

**Exploring the effects of the existing military camp on the
expansion and socio-economic aspect of the city: the case of
Shashemene city, Ethiopia**



Tsegaw Admasu Keneni

A Thesis Submitted to the Department of Architecture

School of Civil Engineering and Architecture

**Presented in Partial Fulfillment of the Requirement for the Degree of Master's in
Urban Planning and Design**

Office of Graduate Studies

Adama Science and Technology University

June, 2023

Adama, Ethiopia

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Advisor: Daniel Lirebo (Ph.D., Assistant Professor)

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Declaration

I hereby declare that this Master Thesis entitled “**Exploring the effects of the existing military camp on the expansion and socio-economic aspect of the city: the case of Shashemene city, Ethiopia.**” is my original work. That is, it has not been submitted for the award of any academic degree, diploma or certificate in any other university. All sources of materials that are used for this thesis have been duly acknowledged through citation.

Tsegaw Admasu Keneni

20/6/2023

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I, the advisor of this thesis, hereby certify that I/we have read the revised version of the thesis entitled “**Exploring the effects of the existing military camp on the expansion and socio-economic aspect of the city: the case of Shashemene city, Ethiopia.**” prepared under my guidance by Tsegaw Admasu. submitted in partial fulfillment of the requirements for the degree of Master’s of Science in Urban Planning and Design. Therefore, I/we recommend the submission of revised version of the thesis to the department following the applicable procedures.

Daniel Lirebo Ph.D.

20/6/2023

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Approval Page Thesis Proposal

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LIST OF ABBREVIATIONS AND ACRONYMS

LULC	land cover land use
GDP	Growth Domestic Production
Co2	Carbon dioxide
BRAC	Base Realignment and Closure
MoD	Ministry of Defense
TVET	Technical and vocational education and training
CAD	Computer Aided Design
SPSS	Statistical Package for the Social Sciences
GIS	Geographic Information System
HC	High compatibility
MC	Medium compatibility
NC	Neutral/low compatibility
MI	Medium incompatibility/very low compatibility
HI	High incompatibility

ABSTRACT

Urban land use change may be characterized as the transformation of land use, i.e., from one type of land use into various urban activities including residential, commercial, and other urban services (Mekuriaw Alemu, 2018). This research's objectives include assessing the socioeconomic impacts of the former military camp in Shashemene City, examining the distribution of land uses, and planning and developing the required and appropriate land uses for the study region. The study is focused on the socioeconomic impact, psychological effect and land-use functions of the Shashemene military camp and is only performed inside the city of Shashemene. For this study, stratified and purposive sampling methods are used. The respondents were chosen using a stratified random sample approach that represents their groups or strata, which is 15 respondents from the residents of the camp, 24 from each of the surrounding society, local business owners, students and staff of the adjacent educational institutions and transport service providers (bajaj). To meet the objectives of the study, the data was acquired via a variety of different data gathering techniques and the data gathered via questionnaire was tabulated and analyzed using analytic softwares like Minitab, SPSS and Excel. To examine the effect of the camp on the expansion of the city geospatial softwares like ArcGIS pro and google earth has been used. The quantitative and qualitative properties of the data, which was obtained from primary and secondary data sources are presented as a narrative description, serve as the basis for the analysis. According to the findings of the study on the impact on city growth, the camp initially had a good and constructive impact on the city's expansion (1955 e.c.), but with time it evolved to have a destructive and detrimental impact on the city's current growth. Additionally, the outcome demonstrates that the camp has a major detrimental impact on all participants and their social life. The outcomes indicate that the camp and its activities have a severe psychological influence on both the camp's residents and the residents of the surrounding area. According to the economic effect analysis, the camp restricts business options and creates difficulties for the neighborhoods. The majority of respondents (82%) claimed that it will be advantageous if the camp is relocated and converted to other land uses. In this regard, the study comes to the conclusion that the camp is unfavorable to the socioeconomic development, residents' psychological makeup, and urban expansion. And suggested that the camp should be relocated and the land's purpose changed to one of commercial, mixed-use, and residential.

Keywords: Urban, Military camp, Expansion, Social, Economic, Psychological, Land use and Relocation

CHAPTER ONE

INTRODUCTION

1.1 Background

In the past thirty years, this trend has greatly intensified in Ethiopia. Urbanization has grown rapidly in recent years. Recent studies project that it will continue to rise rapidly over the next few decades and will reach 70% by 2050 (United Nations, 2018). Since the beginning of decentralization in the post-1991 period, rapid urban growth has been an evident phenomenon in the context of the entire country, Ethiopia. However, it is thought that the pace of urban area growth varies depending on the geographical setting (Gebeyehu, 2015). The rapid rate of urbanization in Ethiopia causes a rapid concentration of people, capital, and industry in urban areas.

One of Ethiopia's main commercial centers is Shashemene. Shashemene serves as the political, social, and economic hub for the neighboring cities and towns as the capital of the West Arsi Zone. Shashemene is a highly prosperous center for the neighboring zones and cities because of its position and five main gateways. The largest of the kebeles is Awasho, where the study area is located. The market and local foot traffic are boosted by the new bus terminal. Now, the neighborhood has developed into a crucial economic hub. Land usage quickly changed from a residential to a business area.

This kebele is home to the military camp that the monarchial government constructed in the 1950s. It was believed that the military camp would be remote from the city while it was being constructed. However, the city's growth over the past decades has swallowed the military base and commercialized the neighborhood. The effects of former military installations on the social and economic aspects of cities are not adequately researched and examined. These military outposts (camps) take up a sizable amount of land that is necessary for the growth of the city. For many years, gains that may have been achieved by redeveloping these sorts of areas were lost due to gaps in the information if it was provided on the impact of these military camps on city development and expansion.

Social and psychological effects of the military is described and mentioned as follows by scholars, being in the military means dealing with difficult, demanding, and possibly stressful situations for military personnel and their families. Strong community ties are beneficial for many military personnel, their spouses, and their families in helping them

cope. Military families must traverse many of the same difficulties that civilian families do in addition to the particular difficulties posed by their subculture. (O'Neal et al., 2020). According to this claim, military duty affects a critical stage of young people's socialization (Language et al., 1978). Based on their past experiences, individuals and families have different coping mechanisms and behaviors (Delahaij & Van, 2016). According to McCurry (2003), the Base Realignment and Closure (BRAC) Act in the United States has allowed for the redevelopment of hundreds of former military sites for industrial, commercial, and residential use (Bagaeen, 2006). The US Defense Department now has until 15 September 2011 to complete implementation of the BRAC Commission's most recent recommendations for reshaping the US Defense Department's infrastructure, knowing that the BRAC process has already demonstrated that thousands of acres can be successfully recycled (Bagaeen, 2006).

Three rounds of military base closures since the early 1990s have led to the deactivation of 97 installations, freeing up more than 100,000 acres and countless structures for reconstruction. Communities that suffered significant employment losses as a result of base closures, from Long Beach, California, to Limestone, Maine, have been able to convert the large sites into housing projects, office parks, and industrial zones. Currently, the government is considering more budget cutbacks that might force the closure of up to 70 more facilities (Murphy, 2003). In a time when prime greenfield sites are dwindling, base redevelopment may be the best chance to establish substantial new developments in prime areas. Developers have converted firing ranges into retail malls, barracks into apartment buildings, and runways into golf courses in collaboration with local authorities (Murphy, 2003).

Developers in the UK are considering selling six military properties near London in places including Uxbridge, Mill Hill, and Woolwich, which may spark a \$1 billion housing boom. The Ministry of Defense (MoD) listed the historic 13-acre Chelsea Barracks for sale in September 2005 with an asking price of \$250 million (Murphy, 2003). According to the international studies mentioned above, converting former military installations can help cities grow and develop. This study will close the knowledge gap and present a strategy for creating and contributing to solutions for issues brought on by the city's explosive growth around the former military camp. Opportunities will be made explicit and invited for usage by stakeholders. At the conclusion of this study, recommendations, guidelines, and designs will be offered.

1.2 Problem Statement

A large number of military bases and camps were built during the former military government. These camps were built close to urban areas. These military compounds, which were meant to be remote from cities, are now completely surrounded by cities. The current locations of these military stations were chosen outside of cities at the time these military camps were established, and the rate of urban expansion was not taken into consideration.

Due to the accessibility advantages, they offer, investments in mass transportation have an impact on the geoGraphical distribution of features of urban spatial structure, such as land rents and building heights. The transportation networks also benefit from the increased density (Vergel-Tovar & Rodriguez, 2022). The new, renovated bus terminal is situated in the heavily populated region where the study area (military camp) is now located. The compound's land value is quite high cause of the proximity to the bus station. The fight for land for various purposes and by various entrenched interests is framed by the minimum space within cities and the expanding space requirements for different uses (Mohamed, 2014). The fundamental problem of the study area is that this military camp has an area that, if given the proper land use allocation and is consistent with the nearby newly developed commercial land uses, has the potential to significantly contribute to the city's economic growth.

Along with the consequences on land use and the economy, this military establishment also caused other issues. The separation of the camp society from the surrounding has negative and stressful impacts on both the locals and the military camp occupants. The most impacted are children. Military children are under a tremendous deal of psychological stress due to stressful military-related living conditions (de et al., 2011). The warnings posted on the compound's gates, such as "do not get close the barrier," will also have the effect of making commuters who use the neighboring streets feel intimidated and under severe rule. It is important to thoroughly investigate the compatibility of the land use with this military camp as well as the socioeconomic and psychological issues that have occurred.

1.3 Research Objectives

General objective

To evaluate the socioeconomic and psychological effects of the military camp that was located in Shashemene City, to look at the distribution of land uses, weather to plan the necessary and acceptable land uses for the occupied area.

Specific Objective

- To evaluate the compatibility of the military camp's land use in compliance with the structural plan of the city and to detect its impact on the expansion of the city through time.
- To assess the influence of military camp on the urban functions of adjacent communities.
- To examine the psychological impact of the military base on the communities.

1.4 Research question

There were several research questions that needed to be addressed in order to meet the aforementioned study objectives, and they are listed below in question form:

1. Does it have an impact on the future development of the city and is it consistent with adjacent land use type and pattern?
2. How does the camp influence the urban functions of the surrounding communities?
3. What psychological effects does the military camp poses on the community?

1.5 Significance of the study

The main city in the west Arsi zone is Shashemene, which also serves as the economic center of the region. The prior administration chose the area based on the requirement that the military camp should be located distant from the city. But over time, the chosen location developed into a very vibrant economic and residential neighborhood. The military camp's objectives are incompatible with the way the area is currently used.

