

UNIVERSITY OF THE WITWATERSRAND

School of Architecture and Planning

Faculty of Engineering and the Built Environment



Making gender inclusive spaces around Rea Vaya Transit areas:
the case of Commissioner Street.

Zola Conco

Student Number: 545372

A Research Report submitted to the Faculty of Engineering and
Built Environment, School of Architecture and Planning,
University of the Witwatersrand, Johannesburg in partial
fulfilment of the requirements for the Bachelor of Science Honours
degree in Urban and Regional Planning.

2015

Johannesburg, South Africa.

DECLARATION

I declare that this Research Report is my own work. It is being submitted in order to obtain an Honours Degree in Urban and Regional Planning to the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination to any other University.

.....

(Signature)

.....

(Date)

ABSTRACT

The planning profession has been regarded as a mechanical, value free activity and mainly dominated by male perceptions. Planning policy has begun to consider more social issues, however, even with this transition, gender issues in the urban environment have been a particular challenge and have not been completely understood by planners. As a result gender issues have often not been considered in the physical design of the urban environments.

The travel patterns of women and men have generally been understood to differ due to the different roles played by women and men in our societies. However, women's vulnerability may also shape their travel patterns within the city.

While numerous studies have presented findings about the strong relationship between women and their fears within the built environment, particularly in public spaces, little attention has been given to the relationship between women's fear and transit environments in South African cities. This is an important relationship to be considered, as the degree to which this affects women will determine the extent to which they are able to participate equally in the city.

A number of development plans have been introduced into the city of Johannesburg, as a method of improving the lives of its citizens. One of these has been the introduction of the Rea Vaya Bus Rapid Transit system (BRT). However, it appears that little consideration has been paid to the environments around that BRT stations, primarily with concerns of gender sensitivities. Therefore, this study investigates whether the physical design of the built environment around the BRT stations has considered the effects of gender sensitivities on women's travel patterns. The research assess whether the built environment around the bus stations have helped to reduce the spatial barriers faced by women in the city, namely their vulnerability and facilitate their right to the city.

A case study was done around the Rea Vaya station on Commissioner Street and the adjacent urban spaces. Women of various ages were interviewed in an open-ended

manner to gather in-depth information about women's personal experiences and concerns for safety in the city centre. The case study also included a safety audit of the site, which was conducted by the researcher.

High levels of actual and perceived safety amongst women were found, especially for walking in the area and using the BRT at night. As a result, women who were using the site were found to have distinct needs in ensuring their safety and comfort while using the space. A mismatch was found in the responses of women's expressed needs and the variety of common safety strategies implemented by the City of Johannesburg (CoJ).

The conclusion argues that women's safety is an essential but neglected issue, which deserves the attention of urban planners. Drawing on responses from the case study and interviews, the research offers a set of recommendations that planning policy that focuses on the initiatives and responses that can be used to improve on women's experience of the site.

TABLE OF CONTENTS

Declaration	2
Abstract	3
Acknowledgements	8
List Of Figures	9
List Of Tables.....	12
List Of Abbreviations.....	13
Chapter One: Introduction.....	14
1.1 Background	14
1.2 Problem Statement.....	14
1.3 Research Question	16
1.4 Aim And Objectives Of Research.....	16
1.5 Research Methodology	17
1.5.1 Site Analysis.....	18
1.5.2 Case Study Interviews	18
1.5.3 Safety Audit	18
1.5.3 Selection Of Participants	18
1.5.4 Data Collection	19
1.6 Limitations Of The Study.....	21
1.7 Ethical Considerations	22
1.8 Structure Of Report:	22
Chapter Two: Literature Review	24
2.1 Why Focus On Women.....	24
2.2 Factors Affecting Women’s Safety	28
2.3 Gender Dynamics In The Public Realm	32
2.4 Gender Sensitive Urban Design	34
2.5 Conclusion	43
Chapter Three: Case Study Overview.....	46
3.1 Study Area	46
3.2 Case Study Overview: Commissioner Street Rea Vaya Station ..	49
Chapter Four: Site Analysis And Findings	51
4.1 Site Analysis	51
4.1.1 Sodium Streetlights :.....	51

4.1.2 Sightlines And Entrapment Areas.....	52
4.1.3 Isolation.....	53
4.1.4 Maintenance, Design And Signage	53
4.1.5 Mobility	53
4.1.6 Women’s Responses.....	55
4.1.7 Personal Data	55
4.1.8 Reasons For Women’s Trips.....	55
4.1.9 Women’s Perceptions Of Safety During Different Hours Of The Day	57
4.1.10 Experiences Of Violence And Crime	58
4.1.11 Factors Contributing To Women’s Insecurity	59
4.1.12 Limited Mobility	60
4.1.13 Behaviour Modifications	61
4.1.14 Women’s Recommendations.....	62
4.2 Safety Audit.....	63
4.2.1 Personal Data	64
4.2.2 Movement	64
4.2.3 Street Traders.....	65
Chapter Five: Analysis Of Findings	70
5.1 Age.....	70
5.2 Time Of Day	71
5.3 Lighting	72
5.4 Familiarity With The Area	72
5.5 Physical Factors Affecting Safety	73
5.6 Limited Activity	74
5.7 Women’s Concerns For Their Safety.....	75
Chapter Six: Conclusion And Recommendations	77
6.1 Conclusion	77
6.2 Recommendations	80
6.2.1 The Role Of Planners	81
6.2.2 Incorporating Women's Voices	82
6.2.3 Management And Maintenance	82
6.2.4 Natural Surveillance.....	Error! Bookmark not defined.
6.2.5 Lighting	85

6.2.6 Increased Mobility86

References89

Appendix A Questionnaire96

Appendix A Participant Information Sheet99

Appendix B Consent Form101

ACKNOWLEDGEMENTS

I am thankful to my supervisor, Amanda Williamson, whose generous guidance and expertise made the successful completion of this research report possible. It was a pleasure working her on this topic that is of great interest to me.

I am grateful to Professor Mfaniseni Sihlongonyane for showing an interest in my research and finding the time to provide me with relevant material regarding the topic of my research.

I am greatly indebted to my brother, Joy Conco, for finding the time to assist me in successfully completing my research, as well as for the encouragement and motivation.

LIST OF FIGURES

Figure 1: Clear and legible accessibility in relation to unclear accessibility routes (CoCT, n.d.)

Figure 2: Pavement that allows effortless movement (left) in relation to a restricted movement as a result of obstructions on the pavement (right) (CoCT, n.d.)

Figure 3: The desired mixing of land uses in order to achieve diverse user group at various times of the day (CoCT, n.d.)

Figure 4: Site Context

Figure 5: The network links of the Rea Vaya in the city of Johannesburg

Figure 6: BRT station on Commissioner Street and nodes surrounding the area of study

Figure 7: BRT Station on Commissioner Street and area of study

Figure 8: Active Streetlight

Figure 9: Sightlines and blind spots

Figure 10: Areas of poor maintenance on the site

Figure 11: Activity and movement on the site

Figure 12: Woman disguising her valuables in a plastic bag

Figure 13: Factors causing congestion on the streetscape

Figure 14: Congestion on street

Figure 15: Congestion on street resulting in restricted pedestrian mobility

Figure 16: Informal activity taking place on site

Figure 17: Informal traders causing congestion on streetscape

Figure 18: Male informal traders accused of sexually harassing women

Figure 19: Informal traders causing congestion on streetscape

Figure 20: Male informal traders accused for sexually harassing female pedestrians

Figure 21: Shop employees occupying streetscape and reducing accessibility

Figure 22: Loitering men accused of sexually harassing women

Figure 23: Abandoned buildings allegedly occupied by homeless people

Figure 24: Abandoned building allegedly utilized for drug dealing

Figure 25: Poor drainage

Figure 26: Pools of stagnant water

Figure 27: Poor maintenance

Figure 28: Litter pollution

Figure 29: Areas that lack maintenance on site

Figure 30: The focus area for recommendations

Figure 31: Graffiti should be removed as soon as possible

Figure 32: Uniform building setbacks and no obstructions on sidewalk result in clear sightlines

Figure 33: Eyes on the street

Figure 34: Adequate levels of lighting can promote safer environments

Figure 35: White light may improve visibility

Figure 36: Conceptual design of traffic-free Delver Street

Figure 37: Pedestrianize Delver Street

LIST OF TABLES

Table 1: Total number of crimes in Johannesburg Central

Table 2: Age range of respondents

Table 3: Women's frequency of exposure to the site

Table 4: Concern for personal safety in the area

Table 5: Least safe time of day

Table 6: Concern for personal safety per age group, in relation to experiences of violence

Table 7: Limit activities

Table 8: Women's recommendations to improve safety in the area

Table 9: Age range of participants

LIST OF ABBREVIATIONS

BRT – Bus Rapid Transit

CBD - Central Business District

CCTV - Closed-circuit television

CoCT - City of Cape Town

CoJ - City of Johannesburg

CoV - City of Vienna

SoQ - State of Queensland

CHAPTER ONE: INTRODUCTION

1.1 BACKGROUND

South Africa, much like many African countries, has been promoting the use of the Bus Rapid Transit (BRT) systems as a way of improving the public transport services that are available to the citizens, with a particular focus on the marginalized communities as a means of reducing the spatial fragmentation that resulted from the apartheid planning (City of Johannesburg, 2008, Vaz and Venture, 2011).

The City of Johannesburg approved the Rea Vaya system in 2006-2007 in an effort to improve the quality of life for its residents, the quality of public transport in the city, and to reduce the exclusion of marginalized communities (Rea Vaya, 2015a). The Rea Vaya was also aimed at improving the lives of the disabled, elderly as well as women with children (Rea Vaya, 2015a).

Some of the city's primary development policies, such as the Growth and Development Strategy of 2015 have given precedence to development surrounding public transport corridors and nodes, as well as to create development that is supportive of public transport (CoJ, 2015d). As a result, spatial development policies and designs are geared towards Transit Orientated Development for stations and nodes such as the Rea Vaya Bus Rapid Transit (CoJ, 2015d).

1.2 PROBLEM STATEMENT

While public transport has been a promising development strategy for the reconstruction of South African cities (Wilkinson, 2006), it also holds great potential for emphasizing the social inequalities (PolicyLink, 2009), particularly gender inequalities. Much urban planning practice and urban development processes has not taken into account that men and women often experience the city differently. Often the assumption is that all people's experiences of the city are undifferentiated whereas the opposite is true. While many efforts have been made to bring to light the gender issues in planning, women have largely been marginalized in planning practice as well as planning theory (Cleobury, 1994).

‘The right to the city’, as defined by Henri Lefebvre (1968), makes reference to creating inclusive cities by means of a rights-based approach consisting of four dimensions – social, cultural, economic and political. For Lefebvre these four dimensions encapsulate the ‘right to the city’ and when combined ensure inclusive cities. Fenster (2004) brings to light the shortcomings of Lefebvre’s notion of ‘the right to the city’ by arguing that it lacks attention to detail as well as the power structures that come into play in the city context. The public realm is not merely a void in which actions are carried out, but it is a space moulded significantly by historical patriarchal power relations (Koskela, 1999). Gender relations have been spatialized over a number of years, with the public realm being perceived as pertaining to men and the woman’s place being at home (Fenster, 2004). Therefore gender equality has not necessarily been translated fully as women are now experiencing exclusion in less formal settings such as the public realm and in ways that are subtler. Women are seemingly more restricted than men in accessing the urban environment due to a number of factors, including being victims to violence and harassment (Dept of Justice, 1999). This forces women to negotiate space in a male-dominated and gendered urban environment.

According to Smith (2008), research has shown that there is a direct link between the concerns and fears of transit passengers’ safety and their travel decisions (Smith, 2008). While there has been much research focusing on the relationship between women’s fear in the urban environment and on transit systems, little research has been conducted on the effects of the urban design of transit environments and their relationship to women’s travel patterns in South African cities. In addition to this, South African transport planning is yet to embrace gender sensitive planning around transit environments, particularly in practice.

Because bus stations are the entry point to the BRT system, they are the most important interface with a customer and affect the safety, comfort, security, and general image of the site (Maunganidze, 2011). As a result of this, women may be restricted in their ability to access the city, and particularly to access and enjoy public spaces. This may infringe on women’s ability to freely exercise their right to the city as compared to their

male counterparts. Statistics have shown that women in South African cities fall victim to criminal activity more than anywhere else in the world and are therefore regarded as more vulnerable than men (Faul, 2015).

Policy and urban design principles have often not paid sufficient attention to the issue of gender, and have thus often created spaces that reflect the perspectives of the individuals who design them (Fenster, 2004). Urban planners are often white, middle-class men and women are often under-represented in the built environment profession (Fenster, 2004). This gender-blindness means that women in the city, whether in Western or non-Western cultures, can be fearful, restricted, and in some instances not permitted to use public space and particularly unable to use these spaces alone.

1.3 RESEARCH QUESTION

To what extent is women's 'right to the city' affected by the spatial design of the urban environment around the Rea Vaya Bus Stations?

Sub-questions:

- How does gender-blind urban design compromise women's experiences of the city?
- What urban design approaches have been used to address women's concerns of perceived and actual safety, particularly around transit spaces, and how effective have they been?
- What are women's perceptions of the urban fabric around the BRT stations?
- How do their perceptions affect their 'right to the city'?
- What planning policies and techniques may assist in addressing the safety concerns and needs of the women in the urban spaces linked to public transport facilities?

1.4 AIM AND OBJECTIVES OF RESEARCH

This research aims to explore how women's 'right to the city' may be hindered by the physical design of the urban environment around the Rea Vaya Bus stations.

The objectives of the research include:

- distinguishing the factors and design principles that contribute to making women feel either safe or unsafe when participating in public spaces, with a particular focus on spaces around transit stations.
- uncovering whether or not the spatial design of the built environment around the BRT stations meets the needs required for promoting comfortable environments for women through an analysis of the environment by a safety audit.
- distinguishing the specific needs that will enable women to feel safe and comfortable around transit environments as communicated by women who use the space.
- considering whether or not the design principles believed to make gender inclusive and safer spaces for women are relevant to the specific site.

1.5 RESEARCH METHODOLOGY

The research methodology consists of a qualitative case study, and seeks to unveil women's personal perceptions of the research area. The case study was carried out around the Rea Vaya station on Commissioner Street and the adjacent urban spaces. This was in order to gather in depth information about women's travel patterns in relation to their perceptions of the surrounding urban environment.

This research methodology provided the necessary tools in order to study contexts with multifaceted phenomena. When this approach is applied in the appropriate manner it allows for the evaluation of theory and the development of interventions.

Commissioner Street is a street within the inner city of Johannesburg that has a lot of activity and has women of different ages who use the Rea Vaya bus. The area is ideal for the purpose of this research because of its centrality in the city and for this reason is also used by a number of people. From the station a radius covering approximately 200 meters will designate as the research area.

Information was obtained through a site analysis of the study, as well as two sets of interviews (see Annexure A).

1.5.1 SITE ANALYSIS

A site analysis was carried out of the designated study area wherein observations were made about the extent to which gender sensitive urban design was present in the area. This was guided entirely by the gender sensitive urban design recommendations stated in the literature.

1.5.2 CASE STUDY INTERVIEWS

Ten interviews were conducted to obtain the women's personal reflections and experiences of safety in the city, with particular focus on the surrounding urban fabric of public transport terminals. Photographic record was made of the observations made by the participants as either causing discomfort and fear or apprehension.

1.5.3 SAFETY AUDIT

Six interviews were conducted for the safety audit. The safety audit included a walk through the site with the participants. They were asked to verbally make note of the factors that caused a sense of discomfort, insecurity, or threat as they walked through the environment. Once the data was collected, the participants' observations of the area were mapped of the spaces that caused discomfort. Photographic record was made of the areas the participants pointed out as causing fear, discomfort or regarded as safe.

1.5.3 SELECTION OF PARTICIPANTS

Women from the ages of 18 and older, as well as those who were frequent and infrequent users of the space, were selected for the interviews. This was in order to provide a well-rounded study by providing an opportunity for various perceptions to be put forward in the research.

The questionnaires targeted both women who currently used the surrounding space as pedestrians. This information was established by brief questioning of possible

candidates prior to the interview. The interviews were conducted in an open-ended manner to allow the participants to share their personal experiences of these spaces and the concepts mentioned here. This is because everyone's right to the city is personal and experienced in a unique way and therefore each woman's experience and story should come through.

Lastly, the information gathered above guided the research conclusions and recommendations as to what design principles and interventions can be used and further built on in order to address the issues brought to light in the research findings.

1.5.4 DATA COLLECTION

The kind of data that was requested from the female participants comprises of the perceptions the women have of the urban fabric around the bus station, as well as their particular needs for creating an urban environment that accommodates gender sensitivities. The study analyses whether the built environment around the Rea Vaya BRT station provides women with an environment that allows them to use the space without concerns of victimization. The study also uncovers the extent to which gender-blind urban design compromises women's experiences of the city, particularly the effects on their travel patterns.

The research obtained information through the use of semi-structured open-ended questionnaires with eight of the female participants. These was conducted as the women moved through the environment or as they waited for the bus to arrive so that the researcher could spatially map all the areas of concern raised by the women. This was also in order to minimize the amount of time the questionnaires required from the participants.

Urban designers have attempted to use particular principles and elements of design to shape the built environment in a way that promotes a safe and comfortable environment. However, some areas of the built environment are not deliberately planned or are planned without the consideration of gender sensitivities. The research seeks to uncover how this affects the intensity to which women's ability to participate in the city is

affected. The researcher carried out a safety audit of the area, which included mapping of the observations of six participants' concerns, as well as the researcher's personal experience on the site as a woman. A site analysis was carried out and this mapped the areas of concern on the site as suggested by urban design principles, and compared the results to the areas noted by the participants. This allowed for any overlaps or mismatches of areas of concern to be noted as part of the site analysis and by the participants. This also revealed what urban design principles may be effective in gender sensitive planning.

The questionnaires also uncovered whether the identified elements associated with a safe environment have in fact impacted upon the way women perceive the space and how these influence their travel patterns and confidence to utilize the space. The questionnaire attempted to understand the purpose of travel for women and the distance of travel to where they reside. This is important to note whether women's familiarity with an area affects their perceptions of safety in the area.

Many of the safety principles that have been identified by urban planners have focused more on a concern of general safety and less on the specific needs of women. Therefore the questionnaire and safety audit will also gather information from the female participants as to what their particular needs are for creating a more gender sensitive environment, especially around transit environments, as well as to uncover whether the BRT has influenced their experiences.

Data was collected at a 200m radius from the Rea Vaya BRT station at the intersection of Delvers and Commissioner Streets. This location is significant because the station is located along a major arterial in the city and is therefore used extensively. During the week, data was collected both on peak and off peak hours. This was in an attempt to extract information from women travelling at different times of the day to identify whether time is a factor of safety in women's experiences and travel patterns in the inner city. At peak hours, the data was collected between 07:00-08:00 in the morning, 13:00-14:00 during the afternoons, and 17:00-18:00 in the evenings. At off peak hours, the data was collected at 10:00-11:00 in the morning and at 19:00-20:00 in the evening.

These times were chosen as the peak hour times are the best time to interact with commuters and pedestrians and make observations about how women respond to moving through the site. The observation of both on peak and off peak hours also provided an overview of the different volumes and activities occurring on the site and provide further insight as to the impacts this may have on women's perceptions.

1.6 LIMITATIONS OF THE STUDY

A few obstacles arose in the process of conducting the study. These obstacles restricted the study from focusing solely on female commuters of the Rea Vaya BRT station on Commissioner Street, as many of the female commuters did not have enough time to answer the questionnaire as they were waiting for the bus. In addition to this, all persons who are not commuters of the BRT are denied access to the bus station itself and from waiting near the station. This made it very difficult for the researcher to approach the potential participants for the research. Female commuters who were departing the station were often not available to answer the questionnaire due to time constraints. Therefore the research also had to include women who were not commuters of the Rea Vaya, but were users of the built environment around the Rea Vaya station.

Participants who were not commuters of the Rea Vaya were occasionally unable to complete the questionnaire as a result of time constraints. This does not imply however that the research was unable to acquire adequate information to develop the study. Seven of the interviews and six safety audits were successfully completed, and this meant that there was more than enough data to complete and fully develop the research. In addition to this, on two occasions the researcher was faced with a slight challenge of a language barrier. The researcher spent additional time explaining the questions with these participants however, to overcome this. The researcher also spent additional time understanding the participants' answers and at times was assisted in translation by the participants' companions.

1.7 ETHICAL CONSIDERATIONS

Each woman chosen for the study was required to answer the questionnaire (refer to Annexure 1). However, before they were interviewed, the academic purpose, scope and possible risks of the study were discussed with them as set out in the Participant Information Sheet (refer to Annexure 2). Formal consent was obtained verbally by each of the participants as an indication that they were willing to participate in the research. The research was careful to only interview females over the age of 18, as any age below this is considered a vulnerable group.

