It is further recommended that an environmental engineer be part of the team for detailed planning for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future.
- Also, that the planning addresses appropriate ecologically responsive techniques for both the quantity and quality of the water in the Kund. It is recommended that the contractor be required to provide conservation and detailed landscape design as part of his scope of work.

179. **Bijendra Bihari Kund:** this tank is located adjacent to the Jaipur Bharatpur highway and in close proximity to an important historic temple. The temple is frequented by local people more specifically women for various rituals throughout the day. In the past water from the tank was used for rituals in the temple but due to pollutants in the water from sewage, this water is not used for ritual purposes. Several interventions are being done in the setting of the tank without

adequate consideration of historic, architectural or/and association in value of the various cultural and social components because of which the cultural significance of the temple precinct (of which the tank forms a part) is being compromised. The tank has the temple on one of its edges, residential neighbourhoods (recently developed) on two of its side, a raised mound with a Goddess shrine on one side along agricultural fields. The source of water in the tank is a well which is located on the inner edge of the tank. Principal source possibly being storm water (contaminated with untreated sewage from the area around). The overflow from the tank is into the drainage channel which is currently overgrown which vegetation and floors along the agricultural field and under the highway to across the road.

180. **Saligram Kund.** As in the case of the Saligram kund, the scope of the project is conservation of historic fabric of tank and landscape interventions. The extent of the property (water tank with the open space and temple in the setting) requires to be defined. This is necessary for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future.

181. Detailed planning for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future. Also, that the planning addresses appropriate ecologically responsive techniques for both the quantity and quality of the water in the Kund. It is recommended that the contractor be required to provide conservation and detailed landscape prior to start of restoration activities. Catchment of Saligaram Kund area is proposed to be covered under Bharatpur Sewerage project under RSTDSP-AF, and Brijendra Bhihari Kund under FSSM components of subproject.

Observations

- Use of modern materials and techniques for all the conservation and repair works; 'Beautification' needs to be based on understanding of the historic attributes of the water body and its setting, more specifically the relationship with the temple absence of which will lead to loss of authenticity and integrity of the structures and its setting

Mitigation measure

- The extent of the property (water tank with the open space and temple in the setting) requires to be defined.
- This is necessary for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future.
- It is further recommended that an environmental engineer be part of the team for detailed planning for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future.
- Also, that the planning addresses appropriate ecologically responsive techniques for both the quantity and quality of the water in the Kund.
- It is recommended that the contractor be required to provide conservation and detailed landscape design as part of his scope of work

C. Pre-construction Impacts

182. **Consents, permits, clearances, no objection certificate (NOC), etc.** Necessary consents/NOC as per section IV will be required during pre-construction phase and before any civil works commence. A copy of Consent/Permission/Clearance/ NoC should be included in the monitoring reports and submitted to the PIU by the Contractor. Failure in obtaining the same will result in delay of work and may lead to stoppage of works. Following measures needs to be implemented:

- HIA recommendations should be considered in final designs
- ULB to obtain all necessary consents, permits, clearance, NOCs, etc. prior to start of civil works.
- Contractor to obtain necessary consents, permits, license etc., required for construction, and submit copies to PIU; PIU to acknowledge in writing
- PMU to update IEE and EMP prior to starting of works to reflect any changes in project design during design verification and detailed field survey, and submit to ADB for clearance and disclosure
- Contractor to prepare SEMP based on the updated EMP, and approved by PIU prior to commencement of works
- Include in detailed design drawings and documents, all the conditions and provisions stipulated in permits, consents issued by regulatory agencies, if any.
- Contractor to conduct pre-construction (baseline) environmental monitoring as indicated in EMP budget tables. The monitoring results shall be referred as baseline quality for key environmental parameters of air, water and noise)
- Continue consultation with the local communities during detailed design, and implementation and provide information in the language that is understandable to the local community regarding project activities and the anticipated impacts as part of the project information dissemination.
- Due to the current COVID-19 pandemic situation, there is a risk of virus spread at the work sites and offices, endangering the health and lives of workers and staff, and surrounding community, Proper measures need to be put in place at the work sites, and offices as stipulated by the government regulations and advisories issued by international organizations such as World Health Organization (WHO), International Labour Organization (ILO) etc.,, and contractor should ensure that proper measures are put in place and ensure compliance. Contractor should also encourage vaccination of all workers and staff engaged in project work.

183. **Utilities**. Works are located within the project sites Telephone lines, electric poles and wires, within the proposed project locations may require to be shifted in few cases. To mitigate the adverse impacts due to relocation of the utilities, the contractor, in collaboration with ULB will:

- identify the locations and operators of these utilities to prevent unnecessary disruption of services during construction phase; and
- Instruct construction contractors to prepare a contingency plan to include actions to be done in case of unintentional interruption of services.

184. **Preparation of H&S Plan for Pandemic like COVID-19,** With the existing EHS guidelines contracture has to prepare a site specific EHS plan including COVID -19 guidelines based on **following** principles and it get approved from PMU before staring of construction, the Contractor shall abide by the most stringent procedure available.

(i) Consistently practice social distancing.
(ii) Cover coughs and sneezes.
(iii) Maintain hand hygiene.
(iv) Clean surfaces frequently.

185. **Site selection of construction work camps, stockpile areas, storage areas, and disposal areas.** Residential areas will not be considered for setting up construction camps to protect the human environment (i.e., to curb accident risks, health risks due to air and water pollution and dust and noise and to prevent social conflicts, shortages of amenities and crime). Extreme care will be taken to prevent disposals near forest areas, water bodies, swamps or in areas which will inconvenience the community. Construction sites, including disposal sites, will be selected by Contractor in compliance with these conditions and the same will be reflected in Site Environmental Management Plan (SEMP) which is to be prepared by Contractor prior to start of construction and approved by PIU.

D. Construction Impacts

186. **Site selection of sources of materials.** Extraction of materials can disrupt natural land contours and vegetation resulting in accelerated erosion, disturbance in natural drainage patterns, ponding and water logging, and water pollution. To mitigate the potential environmental impacts, locations of quarry site/s and borrow pit/s (for loose material other than stones) would be assessed by PIU. Priority would be sites already permitted by Mines and Geology Department. If new sites are necessary, these would be located away from population centres, drinking water intakes and streams, cultivable lands, and natural drainage systems; and in structurally stable areas. It will be the construction contractor's responsibility to verify the suitability of all material sources and to obtain the approval of Department of Mines & Geology and local revenue administration. If additional quarries will be required after construction is started, then the construction contractor shall use the mentioned criteria to select new quarry sites, with written approval of PIU. Contractor will identify sources of water for construction purposes and obtain necessary permissions as required, and approval of PIU before the use. Details of material sources and water sources will be provided in SEMP.

187. **Debris disposal Site.** Prior to the commencement of works, contractor shall identify a debris disposal site in consultation with the PIU and Consultant. Contractor will prioritize the use of solid/construction waste disposal sites operated under the consent from RSPCB. Contractor will follow all the prescribed rules during construction and adhering to following criteria (including but not limited to)

- Contractor shall prepare a construction and demolition waste management plan in pre-construction phase for safe disposal of construction and demolition wastes as per applicable rules and submit to PIU for approval
- Dispose the construction waste and debris in construction and demolition waste management facility approved by RSPCB; if such facility is not available near the project town, the contractor shall identify disposal site confirming to the criteria, obtain permissions from local body and government agencies as required, and submit for the approval of PIU; disposal sites shall be used only after approval of the PIU
- Sites shall not be located in forest areas, water bodies or drainage lines, swamps or in areas which will inconvenience the community
- The site shall be selected preferably from barren, infertile lands.

- The local governing body and community shall be consulted while selecting the site.
- Debris disposal site shall be at least 200 m away from surface water bodies.
- No residential areas shall be located within 100 m downwind side of the site.
- The site is minimum 250 m. away from sensitive locations like hospitals, religious places, ponds/lakes or other water bodies.

188. **Impact due to Waste Generation**. Construction activities will produce excess excavated soils, excess construction materials, and solid wastes (such as removed concrete, wood, packaging materials, empty containers, oils, lubricants, and other similar items). These impacts are negative but short-term and reversible by mitigation measures. The contractor will need to adopt the following mitigation measures:

- Avoid stockpiling of excess excavated soils;
- Coordinate with ULB for beneficial uses of excess excavated soils or immediately dispose to designated areas;
- Manage solid waste according to the following hierarchy: reuse, recycling and disposal. Include designated/approved disposal areas in waste management plan.
- Coordinate with Local authority/ ULB for beneficial use of excavated materials or immediately dispose to designated areas.
- Recover used oil and lubricants and reuse; or remove from the site.
- Avoid stockpiling and remove immediately all demolished materials, excess construction materials, and solid waste (removed concrete, wood, packaging materials, empty containers, oils, lubricants, and other similar items).
- Prohibit disposal of any material or wastes (including human waste) into drainage, nallah, or kunds

189. **Sources of Materials**. Significant amount of gravel, sand, coarse aggregate, and cement will be required for this project. The **construction** contractor will be required to:

- Use material sources permitted by government[6;]
- Verify suitability of all material sources and obtain approval of PIU;
- Ensure that the loading and unloading of the materials and the transportation of the materials from source to construction site does not cause impact on health and safety of the workers and the community; and
- Submit to PIU on a monthly basis documentation of sources of materials. If contractor is purchasing ready mix concrete, asphalt/macadam and aggregates from third party, contractor will assure that all the parties/ suppliers are having CTE/CTO from RSPCB and will collect the copy of these certificates and submit to PIU/consultants.

190. **Air Quality**. Emissions from construction vehicles, equipment, and machinery used for excavation and construction will induce impacts on the air quality in the construction sites. Anticipated impacts include dusts and increase in concentration of vehicle-related pollutants such as carbon monoxide, sulphur oxides, particulate matter, nitrous oxides, and hydrocarbons. These however will be temporary limiting to construction activities only. To mitigate the impacts, construction contractors will be required to:

[6]CTE and CTO will be required for batching plant, hot mix plant, crushers etc. if specifically established for this project. If contractor is purchasing raw material or ready mix concrete, asphalt/macadam and aggregates from third party, he has to be assured that third party is having CTE/CTO from RSPCB and should collect the copy of these and submit to PIU/consultants. Quarry sites should also have the desired permissions.

- Damp down exposed soil and any stockpiled material on site by water sprinkling;
- Use tarpaulins to cover sand and other loose material when transported by trucks;
- Clean wheels and undercarriage of haul trucks prior to leaving construction site
- Don't allow access in the work area except workers to limit soil disturbance and prevent access by barricading and security personnel
- Fit all heavy equipment and machinery with air pollution control devices which are operating correctly, DGs should have proper stake height as per norms;
- Ensure all the equipment are having PUC certificates
- Do regular water sprinkling in dusty areas to reduce dust emission during works
- Damp down the structures before demolishing to reduce dust emission
- Damp down on regular basis all the access ways
- Maintain all the equipment and vehicles to reduce emission of smoke and keep pollution under control and keep records of periodic maintenance
- Conduct ambient air quality monitoring periodically as per Environmental Management Plan EMP

191. **Surface Water Quality.** The Project Conservation & Development of Heritage Sites Bharatpur, however, the scope of work do not have any impact on its water quality. Nevertheless, run-off from stockpiled materials and chemical contamination from fuels and lubricants during construction works can contaminate the drainage system of City. These potential impacts are temporary and short-term duration only. However, to ensure that these are mitigated, construction contractor will be required to:

- Avoid to construct any construction camps and labour camps near to any water body and do not allow to dispose any waste or sullage in to any water body
- Avoid stockpiling of earth fill especially during the monsoon season unless covered by tarpaulins or plastic sheets;
- Prioritize re-use of excess spoils and materials in the construction works. If spoils will be disposed, consult with PIU on designated disposal areas;
- Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies;
- Place storage areas for fuels and lubricants away from any drainage leading to water bodies and provide impermeable lining under the storage yard of fuels and lubricants
- Dispose any wastes generated by construction activities in designated sites;
- Keep oil tray or pans under the Diesel Generator (DG) set or during maintenance of mechanical equipment to avoid oil spillage resulting soil and water pollution, and
- Conduct surface water quality Monitoring according to the Environmental Management Plan (EMP)

192. **Impact on** Groundwater **and Soils**: The proposed project activities are not expected to interfere with groundwater regime. No groundwater abstraction is proposed for the proposed project activities. Indiscriminate disposal of wastewater from labour camps, construction sites, and construction waste, spillage of oils and lubricants may contaminate soil and the groundwater. Proper and safe disposal of wastewater, and handling of material and waste is necessary to mitigate these impacts. Measures suggested under “impacts due to waste generation” and “worker camps” shall be implemented.

193. **Noise and Vibration Levels**. Construction works will be conducted along the roads in Bharatpur urban area, where there are majorly houses, commercial activities, few religious places and small-scale businesses. The sensitive receptors are the schools, religious places, hospitals in these areas. Increase in noise level may be caused by excavation, particularly breaking of cement concrete or bitumen roads, operation of construction equipment like concrete mixers, and the transportation of equipment, materials, and people. Vibration generated from construction activity, for instance from the use of pneumatic drills, will have impact on nearly buildings. This impact is negative but short-term, and reversible by mitigation measures. The construction contractor will be required to:

- Plan activities in consultation with PIU so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance;
- Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach;
- Minimize noise from construction equipment by using vehicle silencers, fitting jackhammers with noise-reducing mufflers, and use portable street barriers to minimize sound impact to surrounding sensitive receptor;
- Diesel Generators being used at site should have sound reducing (acoustic) enclosures,
- Avoiding any use of pneumatic drills
- Consult the custodians of important buildings, cultural and tourism authorities and local communities in advance of the work to identify and address key issues, and avoid working at sensitive times, such as religious and cultural festivals, etc.;
- Provide all workers appropriate PPEs like ear plug/muff, working in high noise conditions;
- Keep all vehicles and equipment in good conditions to avoid excessive noise generation;
- Consult in advance with habitants and inform them about the nature and duration of works
- Conduct noise monitoring according to the Environmental Management Plan (EMP)

194. Socio**-Economic - Income**. The project components will be located in government land and there is no requirement for land acquisition or any resettlement. Construction works unlikely to impede the access of public .

195. **Socio-Economic-Employment**. Manpower will be required during the 12-months construction stage. This can result in generation of temporary employment and increase in local revenue. Thus, potential impact is positive and long-term. The construction contractor will be required to:

- Employ local labour force to the maximum extent
- Secure construction materials from local market.

196. **Occupational Health and Safety.** Workers need to be mindful of the occupational hazards which can arise from works. Potential impacts are negative and long-term but reversible by mitigation measures. Construction contractor will depute experienced EHS personnel and will be required to:

- Comply with all national, state and local labour laws (see **Appendix C-12**);
- Develop and implement site-specific occupational health and safety (OH&S) Plan
- Ensure that qualified first-aid is provided at all times. Equipped first-aid stations shall be easily accessible throughout the site;

- Provide medical insurance coverage for workers;
- Secure all installations from unauthorized intrusion and accident risks;
- The project area experiences extreme temperature during summer months of April and May, which may affect the health of workers engaged in construction work. Contractor should take necessary measures during summers including the following:
- Provide appropriate shade near the work place; allow periodic resting and provide adequate water
- Provide necessary medicine and facilities to take care of dehydration related health issues
- Provide supplies of potable drinking water;
- Provide clean eating areas where workers are not exposed to hazardous or noxious substances;
- Provide H&S orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;
- Provide visitor orientation if visitors to the site
- Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas;
- Ensure moving equipment is outfitted with audible back-up alarms;
- Mark and provide sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate; and
- Disallow worker exposure to noise level greater than 85 dBA for duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.
- Follow all the protocols and guidelines (WHO interim guidelines and RSTDSP-EAP SOP and COVID-19 Management Plan) as given in **Appendix C-24.**

197. **Community Health and Safety.** Works are confined to specific sites and heritage buildings. Works of city gates for fixing lights will be on the roads, however, this activity is unlikely to pose significant safety risk to community and road users. Material and debris transport using construction vehicles may pose safety risk to the public, specifically in high-pedestrian areas may include traffic accidents and vehicle collision with pedestrians. Potential impact is negative but short-term and reversible by mitigation measures. The construction contractor will be required to:

- Plan routes to avoid times of peak-pedestrian activities.
- Maintain regularly the vehicles and use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure.
- Provide hard barricades and deploy security personnel to ensure safe movement of people and also to prevent unnecessary entry and to avoid accidental fall of electric cables during the works on gates.

198. **Workers Camps.** Operation of work camps can cause temporary air and noise pollution from machine operation, water pollution from storage and use of fuels, oils, solvents, and lubricants. Potential impacts are negative but short-term and reversible by mitigation measures. The construction contractor will be required to:

- Consult PIU before locating project offices, sheds, and construction plants;

- Minimize removal of vegetation and disallow cutting of trees;
- Provide drinking water, water for other uses, and sanitation facilities for employees;
- Provided temporary rest and eating area at all work sites;
- Ensure conditions of liveability at work camps are maintained at the highest standards possible at all times; living quarters and construction camps shall be provided with standard materials (as far as possible to use portable ready to fit-in reusable cabins with proper ventilation); thatched huts, and facilities constructed with materials like GI sheets, tarpaulins, etc., shall not be used as accommodation for workers; accommodation shall meet the IFC standards for workers accommodation[7] which include: provision of safe housing, availability of electricity, plumbing, water and sanitation, adequate fire protection and dormitory/room facilities; accommodation shall be in the range from 10 to 12.5 cubic meter (m3) (volume) or 4 to 5.5 square meters (m2) (surface) per worker, a minimum ceiling height of 2.10 m; a reasonable number of workers are allowed to share the same room–(standards range from 2 to 8 workers); workers with accompanying families shall be provided with a proper and safe accommodation (Suggested guidelines based on IFC benchmark standards for workers accommodation is provided in **Appendix C-21);**
- Prohibit employees from poaching wildlife and cutting of trees for firewood;
- Train employees in the storage and handling of materials, , especially to avoid/minimize leaks or spills of construction chemicals, fuels, oils, lubricants etc., which can potentially cause soil and groundwater contamination; ; provide impervious floors at storage and handling sites and ensure spill control measures;
- Recover used oil and lubricants and reuse or remove from the site;
- Ensure sewage is disposed off scientifically either through city sewerage system, if available close to camp, or through on-site facilities such as septic tanks (water sealed to avoid seepage) and soak pits
- Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas;
- Remove all wreckage, rubbish, or temporary structures which are no longer required; and
- Report in writing that the camp has been vacated and restored to pre-project conditions before acceptance of work.

199. **Social and Cultural Resources**. For this project, excavation will occur at locations not known to have archaeological values, so there is no risk of such impacts. There are three ASI protected monuments in Bharatpur and no work is proposed in ASI protected monuments. There are 11 State protected monuments in the Bharatpur and only the façade lighting is proposed in these monuments and prior permission will be taken from concern department prior to illumination works.

200. **Traffic diversion and/or road closure-** Proposed works do not require traffic diversion and/or road closure.

E. Operation and Maintenance Impacts

201. Operation and maintenance of the infrastructures will be the responsibility of Bharatpur municipal corporation, and archaeological department (for city gates).

[7] https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_gpn_workersaccommodation

202. The infrastructures are designed such that they shall not require major repairs or refurbishments and should operate with little maintenance beyond routine actions required to keep the toilets, water stations, lampposts, and other minor components in working order. These will be monitored periodically to detect any problems and allow remedial action if required. Any repairs will be small-scale involving manual, temporary, and short-term works involving regular checking and recording of performance for signs of deterioration and servicing.

203. The heritage sites being improved are of local importance and will improve the visits from the city and nearby areas. This will certainly add to the tourist flow into Bharatpur, and the O&M impacts are mainly related to increased number of tourists. This will increase vehicle movement along the roads and increase demand for services. Various infrastructure improvements are being regularly undertaken by the government to support tourism, and therefore no notable impacts are envisaged. To manage increased tourist flow at the heritage sites, subproject includes provision of water supply, sanitation and other facilities as needed.

VII. PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

A. Overview

204. The active participation of stakeholders including local community, NGOs/CBOs, and the media in all stages of project preparation and implementation is essential for successful implementation as well as operation of the project. It will ensure that the subprojects are designed, constructed, and operated with utmost consideration to local needs, ensures community acceptance, and will bring maximum benefits to the people. Public consultation and information disclosure is a must as per the ADB policy.

205. A three-tier consultation process has been adopted for RSTDSP project: focus group discussions, primary household sample surveys and a City-level public consultation workshop. Most of the main stakeholders have already been identified and consulted during preparation of preliminary design and IEE, and any others that are identified during project implementation will be brought into the process in the future. Primary stakeholders of the subproject are: residents, shopkeepers and businesspeople who live and work alongside the roads in which network improvements will be provided, and government and utility agencies responsible for provision of services, Bharatpur Municipal Council. Secondary stakeholder are: NGOs and CBOs working in the area, community representatives, beneficiary community in general, government agencies, the executing and implementing agencies (LSGD and RUDSICO-EAP), Government of India and the ADB.

1. Public Consultation

206. The public consultation and disclosure program is a continuous process throughout the project implementation, including project planning, design and construction. Informal and formal consultations at different locations were also conducted during social and environmental impact assessment in Bharatpur in Dec-2021 & May -2022.

B. Consultation during Project Preparation

207. Institutional consultations were conducted with the Governmental Departments such as Local Self Government Department, Bharatpur Municipal Council, etc. The project proposals are

formulated in consultation with ULB and the proposals have been finalized only after certification of both; that the proposals suit the requirements of the ULB.

208. Focus-group discussions with residents and other stakeholders were conducted to learn their views and concerns. A social and environmental impact assessment has been conducted in the City, covering sample households and nearby vendors to understand the basic characteristics of City, health status, and the infrastructure service levels, and also the demand for infrastructure services.

209. Informal and formal consultation are conducted with local population of the area, about at 5 places along with proposed alignment with about 47 persons in July 2021 (Appendix 3). Discussions were held about proposed project components, EMP measures, grievance redressal, ownership of land and general people perception for proposed project. It was noted that people are willing to extend their cooperation as the proposed activities are supposed to enhance the infrastructure service levels and the living standard of the public. The public expressed their concern regarding the nuisance and disturbance (dust, road closure and traffic management activities) during the construction stage which can have impact on their day to day activities. Public demanded for advance notice before construction and proper warning signs along the construction area to avoid accidents and inconvenience. Project team responded to the issues on nuisance and disturbance raised during the consultation that measures have been incorporated in the EMP. Details of public consultations are given in **Appendix 3.**

210. A City-level City Level Committee (CLC) has been formed in Bharatpur district by Government orders. City Level Committee meeting was organized to which representatives of primary and secondary stakeholders were invited. City Level Stakeholder committee meeting was organized for finalization of works of Conservation & Development of Heritage Sites subproject in Bharatpur city in District Head Quarter, Bharatpur on dated. 29.07.2021 under the chairmanship of District Collector, Bharatpur, in presence of, DPR consultants, RUDSICO-EAP officials, PHED officials, Municipal Council officials, UIT officials, PWD and other invitee members. Proposed scope of works and designs were discussed in the meeting. Land availability for the proposed components was also confirmed by local authority. The feedback and concerns of the stakeholders were taken into consideration for finalization of design and scope of works. The project was agreed by the committee for further course of action by RUDSICO-EAP. Details of CLC meeting, minutes and photographs are attached in **Appendix 3.**

211. A town level consultation/workshop was organised in Meeting Hall of Municipal Corporation, Bharatpur on October 10, 2022. Meeting was attended by 42 stakeholders including public representatives, government departments and ADB consultants. Another Town level consultation was conducted in Bharatpur on January, 18 2023 in the Meeting Hall. All ward wise public representatives, news reporters, prominent persons and officers from RUIDP, Nagar Nigam, administration and PHED was invited for meeting. ADB team members and consultants also participated. 45 persons attended the meeting, expressed support to the project. Details of these meetings and photographs are attached in **Appendix 3.**

1. Consultation During Construction

212. Prior to start of construction, ULB and PIU with the assistance of Consultants will conduct information dissemination sessions at major intersections and solicit the help of the local community leaders/prominent citizens to encourage the participation of the people to discuss various social and environmental issues. At each ward/neighbourhood level, focus group meetings will be conducted to discuss and plan construction work with local communities to

reduce disturbance and other impacts, and provide a mechanism through which stakeholders can participate in project monitoring and evaluation.

213. A constant communication will be established with the affected communities to redress the environmental issues likely to surface during construction and operational phases and also regarding the grievance redress mechanism. ULB and PIU with the help of Community Awareness and Participation Consultant (CAPC) will organize public meetings and will appraise the communities about the progress on the implementation of EMP. Meeting will also be organized at the potential hotspots/sensitive locations before and during the construction.

C. Information Disclosure

214. Executive summary of the IEE will be translated in the local language and made available at the offices of ULB and RUDSICO-EAP- PMU and PIU. Copies of summary will be provided to participants of city level workshop to be organized in Bharatpur. Hard copies of the IEE will be accessible to citizens as a means to disclose the document and at the same time creating wider public awareness. Electronic version of the IEE in English and Executive Summary in Hindi will be placed in the official website of the ULB and /RUDSICO-EAP after approval of the IEE by Government and ADB. Stakeholders will also be made aware of grievance register and redress mechanism.

215. Public information campaigns via newspaper/radio/TV, to explain the project details to a wider population will be conducted. Public disclosure meetings will be conducted at key project stages to inform the public about the progress and future plans. Prior to start of construction, the PIU will issue Notification on the start date of implementation in local newspapers A board showing the details of the project will be displayed at the construction site for the information of general public.

216. Local communities will be continuously consulted regarding location of construction camps, access and hauling routes and other likely disturbances during construction. The road closure together with the proposed detours will be communicated via advertising, pamphlets, radio broadcasts, road signage, etc.

VIII. GRIEVANCE REDRESS MECHANISM

A. Project Specific Grievance Redress Mechanism

217. A project-specific, three-tier grievance redress mechanism (GRM) covers both environment and social issues. The GRM will be established to receive, evaluate, and facilitate the resolution of affected persons' concerns, complaints, and grievances about the social and environmental performance at project level. The GRM will aim to provide a time-bound and transparent mechanism to voice and resolve social and environmental concerns related to the project. Assessment of the GRM designed and implemented for Rajasthan Urban Sector Development Program (RUSDP)8 the system was effective in timely resolution of grievances in

[8] The procedures followed for grievance redress during implementation of RUSDP Phase III included the project GRM and the pilot GRM software application (smart check) in Pali, the Sampark portal of Government of Rajasthan, and the Chief Minister's helpline. Complaints received through various channels were mostly minor and pertained to damage to existing water supply pipelines and disruption of water supply during construction, delays in road restoration, and pending new connections. Complaints related to damage to private property (compound walls/steps, etc.) were less in number. The grievances were mostly possible to resolve in coordination with the contractors. Complaints received were immediately referred by the CAPC/PMDSC supervision staff to the PIU Nodal officer (safeguards) and concerned engineer at PIU, who advised them on further action. Follow up with the contractor on

a transparent manner.[9] The multichannel, project-specific, three-tier GRM is functional at RUSDP, hence the design of GRM for RSTDSP takes into account the proposed institutional structure for RSTDSP and the positive features and learnings from the previous GRM.[10]

218. Common Grievance Redress Mechanism. A common GRM will be in place for social, environmental, or any other grievances related to the project. Implementation of the resettlement plans/RIPPs/DDRs/IEEs will follow the GRM described below. The GRM will provide an accessible and trusted platform for receiving and facilitating resolution of affected persons' grievances related to the project.

219. Public awareness campaigns within entire ULB/Municipal area will ensure that awareness on grievance redress procedures is generated. The nodal officer- social/environment at field level through community awareness and public participation consultant (CAPPC) will conduct ULB/Municipal area-based awareness campaigns to ensure that poor and vulnerable households are made aware of grievance redress procedures and entitlements. Contractors will provide pamphlets to communities prior to start of works and billboards during construction. The pamphlets and billboards will include relevant environmental and social safeguards, GRM information, and contact details of key personnel from PIU and contractors.

B. Grievance Redress Process

220. Affected persons will have the flexibility of conveying grievances/suggestions by dropping grievance redress/suggestion forms in complaint/suggestion boxes that will be installed by project PIUs or by e-mail, by post, or by writing in a complaints register in ULB offices/complaints register at contractor's work site[11] or by sending a WhatsApp message to the PIU[12] or by dialling the phone number of town level PIU/CAPPC or by dialling a toll-free number.[13] Any aggrieved person can also avail the facilities of online grievance monitoring system 'Rajasthan Sampark' portal to register their grievances which is a parallel mechanism of grievance registration, in addition to the project GRM.[14] Careful documentation of the name of the complainant, date of receipt of the complaint, address/contact details of the person, location of the problem area, and how the problem was resolved will be undertaken and feedback provided to the complainant on action/decision taken. The Safeguard and safety officer of town/city level

complaint resolution was undertaken by PIU Nodal officer CAPC and PMDSC and final feedback sought from complainant upon resolution. Complaints requiring inter-departmental coordination were referred to the PMU for resolution, and feedback provided to complainant. The PMU kept regular track of grievances through WhatsApp and email alerts, ensuring registration and follow-up until resolution.

[9] Town-level grievance registration data indicates that a large number of grievances were registered, pointing to the effectiveness of the multi-channel GRM. No major grievance was received for RUSDP Phase III. The GRM helped smoothen the process of project implementation, hence the proposed architecture for the RSTDSP GRM remains similar, with some refinement, taking into account the changes in institutional setup proposed for project implementation.

[10] Continued logistics support at field level will be key to successful management of grievance redress under RSTDSP. The target date for establishment of the first level (PIU level) and second level (Zonal level) of GRM is before loan negotiation.

[11] RUSDP piloted an online application based live GRM counter for resolution of public grievances over and above the usual process of grievance registration and redressal. This app based GRM - "RUIDP Smart Check" is available at Google play store (free of cost) and is operational. The RUIDP Smart Check "app" was launched in Pali town in July 2017 and is proposed to be scaled up in RSTDSP project towns. For persons without access to the application, the traditional channels will continue to be available.

[12] It is suggested for each PIU to have a dedicated WhatsApp group for registration of grievances and receipt of quick feedback, to be followed by more formal communication.

[13] Project contractors in all project towns will have a toll-free number with specific working hours for registration of grievances related to RSTDSP.

[14] http://www.sampark.rajasthan.gov.in/RajSamWelcome.aspx

PIU will have the overall responsibility for timely grievance redressal on environmental and social safeguards issues and for registration of grievances, related disclosure, with the assistance of project consultants. In case of grievances that are immediate and urgent in the perception of the complainant, the contractor, and officials of PIU with assistance from CMSC and CAPPC on-site will provide the most easily accessible or first level of contact for quick resolution of grievances. Contact numbers and names of the concerned PIU safeguard and safety officer, contractors, CAPPC and CMSC personal will be posted at all construction sites at visible locations.

(i) **1st level grievance**. The contractors, PIU executive engineer/assistant engineer designated as safeguard and safety officer (social and environment), CMSC (safeguard staff) and CAPPC can immediately resolve issues on-site, in consultation with each other and will be required to do so within 7 days of receipt of a complaint/grievance. If required, city level monitoring committee (CLMC)[15] will be involved in resolution of grievances at the 1st level;

(ii) **2nd level grievance**. All grievances that cannot be redressed within 7 days at field/PIU level will be brought to the notice of Zonal PIU headed by Additional Chief Engineer (ACE). The ACE at zonal PIU will resolve the grievance within 7 days of receipt of compliant/grievance in discussion with the ASO, field level PIU, CMSC, CAPPC and the contractor; and

(iii) **3rd level grievance**. All the grievances that are not addressed by Zonal PIU within 7 days of receipt will be brought to the notice of the PMU. Depending on the nature of grievance, the project officer (social/environment) at PMU will resolve the grievance within 15 days of receipt of grievance with necessary coordination of Zonal PIU and CMSC and guidance/instruction of additional project director (APD-PMU).

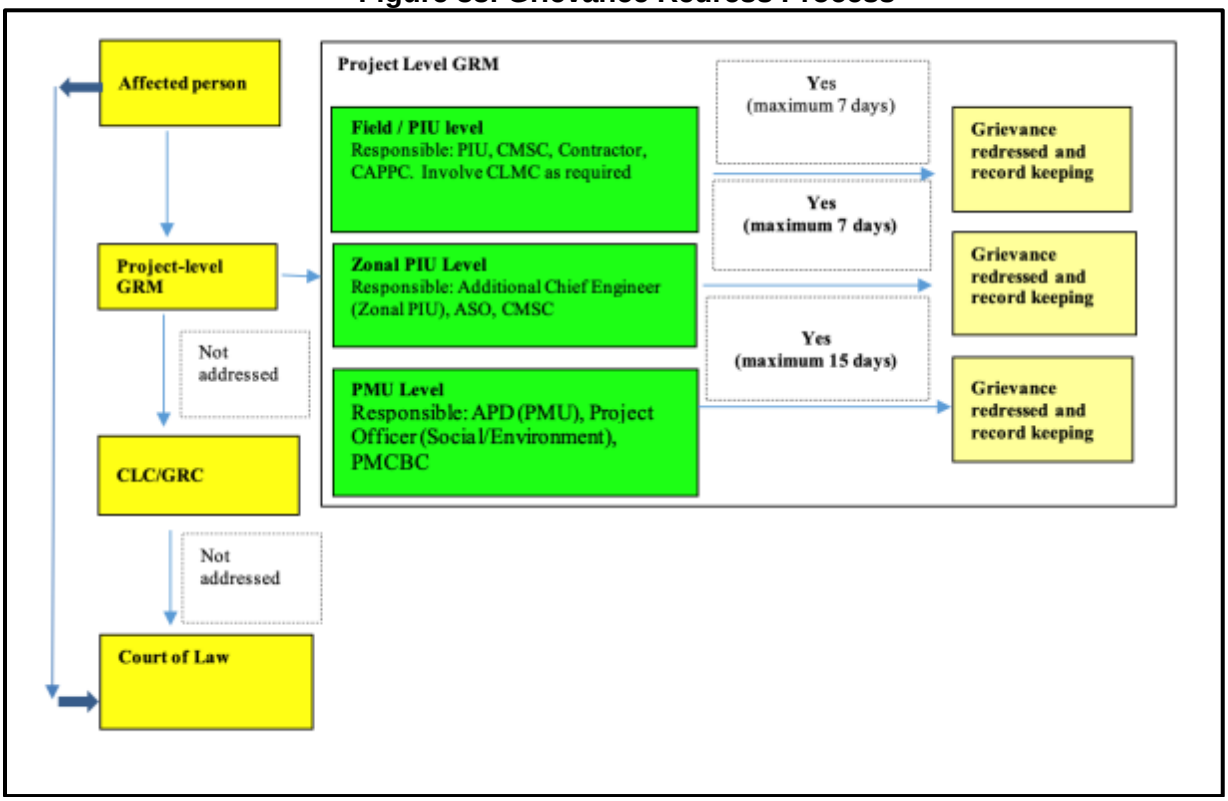
221. Grievances not redressed through this process within/at the project level within stipulated time period will be referred to the CLC/GRC, which has been set up.[16] In its role as a GRC, the CLC will meet whenever there is an urgent, pending grievance. Other grievances can be discussed during its regular meetings. Zonal PIU will inform the CLC regarding any grievances required to be resolved urgently. The GRC will resolve the grievance within 15 days of receiving the complaint. In case of any indigenous peoples impacts in subprojects, the CLC/GRC must have representation of the affected indigenous people community, the chief of the tribe or a member of the tribal council as traditional arbitrator (to ensure that traditional grievance redress systems are integrated) and an NGO working with indigenous people groups. The multi-tier GRM for the project is outlined below (Figure 38), each tier having time-bound schedules and with responsible persons identified to address grievances and seek appropriate persons' advice at each stage, as required. The GRC will continue to function throughout the project duration.

[15] The CLMC has been formed at the town/city level for planning and monitoring of work, resolve issues related to departmental coordination etc. It is headed by Commissioner/Executive Officer ULB (Chairman) and city engineer of public health engineering department (PHED), public works department (PWD) and head of PIU acting as Member Secretary.

[16] City Level Committee (CLC)/grievance redress committees (GRCs) has been constituted for each town/city under the Chairmanship of District Collector to provide overall subproject guidance and "to sort out issues and remove hindrances, if any". CLC formed at city-level/district level with members composed of: District Collector as Chairperson, and following as members: ULB Commissioner/Mayor/Chairman; Deputy Mayor/Vice Chairman ULB; Chairman/Secretary Urban Improvement Trust (UIT); Head of Zonal/field level PIU as Member Secretary; one representative each from relevant government departments as appropriate (PWD/PHED/Town Planning Department etc.). All CLCs in their role as GRCs will have at least one-woman member/chairperson. In addition, for project-related grievances, representatives of affected persons, community-based organizations (CBOs), and eminent citizens will be invited as observers in GRC meetings. The concerned Member of Parliament (MP) and Member of Legislative Assembly are also part of the CLC.

222. The project GRM notwithstanding, an aggrieved person shall have access to the country's legal system at any stage and accessing the country's legal system can run parallel to accessing the GRM and is not dependent on the negative outcome of the GRM. In case of grievance related to land acquisition, resettlement and rehabilitation, the affected persons will have to approach a legal body/court specially proposed under the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act (RFCTLARRA), 2013.[17]

Figure 38: Grievance Redress Process



APD = Additional Project Director, ASO = Assistant Safeguards Officer, CAPPC = community awareness and public participation consultant, CMSC = construction management and supervision consultants, CLC = city level committee, CLMC = city level monitoring committee, GRC = grievance redress committee, PIU = project implementation unit, PMU = program management unit, PMCBC = project management and capacity building consultant.

223. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB-assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make an effort in good faith to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.[18]

224. **Record-keeping.** The PIU of each town/city will keep records of grievances received,

[17]The Authority admits grievance only with reference to the Land Acquisition and R&R issues under the RFCTLARRA, 2013.

[18] Accountability Mechanism. http://www.adb.org/Accountability-Mechanism/default.asp.

including contact details of complainant, date the complaint was received, nature of grievance, agreed corrective actions and the date these were affected and final outcome. The number of grievances recorded and resolved, and the outcomes will be displayed/disclosed in the PMU office, PIU offices, and on the web, as well as reported in monitoring reports submitted to ADB on a semi-annual basis. The sample grievance registration format is attached as **Appendix C-17**.

225. **Periodic review and documentation of lessons learned.** The PMU Project Officers (Social and Environment) will periodically review the functioning of the GRM in each town and record information on the effectiveness of the mechanism, especially on the project's ability to prevent and address grievances.

226. Costs. Contractors are required to allocated budget for pamphlets and billboards as part of the EMP. Costs involved in resolving the complaints (meetings, consultations, communication and reporting/information dissemination) will be borne by the concerned PIU at town level while costs related to escalated grievances will be met by the PMU. Cost estimates for grievance redress are included in resettlement cost estimates.

227. Presently GRC in 14 ongoing project towns are functional as per RSTDSP's Grievance Redress Mechanism (GRM). Therefore 2nd and 3rd level GRC are already functional at Zonal PIUs (at Jaipur and Jodhpur) and PMU levels. PIU level GRC shall be formed in upcoming project towns after PIUs in new towns are established through office order from PMU for the same

IX. ENVIRONMENTAL MANAGEMENT PLAN

A. Environmental Management Plan

228. The purpose of the environmental management plan (EMP) is to ensure that the activities are undertaken in a responsible, non-detrimental manner with the objectives of: (i)providing a proactive, feasible, and practical working tool to enable the measurement and monitoring of environmental performance on-site; (ii) guiding and controlling the implementation of findings and recommendations of the environmental assessment conducted for the project;(iii) detailing specific actions deemed necessary to assist in mitigating the environmental impact of the project; and (iv) ensuring that safety recommendations are complied with.

229. A copy of the EMP must be kept at work sites at all times. This EMP will be included in the bid documents and will be further reviewed and updated during implementation. The EMP will be made binding on all contractors operating on the site and will be included in the contractual clauses. Non-compliance with, or any deviation from, the conditions set out in this document constitutes a failure in compliance.

230. For civil works, the contractor will be required to (i) establish an operational system for managing environmental impacts (ii) carry out all of the monitoring and mitigation measures set forth in the EMP; and (iii) implement any corrective or preventative actions set out in safeguards monitoring reports that the employer will prepare from time to time to monitor implementation of this IEE and EMP. The contractor shall allocate budget for compliance with these EMP measures, requirements and actions. Tables for Environment Management Plan during Design, Pre-construction, Construction and Operation phases are given below.

Table 10: Heritage Management Plan

Proposed interventions	Details of works / components, materials, design, etc.	Observations & Assessment	Mitigation measures	Responsibility to implement mitigation measures/guidelines	Cost and source of funds
• Conservation & Redevelopment of Town Hall campus and façade improvement of the Raj kiya Vishist Purva Uchha Madhyamic Vidyalaya Adaptive Reuse of the Heritage Building as a Cultural Activity Zone • Redevelopment of Rang Manch Area as Theatre for visual art performance • Conservation & Redevelopment of Main Building as visual art gallery • Development of View point/ Watchtower on Terrace • Site & Outdoor area redevelopment as cafeteria, parking, landscape • Façade Illumination for night views. Façade conservation of the Raj kiya Vishist Purva Uchha Madhyamic Vidyalaya All selected works should conserve the historic built fabric and structural strengthening. Retrofitting	Adaptive Reuse as a Centre of Performing Arts and façade improvement/ conservation of Raj kiya Vishist Purva Uchha Madhyamic Vidyalaya - intervention of civil works and mechanical, electrical and plumbing services Conservation of the built fabric and structural retrofitting	Reuse of spaces and parts of the building to ensure appropriate interventions to protect the integrity of the monument. Provision of services can cause distress in the historic building as chases are made to provide electrical cables etc. Use of modern materials for conservation and repair can be incompatible with historic materials and lead to loss of authenticity in the historic building	Prepare detailed conservation plan based on detailed documentation of materials, condition, and conservation planning. Detailed design of adaptive reuse with detailed design of engineering services including electrical, plumbing, and mechanical. Conservation to be carried out by specialised contractor who has prior experience in such works. The special terms in the contract are recommended to include that contractor is required to have in his team, a conservation architect for design development and detailing along with the MEP consultants. Structural engineer to be part of the project team to provide details for structural repair and retrofitting. All design to be reviewed by a conservation architect .	Contractor/PIU	Project cost

Proposed interventions	Details of works / components, materials, design, etc.	Observations & Assessment	Mitigation measures	Responsibility to implement mitigation measures/guidelines	Cost and source of funds
of selected monuments may be undertaken. No new material or change in design is proposed in the subproject.			Avoid any additional structure within the town hall		
Revitalisation of Nehru Park • PATHWAY: Redevelopment of pathway in local sandstone. • CLOCK: Restoration of stone clock in the park. • SEATING ARRANGEMENTS: Few more benches have been proposed in the garden. • CHILDREN PLAY AREA: Facilities of children Play Area, Four Seater MGR, Wave Slider, Mult Seater See-Saw, Four seat Arch Swing are proposed. • FOUNTAIN: Umbrella shaped 4 fountains, Wall fountain is proposed on the sloping wall besides the steps. • SELFIE POINT: Selfie point is proposed inside the park made up of Red sand stone. • BOUNDARY: Restoration of boundary wall.	Landscape improvements with interventions of pathways, enhancement of children's play area, boundary wall repair etc.	The park is within a historic citadel and in close proximity to ASI protected monuments; the fortification wall of the citadel defines one of the edges of the park, bold and over decorative interventions can compromise the spirit of the place and loss of authenticity of the historic setting	Low impact interventions which do not overpower the historic attributes of the setting. Use of local/ historic / natural materials which are similar in colour, texture with the historic materials and techniques used in the historic buildings (for instance random rubble stone masonry in walling, rough sandstone etc.)	Contractor/PIU	Project cost

Proposed interventions	Details of works / components, materials, design, etc.	Observations & Assessment	Mitigation measures	Responsibility to implement mitigation measures/guidelines	Cost and source of funds
• GAZEBO: One circular gazebo of size 6.4 m Dia.					
Façade lighting & Illumination of City Gates (Chandpole Gate, Surajpol Gate, Kumher Gate, Mathura Gate, Ketan Gate, Neemda Gate, B Narain Gate, Gobardhan Gate and Anah Gate) • The propose lighting will be done only with single color warm white lights • The propose lighting will be done with theme of Micro & Diffuse façade • LED light fixtures like Spot lights, Strip lights, linear lights, wall washers, Up-lighter & down lighters will be used for illumination • Areas to be highlight on façade will be - Door frames, motifs, architraves, Kangooras or gate chajja, Inverted ceilings	Monument lighting During site visit recently installed lighting was noted.	Cables and fittings mounted on the surface of the monument are invasive and will cause irreversible damage to the historic surfaces	Following Illumination fittings guidelines may be used in detail designing • provided on independent floor mounted or pole mounted structures. • No fixtures should be visible on surface • No wiring to be visible on surface • Prior applicable permissions from ASI/Department of Archaeology and Museum, Government of Rajasthan	Contractor/PIU	Project cost
Façade lighting& Illumination of Laxman Mandir, Ganga Mandir & Jama Masjid To reduce consumption of power all the proposed lights will be LED. • The propose lighting will be done only with single	Monument lighting During site visit recently installed lighting was noted.	Cables and fittings mounted on the surface of the monument are invasive and will cause irreversible damage to the historic surfaces	Following Illumination fittings guidelines may be used in detail designing • provided on independent floor mounted or pole mounted structures. • No fixtures should be visible on surface	Contractor/PIU	Project cost

Proposed interventions	Details of works / components, materials, design, etc.	Observations & Assessment	Mitigation measures	Responsibility to implement mitigation measures/guidelines	Cost and source of funds
color warm white lights • The propose lighting will be done with theme of Micro & Diffuse façade • LED light fixtures like Spot lights, Strip lights, linear lights, wall washers, Up-lighter & down lighters will be used for illumination • Areas to be highlight on façade will be stone architectural elements • No large fixtures to be installed • Wiring of lighting to be hidden			• No wiring to be visible on surface • project team may re-consider the proposal for number of proposed lightning. • Prior applicable permissions from ASI and state archaeology and museum department		
Conservation & Redevelopment of Saligram Kund& campus Conservation Scope of Work • Conservation of Kund structure • Masonry walls conservation & restoration • Lime plaster & Kada • Restoration & replacement of damage/ missing stone elements • Restoration of Ghats/ flooring • Plinth Edge protection • Reconstruction of damage/ missing wall • Dirty water raising • De-vegetation of existing	Conservation of the historic Kund; dredging of the sludge and polluted water inside the water body, de-vegetation of the Kund - from inside and from the masonry structure Landscape improvements in the setting of the tank with paved surfaces; street furniture etc.	Conservation and repair with modern materials and structural details will cause loss of authenticity of the historic structure. 'Beautification' needs to be based on understanding of the historic attributes of the water body and its setting, more specifically the relationship with the temple absence of which will lead to loss of authenticity and integrity of the structures and its setting	The contractor be required to provide detailed conservation and landscape design as part of his scope of work The scope of the project is conservation of historic fabric of tank and landscape interventions. The extent of the property (water tank with the open space and temple in the setting) requires to be defined. This is necessary for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is	Contractor/PIU	Project cost

Proposed interventions	Details of works / components, materials, design, etc.	Observations & Assessment	Mitigation measures	Responsibility to implement mitigation measures/guidelines	Cost and source of funds
structure • Façade Restoration of surrounding heritage structures • Façade lighting Redevelopment Scope of Work • Construction of boundary wall/ site demarcation • Surrounding development of Kund- Flooring/ plantation/ Street furniture/ Lighting/ Signage • Development of visitor facility area like Toilets • Development of Kiosk • Development of Parking • Plinth Edge protection • Reconstruction of damage/ missing wall • Dirty water raising • De-vegetation of existing structure • Façade Restoration of surrounding heritage structures • Façade lighting			not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future. It is further recommended that an environmental engineer be part of the team for detailed planning for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future. Also, that the planning addresses appropriate ecologically responsive techniques for both the quantity and quality of the water in the Kund. It is recommended that the contractor be required to provide conservation and detailed landscape design as part of his scope of work.		

Proposed interventions	Details of works / components, materials, design, etc.	Observations & Assessment	Mitigation measures	Responsibility to implement mitigation measures/guidelines	Cost and source of funds
Conservation & Redevelopment of Bijendra Bihari Kund& Campus Conservation Scope of Work • Restoration of historic Ghat structure • Façade Restoration of surrounding heritage structures • Restoration of water channel • Retaining wall construction around catchment area • Restoration of architectural elements on façade • Façade lighting Redevelopment Scope of Work • Redevelopment of compound area/ compound wall • Flooring & pavement around Kund • Installation of street furniture- stone benches, signage's, light poles, bollards, dustbins, railings • Landscape development in surroundings • Kiosk & public amenities development	Conservation of the historic kund; dredging of the sludge and polluted water inside the water body, devegetation of the Kund - from inside and from the masonry structure Landscape improvements in the setting of the tank	Use of modern materials and techniques for all the conservation and repair works; 'Beautification' needs to be based on understanding of the historic attributes of the water body and its setting, more specifically the relationship with the temple absence of which will lead to loss of authenticity and integrity of the structures and its setting	The extent of the property (water tank with the open space and temple in the setting) requires to be defined. This is necessary for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future. It is further recommended that an environmental engineer be part of the team for detailed planning for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future. Also, that the planning addresses appropriate	Contractor/PIU	Project cost

Proposed interventions	Details of works / components, materials, design, etc.	Observations & Assessment	Mitigation measures	Responsibility to implement mitigation measures/guidelines	Cost and source of funds
			ecologically responsive techniques for both the quantity and quality of the water in the Kund. It is recommended that the contractor be required to provide conservation and detailed landscape design as part of his scope of work.		

Table 10: Design Stage Environmental Management Plan

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation/ Monitoring	Cost and Source of Funds
Location impacts of proposed components	Nearby community may be affected due to increased pollution during construction and operation	• site to be selected so that nearby community may have no or minimum impact due to proposed works • Mitigation measures are prepared and included in design and EMP is attached with contract documents	Consultants/PMU	No cost required
Requirement of tree cutting	Tree cutting may result loss of aesthetics and increase in air pollution	• (i) sites should be selected so that minimum tree cutting is required • (ii) project documents should include the minimum tree cutting provisions • (iii) Provision for Compensatory plantations should be included in contract documents	Consultants/PIU/PMU	No cost required
Energy Efficiency	Loss of natural resources	Use energy efficient electrical equipment • Provision of use of energy efficient equipment in contract agreements and BOQ	Consultants/PMU	No cost required
All work sites	Physical cultural resources and chance finds	• Ensure that worksites are not located in archeologically sensitive areas; liaise and reconfirm	Consultants/PMU	No cost required

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation/ Monitoring	Cost and Source of Funds
		with local Archaeological Department during detailed design phase; • Create awareness among the workers, supervisors and engineers about the chance finds during excavation work; • Stop work immediately to allow further investigation if any finds are suspected; • Inform local Archaeological Department / Museum office if a find is suspected and take any action, they require to ensure its removal or protection in situ.		
and Health and Safety requirements into Contractor Bid Document	Implementation of the EMP	• The EMP should be included in the Bid Document so that the selected Contractor understands the issues and makes necessary plans to prepare and implement the EMP	PMU	Project Costs
Incorporating EMP in bidding document	Implementation of the Health and Safety measures by contractor	• Health and safety requirements should be incorporated as part of the contract bid document so that the selected Contractor understands the issues and makes necessary plans to prepare and implement the health and safety requirements.	PMU	Project Costs
Preparation of plans and protocols	Various impacts	Prepare occupational health and safety plan	PIU / CMSC with the assistance of PMCBC and contractor	PMU costs

Table 11: Environmental Management Plan of Anticipated Impacts during Pre-Construction

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Funds
Compliance with environmental subproject selection criteria	Environmental impacts due to subproject	• Compliance with environmental subproject selection criteria	PIU and Municipal Corporation Bharatpur	PMU	No costs required

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Funds
Legal compliance	Environmental legal noncompliance may attract legal actions Failure to obtain necessary consents, permits, NOCs etc. can result to design revisions and/or stoppage of works	• HIA recommendations should be considered in final designs • ULB to obtain all necessary consents, permits, clearance, NOCs, etc. prior to start of civil works. • Contractor to obtain necessary consents, permits, license etc., required for construction, and submit copies to PIU; PIU to acknowledge in writing. • PMU to update IEE and EMP prior to starting of works to reflect any changes in project design during design verification and detailed field survey, and submit to ADB for clearance and disclosure • Contractor to prepare SEMP based on the updated EMP, and approved by PIU prior to commencement of works • Include in detailed design drawings and documents, all the conditions and provisions stipulated in permits, consents issued by regulatory agencies, if any. • Contractor to conduct pre-construction (baseline) environmental monitoring as indicated in EMP budget tables. The monitoring results shall be referred as baseline quality for key environmental parameters of air, water and noise) • Continue consultation with the local communities during detailed design, and implementation and provide information in the language that is understandable to the local community regarding project activities and the anticipated impacts as part of the project information dissemination. • Due to the current COVID-19 pandemic situation, there is a risk of virus spread at the work sites and offices,	PIU/Consultants in Municipal Corporation Bharatpur	PMU	Cost of obtaining all consents, permits, clearance, NOCs etc. prior to start of civil works responsibility of PIU.

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Funds
		endangering the health and lives of workers and staff, and surrounding community, Proper measures need to be put in place at the work sites, and offices as stipulated by the government regulations and advisories issued by international organizations such as World Health Organization (WHO), International Labour Organization (ILO) etc.,, and contractor should ensure that proper measures are put in place and ensure compliance. Contractor should also encourage vaccination of all workers and staff engaged in project work.			
Environmental monitoring of baseline conditions of air, noise, water and soil	To establish base line environmental conditions	• Environmental monitoring through NABL approved laboratory	Construction contractor	CMSC/ PIU	Contractor
Utilities	Telephone lines, electric poles and wires, water lines and gas pipe lines within proposed project area	• Identify the locations and operators of these utilities to prevent unnecessary disruption of services during construction phase; and • Instruct construction contractors to prepare a contingency plan to include actions to be done in case of unintentional interruption of services.	Contractor in collaboration with PIU and with approval of PMU	CMSC/ PIU	No cost required. Mitigation measures are part of TOR of PMU, PIU and Consultants
Sources of Materials	Extraction of materials can disrupt natural land contours and vegetation resulting in	• Use material sources permitted by government;[19] • Verify suitability of all material sources and obtain approval of PIU; • Ensure that the loading and unloading of the materials and the	Contractor to prepare list of approved quarry sites and sources of materials with the approval of PIU	CMSC/ PIU	No cost required. Mitigation measures are part of TOR of PIU and Consultants

[19]CTE and CTO will be required for batching plant, hot mix plant, crushers etc. if specifically established for this project. If contractor is purchasing raw material or ready mix concrete, asphalt/macadam and aggregates from third party, he has to be assured that third party is having CTE/CTO from RSPCB and should collect the copy of these and submit to PIU/consultants. Quarry sites should also have the desired permissions.

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Funds
	accelerated erosion, disturbance in natural drainage patterns, ponding and water logging, and water pollution.	transportation of the materials from source to construction site does not cause impact on health and safety of the workers and the community; and • Submit to PIU on a monthly basis documentation of sources of materials. If contractor is purchasing ready mix concrete, asphalt/macadam and aggregates from third party, contractor will assure that all the parties/ suppliers are having CTE/CTO from RSPCB and will collect the copy of these certificates and submit to PIU/consultants			and also part of contractual terms
Construction work camps, stockpile areas, storage areas, and disposal areas.	Conflicts with local community; disruption to traffic flow and sensitive receptors	• Prioritize areas within or nearest possible vacant space in the project location; • If it is deemed necessary to locate elsewhere, consider sites that will not promote instability and result in destruction of property, vegetation, irrigation, and drinking water supply systems; • Do not consider residential areas; For excess spoil disposal, Contractor will prioritize the use of solid/construction waste disposal sites operated under the consent from RSPCB. If unavailable or not feasible, contractor shall identify disposal site confirming to the following criteria, obtain permissions from local body and other government agencies as required, and submit for the approval of PIU; disposal sites shall be used only after approval of the PIU: (a) sites shall not be located in forest areas, water bodies or drainage lines, swamps or in areas which will inconvenience the community	Contractor in collaboration with PIU Approval of disposal site by PIU	CMSC/ PIU	Good engineering practice to be followed by contractor – no additional costs

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Funds
		(b) site shall be selected preferably from barren, infertile lands. (c) no residential areas shall be located within 50 m downwind side of the site; and (d) site is minimum 250 m away from sensitive locations like hospitals, religious places, ponds/lakes or other water bodies			
Consents, permits, clearances, NOCs, etc.	Failure to obtain necessary consents, permits, NOCs, etc. can result to design revisions and/or stoppage of works	Following consents are required- - Tree cutting- local authority - Storage, handling and transport of hazardous materials- RSPCB - Sand mining, quarries, borrow areas- Department of mines and Geology - Traffic diversion- local authority, traffic police • Ensure that all necessary approvals for construction to be obtained by contractor are in place before start of construction • Acknowledge in writing and provide report on compliance all obtained consents, permits, clearance, NOCs, etc. • Include in detailed design drawings and documents all conditions and provisions if necessary	PIU and Consultants	PMU	No cost required. Cost of obtaining all consents, permits, clearance, NOCs, etc. prior to start of civil works responsibility of PIU. Mitigation measures are part of TOR of PIU and Consultants
Social and Cultural Resources	Risk of archaeological chance finds	• Conduct of any works within 300 m from the boundary of ASI monument requires prior permission from National Monument Authority. • Consult with concerned religious authorities, nearby people and devotees in pre-construction phase and explain the work method and duration of proposed works, take their suggestions and comments and incorporate in design the mitigation measures required	Construction Contractor	CMSC/ PIU	Cost for implementation of mitigation measures responsibility of contractor.

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Funds
		• Plan construction adjacent to religious/social sites, undertake excavation and construction work in such a way that no structural damage is caused to the religious building. • Observe the local rituals and important dates of festivals, weekly/monthly/annual religious occasions in the religious places and plan construction activities not to make any disturbance/hindrance/obstacles during such time to the religious places,			
Preparation of H&S Plan for Pandemic like COVID-19		• Consistently practice social distancing. • Cover coughs and sneezes. • Maintain hand hygiene. • Clean surfaces frequently.	Construction Contractor	CMSC/ PIU	Cost for implementation of mitigation measures responsibility of contractor.

Table 12: Environmental Management Plan of Anticipated Impacts during Construction

Field	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and Source of Funds
EMP Implementation Training	Irreversible impact to the environment, workers, and community	• Project manager and all key workers will be required to undergo EMP implementation including spoils management, Standard operating procedures (SOP) for construction works; occupational health and safety (OH&S), core labour laws, applicable environmental laws, etc. • Contractor has to depute a qualified EHS personnel in the start of the project to conduct training to all the personnel and effective monitoring of mitigation measures during construction	Construction Contractor	CMSC/ PIU	Cost of EMP Implementation Orientation Training to contractor is responsibility of PMU. Other costs responsibility of contractor.
Air Quality	Emissions from construction vehicles, equipment, resulting to dusts and increase in concentration of vehicle-related pollutants such as carbon monoxide, sulphur oxides, particulate matter, nitrous oxides, and hydrocarbons.	• Damp down exposed soil and any stockpiled material on site by water sprinkling; • Use tarpaulins to cover sand and other loose material when transported by trucks; • Clean wheels and undercarriage of haul trucks prior to leaving construction site • Don't allow access in the work area except workers to limit soil disturbance and prevent access by barricading and security personnel • Fit all heavy equipment and machinery with air pollution control devices which are operating correctly, DGs should have proper stake height as per norms; • Ensure all the equipment are having PUC certificates. • Do regular water sprinkling in dusty areas to reduce dust emission during works • Damp down the structures before demolishing to reduce dust emission. • Damp down on regular basis all the access ways • Maintain all the equipment and vehicles to reduce emission of smoke and keep pollution under control and keep records of periodic maintenance.	Construction Contractor	CMSC/ PIU	Cost for implementation of mitigation measures responsibility of contractor.

Field	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and Source of Funds
		• Conduct ambient air quality monitoring periodically as per Environmental Management Plan EMP			
Water quality	Mobilization of settled silt materials, and chemical contamination from fuels and lubricants can contaminate nearby surface water quality.	• Avoid constructing any construction camps and labour camps near to any water body and do not allow to dispose any waste or sullage in to any water body • Avoid stockpiling of earth fill especially during the monsoon season unless covered by tarpaulins or plastic sheets; • Prioritize re-use of excess spoils and materials in the construction works. If spoils will be disposed, consult with PIU on designated disposal areas; • Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies; • Place storage areas for fuels and lubricants away from any drainage leading to water bodies and provide impermeable lining under the storage yard of fuels and lubricants • Dispose any wastes generated by construction activities in designated sites; • Keep oil tray or pans under the Diesel Generator (DG) set or during maintenance of mechanical equipment to avoid oil spillage resulting soil and water pollution, and • Conduct surface water quality Monitoring according to the Environmental Management Plan (EMP)	Construction Contractor	CMSC/ PIU	Cost for implementation of mitigation measures responsibility of contractor.
Noise Levels	Increase in noise level due to earth-moving and excavation equipment, and the transportation of equipment, materials, and people	• Plan activities in consultation with PIU so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance; • Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach; • Minimize noise from construction equipment by using vehicle silencers, fitting	Construction Contractor	CMSC/ PIU	Cost for implementation of mitigation measures responsibility of contractor.

Field	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and Source of Funds
		jackhammers with noise-reducing mufflers, and use portable street barriers to minimize sound impact to surrounding sensitive receptor; • Diesel Generators being used at site should have sound reducing (acoustic) enclosures, • Avoiding any use of pneumatic drills • Consult the custodians of important buildings, cultural and tourism authorities and local communities in advance of the work to identify and address key issues, and avoid working at sensitive times, such as religious and cultural festivals, etc.; • Provide all workers appropriate PPEs like ear plug/muff, working in high noise conditions; • Keep all vehicles and equipment in good conditions to avoid excessive noise generation; • Consult in advance with habitants and inform them about the nature and duration of works • Conduct noise monitoring according to the Environmental Management Plan (EMP)			
Land use	Environmental Issues due to land use change	• The impact due to change in land use will be negligible due to this project.	Not applicable	ULB/ PIU	Not applicable
Socio-Economic - Employment	Generation of temporary employment and increase in local revenue	• Employ local labour force to the maximum extent • Secure construction materials from local market.	Construction Contractor	CMSC/ PIU	Cost for implementation of mitigation measures responsibility of contractor.
Impact due to Waste Generation.	negative but short-term and reversible by mitigation measures	• Avoid stockpiling of excess excavated soils; • Coordinate with ULB for beneficial uses of excess excavated soils or immediately dispose to designated areas; • Manage solid waste according to the following hierarchy: reuse, recycling and disposal. Include designated/approved disposal areas in waste management plan. • Coordinate with Local authority/ ULB for beneficial use of excavated materials or	Contractor to finalize locations in consultation and approval of PIU	CMSC/ PIU	No cost required. Mitigation measures are part of TOR of PIU and Consultants and also part of contractual terms

Field	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and Source of Funds
		immediately dispose to designated areas with prior approval of the PIU • Recover used oil and lubricants and reuse; or remove from the site. • Avoid stockpiling and remove immediately all demolished materials, excess construction materials, and solid waste (removed concrete, wood, packaging materials, empty containers, oils, lubricants, and other similar items). • Prohibit disposal of any material or wastes (including human waste) into drainage, nallah, or kunds			
Debris disposal Site	Disruption to traffic flow and sensitive receptors	• The site shall be selected preferably from barren, infertile lands. • The local governing body and community shall be consulted while selecting the site. • Contractor shall prepare a construction and demolition waste management plan in pre-construction phase for safe disposal of construction and demolition wastes as per applicable rules and submit to Municipality through PIU for approval • Debris disposal site shall be at least 200 m away from surface water bodies[20]. • No residential areas shall be located within 100 m downwind side of the site. • The site is minimum 250 m. away from sensitive locations like hospitals, religious places, ponds/lakes or other water bodies. • Construction Impacts	Contractor to finalize locations in consultation and approval of PIU	CMSC/ PIU	No cost required. Mitigation measures are part of TOR of PIU and Consultants and also part of contractual terms
Occupational Health and Safety	Occupational hazards which can arise during work	• Comply with all national, state and local labour laws (see Appendix C-12); • Develop and implement site-specific occupational health and safety (OH&S) Plan	Construction Contractor	CMSC/ PIU	Cost for implementation of mitigation measures responsibility of contractor.

[20] In the absence of site meeting the stipulated criteria, an alternate site can be selected specifying the reasons. In such a case, the construction camp management plan should incorporate additional measures specific to the site as suggested by the Construction Manager.

Field	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and Source of Funds
		• Ensure that qualified first-aid is provided at all times. Equipped first-aid stations shall be easily accessible throughout the site; • Provide medical insurance coverage for workers; • Secure all installations from unauthorized intrusion and accident risks; • The project area experiences extreme temperature during summer months of April and May, which may affect the health of workers engaged in construction work. Contractor should take necessary measures during summers including the following: • Provide appropriate shade near the work place; allow periodic resting and provide adequate water • Provide necessary medicine and facilities to take care of dehydration related health issues • Provide supplies of potable drinking water; • Provide clean eating areas where workers are not exposed to hazardous or noxious substances; • Provide H&S orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers; • Provide visitor orientation if visitors to the site • Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas; • Ensure moving equipment is outfitted with audible back-up alarms; • Mark and provide sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal. Signage shall be in accordance with			

Field	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and Source of Funds
		international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate; and • Disallow worker exposure to noise level greater than 85 dBA for duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively. • Follow all the protocols and guidelines (WHO interim guidelines and RSTDSP-EAP SOP and COVID-19 Management Plan) as given in Appendix C-24.			
Community Health and Safety.	Traffic accidents and vehicle collision with pedestrians during material and waste transportation	• Plan routes to avoid times of peak-pedestrian activities. • Maintain regularly the vehicles and use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure. • Provide hard barricades and deploy security personnel to ensure safe movement of people and also to prevent unnecessary entry and to avoid accidental fall of electric cables during the works on gates.	Construction Contractor	CMSC/ PIU	Cost for implementation of mitigation measures responsibility of contractor.
Work Camps and work sites	Temporary air and noise pollution from machine operation, water pollution from storage and use of fuels, oils, solvents, and lubricants Unsanitary and poor living conditions for workers	• Consult PIU before locating project offices, sheds, and construction plants; • Minimize removal of vegetation and disallow cutting of trees; • Provide drinking water, water for other uses, and sanitation facilities for employees; • Provided temporary rest and eating area at all work sites; • Ensure conditions of liveability at work camps are maintained at the highest standards possible at all times; living quarters and construction camps shall be provided with standard materials (as far as possible to use portable ready to fit-in reusable cabins with proper ventilation); thatched huts, and facilities constructed with materials like GI sheets, tarpaulins, etc., shall not be used as	Construction Contractor	CMSC/ PIU	Cost for implementation of mitigation measures responsibility of contractor.

Field	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and Source of Funds
		accommodation for workers; accommodation shall meet the IFC standards for workers accommodation[21] which include: provision of safe housing, availability of electricity, plumbing, water and sanitation, adequate fire protection and dormitory/room facilities; accommodation shall be in the range from 10 to 12.5 cubic meter (m3) (volume) or 4 to 5.5 square meters (m2) (surface) per worker, a minimum ceiling height of 2.10 m; a reasonable number of workers are allowed to share the same room–(standards range from 2 to 8 workers); workers with accompanying families shall be provided with a proper and safe accommodation (Suggested guidelines based on IFC benchmark standards for workers accommodation is provided in Appendix C-21); • Prohibit employees from poaching wildlife and cutting of trees for firewood; • Train employees in the storage and handling of materials, especially to avoid/minimize leaks or spills of construction chemicals, fuels, oils, lubricants etc., which can potentially cause soil and groundwater contamination; provide impervious floors at storage and handling sites and ensure spill control measures; • Recover used oil and lubricants and reuse or remove from the site; • Ensure sewage is disposed off scientifically either through city sewerage system, if available close to camp, or through on-site facilities such as septic tanks (water sealed to avoid seepage) and soak pits • Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas; • Remove all wreckage, rubbish, or temporary structures which are no longer required; and			

[21] https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_gpn_workersaccommodation

Field	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and Source of Funds
		• Report in writing that the camp has been vacated and restored to pre-project conditions before acceptance of work. •			
Submission of EMP implementation report	Unsatisfactory compliance to EMP	• (i) Appointment of supervisor to ensure EMP implementation • (ii) Timely submission of monitoring reports including pictures	Construction contractor	CMSC/ PIU	Cost for implementation of mitigation measures responsibility of contractor.
Post-construction clean-up	Damage due to debris, spoils, excess construction materials	• Remove all spoils wreckage, rubbish, or temporary structures (such as buildings, shelters, and latrines) which are no longer required; and • All disrupted utilities restored • All affected structures rehabilitated/compensated • The area that previously housed the construction camp is to be checked for spills of substances such as oil, paint, etc. and these shall be cleaned up. • All hardened surfaces within the construction camp area shall be ripped, all imported materials removed, and the area shall be top soiled and regressed using the guidelines set out in the revegetation specification that forms part of this document. • The contractor must arrange the cancellation of all temporary services. • Request PIU to report in writing that worksites and camps have been vacated and restored to pre-project conditions before acceptance of work.	Construction Contractor	CMSC/PIU	Cost for implementation of mitigation measures responsibility of contractor.

Table 13: Environmental Management Plan of Anticipated Impacts during Operation

Field	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and Source of Funds
Solid Waste Management	Unsafe disposal of solid waste may cause public nuisance and health issues	Provide dust bins at appropriate locations and remove all the solid waste generated at project sites on regular basis and dispose in designated disposal sites.	Municipal Corporation, Bharatpur	Municipal Corporation, Bharatpur	Municipal Corporation, Bharatpur
Basic services like drinking water, toilets etc.	Visitors need these facilities in a tourist place and lack of drinking water and toilet services will discourage the public turnout.	Maintain all the basic services provided at site such as cleaning of toilets, drinking water availability etc.	Municipal Corporation, Bharatpur	Municipal Corporation, Bharatpur	Municipal Corporation, Bharatpur
Maintenance of built/Restored infrastructure, like parking, signage, Town Hall, and Illumination of gates and other buildings/structures etc.	In the absence of regular maintenance the restored/built infrastructure may get spoiled and may cause public nuisance.	Maintain all the restored/ built infrastructures at the level of satisfaction of visitors Follow maintenance requirements or recommendations, if any, of state archaeological department / ASI and recommendations from the heritage impact assessment and mitigation plan	Municipal Corporation, Bharatpur	Municipal Corporation, Bharatpur	Municipal Corporation, Bharatpur

Table 15: Environmental Monitoring Plan of ambient air, noise, water and soil quality and other during Construction

Monitoring field	Monitoring location	Monitoring parameters	Frequency	Responsibility	Cost & Source of Funds
Construction disturbances, nuisances, public & worker safety	All work sites	Implementation of dust control, noise control, traffic management, & safety measures. Site inspection checklist to review implementation is appended .	Weekly during construction	Supervising staff, EHS officer and safeguards specialists	No costs required
Construction, Labour Camp, storage yard Management	Construction, Labour Camp, storage yard Management	As per SEMP	Weekly	EHS officer, Environment Specialist of consultant	contractor
Solid waste management	Construction, Labour Camp, storage yard Management	As per SEMP	Weekly	EHS officer, Environment Specialist of consultant	contractor
Construction and demolition waste management	All construction site	As per SEMP and applicable rules and regulations	Weekly	EHS officer, Environment Specialist of consultant	contractor
Ambient air quality	3 locations (during construction)	PM_{10}, $PM_{2.5}$, NO_2, SO_2, CO	Quarterly except Monsoon period	Contractor	Contractor (
Ambient noise	3 locations (during construction)	Day time and night time noise levels	Quarterly	Contractor	Contractor

B. Institutional Arrangements

231. The Local Self Government Department (LGSD) is the executing agency which is responsible for the overall strategic guidance and ensure the compliance with ADB loan covenants. RUDSICO is the implementing agency responsible for the technical supervision and project implementation. The RUDSICO Board (under the chairmanship of the Honourable Minister), the LGSD and the City Level Monitoring Committees (CLMCs, under the chairmanship of their respective commissioner/executive officer) is proposed to monitor the project implementation. The PMU is already established at state-level (Jaipur) and headed by a dedicated Project Director. The PIUs have two zonal offices (1 in Jaipur and 1 in Jodhpur). Each zonal office is headed by an additional chief engineer. Urban Local Bodies (ULBs) will be the final custodian and user of the created infrastructure. As primary stakeholders, the ULBs will be involved and engaged in the day-to-day monitoring and implementation.

232. At the PMU level, the Project Director is being supported by Additional Project Director (Chief Engineer-level) and a Chief Engineer, who are being supported by Dy Project Directors (Technical and Administration) and a financial advisor. There is one project officer for Social and another project officer for Environmental aspects within PMU.

233. The PMU is being supported by the Project Management and Capacity Building Consultants (PMCBC). The PMCBC shall manage preparation/vetting design documents, tendering of contracts, implementation of resettlement, environmental management and gender action plans; setting and managing project performance monitoring systems, planning and managing implementation of training and capacity building as well as institutional strengthening activities besides preparing reports as per ADB requirements. PMCBC has engaged a social safeguard specialist and environmental safeguard specialist at the PMU level for managing all social and environmental safeguard related support services as envisaged in its scope of work. They will be assisted by concerned field level safeguard support staffs of CMSCs and PIU.

234. There are two zonal PIUs already established in Jaipur and Jodhpur. One PIU shall be established at every town before award of new projects. PIUs at the town-level shall be headed by a Superintending Engineer / Executive Engineer, who shall work as Project Manager and shall sign the contract documents, manage the contract and disburse payments as Drawing and Disbursing Officer.

235. Construction management and supervision consultants (CMSCs) - 2 nos. of CMSCs catering to Jaipur and Jodhpur units are already established. They shall directly support PIUs in day-to-day contract management, construction supervision including quality management of ongoing works etc. This shall include work measurement, quantities, verification of bills of contractors etc. In compliance with the EMP, the CMSC shall develop a strategy to overcome the difficulties of construction/traffic management in narrow streets and also prepare detailed plans for detour of traffic during excavation for pipe laying. The CMSCs will propose and implement mechanism for coordination among all stakeholders such as traffic police, roads department, user committees, etc., for smooth construction execution. Adequate measures shall be taken for working near physical cultural resources involving close coordination with the Department of Archaeology. The CMSC will lead design of surveys and investigations required for the protection of archaeological sites/heritage areas and prepare Archaeological Impact Assessments, or other agreed upon document to be approved by the Department of Archaeology for the archaeologically sensitive locations.