The rate of the city's future growth was not taken into account when the camp was established, and now there isn't much activity to make use of the region. This research will aid in understanding how the Shashemene military base affects the surrounding commercial districts and residents' socioeconomic standing. It will be designed to clear the way for the appropriate entities to take the issues raised by the research into account and to lessen the difficulties posed by the military camp for the future growth of our city.

As a result of the study's findings, suggestions and solutions will be available to several accountable entities, including engineering and managerial bodies, as well as other parties with an interest in the camp. This study will include scholarly details on the connection between formerly used military bases and urban growth, as well as the socioeconomic and psychological effects on society. There is little knowledge about these sorts of land uses in our nation. This study will also serve as a source of information and the foundation for further research.

Understanding the effect of military camps on the city's growth and expansion can help planners for a variety of purposes and will eventually serve as a crucial foundation for all land administration and urban planning functions, allowing legislators, planners, and state and local government officials to make better decisions regarding land use allocation and policy when dealing with such sensitive and wide - ranging land uses.

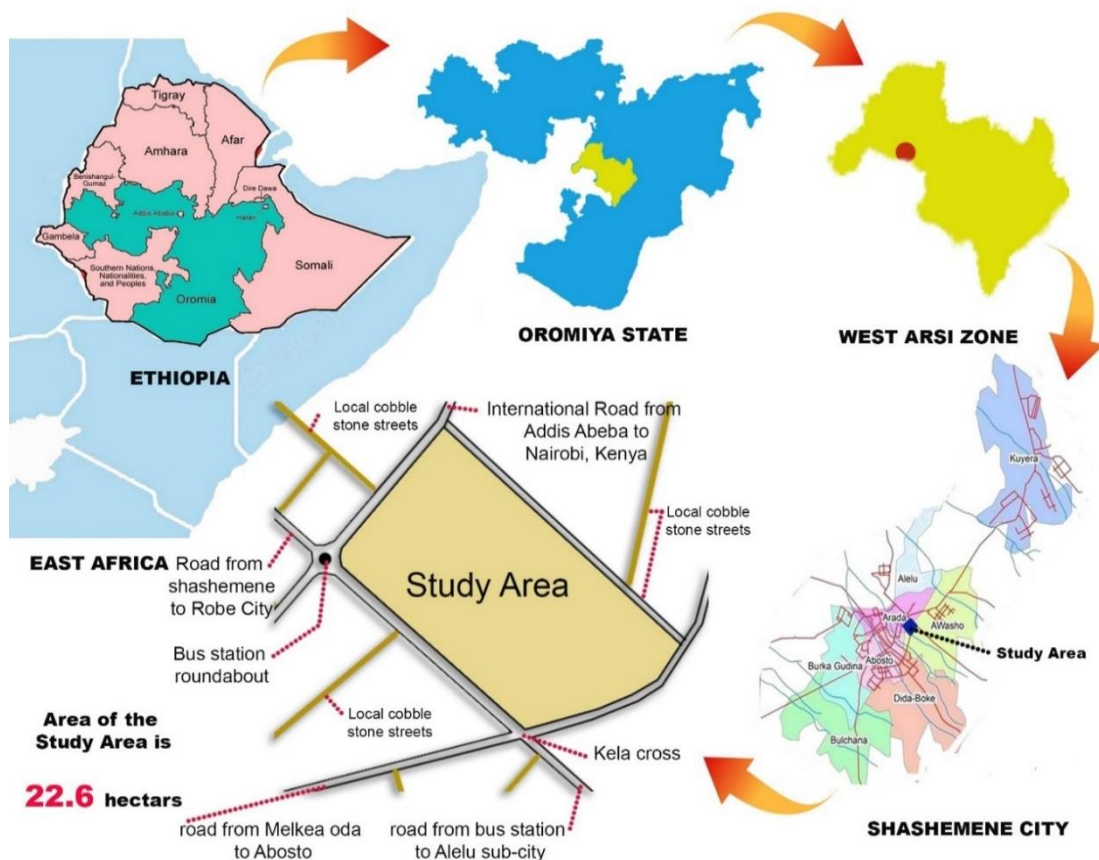
There are several cities in Ethiopia that have these kinds of old military camps. The majority of these camps took up sizable urban areas, which had a significant impact on the growth of the city. This research will serve as a model of how to make the most of the potential of the region where these old military sites formerly stood.

Uncertainty exists over the effects on the neighboring societies' social structures and interactions with the families living in the camp and studying it will help to improve the social life of both. Since the camp is military in nature, it serves special types of activities and vehicles that are distinct from the surrounding activity understanding it will be used as guidelines for urban planning. Military troops and civic society have a special relationship that has been eroded and is not examined. Understanding their relationship will enable us to think through and address any issues that may develop. Understanding how civilians view military people can assist the military function and provide a positive image to the public.

1.6 Scope of the study

1.6.1 GeoGraphical scope of the study

The research is restricted to the city of Shashemene and focuses on the socioeconomic and land-use functions of the Shashemene military camp. The scope of this research will also be centered on the nearby communities and commercial districts in order to address the general and specific aims of the proposal. The selected camp has plot area of 22.6 hectares.



Map 2.1: - Location map of the study area

1.6.2 Spatial scope

Only the problems associated with Shashemene City's growth and the difficulties brought on by the old military camps were covered in this study, along with the surrounding communities. The goal of this was to better understand the mechanisms that would be utilized for land use allocation and modification.

1.6.3 Temporal scope

This research will study the military camp's and the surrounding area's past geographical and social history starting from 40 years ago and will also predict expansion and fate of the study area.

1.7 Limitation of the study

The lack of pertinent literature and documentation, particularly local literature or studies relating to military camps and changes in urban land use, was a major issue. Another drawback was the lack of actual data about how the military base affected property values for homes and businesses. Information on military bases in particular is difficult to obtain and involves secrecy. It might be challenging to obtain permission to collect information on the spot. Other restrictions on include numerous case regions for the research were those related to time, manpower, and finances.

1.8 Expected outcome

The study's findings will result in urban planning and land use decisions that will improve the study area's economic and social standing as well as that of the surrounding area. The designated land uses will address the identified issues and constraints while adhering to international standards. Results that demonstrate how the military camp has affected the surroundings and the growth of the city will be used by the government and other sectors to raise the standard of living in these communities. The findings and the urban design will be used as a sample to other cities with comparable situations.

1.9 Operational Definition

Land use Planning

Land use planning is a process that ensures the judicious use of land by group of people who benefit from it (Amler et al., 1999).

Urbanization

Urbanization refers to change in size, density, and heterogeneity of cities. Urbanicity refers to the impact of living in urban areas at a given time(Vlahov & Galea, 2002).

Military installation

a base, camp, post, station, yard, center, or other activity under the direction of the Secretary of a Military Department or, in the case of such activity abroad, the Secretary of Defense or the Secretary of a Military Department on an operational level (*Department of Defense Dictionary of Military and Associated Terms*, 2001).

Psychology

is the study of the mind and behavior in science. The Greek words "psyche," which means life, and "logos," which means explanation, are where the word "psychology" originates (Freedheim & Weiner).

Social Psychology

Starting with the notion that a person's personality traits are insufficient to anticipate their thoughts, feelings, and behaviors, social psychologists develop their theories. This is due to the fact that, whether we like it or not, we are all heavily influenced by others. The scientific study of these social factors and their outcomes is known as social psychology. Social psychologists look into things like group norms, obedience to authority, and interpersonal attraction (*The Science of Psychology*).

Social

It is concerned with the existence's fundamental interconnectedness (which includes the potential of the absence of relatedness). It is concerned with the fact, not just the 'being' but also the 'being-with'. Exploring the social entails learning about the nature, potential, and difficulties of that which we are "with." (Urry et al., 2007).

1.10 The outline of the Thesis

The thesis contains six distinct chapters. The first chapter examines the general introduction of the study, the second chapter has review of literature, and the third chapter explains the research methodology and back ground of the study area. The fourth chapter discusses the result. The fifth chapter will provide design and proposals while the sixth chapter contains recommendations and conclusions. The last chapter deals with list of all works cited in the proposal and questionnaire used in the study and other appendixes.

CHAPTER TWO

LITERATURE REVIEW

1.1 concepts and definition of terms

Urban

An urbanized area is made up of a location and the nearby, highly populated land that combined have a minimum population of 50,000 people. The area immediately around a location is referred to as the "densely populated surrounding territory" if it is made up of one or more continuous blocks with at least 1,000 persons per square mile of habitation (Vlahov & Galea, 2002).

Land use and Land use Change

Different academics have sought to define the word "land use" differently from a variety of angles. Land use is said to be the result of interactions between a society's cultural heritage, technical prowess, and physical demands on the one hand, and the land's inherent potential on the other (Tebeje, 2019). Changes in land cover can take two different forms: switching from one kind to another (for example, from forest to grassland) and changing the state of one type of land cover (e.g., from extensively cultivated area to intensively cultivated area) (Gregorio & Jansen, 1998).

Land use Planning

Planning for land use assures that the individuals who will benefit from it will utilize it wisely. Land use planners and policy makers need to step in by implementing guidelines/regulations on the use of land and to sustain the natural resources in order to make the best use of the limited available land and its resources. Zoning, land use control, land use limits, and allocation are only a few of the laws that the governments and administrative entities engaged in land use planning impose on how land is used (Amler et al., 1999).

Urbanization

Urbanization describes how cities change in terms of their size, density, and heterogeneity. The influence of residing in urban regions at a certain period is referred to as urbanicity (Vlahov & Galea, 2002).

Military base

A military base is a building that is directly owned and run by or for the military or one of its branches, houses military people and equipment, and aids in operations and training. A military base often houses one or more units, although it can also serve as a command post, a training facility, or a test site. Military wiki website defines military base as an establishment that often needs some outside assistance to function.

1.2 Global Trends of Urbanization

By 2007, the majority of people on Earth will reside in cities. Cities in less rich countries are urbanizing more quickly, and the rate of expansion varies by area (Vlahov & Galea, 2002). In actuality, compared to any other period in human history, urbanization has advanced far more quickly and reached substantially bigger proportions in the past 150 years. The enormous expansion of global trade throughout this time has made it possible for the urban population to source their food from an ever-wider region (Davis, 2015).

Looking at the most urbanized nation, England, one can observe the speed at which urbanization has recently occurred. Although London had already passed the million-person barrier (865,000), fewer than 10% of England and Wales' inhabitants lived in cities with a population of 100,000 or more in 1801. In 1901, at least 35% of the people in England and Wales lived in cities with a population of 100,000 or more, and 58% did so in cities with a population of 20,000 or more. These two percentages had increased to 38.4 and 69.3 percent, respectively, by 1951. In terms of urban development, Britain led the way. No other country got the same level of urbanization that she had in 1801 until around 1850. Following then, the British rate of urbanization started to gradually decrease, while most other nations' rate remained high (Davis, 2015).