The researcher also made sure to provide her name, show her student card – i.e. verify identity, and academic nature of research exercise. The researcher assured the participants that their confidentiality and anonymity would be ensured.

The participant's privacy was protected as no information regarding personal identification was requested.

An ethics clearance application form was submitted to the university by the researcher as indication that the research would be carried out in a manner that is purely ethical.

1.8 STRUCTURE OF REPORT:

The research consists of six chapters. The first chapter of the research introduces the research topic and provides a summary of the study. Concise statements of the research problem statements follow this. Lastly, this chapter provides the research question, as well as the sub-questions, aims and objectives.

The second chapter consists of literature reviews on studies that have been previously undertaken that are relevant to the study. The chapter opens with a gendered critique of the right to the city and critically analyses the extent to which the built environment may contribute positively and negatively towards these issues. The literature deals mostly with women's fear of public environments, with a particular focus on transit environments. Women's fear of public environments has generally been associated with particular factors and settings of the built environment. This chapter reviews the truths

and misconceptions of the fears women have of being in public spaces and studies the consequences of these perceptions as echoed in women's travel patterns and behaviours in public spaces, with particular focus on transit environments.

The third chapter focuses on an overview of the case study of the urban environment surrounding the Commissioner Street BRT Station. The chapter also includes a brief site analysis and background to the Rea Vaya Station and of Commissioner Street in Johannesburg's inner city.

The fourth chapter presents the findings of the analysis, safety audit, and questionnaires that have been carried out on the area surrounding the Commissioner Street Rea Vaya station on female users of the space, both BRT commuters and pedestrians in the vicinity of the station. The data collected is recorded in tables, mapping and photography. These provide an in-depth study of the needs and perceptions of women in the given transit environment.

The fifth chapter provides an analysis of the findings of the fieldwork and explores their implications as suggested by the main ideas and arguments in the literature review.

The final chapter provides a conclusion to the study, and makes recommendations about the initiatives and responses that can be used to improve women's experiences of the space, and makes suggestions about the ways in which public space can be redesigned in a manner that is more gender conscious. These recommendations are drawn from the information from the interviews and safety audit of Commissioner Street, and are also guided by the findings from the literature review.

CHAPTER TWO: LITERATURE REVIEW

This chapter deals with analytical reviews of previous studies that have been done, which are applicable to the study. The chapter opens with a gendered critique of the right to the city and some relevant information and statistics that play into restricting women's mobility in the urban environment more than men. The literature also recognises the conceptions and misconceptions and the extent to which the built environment contributes towards affecting women's perceived and actual safety in urban spaces. The literature deals primarily on women's fears around public transit environments, but also deals with public environments in general. Many factors and settings of the built environment have been associated with women's fear. This chapter deals with the conceptions and misconceptions of the fears women are faced with when in public spaces and what consequences these have on women's travel patterns and behaviours in public spaces, with particular focus on transit environments.

2.1 WHY FOCUS ON WOMEN

The way in which women experience the built environment is often very different in comparison to that of their male counterparts. Regardless of the cultural differences, women's accessibility and mobility are more constrained in the urban environment than men. Due to this, Hanlon (1996) argued that vulnerability is an important issue and therefore women's ability to access good and safe public transport resources is essential to living in the urban built environment. The perception of fear seriously impacts upon women's willingness to use public transport and therefore dictates their travel patterns (Hanlon, 1996).

Many different attempts have been made to analyse the factors that affect women's ability to travel safely. According to Kang (2006), the reasons for these may vary in relation to culture and experience and may include women being unable to travel outside of particular communities because of their subordinate position to the men in their society, or because of the practical gender needs that women identify within their societal roles. It is evident that a patriarchal male-dominant society, in which much of the primary social privileges are given priority to men (Sultana, 2011), is responsible for

defining a difference between women and men, and values more greatly traditionally male activities (Kang, 2006). Fenster (2004) writes of how public space is seen by some feminists as a “white upper-middle class heterosexual male” domain, meaning that women are often unable to use public spaces and especially not alone (Fenster 2004: 246). This is true for both Western and non-Western cultures. For a number of years, the private space was viewed as the space for women while the space for men was often found in the public realm (National Democratic Institute, n.d.). In addition to this are social attitudes and the attitudes of the police where the trivializing of harassment and crimes against women have contributed to their feelings of a lack of safety (O’Leary, 2011).

However, it is the ability to use urban space daily that creates one’s sense of belonging and right to the city. Fenster’s writing deals with women’s sense of comfort and belonging in the city. The fears that arise with regards to using public spaces such as urban parks and public transport prevent women’s ability to fulfil their right to the city. According to Jones and Bose (2004), there has been no extensive research on the relationship that exists between women and their travel patterns and there is a lack in good quality data on women’s travel behaviours. Sham *et al.* (2013) dispute this by arguing that there has been progress in the analysis of the factors which impact on women’s travel patterns and safety is regarded as a dominant influence. Fainstein and Servon (2005) believe that women’s travel patterns are closely linked with society’s cultural norms of domesticity. Women are often responsible for playing multiple roles in society and are therefore required to make multiple trips around the city (Aljounaidi, 2010). The numerous trips undertaken by women have a potential of being unsafe as women need to wait or walk through unsafe areas to reach public transit (Peters, 2002). As a result, women feel the need to strategize their routes when traveling to secure their safety and minimize risks (Aljounaidi, 2010).

Women are considered more vulnerable to victimization. Whilst personal security may affect all people, there are particular groups who are more vulnerable and women are included in this group. A study done by Lynch and Atkins (1988) in London shows that these risks and fears include harassment, physical attack as well as other behaviour that

has had a great amount of influence on urban dwellers. This caused a significant amount of apprehension among women walking at night, walking through parks, and when waiting for public transport such as buses or trains (Lynch and Atkins, 1988).

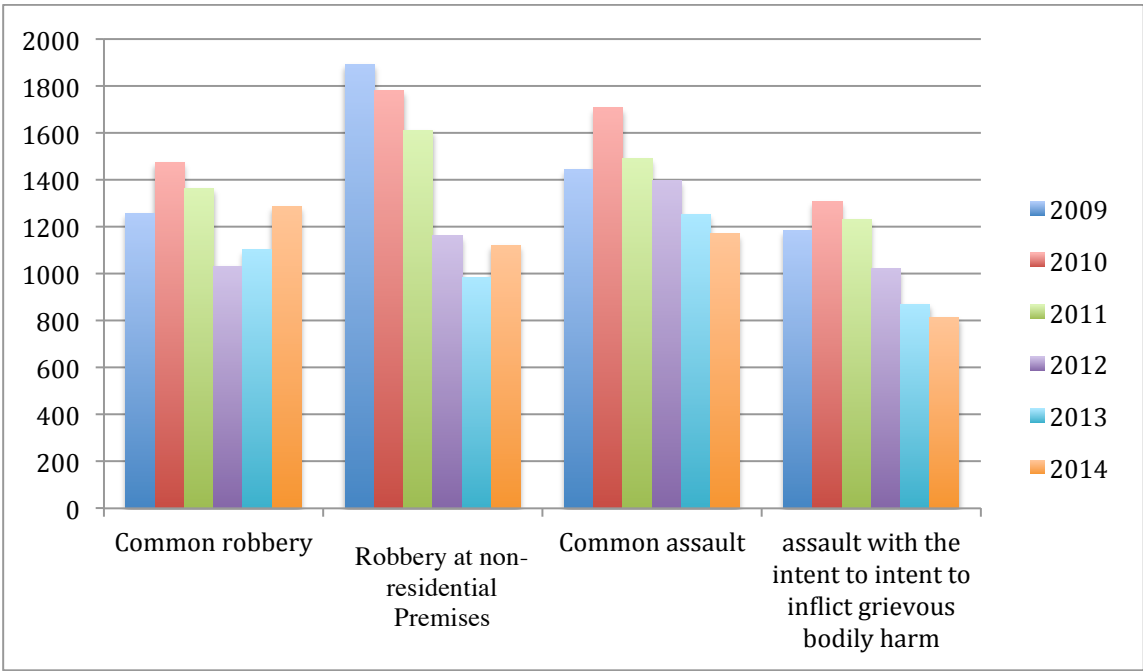
‘The right to the city’, as defined by Henri Lefebvre (1968) makes reference to creating inclusive cities by means of a rights-based approach consisting of four dimensions – social, cultural, economic and political. This empowers all citizens to take part in the production and use of all urban spaces. The right to the city also includes the liberty of individuals to access urban resources but also the freedom to create and recreate our cities (Harvey, 2008). “The right to the city manifests itself as a superior form of rights: right to freedom, to individualisation in socialisation, to habit and to inhabit. The right to the **oeuvre**, to **participation** and **appropriation** (clearly distinct from the right to property), are implied in the right to the city” (Lefebvre, 1968:174).

Fenster (2004) brings to light the shortcomings of Lefebvre’s notion of ‘the right to the city’ by arguing that it lacks attention to detail as well the power structure that come into play in the city context. Public space is seen by some feminists as a “white upper-middle class heterosexual male” domain, meaning that women are often unable to use public spaces and especially not alone (Fenster, 2004: 246). This is true for both Western and non-Western cultures.

Studies carried out in Johannesburg have indicated that there has been a continuous decrease in the occurrence of crime (see Table 1). However, more recent statistics released by the South African Police Service (SAPS), identify that there has been a 0.9% increase in contact crimes in South Africa (Flanagan and Germaner, 2015). Statistics have also shown that the largest provincial increase in murder is in Gauteng, reaching a 10% increase (Flanagan and Germaner, 2015). This is in alignment with the feeling of insecurity that citizens have, although no distinction is made between women and men’s experiences (Writer, 2014). The Minister of Police, Mr Nathi Nhleko, indicated that the fight against crime is not solely a police matter and that other service delivery agencies were in need for improvement to stop the societal unrest (Flanagan and Germaner, 2015). This indicates that police services are both insufficient and inappropriate to have the exclusive responsibility to fight the increasing crime rates in the city. The use of

urban design principles to reduce criminal activity in the urban environment may therefore be of great significant in assisting the ‘fight against crime’ and the creation of safer cities. Bachelet (2013) also recognises that the creation of safer cities needs a partnership from the private sector, the government and civil society (Bachelet, 2013)

Table 1: Total number of crimes in Johannesburg Central



(Source: SAPS, 2014)

As a result of the high crime activities taking place in the inner city of Johannesburg, one of the measures undertaken by the municipal government has been to install closed-circuit television on each street corner of the inner city (CoJ, 2015b). According to the Mail ad Guardian (2006), this may be one of the reasons for the gradual decrease in crime in the inner city as of 2009 (see Table 1) in addition to the investments that have been made in the inner city. According to the Johannesburg Metropolitan Police Department, the police average response time in this portion of the city is 60 seconds which has also assisted decreasing crime rates (Gifford, 2008).

2.2 FACTORS AFFECTING WOMEN'S SAFETY

Time of day is regarded as a critical factor that affects the fear levels of women who are commuting. This is particularly true when travelling at night. However, some researchers did not agree that time was necessarily a factor for fearing crime, and argued instead that the knowledge of violence in particular area is a great influence (Lynch and Atkins, 1988). Nevertheless, from the data acquired it was evident that travelling at night is perceived as being less safe than travelling during the day. This is accounted for by the perception that darkness is less safe due to less evident surveillance and more limited presence of other people (Lynch and Atkins, 1988). The study carried out by Lynch and Atkins (1988) indicated that 88% of the women surveyed felt safer to travel during the day, while 37% indicated that they did not feel apprehension while travelling at night. In conclusion to their study the authors found that women avoid being in what they regarded as vulnerable situations and at times refraining from travelling all together. This continues to be an obstacle to constructing gender inclusive cities and continues to limit women from participating as freely as men in the city.

A separate study undertaken by Seiji *et al.* (2011) in Japan revealed that elderly citizens were more positive towards efforts of local crime prevention as opposed to younger citizens, as they were more actively involved in activities promoting crime prevention. The study also found that 91% of women who were between the ages of 20-54 felt much safer travelling during the day. However as the day progressed into night, the overall percentage of these women who felt safe decreased by 50%. Women over the age of 60 were even more affected by this with their feelings of safety at night decreasing from 83% during the day to 21% at night. Although young adults seemed to also be affected by safety in relation to travel times, they were found to be the least fearful at night with 48%. The HealthLinkBC (2014) is of the belief that older people tend to be more sensitive towards the consequences of victimization as they have reduced muscle strength and mobility (Healthlinkbc, 2014; HelpAge International, n.d.). However, the study showed that overall, women of all ages felt significantly safer to travel by bus during the day as opposed to travelling during the night-time.

Although many of these authors have acknowledged that safety and security is an element affecting women, the definition of these concepts need to be considered as this will differ between various authors and situations. According to Thygerson (1990), safety is a concept that is hard to define because it alters from day to day, suggesting that a person experiences changing levels of safety each day of his or her life. Burns et al (1992) also state that although the words ‘safety’ and ‘security’ are normally seen as having very distinct properties, there is a great deal of ambiguity in these words. Albrechsten (2003) believes that the idea behind both these concepts is about the protection of one’s assets and the creation of a safe condition. He states that while safety is the protection against unintended incidents, security is the protection against intended incidents (Albrechsten, 2003). A part of security involves being protected against criminal activity but also about a state of feeling safe and without threat or danger (Albrechsten, 2003). Although criminal acts are mostly deliberate, some, such as unintentionally driving slightly over the speed limit, are not. Therefore it is incorrect to limit security to the protection against deliberate acts. Security is also about being protected against intended incidents that cause one to be subject to any threat (Albrechsten, 2003). Albrechsten therefore concludes that perhaps a slight difference that can be seen in these two concepts is that security is particularly targeted at protection against crime, while safety deals mainly with the protection of human lives, although criminal activity may also fall under this category (Albrechsten, 2003).

An article on the intelligent design for safe cities indicates that there are a number of ways of understanding a safe city and that even the defining of a safe city brings about various challenges (Veiga, 2015). A blog post on City-Data.com asked United States citizens what their definition of a safe city was (City-Data, 2015). Some of user responses were as follows:

“Low violent crime rate.”

“I would say a city where I know where I’m going and that I’m familiar with. Any unfamiliar big city can be scary, especially at night.”

“I would say a city with an average annual homicide rate of less than 5 per 100,000 people.”

“... In my opinion, your definition of ‘safe city’ is too narrow. One category of crime is not necessarily proportional to the other” (City-Data.com, 2015).

The responses reinforce Thygerson’s point best in saying that the definition of safety seems to alter from person to person. This also supports Albrechsten’s argument that a part of safety is understood as being protected against criminal activity and is also about a state of feeling safe and without threat or danger (Albrechsten, 2003).

According to Badger (2014) the fear that women have of violence is as intense as violence itself as it shapes the way women live their lives in a number of small ways (Badger, 2014). This can also manifest itself in women avoiding being out during the night time as they fear that they may have to travel home alone afterwards (Badger, 2014). A general social survey conducted between 1973 and 2012 in the United States by the National Opinion Research Center indicated that over the span of 39 years, women have become over twice as likely to be afraid to walk alone at night (Badger, 2014). Mosher (2008) indicates that women’s fear for personal safety has broader effects because women’s insecurity becomes a barrier to their full participation in the city and this affects the economic and social prosperity of the city to some extent as women are generally restricted in their ability to contribute equally in this regard (Mosher, 2008).

While the fear of urban spaces is often recognized as a social issue, Fenster (2004) recognizes it also as a spatial issue. She indicates that women’s experiences are often restricted due to the design of urban spaces. Spaces are sometimes designed so that they become a “planned trap” for women (Fenster, 2004: 224) In other words, planners design or create spaces without much gender sensitivity. These spaces in the city that have been created in a gender-blind manner may therefore be regarded as unpleasant and are often avoided by women or approached fearfully. Some of the factors she identifies for creating an unsafe city for women are what she refers to as the ‘usage of spaces and

familiarity' (O'Leary, 2011). This means that women are affected by the gender that dominates a space the most (O'Leary, 2011).

According to Levy (2013) all kinds of development planning have not succeeded in formulating, conceptualizing, implementing and institutionalizing planning that addresses the numerous and simultaneous identities of men and women. Transport planning has been no exception. According to Modise (2013), transport planners in the Transport Department of the City of Johannesburg failed to consider the different gender needs between women and men when undertaking the planning process of the Rea Vaya BRT (Modise, 2013). Decisions of transport are regarded as “a series of trade-offs” about the time of travel, the purpose of travel, and modes of travel or whether to travel at all (Levy, 2013: 3). Levy argues that when transport planning does not take in account the social positions of transport users, it refrains from being ideologically neutral. These gendered critiques of transport planning have brought to light the fact that transport planning and transport policy is based upon long-standing assumptions. Such assumptions are directly relatable to gender relations and the way in which the structure of the household and how labour is divided in the household, which is informed largely by middle-class “western” values (Levy, 2013: 3). There is an evident lack in both theory and practice of the representation of women in the built environment. Levy (2013) adds that in addition to this, there have been numerous transport biases, particularly the focus on private motorized transport, which is largely unaffordable to women and men who are less fortunate. O'Leary (2011) also indicates that of the factors that impact on women's and girls' safety in the city, the main ones are, poverty and socio-economic status. Poor women are frequently faced with increased safety challenges as a result of the difficulty of accessing essential services (O'Leary, 2011). Levy (2013) also mentions that treating individuals' travel choices in, what she calls, a “social vacuum”, inevitably results in understanding transport as being devoid of politics (Levy, 2013: 3). While men predominantly seek a fast and efficient mode of transport, women generally seek safe transit space first and foremost (Bates and Villa, 2014). This, however, is often not widely recognized as women often do not report incidents of harassment or their insecurities and fears are not taken seriously (Bates and Villa, 2014). If we begin to understand travel choices as a political act instead of a technical exercise

and acknowledge that women use public transport extensively, the notion of the right to the city becomes a very relevant one (Levy, 2013).

2.3 GENDER DYNAMICS IN THE PUBLIC REALM

The urban environment needs also to be understood as a place in which much of society's gender dynamics are acted out. West and Zimmerman argue that "conventionalized gestures" are gendered constructs, which have been accepted as the norm in socialization processes (West and Zimmerman, 1987: 130). In addition to this, the repetition of these interactions promotes their normalization and has been significant in making natural the gestures and words that characterize communications such as sexual harassment on the street, and the social expectations of each gender (West and Zimmerman, 1987). The belittling language used to communicate with women has often portrayed women in a degrading manner and are strengthened when harassers dismiss or look down on women's negative reactions (Kleinman, 2002).

This generates a hierarchy in which the men who are starting the catcalling are pronouncing their position of dominance and women who are victims to catcalling, as subordinate (Walkowitz, 1998). According to Cameron and Kulick (2003), "Since in male-dominated societies the relationship between the two variables is non-random and socially meaningful (there is a regular, albeit not invariant, association between power and masculinity / powerlessness and femininity), in many contexts the language that signifies one may also signify the other" (Cameron and Kulick, 2003: 57). Sexual harassment reaffirms the power relationship present between women and men. Cameron (2006) argues that this is due to the fact that sexual harassment degrades women and not men, and emphasizes the gender imbalances that give men the opportunity to dominate women (Cameron, 2006). Verbal harassment expresses men's power being asserted in the public realm as mentioned by Fenster. Their sense of belonging is based on the subordination of women through harassment on the streets, causing a fear of male violence amid the women traversing this space. A study carried out by Plan It Safe (1999) indicated that women not only experience a greater level of fear of crime in comparison to men, but the crime feared most by women is sexual assault, which is exceedingly more fearsome than robbery, which was the crime most men were afraid of.

In a presentation titled ‘Violence against women- it’s a men’s issue’, Katz (2013, min. 0:27) argues that gender issues are often regarded as “women’s issues that some good men help out with”. It is common for men to hear ‘gender issues’ and to simply tune out as though this discussion excludes them (Katz, 2013). However this frames part of the problem as gender sensitivities are primarily as a result of what Katz regards as ‘men’s issues’. This means that in most cases of violence against women, and even violence against men, men are typically the perpetrators (Katz, 2013). Katz believes that through infrequently challenging the dominant groups and pervasively blaming the victims, dominant systems have been able to maintain and reproduce themselves (Katz, 2013). This has been manifested in questions including: “What was she wearing?” (Katz, 2013), or why was she out so late? For a number of years this has successfully taken the focus off the perpetrator and has blamed the victim.

An example of this is given by an incident in which a group of 50 to 60 men harassed two teenaged girls near Noord Street taxi rank on December 30 2011, because one of them wore a miniskirt (Kearl, 2012). One of the young women was followed and repeatedly groped, as other men took photos of her with their cellphones (Kearl, 2012). The offenders, some of whom included taxi drivers and street traders, justified this action by referring to the way the young woman was dressed in public and continued to hurl comments at female protestors in saying that South African women have been given too many rights (Kearl, 2012). This also suggests that men are threatened by the increasing presence and independence of women in urban areas, and some are retaliating in a violent manner, with their response focused specifically at women’s bodies.

