

# **Study of Accessibility and Territoriality in CPTED Application in Vertical Residential (Case Study: BB Apartment and Rusun Apron, Greater Jakarta)**

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## **ABSTRACT**

In large cities, vertical housing as a housing choice could have criminal issues. It could result from social backdrop elements and building design. Crime Prevention Through Environmental Design (CPTED) was introduced to minimize the potential problems. CPTED was based initially on Oscar Newman's theory from his book, *Defensible Space*. The 2nd generation of CPTED appears that design alone was not enough to prevent crime and more focusing on its residents' social life. This research examines how the implementation of CPTED could function appropriately in vertical housing in Greater Jakarta. This study uses a qualitative method that was compiled descriptively using two case studies, BB Apartments, and Rusun Apron. The results of this study indicate that all aspects of CPTED, whether accessibility, territoriality, or community, must be considered in designing a safe and comfortable vertical residential environment. The scale of the building is also an essential factor in the occurrence of crime; when the scale is too large, the supervision and bonds between residents are not intense. Nevertheless, it is important to highlight that CPTED was created to reduce crime, not eliminate it. The application of CPTED must also be adapted to the situation and conditions of the vertical residential environment that will be created to be a maximum preventive.

Keywords: Crime Prevention, CPTED, Accessibility, Territoriality, Jakarta

## **INTRODUCTION**

Residential is the only space the whole community uses when we are isolated due to a pandemic. The comfort and safety of the residential area are crucial things to consider in choosing a residence. With the urban land crisis, vertical housing has become the choice of urban communities (Sabaruddin, 2018). Vertical dwellings have been made with various considerations of facility design and accessibility. But there are still many criminal cases that occur and make people hesitate to choose vertical housing as a place to live. Various factors certainly cause this. Programs, building forms, building design, accessibility, and even social factors

can also influence the occurrence of criminal acts in vertical residences. This phenomena inspires designers from around the globe to collaborate and establish a foundation for crime prevention through design. In 1996, Crime Prevention Through Environmental Design (CPTED) was formed, which is under the auspices of the International CPTED Association (ICA) (CPTED, 2022). So, in this study, the authors try to find out how CPTED can be applied in Indonesia and how much influence it has as a measuring tool to prevent crime in vertical housing.

## LITERATURE REVIEW

### 1. First Generation of Crime Prevention Through Environmental Design (CPTED)

Crime Prevention Through Environmental Design, or CPTED, is a movement to reduce the fear of crime in society. CPTED is a pioneer in reducing victims by trying to deter criminals and build a sense of community so they can gain control over their territory. CPTED was initiated in the 1970s, when Oscar Newman released his book defensible Space (Newman, 1973). This book reinforces the concept of the CPTED movement in preventing crime and building the community.

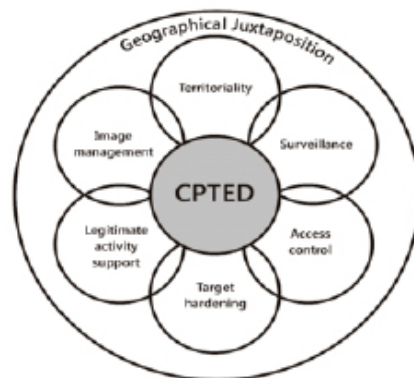


Image 1 First Generation of CPTED Diagram.  
(Source: Nadezhda Samoylova, 2020)

### 2. Second Generation of Crime Prevention Through Environmental Design (CPTED)

Several years after the existence of the first generation of CPTED, CPTED members carried out various studies and experiments that led to the birth of the second generation of CPTED. This second generation has references from the field of environmental criminology, and has changed the focus which was initially focused on how design can solve the problem of crime, now to focus on the community and social life. The second generation of CPTED has 4 approaches, namely Social Cohesion, Community Culture, Connectivity, and Threshold Capacity.

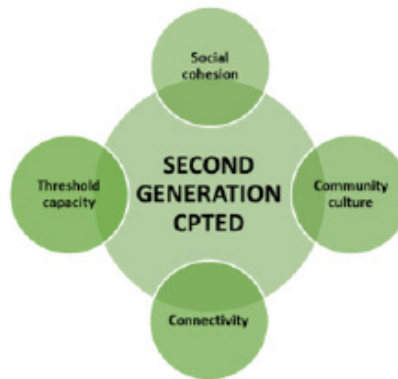


Image 2 Second Generation of CPTED Diagram. (Source: Newman, 1973)

## **METHODOLOGY**

The research method used in this research is qualitative and arranged descriptively. This qualitative method is used to get answers to research questions by exploring and understanding the meaning of a problem (Creswell, 2009). Qualitative methods use the data needed for research obtained from literature studies, opinions, understanding, history, and behavior. The data are explained narratively, along with the data obtained from observation activities in the field. The method of data collection in this research is by analyzing case studies and conducting field observations, documentation, and interviews with certain people, so that data collection is more structured and can be done systematically.

