



RESEARCH ARTICLE

MICROCLIMATE OF THE AMBEDKAR MEMORIAL

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ABSTRACT

The mesmerising memorial has gifted a completely different definition to the new parts of the city and Gomti Nagar. However, a major problem that has been witnessed over time is the increase in microclimatic temperature inside and around the complex, creating discomfort for visitors/ users and nearby dwellers. The effect on environment has been overlooked by the creators of the memorial in today's millennium, when there is a desperate need to save the earth and have a sustainable approach to all that is created.

1. INTRODUCTION

Dr. Bhimrao Ambedkar Samajik Parivartan Prateek Sthal is a public park honoring prominent personalities who have showcased unforgettable work towards humanity, equality and social justice such as Jyotirao Phule, Narayan Guru, Shahuji Maharaj, Bhimrao Ambedkar and Kanshi Ram. The memorial was constructed by Mayawati, the Chief Minister of Uttar Pradesh, during her administration when she led the Bahujan Samaj Party. It is located in Gomti Nagar, Lucknow, Uttar Pradesh. The mesmerising memorial has gifted a completely different definition to the new parts of the city and Gomti Nagar. People duly comment on the large area it occupies or the wastage of resources, but nothing as such is the case. Resources have been utilized; money has been put in; a large area has been occupied, to build a memorial for an authority as big as Dr. Bhim Rao Ambedkar, the architect of the Constitution of India, the founding father of the Republic of India and a social reformer who inspired the Dalit Buddhist movement and supported the rights of women and labour. However, a major problem that has been witnessed over time is the increase in microclimatic temperature inside and around the complex, creating discomfort for visitors/ users and nearby dwellers. The effect on environment has been overlooked by the creators of the memorial in today's millennium, when there is a desperate need to save the earth and have a sustainable approach to all that is created.

2. AIM: The aim of this study is to showcase that there is an adverse temperature rise in the Ambedkar Memorial such that it is creating its own microclimate, a discomfort to the visitors and the surrounding areas affected.

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3. OBJECTIVES: The objectives for the study would help to achieve the aim of the study are enlisted below.

- To conclude that the Memorial complex has its own microclimate created and understand the reasons for it.
- To analyse effect of this microclimatic condition on visitors and users.
- To enlist alternative solutions that could be incorporated to solve the issue.

4. METHODOLOGY

A primary analysis of the complex, the live case study has helped to have a record of the current situation. This is followed by secondary analysis via texts such as newspaper reports and personal blogs. There is also information taken from instructors specialising in climate studies.

5. CASE STUDY

5.1. PRIMARY CASE STUDY

Primary site analysis and analysis of aerial images from Google maps show use of stone in the complex. Entire area of Gomti Nagar from top is green whereas the Memorial complex is a monotonous pale brown shade owing to the extensive use of stone. Landscaping in the memorial site is done by paving with granite, marble and sandstone tiles. There are also levels created at certain places that are a feature of the memorial's architecture beauty. There are shrubs along the walkways which also help in directing the visitors. No soft-scape spaces are found in the landscaped area. Green on the site is just the mere amount of shrubs and short trees present. These are highly pruned to specific small sizes.