236. Community awareness and public participation consultants (CAPPC)- CAPC core unit is already established at PMU, Jaipur and at fields in ongoing 14 project towns. CAPC field team will be established in upcoming project towns after PIUs are formed in new towns. CAPC will closely work in the field (with PIUs) to facilitate creation of project awareness and ensuring public participation for all project works at the community level CAPPC shall also undertake various IEC activities to promote and pursue health and hygiene among the communities.

237. Figure 39 shows Environmental Safeguards Implementation Arrangements within RUDSICO-EAP and Table 16 and 17 summarize the institutional responsibility of environmental safeguards implementation at all stages of the project.

238. Project Management Unit. RUDSICO will establish a state-level PMU, headed by dedicated project director, and housed in EAP division of RUDSICO. For the purpose of project implementation, 2 Zonal project implementation units (Zonal PIUs), at Jaipur and Jodhpur, headed by additional chief engineers (ACE) will be established. At PMU, there will be two dedicated project officers (i) project officer (Environment) and (ii) project officer (Social and Gender), who will be responsible for compliance with the environmental, social safeguards and gender in program implementation. Key responsibilities of the project officer (Environment) are enumerated in Table 17.

239. Contractor and CMSC. Key responsibilities of the town-level environment specialist are enumerated in Table 17.

240. Contractors. The contractor will be required to update the IEE and will be responsible for providing final design (including pipe alignments) to the supervision consultant for finalization/updating of resettlement plan. The contractor shall appoint an environment, health and safety (EHS) engineer who will be responsible on a day-to-day basis for (i) ensuring implementation of EMP, (ii) coordinating with the town-level PIUs and environment specialists of project consultant teams; (iii) community liaison,[22] consultations with interested/affected people, (iv) field-level grievance redress; and (iv) reporting.

241. The Contractor has required to submitted to RUDSICO-EAP, for review and approval, a SEMP including (i) proposed sites or locations for construction work camps, storage areas, hauling roads, lay down areas, disposal areas for solid and hazardous wastes; (ii) specific mitigation measures following the approved EMP; (iii) monitoring program per SEMP; (iv) budget for SEMP implementation. No works can commence prior to approval of SEMP.

242. A copy of the EMP or approved SEMP will be kept on-site during the construction period at all times. Non-compliance with, or any deviation from, the conditions set out in the EMP or SEMP constitutes a failure in compliance and will require corrective actions. The EARF and the IEEs specify responsibilities in EMP implementation during design, construction, and O&M phases.

243. RUDSICO-EAP will ensure that bidding and contract documents include specific provision requiring Contractors to comply with: (i) all applicable labour laws and core labour standards on (a) prohibition of child labour as defined in national legislation for construction and maintenance activities; (b) equal pay for equal work of equal value regardless of gender, ethnicity, or caste and (c) elimination of forced labour; and (ii) the requirement to disseminate information on sexually transmitted diseases including HIV/AIDS, to employees and local communities surrounding the project sites.

Table 17: Institutional Roles and Responsibilities for Environmental Safeguards Implementation

Responsible Agency	Responsibility		
	Pre-Construction Stage	**Construction Stage**	**Post-Construction**
PMU (Project Officer; Environment),	(i) Review REA checklists and assign categorization based on ADB SPS 2009 (ii) Review and approve EIA/IEE (iii) Submit EIA/IEE to ADB for approval and disclosure in ADB website (iv) Ensure approved IEEs are disclosed in RSTDSP/PMU websites and summary posted in public areas accessible and	(i) Over-all environmental safeguards compliance of the project (iii) Monitor and ensure compliance of EMPs as well as any other environmental provisions and conditions. (i) Review monthly monitoring report (ii) Prepare and submit to ADB semi-annual monitoring reports (iv) If necessary, prepare Corrective Action Plan and	Compliance monitoring to review the environmental performance of project component, if required and as specified in EMP

[22] Reasonable size social outreach team (SOT) to be appointed by contractor to facilitate community liaison, consultations and R&R implementation (including resolution of grievances). Requirement of SOT will be included in bid document.

Responsible Agency	Responsibility		
	Pre-Construction Stage	**Construction Stage**	**Post-Construction**
	understandable by local people. (v) Ensure environmental management plans (EMPs) are included in the bid documents and contracts (vi) Organize an orientation workshop for PMU, PIU, ULB and all staff involved in the project implementation on (a) ADB SPS, (b) Government of India national, state, and local environmental laws and regulations, (c) core labour standards, (d) OH&S, (e) EMP implementation especially spoil management, working in congested areas, public relations and ongoing consultations, grievance redress, etc. (vii) Assist in addressing any grievances brought about through the Grievance Redress Mechanism in a timely manner as per the IEEs (viii) Organize an induction course for the training of contractors preparing them on EMP implementation, environmental monitoring requirements related to mitigation measures; and taking immediate actions to remedy unexpected adverse impacts or ineffective mitigation measures found during the course of implementation. (ix) Ensure compliance with all government rules and regulations regarding site and environmental clearances as well as any other environmental requirements (x) Assist PMU, PIUs, and project NGOs to document and develop good practice construction guidelines to assist the contractors in implementing the provisions of IEE. (xi) Assist in the review of the contractors' implementation	ensure implementation of corrective actions to ensure no environmental impacts; (iii) Review and submit Corrective Action Plans to ADB (iv) Organize capacity building programs on environmental safeguards (iv) Coordinate with national and state level government agencies (vi) Assist in addressing any grievances brought about through the Grievance Redress Mechanism in a timely manner as per the IEEs (ix) Coordinate PIUs, consultants and contractors on mitigation measures involving the community and affected persons and ensure that environmental concerns and suggestions are incorporated and implemented	

Responsible Agency	Responsibility		
	Pre-Construction Stage	**Construction Stage**	**Post-Construction**
	plans to ensure compliance with the IEE.		
PIU, Safeguard and Safety Officer (SSO)	(i) Ensure IEE is included in bid documents and contract agreements. Ensure cost of EMP implementation is provided. (iv) Disclose of approved EIAs/IEEs. (v) Obtain all necessary clearances, permits, consents, NOCs, etc. Ensure compliance to the provisions and conditions. (vi) EMP implementation regarding sites for disposal of wastes, camps, storage areas, quarry sites, etc. (vii) Organize an induction course for the training of contractors, preparing them on EMP implementation, environmental monitoring requirements related to mitigation measures, and on taking immediate action to remedy unexpected adverse impacts or ineffective mitigation measures found during the course of implementation.	(i) oversee day-to-day implementation of EMPs by contractors, including compliance with all government rules and regulations. (ii) take necessary action for obtaining rights of way; (iii) oversee implementation of EMPs, including environmental monitoring by contractors; (iv) take corrective actions when necessary to ensure no environmental impacts; (v) submit monthly environmental monitoring reports to PMU, (vi) conduct continuous public consultation and awareness; (vii) address any grievances brought about through the grievance redress mechanism in a timely manner as per the IEEs; and	(i) Conducting environmental monitoring, as specified in the EMP. (ii) Issuance of clearance for contractor's post-construction activities as specified in the EMP.
Consultant – 1.PMCBC-Environmental Safeguard Specialist – 1 no. Asbestos Expert – 1no. Heritage Expert – 1no. Biodiversity Expert – 1no.	(i) Review IEE/EMP submitted by CMSC and revise report to submit to PMU (ii) Assist PMU and PIU in obtaining all necessary clearances, permits, consents, NOCs, etc. Ensure provisions and conditions are incorporated in the IEE and detailed design documents. (iii) Assist in ensuring IEE is included in bid documents and contract agreements. (iv) Assist in determining adequacy of cost for EMP implementation. (v) Assist in addressing any concern related to IEE and EMP.	(i) Monitor EMP implementation (ii) Assist in addressing any grievances brought about through the Grievance Redress Mechanism in a timely manner as per the IEEs.	

Responsible Agency	Responsibility		
	Pre-Construction Stage	**Construction Stage**	**Post-Construction**
	(vi). Conduct specific assessment requirements		
Consultant- 2. CMSC- 2 nos. Environmental safeguards professional	(i) Update initial environmental assessment for proposed project using REA checklists and submit to PIU/PMCBC (ii) Assist in summarizing IEE and translating to language understood by local people.	Monitoring of Implementation of EMP at site by contractor Recommend corrective action measures for non-compliance by contractors Assist in the review of monitoring reports submitted by contractors (iv) Assist in the preparation of monthly monitoring reports conduct continuous public consultation and awareness;	(i) Assist in the inspection and verification of contractor's post-construction activities.
Contractors (EHS Engineer)	(i) Review the IEE and provide information about changes needed as per revised design and scope of works to ESS of PMCBC for final revision of IEE (ii)Prepare EHS plan and take approval from CMSC/PIU and Ensure EMP implementation cost is included in the methodology. (iii) Undergo EMP implementation orientation by ESS of supervision consultant prior to start of works (iv) Provide EMP implementation orientation to all workers prior to deployment to worksites (v) Seek approval for camp sites and sources of materials. (vi) Ensure copy of IEE is available at worksites. Summary of IEE is translated to language understood by workers and posted at visible places at all times.	(i) Implement EMP. (ii) Implement corrective actions if necessary. (iii) Prepare and submit monitoring reports including pictures to PIU (iv) Comply with all applicable legislation, is conversant with the requirements of the EMP; (v) Brief his staff, employees, and labourer about the requirements of the EMP and provide environmental awareness training to staff, employees, and laborers; (vi) Ensure any sub-contractors/ suppliers who are utilized within the context of the contract comply with all requirements of the EMP. The Contractor will be held responsible for non-compliance on their behalf; (vii) Bear the costs of any damages/compensation resulting from non-adherence to the EMP or written site instructions; (viii) Ensure that PIU and ACM/SO are timely informed of any foreseeable activities related to EMP implementation.	(i) Ensure EMP post-construction requirements are satisfactorily complied (ii) Request certification from PIU

C. Capacity Building and Development

244. Executing and implementing agencies need to have a sustained capacity to manage and

monitor environmental safeguards. Although specialist consultants support will be available to PMU and PIUs, it is necessary to mainstream safeguards in day-to-day working. Therefore, PMU and PIUs require capacity building measures for (i) a better understanding of the project-related environmental issues; and (ii) to strengthen their role in preparation of IEE, implementation of mitigation measures, and subsequent monitoring. Trainings and awareness workshops are included in the project with the primary focus of enabling the PMU and PIU staff to understand impact assessments and carry out environmental monitoring and implement EMPs. After participating in such activities, the participants will be able to review environmental assessments, conduct monitoring of EMPs, understand government and ADB requirements for environmental assessment, management, and monitoring (short- and long-term), and incorporate environmental features into future project designs, specifications, and tender documents and carry out necessary checks and balances during project implementation.

245. PMCBC's ESS shall assess the capabilities of the target participants, customize the training modules accordingly and provide the detailed cost.

246. Typical modules would be as follows: (i) sensitization; (ii) introduction to environment and environmental considerations in water supply and wastewater projects; (iii) review of IEEs and integration into the project detailed design; (iv) improved coordination within nodal departments; and (v) monitoring and reporting system. Specific modules customized for the available skill set will be devised after assessing the capabilities of the target participants and the requirements of the project. The contractors will be required to conduct environmental awareness and orientation of workers prior to deployment to work sites. The proposed training project, along with the frequency of sessions, is presented in Table 18.

Table 18: Capacity Building Program on EMP Implementation

Sl. No.	Description	Target Participants and Venue	Cost and Source of Funds
1	Introduction and Sensitization to Environmental Issues (1 day) - ADB Safeguards Policy Statement -EARF of RSTDSP -Government of India and Rajasthan applicable safeguard laws, regulations and policies including but not limited to core labour standards, OH&S, etc. -Incorporation of EMP into the project design and contracts -Monitoring, reporting and corrective action planning	All staff, ULBs and consultants involved in the project At PMU, Jaipur	PMU cost
2	Treated Effluent Reuse Concepts, Design and Management	All staff at PMU and ULBs	PMU cost
3	Sludge Reuse Concept, Design and Management	All staff at PMU and ULBs	PMU cost
4	EMP implementation (2 days) -Roles and responsibilities -OH&S planning and implementation -Wastes management (water, hazardous, solid, excess construction materials, spoils, etc.) -Working in congested areas, - Public relations - Consultations - Grievance redress -Monitoring and corrective action planning -Reporting and disclosure -Post-construction planning	All staff and consultants involved in the subproject All contractors before start of construction works At PIU	PMU cost

5	Plans and Protocols (1 day) -Construction site standard operating procedures (SOP) - Asbestos Management Plan -Heritage Impact Assessment -Biodiversity and Critical Habitat Assessment - Site-specific EMP -Traffic management plan -Spoils management plan -Waste management plan - Chance find protocol - O&M plans - Post-construction plan	All staff and consultants involved in the project All contractors before start of construction works or during mobilization stage. At PIU	PMU cost Contractors cost as compliance to contract provisions on EMP implementation
6	Experiences and best practices sharing - Experiences on EMP implementation - Issues and challenges - Best practices followed	All staff and consultants involved in the project All contractors All NGOs; At PMU Jaipur	PMU Cost
7	Contractors Orientation to Workers on EMP implementation (OH&S, core labour laws, spoils management, etc.)	All workers (including manual laborers) of the contractor prior to dispatch to worksite	Contractors cost as compliance to contract provisions on EMP implementation

D. Monitoring and Reporting

247. Prior to commencement of the work, the Contractor will submit a compliance report to PIU ensuring that all identified pre-construction environmental impact mitigation measures as detailed in the EMP will be undertaken. PIU with the assistance of the SO and ESS of PMCBC, consultant will review the report and thereafter PMU will allow commencement of works.

248. During construction, results from internal monitoring by the Contractor will be reflected in their monthly EMP implementation reports to the PIU and ACM, CMSC. Project officer (Environment) and ACM will review and advise contractors for corrective actions if necessary. Monthly report summarizing compliance and corrective measures taken will be prepared by safeguard officer with the assistance of ACM and submitted to PMU.

249. Quarterly report shall be prepared by CMSC and PIU and submitted to PMU for review and further actions.

250. Based on monthly and quarterly reports and measurements, PMCBC will draft semi-annual report and submit PMU for their review and further submission to ADB (Appendix C-15). Once concurrence from the ADB is received the report will be disclosed in the Project website.

251. The PMU will submit semi-annual environmental and social safeguards monitoring reports to ADB, which will be reviewed and disclosed on ADB's website. The monitoring reports will be prepared by PMU with assistance from the PMCBC based on inputs from the PIU's safeguard officers, CMSC, contractors and NGOs, where relevant. The status of safeguard implementation, issues, and corrective actions including associated cost and schedule are to be clearly reported to ADB. The status of safeguards implementation will also be discussed at each ADB review mission and with necessary issues and agreed actions recorded in Aide Memoires. ADB will also carry out annual environmental and/or social (including gender) reviews of the Project. The outline of the semi-annual environmental monitoring report is in Appendix C-15. ADB's monitoring and supervision activities are carried out on an ongoing basis until a project

completion report (PCR) is issued. Thus, semi-annual report, which may cover O&M of completed packages, will be submitted to ADB until PCR is issued.

252. ADB will review project performance against the project commitments as agreed in the legal documents. The extent of ADB's monitoring and supervision activities will be commensurate with the project's risks and impacts. Monitoring and supervising of social and environmental safeguards will be integrated into the project performance management system.

E. EMP Implementation Cost

253. Most of the mitigation measures require the contractors to adopt good site practice. Contractor being bound to adopt several mitigation measures through various legal obligations (e.g. BOCW Act, Labour acts etc.) such as use of PPEs, provide toilets and potable drinking water, labour camp management, safety at work sites, safety in equipment operations etc. which should be part of their normal procedures; are not included in EMP cost of this project. Mitigation that is the responsibility of PIU/ULB will be provided as part of their management of the project, so this also does not need to be duplicated here. Cost for the capacity building program is included as part of the project. Regardless of these, project specific costs of mitigation by the construction contractors are included in the EMP budget for the civil works are enumerated here (**Table 19**).

Table 19: Cost Estimates to Implement the EMP

S. N.	Particulars	Stages	Unit	Total Number	Rate (INR)	Cost (INR)	Costs Covered By
	Mitigation Measures						
A.	**Monitoring Measures**						
1	Air quality monitoring*****	Pre-construction and Construction (quarterly)	per sample	30	4920	1,47,600	Civil works cost
2	Noise levels monitoring*****	Pre-construction and Construction (quarterly)	Per sample	40	1980	59,400	Civil works cost
3	Surface water quality*	Pre-construction and Construction (quarterly)	per sample	10	6720	67,200	Civil works cost
	Subtotal (A)					**2,74,200**	
B	**Capacity Building**						
1.	Introduction and sensitization to environment issues	Pre-construction	lump sum			25,000	PMU
2.	EMP implementation	Construction	lump sum			25,000	PMU
3.	Plans and Protocols	Construction	lump sum			25,000	PMU
			lump sum			25,000	Civil works cost
4.	Experiences and best practices sharing	Construction/Post-Construction	lump sum			10,000	PMU
5.	Contractors Orientation to	Prior to dispatch to worksite	Lump sum			25,000	Civil works cost

S. N.	Particulars	Stages	Unit	Total Number	Rate (INR)	Cost (INR)	Costs Covered By
	Workers on EMP implementation						
	Subtotal (B)					**135,000**	
C	**Civil Works**						
1	Water Sprinkling for dust suppression	Construction	KL	250	111	27750	Civil works cost
	Sub Total (C)					**27,550**	
D	**Grievance Redressal Mechanism**				Lump sum	10,000	Civil works cost
	Sub Total (D)					**10,000**	
F	**Heritage Management**	Physical Cultural Survey and Site Verification, Consultations, Documentation of Baseline Conditions, Assessment of Mitigation Requirements, Supervision of Contractors, Documentation and Reporting			Lump sum	100,000	PMU
	Total (A+B+C+D+E+F)				**INR**	**546,750.00**	

Summary of EMP Cost incurred by Institution:

Contractor Cost - INR 361,750 /-
PMU Cost - INR 185,000/-
Total - **INR 546,750/-**

(In Words: Rupees Five Lacs Forty-Six Thousand Seven Hundred Fifty Only)

Table 20: Details of environment monitoring locations

Project components where environmental monitoring is required	Total numbers of environmental monitoring required in one quarter	Total numbers of environmental monitoring required in 18 months (five quarters leaving quarter of monsoon)	Project duration	Total number of environmental monitoring required during project duration
Total-6 Location	Air- 1 Noise- 1 Surface Water- 2	Air- 5 Noise- 5 Surface Water-10	18 months	Air- 30 Noise- 30 Surface Water-10

X. CONCLUSION AND RECOMMENDATION

254. The process described in this document has assessed the environmental impacts of all elements of the Conservation & Development of Heritage Sites subproject. All potential impacts were identified in relation to pre-construction, construction, and operation phases. Planning principles and design considerations have been reviewed and incorporated into the site planning and design process wherever possible; thus, environmental impacts as being due to the project design or location were not significant. Heritage impact assessment study conducted, and recommendations will be incorporated into the final designs.

255. Bharatpur also known as the 'Eastern Gateway of Rajasthan' and is located in proximity to major tourism destinations like Jaipur, Agra, Mathura and Delhi and lies on the major tourist circuit of golden triangle i.e. Delhi-Jaipur-Agra. The city is endowed with a rich history as well as natural and cultural heritage resources. Bharatpur has a number of religious, historical and archaeological places of importance, attract tourists from India and abroad. Subproject includes restoration of town hall and kunds (old water harvesting/storage structures with heritage value) and these are not listed or protected monuments, but are important part of local heritage, and are in neglected stage and improvement will add value to the city.

256. Subproject will provide lighting illumination of city gates (which are state government protected), two temples and a mosque. Subproject will also redevelop a Park, next to the townhall. Town Hall is located within fortification walls. It exhibits a wide variety of architectural styles dating to different time periods. It is a palette of built heritage with a rich and varied vocabulary that has continued over decades. Bijendra Bihari Kund and Saligram Kunds are located within the town, and are in poor condition, needs restoration. All proposed works will conserve the historic built fabric and no new type of material or change in design is proposed in the subproject. Heritage impact assessment study conducted as part of IEE reviewed the heritage importance of proposed sites, assessed the impact of the proposed measures, and provided recommendations to ensure that the improvements are appropriate. Measures will be included in the detailed designs.

257. Potential impacts during construction are considered significant but temporary and are common impacts of construction in urban areas, and there are well developed methods to mitigate the same.

258. The public participation processes undertaken during project design ensured stakeholders are engaged during the preparation of the IEE. The planned information disclosure measures and process for carrying out consultation with affected people will facilitate their participation during implementation. The project's grievance redress mechanism will provide the citizens with a platform for redressing grievances, and describes the channels, timeframe, and mechanisms for resolving complaints about environmental performance.

259. The Environmental Management Plan proposed in the project includes mitigation measures for identified impacts, training and capacity building activities, a monitoring plan to ensure that the environmental standards are maintained throughout the project construction period and a reporting plan to ensure that the project is implemented as per environmentally sound engineering and construction practices. The budgetary provision for mitigating the anticipated impacts by proposed subproject component is made in the project for effective implementation of the EMP.

260. The EMP will assist the PMU, PIU, Consultants and contractors in mitigating the environmental impacts, and guide them in the environmentally sound execution of the proposed project. The EMP will also ensure efficient lines of communication between PIU/ULB, PMU,

consultants and contractor. A copy of the EMP shall be kept on-site during the construction period at all times. The EMP shall be made binding on all contractors operating on the site, and will be included in the contractual clauses. Non-compliance with, or any deviation from, the conditions set out in this document shall constitute a failure in compliance.

261. The project will benefit the general public by Conservation & Development of Heritage Sites in Bharatpur. The potential adverse environmental impacts are mainly related to the construction period, which can be minimized by the mitigation measures and environmentally sound engineering and construction practices.

262. Therefore, as per ADB SPS, the project is classified as environmental category B and does not require further environmental impact assessment.

263. **Recommendations**. The following are recommendations applicable to the subproject to ensure no significant impacts:

(i) Obtain all statutory clearances (e.g., Permission from State Archeology and Musueums Department and Archeological Survey of India) at the earliest time possible and ensure conditions/provisions are incorporated in the detailed design;
(ii) Include this IEE in bid and contract documents;
(iii) Commitment from PMU, PIUs, project consultants, and contractors to protect the environment and the people from any impact during project implementation
(iv) Update/revise this IEE based on detailed design and/or if there are unanticipated impacts, change in scope, alignment, or location;
(v) RUDSICO-EAP has to ensure that associated projects are completed on time and are in operation prior to completion of civil works under this subproject
(vi) Conduct safeguards induction to the contractor upon award of contract;
(vii) Ensure that Solid waste management protocols are compliant with environmental regulations (Solid Waste Management Rules 2016 and its amendments) and solid waste disposal should have a designated site (dumping on vacant lot is not allowed);
(viii) Ensure contractor appointed qualified environment, health and safety (EHS) officers prior to start of works;
(ix) Timely disclosure of information and establishment of GRM;
(x) Involvement of contractors, including subcontractors, in first level GRM;
(xi) Strictly supervise EMP implementation;
(xii) Consult/ Get permission from Archaeological Survey of India prior to start of work on the components proposed in close proximity of protected monuments.
(xiii) Seek permission from State Department of Archaeology and Museum prior to start of work on any state protected monument
(xiv) PMU to ensure that the catchment area of both kunds are covered with proposed sewerage system
(xv) Continuous consultations with stakeholders;
(xvi) Documentation and reporting on a regular basis as indicated in the IEE.

Appendix 1: REA Check list

Instructions:
The project team completes this checklist to support the environmental classification of a project. It is to be attached to the environmental categorization form and submitted to the Environment and Safeguards Division (RSES) for endorsement by the Director, RSES and for approval by the Chief Compliance Officer.
This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

Country/Project Title: India/Rajasthan Secondary Towns Development Investment Program (RSTDP)/, Conservation & Development of Heritage Sites Bharatpur Distt. Bharatpur, Rajasthan
Sector Division: Urban Development

REA Checklist- City Development

Screening Questions	Yes	No	Remarks
A. Project Siting Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
Densely populated?		No	Project area do not have residential use in its immediate vicinity, this is recreational area and people from surrounding localities as well as tourist visit the place. Minimal road disruption is expected owing to the small length (150 meters) of road under renovation and measures such as best activity scheduling, traffic management, etc. will be employed to minimize the impact to acceptable levels.
Heavy with developmentactivities?		No	The area is free from any major activities. People visit the place for recreational activities which is not a permanent activity.
Adjacent to or within any Environmentally sensitiveareas?		No	Keoladeo bird Sanctuary is situated at a distance of about 3 km (Aerial distance).
Cultural heritage site		No	Proposed sites are selected near ASI protected monuments and Prior NOC from ASI will be taken before start of Project. Other than ASI site the project involved in beautification and infrastructure improvement on cultural heritage monuments under supervision of archaeological and museum department of government of Rajasthan
Protected Area		No	Nearest environmentally sensitive area is Keoladeo Bird Sanctuary which lies at an aerial distance of 3 km from PIA.
Wetland	Yes		One third of the Keoladeo National Park is wetland with mounds, dykes, and open water with or without submerged or emergent plants

Mangrove		No	
Estuarine		No	
Buffer zone of protected area		No	
Special area for protecting biodiversity		No	
B. Potential Environmental Impacts Will the Project cause			
Impacts on the sustainability of associated sanitation and solid waste disposal systems and their interactions with other urban services.		No	
Deterioration of surrounding environmental conditions due to rapid urban population growth, commercial andindustrial activity, and increased waste generationto the point that both manmade and natural systems are overloaded and the capacities to manage these systems areoverwhelmed?		No	
Degradation of land and ecosystems (e.g. loss of wetlands and wild lands, coastal zones, watershedsand forests)?		No	The project will not cause degradation of land and ecosystem.
Dislocation or involuntaryresettlement of people		No	
Degradation of culturalproperty, and loss of cultural heritage and tourism revenues?		No	Improvement in tourism revenue anticipated due to the development of the lake as an ecotourism destination
Occupation of low-lying lands, floodplains and steep hillsides by squatters and low-income groups, and their exposure to increased health hazards and risks due to pollutive industries?		No	
Water resource problems (e.g. depletion/ degradation of available water supply, deterioration for surface and ground water quality, and pollution of receiving waters?		No	Sanitation problems may occur temporarily during construction phase due to generation of sewage and solid waste from the construction/ labour camp.
Air pollution due to urbanemissions?	Yes		Minor impacts during construction phase are anticipated due to excavation, demolition, transport of materials and operation of equipment like dieselgenerators and concrete mixers. Mitigation measures are considered in EMP.
Social conflicts between construction workersfrom		No	

other areas and local workers?			
Road blocking and temporary flooding due to land excavation during rainy season?		No	Temporary diversion or partial closure of access road due to construction and beautification activity at City & Fort Gates may be required during construction phase. Bharatpur receives scanty rains; hence no temporary flooding is expected.
Noise and dust from construction activities?	Yes		Minor noise and dust from construction activities is anticipated which shall be temporary in nature coinciding only with the duration of construction activities. Mitigation measures are considered in EMP.
Traffic disturbances due to construction material transport and wastes?		No	The transportation of construction material and wastes shall be site specific and restricted to daily requirements which is not expected to result into traffic disturbances.
Temporary silt runoff due to construction?		No	
Hazards to public health due to ambient, household and occupational pollution, thermal inversion, and smog formation?		No	
Water depletion and/or degradation?		No	No project component is proposed inside Lake or its shoreline.
Overpaying of ground water, leading to land subsidence,lowered ground water table, and salination?		No	Not anticipated as per the nature of the work
Contamination of surface and ground waters due to improper waste disposal?		No	The sewage generated in labour camps will be processed in toilets with bio-digestors.
Pollution of receiving waters resulting in amenity losses, fisheries and marine resource depletion, and health problems?		No	Considering the nature of work and its confinement in a small stretch, there is no probability of pollution of freshwaters due to implementation of project. Safe disposal of construction waste and excavated soil will be done as per EMP.
Climate Change and Disaster Risk Questions			
The following questions are not for environmental categorization. They are included in this checklist tohelp identify potential climate and disaster risks.			
Screening Questions	**Yes**	**No**	**Remarks**
Is the Project area subject to hazards such as earthquakes, floods, landslides, tropical cyclone winds, storm surges, tsunami or volcanic eruptions and climate changes		No	The area is not subject to floods, landslides, tropical cyclone winds, storm surges, tsunami or volcanic eruptions and localized climate changes. the project area falls in moderate damage seismic Zone-III as per seismic zonation map of India.
Could changes in temperature, precipitation, orextreme events patterns over the Project lifespan affecttechnical or financial sustainability (e.g., changesin rainfall patterns disruptreliability of water supply; sealevel rise creates salinity intrusion into proposed watersupply source)?		No	

Are there any demographic orsocioeconomic aspects of the Project area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, ethnic minorities, women or children)?		No	
Could the Project potentially increase the climate or disaster vulnerability of the surrounding area (e.g., by using water from a vulnerablesource that is relied upon by many user groups, or encouraging settlement in earthquake zones)?		No	

Checklist for Preliminary Climate Risk Screening

Country/Project Title: India/Rajasthan Secondary Towns Development Investment Program (RSTDP), Conservation & Development of Heritage Sites Bharatpur, District – Bharatpur , Rajasthan
Sector: Urban Development
Division/Department: Urban Development

Screening Questions		**Score**	**Remarks[23]**
Location and Design of project	Is siting and/or routing of the project (or its components) likely to be affected by climate conditions including extreme weather related events such as floods, droughts, storms, landslides?	0	No such issue may affect the project
	Would the project design (e.g. the clearance for bridges) need to consider any hydro-meteorological parameters (e.g., sea-level, peak river flow, reliable water level, peak wind speed etc)?	0	No such issue may affect the project
Materials and Maintenance	Would weather, current and likely future climate conditions (e.g. prevailing humidity level, temperature contrast between hot summer days and cold winter days, exposure to wind and humidity hydro-meteorological parameters likely affect the selection of project inputs over the life of project outputs (e.g. construction material)?	0	No such issues may affect the project
	Would weather, current and likely future climate conditions, and related extreme events likely affect the maintenance (scheduling and cost) of project output(s) ?	0	No such issue may affect the project
Performance of project outputs	Would weather/climate conditions, and related extreme events likely affect the performance (e.g. annual power production) of project output(s) (e.g.	0	No problem will envisaged in future which

[23] If possible, provide details on the sensitivity of project components to climate conditions, such as how climate parameters are considered in design standards for infrastructure components, how changes in key climate parameters and sea level might affect the siting/routing of project, the selection of construction material and/or scheduling, performances and/or the maintenance cost/scheduling of project outputs.

	hydro-power generation facilities) throughout their design life time?		likely affect the performance of project output

Options for answers and corresponding score are provided below:

Response	Score
Not Likely	0
Likely	1
Very Likely	2

Responses when added that provide a score of 0 will be considered low risk project. If adding all responses will result to a score of 1-4 and that no score of 2 was given to any single response, the project will be assigned a medium risk category. A total score of 5 or more (which include providing a score of 1 in all responses) or a 2 in any single response will be categorized as high risk project.

Result of Initial Screening (Low, Medium, High): Low

Appendix 2: Heritage Impact Assessment for City Beautification Project

Heritage Impact Assessment & Management Plan

EXECUTIVE SUMMARY

1. The focus of the subproject is on the following components:

- Conservation & Redevelopment of Town Hall campus and façade improvement of Raj kiya Vishist Purva Uchha Madhyamic Vidyalaya .
- Facade lighting & Illumination of City Gates
- Facade lighting & Illumination of Laxman Mandir, Ganga Mandir & Jama Masjid
- Conservation & Redevelopment of Saligram Kund & campus
- Conservation & Redevelopment of Brijendra Bihari Kund & Campus
- Revitalisation of Nehru Park

2. The major scope of work under the proposed subproject as stated in the Detailed Project Report will include the following aspects:

- Conservation & Adaptive reuse of the heritage resources.
- Creating recreational facilities for tourists & locals
- Development of tourist facilities & services at selected components
- Facade lighting & illumination of important heritage resources for night tourism

3. The objective of the subproject is to improve, conserve and manage physical and environmental image of the historical & heritage sites with planned interventions consistent to its historic status, revitalization of walled city along with sustainable model for citizens and tourists, to educate visitors about the historical structures, culture and the values of city, providing tourist infrastructure facilities along with protecting the heritage value of the property and to enhance tourist attractions with all facilities.

A. Scope of the Subproject

4. Bharatpur is a city in the western Indian state of Rajasthan and is 180 kilometres from New Delhi. Geographically, the district is placed close to the capital of the state, major cities of neighbouring state of Uttar Pradesh and Delhi. Bharatpur touches Gurgaon of Haryana in the north, Mathura in the east, Agra of Uttar Pradesh and Dholpur of Rajasthan in the south and Dausa and Alwar in the west. The city lies the golden triangle, which also includes Delhi, Agra, and Jaipur. The distance between Jaipur and Bharatpur is around 178 km whereas Agra lies 55 km and Mathura is located at 34 km. Tourists from these areas travelling from Agra visit the bird sanctuary and fort in Bharatpur before continuing on to Jaipur. They donot stay overnight in Bharatpur. The proposed subproject components are expected to increase the number of tourist attractions in the city and this is projected to contribute to the economy of Bharatpur.

5. Under the subproject several heritage sites and structures that require conservation and upliftment have been identified with the following objectives:

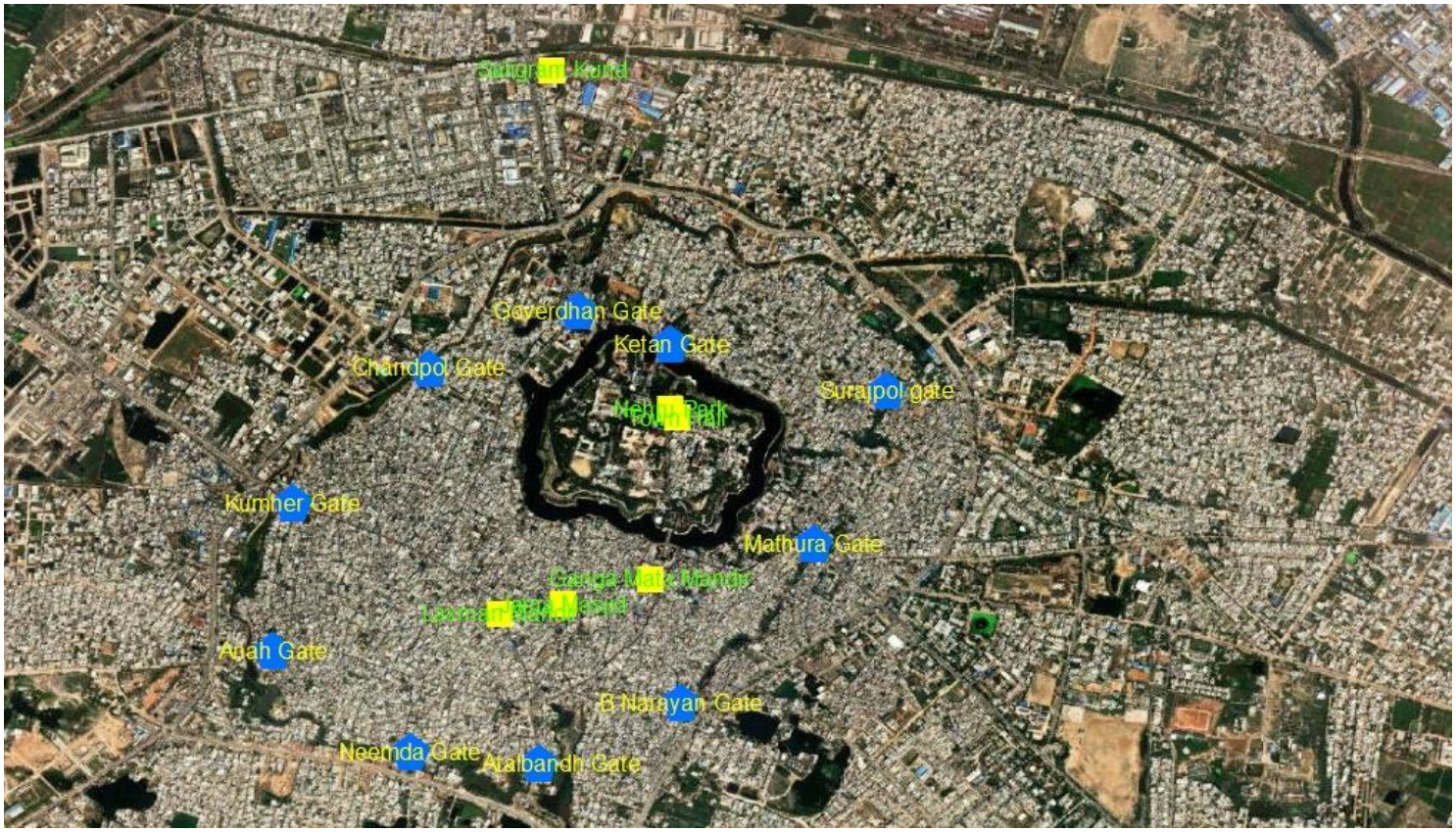
- Conservation & restoration of existing cultural & natural heritage resources.
- Bringing the rich heritage of the city on the tourist map of Bharatpur.
- Creating awareness amongst locals towards their city heritage .
- Providing better infrastructure for tourism in the city.

