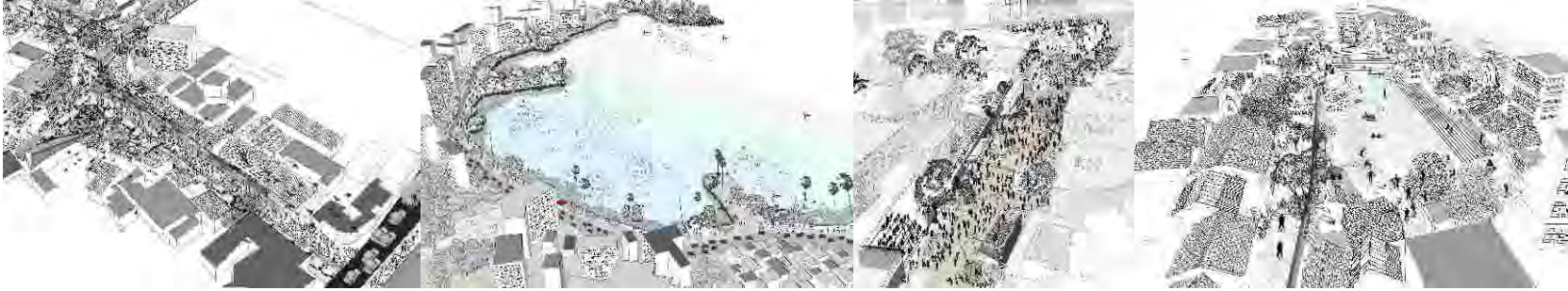

Open spaces in Mumbai

No:9 ; 2012
Landscape Environment Advancement Foundation, LEAF

Open spaces in Mumbai

Sushmita Paul

July 2012

Landscape Environment Advancement Foundation (LEAF), 2012

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Introduction

Small steps

"Inevitably, life between buildings is richer, more stimulating and more rewarding than any combination of architectural ideas."
- Jan Gehl, Life Between Buildings, Using public space.

The space outside a house, the pavement of the street, the corner around the street, the wide footpath near the corner, the 'park' – everyday spaces, spaces in which life is enacted everyday – the life of the child going to and from school, of the person selling vegetables and the people buying vegetables, the life of the people walking their dogs, by the couple sitting on a bench in the corner, of the guy selling tea, of the group of kids practicing cricket and that of the three idle friends who have nothing better to do at the moment than watch all the above.
Outdoor life is not limited to designated open spaces – 'parks' and 'maidans'; but is spread over every bit of space that can be occupied according to need and convenience. The use of these spaces is not restricted to recreational use, but also includes everyday activities of requirement across a section of people.

After all, the way people occupy spaces makes place. Sometimes this occurs even without absolutely any conducive physical elements. Human beings also have innovative ways of appropriating existing spaces, surfaces and objects. Existence and action both generate spatiality; sometimes to the extent of transforming seemingly 'leftover' spaces to positive, interesting ones. This is amply illustrated by the Linking road stalls. In fact, they have 'erased' the defined *maidan* behind the stalls.
Usage of these spaces is context (historical, cultural), place(connectivity, land use) and people (gender, age, community) specific.

This study takes the case of Mumbai and asks a set of straightforward questions - how do people choose the spaces they do for certain activities, do the kind of trees make any difference to these spaces, are there some elements that are more used than others, are there some places which are more used, or, less used than others, which places are comfortable to walk, how come some places are clean others are not ?

This is the simple premise that this LEAF document is based on; and these are some of the basic questions it asked. For the purpose of this study, Sushmita (a second year Landscape Architecture student) has documented a set of 'open' spaces in Mumbai. While the task is complex, she has stuck to first hand observations to understand the nature of activities in the selected open spaces. The study has chosen ten 'types' of open spaces and are organized according to scale – from the space outside a house to one that is one of the many iconic images of Mumbai; deliberately foregoing only designated open spaces.

While the study is by no means comprehensive, it sets out to start a process of documentation that will probably help us understand our immediate environments better and also open our eyes to the many valuable lessons that can be drawn from the close observation of these. The study also tries to draw basic inferences from the studied spaces that can become the basis of design for future open space projects.

- Anjali Jain

Introduction

A space to a place

Open spaces are a critical factor in determining the quality of life in cities. While many of these spaces have been consciously made, many others owe their origins to regular use by people. People and their everyday activities define space; sometimes in a more powerful manner than a given physical definition. Places of interaction give rise to shared, social spaces. This may range from a shared courtyard between neighbours, a street shared with vendors and fellow commuters, to a garden shared by the entire city.

Open spaces in an urban fabric become much needed spaces of leisure, interaction and in many cases, everyday transactions. “Open space is not only for recreation and conservation of environmental and cultural values, it is the foundation of urban livability”.

Mumbai due to its geography and history offers a range of open spaces which are used in a very, very intense manner. While the seafronts, mangroves, designated national parks and historic maidans are the more visible open and green spaces, there is a plethora of smaller open spaces that shape the character of the city. These range from spaces of leisure to spaces of requirement.

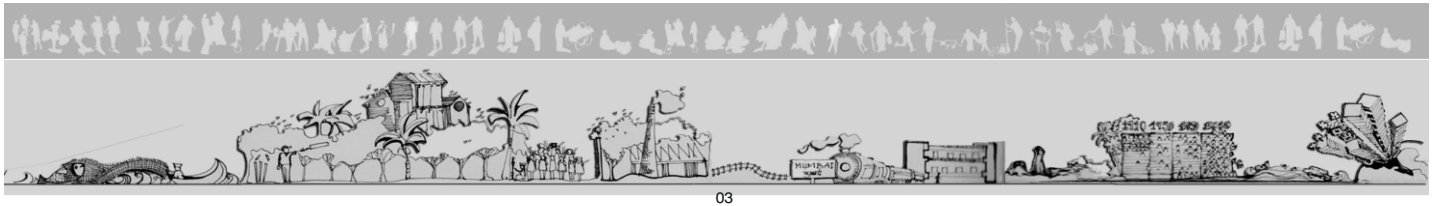
By no means comprehensive, this document studies eleven open spaces in the city of Mumbai to understand their workings. While one cannot argue about the historical and cultural importance of many of these places, the focus in this study is on understanding the current manner of use of these spaces.

The case studies have been chosen keeping in mind a sequential increase in scale; beginning with the space right outside a house (Dadar Parsi colony), to the neighbourhood (Bandra Linking road) to a well known landmark of the city (Marine Drive).

Each of the places is mapped with respect to land use, connectivity, ground surface and tree cover (where relevant). Next, a detailed sketch records the manner in which people use the space; supported by photographs based on site visits. Each of the case studies is then summed up with key observations for that particular case study.

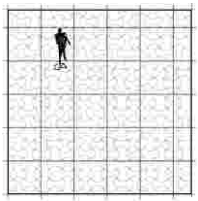
While some of these case studies reaffirm very strongly the well known tenets of good urbanism – 'eyes on street', parks without barricades; many others throw up interesting paradoxes (Patwardhan garden on Linking road completely obliterated by shopping).

This study is a documentation of observations made in eleven open spaces in Greater Mumbai. The analysis is based on personal observations and is represented in the form of drawings and images. All the eleven case studies are analyzed differently, according to the primary aspect that governs that particular space like biodiversity, vehicular movement, demography, water, surrounding built context, associated history and attention to details like street furniture.



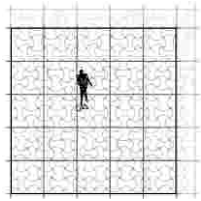
Note: A quick comparison between major cities of the world, unfortunately shows the lack of open spaces in Mumbai (ref. see below)

Open space ratio



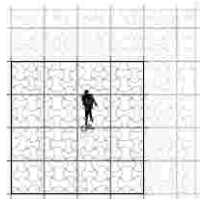
London
1,577 Sq km

31.68 sq.m/ person



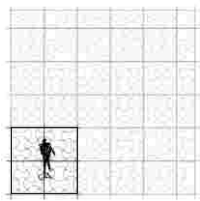
New York
1,213 Sq km

26.4 sq.m/person



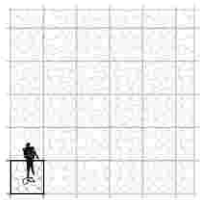
Chicago
606 Sq km

17.6 sq.m/person



Tokyo
2,187 Sq km

3.96 sq.m/person



Mumbai
603 Sq km

1.1 sq.m/person

Source: http://timesofindia.indiatimes.com/city/mumbai/You-have-just-1-1-square-metres-of-open-space/articleshow/13585198.cms?

Mumbai facts

Founded: 1668
Latitude and Longitude: 18°58'N, 72°50E
Coastline: 36 km (23 mi), Bombay Island
Climate: Tropical monsoonal; warm temperatures all year, with heavy rainfall concentrated in the summer months
Annual Mean Temperature: 27°C (81°F); January 24°C (76°F); May 30°C (86°F)

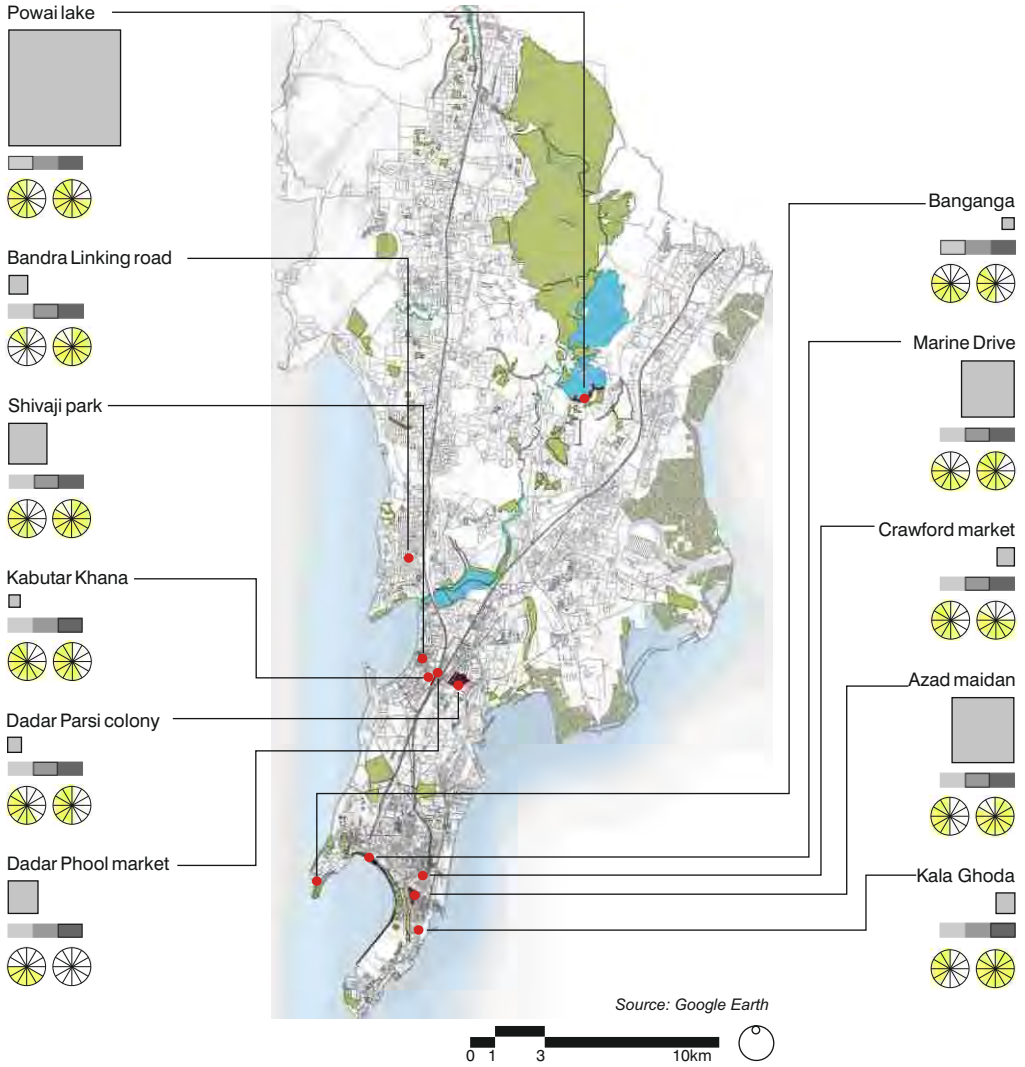
Mumbai Population Profile

1. City Proper
Population: Approximately 10 million
Area: Mumbai Island: 65 sq km (25 sq mi)

2. Metropolitan Area
Population: 18,042,000
Description: Area administered by the Municipal Corporation of Greater Mumbai (Brihanmumbai Municipal Corporation or BMC)
Area: 437 sq km (170 sq mi)

Base map

Map of Mumbai showing open spaces.



Water bodies

Documented open spaces

Other open spaces in Mumbai

Mangroves.

Area

L M H

Density palette during peak hours.
(The maximum number of people in a space at the peak time, observed during the site visit).
Low; Medium; High.

am pm

Time

Influence of the open space

SRICHAND
CLASSES
92.55
ADMISSIONS
21st Aug.
X, IX, XI XII
24072416 / 24073151

1. Building and its Environment

Area

L M H

Density palette during peak hours.
(The maximum number of people in a space at the peak time, observed during the site visit). Low; Medium; High.

am pm

Time

Influence of the open space

Dadar Parsi colony

Land use map

Residential | Commercial | Institutional

Recreational | Religious | Mixed use

Grain map

Grid (5 m X 5 m)

Maidan | Grass

Tree shade (dense) | Tree shade (scattered)

Area studied

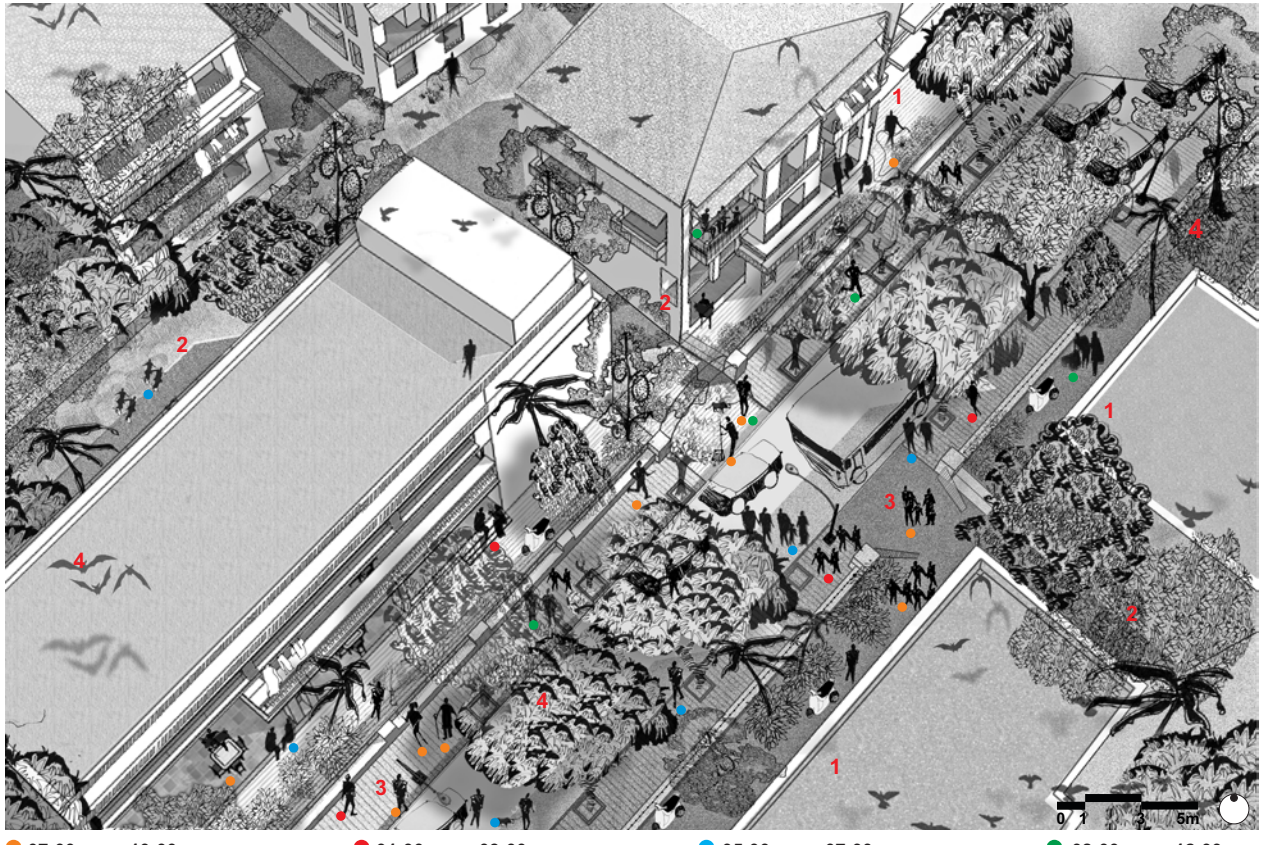
Area:

311596.93 sq.m

Dadar Parsi Colony is a Parsi colony situated in Dadar west and was built in 1899 -1900 by the British. It was the first planned suburban scheme in Bombay, with specifications of restriction in height and margins between buildings. Unlike the other Parsi colonies built in Mumbai, this one is not surrounded by a wall or fence. The ‘Five Gardens’ garden which is a part of the colony is used by people residing in Dadar, Matunga and Sion. This case study examines a small 50m stretch of street in this colony.

