



CPTED for a Safe Basti: A Case of Nardan Camp

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Abstract

The rapid urbanization has led to incremental growth of Basti's in Delhi and these Basti's have become major grounds for crime due to negligence as well as spaces which become prone to dumping of garbage, criminal activities as well as drug addiction. These spaces are generally located near to the periphery, which generally coincides with the entry to the forest or restricted areas, as in the case of Nardan Camp, Delhi. The residents have faced criminal activities such as theft, eve teasing, robbery etc. on a daily basis and the women have been the easiest target for the same. The primary research including the site visits revealed that the crime was due to easy access to the Basti, lack of physical infrastructure and behavior changes in the youth. The study indicated that the problems may be addressed by a few interventions based on the concepts of CPTED. These interventions were proposed after a thorough understanding of the needs and the activity pattern with community participation to bring in a sense of belonging to the dwellers. The public spaces could be made safer by providing basic physical infrastructure such as streetlights, boundary walls, creating buffer zones on the periphery, installing cameras etc. Also, by providing safe spaces for all age groups. These small interventions can bring a change in the Basti through CPTED and can help transform gloomy dysfunctional public spaces into celebrated community spaces while increasing livability and quality of life.

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1. Introduction

Rapid urbanization and city development as a result of ongoing migration have caused several challenges in Indian cities. Slum relocation, unauthorized settlement, overpopulation, and economic inequality have all contributed to an increase in crime. Urban growth and city expansion frequently result in unforeseen spaces; concealed and neglected, they can become breeding grounds for criminals and drug users or a waste dumping site. These abandoned areas are dangerous and have become hotspots for criminal activity such as theft, eave teasing, robbery, and so on.

Delhi, India's capital, faces a persistent slum problem due to rapid urbanization, rural-to-urban migration, and a growing population. The city now houses over 2,500 slums, accommodating millions of people, constituting a significant fraction of the total population. (Sinha & Shekhar, 2017) The influx of rural migrants seeking better economic opportunities has exacerbated the issue, leading to the rapid spread of slum settlements. Living conditions in these slums are characterized by overcrowding, lack of essential facilities, and inadequate housing, resulting in serious health hazards and poor overall well-being. Slum dwellers often lack proper sanitation, safe drinking water, and waste management systems. Apart from these a major problem which has been neglected is the increasing crime rate in the unauthorized settlements of Delhi. In Delhi 43% of slum residents reported that minor crimes like fights, brawls, and snatching have increased in their locality. (Jyoti Mishra, 2022)

Nardan Camp in Delhi is an unauthorized settlement located near the protected forest area in Tughlakabad. The location of the Basti and unprecedented growth has led to formation of land parcels near the approach of the Basti which led to shady places for criminal activities. These crimes have led to unsafe environment for the people of the Basti especially for women and children. These crimes need to be addressed and prevented through design interventions in the Basti based on the methods of Crime Prevention Through Environmental Design (CPTED).



Figure 1. Entry of Nardan Basti, Source: Emara Architecture and Urbanism



Figure 2. Streets of Nardan Basti, Source: Google Earth

Crime Prevention Through Environmental Design (CPTED) is a multidisciplinary crime prevention method that employs urban and architectural design, as well as the management of built and natural settings. CPTED tactics seek to reduce victimization, dissuade offender decisions that lead to criminal actions, and foster a sense of community among residents in order to achieve territorial control of places, reduce crime, and reduce fear of crime.(Singapore, 2003a)

1.1. Aim

The aim of the research paper is to create safe public spaces and to provide solutions for increasing crimes in Nardan Basti through design interventions based on the methods of CPTED.

2. Methodology

The primary research included site visits to the Basti and qualitative method of Focused Group Discussions (FGD). The site visit was conducted to understand the ground reality and to get acquainted with the spaces. Apart from that the focused group discussion with the women and youth of the Basti was also arranged with help of an NGO IGSSS and EMARA Architecture and Urbanism, New Delhi already working in the Basti. The discussion included approx. 20 women aged 14 to 70 and children approx. 10 in number. The base map of the Basti was used to mark spaces as indicated by the Basti people. For the Focused group discussion questionnaire was prepared with open ended questions such as-

- *Have you been a victim or witness of any criminal activity?*
- *At what time the criminal activities are more prone to happen?*
- *What spaces or streets in the Basti feel unsafe?*
- *What is the condition of streetlights?*
- *Does the Govt. authority provide surveillance, is it helpful?*

The responses were recorded and then were used to demarcate areas on the map for better understanding and then these areas were visited to consider various factors such as approach, public use, connectivity etc. The responses were used to propose interventions for the spaces which were more prone to crimes to transform them into lively public spaces.

