



# RAJAON KI BAOLI

## MEHRAULI ARCHAEOLOGICAL PARK



### Project Details

Hon'ble Prime Minister, as part of the commemorative celebration of the 75th anniversary of our independence, envisioned protecting traditional water bodies for ensuring water security of cities by involving youth and the community. Bearing this vision in mind, the Government of India has launched '**Mission Amrit Sarovar – Jal Dharohar Sanrakshan**'



Ministry of Housing  
and Urban Affairs,  
Government of India



Ministry of Education  
Government of India



All India Council for  
Technical Education,  
New Delhi

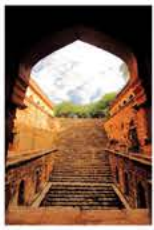


**Intern Team**  
Faculty of Architecture  
& Ekistics  
**Jamia Millia Islamia,**  
New Delhi  
[a Central University]  
[NAAC accredited **A++** Grade]

Scan QR for  
water body  
website







Steps in North side



Q4 levels at Baoli



Plaster and stucco work

#### Baolis of Delhi

The need to make water accessible to the human population has led to the construction of several wells and baolis, which became an epitome of the art and architecture of the local people. Most kings established their capitals in Delhi which has the Yamuna flowing through it and at one time it had about 100 or more baolis, of which only thirty have survived. Many were lost, while some were preserved and restored. Numerous tanks and baolis were commissioned by the ruling clans in which water was collected mainly during the rainy season and was then used throughout the year by the people in the neighbourhood. Separate baolis were constructed for drinking and bathing purposes. Baolis were often constructed close to mosques and temples. People washed and bathed before prayers. In India, baolis are mainly found in the arid north-western region due to the scarcity of water there. Some baolis were designed only for the purpose of water storage, others to provide shelter to travellers and caravans. These baolis were designed with rooms on the higher floors, with a dalan (colonnaded veranda) supported on columns. Such step-wells were also used as shaded spaces for social interaction where discussions could be held.

# राजाओं की बावली महारौली

Imperial Delhi! dowered with sovereign grace...

Thy changing Kings and Kingdoms pass away,  
The gorgeous legends of a bygone day.

- Sarojini Naidu



Women & cattle, Lodhi-era.

Painting by Marianne North, 1880

Earlier, the water in the stepwell used to rise to the third level, but over a period of **500 years**, the well got silted up and earned the name 'sookhi baoli'

2005

Desilting of the stepwell was carried out up to **6.1 metres**, following which the water level rose to **20 feet**.

2017

As per a report, "The leakage from **sewer lines/soak pits** or leakage from **DJB water supply** pipe lines or both may be locally recharging the groundwater in the area, causing its level to rise."

2020

Late 2021 witnessed **high increase in water level**, filling even the first level up to **4 feet**. This creates an alarm for a greater rise **spilling water in the campus** if not controlled

2022



1997

Conservation work started as an initiative to revive the Mehrauli Archaeological Park including the Baoli by **ASI, DDA and INTACH**.



The **desilting process** in the strata was started in **2005-06**.



2015

Water filled up the first level. Mehrauli which is usually short of groundwater suddenly showed an **increase in the level** after 2014.



2019

After the desilting, there was never a provision to use the water in the baoli leading to **stagnancy**, becoming a **breeding ground for mosquitoes and algae**.



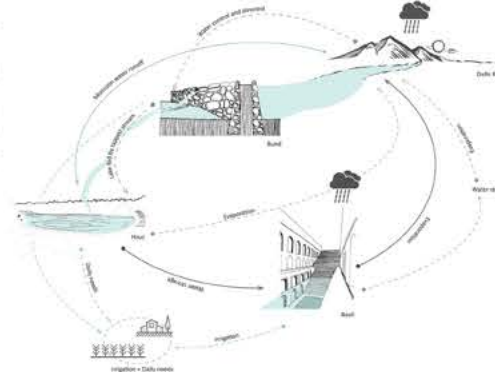
2021

In **July 2022**, the level of water reduced up to the second level due to the summer heat and lesser rain spells. An **outlet that circulates** the water and keeps it free from stagnation is vital.



1923, ASI Archives

The water level is increasing over the years as is evident from the photographs. However, the **water level fluctuates** according to the seasons. The water level increases in the **winters** to attain maximum depth in early **spring**, then decreases in the **summers** only to again rise in the **monsoon**.

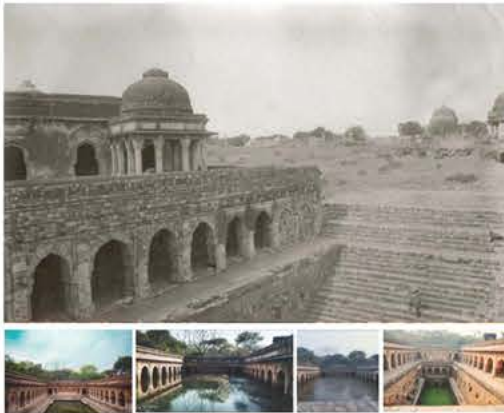


## WATER QUALITY INDEX ASSESSMENT

Mehrauli (south Delhi): A study done by Central Ground Water Board has revealed that groundwater could be contaminated with leakage from sewer lines. Tests in laboratory have found **high nitrate content** in the groundwater which comes from human faeces.



1919, ASI Archives



July 2022

March 2022

Nov 2021

Dec 2017

Dec 2020

The Baoli was built around 1516 and was used for daily household chores by the rajon (masons)

2022

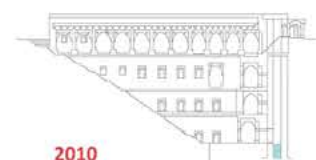


The Baoli had a religious significance because of the mosque adjacent to it.

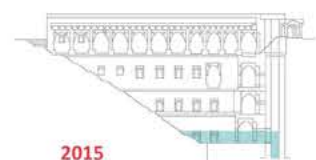
The area around Baoli was used for cattle, even today caretakers come early in the morning for the same

The travellers used to visit Rajon ki Baoli and took rest due to the rooms in archways. Today the tourists come and take rest here to save themselves from heat

1600s



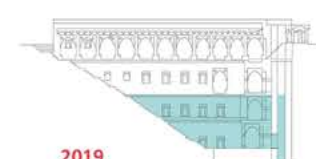
2010



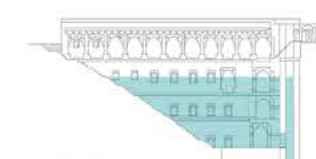
2015



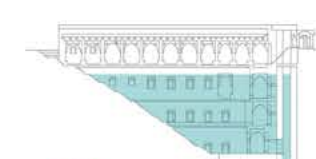
2017



2019



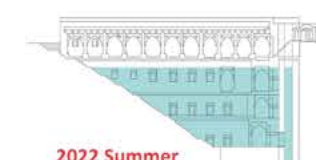
2020



2021



2022 Winter

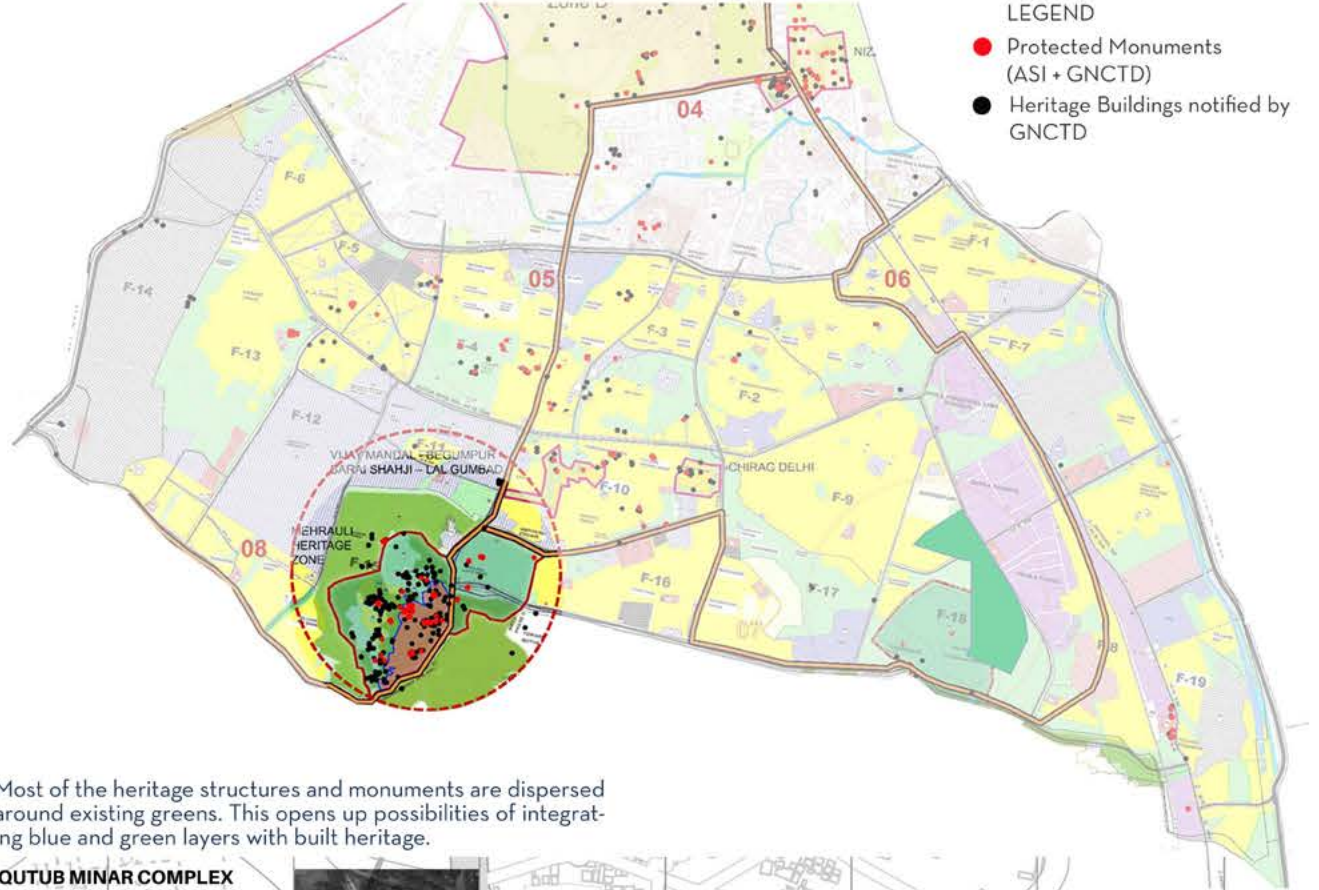
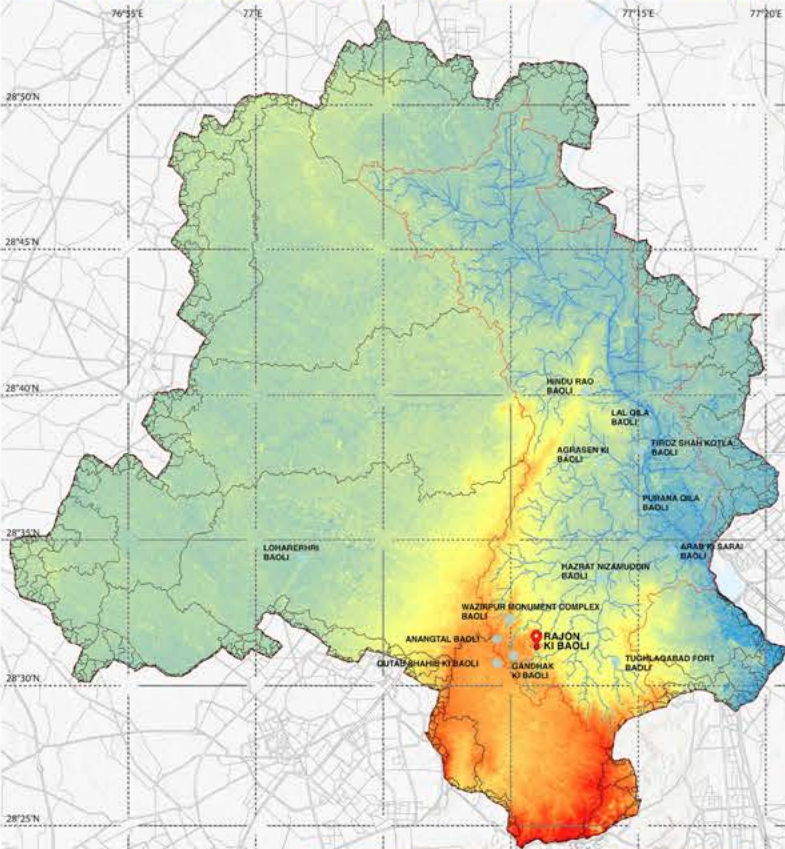


