

Necropolis of the Metropolis: Designing landscapes of the dead for their better integration in the city fabric.

MASTER OF LANDSCAPE ARCHITECTURE

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Declaration

I Priyanka Sarkar, Scholar No. 2013mla008 hereby declare that the thesis entitled Necropolis of the Metropolis, Designing landscapes of the dead for their better integration in the city fabric, submitted by me in partial fulfillment for the award of Master Of Landscape Architecture, in School of Planning and Architecture Bhopal, India, is a record of bonafide work carried out by me. The matter embodied in this thesis has not been submitted to any other University or Institute for the award of any degree or diploma.

22.5.2015

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Certificate

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Necropolis of the Metropolis: Designing landscapes of the dead towards their better integration in the city fabric

A DESIGN THESIS

Submitted

*In partial fulfilment of the requirements for the
award of the degree of*

MASTER OF LANDSCAPE ARCHITECTURE

By

Priyanka Sarkar

2013mla008

Under the Guidance of

Prof. Savita Raje



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ABSTRACT

NECROPOLIS is word of Greek origin derived from nekros = dead + polis = city. Dictionary definition of NECROPOLIS is cemetery, especially one of large size and usually of an ancient city. METROPOLIS is also a word of Greek origin derived from mētēr = mother+ polis = city. Dictionary defines METROPOLIS as any large, busy city, sometimes capital.

The houses of the dead are more permanent than the houses of the living, and in history the necropolis becomes a fundamental addition to the metropolis. They are placed on the boundary zone outside the city which led to the disassociation of death from the heart of the urban fabric and has led to the degradation in the layer of history and consciousness.

Objective of this thesis is to understand the locational aspects of burial grounds in cities and their inter relationships with the city fabric. The outcome shall be aimed at igniting an initiation in making the resting places of the dead a part of the sustainable green infrastructure network of the city.



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CHAPTER ONE

PERCEPTION OF NECROPOLIS

Introduction

Death is an undeniable truth of life that everybody has to encounter. The death of near and dear ones are unfortunate but are inevitable. One seeks comfort in the people around them during the mourning, rituals and beliefs help in dealing with the grief but these rituals that were introduced to provide comfort to the mourners generated a negative conception with the lack of awareness and knowledge about the procedures done leading to superstition that permeated to the perception of these spaces. The change in perception about these places led to the degradation of these places from the city design making them neglected areas.



Figure 1 Hollywood Cemetery, Virginia



Figure 2 Pere Lachaise, Paris

NECROPOLIS a word of Greek origin, where *nekros* means dead and *polis* means city. Dictionary definition of NECROPOLIS is a cemetery, especially one of large size and usually of an ancient city or a historic /prehistoric burial ground.

The term implies a separate burial site at a distance from a city as opposed to tombs within cities, which were common in various places and periods of history. They are different from grave fields, which did not have remains above the

ground. While the word is most commonly used for ancient sites, it has also been used for some modern cemeteries such as the Glasgow Necropolis. (Anon., 2015)

India, the second most populated country in the world has recorded an average crude death rate¹ of 8 during the period 2010 to 2014, which roughly estimates an average of around 10 million deaths per year. (Anon., n.d.) Disposing of dead bodies has been necessary for a community living and with the increasing population and urban growth the designing of these areas become more critical.

The rural cemetery was designed with romantic vision, based upon English landscape gardening. Nature, in contrast to an increasingly urban setting, was idealized and sought out; Cemeteries, located close to the city, were consciously designed to provide sanctuary, solitude, quiet, adornment, and beauty. It was common, Especially on Sundays, for full families to picnic in cemeteries “taking long walks in the peaceful setting, thinking about the past and the future, and keeping a little bit of history alive for themselves.” (Finney, 2012).

¹ Census of India and The World Bank defines Crude death rate as ‘Rate that indicates the number of deaths occurring during the year, per 1,000 population estimated at midyear’

CHAPTER TWO

THE METROPOLIS

What is a Metropolis?

METROPOLIS a word of Greek origin, where *mētēr* means *mother* and polis means city. Dictionary definition of METROPOLIS is any large busy city, sometimes capital, city of a country or the mother/parent state of a colony.

As the 19th century progressed, towns grew to cities, and population increased proportionally. For reasons of public health and overcrowding, burial grounds began to be located outside of population centres, no longer on church ground. These cemeteries spawned the “Rural” Cemetery Movement, beginning in 1831 with Mount Auburn, Boston; Laurel Hill, Philadelphia (1836); Greenwood, N.Y. (1838); Lowell, Mass. (1841); Evergreen, Portland, Maine (1855); Forest Hill, Madison, Wisc. (1858); And countless others as the country and movement expanded.

Delhi - The Mother City

Delhi has developed itself as a metropolis over the years being the centre of activities and providing for neighbouring city needs, it developed a new boundary called national capital region. With Sonapat, Panipat, Rohtak, Jhajjar, Mahendragarh, Bhiwani, Gurgaon, Rewari, Mewat, Faridabad, Gautam Budh Nagar, Bulandshahr, Ghaziabad, Hapur, Meerut, Baghpat, Alwar, Mewat, Bharatpur as the satellite towns to the mother city.

The landscape of Delhi can be described as comprising of a central ridge which is part of the Aravalli hills. The Aravalli enter Delhi from Gurgaon to the south-west while branching towards eastern side, Tughlakabad. With the growth of the city the ridge got fragmented and the 4 separate zones created were

2.1.1 The OLD DELHI or NORTHERN RIDGE denotes the hilly area near Delhi University and is by far the smallest segment of the Ridge. Nearly

170 hectares were declared a Reserved Forest in 1915. Less than 87 hectares remain today.

2.1.2 The TUGHLAKABAD or SOUTHERN RIDGE sprawls across 6200 hectares and includes the Asola and Bhatti wildlife sanctuaries. This is the least urban of the 4 segments of the Ridge, but a lot of it is village- or privately-owned farmland

2.1.3 The NEW DELHI or CENTRAL RIDGE was made into a Reserved Forest in 1914 and stretches from just south of Sadar Bazar to Dhaula Kuan. It extends over 864 hectares, but some bits have been nibbled away.

2.1.4 The MEHRAULI or SOUTH-CENTRAL RIDGE is centred on Sanjay Vana, near JNU, and encompasses 633 hectares. Large chunks have been encroached and built upon.

Delhi has 4 natural divisions Kohi or the hilly tracts, Bangar or level main land, Khadar or sandy riverain of the Yamuna and dabar that subjected to seasonal flooding. The Delhi territory today is not identical with Delhi district as it was in the 19th century, but these 'natural divisions' are still useful descriptive labels for Delhi's micro-habitat.

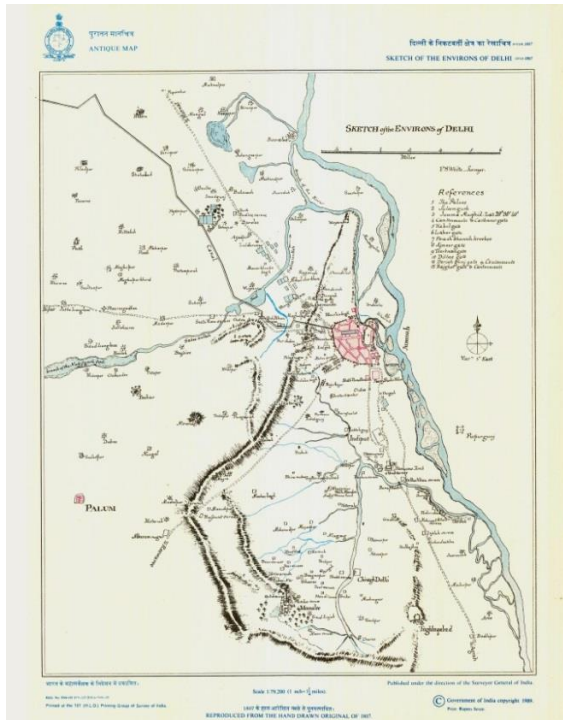


Figure 3 Antique Map of Delhi

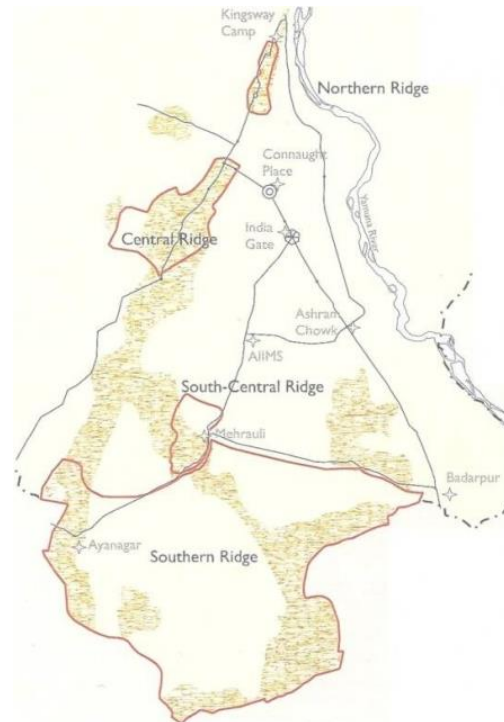


Figure 4 Delhi Ridge Mapping

Shahjahanabad the walled city of Delhi had the northern ridge to its north, which in the 19th century was mostly bare and untended except for a military camp. However inside the walled city were extensive charbaghs- formal, rectangular Mughal gardens laid out by about 1740's North West of the walled city laid a dense patchwork of gardens and orchards forming the garden village of Sadhauran Kalan. This tract was watered by the canal bringing water to the city, and some famous Mughal gardens such as Roshanara Begum's Bagh were located here. Close by, abutting Kashmiri gate, was Qudsia Begum's Bagh, a large 18th century walled garden along the banks of the river, with a fine mosque and fine baradari.

In 1857 the uprising changed a lot about the Delhi landscape when trees hazari and QudsiaBagh lost all its trees. Sepoys took cover of bushes and trees from which to snipe at British positions on the Northern Ridge. Inside the walled city, to the queens taste English style gardens were laid while beyond the city walls, RoshananaraBagh were enlarged by joining it with smaller baghs, and from now on became almost an exclusive British preserve, a place for picnics, tea parties and buggy rides. Large chunks of Qudsiabagh were sectioned off to make tennis courts and a rose garden. (Krishen, 2006)

With the growth of the city sprawl and layers of history it is seen that the landscape aspect of the city is what is compromised the most. The current scenario of Delhi is that the historic landscape now stands fragmented in the form of patches in the city fabric. This thesis talks about the possibility of interlinking these patches of historic landscapes with the necropolises that have developed over time reflecting the influence and existence of man on the landscape. An approach towards integrating the landscape patches is an initiation towards creating the setting that once existed making the dense city more breathable and appealing.

CHAPTER THREE

JOURNEY THROUGH TIME AND SPACE

The Religious aspect to cremation so far

Different religions follow different cremation rights towards the disposal of the body after death. The primary force generating these rights is the central idea that each religion follows.

3.0.1 HINDUS

Hindus believe that life and death are part of the concept of samsara, or rebirth. The ultimate goal for Hindus is to become free from desire, thereby escaping samsara and attaining moksha, the transcendent state of salvation. Once moksha is attained, the soul will be absorbed into Brahman, the divine force and ultimate reality. (Anon., n.d.)

3.0.1.1 at the moment of death –

- In the right ear mantra is chanted, "AomNamo Narayana" or "Aom Nama Shivaya" is intoned. (This is also done for sudden-death victims, such as on a battlefield or in a car accident).
- Holy ash or sandal paste is applied to the forehead, Vedic verses are chanted, and a few drops of milk, Ganga or other holy water are trickled into the mouth and leaves of tulsi plant are placed on the mouth and eyes.
- After death, the body is laid in the home's entryway, with the head facing south, on a cot or the ground--reflecting a return to the lap of Mother Earth.
- The lamp is kept lit near the head and incense burned.
- A cloth is tied under the chin and over the top of the head, The thumbs are tied together, as are the big toes. (Anon., n.d.)

3.0.1.2 Preparing the body –

- A lighted oil lamp as well as a picture of the deceased's favorite deity should be kept by the deceased's head.

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- The body is washed by family members and close friends. For the ritual washing, the deceased's head should be facing southward.
 - The "abhisegam" (holy bath), the body is washed in a mixture of milk, yogurt, ghee (clarified butter), and honey.
 - The body may also be washed in purified water. While the body is being washed, those washing should recite mantras.
 - Once the body cleaned, the big toes should be tied together, the hands should be placed palm-to-palm in a position of prayer, and the body should be shrouded in a plain white sheet.
 - If the person who died was a married woman who died before her husband, she should be dressed in red. (Anon., n.d.)

3.0.1.3 cremation –

- All Hindus—except babies, children, and saints—are cremated.
- The body is carried on a stretcher and walked to the cremation site, though it is acceptable to transport the body in a vehicle.
- The body should be brought into the crematorium feet-first, ideally with the feet facing south.
- It is customary that only men attend the cremation.
- The family builds a pyre and places the body on the pyre.
- The body is ready for cremation, and should be placed into the incinerator feet-first.
- The karta will circle the body three times, walking counter-clockwise so that the body stays on his left, and sprinkling holy water on the pyre.
- Then the karta will set the pyre on fire and those gathered will stay until the body is entirely burned and then return home. (Anon., n.d.)