The secondary research includes the reports regarding crime in Delhi Slums and CPTED methods for crime prevention, the guidelines, principles, and Objectives.



Figure 3. Site Visit of Nardan Basti; Source: Emara Architecture and Urbanism



Figure 4. Focused Group discussion.; Source:Emara Architecture and Urbanism

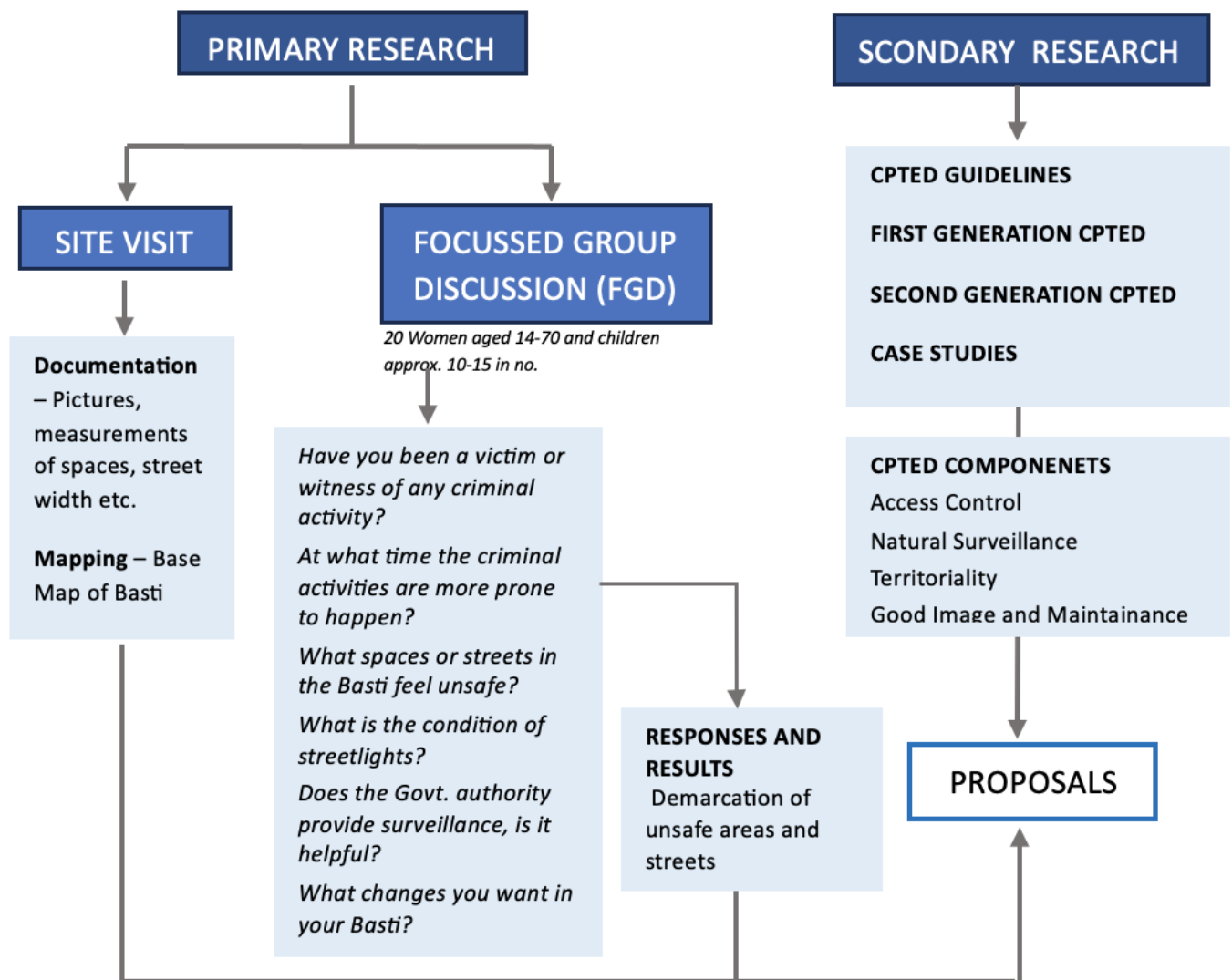


Figure 5. Methodology Framework; Source: Author

1.2. Study Area

Nardan Basti is present near Tughlaqabad on the Mehrauli-Badarpur road and has an area of 38757 sq km with 593 households. It is adjacent to the Asola Bhatti Wildlife Sanctuary, so the Basti site has contoured slopes and is surrounded by lush greens in the south. The designated land use in Master plan is Regional Park under Recreational spaces. Basti has 3 entry points, two from Mehrauli Badarpur road through Warsi and MST road and one entry from Khatta camp through Prem Nagar Road. The Basti has dense development set along the narrow streets with very few open areas. The frontage of the Basti near the main approach from the highway has quite a big open space which is acquired by parking, construction material and waste dumping. This area is the major breeding ground for criminal activities.



Figure 6. Location of Nardan Basti, Source: Author



Figure 7. Nardan Basti location in map of Southeast Delhi; Source: MapsofIndia.com

3. Literature Review

Crime Prevention Through Environmental Design (CPTED) is a proactive or reactive strategy that modifies the environment to decrease the likelihood of criminal activity. CPTED includes six main components: territoriality, surveillance, access control, image and maintenance, activity support, and target hardening. (Cozens et al., 2005) Territoriality involves clearly identifying ownership of land or property through symbolic and real barriers. Surveillance includes formal, informal, and mechanical methods to deter potential offenders. Access control restricts or redirects movement within a location through physical or perceptual barriers. Image and maintenance promote a positive image and show guardianship through upkeep and eliminating disarray. Activity support encourages intended patterns of use and community engagement. Target hardening involves physical barriers and reinforcement to deny or limit access to a target. Excessive reliance on target hardening can create a fortress mentality and damage the self-policing capacity of the environment. CPTED can effectively reduce opportunities for crime and the fear of crime. Refinements to the strategy may include more risk assessment and socio-economic and demographic profiling. (Abdul, n.d.) CPTED strategies can be tailored to specific issues, such as reducing open-air drug sales and use.