B. Description of the Setting

6. Subproject components are proposed in the citadel of the historic city of Bharatpur and in its immediate surroundings which were changed to urban use several decades ago. The citizens of the Bharatpur city will be the major beneficiaries of this subproject. Improved ambiance and infrastructure at one of the most visited places in Bharatpur. Implementation of project will attract more recreational facilities in the city and will attract tourist; this will contribute to the overall economy of the city.[24]

[24] Ibid

Locations of Proposed Components around Bharatpur



C. Objective of the HIA

- To evaluate the significance of the heritage assets and their condition
- To assess the impact of the proposed interventions under the sub project
- Propose mitigation measures through appropriate design and planning in conservation and adaptive reuse of the cultural heritage sites that ensures that the values of the heritage assets are protected and not compromised with the interventions
- Propose appropriate management systems for project implementation so as to ensure that the conservation works are in compliance with acceptable national and regional standards.
- Establish monitoring indicators for measuring compliance

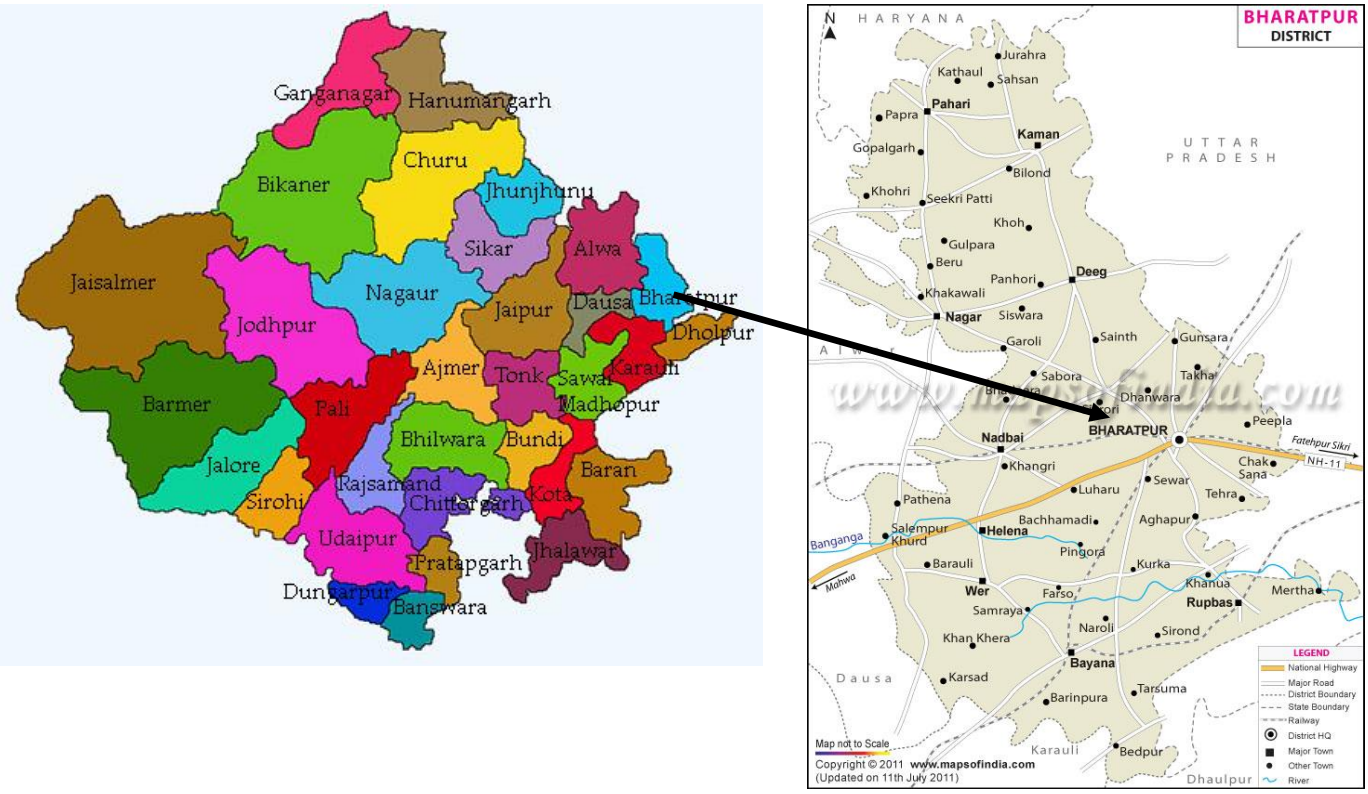
I. BACKGROUND AND DESCRIPTION

A. Bharatpur: The Eastern Gateway to Rajasthan

7. Bharatpur, lying in the eastern part of the state of Rajasthan, is strategically located along the golden triangle, a touristic route consisting of Delhi, Agra, and Jaipur. It is the administrative headquarters of Bharatpur district, the headquarters of Bharatpur Division of Rajasthan state and is part of the National Capital Region (NCR) of India. It also became a Municipal Corporation with 65 wards in 2014.

8. The city is situated 180 km south of India's capital, New Delhi, 178 km from Rajasthan's capital Jaipur, 55 km west of Agra, Uttar Pradesh and 38 km from Mathura, Uttar Pradesh. A broad-gauge railway line also links it with Jaipur. Geographically, the district is situated between 26° 22' and 27° 83' N and 76° 53' and 78° 17' E and its average height above sea level is around 183 m.

Location of Bharatpur city on the Map of Rajasthan State



B. Rationale and Tourism Potential of the Project

9. The tourist inflow in Rajasthan is constantly increasing, and being the headquarter of the district, a large number of people visit Bharatpur due to which it sets the record for one of the highest footfalls in the state of Rajasthan. Some of them stay there for work while some go to Agra. Although Bharatpur is connected by road to the state capital and important cities, railway connectivity is via metres gauge line and broad-gauge rail route. The city lacks adequate tourist information counters at important places like railway station and bus stands – currently, Bharatpur has only one Tourist Information Centre.

In the 70s and 80s, Bharatpur used to witness a heavy influx of tourists – 70% of tourists travelling from Agra to Jaipur used to halt or stay here overnight, as per the older residents of the city. Unfortunately, with the passage of time, the tourist infrastructure has degraded, there is a shortage of basic services, utilities, and fundamental resources like water. Due to this, the numbers of tourists have been falling over the last few years. Tourists travelling from Agra visit the Keoladeo National Park and Lohagarh fort on their way to Jaipur. Restoration and improvement of heritage structures in Bharatpur and development of public amenities will also lead to economic development of the city and will significantly contribute to the economy of the state.[25]

[25] From '*Detail Project Report: Conservation & Development of Heritage Sites in Bharatpur*', prepared for Bharatpur Municipal Corporation, Rajasthan Urban Infrastructure Development Program (RUIDP), p. 21.

10. In recent times, it is claimed that the government has started undertaking several projects to ensure uninterrupted water supply, proper drainage and sewerage in the city. The current 'Bharatpur Tourism Beautification Project Proposal' is envisioned to act as a catalyst to increase tourism footfall in the city.

C. Tourism Assets in and around Bharatpur are listed as:

1. Lohagarh Fort
2. Keoladeo National Park
3. Shri Banke Bihari Temple (inside Lohargh Fort)
4. Gayatri Temple (inside Lohargh Fort)
5. Government Museum
6. Bharatpur Palace and Museum
7. Sewar Fort
8. Purana Mahal
9. Deeg Palace
10. Dak Bungalow
11. Delhi Gate (outside Lohargh Fort)
12. Fateh Burj
13. Jawahar Burj
14. Ashtadhatu Gate
15. Moat surrounding the Fort wall
16. Fort walls including Chowburja gate
17. Approach bridges at the Chowburja and Ashtadhatu gates

II. HERITAGE SIGNIFICANCE OF BHARATPUR

11. The heritage value of Bharatpur is closely tied to its mythological significance – the city itself was named after Bharat, Lord Rama's brother, whose other brother, Laxman, is the family deity of the erstwhile royal family of Bharatpur. The name 'Laxman' was engraved on the state's arms, seals, and other emblems. Aside from its association with the Ramayana, there is a belief that the Pandavas, the five brothers central to the epic of Mahabharata, had spent their 13th year of exile in Bharatpur around 3,500 years ago.

A. Historic Value

12. Historically, the city and fort of Bharatpur was founded by Rustam, a Jat chieftain belonging to the Sogariya clan. With the decline of the Mughal Empire, in the early 17th century, the Jats established a state in the Mewat region south of Delhi, with its capital at Deeg. Maharaja Suraj Mal took over from Khemkaran, the son of Rustam, in the 18th century and turned Bharatpur into an impregnable well-fortified city, carved out of the region formerly known as Mewat and established it as the capital of his state. It is also important to note that the cities of Bharatpur, Deeg and Dholpur played an important part in the history of Rajasthan. Several buildings and sites associated with this layer of history exist till date and infact contribute to the rich historic landscape of the urban area.

13. In the early 19th century, the princely state witnessed a siege by the British, and it was also one of the first states in Rajputana to have a treaty with British. During the British rule, it was spread across an area of 5,123 km, and its rulers enjoyed a salute of 17 guns, indicative of a relatively high rank based on their prestige. In 1947, the state acceded to the Indian Union, and in 1948, the Matsya Union or Matsya Sangh, was formed by the merger of four erstwhile princely states – Alwar, Bharatpur, Dholpur, and Karauli – which eventually led to the creation of the present-day state of Rajasthan.[26]

B. Social and Spiritual Value

14. One of the most important festivals of Bharatpur is the Braj festival lasting 3 days which takes place every year before the festival of Holi, in the month of Phalgun, according to the Hindu calendar. The festival is an embodiment of Indian culture and mythology as it is dedicated to Lord Krishna who is believed to have spent his childhood in the Braj region. The city being close to Mathura, his birthplace, has a great influence on the celebration of the Holi festival at Deeg. Rasleela, an Indian folk dance associated with the traditional story of Krishna as described in Hindu scriptures, is organised on this festival, folk songs are sung, and the whole town is decorated with colours.

15. Gangaur and Teej are also important festivals celebrated in the region. In the memory of the late Maharaja Jaswant Singh of the princely state, an exhibition and cattle fair are organized every year in which different breeds of animals are brought from different places. For pilgrims to

[26] https://rajbhawan.rajasthan.gov.in/content/rajbhawan/en/aboutus/introduction.html

the region there are places like the Laxman Mandir, Ganga Mandir, Jama Masjid and Bankey Bihari Temple.

16. As is evident, the people of Bharatpur hold their native traditions and customs in high regard and endeavour to preserve them.

C. Ecological Value

17. Keoladeo National Park, home to more than 230 different species of birds and a major wintering site for migratory birds from Afghanistan, Turkmenistan, Siberia is one of the main attractions of Bharatpur. Now a UNESCO World Heritage Site, Keoladeo was originally established as a duck-hunting reserve by the Maharajas of Bharatpur and was known as the best duck shooting resort in the British Empire. The site was declared a bird sanctuary in 1956 and later received the status of a National Park.

18. It is famous for ducks, goose, teals, pintails, and the rare Siberian cranes. Local birds in the area mainly are egerls, painted storks, cormorants, sarus cranes, spoonbills and openbill storks and weaver birds. Migratory birds flock here in July-August and breed here till October-November.

III. BASELINE FEATURES AND CONDITION OF THE SUBPROJECT COMPONENTS

A. Town Hall

19. This building is historic in nature with a distinctive medieval architecture style. It has been built in two phases which is evident from its architecture and use of materials. It comprises a raised pavilion like structure with an extension of a hall evidently built for performances.

Town Hall- phase I of the building faces the road; the plinth and the roof are in serious state of decay

20. The Town Hall precinct is located adjacent to the Nehru park, along the edge of the moat wall of the citadel. The fortification wall along with the moat of the citadel are notified monuments by the Archaeological Survey of India, hence the Town hall building is located within the 'buffer zone' of the protected monument which requires all proposed works to be undertaken on this building to be approved by the National Monument Authority.

Town Hall in the citadel of Bharatpur; the moat marked in blue, moat walls and the two entrance gateways are protected monuments, notified by ASI

As mentioned in the IEE and Detailed Project Report, the entire building has been unused for several years – a part of the building was used as a government office, another part was used as a storage facility. A large part of the building is currently not in use. The building has been falling into disrepair since several years and hence is in a state of decay evidently due to absence of any maintenance. Architectural details of the structure have been compromised due to poor maintenance and incongruous construction. Graffiti and posters on the walls have defaced the historic fabric of the building along the street as the outer façade of the building is along the road edge.

21. It is evident that some repairs have been made using improper materials and techniques; the original plaster on the walls and roof is disintegrating, while original layers of wall finishing have been masked by inappropriate materials and multiple layers of paint. The parapet is broken, there is vegetation growth across the terrace which is resulting in seepage of moisture and development of cracks. Later interventions have concealed and damaged blind arches, pilasters, and openings on the upper floors.

22. Adjacent to the Town, along the principal access road is the Raj kiya Vishist Purva Uchha Madhyamic Vidyalaya (RVPUMV). This building is of heritage value and was possibly built during the same time as the construction of the Town Hall building. This is evident from its architectural character. The façade of the building appears to have been repaired several times with modern materials like cement-based plaster without any consideration for historic materials and detailing. The eastern façade is reported to be in very poor condition. The school houses students till class 11 soon to be extended to class 12. The existing façade is constructed with masonry wall in lime mortar and further finished with lime plaster.

It is proposed to restore and conserve the road side façade of this heritage school building with traditional conservation method and techniques.

Existing Condition of Town Hall

B.

Existing Condition of Government RVPUMV School

C. Façade Lighting of City Gates

23. Single-colour warm white lights with theme of micro & diffuse façade is proposed to be used. LED light fixtures like spotlights, strip lights, linear lights, wall washers, up-lighter and

down-lighters will be used for illumination. Features to be highlighted on façade are - door frames, motifs, architraves, kangooras or gate chajja, inverted ceilings. Gates proposed for façade lighting are as under:

Showing Continuous façade of Town Hall and RVPUMV (from School side)

<table>
<tr><td>  </td><td>  </td></tr>
<tr><td>ATALBANDH GATE</td><td>CHANDPOLE GATE</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>SURAJPOL GATE</td><td>KUMHER GATE</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>MATHURA GATE</td><td>KETAN GATE</td></tr>
</table>

	
NEEMDA GATE	B NARAIN GATE
	
Gobardhan Gate	Anah Gate

D. Laxman Mandir, Ganga Mandir & Jama Masjid

a. Ganga Mandir

24. Ganga Maharani Temple features a unique blend of South Indian, Mughal and Rajputana architectural styles. The temple has two entrance gates, while Lord Krishna is seen holding the mountain of Giri Raj on one side; there are statues of Laxmi Narayan and Shiva Parvati on the other. The walls and pillars of the temple are decorated with beautiful carvings. The temple is located across the moat, opposite the principal gateway of the citadel. The king and queen could have the first sight of Ganga Maharani, and even today, a window in the royal palace opens exactly in the direction of the temple.

25. The building is built of Bansi Paharpur stone and gets its distinctive character from the open arcade which are present on all its sides. A long grand staircase with shallow treads leads to the temple court from the road. The building is in a good state of conservation

Ganga Mata Mandir, across the moat of citadel.

b. Jama Masjid

26. The Jama Masjid is a monumental building, built of the Bansi Paharpur stone and is in the heart of the market street, and is located between the two temples. The three domes of the mosque tower over the other lesser significant buildings on the market street.

27. The front façade has some shops, while the back façade is marred by incongruous elements such as hoardings, advertisements boards, and improperly hung electrical and cable wires. The lighting on the façade is inadequate as it fails to highlight the Masjid's beautiful architectural elements. The local people explained that the streetlights are inadequate, and they are frequently found in a state of disrepair.

Jama Masjid, in the heart of the city

c. Laxman Mandir

28. The temple is made of sandstone, Bansi Paharpur. The temple like the previously described buildings are built on a high plinth, with its front façade adorned with a variety of architectural features – the entrance has gokha adjoining tibari structures, flanked by jharokha windows on both sides; and stone chajjas supported by ornamental brackets. The steps inside multifoil arched entrance leads to the temple's Jagmohan Mandapa.

29. Due to later constructions of shops around the periphery of the building, some architectural features and embellishments such as the winged portion of the entrance façade are now hidden. Additionally, hoardings and advertising boards are detracting from the historic façade and hiding its architectural features.

30. In recent years, the floor of the temple court, along its periphery have been provided with stone paving.

Laxman Mandir- provided with sandstone flooring in recent times

E. Saligram & Brijendra Bihari Kund

a. Saligram Kund

31. Cruciform in shape, the kund has remanent of masonry which define three of its four sides. Built primarily of brick masonry in lime mortar with decorative features in red sandstone. The kund is currently in a poor condition with deteriorating masonry and extensive vegetation growing around it. According to a local resident, the fourth wing comprised a ramp which made it possible for animals to access water in the Kund. Algae has formed on the surface of the water due to long-term water logging, and the water often flows out of the Kund. A temple is located on one of the sides of the kund and a small informal settlement has developed on the other edge.

32. The locals informed that the source of water is a well; however, in the past, it is believed to have been from a canal which continues to exist but no longer supplies water. During the site visit, the canal was observed to have been overgrown with vegetation and filled with debris and garbage. It was also mentioned that the water is contaminated by sewage. Heavy vehicles are parked on the rear side of the temple, along the edge of the road which define one of the edges of the precinct. Due to these developments the kund is not visible from the road. A network of canals in city functioned as flood channels and is said to be one of the sources of water for the kund. major source of water to the kund is Girraj Canal passing adjacent to the kund in tis Northern direction having a lateral sluice.

Masonry edges of the kund, remains of the historic fabric

The water of the kund is contaminated with solid waste and surface run off

33. The extent of the property (water tank with the open space and temple in the setting) requires to be defined as all the four edges have different conditions, Edge 1 – A temple with informal parking of trucks. A road is present on the outer edge; Edge 2 –Bushy vegetation around the edge of the tank; Edge 3 –B High wall of an adjoining semi-industrial plot; Edge 4 – The overgrown canal. This is necessary for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the roads, and to ensure that there is no encroachment in the future. Catchment of Saligram Kund is proposed to be covered under the sewerage network under RUIDP Phase-IV and the Brij bihari Kund under the FSSM scheme under the same scheme

b. Brijendra Bihari Kund

34. The Brijendra Bihari kund is one of the historic water structures in the town located adjacent to an important temple. Water from the Kund was used for rituals in the temple but due to pollutants in the water from sewage, this water is no longer used for ritual purposes. The temple is situated on one of the Kund's edges, recently developed residential neighbourhoods can be found on two of its sides, and a raised mound with a Goddess shrine is on its fourth side along agricultural fields. The extent of the property (water tank with the open space and temple in the setting) requires to be defined. This is necessary for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future.

35. The source of water in the tank is a well which is located on its inner edge, with the principal source possibly being storm water contaminated by untreated sewage from the area around. The water from the tank overflows into a drainage channel which is currently overgrown with vegetation. The Kund was seen filled with sewerage water from nearby habitation. Interception of sewage from this locality is proposed to be covered under Bharatpur Sewerage project, RSTDSP Phase-IV/ Amrut,.

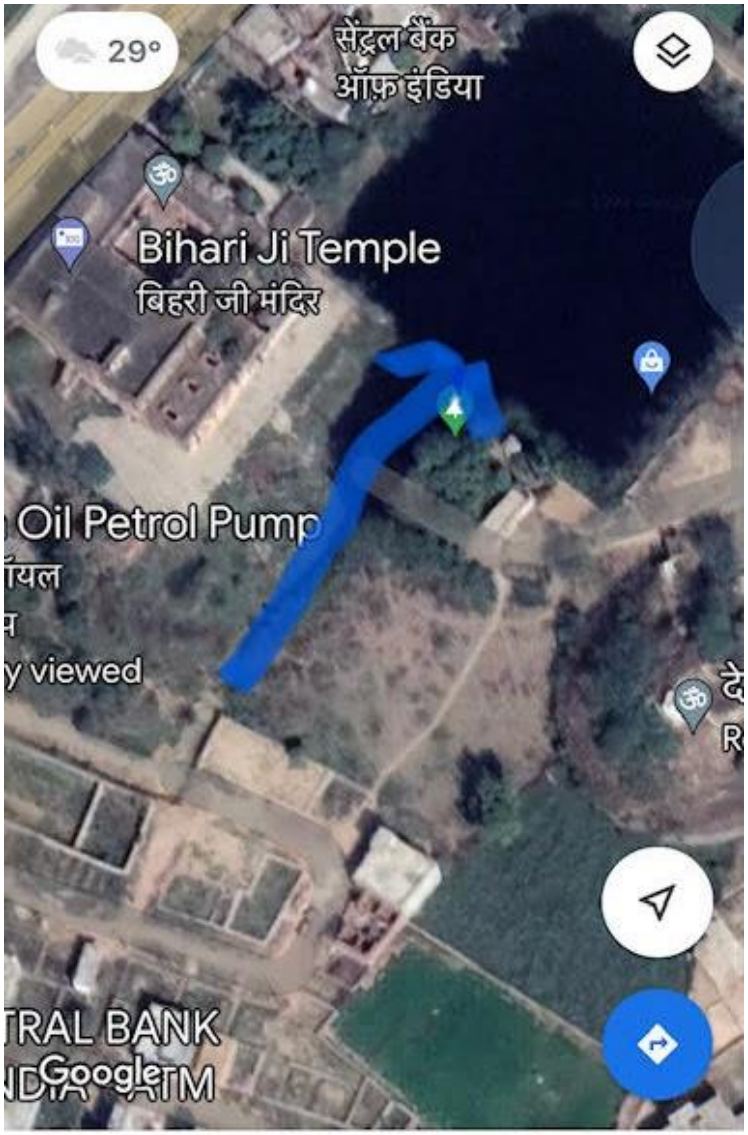
Water of the kund is contaminated with sewage from the neighbourhood

Temple on the bank of the kund

36. Several interventions are underway in the Kund – however, they lack adequate consideration of the historic, architectural or/and socio-cultural contexts and associated values, because of which the cultural significance of the temple precinct (of which the Kund is a part) is being compromised.

37. The Kund is currently in critical condition – its boundary and steps are broken and need to be conserved and partially rebuilt, and algae has formed on the surface of the water, giving rise to a foul odour. The Kund is surrounded by residential neighbourhoods, and the establishment of shops/ warehouses/ workshops inside the heritage structure has compromised the integrity of the site.

38. Additionally, there are no toilet facilities in the area, parking is haphazard (which makes it difficult to access the Kund and causes congestion), information and direction signage are lacking, and seating facilities are missing.



The setting of the kund with the temple; the
Arrow denotes the flow of storm water from the surrounding area into the tank

F. Nehru Park

39. The Nehru Park is a public park located within the citadel (a protected monument) adjacent to the Town Hall building. The park has provisions of pathways, benches, children's play area all enclosed by a boundary wall. The forecourt has several vendors addressing the needs of the local visitors. The features within the park are in a state of disrepair.

Pathways, sculpture and features such as a clock, all in a state of decay

IV.REGULATORY FRAMEWORK

40. Several of buildings of historic significance which are part of the subproject components are recognised and protected by the ASI or the State government.

Monuments of National Importance recognised by the ASI in Rajasthan[27]

41. Following parts of the Lohargarh Fort (the citadel) are recognized as monuments of national importance. Several functions have been assigned to the National Monuments Authority (NMA) for the protection of monuments and sites through appropriate development norms within the prohibited and regulated area around the centrally protected monuments. One amongst these responsibilities NMA is to consider grant of permissions to applicants for construction related activity in the prohibited and regulated area. It should be noted that conduction of any works within 300 m from the boundary of any of the following monuments protected by ASI warrants prior permission from NMA.

1. Delhi Gate outside the Bharatpur Fort
2. Fateh Burj
3. Jawahar Burj
4. Ashtadhatu Gate
5. Chowburja Gate
6. Moat surrounding the Fort wall
7. Fort walls including Chowburja gate and approach bridges at the Chowburja and Ashtadhatu gate.

State Protected Monuments[28]

1. Kishori Mahal complete premises
2. Kamara Khas
3. Kachahari Kala
4. Kothi Khas
5. Hansarani Palace
6. Chaman Bagichi
7. Hammam and adjoining structure area and open land till boundary of the fort including three wells and gates of mudwall
8. Mud bastion near Surajpol gate
9. Mathura gate
10. Atalbandh gate
11. Anah gate
12. Kumher gate
13. Govardhan gate
14. Neemda gate
15. Chandpol gate
16. Surajpol gate
17. B Narain gate

[27] https://asijaipurcircle.nic.in/bharatpur%20district.html. https://rgplan.com/articles/monuments/Monuments%20of%20Rajasthan.pdf

[28] From the website of ASI. *https://asi.nic.in/protected-monuments-in-rajasthan/.*

V. PROPOSED SUBPROJECT COMPONENTS AND SCOPE OF WORK

A. Conservation & Redevelopment of Town Hall

a. Description

42. The Town Hall, a two-storeyed structure is located within the walls of Lohargarh Fort. Constructed on a raised plinth, it exhibits a wide variety of architectural styles spread across different time periods with features like round arches, stone columns, pilasters, decorative spandrels, pilasters, stone balustrades, parapets, triangular pediment, piers, round clerestory windows and an arcaded balcony. One of the multifoil arches is designed in a typical haveli temple style where the hallway is Jagmohan mandapa of a temple with garbhagriha at the centre, surrounded by a circumambulation path. Additionally, there is a theatre hall with steps leading

Citadel, located within a densely populated

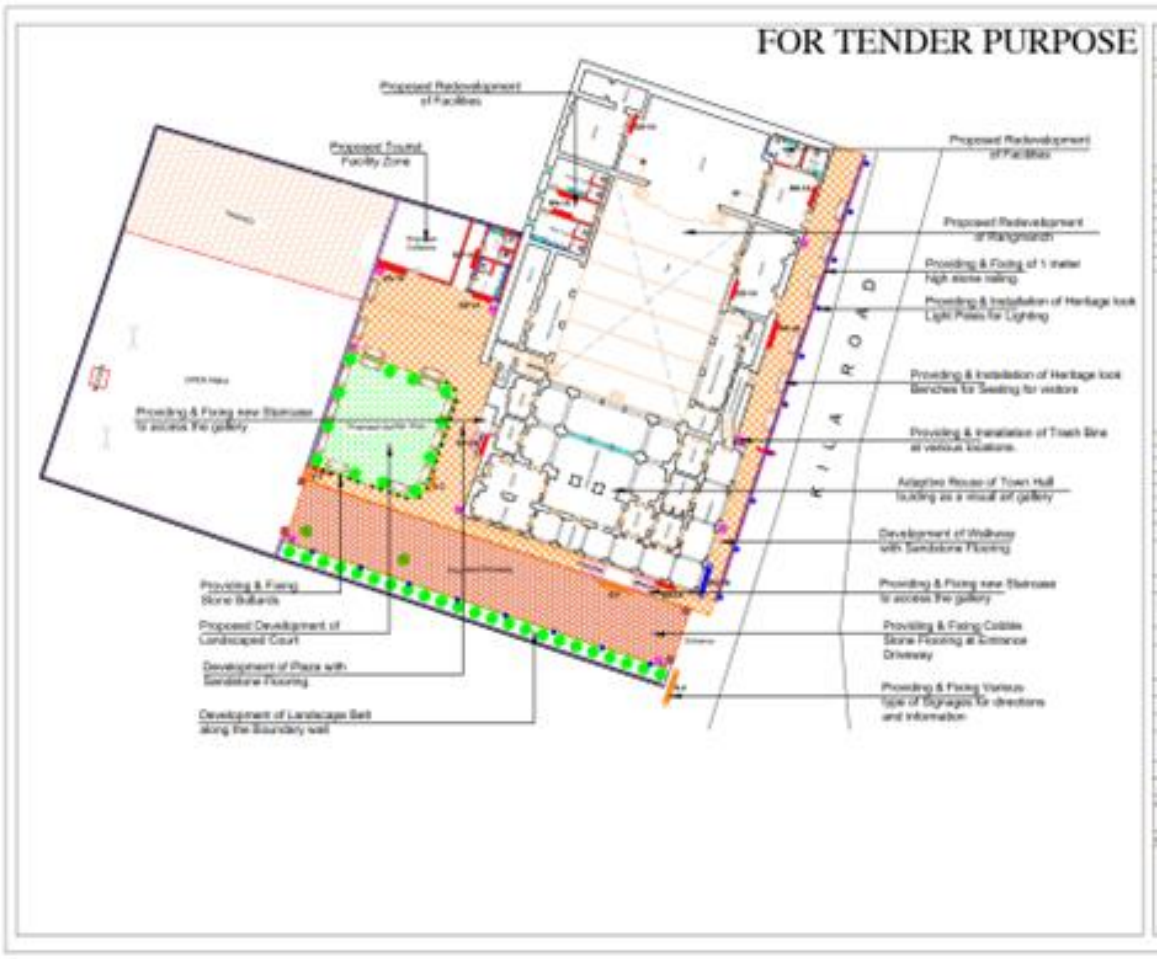
down towards the stage. It appears to have been built in two phases. This is evident from its architectural style, construction materials and systems that were used. Phase 1 of the building comprises the arcade building with inner pavilion chambers enclosed within a single bay deep rooms and verandas on two sides. Phase 2 is a large hall located towards the rear of the building which is built of relatively modest materials – brick masonry walls and corrugated iron sheets. This hall with sloping roof houses a stage towards its rear, and it is likely to have been a multipurpose hall.

Phase I of the building is the two storied building with the arcade;
Phase II of the building is a plain masonry structure which houses a large hall roofed with trusses and corrugated sheets.

b. Proposed Works

43. It has been proposed to conserve and redevelop the existing Town Hall building by undertaking the following major activities:

(i) Adaptive reuse of the heritage building as a cultural activity zone
(ii) Redevelopment of Rang Manch area as theatre for visual art performance
(iii) Conservation & redevelopment of main building as visual art gallery
(iv) Development of viewpoint/ watchtower on terrace
(v) Site & outdoor area redevelopment as cafeteria, parking, landscape
(vi) Façade illumination for night view



c. Proposed Conservation Activities

i. Façade restoration (Stone Conservation)
ii. Replacement of damaged & missing stone elements
iii. Stone cleaning/ protective coating
iv. Site & building cleaning/ removal of waste & dump materials
v. De-vegetation of built form and surroundings
vi. Removal of encroachments & partitions
vii. Repair & restoration of architectural elements like railing, jaali, parapet, cornice, motifs
viii. Repair & restoration of doors & windows
ix. Repair & restoration of masonry walls
x. Plinth protection of built structure.
xi. Improvement of Façade of Government School adjoining Town Hall

d. Proposed Site Redevelopment Activities

i. Development of walkway/ cobble stone flooring
ii. Development of green spaces
iii. Development of street furniture
iv. Development of activity zone/ craft bazaar/ food outlet

v. Development of parking for visitors
vi. Site surrounding development as heritage precinct

e. Proposed Building Redevelopment Activities

i. Removal & replacement of existing building shade structure
ii. Redevelopment of stage area, green rooms, washrooms and public amenities
iii. Redevelopment of seating zone with flooring and markings
iv. Updating building services, acoustics
v. Façade and internal lighting

The proposed interventions for façade improvement of the school in the DPR are the following:

i. Cleaning of existing surface, removal of vegetation, re-plastering and Painting
ii. Fixing of broken architectural elements (e.g. Brackets, Chajjas, etc.)
iii. Ornamental work in plaster to enhance the façade
iv. Repair & restoration of masonry wall, doors & windows

These are broadly understood as the following interventions:

1. Removal of the later applied cement-based plaster
2. Removal of the pulverised plaster
3. Repair and restoration of the masonry wall
4. Repair of doors and windows
5. Replastering the masonry with lime plaster
6. Repair of the brackets and chajjas, and other decorative features of the façade.
7. Provision of decorative features in plaster

f. Evaluation of the Proposed interventions:

44. The building is of architectural significance and merits conservation and reuse as a space for performing arts as suggested in the proposed subproject. This is in accordance with the spaces available in the historic building.

45. However, its architectural typology and pavilion-like form with a few walls do not lend itself to be used as a visual art gallery, as also put forth in the proposal (this is in addition to the performing arts space). *In order to achieve spaces and walls for display, extensive interventions would require to be undertaken which would compromise the integrity of the spaces within the historic building.* It is recommended that the building be used as a venue for performing arts only.

g. Conservation Activities

46. Details on conservation to be worked out during the detailed design / prior to implementation (either by contractor or by a consultant). Conservation works must be carried out by a specialised contractor who has prior experience in undertaking such works. Special terms in the contract should be included that the contractor be required to have a conservation architect overlooking the design development process and detailing along with the MEP (Mechanical, Electrical and Plumbing) consultants, in the event that the urban local body may

not have the required specialisation. Structural crack has been observed in the wall of the school. It is recommended that a structural engineer be part of the team of the consultant or the contractor to provide the structural strengthening details for the walls which should be sensitive to the historic building both in use of material and construction detail. Interventions should be least invasive.

h. Heritage Regulations

47. The Town Hall building is located within 300 metres from the moat surrounding the citadel/ fort, which is a monument of national importance. Since it falls within the buffer zone of this ASI-protected monument, all interventions within this area including conservation and interventions to reuse the Town Hall will require the approval of NMA.

B. Façade Lighting of City Gates

48. Single-colour warm white lights with theme of micro & diffuse façade is proposed to be used. LED light fixtures like spotlights, strip lights, linear lights, wall washers, up-lighter and down-lighters will be used for illumination. Features to be highlighted on façade are - door frames, motifs, architraves, kangooras or gate chajja, inverted ceilings. Following city Gates are proposed for façade lighting, of which 9 gates are state protected monuments and will require prior permission from State Department of Archaeology and Museum, Government of Rajasthan. These gates are, Chandpole Gate, Surajpol Gate, Kumher Gate, Mathura Gate, Ketan Gate, Neemda Gate, B Narain Gate, Gobardhan Gate and Anah Gate

Evaluation of the Proposed interventions

49. Details on illumination to be worked out during the detailed design / prior to implementation by contractor will be done and approval shall be taken from PIU prior to start of work. Implementation of this work must be carried out by a specialised contractor who has prior experience in undertaking lighting on historic buildings. Special terms in the contract should be included that the contractor be required to have a conservation architect overlooking the design development process and detailing along with the Electrical consultants, in the event that the urban local body may not have the required specialisation.

50. The historic Ketan and Mathura Gates are located within 300 m from the moat of Lohagarh Fort which is a monument of National importance protected by ASI. This implies that permission to illuminate the façades of these gates will have to be solicited from NMA.

The illumination of Chandpole Gate, Surajpole Gate, Atalbandh Gate, Kumher Gate, Mathura Gate, Neemda Gate, B Narain Gate, Gobardhan Gate and Anah Gates , which are state protected monuments and will require permissions from the State department of Archaeology and Museum, Government of Rajasthan .

C. Facade Lighting & Illumination of Laxman Mandir, Ganga Mandir & Jama Masjid

a. Historic and Spiritual Significance

i. Ganga Mata Mandir

51. This is a grand temple dedicated to Goddess Ganga, located right in front of the Lohagarh Fort. A large number of devotees visit this temple every year on religious festivals like Ganga Saptami and Ganga Dussehra. The temple is believed to signify purity and holiness of Maa Ganga.

ii.Jama Masjid

52. The Mosque is located south of the fort, across from the city post office. Jama Masjid serves as a prayer ground and a space for religious meetings of Muslim community. There is also a Madrasa for children within the complex.

53. This is the only Jama Masjid in India built by Hindu Jat rulers and is symbolic of the unity in diversity amongst the people. It is believed that a drought hit Bharatpur a long time ago, animals were dying, no crops were growing, and there was a massive shortage of water. The king asked the religious leaders of all religious groups to pray for rainfall as per their traditions. Soon, there was a heavy rainfall which impressed the king, and he fulfilled the wishes of all the religious leaders – the Hindu leaders asked for the Ganga Mandir, while Muslim leaders asked for the Jama Masjid.

iii.Laxman Mandir

54. This Temple is dedicated to Dasaratha's son, Lakshmana and his wife Urmila, and it also has shrines of Rama, Bharat, Shatrughna as well as Hanuman.

b. Design guidelines as described in the DPR

i. To reduce consumption of power all the proposed lights will be LED
ii. The propose lighting will be done only with single color warm white light
iii. The propose lighting will be done with theme of Micro & Diffuse façade
iv. LED light fixtures like spotlights, strip lights, linear lights, wall washers, up-lighter & down lighters will be used for illumination
v. Areas to be highlighted on façade will be stone architectural elements
vi. No large fixtures will be installed
vii. Wiring of lighting to be hidden

c. Evaluation of the Proposed interventions

55. The three buildings described above have embellished stone exterior surfaces and are of considerable architectural and historic significance. The courtyard/open spaces around or within the complex have stone paving. The proposed subproject component is lighting of the temple façade. The DPR does not contain the details for the intervention, for instance it does not provide details whether the light fittings and related infrastructure would be mounted on poles or on the building itself. However, it would be prudent to accept that no wiring should be mounted on the stone face of the building and no chasing of the stone faces should be permissible to provide the lighting. This is important as damage to the stone face would be an irreversible damage to

the historic building facades. This is an important matter for consideration for both the inner and outer facades. Details on illumination to be worked out during the detailed design / prior to implementation by contractor and prior approval of PIU will be required for entire lighting arrangement. Implementation of this work must be carried out by a specialised contractor who has prior experience in undertaking lighting on historic buildings. Special terms in the contract should be included that the contractor be required to have a conservation architect overlooking the design development process and detailing along with the Electrical consultants, in the event that the urban local body may not have the required specialisation.