2022 Summer



# LOCATION

## EXISTING BAOLIS & WATERSHED MAP OF DELHI



### LEGEND

- Protected Monuments (ASI + GNCTD)
- Heritage Buildings notified by GNCTD

Most of the heritage structures and monuments are dispersed around existing greens. This opens up possibilities of integrating blue and green layers with built heritage.

### QUTUB MINAR COMPLEX

### SITE CONTEXT

Modern Mehrauli consists of three distinct parts: the enclosed Qutub Complex, now a UNESCO World Heritage site, the urban Mehrauli village centered around Bakhtiyar Kaki dargah and the beautifully landscaped Mehrauli Archaeological Park. The park consists of monuments inside Mehrauli Archaeological Park including Sultan Balban's Tomb, Sohawal Masjid, British follies, Rajon ki Baoli, Gandhak ki Baoli and several other ruined settlements in the park. Besides the architectural delights to visit, Mehrauli is also a well planned region that has its own residential complex with schools and hospitals situated in close proximity. The Jawahar Lal Nehru University and the Indian Institute of Mass Communication are a few of the several other educational institutes situated in this area.



### LODHI ERA TOMB



### BUS TERMINAL

### MEHRAULI ARCHAEOLOGICAL PARK

### MEHRAULI - BADARPUR ROAD



### AZAM KHAN TOMB

### GOLF COURSE



### HAUZ-I-SHAMSI



### JAIN MANDIR DADABARI



### QUTUB MINAR METRO STATION



### MEHRAULI

The region around Mehrauli is the oldest continuously inhabited region in Delhi. Urban settlement in this area pre-dates the arrival of Islam, with Lal Kot being constructed by Anang Pal Tomar in the 11th century. Lal Kot grew into the fortified citadel Qila Rai Pithora during the rule of the Chauhan, who were defeated by Mohammed Ghori in 1192.

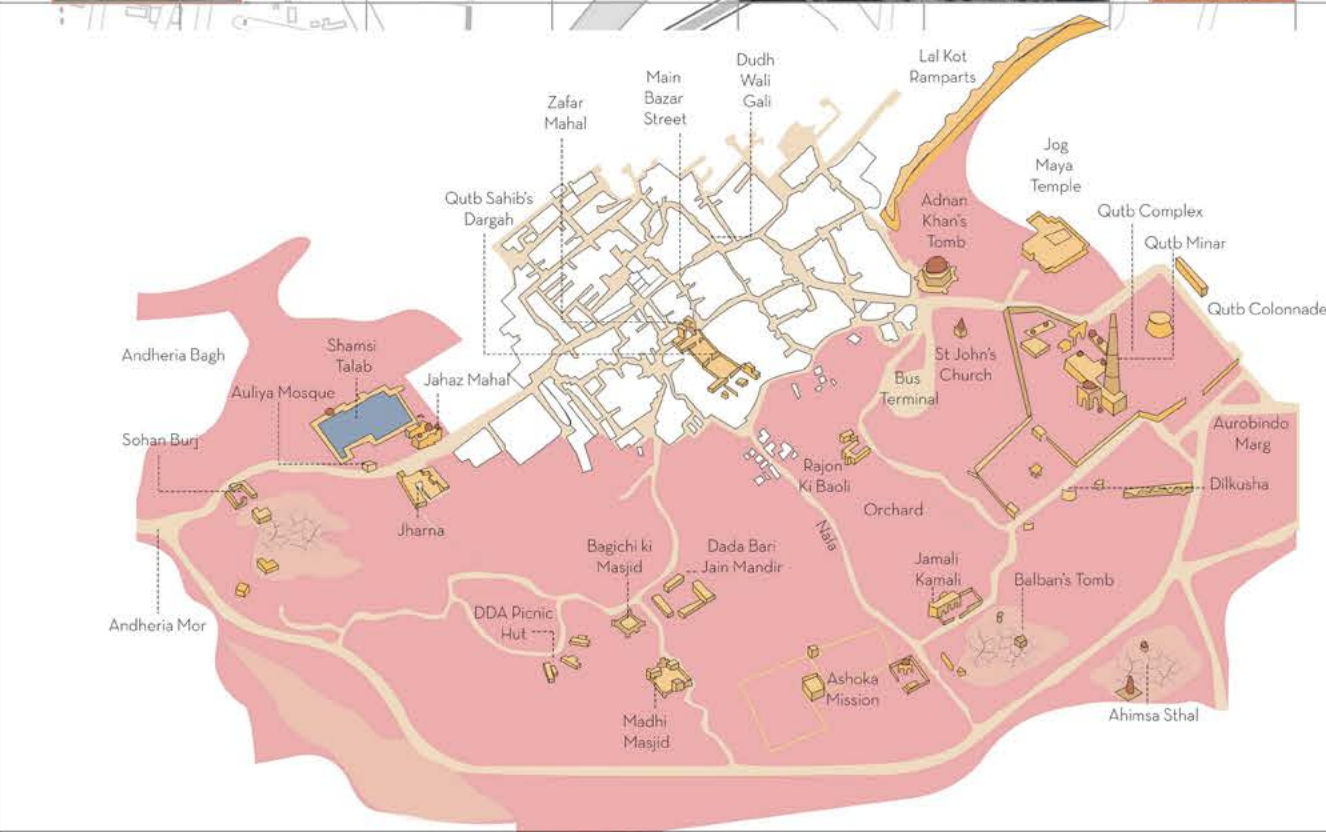
The Qutub Minar was built by Sultan Iltutmish along with the Quwat-ul-Islam mosque at the beginning of the 13th century and the Mehrauli village grew up around the grave of the revered Sufi saint Qutubuddin Bakhtiyar Kaki. Settlements extended all the way south of the village to Hauz-i-Shamsi, an artificial tank constructed by Iltutmish in 1230. Around this core urban area a large number of tombs, palaces, tanks, step wells, sarais, mosques and other buildings were constructed in the Sultanate, Khilji, Tughlaq, Lodhi, Suri, Mughal and British periods. As other cities were built at Jahanpanah, Siri, Tugh-



## History

Rajon ki Baoli has stood along a complex stepwell, and a masjid with chattri since 1506. The chattri features a dome that springs from 16-sided drum and was the earliest of 3 structures. An amir of the court of Sikander Lodhi - Daulat Khan, in year 1516 built the detailed, elaborate and extensive baoli which was Rajon ki Baoli. The baoli for masons as it was used by those for their daily chores. The U-shaped baoli with its natural spring as source of water is an Indo-Islamic design. It is located in the Mehrauli Archaeological Park, around 400m south of Adham Khan's Tomb.

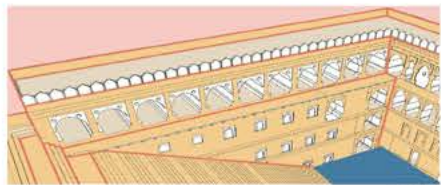
The stepwell consists of four levels and has arched colonnades on the east and west walls and steps on the southern side which lead to the water. The northern side has a well and also consists of arches. The site is rectangular in plan and has a mosque and a tomb on its roof in the western corner. Both these structures also belong to the Lodhi era. Inscribed work and embellishments are found on the outer façade of the colonnades as well as the mosque. The tomb is 12- pillared and has glazed tiles on its dome. There are four sets of stairs which lead to the roof: one each at the starting of the steps in the south in the eastern and western colonnade respectively, and two in the northern pavilion near the well. There is one set of stairs in the northern portion which provides access to the lower levels of the stepwell.





# SPATIO-TEMPORAL ANALYSIS

2010



2015



2017



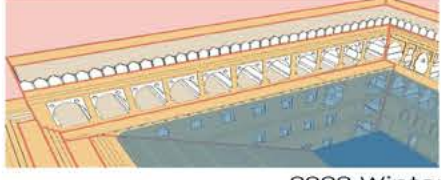
2019



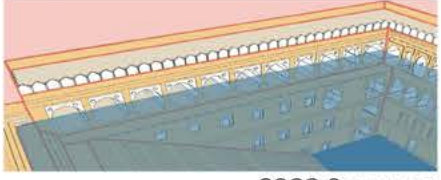
2020



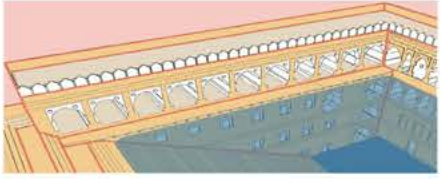
2021



2022 Winter



2022 Summer



## HAUZ - E - SHAMSI

The semi-arid nature of Delhi led the rulers to explore different kind of engineering techniques to harvest and channelize the rainwater, which was a major source of water. The water harvested from the rains was stored and used throughout the year. Delhi lies on the banks of the perennial river, Yamuna. The tanks not only functioned as water storage reservoirs for the monsoon rains but also helped ground water recharge. Also, many social, cultural and religious activities were centred around these great tanks.

Located at a mile from the Qutub Minar, Hauz-i-Shamsi, named after the second ruler of the Slave dynasty, Shams-ud-Din Iltutmish, who was anxious about the location of the new reservoir that he wished to create for the inhabitants of Mehrauli until one night Prophet Muhammad appeared in his dream seated on Buraq, the winged horse, at a place where the reservoir exists presently. The reservoir's water therefore is considered to also have healing powers owing to the history associated with its site identification. The rectangular tank covered an area of 100 acres and measured two miles in length and a mile in breadth. The tank was made up of red sandstone with steps and terraces around it for the visitors to access the water. The surplus water from the tank, created in the Mehrauli catchment and lying on an elevated ground in context to the greater area, also fed the villages lying in the north namely Chirag Dilli, Khirki Gaon, Begumpur, Hauz Khas, Kotla Mubarakpur etc. The excess water of the tank is believed to have fed the waterfalls around the tank and the moats of the third Sultanate city, Tughlaqabad, after Firoz Shah Tughlaq had diverted the excess water to the Naulakh Canal. A 1902 description of the tank calls out on its picturesque surroundings, however the tank seldom contained water. By 1919 the tank had shrunk to 270 bighas, 8 gaj, and remained silted-up. However, the inhabitants of Mehrauli predominantly used the water that was collected during the rainy season for drinking purposes. Some people also used the space available at the edges of the tank for growing watermelons. In 1920, the domed pavilion, which was earlier at the centre of tank could now be found close to the western edge of the tank, thereby emphasizing on the disproportionate shrinking of the tank. The tank reduced further by 1999, also witnessing a change in the construction material. Delhi stone had replaced the original sandstone lining of the tank, and the water of the tank was being used by the inhabitants for their everyday purpose of bathing and washing cattle.