Rapid and unplanned urban growth, according to the UN (2014), endangers sustainable land development when the systems required for urban land development and management are not created or when laws ensuring that the advantages of city living are fairly distributed are not put in place. Even while cities have a competitive edge today, urban and rural regions are still not equally developed, and hundreds of millions of the world's urban poor live in subpar housing (Butta & Girma, 2020).

1.3 Urbanization in Africa

Africa, a continent with tremendous biodiversity, is urbanizing quickly. Africa is becoming more urbanized, as seen by the expansion of both its megacities and its smaller towns and cities. Urbanization on the continent will have a growing influence on conservation planning and practice, both directly and indirectly (Güneralp et al., 2018). It is predicted that Africa will enter the "urban era" at a speed that has never been seen before. The continent is still mostly rural, yet it is one of the areas of the globe that is urbanizing the quickest. From 395 million in 2010 to 1.339 billion in 2050, Africa's urban population is anticipated to more than treble, accounting for 21% of the estimated global urban population. Seven megacities—cities with populations of over 10 million—are now found on the continent: Cairo, Kinshasa, Lagos, Accra, Johannesburg-Pretoria, Khartoum, and Nairobi. Dar es Salaam and Luanda will be included to this list in 15 years (Güneralp et al., 2018).

On the other hand, migration and natural population growth were the primary causes of urbanization in Africa and other emerging nations, and migration is ascribed to rural-push. Additionally, urbanization is happening quickly. (Butta & Girma, 2020).

1.4 Urbanization in Ethiopia

Gamst described Ethiopian culture as "Peasantries and Elites without Urbanism" forty years ago. He was alluding to the existence of a high culture civilization with social order but no cities (Tegenu, n.d.-a). Researchers were still discussing "urban deserts" in Ethiopia thirty years later, despite the country's urbanization rate accelerating at an average annual growth rate of between 4% and 5.6 percent. A considerable portion of the population still lives more than 10 hours' travel distance from an urban center, according to a recent urbanization research that employed an agglomeration index as a methodology (Tegenu, n.d.-a).

The view of neighborhoods that were compelled to abandon their land and property is said to be less well captured by Ethiopia's urban growth. The Ethiopian urbanization initiative neither involves nor supports farmers in the periphery, thus affecting people's livelihoods with women and young people suffering the most. Urban communities are rapidly encroaching into rural settlements in the region of Kebele's periphery, which is governed by the municipal government, transforming the way of life from agricultural to non-agriculture (Tegenu, 2010).

1.5 Urbanization of Shashemene

Shashemene is situated in the Oromia National Regional State's East Shewa Zone, some 250 kilometers south of Addis Abeba. The settlement is situated at 7 degrees North Latitude and 38 degrees East Longitude on a Map. When compared to other towns, the town is growing pretty quickly and is significant economically. The city is adjacent to the lakes and vacation spots of Awassa, Langano, and the Shala-Abiyata park and is also located inside the Ethiopian Rift Valley. Shashemene's urban area has 1,858 hectares of land. Shashemene district is divided into the Dega, Woinadega, and Kolla climate zones. It is located between 1,672 and 2,722 meters above sea level (Bevan et al., 2006).

Shashemene was established in the second decade of the 20th century primarily as a result of the growth of commercial activities in the country's southern corridor and its strategic location along the route leading south to the Kenyan border as well as the roads leading to South Omo in the west and Bale in the east. The town became a significant commercial and distribution hub for both agricultural and industrial products as a result of the convergence of a road network (Bevan et al., 2006).

The construction of a road from Addis Ababa to Moyale in southern Ethiopia via Shashemene marked a significant turning point in the town's growth. In 1932, the route passed via Shashemene town. Shashemene became an economically significant hub of the region due to the development of roads to the nearby rural regions and the main route from Addis Abeba to Moyale. As a result, it prompted the creation of crucial organizations including the bus station, the bank, and several hotels, which prompted the town's growth. Since the proprietors of these organizations erected their business headquarters and dwelling homes in the town, the introduction of mechanized agriculture in the nearby rural areas also aided in the town's growth (Bevan et al., 2006).

Shashemene's growing economy opened up a variety of business options and drew a huge influx of immigrants, who quickly outnumbered the town's ability to provide for them financially. The town's population is now multiethnic as a result of the emigration of many ethnic groups (Bjeren 1985). The majority of people living in the two Kebele work as tiny traders, day laborers, blacksmiths, potters, tella and areke dealers, sex workers, brokers, tailors, cart drivers, and other members of the informal economy. Only a small part of the population works for the government (Bevan et al., 2006).

1.7 Forms of Urban Expansion

Urban growth occurs in a variety of distinct ways. Any particular city may see new urban development with densities (people per square kilometer) that are equivalent to those found in built-up regions, higher densities, or lower densities. It can happen by infilling the remaining open spaces in existing built-up regions, redeveloping built-up areas at higher densities, or starting from scratch in previously undeveloped areas. New greenfield development can either "leapfrog" away from existing built-up regions, leaving swathes of undeveloped land that divide it from them, or it can be continuous with them. It can invade sensitive areas that need to be protected, including as wetlands, watersheds, woods, farms, and orchards in the area around the city. And it can therefore alter, preserve, or expand the amount of open space in and around the city (Angel et al., 2005). The urban expansion of land uses can take place in five general forms:

- **Infilling.** For new applications, new projects are built in previously developed or undeveloped regions. Urban growth potential on sites that have lost their economic relevance, such as former industrial sites, abandoned ports (waterfronts or rail yards), and shopping centers, can be seen in brownfield redevelopments.
- **Extension.** A typical type of growth when the land use is a development right next to the current land uses the network of current infrastructure is expanded to include new infrastructures like roadways and utilities.
- **Linear development.** Similar to extension, except in this instance the expansion is influenced by an already-existing circulation corridor, such a highway or a transport line (subway, light rail). It immediately benefits from the accessibility provided by the transportation system.
- **Sprawl.** a typical suburban development style that makes use of dispersed parcels. Without taking into account the current urban structure, each developer is utilizing an existing piece of land.
- **Large-scale projects.** A significant quantity of land is needed for the construction of a big infrastructure project, such as a new port, airport, industrial zone, logistics zone, or intermodal rail terminal. The amount of integration to existing land uses may be limited since its operational logic frequently differs greatly from the current landscape. These initiatives frequently serve as the catalyst for brand-new neighborhood construction.

1.8 The consequences of urban expansion

The evidence that is currently available suggests that variations in how cities grow and expand are linked to both favorable and unfavorable outcomes that have an impact on the welfare and wellbeing of their residents. Some effects of urban growth, such the rise in greenhouse gas emissions brought on by more automobile commuting in low-density cities, may even extend beyond of the city limits (Angel et al., 2005).

Most of these megacities are undergoing fast urban growth, which is causing changes in transportation patterns, most notably the sharp increase in trip distance and vehicle travel. Significant environmental issues have already been brought on by the rise in car kilometers traveled. The most current data available predicts a 3.4% yearly growth rate in CO₂ emissions from the transport sector in emerging nations (Zhao, 2010).

Some of the consequences of urban expansion are, inflated infrastructure and public service, costs, energy inefficiency, disparity in wealth, impacts on wildlife and ecosystem, loss of farmland, increase in temperature, poor air quality, impacts on water quality and quantity, impacts on public and social health and other impacts

1.9 Land use change

One of the key areas of study for sustainable development and global environmental change is land use change. In-depth analyses of these transitions are needed given the severity of land use change in response to global population expansion and its effects on the environment (Guan et al., 2011).

Given that the dynamic process of urban development with its temporal-spatial dimensions cannot be prevented, modeling, simulation, and prediction of cities' future growth would be applicable as one of the planning tools and policies to overcome the issues associated with rapid growth and development of urban areas, to achieve land use stability, understanding about interactions between the natural and man-made environments, and ultimately the goals of sustainable urban development (Nouri et al., 2014).

1.11 Military Installations

Jurisdictional definition

Typically, bases are extra-legal areas outside the purview of civil law. They may be anything from tiny outposts to military cities with up to 100,000 inhabitants. Some military installations may be owned by a different country or state than the area it is located in. A military base may go by a variety of names, such as the ones listed below.

-Armory (military)	-Installation	-Naval base
-Arsenal	-Joint base	-Naval dockyard
-Barracks	-Magazine (artillery)	-Outpost (OP)
-Casern	-Main Operating	-Presidio
-Combat Outpost (COP)	Base (MOB)	-Proving ground
-Facility	-Marine Corps base	-Reservation
-Fire support base	-Military airbase, airfield	-Shipyard or yard
-Forward Operating Base	or field	-Station
-Fortification	-Military camp	
-Garrison	-Naval air station	

Types of military establishments

The phrase "military base" can refer to any facility (often permanent) that houses a country's armed forces or even organized paramilitary forces like the Police, Constabulary, Militia, or Guards, depending on the context. Alternatively, the phrase may exclusively apply to a facility used by the army (or maybe other land-related forces, such as the marines), excluding bases used by the air force or the navy. This is in line with the many connotations of the word "military."

In order to facilitate military logistics, a military installation may also house significant quantities of military supplies. Most military installations are off-limits to the general public, and often only approved personnel are allowed inside (be it military personnel or their relatives and authorized civilian personnel).

Military bases often include accommodation, a post office, and eating options for soldiers. Additionally, they could offer support services including fast food joints, snack bars, petrol

stations, churches, schools, hospitals, or clinics, as well as shops, convenience stores, beauty parlors, and laundromats. Facilities such as fitness centers, libraries, athletic fields, basketball hoops, child development centers, auto shops, hobby/arts and crafts centers, bowling alleys, and community activity centers are provided by Family, Morale, Welfare, and Recreation.

1.12 The impacts of military installations on the host community

The local area (hence referred to as the host community) in which a military installation is located is affected by its presence in terms of its population, economy, and social structure (Parai et al., 1996). Interest typically has an influence on expenditures, income, employment, and tax receipts. Nevertheless, it should be acknowledged that a base may have some economic effects that are difficult to measure but nonetheless have a significant impact. For instance, a community's perspective and confidence in its economic future can be significantly improved by the sense of security and well-being that comes from the degree of economic prosperity that is in part supported by the base's operations (Parai et al., 1996).