Wikipedia

Key plan (n.t.s)



07:00 a.m - 10:00 a.m

- Walking (H)
- Walking to school (M)
- Jogging (H)
- Reading (L)
- Walking dogs (H)
- Watering (L)
- Cleaning (M)
- Walking (L)

01:00 p.m - 03:00 p.m

- Walking to bus stop (H)
- Strolling (H)
- Playing (L)
- Sitting (L)

05:00 p.m - 07:00 p.m

- Couples strolling (H)
- Strolling (M)
- Walking (H)
- Playing (L)
- Walking to garden (H)
- Watering plants (L)
- Walking dog (M)
- Chatting (L)

08:00 p.m - 12:00 a.m

- Walking dog (H)
- Strolling (H)
- People playing cards (H)
- Walking (L)

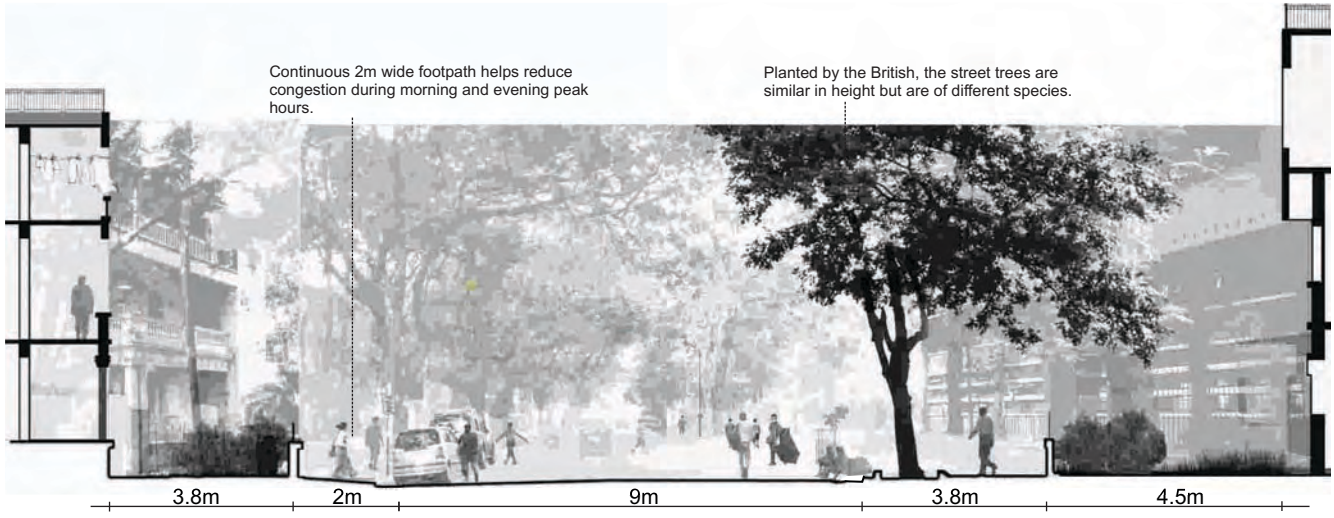
Intensity of activities: High (H) Medium (M) Low (L)

01 Porous building facade.

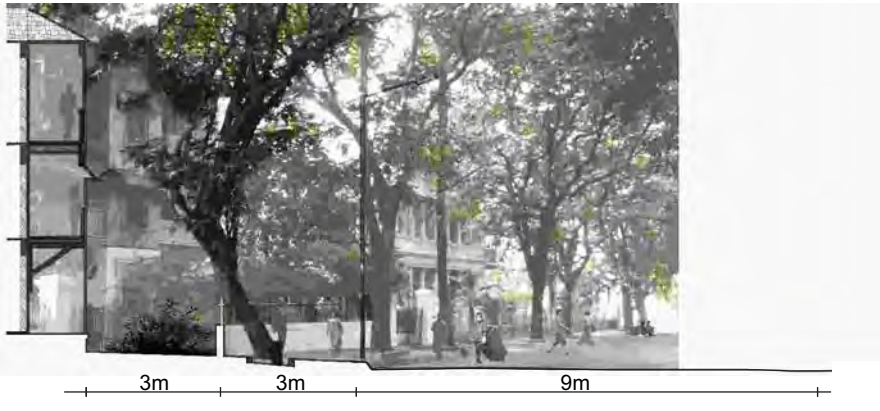
02 The setback and spaces between the buildings.

03 Footpath and activities.

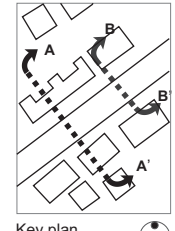
04 Tall and dense avenue of trees creates an enclosed space. The trees are home to a diverse range of avifauna.



Section AA'

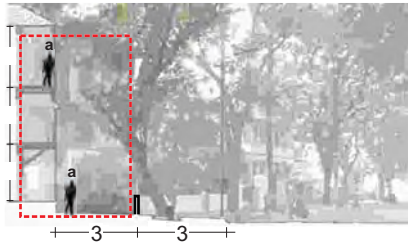


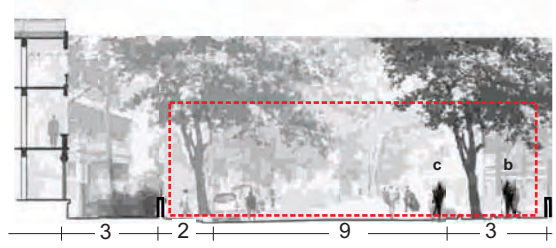
Section BB'

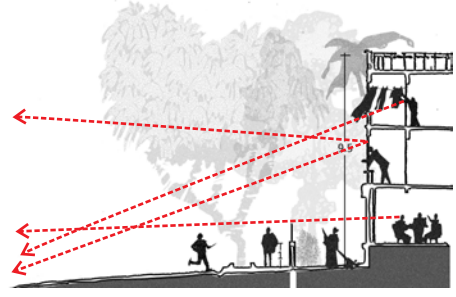


Key plan
(n.t.s)

Key observations







1. Sense of enclosure

The front yard and trees form a tall volume of space for the residents. There is a sense of enclosure due to the presence of the trees.
The high fence maintains the privacy of the residents while giving a sense of porosity to the edge of the pavement.

2. “Eyes on the street”

Big openings of the building towards the street and low height compound wall make for constant ‘eyes on the street’. This makes the road safe for everyone (children, women and the elderly) at all times of the day. It also ensures that the street remains clean.

3. Canopy formed by trees along the street.

The dense canopy of trees is an extremely inviting feature. The trees are of diverse species, planted at a distance of approximately 8 meters c/c and not in an absolute straight line. The species observed on the studied stretch of road are listed on the left.

Plant species observed on site.

Drypetes roxburghii,
Artocarpus heterophyllus,
Mimusops elengi,
Polyalthia longifolia,
Ficus benghalensis,
Peltophorum pterocarpum,
Nyctanthes arbortristis,
Palm spp.,
Delonix regia,
Syzigium cumini,
Samanea saman,
Sterculia foetida,
Kigelia pinnata

2. Neighbourhood incidents

Area

L M H

Density palette during peak hours.
(The maximum number of people in a space at the peak time, observed during the site visit). Low; Medium; High.

am pm

Time

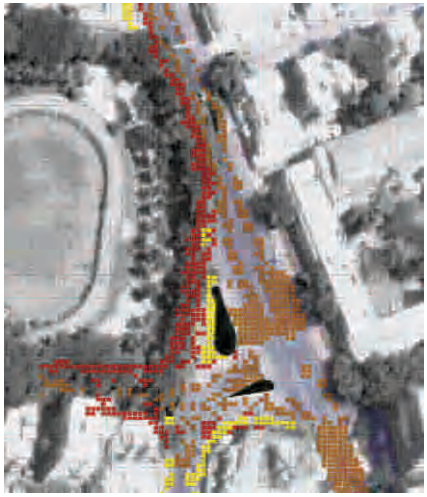
Influence of the open space

Bandra Linking road

Landuse Map

Residential | Open spaces | Religious

Commercial | Institutional | Mixed use



Grain map

Grid size 2m x 2m

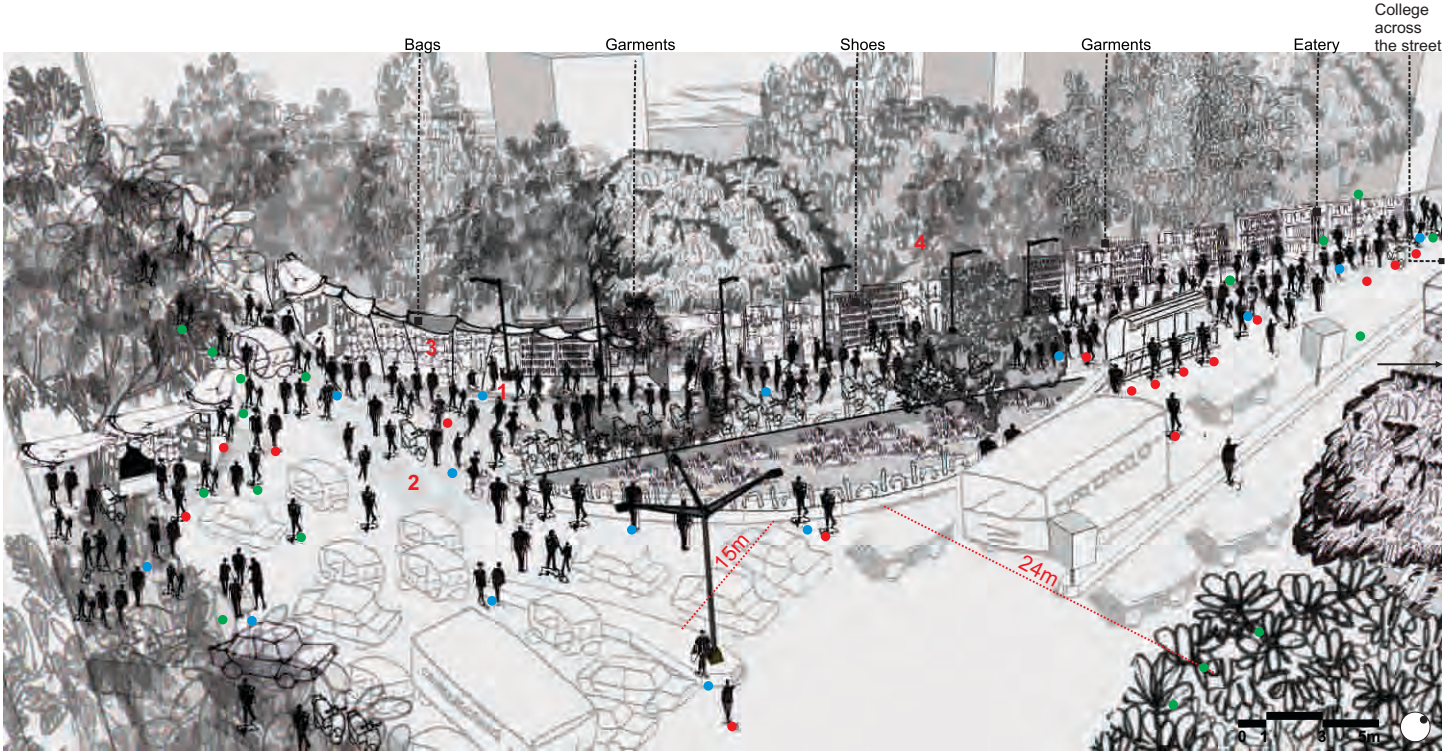
Pedestrian | Parked vehicles

Vehicular movement

Length:

300m

Linking road is located in Bandra West. It was one of the first arterial roads linking Bandra and Juhu to other parts of the city such as Dadar, Worli, Matunga, Wadala, Byculla in the north, during the 1940s. The oldest name of the road was Dadabhai Navroji Road. The entire stretch of Linking road, is lined with stalls of clothes, shoes, bags and food. There are high end apparel shops as well as stalls selling clothes. This leads to a mix of user groups. The college which is across the street also results in a lot of activities which spill out on the street. There is a garden behind the shopping street, used during mornings and evenings by people living in the neighbourhood. This study looks at the street shopping area at the southern end of Linking road.



Plan shows activities from 11:00 a.m to 11:00 p.m

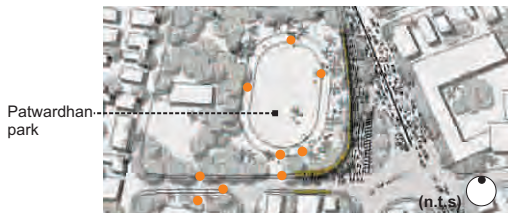
06:00 am - 09:00 pm
(Refer plan on the right)

- Jogging (H)
- Strolling (H)
- Walking dog (M)

11:00 am - 11:00 pm
(The activity and the usage pattern remains the same for afternoon, evening and night)

- Gathering (H)
- Chatting (M)
- Cleaning (L)
- Shopping (H)
- Eating (M)
- Strolling couples (H)
- Walking (M)
- Walking (H)
- Shopping (L)

Intensity of activities: High (H) Medium (M) Low (L)



Plan showing activities from 06:00 am - 09:00 am

01 Encroached footpath, temporary stalls.

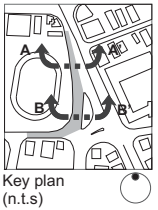
02 3.5m wide paved surface between the footpath and the road is used for pedestrian movement.