3.0.1.4 Post-Funeral Reception –

- Upon returning home, all family members will bathe and change into fresh clothes. Then the family will gather for a meal.
- A lamp and water pot is set where the body lay in state.
- The day after the cremation, the karta will return to the crematory and collect the ashes.

-
- Traditionally, the ashes should be immersed in the Ganges River, though more and more other rivers are becoming acceptable substitutes. (Anon., n.d.)

3.0.2 MUSLIMS

Muslims commonly believe that the good deeds one does in life will yield entry into Paradise on the Day of Judgment, also called Qayamatka din, when the world will be destroyed. Many Muslims believe that until the Last Day the dead will remain in their tombs and those heading for Paradise will experience peace while those heading for Hell will experience suffering. (Anon., n.d.)

3.0.2.1 Ghusl Mayyit Method (Washing the Dead Body) –

- Clean the body thoroughly of all *najasa*t (urine, stool, blood, etc). Use soap with lukewarm water and a pair of gloves.
- Make a *niyyat*, "I am washing this dead body with *SIDR WATER* *Wajib Qurbatan llaLlah*" and wash the body with *SIDR WATER* (water in which a small quantity (2 handful) of berry or lotus leaves have been added or its essence squeezed from a parchment paper).
- Make a *niyyat*, "I am washing this dead body with camphor water *Wajib Qurbatan llaLlah*". And wash the body with camphor water in which a little (half handful) of camphor has been added.
- Make a *niyyat*, "I am washing this dead body with clean water *Wajib Qurbatan llaLlah*" and wash the body with clean (tap) water.
- After all these *Ghusls*, the body should be gently dried with a clean towel. The method of giving *Ghusl* is *Tartibi* - in sequence, first head and neck, then the right side and finally the left, the way we ordinarily do our *Ghusl*.

3.0.2.2 Tahnit or Hunut (Applying Camphor Powder) –

- After first *wajib* act has been completed, the second *wajib* act is *tahnit*. This involves applying fresh fragrant camphor powder on seven part of the body which rest on the ground when prostrating doing *Sajdah*.

-
- These are the forehead, the palms of hands, the knees, and the toes. It is *wajib* / preferable to start *tahnit* starting with the forehead and ending with the palms.
 - Some camphor may also be applied on the tip of nose and the chest. Keep the *niyyat*, "I am doing *tahnit* / *hunut* on the dead body *WajibQurbatanIlLah*" before commencing *tahnit*.
 - The body should be laid on the *Kafan* pre-arranged systematically to facilitate this process.

3.0.2.3 SalaatulMayyit

- The body, in a coffin, is laid before the person(s) praying in congregation, head on the right side of the congregation and the face towards *Qibla*.
- Those praying, stand close to the coffin in a row(s) stretching along both sides from the middle of the coffin.
- Imam stands in front reciting loudly and *Mu'mineen* follow the recitation. It is recommended that they all be in (*wudhu*). For a female *mayyit*, Imam stands near the chest of the *mayyit*.

3.0.2.4 Kabra

- The coffin, having been brought in a graveyard, is placed a short distance away from the dug up grave and moved slowly to the grave by pausing for a few seconds, putting back on the ground and lifting up again, three times.
- At the fourth time, it is finally lowered into the grave with head first and is put to rest on its right side with the face towards *Qibla* as a *wajib* act.
- A piece of cloth should be spread over the grave while lowering the body of a female so that the by standers should not be able to.
- After the body has been laid in the *lahad* the ties at both ends of the *kafan* should be unfastened and some earth should be put under the cheek of the *mayyit*. An earthen pillows should be done up under the head to rest it a little above the ground.
- *Talqin* is then recited. The person reciting the *talqin* should hold with his right hand the right shoulder of the dead body and should

place his left hand tightly on its left shoulder and take his mouth near its ear and shaking its shoulders should say three times.

3.0.3 CHRISTIAN CATHOLIC

Catholics commonly believe that death is the passing from the physical world to the afterlife, where the deceased's soul will live in Heaven, Hell, or Purgatory. At the end of time, the judgment day, when Christ returns, many Catholics believe that the bodies of the dead will be resurrected.

3.0.3.1 The Moment of Death –

- After the death, a priest should be contacted so that the necessary rites can be administered and the funeral planning process can begin.
- The family and friends will often gather for a vigil or wake the day before the funeral.
- There might be a processional from the home or funeral home to the church, with family and friends following behind the hearse and the clergy.
- Funeral Masses may not be held on Holy Thursday (the Thursday before Easter), Good Friday (the Friday before Easter), Holy Saturday (the Saturday before Easter), or Easter Sunday. Funeral Masses are also prohibited on the Sundays during Advent (the period starting on the fourth Sunday before December 25 through December 25), Lent (the 40-day period before Easter), and the Easter Season (the 50-day period after Easter).
- A Funeral Mass may be held on Ash Wednesday (the first day of Lent).
- The funeral typically takes place in the church during mass and is formal.

3.0.3.2 Cremation –

- The casket is usually draped with a white pall to symbolize Baptism in Christ.
- Flowers are often brought into the church.
- The Easter Candle is placed near the casket to symbolize faith that the Deceased may rise again with Christ.

-
- Family and friends gather together with a priest or deacon to pray over the body one last time.
 - In order to make the burial or interment site a sacred place for the deceased, the priest or deacon will bless the place before the body or remains are placed inside.
 - After the site has been blessed, the body or remains will be committed to the earth. The priest or deacon will then recite more prayers.

3.0.3.3 Mourning period -

- The Committal generally takes place at the Deceased's grave.
- There is often a processional from the church to the gravesite, in which all attendees follow the hearse, usually accompanied by police escorts.
- Prayers are offered at the grave site or final resting place of the remains and address the hope for resurrection.
- It is common for a reception to be held after the funeral, either at the church or at the home of the family where people share food and stories.
- Eulogies in Catholic funerals are traditionally given during the vigil/wake, during the Committal or at a reception.

These cremation rights have been performed for ages and now with modifications as well the techniques have not changed. With the world thriving for green and sustainable way of life experiments have also been taken in the field of death.

3.1 Cremations for green cities

The use of electric cremations had already been tried for few years now but it failed to satisfy the religious sentiments attached with the process and thus the technique did not gain as much popularity as expected. Then came in a C.N.G incinerator and has been functioning for few years the rituals being same only the final cremation process changed from wood to C.N.G.

While in the west much talk has sprung up about green burials with the world population exceeding 7 billion; it was questioned if the landscape can

accommodate our dead in a sustainable way. Statistics from the Cremation Association of North America show that it can take two to four hours at temperatures ranging from 760 to 1,150 degrees C to fully cremate a body. This is estimated to be roughly equivalent to the energy required to drive 4,800 miles, or 7,725 kilometres. Added to this are considerable toxins that are released into the atmosphere during cremation, such as carbon dioxide, lead, nitrogen oxide, and hydrogen fluoride.

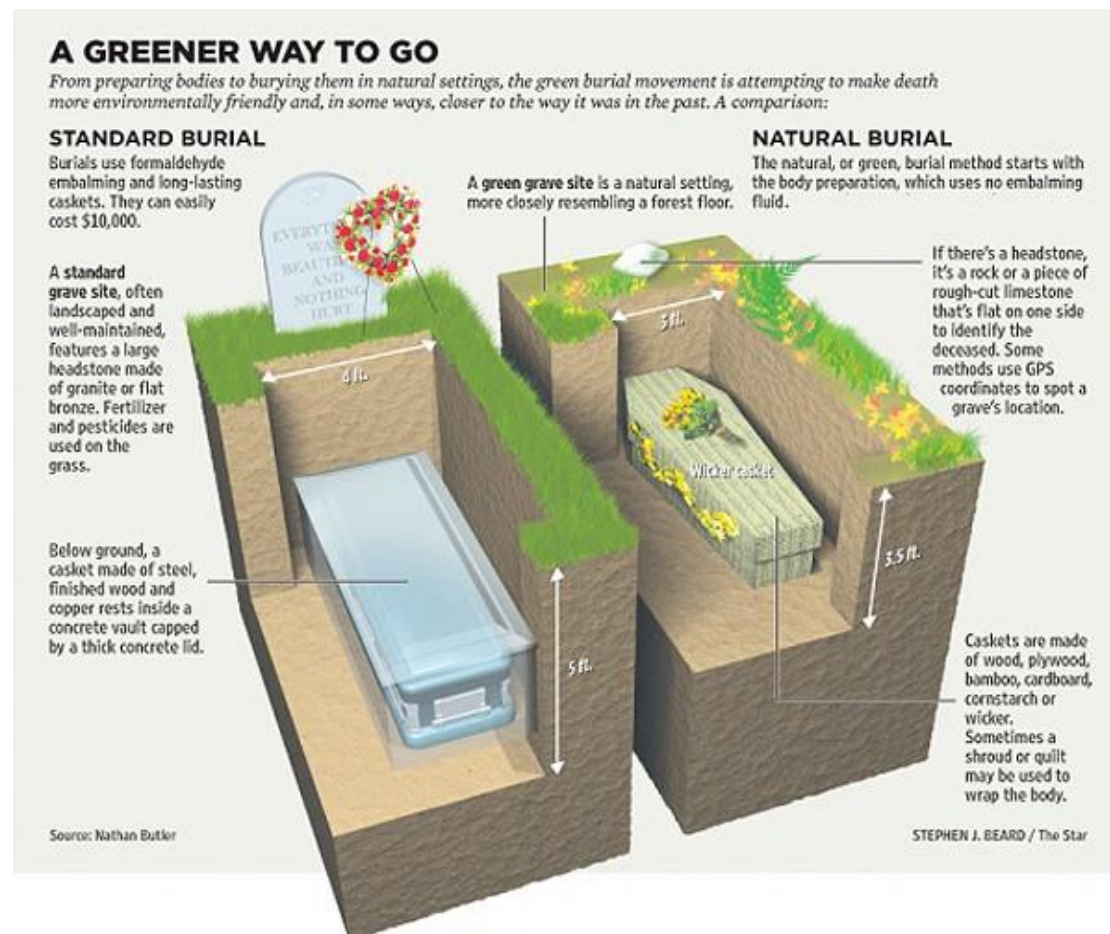


Figure 5 Green Burial

Green Burial involves the interment of the body without embalming, using natural coffins or caskets to enable the body to decompose naturally, returning its nutrients to the ground. The aesthetics of Green or Natural Burial Grounds often reflect the environmental choices made by the interments. Gone are the rigid formal lines and large tombstones, in favour of woodlands, meadows, and open fields, as can be seen in sites like Binningwood, Westall Park, or Prairie Creek Conservation Cemetery.



Figure 6 Steelman Town Cemetery, New Jersey



Figure 7 Steelmsn Town Cemetery, New Jersey

This paradigm shift in our deathscapes has further reaching consequences though, as we gradually change our perception of the landscape of death and remembrance. Sonia Jackett, In her article Cemetery Park examines how St. George's Field in Leeds has been transformed from a cemetery into a public park, while Southern Cemetery in south Manchester (the U.K.'s largest cemetery) has been designated a National Nature Reserve for its biodiversity.

The idea of coming full circle and returning whence we came from is one that appeals to many of us, regardless of our faith (or lack thereof), and this is an idea

captured perfectly by this beautiful new burial method developed in Italy. The Capsule Mundi project by designers Anna Citelli and Raoul Bretzel has developed an organic, biodegradable burial capsule that will turn the deceased's body into nutrients for a tree that will grow out of their remains.

After being encapsulated in the fetal position, the deceased is buried and either a tree or tree seed is planted above their capsule. The project's site already has a number of trees to choose from. The project is currently only a concept because Italian law forbids such burials. If it were allowed to proceed, however, the project's aim would be to create entire memorial parks full of trees instead of tombstones. And instead of destroying and burying wood for wooden coffins, we would, at the end of our lives, provide sustenance for new trees instead. (Dovas, 2015)

Another interesting take on green burial is a project called The Infinity Mushroom (in progress). It will be a unique strain(s) of fungi that will be trained to decompose bodies and remediate the industrial toxins in bodies. Using mycological tissue culture and growing techniques, Jae Rhim Lee is training fungi to consume her own body tissue and excretions—skin, hair, nails, blood, bone, fat, tears, urine, feces, and sweat. The fungi have been chosen for their potential to utilize the nutrients in human tissue and to remediate industrial toxins in soil. Once realized, the Infinity Mushroom will be applied to the other components of the project.

Cultivation of the Infinity Mushroom is a type of decompiculture—the cultivation of decomposing organisms, a concept developed by entomologist Timothy Myles. The cultivation process promotes acceptance of and a personal engagement with death and decomposition. (Lee, 2011)

CHAPTER FOUR

DESIGN APPROACH

4.0 Aim:

To understand the role of cremation and burial ground in a city's open park network and propose an integrated design to make them active.

4.1 OBJECTIVE:

- To understand the locational aspects of burial grounds in cities and their inter relationships with city fabric.
- To study the similarities in the cultural ceremonies to help establish the roots of a perspective.
- To understand the perception of different people towards these resting places of the dead.
- To analyze the potential of the area's functional aspect based on perception study and locational aspect.
- To propose design solutions integrating the necropolis in the metropolis.
- To design the necropolis as active and beautiful locale.