In some places, military physicians and dentists work part-time in the local hospital or clinic to relieve overworked civilian workers and make their specialized skills and expertise available. Community members are also allowed to utilize the base's recreational facilities. Military soldiers and their families frequently participate actively in civic affairs. However, certain information is more easily accessible, such as the number of military families residing in off-base housing in the neighborhood and the number of military school-aged children attending nearby schools, which give some estimates of social implications (Parai et al., 1996). The host community is theoretically defined as the region where the majority of the base's local expenses are incurred and where the majority of the military and civilian base employees reside (Parai et al., 1996).

Some researches discussed the connections of military and society as a whole. There may not be many people in the population who are aware that there are other ways to organize society or view the world. This ideology's seven guiding principles include:

- That armed force is the ultimate resolver of tensions;
- That human nature is prone to conflict;
- That having enemies is a natural condition;
- That hierarchical relations produce effective action;

- That a state without a military is naïve, scarcely modern, and barely legitimate;
- That in times of crisis those who are feminine need armed protection; and
- That in times of crisis any man who refuses to engage in armed violent action is jeopardizing his own status as a manly man (Bernazzoli & Flint, 2009).

1.12 Military installations and economy of the host community

There are conceptually three kinds of economic impacts that can be estimated. The net amount going to the first Recipients in the host community is what is referred to as the first, or the direct effect. From the facts at hand, this is often the easiest to detect and estimate. When it comes to base expenditure on goods and services, this refers to the sums paid out in the community for goods and services produced there as well as the margins on goods produced elsewhere. When viewed as income, this refers to the money that was made in the community through the production or provision of these goods and services. The direct effect in the case of base wages and salaries paid to military and civilian employees consists of the base earnings and salaries received before taxes and other deductions (Parai et al., 1996).

The second effect, referred to as the indirect impact, consists of the subsequent spending (or income) made by host community workers and intermediary businesses that provide the goods and services that the base workers have purchased, as well as by contractors who provide good authorities may also include measures unrelated to zoning, such real estate disclosure laws and cooperation with regional property assessors. To their credit or discredit, local governments' ability to control land use varies from state to state and, in certain situations, from local government to local government within a state, depending, for instance, on the presence of important habitats and local population thresholds (Appel & Smith, 2011).

Property owners, local Government, And the Military: Bridging the gap

Military Overlays are one of the most challenging land use compatibility situations in terms of law, politics, and technology. Compatibility issues surrounding military sites cannot be resolved without widespread support from the community to avoid these confrontations, given the complexity of the situation, the serious safety hazards, and the absence of government enforcement authority (Appel & Smith, 2011).

The relationship Between Military and local officials

Military and local government officials must collaborate in order to properly assess the breadth of legal tools to conduct compatibility efforts and to assess their potential for political support. Each does, in fact, bring valuable perspectives and abilities to the Table. Armed forces provide the local government with clear, unbiased criteria that are based on compatibility studies, which it then utilizes to evaluate risk and make policy decisions. Although both the military and the local administration have the best of intentions, communication and partnership may be hampered by institutional and cultural gaps. Local governance is formed by politics, conflicting interest groups, and compromise as opposed to the top-down military structure (Appel & Smith, 2011).

1.13 Efficiency requirements of military areas:

A functional and efficient military establishment is essential to the proper operation of the military in the defense of the nation. As a result, certain fundamental needs must be met in military locations (Abdelrahman Osman Hussien Mohammed & Mahmud Osman, 2003). The following conditions can be elaborated upon:

A. Location aspects: This military concept's most crucial factor is this one. Military units are positioned strategically to safeguard important government facilities like refineries, large dams, airports, etc., to increase military security, or to guard entry and exit points to the city and the nation as a whole.

B. Facilities: These include easy-to-access training areas for soldiers and officers as well as areas for military maneuvers. Large, expansive regions are needed for this, which should be considered in the development and placement of military locations. Additionally, this can contain a location for the administrative offices, mess, barracks, clubs, workshops, and warehouses for the military staff.

C. Sectors: For the goal of an efficient defense, it is crucial and strategically important to divide military districts into a number of units or sectors that are dispersed throughout the urban area. This military sector or units should be autonomous yet under the general headquarters' control. placed within the urban fabric and set back from the general public by a buffer zone. Due to their favorable strategic locations, these sectors contribute to both the city's and the nation's overall security.

D. Accessibility: Within the framework of the urban fabric, connections between points must be flexible and simple to coordinate. To allow simple access for security purposes, transport should be clearly separated from populated areas while also being situated close to a nearby connected transit and highway or routes. Additionally, they provide important communications between various military operations and the city's physical infrastructure. The efficiency of military districts or areas is supposed to be improved in the context of the urban fabric, and this should be a key concern in the development and placement of military areas.

1.14 Location requirements of military areas:

The criteria for where military forces should be located on the ground take the shape of standards and guiding principles, taking into account a wide range of physical, economic, social, and security factors. The location of each military use in respect to all other uses, as well as the urban area's transportation and utility networks, are all addressed by these standards. In their most basic forms, they relate to amenities for urban living, general security measures in military zones, and safety, convenience, and economics. They take into account potential attack risk, safety risks, and how close or far away from other land uses a location is.

Three major areas—the working areas, the residential areas, and the amusement areas—are identified in the complex of the military camp according to general principles relating to the purpose of military areas. Administrative office buildings, retail spaces, manufacturing facilities, educational facilities, and services make up the main work area. Residential communities are seen as the living areas, along with their ancillary community amenities like playgrounds, neighborhoods shops, and elementary schools. The recreational facilities made up of clubs are typically included in the entertainment time zones. In the broadest possible context, principles relating to these three areas are generally understood somewhat as follows:

- A. To be away from the international airline's routes.
- B. Possibilities of concealment from air and land, to minimize conflict of the military air force and civilian planes.
- C. As far as possible from the populated areas and to be located at the same time in convenient proximity with a nearby interconnecting transit and thoroughfare routes to insure easy access to and from, and for the security purposes.

1.15 The military society as a complete institution

Contrary to the traditional nobility, the concerned group is not isolated from society by advantages or privileges. It cannot be confused with "common people" either. Despite this, it had some autonomy compared to the all-encompassing civilization that controlled it, but it was still free to operate in its original manner and do the specialized jobs that were assigned to it (Gresle, 2005).

What was unique about these military organizations was that they contained practically all aspects of civil life, aside from the objective constraint they imposed on individuals who could then be permanently mobilizable and the geographic isolation they assumed. The only distinction was that in the military world, the various institutions that made up civilian life were grouped there within a single institution, in many ways a "total" one that could function in an independent manner because it concerned the family as well as the close relatives of soldiers by trade (and most of all of officers) (Gresle, 2005).

1.16 the effects of military installations closure on local employment growth

Indirect effects of base closure

The total effect of base closure on nearby communities (measured in employment terms) includes the direct effect equivalent to the loss of military and defense civilian personnel formerly employed on the installation, as well as the additional off-base indirect and induced employment effects brought on by altered patterns of industry and worker expenditures on local inputs and outputs, respectively. Of course, the effects of base closure are also measured in terms of revenue and may be broken down into direct, indirect, and induced components (Poppert & Herzog, 2003).

Local Government Planning and Implementation tools

Despite the military's numerous planning and execution activities, local governments still control the majority of the necessary instruments. In addition to comprehensive planning and land use control measures like zoning, subdivision oversight, and building code enforcement, these

Qualitative Assessments

In some research, the effects of base closure have been evaluated by contrasting pre- and post-BRAC measures of local well-being. For instance, among the 62 villages affected by the closure

of 88 bases under the 1988 BRAC, 60% had reduced unemployment rates at the start of closure activities; this number rose to 68% by 1997 (Poppert & Herzog, 2003).

Econometric Assessments

With regard to econometric studies, Hooker and Knetter (1999) used a counterfactual method to examine the effects of base closures by comparing the employment and PCI growth rates at the county level to those that would have been obtained had each county grown at the rate of its respective state and (ii) the ex-post margins between the county and state reflected the pre closure experience. The difference is thought to indicate the shift in employment or PCI caused by base closure (Poppert & Herzog, 2003).

Mitigating Factors

Numerous base closure analyses (above) show that BRAC instructions have a negligibly small or even beneficial influence on local employment. Such seemingly illogical outcomes are frequently attributed to mitigating factors that are missing (uncontrolled) from earlier empirical impact studies but which are likely to counteract or neutralize adverse employment consequences within the local economy (Poppert & Herzog, 2003).

1.17 case study: - Former military site: Vauban (Freiburg)

Due to the large number of foreign soldiers stationed during the Cold War, Germany has been one of the nations most impacted by the closure of military facilities. The selection of this case study was based on its efforts to address environmental issues and community involvement in developing a sustainable urban zone on the site of a former military post. Since the 1930s, Vauban has served as an army post. When the French military left in 1990, campaigners used the slogan "barracks into houses" in response to the dire housing scarcity in the Freiburg region. Late in 1994, the community organization Forum Vauban was established. In 1995, it was designated as the official organization for the expanded citizen engagement. The Forum's top aim has been to collaboratively create a sustainable city area that might serve as a template for other initiatives (Bagaeen, 2006).

On the site of a former French army barracks near the city of Freiburg in southwest Germany, the new Vauban residential neighborhood has begun to take shape. Planning firm Kohlhoff & Kohlhoff won a competition to design a quarter with 2000 units in 1994, working with landscape architects Luz and Partner and transport planner Hans Billinger (Weiss, 2005). A little over 2000 individuals have moved into the project by the beginning of 2001.

It will be created for 5000 residents and 600 jobs when finished, and it will occupy 38 acres. Forum Vauban developed the "Sustainable Model District Vauban" project in collaboration with the city administration and the other partners with the goal of defining an outline to implement, in a cooperative participatory way, a concept of development for a community, meeting ecological, social, economic, and cultural requirements. The project's ability to include the people who were building the district has been its greatest asset. The ideas, creativity, and dedication of the people associated with a shared objective to establish a sustainable, flourishing community have been major driving forces for the growth of Vauban. As a model sustainable city area, Vauban has gained respect on a national and worldwide level (Bagaeen, 2006).