56. Lastly, it should be noted that Ganga Mata Mandir is situated at 150 m from the moat of Lohagarh Fort which is a monument of national importance protected by ASI. Any work within 300 metres of the protected monument, including monument lighting would require permission from NMA.

D. Conservation & Redevelopment of Saligram Kund

a. Historic and Spiritual Significance

57. This kund is located in the Saligram temple precinct which was built by the King of Bharatpur 200-250 years ago to commemorate the birth of his son. It is stated that an idol of Lord Hanuman – which can now be found in the temple – was discovered during excavation work for the Kund, making it sacred, of immense religious significance for the local community. There is an adage about this site – it is believed that when there was a lack of ghee (fat) while making devotional offerings, the water of this Kund was used as ghee in preparation of the same, adding to the spiritual value of this Kund.

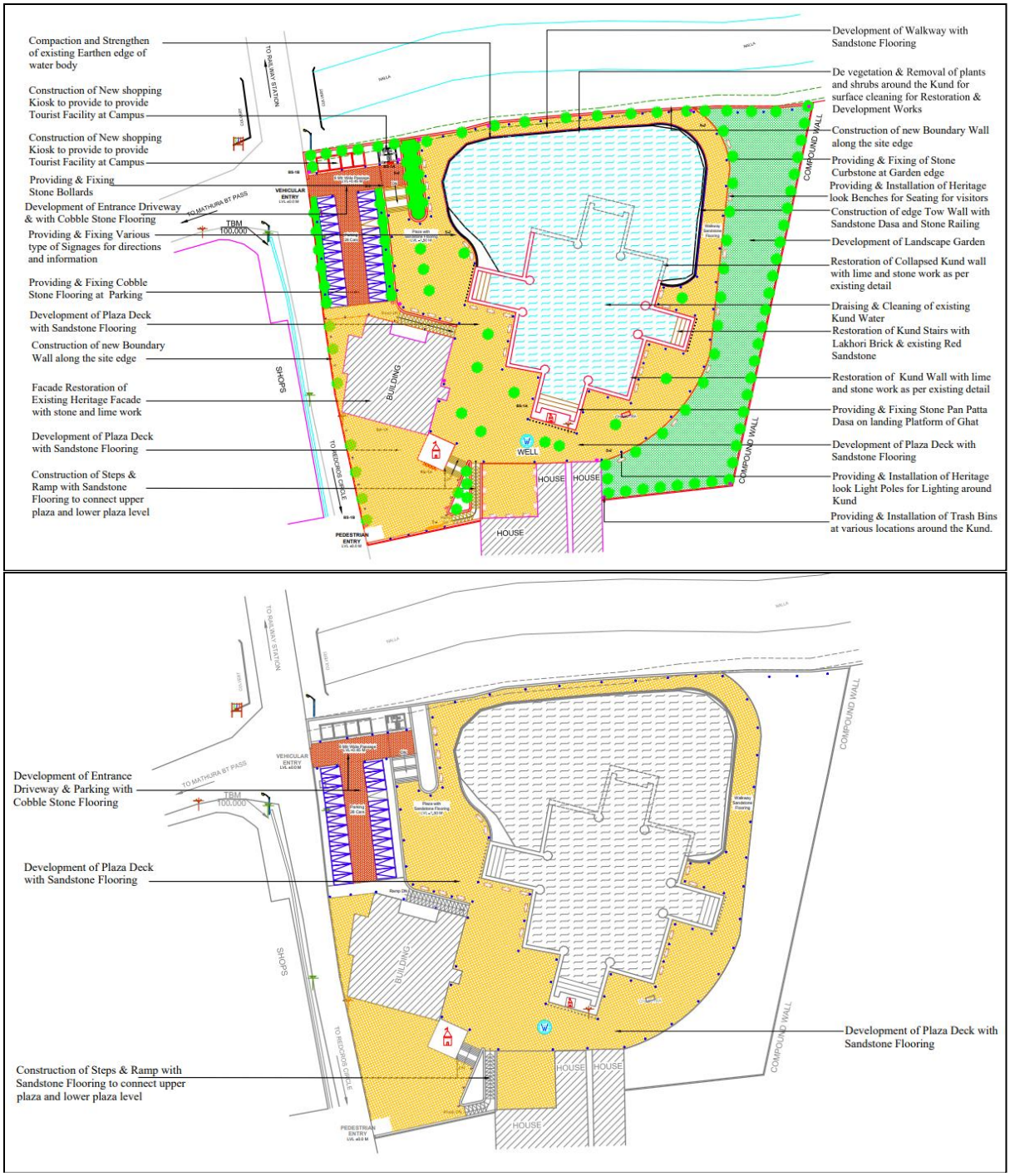
Scientific and Ecological Significance

58. The kund is of historic significance that also represents the ancient knowledge of storm water management in the city that informed the historic city planning. It is evident that the catchment of the kund is such that it prevented the flooding of the adjacent areas.

Scope of work

Conservation of the Kund

i. Conservation of the masonry walls
ii. Provision of Lime plaster & *kada*
iii. Restoration & replacement of damage/ missing stone elements
iv. Restoration of Ghats/ flooring
v. Plinth edge protection
vi. Reconstruction of damage/ missing wall
vii. Dredging of the polluted water
viii. De-vegetation of existing structure
ix. Façade restoration of surrounding heritage structures
x. Façade lighting



Layout plan of the kund with proposed interventions

b. Redevelopment of the area

i. Construction of boundary wall/ site demarcation
ii. Area development around the kund - flooring/ plantation/ street furniture/ lighting/ signage
iii. Development of visitor facility area like toilets
iv. Development of kiosk
v. Development of parking

c. Evaluation of the Proposed interventions

59. The historic town of Bharatpur has a unique system of water bodies and water channels comprising a complex system of flood management, and irrigation canals and drains. The moat of the Lohargarh Fort is part of this complex system which was found to be filled to its brim in the month of August 2022 (at the time of site visit). Other than these, water tanks of historic and cultural significance were also observed.

60. Although the scope of the project is conservation of historic fabric of tank and landscape interventions, the nature of interventions is primarily for beautification of the area around the kund.

61. The conservation and plan for reconstruction of the missing areas of the tank requires to be based on investigation which is only possible after the water and sludge has been dredged. It is therefore recommended that the conservation plan be prepared during the project implementation by a team of conservation architect, structural engineer and Environmental Engineer (as the source of water needs to be comprehensively analysed to revive the water system, if possible; design for protection of water source and propose interventions to prevent contamination through design interventions). A holistic plan which addresses aspects related to water harvesting is recommended to ensure that the intervention of conservation of the heritage structure enhances the integrity of the water structure. It is further recommended that paving with red sandstone along the perimeter of the kund be not provided as it compromises the authenticity and integrity of the historic structures. The paving should be a combination of hard and soft surfaces where hard surface is provided only in pathways. The pathways could be a combination of the brick and rough stone surfaces with anti-skid properties.

62. The extent of the property (water tank with the open space and temple in the setting) requires to be defined. This is necessary for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future.

63. Operation and maintenance of heritage structure is recommended to be considered while developing the design components as several of features such as the electrification with decorative lights etc need to be regularly maintained.

d. Heritage Regulations

64. The ASI protected fort wall is located at 2300 metres from the kund, thus, no permission for the proposed works is needed.

E. Conservation & Redevelopment of Brijendra Bihari Kund

a. Historic Significance

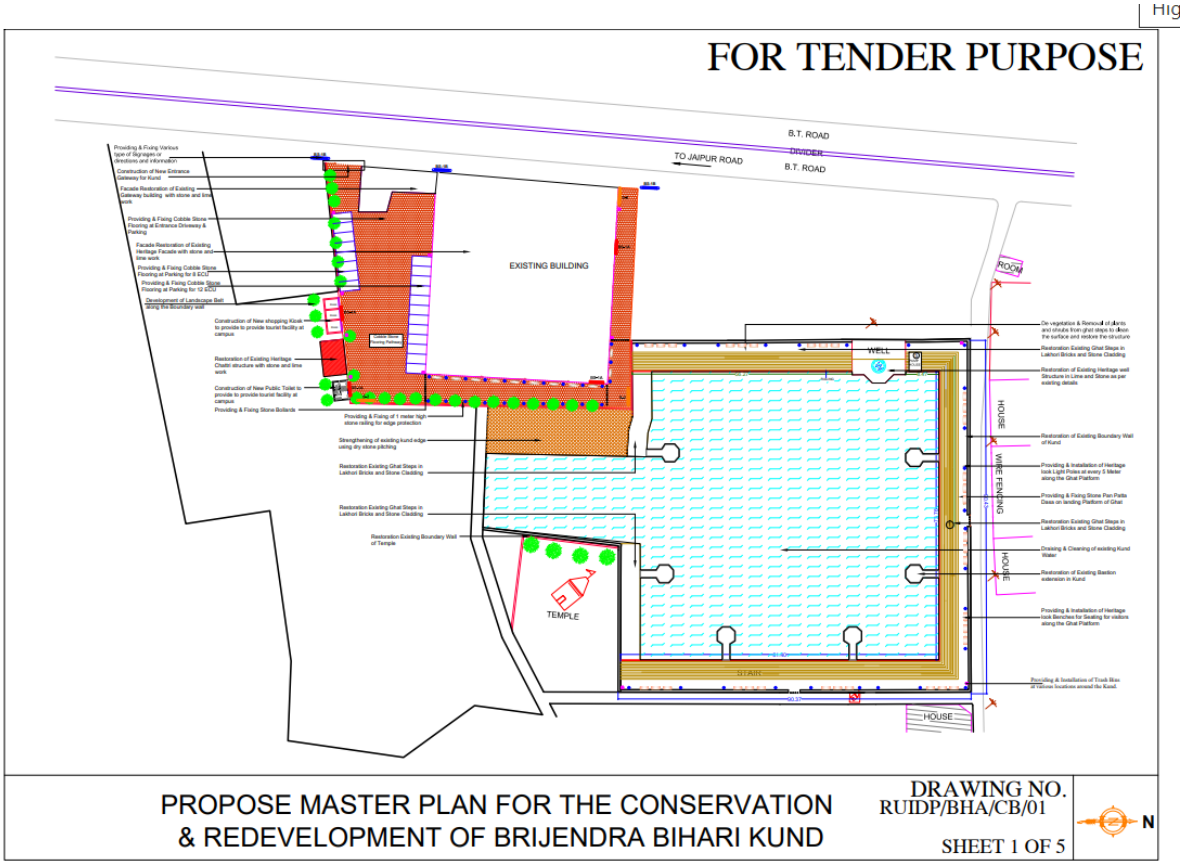
65. This temple was founded in 1918 by Maharaja Kisanji to commemorate the birth of his son, Maharaj Brijendra Singh Ji, who donated it to Shri Vallabh Acharya Ji. The adjoining kund was built in 1918 to meet the temple's water needs, and it included 6 ghats and 1 well. Later, this kund was used to provide drinking water for the elephants in the Sewar fort.

b. Scope of work

Conservation of Kund

i. Restoration of historic ghats
ii. Façade Restoration of surrounding heritage structures
iii. Restoration of water channel

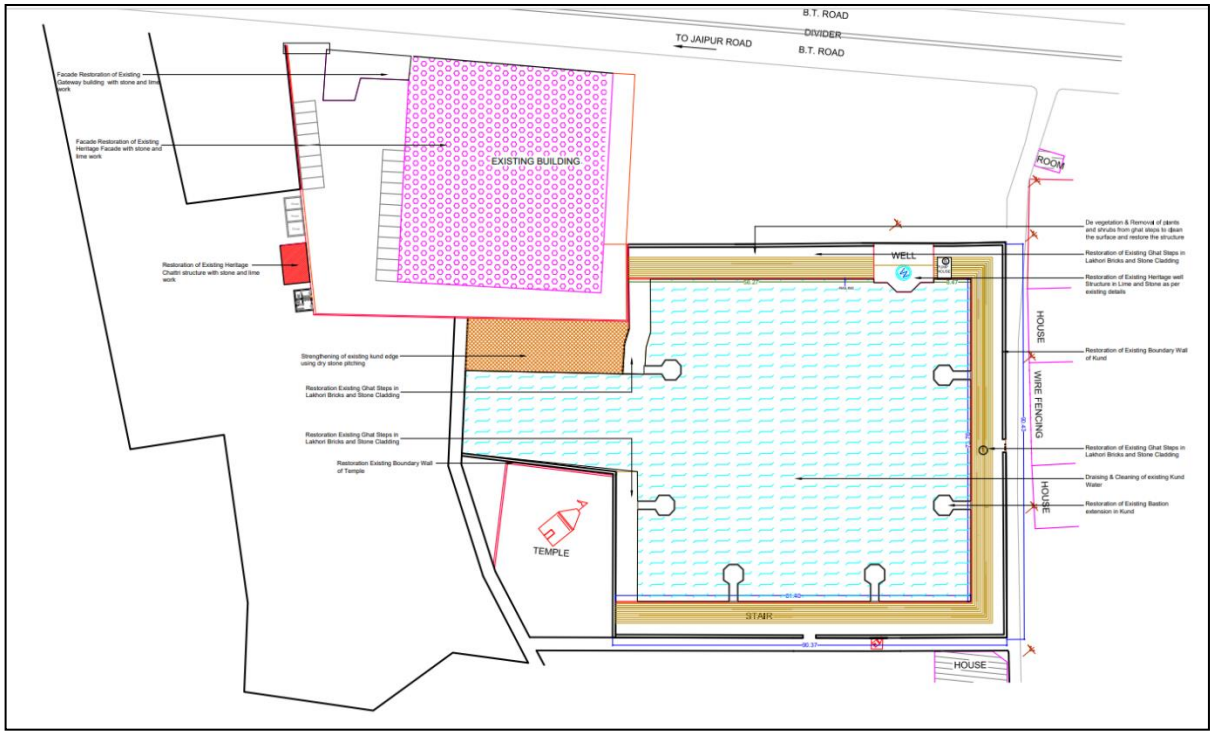
iv. Retaining wall construction around catchment area
v. Restoration of architectural elements on façade
vi. Façade lighting



Layout plan of the kund with proposed interventions

Redevelopment

i. Redevelopment of compound area/ compound wall
ii. Flooring & pavement around kund
iii. Installation of street furniture- stone benches, signage's, light poles, bollards, dustbins, railings
iv. Landscape development in surroundings
v. Kiosk & public amenities development



Layout plan of the kund with proposed interventions

The temple is regularly visited by the local community, more specifically by women

c. Evaluation of the Proposed interventions

66. The historic town of Bharatpur has a unique system of water bodies and water channels comprising a complex system of flood management, and irrigation canals and drains. The moat of the Lohagarh Fort is part of this complex system which was found to be filled to its brim in the month of August 2022. Other than these, water tanks of historic and cultural significance were also observed.

67. This tank is located near the Jaipur-Bharatpur highway, adjacent to an important historic temple endowed by the royal family to a trust. The temple was seen to be frequented by local people, more specifically, women, for various rituals throughout the day.

68. The extent of the property (water tank with the open space and temple in the setting) requires to be defined. This is necessary for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future.

69. It is recommended that detailed conservation plan be prepared during the project implementation by a team of conservation architect, structural engineer and Environmental Engineer (as the source of water needs to be comprehensively analysed to revive the water system, if possible; design for protection of water source and propose interventions to prevent contamination through design interventions). RUIDP project under RSTDSP, Phase-IV includes provision of sewage management (FSSM) in this area as this area falls in fringe of city and have sparse population. It is recommended that the source of contamination of the water tank be addressed as part of this scheme.

70. It is also advised that the contractor will be required to provide detailed design as part of their scope of work.

71. To avoid contamination of kund water with sewage, the catchment area of 2 Kunds are proposed to be covered to be covered under the Bharatpur Sewerage project under RSTDSP, Phase-IV.

d. Heritage Regulations

72. The ASI protected fort wall is 5.4 km far from proposed site, thus, no permission for the proposed works is needed.

The edge of the kund, a road with historic brick masonry wall

The well structure of the kund, important feature for conservation

Community consultation at the site of the kund.

F. Revitalisation of Nehru Park

73. The Park is located close to the Town Hall within the premises of Lohargarh Fort.

a. Work Proposed

i. Redevelopment of pathway in local sandstone
ii. Restoration of Clock built in the landscape in the park.
iii. Provision of benches
iv. Facilities of children play area, wave slider, multi-seater see-saw, four-seated arch swing and others.
v. Umbrella shaped 4 fountains; to include wall fountain on the sloping wall beside the steps.
vi. Selfie Point is proposed inside the park made up of red sandstone.
vii. Repair of Boundary Wall.
viii. Circular Gazebo of size 6.4 m diameter.

b. Evaluation of the Proposed interventions

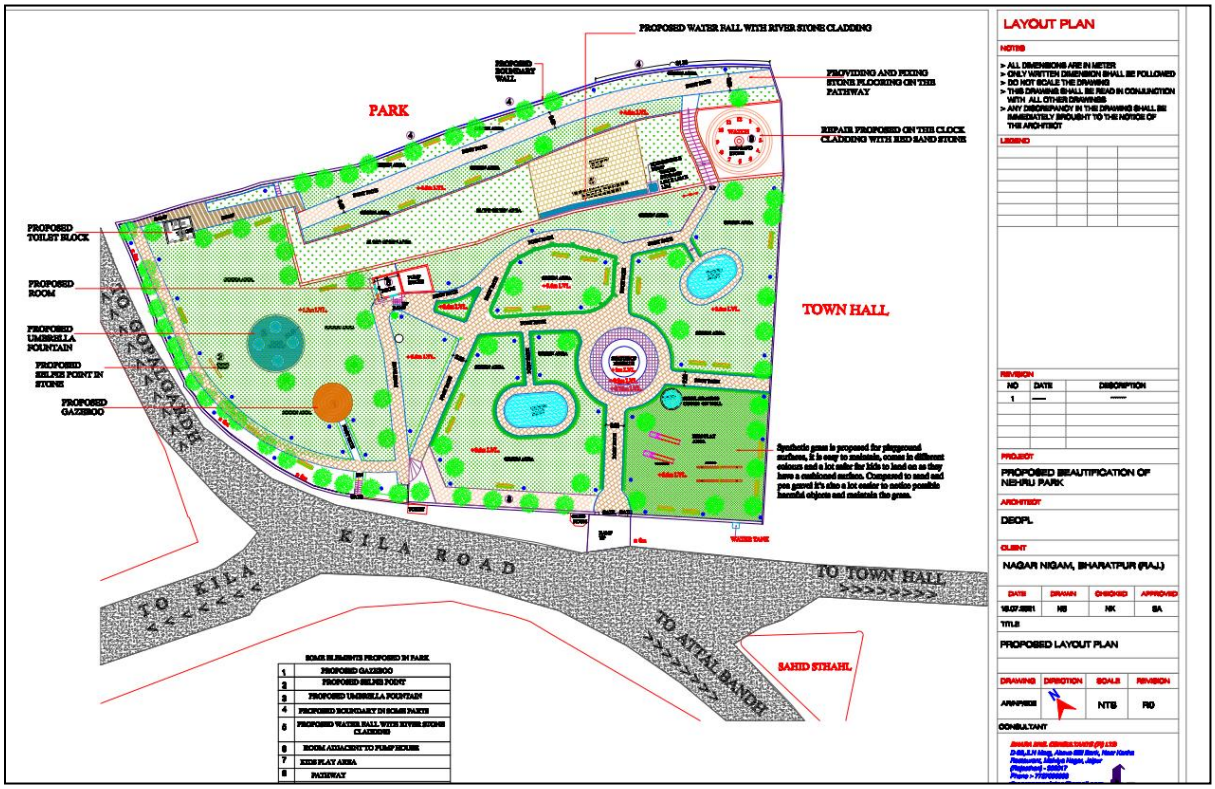
74. Nehru Park is located within the citadel / Lohargarh fort, adjacent to the fortification wall which forms the inner edge of the moat. The Nehru park shares a boundary with the Town Hall. The subproject components are for the repair of clock, provision of street furniture, pathways, children's play area enhancement, and boundary wall repair. It is however recommended that the park be considered for integration with the Town Hall by providing interlinking passage guarded by Gate(s), the proposed use of the Town Hall as a Centre for Performing Arts will also merit some open space – possibly as an outdoor venue for performing arts – and there is very little open space within the Town Hall complex currently.

Need for improvement for surface parking along the edge of the Town Hall & Nehru Park

75. Parking areas are available at a distance of 70m from the town hall, which include small parking at museum. Town Hall is conserved and reused as a Centre for Performing Arts (Rangshaala) and other events which match best with the architecture ambiance of Town Hall. It is recommended that the landscape plan for Nehru Park be reorganised responding to the integrated plan for the Town Hall and the Park. This will facilitate improved operation and maintenance of the facilities too.

76. The Nehru Park is located 190 m away from the Moat surrounding the Fort Wall and its 2 Gates which are monuments of national importance, protected by the ASI. These project subcomponents fall within the buffer zone of these ASI-protected monuments, work to be undertaken in the Nehru Park will solicit the approval of NMA.

Landscape plan for the Nehru Park- A beautification project



VI. FRAMEWORK OF HIA TO DETERMINE THE MITIGATION PLAN

77. The objective of the Heritage Impact Assessment report is to evaluate the significance of the heritage assets and their condition from the documents shared by RUIDP. A field visit was undertaken in the month of August 2022. The previous sections of the report has the information from the DPR primarily along with information from the field visit. A framework has been developed to assess the impact of the proposed interventions under the sub project. Mitigation measures have been recommended for implementation. These are through appropriate design and planning in conservation and adaptive reuse of the cultural heritage sites that ensures that the values of the heritage assets are protected and not compromised with the interventions or through appropriate management systems for project implementation so as to ensure that the conservation works are in compliance with acceptable national and regional standards. RUIDP is advised to establish monitoring indicators for measuring compliance that ensure that the heritage attributes are protected and conserved anchored in the principles of sustainability in material, social, legal and ecological aspects.

78. The framework is provided in a table with the following sections:

- Subproject components
- Existing Management framework
- Attributes of value
- Proposed Interventions
- Vulnerability
- Impact
- Recommendation for Mitigation

A. Archaeological / Chance Finds

79. Considering the long history of the town, it is possible that archaeological remains may be uncovered during the excavations. Contractors therefore should follow the below measures when undertaking and construction work:

- Create awareness among the workers, supervisors and engineers about the chance finds during excavation work;
- Stop work immediately to allow further investigation if any finds are suspected;
- Inform local Archaeological Department / Museum office if a find is suspected and take any action, they require to ensure its removal or protection in situ; and
- Prepare a chance find protocol

VII. HERITAGE IMPACT ASSESSMENT FRAMEWORK AND RECOMMENDATIONS FOR MITIGATION- A SUMMARY

80. The Subproject components are:

1. Conservation & Redevelopment of Town Hall campus
2. Revitalisation of Nehru Park
3. Façade lighting & Illumination of City Gates (Chandpole Gate, Surajpol Gate, Kumher Gate, Mathura Gate, Ketan Gate, Atalbandh Gate, Neemda Gate, B Narain Gate, Gobardhan Gate and Anah Gate)
4. Façade lighting& Illumination of Laxman Mandir, Ganga Mandir & Jama Masjid
5. Conservation & Redevelopment of Saligram Kund& campus
6. Conservation & Redevelopment of Bijendra Bihari Kund& Campus

81. The major scope of work are- conservation and adaptive reuse of the heritage resources, creating recreational facilities for tourists & locals, development of tourist facilities & services at selected components, façade lighting & illumination of important heritage resources for night tourism.

82. Under this subproject the Town Hall is proposed to be used as a Centre for Performing Arts. From the architecture of this historic building it is evident that the building has been built in two phases. Phase 1 of the building comprises a building comprising an arcade around an inner pavilion chambers enclosed within a single bay deep rooms and verandas on two sides. This is a two-storeyed building built over a raised plinth. The second part or phase of the building is a large hall towards the rear of the building which is built of relatively modest materials – brick masonry walls and corrugated iron sheets. This hall with sloping roof houses a stage towards the rear, it is evident that the hall was used as a multipurpose hall. The building is currently used as a storage facility by the urban local body and is in a poor state of conservation.

83. The building is of architectural significance and merits its conservation and reuse as a space for performing arts as recommended in the proposed project. This is in accordance with the available spaces in the historic building. The hall shall be used considering the architectural typology, its features of pavilion-like form with embellished few walls.

84. Details on conservation to be worked out prior to implementation by contractor. Conservation works must be carried out by a specialised contractor who has prior experience in undertaking such works. Special terms in the contract should be included that the contractor be required to have a conservation architect overlooking the design development process and detailing along with the MEP (Mechanical, Electrical and Plumbing) consultants, in the event that the PIU/PMU may not have the required specialisation.

85. The building is within the 300 metres buffer zone of the ASI protected monument of the citadel gate and moat and therefore the conservation and reuse plan would require to be approved by the National Monument Authority.

86. Nehru Park is in the Citadel adjacent to the fortification wall which forms the inner edge of the moat. The moat and the two gates of the Citadel are protected monuments by Archaeological Survey of India and hence development within 100 metres and 200 m are prohibited and regulated areas. Any work to be undertaken in the Nehru Park would solicit NOC/approval by National Monuments Authority. The project components are for the repair of clock built in the landscape, provision of street furniture, pathways, enhancement of children's play area, and boundary wall repair. As Nehru Park and Town Hall share a boundary, it is

recommended that the park be considered for interlinking through gates with the Town Hall through landscape design– as Town Hall as a Centre for Performing Arts would merit some open space – possibly as an outdoor space for performing arts. In the current condition there is very little open space within the Town Hall complex. The landscape plan for Nehru Park could be reorganised responding to the need. Further, the edge of Nehru Park and Town Hall is recommended to be reorganised to include a proper parking facility as the building of Town Hall borders the road and use as the Performing Arts (Rangshaala) would generate traffic. Proper management of the edge would facilitate efficient and safe vehicular and pedestrian movement.

87. Façade lighting & Illumination of City Gates (Chandpole Gate, Surajpol Gate, Kumher Gate, Mathura Gate, Ketan Gate, Neemda Gate, Atalbandh Gate, B Narain Gate, Gobardhan Gate And Anah Gate)-The city gates are proposed to be illuminated under subproject. The Gates proposed for façade lighting are state protected monuments. Details on illumination to be worked out prior to implementation by contractor. Implementation of this work must be carried out by a specialised contractor who has prior experience in undertaking lighting on historic buildings. Special terms in the contract should be included that the contractor be required to have a conservation architect overlooking the design development process and detailing along with the Electrical consultants.

88. Works on the city gates would need permission from the state department of archaeology and Museum.

89. Façade lighting& Illumination of Laxman Mandir, Ganga Mandir & Jama Masjid; The buildings are of considerable architectural and historic significance. These are built of stone exterior surfaces. The courtyard/open spaces around a central/building have stone paving. Details on illumination to be worked out during the detailed design / prior to implementation by contractor. Implementation of this work must be carried out by a specialised contractor who has prior experience in undertaking lighting on historic buildings. Special terms in the contract should be included that the contractor be required to have a conservation architect overlooking the design development process and detailing along with the Electrical consultants.

90. Conservation & Redevelopment of Saligram Kund & campus and Conservation & Redevelopment of Bijendra Bihari Kund & Campus; The historic town of Bharatpur has a unique system of water channels, and water bodies. The water channels include a complex system of flood management and irrigation canals and drains. The moat of the Citadel is part of this complex system which was found to be filled to its brim in the month of August 2022. Other than these there are water tanks which were of historic and cultural significance.

91. **Saligram temple Kund:** Evidently cruciform in plan, built of brick masonry set in lime mortar of which only three wings are visible. The fourth wing was explained by the local resident to comprise of a ramp which provided for animals to access water. The source of water was explained by a local resident to be from a well, in the past it was apparently from a canal which continues to exist but does not supply any water now. The canal was found to be overgrown with vegetation and with debris and garbage. The water is contaminated by sewage water and the extent of property of this historic tank is not clear and all the four edges have different edge conditions. Edge 1 – a temple, open four court of temple with informal parking of trucks. A road is present on the outer edge; Edge 2 – Bushy vegetation at the edge of the tank; Edge 3 – high wall of an adjoining semi-industrial plot; Edge 4 – The overgrown canal. The extent of the property (water tank with the open space and temple in the setting) requires to be defined. This is necessary for proper protection of the water feature, design appropriate interface between the

roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future.

92. The scope of the project is conservation of historic fabric of tank and landscape interventions. The extent of the property (water tank with the open space and temple in the setting) requires to be defined. This is necessary for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future. It is further recommended that a hydrologist and environmental engineer be part of the team for detailed planning for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future. Also, that the planning addresses appropriate ecologically responsive techniques for both the quantity and quality of the water in the Kund. It is recommended that the contractor be required to provide conservation and detailed landscape design as part of his scope of work.

93. Bijendra Bihari Kund: this tank is located adjacent to the Jaipur Bharatpur highway and in close proximity to an important historic temple. The temple is frequented by local people more specifically women for various rituals throughout the day. In the past water from the tank was used for rituals in the temple but due to pollutants in the water from sewage, this water is not used for ritual purposes. Several interventions are being done in the setting of the tank without adequate consideration of historic, architectural or/and association in value of the various cultural and social components because of which the cultural significance of the temple precinct (of which the tank forms a part) is being compromised. The tank has the temple on one of its edges, residential neighbourhoods (recently developed) on two of its side, a raised mound with a Goddess shrine on one side along agricultural fields. The source of water in the tank is a well which is located on the inner edge of the tank. Principal source possibly being storm water (contaminated with untreated sewage from the area around). The overflow from the tank is into the drainage channel which is currently overgrown which vegetation and floors along the agricultural field and under the highway to across the road.

94. As in the case of the Saligram kund, the scope of the project is conservation of historic fabric of tank and landscape interventions. The extent of the property (water tank with the open space and temple in the setting) requires to be defined. This is necessary for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future.

95. It is further recommended that an environmental engineer be part of the team for detailed planning for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future. Also, that the planning addresses appropriate ecologically responsive techniques for both the quantity and quality of the water in the Kund. It is recommended that the contractor be required to provide conservation and detailed landscape prior to start of restoration activities.

96. Catchment of Kund area is proposed to be covered under Bharatpur Sewerage project under RSTDSP, Phase-IV. It is recommended that the source of contamination of the water tank be addressed as part of this scheme.

97. It is advisable that the PMU/ ULB ensures that catchment area of 2 Kunds is covered by proposed sewerage schemes under RUIDP phase - IV/ Amrut.

VIII.HERITAGE IMPACT ASSESSMENT AND MITIGATION MEASURES PLAN

Proposed interventions	Details of works / components, materials, design, etc.	Observations & Assessment	Mitigation measures	Responsibility to implement mitigation measures/guidelines
• Conservation & Redevelopment of Town Hall campus and façade improvement of the Raj kiya Vishist Purva Uchha Madhyamic Vidyalaya Adaptive Reuse of the Heritage Building as a Cultural Activity Zone • Redevelopment of Rang Manch Area as Theatre for visual art performance • Conservation & Redevelopment of Main Building as visual art gallery • Development of View point/ Watchtower on Terrace • Site & Outdoor area redevelopment as cafeteria, parking, landscape • Façade Illumination for night views. Façade conservation of the Raj kiya Vishist Purva Uchha Madhyamic Vidyalaya All selected works should conserve the historic built fabric and structural strengthening. Retrofitting of selected monuments may be undertaken. No new material or change in design is proposed in the subproject.	Adaptive Reuse as a Centre of Performing Arts and façade improvement/ conservation of Raj kiya Vishist Purva Uchha Madhyamic Vidyalaya - intervention of civil works and mechanical, electrical and plumbing services Conservation of the built fabric and structural retrofitting	Reuse of spaces and parts of the building to ensure appropriate interventions to protect the integrity of the monument. Provision of services can cause distress in the historic building as chases are made to provide electrical cables etc. Use of modern materials for conservation and repair can be incompatible with historic materials and lead to loss of authenticity in the historic building	Prepare detailed conservation plan based on detailed documentation of materials, condition, and conservation planning. Detailed design of adaptive reuse with detailed design of engineering services including electrical, plumbing, and mechanical. Conservation to be carried out by specialised contractor who has prior experience in such works. The special terms in the contract are recommended to include that contractor is required to have in his team, a conservation architect for design development and detailing along with the MEP consultants. Structural engineer to be part of the project team to provide details for structural repair and retrofitting. All design to be reviewed by a conservation architect. Avoid any additional structure within the town hall	Contractor/PIU

Proposed interventions	Details of works / components, materials, design, etc.	Observations & Assessment	Mitigation measures	Responsibility to implement mitigation measures/guidelines
Revitalisation of Nehru Park • PATHWAY: Redevelopment of pathway in local sandstone. • CLOCK: Restoration of stone clock in the park. • SEATING ARRANGEMENTS: Few more benches have been proposed in the garden. • CHILDREN PLAY AREA: Facilities of children Play Area, Four Seater MGR, Wave Slider, Mult Seater See-Saw, Four seat Arch Swing are proposed. • FOUNTAIN: Umbrella shaped 4 fountains, Wall fountain is proposed on the sloping wall besides the steps. • SELFIE POINT: Selfie point is proposed inside the park made up of Red sand stone. • BOUNDARY: Restoration of boundary wall. • GAZEBO: One circular gazebo of size 6.4 m Dia.	Landscape improvements with interventions of pathways, enhancement of children's play area, boundary wall repair etc.	The park is within a historic citadel and in close proximity to ASI protected monuments; the fortification wall of the citadel defines one of the edges of the park, bold and over decorative interventions can compromise the spirit of the place and loss of authenticity of the historic setting	Low impact interventions which do not overpower the historic attributes of the setting. Use of local/ historic / natural materials which are similar in colour, texture with the historic materials and techniques used in the historic buildings (for instance random rubble stone masonry in walling, rough sandstone etc.)	Contractor/PIU
Façade lighting & Illumination of City Gates (Chandpole Gate, Surajpol Gate, Kumher Gate, Mathura Gate, Ketan Gate, Neemda Gate, B Narain Gate, Gobardhan Gate and Anah Gate) • The propose lighting will be done only with single color warm white lights • The propose lighting will be done with theme of Micro &	Monument lighting During site visit recently installed lighting was noted.	Cables and fittings mounted on the surface of the monument are invasive and will cause irreversible damage to the historic surfaces	Following Illumination fittings guidelines may be used in detail designing • provided on independent floor mounted or pole mounted structures. • No fixtures should be visible on surface • No wiring to be visible on surface • Prior applicable permissions from ASI/Department of	Contractor/PIU

Proposed interventions	Details of works / components, materials, design, etc.	Observations & Assessment	Mitigation measures	Responsibility to implement mitigation measures/guidelines
Diffuse façade • LED light fixtures like Spot lights, Strip lights, linear lights, wall washers, Up-lighter & down lighters will be used for illumination • Areas to be highlight on façade will be - Door frames, motifs, architraves, Kangooras or gate chajja, Inverted ceilings			Archaeology and Museum, Government of Rajasthan	
Façade lighting& Illumination of Laxman Mandir, Ganga Mandir & Jama Masjid To reduce consumption of power all the proposed lights will be LED. • The propose lighting will be done only with single color warm white lights • The propose lighting will be done with theme of Micro & Diffuse façade • LED light fixtures like Spot lights, Strip lights, linear lights, wall washers, Up-lighter & down lighters will be used for illumination • Areas to be highlight on façade will be stone architectural elements • No large fixtures to be installed • Wiring of lighting to be hidden	Monument lighting During site visit recently installed lighting was noted.	Cables and fittings mounted on the surface of the monument are invasive and will cause irreversible damage to the historic surfaces	Following Illumination fittings guidelines may be used in detail designing • provided on independent floor mounted or pole mounted structures. • No fixtures should be visible on surface • No wiring to be visible on surface • project team may re-consider the proposal for number of proposed lightning. • Prior applicable permissions from ASI and state archaeology and museum department	Contractor/PIU

Proposed interventions	Details of works / components, materials, design, etc.	Observations & Assessment	Mitigation measures	Responsibility to implement mitigation measures/guidelines
Conservation & Redevelopment of Saligram Kund& campus Conservation Scope of Work • Conservation of Kund structure • Masonry walls conservation & restoration • Lime plaster & Kada • Restoration & replacement of damage/ missing stone elements • Restoration of Ghats/ flooring • Plinth Edge protection • Reconstruction of damage/ missing wall • Dirty water raising • De-vegetation of existing structure • Façade Restoration of surrounding heritage structures • Façade lighting Redevelopment Scope of Work • Construction of boundary wall/ site demarcation • Surrounding development of Kund- Flooring/ plantation/ Street furniture/ Lighting/ Signage • Development of visitor facility area like Toilets • Development of Kiosk • Development of Parking • Plinth Edge protection • Reconstruction of damage/ missing wall • Dirty water raising	Conservation of the historic Kund; dredging of the sludge and polluted water inside the water body, de-vegetation of the Kund - from inside and from the masonry structure Landscape improvements in the setting of the tank with paved surfaces; street furniture etc.	Conservation and repair with modern materials and structural details will cause loss of authenticity of the historic structure. 'Beautification' needs to be based on understanding of the historic attributes of the water body and its setting, more specifically the relationship with the temple absence of which will lead to loss of authenticity and integrity of the structures and its setting	The contractor be required to provide detailed conservation and landscape design as part of his scope of work The scope of the project is conservation of historic fabric of tank and landscape interventions. The extent of the property (water tank with the open space and temple in the setting) requires to be defined. This is necessary for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future. It is further recommended that an environmental engineer be part of the team for detailed planning for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future. Also, that the planning	Contractor/PIU

Proposed interventions	Details of works / components, materials, design, etc.	Observations & Assessment	Mitigation measures	Responsibility to implement mitigation measures/guidelines
• De-vegetation of existing structure • Façade Restoration of surrounding heritage structures • Façade lighting			addresses appropriate ecologically responsive techniques for both the quantity and quality of the water in the Kund. It is recommended that the contractor be required to provide conservation and detailed landscape design as part of his scope of work.	
Conservation & Redevelopment of Bijendra Bihari Kund& Campus Conservation Scope of Work • Restoration of historic Ghat structure • Façade Restoration of surrounding heritage structures • Restoration of water channel • Retaining wall construction around catchment area • Restoration of architectural elements on façade • Façade lighting Redevelopment Scope of Work • Redevelopment of compound area/ compound wall • Flooring & pavement around Kund • Installation of street furniture-stone benches, signage's, light poles, bollards, dustbins, railings • Landscape development in surroundings	Conservation of the historic kund; dredging of the sludge and polluted water inside the water body, devegetation of the Kund - from inside and from the masonry structure Landscape improvements in the setting of the tank	Use of modern materials and techniques for all the conservation and repair works; 'Beautification' needs to be based on understanding of the historic attributes of the water body and its setting, more specifically the relationship with the temple absence of which will lead to loss of authenticity and integrity of the structures and its setting	The extent of the property (water tank with the open space and temple in the setting) requires to be defined. This is necessary for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment in the future. It is further recommended that an environmental engineer be part of the team for detailed planning for proper protection of the water feature, design appropriate interface between the roads to ensure that the water is not contaminated by storm water runoff from the area around, and to ensure that there is no encroachment	Contractor/PIU

Proposed interventions	Details of works / components, materials, design, etc.	Observations & Assessment	Mitigation measures	Responsibility to implement mitigation measures/guidelines
• Kiosk & public amenities development			in the future. Also, that the planning addresses appropriate ecologically responsive techniques for both the quantity and quality of the water in the Kund. It is recommended that the contractor be required to provide conservation and detailed landscape design as part of his scope of work.	