While women have resorted to a number of responses to protecting themselves against violence and harassment in public spaces including: being accompanied by a male companion, adjusting personal appearance, fighting back or carrying protection (Madiz, 1997), these attempts to secure their bodies have not always had positive results. Very often women feel tremendous amounts of fear when catcalled as this has often escalated into violence. One woman in Detroit was shot and killed after she refused to give a stranger her telephone number and another woman in New York had her throat slashed after she refused to go on a date with a stranger (Culp-Ressler, 2014). However, in most cases, women who do not respond positively to sexual harassment are met with rude,

threatening and demeaning comments from their offenders (Kearl, 2013).

2.4 GENDER SENSITIVE URBAN DESIGN

While urban planning recognises that a safe city is a just city, designing cities that are as safe for women as they are for men has often been a challenge. The process of planning and designing spaces has crucial significance to creating cities that are safer and more inclusive to women. Dame and Grant (2001) acknowledge that planning requires a constant evaluation of the physical and design because the implications of the planning process have the ability to either highlight gender inequalities or advance them (Dame and Grant, 2001). Dame and Grant (2001) also acknowledge that designing spaces that are safe and that create a sense of comfort in their users involves more than just the physical aspects of space although interventions may arise at a physical level first to encourage these desired environments. Various participatory studies by Plan It Safe (1999) undertaken in Liverpool, asked women what it was about certain public places that made them feel unsafe. There were a number of responses and factors that women identified as contributing to their discomfort, often which were features of the built environment (Dept of Justice, 1999).

O’Leary (2011) provides guiding principles for the design of safer cities. These involve including women in the decision making processes that affect their safety, having an understanding of the intersection of women’s identities, knowing the value of the knowledge women have generated from their lived experiences, equally recognizing perceived and actual safety, understanding that gender effects the way one experiences the city, and finally, involving stakeholders, community members, and all those who use the space in the planning process (O’Leary, 2011). These views are based on the idea that the public realm, as a male domain, has shaped social norms. This means that if women enter a public space, they should not remain in it for longer than considered necessary. This has meant that the urban design of public spaces has had little consideration of women’s needs. O’Leary states that women are hesitant to use male dominated spaces and even go as far as avoiding them (O’Leary, 2011). Spaces that are occupied by women, on the other hand, have shown to be occupied by more people overall than those that are not (Dame and Grant, 2001).

The perception that there is a possibility of violence is important in identifying problem areas (Dept of Justice, 1999). Dame and Grant (2001) emphasize that if public spaces are abandoned, dark, unclean, unmaintained, or lack particular elements such as emergency phones, or benches, decrease safety for everybody, but particularly for girls and women (Dame and Grant, 2001). A study undertaken in Liverpool indicated that in addition to the above factors, some of the main design characteristics contributing to women feeling uncomfortable in public spaces included trees, bushes, parks and car parks as these create hiding spots for criminals (Dept of Justice, 1999; CoCT, n.d.). While women have also reported to feeling more at ease when uniformed people are guarding public spaces, they favoured having bus conductors and park wardens as opposed to police in sight (Dept of Justice, 1999). The sight of police made women feel as though the area was unsafe, while security guards guarding privatized public spaces were also problematic in that they are primarily concerned with the enterprise's profitability rather than the security of the general public (Dept of Justice, 1999). Areas that were fenced off also created more discomfort in women as they felt trapped (Dept of Justice, 1999). Many of the design characteristics that made women feel uncomfortable in a particular environment made women feel twice as insecure to access a space after dark (Dept of Justice, 1999). In addition to this, the social attitudes and the attitudes of the police that trivialize harassment and crimes against women have contributed to them feeling unsafe.

Glaser *et al.* (2012) believe that in order for users to feel safe and comfortable on the street, the urban environment needs to have greater focus on planning the streetscape, or what they refer to as a “plinth” (Glaser *et al.*, 2012: 6). This is due to the fact that when people move through the street, they examine the surroundings at an eye-level both subconsciously and consciously (Glaser *et al.*, 2012). In order for the design to be successful, planners and designers need to pay more attention to the way in which people interact with the space around them and the way in which they express themselves within a particular space (Dame and Grant, 2001). If the emotions associated with being on the street are positive ones, there is a higher chance of people feeling comfortable in the space and of these individuals returning to the place (Glaser *et al.*,

2012). Achieving this may include a consideration of land use, function type, and the design of a street (Glaser *et al.*, 2012).

Dame and Grant (2001) also note that spaces such as bus stops and streets that have been designed for distinct safety needs of women portray the following characteristics:

- Clear accessibility to and from a location (see Figure 1)
- Effortless movement within a location (see Figure 2)
- Excellent lighting so that users will be able to see and be seen
- Signage that is easy-to-read that will assist users to find their way
- Clear, well managed paths that will allow users to see each other clearly
- Good visibility of a space in its entirety, void of places where a person can hide or wait without being seen
- Has mixed uses to include a diverse user group at various times of the day (see Figure 3)
- Accommodates the changes that come with different seasons
- Accommodates both the elderly and young children, as women are often caretakers. This may include low, wide streets to move easily with walkers, wheelchairs, and strollers, and in areas that has slow-moving traffic
- An easy accessibility to clean and safe public toilets that have enough space to change children's diapers (Dame and Grant, 2001).

Figure 1: Clear and legible accessibility in relation to unclear accessibility routes (CoCT, n.d.)

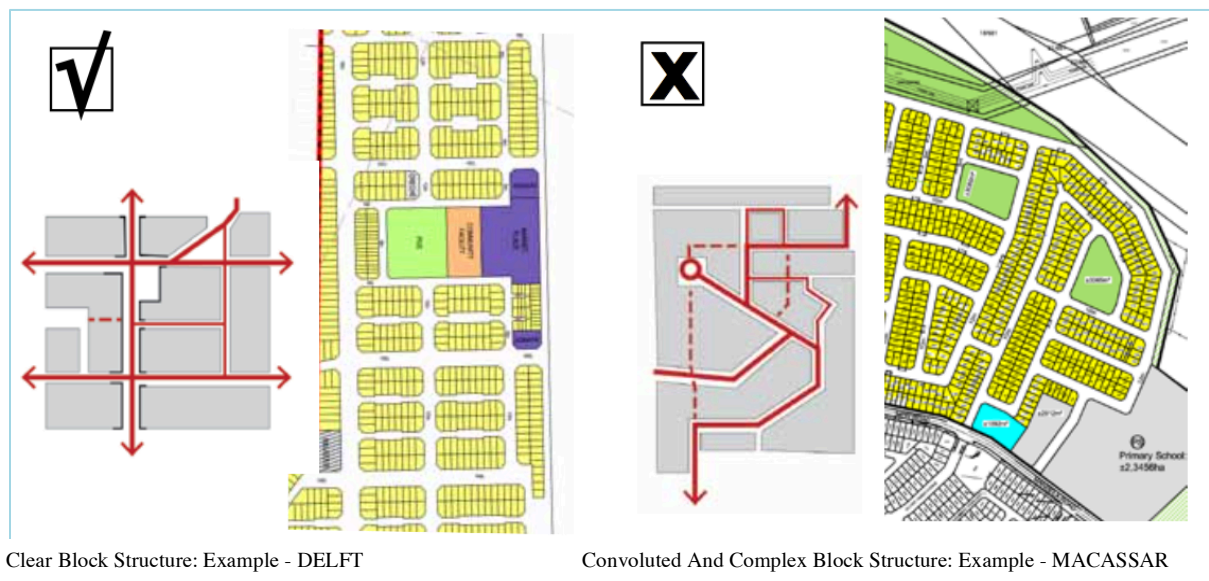
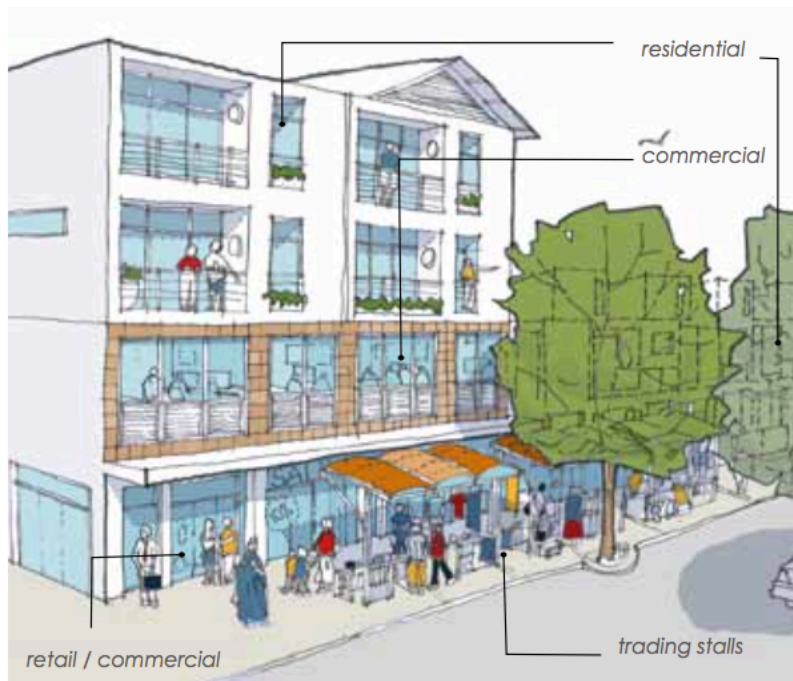


Figure 2: Pavement that allows effortless movement (left) in relation to a restricted movement as a result of obstructions on the pavement (right) (CoCT,n.d.)



Figure 3: Desired mixing of land uses in order to achieve diverse user group at various times of the day (CoCT,n.d.)



However, the more familiar a woman reported to being with a particular environment, the safer she expressed feeling (Dept of Justice, 1999). In addition to this, according to Plan It Safe (2008) what contributes greatest to women's sense of security is the presence of many other people who are happy and enjoying the space (Dept of Justice, 2008). As a result of this, Plan It Safe argues that designers need to pay more attention about how to successfully attract a diverse group of users to a space in which they can enjoy themselves, a space that will draw people out of their cars and homes (Dept of Justice, 2008). Bachelet (2013) believes however that each city needs a local response as each is unique. Therefore, every city requires its own diagnostic study that has both evidence and data, and participation with community members (Bachelet, 2013).

Dame and Grant (2001) strongly believe that the most successful way of creating spaces that are hospitable to women is through consulting with women (Dame and Grant, 2001). In addition to this safety needs to be monitored on a regular basis to measure how effective the safety measures have been (CoCT, n.d.). According to the City of Vienna (CoV), gender sensitive planning is a type of planning that considers women, and in so doing, ensures the equity in planning (CoV, 2013). A gender sensitive perspective is used to advise planning throughout its entire process and focuses on creating multiple-choice spaces (CoV, 2013). This means that space is designed to allow for the practice of a number of different activities and balances between interests of a number of users (CoV, 2013). According to the City of Vienna however, gender sensitive planning needs to incorporate all user groups in decision-making and in this way is able to conclude on the most equitable outcomes in the design process (CoV, 2013).

Glaser *et al.* (2012) argued that if the human behaviour is better understood in relation to its context, governments will be more successful in managing the city centres in a way that will allow individuals to be more at ease and enjoy a space (Glaser *et al.*, 2012). Dame and Grant (2001) also acknowledge, however, that women may have difficulty participating in discussions dealing with public planning and public design for a number of reasons. Some of the main reasons that were identified included the following:

- They have trouble making it to or from the meeting
- There has been an internal acceptance of gender-discrimination and violence, causing the problem to be seen as insignificant
- They are not able to afford childcare or set aside the time it takes to be an active participant in the discussions
- They fear voicing their opinions in public
- They are not aware of the resources available to them to help support women
- They do not feel safe to access the places where the discussions (Dame and Grant, 2001).

According to guidelines for crime prevention through environmental design given by the Australian State of Queensland, there is a relationship in the way in which the built environment is built and the incidents of crime and safety (State of Queensland, 2007). This has been seen in glimpses of some research since the 1960s with authors such as Jane Jacobs in *The Death and Life of Great American Cities* (SoQ, 2007). Jane Jacobs makes reference to how the use of mixed land uses results in having “eyes on the street” as a result of twenty-four hour activity (Jacobs, 1961).

This is also affirmed by City of Cape Town (CoCT, n.d.) and Glaser *et al.* (2012) who believe that natural surveillance is essential to secure environments and therefore designers should have surveillance in mind as well as legibility. There is an unwritten rule in the city that is: “look out for one another.” (CoCT, n.d.: 18). The CoCT (n.d.) also highlights the importance of the permeability of an urban environment to increase the level of safety. CoCT believes that this unspoken rule of natural surveillance comes together under three notions of visibility, presence and social responsibility in what is termed ‘surveillance’ (CoCT, n.d.). In addition, the design of a built environment also needs to allow for opportunities where inside-outside connections can be made so that passive surveillance can be optimal (CoCT, n.d.). In order to achieve this, one of the main factors to consider is the location of windows, doors and wall openings in buildings, and where possible, these should be positioned in such a way that they

overlook the street and public realm (CoCT, n.d.). This allows people who are inside the buildings to provide a passive surveillance to those in the public realm without even being conscious of it. In order for this to be effective however, visual clutter also needs to be avoided. Signage and street furniture need to be used sparingly and need to be positioned appropriately in order to reduce visual clutter on the streetscape (CoCT, n.d.). However, in most cities, the streetscape is usually the portion of the site where electrical substations and other infrastructural elements are found. (CoCT, n.d.). The City of Cape Town recommends that these ought to be located at the centre of an urban block (CoCT, n.d.).

A study undertaken by Trench *et al.* (1992), indicated that women were strongly opposed the use of CCTVs as an attempt to improve their safety. Their reasons included the fact that women still experienced mugging even whilst captured on CCTV, and secondly that they were uncertain about the effectiveness of the monitoring of the cameras (Trench *et al.*, 1992). This is in agreement with CoCT (n.d.) that natural surveillance is a more essential form of security. Bornstein *et al.* (2009) confirms that security cameras are the least effective way of improving women's feelings of insecurity (Bornstein *et al.*, 2009).

Permeability, on the other hand, can be defined as a measure in the total routes through a particular area (Pease *et al.*, 2005). Although a high level of permeability has the ability to increase access to a site, this may also undermine safety by allowing offenders to have access to numerous escape routes after committing a crime (Pease *et al.*, 2005). Therefore a certain degree of limited access to a site, without creating inconvenience, may increase the safety levels in an area (Pease *et al.*, 2005). CoCT advise that a movement network with intersections at 60 to 100m intervals is most desirable (CoCT, n.d.). These movement routes also need to be designed in such a way that they have universal access (CoCT, n.d.), meaning that all user groups including women with prams and especially the disabled should be able to make use of the routes and different access points.

The design of public spaces should also include an analysis of the many uses that a public space holds, as well as an analysis of who uses the space, when, and for what

time duration, and who does not use the space, when and why (Dame and Grant, 2001). The purpose of such a study indicates that when a particular group of people do not use a space, it is typically an indication that the space has a level of insecurity to particular members of that group (Dame and Grant, 2001). Therefore the planning of a particular space from a gendered perspective requires continuous attention to both the social and physical characteristics. An experiment carried out by Norgaard and Borresen (2008) also shows that a well maintained and well operated space contributes directly to feelings of security and crime prevention (Norgaard and Borresen, 2008). A poorly maintained space is signalled by features such as litter, broken street furniture, graffiti and other forms of vandalism (Norgaard and Borresen, 2008). This is supported by a study undertaken by Glaser *et al.* (2012), which showed that streets which are used more frequently are linked to positive factors of the street design such as transparency of windows and a rich sensory experience, while negative factors included a lack of transparency and factors that were either passive or not appealing to the senses (Glaser *et al.*, 2012). According to the Western Australian Planning Commission (2006) even well designed spaces will not continue to be safe if they are not effectively maintained. The CoCT believes that in order to prevent derelict buildings, property owners, both private and public, need to be required to develop maintenance plans towards the preservation of their buildings and to have them reviewed on a regular basis (CoCT, n.d.). CoCT also believes that these should have investment cycles stating which elements of building are in need of replacement or repair, what the projected cost will be so that budgeting can be put in place, and when this is most prone to occurs (CoCT, n.d.). In addition to this, Norgaard and Borresen (2008) also make the observation that vandalism and graffiti reinforce feelings of insecurity in citizens as it may suggest a lack of surveillance in the area.

O’Leary (2011) also points out that infrastructure, such as lighting, is essential for safer cities, particularly in commercial areas where inadequate lighting makes it problematic for women to work late. However, Atkins *et al.* (1991) challenge this in a study they carried out in London, which disproved that lighting affects crime rates. The authors concluded that no evidence is found in support that well lit areas reduce reported crime. However, they found that the perceived safety of women is drastically improved by

street lighting (Atkins *et al.*, 1991). In addition to this, the colour of the lighting may also play a role in the adequate lighting of a streetscape. The White Paper on Outdoor Lighting produced by Philips Lighting (2014) indicates that white light improves the rendering of colour, meaning that the surroundings will therefore be brighter and much easier to see as the environment is rendered more naturally (Philips Lighting, 2014).

In most areas however, street lighting is inadequate for pedestrians as it is predominantly designed to illuminate the road surface for the drivers of vehicles to encourage road safety at night-time, rather than improve visibility for pedestrians. Nearly half of road accidents occur after daytime and therefore lighting has been used to decrease the possibility of accidents to all road users during these hours (RoSPA, 2015).

Safety audits have been used widely in many different places and have grown as a tool used in many cities as a way to approach the prevention of violence. They are regarded highly as they allow interactive consultation with citizens to create a sense of awareness and give an input on areas of concern. Safety audits are usually focused on creating improvements in the built environment. However, the effectiveness of safety audits as an instrument against crime prevention has been questioned and raised repeatedly. Phaure (2004) argues that this is because no solid outcomes have resulted when gender theory has been applied to a result based field of crime prevention (Phaure, 2004). Lambrick and Travers (2004) believe that this is a result of the fact that the relevant data regarding the prosperity of safety audits has been challenging to find. This is due to the complexities underlying the measuring of complicated social phenomena, the shortage of resources and political resistance (Lambrick and Travers, 2004). A further issue is that people have often felt as though efforts and resources that go into creating safety audits for women have shifted the focus away from fundamental issues in a community relating to crime and violence (Lambrick and Travers, 2004). Lambrick and Travers (2004) also argue, however, that when focusing more on the conceptual aspect of crime prevention and not on the physical, safety audits have been successful (Lambrick and Travers, 2004). This is because safety audits have the ability to provide a physical perspective from which initiatives for crime prevention can be produced (Lambrick and Travers, 2004). In addition to this, the safety audit may be able to identify not only the

physical causes of crime, but also the environmental and social factors (Lambrick and Travers, 2004). Women also feel that they have been able to regain the public realm through participating in safety audits and therefore the number of women using public space is likely to increase.

2.5 CONCLUSION

This literature review discusses the relationship between women's travel patterns and the issue of travel safety in the urban context. The literature reiterates that gender sensitivities are typically ignored in the process of creating urban environments, and in turn, this infringes on women's ability to freely exercise their right to the city when compared to their male counterparts. The way that safety is understood differs from person to person, however, an underlying theme can be recognized that safety and security is understood as the protection of one's assets. In this case this would mean the protection against danger or threats of danger as well as the protection of the right to an equally inclusive city for all genders. Statistics also indicate an increase in contact crimes and in murder in South Africa, which gives reason for the level of fear amongst the citizens. In addition to this, women in South Africa are the primary victims of crime than anywhere else in the world. The 'fight against crime' is not solely the responsibility of the police force but also of the government, private sector and civil society.

Some of the research has shown that women living in urban areas who have little to no choice except to use public transport as a mode of travel have reported to experiencing safety differently throughout the day, with the highest insecurity being felt at night and the lowest being during the day. Women between the ages of 20-54 felt safer travelling during the day. While this number dropped by 50% when women were travelling at night, women over the age of 60 decreased from 83% during the day to 21% at night. As a result a number of women avoid being in the streets or after dark. According to Badger (2014) the fear that women have of violence is as intense as violence itself as it determines the way women live their lives in a number of small ways. This will assist in considering different ages and times of travel to best understand the relationship between women's fear and travel patterns, as opposed to homogenizing women and their experiences. This will provide a more well-rounded understanding of the issue at hand.

Fenster (2004) highlights that while the fear associated with urban spaces is often seen as only political, there is also an undeniable connection between fear and the way in which urban spaces have been designed. This means that spaces are often designed without consideration of gender sensitivities.