The Crime Prevention Through Environmental Design (CPTED) Guidebook(Singapore, 2003b) emphasizes the role of the community, homeowners, planners, developers, and architects in integrating CPTED principles and concepts into the design and management of the physical environment for effective crime prevention and control. The designated purpose of a space can be evaluated using the Three D's (Design, Deterrence, and Detection) framework, which considers factors such as legibility, transparency, familiarity, and territorial reinforcement. Visibility and lighting play a crucial role in enhancing natural surveillance and reducing concealed or isolated routes, entrapment areas, and crime opportunities. Activity generation, including cultural and entertainment activities, can contribute to the vitality of business districts and town centers, attracting more people and tourists. Design elements such as open railings, well-defined entrances, visible washroom entrances, and sufficient lighting contribute to continuity, clear ownership, and safety.

The authors Al-Ghiyadh and Al – Khafaji in the IOP Conference have mentioned that urban planning and urban design play a crucial role in creating safe cities and improving security conditions in urban areas. The combination of urban planning and urban design is essential in the process of building safe cities.(Al-Ghiyadh & Al-Khafaji, 2021)The paper suggests that various elements of urban planning and design, such as street planning, land use, building density, and management and good governance, can reduce opportunities for crime and increase security. The authors emphasize the importance of designing for territoriality, access control, defensible space, accessibility, activity support, building image, visibility, lighting, and maintenance in order to enhance security in urban areas. The paper also highlights the need for proper organization, cooperation with city authorities, and the implementation of policies and tasks such as successful planning and design, good governance, professional police personnel, and modern surveillance technologies to create safe cities.(Al-Ghiyadh & Al-Khafaji, 2021)

The review of two decades of research on violence against women in urban slums of India concludes that crime against women in these areas is widespread and persistent. The prevalence of any form of violence against women in urban slums, as reported in the studies, ranged from 15% to 59.3%.(Jungari et al., 2022)The review also highlights that the risks of violence and crime against women in urban slums have not changed over time due to unsafe spaces in the locality and lack of physical infrastructure. The studies reviewed were mostly concentrated in Mumbai, indicating a need for in-depth studies covering slums in other major cities to gain better insights into the issue.