Appendix 3: Stakeholders Consultations Conducted During Project Preparation

1. Consultations during Social and Environmental Impact Assessment

Various consultations were done during social and environmental impact assessment of the project with residents of the town at various locations to understand their level of satisfaction about the present status of Conservation & Development of Heritage Sites and also to understand their awareness about the proposed works and their willingness/acceptance of the proposed works under RSTDSP. Details of these consultations are given below-

Public Consultation

S. No	Date and Location	Participants	Topic Discussed	Outcome	Photographs of Public Consultation
1	07.12.2021 Red Cross Circle, Bharatpur; Indra Gandhi Park	Shahid Khan Sonu Kumar Shekhar Saini Salman Khan Jahid Khan Lekhraaj Saini Ramesh Kumawat Hari krishan Bhagat Singh Govardhan Singh Mohan Singh Dilsher Singh Pursotham Saini Parmanad Saini Yatendra Saini **Male: 15** **Female: 0** **Total-15**	Project components under RSTDSP and the benefits to the Community. Process of logging grievance and its mechanism under the project. Probable disturbances and pollution during construction works Present status of Presence of historical/ cultural/ religious sites nearby. Unfavourable climatic condition	Conservation and development of heritage structures including Kunds and city gates and restoration of Town hall is proposed which includes improvement these heritage assets in the city and their beautification. People understand that during construction works there may be some disturbance and air and noise pollution in immediate surrounding of project area and they are ready to bear these impacts within acceptable limits. Participants are happy with proposed project components as it will provide a renovated Kunds, illuminated heritage structures , temples, mosque, city gates and will add into cities beauty and will attract touristwhich will add in city economy also.	 
2	07.12.2021 Bharjwasi Khund; Bharatpur	Yuvraj Krishana Sharma Arti Sharma Barvar Singh Maan Singh Phulwati Sheela Rahul Laxsmi Ravi **Male: 06** **Female: 04** **Total-10**	Project components under RSTDSP and the benefits to the Community. Process of logging grievance and its mechanism under the project. Probable disturbances and pollution during construction works Present status of Presence of historical/ cultural/ religious sites nearby. Unfavourable climatic condition	Conservation and development of heritage structures including Kunds and city gates and restoration of Town hall is proposed which includes improvement these heritage assets in the city and their beautification. People understand that during construction works there may be some disturbance and air and noise pollution in immediate surrounding of project area and they are ready to bear these impacts within acceptable limits. Participants are happy with proposed project components as it will provide a renovated Kunds, illuminated heritage structures , temples, mosque, city gates and will add into cities beauty and will attract tourist which will add in city economy also.	 

S. No	Date and Location	Participants	Topic Discussed	Outcome	Photographs of Public Consultation
3	07.12.2021 Shani Dev Mandir; Hiradas; Bharatpur	Yogesh Meena Krishana Manish Khwar Singh Devi Singh **Male: 5** **Female: 0** **Total-5**	Project components under RSTDSP and the benefits to the Community. Process of logging grievance and its mechanism under the project. Probable disturbances and pollution during construction works Present status of Presence of historical/ cultural/ religious sites nearby. Unfavourable climatic condition	Conservation and development of heritage structures including Kunds and city gates and restoration of Town hall is proposed which includes improvement these heritage assets in the city and their beautification. People understand that during construction works there may be some disturbance and air and noise pollution in immediate surrounding of project area and they are ready to bear these impacts within acceptable limits. Participants are happy with proposed project components as it will provide a renovated Kunds, illuminated heritage structures , temples, mosque, city gates and will add into cities beauty and will attract tourist which will add in city economy also.	
4	07.12.2021 Nehru Park; Bharatpur	Parshuram Sonu Saini Amit Singh Ram Singh **Male: 04** **Female: 0** **Total-04**	Project components under RSTDSP and the benefits to the Community. Process of logging grievance and its mechanism under the project. Probable disturbances and pollution during construction works Present status of Presence of historical/ cultural/ religious sites nearby. Unfavourable climatic condition	Conservation and development of heritage structures including Kunds and city gates and restoration of Town hall is proposed which includes improvement these heritage assets in the city and their beautification. People understand that during construction works there may be some disturbance and air and noise pollution in immediate surrounding of project area and they are ready to bear these impacts within acceptable limits. Participants are happy with proposed project components as it will provide a renovated Kunds, illuminated heritage structures , temples, mosque, city gates and will add into cities beauty and will attract tourist which will add in city economy also.	 

S. No	Date and Location	Participants	Topic Discussed	Outcome	Photographs of Public Consultation
5	07.12.2021 Shaligram Khund; Bharatpur	Jitendar Umesh Kanta Manu Kumar Laccho Devi Sudhama Devi Kamla Devi Suman Devi Leelavati Abhishek Tiwari Suresh Parshuram Kasturi Devi Urmila Chanchal Suman Aarti **Male: 06** **Female: 10** **Total-16**	Project components under RSTDSP and the benefits to the Community. Process of logging grievance and its mechanism under the project. Probable disturbances and pollution during construction works Present status of Presence of historical/ cultural/ religious sites nearby. Unfavourable climatic condition	Conservation and development of heritage structures including Kunds and city gates and restoration of Town hall is proposed which includes improvement these heritage assets in the city and their beautification. People understand that during construction works there may be some disturbance and air and noise pollution in immediate surrounding of project area and they are ready to bear these impacts within acceptable limits. Participants are happy with proposed project components as it will provide a renovated Kunds, illuminated heritage structures , temples, mosque, city gates and will add into cities beauty and will attract tourist which will add in city economy also.	 
6	31.05.2022 Ganga Mandir; Bharatpur	LALA RAM KHATRI BABLU DEVI CHARAN GABBAR VIJAY CHITO MANOJ KULDEEP KAPOOR HAJARI LALGOVIND JI **Male: 12** **Female: 00** **Total-12**	Project components under RSTDSP and the benefits to the Community. Process of logging grievance and its mechanism under the project. Probable disturbances and pollution during construction works	Conservation and development of heritage structures including Kunds and city gates and restoration of Town hall is proposed which includes improvement these heritage assets in the city and their beautification. People understand that during construction works there may be some disturbance and air and noise pollution in immediate surrounding of project area and they are ready to bear these impacts within acceptable limits. Participants are happy with proposed project components as it will provide a renovated Kunds, illuminated heritage structures , temples, mosque,	

S. No	Date and Location	Participants	Topic Discussed	Outcome	Photographs of Public Consultation
			Present status of Presence of historical/ cultural/ religious sites nearby. Unfavourable climatic condition	city gates and will add into cities beauty and will attract tourist which will add in city economy also.	
7	31.05.2021 City Gate; Bharatpur	SONU SHARMA DILIP SURESH LAXMAN DHAN SINGH **Male: 05** **Female: 00** **Total-05**	Project components under RSTDSP and the benefits to the Community. Process of logging grievance and its mechanism under the project. Probable disturbances and pollution during construction works Present status of Presence of historical/ cultural/ religious sites nearby. Unfavourable climatic condition	Conservation and development of heritage structures including Kunds and city gates and restoration of Town hall is proposed which includes improvement these heritage assets in the city and their beautification. People understand that during construction works there may be some disturbance and air and noise pollution in immediate surrounding of project area and they are ready to bear these impacts within acceptable limits. Participants are happy with proposed project components as it will provide a renovated Kunds, illuminated heritage structures , temples, mosque, city gates and will add into cities beauty and will attract tourist which will add in city economy also.	

S. No	Date and Location	Participants	Topic Discussed	Outcome	Photographs of Public Consultation
8	31.05.2022 Khumhar Gate; Bharatpur	DEEPAK PURAN SETH CHANDRABHAN SUNIL SANJAY **Male: 05** **Female: 00** **Total-05**	Project components under RSTDSP and the benefits to the Community. Process of logging grievance and its mechanism under the project. Probable disturbances and pollution during construction works Present status of Presence of historical/ cultural/ religious sites nearby. Unfavourable climatic condition	Conservation and development of heritage structures including Kunds and city gates and restoration of Town hall is proposed which includes improvement these heritage assets in the city and their beautification. People understand that during construction works there may be some disturbance and air and noise pollution in immediate surrounding of project area and they are ready to bear these impacts within acceptable limits. Participants are happy with proposed project components as it will provide a renovated Kunds, illuminated heritage structures , temples, mosque, city gates and will add into cities beauty and will attract tourist which will add in city economy also.	
9	31.05.2022 Suraj Pole; Bharatpur	VIRENDRA GYARSHI KHEM CHAND ASHOK **Male: 04** **Female: 00** **Total-04**	Project components under RSTDSP and the benefits to the Community. Process of logging grievance and its mechanism under the project. Probable disturbances and pollution during construction works Present status of Presence of historical/ cultural/ religious sites nearby. Unfavourable climatic condition	Conservation and development of heritage structures including Kunds and city gates and restoration of Town hall is proposed which includes improvement these heritage assets in the city and their beautification. People understand that during construction works there may be some disturbance and air and noise pollution in immediate surrounding of project area and they are ready to bear these impacts within acceptable limits. Participants are happy with proposed project components as it will provide a renovated Kunds, illuminated heritage structures , temples, mosque, city gates and will add into cities beauty and will attract tourist which will add in city economy also.	

S. No	Date and Location	Participants	Topic Discussed	Outcome	Photographs of Public Consultation
10	31.05.2022 Chand Pole; Bharatpur	ANKIT CHOUHAN SOHIL ROSHANI **Male: 02** **Female: 01** **Total-03**	Project components under RSTDSP and the benefits to the Community. Process of logging grievance and its mechanism under the project. Probable disturbances and pollution during construction works Present status of Presence of historical/ cultural/ religious sites nearby. Unfavourable climatic condition	Conservation and development of heritage structures including Kunds and city gates and restoration of Town hall is proposed which includes improvement these heritage assets in the city and their beautification. People understand that during construction works there may be some disturbance and air and noise pollution in immediate surrounding of project area and they are ready to bear these impacts within acceptable limits. Participants are happy with proposed project components as it will provide a renovated Kunds, illuminated heritage structures , temples, mosque, city gates and will add into cities beauty and will attract tourist which will add in city economy also.	
11	31.05.2022 Atal Gate and; Govardhan Gate; Bharatpur	RAJVEER BRIJESH ARJUN PRADEEP TANVAY PODAR **Male: 05** **Female: 00** **Total-05**	Project components under RSTDSP and the benefits to the Community. Process of logging grievance and its mechanism under the project. Probable disturbances and pollution during construction works Present status of Presence of historical/ cultural/ religious sites nearby. Unfavourable climatic condition	Conservation and development of heritage structures including Kunds and city gates and restoration of Town hall is proposed which includes improvement these heritage assets in the city and their beautification. People understand that during construction works there may be some disturbance and air and noise pollution in immediate surrounding of project area and they are ready to bear these impacts within acceptable limits. Participants are happy with proposed project components as it will provide a renovated Kunds, illuminated heritage structures , temples, mosque, city gates and will add into cities beauty and will attract tourist which will add in city economy also.	

S. No	Date and Location	Participants	Topic Discussed	Outcome	Photographs of Public Consultation
12	31.05.2022 Anah Gate and; Neemda Gate; Bharatpur	VIKAH DEVINDRA GOURAV VIJAY SINGH BACCHU SINGH DEEPAK **Male: 06** **Female: 00** **Total-06**	Project components under RSTDSP and the benefits to the Community. Process of logging grievance and its mechanism under the project. Probable disturbances and pollution during construction works Present status of Presence of historical/ cultural/ religious sites nearby. Unfavourable climatic condition	Conservation and development of heritage structures including Kunds and city gates and restoration of Town hall is proposed which includes improvement these heritage assets in the city and their beautification. People understand that during construction works there may be some disturbance and air and noise pollution in immediate surrounding of project area and they are ready to bear these impacts within acceptable limits. Participants are happy with proposed project components as it will provide a renovated Kunds, illuminated heritage structures , temples, mosque, city gates and will add into cities beauty and will attract tourist which will add in city economy also.	 

S. No	Date and Location	Participants	Topic Discussed	Outcome	Photographs of Public Consultation
13.	31.05.2022 Brij Bihari Khund and; Town Hall; Bharatpur	RAJU JITENDRA BABU LAL KISHAN LAL MAHENDRA RAM KUMAR MANOJ KUMAR BACCHU SINGH ROSHAN LAL **Male: 09** **Female: 00** **Total-09**	Project components under RSTDSP and the benefits to the Community. Process of logging grievance and its mechanism under the project. Probable disturbances and pollution during construction works Present status of Presence of historical/ cultural/ religious sites nearby. Unfavourable climatic condition	Conservation and development of heritage structures including Kunds and city gates and restoration of Town hall is proposed which includes improvement these heritage assets in the city and their beautification. People understand that during construction works there may be some disturbance and air and noise pollution in immediate surrounding of project area and they are ready to bear these impacts within acceptable limits. Participants are happy with proposed project components as it will provide a renovated Kunds, illuminated heritage structures , temples, mosque, city gates and will add into cities beauty and will attract tourist which will add in city economy also.	 
14.	31.05.2022 Jhama Maszid; Bharatpur	MANISH PAWAN RAMESH SURENDRA PAL ABDUL HAMIR MOH. AABUL CHAND KHAN **Male: 07** **Female: 00** **Total-07**	Project components under RSTDSP and the benefits to the Community. Process of logging grievance and its mechanism under the project. Probable disturbances and pollution during construction works Present status of Presence of historical/ cultural/ religious sites nearby. Unfavourable climatic condition	Conservation and development of heritage structures including Kunds and city gates and restoration of Town hall is proposed which includes improvement these heritage assets in the city and their beautification. People understand that during construction works there may be some disturbance and air and noise pollution in immediate surrounding of project area and they are ready to bear these impacts within acceptable limits. Participants are happy with proposed project components as it will provide a renovated Kunds, illuminated heritage structures , temples, mosque, city gates and will add into cities beauty and will attract tourist which will add in city economy also.	

S. No	Date and Location	Participants	Topic Discussed	Outcome	Photographs of Public Consultation
15	15.09.2022 Brij Bihari Kund, Bharatpur	Girish K Sharma Ganpat Lal Raghav Das Badan singh Laxman Singh Ratan Singh Sangram Singh Bhanwar Singh Rohitash Balal Raju Gupta Male:11	Project components under RSTDSP, with special emphasis on re-development of Brijbihari Kund, and the benefits to the Community.	Conservation and development of heritage sites, Brijbihari Kund and other prominent gates in Bharatpur. People understand that during construction works there may be some disturbance and air and noise pollution in immediate surrounding of project area and they are ready to bear these impacts within acceptable limits. Participants are happy with proposed project as it will provide a renovated Kund with religious and recreational opportunities and will attract tourists/devotees which will add in city economy also.	
		Total : 117 **Male :102** **Female :15**			

Attendance sheet of public consultation in Bharatpur

Rajasthan Secondary Town Development Sector Project (RSTDSP-Ph-IV)

Consultations with Stakeholders

Project Town... Bharatpur Name of Project: Beautification (City Development)

Date: 07/12/2021 Place of Consultation Khalisam Pond

Attendance Sheet

S.N.	Name	Occupation	Mobile Number	Signature
1	Jitendra Kumar	Resident	9983602671	
2	Umesh	Student	6367923645	
3	Kanha	Student	" "	
4	NITIN	student	6376770258	
5	Mamta	Local Resident	9119225273	
6	Lachho devi	" "	9782994935 6376770252	
7	Sudhama devi	" "	6376770252	
8				
9	Kamla devi	Local Resident	6376770252	
10	Suman devi	" "	9119225273	
11				
12	Leelavati	Local Resident	9119225273	
13	Abhisek tiwari	Social	9414025258	
14	Suresh	Soil	6375918213	
15	Parshuram Sharma	Resident	946.738174	
16	Kasturi devi		9785645225	
17	Urmila	Silai wali	78771305 77	
18	Chanchal	Shop Keeper	—	
19	Suman			
20	Rani	Students	7877114436	

Rani Kumari (CMSC OI; Jaipur Zone)

Scanned with CamScanner

Attendance sheet Brijendra bihari Kund

Consultation with Stakeholders (Panning/implementation Phase)

Project Town: Bharatpur — Name of the project: Beautification/City Development

Date: 07/12/2021 — Place of consultation: Bhoomjwasi Khund

S.No.	Name and mobile no.	Designation and/or Address	Topics Discussed	Outcome of the consultation	Signature
6	Phulwati	Local Resident	1. Awareness about the project 2. Present status of site/project 3. Status of water supply/ Drainage/sewerage in town 4. Requirement of any tree cutting due to project 5. Presence/movement of wild fauna at project town/project sites 6. Whether project is beneficial for citizens and increase citizen's convenience 7. Whether project is causing any livelihood impact to someone 8. Any historical or cultural monuments in town/near project sites 9. Any suggestion about the project 10. Any other relevant information found at site	Local Resident was agreed with the Area development	
7	Shila	Local Resident		" "	
8	Rahul (9772966078)	Student		" "	
9	Lakhmi Chand	Local Resident		" "	
10	Ravi (9982994553)	Student		" "	

Mani Kumar (Mani Ramoor (CMSCOI; Jaipur Zone)

Name and Signature of the person who done consultation:

Any special issue noted at site:

Consultation with Stakeholders (Panning/implementation Phase)

Project Town: Bharatpur — Name of the project: Beautification / City Development.

Date: 07/12/2021. — Place of consultation: Bhoomjwasi Khund.

S.No.	Name and mobile no.	Designation and/or Address	Topics Discussed	Outcome of the consultation	Signature
1	Yuvraj (9982085583)	Local Residence	1. Awareness about the project 2. Present status of site/project 3. Status of water supply/ Drainage/sewerage in town 4. Requirement of any tree cutting due to project 5. Presence/movement of wild fauna at project town/project sites 6. Whether project is beneficial for citizens and increase citizen's convenience 7. Whether project is causing any livelihood impact to someone 8. Any historical or cultural monuments in town/near project sites 9. Any suggestion about the project 10. Any other relevant information found at site	Local Resident was agreed with the Area Development	
2	Krishana Sharma (6350508314)	Local Resident		" "	
3	Arti Sharma (6350508314)	Local Resident		" "	
4	Beervar Singh (9929171887)	Ex-Army Person (Resident)		" "	
5	Man Singh (—)	Local Resident		" "	

Mani Kumar (Mani Ramoor. (CMSCOI; Jaipur Zone)

Name and Signature of the person who done consultation:

Any special issue noted at site:

Attendance sheet Nehru Park

Consultation with Stakeholders (Panning/implementation Phase)

Project Town: Bharatpur

Name of the project: Beautification / City Development

Date: 07/12/2024

Place of consultation: Nehru Park.

S.No.	Name and mobile no.	Designation and/or Address	Topics Discussed	Outcome of the consultation	Signature
1	Paragram 8094748967	Satmarayan Mandir	1. Awareness about the project 2. Present status of site/project 3. Status of water supply/ Drainage/sewerage in town 4. Requirement of any tree cutting due to project 5. Presence/movement of wild fauna at project town/project sites 6. Whether project is beneficial for citizens and increase citizen's convenience 7. Whether project is causing any livelihood impact to someone 8. Any historical or cultural monuments in town/near project sites 9. Any suggestion about the project 10. Any other relevant information found at site	Local Shopkeeper/ Resident agreed with City Development	
2	Sonu Saini 6375402101	Sahyog Nagar		" "	
3	Amit Singh 8058805104	Sahyog Nagar		" "	
4	Ram Singh.	Satyam Lal.		" "	
5	—	—		—	—

Mani Kumar (Mani Kumar) (CMSC01; Jaipur Zone)

Name and Signature of the person who done consultation:

Any special issue noted at site:

Attendance Sheet – Jama Masji

Rajasthan Secondary Town Development Sector Project (RSTDSP- Ph-IV)

Consultations with Stakeholders

Project Town: भरतपुर **Name Of Project:** Beautification

Date: 21/01/22 **Place of Consultation:** जामा मस्जिद

Attendance Sheet

S.N.	Name	Occupation	Mobile Number	Signature
1	मनीष	हेला		मनीष
2	पवन	हेला	9764162509	पवन
3	रमेश चंद	हेला		रमेशचंद
4	सुरेश पाल	हेला		सुरेश पाल
5	अब्दुल हमीद			अब्दुल हमीद
6	मो० आबीद	इमाम जामा मस्जिद	09557622090	
7	चाँद खान	मैनेजर जामा मस्जिद	09610122001	
8				

d

Attendance Sheet – Laxsman Mandir

Rajasthan Secondary Town Development Sector Project (RSTDSP- Ph-IV)

Consultations with Stakeholders

Project Town: भरतपुर **Name Of Project:** Beautification

Date: 21/01/21 **Place of Consultation:** लक्ष्मण मंदिर

Attendance Sheet

S.N.	Name	Occupation	Mobile Number	Signature
1	मुकेश	पुजारी लक्ष्मण मंदिर	9983024003	मुकेश
2	बाबू लाल			बाबूलाल
3	सोनू			
4	वीरू			वीरू
5	देवीलाल		9636705401	देवीलाल
6	पुरुषेन्द्र			पुरुषेन्द्र
7				

Attendance Sheet – Ganga Mandir

Rajasthan Secondary Town Development Sector Project (RSTDSP- Ph-IV)

Consultations with Stakeholders

Project Town: Bharatpur Name Of Project: Beautification

Date: 21/07/22 Place of Consultation: Ganga mandir

Attendance Sheet

S.N.	Name	Occupation	Mobile Number	Signature
1	लाला राम रबारी	भगत		लाला राम
2	बबलू	भगत		बबलू
3	देवी चरण	भगत		देवी चरण
4	जोधर	भगत		
5	जोगेन्द्र जी	पुजारी	9414022434	जोगेन्द्र
6				

Attendance Sheet – City Gate

Rajasthan Secondary Town Development Sector Project (RSTDSP- Ph-IV)

Consultations with Stakeholders

Project Town: Bharatpur Name Of Project: Beautification

Date: 21/07/22 Place of Consultation: RC NARAYAN Gate

Attendance Sheet

S.N.	Name	Occupation	Mobile Number	Signature
1	Sony Sharma	Shop	9079761727	सोनू
2	Dilip	driver	8875775850	दिलीप
3	Suresh kuma	Shop	9667292731	सुरेश कुमार
4	Laxman	Shop	9887557720	लक्ष्मण
5	Dhan singh	Shop	8697016506	धन सिंह
6				

Attendance Sheet – Kumhar Gate

Rajasthan Secondary Town Development Sector Project (RSTDSP- Ph-IV)

Consultations with Stakeholders

Project Town.....Bharatpur **Name Of Project:**Beautification

Date:.....21/07/22 **Place of Consultation:**...Kumhar gate

Attendance Sheet

S.N.	Name	Occupation	Mobile Number	Signature
1	[illegible]	मोची		
2	[illegible]		9697706095	
3	[illegible]		9461582391	
4	सुनील	[illegible]	8094553742	सुनील
5	[illegible]	[illegible]	8306671533	
6				

Attendance Sheet – Suraj Pole

Rajasthan Secondary Town Development Sector Project (RSTDSP- Ph-IV)

Consultations with Stakeholders

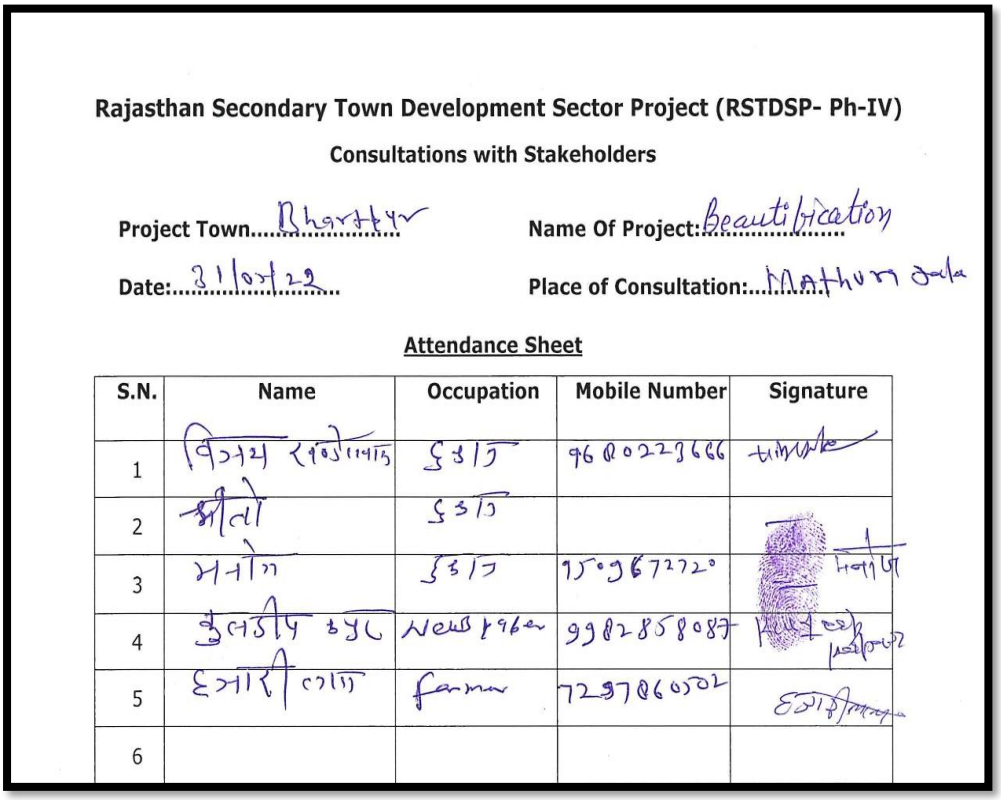
Project Town.....Bharatpur **Name Of Project:**Beautification

Date:.....21/07/22 **Place of Consultation:**...सूरज पोल गेट

Attendance Sheet

S.N.	Name	Occupation	Mobile Number	Signature
1	वीरेंद्र	Shop	8561098967	
2	[illegible]	Shop	8058206247	
3	[illegible]		6367093660	
4	[illegible]		6377194128	
5				

Attendance Sheet – Mathura Gate



Rajasthan Secondary Town Development Sector Project (RSTDSP- Ph-IV)

Consultations with Stakeholders

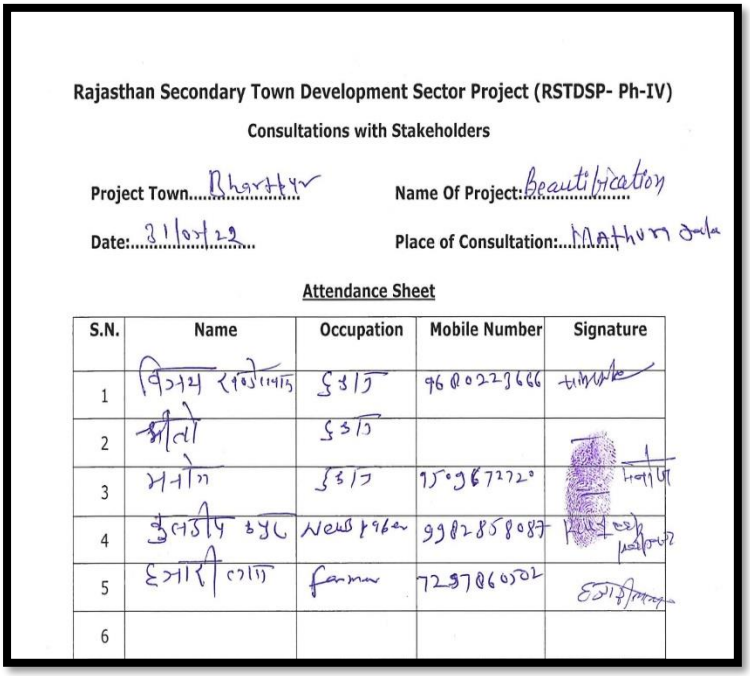
Project Town: Bharatpur **Name Of Project**: Beautification

Date: 31/Oct/22 **Place of Consultation**: Mathura Gate

Attendance Sheet

S.N.	Name	Occupation	Mobile Number	Signature
1	विजय राजोरिया	सेवा	9680223666	
2	सीता	सेवा		
3	मोहन	सेवा	7508767272	
4	हरदीप सिंह	News Paper	9982858087	
5	इमरती लाल	farmer	7297860502	
6				

Attendance Sheet – Mathura Gate



Rajasthan Secondary Town Development Sector Project (RSTDSP- Ph-IV)

Consultations with Stakeholders

Project Town: Bharatpur **Name Of Project**: Beautification

Date: 31/Oct/22 **Place of Consultation**: Mathura Gate

Attendance Sheet

S.N.	Name	Occupation	Mobile Number	Signature
1	विजय राजोरिया	सेवा	9680223666	
2	सीता	सेवा		
3	मोहन	सेवा	7508767272	
4	हरदीप सिंह	News Paper	9982858087	
5	इमरती लाल	farmer	7297860502	
6				

Attendance Sheet – Chand Pole

Rajasthan Secondary Town Development Sector Project (RSTDSP- Ph-IV)

Consultations with Stakeholders

Project Town: भरतपुर Name Of Project: Beautification

Date: 21/01/22 Place of Consultation: चांद पोल गेट

Attendance Sheet

S.N.	Name	Occupation	Mobile Number	Signature
1	अर्चना चौहान	शिक्षा	9782245718	अर्चना
2	सोहिल	शिक्षा	7878676028	सोहिल
3	रोशनी	शिक्षा	02759281854	रोशनी
4				
5				

Attendance Sheet – Atal Gate

Rajasthan Secondary Town Development Sector Project (RSTDSP- Ph-IV)

Consultations with Stakeholders

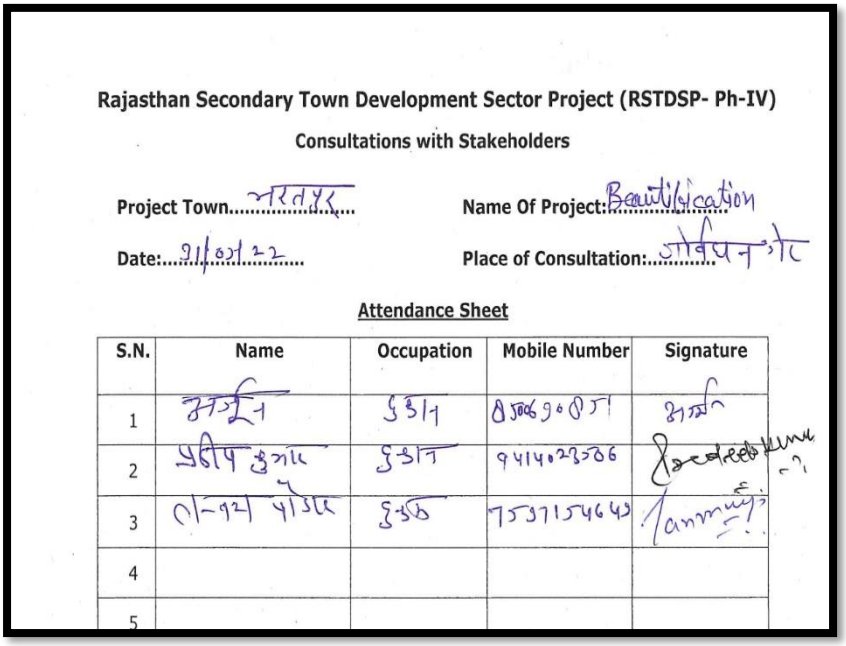
Project Town: Bharatpur Name Of Project: Beautification

Date: 21/01/22 Place of Consultation: ATAL BAND GATE

Attendance Sheet

S.N.	Name	Occupation	Mobile Number	Signature
1	जहांगीर	शिक्षा	09636541927	जहांगीर
2	हेमेन्द्र	शिक्षा	6367315967	हेमेन्द्र
3				
4				

Attendance Sheet – Govardhan Gate



Rajasthan Secondary Town Development Sector Project (RSTDSP- Ph-IV)

Consultations with Stakeholders

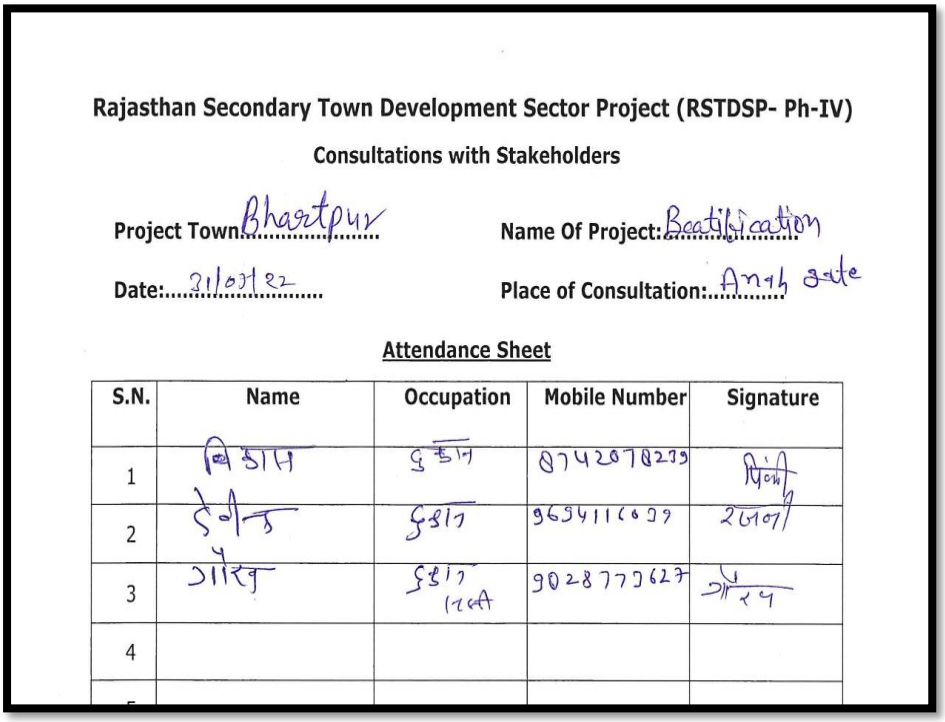
Project Town: भरतपुर Name Of Project: Beautification

Date: 21/07/22 Place of Consultation: गोवर्धन गेट

Attendance Sheet

S.N.	Name	Occupation	Mobile Number	Signature
1	[illegible]	[illegible]	[illegible]	[illegible]
2	[illegible]	[illegible]	9414023506	[illegible]
3	[illegible]	[illegible]	7597154643	[illegible]
4				
5				

Attendance Sheet – Anah Gate



Rajasthan Secondary Town Development Sector Project (RSTDSP- Ph-IV)