## **RESULT & DISCUSSION**

### **Accessibility in Vertical Housing**

In the first vertical housing case study, the Rusun Apron Kemayoran, there are 8 towers, each consisting of 5 floors, where a commercial and service area is on the ground floor. This apartment is located in the city centre, surrounded by other vertical residences, settlements, offices, halls, and several shopping centres, both traditional and modern. The problem with this flat at first was its openness to the surrounding environment. This means that the Rusun Apron Kemayoran area can be accessed by anyone from the main gate (Image 4) to the other two doors that should exit (Image 5 & Image 6). Not only the Apron area can be accessed by anyone, but also anyone can access every building because there are no gates or fences that surround the Apron area.



Image 3 The Main Gate of the Rusun Apron Kemayoran. The condition of the main gate of the Apron Flat since it was built until before the parking gate was built, only uses a portal and can be accessed by anyone. (Source: Google Streetview 2019)



**Image 4** The Second Gate of the Kemayoran Apron Flat. The condition of the second gate of the Apron Flat is located at the back of the apartment area and is always open, before the parking gate. (Source: Google Streetview 2019)



**Image 5** The Third Gate of the Kemayoran Apron Flat. (Source: Google Streetview 2019)



**Image 6** Main Entrance of the Apron Flats in Kemayoran 2022.  
(Source: Author's Documentation)

Starting in 2021, the main entrance to the Kemyoran Apron Flat will be given a paid parking gate (only for immigrants or outsiders) or using a card (only for residents of the Kemayoran Apron Flat) (Image 7). Then the portals at the other 2 entrances were closed so that until now access to enter and exit was only through the main gate.

*“For me, it’s good now, there’s only one door (entry). People also don’t enter carelessly because there is a parking gate, so it’s more organised. Yes, even though theft or robbery is still there, it becomes more comfortable.” [Mrs. Ari]*

They believe that with the parking gate, the apartment environment is more defined as their environment and is not as open to the public. In fact, clear boundaries can add to residents’ comfort even if crime still occurs. Although Newman stated that using fences or gates would only give criminals the impression that what is behind

the fence is valuable. However, in some cases, the fence will make the occupants more comfortable, such as when one Pruitt-Igoe tower decided to use the fence because the crime was too high and causing the occupants discomfort.

BB Apartments are made with a design that is quite different from other apartments. This BB apartment area is very open, without fences or gates, and has six entrances (Image 8). The main entrance is right in front of the main road, and pedestrians use huge glass (Image 9). The ground floor and upper ground become the center of public activities, such as the lobby, lounge, as well as trade and services. So the first 2 floors are public areas. When you enter the lift area, it indicates that you have entered a more private area; only residents and building users can go up because they have to use an access card. Even residents can only access the floor of their unit, the UG floor, which is a facility area, and the Refugee floor.



**Image 7 BB Apartment Accessibility Existing Condition.  
(Source: Author's Documentation, 2022)**



**Image 8 (a) Outdoor View Main Entrance BB Apartment, (b) Indoor View Main Entrance BB Apartment (Source: Author's Documentation)**

In the absence of literal boundaries such as the use of fences in this BB Apartment building, they said there were enough people who understood that when they turned and passed the signage that said BB Apartment, they entered a different area, namely the residential area. But not a few are also not aware of the difference, so there are people who enter with hesitation because it is open.

*“Actually, the apartment environment is safe, even if there are one or two thefts. But that's very rare. Well, if there is no fence or at least a parking gate, it won't be comfortable to any of us who live in this building.” [AH]*

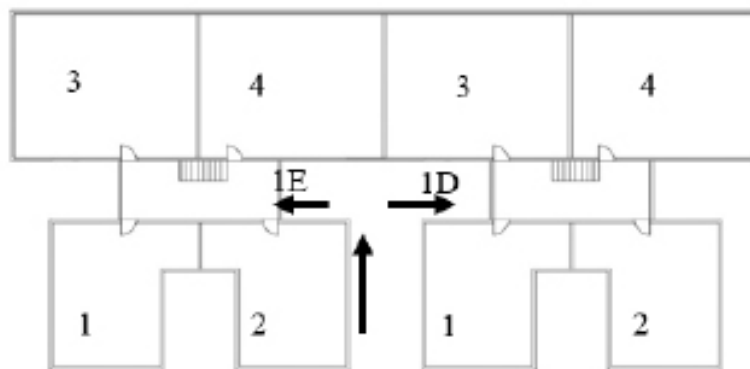
It can be said that the absence of a fence or at least a parking gate makes those who

live in it uncomfortably. Then there are also other opinions about the main entrance to this apartment. According to Oscar Newman (1973), placing the entrance at the front with wide and clear visibility, can help prevent crime. Because road users could become a natural surveillance when something suspicious happens. But now, in this apartment, it turns out to be contrary to Newman's opinion.