Figure 1.1 Evening view of Ambedkar Memorial

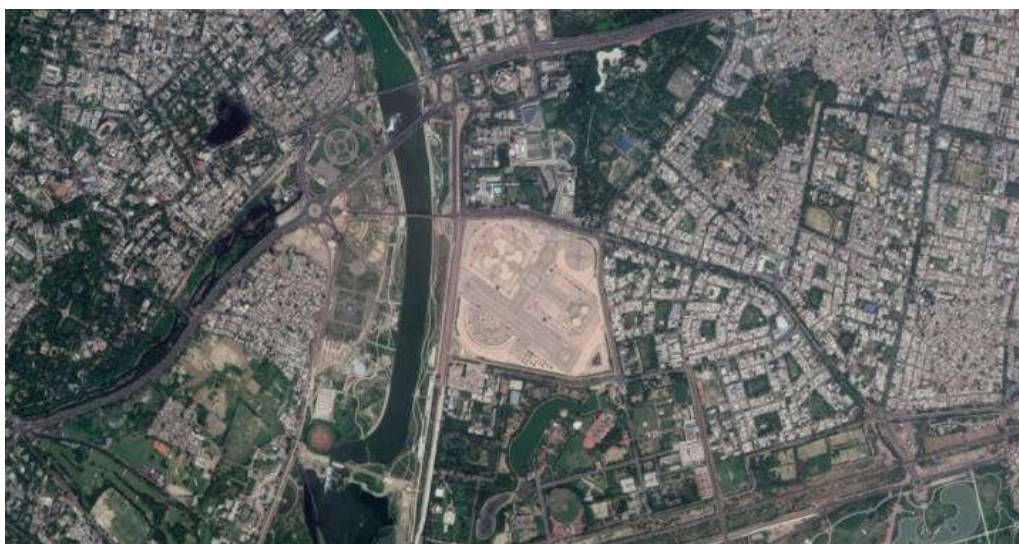


Figure 5.1.1 Aerial image of Ambedkar Memorial in context of Gomti Nagar



Figure 5.1.2 Aerial image of the site



Figure 5.1.3 Landscaping on the site



Figure 5.1.4 The gallery building



Figure 5.1.5 The Museum block

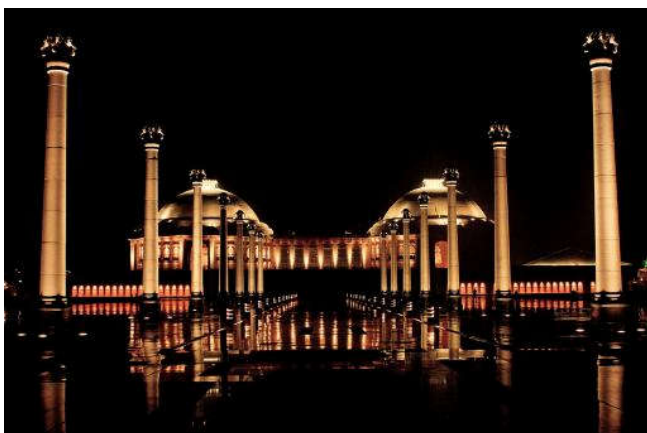


Figure 5.3 Lighting at night

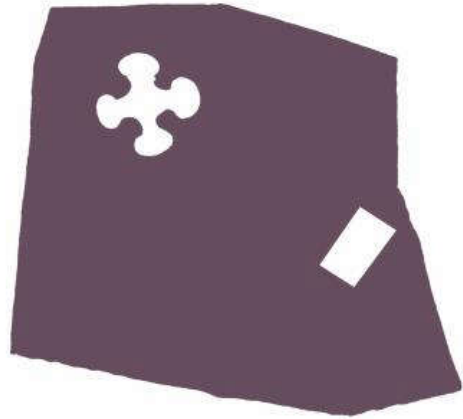
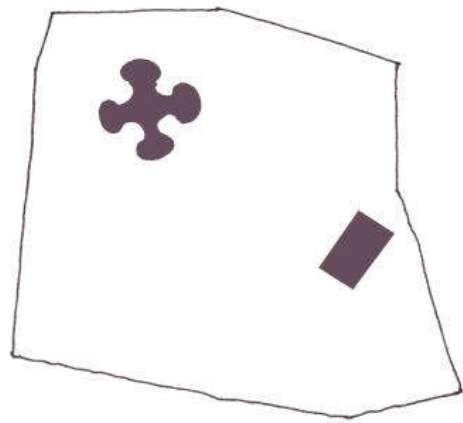


Figure 6.1.1 Figure ground of the site

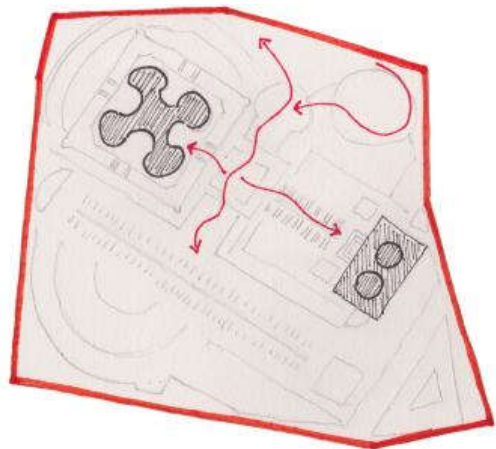


Figure 6.1.2 Circulation on site

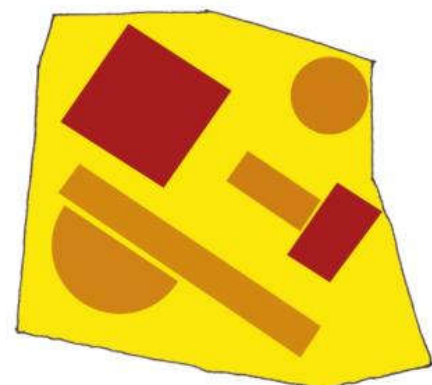


Figure 6.1.3 Red to yellow denotes shaded functional, non-shaded functional and free space

5.2. Secondary case study

5.2.1. Case Study 1

Lucknow Pulse- Ambedkar Memorial & its Grandeur: An article by Lucknow Pulse, an initiative to help Lucknow regain its past glory, explains about the Ambedkar Memorial and its grandeur. The memorial is constructed with red sandstone and *Makrana* marble, transported from Mirzapur and Rajasthan. It is speculated that complete mountains at Mirzapur have been pulled down for the project. At the entrance, we find 62 statues of elephants flanking the walkway on both sides. Squares and kiosks have been planned on the site, each having granites statues. The expansive courtyard, impressive Ashokan urns, columns and bronze fountains enhance beauty of the memorial. The complex has spectacular lighting display from Belgium.