Consultations with Stakeholders

Project Town: Bhartpur Name Of Project: Beautification

Date: 21/07/22 Place of Consultation: Anah gate

Attendance Sheet

S.N.	Name	Occupation	Mobile Number	Signature
1	[illegible]	[illegible]	8742078299	[illegible]
2	[illegible]	[illegible]	9694116099	[illegible]
3	[illegible]	[illegible]	9028777627	[illegible]
4				
5				

Attendance Sheet – Neemda Gate

Rajasthan Secondary Town Development Sector Project (RSTDSP- Ph-IV)

Consultations with Stakeholders

Project Town: Bharatpur   Name Of Project: Beautification

Date: 21/03/22   Place of Consultation: NEEMDA Gate

Attendance Sheet

S.N.	Name	Occupation	Mobile Number	Signature
1	विजय सिंह	दुकान	9887493922	विजय सिंह
2	बच्चू सिंह	दुकान	9694975042	बच्चू सिंह
3	दीपक		7850006188	[illegible]
4				
5				

Attendance Sheet – Brij Bihari Kund

Rajasthan Secondary Town Development Sector Project (RSTDSP- Ph-IV)

Consultations with Stakeholders

Project Town: Bharatpur   Name Of Project: Beautification

Date: 31/03/2022   Place of Consultation: ब्रज बिहारी कुंड

Attendance Sheet

S.N.	Name	Occupation	Mobile Number	Signature
1	राजू	दुकान	9799081487	[illegible]
2	जितेन्द्र	दुकान	7023615223	जितेन्द्र
3	बाबू लाल गुप्ता	Service	7568797220	[illegible]
4	किशन लाल	मंदिर पुरोहित		किशन लाल
5	महेन्द्र शर्मा		9783857040	[illegible]
6				

Attendance Sheet - Town Hall

Rajasthan Secondary Town Development Sector Project (RSTDSP- Ph-IV)

Consultations with Stakeholders

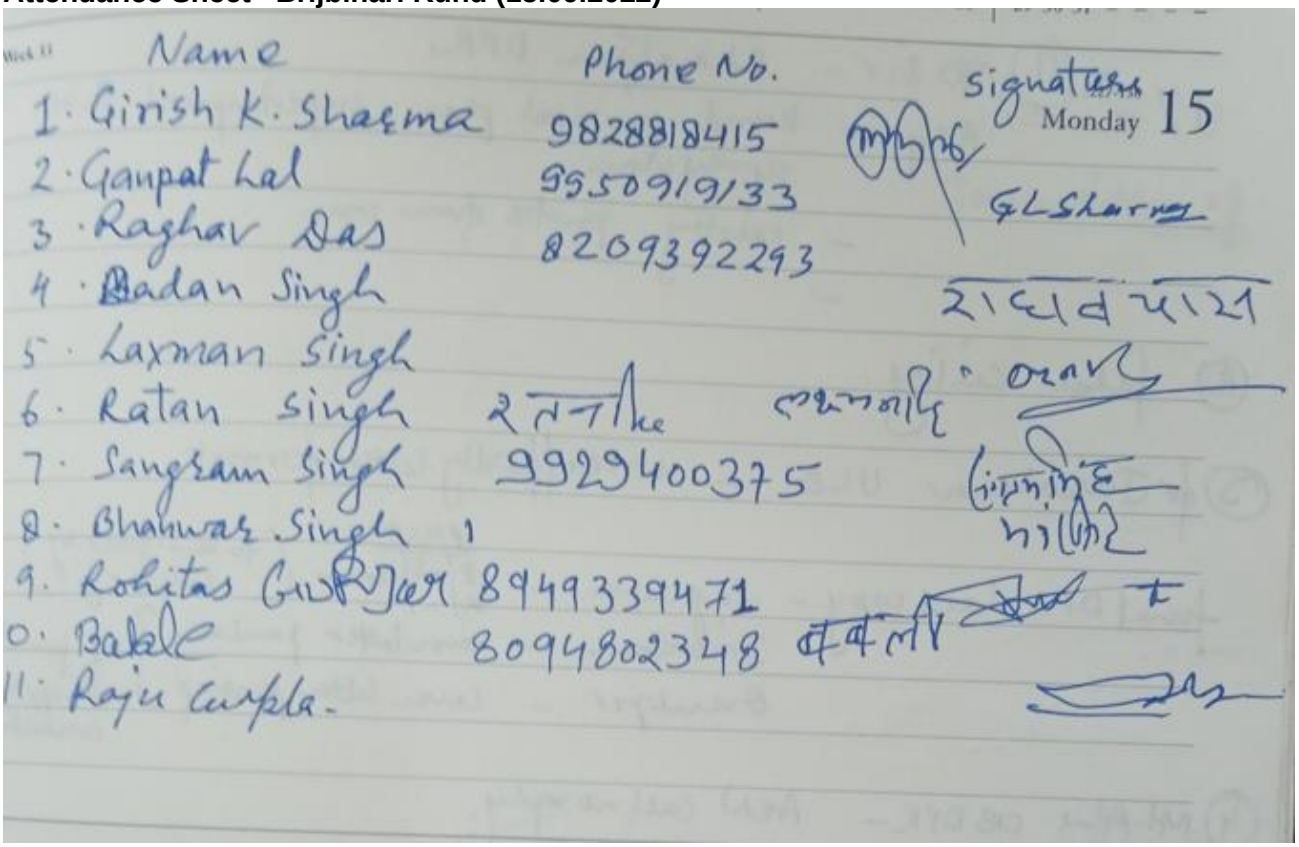
Project Town.....Bharatpur Name Of Project: Beautification

Date: 21/09/22 Place of Consultation: Town Hall

Attendance Sheet

S.N.	Name	Occupation	Mobile Number	Signature
1	[illegible]		[illegible]	
2	[illegible]		[illegible]	
3	[illegible]		[illegible]	
4	[illegible]		[illegible]	
5				

Attendance Sheet –Brijbihari Kund (15.09.2022)



	Name	Phone No.	Signature
1.	Girish K. Sharma	9828818415	Monday 15
2.	Ganpat Lal	9550919133	GLSharma
3.	Raghav Das	8209392293	
4.	Badan Singh		
5.	Laxman Singh		
6.	Ratan Singh		
7.	Sangram Singh	9929400375	
8.	Bhanwar Singh		
9.	Rohitas Gurjar	8949339471	
10.	Bakale	8094802348	
11.	Raju Gurjar		

Meeting with Archaeological Survey of India (ASI) and Department of Archaeology and Museum, GoR officials

Consultation with Stakeholders (Planning/Implementation Phase)

Project Town: Bharatpur

Name of the project: Bharatpur city Beautification

Date: 22/11/2022

Place of consultation: ASI, Jaipur

S.No.	Name and mobile no.	Occupation and Address	Topics Discussed	Outcome of the consultation	Signature
1	Dr. Vinay Kumar Gupta	Superintending Archeologist ASI, JAIPUR.	1. Work Components of Bharatpur City Beautification, which are in close proximity of ASI protected monuments namely Town Hall and Nehru Park. Procedure for obtaining NOC from ASI.	Director state Archeology & Museum shall be approached for NOC, who is designated/compitent Authority to grant Permission, and he to comp for proposed	V. Dgupta 22/11/22
2	9456053192				
3					
4			2. Facade lighting & illumination of Ganga mandir, ketan Gate and Goverdhan Gate	Components under Bharatpur city Beautification project.	
5					
6			3 - Special precautions while working in close proximity of Protected structures/monuments	Experienced Contractors in Heritage works related to Conservation & Protection shall be Engaged in such works.	
7					

Name and Signature of the person who done consultation: Surendra Singh Nagdali SSE, PMC BC; Manas Sharma Heritage Expert.

Consultation with Stakeholders (Planning/Implementation Phase)

Project Town: Bharatpur

Name of the project: Bharatpur, Beautification

Date: 22.11.2022

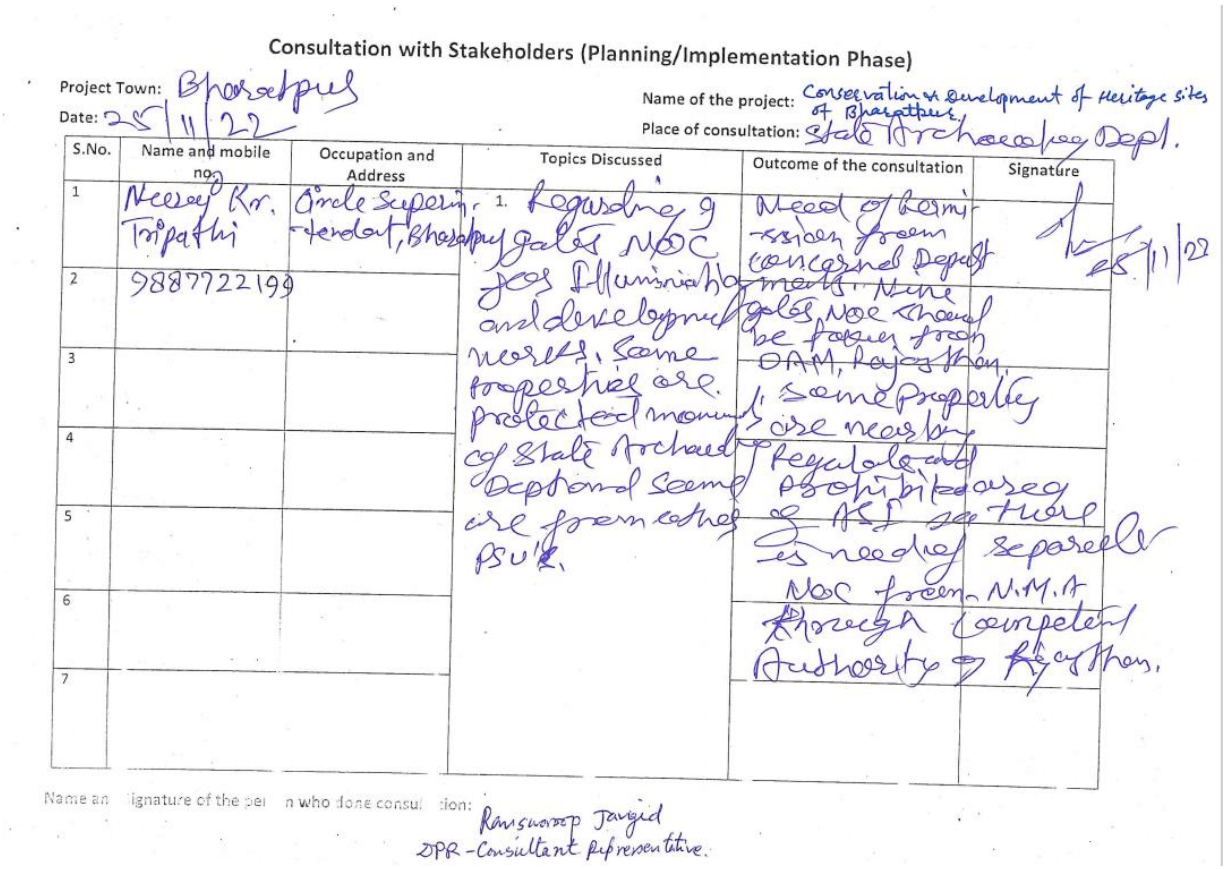
Place of consultation: Archeology & museum Deptt. Jaipur

S.No.	Name and mobile no.	Occupation and Address	Topics Discussed	Outcome of the consultation	Signature
1	Er. Mukesh Sharma 9829271567	Executive Engineer. Archeology & museum Deptt. Rajasthan Govt.	1. Facade Lighting of Ganga Mandir, Laxman Mandir, Jama Masjid and restoration and lighting of city Gates at Bharatpur, which are state protected monuments. 2. Permission required for facade lighting & illumination of city Gates.	It was advised to consult circle office of Archeology and Museum Department, at Bharatpur for further details. Permission shall be obtained prior to execution of works from State Archaeology & Museum department.	22/11/22
2	-	-			
3					
4					
5					
6					
7					

Name and Signature of the person who done consultation:

Surendra Singh Nagdali
SSE, PMCBC

Manas Sharma
Heritage Expert.



Consultation with Stakeholders (Planning/Implementation Phase)

Project Town: Bharatpur

Name of the project: Conservation & Development of Heritage sites of Bharatpur

Date: 25/11/22

Place of consultation: State Archaeology Dept.

S.No.	Name and mobile no	Occupation and Address	Topics Discussed	Outcome of the consultation	Signature
1	Neeraj Kr. Tripathi	Circle Superintendent, Bharatpur	1. Regarding 9 gates NOC for Illumination/Boundary and development works. Some properties are protected monuments of State Archaeology Dept and some are from other PSU's.	Need of Permission from concerned Deptt. Nine gates, NOC should be taken from DAM, Rajasthan. Some Property are nearby Regulated and Prohibited area of ASI so there is needed separate NOC from N.M.A through competent Authority of Rajasthan.	25/11/22
2	9887722199				
3					
4					
5					
6					
7					

Name and signature of the person who done consultation: Ramswaroop Jangid
DPR - Consultant representative.

Workshop and Stake Holders Consultation, dated 11.10.2022

An stakeholder consultation/workshop was organised in Meeting Hall of Municipal Corporation, Bharatpur on 11.10.2022 precided by the Minister for Technical Education and Ayurveda, Government of Rajasthan. Meeting was attended by stakeholders as well as public figures. District Collector, Bharatpur, Various Government Department representatives including PHED, Archaeological Survey of India (ASI), Department of Archaeology and Museum, GoR, PHED, PWD, UIT, Municipal Corporation Engineers, Town Planners, Representative engineer of Local self Governance department of GoR. TA-Team of ADB with its members interacted on various aspects, sewerage and avenues of tourism development in Bharatpur, City beautification including conservation of its build and natural heritage was discussed in view of long term planning .

The meting got wide coverage in mainstream media and a paper cutting of the workshop is depicted below (Rajasthan Patrika, dated 12.10.2022)

'प्राचीन स्थलों के साथ प्राकृतिक स्थलों को भी करना होगा संरक्षित...'

पत्रिका न्यूज नेटवर्क
rajasthanpatrika.com

भरतपुर. एशियन डवलपमेंट बैंक की टीम की ओर से मंगलवार को कलक्ट्रेट सभागार में भरतपुर में पर्यटन विकास की संभावनाओं पर कार्यशाला की। इसकी अध्यक्षता तकनीकी शिक्षा एवं आयुर्वेद राज्य मंत्री डॉ. सुभाष गर्ग ने की।

कार्यशाला में बैंक के प्रतिनिधियों ने बताया कि राज्य के भरतपुर, नक्लगढ एवं जोधपुर में पर्यटन को बढावा देने के लिए इस प्रकार की कार्यशाला की जा रही है। कार्यशाला में बताया गया कि कोरिया, वियतनाम एवं सिंगापुर में स्थानीय संसाधनों का उपयोग कर पर्यटन को बढावा दिया। इसकी वजह से इन देशों की आय में काफी इजाफा हुआ है। कार्यशाला में बताया गया कि वर्तमान में जो संसाधन उपलब्ध हैं उनका बेहतर ढंग से उपयोग करना होगा तथा विरासत के साथ स्थानीय संस्कृति को परिचित कराने के लिए कार्यक्रम आयोजित करने होंगे। ताकि पर्यटन को बढावा मिले और पर्यटक अधिक समय तक ठहर सकें।

कार्यशाला में बताया गया कि साउथ कोरिया में पर्यटन कई गुना बढ गया है क्योंकि वहां की सरकार ने पर्यटन के विकास के लिए सभी संसाधनों का उपयोग किया। कार्यशाला में यह भी बताया गया कि प्राचीन धरोहरों के साथ साथ प्राकृतिक स्थलों को भी संरक्षित करना होगा। क्योंकि अधिकांश पर्यटक प्राकृतिक स्थलों के संबंध में अधिक रुचि रखते हैं। कार्यशाला में साउथ कोरिया के खान ए ने बताया कि साउथ कोरिया में ऐतिहासिक स्थलों के साथ सरकार ने प्राकृतिक स्थलों को भी विकसित किया है। यही कारण है कि आज कोरिया की आय पर्यटन व्यवसाय से कई गुना बढ गई है।

कार्यशाला की अध्यक्षता करते हुए तकनीकी शिक्षा राज्यमंत्री ने कहा कि भरतपुर की विरासत काफी समृद्ध है। जिसे सहेजने की आवश्यकता है। पर्यटन के स्थलों के विकास के लिए सभी विभागों को मिलकर प्रयास करना होगा और लोगों में इनके संरक्षण के प्रति जागृति लानी होगी। नगर निगम के मेयर अभिजीत कुमार ने बताया कि शहर में गंदे पानी की निकासी के लिए ड्रेनेज परियोजना प्रारंभ की गई है और 36 2 करोड़ रुपए की लागत से सीवरेज का कार्य प्रगति पर है।

Following participated in the Workshop and Consultation

S.No.	Name	Designation and Department
1.	Dr. Subhash Garg	**Minister,** Technical Education and Ayurveda, Government of Rajasthan
2.	Alok Ranjan	**District Collector,** Bharatpur District
3.	Abhijit Kumar	**Mayor,** Municipal Corporation , Bharatpur
4.	Nawon Kim	**Team Leader** , ADB
5.	Bhawesh Kumar	**Sr. Project Officer,** ADB
6.	Kapil Gupta	**Superintending Engineer,** RUIDP, Jaipur
7.	N.C. Panwar	**Superintending Engineer,** RUIDP, Jaipur
8.	Arvindo Vijay	**Superintending Engineer,** PHED, GoR.
9.	Vinod K Chauhan	**Superintending Engineer,** Municipal Corporation, Bharatpur
10.	Mudasar Ali	**CA, Archeological Survey of India** (ASI).
11.	Neraj Tripathi	**Superintendent, Department of Archeology and Museum,** GoR.
12.	Manoharlal Meena	**DTP, Town Planning**, GOR
13.	K.K. Khandelwal	**Senior Town Planner,** GoR.
14.	O.P. Kirab	**Executive Engineer,** PWD, GoR.
15.	D.P. Sharma	**Executive Engineer,** UIT
16.	Ashok Agarwal	**Executive Engineer,** PHED, GoR.
17.	Sanjay Kumar Singh	**Executive Engineer,** PHED, GoR.
18.	K.K. Khandalwal	**AC, Devsthanam,** GoR.
19.	Pradeep K. Jha	**Team Leader,** CMSC, RSTDSP, Jaipur
20.	Manas Sharma	**Heritage Expert,** PMCBC, RSTDSP, Jaipur
21.	Sanjay Grover	**PPP Specialist,** ADB
22.	Patrik R.	**ADB**
23.	Sanjay Saxena	**Team Leader,** TA Team
24.	Urvashi Srivastava	**Heritage Expert,** TSCPL
25.	Suresh Gupta	**TA-Consultant**, ADB, TA
26.	Nirdy mangal	**TA-Consultant**, ADB, TA
27.	Umar Khan	**TA-Consultant**, ADB, TA
28.	Stephen C.	**TA-Consultant**, ADB, TA
29.	Srilatha G.	**TA-Consultant**, ADB, TA
30.	Nomaen Akhtar	**TA-Consultant**, ADB, TA
31.	KOU SEAM MUM	**TA-Consultant**, ADB, TA

32.	HONG, NAHI	**TA-Consultant**, ADB, TA
33.	SEO HAN LIM	**TA-Consultant**, ADB, TA
34.	Deepa Kumari	**Assistant Engineer**, MCB
35.	Meena	**Assistant Engineer**, MCB
36.	Kodi Venkatesan	**Chief Manager**, BESL
37.	Aakash Saxena	**COO**, BESL
38.	Shatyabhanu	**Director**, Dhara Consultants
39.	Devendra Singh	**Assistant Engineer**, Water Resources Department, GoR.
40.	Radheshyam Gurjar	**Assistant Engineer**, Municipal Corporation, Bharatpur.
41.	Lokendra Jain	**Assistant Engineer**, Local Self Governance , GoR.
42.	Vicky Projapat	**Project Manager,** Green city Surveyors, Pvt. Ltd.

Attendance Sheet –Meeting Hall, Collectorate, Bharatpur (11.10.2022)

S.No	Name	Designation	Department	E-mail	Mobile	Signature
1	Alok Ranjan	District Collector				
2	Dr Subhash Garg	MLA				
3	Abhijeet Kumar	Mayor				
4						
5						
6						
7	Nawon Kim	Team leader	ADB	nawonkim@adb.org	+639999991583	
8.	Bhavesh Kumar	Sr. Project officer (Urban)	ADB.	bkumar@adb.org.	+91 8800729004	
9.	Sanjay Grover	Sr. PPP Specialist	ADB	sgrover@adb.org	+63[illegible]5041	
10	Patrick Rene	Director's Advisor	ADB	prene@adb.org	+6[illegible]	

S.No	Name	Designation	Department	E-mail	Mobile	Signature
11	SANJAY SAXENA	TEAM LEADER TA TEAM	ADB TA	Sanjay@tscpl.com	9811083474	
12	URVASHI SRIVASTAVA	HERITAGE EXPERT TSCPL	ADB TA	SREURVASHI@YAHOO.com	9871973126	
13	Sharad Gupta	TA Consultant	ADBTA		9419652063	
14	Umar khan	TA – Infrastructure Consultant	ADBTA	umar_jk@yahoo.com	8527605222	
15	Stephen Cairns	TA consultant	FCL/ETHZ	cairns@arch.ethz.ch	96340467	
16	Srilalitha G.	TA-Consultant	FCL/ETHZ	srilalitha.gopalakrishnan@sec.ethz.ch		
17	Niraly Mangal	TA-Consultant	FCL/ETHZ	niraly.mangal@sec.ethz.ch		
18	Nomaan Akhtar	TA-Consultant	ADBTA	nomaan@tscpl.com	8128558087	
19	KOH, SEAH BUM	TA-Consultant	Hau-A	zedikoh@hau-a.co.kr	+82-10-7[illegible]	
20	HONG, NA HI	TA-Consultant	Hau-A	nahong@hau-a.co.kr	+82-10-[illegible]	

S.No	Name	Designation	Department	E-mail	Mobile	Signature
31	KAPIL GUPTA	SE	RUIDP, Jaipur	Kapil73gupta@gmail.com	9414262943	
32	M. C. PANWAR	SE	RUIDP PMC	mc panwar@gmail.com	09413813736	
33.	Neeraj Tripathi	Superintending Archaeologist Bharatpur Division	Archaeology Dept.	Supdtarchbharatpur@gmail.com	9887722199	
34	Dr. ARVIND VIJAY	SE,	PHED	arvindvijay@gmail.com	9414922172	
35	Vinod Kr Chauhan	SE	MCB	Vinodchauhan25@gmail.com	9414307870	
36.	O. P. KHAD	EE	PWD	opkhadi571@gmail.com	9414014868	
37.	Satyabhanu Angirish	Director	Dhara Eng Consultants Pvt Ltd	dhaaraassociates@gmail.com	7727096633	
38	D. P. Sharma	EE	UIT	uitbharatpur@gmail.com	8209995497	
39	vicky prajapat	P.M	Greencity Surveyors Pvt. Ltd	greencityconsultants.jaipur@gmail.com	7742420043 9314165000	
40	Ashok Agarwal	EE & TA to SE	PHED	akagrawal.003@gmail.com	9414930247	

S.No	Name	Designation	Department	E-mail	Mobile	Signature
21	SEO, HAN LIM	TA – consultant	HAN-A	hlseo@han-a.co.kr	+82 10 1523 5548	
22.	mohan lal meena	DTP	Town Planning		9460619641	
23.	Ravi Rai Verma	STP (Project)	Town Planning	ravirai.verma@yahoo.com	8764115291	
24.	K. K. Khandelwal	AE Development	Development		8094735980	
25.	Deepa Kumawat	AEN	Nagar Nigam		7737483717	
26	Meena Seema Ramhari	AEN	Nagar Nigam	meena.seema12@gmail.com	9716624825	
27	KODI. VENKATESAN	Chief Manager	BESL	kodi.venkatesan@rpsg.in	9116107313	
28	AAKASH SAXENA	COO	BESL	aakash.saxena@rpsg.in	7412060128	
29	MANAS SHARMA	HERITAGE EXPERT	PMC BC (RUIDP)	manas.sharma09@gmail.com	9828384088	
30	PRADEEP KUMAR JHA	Team Leader CMSC-01, RUIDP	CMSC-01 RUIDP	pradeep.kumar.jha@rkdkv.com	9910188505	

S.No	Name	Designation	Department	E-mail	Mobile	Signature
41.	Sanjay Kumar Singh	XEn (CML)	PHED Region Bharatpur		6375243191	
42.	Devendra Singh	A.En (M)	WRD Bharatpur		9887529715	
43.	Radheshyam Gurjar	AEn.	Nagar Nigam Bharatpur		9079773212	
44	Lokendra Jain	AEN	DDR (LSG) B'PUR		9414441535	
45	Mudassar Ali	CA, ASI.,	ASI, Bharatpur	cabh.asi@gmail.com	9410830786	

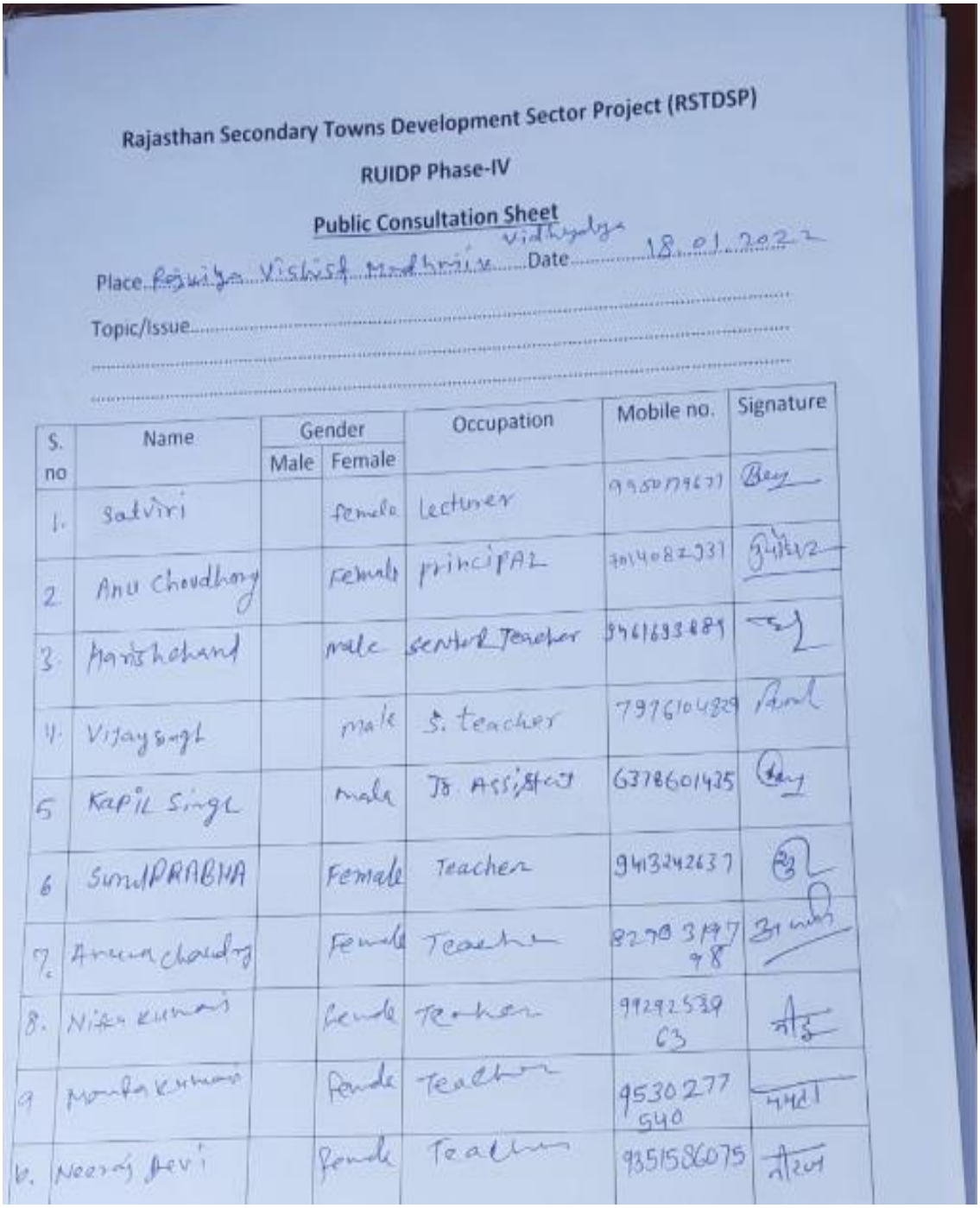
Consultations conducted in January 2023. ADB officials, consultants and PMU and PIU teams also interacted with Nagar Nigam officials and local public and their feedback about proposed works was taken during site visit to project component locations on 18th and 19th January, 2023. During interaction with school officials near town hall, it was informed by school teachers that sanitation condition and drinking water system of the school needs to be improved. The existing facilities is not enough to meet out with present strength of school children's and teachers.

Town Hall-Interaction with care taker

Indira Park

School- Government Special Primary Montessori school, Kila Bharatpur

Saligram Kund



Rajasthan Secondary Towns Development Sector Project (RSTDSP)

RUIDP Phase-IV

Public Consultation Sheet

Place Rajkiya Vishisht Madhyamik Vidhyalaya Date 18.01.2022

Topic/Issue .....

S. no	Name	Gender		Occupation	Mobile no.	Signature
		Male	Female			
1.	Satviri		female	Lecturer	9950179671	
2.	Anu Choudhary		female	principal	7014082931	
3.	Mahesh Anand		male	Senior Teacher	9461693689	
4.	Vijay Singh		male	S. teacher	7976104329	
5	Kapil Singh		male	Jr Assistant	6378601425	
6	SunilPRABHA		Female	Teacher	9413242637	
7.	Aruna Chaudhary		Female	Teacher	8290 3197 98	
8.	Nitin Kumari		female	Teacher	9929253963	
9	Monika Kumari		female	Teacher	9530277540	
10.	Neeraj Devi		female	Teacher	9351586075	

Stakeholder consultation was held on 18th January 2023 in the meeting hall of Nagar Nigam Bharatpur and proposed sewerage and beautification works were discussed in detail. Nigam *parshad*/ or ward councillors suggested that there are so many historical sites in Bharatpur and their renovation is also required. Mayor, Nagar Nigam informed that we will take up these issues with higher authorities and will request to consider under AMRUT scheme.

Stakeholder consultation-Nagar Nigam Conference hall-18.01.23

RUIDP

Office of The Superintending Engineer,
External Aided project (RUIDP)
Rajasthan Urban Drinking Water Sewerage and
Infrastructure Corporation Ltd. PIU-Bharatpur

Address: House No. 246 Ram Vatika Rajendra Nagar Bharatpur (Rajasthan) E-mail: Bharatpur.ruidp@rajasthan.gov.in

RUIDP/PMU Ph-IV/BHR/2022-23/ Date:

Town Level Consultation Bharatpur City Beautification and also Bharatpur Sanitation components with officials of Asian Development Bank (ADB) and RUIDP, Jaipur a meeting is scheduled to be held on ***18 January 2023 at 03:30 PM*** in Nagar Nigam Meeting hall, Bharatpur

Attendance Sheet

S.N.	Name	Designation	Department	Mob. No	Signature
1					
2					
3		SE RUIDP PIU Bharatpur	RUIDP	8619613736	
4		Ex. En	Nagar Nigam		
5	Deepak Agrawal	Councillor	Nagar Nigam	9414223453	
6	Shailesh Parashar	— " —	— " —	9414025830	
7		Nagar Nigam Parishad	Nagar Nigam	9414268472	
8	Bhaskar Sharma	Councillor	Nagar Nigam	8385934785	
9				9001858796	
10			Nagar Nigam	9414303745	
11				6375093861	
12				9782743073	

RUIDP

Office of The Superintending Engineer,
External Aided project (RUIDP)
Rajasthan Urban Drinking Water Sewerage and
Infrastructure Corporation Ltd. PIU-Bharatpur

Address House No. 246 Ram Vatika Rajendra Nagar Bharatpur (Rajasthan)

S.N.	Name	Designation	Department	Mob. No	Signature
13					
14					
15					
16					
17					
18		GIS Consult			
19		GIS consult			
20	Ayan Alikhan	GIS Con			
21					
22	Mudassar Ali	ASI, Bharatpur fort, DAP	ASI		
23					
24					
25	T. D. Singh	Social Expert	PMCBC RUIDP		
26	MANAS SHARMA	HERITAGE EXPERT	PMC BC RUIDP		
27					

RUIDP

Office of The Superintending Engineer,
External Aided project (RUIDP)
Rajasthan Urban Drinking Water Sewerage and
Infrastructure Corporation Ltd. PIU-Bharatpur

Address House No. 246 Ram Vatika Rajendra Nagar Bharatpur (Rajasthan)

S.N.	Name	Designation	Department	Mob. No	Signature
28	[illegible]	M.E. CMM RUIDP Jaipur	RUIDP, JPR	9314139811	
29	Vandan Srivastava	Environmental Safeguard, Professional	CSMC09 RUIDP	9410083379	
30	PRADEEP K JHA	TEAM LEADER CMSC-01 RUIDP	CMSC-01 RUIDP	9910188505	
31	[illegible]	SO Social PMU	PMU RUIDP	[illegible]	
32	Govind Singh Rathore	Safeguard consultant Environment, ADB	ADB	9560967[illegible]	
33	Seema Ghosh	Social Safeguards Consultant, ADB	ADB		
34	[illegible]			7742164[illegible]	
35	[illegible]			[illegible]	
36	[illegible]	[illegible]	[illegible]	7665111333	
37	[illegible]	[illegible]	[illegible]	9462056987	
38	[illegible]	[illegible]	[illegible]	9413834[illegible]	
39	[illegible]	[illegible]	[illegible]	[illegible]	
40	Mohmmad [illegible]	Manager	MTS JAIPUR	9461823[illegible]	
41	Satyabhamy Angirash	Director Dhara Eng consultants P Ltd	Dhara Eng Consultants Pvt Ltd	7727096[illegible]	
42	Ashish Kumar Nagar	J.E.	Nagar Nigam Bharatpur	974[illegible]222	

2. **Stakeholders Consultations in CLC:**

City level Stakeholder Committee (CLC) Meeting (dtd. 29.07.2021)- City stakeholder committee meeting was organized for Bharatpur in District Head Quarter, Bharatpur on 29.07.2021 to discuss the matter of proposed Conservation & Development of Heritage Sitessubproject in Bharatpur under the chairmanship of District Collector, Bharatpur , in presence of, DPR consultants, RUDSICO-EAP officials, PHED officials, Municipal Council officials, UIT officials, PWD and other invitee members. Proposed scope of works and probable outcomes were discussed in the meeting and it was decided that the subproject Conservation & Development of Heritage Sites shall be taken up for implementation. Minutes of CLC meeting are given below-

Minutes of CLC meeting with Outcomes

RUIDP

राजस्थानसरकार
कार्यालय अधिशाषीअभियंता
राजस्थान शहरीआधारभूतविकासपरियोजना (आरयूआईडीपी)
तृतीय चरण (फेज-III) प्रोग्रामलोन, पी.आई.यू.-सवाईमाधोपुर
3,इन्द्राकॉलोनी, सवाईमाधोपुर- 322001,दूरभाष07462-297122 ईमेल: swm.ruidp@rajasthan.gov.in

क्रमांकः— RUIDP/PIU/SWM/PH-IV/2021-22/927 दिनांकः— 25/10/21

सिटी लेवल कमेटी दिनांक 20.10.2021 आर0यू0आई0डी0पी0, के चतुर्थ चरण के अन्तर्गत भरतपुर शहर के सौन्दीकरण के कार्य की बैठक कार्यवाही विवरण :-

अधिशाषी अभियन्ता एवं सदस्य सचिव आर.यू.आई.डी.पी. सवाईमाधोपुर के पत्रांक 903–918 दिनांक 18.10.2021 की अनुपालना में दिनांक 20.10.2021 समय 11.00 बजे श्रीमान जिला कलक्टर महोदय की अध्यक्षता में भरतपुर शहर का शहरी सौन्दर्यीकरण कार्य आर.यू.आई.डी.पी. की एशियन विकास बैंक की वित पोषित योजना चतुर्थ चरण के अन्तर्गत प्रस्तावित योजना की क्रियान्विती के सम्बन्ध में सिटी लेवल कमेटी की बैठक आयोजित की गई। जिसमें निम्नलिखित सदस्यों ने भाग लिया। सूची संलग्न है।

भरतपुर शहर के लिए एशियन विकास बैंक की वित पोषित योजना चतुर्थ चरण के अन्तर्गत प्रस्तावित योजना में भरतपुर शहर के सौन्दीकरण के लिये 25.00 करोड़ रूपये का प्रावधान रखा गया। जिसकी डी.पी.आर. बनाने के लिये नगर निगम भरतपुर द्वारा मैसर्स धारा इन्जिनियरिंग प्रा0 लि0, जयपुर को कार्य सौंपा गया। सलाहकार द्वारा भरतपुर शहर के सौन्दीकरण के लिये प्रस्ताव बनाये गये।