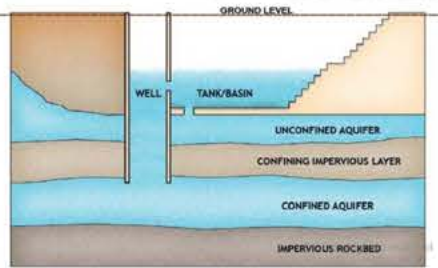
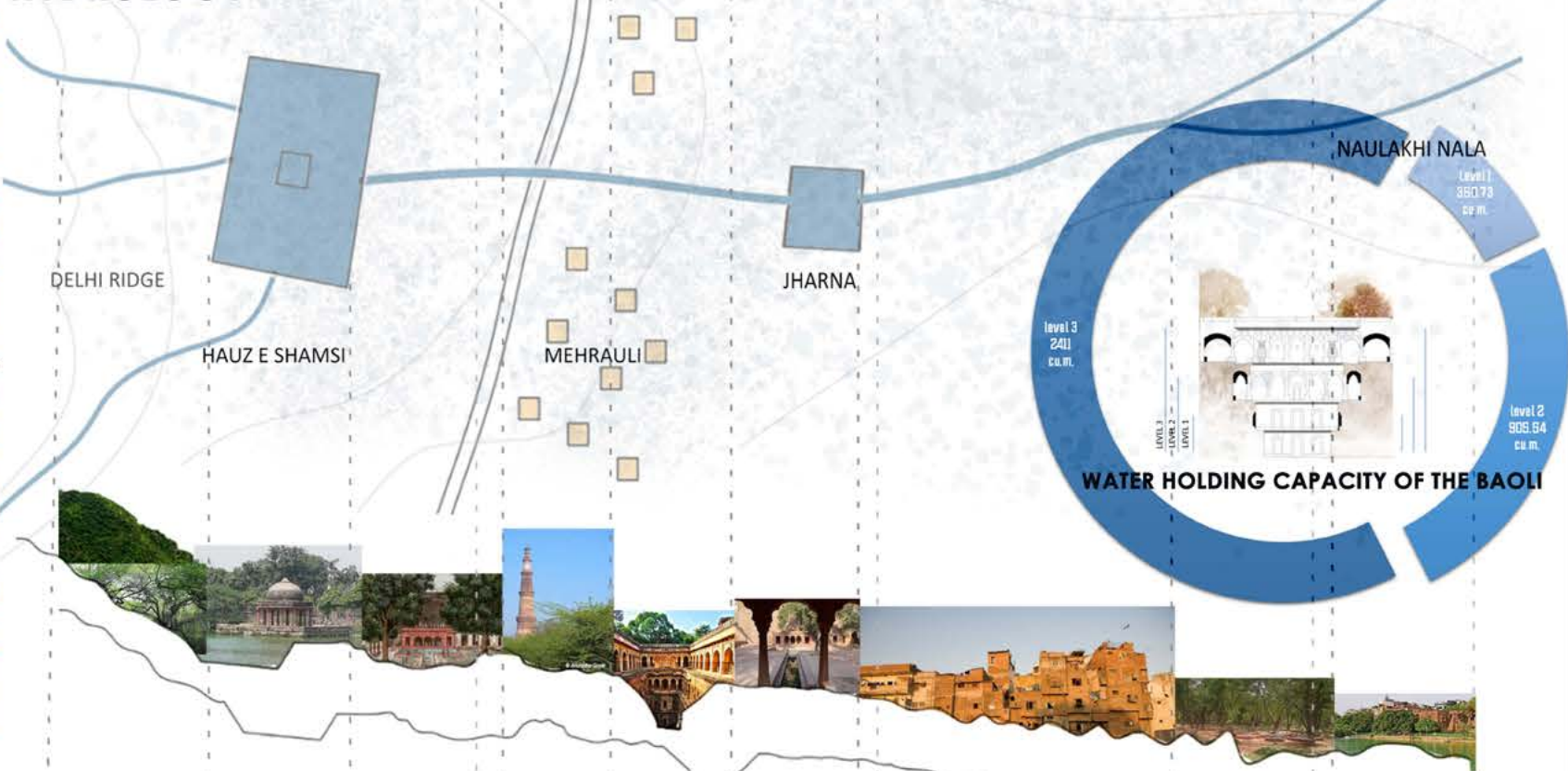


Diagram of a baoli with steps, a tank/basin, and well, positioned over the underground water aquifer

## HYDROLOGY



DELHI RIDGE

HAUZ E SHAMSI

JHARNA

MEHRAULI

BAOLI aquifers & well

STREAM surface run-off

ABADI / BASTI settlements

MARSHES

RIVULET / CANAL

266 m  
DRAINAGE NETWORK

226 m



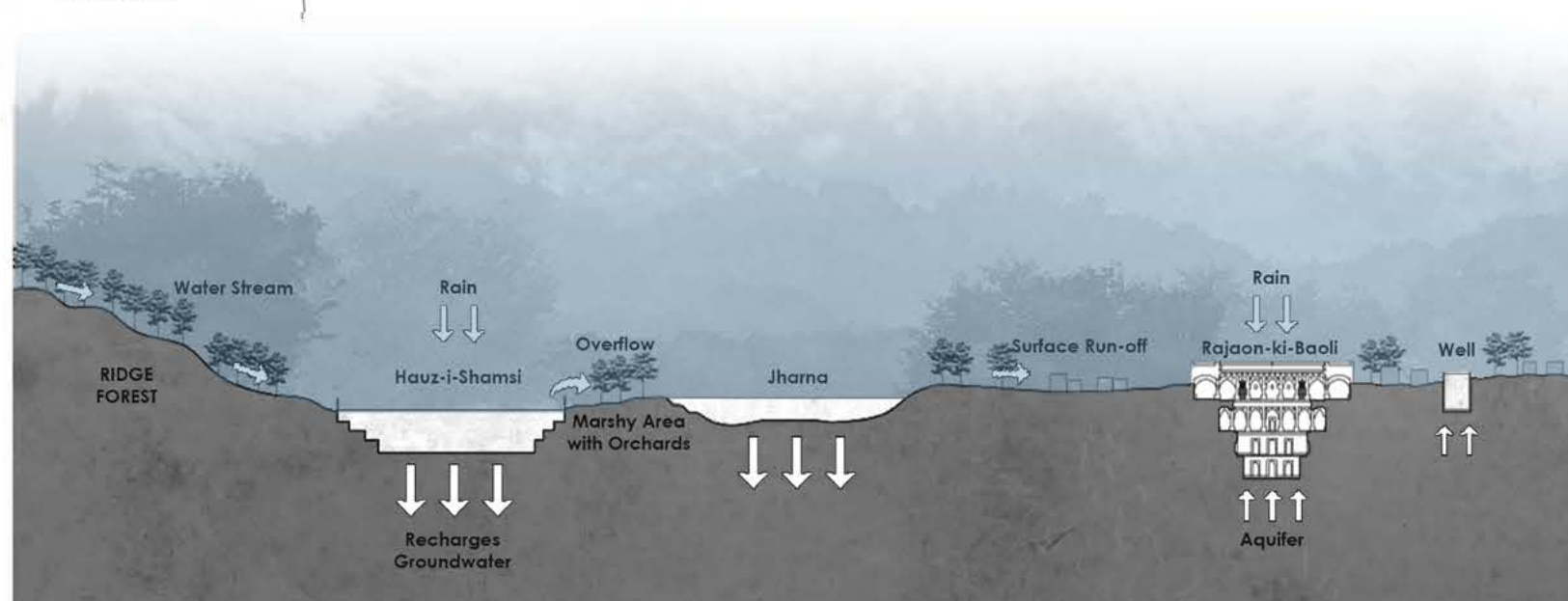
HAUZ E SHAMSI  
CONTEXT

LAL KOT

RUINS OF MEHRAULI

QILA RAI PITHORA

JHARNA





# HISTORY

## RAJAON KI BAOLI(1506 AD)

Rajaon ki Baoli has stood along a complex stepwell, and a masjid with chattri since 1506. The chattri features a dome that springs from 16-sided drum and was the earliest of 3 structures. An amir of the court of Sikander Lodhi – Daulat Khan, in year 1516 built the detailed, elaborate and extensive baoli which was Rajaon ki Baoli. The baoli for masons as it was used by those for their daily chores. The U-shaped baoli with its natural spring as source of water is an Indo-Islamic design. It is located in the Mehrauli Archaeological Park, around 400m south of Adham Khan's Tomb. The stepwell consists of four levels and has arched colonnades on the east and west walls and steps on the southern side which lead to the water.

The northern side has a well and also consists of arches. The site is rectangular in plan and has a mosque and a tomb on its roof in the western corner. Both these structures also belong to the Lodhi era. Inscribed work and embellishments are found on the outer façade of the colonnades as well as the mosque. The tomb is 12- pillared and has glazed tiles on its dome. There are four sets of stairs which lead to the roof: one each at the starting of the steps in the south in the eastern and western colonnade respectively, and two in the northern pavilion near the well. There is one set of stairs in the northern portion which provides access to the lower levels of the stepwell.

### HAUZ-E-SHAMS

1230 AD

Hauz-e-Shamsi was built by Sultan Shams-ud-din Iltutmish. It was a big reservoir with a domed pavilion in the middle. The reservoir was built to solve the water problems of Iltutmish's empire.

### JAMALI KAMALI

1528-1536 AD

The single domed mosque of Jamali Kamali was built by the Sufi Saint, Sheikh Fazlullah popularly known by his pen name Jamali. The tomb has two graves, one of Jamali and the other belongs to his companion Kamali.

### QULI KHAN TOMB

17TH CENTURY

The tomb of Mohammad Quli Khan is an octagonal structure in an open area in Mehrauli Archaeological Park. It was built by Quli Khan himself in the memory of his father, later the mortal remains Quli Khan were buried there.

### ZAFAR MAHAL

18TH CENTURY

The Zafar Mahal was which was built first by Akbar Shah II in the 18th century, and the entrance gate that was reconstructed in the 19th century by Bahadur Shah Zafar II and served as the summer palace of Bahadur Shah Zafar II.

### BALBAN'S TOMB

1287 AD

The tomb was built by Ghiyas ud din Balban, who was one of the most prominent rulers of Slave Dynasty. The first Islamic arch and the first Islamic dome appeared in India in this tomb.

### AZIM KHAN TOMB

17TH CENTURY

The tomb was a mausoleum of Azim Khan who was assumed to be a noble or a general in Akbar's army. The gravestone has now disappeared.

### JHARNA

17TH CENTURY

The jharua was built by Nawab Ghaziuddin. It was built as a recreational space and a pleasure garden for the Mughals.

