Landscape Of Waste

The case of Pirana dump site
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Landscape Environment Design Foundation (LEAF), 2019

LEAF is engaged in research and publication in the area of landscape design and environmental planning. It supports research programs of varying durations every year. Over the years, LEAF has increased its areas of exploration to developing city management matrices, governance and administration studies, urban generation and open space outreach efforts.

It has also worked on a country wide exhibition on landscape design - Tracing Narratives: an exhibition that explored the various facets of landscape design and its history in India.

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Why is a wasteland which has been active since 1980, and projected to close by 2008 after having stored Ahmedabad's rising waste for 28 years then, still very active even in 2019? The Swachh Survekshan Awards 2019 saw Indore claim the award for the cleanest city in the 3-10 lakh population category. On the same day, Ahmedabad bagged the title for the cleanest city in the 10 lakh plus population category. But there is a stark difference in the way the two cities have dealt with their Municipal Solid Waste. While Indore managed to clean up their 100-acre Devguradiya trenching ground which stored 15 lakh MT of the city's waste for several decades and attempts to convert it into a garden, Ahmedabad has barely scratched the surface when it comes to harnessing the potential of their 84 hectare open dump, **Pirana**, or even check the adverse effects it has caused on all the life around it.

Arranged in no particular order are the photographs captured around various locations near the dump at Pirana. These were then fused to create 8 graphic postcards to exaggerate and bring to light the strong, unsettling character of the place. These postcards intend to highlight the unliveable nature of the areas around the dump yard, like Citizen Nagar and Bombay Hotel. They hope to demonstrate the effects the dump has or will have on the people inhabiting these localities, if not dealt with soon enough. These photomontages attempt to represent the texture and massive scale of the dump yard, presenting it as an ever-subjugating intruder to the habitat of the people, flora and fauna of the place. They bring out the horror that Pirana is, and become an amplification of the appalling conditions that exist presently, and also the darkness which may befall on Pirana.

Pirana Dumping Site

Taj Mahal

A comparison of Pirana and Taj Mahal

The 366-year old Taj Mahal complex occupies 17 hectares of land while Pirana occupies 84 hectares of land, which makes it about 5 times as large. This must be thought of as a potential-gauging comparison to give an idea of the area which could be reclaimed and put to better use. As of now, Pirana has humongous influence over its surrounding areas, comparatively much higher than the Taj Mahal, but due to drastically different reasons.

Image: Google Maps

Intrusion into Privacy

The residents of the Citizen Nagar settlement, which provides shelter to those displaced during the 2002 Gujarat Riots, often complain of skin and respiratory ailments caused by the 39-year old mountain of waste.

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Too close for comfort

‘Unsheltered’, ‘piping hot’ and ‘filthy’ would be the primary reactions to the hefty dumps of waste. These strong reactions often lead us to neglect the dreadful living conditions of the flora and fauna at Pirana.

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F3
33
48

Scenic Backdrop

A brick wall constructed 13 months earlier is the only separator between the garbage dump and the human settlement. But is it a strong enough boundary to hold back the smell of the dump, the heat of the burning garbage or the dust which blows into the households due to winds?

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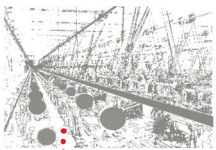
An open dump this large should be located away from any form of life, but Pirana has human settlements dangerously close to it. The peculiar name, “Pirana”, means the place that a “Pir”, a religious figure, inhabits. As it happens, a prominent da’i by the name of Pir Imam Shah, who started a cohesive community for his Hindu and Muslim followers, is buried at a dargah, about 13 km away from the dumping ground. Quite ironically, the people living near the dump happen to be those who were displaced during the 2002 Hindu-Muslim riots in Gujarat. The houses in the area, colloquially known as Bombay Hotel, were donated by the Kerala Muslim League Relief Committee to act as temporary relief for those who suffered during the riots. But as time has passed, the residents have made additions to the houses to accommodate their growing families which, in turn, led the area to develop as a permanent slum. The dominating character of the waste is felt from the Piplaj-Pirana main road as well as the innards of these slums. The main road isn’t wide enough to contain all the vehicular movement and is often the scene of traffic congestion. The unsegregated waste of the non-scientific landfill in the form of three distinct mounds can be seen from the far stretches of Ahmedabad.

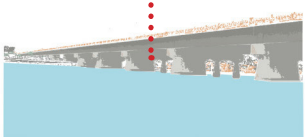


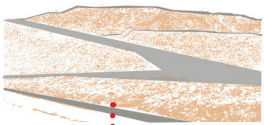
Calico Mills
established

1880

Sardar Bridge
opened

1939



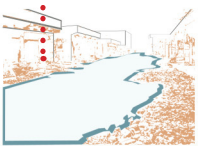


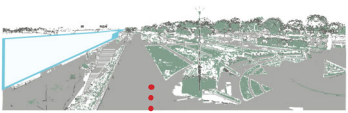
Pirana's usage
begins

1980

Bombay Hotel region develops

2002



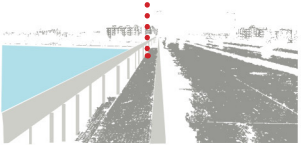


Sabarmati Riverfront opened

2005

Ambedkar Bridge opened

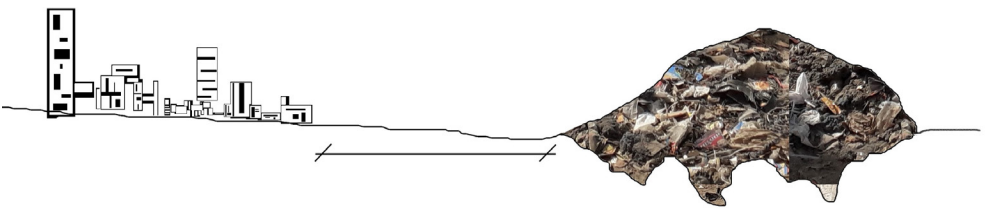
2011



Timeline of Related Events

As per a study in 2014, whose parameters were based on Central Pollution Control Board, Municipal Solid Waste management and handling rules (2000) and Central Public Health and Environmental Engineering Organisation (CPHEEO) manual, to determine suitability for potential dumping sites, there were certain criteria which must be satisfied by a parcel of land to be considered for a potential dump yard.