03 Temporary stalls of 1.5m (W) x 2m (B) x 2.8m (H).

04 The market has 65% stalls of clothes, 25% stalls of shoes, bags and other small goods and10% of food stalls.

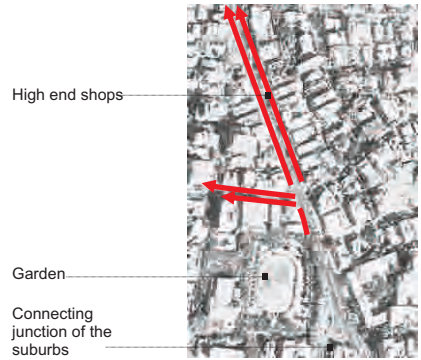
Section AA'

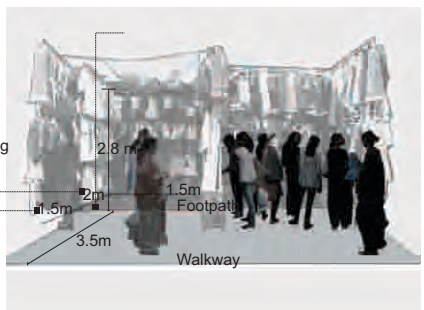
Section BB'

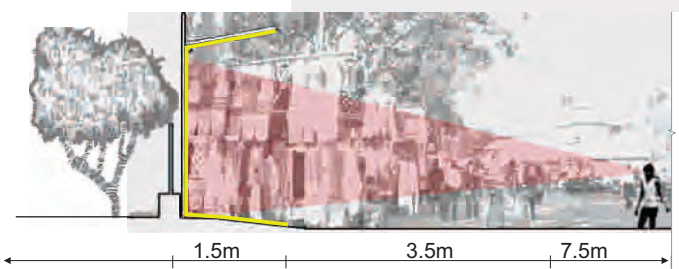


Key plan
(n.t.s)

Key observations







1. The informal stalls are a continuation of the high end shops that line Linking road.

Linking road is a major shopping hub. The stalls are a continuation of shops lining the road. This leads to high footfall.

2. The market occupies a total width of 5m.

The stalls, their display, space for people to stand and bargain and adequate space for non shoppers to walk, takes up all of 5m of space. While 1.5m of this space (stall+standing space) is above road level. The pavement for walking is 3.5m wide and at grade with the road; the pedestrian zone is demarcated by a different surface material, concrete cobbles in this case.

3. Shopping as the dominating activity.

The garden behind the shopping street is visually inaccessible and does not allow the open space to be a part of the activity on the road and the footpath, so the garden becomes a dead space even though the street is active.

Source:
http://shutterbugged.blogspot.in/2012/04/busyness-at-dadar-flower-market.html

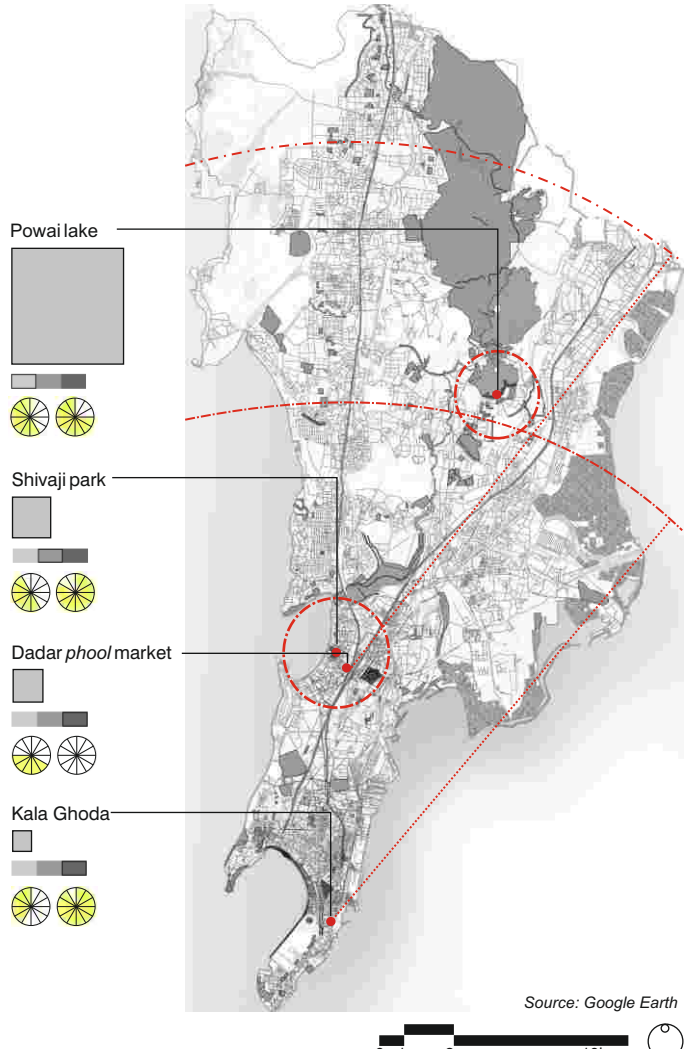
3. Suburban Centers

Area

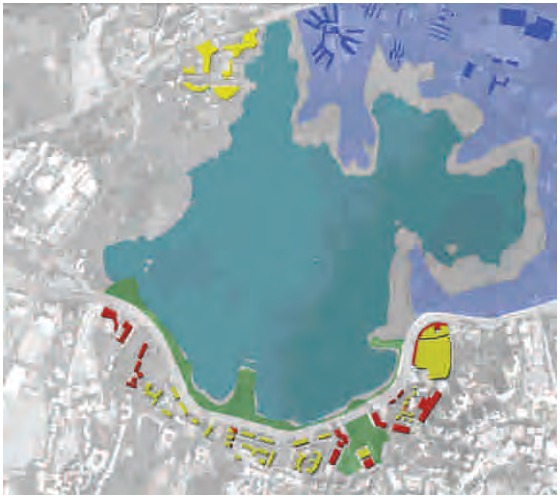
Density palette during peak hours.
(The maximum number of people in a space at the peak time, observed during the site visit). Low; Medium; High.

Time

Influence of the open space

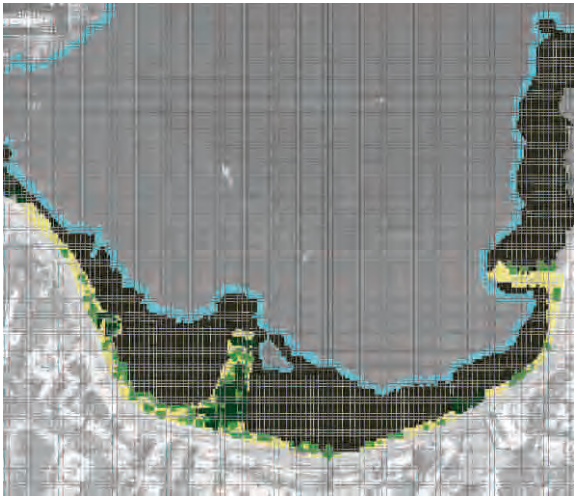


Powai lake



Land use map

Residential
Commercial
Lake
Recreational
Institutional



Grain map

Paved
Tree shade (dense)
Garbage and *Eichornia* (water hyacinth)
Grid (5 m X 5 m)
Lake visible
Tree shade (scattered)

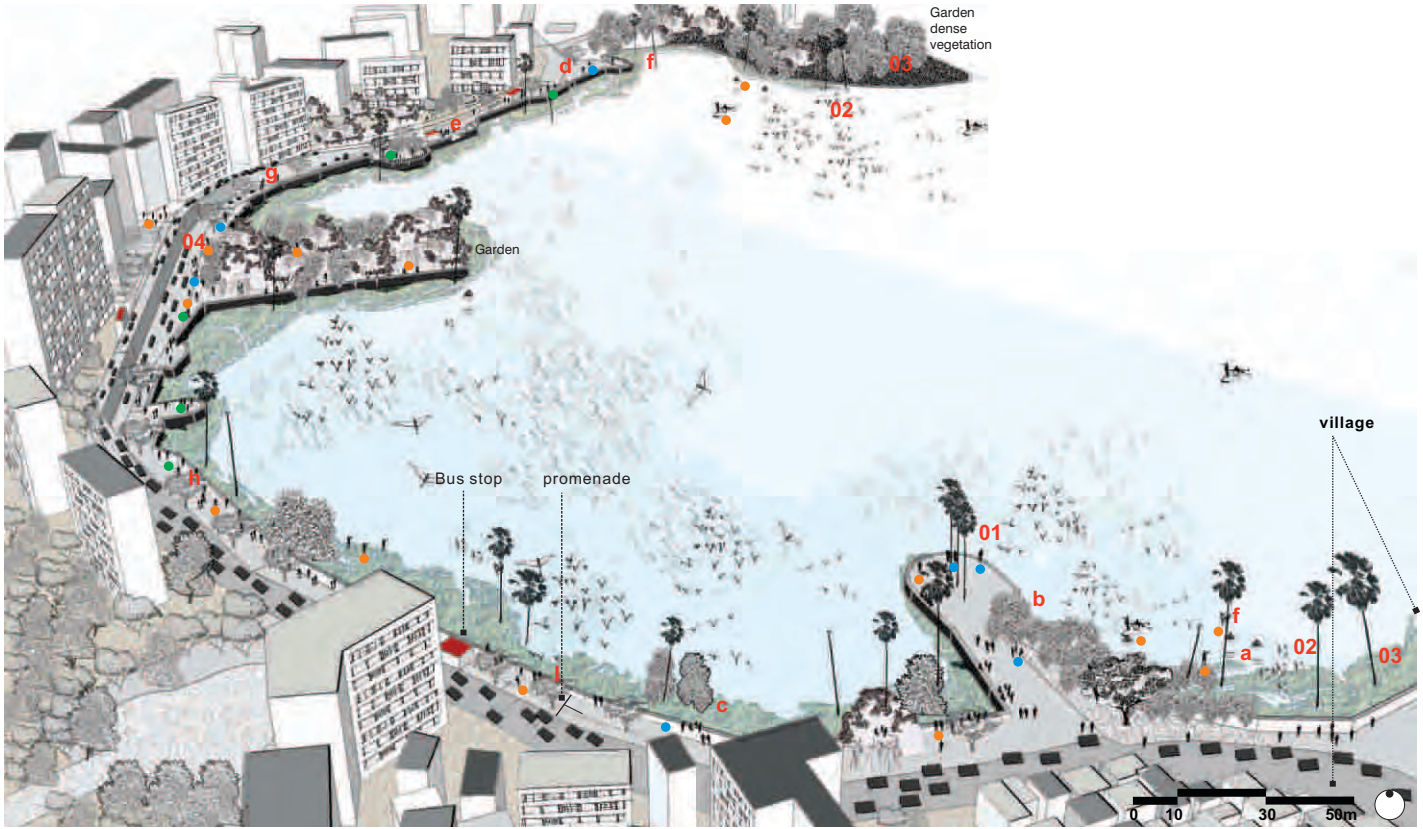
Area

Lake area: 21,00,000 sq.m

Lake front development: 60,000sq.m

Key plan (n.t.s)

Powai lake is an artificial lake, located in the north of Mumbai. It was originally developed in 1890 as an emergency measure to mitigate an anticipated water famine. At present the water in the lake is unfit to drink. In 2006, the lake edge was sanctioned to be developed as a public plaza. The edge of the lake allows people to exercise, play, organize gatherings and to do other recreational activities.



07:00 a.m- 10:00 a.m

- Walking (H)
- Fishing (M)
- Chatting (L)
- Walking dog (H)
- Collecting coconut (M)
- Jogging (H)
- Walking (M)
- Swimming (M)
- Cleaning (L)

05:00 p.m-07:00 p.m

- Strolling (H)
- Fishing (L)
- Walking (H)
- Chatting (L)
- Playing (H)
- Chatting (M)

08:00 p.m-12:00 a.m

- Walking (H)
- Playing (M)
- Chatting (H)
- Chatting (H)
- Strolling (M)

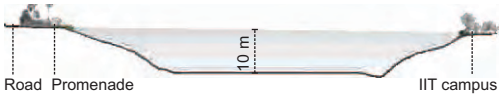
Intensity of activities: High (H) Medium (M) Low (L)

01 The edge is marked by a continuous parapet wall 0.65m high.

02 Ashy Drongo, Black Kite, White-throated Kingfisher, Crow Pheasant, Bronze-winged Jacana, Purple Moorhen, Ashy Prinia and crocodiles can be spotted around the lake.

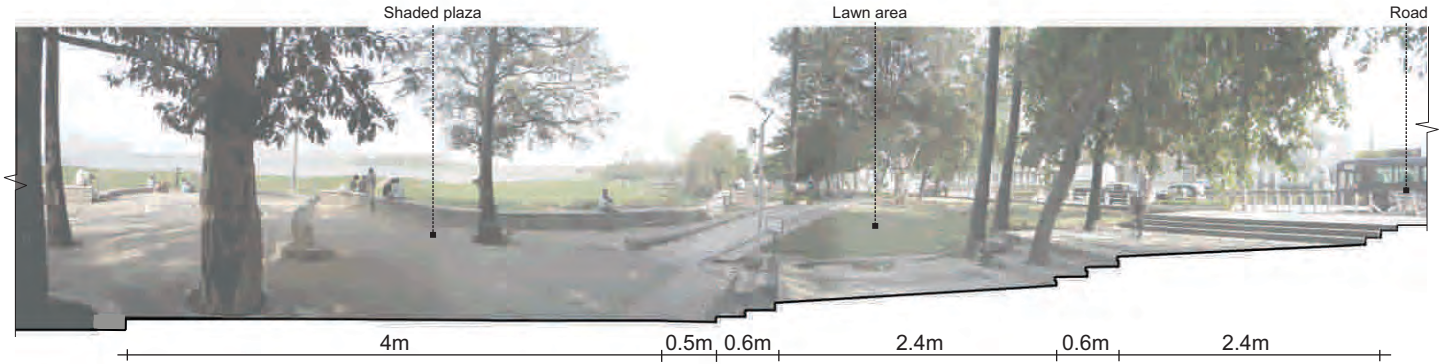
03 This space is shared by visitors, local village dwellers and people from the surrounding residential areas.

04 Activities on the edge of the lake.

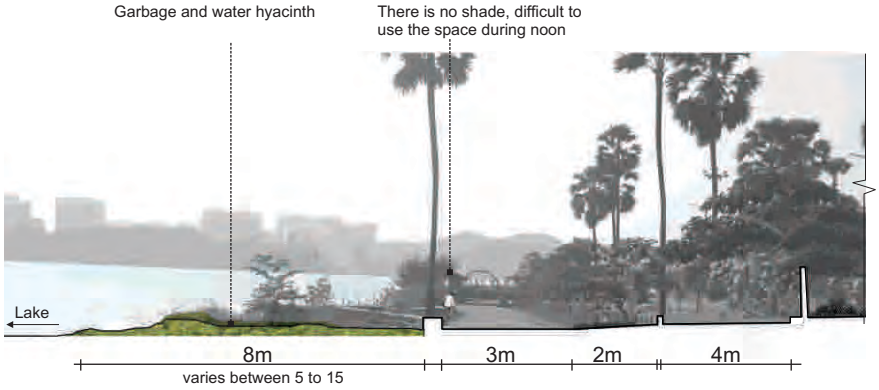


Site section AA'

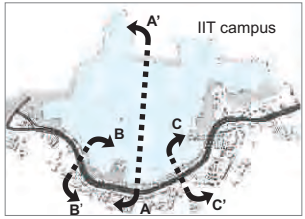
Source : Google Earth



Section BB'



Section CC'

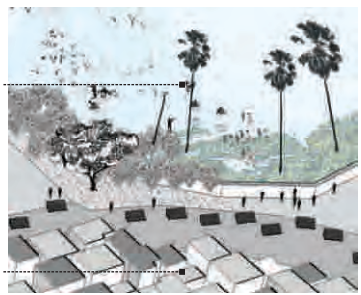


Key plan
(n.t.s)

Key observations

1. The promenade as a buffer.

The 15 meter wide promenade creates a buffer between the heavy vehicular zone and the lake. This helps reduce the effect of the noise and air pollution on flora and avifauna of the lake.



2. The parapet allows flexible usage.

Minimum intervention and the simplicity of the edge, has made the space flexible to the needs of the local villagers, residents from the nearby neighborhood, children and visitors. The edge near the village is not paved and is used more frequently by the villages for fishing, collecting coconuts and recreational purposes.