4. Discussion and Findings

4.1. Crime in Nardan Basti

Nardan Basti due to its location, unrestricted access through the Highway and proximity to the forest area has led to an increase in crime in the Basti. Eave teasing, snatching, theft have become a daily affair and 70% of the people in FGD have been witness to it and 30% have been the victims. The main access to the Basti is from the Mehrauli Badarpur Road but the stretch from the highway to the Basti is covered with wilderness on both sides. All the people in FGD agreed that the areas in proximity to the Forest are more prone to crime. These areas become the hiding place for thieves, they attack

people in the broad daylight using sharp weapons and snatch valuable items. Also these areas become hotspots for drug addicts. In the FGD 80% of the people agreed that more streetlights should be installed, due to the absence of streetlights in the Basti, at night it becomes way more dangerous. The Basti although near the highway does not have bus stop, the nearest bus stop is more than 1 km away from the Basti which makes it difficult for women, children, and the elderly to travel especially at night. In the FGD 90% of the people agreed that a bus stop should be made near the Basti for safety concerns. The areas in the Basti adjacent to the forest areas are unsafe due to thieves entering the houses easily and then running back to the forest. Women face eave teasing while returning back from work or school at the main street which creates the streets unsafe for women due to lack of lights and surveillance.

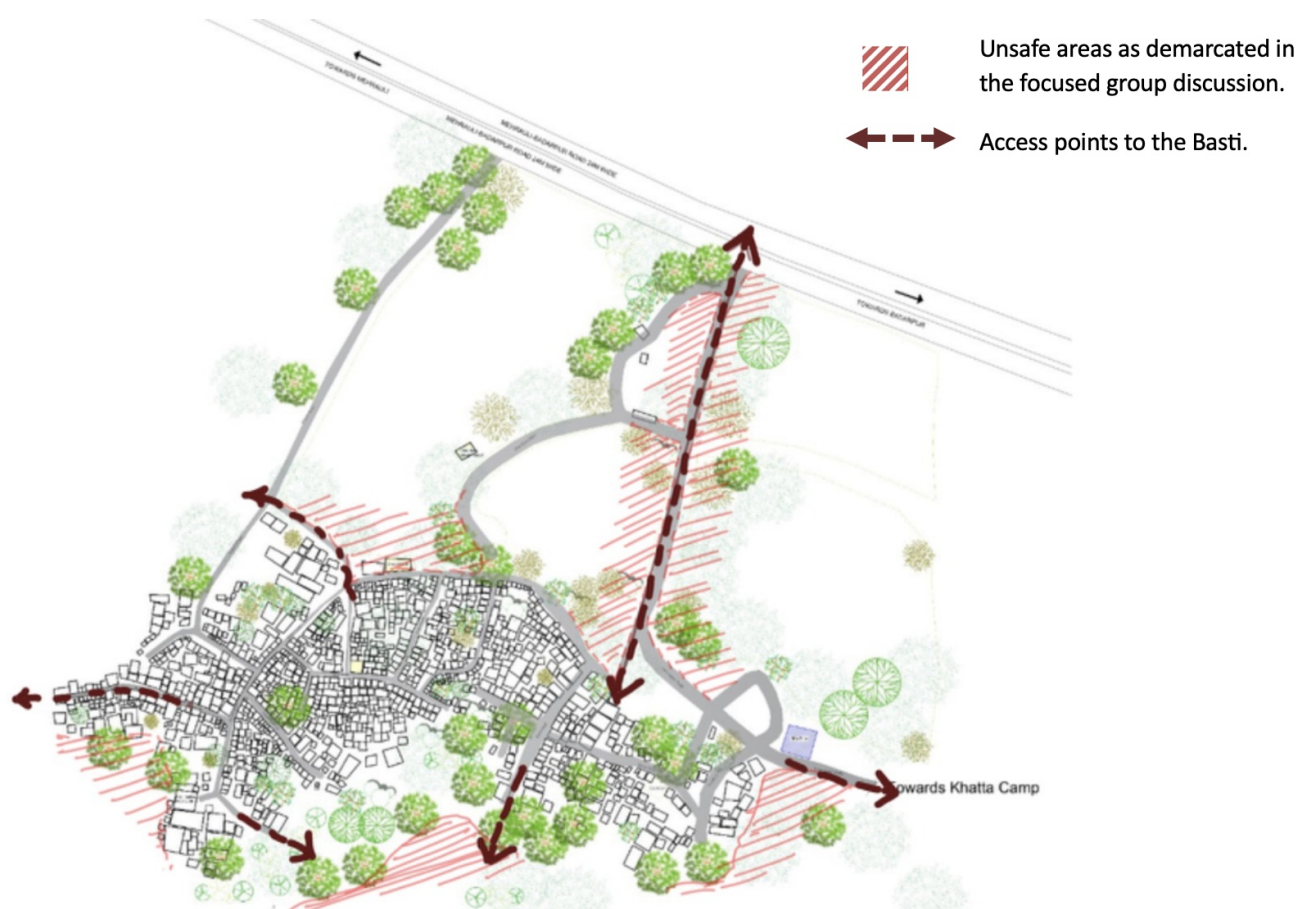


Figure 8. Basti Base Map showing crime Hotspot and dead spaces.; Base Map Source: Emara Architecture and Urbanism, Illustration: Author.