1. The slope of the land should be around 10 to 15 degrees.
2. Soil thickness should be about 350 m.
3. Population density should be low and no human settlements should be within a 500 m radius.
4. The distance from water sources should be more than 750 meters.



The CPCB stipulation stating that there should not be any human settlements within a **500 m** radius of a landfill is clearly violated at Pirana- Bombay Hotel.


GJ27 X 8611

Workplace of Waste

Off the Piplaj-Pirana road, bifurcating streets lead you to various factories and mills. The workers often have to stay back at their place of work, during the evening hours when the waste is burnt, and complain of respiratory illnesses.

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Vadilal
આનંદ થા એન્ડ નાસ્તા પોઈન્ટ

Where are we headed?

A sight of food cooked in the open or on roadside is often reason enough to avoid eating at a certain place, but that isn't the case here. Although a 40 meter high dump of waste, less than 500 meters away, staring in at their food, should be good enough.

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Grave Danger

There is no boundary between this graveyard and the main street which runs along the 6.5 km stretch of the dumping ground. Not even a 2.1 meter high brick wall, which is supposed to hold back the waste and its effects, near the Citizen Nagar housing locality.

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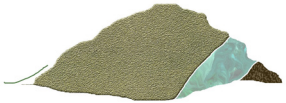
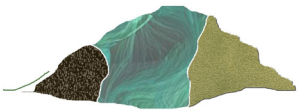


Excel Industries Ltd. Data, 2017

70% Inert Sand
20% Organic Waste
10% recyclable waste



CPB and CSD Data, 2012

37% Inert Sand
40% Organic Waste
23% recyclable waste

A study conducted in accordance with Ahmedabad Municipal Corporation in 2015, when the municipal solid waste was 2300 metric tonnes per day, revealed the composition of plastic waste onsite as well. It was found that in a waste sample of 105.07 kg/tonnes of plastic waste, 0.672 kg/tonnes was PET, 92.416 kg/ tonnes was HDPE/ LDPE and 0.824 kg/tonnes was PVC.

The composition of waste reveals that when Bio-mining is practiced, large quantities of compost can be generated with the organic waste. The inorganic part of the waste can be used to produce Refuse derived fuel (RDF) and the completely inert part of the waste can be diverted to a sanitary landfill. The inert waste comprising of sand can also be sold to the Construction and Demolition industries. The recovered sand can be used to manufacture paver blocks.

Pirana and its effects are well-documented and written about in various articles in the past. Not just the dumping ground but also the presence of various factories and manufacturing units in the vicinity, which discharge pollutants and foul smell on a daily basis, are making the well-being of the people a distant reality. To think of it, the workers in the factories are no strangers to health issues either. They work from morning till night on either timber processing, denim-dyeing or with waste from the dump. The end of their work day coincides with when the waste in the Pirana dumps are lit. The combustion usually does not die rapidly due to exceeding amounts of Methane caused by the decomposition of the unsegregated organic waste. These issues are very real and have seen different propositions made over the years, but not even one has come to fruition.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Holding back the Playing Field

The inner streets culminate into boundary walls, signaling a dead end, but with the omnipresent garbage mountain lying behind them. The main bifurcating street connects directly to one of the three open dumps, which is easily accessible to the children playing in the area.

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STOP
SECURITY CABIN

Can we stop?

Currently, Excel Industries Ltd. runs a waste-to-compost plant near the Pirana Dumping Site, which is unable to process all the legacy waste. Diverting the waste being deposited at Pirana and segregation at source may speed up the process of clearing the hillocks of garbage.

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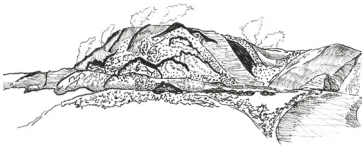

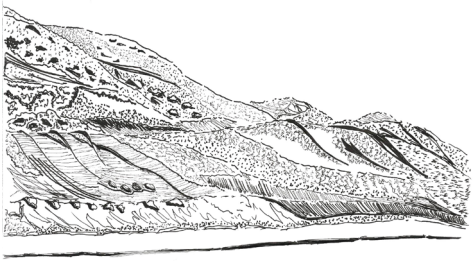

There should not be any human/animal habitation as close to Pirana as there is currently, and the fact that there is, should be reason enough for prompt closure of the landfill. If the cost of human lives being at stake is not a strong enough reason, the imminent threat of the 23 meter high mountain of toxic waste collapsing onto the abutting road should be. **If people get uncomfortable at the thought of driving through the road next to this promenade of waste, it should also lead us to recognize the danger in which people are living alongside it.**

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Kaustabh Banerjee is a B.Arch. student at V-SPARC, Vellore Institute of Technology.
This study is a part of his office training at M/s Prabhakar B. Bhagwat for 6 months and was undertaken for a period of 3 weeks.

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