4.2 METHODOLOGY :

- Literature review & Case study
 - To understand the role of a burial and cremation ground
 - To study the eminent examples catering similar landscape aspects
- Aim & Objective framing
- Data Collection
 - Primary Data
 - Site visit and Observation
 - Perception Survey
 - Secondary Data
 - Maps and Demography
 - Regional plan and Land use plan
- Data Analysis and inference¹
- Design Programming Solutions

-
- Final Design Solution

4.3 SCOPE & LIMITATION:

- Limited to a landscape design approach of integration.
- Integrating the existing burial grounds, cemeteries and burning grounds to be a part of the city's green infrastructure network.
- Design the burial grounds to be ecologically sound and add to the environmental quality.
- Proposing an alternative for the ceremonial practices that creates a negative impact on the environmental quality.
- Limited intervention due to non-availability of the recent map of the area

4.4 EXPECTED OUTCOME :

- Making the resting places of the dead more active with public participation and thus eradicating the scope of anti-social activities prevailing in these area.
- Providing the city with a more sustainable green infrastructure network.
- Designing most sort after places by the living

CHAPTER FIVE

LITERATURE REVIEW

5.1 Punta Arenas Cemetery, Chile:

The Punta Arenas cemetery lies at the entrance of the city and, in addition to having a singular architectural value; it keeps the remains of pioneers and of the main families that gave origin to the entire population of the region. (Anon., 2007)

Integrated to the urban heritage, this cemetery was founded in 1894, north of the town center, on Av. Bulnes, about 4 hectares in size. Its massive ornamental gateway was donated by the wealthy businesswoman Sara Braun, in 1919.



Figure 8 Sara Braun Cemetery Gate, Chile++++++

There are large grounds, adorned with many neatly trimmed evergreen trees. Mausoleums and grave sites now fill the land space, and new burials are placed in niches (there is also a modern, private, lawn-type cemetery further out of town).

Separate Protestant burial in Chile began with O'Higgins in the early days of the Republic, respecting the religious freedom of the British community in Valparaiso. Later, "Cementerios de Disidentes" arose in other towns and cities with a significant non-Catholic community. In Punta Arenas, the so-called British Section is actually somewhat of a misnomer, because several other nationalities are represented, including German, French, Norwegian and Chilean. The picture is further complicated by family tomb-stones which record parents of two different nationalities, as well as their Chilean-born offspring. (Anon., 2012)

Inside this necropolis lies a veritable miniature city, with avenues that connect the magnificent tombs of founding families, immigrant colonies, and civic worke



Figure 9 Mausoleum of Croatian Mutual Aid Society



Figure 10 Punta Arenas Cemetery, Chile

The atmosphere is magnificent and highly impressive. Numerous writers and artists have created works with the cemetery as an inspiration.

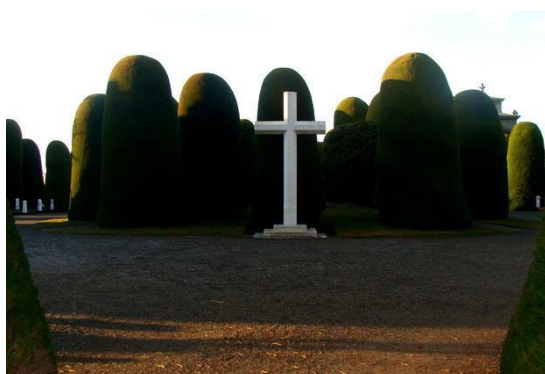


Figure 11 Main Cross at Central Plaza, Punta Areas Cemetery, Chile



Figure 12 Monolith Commemorating Captain Adolfus Andresen

The character of the space can be expressed as:

- Its layout is very formal.
- It resembles an English park with avenues lined by carefully trimmed European cypresses (*Cupressus sempervirens*).
- The silence and solemnity of the place conveys peace and serenity to the visitors.



Figure 13 Line of European Cypress Trees



Figure 14 Walkway of the Cemetery



Figure 15 A Plaza in the Cemetery

Some of the most attractive and detailed mausoleums belongs to few of the wealthiest families of the society the founder families. Their design and construction details are the magnificent

Menendez-Behety,

Braun-Hamburger,

Bitsch-Sauders,

José Nogueira and

Sara Braun,

Kusanovic,

Menendez-Montes, and so on.

Several of the most luxurious buildings were constructed in the first three decades of the twentieth century.



Figure 16 Mausoleum of Sara Braun and Her Husband



Figure 17 Tomb of Kusanovic Family

An exquisitely kept park is the place chosen by visitors to behold. The inner paths lead to tombs and mausoleum, some of them ornamented with various styles and marble and brass terminations and sculptures of forged iron.



Figure 18 Statue on A tomb

5.2 Highgate Cemetery, London :

The cemetery in its original form (the older, Western part) was consecrated by the Bishop of London on 20th May 1839. It was part of an initiative to provide

seven large, modern cemeteries to ring the city of London.



Figure 19 Highgate Cemetery. London

The inner-city cemeteries, mostly the graveyards of individual churches, had long been unable to cope with the number of burials and were seen as a health hazard and an undignified way to treat the dead. Cemetery is located in North London, England.



Figure 20 High gate Cemetery, London

Many famous people are buried there, such as Karl Marx, Douglas Adams, and the parents of Charles Dickens but is also long been known for ghosts, sinister activities, and other strangeness, including the Highgate Vampire.

It is designated Grade I on the English Heritage Register of Parks and Gardens of Special Historic Interest in England. It is divided into two parts, named the East and West cemetery. There are approximately 170,000 people buried in around 53,000 graves at Highgate Cemetery. (Anon., n.d.)



Figure 21 High gate Cemetery, London



Figure 22 High gate Cemetery, London

Counted amongst top haunted places in the world, the most famous spooky story of this cemetery is The Highgate Vampire, which is really not a vampire but a phantom that is described as a 7-ft-tall male figure with hypnotic eyes and wearing a long black coat. Many people have sighted the Highgate Vampire now and then. (Anon., n.d.)

Highgate Cemetery is set in 20 wonderfully wild and atmospheric hectares, with dramatic and ornamented Victorian family crypts

It is divided into two parts on either side of Swain's Lane. On the eastern side you can visit the grave of Karl Marx.

A tour of the whole cemetery is conducted on all the days however children under eight are not allowed to join.

The tour is a maze of winding paths leading to the Circle of Lebanon, rings of tombs flanking a circular path and topped with a majestic cedar of Lebanon tree.

In the tour, the guide shows the various symbols and eminent dead occupying the tombs. It is still a working cemetery. (Anon., n.d.)



Figure 23 Gate of High gate Cemetery, London

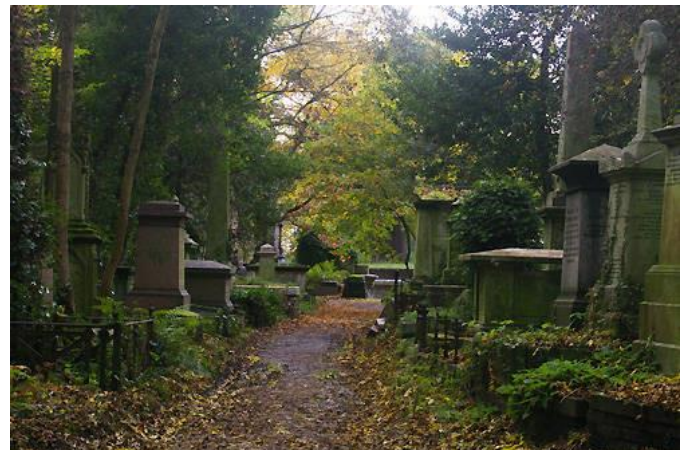


Figure 24 High gate Cemetery, London

(Anon., n.d.)

CHAPTER SIX

CASE STUDIES

6.1 BadaBagh(Nazarbagh + TakiKalandar Shah), Bhopal

Located in the heart of the old city of Bhopal, Madhya Pradesh, India, Badabagh occupies a very important position. BadaBagh is one of the oldest Burial grounds still functional and has now weaved into the routines and city itinerary. It has grown in the life of the city with time and marks itself as one of the landmarks in the area.

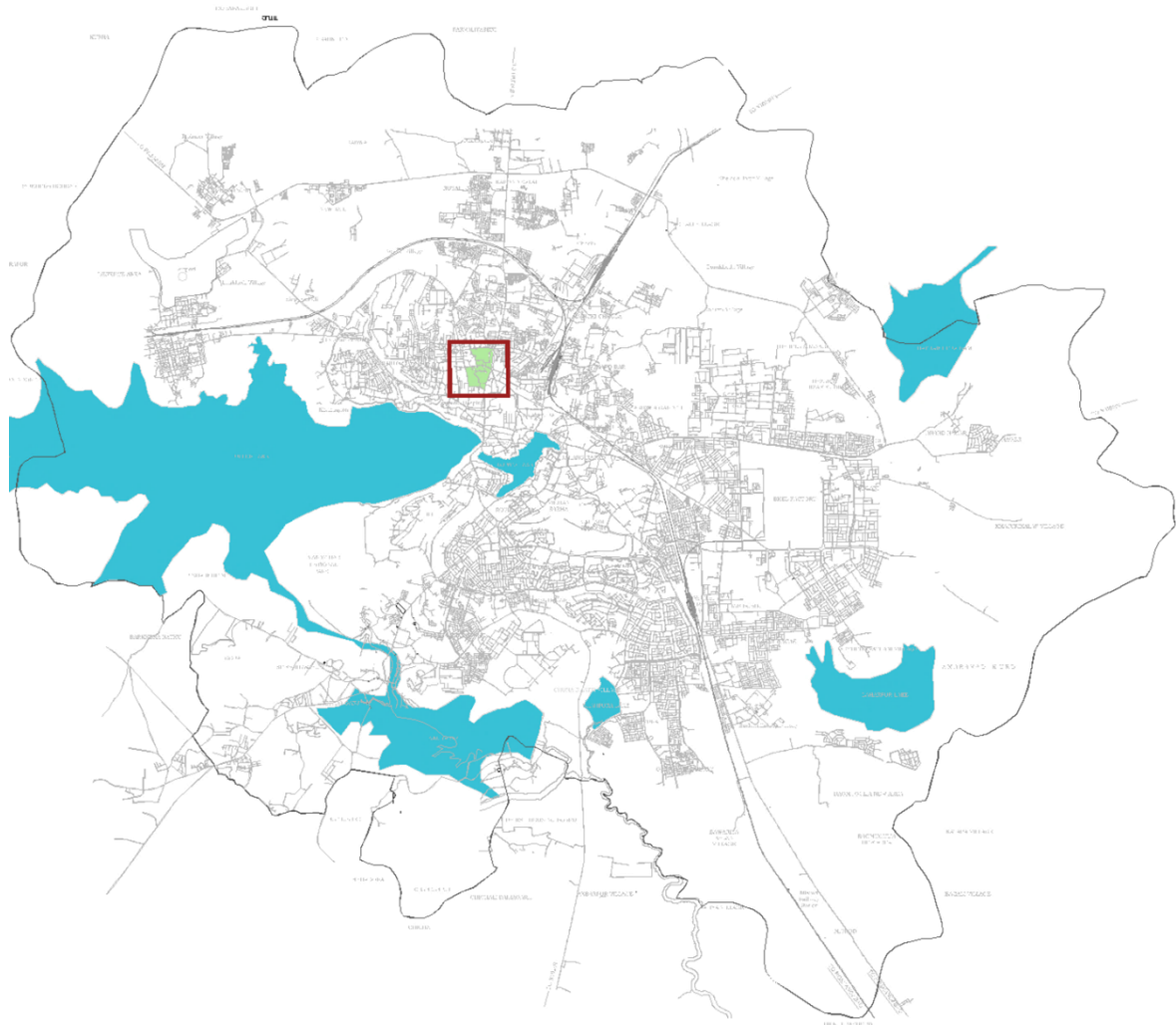


Figure 25 Location map of Badabag, Bhopal

Comprising of the Royal and common man burial on either side of the busy Hamidia road that crawls down from the Shahjahanabad police station to Bhopal Talkies. To the left is the NazarBaghor the royal burial ground with its high domed red mausoleums, built in memory of members of the ruling clan.



Figure 26 Site and Surrounding Features, Badabag, Bhopal

Nawab WAZIR MUHAMMED KHAN, 6th Nawab of Bhopal 1807/1816, born 1766, Diwan of Bhopal, Commander-in-Chief of the Bhopal Army, Nawab of Bhopal in opposition to Nawab Ghous Muhammed Khan, died 16th March 1816, buried at Bara Bagh.



Figure 27 Tomb of Wazir Muhammad Khan and His Two Begams



Figure 28 Tomb of Nazar Muhammad Khan

Nawab NAZAR MUHAMMED KHAN, 7th Nawab of Bhopal 1816/1819, born 1791, married 1817, Nawab Sultan Qudsiya Begum, died 19th Nov. 1819.

Nawab Sultan Kudsiyya Begum, 9th Nawab Begum of Bhopal 1819/1837, born 1801, died 1881.

The NazarBaghelicits regular visits from historians attempting to make sense of the city’s convoluted history. The intricate white marble enclosure housing the grave of Nawab Siddique Hasan at the edge of the burial ground and the cluster of red sandstone domes are the landmarks of this cemeteryAt the NazarBaghpolitical affiliations, take precedence over familial considerations. And it is not uncommon to find noblemen buried in proximity to their political patrons.

Right of the Hamidis road is a whitewashed boundary encompassing the TakiaKalandar Shah the commoners’ graveyard.