Figure 9. Entry of Basti.; Source: Google Maps



Figure 10. Gathering at Entrance. .; Source: Google Maps



Figure 11. Bati open from forest side.; Source: Emara Architecture and Urbanism



Figure 12. Poor Solid waste management; Source: Emara Architecture and Urbanism

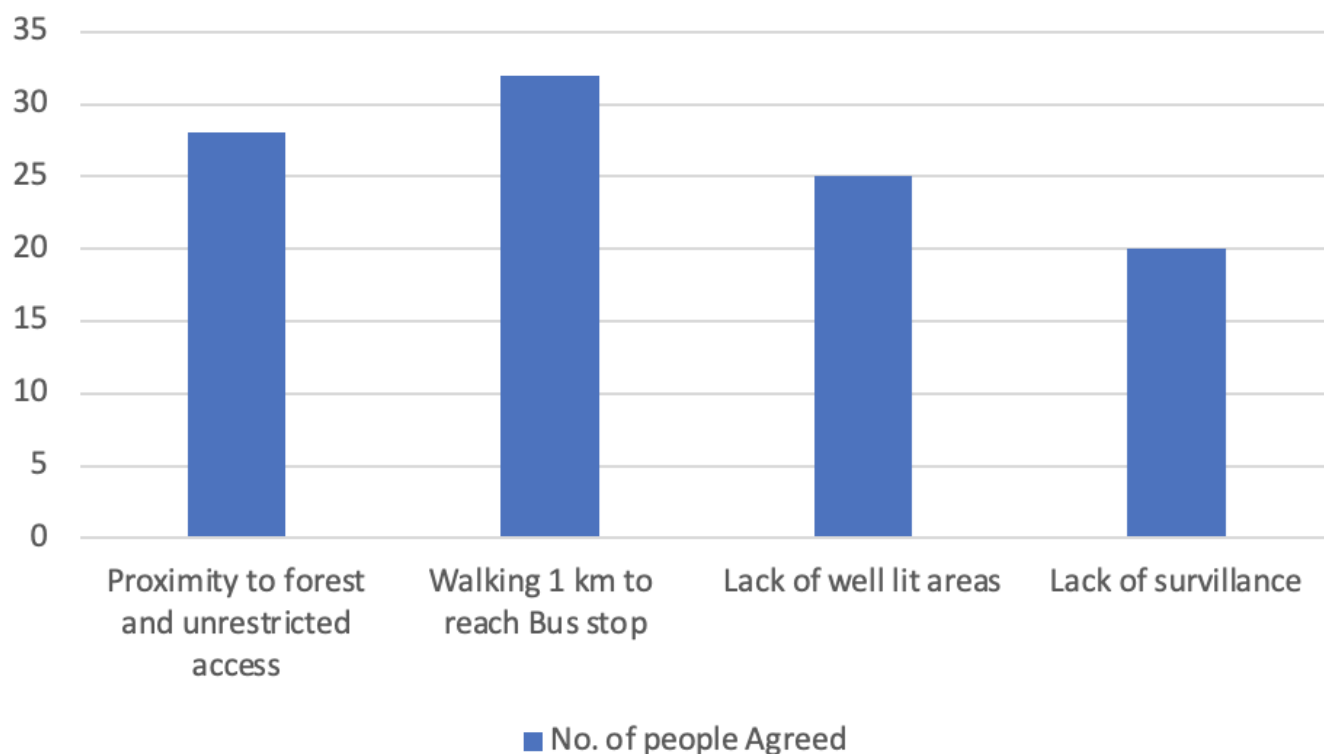


Figure 13. Causes of crime as per FGD; Source:Author

4.2. Aspiration of the Basti's People

The focused group discussion with the women and youth of the Basti brought forward various problems and demands of the people for a safe environment. The people aspire to feel safe in the public spaces, also the women and children of the Basti need safe spaces for recreational activities. The elimination of criminal activity from the Basti through environmental design will lead to positive impact on the youth as these shady areas lead to breeding grounds for drug addiction. The Basti people also demand for a security check post be established near the main entrance for the purpose of safety.

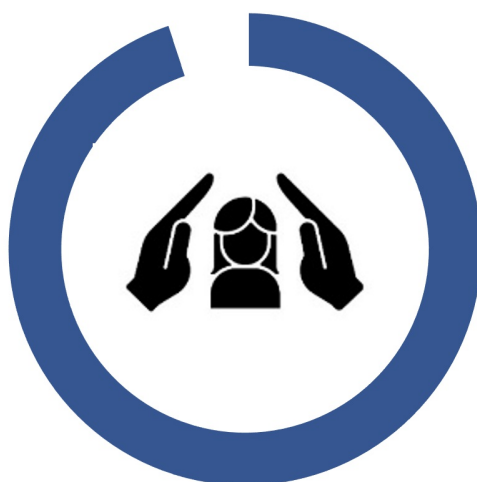


Figure 14. Safety of women;
Source: Morbi Update



Figure 15. No drug.;

Source: Shutterstock