5.2.2. Case Study 2

Indian Express- Ambedkar Memorial without a green nod

The article brings forth facts and explains that the then Mayawati government constructed the memorial without obtaining environmental clearance. According to an audit of implementation of environmental laws in Lucknow conducted by the Comptroller Auditor General of India, the Uttar Pradesh Pollution Control Board has failed to ensure implementation of the provisions of Environment Protection Act 1986. *Under the Environment Protection Act, the UPPCB has to issue a no-objection environmental certificate for special projects after clearance from the state-level environment certificate for special projects after clearance from the state-level environment impact authority (SIAAA)... The government said it had been informed by SEIAA that this particular project was not covered under the Environmental Impact Assessment notification, 2006. Reports said that the government's claim was incorrect because it was necessary for the authorities concerned to get clearance from UPPCB for construction on an area less than 20,000 sq m. Dr. B R Ambedkar Samajik Parivartan Sthal was, according to information collected from the Uttar Pradesh Ranjkiya Nirman Nigam, built on an area of 8,836.14 sq m.*

6. CHAPTERS

6.1. Chapter 1 Landscape alternatives

The memorial is situated in the swish locality of Gomti Nagar which is said to be the largest planned residential colony in India. Cost of the memorial is estimated at seven billion rupees. As analysed above, a major reason for the increase in micro-climatic temperature is the material used- the stone, which gets heated by the scorching sun of the day, increasing the temperatures of the memorial. Instead of the stone paving and allocating all exterior area as hard-scape, a better approach would have been a landscape technique with partial hard-scape and soft-scape spaces. The site is well-composed at present. However, further exploration in allocating soft-scape spaces would have led to a more sustainable and balanced design solution. The locals refer to the memorial as *Ambedkar Park*, which somehow explains the want of a park space in Lucknow. With more soft-scape, the memorial could have been a boon to the developing city and its people.

6.2. Chapter 2 Vernacular absence to be met: The case studies show extensive use of granite and sandstone as cladding and flooring.

The stone has been quarried and transported from Mirzapur and Rajasthan, adding to expenses of the project, also being non-sustainable at the same time. It would have been justifiable if materials from the state or town vicinity were put to use. Perhaps, vernacular styles and arts of Lucknow could also have been promoted with this gesture. For instance, let us consider Bhopal, capital city of Madhya Pradesh, a peaceful serene town. A positive factor about this city is that rock-cut architecture is still evident in spaces and nooks carved out from the hills, instead of breaking down the natural resource. This has led Bhopal to maintain its identity. They have used the natural lake in the heart of the city too well. The lake has not lost its glory what it must have had some 500 years ago. While, in the case of Gomti Nagar, the entire area covered by the memorial was a belt of green lush with tall trees, but unfortunately there is no speck of that jungle or the trees which Gomti Nagar had just 25 years before.

6.3. Chapter 3 architectural objectives: The monotony of the area can be experienced once you enter the complex- a large and unending expanse of granite floor. This does not please the eye causing glare. The designers should have taken into account such issues and created a play of spaces, making the place much dynamic rather than regular. Patches here and there of grass, or may be in some regular manner could have been planned to make the memorial look lush and vibrant rather than monochrome. Currently, the granite flooring is in levels which could be played with more had there been alternate patches of grass with the stone.

6.5. Chapter 4 Not a sustainable design: Sustainability check has become a prominent concern to be taken care of in case of any built environment. A major problem that has cropped up owing to the Ambedkar Memorial's existence is the zero amount of ground water recharge in such a great expanse of land. The site has been landscaped with stone as a solid surface, without any spaces that could help in rain water harvesting through ground. The memorial thus has a major role in decreasing the underground water table level of Gomti Nagar. The granite flooring blocks all the rainwater and drains it off into the municipal lines.

6.6. Chapter 5 comparison with the vicinity: The Ambedkar Memorial has been constantly compared to other such public spaces developed in the city. Local visitors and tourist crowd is shifting focus to other public places due to the heated micro-climate of the memorial, a major discomfort to the user group. National newspaper, *The Pioneer* had covered news on the Janeshwar Mishra Park when it was inaugurated. It explained that the upcoming park shall pull crowds towards itself, shifting the centre of the city from the vicinity of the Ambedkar Memorial. The memorial has been referred to as *vast expanses of the red sandstone on the outer periphery, undulating hillocks at closer quarters and palm trees encircling the band of azure*, whereas the Janeshwar Park has been called as *an oasis in the concrete jungle*.

7. CONCLUSION

An architectural beauty and epitome of scenic pleasure, Ambedkar Memorial is a landmark for Gomti Nagar and Lucknow which unfortunately has the drawback of an uncomfortable microclimate. The need is to implement changes so that the microclimate of the precincts may get more comfortable and breathable as compared to the present

situation where you feel the gush of heat hitting you the moment you enter it. Nonetheless, this discomfort may be avoided by implementing certain changes, permanent and temporary, that would mark the memorial as a flawless example of the city's much renowned architecture beauty.

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