Figure 29 Takia Kalandar Shah bUrial Ground, Bhopl

TakiaKalandar Shah – Named after a peer residing in this burial ground called Kalandar Shah. This Burial ground is dated 150 years old and houses some of the oldest graves still very much in use this burial ground. Cemented sandstone walkway crisscrosses through a maze of tamarind trees that shade this densely graved plot. The resting places here are humble and, perhaps, reflect the end of a struggle to make it to the other side of the road. It is relatively easier to outline family histories at the TakiaKalandar Shahas sons are mostly buried at their mothers’ feet and women are buried beside their husbands.



Figure 30 Takia Kalandar Shah Burial Ground, Bhopal



Figure 31 Takia Kalandar Shah Burial Ground, Bhopal



Figure 32 Takia Kalandar Shah Burial Ground, Bhopal

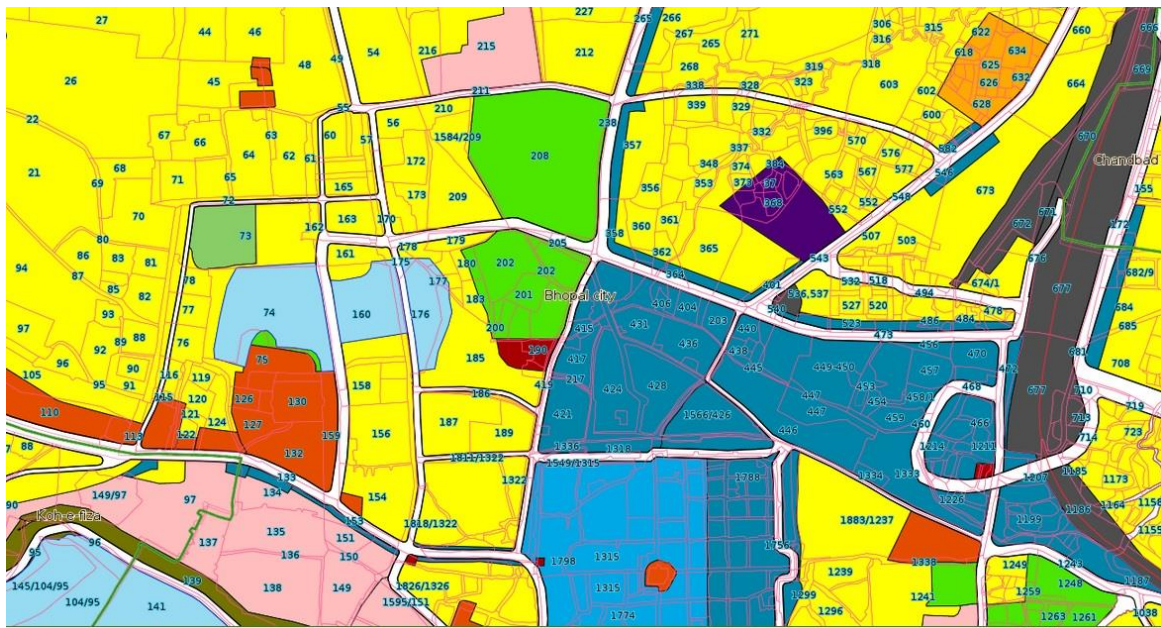


Figure 33 Land Use Map of Badabag, Bhopal

The land use pattern of the neighbouring areas of badaBagh are mostly residential except for Berasia road which is predominantly commercial with auto parts repair shops, etc. Saifia College marks the end point of the Takia Kalandar Shah.

The contours of the site are such that the two ridges collect water in the motialalab then the overflow feeds the Munshi Hussain talab and its overflow feeds the last lake and finally the excess water washes down the badabagh and slopes towards the footamakhbara.

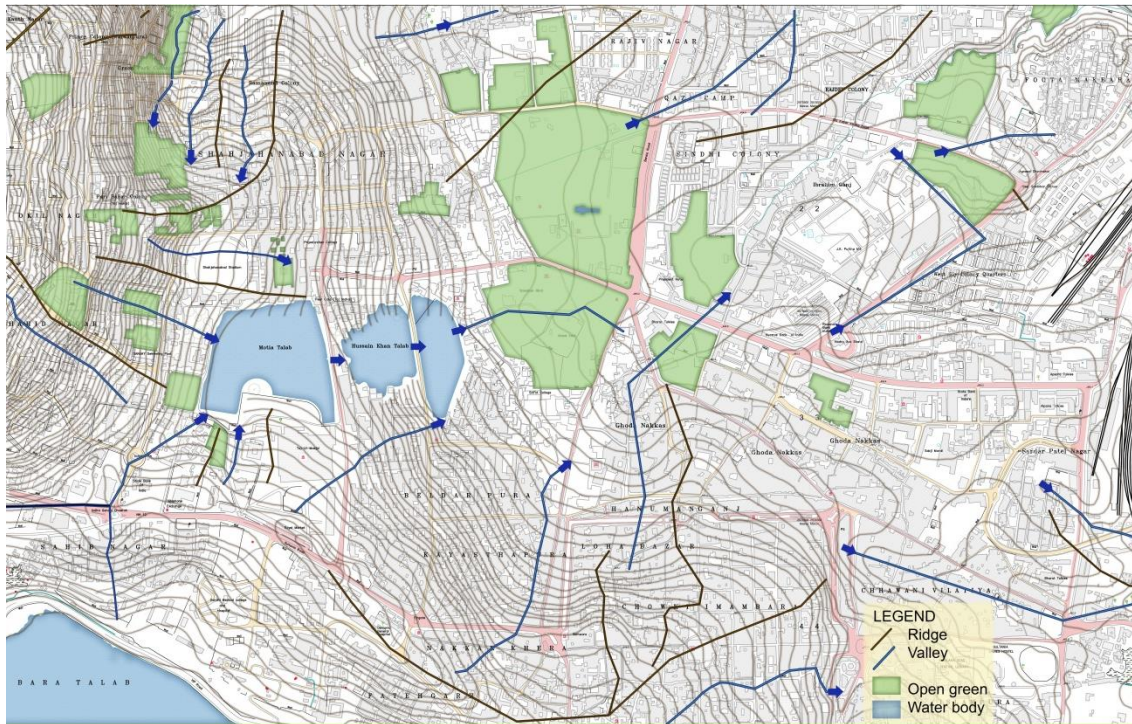


Figure 34 Physiographic Map of Barabag, Bhopal

After site visit it was found that the Bada bagh which is a historic burial ground has weaved itself in the city’s fabric so well that it has become a landmark and a node of the city movement, it was evident that the burial ground has adapted itself to be in use by the city as a space more than just a burial ground. The activities that it houses were sports and leisure with taking short cuts through the burial ground, waiting for their cars to be fixed at the repair shop and people reading newspapers to playing cards. The issues with the ground were also listed down to understand the potential that was not explored.

Also analysing the crowd generation points it was observed that activities were all around the burial ground and if the edge condition is improved then it might get more people doing using the space.



Figure 35 Design Analysis, Badabag, Bhopal

6.2 NigambodhGhat, Delhi

Shahjahanabad the old city of Delhi which marks the beginning of the city had Nigambodhghat located in its walled complex. The last of the remaining gates of the old walled city is **Nigambodh Gate**. Located on northeastern edge the city on the Ring Road near the Yamuna Bazaar, Nigambodh Gate derives its name from the popular NigambodhGhat. It is a 5.56 Acre cremation ghat on the banks of the Yamuna river coast in New Delhi, situated on the Ring Road, at the back of the historic Red Fort. It consists of a series of bathing and ceremonial stepped piers leading to the waters of the river.

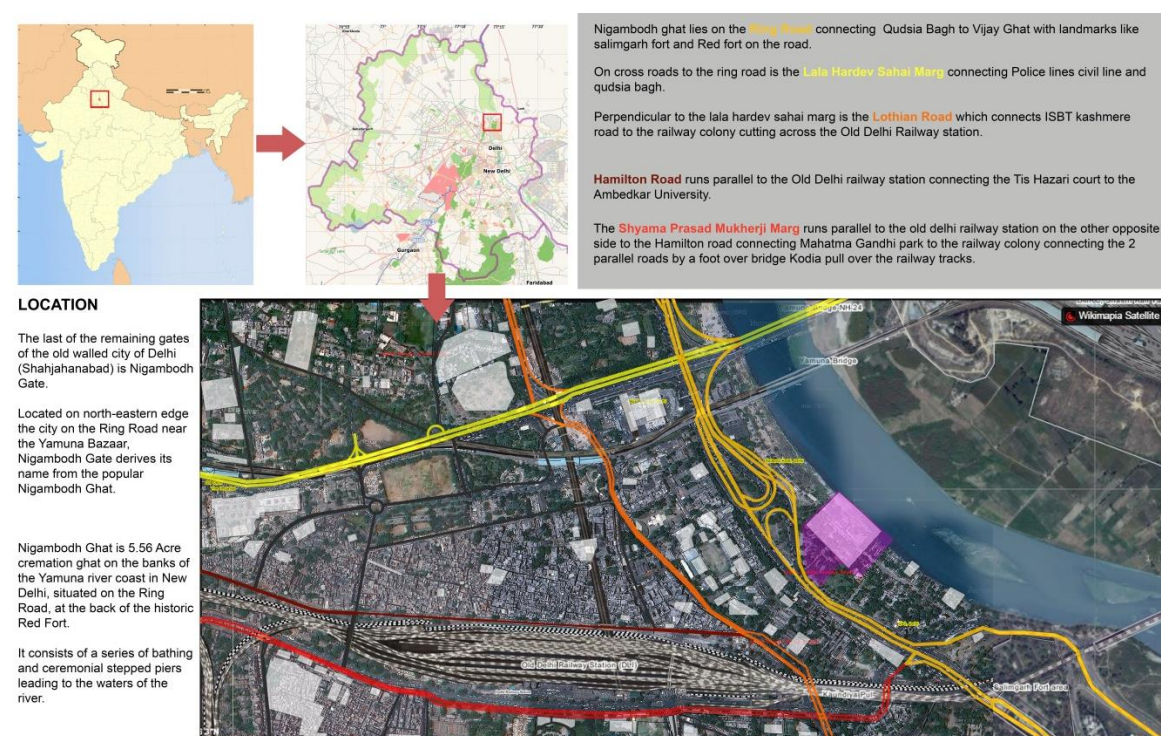


Figure 36 Location and Connectivity, Nigambodh Ghat, New Delhi

The ring road existing on the previous location of the Yamuna has the entry and exit points to the Nigambodhghat. There are two entry and exit to the site with only one functional while the other locked down.

The area being a part of the old city this portion of land houses many stories historic and mythological in nature.

- Nigambodhghat is said to be a very pious land where lord Shiva resides himself.

- As per Padma puran and soumrishanhitan, Indra once performed a yagya on the bank of Yamuna in the khandav van. It was highly appreciated and declared as a tirtha by the gods and goddesses giving the name Nigam (veda), Bodh (gyan). After the yagya was over indra gave away fist full gold silver and jewels naming the land as Indraprastha.
- Merutantra talks of lord Brahma gaining his Veda gyan here and once when all the Veda gyan of the world was lost Lord brahma bathe in the nigambodhghat and regained his lost memory and Vedagyan.

Located amidst monuments like Qudisia Park, Roshanara garden, Nicholson cemetery, and the world heritage site, Red fort.



Figure 37 Land Marks and Open Spaces Surrounding, Nigambodh Ghat, New Delhi

This site is also active socially with activities associated other than cremation. Being such an ancient ghat the nigambodhghat holds some of the oldest temples in its complex. People visit these temples often and thus they are active and attract people to this hindu cremation ghat.

While the maintenance and planning of the ghat today is

-
- Municipal Corporation Department (MCD) partnered with an NGO called Badhi Panchayat Vaishya Beesay Agrawal in 2011.
 - The bank of the river Yamuna is maintained and cleaned every few months by SantNirankari Mandal.
 - All the maintenance and administrative work is done by the Badhi Panchayat Vaishya Beesay Agrawal committee.
 - Gangajal and cow dung cakes are given free of cost to every registration.
 - The cost of maintenance of this place is Rs 10 Lakh per month and all of this is collected through donations from the people.
 - A total of six new cars including a tempo traveler and four eco air-conditioned cars have been bought.
 - A staff of 52 members has been inducted and this includes 15 sweepers, 16 security guards, 7 gardeners and 3 drivers.
 - Four new AC mortuary boxes have been bought.
 - The platforms are cleaned thrice in three days. Every month, a vehicle carries the ashes of the unclaimed dead bodies and transports them to Haridwar to immerse them in the river Ganga.
 - The management committee has a tie-up with 'DadhichiDehdanSamiti', an organization dedicated to promote the cause of body organ donation after death.



Figure 38 Design Analysis, Nigambodh Ghat, New Delhi

Analysis of the issues and activities other than cremation are many here while these activities make these areas useful the acceptance of such site to be more than just a patch of land which is associated with death becomes high.