Figure 16. Children playing area;

Source: Shutterstock.

In the FGD 95% of the people agreed safety of women should be the considered at priority, 90% of the people wanted the basti to not become a hotspot for drug addiction and 85% people wanted safe playing area for their children.

4.3. Design Interventions as per CPTED

The proposed designed interventions for the Basti are based on first generation CPTED such as natural surveillance, territoriality, access control, image and maintenance, activity support, and target hardening, and it can be made possible through second generation community engagement. The proposals include public parks, bus stops, solid waste management, creating buffer zones between the forest and Basti, installation of streetlights and CCTVs for surveillance, etc.



Proposals:

1. Public Park
2. Bus stop
3. Buffer Zone
4. Streetlights and CCTV Cameras

Figure 17. Proposed Plan for Nardan Basti; Base Map Source: Emara Architecture and Urbanism, Illustration; Source: Author



Figure 18. Public Park; Source: Author

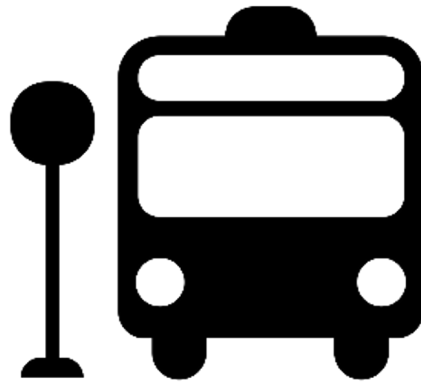


Figure 19. Bus Stop; Source:Author.