## PHOOL WALON KI SAIR

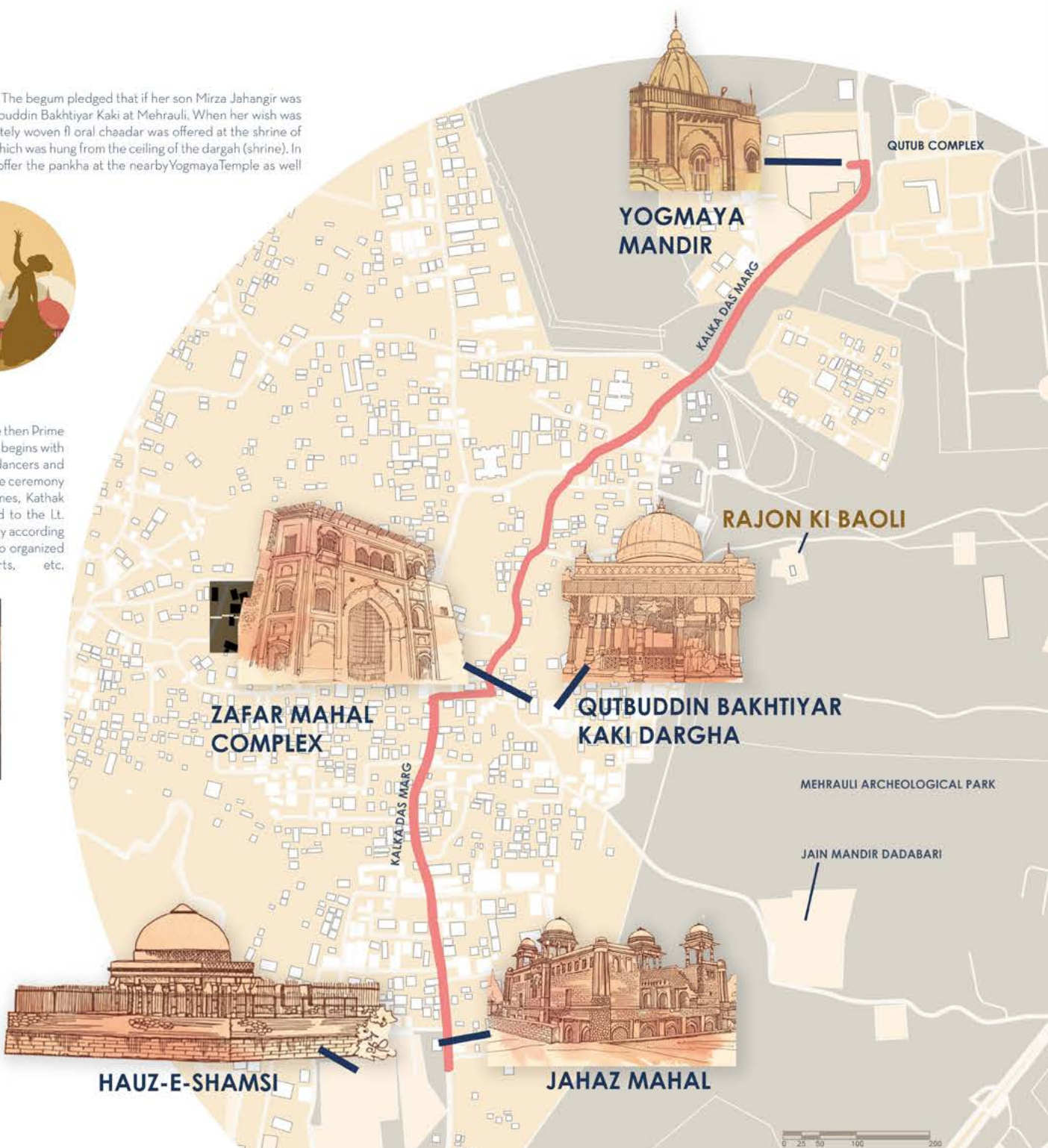
The tradition was started by Begum Mumtaz Mahal, the wife of the Mughal emperor Akbar Shah II. The begum pledged that if her son Mirza Jahangir was released from British custody, she would offer a chaadar (blanket) of flowers at the Dargah of Qutbuddin Bakhtiyar Kaki at Mehrauli. When her wish was granted in 1811, the entire Mughal court went with her from Shahjahanabad to Mehrauli. A delicately woven floral chaadar was offered at the shrine of Khwaja Qutbuddin Bakhtiyar Kaki. An enthusiastic flower seller added a large floral pankha (fan), which was hung from the ceiling of the dargah (shrine). In order to enable the Hindus in the congregation to be part of the celebrations, it was decided to offer the pankha at the nearby Yogmaya Temple as well.



It was stopped by the British in 1942 during the Quit India Movement but was revived in 1961 by the then Prime Minister Jawaharlal Nehru as a symbol of communal harmony. The festivities carry on for a week. It begins with the procession from Nizamuddin's Dargah to Kaki's Dargah. The procession is led by musicians, dancers and flower-sellers to Kaki's tomb. Here floral 'Chaadars' and 'Pankhas' are laid on the Dargah and the same ceremony is repeated at the Devi Jog Maya temple. The festivities are continued with cultural programmes, Kathak performances, Qawwalis, etc. Shehnai is played during the festival and a 'Pankha' is presented to the Lt. Governor of Delhi, the Chief Minister of Delhi, the Vice President and the President of India on a day according to their availability. They give their thanks and blessings for the Festival. An amusement fair is also organized with stalls, kite-flying competitions, wrestling bouts, traditional sports, etc.



The festival today begins with a ceremonial visit by the heads of the festival's organising committee, Anjuman Sair-e-Gul Faroshan, visiting the lieutenant governor of Delhi at his residence in Civil Lines area. At Raj Niwas, the lieutenant governor is presented with a fan made of flowers. The organising committee then meets the chief minister and chief secretary of Delhi. During the next seven days, the organisers also try to present the president and vice-president of India with floral pankhas.





# STAKEHOLDER CONSULTATION

## (PUBLIC PARTICIPATION)



LIMITED AGE GROUP OF PEOPLE



LACK OF PUBLIC AMENITIES



PLACES UNKNOWN TO LOCALS



NO SECURITY



TOURIST

NOT MANY TOURISTS  
COME TO VISIT THIS  
BAOLI



LOCALS

LOCALS VISIT HERE  
OFTEN DURING EVE-  
NING AND USE THIS  
SPACE AS A RECRE-  
ATIONAL SPACE

USER #03  
F - 62  
Baoli should be closed and  
houses should be made on  
place of that

USER #05  
M - 21  
This is a recreational  
space, just the water is  
filthy and it should be  
cleaned at the earliest

USER #09  
M - 53  
A public space, locals visit  
here often. Tourists should  
increase

USER #01  
M - 67  
The water is magical, it  
cures many diseases. Baoli  
should be conserved

USER #02  
F - 44  
Water should be cleaned  
and pathways should be  
made. Nothing haunted

USER #04  
F - 32  
A heritage place and it  
should be conserved and  
redeveloped as it  
used to be in earlier  
times.

USER #06  
M - 48  
It is a historic place and  
should be developed as a  
tourist place

USER #07  
M - 14 & M - 12  
We go to play cricket near  
Baoli everyday

USER #08  
F - 38  
This is a religious place  
where jins reside. The baoli  
water is holy water, it cures  
different diseases.

USER #10  
M - 57  
Baoli should be rejuvenat-  
ed so that upcoming gen-  
eration gets to see it

THROUGH OUR PRIMARY STUDY WE HAVE TAKEN INTERVIEW OF 100+ PEOPLE AND THESE ARE THE FEW ILLUSTRATIONS THAT WE HAVE SHOWN ON OUR SHEET

GENDER  
RATIO



49%

FEMALE



51%

MALE

AGE RATIO



10%



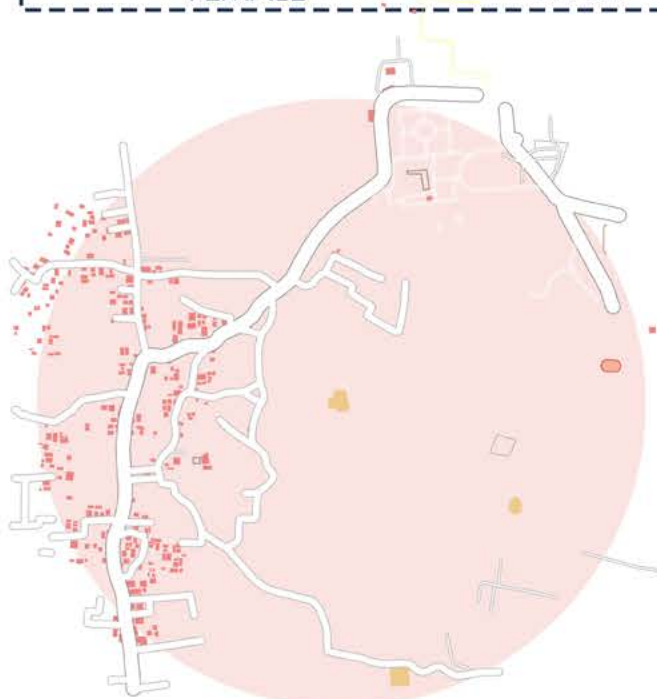
30%



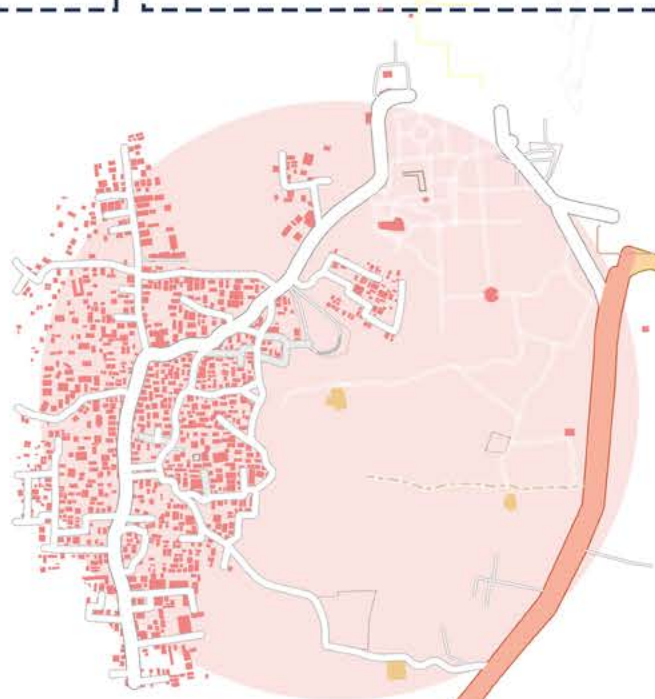
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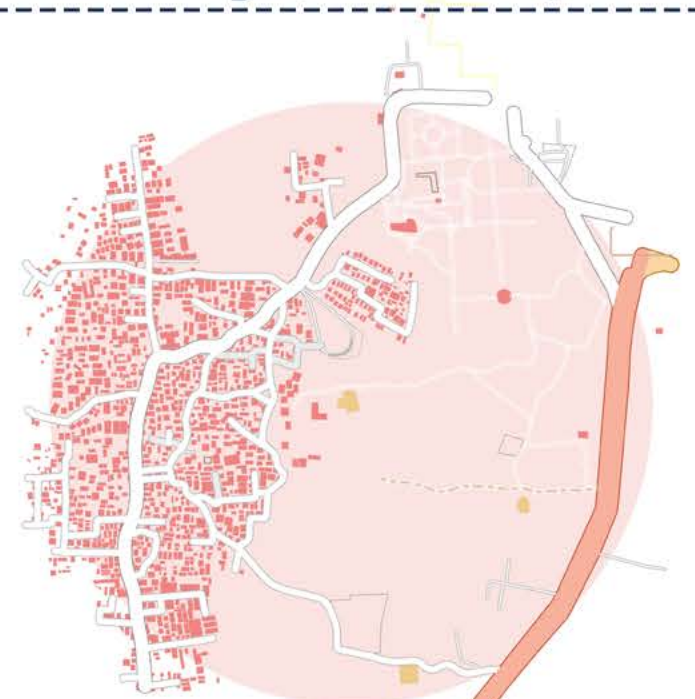
20%