Analysing Factors	Bada Bagh		Nigambodh Ghat		Inference
	Issue	Solution	Issue	Solution	
Access	Not defined nor is the visual access clear.	Urgent attention needed to demarkate the entry and exit points and making them welcoming.	Entry and Exit through 1 grand gate.	Different entry and exits as per the various users shall make the complex easy to understand.	The ease of access to these areas will help attract crowd more.
Edge condition	Boundary wall in part on the periphery.	A boundary wall inviting public shall be constructed.	High boundary wall with no visibility to the site at all.	The Boundary if necessary shall be made transparent to allow visual access.	A transparent boundary wall if necessary shall be present but it shall open up the site visually to the crowd.
Historic Value	Very old Since Dost Mohammad Khan.	Heritage needs to be preserved.	Ancient complex said to be established by Pandavas.	Awareness about the site with the social and religious activities shall be promoted.	A heritage needs to be preserved and maintained for the future generations.
circulation	Not defined the existing vegetation reflects the circulation pattern.	Needs to be designed to promote more activities.	Well established walkways and roads but no segregation of traffic.	Circulation design shall be considering integration of spaces	circulation is very important as it can unveil and cover various spaces. The gradation of spaces is necessary.
Surrounding Open spaces	Community level open spaces in near vicinity but no regional level open space.	Some kind of integration or vocabulary shall be developed to accentuate their relationship.	Ancient open spaces around the vicinity with district park and city ridge in close proximity.	Being amidst open spaces of regional scale the landscape design shall consider reflecting the same.	Some kind of integration shall be established between open areas and burial and cremation grounds to make these abandoned spaces a part of the
Surrounding Activities	Automobile repair shops offices and commercial centre as the surrounding landuse generates crowd.	The crowd collection from the neighbouring landuse are the daily users of the space. They shall be considered in designing of the space.	Monuments, Regional park and old Delhi railway station generates tourist crowd in the area but users are limited to the local residents of Delhi.	Tourist dominant crowd from the surrounding can be directed towards the site.	Surrounding activities generate the potential users of these sites so they need due consideration.
Aesthetic	Heavily vegetated and green cover gives a very inviting and picturesque landscape. But the royal ground is in a horrid state and waste of the monumental tombs.	Upgrading the site to make it more welcoming and multifunctional.	On the whole looks fine but being fragmented makes the site very confusing.	Aesthetic shall be considered to attract tourists and public to the site.	Aesthetics are very important to ensure public attention.
Vegetation	Rich flora with a wilderness like landscape for the takia kalandar shah	Flora and its grandeur shall be utilised to publicize the burial ground other functions.	Manicured parks and designed open spaces. In patches and the whole area seems fragmented.	Vegetation and open areas need to be integrated in the design of the complex so that it seems a part of the site complex.	Burial grounds have the potential for floral biodiversity. They need to be recognised for the same.
User Friendly	Male dominant	Shall be designed for all kinds of users.	All kinds of Users	every age and all gender friendly	Suitable for heterogeneous crowd.
Maintenance	Takia kalandar shah is still maintained due to regular use but Nazari bagh is in a very bad condition.	Needs serious consideration for maintenance	Well maintained inside the complex but the Yamuna ghats are in horrid state.	Maintenance shall be considered for the banks of Yamuna.	Maintenance is important but design shall be such that it needs minimum work.
Security	There is no security or surveillance of the site.	Security and surveillance shall be of prime consideration	There are security guards and the place has people throughout.		Security is very important to consider for the heterogeneous crowd.
Other activities	Meeting point	The potential of Anti-social activities shall be minimised	Visiting Ancient temples	More Activities shall be designed to attract crowd considering the heritage value of the site.	Activities need to be introduced to attract crowd and make these places active and a part of the city fabric.
	Hang-out / waiting area		Bhajan sandhyas and other religious and social events		
	Anti-social activities		Buddhist custom makes it mandatory to visit cremation grounds occasionally.		
	Play ground		Being an important part of the history of Delhi many NGOs and Organisations take active participation in the site.		
	Drive through				

Figure 39 Comparative analysis: Badabag and Nigambodh Ghat

CHAPTER SEVEN

SITE ANALYSIS

Delhi has at present there are 59 cremation grounds and 4 graveyards of the MCD and Delhi WAQF board has 53 burial ground.

1. In the existing cremation ground provision of cremation is to be made.
2. In proposed urban extension new burial ground/ crematorium/ cremation ground/ cemetery etc. are to be planned with proper parking and landscape provision. The plot area to be about 0.4ha per 5.0 lakh population for a cremation ground and upto 1.0 ha per lakh population for a cemetery and burial ground subject to availability of land. (Anon., 2021)

Mapped on GIS the map of Delhi with all the cremation and burial grounds marked

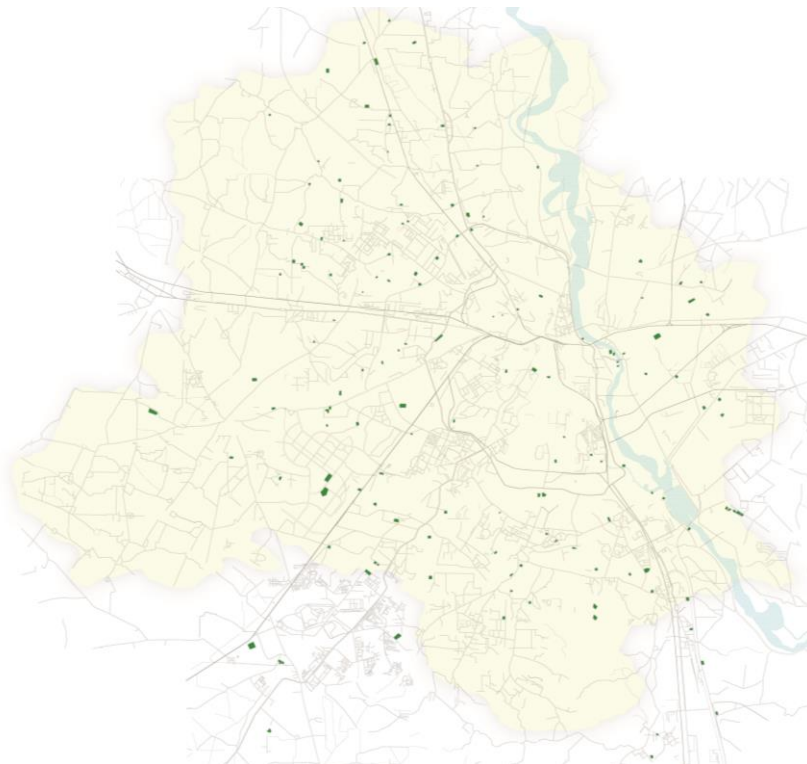


Figure 40 Location of Cemeteries in Delhi

Using GIS layers of the city like Regional open spaces

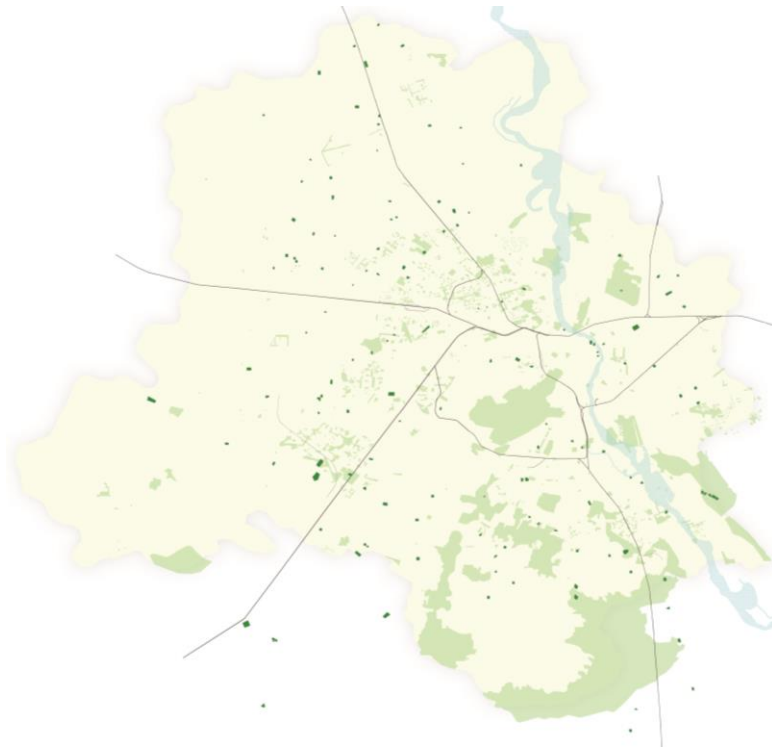


Figure 41 Location of Cemeteries and Regional Open Spaces in Delhi

Drainage pattern of Delhi

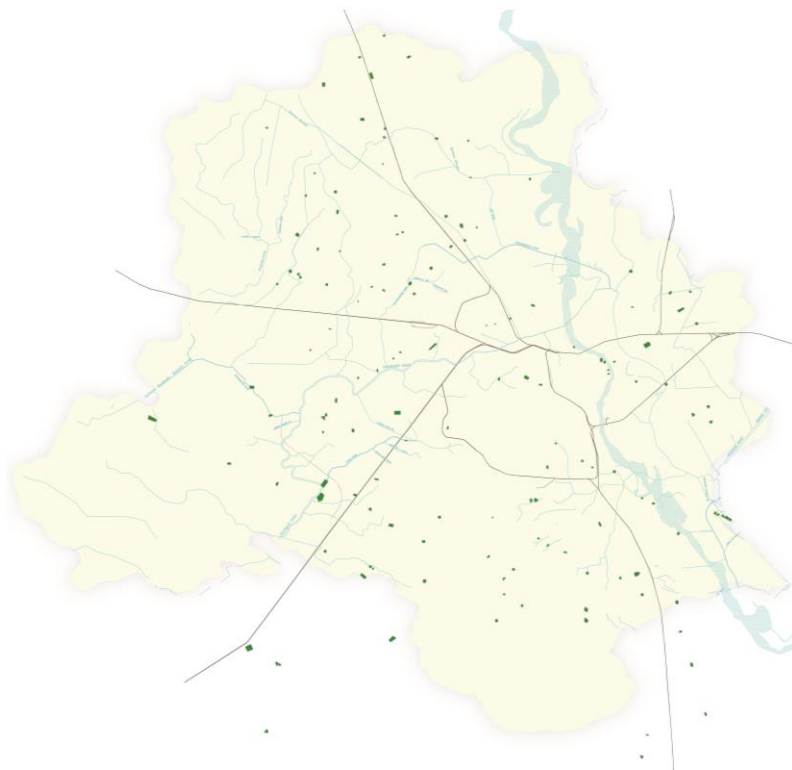


Figure 42 Location of Cemeteries and Drainage Channels in Delhi

Overlapping these layers analyzing the proximity to open areas and major drains

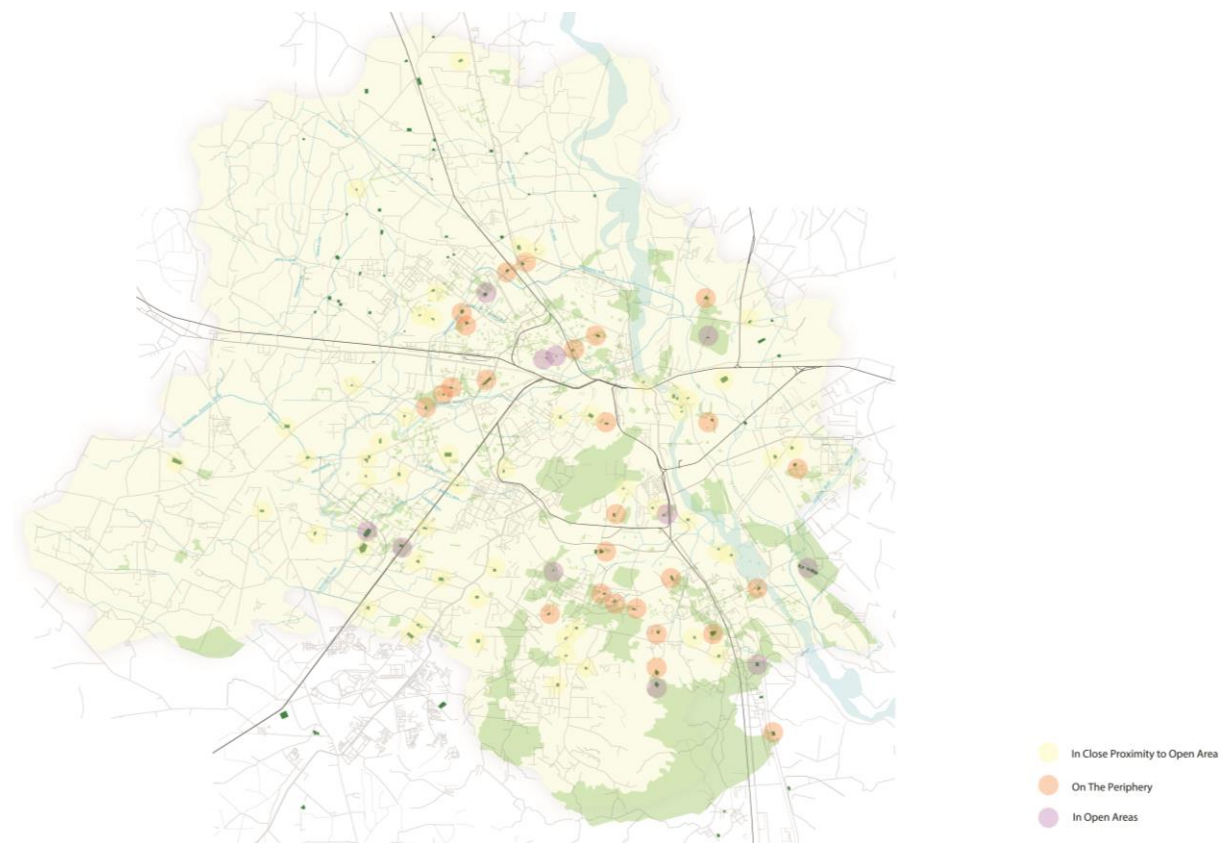


Figure 43 Proximity Analysis

Based on this proximity analysis a site comprising of all 3 types of cremation and burial grounds (Hindu, Muslim, Christian) was selected.