In addition to the physical design of space, the gender dynamics, which manifest in the urban environment also effect women's experiences of the city. Street harassment causes women to be belittled and to be portrayed in a degrading manner. Verbal harassment on the street has often resulted in fear and anxiety in women and has in some cases resorted to violence. Verbal harassment has also been a demonstration of men's power being asserted in the public realm and their sense of belonging based on the objectification of women. Women have been pervasively blamed in these instances for inviting harassment and assault as a result of their dress code and the time of day that they chose to be out. Their offenders, on the other hand, have infrequently been challenged. Women are also made to feel uncomfortable by dark, unmaintained and abandoned spaces. Women generally avoid parks, car parks and spaces with vegetation that obstructs sightlines and create hiding spots for offenders.

Urban planners have recognized that a just city is one that is safe and inclusive, however, achieving cities this in the spatial realm has been a challenge. Some of the factors that have been identified however, include the usage and familiarity of space, meaning that women are affected by the gender that dominates the space the most. In addition to this, more attention needs to be paid on planning and the ground floor of buildings. This is because as people move through the street, they examine the surroundings at an eye-level both subconsciously and consciously. Public spaces also need to be regularly maintained, well lit, have emergency phones, and be occupied by other users who are happy and enjoying the space.

Crime prevention planning has suggested interventions such as designing areas to improve natural or camera surveillance as well as to increase the access levels to a site so it has universal access. Spaces should be designed particularly for their user groups, meaning that the design of spaces should consider who uses the space, how they use it,

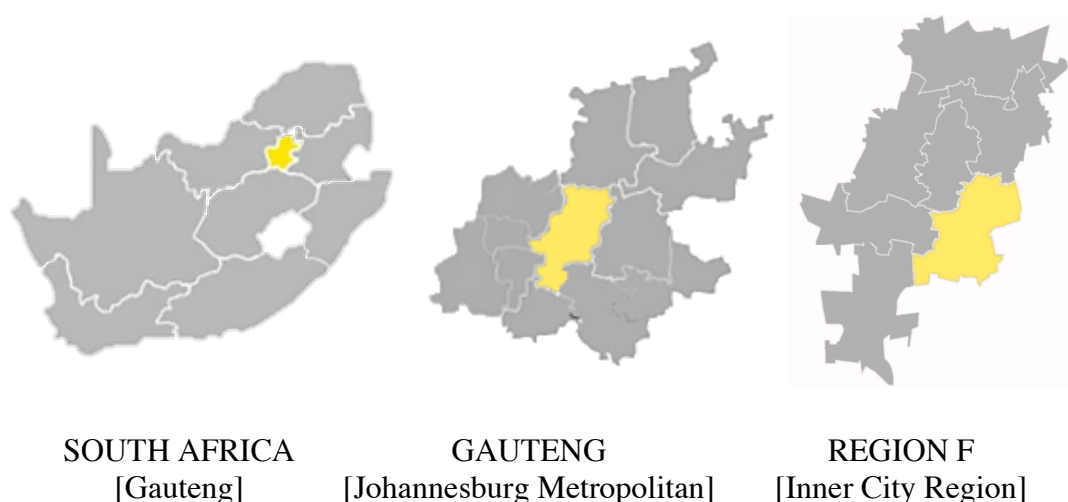
and at what times. Therefore the planning of a particular space from a gendered perspective involves continuous attention to both the social and physical characteristics. Many proposals have been suggested and implemented, such as CCTVs, but have not been in accordance with the needs of women and have had no effect on improving their feeling of safety. In such cases, there seems to be a lack of gender sensitive planning, and assumptions have been made that safety is understood homogeneously between all people and primarily between genders. Gender sensitive planning has been one way of achieving this. As a result, one of the most successful ways of creating spaces that are hospitable to women is through consulting with women. This is where there seems to be the largest gap in existing South African research, both in policy and in urban design principles and will be one of my main points of interest. Safety audits have been used as a tool in many cities to as an approach to crime prevention. However, their effectiveness has been questioned repeatedly. Lambrick and Travers (2004) also argue, however, that when focusing more on the conceptual aspect of crime prevention and not on the physical, safety audits have been successful. Paying attention to gendered sensitivities in urban design is an important aspect to fulfilling a gender-neutral city. Most importantly, women have felt as though they have regained the public realm in taking part in safety audits and the number of women using the public space is likely to show an increase.

CHAPTER THREE: CASE STUDY OVERVIEW

This chapter focuses on a case study of the urban environment surrounding the Commissioner Street Station. The chapter also includes a brief background, a site analysis, and safety audit of the Rea Vaya Station at the intersection of Delver Street and Commissioner Street.

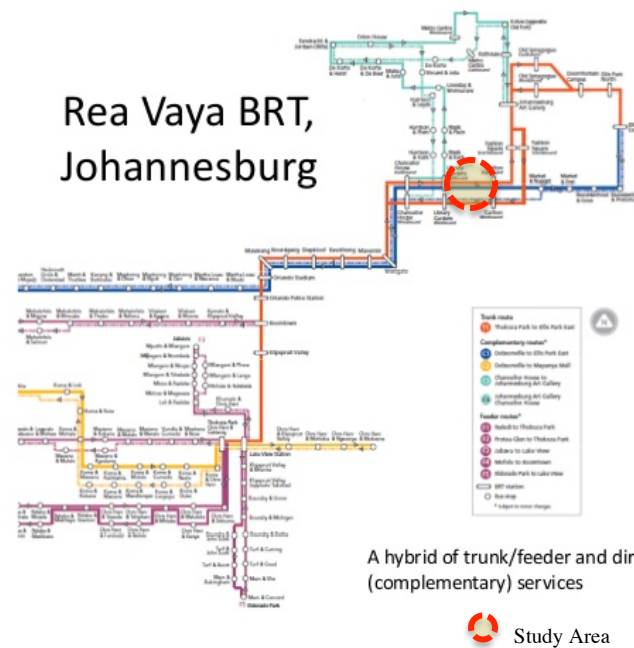
3.1 STUDY AREA

Figure 4: Site Context



The study area is located within the inner city of Johannesburg at the intersection of Delver and Commissioner Streets (see Figure 6). Johannesburg is one of South Africa's largest cities and is the capital of the Gauteng province. Johannesburg has been divided into seven regions, namely, Diepsloot, Northcliff, Roodepoort, Sandton, Soweto, Inner City, and Orange Farm. Commissioner Street falls under the Inner City region. Commissioner Street is one of the main one-way streets in the city centre. The street runs from M31 to the M1, and is identified as the R24 (see Figure 5). Although there is little information on the origin of the street, it is commonly known that the street was central to the development of Johannesburg. Since the foundation of the city, Commissioner Street being the first road in the city, has always been an essential route mobility route (CoJ, 2015d).

Figure 5:The network links of the Rea Vaya in the inner city of Johannesburg (Slideshare,2015)



After the eradication of the Group Areas Act in 1991, the city was affected by urban decay. Many of the lower income individuals who had been prohibited to live in the city moved into the city along with many immigrants from neighbouring economically troubled African countries. The inner city began to experience decline during the early 1980s and late 1990s as a result of the high crime rates in the area (Jones, 2003). Some of the effects of this resulted in many of the buildings in the inner city being deserted by their landlords, and many institutions and corporations moved their headquarters to suburban areas (Jones, 2003). Although the inner city has been associated with a very low income, the CoJ reports that not all of the citizens residing in the inner city are poor (CoJ, 2015c). 12% of the residents earn more than R15 000 per month, while 79% earn over R1500 per month (CoJ 2015c). However, only 31% own their own vehicles, meaning that 32% of citizens rely on municipal buses and over 70% on municipal buses (CoJ, 2015c).

Introducing the Rea Vaya system in Johannesburg in 2006-2007, was foreseen to be one of the City's first steps towards a change in the manner that public transport had been

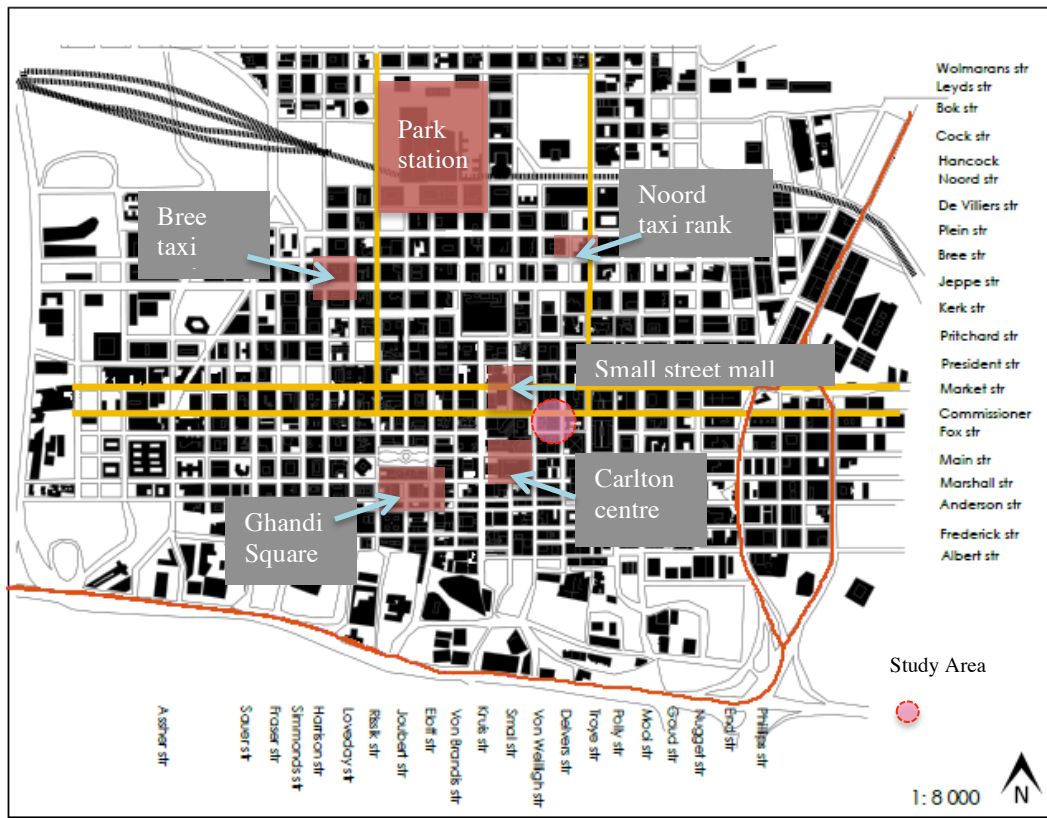
functioning for many years as well as for restructuring the spatial inequalities in the city. Around 800 00 commuters enter into the inner city on a daily basis and 400 000 migrant shoppers travel to the inner city annually (CoJ, 2015b). The benefits of having introduced the BRT to cities worldwide have included meeting the mobility needs of many citizens in a way that is more effective than other transport modalities (Session, 2006).

More corridors were built in the second phase to include the major arterials in the city, putting more than 85% of the city's population within 500 meters of the main corridors (Department of Transport, 2010). Currently, there are a number of trunk routes, which run throughout the city to the Central Business District (CBD) (see Figure 5), one of these passing through Commissioner Street.

The Commissioner Street station is surrounded by a number of nodes, which generate high levels of pedestrian and vehicular traffic. Park Station and Gandhi Square are some of the largest transport hubs responsible for bringing people into the city and are connected to the Rea Vaya transport routes. Bree and Noord Street taxi ranks are also significant transport nodes into the inner city and these transport nodes, along with commercial nodes such as Carlton Centre and Small Street Mall, generate a significant amount of pedestrian and vehicular traffic in the study area. Transport systems such as the BRT, Metro Bus, and taxis utilise Commissioner Street as one of the main arteries through the city centre. The southwestern portion of the area is comprised mainly of corporate and financial offices and institutions.

The area of study covers a radius of 200m around the Rea Vaya BRT station (see Figure 6) The reason behind choosing this site is because this station and the area around the station is an important access route into the city centre and is therefore used widely. As a result, this will allow for an investigation as to what design tools and techniques positively affect women's rights to the city. The site is located within the CBD of Johannesburg.

Figure 6: BRT station on Commissioner Street and nodes surrounding the area of study

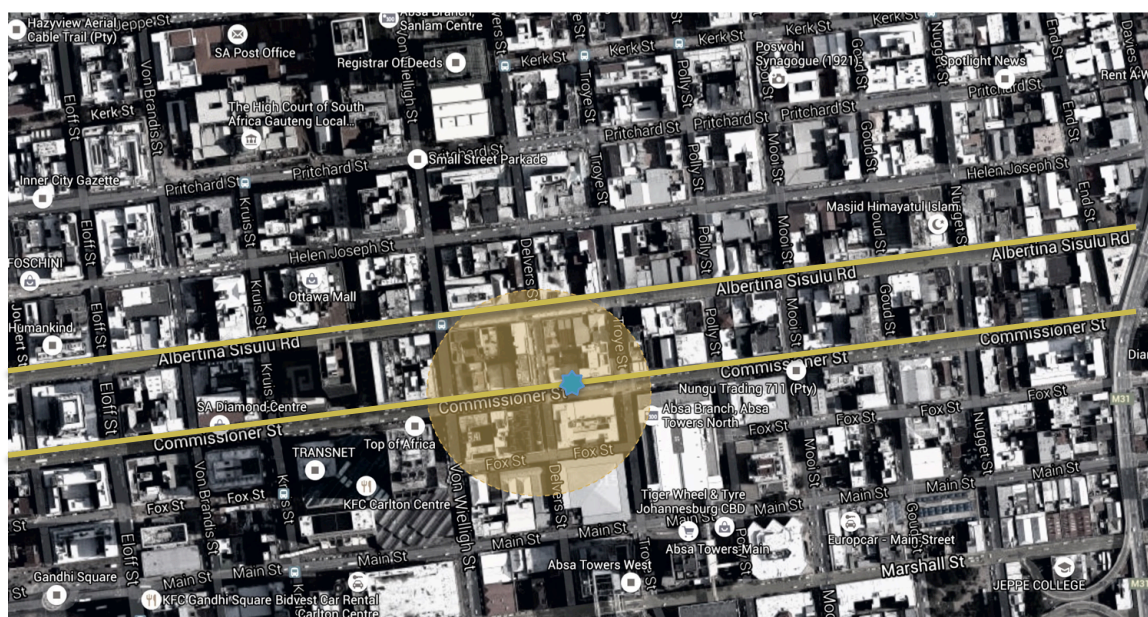


(Mtshali, 2014)

3.2 CASE STUDY OVERVIEW: COMMISSIONER STREET REA VAYA STATION

Johannesburg's inner city has many features that can be considered to work against women's positive experiences of the area and a sense of safety, particularly around transit environments such as the Rea Vaya Station. The following section offers a detailed summary of a safety audit that was undertaken within a 200m radius of the bus station, as this area holds a significant amount of activity and pedestrian traffic. For each of the design elements, a summary is provided of the observations made.

Figure 7: BRT Station on Commissioner Street and area of study



Scale 1:1000



N

-  BRT station
-  Study area
-  BRT route

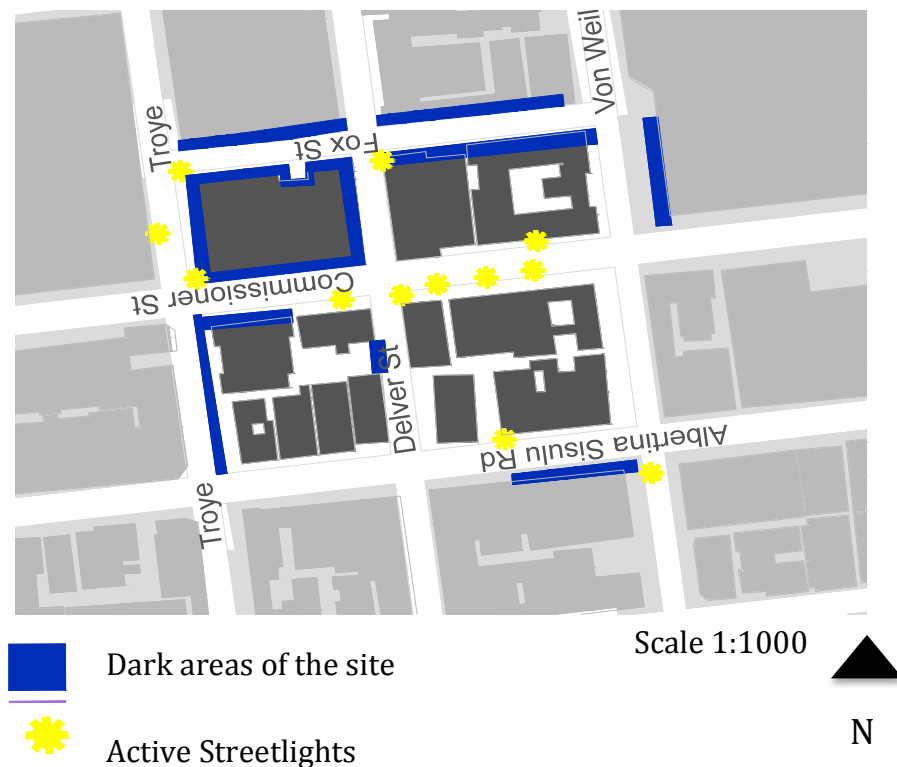
CHAPTER FOUR: SITE ANALYSIS AND FINDINGS

4.1 SITE ANALYSIS

4.1.1 SODIUM STREETLIGHTS

In the majority of the areas in which the audit was carried out, lighting is considered to be uneven and inadequate. While there are a lot of streetlights on Commissioner Street especially around the Rea Vaya station, the lighting was predominantly on the road and therefore failing to effectively illuminate the sidewalk. This meant that many areas of the streets feeding into Commissioner Street were largely in darkness or had random patches of light. Lighting was found under many of the building overhangs, which illuminated the street well on Commissioner Street. The lack of lighting in many of the areas on the site caused an overall poor visibility of possible threats in the space during the later hours of the evening, particularly around abandoned and derelict buildings, sightlines and along movement paths.

Figure 8: Active streetlights

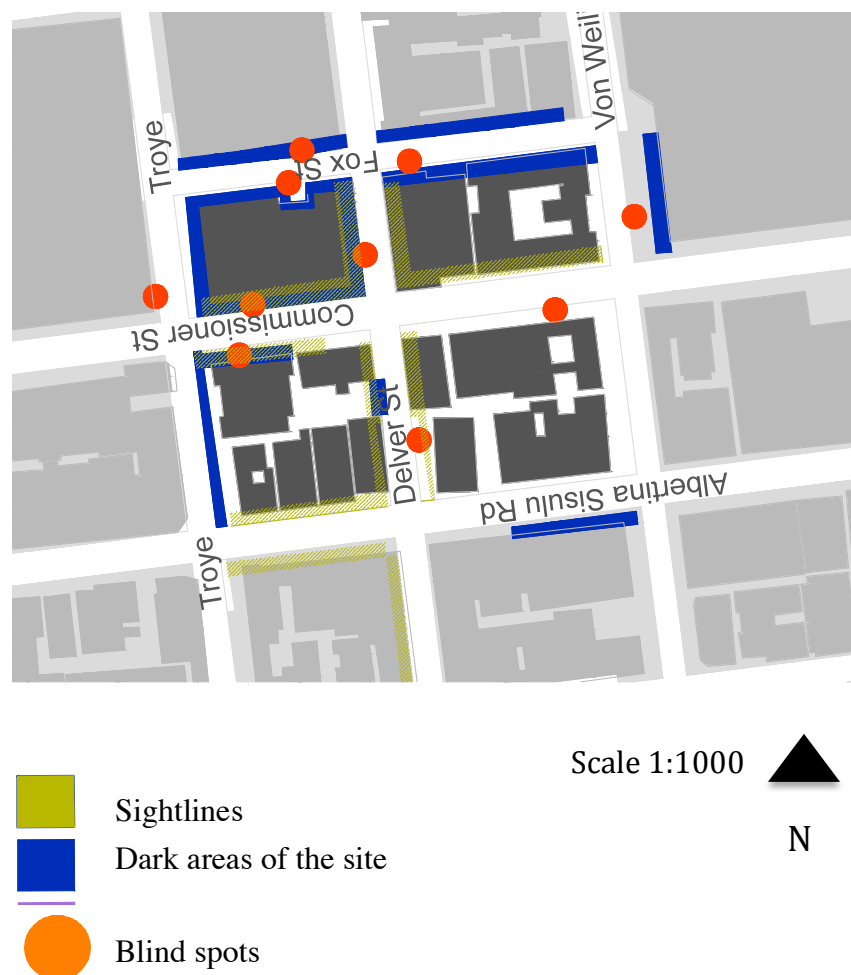


4.1.2 SIGHTLINES AND ENTRAPMENT AREAS

Sightlines are often understood as an uninterrupted line of vision (Oxford English Dictionary, 2010) and entrapments as areas on a site that can cause someone to be entrapped (Oxford English Dictionary, 2010).

The audit was also able to identify that certain areas on the site had buildings that were set back further than others, creating areas that are hidden from view. In addition to this, sidewalks with building columns on the streetscape were also considered areas of concern as they limited vision and created hiding spots. Generally however, the sightlines in the area were distinct. Streetscapes with inactive edges created spaces that were more threatening as these were significantly less active and seemed to have less passive surveillance.