*“The door (the main entrance) was locked because it was more unsafe. Initially, because we lacked security personnel, and the front entrance, someone really had to guard it. So when we consider the safety aspect, we finally close the main entrance. Because even though there is security, one day they also have their guard down. also, this entrance is by the side of the road, lots of people passing by, lots of people can see what's going on inside, if you're careless, someone suddenly enters and in the lobby there may be residents sitting and not aware of what's going on, and that would be a crime.” [P.B, Managing Operations Manager]*

### **1. Territoriality in Vertical Housing**

In each building in this Apron Flat, if we enter from the front entrance access, the circulation is divided into 2. An example is if the building is an Apron 1 building, then if we take the stairs on the right we will enter the 1D residential unit and if we take the stairs on the left we will enter the 1E residential unit (Image 11). So that in one building there are 2 different and separate circulations, on each floor there are also only 4 residential units that share corridors and stairs. The corridor in this Apron Flat is not too big and not too small for people to pass by. The majority of units in the flats use netting doors, so at certain hours they open their main doors and only close the net doors (Image 12). This makes natural surveillance on the residential floor increasingly formed.



**Image 9 Typical Plan of Apron Flats. Sharing access within one building. One staircase and one corridor serve fewer units (Source: Author's Documentation)**



**Image 10** The corridor of Rusun Apron Kemayoran. The condition of the residential floor of the flats is not large and causes the shape to be circular. The use of a residential floor pattern like this, also supported by the use of net doors, adds to the natural surveillance of the occupants. (Source: Author's Documentation, 2022)

*"There's enough privacy here. Although actually, our privacy space is only in our unit. But because sometimes the front or side neighbors are familiar with it, it's normal to cross boundaries (privacy). Most of the people here use netting doors, when people pass by, they still greet each other. Or what are the next-door neighbors doing in the corridor, we'll just join in."* [Mrs. Kayla]

When social life is formed in a vertical residence, care will also be formed. With a small building scale, it will be easier for this concern to be formed. The corridor in this flat also only facilitates four units and can be said to be very small; this adds to the formation of natural surveillance. Because when they get to know each other and see someone they've never seen in their neighborhood, curiosity arises, leading to surveillance. The example in Newman's book, The old student dormitory has the same concept as the Rusun Apron Kemayoran, and the new student dormitory has the same concept as the BB Apartment. However, the students claim that they prefer their old dormitory, because in the old dormitory they had a strong bond between students on one floor. When they have to share a corridor with dozens of

rooms, they find it difficult to bond with each other on one floor because there are too many people and a too large area to control. The scale of this building also how strong the community's awareness is built.

BB Apartments do not have literal boundaries, such as the use of fences, but the application of symbolic boundaries in the form of a change from concrete to andesite roads is enough for the public to realize that it is a different area. The comfort factor in this BB Apartment, which the interviewees mentioned, is one of the factors due to the occupants of the unit who are more active and communicative if they compare it to the first tower. The residents and unit owners create a group that they call the *Paguyuban*. However, even though the social life in this apartment has been established, it does not mean that they can also interfere in the affairs of other residents if they are already in the unit. They really understand their limits, and sometimes knowing their limits can also be negligent in preventing crime.

*"[...] Even though it doesn't rule out the possibility that the criminals are the residents themselves who have access, so they don't go through screening on the GF floor. And if there is a crime on the residential floor, maybe they are the ones who committed crimes for themselves, and we can't monitor it either, for example, maybe drug users. [...]" [PB, Managing Operations Manager]*

BB Apartment uses a double-loaded corridor for 32 units with a length of approximately 82 meters. Although this corridor is only straight, the visibility is too long and it is obscured by light coming from the openings on both sides of the corridor (Image 12). So even though several people passed through the same corridor, having a considerable distance away, it couldn't be said to be natural surveillance because we can't even identify the person's face if the distance is too far (Image 13).



**Image 11 Typical Floor Plans of BB Aptments (Source: Building Manager of BB Apartments)**



**Image 12 The existing condition of BB Apartment Corridor  
(Source: Author's Documentation)**



## **CONCLUSION**

Accessibility and territoriality are inseparable concepts. In vertical housing, everyone, not only inhabitants, must be aware of what their borders are and what their restrictions are. When current territoriality or borders are unable to specify the bounds of each space in the environment, this affects accessibility and should concern the user. The size of the building can also play a role in crime reduction in vertical housing. A smaller building size will be better in lowering the danger of crime in vertical housing, according to the findings of the author's observations and analysis. Residents' territoriality on their residential floors is also smaller due to a lower building scale, which allows for maximum surveillance.

CPTED exists to reduce crime in vertical housing, not to overcome or even eliminate crime. So that's why when the first generation was created, they realized territoriality, natural surveillance, and image were not enough to reduce crime. Therefore, the second generation of CPTED appears, emphasizing more on the residents and community's social life. So even though the designers have considered the design using the first generation CPTED, they didn't consider the second generation CPTED; preventing crime is not optimal. The author is aware that while creating a vertical house, designers must consider more than just design principles and theories; they must also consider the setting in which they will be used and the intended audience. On this basis, we may ascertain the requirements of our users and modify our proposed design accordingly.

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