After a site visit and background study, the site selected finally was the region from Roshanara Garden to NigambodhGhat and Old Delhi railway station to QudsiyaBagh.

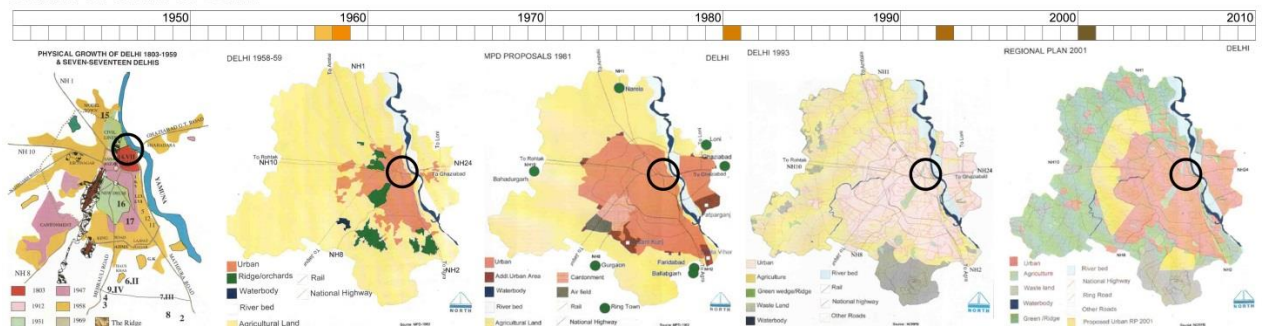
Shahjahan, the great Mughal builder who in 1648 built Shahjahanabad, the seventh city of Delhi. Shahjahanabad was a walled city, and some of its gates and parts of the wall still stand.



Figure 44 Plan of Delhi: 1857-1858

Shahjahanabad was secured and enclosed by about ten kilometer long wall. Ten gates connected the city with the surrounding region. Lahore gate was the main entrance for the Red Fort besides Delhi Gate. The Kashmere Gate, Calcutta Gate, Mori Gate, Kabul Gate, FareshKhana Gate, Nigambodh gate, Ajmere Gate and the Turkman Gate were the other major links of the city with the highways. With the growth of the city and Shahjahanabad as the center the city grew out in all directions and with Yamuna marking the natural boundary the Nigambodhghat has marked the edge of the city ever since.

Urban Growth of Delhi



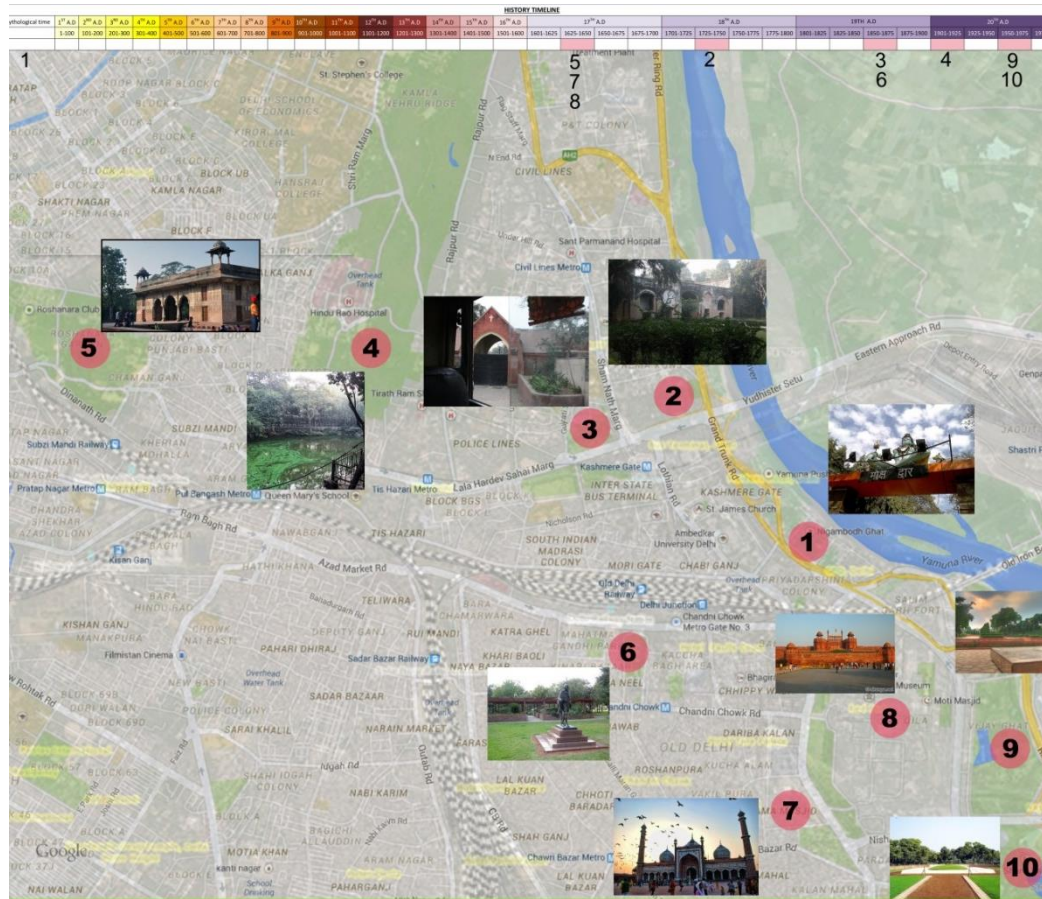


Figure 45 Land Marks and Monuments in Old Delhi

DESTINATION DATATION

S.NO.	DESTINATION	DATATION	STORIES ASSOCIATED
1	Nigambodh Ghat	3129 B.C.	Nigambodh ghat is said to be a very pious land where lord Shiva resides himself.
			As per Padma puran and soumri sanhitan, Indra once performed a yagya on the bank of Yamuna in the khandav van. It was highly appreciated and declared as a tirtha by the gods and goddesses giving the name Nigam(veda), Bodh(gyan). After the yagya was over Indra gave away fist full gold silver and jewels naming the land as Indraprastha.
			Meru tantra talks of lord Brahma gaining his Veda gyan here and once when all the Veda gyan of the world was lost Lord brahma bathe in the nigambodh ghat and regained his lost memory and veda gyan.
2	Qudsia Bagh	1748	Qudsiya Begum seduced Muhammed Shah Rangila while she was a dancing woman and was known as Udhman Bai; she later gave the Mughals their next emperor. The Begum's palace was destroyed by the British during the siege of Delhi in 1857. It is reduced to a mosque.
3	Nicolson Cemetery	1857	Brigadier General John Nicolson who was nicknamed "the lion of Punjab". An Irish army officer in the British East India Company, Nicolson died of wounds received during the revolt. His tomb lies near the entrance, barricaded by an iron grill invaded by jasmine vines.
			The British High Commission in India renovated the cemetery in 2006. It hired British multinational security services company G4S.
4	Kamla Nehru Ridge	1915	Nearly 170 hectares were declared a Reserved Forest in 1915. Less than 87 hectares remain today, which is to be develop as Biodiversity Park. Home to several historical monuments, namely the Flag Staff Tower (1828), Ashoka pillar (1356), Pir Ghaib (14th century), Chauburji, Old Baoli.
5	Roshanara Garden	1640 AD	Daughter of Shah Jahan, Roshanara's strong liking for her brother led to the murder of her eldest brother. She chose to spend an esoteric life in her palace in Delhi, surrounded by a thick forest. She never married and lived in her palace till the end of her life.
6	Mahatma Gandhi Park	19th Century	The park is referred to as 'Company bagh' as this park is an integral part of European social life in the early 19th century. Originally called 'Queen's Park' by the Britishers.
7	Jama Masjid	1650 AD	India's largest mosque can hold 25,000 people. It has three gateways, four angle towers and two minarets. The only prayer session where non-Muslims may be present is at 7.45am.
8	Lal Qila	1648	It took ten years to complete the fort, has almost two and half kilometer perimeter with tallest structure of 33 meters.
			As per ASI reports, The original color of the structure was white painted red by the british, While restoring the fort. The main architects of this monument were Ustad Ahmad and Ustad Hamid. During the times of Mughal, it was called Qila-i-Mubarak (the blessed fort).
9	Vijay Ghat	1966	His last rites were performed at Vijay Ghat, which is also known as 'Victory Bank'.
10	Shanti Van	1964	Jawaharlal Nehru's samadhi is to the north of the Raj Ghat and is known as the Shantivan or Shanti Vana meaning the forest of peace.

Land Resources

Delhi covers an area around of 1483 sqkms based on the estimations in the Master Plan. It consists of the Yamuna Flood Plain, the old Khadar (earlier flood plain) and the Bangar (upper alluvial plain). Majority of the land is covered by fine-to-coarse loamy soils with different levels of moisture-retention capacity. This land has been converted to urban use.