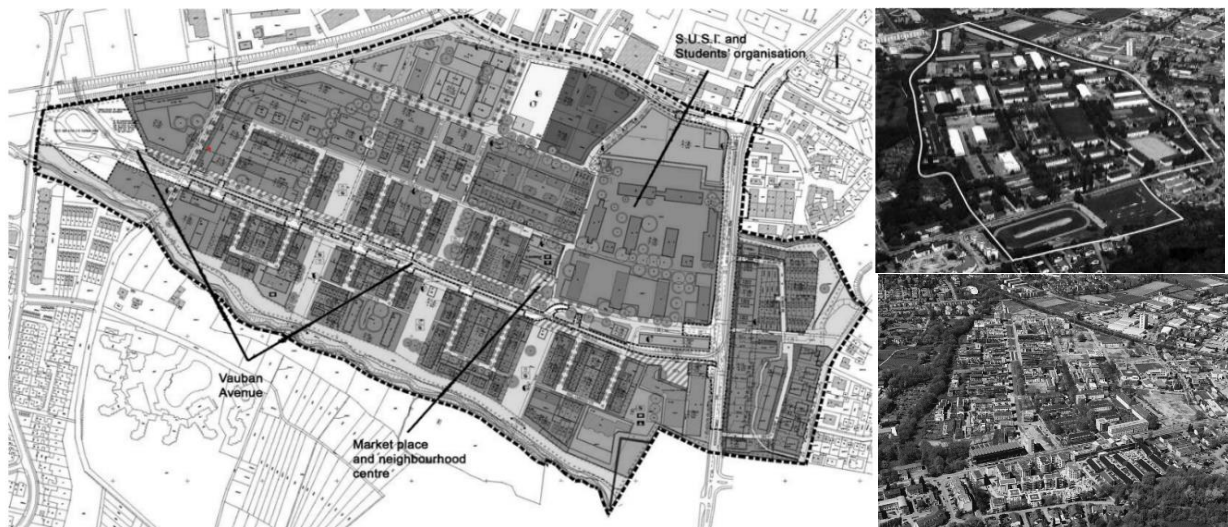


Figure 2.1:- Vauban (Freiburg) military post

This has largely been brought about by the efforts, initiatives, and projects of the Forum in the neighborhood. A variety of home designs were encouraged in order to construct housing of higher density for different socioeconomic categories, where the citizens actively engaged in the planning process, by dividing the land into tiny plots and giving precedence to private builders and groups of builders. Meetings with residents, seminars, a cooperative council, and residents' representatives on the management team are some examples of this engagement (Bagaeen, 2006).

1.18 Research Gap

It is evident from the literature analysis that military installations (bases, camps, boot camps, etc.) have a significant influence on the growth and urbanization of cities. The military sector in developed nations like America and England is in charge of organizing the conversion of outdated and inoperable military facilities to civilian usage. These organizations will research and plan the appropriate land use for these areas. Numerous laws and rules were also adopted by their legislative body to regulate and facilitate the conversion of military installations to civic uses. The Base Realignment and Closure (BRAC) Act allowed for the redevelopment of hundreds of former military sites in the United States for industrial, commercial, and residential use (Bagaeen, 2006).

Contrary to modern nations, Ethiopian military installations that are outdated and no longer in service still occupy land and provide obstacles to urban growth. These places are not investigated at all, which leaves a knowledge vacuum that must be filled in order to rebuild and convert to civilian usage, which will support the expansion of the city and its economy.

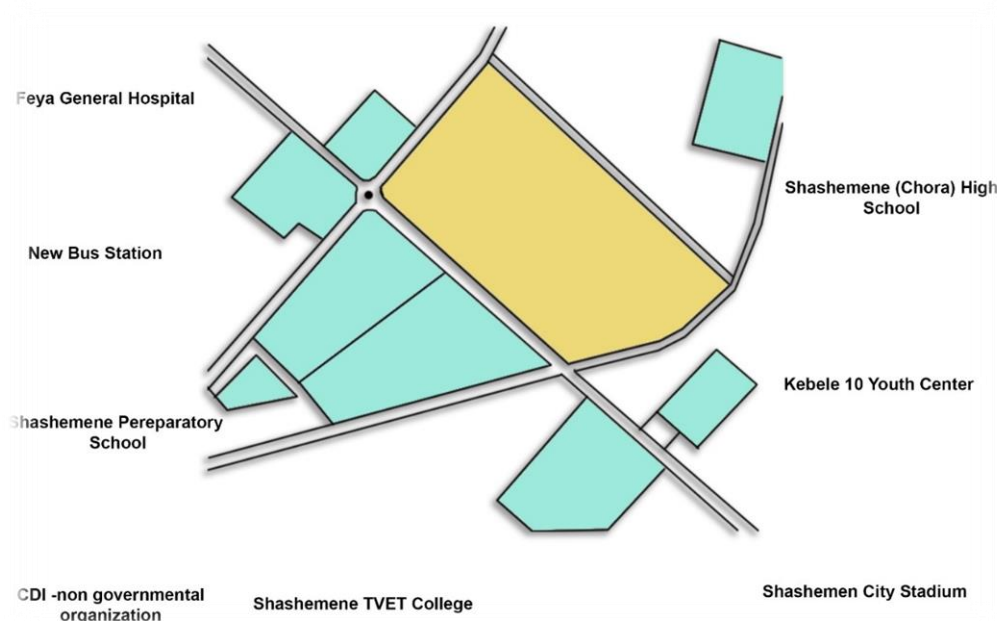
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Study Area and its description

The study area is situated in the city of Shashemene's core district. It is specifically located in the 'camp sefer' neighborhood of the Awasho sub-city, which is thought to include 22.6 hectares of land. A major road touches the study area in the north direction, passing from Melka Oda to Abosto sub city (city center), and another international road passes along side of the study area in the east direction, connecting Addis Abeba to Nairobi, Kenya. It is surrounded by an old 01 kebele residential site in the west. Additionally, in the camp's northern direction are the Shashemene Preparatory School and Shashemene TVET.

The south-west direction, which is primarily residential, and the east direction, which is primarily commercial, are the boundaries of the research area. Schools, TVET, hospitals, clinics, stores, and checkpoints are some more supplementary commercial and service operations. There are other development initiatives in the region, such as building roads and developing infrastructure. The neighborhood is distinguished by business establishments along the main thoroughfares, such as banks, cafés, stores, clinics, private schools, etc., and is predominately made up of single-family detached houses for residential use.



Map 3.1: Study area's surrounding services

3.2 Study design (Research Design)

The conceptual framework for the research is revealed through the research design. The research began by determining the actual issues and difficulties brought on by the former military camp. We used all available means of gathering sufficient information in order to better understand these issues and make suggestions for potential solutions.

In order to conduct a thorough examination into the degree of the military camp's influence on the study area and the nearby villages, the study used a descriptive kind of research approach. By using the descriptive research approach, the researcher gathered data that characterizes, investigates, and quantifies social phenomena, notably problems, difficulties, and circumstances that are pervasive in the society at a given moment. In this study, a longitudinal time horizon was used to collect information from the same sample at various periods in time and place.

3.3 Study Approaches

The study was carried out by combining qualitative and quantitative research methodologies in order to preserve unity in its findings. The study employed the mixed method, qualitative as major data gathering technique whereas quantitative data as supportive and goes concurrently throughout the study.

3.4 Data Sources and Types

The research used a combination of primary and secondary data sources, with spatial data serving as support.

3.4.1 Primary Data Sources

Primary data sources were collected using open ended and close ended questionnaires, structured interviews for study area and surrounding dwellers. Overt observation of different factors on the study area and the surroundings was used as primary data source. Moreover, to triangulate the data collected from these sources, it was supported by google earth image, GIS and CAD files.

3.4.2 Secondary Data Sources

The secondary sources were collected from books, journals, research reports, and papers, magazines, newsletters and newspapers, and internet materials. The city's archive was also used for gathering information. For the analysis of land use and land cover changes, sources from Google Maps and Landsat images were utilized. Change detection support the investigation of urban expansion based on remote sensing data of Shashemene city.

3.5 Study Population

The targeted population included military families residing inside the camp, residents of the nearby neighborhoods, local business owners, students and staff at the nearby educational institutions and providers of public transportation services. Government organizations including land administration, urban planning, Cadaster and economic development offices in the Shashemene municipal administration and the administration of the military camp were part of the target population. Elders and former city officials who are knowledgeable about the trajectory of urban expansion contributed significantly to the research.

3.6 Sampling Techniques and Sample Size

3.6.1. Sampling Techniques

In order to ensure that the research questionnaires are completed and the desired objectives are reached, a mix type of sampling technique called stratified sampling and purposive sampling was employed for this study. To choose the sample of government offices, the purposive sampling approach was used.

In the case of probabilistic, the Stratified random sampling technique was used to select respondents that represents their groups or strata. Each type of strata or group in the population had a chance of being selected when random Stratified sampling technique. This study's population is divided into a number of different groups, including military families living inside the camp (group 1), people living in nearby neighborhoods (group 2), local business owners (group 3), students and staff at nearby educational institutions (group 4) and people who provide public transportation services (bajaj) (group 5).

3.6.2 Sample size

The data collection was designed to cover the residential blocks that are adjacent to the military camp and every building inside the study area (military camp) in order to provide evenly dispersed data coverage, but due to security reasons we can't address each building in the camp. Around 1000 participant whom lives or works around the camp were targeted and the determined study's population was provided with questionnaires and some interview questions, especially for longtime residents. The target size was determined to assess the immediate, to the camp, population deeply and specifically. In order to collect both the qualitative and quantitative data required for the study, questionnaires was distributed to each stratum of the study population.

The sample size of this study is determined by precision level of 9%. The level of precision is the range in which the true value of the population is estimated. Therefore, the sample size calculated by 91% confidence level and precision level of $\pm 9\%$. Yamane's formula is used to determine and calculate the sample size is: -

$$n = \frac{N}{1 + N(e)^2}$$

Formulas 3.1:- Yamane's (1967) sampling formula

Where; n = sample size, N = the total survey area population, e = level of precision.

Totally 110 participants were participated in the survey. 15 respondents were from the residents of the camp and from the rest of four stratum 96 participants were included divided equally to each stratum, which is 24 participants. The selected 24 populations from the surrounding neighborhoods stratum considers as a household survey, 24 households were selected.

3.7. Data collection tools

The data was gathered using a number of different data collection tools in order to achieve the study's goals. These included the use of questionnaires, key informant interviews, document analyses, and field observations.

3.7.1 Questionnaires Survey

We employed both open-ended and closed-ended surveys. The interview questionnaire's phrasing and sequence followed exactly by a series of questions that the researcher developed. To ensure that all responders can comprehend each question equally, the questionnaire was written in English and translated into the local languages of Oromiffa and Amharic. The researcher discussed the data collection process, methods of interacting with the chosen responder and the data collectors in the field each day and offer helpful feedback for the data collectors.

3.7.2 Key Informant Interview

Key informant interviews involved speaking with knowledgeable people who can provide the necessary facts, opinions, and ideas about a particular issue. Candidates for the interview included members of the local and municipal governments, business owners, and older individuals who have lived in the area for a long time.