1. हीरादास कुण्ड	2. सालिग्राम कुण्ड
3. सेवर पोखर	4. इन्दिरा गाँधी पार्क
5. नेहरू पार्क	6.संरक्षित गेट
7. फोर्ट वॉल	8.स्टेशन रोड
9. बृजेन्द्र विहारी कुण्डा	10. लक्ष्मण मंदिर
11.मालीपुरा के पास पार्क	12. बस स्टेण्ड
13. सुजान गंगा	14. आर.बी.एम. हॉस्पीटल

बैठक में माननीय मेयर महोदय, नगर निगम, भरतपुर द्वारा इस सम्बन्ध में विस्तृत चर्चा की गई। तत्पश्चात् सीएलसी के सदस्यों द्वारा उसका सर्वसम्मति से अनुमोदन किया गया तथा आरयूआईडीपी को उपरोक्त कार्य की शीघ्र निविदा आमंत्रित करने के निर्देश दिये गये। बैठक के अन्त में आर0यू0आई0डी0पी0 के अधिशाषी अभियंता श्री नरेन्द्र प्रसाद वर्मा ने बैठक में उपस्थित समस्त अधिकारियों/जनप्रतिनिधियों का आभार व्यक्त किया तदपश्चात् बैठक सधन्यवाद समाप्त हुई।

संलग्नः—उपरोक्तानुसार

25/10/21
अधिशाषी अभियन्ता एवं
सदस्य सचिव
आर.यू.आई.डी.पी.
सवाई माधोपुर

क्रमांकः– 928–943 दिनांकः– 25/10/21

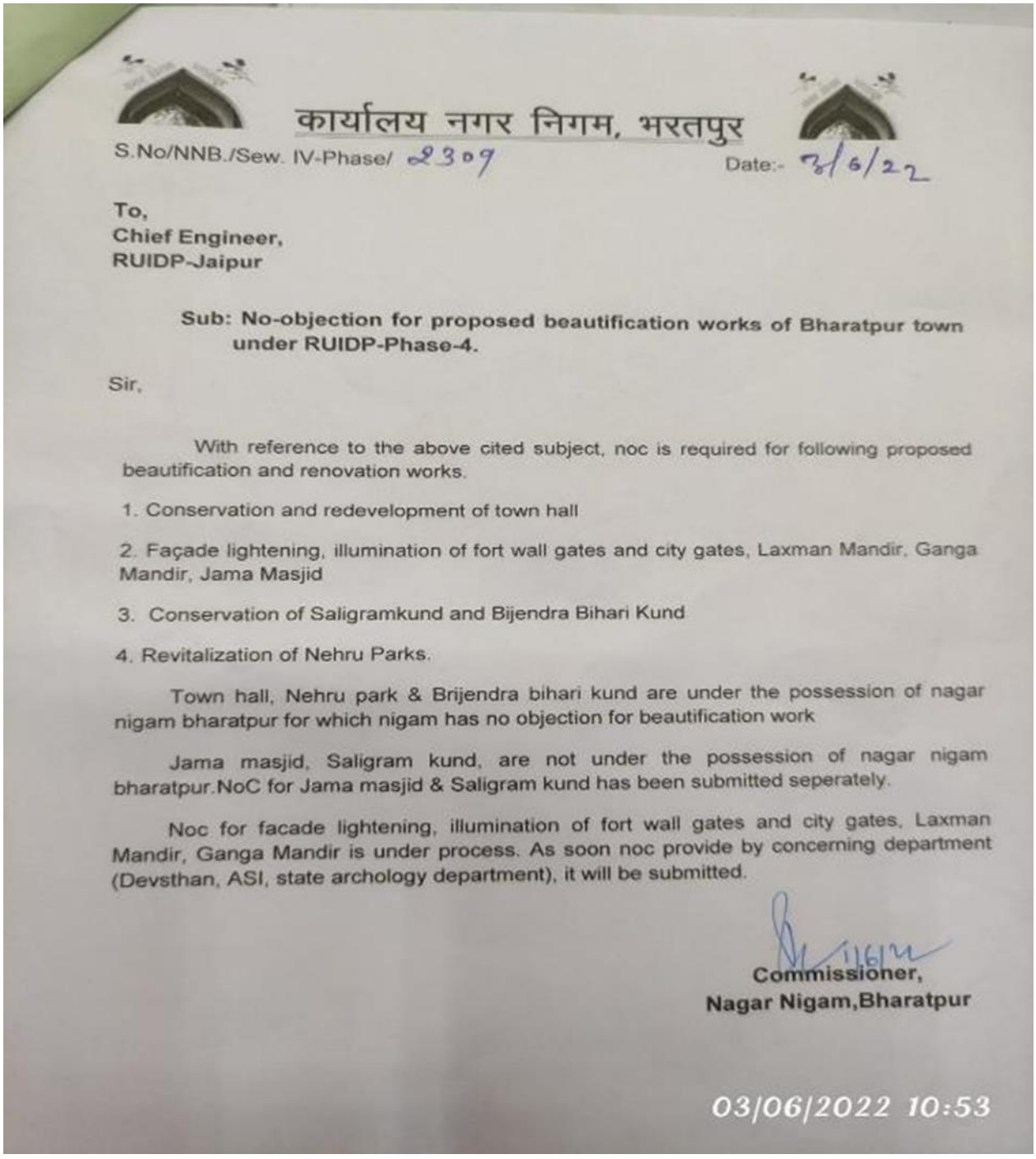
प्रतिलिपिः–

1. निजी सहायक परियोजना निदेशक, आरयूआईडीपी, जयपुर।
2. निजी सहायक जिला कलक्टर महोदय भरतपुर।
3. निजी सहायक सांसद महोदय लोकसभा क्षेत्र, भरतपुर।
4. निजी सहायक विधायक महोदय विधानसभा क्षेत्र, भरतपुर।
5. निजी सहायक महापौर महोदय नगर निगम, भरतपुर।
6. निजी सहायक उप महापौर महोदय नगर निगम, भरतपुर।
7. श्रीमान अध्यक्ष/सचिव नगर विकास न्यास, भरतपुर।
8. अति0 मुख्य अभियन्ता पी.एच.ई.डी.।
9. अति0 मुख्य अभियन्ता पी.डब्ल्यू.डी.।
10. अति0 मुख्य अभियंता, आरयूआईडीपी जोन, जयपुर।
11. आयुक्त नगर निगम, भरतपुर।
12. अधिशाषी अभियंता, नगर निगम, भरतपुर।
13. अधिशाषी अभियंता, नगर विकास न्यास, भरतपुर।
14. उप नगर नियोजक भरतपुर।
15. मुख्य कार्यकारी अधिकारी ल्यूपिन भरतपुर।
16. मैसर्स धारा इन्जिनियरिंग प्रा0 लि0, जयपुर,।

25/10/21

अधिशाषी अभियन्ता एवं
सदस्य सचिव
आर.यू.आई.डी.पी.
सवाई माधोपुर

Appendix 4: NOC of all proposed sites of Nagar Nigam



कार्यालय नगर निगम, भरतपुर

S.No/NNB./Sew. IV-Phase/ 2309 Date:- 7/6/22

To,
Chief Engineer,
RUIDP-Jaipur

Sub: No-objection for proposed beautification works of Bharatpur town under RUIDP-Phase-4.

Sir,

With reference to the above cited subject, noc is required for following proposed beautification and renovation works.

1. Conservation and redevelopment of town hall
2. Façade lightening, illumination of fort wall gates and city gates, Laxman Mandir, Ganga Mandir, Jama Masjid
3. Conservation of Saligramkund and Bijendra Bihari Kund
4. Revitalization of Nehru Parks.

Town hall, Nehru park & Brijendra bihari kund are under the possession of nagar nigam bharatpur for which nigam has no objection for beautification work

Jama masjid, Saligram kund, are not under the possession of nagar nigam bharatpur.NoC for Jama masjid & Saligram kund has been submitted seperately.

Noc for facade lightening, illumination of fort wall gates and city gates, Laxman Mandir, Ganga Mandir is under process. As soon noc provide by concerning department (Devsthan, ASI, state archology department), it will be submitted.

Commissioner,
Nagar Nigam,Bharatpur

03/06/2022 10:53

Appendix 5: NOC of Jama Masque for proposed lighting works of Jama Masque

आयुक्त
नगर परिषद्, भरतपुर
राजस्थान।

विषयः— NOC for RUIDP के चतुर्थ चरण में जामा मस्जिद के सौन्दर्यकरण के कार्य।

मान्यवर,

आरयूआईडीपी के चतुर्थ चरण में जामा मस्जिद के आस–पास सौन्दर्यकरण का कार्य प्रस्तावित है। इस प्रस्तावित कार्य से जामा मस्जिद समिति के सदस्यों को कोई भी आपत्ति नही है।

जामा मस्जिद समिति सदस्य
पताः— भरतपुर, राजस्थान

To,
Commissioner,
Nagar Nigam, Bhartpur

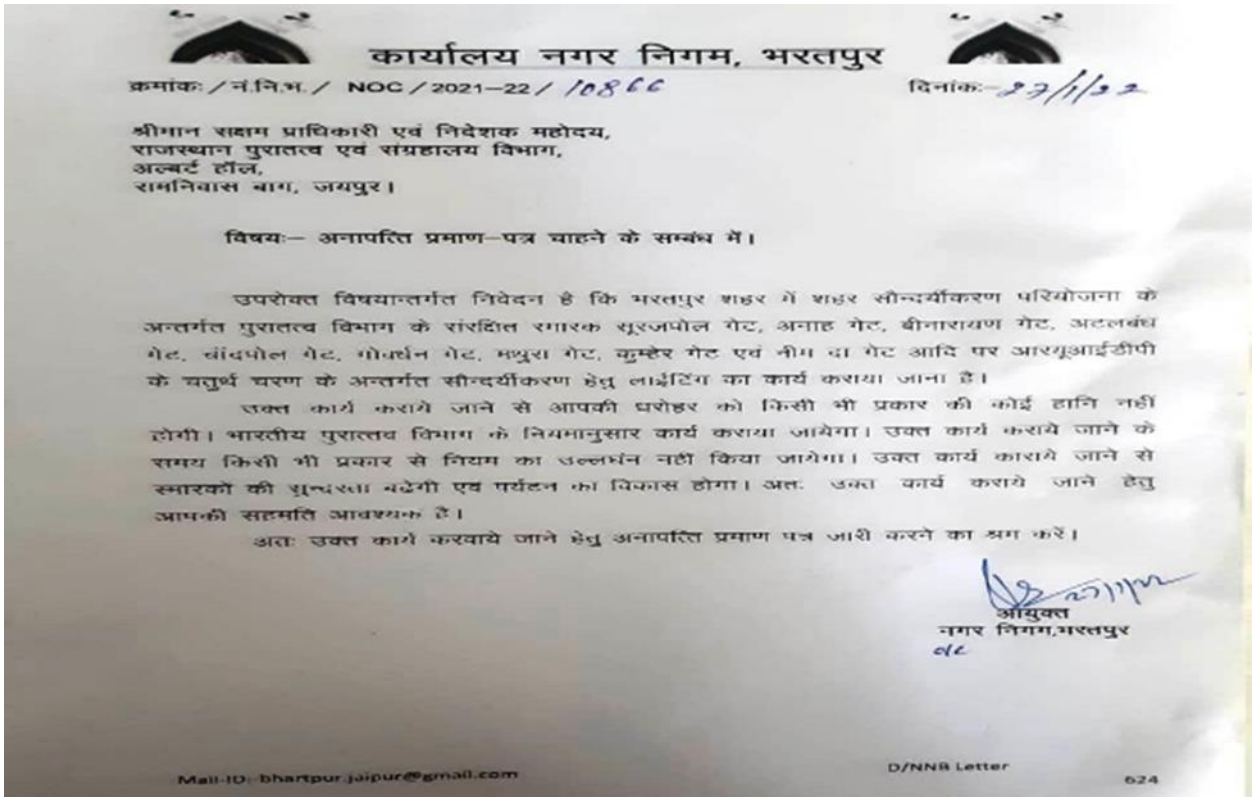
Subject: NOC for Beautification work of Jama Mosque for RUIDP Phase-IV.

Sir,

It has been proposed beautification work near to Jama Mosque for RUIPDP Phase-IV. For this proposed work Member committee of Jama Mosque has not have any objection.

Jama Mosque Committee Member
Bhartpur, Rajasthan

Appendix 6: Letter of Nagar Nigam to Department of Archaeological and Museum Rajasthan for provide NoC for proposed works of city gates.



कार्यालय नगर निगम, भरतपुर

क्रमांकः / नं.नि.भ. / NOC / 2021–22 / 10866 दिनांकः 23/11/22

श्रीमान सदाम प्राधिकारी एवं निदेशक महोदय,
राजस्थान पुरातत्व एवं संग्रहालय विभाग,
अल्बर्ट हॉल,
रामनिवास बाग, जयपुर।

विषयः— अनापत्ति प्रमाण–पत्र चाहने के सम्बंध में।

उपरोक्त विषयान्तर्गत निवेदन है कि भरतपुर शहर में शहर सौन्दर्यीकरण परियोजना के अन्तर्गत पुरातत्व विभाग के संरक्षित स्मारक सूरजपोल गेट, अनाह गेट, बीनारायण गेट, अटलबंध गेट, चांदपोल गेट, गोवर्धन गेट, मथुरा गेट, कुम्हेर गेट एवं नीम का गेट आदि पर आरयूआईडीपी के चतुर्थ चरण के अन्तर्गत सौन्दर्यीकरण हेतु लाईटिंग का कार्य कराया जाना है।

उक्त कार्य कराये जाने से आपकी धरोहर को किसी भी प्रकार की कोई हानि नहीं होगी। भारतीय पुरातत्व विभाग के नियमानुसार कार्य कराया जायेगा। उक्त कार्य कराये जाने के समय किसी भी प्रकार से नियम का उल्लंघन नहीं किया जायेगा। उक्त कार्य कराये जाने से स्मारकों की सुन्दरता बढ़ेगी एवं पर्यटन का विकास होगा। अतः उक्त कार्य कराये जाने हेतु आपकी सहमति आवश्यक है।

अतः उक्त कार्य करवाये जाने हेतु अनापत्ति प्रमाण पत्र जारी करने का श्रम करें।

आयुक्त
नगर निगम,भरतपुर

Mail-ID: bhartpur.jaipur@gmail.com D/NNB Letter 624

To Director,
Department of Archaeological and Museum Rajasthan,Albert Hall,Ramniwas Baag-Jaipur
Sub: No-objection for proposed lighting works of city gates at Bharatpur

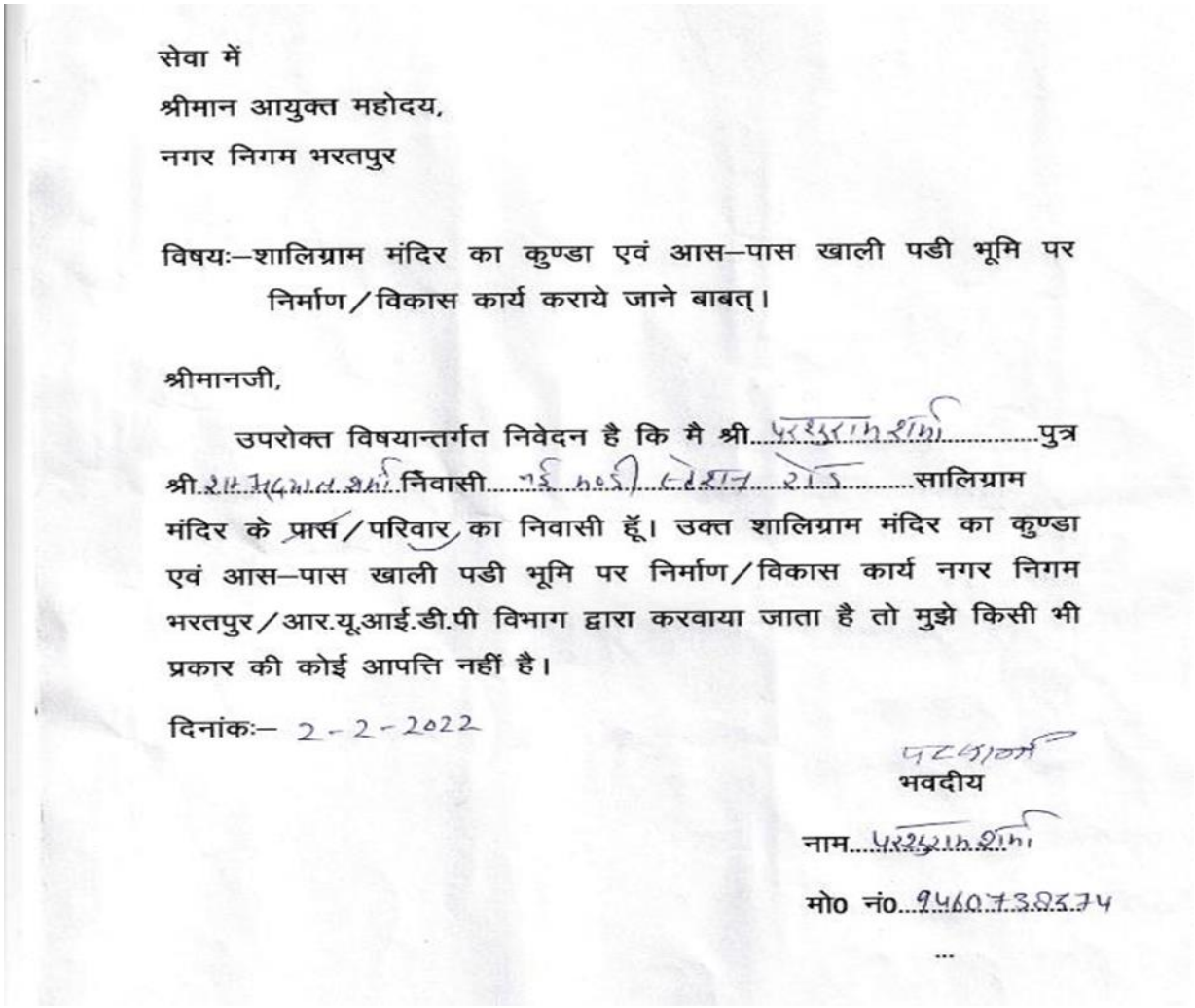
Dear Sir,

With the above cited subject, this is informing you that under beatification works of Bharatpur town, lighting arrangements are considered for city gates(Surjapole gate, Naah Gate, Binarayan gate, Atalbandh gate, Chandipole gate, Goverdhan gate, Mathura gate, Kumher gate etc).During works ,no loss will be anticipated and works will be executed as per guidelines of Archaeological and Museum Rajasthan.

Please provide no-objection for the proposed lighting works of above gates.

Commissioner, Nagar Nigam-Bharatpur

Appendix 7: No-objection of family members of Temple Murty Srisaligramji maharaj For proposed redevelopment of Saligram Kund



सेवा में
श्रीमान आयुक्त महोदय,
नगर निगम भरतपुर

विषयः—शालिग्राम मंदिर का कुण्डा एवं आस—पास खाली पडी भूमि पर निर्माण/विकास कार्य कराये जाने बाबत्।

श्रीमानजी,

उपरोक्त विषयान्तर्गत निवेदन है कि मै श्री परसुराम शर्मा पुत्र श्री रामदयाल शर्मा निवासी नई मंडी स्टेशन रोड सालिग्राम मंदिर के प्रास/परिवार का निवासी हूँ। उक्त शालिग्राम मंदिर का कुण्डा एवं आस—पास खाली पडी भूमि पर निर्माण/विकास कार्य नगर निगम भरतपुर/आर.यू.आई.डी.पी विभाग द्वारा करवाया जाता है तो मुझे किसी भी प्रकार की कोई आपत्ति नहीं है।

दिनांकः— 2-2-2022

भवदीय
नाम परसुराम शर्मा
मो० नं० 9460738574

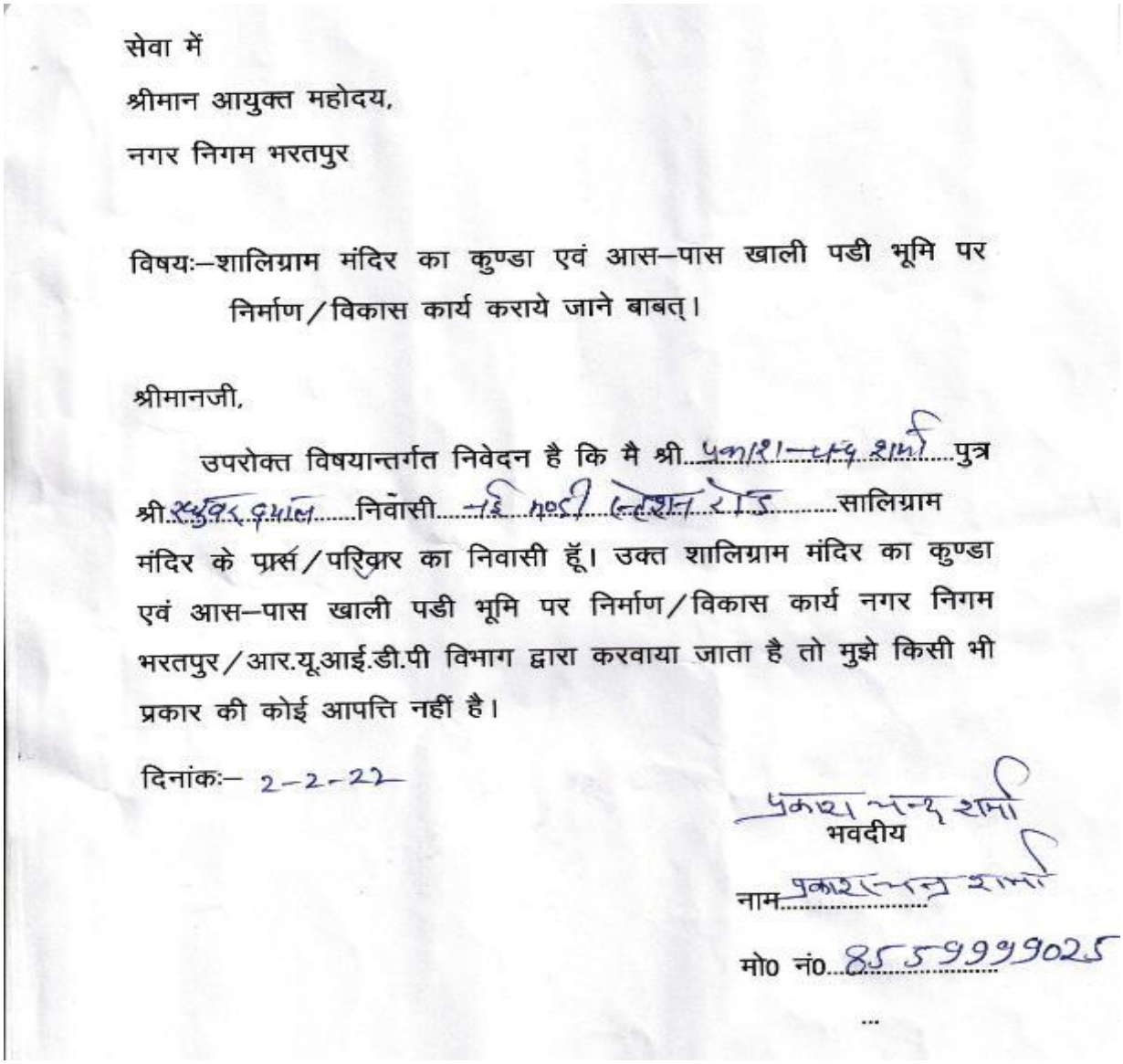
To,
Commissioner-Nagar Nigam-Bharatpur

Sub: Regarding construction and renovation of surrounding areas of Saligram Temple

Sir,

With the above cited subject,I Parsuram Sharma s/o Ramdayal Sharma,resident of New Mandi,Station road is hereby allowing to Nagar Nigam Bharatpur for proposed redevelopment works of Saligram kund.I have no objection.

Parsuram Sharma



सेवा में

श्रीमान आयुक्त महोदय,

नगर निगम भरतपुर

विषयः–शालिग्राम मंदिर का कुण्डा एवं आस–पास खाली पडी भूमि पर निर्माण/विकास कार्य कराये जाने बाबत्।

श्रीमानजी,

उपरोक्त विषयान्तर्गत निवेदन है कि मै श्री प्रकाश चन्द्र शर्मा पुत्र श्री रघुवर दयाल निवासी नई मण्डी स्टेशन रोड सालिग्राम मंदिर के पार्स/परिवार का निवासी हूँ। उक्त शालिग्राम मंदिर का कुण्डा एवं आस–पास खाली पडी भूमि पर निर्माण/विकास कार्य नगर निगम भरतपुर/आर.यू.आई.डी.पी विभाग द्वारा करवाया जाता है तो मुझे किसी भी प्रकार की कोई आपत्ति नहीं है।

दिनांकः– 2-2-22

प्रकाश चन्द्र शर्मा
भवदीय

नाम प्रकाशचन्द्र शर्मा

मो0 नं0 8559999025

To,
Commissioner-Nagar Nigam-Bharatpur

Sub: Regarding construction and renovation of surrounding areas of Saligram Temple

Sir,

With the above cited subject,I Prakashchandra Sharma s/o Raghuvar Das ,resident of New Mandi,Station road is hereby allowing to Nagar Nigam Bharatpur for proposed redevelopment works of Saligram kund.I have no objection

Prakash Chandra Sharma

Appendix 8: IBAT Report of Bharatpur

IBAT

Integrated Biodiversity Assessment Tool

PROXIMITY REPORT
FORT WALLS

Country: India

Location: [27.2, 77.5]

Date of analysis: 06 July 2022 (GMT)

Buffers applied: 3 km | 10 km | 50 km

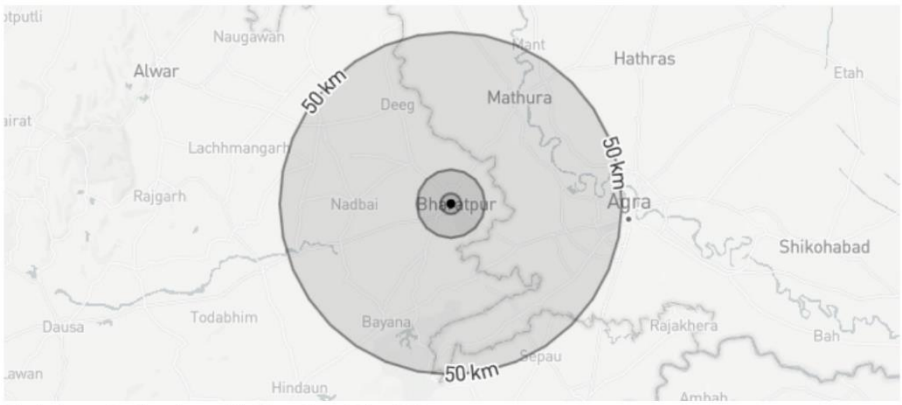
IUCN Red List Biomes: Freshwater, Terrestrial

Generated by: Noime Walican

Organisation: ADB

Overlaps with:

Protected Areas	2
Key Biodiversity Areas	2
IUCN Red List	49



Displaying project location and buffers: 3 km, 10 km, 50 km

About this report

This report presents the results of [6274-32341] proximity analysis to identify the biodiversity features and species which are located within the following buffers: 3 km, 10 km, 50 km.

This report is one part of a package generated by IBAT on 06 July 2022 (GMT) that includes full list of all species, protected areas, Key Biodiversity Areas in CSV format, maps showing the area of interest in relation to these features, and a 'How to read IBAT reports' document.

WARNING: IBAT aims to provide the most up-to-date and accurate information available at the time of analysis. There is however a possibility of incomplete, incorrect or out-of-date information. All findings in this report must be supported by further desktop review, consultation with experts and/or on-the-ground field assessment. Please consult IBAT for any additional disclaimers or recommendations applicable to the information used to generate this report.

Please note, sensitive species data are currently not included in IBAT reports in line with the Sensitive Data Access Restrictions Policy for the IUCN Red List. This relates to sensitive Threatened species and KBAs triggered by sensitive species.

Data used to generate this report

- UNEP-WCMC and IUCN, 2022. Protected Planet: The World Database on Protected Areas (WDPA)[On-line], Cambridge, UK: UNEP-WCMC and IUCN. Available at: www.protectedplanet.net - July 2022.
- BirdLife International (on behalf of the KBA Partnership), 2022. Key Biodiversity Areas - April 2022.
- IUCN, 2021. IUCN Red List of Threatened Species - December 2021.
- IUCN. The IUCN Red List of Threatened Species. Version 2019-3. (2019). https://www.iucnredlist.org
- IUCN. Threats Classification Scheme (Version 3.2). (2019)
- Strassburg, B.B.N., Iribarrem, A., Beyer, H.L. et al. Global priority areas for ecosystem restoration. Nature 586, 724–729 (2020). https://doi.org/10.1038/s41586-020-2784-9

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Protected Areas

The following protected areas are found within 3 km, 10 km, 50 km of the area of interest.
For further details please refer to the associated csv file in the report folder.

Area name	Within buffer of
Keoladeo National Park	3 km
Keoladeo National Park	3 km

Key Biodiversity Areas

The following key biodiversity areas are found within 3 km, 10 km, 50 km of the area of interest.
For further details please refer to the associated csv file in the report folder.

Area name	Distance
Keoladeo National Park and Ajan Bande	3 km
Sur Sarovar Bird Sanctuary	50 km

IUCN Red List of Threatened Species

The following threatened species are potentially found within 50km of the area of interest.

For the full IUCN Red List please refer to the associated csv in the report folder.

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Batagur kachuga	Red-crowned Roofed Turtle	REPTILIA	CR	Decreasing	Terrestrial, Freshwater
Batagur dhongoka	Three-striped Roofed Turtle	REPTILIA	CR	Decreasing	Terrestrial, Freshwater

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Leucogeranus leucogeranus	Siberian Crane	AVES	CR	Decreasing	Terrestrial, Freshwater
Ardeotis nigriceps	Great Indian Bustard	AVES	CR	Decreasing	Terrestrial
Sypheotides indicus	Lesser Florican	AVES	CR	Decreasing	Terrestrial
Vanellus gregarius	Sociable Lapwing	AVES	CR	Decreasing	Terrestrial
Gyps bengalensis	White-rumped Vulture	AVES	CR	Decreasing	Terrestrial
Sarcogyps calvus	Red-headed Vulture	AVES	CR	Decreasing	Terrestrial
Gyps tenuirostris	Slender-billed Vulture	AVES	CR	Decreasing	Terrestrial
Gyps indicus	Indian Vulture	AVES	CR	Decreasing	Terrestrial
Geoclemys hamiltonii	Spotted Pond Turtle	REPTILIA	EN	Decreasing	Terrestrial, Freshwater
Hardella thurjii	Crowned River Turtle	REPTILIA	EN	Decreasing	Terrestrial, Freshwater
Nilssonia gangetica	Indian Softshell Turtle	REPTILIA	EN	Decreasing	Terrestrial, Freshwater
Nilssonia hurum	Indian Peacock Softshell Turtle	REPTILIA	EN	Decreasing	Terrestrial, Freshwater
Oxyura leucocephala	White-headed Duck	AVES	EN	Decreasing	Terrestrial, Freshwater

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Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Rynchops albicollis	Indian Skimmer	AVES	EN	Decreasing	Terrestrial, Freshwater
Sterna acuticauda	Black-bellied Tern	AVES	EN	Decreasing	Terrestrial, Freshwater
Haliaeetus leucoryphus	Pallas's Fish-eagle	AVES	EN	Decreasing	Terrestrial, Freshwater
Neophron percnopterus	Egyptian Vulture	AVES	EN	Decreasing	Terrestrial, Freshwater
Falco cherrug	Saker Falcon	AVES	EN	Decreasing	Terrestrial, Marine, Freshwater
Leptoptilos dubius	Greater Adjutant	AVES	EN	Decreasing	Terrestrial, Freshwater
Manis crassicaudata	Indian Pangolin	MAMMALIA	EN	Decreasing	Terrestrial
Varanus flavescens	Yellow Monitor	REPTILIA	EN	Decreasing	Terrestrial
Aquila nipalensis	Steppe Eagle	AVES	EN	Decreasing	Terrestrial
Ploceus megarhynchus	Finn's Weaver	AVES	EN	Decreasing	Terrestrial
Crocodylus palustris	Mugger	REPTILIA	VU	Stable	Terrestrial, Freshwater
Lutrogale perspicillata	Smooth-coated Otter	MAMMALIA	VU	Decreasing	Terrestrial, Marine, Freshwater
Prionailurus viverrinus	Fishing Cat	MAMMALIA	VU	Decreasing	Terrestrial, Freshwater

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Rhinoceros unicornis	Greater One-horned Rhino	MAMMALIA	VU	Increasing	Terrestrial, Freshwater
Pangshura tecta	Indian Roofed Turtle	REPTILIA	VU	Decreasing	Terrestrial, Freshwater
Wallago attu		ACTINOPTERYGII	VU	Decreasing	Freshwater
Bagarius yarrelli		ACTINOPTERYGII	VU	Decreasing	Freshwater
Marmaronetta angustirostris	Marbled Teal	AVES	VU	Decreasing	Terrestrial, Marine, Freshwater
Aythya ferina	Common Pochard	AVES	VU	Decreasing	Terrestrial, Marine, Freshwater
Columba eversmanni	Yellow-eyed Pigeon	AVES	VU	Decreasing	Terrestrial, Freshwater
Grus antigone	Sarus Crane	AVES	VU	Decreasing	Terrestrial, Freshwater
Sterna aurantia	River Tern	AVES	VU	Decreasing	Terrestrial, Marine, Freshwater
Clanga clanga	Greater Spotted Eagle	AVES	VU	Decreasing	Terrestrial, Freshwater
Aquila rapax	Tawny Eagle	AVES	VU	Decreasing	Terrestrial, Freshwater
Aquila heliaca	Eastern Imperial Eagle	AVES	VU	Decreasing	Terrestrial, Freshwater
Leptoptilos javanicus	Lesser Adjutant	AVES	VU	Decreasing	Terrestrial, Marine, Freshwater

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Lissemys punctata	Indian Flapshell Turtle	REPTILIA	VU	Decreasing	Terrestrial, Freshwater
Xenochrophis cerasogaster	Painted Keelback	REPTILIA	VU	Decreasing	Freshwater
Panthera pardus	Leopard	MAMMALIA	VU	Decreasing	Terrestrial
Tetracerus quadricornis	Four-horned Antelope	MAMMALIA	VU	Decreasing	Terrestrial
Rusa unicolor	Sambar	MAMMALIA	VU	Decreasing	Terrestrial
Saxicola macrorhynchus	White-browed Bushchat	AVES	VU	Decreasing	Terrestrial
Clanga hastata	Indian Spotted Eagle	AVES	VU	Decreasing	Terrestrial
Oryza malampuzhaensis		LILIOPSIDA	VU	Decreasing	Terrestrial

Recommended citation

IBAT Proximity Report. Generated under licence 6274-32341 from the Integrated Biodiversity Assessment Tool on 06 July 2022 (GMT). www.ibat-alliance.org

How to use this report

This report provides an indication of the potential biodiversity-related features - protected areas, key biodiversity areas and species - close to the specified location. It provides an early indication of potential biodiversity concerns, and can provide valuable guidance in making decisions. For example, this information can be helpful when assessing the potential environmental risk and impact of a site, categorising investments/projects, preparing the terms of reference for an impact assessment, focusing attention on key species of conservation concern and sites of known conservation value, and reviewing the results of an impact assessment.

The report does not provide details of potential indirect, downstream or cumulative impacts. Furthermore, the report should be regarded as a "first-step", providing a set of conservation values sourced from global data sets, and is not a substitute for further investigation and due diligence, especially concerning national and/or local conservation priorities.

Common Appendices C1 – C25 attached separately)

Appendix C-1: Drinking Water Standards
Appendix C-2: Ambient Air Quality Standards
Appendix C - 3: Emission limits for New DG sets up to 800 KW
Appendix C- 4: Stack Height Requirement of DG set
Appendix C-5: Vehicle Exhaust Emission Norms
Appendix C-6: Ambient Noise Quality Standards
Appendix C-7: Noise Limits for DG Set
Appendix C-8: Effluent Discharge Standards for Sewage Treatment Plant
Appendix C-9: Pages from Rajasthan State Sewerage and Wastewater Policy for reuse of treated effluent and sludge
Appendix C-10: Guidelines for Reuse of Treated Effluent and Sludge from STP for Beneficial Purposes
Appendix C-11: Guidelines for compensatory tree plantation in RUIDP works.
Appendix C-12: Salient Features of Laws applicable to Construction Works including Labor Laws
Appendix C-13: Sample Outline Spoil Management Plan
Appendix C-14: Sample Outline Traffic Management Plan
Appendix C- 15: Sample Six Monthly Reporting Format
Appendix C-16: Sample Environmental Site Inspection Report
Appendix C-17: Sample Grievance Registration Form
Appendix C-18: Management Plan for Night works at Project Sites
Appendix C-19: Guidelines for Safety during Monsoon/Heavy rainfall
Appendix C-20: Sample ACM Management Plan
Appendix C-21: Guidelines for Workers Camps
Appendix C-22: Guidelines for Safety in Chlorine Usage
Appendix C-23: Guidelines for Prevention and Control of COVID-19
Appendix C-24: RUDSICO-EAP Guidelines for implementation of Prevention and Control Measures for COVID-19
Appendix C-25 Management of Work Plan during festivals and fairs (melas)