1857



2000



2020

THE POPULATION GROWTH AND THE EFFECTS OF LAL DORA ON MEHRAULI VILLAGE HAS MADE IT A HIGHLY POPULATED MIXED USE SETTLEMENT WITH IRREGULAR GROWTH. THE OBSERVATION MADE IS THAT RECREATIONAL AREA MUST BE AVAILABLE FOR ALL AGE GROUPS AND A JUSTIFIED MAINTENANCE OF THE ARCHAEOLOGICAL PARK THROUGH INTERVENTIONS WHICH WOULD HELP IN DEVELOPING A BETTER LIVING ENVIRONMENT



# DOCUMENTATION

## MOSQUE AT RAJAON KI BAOLI

**LOCATION** Rajaon ki Baoli, DDA Park, Mehrauli

**OWNERSHIP** Public ASI

**FUNCTION** Formerly: Baoli At present : Monument (Not used)

**STATUS** Protected

**SPECIAL FEATURES**

**A. SIGNIFICANCE:-** This building is attached to the stepwell. The mosque is probably contemporary to the stepwell and is archaeological value.  
**B. PHYSICAL DESCRIPTION:-** The mosque is three bays deep and measures 15.7m by 4.85m. each of the three compartments is entered through an archway. The roof is accessible from a steep flight of steps at either end. At the south east corner of the courtyard is a gateway.

**MATERIALS** WALLS: Random rubble, Floors: stone, Domed Roof: Stone

**STATEMENT OF PRESERVATION** Fair

**DATE** AD 1512

**GRADING** Archaeological Value A



## TOMB AT RAJAON KI BAOLI

**LOCATION** Rajaon ki Baoli, DDA Park, Mehrauli

**OWNERSHIP** Public ASI

**FUNCTION** Formerly: Tomb

**STATUS** Protected

**SPECIAL FEATURES**

**A. SIGNIFICANCE:-** The building is of archaeological value and is located of mosque at rajon ki baoli

**B. PHYSICAL DESCRIPTION:-** The canopy measures 5.48sq m and comprises of 12 columns which support a dome which springs from a 16 sided drum. An uninscribed grave lies under this. There is a red sandstone chajja running all around the building over which there is a grey stone frieze in the centre of the south side of the frieze there is a sandstone inscription which gives the date of the building

**MATERIALS** Floors: stone,

**STATEMENT OF PRESERVATION** Signs of deterioration

**DATE** AD 1506

## RAJAON KI BAOLI

**LOCATION** DDA Park, Mehrauli, about 700m NW from jamali kamali

**OWNERSHIP** Public ASI

**FUNCTION** Baoli

**STATUS** Protected

**SPECIAL FEATURES**

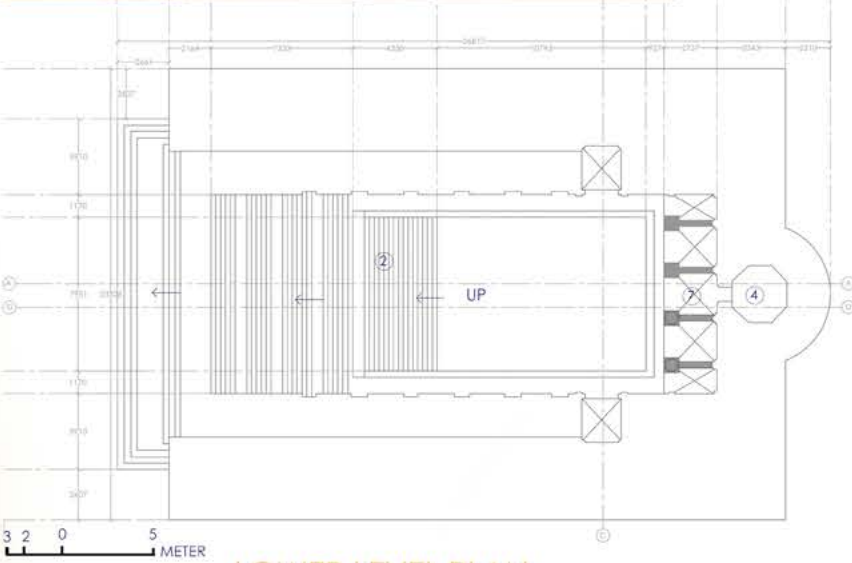
**A. SIGNIFICANCE:-** The baoli is very spectacular and related building add further to its character. it appears to have derived its name from fact that it was used by masons for a while

**B. PHYSICAL DESCRIPTION:-** The baoli is oblong, with step leading downwards from north. In 1875 there were 66 steps but now, because the stepwell is partly filled i, there are three storeys and 41 steps. The wall of the lowest visible storey are decorated with deeply recessed arches. The top storey is surrounded by an arcade with massive piers. On south side is a well. The top storey and chajjas which have now disappeared.

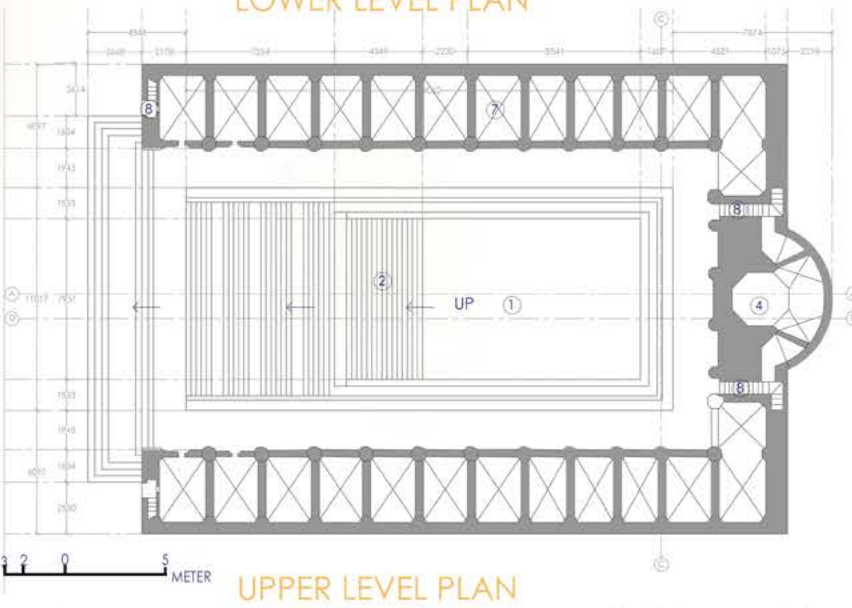
**C. DECORATIVE FEATURES:** Niche in the baoli, Kangura battlements, mouldings