Figure 9: Sightlines and blind spots



4.1.3 ISOLATION

Many buildings around the site were noted as posing a potential threat to women. This was because a few of the buildings near the site were either derelict or abandoned and created little to no activity around them. Women, men, and children occupied the area during the day, which made the space feel safe. However as sunset approached at 18:00, the streets began to lack the presence of people. The presence of women in particular began to decrease at this time. After 17:00, the site was significantly quieter as the stores began to close. Commissioner Street stayed busy until 19:00 as the stores closer to the BRT station closed much later than the others.

4.1.4 MAINTENANCE, DESIGN AND SIGNAGE

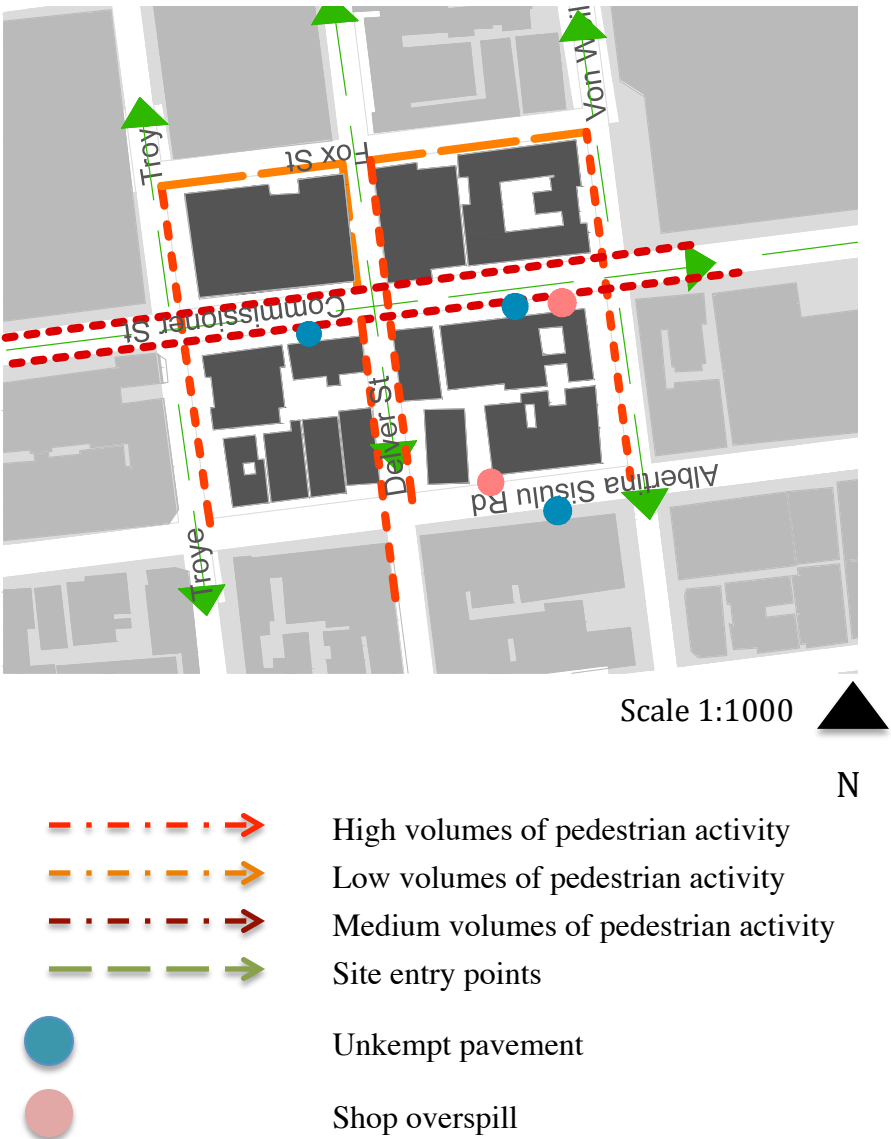
As previously mentioned, poorly maintained space are signalled by factors such as litter, broken street furniture, graffiti and other forms of vandalism (Norgaard and Borresen, 2008). Many of the places that were audited were found to be less than aesthetically pleasing as maintenance was a serious concern for this portion of the area. Many pools of stagnant dirty water can be found around the pavements and on the road. Piles of litter, overflowing rubbish bins, poor drainage and unkempt pavements were evident. The pavement was uneven, cracked and sometimes missing in certain areas. Many of the buildings in the area have been spray-painted with gang signs. A lack of maintenance in some of the existing lighting was also noted, along with dark abandoned buildings existing amongst other active buildings. The area also lacked signage and although the grid pattern of the streets makes it easy to move through the area, a lack of signage made it difficult to indicate where the different streets lead. The narrower streets feeding into Commissioner Street also smelt of urine and were occupied nearly exclusively by men.

4.1.5 MOBILITY

Mobility can be defined as people's movement from one area to another (Oxford English Dictionary, 2010). The lack of maintenance of the sidewalks as well as advertisement boards and spillage of the shops onto the pavement, combined with the heavy levels of pedestrian traffic, made decreased mobility and made moving through the area very difficult. The combination of all of this activity created a significant amount of congestion on the sidewalk.

Although there were many negative aspects about the area, many of the safety elements recognised in the literature were found on the site. These included sightlines, and a regular street pattern that allows for an easy navigation through the site and provide alternative routes to the bus station, as well as a sense of comfort provided by the passive surveillance of a well-populated area.

Figure 11: Activity and movement on the site



4.1.6 WOMEN'S RESPONSES

This section will report the findings of the data collected from the questionnaires that were personally given to each participant. This chapter will present the findings of the data that was collected from female passengers of the Rea Vaya on Commissioner Street Station, as well as other female users of the urban environment around the Rea Vaya station. This chapter first deals with the findings as provided by a sample size of 13 female users of the site, and is then followed by a safety audit as provided by an additional 6 female users of the site.

4.1.7 PERSONAL DATA

The participants ranged from an age group of 18 to 60. Women between the age of 18 - 29 made up 40% of the participants, women between 30 and 39 made up 40%, and women between 40 and 49 made up the remaining 20%. The interviews were conducted on a Wednesday and Thursday from 13:00-14:00, 16:00-17:00.

Table 2. Age range of participants

Age Range (years)	Number of sample
18 -29	4
30 – 39	5
40 – 49	2
50 - 59	1
60- 70	2

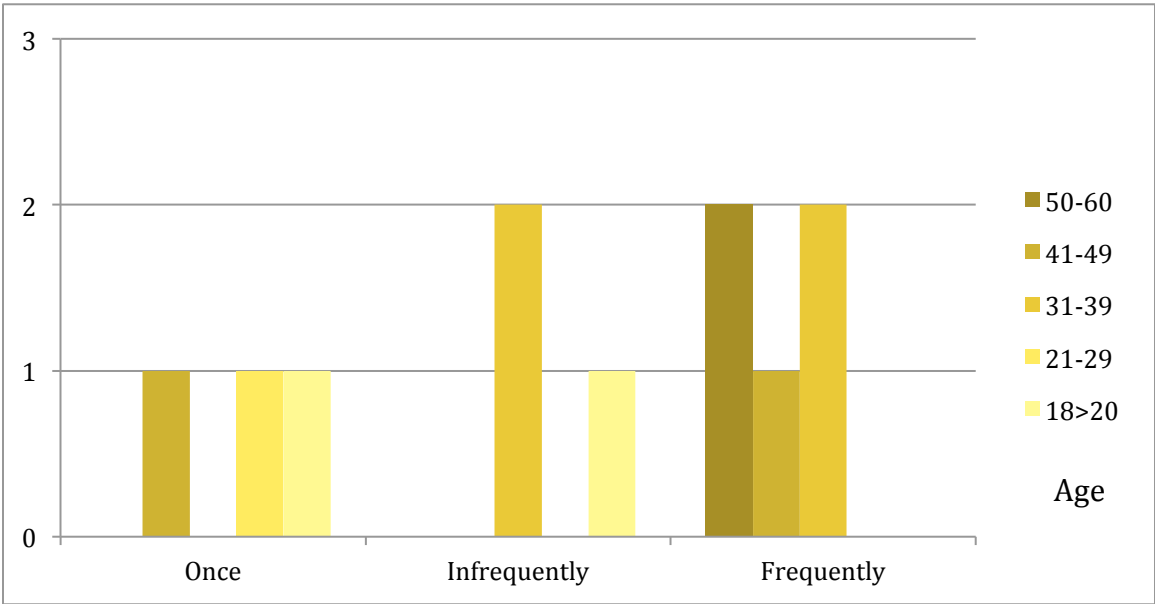
4.1.8 REASONS FOR WOMEN'S TRIPS

Many of the women who were using the Commissioner Station were in the area due to both productive and recreational reasons. Activities such as school and work are considered productive activities, while shopping is considered both recreational and reproductive purposes, depending on whether or not shopping is done for household purposes. One of the women reported to being in the area as a result of trips relating to recreational purposes exclusively, in which she was using the Rea Vaya as a means to visiting a friend. Two of the women also reported to using the bus and being in the area

as a result of productive purposes exclusively and were using the bus to access either school or work. The remaining seven women were in the area for both reproductive and leisure reasons. This was often with a combination of school, leisure and shopping trips or work, leisure and shopping trips. The importance of noting the overlaps in the study is to identify whether or not women are generally responsible for playing dual roles in their homes and this implies that the BRT system has given women the opportunity to access a wider range of activities.

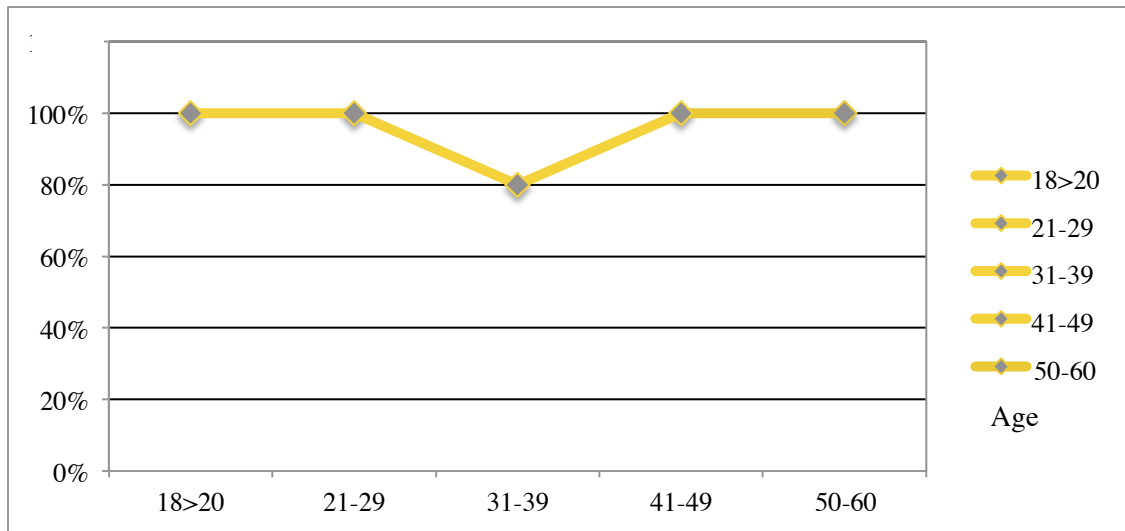
Many women interviewed were not residents of the inner city and were in the area for the purposes of shopping and work and therefore did not live in the area. In addition to this, 9 of the participants reported to being in the area very rarely or infrequently. Of these women, all of them felt the area was unsafe and were concerned for their safety whenever they were in the area (see Table 3). The remaining participants were in the area on a frequent or daily basis but also felt fear for their safety in the area.

Table 3
WOMEN’S FREQUENCY OF EXPOSURE TO THE SITE



The number of respondents by age group, who communicated concern for their personal safety on the site in relation to their frequency of exposure to the area

Table 4
CONCERN FOR PERSONAL SAFETY IN THE AREA



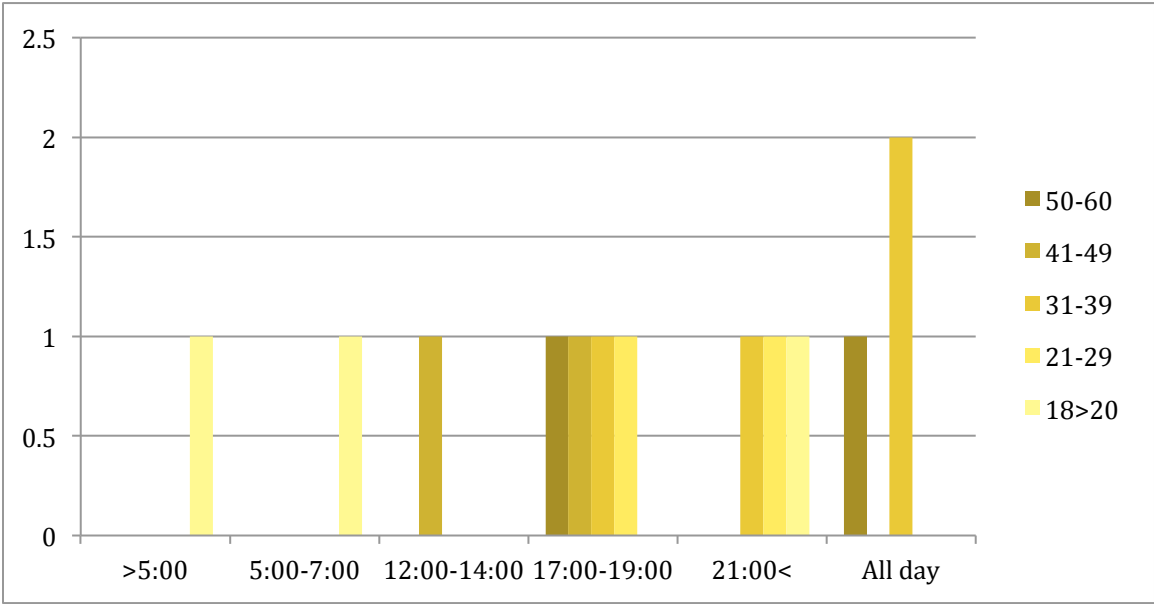
The percentage of respondents by age group, who communicated concern for their personal safety on the site

4.1.9 WOMEN'S PERCEPTIONS OF SAFETY AT DIFFERENT TIMES OF THE DAY

While all of the women found that the Rea Vaya station appeared to be safe, all of the participants shared concerns about a lack of safety and security in the area. This means that while women felt unsafe in the area, they also felt that there was a lack of protection against victimization. As a result all of the participants reported to reducing their activity in the area, particularly during the night-time due to increased feelings of insecurity. All of the participants felt unsafe to be in the site after sunset, while five of the participants felt equally unsafe on the site, regardless of the time of day (see Table 5). Women between the ages of 50 – 60 were noticeably more reluctant to being approached by the researcher. Many of these women however, particularly between the ages of 50 – 60, were often in the site as a result of their job requirements. These women reported that they did not interact with the site at all besides during work hours and left the site immediately after work. Although age was also considered to be a factor in that women between the ages of 50-60 reported to be the most fearful in the area, the reduction of

activity during the night-time was true for all age groups. Eight of the participants felt slightly safer during midday, when the site has the most activity, ‘eyes on the street’ and a lot of activity taking place. In addition to this, one of the participants felt that exactly after midday the site began to decrease in safety level. Another participant felt that the site was the least safe during the early hours of the morning as well as in the evening, due to experiences of robberies she had heard of from family members or friends and had fears of being “raped and beaten” (Participant 1). One of the participants, although acknowledging a lack of safety for women in the area, reported to not feeling insecure at all during the day because her experience with the area has allowed her to be “street wise” or to have the awareness and knowledge required to live or get through an often dangerous environment (Participant 2).

Table 5
LEAST SAFE TIME OF DAY



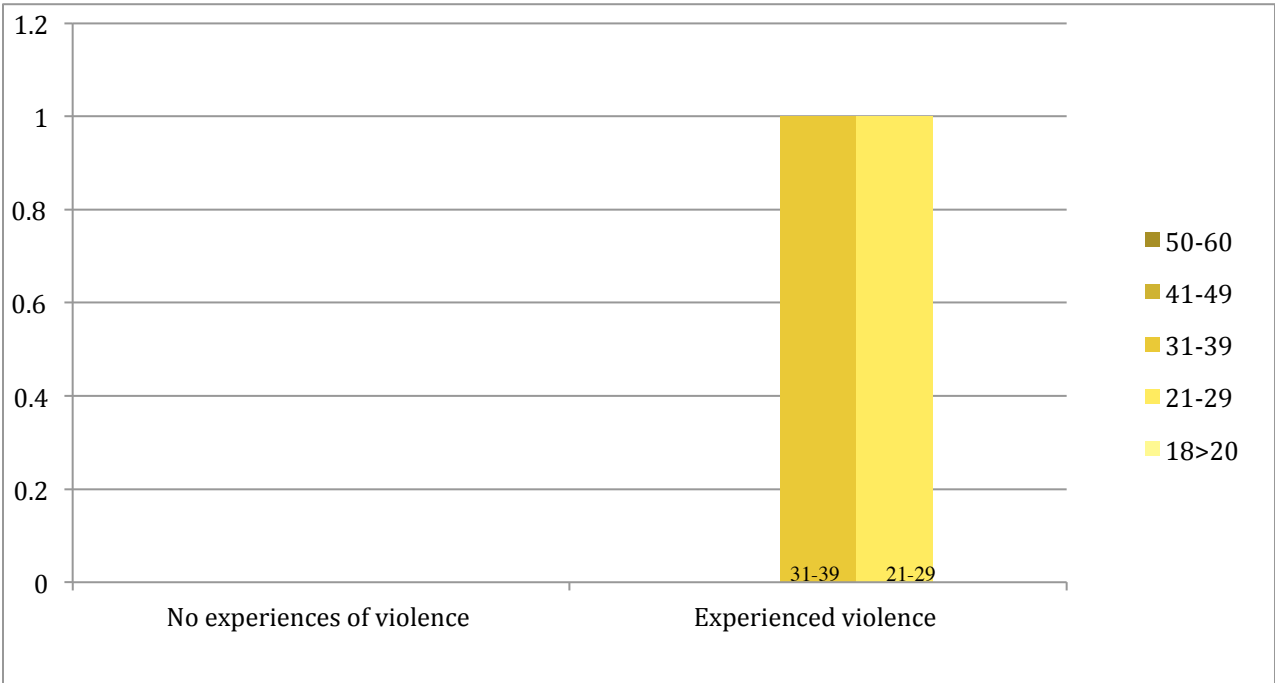
The number of respondents by age group, who communicated the time of day they believed the lack of safety began to increase in the area

4.1.10 EXPERIENCES OF VIOLENCE AND CRIME

Two of the women interviewed have experienced crime or violence in the area (see Table 6), and four of the women know female friends or family members who had

experienced criminal activity or personal violence on the site at some point in their lives, which contributed to their feelings of insecurity of the area. Nine of the women had never experienced any physical attacks in the area, while 10% responded positively. These attacks and robbery took place at the intersection of Commissioner and Troye Streets. Another woman who owned a shop three streets south of Commissioner Street, reported to having witnessed innumerable shooting and criminal activity, and as a result had resorted to hiring security to guard her shop.

Table 6
CONCERN FOR PERSONAL SAFETY PER AGE GROUP, IN RELATION TO
EXPERIENCES OF VIOLENCE



4.1.11 FACTORS CONTRIBUTING TO WOMEN’S INSECURITY

Many women knew that they felt unsafe within the site, however many found it difficult to articulate exactly what it was about the environment that caused them to feel unsafe. Women felt they would become victims of the men lingering on the street. Nugget Street was a specific area that women identified as a space they make an effort to avoid due to high incidents of crime reported in the area, the presence of drug dealers and prostitutes. One woman who was not familiar with the site accidentally found her self walking

through Nugget Street and described how she was overcome with insecurity. One of the women associated feelings of insecurity with walking past abandoned buildings, homeless individuals sleeping on the street as well as drug dealers, and prostitutes occupying the street. Nine of the participants reported to being made uncomfortable by loitering men along with a number of the men that had informal stalls set up along the pavement. Some of the reasons for this were the verbal sexual harassment women experienced while walking past these men. Other places that were noted were quieter portions of the site that have significantly less activity than Commissioner Street. A few women also mentioned the discomfort brought about with their encounters with “women of the night”, who occupy the streetscape during broad daylight. One of the participants spoke of the threats she received from the prostitutes because she was a threat to stealing their customers. While the majority of the participants felt that they were more likely to be targets of criminal activity and to be affected by the inadequate level of safety in the area as women, one woman felt that both men and women are equally affected and that this is a result of the growing poverty levels in the country.