3.7.3 Document Analysis

The basic data that was used in the study was originated from secondary data sources that will be gathered from a variety of papers, including those collected from government agencies, the administration of military camps, and information gathered from various applications and websites. 2015 E.C Shashemenes city profile, proposed master plan of the city and internal magazines of south command of Ethiopian military force were some of the documents studied.

3.7.4 Field Observations

The field observations conducted to collect data using equipment like cameras and video equipment. The researcher observes the current ground reality in the subject region while doing field research.

3.8. Data analysis and interpretation

Raw data was methodically added up, tabulated, and sorted manually after being gathered through surveys, interviews, document analysis, and observations. We utilized both quantitative and qualitative methods to analyze the data. The findings from the participatory assessment, which included key informant interviews, observations, and secondary data

acquisition, was described by using qualitative approaches. The data was analyzed using data analysis and geospatial software like Minitab, SPSS, GIS, Google earth and Excel after we have all the information we need for this study. The analysis is based on the quantitative and qualitative characteristics of the data that will be gathered from primary and secondary data sources and presented as a narrative description.

3.9. Ethical Consideration

The participants were informed of the study's objectives, and the researcher get their consent before asking them to complete the questionnaire or interview. The participants were told by the researcher that the information they submitted will exclusively use for the purposes of the study. As a result, the researcher only utilized the information provided by his participants for research purposes. In addition, all interactions with the relevant organizations were conducted with their informed permission in order to protect both institutional and individual wellness. The researcher guaranteed anonymity by averting naming the participants. Information gathering which was conducted in the military camp was in accordance with the security laws and regulations of the camp by acquiring the permission needed.

CHAPTER 4

FINDINGS AND DISCUSSIONS

4.1 Background of the study area

The camp was established in 1955 E.C during the reign of king Haileselesai. Half of the compound was the first selected area the other half is included later after replacing a church. The main purpose was to hold the newly mobilized recruits temporarily, later it was expanded and hold the current size. During the military (derg) regime it was structured as permanent military base. It contained airborne units, airborne trainees, repair(garage) units, repair(garage) trainees and rest place for wounded soldiers. This information was gathered from senior residents of the surrounding society and retired soldiers that were stationed there.

The other main function of camp was used as storage for ammunitions, uniforms, food and gas. It was under the command of south command, both civil and military engineers are also based here. After the fall of ‘derg’ and the rise of EPRDF the camps function was reduced to only gas distribution and repairment(garage) other functions were transferred to other areas. Currently the camp service as a residential area for soldier families and temporarily stationed soldiers. Former house that was used to accommodate trainees were converted to small houses to the hold the military families and stationed soldiers.



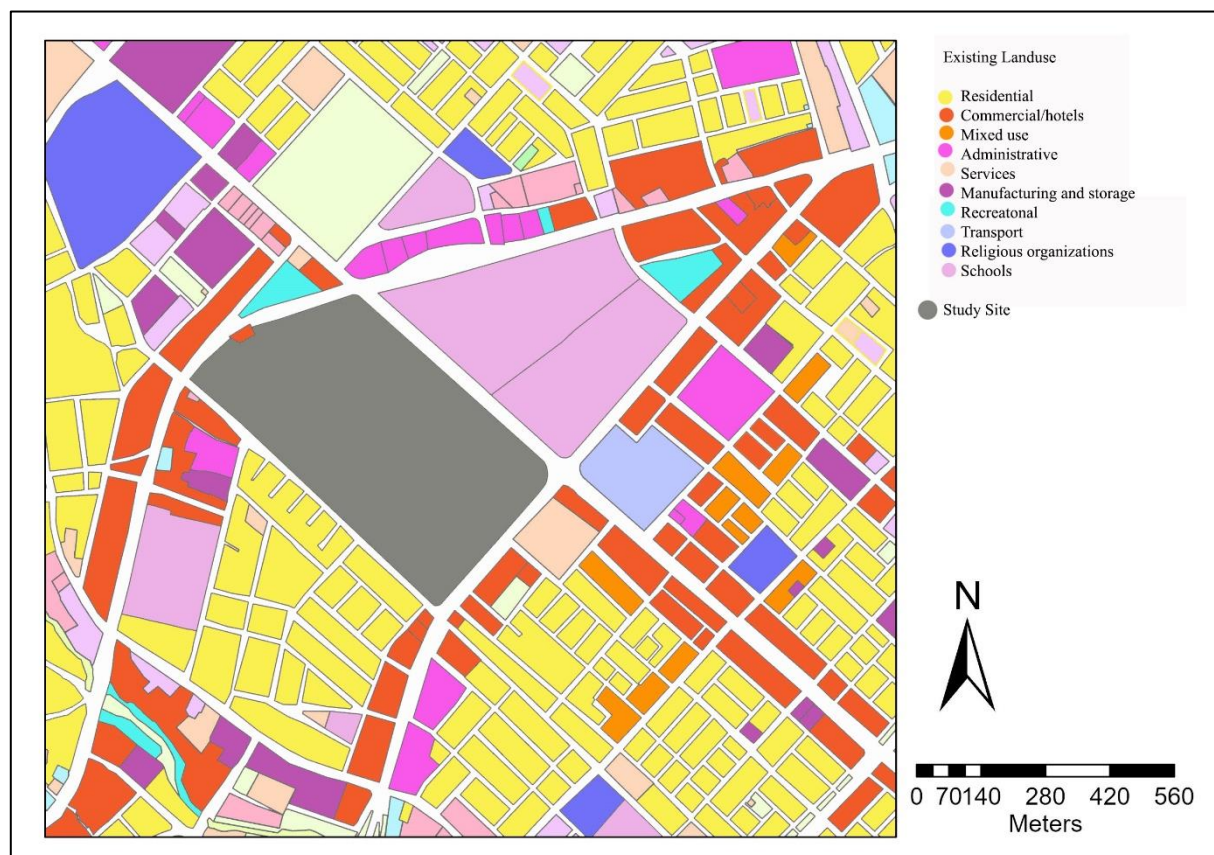
Figure 4.1: Satellite image of the study area and its surrounding

4.2 Land use Compatibility of the study area with the adjacent land uses

4.2.1 Existing land use

The existing land use is mainly military and civil purposes, but now it serves mainly as the residence of military families, with little military personnel stationed. There are clinics, garages and both military equipment and other materials stores. The purpose of this camp has been changing since its establishment. Generally, it was serving as military personnel and equipment station, equipment maintenance, and trained ground. Storage depots that are being still used to store equipment, munitions, and other supplies that are important for the operation of military forces exist today.

Other services like clinics which give services to army personnel, veterans and families of both were there, but only the building exists today it stop providing service. Garages of both military and civilian vehicles are one of the functions existed inside the camp. The performance and capacity of these garages decreases through time but they are still functioning focusing mainly on civilian vehicles.



Map 4.2: Existing Land use

4.2.2 Functions inside and their compatibility with each other

Residences

There are three types of residential buildings in this camp, divided based on the occupant's type. The main and the majority is the residential buildings that holds families of military personnel. The other type of residential buildings is that holds stationed soldiers and temporarily stationed soldiers. The third one is the residential house found around the administrative building which is the residence of the administrator of the camp.

The proximity of the soldier's residence and the civilian's residence is the main incompatibility issue of this compound. Based on the type of the residences and their aim the residences must have been kept in different zones. The sociological and psychological effect of the soldiers to the residents is discussed in this chapter. The other issue is the location of one of the stores which is found in the east side of the residential area. This store and materials stored can bring dangers like fire accidents which happed three time in the last three years only. But the location of the playground is good for recreation to the residences.

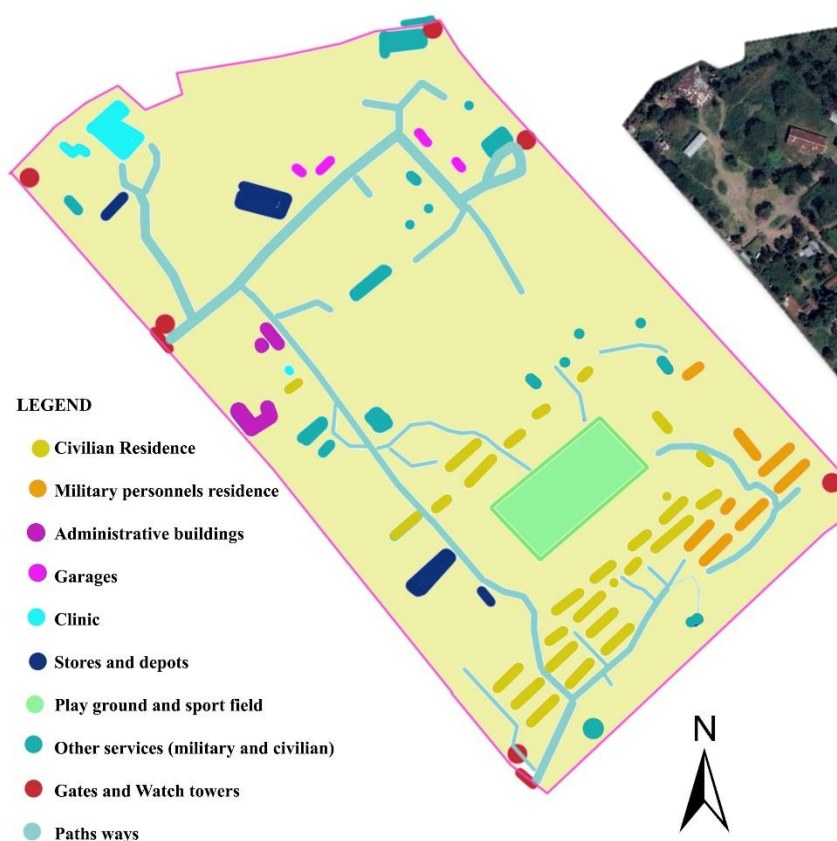


Figure 4.2: Satellite image of the study area

Health service

There is a clinic which serves both military personal and civilian residents of the camp, and also veteran and their families also get service. The location which is northern most part of the camp that is far from the residential areas. It is very near to gas stion which is adjacent to the camp and depots and stores of the camp which may hold dangerous materials that are risk susceptible.

Garages, stores and depos

As mentioned, previously these functions were dominant before but their activity is dimensioned when the function of the camp changed. But still gives services. The material stored and gas depos create danger for the residence and the surrounding neighborhoods. The buildings and the containers are very old and doesn't have the ability to function any more, but still they are being used this increases the risk.

Administrative building and other service

The location of the administrative buildings is around the main entrance which give easy access to visitors. Other building which has military functions are scattered around the camp and didn't consider what type of land use should be next to them. Specially these functions are not compatible with the residential zone of the camp.