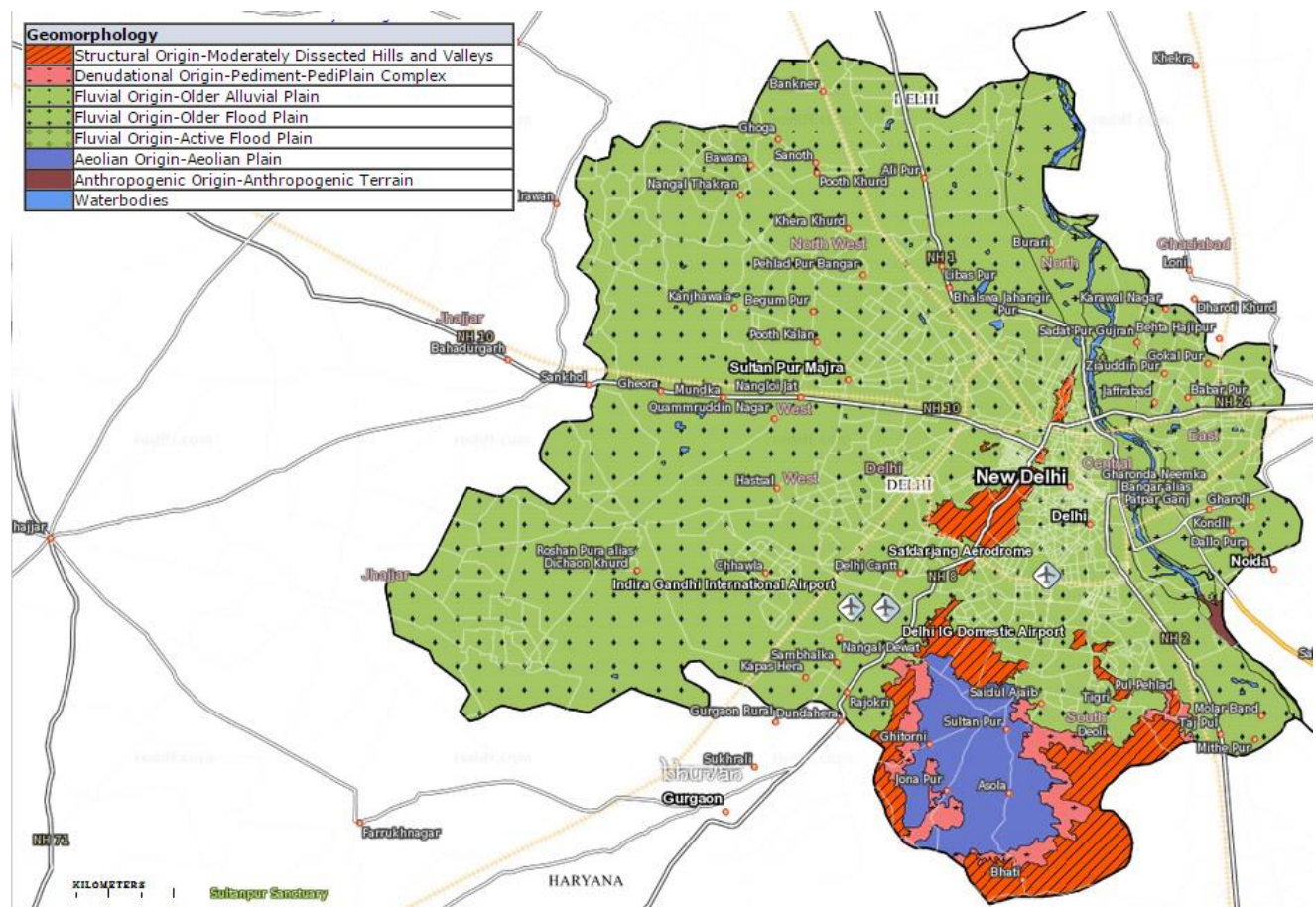


Figure 46 Geomorphology Map, Delhi

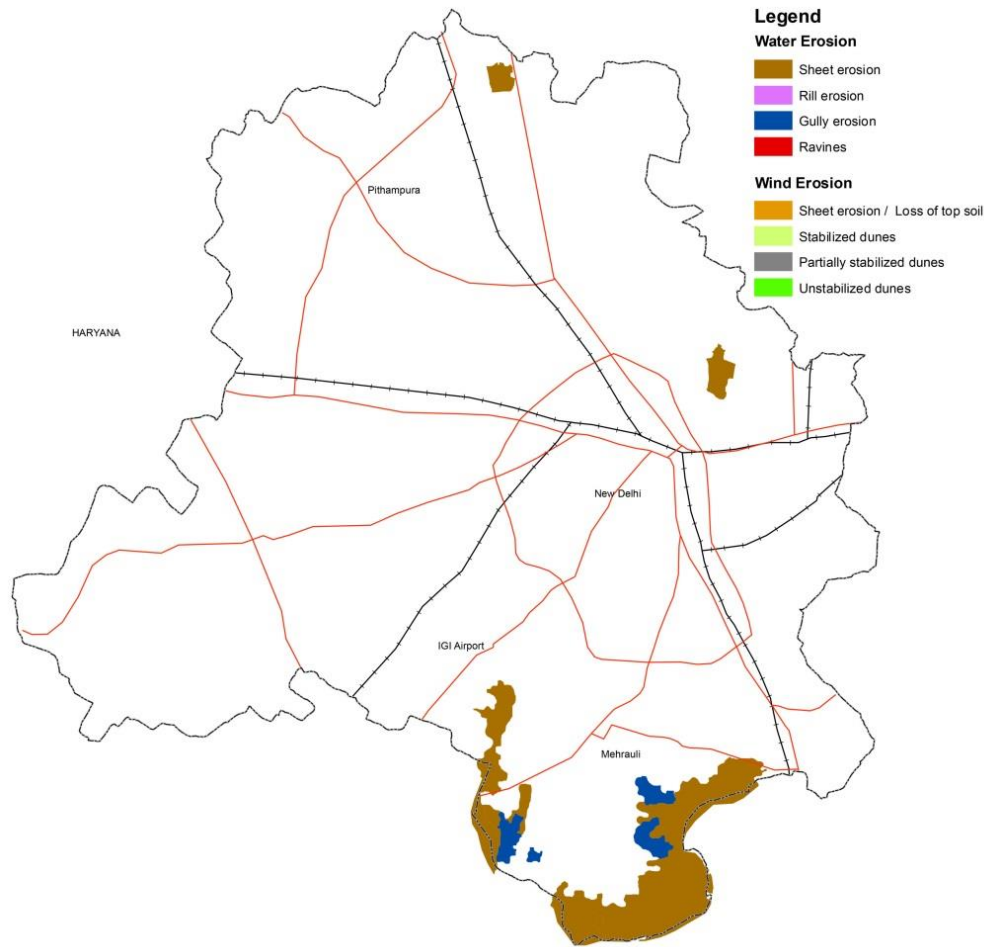


Figure 47 Soil Erosion Map, Delhi

Wind Direction

In the summers, the predominant wind directions are from the west in the morning and either west or northwest in the evening.

In the monsoons, the predominant wind directions are from the southeast or west in the morning and from east (in July and August) or north-west (in September) in the evenings.

During the post monsoon season, west and calm winds predominate in the mornings while in the evenings, north and northwest winds are most frequent.

In the winter mornings, southwest and west winds dominate, while in the evenings, northwest and north winds are frequent.

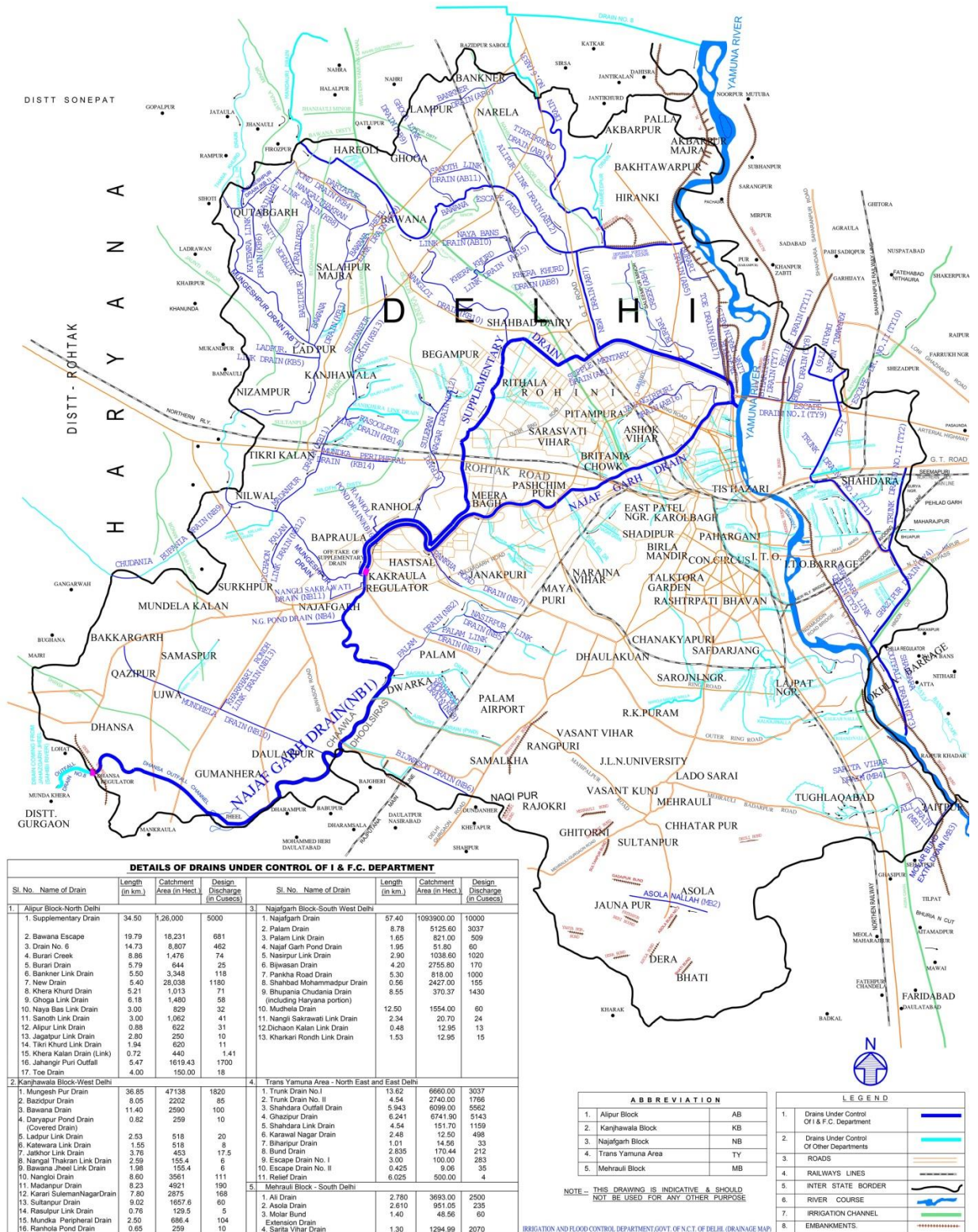


Figure 48 Drainage Map, Delhi

Of the Shahjahanabad area tanga stand drain, civil military drain and Delhi gate drain are the 3 drains emptying into the Yamuna.

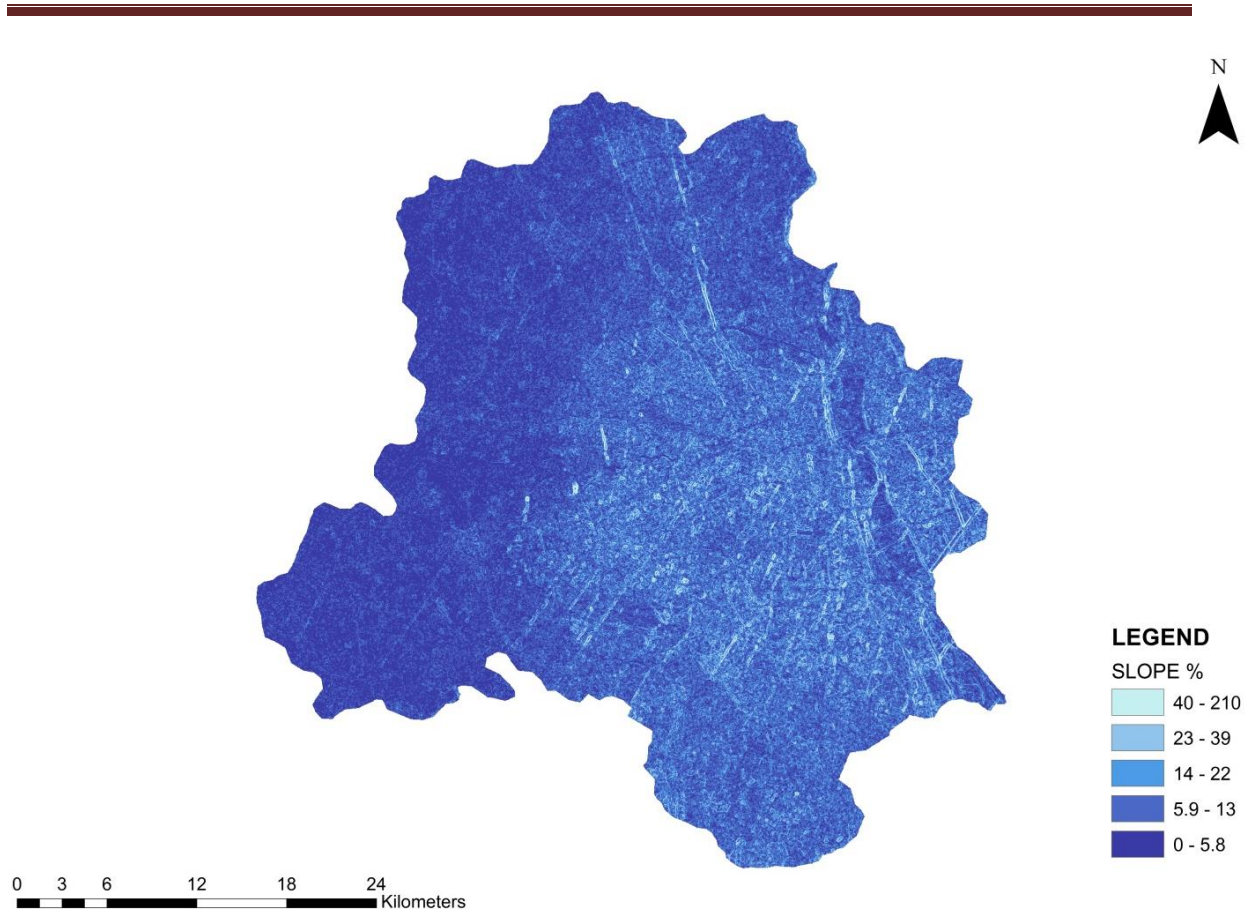


Figure 49 Slope Analysis, Delhi

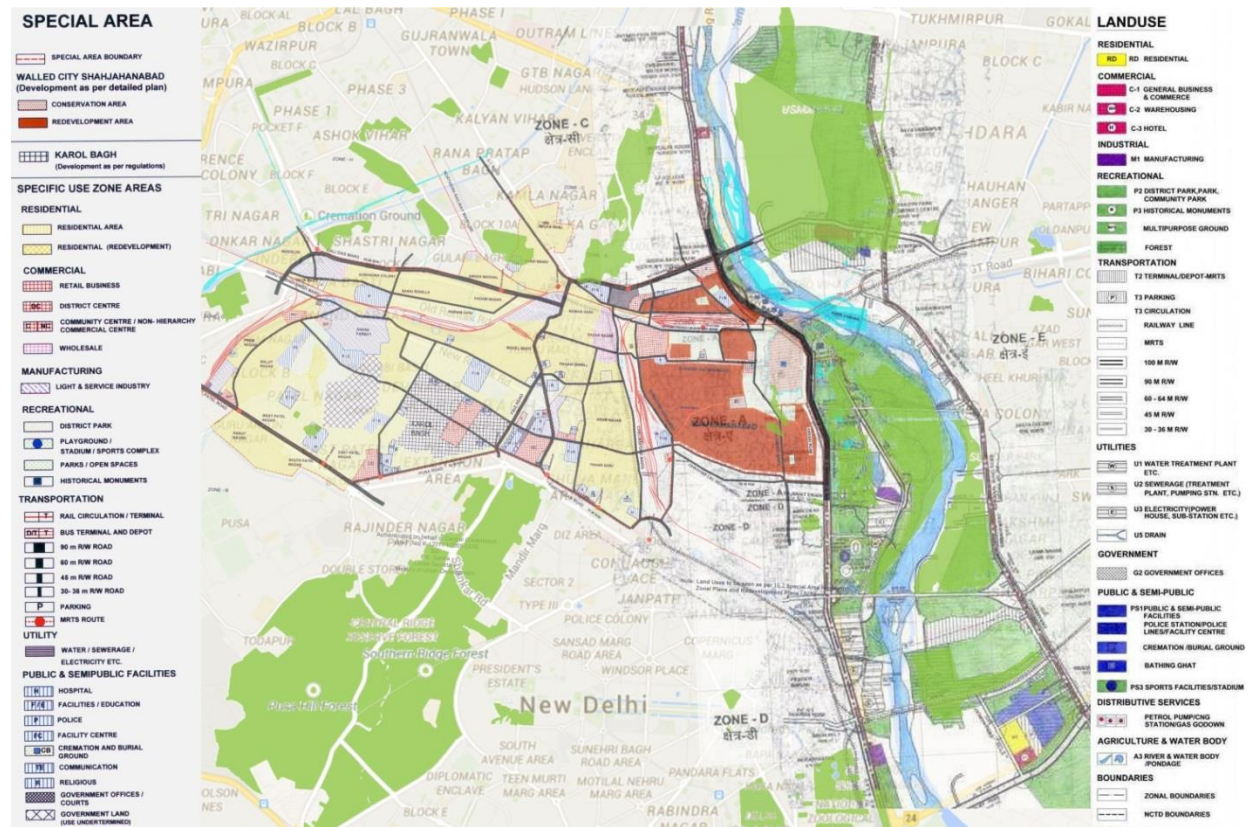


Figure 50 Land Use Map: Site and Surrounding



Figure 51 Site with Regional Open Spaces

The Total area of the region

= 6672400 SQ.M

= 1648.785 Acre

Total open park area

= 634510 SQ.M

=156.7 Acre

Then the percentage of parks that exists in this area

= $(156.7/1648.7) \times 100$

=9.5 %



Figure 52 Site with Regional Open Spaces and Necropolises

Total open area of necropolis

= 421230 SQ.M

=104 Acre

But if we include the cemeteries in the park system then the percentage of park system

$=((156.7+104)/1648.7)*100$

=15.8 %

So, if these necropolises and parks are integrated together to form a continuous green cover, the addition of these green corridors to the park system will improve these links connecting the otherwise fragmented open areas but also provide the birds and insects a corridor to move about easily improving the ecology of the area.