Garbage and *Eichornia*

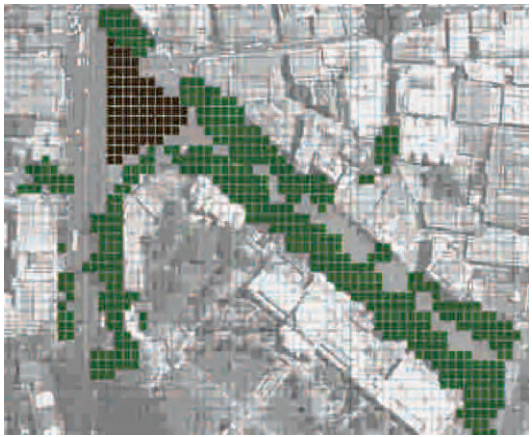
Garbage and *Eichornia*

3. Poor association with water, visually and physically.

Water is the most important element of this recreational space but due to the garbage and *Eichornia* at the edges it fails to elevate the senses. The garbage thrown in the water by the people residing around gets entangled in the 8 m wide swath of *Eichornia*. This makes it difficult to derive a connection between the promenade space and the lake waters.

http://populartemplesofindia.blogspot.in/2012/02/kala-ghoda-art-festival-2010-mumbai.html

Kala Ghoda



Land use map

- Footpath used for installations
- Major vehicular route
- Road converted to a pedestrian only zone
- Parking space, galleries, exhibition, restaurant are part of the festival

Grain map

- Major installations
- Grid (5 m X 5 m)
- Tree shade

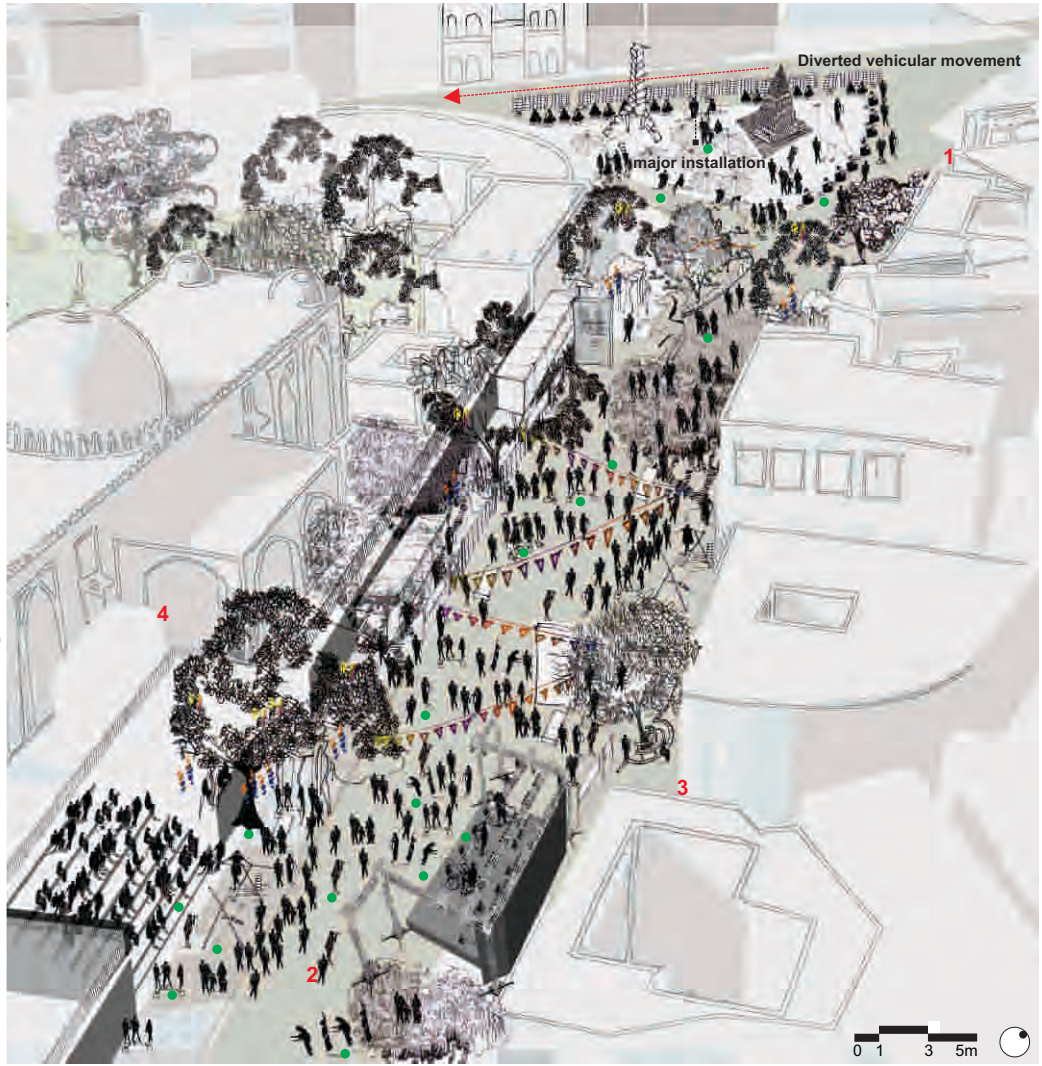
Area:

9,534 sq.m

The Kala Ghoda Arts Festival is an annual festival, held in late January or early February, in the Kala Ghoda precinct of South Mumbai. It is usually a nine day festival. The name Kala Ghoda can be traced to the old equestrian statue of King Edward VII, which was placed at the center of the large node on the old Esplanade Road. It was started in 1999. Today the area is a hub of cultural activity and a throbbing urban node with institutions like the Jehangir Art Gallery, Max Mueller Bhavan Bombay, Bombay University, Prince of Wales Museum, National Gallery of Modern Art, Institute of Science, Bombay Natural History Society, Elphinstone College, and David Sassoon Library around it. This is the historic precinct of Mumbai and forms an impressive backdrop for the festival.

Source: http://www.udri.org/

Key plan
(n.t.s)



08:00 p.m - 11:00 p.m

Walking (H) | Performing (M) | Chatting (L)
Chatting (H) | Watching (M) | Selling (L)
Selling (H) | Shopping (M)
Performing (M) | Dancing (M)

Intensity of activities:
High (H) Medium (M) Low (L)

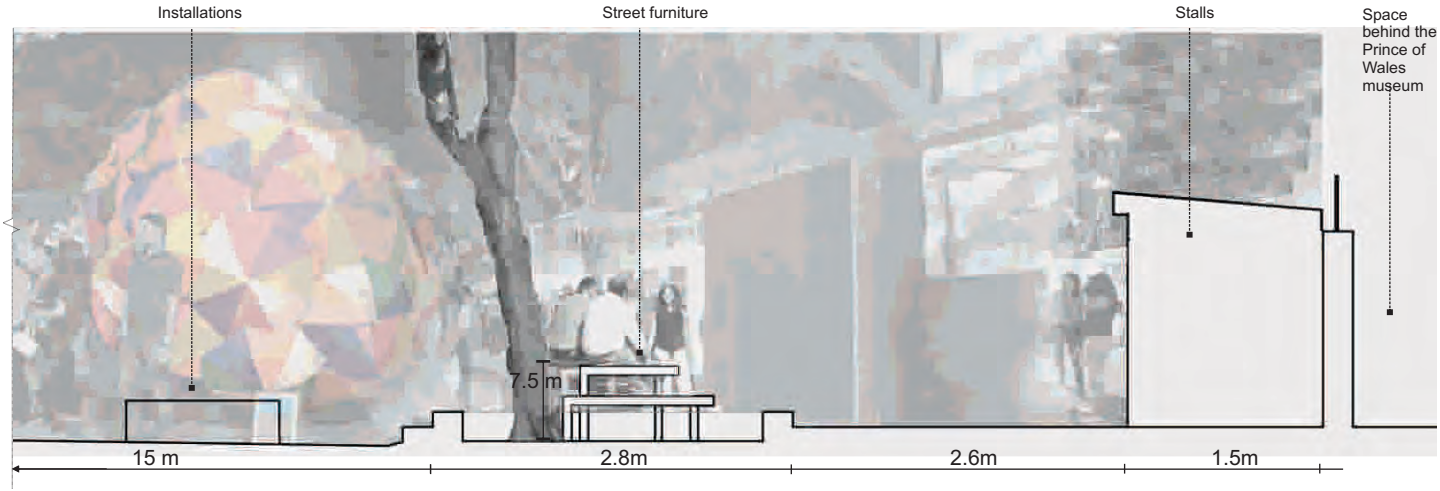
Note: The intensity of the people flowing in and out of the festival remains similar through out the day.
Day time - 11a.m. to 3p.m.
Night time - 7p.m. to 11p.m.
The view shows activity documented during the night time.

01 Context.

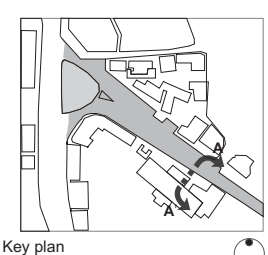
02 Intensity and frequency of people visiting remains similar during day time and at night.

03 Multiplicity usage of street furniture.

04 Existing amphitheater, railings, curbs, trees and compound walls are all used to form temporary spaces for the display of art work, public seating and support structure for stalls.

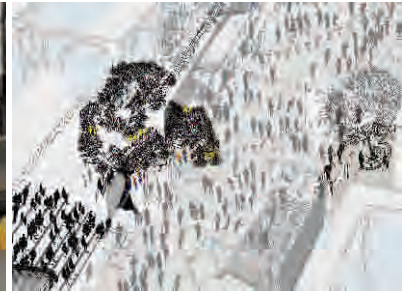


Section AA'



Key plan
(n.t.s)

Key observations



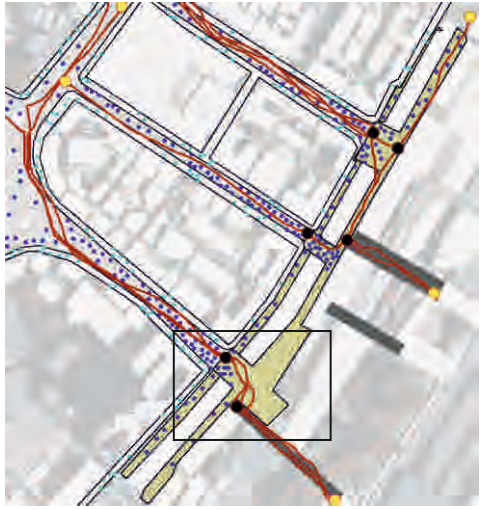
1. Key statistics

Duration: Nine days.
Visitors: Max no. of people coming to the space -over one lakh.
source *: http://timesofindia.indiatimes.com/topic/Kala-Ghoda-Arts-Festival-2011.*
Area: 100,000 square feet, existing indoor gallery space, mass outdoor pavement galleries, and exhibition space within the covered arcades.
Surrounding: Heritage precinct.

2. Multiplicity of spaces.

During the festival, the 15m wide street, 4 m wide pavements, tree guards, curb stones along the parking lot, compound wall, trees etc all used in some way. There are temporary spaces for the display of art work on the existing railing, public seating on the curbs and support structure for stalls on the trees (as shown in the images on the left).

Source: Pravinm Parab
http://flickeflu.com/set/72157616564110569



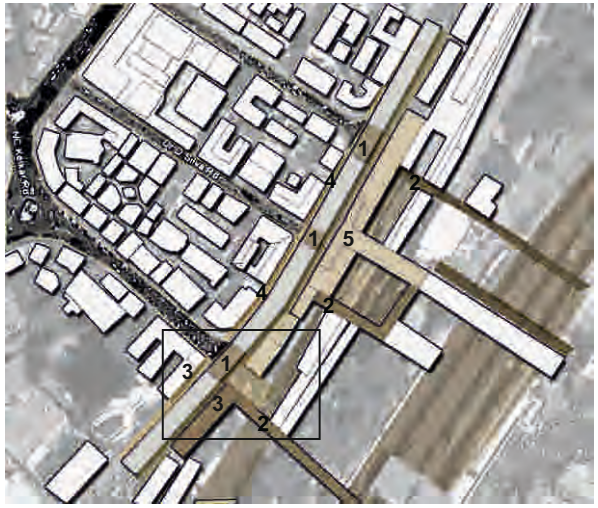
People walking on pathway

People walking on the road

Path for commuters

Starting point of the route taken by the users

Ending point of route taken by users



Dadar *phool* market

01 Under bridge

02 Foot over bridge

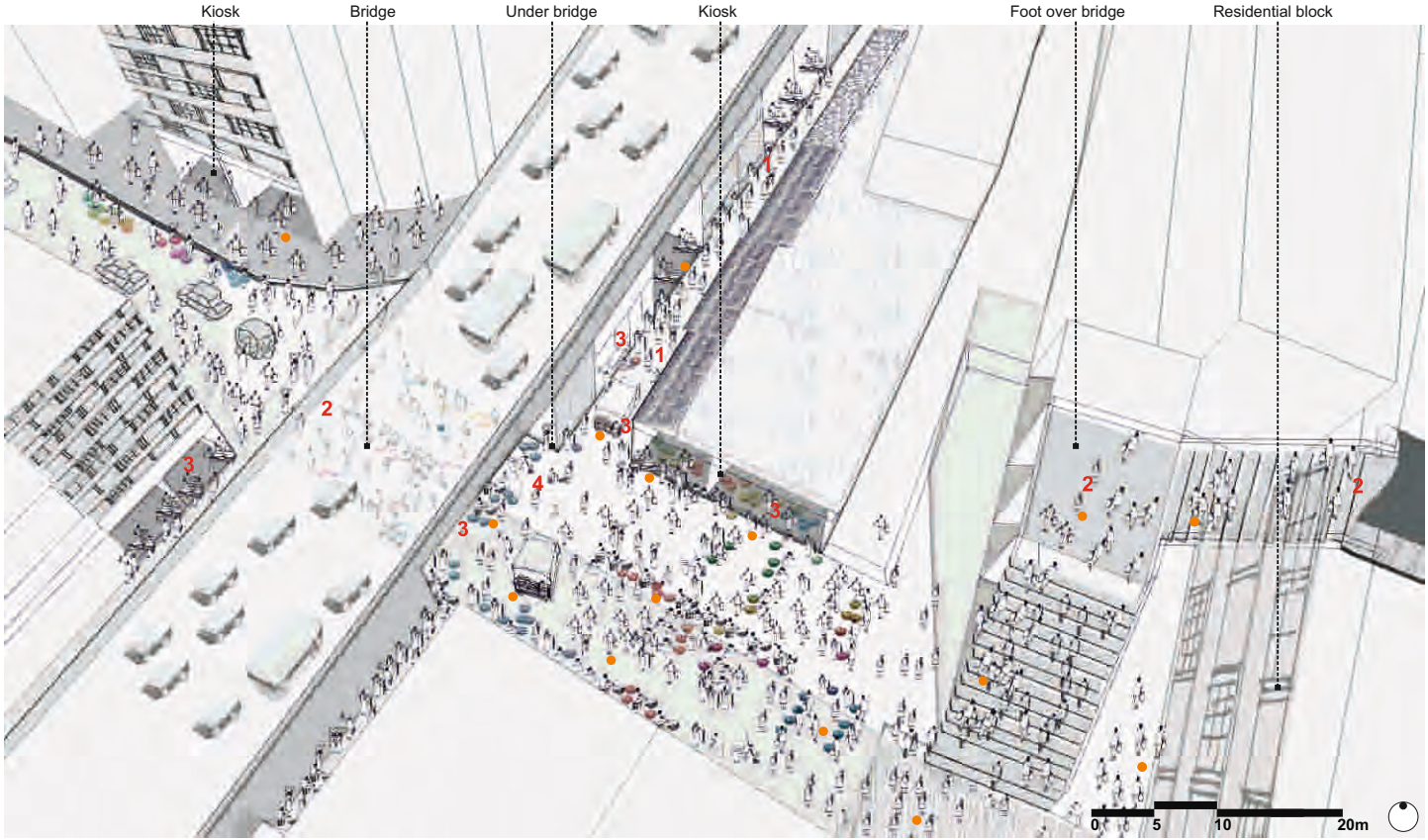
03 Flower shop

04 Flower venders on the street

05 Dadar west railway station

Length: 300m

Dadar *phool* market (flower market) is located outside Dadar station in central Mumbai. It is a whole sale flower market, which starts at 05:00 am and ends by 09:00 am. Flowers like rose, chrysanthium, marigold, jasmine, gladiola, aster, lily, gerbera and carnation line the narrow street. The flowers come from Pune, Bangalore,Thailand, Kolkata, Mumbai, Muzaffarnagar, Shimla and Kullu in



04:00 am - 09:00 am

Note: The drawing shows activities from 04:00 am to 09:00 am

- Selling in kiosk (H)
- Selling (M)
- Standing and Selling (H)
- Buying (L)
- Selling (H)
- Buying (L)
- Cleaning (M)

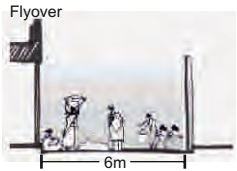
Intensity of activities: High (H) Medium (M) Low (L)

01 Edge conditions.

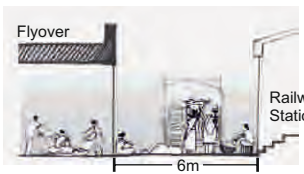
02 Approach views.