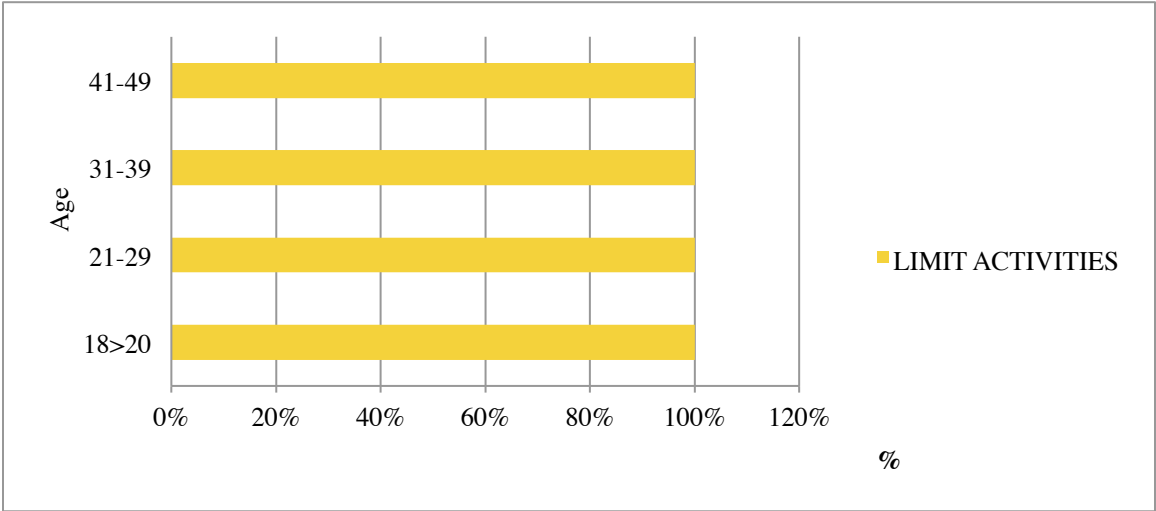
Women observed that on the occasions when they were on site in the evening hours, there were many patches of darkness that cause great fear and vulnerability. Although some of the women were able to identify individuals walking on the street in the evenings, it was not until they were in close range that they were able to identify whether the approaching person appeared threatening or not.

4.1.12 LIMITED MOBILITY

All of the women interviewed reported to having to limit their travel patterns as a result of concerns for their safety (see Table 7). Many women indicated that they limit their movement during the evenings by not using the Rea Vaya as well as not walking due to perceptions that the surrounding environment was not safe. Five of the women needed to be accompanied by a male companion to the station during sunset and the hours afterwards, as well as in the early hours of the morning. If no male companions were available to escort them to the station and other areas of the site, six of the women resorted to cancelling their plans and one risked her safety if she had any important

commitments that she could not afford to miss. Four of the women confirmed that the experience and second hand knowledge of assault affected their patterns of movement.

Table 7
LIMIT ACTIVITIES



The percentage of respondents by age group, who limit their movement and activities as a result of concern for their safety

4.1.13 BEHAVIOUR MODIFICATIONS

Some of the main methods noted of ensuring personal safety were avoiding certain areas of the site, and taking precautions around loitering men, derelict or abandoned buildings and prostitutes. Women tried to stay away from many of these factors by avoiding areas of the site where the above attributes are present. Another group of women spoke about how they would leave the site immediately after work. Women also resorted to keeping valuables out of sight often by placing them in plastic bags (see Figure 11) and mostly ensuring to travel with a male companion if in the area at any other time besides midday. Nine of the participants felt as though they were risking their personal safety by being in the area.

Figure 12: Woman disguising her valuables in a plastic bag
(Conco, 2015)



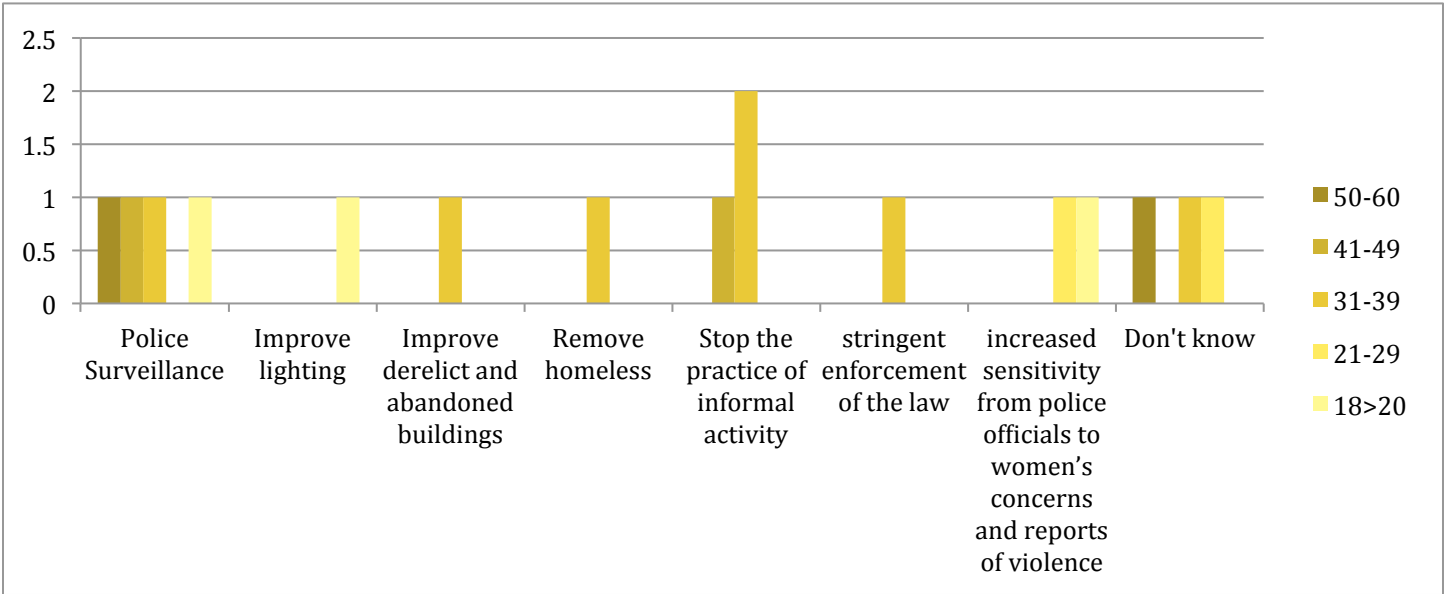
4.1.14 WOMEN'S RECOMMENDATIONS

The women suggested a range of solutions to improve the built environment around the transit spaces to achieve an environment that feels safer and more comfortable for them. Four of the women spoke about the need to improve the presence of police officials or for the City to employ security guards who would be permanently positioned at the corner of each block. One of the participants felt as though her security in the area would improve with police officials patrolling the area every three minutes. Another participant felt that there was a need for more stringent enforcement of the law. This was also accompanied by a recommendation to renovate derelict and abandoned buildings as they caused fear for the unknown of what lies beyond the walls of these dead spaces. One woman in particular felt discomfort in walking past derelict and abandoned buildings, as she believed that drug users and the homeless occupied them. One participant also spoke about making use of bylaws to remove the homeless who are utilising the street space as a place of residence. Women reported that they were often passing by inebriated, homeless men who were occupying the street space and made them feel that their safety was being threatened. Bylaws were also recommended to remove the men who were selling on the sidewalks without legal permits, as well as the

prostitutes and drug dealers occupying the streetscape, as they are an attraction for suspicious characters. In addition to this one of the women felt there needed to be an improvement of the lighting in the area.

The main solution that expressed however, was the need for improved enforcement of the laws and as well as a greater presence of police officials (see Table 8). This however was also accompanied by the concern that after reporting criminal activity, the police do not follow up of the incident; this was reported to be especially true for sexual violence against women. Women voiced the need for increased sensitivity from police officials to women’s concerns and reports. Three of the women did not have any solutions to improve the lack of security in the area.

Table 8
WOMEN’S RECOMMENDATIONS TO IMPROVE SAFETY IN THE AREA



4.2 SAFETY AUDIT

The following section provides a detailed summary of a walk through the site conducted with six female users of the space. Whilst walking through the streetscape of the site, women were asked to note the factors that created a sense of discomfort, insecurity, or threat as they moved through the environment. The following presents a narrative summary.

4.2.1 PERSONAL DATA

The participants ranged from an age group of 21 to 60. Women between the age of 20 - 29 made up the majority of the participants. This was due to the fact that women between the ages of 40 to 60 were very unwilling to be approached.

Table 9. Age range of participants

Age Range (years)	Number of sample
20 – 30	5
40 – 50	1

4.2.2 MOVEMENT

In a number of the streets that were audited, crowding was noted to be a great contributor of women feeling discomfort and insecurity in the area (see Figure 12 and 13). Women reported that this made them feel that their chances of being mugged were considerably higher due to the volumes of pedestrian traffic which resulted in reduced visibility and restricted movement. Women were unable to differentiate whether or not they were being pickpocketed when individuals bumped into them or whether this was simply due to the high volumes of pedestrian traffic, which did not allow people to move comfortably. Women were also wary of being mugged, and even being jostled by the crowds caused a high level of anxiety. Many of the sidewalks were described as being too narrow. Women felt that this was a result of street traders occupying most of the pedestrian space, as well as the shop employees who were advertising on the sidewalk. This also made moving through the site particularly challenging for women who are disabled and travelling with prams. Women who were lost and asking for directions approached the researcher. Women felt vulnerable as a result of stumbling into areas that caused them to feel threatened.

Figure13: Factors causing congestion on the streetscape



4.2.3 STREET TRADERS



Figure14: Congestion on street (Conco, 2015)



Figure15: Congestion on street resulting in restricted pedestrian mobility (Conco, 2015)

In addition to causing congestion, women spoke of how male street traders would often verbally and sexually harass them as they passed by, with comments like “My size.” Men who were advertising on the side of the sidewalk were also noted as culprits of sexual harassment and intentionally made no attempt to step aside for women walking past them. Women felt particularly threatened and unsettled by this. Some of the women come on the fact that the men occupying the streetscape sometimes look suspicious. This was not necessarily because they were engaged in any threatening activity, but their mere presence caused feelings of insecurity and apprehension.

Figure16: Informal activity taking place on site (Conco, 2015)

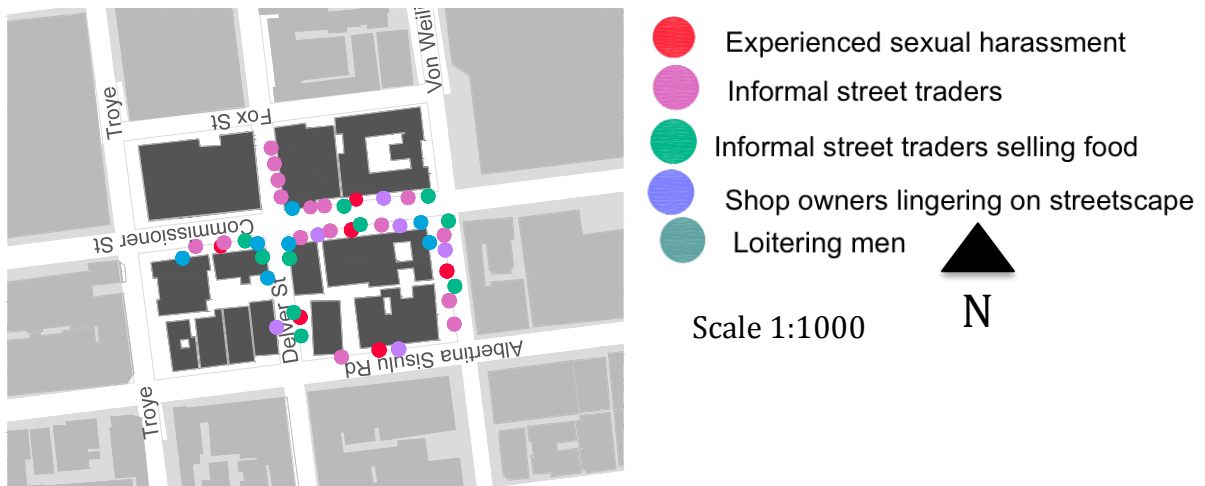




Figure 17: Informal traders causing congestion on streetscape (Conco,2015)



Figure18: Male Informal traders accused for sexually harassing women (Conco,2015)



Figure19: Informal traders causing congestion on streetscape (Conco,2015)



Figure20: Male Informal traders accused for sexually harassing female pedestrians (Conco,2015)



Figure21: Shop employees occupying streetscape and reducing accessibility (Conco,2015)



Figure22: Loitering men accused of sexually harassing women (Conco,2015)

4.2.4 MAINTENANCE

In all of the areas that were audited, maintenance was repeatedly mentioned. The areas lack of aesthetics and maintenance were a considerable problem in creating an unpleasant urban environment. Women also noted that even when the rubbish was collected on the site, the state of the environment, aside from the litter, still looked unkempt and “dirty”. This was due to the stagnant water pools on the road, the graffiti, and the presence of unkempt buildings (see Figures 20-28). Although many of the women noted the presence of graffiti, none of the women associated this with a lack of surveillance. According to the participants, the presence of graffiti only contributed to the area’s untidiness and lack of maintenance. One of the women also commented on the lack of hygiene that was present in the area as a result of the food being sold on the sidewalk, and felt that this would increase the spread of germs and diseases.

One of the women also commented on the lack of hygiene that



Figure23: Abandoned buildings allegedly occupied by homeless people (Conco,2015)



Figure24: Abandoned building allegedly utilized for drug dealing (Conco,2015)



Figure25: Poor drainage (Conco,2015)



Figure26: Pools of stagnant water (Conco,2025)



Figure27: Poor maintenance (Conco,2015)



Figure28: Litter pollution (Conco,2015)

Figure 29: Areas that lack maintenance



- Pool of stagnant water
- Overflowing bin
- Litter pollution
- Graffiti
- Unkempt buildings

Scale 1:1000



CHAPTER FIVE: ANALYSIS OF FINDINGS

This chapter gives an analysis and further interpretation on the findings presented in the previous chapter. The discussion of the findings is based on the topics mentioned in the literature review. This chapter also aims to answer the sub questions of the research by understanding the extent to which women's perceived and actual safety affects their ability to exercise their right to the city.

5.1 AGE

According to the results of the study, women between the ages of 18-29 felt slightly more positive in regards to the safety of the area as they were more comfortable to be on the site till the later hours of the evening, even reporting to being in the area at 22:00. Women between the ages of 30-49, however, were more reluctant to travel after dark and generally they avoided being in the area after 17:00. Women between the ages of 50-60 were exceedingly reluctant to be interviewed and those who were reported that they had no interaction with the site outside of personal responsibilities. These findings contradict the study undertaken by Seiji *et al.* (2011) which indicated that the safety levels of women aged 60 and older reported to be 83% during the day and decreased to 21% at night. The research revealed that women between these ages did not feel safe on the site regardless of the time of day. However, when the day progressed into night, all of the participants felt that the safety in the area decreased significantly. While the study undertaken by Seiji *et al.* (2011) indicated that 50% of the participants' feelings of safety decreased as the day progressed into night, the research shows that all of the participants interviewed felt as though safety in the area decreased significantly at night. The study also revealed that despite age, women generally feel safer to travel and interact with the urban environment during the day and reduced their activity in the area at night. The findings also reveal that the feeling of one's safety is age related as the survey revealed that higher levels of fear were present among older women. However, this is not the sole explanation for women's fear. It seems that the heightened vulnerability of older women is may be related to the argument put forward by HealthLinkBC (2014) that older people tend to be more sensitive towards the consequences of victimization as they have reduced muscle strength and mobility (HealthLinkBC, 2014; HelpAge International, n.d.).

5.2 TIME OF DAY

The women were able to identify a number of different factors that caused them to feel apprehensive about the area. It is made clear from the findings the extent to which a woman's mobility is restricted by fear for personal safety. As indicated by Badger (2014), travelling after sunset was especially recognised as being less safe than travelling during the daytime. There is an unquestionable reduction of the women's activity at night as a result of feeling more insecure. This is due to the level of passive surveillance that is present during the day provided by the presence of other people, and the feeling of a lack of effective surveillance during the night due to the reduced presence of other individuals, and particularly that of women. This is also indicated in the study carried out by Lynch and Atkins (1988) which indicated that the time of day is a factor which influences women's safety due to the perception that darkness is less safe as a result of the reduced surveillance and limited presence of other people. A number of women however, were able to identify that the space is predominantly male dominated, particularly after sunset and this was found to be true. Women found that when the area became increasingly male dominated they became significantly intimidated as their chances of being victims to violence were also increased. This bears out O'Leary's (2011) point that women tend to avoid male dominated spaces and at times even go as far as avoiding them. A few of the women reported to only being comfortable to be in the area after dark if they were being accompanied by a male companion. This supports Badger's (2014) argument that women's fear of travelling alone at night sometimes manifests in them avoiding being out at night. From this information we are able to deduce that darkness along with the increased presence of unknown men are important factors contributing to feelings of insecurity in women's experiences of the city. From the studies mentioned in the literature, travelling during the night is considered much less safe by women than travelling during the day (Lynch and Atkins, 1988). When considering the findings, there is an indication that indeed woman's travel patterns and level of comfort in an area is affected by the time of day.

For the most part, it appears that the women's perceptions of safety levels in an area are largely parallel with the area's activity levels and the presence of other women. When the levels of activity in the area are at their highest, women's level of comfort and

security are at their peak. On the other hand, when the level of activity decreases and the site becomes increasingly isolated and dark, so women's level of comfort, security and activity decrease. It should also be noted that the time that women reported to experiencing criminal activity occurred between 05:00 and 06:00 as well as after 17:00.

5.3 LIGHTING

According to the surveys, it is evident that the presence of adequate lighting on street has a direct relationship with women's movement and the routes they prefer to take during the evening. Adequate street lighting is mentioned as one of the physical factors that affect safety under O'Leary's (2011) guide for building safe cities for women. O'Leary (2011) notes that adequate street lighting is essential to enable women to use an area late at night. The research did not reveal whether or not the crime rates in the area were affected by lighting, as indicated by Atkins *et al.* (1991), although the findings reinforced their argument that lighting contributes to improving women's perceived safety. Although the area was lit in a number of places, the lighting was not considered to be effective as the level of visibility is still very low. This may have been the result of the fact that the lighting on the pavements is predominantly designed to illuminate the road surface for the drivers of vehicles, rather than improve visibility for pedestrians. The Royal Society for the Prevention of Accidents (2015) mentions that because nearly half of road accidents occur at night, streetlights have been used to decrease the possibility of accidents for road users during these hours (RoSPA, 2015). In addition to this, the colour of the lighting made a significant difference to the brightness of the streetscape. The yellow-orange streetlights usually created areas that were identified as being inadequate in lighting, whereas the areas with white lighting have improved levels of visibility. Philips Lighting (2014) indicated that white light improves the rendering of colour, meaning that the surroundings will therefore be brighter and much easier to see as the environment is rendered more naturally (Philips Lighting, 2014). The colour of lighting present in the study area is amber.

5.4 FAMILIARITY WITH THE AREA

The data also revealed that the women who used the space less frequently than those who did not, had no effect on the response to their perceptions of safety in the area. The

data reveals that perceptions of safety are not influenced by one's frequency of exposure to the area. Therefore, in contradiction to suggestions made in the 1999 Plan It Safe document, it appears that the apprehension women feel about particular environments may not be improved through repeated exposure to a particular environment even if they experience no harm within the feared location. Therefore, increased exposure to a particular environment is likely to have no effect on women's perceptions of safety or their level of comfort in the area.

5.5 PHYSICAL FACTORS AFFECTING SAFETY

Although isolation was reported to be an important factor linked to feeling unsafe in the site, it was also noted that a place does not automatically feel safer because of the presence of other people and the activities taking place. Instead, the types of activities and people occupying the space contributed to making the area feel safer.

In many instances, the women were concerned about individuals loitering on the streets. This was mostly in relation to loitering men who were not taking part in any threatening activity, but it was simply their presence that was threatening. Male informal traders occupying the sidewalk and prostitutes also intimidated women. This shows a relationship between informal activities and the women's fears. This can be interpreted through the study that the mere presence of other individuals is not sufficient in creating safer and more comfortable spaces for women, as argued by Lynch and Atkins (1988). This also depends on the individuals who are occupying the space. This confirms the argument made by O'Leary (2011), which indicated that women are affected by the gender that dominates a particular urban environment. This confirms the literature in that women are more apprehensive in male dominated spaces and are more likely to avoid these spaces (O'Leary, 2011). The participants generally felt safer during hours of the day in which there was a greater presence of other women in the environment and less safe in the evening when the space became increasingly male dominated.