**MATERIALS** walls: Random rubble, Floors: stone, vaulted, Domed Roof: Stone

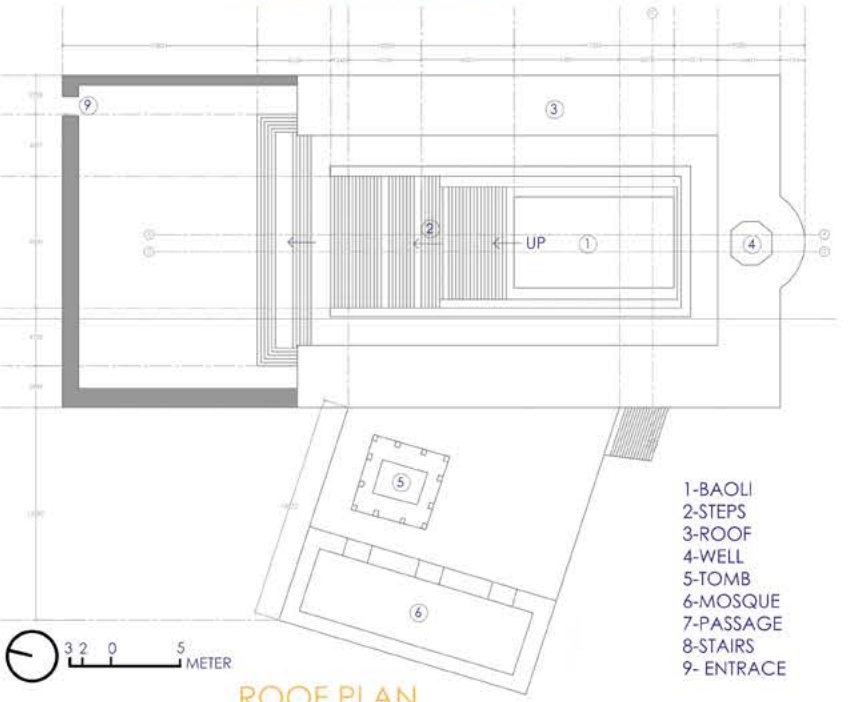
**STATEMENT OF PRESERVATION** Good



LOWER LEVEL PLAN

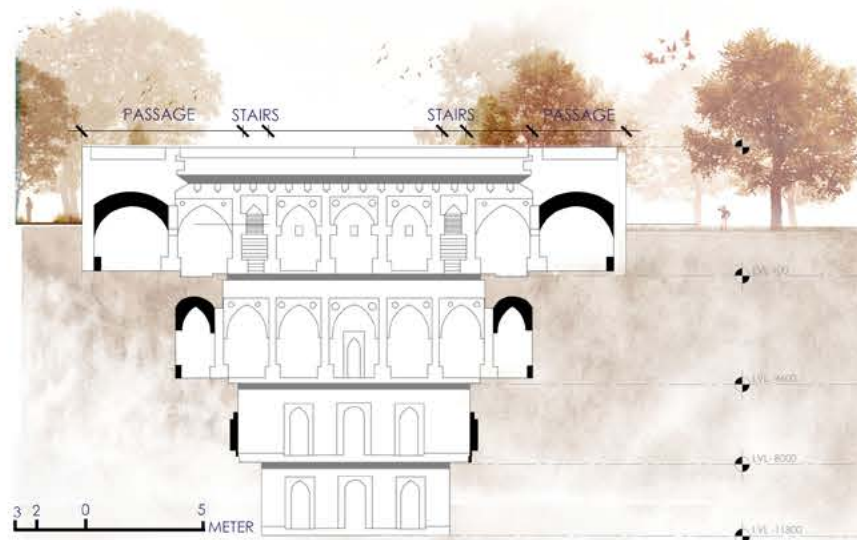


UPPER LEVEL PLAN

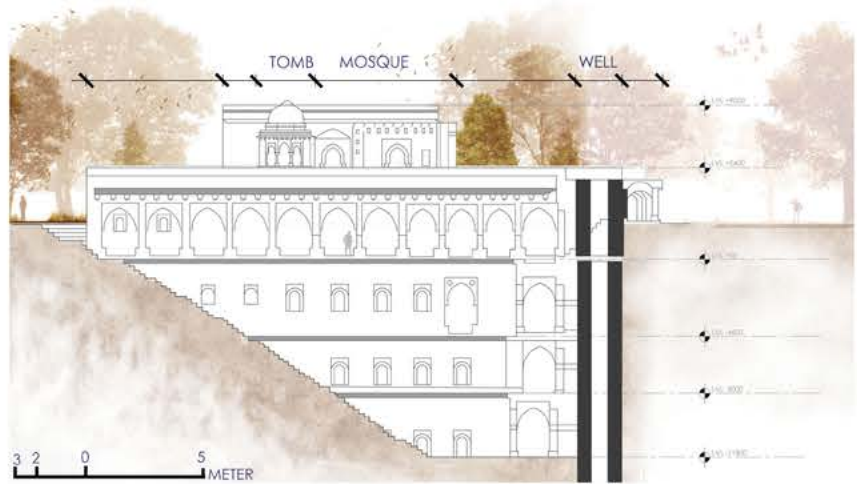


ROOF PLAN

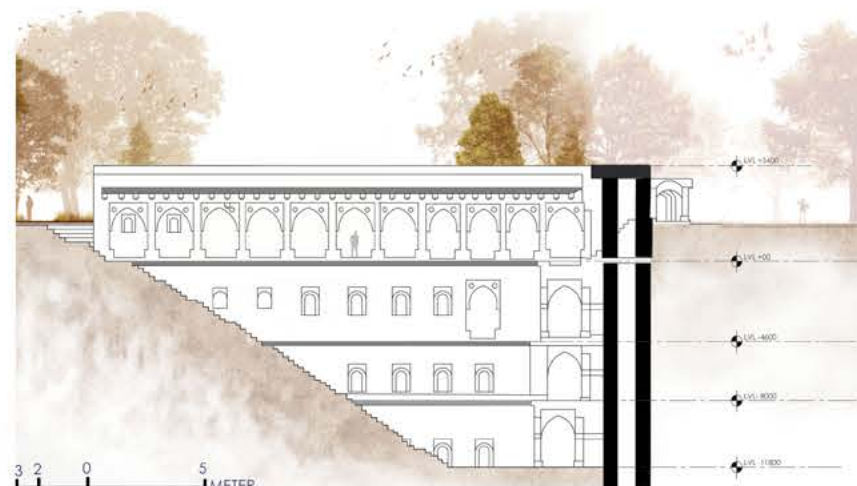
- 1-BAOLI
- 2-STEPS
- 3-ROOF
- 4-WELL
- 5-TOMB
- 6-MOSQUE
- 7-PASSAGE
- 8-STAIRS
- 9- ENTRANCE



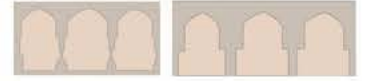
SECTION CC



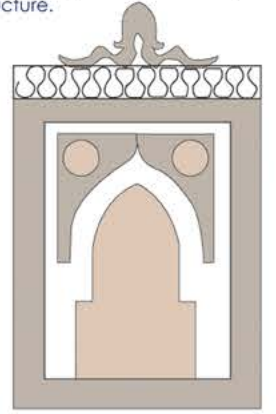
SECTION AA



SECTION DD



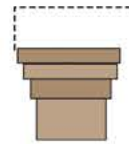
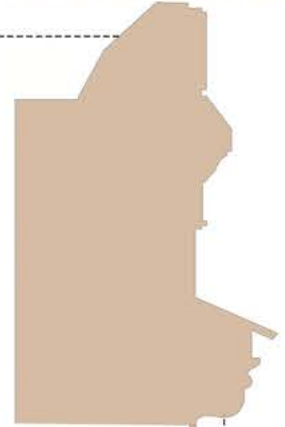
The use of pointed arches throughout all the corridors of baoli gives it an essence of Indo-Islamic period. These series of arches create a beautiful pattern and rhythm in structure.



There are circular floral details around the arches that embellish the structure and add to its magnificence.



The parapet had been adorned with carvings of the arches so that the whole structure holds the essence of Indo-Islamic architecture and creates Unity.



**DETAIL OF COLUMN**  
There are two types of the column in the baoli



**DETAIL OF BRACKET**  
Stone Brackets were used to create an overhang from a wall.

DETAIL OF UPPER FLOOR



# STRUCTURAL ISSUES (AND CONSERVATION TECHNIQUES)



**MOSS ON PARAPET** ■ ■  
A green plant that is visible on the buttresses and parapets.  
Caused by- Absorption of rain and water.



**COVING** ■ ■  
The hollowing of an adobe wall just above grade level.  
Caused by- Standing water or rainwater and deposition of salts.



**SPIDER WEB** ■  
Multiple insects have made colonies inside the structure.  
Caused by- Ill maintenance.



**MOSS GROWTH** ■  
Green fuzzy stuff that appears on the roofs and buttresses.  
Caused by- Stagnant water and moisture.



**CRACKING** ■ ■ ■  
Formation of fissures in the structure.  
Caused by- Structural inheritance



**BLISTERING OF SAND- STONE** ■  
Swelling and rupturing of wall skin.  
Caused by- De-icing salts and ground moisture.

## MEASURES OF PRESERVATION-

1. Damp proofing Course- Damp-proof treatment shall be done to avoid the sub-fluorescence and efflorescence. ■
2. Epoxy Repair- Epoxy coatings can be used to restore small defects in the stone structure. It can also be used to repair broken stones and put back detached details. ■
3. Cleaning of micro-organism growth- The growth of micro-organisms can be combatted by physical as well as chemical means. Plant growth can be removed by tree-killers. ■
4. Consolidating Treatment- This treatment is done to increase the resistivity and coherence of damaged stone. A number of consolidating treatments are available viz., fluorosilicic compounds, silico-organic compounds, epoxy, polyester, acrylic, polyurethane resin etc. ■
5. Protective Coatings- Natural and synthetic waxes, ammonium oxalate, acrylic polymers, silicones vinyl polymers, polyester etc. are used to protect the surface of the structure. ■



**PEELING OF STONE** ■ ■ ■  
The surface of the stone flake or peel away.  
Caused by- Weathering or improper application of mortar.



**VANDALISM** ■ ■ ■  
Visitors have destructed the structure. (Names of people can be seen etched at various places inside the baoli.)

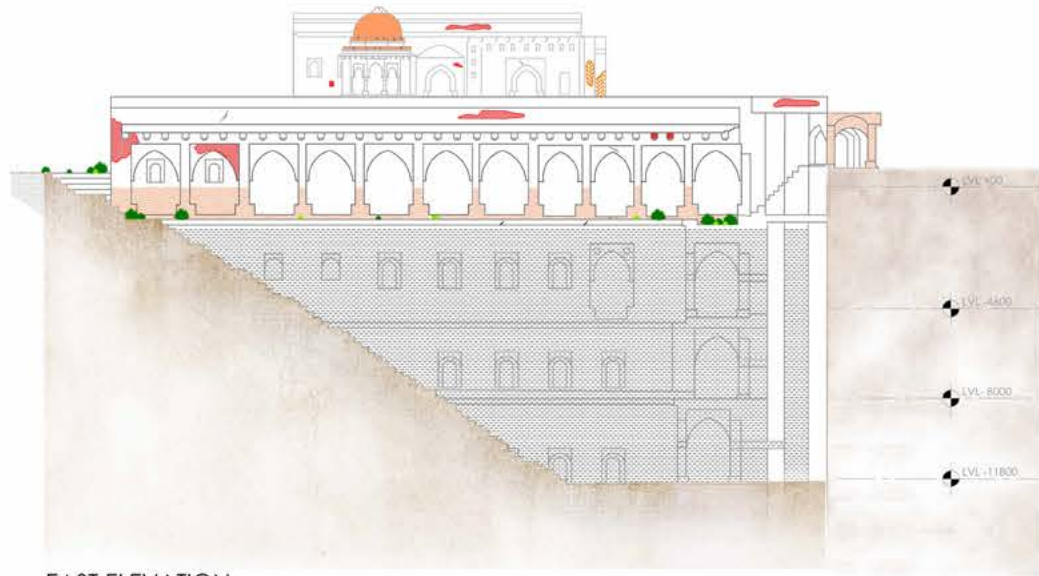


**DEGRADING OF STONE CEILING** ■  
The ceiling of the tomb has darkened.  
Caused by- Contact with air and moisture over the years.