03 Activities.

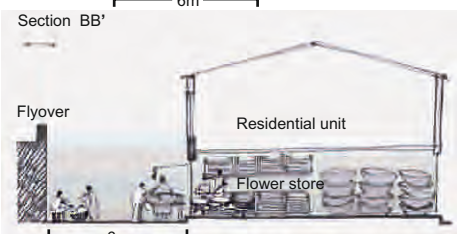
04 The *phool* market disappears by 10:00 am. Later the same space is used as a vegetable market



Section AA'



Section BB'



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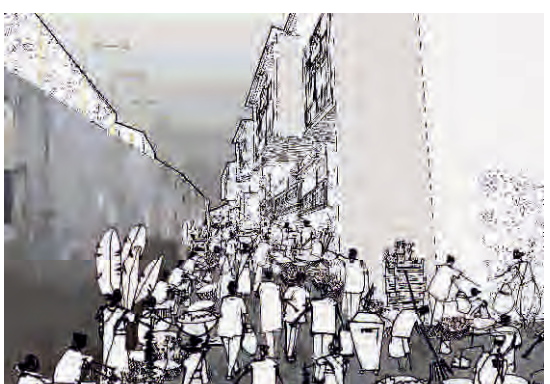
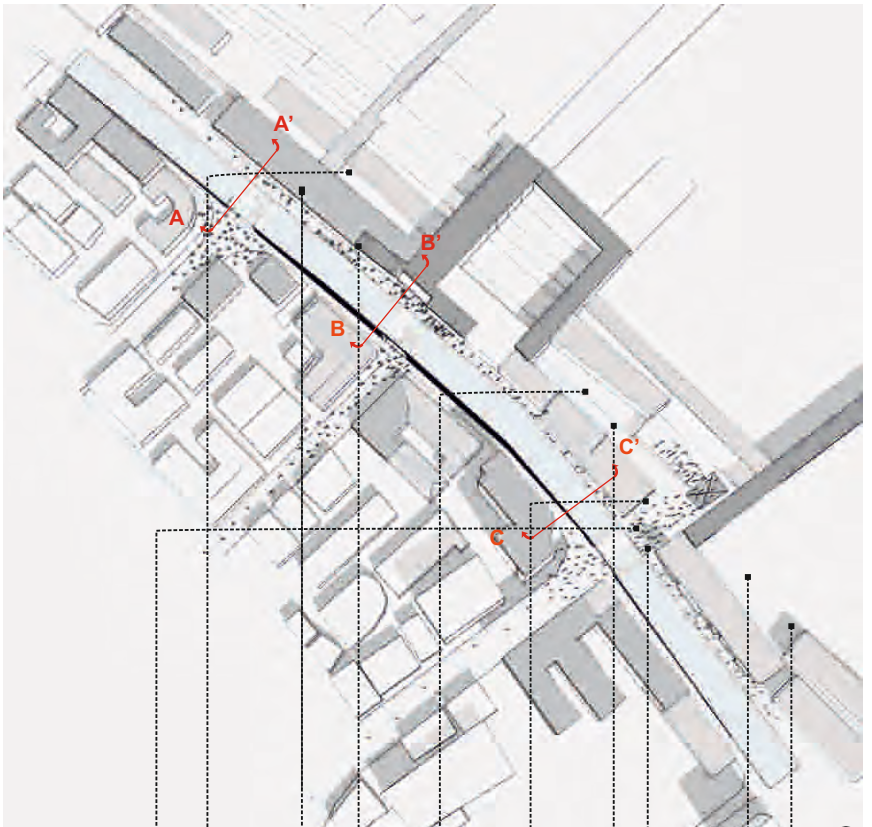
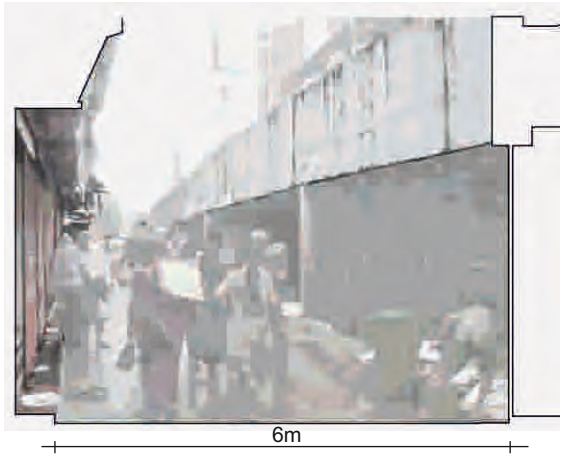




(n.t.s)

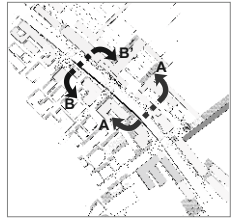
Selling flowers on the streets
(Encroachment on the street; 05:00 am - 09:00 am

Selling flowers in shops
(Legal shops; 05:00 am - 09:00 am)



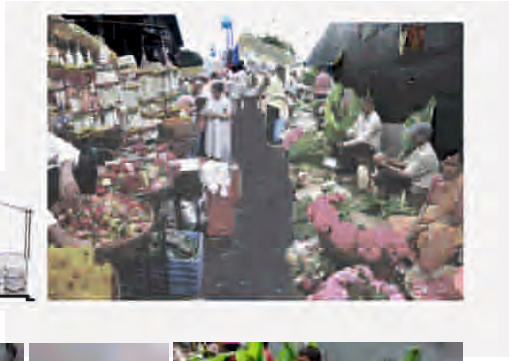
Section AA’

Section BB’



Key plan
(n.t.s)

Key observations



Types of enclosures

Fig.2 Florist sitting near the foot over bridge

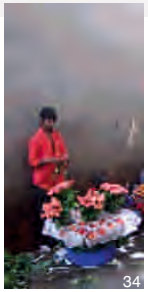


Fig.1 Florist sitting and standing along the flyover.

1.The quality of enclosed space is defined by the smell of the flowers, sound of people in the market and the colours of the flowers.

Along the narrow 6m wide paved walkway, flower sellers line both sides. The dark surroundings which are lit by small yellow bulbs, provides a rich experience while moving in between the colours, sound of people bargaining, and the smell of the flowers.
The edges are solid, so the layers of flowers become the focus as one moves along the narrow market.

2. Along the narrow street there are specific patterns in which the florists set up their wares.

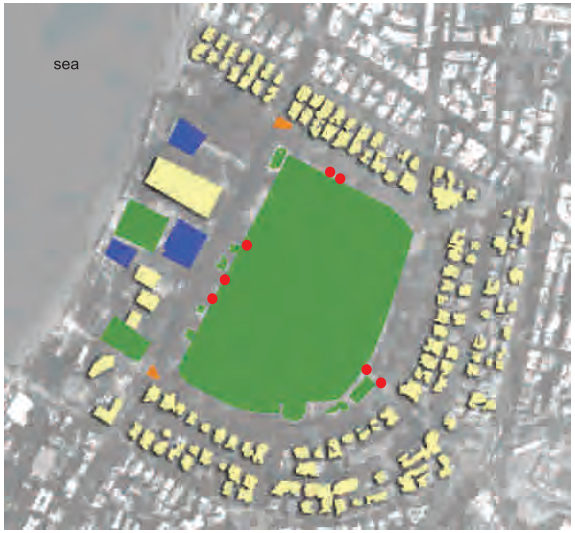
In an area of approximately 2400 sq mts, 300 venders sell flowers every day. *(source: http://indianbazaars.blogspot./2010/03/bazaar-tour-1-dadar-flower-market.html).* Each of the florists setup their wares as per their location:

a. The florists near the wall of the flyover stand and keep their wares in front of them, on the ground (as shown in fig.1).

b. The florists sitting near the foot over bridge keep their wares around them, on the ground (as shown in fig.2).

Source: http://4.bp.blogspot.com/-JqesDYqWbwM/TZsRfFSedLI/AAAAAAAACsc/lMiKb8vl4S8/s1600/08.jpg

Shivaji park



Land use map

Residential Commercial Recreational

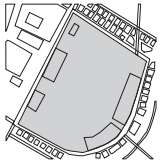
Institutional Religious

Grain map

Grid (5 X 5 m)

Maidan Grass

Tree shade (dense) Tree shade (scattered)

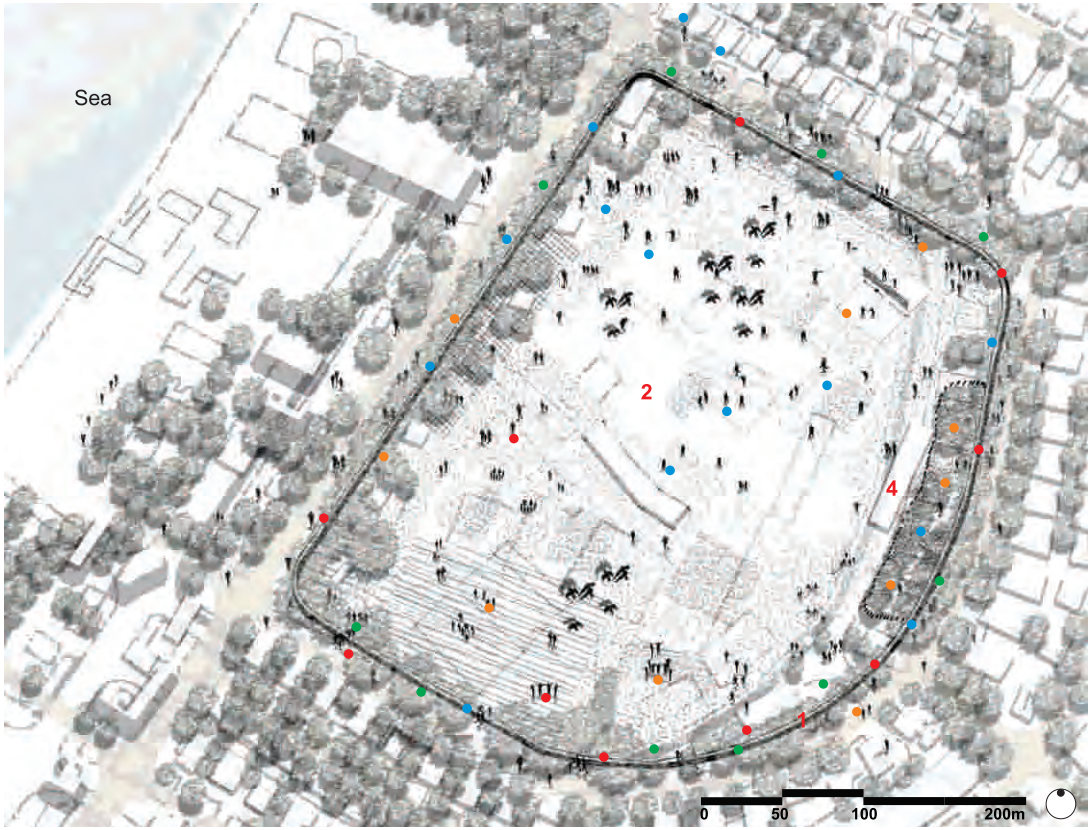


Area:

1,00,203 sq.m

Shivaji park located in central Mumbai was created in1925. The area surrounding the park has many buildings dating back to the mid 1900s. The ground is flanked on its edges by a low height parapet wall which is used by all age groups throughout the day for a range of activities. The walkway around the perimeter is occupied with people taking walks and strolling during the day time. It is of historical and cultural value because of the political and social gatherings it has witnessed, both in pre and post independence Mumbai.

Key plan (n.t.s)



07:00 a.m- 10:00 a.m

- Walking (H)
- Jogging (H)
- Walking dogs (H)
- Yoga (M)
- Playing (M)
- Playing (M)
- Chatting (L)

01:00 p.m- 03:00 p.m

- Chatting (H)
- Walking (H)
- Playing (M)
- Strolling (M)

05:00 p.m-07:00 p.m

- Playing (H)
- Playing (H)
- Playing in groups (M)
- Eating (M)
- Chatting (M)
- Strolling (M)
- Chatting (L)
- Walking dog (L)

08:00 p.m- 12:00 a.m

- Walking (H)
- Jogging (H)
- Walking dogs (M)

Intensity of activities: High (H) Medium (M) Low (L)

01 The low parapet around the park is the most used element working bothways, for looking in and out.

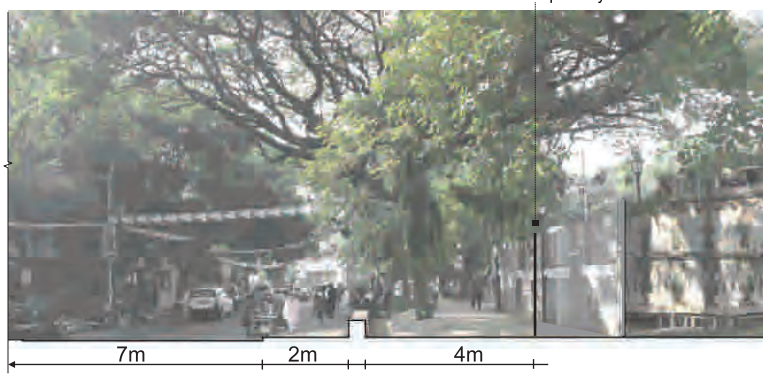
02 The *maidan* is used for sports activities, mostly during winters. The nature of the ground allows for a range of activities.

03 The park is a highly accessible space for people of all sections of society and age groups. The low parapet wall helps in having a highly porous edge.

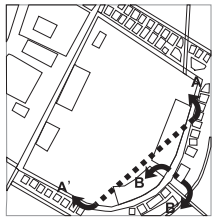
04 Shivaji park is used for public occassions as well as sports tournaments, rallies and even community meetings.

Section AA’

No visual porosity



Section BB’



Key plan
(n.t.s)

Key observations

Visual and physical porosity

1. Low height parapet wall allows for different activities to co-exist in the same space and ensures visual and physical porosity.