Gates and Pathways

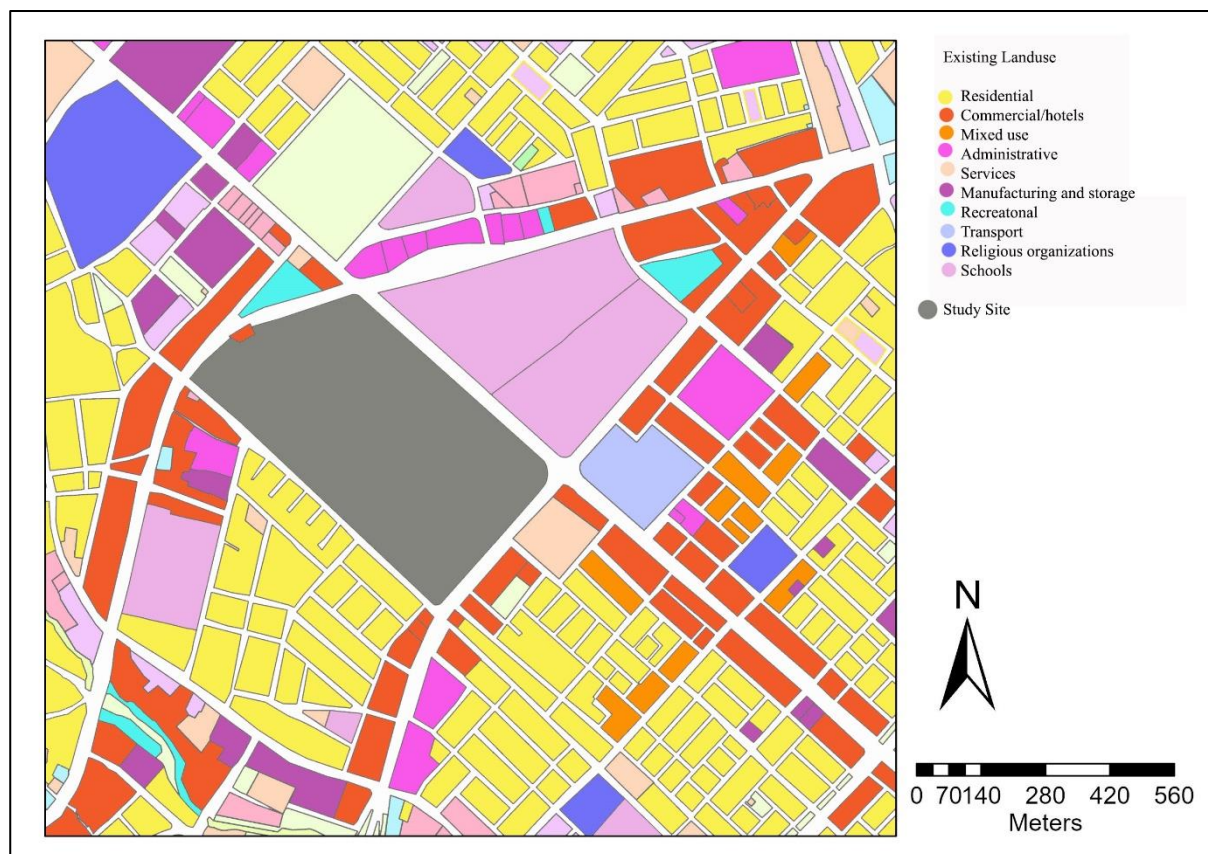
There are only two gates at service today, there are two gates which are closed for along period of time. The gates are found in only one side of the camp which create difficulty and challenge for the movements of the residents to access the surrounding areas. Path ways are not prepared well, the existing pathways are formed by the natural movements of vehicles and peoples. They are not comfortable and poses challenge and danger.

Vacant Space

The rest of the camp is not used and covered by shrubs and plants. These plants range from hundred-year-old to shrubs and grass, which hides dangerous animals like hyenas and snake. The residents are in constant fear of these animals and there were incidents of people being attacked by them. The other danger posed by these plants and trees is fire accidents during dry season where the grass and shrubs are dry.

4.2.3 Adjacent and surrounding land uses

The study site is surrounded by commercial, residential; schools, hospital and other services land uses as shown in the above Map. North of the study site, there are commercial land uses that provides garage services, hotels, retail shops, furniture display shops, electronic selling and repairing shops and other commercial land uses. There are also a recreational land uses that gives service of café and outdoor services. Adjacent to the camp perimeter, on the northern most corner, there is federal police post called ‘kela’ by locals. The road that passes along side of the camp in this direction is the first street to be constructed in the city and serves vast amount of traffic flow, which includes trucks and heavy-duty transports.



Map 4.4: Adjacent and surrounding land uses

The eastern side of the camp has the lowest activities of both vehicular and pedestrian compared to the rest. There are Shashemene preparatory school and Shashemene TVET collage. These areas pedestrians' movement is periodical, that's based on the student's movements and there are some passersby rather than the students. Vehicular activity only comprises three wheeled cars and small numbers of cars passes through. The western side of the camp is a majority of residential land uses. But some residential have kiosks and food stands

in their compounds. Few rent out their home for small furniture and metal work manufacturers and garages. Nevertheless, it is dominated by mostly residential land uses and its activity is low due to the land uses and vehicular activities.

The southern side of the study area is neighbored to high activity zone which is created and based on the bus station, found in the other side of the roundabout. In this area there are many commercial activities that range from small food and fruit selling stands to super markets, from cafes to hotel. It is very active due to the transport created by the bus station and vast commercial activities. A general hospital is also found alongside the camp, which is called Feya general hospital, other services like car training schools and both municipality and zonal government office found in this side of the camp.

4.2.4 Consistency with Land Use Patterns

Land use pattern of the area is customized with the transition of residential land uses to commercial land uses through time and in direction of main roads and services. The pattern of land uses found in this area are mainly derived by the economic activity that is created by the provision of roads and streets. These economic activities lead the patterns of land uses that is usually residential-mixed-commercial. As shown in the next diagram the land use pattern consistency of the area transitioning from inner part of block to the main road and active area.



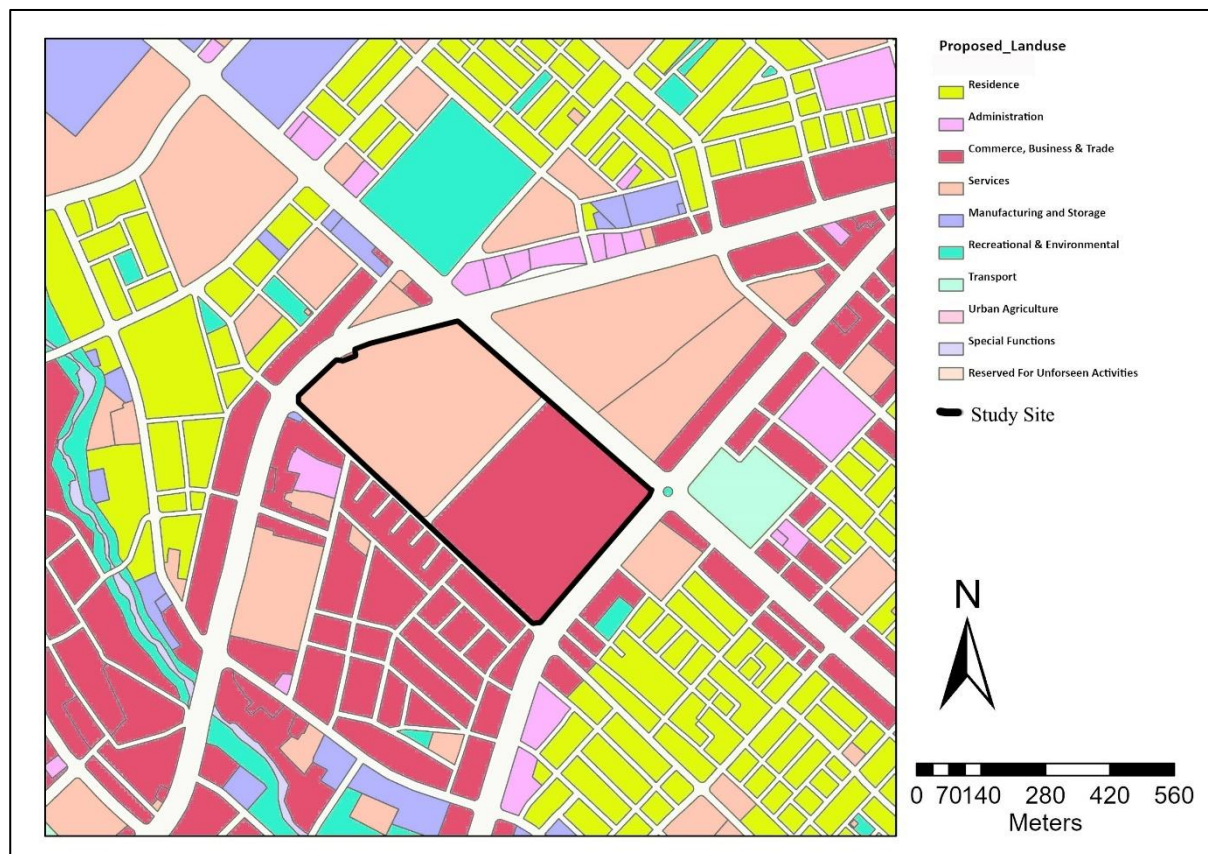
Charts and Graphs 4.1: Land use pattern

The land use pattern of the area is interrupted by the camp as it blocks the access to three main economically active areas. The residential land uses that are in the western side of the camps transition to commercial land uses and economic development is halted by the camps. In comparison to other residential zones in the kebele and city this neighborhood's transition of land use pattern doesn't change that much. The function of the camp and the surrounding land uses are not compatible and their big difference in function and purpose doesn't allow the normal pattern to occur. The ability to be flexible in terms of land use change is hard in case of the camp and the only way is to relocate and change to different land use type.

4.2.5 Consistency with land use plan and policy

Shashemene city municipality Proposed master plan

Shashemene is among the few privileged towns of its time to have its own municipal administration since **1935/36 E.C.**, and a master plan since **1996 E.C.** It covers a total area of **17,119** hectares (city profile). Since then, the city municipality plans its own land uses to replace the military camp. According to some interviewed officials of the city, the camp holds a vital location for the transformation and growth of the city. The ownership of the camp, that is the federal government, is the main challenge that holds the city administration not to take action.