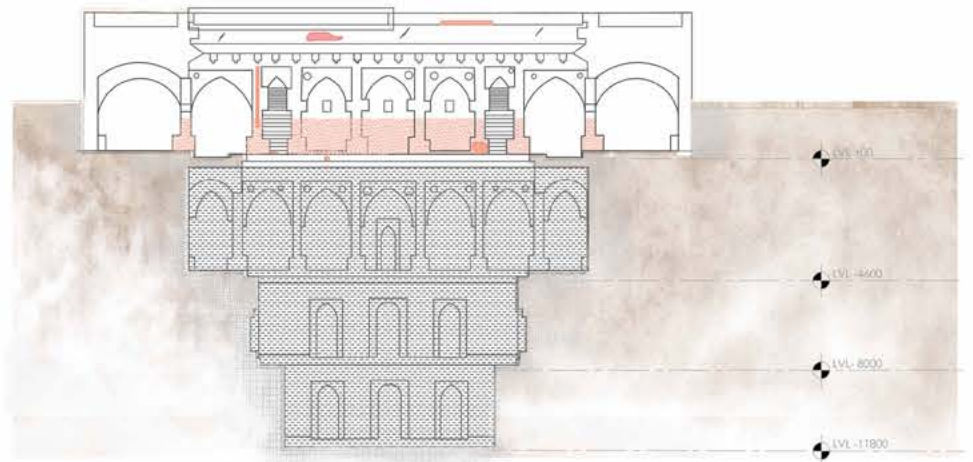


**EFFLORESCENCE** ■  
A whitish haze is visible on the walls.  
Caused by- Entry of water into the structure.

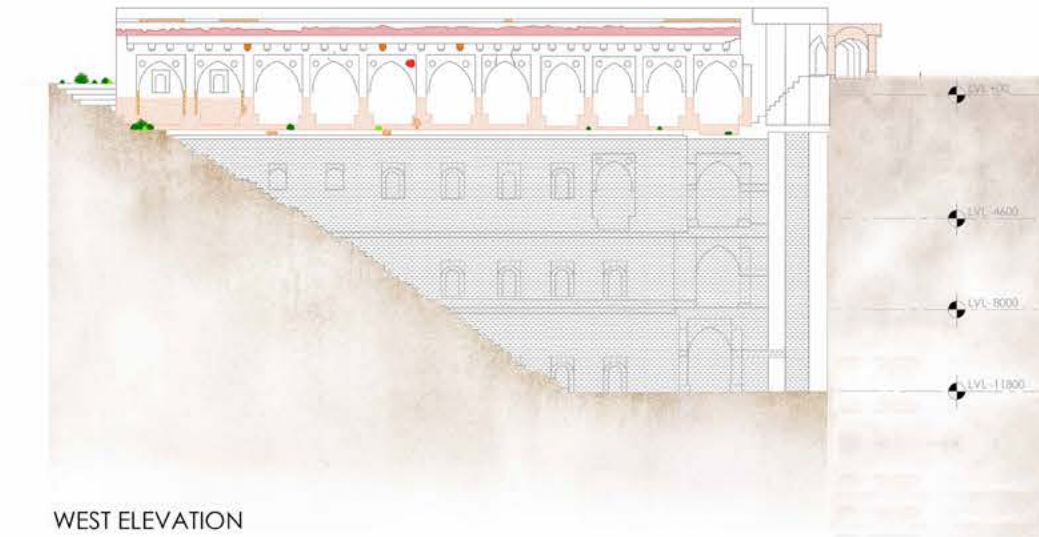
## CONDITION MAPPING



EAST ELEVATION



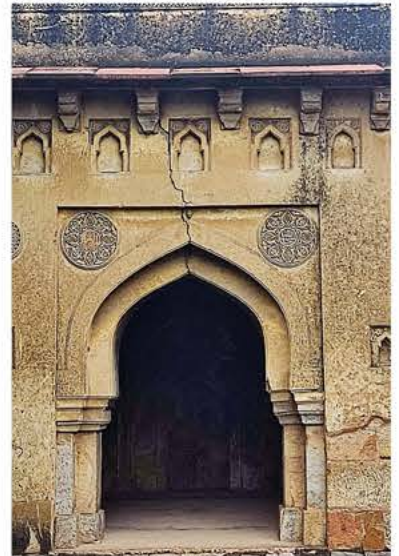
SOUTH ELEVATION



WEST ELEVATION

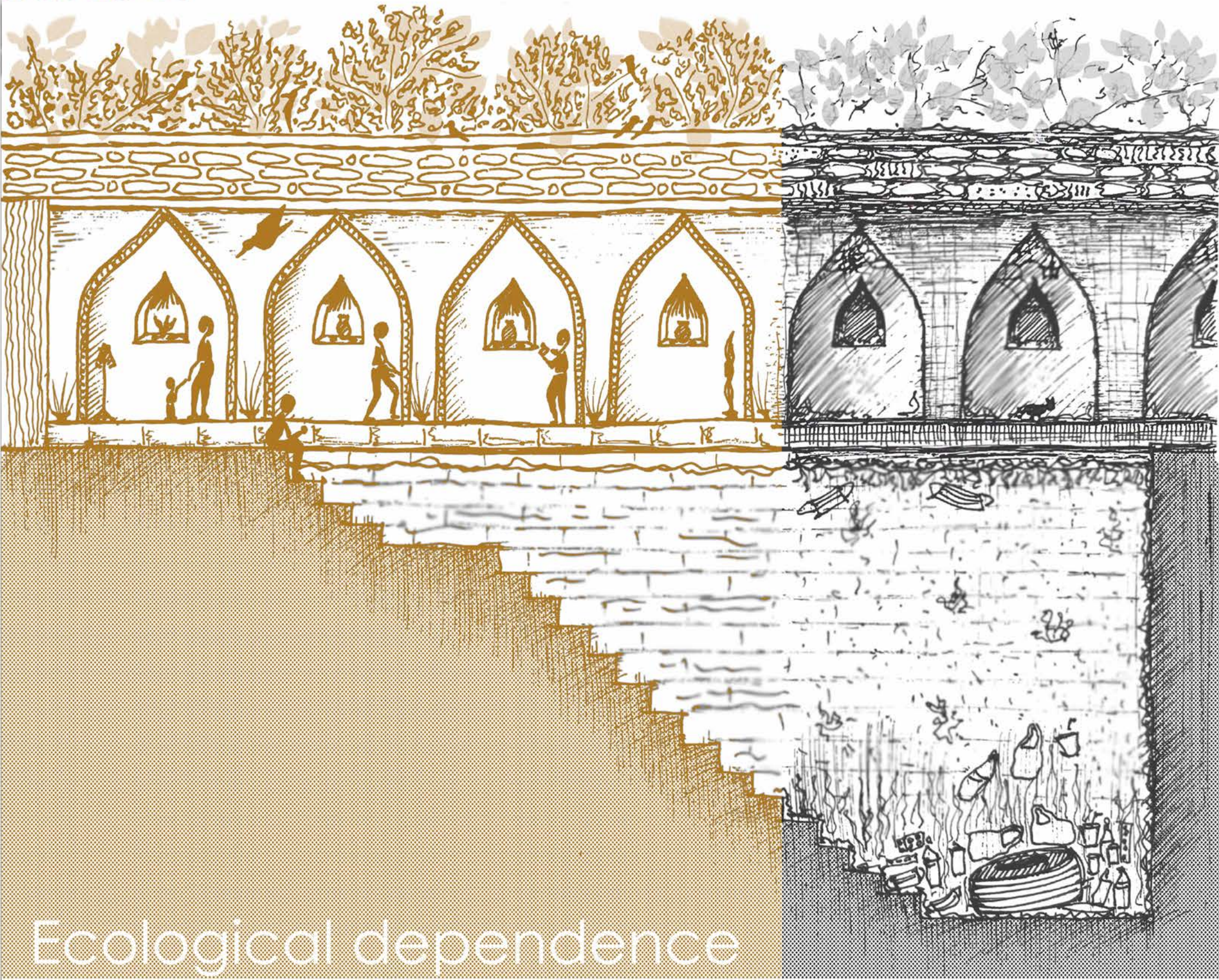
### CONDITION LEGEND

- Sub-fluorescence
- Water Level
- Eroded Plaster
- Broken structure
- Cracks
- Missing tiles
- Missing Buttresses
- Vegetation Growth




Photograph depicting current condition of Baoli

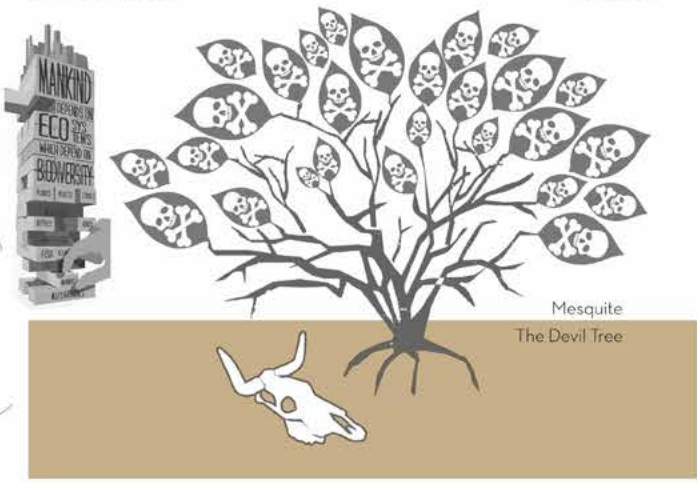
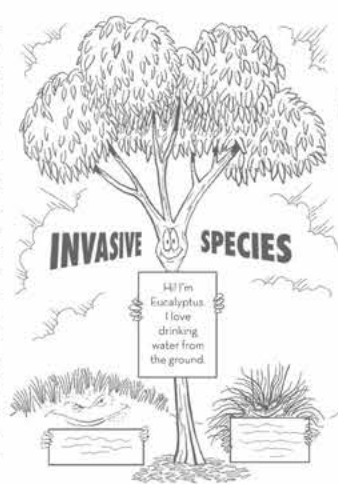




											
Name: Rose-ringed Parakeets Scientific name: <i>Psittacula krameri</i>	Name: Common Myna Scientific name: <i>Acridotheres tristis</i>	Name: Black Drongo Scientific name: <i>Dicrurus macrocercus</i>	Name: Hoopoe Scientific name: <i>Upupidae</i>	Name: Black-rumped Flameback Scientific name: <i>Dinopium benghalense</i>	Name: Eurasian Collared Dove Scientific name: <i>Streptopelia decaocto</i>	Name: Jungle Babbler Scientific name: <i>Turdoides striata</i>	Name: Purple Sunbirds Scientific name: <i>Cinnyris asiaticus</i>	Name: Purple Sunbirds Scientific name: <i>Cinnyris asiaticus</i>	Name: Rufous Treepie Scientific name: <i>Dendrocitta vagabunda</i>	Name: Coppersmith Barbet Scientific name: <i>Megalaima haemacephala</i>	Name: Brahminy Starlings Scientific name: <i>Sturnia pagodarum</i>

							
Name: Khair Scientific name: <i>Acacia catechu</i> Typology: Native	Name: Viliati keekar Scientific name: <i>Acacia karoo</i> Typology: Evergreen tree	Name: Phulai Scientific name: <i>Acacia modesta</i> Typology: Native	Name: Kumtha Scientific name: <i>Acacia senegal</i> Typology: Native	Name: Subabool Scientific name: <i>Lucaena lencecephala</i> Typology: Common	Name: Neem Scientific name: <i>Azadirachta indica</i> Typology: Native	Name: Bistendu Scientific name: <i>Diospyros montana</i> Typology: Native	Name: Mesquite Scientific name: <i>Prosopis juliflora</i> Typology: Invasive Non native

Eucalyptus is called enemy of the environment. Growing Eucalyptus in low rainfall areas may cause adverse environmental impacts due to competition for water with other species and an increased incidence of allelopathy. Mesquite has actually been in India for decades but its environmental impact is just now becoming clear. Mesquite plants are rapidly invading the only habitat for the endangered Indian wild ass (*Equus hemionus khur*), threatening to push the horselike animals out in the process. Over the course of the mesquite invasion Indian wild ass populations have actually increased. But that success has come with a cost. This spread puts the animals into direct conflict with humans, especially when the animals start eating crops. It also leaves them susceptible to other dangers example pesticide poisoning.



Along with being packed with the most prized relics of the medieval era, the park is home to numerous plants and trees that add to its natural charm. To the delight of bird watchers, several rare aviary creatures also dwell in the branches of the park's trees. In the heart of these trees is a beautiful Baoli that offers mesmerizing view of the sunset.



# INTERVENTIONS

Phase 1  
(4 months)

Phase 2  
(5 months)

Phase 3  
(7 months)

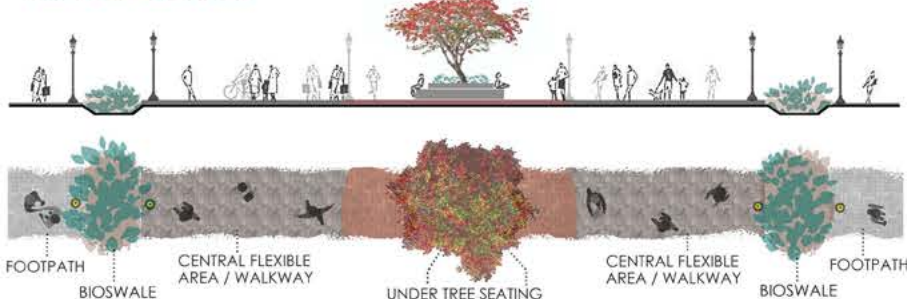


1. Water cleansing
2. Structural conservation
3. Exhibition space
4. Lighting
5. Steps being used as a makeshift temporary OAT

1. Sanitation
2. Landscaping
3. Signages
4. Flower cultivation
5. Local selling spaces

1. Walking trail development
2. Lighting
3. Paving
4. Benches
5. Signages
6. Sanitation
7. Incorporating phool walo ki sair/festivities

## TRACK DETAILS



Formal paths - solid concrete road

Informal paths - paved road with patchy grass

Track - used for both pedestrian and cyclists encompassed with bioscape; under tree seating.