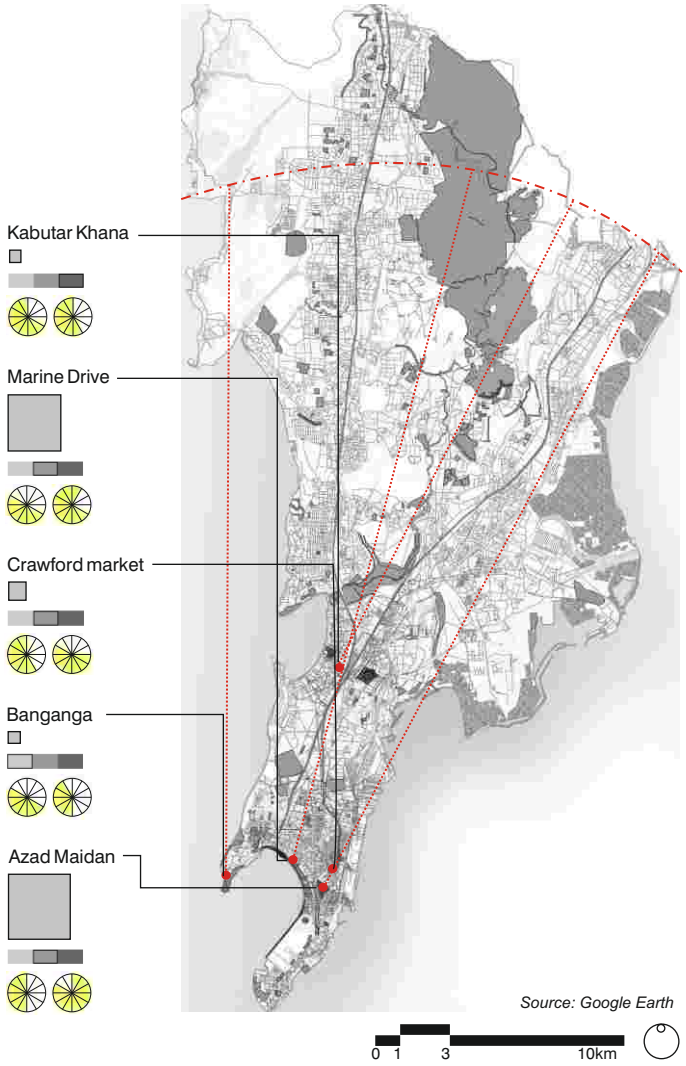
a. The low height parapet wall and the absence of dense vegetation at eye level, along the periphery makes the park visually and physically accessible. The *maidan* which is active through out the day becomes a part of the street and the roads around it. This makes the people using the pathway and the maidan feel safe at all times of the day.

Different activities and mixed user group.

b. The parapet wall becomes a place to sit for children to and fro from the school, a seat for people watching sports in the ground, for workers taking a break to sleep. It is also a datum for vendors from the *poha* seller in the morning to the ones offering a head massage at night.

Source:
http://1.bp.blogspot.com/_wupLTkdHTtI/TFFWXZ_czII/AAAAAAAAYc/AorU9JzaFtM/s1600/mumbai.jpg&w

4. City markers



Area

L M H

Density palette during peak hours.
(The maximum number of people in a space at the peak time, observed during the site visit). Low; Medium; High.

am pm

Time

Influence of the open space

Marine Drive

Length:
4.3 km

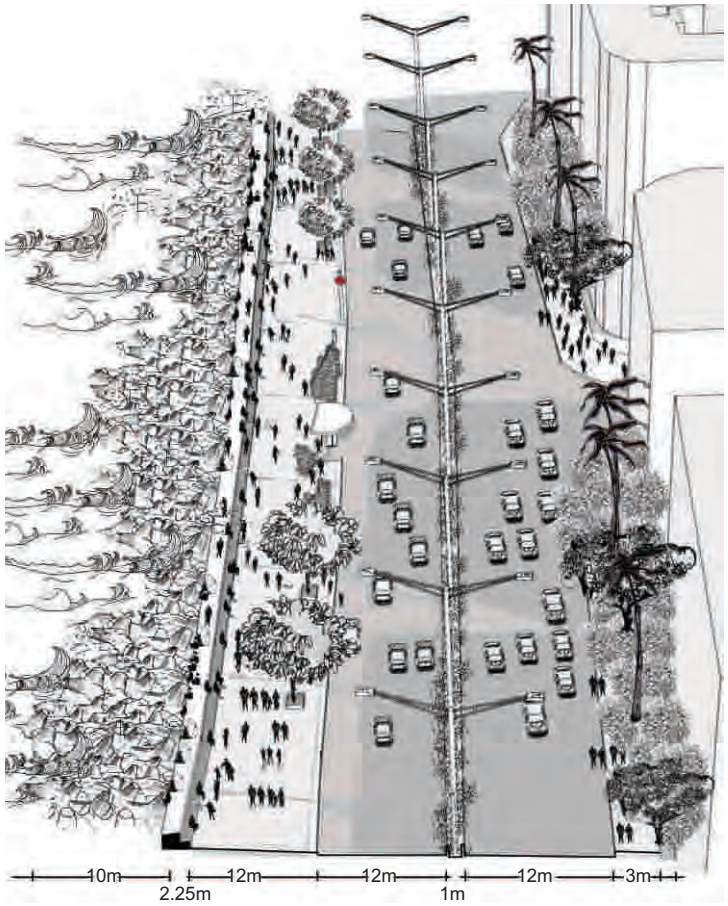
Grain map

- Grid (5 m X 5 m)
- Promenade
- Sea
- Sand (beach)
- Open public ground
- Sand (during low tide)
- Tree shade

Key plan
(n.t.s)

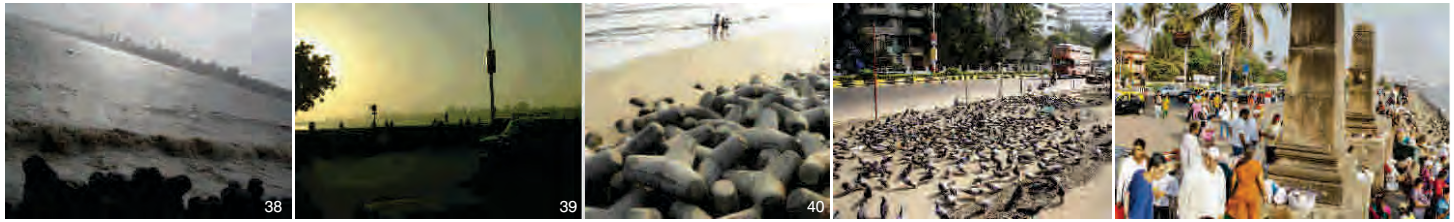
Marine Drive is reclamed land from the back bay of the Arabian Sea it was built in the year 1920. The promenade runs from Nariman point through Girgaum *chowpatty* to the foot of Malabar Hills a length of 4.3 kms approximately. It is a wind swept promenade, flanked by the sea on one side and a row of Art Deco buildings on the other side. Marine Drive is one of the most well known landmarks of Mumbai.

Activities: Evening Morning Occasional (eg.monsoon season)



Part plan

0 5 10 20m

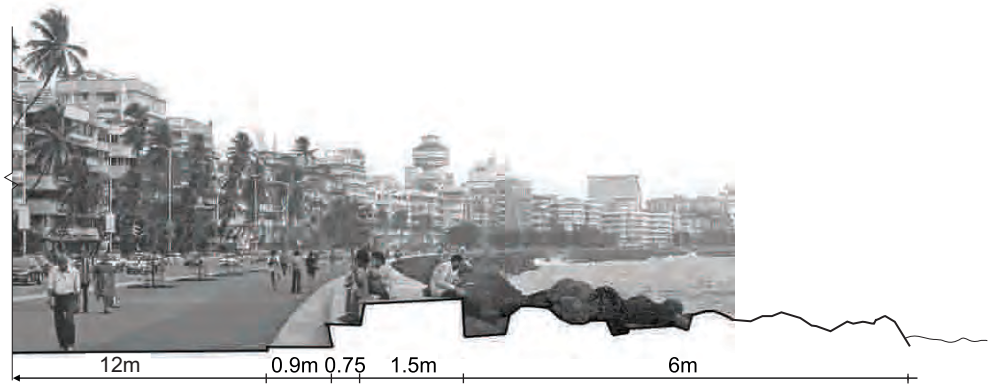


01 Vignettes along Marine Drive.

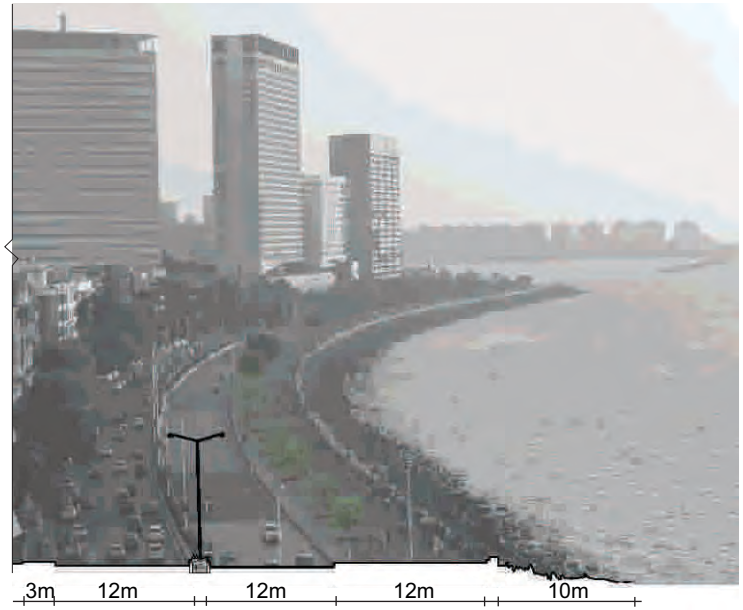
02 Art Deco buildings along the promenade.

03 Wide edge of the promenade gives the users freedom to use the space differently.

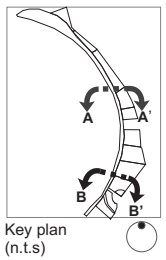
04 The promenade transforms itself during the monsoon and evening hours.



Section AA'

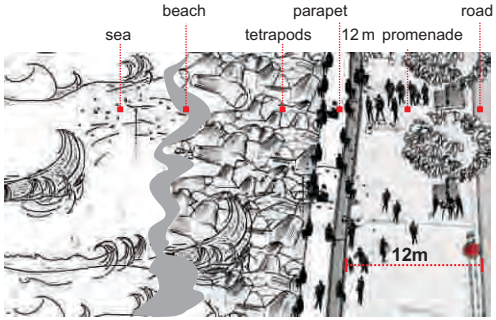


Section BB'



Key plan
(n.t.s)

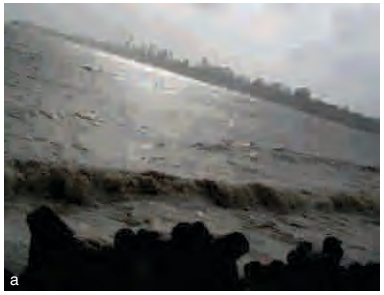
Key observations

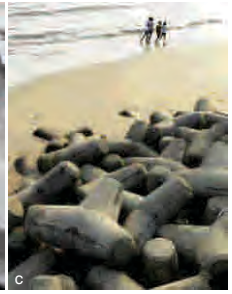


1. The threshold between the buildings and the sea.

a. A 12m wide promenade creates a buffer between the road and the edge of the sea.

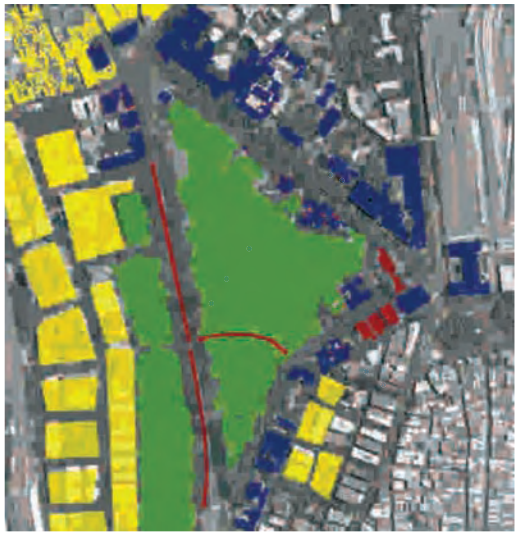
b. A low parapet wall offers multiple and flexible use.
It allows people to face the promenade, allowing active 'people watching'.
It also allows one to face the sea and the infinite. The freedom to look towards both sides allows for a possibility of a sense of engagement with the world, as well as solitary introspection.





c.The parapet sits atop a retaining wall. Between the sea and the retaining wall are concrete tetrapods. These not only break the waves and prevent them from crashing against the retaining wall; but also serve as a measure of the tides and changes in the sea (a,b). These changes engage the people sitting in a more 'complete' manner. At very low tide, a strip of sand is revealed and people scramble over the tetrapods down to walk along the beach (c).

Azad Maidan



Land use map

Commercial Residential Institutional

Recreational

Grain map

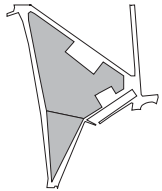
Grid (5 m X 5 m)

Maidan

Grass

Tree shade (dense)

Tree shade (scattered)



Area:

Maidan
1,13,865 sq.m

Key plan
(n.t.s)

Azad Maidan (formerly known as Bombay Gymkhana Maidan) is a triangular-shaped ground in south Mumbai, near the CST railway station. The Bombay Gymkhana clubhouse, which today can be accessed by a limited number of people, was built in 1875 at the southern end of the *maidan*. Fashion street famous for street shopping is to the west of the *maidan*. The *maidan* is used daily by people from around Mumbai for sports, exercise and occasionally for events of national importance (protest meetings, political rallies, flag hoisting etc) .

07:00 a.m- 10:00 a.m

- Walking (H)
- Walking to college (M)
- Waiting (L)
- Shopping (H)
- Playing football (M)
- Jogging (L)
- Eating (H)
- Playing cricket (H)
- Selling (L)
- Playing (M)
- Chatting (L)

01:00 p.m- 03:00 p.m

- Playing (H)
- Couples strolling (M)
- Waiting (L)
- Playing cricket (H)
- Walking to school (M)
- Walking from station (L)
- Selling (H)
- Walking (M)
- Selling (L)
- Chatting (H)
- Playing (L)

05:00 p.m- 07:00 p.m

- Selling (H)
- Playing cricket (M)
- Playing (H)
- Playing football (M)
- Strolling (H)
- Chatting (M)
- Selling (H)

08:00 p.m- 10:00 p.m

- Chatting (H)
- Family strolling (M)
- Walking (H)
- Couples strolling (L)
- Selling (H)
- Jogging (L)
- Walking (M)
- Chatting (L)

Intensity of activities: High (H) Medium (M) Low (L)

Occasional

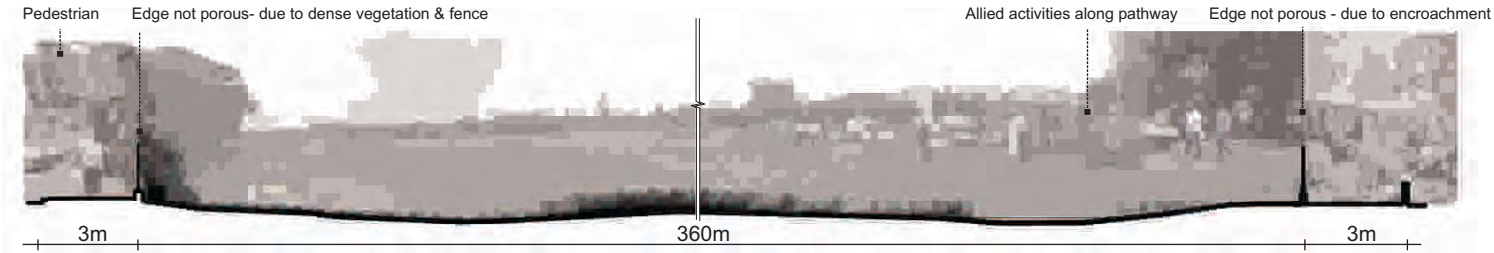
- Protestation (L)
- Rally (L)
- Gathering (L)
- Gathering (L)

01 Sense of identity due to the buildings around.

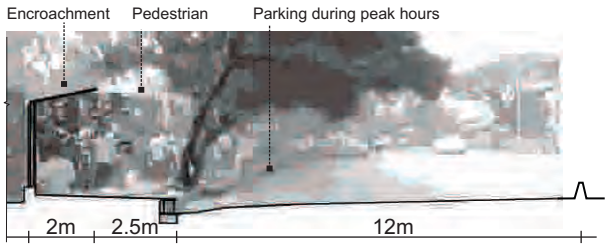
02 Non porous edges.