Figure 20. Solid waste management; Source: Author



Figure 21. CCTV Surveillance and Street; Source: Author lights; Source: Author

4.3.1. Public Park

A public park alongside the main street connecting the highway and the Basti will help to create safe recreational space, also will lead to natural surveillance due to the presence of people in the park and keeping of eyes on the street. The development of the park will improve the image of the street. The activities in the park such as interaction of people,

swings for children, walls for kids to draw, multipurpose central space will help provide active environment to avoid shadiness in the area.



Figure 22. Playing area - Activity.;

Source: Emara Architecture and Urbanism



Figure 23. Children drawing on wall - Activity.;

Source: Emara Architecture and Urbanism

4.3.2. Bus Stop

The bus stop at the main entrance of the Basti, which was once functional, was demolished to develop a new one which is more than a kilometer away. This situation has led to various problems while travelling for women, children, and elder people. Hence a bus stop can be proposed at the main entrance to facilitate safety and security even during the night and add a sense of Territoriality.



Figure 24. Safe Entrance of Basti due to nearby bus stop and streetlights. - Activity;
Source:Author

4.3.3. Buffer Zone

Buffer Zones can be created in the areas which are adjacent to the forest to control access to the Basti. The buffer zones will have fencing made by recyclable materials such as cycle rims, tires, metal scraps etc. Apart from fencing the buffer will be a landscaped area with a sitting area and space for urban farming. Hence, the buffer zone will control access and will also add activity and factor of image and maintenance to the area to make it lively.



Figure 25. Access control through Wheels and scraps of metal creating a boundary;

Source: Author



Figure 26. Urban Farming;

Source: Emara Architecture and Urbanism

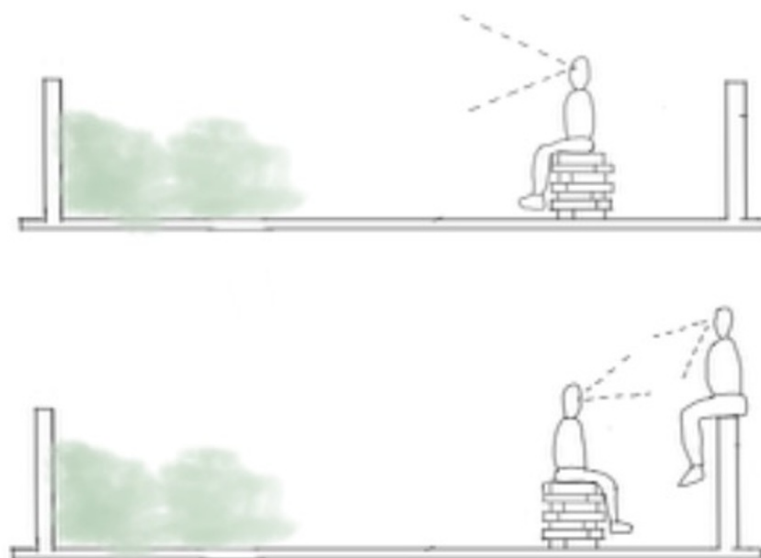


Figure 27. Natural Surveillance in Buffer Zones;

Source:Author

5. Conclusion

Nardan Basti, being an unauthorized settlement, lacks physical infrastructure as well as is prone to criminal activities due to easy access, proximity to the forest etc. CPTED methods-based interventions such as natural surveillance through activity in public parks and buffer zones can help to reduce crime. Apart from them access control through fencing and provision of Bus stops can add a sense of Territoriality in the Basti. The youth of the Basti is quite active to bring a change in the Basti, hence second generation CPTED community participation can be utilized for the interventions to take place. These small interventions can bring about a major change and transform dead, shady areas into lively places and ensure safety and security in the Basti.

Intervention	CPTED Component
Public Park	Activity Support, Image and Maintenance, Natural Surveillance
Bus Stop	Activity Support, Territoriality
Buffer Zones	Access Control, Activity Support, Image and Maintenance, Territoriality
Streets Light and CCTV	Surveillance, Access Control

Conflict of Interests

I have no conflict of interest to disclose.

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