Some of the causes of women's discomfort in particular areas, as mentioned in the literature by Dame and Grant (2001), were due to the poorly maintained or neglected environments as well as the absence of emergency phones and obstructions to sight

lines. Lynch and Atkins (1988) state that the presence of graffiti and vandalism may feel threatening to women and cause them to avoid spaces as they indicate that there is a lack of efficient surveillance in the area. However many of the women were not affected by either of these factors. The findings indicated that women were not intimidated by either graffiti or vandalism in and of themselves. However, they served to reinforce an area's conditions of neglect and poor maintenance that women were wary of. As indicted by Dame and Grant (2001), women generally felt uneasy at the presence of dark, abandoned buildings. Besides this factor, women do not largely associate their feelings of a lack of safety in the area to the physical design of the built environment. The findings revealed that women feel that their security is more dependent on the presence of police officers and security guards in the environment, whereas Lambrick and Travers (2004) mentioned that the presence of police made women feel more insecure as this gave the impression that the area was unsafe. Drawing from the responses that were given by the women, this may be a result of the fact that women in the area are conscious of the fact that their safety in the inner city is at great risk. Therefore the presence of police was not interpreted as a reminder of the lack of safety in the area, instead the presence of police would deter criminal activity from taking place.

5.6 LIMITED ACTIVITY

Identifying women's perceptions and concerns for their safety is significant because this is likely to have a strong impact on limiting their movement and activity (Badger, 2014). Women restricted their movement in an attempt to avert the possibility of victimization. All of the women interviewed reported that they limited their movement through a number of different techniques such as avoiding particular areas, avoiding being on the site at certain hours of the day, and sometimes avoiding travelling altogether in the evenings if there is no male counterpart to accompany them. Mosher (2008) indicates that the fear for one's personal safety has greater social significance as this factor also affects economic and social prosperity because women are often responsible for playing multiple roles in society. The effects of limited mobility and activity as a result of fear is of no less importance however, even if they are only felt by an individual as it infringes directly on one's right to the city.

5.7 WOMEN'S CONCERNS FOR THEIR SAFETY

All of the women who were interviewed expressed a level of concern for their safety in the area. However, only two women had experienced assault. This indicates that women's concerns for their safety in the city are driven largely by perception and less on reality. This, however, is not to be regarded lightly as the crime statistics in the inner city reveal that the total number of common robbery incidents has increased in the area and that common assault is still significantly high (see Table 1). In respect of this, this confirms Lynch and Atkins' (1988) argument that the connection between women's fear of being victims of crime and the crime rates in the area, makes it more evident that this concern is legitimate and is also significant as the fear of victimization is founded in the awareness of being at danger. Faul (2015) indicates that statistics in South Africa reflect that women are the primary victims of criminal activity in the city, exceeding any other country in the world, making them the most vulnerable especially in terms of gender. This suggests that although many of the women interviewed had not experienced any criminal activity, their knowledge of the fact that they are extremely at risk was enough to significantly affect the way in which they interacted with the urban environment. Therefore there is a connection between the knowledge of crime and the fear of being victim to crime, as mentioned by Lynch and Atkins (1988). This means that the fear of crime is logically based in the awareness of being at risk. This is true for both direct and indirect experiences.

The literature indicated that many of the street corners in the city centre had CCTV. This however was not recognized at all by the women and there was a greater need for the presence of security guards and police officials. Although the CoJ has tried to incorporate some security initiatives, this was not in line with the needs of the citizens, and particularly women who are the primary victims of criminal offences. This may have been the result of gender blind planning.

Women mentioned how the presence of security would suppress the feeling of insecurity and even the occurrence of crime. In contrast to this, we can assume that the security cameras do not improve women's feeling of safety as this does not always ensure immediate help. This speaks to the study undertaken by Trench *et al.* (1992), in which

women strongly opposed the use of CCTVs to improve their safety. Women reported that they were still mugged even whilst on CCTV and were also uncertain about how good the monitoring of the cameras were (Trench *et al.*, 1992). The study undertaken by Bornstein *et al.* (2009) states that security cameras were the least effective in improving women's feelings of insecurity (Bornstein *et al.*, 2009). Fenster (2004) argues that the true right to the city means equal participation for all its users and therefore measures to address this need to be considered to prevent discrimination. Most of the participants acknowledged that women have separate safety needs in the city. These were affected by age and income because vulnerability is linked to these characteristics. A number of reasons were given for these distinctions such as the argument that safety is more prominent for women because they are often preyed on for generally being weaker than strong men, while others felt that women are preyed on because they carry their goods in purses which are easy for offenders to snatch and run away with. Other participants highlighted that it is the risk of being sexually assaulted in transit environments that differentiates and emphasises women's needs for safety from men's. In addition to this, older women are considered the greatest victims as they are much easier to overcome.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

The following chapter focuses on the responses and initiatives that may be used to improve women's experience of the area as well as to design spaces in a manner that is more gender conscious. This will be drawn from the information from the interviews and safety audit of Commissioner Street, and will also be guided by the findings from the literature review.

6.1 CONCLUSION

As maintained in the preceding chapter, the lack of gender sensitive planning in South Africa has meant that the needs of women have often been overlooked and that public spaces have generally excluded women's needs. The planning process has largely been regarded as gender-neutral. This has also resulted in a lack of distribution of space and time in the public realm. This is evident in the findings of the research, which indicate that women's fears have dictated the times and routes they chose when travelling in an attempt to escape victimization. As mentioned in the literature and research findings, gender-blind urban design has not been able to highlight and identify these 'blind spots' in the planning profession. Regardless of the actual number of incidents that was reported, the fear of violence has caused constraints on the daily lives of many women in a number of ways and has therefore deprived them of their right to the city.

Many urban design approaches have been used to address women's concerns of perceived and actual safety. Some of these include the implementation of adequate lighting, improved police surveillance, the implementation of CCTVs, and other factors mentioned in the literature. However the research found that many of these were mismatched or contradictory to the needs of the respondents. An example of this can be seen in urban design principles that emphasised that the presence of graffiti causes women to feel apprehension as this usually indicates a lack of surveillance. The participants however were indifferent about the presence of graffiti and showed more concern about other factors of the environment. Another example is the implementation of CCTV surveillance whereas the participants felt a greater need for the presence of security guards and police officials. Although certain approaches have been incorporated

in the city, this was not in line with the needs of women, who are the primary victims of criminal offences.

We can therefore conclude that some of the urban design approaches that have been used to address women's concerns have been ineffective. These approaches were either contradicting the literature or were not mentioned by the authors reviewed. This may also reinforce Dame and Grant's (2001) argument that the security needs of each city are unique and therefore requires the need for consultation and reassessment on the effectiveness of interventions.

There is clear evidence that the levels of fear and apprehension in the area are very high. The lack of safety in the area was generally as a result of the gender dynamics, including the harassment of women which, that took place within the inner city. However, the lack of maintenance was also noted as a factor affecting women's experiences. As a result, the recommendations from the participants were not only targeted at spatial improvements of the built environment around the Rea Vaya station, but also more towards social crime prevention. An example of this is given by a participant who felt that the poor safety levels in the area were as a result of poverty in the country and not gender dynamics, and is therefore an issue to be dealt with by the government. Generally however, women were dissatisfied with the environment around the Rea Vaya station and felt the need for physical improvements to allow them to interact more comfortably with the space.

Understanding citizenship in a homogeneous way has ignored the notion of difference of race, culture, and more specifically, gender. This is in direct contrast to the right to the city, which also represents the right to individualism and challenges the way citizenship is understood. The research has highlighted that viewing citizenship in a traditional way has literally excluded women from participating physically in the urban environment and in so doing has deprived them from fulfilling their right to the city. As mentioned in the literature, it is the repeated interaction and engaging with a site that creates a sense of belonging (O'Leary, 2011). However the gender dynamics present in the inner city of Johannesburg have infringed on women's right to the city by compromising their safety and feelings of belonging. Through catcalling and verbal harassment, men have

pronounced their position of dominance over the women who use this space. Women's sense of exclusion was evidently based on their subordination by men on the street.

Because the need to participate in the city is important for gaining access to facilities, jobs and for both recreational and social activities, the issue of women feeling restricted in being able to participate fully in the public realm has directly affected their quality of life. The issue of women having their right to the city infringed upon because of these factors needs immediate attention. In order for women to have true equality to men in opportunities, they need to have as much access to opportunities as their male counterparts do. With the recognition that this problem has a great impact on women in Johannesburg's inner city, it is necessary that strategies are put in place to address the issue.

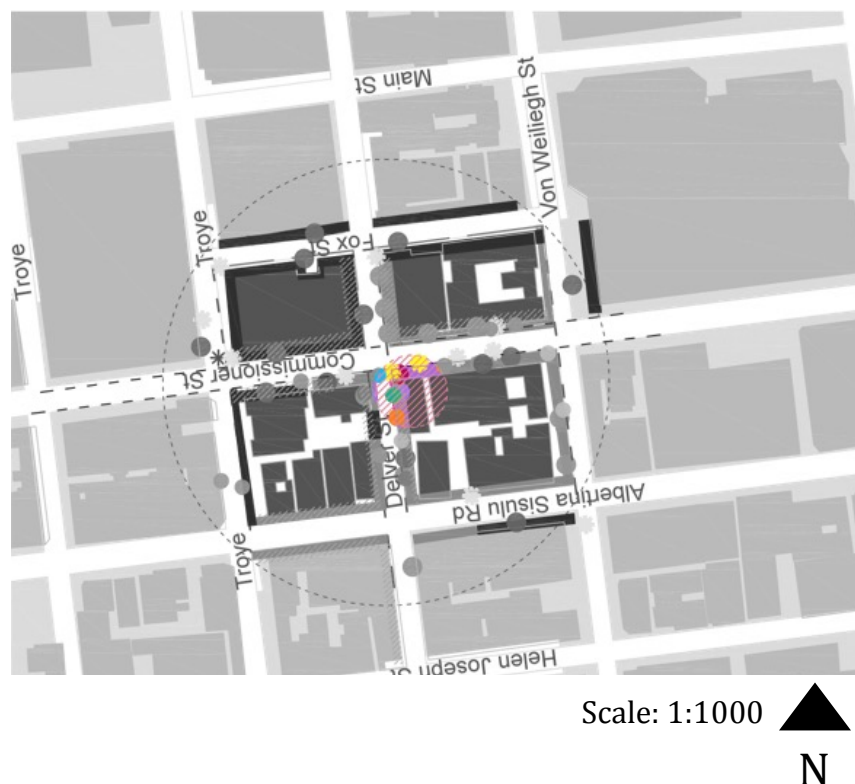
The benefit and significance of the planning profession is that planners have the ability to consider both the social and spatial issues that exist within the city. Planners are also required to consider the welfare of community when dealing with social aspects in the city, in which planners focus on land uses, transport, and environmental planning. This needs the ability to think strategically, as well as to have the ability to distinguish between a number of complex social issues to be able to improve the equality and equity of the city, and more importantly in society. Both the physical and intangible needs of society are constantly evolving and therefore require constant change. It is the role of the planner to be able to put forwards the needs of the citizens and to adapt to meet these changing needs as well as to defend citizens right to the city through the design of physical environment.

A paradigm shift in urban design is long over due in the city of Johannesburg. While the literature reviewed indicated that gender sensitivities in urban environments date back a number of years, urban planning has failed to integrate these realities into the way we understand and design for the city. Understanding the multiple dimensions of women's travel choices in relation to safety and in relation to urban transportation, has given deeper understanding of the social relations, urban transportation, as well as the influence of the urban environment of people's experiences of space.

6.2 RECOMMENDATIONS

The final section focuses on the initiatives and responses that can be used to improve on women's experience of the site as well as to design spaces in a manner that is more gender conscious. This will be drawn from the information from the interviews and safety audit of Commissioner Street, and will also be guided by the findings from the literature review. The recommendations will focus on the southeastern corner of the intersection of Commissioner and Delver Street (see Figure 27). This is because most of the problem areas that were identified by the respondents and site analysis are concentrated in this portion of the site. We may therefore conclude that this portion of the site is in need of the most attention, particularly because it lies adjacent to the Rea Vaya station and has caused apprehension for both commuters and pedestrians.

Figure 30: The focus area for recommendation



6.2.1 THE ROLE OF PLANNERS

According to Levy (2013) however, restructuring understandings of inequality in a paradigm which is deeply rooted in planning and policy making, often requires more than the influence of rational argument. This is frequently closely linked with a change in consciousness and political process. As a result of this, the influential potential of the right to the city may have a strong contribution to the strive for change in transport planning, with particular focus to the design of transit environments.

Therefore in relation to gender issues in society, planners have the ability to communicate the needs of women in the planning process. Planners are also able to think in a manner that is multi-dimensional, which may assist in creating outcomes that result from development planning.

According to Modise (2013), transport planners in the Transport Department of the City of Johannesburg did not take into consideration the different gender needs between women and men when undertaking the planning process of the Rea Vaya (Modise, 2013). This calls for the need of the City of Johannesburg to incorporate gender sensitivities in their planning processes, including their Urban Design Department. The importance of incorporating gender sensitivities in planning is that men's and women's experiences and needs may be used as an essential part of the urban design process, the monitoring and implementation of policies around transport planning to achieve a more equitable society (CoV, 2013). The infrastructure around transit environments will begin to improve in the making of more gender inclusive cityscapes. The CoJ needs to also consult with the community of the area in which they plan to develop Rea Vaya stations and routes. As argued by Dame and Grant (2001), this should also incorporate a consultation with women in the absence of males so that women can have a safe environment to share their needs and concerns.

Many of the areas where women reported to feeling unsafe were noted to be further away from the Rea Vaya station. Women felt levels of insecurity in areas of the site that were not only adjacent to the Rea Vaya station but were still within their journeys around the city. With this knowledge, a whole journey approach needs to be adopted by

the city in implementing gender sensitive transportation planning. The incorporation of an approach that considered a holistic approach as the one mentioned will be challenging, however, it calls for coordination between the Rea Vaya and other entities who have the duty for designing public environments.

A deeper incorporation of gender sensitivities in spatial planning will bring to light the different needs and experiences of men and women in the city and in so doing minimize the risk of increasing inequalities in the city. The design or physical improvements that take place in the built environment ought to be accompanied consultation with women who occupy and utilise that space. This will aid in creating spaces that are more hospitable to women, as argued by Dame and Grant (2001). This will also ensure that the needs of women are never fixed but are unique to every area. Gender sensitive planning should encourage a group-specific and site specific culture in urban design (CoV, 2013).

6.2.2 INCORPORATING WOMEN'S VOICES

As indicated by O'Leary (2011), better recognition needs to be given to the knowledge acquired from the lived experiences that women have of the city they are in. In incorporating women in the decision-making process of the design process of the city, we are recognizing that women are experts on their own feelings of apprehension. In addition to this, women related feelings of apprehension to perceived safety, therefore, it is inefficient to simply focus on reducing either perceived or actual safety. It is important for planners to focus on ensuring women's sense of security in both.

6.2.3 MANAGEMENT AND MAINTENANCE

The site requires active maintenance and management in order to ensure increased levels of safety to the users. According to Western Australian Planning Commission (2006) even well designed spaces will not continue to be safe if they are not effectively maintained. Maintenance of the public space around the Rea Vaya station will motivate people to make use of the space more often. This is because well maintained spaces give the perception of a safer area as a result of being aesthetically pleasing.

As indicated by O’Leary (2013) dilapidated areas increase the potential of violence, therefore the dilapidated areas of the site that cause women to feel apprehension need to be addressed. According to CoJ (2015c) the City has been attempting to renovate the derelict and abandoned buildings in the inner city however this has often been met with numerous challenges (CoJ, 2015c). The CoJ however, has dedicated an Urban Management Department particularly for the inner city, with goals to improve the derelict buildings (CoJ, 2015c). A number of buildings around the site are poorly maintained and require renovation. This requires property owners, both private, to prevent derelict buildings and to develop maintenance plans towards the preservation of their buildings and to review these on a regular basis (CoCT, n.d.). Graffiti should be removed as soon as possible and ensure that signs are kept in good repair. This all aids in creating environments that appear to be better maintained and will therefore decrease the feeling of discomfort that women feel while walking through the space. The design of the physical environment needs to be accompanied by the presence of security guards or police officials. This will not only make women more comfortable to use the site at various hours of the day, but this will also prevent the occurrence of vandalism and criminal activity in the area.

6.2.4 NATURAL SURVEILLANCE

Although the site has a lot of activity and 'eyes on the street', women were not comforted by this fact simply because the streetscape was too crowded, causing a lack of accountability. Natural surveillance in this case can be improved through clear sightlines (see Figure 29).

Figure 31: Graffiti should be removed as soon as possible (Conco, 2015) and (www.surfprep.co.uk)



Figure 32: Uniform building setbacks and no obstructions on sidewalk result in clear sightlines



(Conco, 2015)



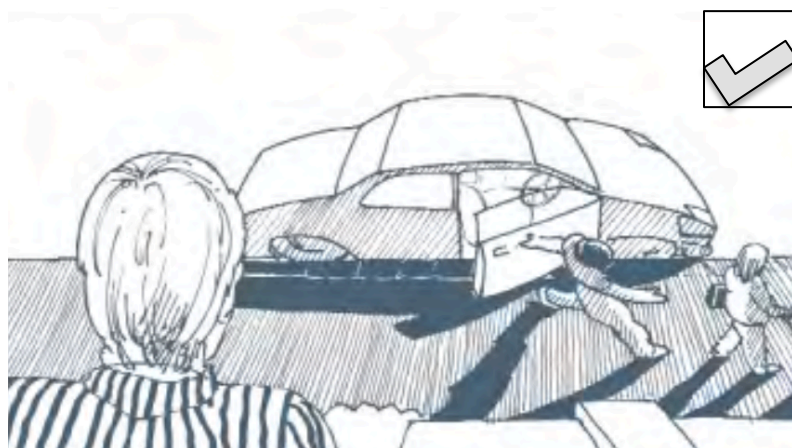
(Kut.org, 2012)

Many of the buildings within the site have setbacks at the entrance creating multiple hiding spots for potential offenders. Building setbacks in the city should therefore be uniform along the street. As mentioned by the City of Cape Town (n.d.), signage needs to be used more sparingly along the streetscape and to be placed at appropriate locations in order to reduce visual clutter on the streetscape (CoCT, n.d.). Removing electricity boxes and other utility services from the streetscape will ensure that no potential hiding places are created for potential offenders (CoCT, n.d.).

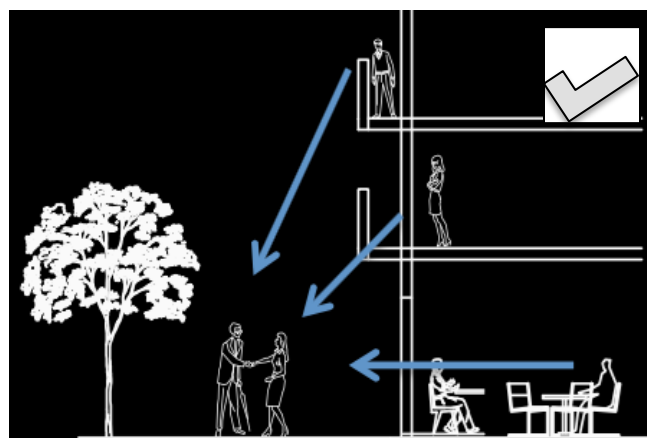
Many of the women interviewed felt the need for improved presence of security guards or of police officials on site in order to decrease their levels of insecurity while in the area. This research therefore recommends that police surveillance be improved in the inner city area, particularly around transit environments such as bus stations, so that women are able to be more mobile in the inner city throughout the day and the evening. The presence of security guards needs to be more evident in the less active areas of the site.

Although the site has a vertical mix of land uses, the residential area above the commercial activity should be deliberately planned to increase natural surveillance through creating more porous building fronts which face the streetscape (see Figure 30).

Figure 33: Eyes on the street



(Dept of Planning, 2006)



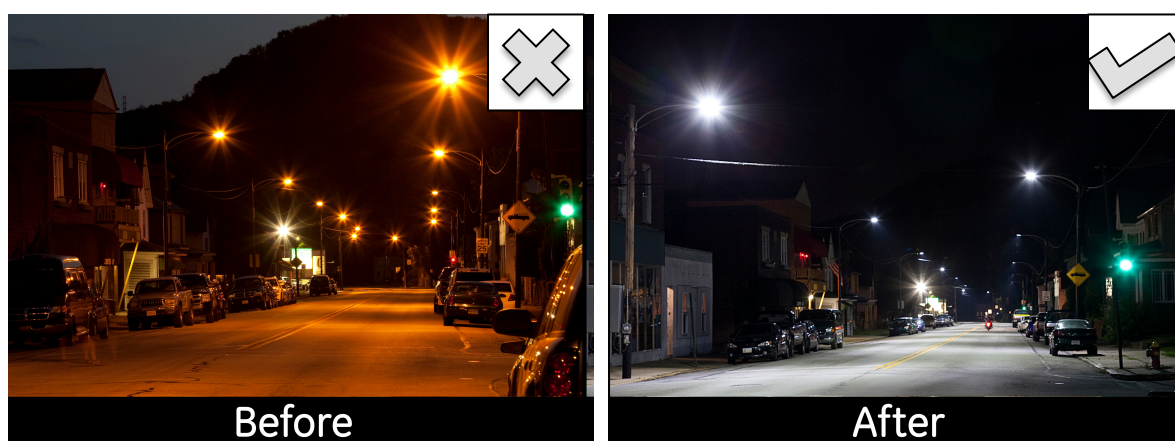
(Conco, 2015)

6.2.5 LIGHTING

Adequate lighting should be ensured for the areas on the site that are in darkness, primarily those around primary activity routes and the feeder routes leading onto Commissioner Street. This will be useful for women who travel after sunset due to their job requirements or due to the change in seasons in which sunset occurs noticeably earlier in the day.