03 *Maidan* surfaces and activities

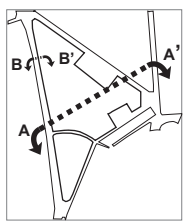
04 Allied activities



Section AA'



Section BB'



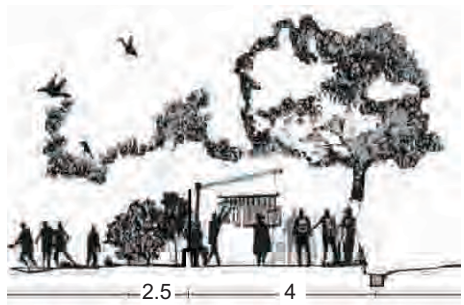
Key plan
(n.t.s)

Key observations

Activities: a) along the path cutting through the *maidan;* b) outside the *maidan;* c) on the *maidan.*

1. Active center, inactive edges.

a. The *maidan* is used only for sports practice. The edge is barricaded by a 1.8m high iron fence all around. People walking on the thoroughfare connecting two access points on opposite sides of the *maidan* are also prevented from entering the maidan due to a barricade.Thus, there is no interaction between the edges of the ground and ground itself - they remain as two isolated activities.



b. There is very less physical and visual porosity due to the 1.8m high fence. Against the fence, there is a layer of hawkers and a series of buildings. This completely cuts off the space inside from the people outside.

2. Biodiversity

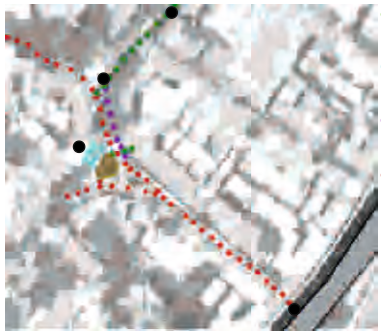
The *maidan* has dense vegetation at the periphery, which invites different species of local and migratory birds.

a. Plant species	b. Bird species.
Samanea saman,	
Peltophorum,	
Palm,	
Bamboo,	
Varieties of *Ficus,*	
Thespesia populnea,	
Sterculia foetida,	
Terminalia catappa,	Indian grey horn,
variety of Cassia,	House crow,
Putranjiva roxburghii,	Parakeet,
Caesalpinia pulcherrima	Oriental Magpie-Robin

Source: Birds in azad maidan;Times of India

Kabutar Khana

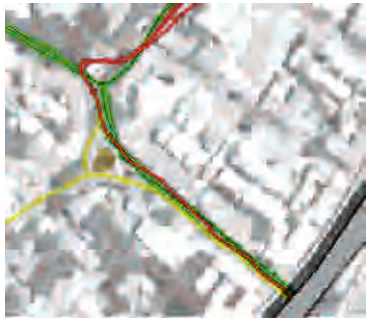
Pedestrian Movement



- From Dadar market
- Jain temple to Kabutar Khana.
- Temple to Kabutar Khanna
- Railway station\ *phool* market to Siddhivinayak Temple
- Origin of pedestrian movement

09:00-10:00 am

Vehicular Movement



- Towards Dadar market
- Towards other parts of the city
- Towards Siddhivinayak temple

09:00-10:00 am

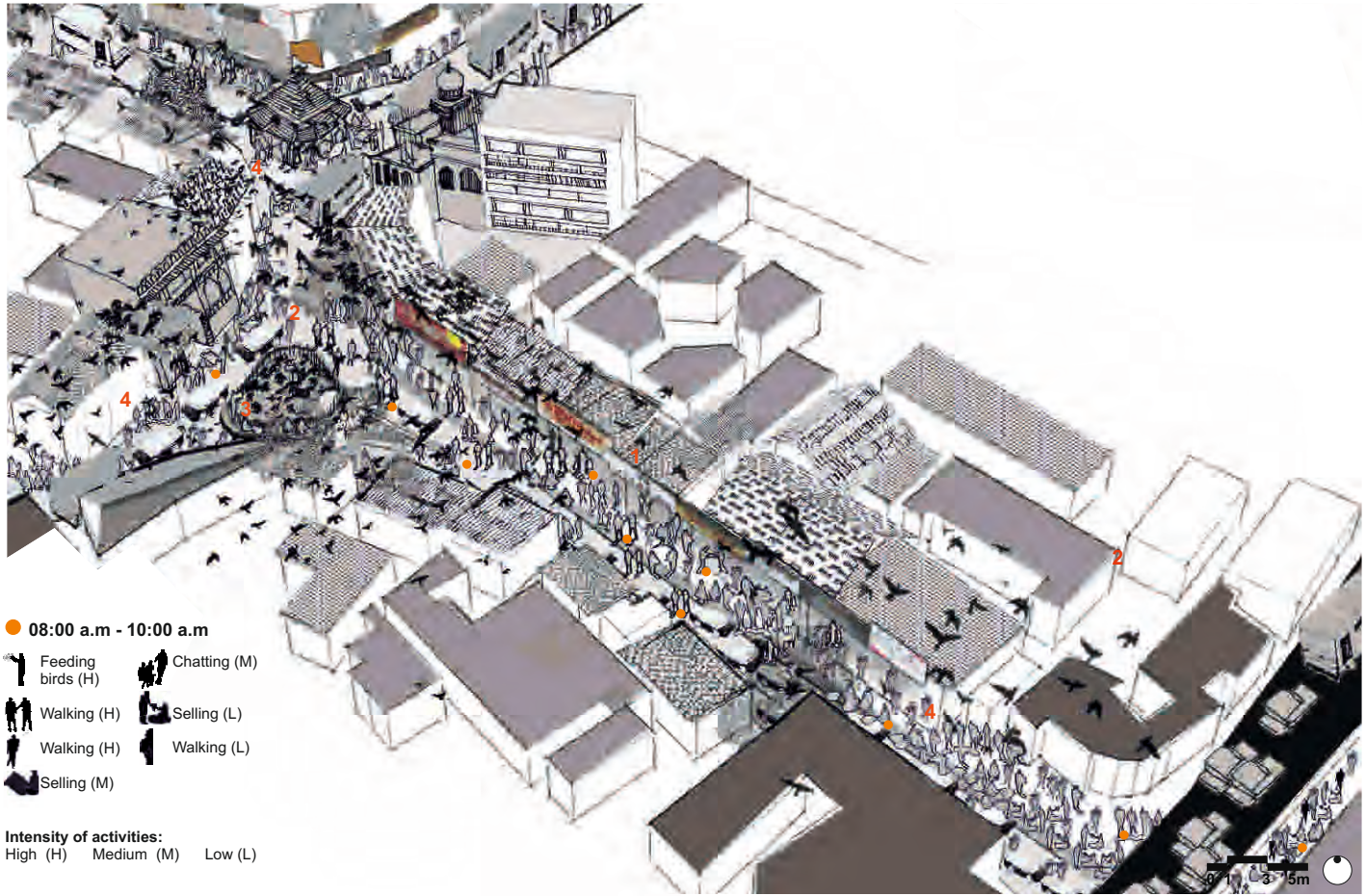
Kabutar Khana

1. Mosque
2. Jain temple
3. Hanuman temple
4. Pigeons on roof top
5. Pigeons seen on trees
6. Shops selling grain for feeding birds
7. Flower market under the bridge
8. Dadar station

Area:
215 sq.m

Key plan
(n.t.s)

Dadar Kabutar Khana is located in south Mumbai. It dates back to 1933 and has been declared as a heritage spot by the government. It is considered as a "Holy Spot" due to the presence of a Mosque, a Jain temple and a Hanuman temple. It is also a bottleneck causing traffic congestion in the area as the railway station is in close proximity. A trust raises the funds for feeding 1500 kgs of grain daily to the pigeons. This grain comes from the wholesale shops at Crawford Market and the APMC (Agricultural Produce Marketing Committee) vegetable market at Vashi and are stored in a shed at Kabutar Khana.



08:00 a.m - 10:00 a.m

Feeding birds (H)
Chatting (M)
Walking (H)
Selling (L)
Walking (H)
Walking (L)
Selling (M)

Intensity of activities:
High (H) Medium (M) Low (L)

Note: The plan is based on the information documented on site from 08:00 am to 10:00 am. During the peak hours of 09:00 am to 11:00 am and 05:00 pm to 07:00 pm the intensity of the vehicular and pedestrian movement increases.

5 am- 9 am

Throughout the day

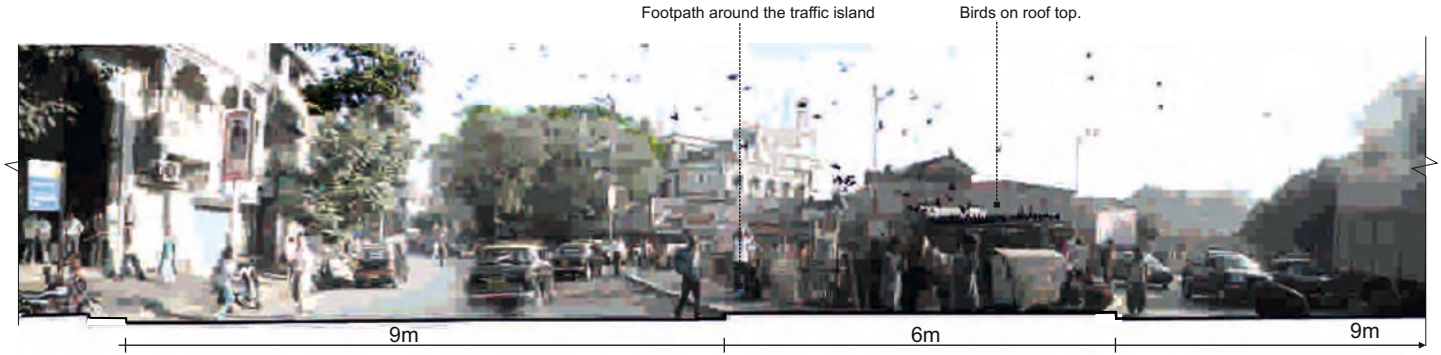
01 Transition from the street to the open space.

02 The pigeons.

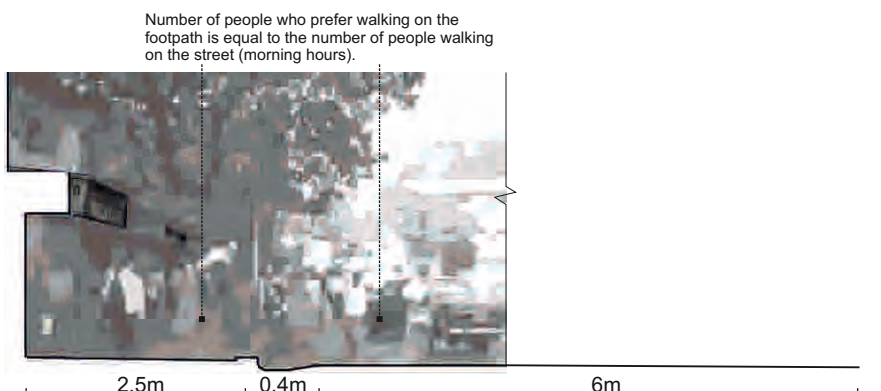
03 The relation between the pigeons and the surrounding structures. Pigeons are fed largely by the devotees of the Jain temple.

04 The space is used as a thoroughfare, and also as an extension of both the temples.

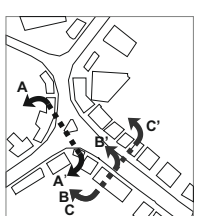
Section CC' through the street



Section AA'

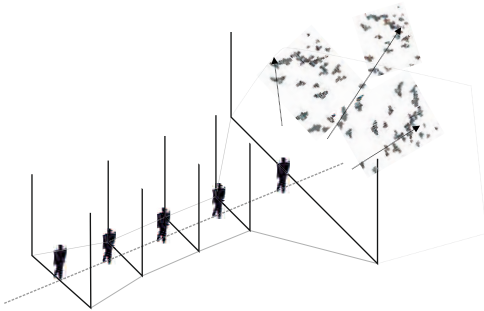


Section BB'



Key plan
(n.t.s)

Key observations

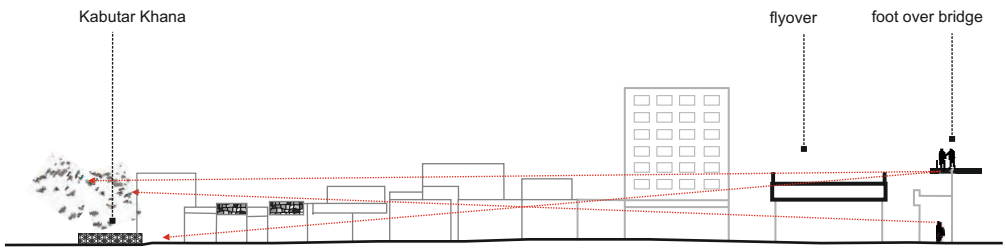


1. An animated 3-dimensional volume

The volume of space changes continuously as one moves towards Kabutar Khana. One walks through a narrow street of 6 meters for a couple of minutes. This street feels narrower than its actual width because of the density of people and goods. At the end of the street one is thrown into a 25 meter wide space filled with pigeons. Air and ground are both full of pigeons, defining an animated 3 dimensional space. The fluttering pigeons engage both the eyes and the ears.

2. The buffer

The 15m wide pathway around the traffic island creates a buffer between the heavy traffic and the pigeon filled island.



3. A landmark

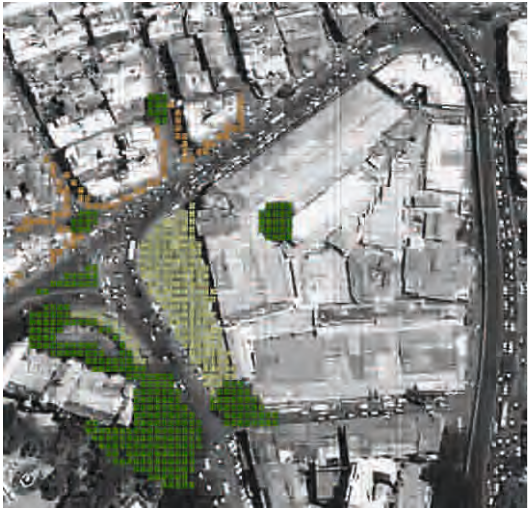
Kabutar Khana is visible from a number of points around. If one is coming here via train, it is visible from the foot over bridge, flyover and the Hanuman temple. This builds a series of images in the mind before physically entering the space.