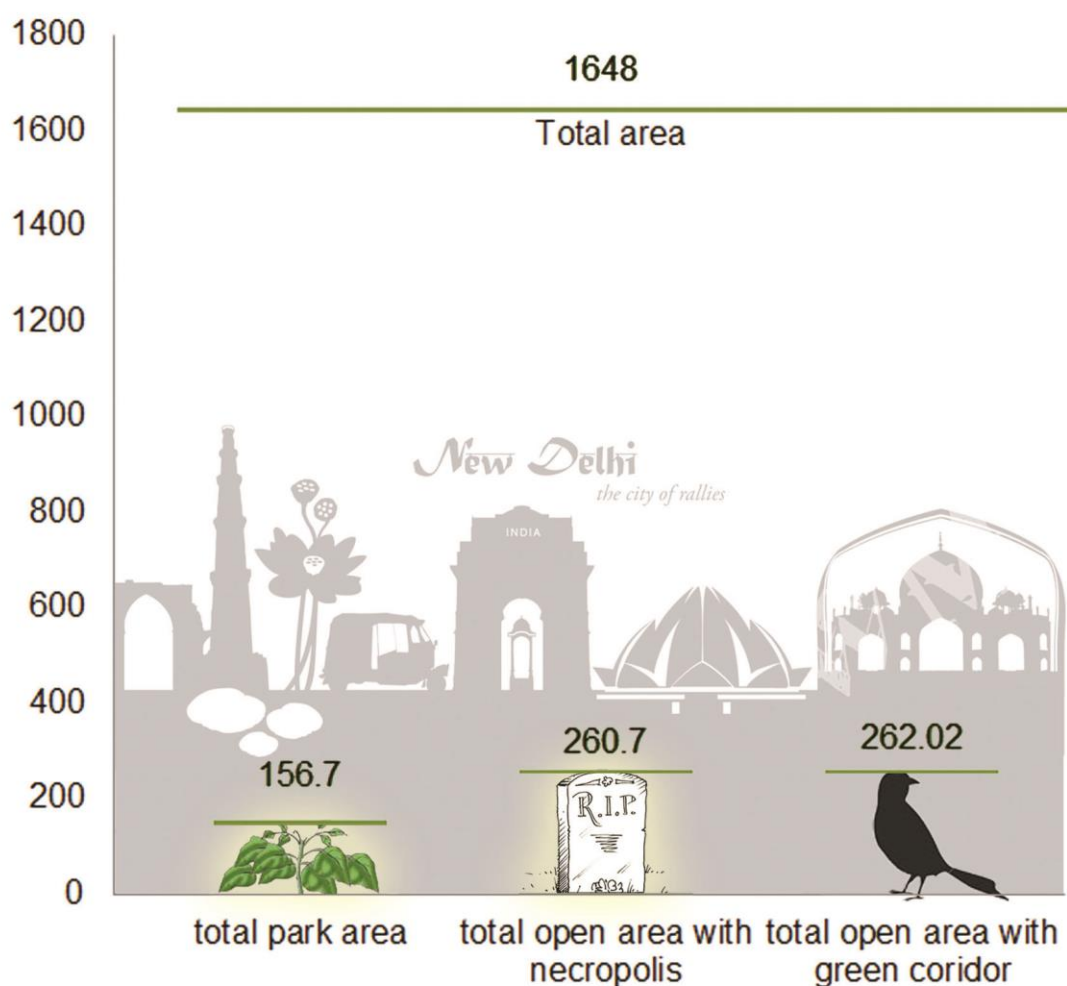


Figure 53 Growth in Open Arrears

In landscapes where formerly contiguous habitat is fragmented, conservation Strategies rely on sufficient levels of movement among habitat patches to rescue small populations from eminent extinction, or to permit recolonization once extinction has occurred. Thus, maintenance of landscape “connectivity” (availability of movement routes among landscape elements) has become a major focus.

CHAPTER EIGHT

DESIGN CONCEPT

The concept of samsara or rebirth where the soul travels through a cycle of life where it changes its form by birth, death and rebirth, the vocabulary of science may coin the phrase “matter can neither be created nor destroyed” here.

The idea of living full cycle of life and returning where we came from is one that appeals to many, regardless of faith, and this notion can be transformed into a perception where death of one cycle is the beginning of another. Necropolises have a rich condition for plant growth and where it marks the death of human life, it is the start of plant life. The potential of these sites for plant growth is immense.

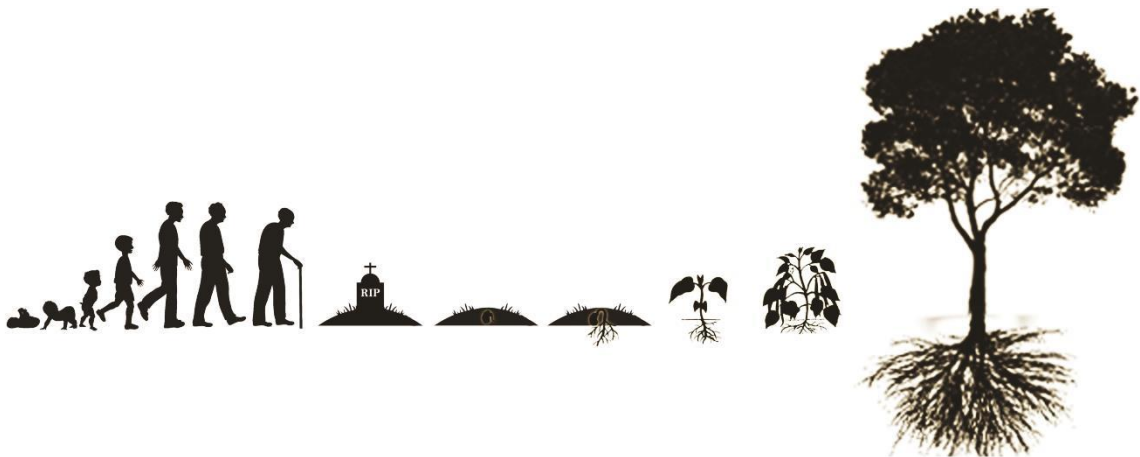


Figure 54 Design Concept

Delhi the metropolis has emerged from an old city called Shahjahanabad along the banks of Yamuna. The locale has some of the ancient most cremation and burial grounds, though their location was strategic then with the urban growth it seems to have lost its meaning and association. Now these places stand as individual green pockets left in wilderness. The connection and integration towards developing an open park system is the challenge.

Urbanization has made the city into a concrete block with no breathing ground. Real estate and land price always compromises on parks and open spaces leaving more land for built-up. In such a scenario cremation and burial grounds

are the open spaces much neglected by the city which are the lungs to the metropolis though they celebrate death they give life to the city.

The concept to integrate these pockets with the existing regional open spaces is inspired by the human nervous system linking all the parts together to function as a system and thus supporting life.

To develop corridors connecting the lungs of the city a network of streets and roads is deigned which reflect the life of the place.

The design intervention approach will be done in levels.

Macro level intervention - The design of the connectors between the cemetery and regional open spaces interlinking them and establishing a continuous green cover.

to start with a base plan of the region identifying potential cremation grounds and burial grounds were surveyed and mapped on the plan. As a binding element landscape features such as Bollards, Lighting fixtures shall have the same character a conceptual for the same is suggested and designed which will continue throughout the region.

First Street, a connector between the Hamilton road and Shyama Prasad Mukherjee Marg. The street is divided into 3 segments based of the character of the same. The first segment is a bridge over the old Delhi railway station and is designed to have a continuous trellis on the bridge with the pavement having alternate planters and delineated pathway. The bollards here are converted into pillars supporting the trellis. The next segment is all residential thus widening of the pavement and proposing a continuous tree cover with bollards limiting the pavement to pedestrian access only. Finally an existing roundabout in ruins is constructed to be a retention pond retaining the statue at the center and making the water body into a converging fountain with columnar trees around it.

Second Street the main spine connecting Qudsia bagh to Roshanara Garden. Divided into 3 segments the first segment dominated by tourist movement is designed with wide pavements and transparent boundaries of the side land-use and provision of kiosks and souvenir shops along the way with the bollards and lighting as per design. The median in the center will have a mound and a

meandering wall with slits to allow visual connectivity. The second segment will have red sandstone balls as street furniture and a formal layout with the median having boulders to allow visual access but limit physical connectivity. The third segment reflects the ridge it holds along so the median will show plantation in three levels and the sidewalks will have seating and typical bollards.

Third connector is through the police lines till the ridge. First segment being the police lines stretch which has a non-perennial water body on one side and high security walls on the other. The water body is constructed to become perennial with a deck on it and rockery on the side while the opposite sidewalk will have alternate bamboo planters and seating with typical bollards throughout the streetscape. This segment leads to the street which connects the ridge to the police lines this road is developed as an exhibition road; it shall have freestanding walls and seating with trellis where exhibitions on the road can be held and seating can be provided along this long stretch. With typical bollards and lights the street is aimed to be active frequently. Finally the road in the ridge is designed devoid of physical boundary walls instead 2 M wide shrub plantations is done to guide movement entry and exit through the designed areas. The road will have typical bollards and lights and alternate pockets/ plaza are created to highlight entry and exit and accentuated through tree crown connected to create a gate.

Micro level intervention - A design suggestion for existing cremation and burial grounds interlinking them with the neighboring open spaces and generating a concept of multifunctional necropolis by introducing a different activity along with. Taking four cremation and burial grounds in total throughout the region and designing them to promote activity and life in these areas.

Lothian cemetery a British cemetery housing many British high officials maintained by the British high commission in India and a protected monument is proposed to be converted into a butterfly garden where planting of seasonal and evergreen flower bed with an organic pathway touring the whole site is created and the graves are made the hero by making them the focus point in the park highlighting them and securing them as well. The site boundaries are made transparent by removing the brick wall and introducing vertical metal members

closely placed to allow only visual access. A lily pond is also proposed strategically to allow the butterfly growth. Evergreen trees are also proposed to provide the habitat needed for the eggs to be laid and larva to hatch.

Nigambodh ghat a Hindu cremation ground along the bank of Yamuna with mostly parking and concrete roads and fragmented patches of park. A sacred grove in the center is proposed comprising of Imli , Peepal and Kareel trees to help absorb the sulphur dioxide and soot from the cremation and also to create an environment to house the ancient temples and allow visitors to access these areas. Boundary wall of the complex is removed and planters and bollards mark the extent of the ground segregating the visitors and cremation activity crowd allows the potential of the site to be explored. A mound is created in front of the cremation platforms to visually block the cremation procedure but create a humble and serene environment. Bank of Yamuna is given stone pitching with Footstool palm and Palmyra palm plantation to play with the visual impact of the site from the Yamuna Bridge and old metal bridge.

Nicholson Cemetery a cemetery housing the soldiers of the sepoy mutiny it is a tourist destination and is a part of the Delhi heritage walk. It is a beautiful site with varied contours and hundreds of graves it is still in use and has a very English feeling to it. The boundary wall is removed and Rose shrub plantation to a width of 2M is done creating a non-permeable boundary but a visually open landscape. The Cemetery is proposed to be developed as an English garden with straight line divisions of the park and the pockets created will have a vast vocabulary of trees, shrubs and ground cover with fountains and bird baths to accentuate the English feeling. Seating along the walk and lighting is also inspired by the English style of architecture. The plazas created shall have kiosks and cafes with built in seating.

Pocket cemetery is a muslim burial ground with 3 burials till date it's a small burial ground with columnar trees leaving a good height of land vacant and fully shaded. Located in a posh area it does not get many visitors but has a 700MM high fencing on the street face while the rear and both sides have high boundary walls divideing the ridge from the same. A pocket park is proposed with a grand water body running along the periphery and finnaly dropping as a water fall

creating a waterwall on edge of the ridge such that it become the hero of the park. Not neglecting the burials the tombs are highlighted and marked to create focus and act as statues while one enjoys the view of the ridge. The boundary wall is removed but the division is created in the form of a haha. Typical bollards and lighting is also proposed using the same lighting element but without the fixture helps create the ambience required to make the burial ground active usable spaces.

The aim of these micro level interventions is to use the chunk of land to its potential and not neglecting the sentiments attached to these last resting places thus making them into the hero but promoting these sites to be used rather than being locked up parcels of land.

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