Improved lighting will also increase the opportunity to identify potential offenders. Streetlights should also create a consistent lighting quality on the streetscape. In addition to this, the lighting in the area needs to be changed from yellow light to white light. As indicated by (Philips Lighting, 2004), this will improve visibility on the site by improving the rendering of colour and thus creating a brighter environment (see Figure 31). This is essential as many of the women found that many of the areas that had lighting did not affect their visibility to a satisfactory amount. In addition this, lighting should be pedestrian oriented to ensure that the sidewalk is being illuminated and not only directed onto the road (Philips Lighting, 2004).

Figure 35: White light may improve visibility



(www.design-led.at, 2015)

6.2.6 INCREASED MOBILITY

As previously mentioned, many of the participants spoke about the high levels of congestion on the sidewalk, particularly along Commissioner Street. Many of the women noted that street traders occupied the streetscape, disrupting the flow of pedestrian movement. In addition to this however are the circuit boxes and multiple signages that occupy the sidewalk. These obstacles have made movement difficult and have posed threats of muggings. Moreover, they have made movement for the disabled and women travelling with prams appear particularly challenging.

A partially traffic free design is recommended at the intersection of Commissioner and Delver Streets. This will assist in reducing the amount of congestion on the streetscape. The road segment of Delver Street has minimum traffic and can therefore be pedestrianized and used to create an area for street traders to utilize. This will decrease the amount of congestion on the sidewalk a considerable amount and will not deprive the economic opportunities of the numerous street traders currently occupying the space.

Figure 36: Conceptual design of traffic-free Delver Street

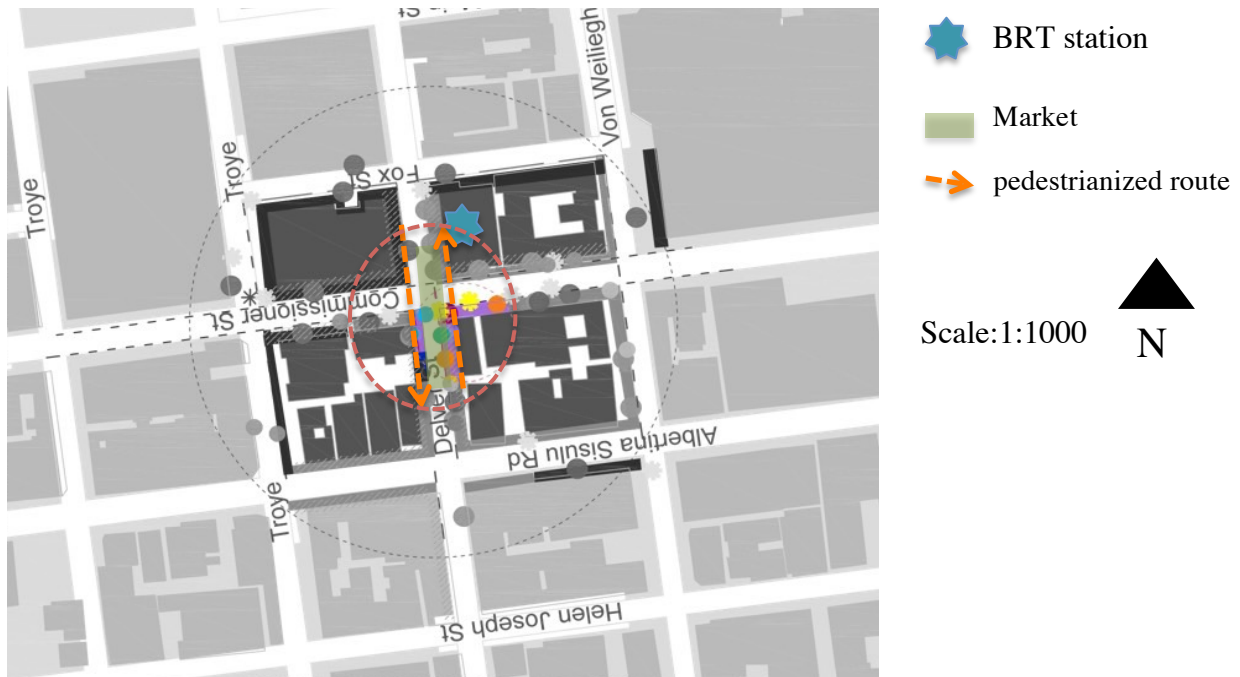


Figure 37: Pedestrianize Delver Street



(Conco, 2015)



(www.berwickstreetlondon.co, 2006)

Restricting the placement of utility services and infrastructure on the streetscape and particularly on street corners needs to be set in place by the CoJ and reinforced by the municipality (CoCT, n.d.) Removing these will increase the space along the pavement and increase the fluidity of pedestrian traffic. As recommended by the City of Cape Town, utilities should be underground where possible, (CoCT, n.d.). This also includes advertisement boards placed along the sidewalk. As mentioned, this will also assist with the reduction of visual clutter present on the site.

Directional signage for pedestrians should be included, bearing directions, distances and the main destinations around the area. Directional signage should be strategically placed in clear sight along pedestrian routes consisting of medium activity levels to minimize conflict with pedestrian movement. In addition to this, pedestrian crossings need to be repainted to ensure that pedestrians are able to cross over to the Rea Vaya station safely. Once again it is the municipality's responsibility to ensure that the maintenance of the inner city is regulated.

REFERENCES

Amars, S. (2006) Crime Levels and Trends in The Next Decade. *Journal of Kuala Lumpur Malaysia Police College*, No.5.

Aljounaidi, I. (2010) Gender and Transport in Mena: Case studies from West Bank Gaza and Yemen: Quick Notes Series 21. (<http://www.unhabitat.org>)

Albrechtsen, E. (2003) 'Security vs Safety', Security and Safety. Available online from <http://www.iot.ntnu.no/users/albrecht/rapporter/notat%20safety%20v%20security.pdf>. (Accessed on 15 April 2015).

Anderson, J. and Panzio, N. (1986) Transportation and Public Safety: Services that Make Service Use Impossible, In J. Bruce and M. Kohn (eds.), *Learning about women and urban services*. New York Latin America and the Caribbean Publication Council.

Atkins, S., Husain, S. and Storey, A. (1991) *The Influence Of Street Lighting On Crime And Fear Of Crime*, 28 edn., London: Home Office Crime Prevention Unit.

Bachelet, M. (2013) Making Cities Safe For Women And Girls. Available at <http://www.theguardian.com> (Accessed on 2 September 2015).

Badger, E. (2014) *This Is How Women Feel About Walking Alone At Night In Their Own Neighborhoods*. Available at <https://www.washingtonpost.com> (Accessed on 7 November 2015).

Barter, R. and Tamim, R. (2000) Taking steps: A Community Action Guide to People Centred, Equitable and Sustainable Urban Transport. Kuala Lumpur, Malaysia.

Bates, L. and Villa, M. (2014) *The right to feel safe: women should be able to use public transport without fear*. Available at <http://www.newstatesman.com> (Accessed on 14 April 2015).

British Columbia. (2014) 'Preventing Abuse and Neglect of Older Adults'. Elder Abuse Prevention Series, 93(a). Available at <http://www.healthlinkbc.ca> (Accessed on 19 August 2015).

Burns, A., McDermid, J., and Dobson, J. (1992) 'On the Meaning of Safety and Security', *The Computer Journal*, **35**(1), pp.1-15.

Cameron, D. and Kulick, D. (2003) 'Language and Sexuality', *Language in Society*, Vol. 34(2), pp.227-282.

City-Data.com (2015) *What Is Your Definition Of A Safe City? (Violent Crime, Neighborhoods)*. Available at <http://www.city-data.com> (Accessed on 13 August 2015).

City of Cape Town. (no date) Design And Management Guidelines For A Safer City. Available at <https://www.capetown.gov.za>. (Accessed on 1 November 2015).

City of Johannesburg. (2015a) Bus Rapid Transit Plans. Available at <http://joburg.org.za>. (Accessed on 1 October 2015).

City of Johannesburg. (2015b) Johannesburg Inner City Development Trends. Available at <http://www.joburg.org.za>. (Accessed on 11 September 2015).

City of Johannesburg (2015c) Reshaping Johannesburg's Inner City. Available at <http://www.joburg.org.za>. (Accessed on 11 September 2015).

City of Johannesburg. (2015d) Spatial Development Framework 2008 -2009. Available at <http://joburg.org.za>. (Accessed on 1 October 2015).

Crime Stats SA. (2014) Crime Stats Simplified. Available at <http://crimestatssa.com>. (Accessed on 18 May 2015).

Culp-Ressler, T. (2014) This Week, Two Incidents Of Street Harassment Escalated Into Violent Attacks Against Women. Available at <http://thinkprogress.org>. (Accessed on 5 September 2015).

Dame, T. and A. Grant. (2001) Kelowna Planning for Safer Communities Workshop Report. Cowichan Valley Safer Futures Program, Canada: pp 17.

Downtown Shreveport (no date) DSDC Facade Rebate. Available at <http://downtownshreveport.com>. (Accessed on 13 July 2015).

Fainstein, S.S. and Servon, L.J. (2005) *Gender and planning: A reader*. New Brunswick, N.J: Rutgers University Press.

Faul, M. (2013) South Africa Violence Against Women Rated Highest In The World. Available at <http://www.huffingtonpost.com>. (Accessed on 12 October 2015).

Fenster, L. (no date) The Right to the City and Gendered Everyday Life. Available at <http://www.adalah.org>. (Accessed on 14 March 2015).

Flanagan, L. and Germaner, S. (2015) Crime Stats: Murder, Hijackings Up. Available at <http://beta.iol.co.za>. (Accessed on 2 September 2015).

Gifford, G. (2008) Joburg Surveillance Zooms In. Available at <http://mobi.iol.co.za>. (Accessed on 1 September 2015).

Glaser, M., Van 't Hoff, M., Karssenberg, H., Laven, J., and Van Teeffelen, J. (2012) *The City at Eye Level*, Eburon Academic: Netherlands.

Hanlon, S. (1996) Where do women feature in public transport? US Department of Transportation, Federal Highway Administration, Washington.

HelpAge International. (no date) Older People In Emergencies. Available at <http://www.helpage.org>. (Accessed on 7 July 2015).

Hensher, D.A. (2006) "Sustainable Public Transport Systems: Moving Towards a Value for Money and Network-based Approach and Away from Blind Commitment", *Transport Policy*, Vol. 14, pp.98-102.

Hook, W. (2015) What's New In The BRT Planning Guide? Available at <http://www.slideshare.net>. (Accessed on 9 November 2015).

Institute for Women's Policy Research. (n.d.) Gender, Urbanization and Democratic Governance. White Paper. Available at <https://www.ndi.org>. (Accessed on 1 December 2015).

Jacobs, J. (1961) *The death and life of great American cities*, Random House Inc, New York.

Katz, J. (2013) Violence Against Women- It's A Men's Issue. Video. Available at <https://www.ted.com>. (Accessed on 22 October 2015).

Kang, L. (2006) Excluded women's transport needs: the case for Johannesburg, South Africa, Working Paper No. 129, Development Planning Unit. University College, London.

Kearl, H. (2012) 60 Men Harass, Grope Two Teenage Girls In South Africa. Available at <http://www.stopstreetharassment.org>. (accessed on 19 September 2015).

Kleinman, S. (2002) Why Sexist Language Matters, *Qualitative Sociology*. Vol. 25, pp.299-304.

Koskela, H. (1999) 'Gendered Exclusions: Women's Fear of Violence and Changing Relations to Space', *Geografiska Annaler*, 81(2), pp.111-124.

Lambrick, M. and Travers, K. (2014) Women's Safety Audits: What Works and Where?, UN-Habitat Safer Cities Programme.

Lawlink. (1999) Plan It Safe: Women Talking About Safety In Public Places. Available at <http://www.lawlink.nsw.gov.au>. (Accessed on 13 July 2015).

Lefebvre, H. (1968) *Le Droit à la Ville*, in Kofman, E. and Lebas, E. (eds. and translators). (1996) *Writings on Cities*, Oxford, Blackwell Publishing.

Levy, C. (2013) 'Travel choice reframed: "deep distribution" and gender in urban transport', *Environment and urbanization*, Vol. 25, no. 1, pp.47-63.

Louw, A., Shaw, M., Camerer, L. and Robertshaw, R. (1998) Crime in Johannesburg. Results of a City Victim Survey. Vol. 18, no. 1.

Lynch, G. and Atkins, S. (1988) The Influence Of Personal Security Fears On Women's Travel Patterns, *Transportation*, Vol. 15, pp.257-277.

Mail and Guardian. (2006) Drop In Serious Crime In Jo'burg. Available at <http://mg.co.za/>. (Accessed on 2 September 2015).

Madriz, E. (1997) *Nothing Bad Happens to Good Girls*, 1st edn., Berkeley: University of California Press.

Maunganidze, L. (2011) The Role of Bus Rapid Transit in Improving Public Transport Levels of Service, Particularly for the Urban Poor Users of Public Transport. Cape Town, University of Cape Town.

Modise, K.A. (2013) Impacts of the bus rapid transit system on female commuters: the case of Soweto-CBD route. Dissertation, University of the Witwatersrand.

Mosher, J. (2008) No Cherries Grow On Our Trees. Available at <http://www.oaith.ca>. (Accessed on 7 August 2015).

Nørgaard, H. and Børresen, S.K. (2008). *Urban space for everyone: Challenges, conflicts and measures*. København: Danish Crime Prevention Council.

Nteta, Z. (2014) Women Have A Right To Safe Public Transport. Available at <http://www.capetownpartnership.co.za>. (Accessed on 14 April 2015).

O'Leary, R. (2011) Building safe and inclusive cities for women: a practical guide Available at <http://www.jagori.org>. (Accessed on 14 April 2015).

Oxford English Dictionary. (2010) 3rd ed. Oxford: Oxford University Press

Peters, D. (2002) Gender and Transport in Less Developed Countries: A Background Paper in Preparation for CSD-9 Co- Coordinator. UN CSD Caucus on Sustainable Transport Background Paper for the expert Workshop 'Gender Perspectives for Earth Summit 2002: Energy, Transport, Information, Information for Decision-Making', Berlin, Germany, 10-12 January. London UNED Forum.

Philips Lighting. (2014) Street Lighting A (B) Right Choice For Cities. <http://www.lighting.philips.com> (Accessed on 5 July 2015).

Policy Link. (2015) The Potential and Pitfalls of Transit Oriented Development. Available at www.policylink.org. (Accessed on 11 March 2015).

Rea Vaya. (2015a) Benefits. Available at <http://www.reavaya.org.za>. (Accessed on 10 August 2015).

Rea Vaya. (2015b) Construction. Available at <http://www.reavaya.org.za>. (Accessed on 10 August 2015).

Seiji, S., Kazunori, H., Tatsuto, A., Takahito, S. and Kenji, O. (2011) People Crime Perception and Attitude toward Community Crime Prevention Activities in Japan, *Journal of ASIAN Behavioral Studies*, Volume 1, No.2.

Sham, R., Omar, N., Mohamed, S., Sharifah, M. and Alaudeen, M. S. S. (2013) *The Supply of Rural Passengers Transport in Relation to Fear Towards Crime*. Faculty of Business Management, Universiti Teknologi: Elsevier Ltd.

Smith, J.M. (2008) Addressing The Security needs of Women Passengers on Public Transport, *Security Journal*, Vol. 21, pp.117-133.

State of Queensland. (2007) 'Crime Prevention through Environmental Design', Part A: Essential features of safer places. Available at <https://www.police.qld.gov.au>. (Accessed on 1 August 2015).

Sultana, A. (2011) *Patriarchy and Women's Subordination: A Theoretical Analysis*, 1st edn., Department of Political Science: University of Dhaka.

Taylor, R.B. (1995) The Impact of Crime on Communities, *Annals of the American of Political and Social Science*. 539. pp.28-45.

Vaz, E. and Venter, C. (2012) The Effectiveness of Bus Rapid Transit as Part of a Poverty Reduction Strategy: Some Early Impacts in Johannesburg. Available at <http://repository.up.ac.za>. (Accessed on 4 September 2015).

Veiga, G. (2015) Intelligent Design For Safe Cities. Available at <http://www2.alcatel-lucent.com>. (Accessed on 4 September 2015).

Walkowitz, J.R. (1998) Going Public: Street Harassment and Streetwalking in Late Victorian London, *Representations* 62 (Spring): 1-30.

West, C. and Zimmerman, D. H. (1987) *Doing Gender*, *Gender and Society*, 1(2): 125-51.

Wilkinson, P. (2006) Transit oriented development: a strategic instrument for spatial restructuring and public transport system enhancement in South African cities. Proceedings from the 25th Southern African Transport Conference, Pretoria, pp.223-233.

Wright, L. (2004) Bus Rapid Transit – Sustainable Transport: A Source Book for Policy-Makers in Developing Cities, Module 3b, Eschborn, Germany.

APPENDIX A QUESTIONNAIRE

Time of interview:

8:00-11:00am	
11:00am-16:00 pm	
16:00pm-18:00pm	

Question No.	Question	Answer
1	What is your age?	
	Do you live in the inner city? If not, in which region of the city do you live?	
2	What brings you to this area today?	
3	How often are you in the area?	
4	Have you ever been concerned for your safety in the area?	
5	Do you think that this has anything to do with the fact that you are a woman?	
6	In your opinion, what are the factors that add/contribute particularly to you as a women feeling unsafe in this area?	
7	Please name/ mark/point	

	out the areas of the site that cause you to feel concern for your safety and give a very brief explanation of each marking	
8	What measures do you take to ensure your safety in the area?	
9	Have you even needed to limit your movement and travel patterns as a result of concern for your personal safety in the area? If yes, how?	
10	Have you ever needed to take a 'risk' on your personal safety because you were forced to travel somewhere?	
11	Are there any negative experiences that you've had in the area that you can share? If so what time did this/ these occur?	
12	What steps would you recommend for readdressing such	

	issues?	
13	Do you use the BRT? If so, is this a personal preference?	
14	During which hours of the day do you feel safest to use the Bus?	

APPENDIX B PARTICIPANT INFORMATION SHEET

Researcher: Zola Conco

Project Title:

Making gender inclusive spaces around Rea Vaya Transit areas

What is the purpose of the study?

This research seeks to understand how women's travel patterns are affected by the design of the built environment. The research aims to distinguish the factors and design principles that attribute to making women feel unsafe and comfortable in public spaces, with a particular focus on spaces around transit stations. Men and women typically experience the city differently, however this is rarely accounted for in the design of the urban environment. Finally, this research will also aim to distinguish the urban design principles that will help give women more liberty to participate with the city.

This study will be carried out over the duration of the next 5 months with the interviews and site visit carrying out from the month of July to August.

Why have you been selected?

Interviewees have been chosen based on the fact that they are female users of the Rea Vaya Bus System, whom have also interacted with the area surrounding the Commissioner Street Bus Station.

Study Procedure:

You will be asked a set of questions about your experiences and perceptions of the environment around the Rea Vaya Commissioner Street bus station. The interview will also include photographic documentation of the factors that cause apprehension as you

walk through Commissioner Street as well as physical notes and mapping of any of your observations of the space that will be noted on a spatial map by the interviewer.

No personal identification will be requested. The interview may be terminated at any time you request.

APPENDIX C CONSENT FORM

I have fully understood the participant information sheet regarding this project and understand what it concerns. All my question relating to the interview and research have been answered to my satisfaction. I understand that I am at liberty to ask any further questions at any point.

I am aware that:

1. My participation in this research is completely voluntary
2. I am free to end the interview at any point
3. The data recorded on audio-tape will be destroyed at the end of this study project
4. The interview involves a set of 20 questions, however, the interviewer is allowed to ask additional questions of clarification to my responses and that in the event that a question causes me to feel uncomfortable, I have the ability to decline answering any specific question(s) and also to terminate the study at any point
5. The result of the research will be published and made available in the school library of the University of the Witwatersrand, however all my identification will be kept anonymous

I agree to take part in this project

(Signature of participant)

(Date)