Crawford market

Land use map

Residential Commercial Institutional

Mixed use

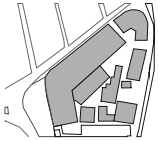


Grain map

Grid (5 m X 5 m)

Tree shade Extended service area

Encroached informal shops



Area:

22,471 sq.m

Key plan (n.t.s)

Crawford market is a 139 yr old structure located in South Mumbai. It is named after Arthur Crawford, the first Municipal Commissioner of the city. The market offers variety of products, fish and meat on a large scale as well as things not typically associated with markets, like different varieties of pets. The market space is predominantly indoors, though there are canopied outdoor shops in addition to small shops with large doorways. It is also very well compartmentalized by the primary products being sold. The market has witnessed the out break of many fires in the past. The market is visited by people from different parts of Mumbai

Source : http://www.outlookindia.com/printarticle.aspx?237082

0 1 3 5m

The sketch shows activities documented from 03:00 pm to 05:00 pm

03:00 pm - 05:00 pm

- Walking (H)
- Selling on street (M)
- Selling on street (L)
- Shopping (H)
- Selling on street (M)
- Carrying goods (L)
- Strolling (H)
- Shopping (L)
- Chatting (L)
- Sitting (M)
- Selling (L)

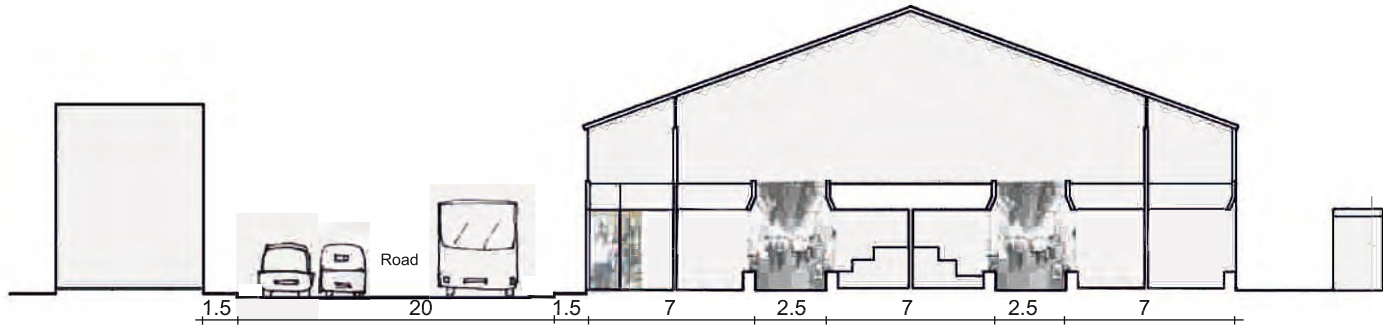
Intensity of activities: High (H) Medium (M) Low (L)

01 Busy streets, gothic and colonial style structure and extended multi functional spaces.

02 Aisles of commercial units and walkway.

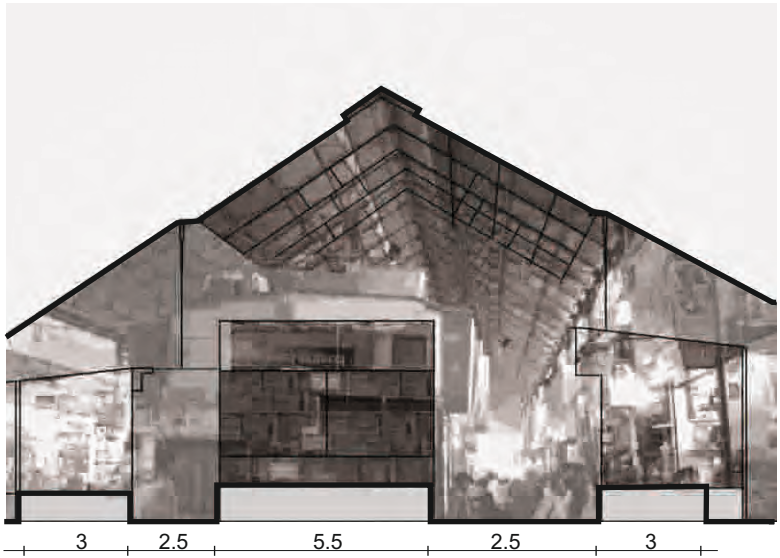
03 Different types of stores.

04 Street furniture and temporary stalls.

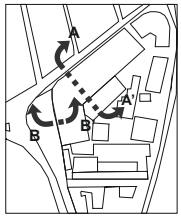


Section AA'

Note: The roof profile and height is not to scale, and is equated on visual analysis.

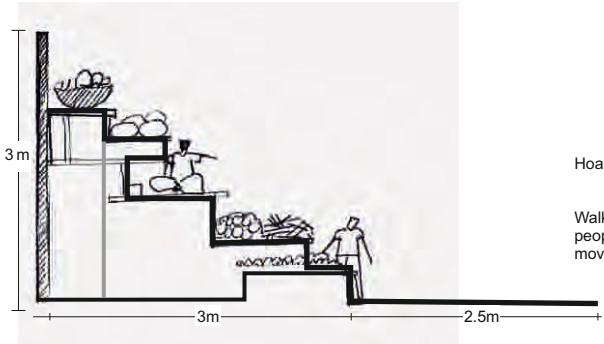


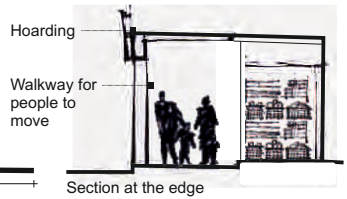
Section BB'



Key plan
(n.t.s)

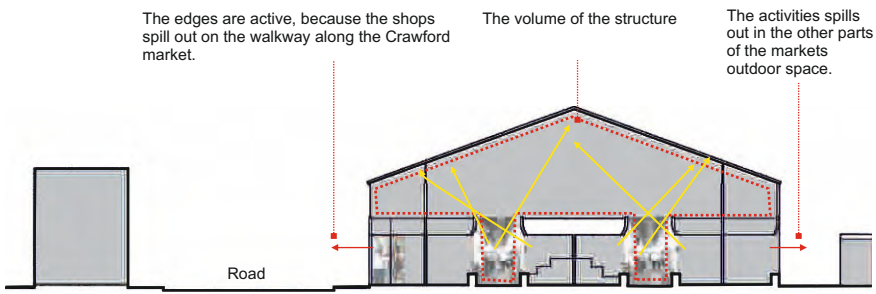
Key observations

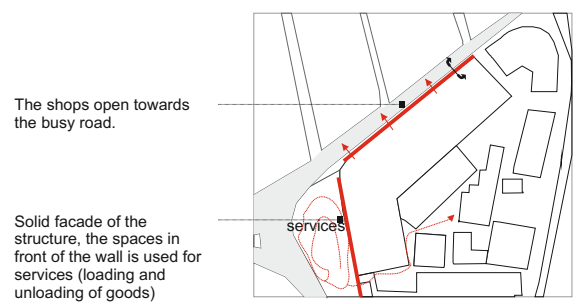




1. The attributes of the market that makes the space have a sense of openness.

The stalls stacked in levels occupy 3.5x3x3m of space which efficiently utilizes the vertical height of the structure, to provide a walking aisle of 2.5m.This reduces congestion and lets the visitor perceive the volume of the space.

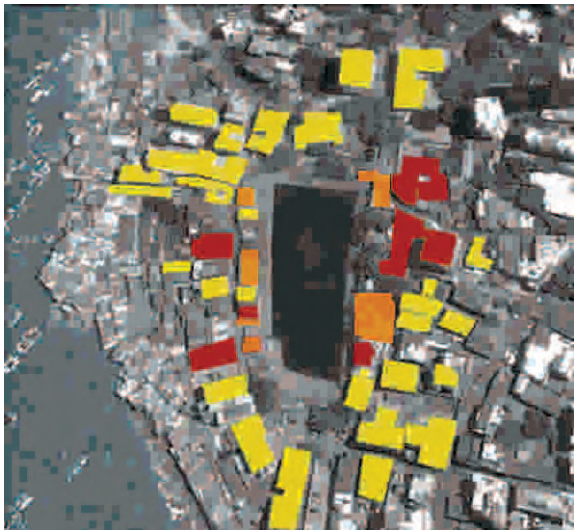




2. Segregation of functional spaces

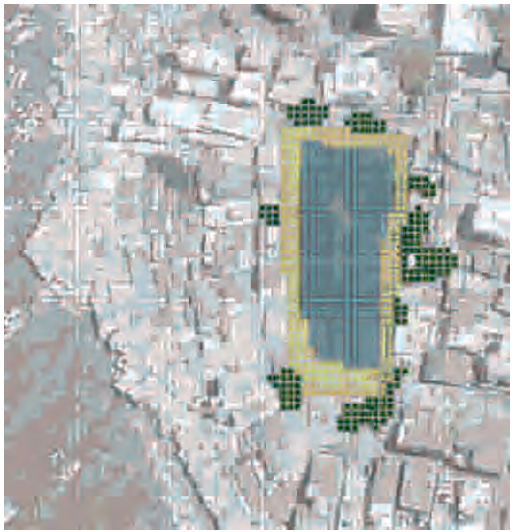
Segregation of movement of allied activities, services and main commercial activities ensure the 22,471 sq.m market works effectively. Good connectivity, large variety of goods available, hence people of all age groups, come from all over Mumbai.

Banganga



Land use map

Residential Commercial Religious



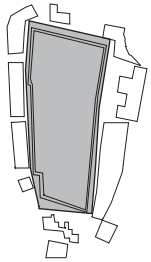
Grain map

Tank

Tree shade

Grid (5m X 5m)

Ghat



Area of the tank with ghats:

6,552 sq.m

Banganga Tank was built over a freshwater spring during the Silhara dynasty in 14th century. The narrow path leading to the tank is flanked by two-storey houses on either side and colorful temples, reminding one of ancient Bombay. At the entrance to the tank are two pillars in which oil lamps were lit in older times.

There are large number of ducks and Little Cormorants, gently floating on the water surface. Along with these, different species of fishes like *Rohu, Mangoor* and Turtles are also present in the tank. The space is frequented by a number of sparrows as well.

Key plan
(n.t.s)

07:00 am - 10:00 am

- Washing (H)
- Praying (M)
- Sleeping (H)
- Religious ceremony (L)
- Bathing (H)
- Swimming (L)
- Drying clothes (M)
- Strolling (L)

01:00 pm - 03:00 pm

- Strolling (H)
- Boating (M)
- Playing (H)
- Swimming (L)
- Washing (H)
- Chatting (L)
- Chatting in groups (M)

05:00 pm - 12:00 am

- Praying (H)
- Strolling (L)
- Chatting (H)
- Chatting (M)
- Religious ceremony (M)

Occasional (Most of the festivals have been banned)

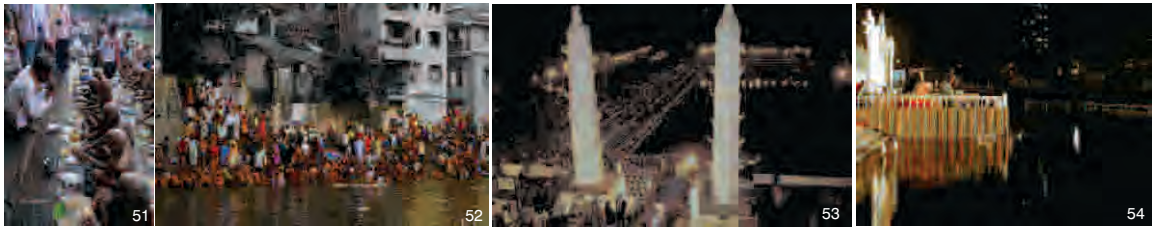
- Gathering (H)
- Watching performance (H)
- Worshipping (H)

Intensity of activities: High (H) Medium (M) Low (L)

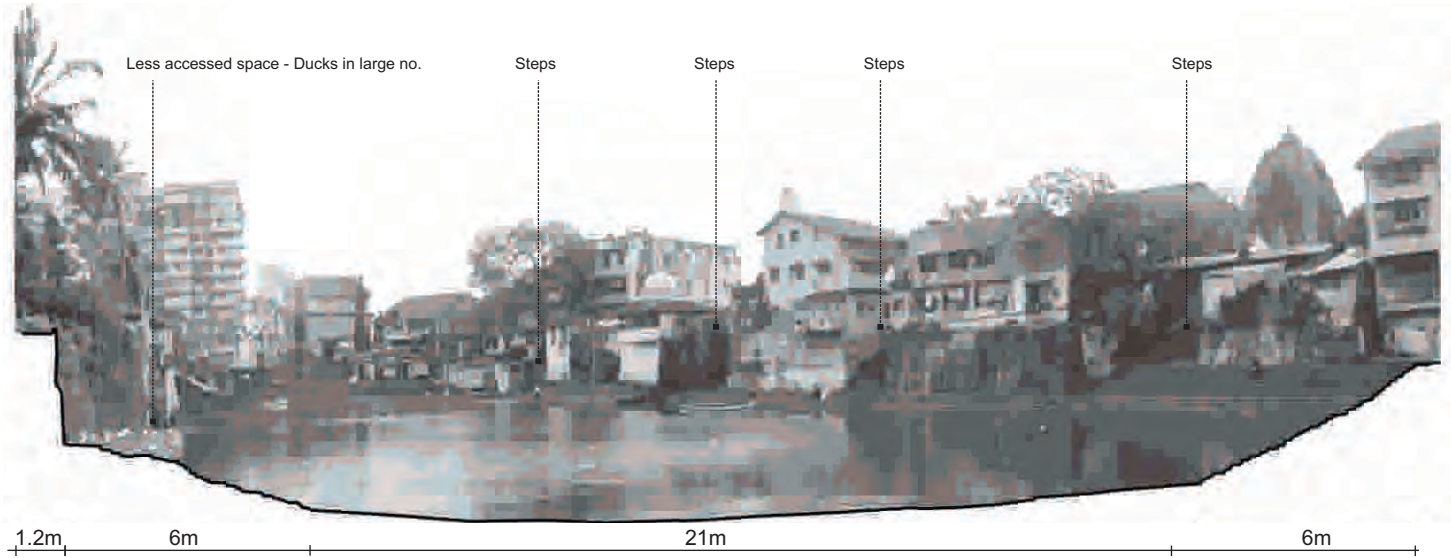
01 The tank and the *ghat* premise.

02 The tank is used for religious activities by people all around Mumbai. People from vicinity participate in allied activities like washing, sitting, bathing, bird feeding, boat riding, cleaning of the ghat etc.

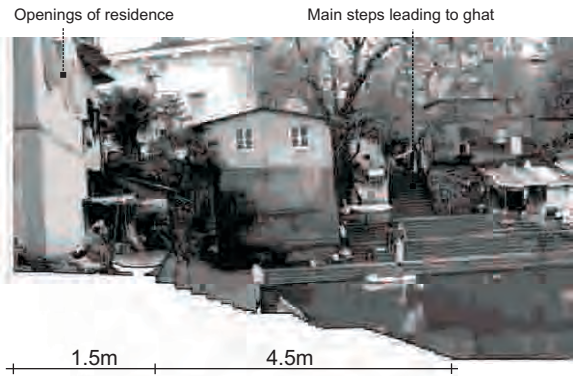
03 The edge has punctures in the form of steps which lead to the ghat from the road.



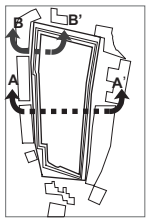
04 Occasions and festival like *Pitru Paksha*, music festival, Banganga festival, *Ganesh chaturthi*, bring different communities of people to this space.



Section AA'

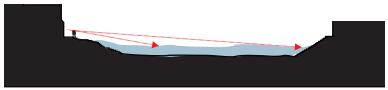


Section BB'



Key plan
(n.t.s)

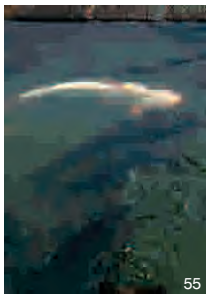
Key observations

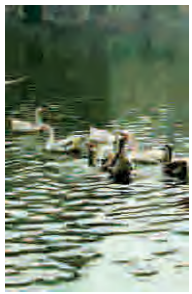


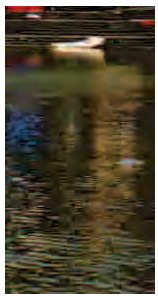
1. A ‘container of water’
At the tank there is a strong sense of containment and one is forced towards the water. The proportion of the surface of the water and its edges, the steps and the buildings around, create a sense of a ‘deep’ container of water.

2. Punctures and connections.

The walls of the container are pierced by steps leading out at seven points. These follow the topography of the place and create a sense of dynamism.







3. Surface of the water.

The surface of the water is the key point of engagement of a person sitting on the steps. (The tank is used for everyday activities like bathing, washing etc by the local residents) The surface is enlived by boats, geese, fish and turtle in the water.

Image credits

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