## STREET LIGHTING

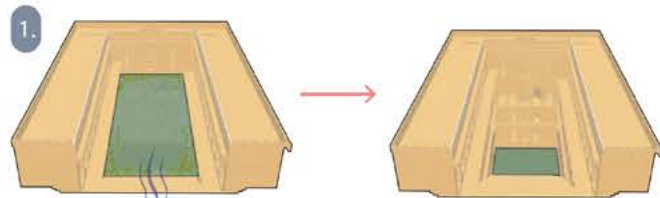
Height of Bollard- 600 mm

Luminous Flux- 567 lm

Light Source- 8 Watt LED lights

Finish - Sandstone finish

## WATER CLEANSING



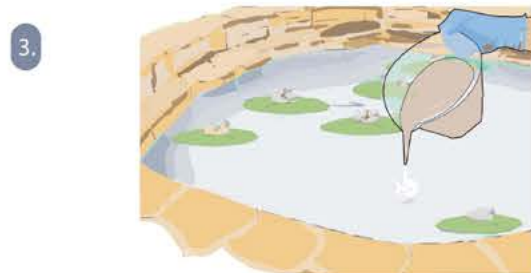
### DESILTING

Desilting is the removal of fine silt and sediment that has collected in a river in order to restore its natural capacity, without widening or deepening of the river. Desilting will increase the storage volume of a dam and remove the accumulated organic material and nutrients that provides growing conditions for aquatic weeds.



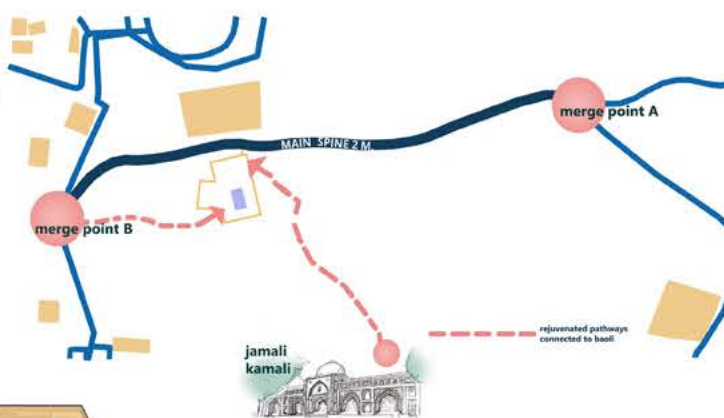
### CLEANING WALLS AND FLOORS

As water is removed from the pond, plants will be exposed. Place aside decaying plant matter. Small pond creatures may leave the plant matter and return to the pond. The sludge at the bottom of the pond is removed by sweeping with a broom and dust pan or shovel. Remove debris and bottom sludge during and after treatment.



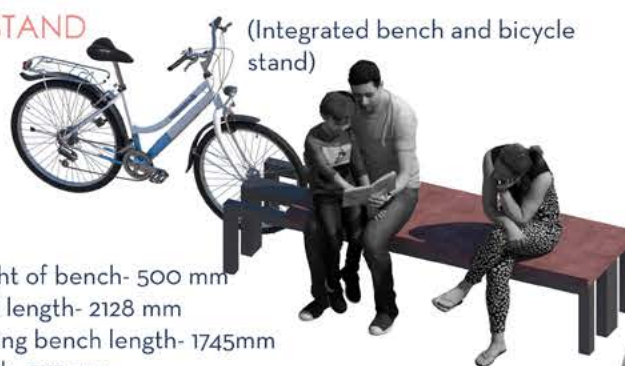
### ADDING ALGAECIDES

Algaecides are disinfectants that chlorinate or brominate water to kill and prevent algae growth. Algaecide will kill the algae and mold affecting baoli water, but it is best used as an algae preventative. A liquid or powder algaecide is the fastest way to clear up pond but also the fastest way to kill pond plants.



The access points are made for the ease of travellers and recognition of the baoli from major merge points according to the user reviews. The pathways are also rejuvenated from Jamali Kamali the famous landmark.

## BI - STAND



- Height of bench- 500 mm
- Total length- 2128 mm
- Seating bench length- 1745mm
- Width- 575 mm
- Seat thickness- 50mm
- Material- Mild steel and Wood
- Bike stand (2)- in built in benches

## WATER REFILLING STATION



- Stainless steel (Marine Grade 316L)
- Options: Drinking Fountain, Bubbler Tap & Basin
- Bright peened finish
- Bolted down below paving level
- Hold seven gallons of purified water
- Tanks are automatically refilled
- Fits any refillable container
- LED lights, sleep mode, and an internal monitoring system keep FloWater running at ultra-low operating costs

## EXHIBITION

### LIGHTING -

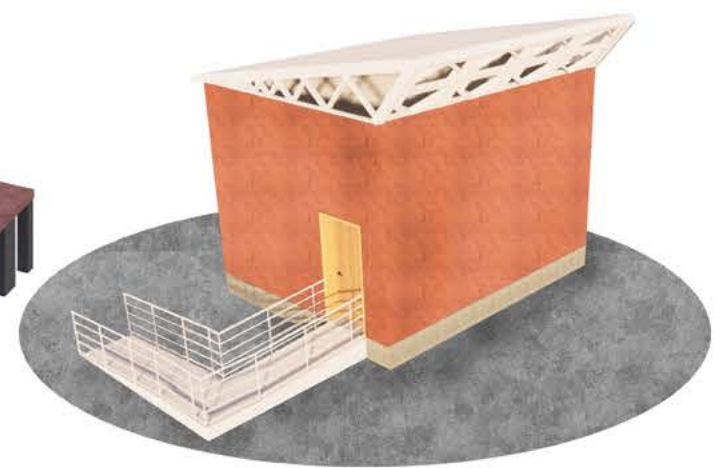
- ProFlood LED is a waterproof projector
- Adjustable beam (from 20° to 40°) to precisely match the surroundings and adjust the focus and uniformity
- Long lifetime of 50Khrs L80 at Tq +25 C
- Exceptionally high-quality output, including advanced control of light distribution and significantly reduced glare

### FREE STAND DISPLAY -

- Easy to install and adjust
- 6' Floorstanding Enclosed Bulletin Board
- Display Area: 24"W x 36"H Cork
- With (1) Lock For A Tamper-Proof Display
- Grooves on Pole: Height Adjustable Board
- With Large Aluminum Pole And Rectangular Heavy Base



## WASHROOM UNIT



- Unisex washroom
- Mother feeding room
- Natural ventilation - using tilted roof with sky light and jaali
- In built sewage collection and grey water reuse in toilet flush, landscape
- Collected sewage - transferred to biogas plants

## SOLAR CHARGING STATION

With 10 USB charging ports, ADA compliant ports and a 30" table, this is a powerful charging station. Options:

- LED lighting and Wifi router.
- Raised, adjustable, 60-Watt poly-crystalline solar panel
- Dedicated handicap access port under table
- Reflective lettering for nighttime visibility
- Theft-resistant mounting with steel security screws
- Pre-drilled 12 base for installation with 1/2 anchor bolts

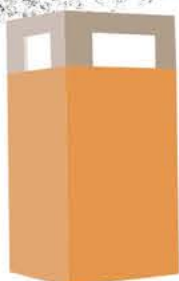




# REJUVENATION (LANDSCAPING)



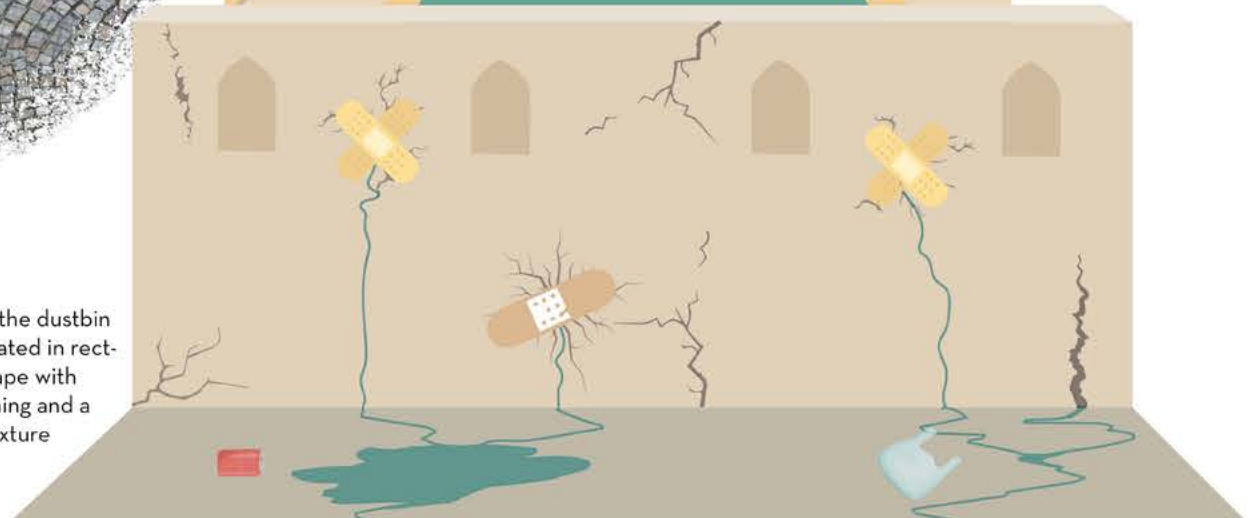
**SIGNAGES** - en-  
graved sandstone  
with aluminium  
cladded stand



**DUSTBINS** - the dustbin  
are been created in rect-  
angular reshape with  
four side pening and a  
sandstone texture

In the first such procession of flower sellers, the heir apparent Sirajuddin Zafar offered the pankhas with a poem. I quote some of the verses below:

Nur e altaaf o karam ki hai yeh sab iss ke jhalak  
Ke woh zahir hai malik aur hai batin mein malak  
Yeh bana iss Shah e Akbar ki badaulat pankha  
Aaj rangeen hai raiyyat se laga Shah talak  
Zafranzaar hai ek baam se dargah talak  
Dekhne aayi hai iss rang se khilqat pankha  
All this reveals the radiance of his blessing  
Within he is an Angel and without a King  
To that great King Akbar do we owe this coloured fan  
From prince to pauper, all bedecked to the last man  
From the bower to the dargah, a wondrous saffron hue  
A blessed Pankha all creation has come here to view  
Waqai sair hai yeh dekhne hi ke qaabil  
Chashm e anjum ho na iss sair par kyun maa'i' I  
To look at this ceremony is such a delight  
Why wouldn't the stars gaze at this very ceremony  
—Bahadur Shah Zafar







# RAJAON KI BAOLI

## MEHRAULI ARCHAEOLOGICAL PARK

### The Team



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INO



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Scan QR for  
water body  
website



सत्यमेव जयते

Ministry of Housing  
and Urban Affairs,  
Government of India



सत्यमेव जयते

Ministry of Education  
Government of India



All India Council for  
Technical Education,  
New Delhi



**Intern Team**  
Faculty of Architecture  
& Ekistics  
**Jamia Millia Islamia,**  
New Delhi  
[a Central University]  
[NAAC accredited **A++** Grade]