Map 4.5: Proposed master plan

A couple of years ago, the current town administration made a determined move to speed up the development of the town and answer the questions of the residents and is one of the fast-urbanizing urban centers in Oromia Regional State and has seventeen (17) sub-cities. The town is serving as an administrative, commercial and transport center of the western Arsi zone. The town was selected to be one of twenty in the Oromia region to benefit from a federal reform program and it is one of the first -grade cities in Oromia Regional State (city profile).

The land uses around the camp are planned to be changed to commercial in the future based on the proposal. The area's commercial activities are actively increasing daily and it is expected that this change will be charged when the newly constructed and organized bus station starts service. The residential land uses which mostly found in the south-west side of the camp are completely changed to commercial land uses in the proposed master plan.

The land use of the city is changing constantly starting from its emergence. The value and necessity of the area that is occupied the camp increase as the expansion of the city increases. The contribution to this growth of the city by the camp is very low. By holding vital space, the camp is harming the expansion and change of the city. The population inside the camp is not changing that much which opposes the rate of increase of population number around the area.

Consistency with land use plans and policies is essential for promoting responsible and sustainable development. Land use plans provide guidelines for future development, while policies express the principles and priorities that inform these guidelines. Ensuring consistency between land uses and proposals with plans and policies helps cities achieve their goals and vision for growth.

The camps land use and function doesn't align with the cities land use plans and policies clearly. The cities land uses plans and policies changed as the expansion and growth of the city increases. The new policies and land uses are always updated and in conduct with the expecting change of the city. But the camp doesn't change and align with the land uses and policies that the city planed. This creates incompatibility between the camp and the cities land uses plan and policies. The city administration faces challenges to make the land uses plans and policies around the camp.

4.2.6 Compatibility with the adjacent land uses

This analysis examines whether the study does create a significant land use incompatibility impact on adjacent land uses. Such an impact would occur if the camps physical characteristics or associated activities prevent or substantively impair the existing function of adjacent land uses. The analysis considers impacts such as frontage activity, aesthetics and functions only to the extent that they substantially impair the ability of adjacent land uses to continue their existing function. Compatibility levels (Table 4.1) have been classified as follows (Taleai et al., 2007).

Table 4.1:- Compatibility levels

High compatibility (HC)	those land uses, which are harmonious and consistent with each other and produce high level of usability when they are adjacent.
Medium compatibility (MC)	those land uses, which are moderately compatible with each other and produce a moderate level of usability when they are adjacent.
Neutral/low compatibility (NC)	those land uses, which have low compatibility with each other and which do not noticeably affect each other when they are adjacent.
Medium incompatibility/very low compatibility (MI)	those land uses, which are incompatible unless exceptional mitigation measures are in place. The usability level of this kind of land uses will reduce when they are adjacent.
High incompatibility (HI)	these land uses should only be located adjacent to each other when extensive and extraordinary mitigating measures can effectively address all compatibility concerns.

Table 4.2: Abbreviations of compatibility levels

Abbreviations for compatibility/incompatibility degree	
High compatibility	HC
Medium compatibility	MC
Neutral/low compatibility	NC
Medium incompatibility/very low compatibility	MI
High incompatibility	HI

Evaluating frontage activity compatibility

Frontage activity of streets refers to the interactions, movements, and functions that occur along the sides of streets, specifically on the building frontages, sidewalks, and pedestrian areas. Frontage activities can include commercial activities (e.g., shop entrances, cafes with outdoor seating, street vendors), social interactions and urban design elements (e.g., street trees, public art installations, building facades). Frontage activity enhances the overall economic and social activities around the streets. The study area is surrounded by different land uses from residential to hospitals, this leads to the surrounding land uses to be affected by the camp. The long perimeter of the camp without any frontage activity will reduce the activities and exposure of the surrounding business to customers. Also affects the land value of the residential zones. Frontage activity grading guidelines that will help us to rank the surrounding land uses is presented in Table 4.3.

Table 4.3: Frontage Grades

Grade A frontage	• More than 15 premises every 100m. No blind facades and few passive ones • More than 25 doors and windows. Much depth and relief in the building every 100m surface • A large range of functions. High quality materials and refined details
Grade B frontage	• 10 to 15 premises every 100m. A few blind or passive facades • More than 15 doors and windows. Some depth and modelling in every 100m the building surface • A moderate range of functions. Good quality materials and refined details
Grade C frontage	• 6 to 10 premises every 100m. Very little depth and modelling in the building surface • Some range of functions. Standard materials and few details • Less than half blind or passive facades
Grade D frontage	• less than 6 premises every 100m. Very little depth and modelling in the building surface • Some range of functions. Standard materials and very few details • passive facades
Grade E frontage	• 1 or less premises every 100m. • No activity at all

Table 4.4: Frontage activity matrix

Frontage activity	Grade A	Grade B	Grade C	Grade D	Grade E
Grade A	HC				
Grade B	MC	HC			
Grade C	NC	MC	HC		
Grade D	MI	NC	MC	HC	
Grade E	HI	MI	NC	MC	HC

Incompatibility/compatibility evaluation system (matrix) for frontage activities set for this assessment is presented in Table 4.4. This research uses the suggestion by Srnka & Koeszegi (2007) that creating an intercoder consistency matrix after a preliminary coding round in the stage of categorization. Based on the criteria set in the above Tables for both frontage activities and compatibility measure the compatibility of the study area's land use and the adjacent land use is analyzed. All of the four sides of the camp are compared to its adjacent land use and the result shows that majority (2) sides have very low compatibility or medium incompatibility with the adjacent land use. In south-east side of the camp the compatibility measure indicates it has low compatibility with the adjacent land use. The north-east side shows high compatibility with its adjacent land uses, this is due to the adjacent land uses that are schools with only 2 gates 1 each.

Table 4.5: Frontage analysis of perimeter of the camp

Direction of contact (perimeter of the camp)	Study area (camp) frontage activities	Neighboring land use frontage activities	Compatibility result
North-West	Grade E (no openings)	Grade B	MI
South-West	Grade E (2 gates)	Grade B frontage	MI
South-East	Grade E (no openings)	Grade C	NC
North-East	Grade E (no openings)	Grade E (2 gates)	HC

In the next Table (Table 4.6) the compatibility and incompatibility assessment based on frontage activities gained from the above Table is presented numerically for final assessment. The result is to be evaluated both in terms of compatibility and incompatibility index. Where 0 is incompatible and 1 is compatible in compatibility assessment and 0 compatible and 1 is incompatible in incompatibility assessment, shown in the next Table. Then compatibility of each side in terms of frontage activities will be acquired.

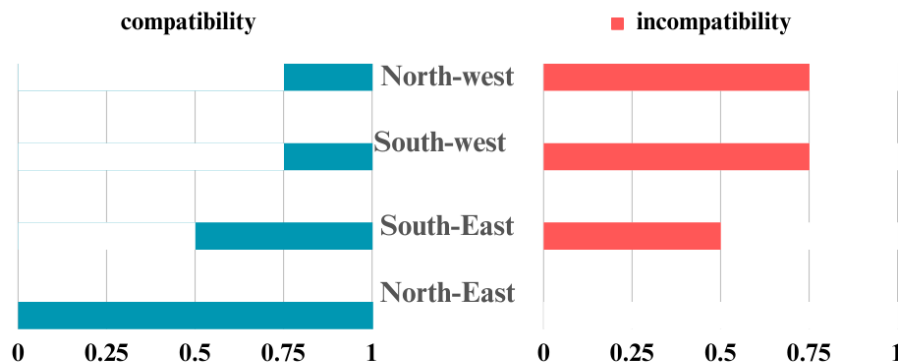
Table 4.6: Assigned value for compatibility/incompatibility

Abbreviations and value for compatibility/incompatibility index		
	Compatibility	Incompatibility
High compatibility (HC)	1	0
Medium compatibility (MC)	0.75	0.25
Neutral/low compatibility (NC)	0.5	0.5
Medium incompatibility/very low compatibility (MI)	0.25	0.75
High incompatibility (HI)	0	1

Table 4.7: Frontage compatibility/incompatibility value of the camp perimeter

Direction of contact (perimeter of the camp)	Frontage Compatibility result	Coverage percentages of	Compatibility Value		incompatibility Value		Assessment Result
			Assigned value	Total value	Assigned value	Total value	
North-west	MI	100%	0.25	0.25	0.75	0.75	Incompatible
South-west	MI	100%	0.25	0.25	0.75	0.75	Incompatible
South-East	NC	100%	0.5	0.5	0.5	0.5	Neutral
North-East	HC	100%	1	1	0	0	compatible

The above Table (Table 4.7) and the below Graph (Charts and Graphs 4.2) show us the final result of compatibility/incompatibility result based on frontage activities. Only the north-easter side of the camp is compatible with its adjacent land uses which are indicational institutions that doesn't need frontage activities for their functions. The south-east side of the camp score neutral, which tells us that the camp and the adjacent land uses are in neutral position in compatibility/incompatibility index.



Charts and Graphs 4.2: Frontage compatibility/incompatibility value

Evaluating aesthetical compatibility

As described earlier in this chapter the study site (camp) is surrounded with different types of land uses. These land uses need a similar adjacent building with respect to their aesthetics. If the adjacent building or structure doesn't much the aesthetics of the building or structure it will disturb and destruct the observer and will diminish the beauty of the surrounding area. Some land uses will be affected by the beauty of their surroundings, like hotels and cafeterias where their visual dimension will be affected that will reduce the value of the services provided. It will also impact the street quality negatively. If it is not treated well then it will be a place where garbage is through and brought health risk.

Table 4.8: Aesthetical compatibility value

Direction of contact (perimeter of the camp)	Value Layers									Aesthetical value
	vegetation			Fence type/age			Street furniture			
	G	M	B	G	M	B	G	G	B	
	treated	Plain grass	Untreated/shrubs	Masonry/stone	Corrugated metal sheet	Barbed wire	Street light	Street furniture	No street furniture	
North-west	*			*					*	Moderate
South-west			*			*			*	No aesthetic
South-west (half)			*	*					*	Very low
South-East			*		*				*	No aesthetic
North-East	*				*				*	Very low
North-East (half)	*			*					*	Low



Figure 4.4: Fence building material (corrugated metal sheet)



Figure 2.3: Fence building material (masonry work)

The above Table (Table 4.8) shows the aesthetical value of each side of the camp. The values are extracted by assessing different elements that can affect aesthetics. The fence of the camp is the first structure that can be noticed by peoples in the surrounding buildings or by passerby, therefore this study focuses on the fences aesthetical value. The determinate elements that are selected to get the aesthetical value are vegetation, fence building material type and age and street furniture. Vegetation factor focuses on the shrubs and grass that surrounded the fence perimeter of the camp; some are treated which have high aesthetical value.

Grass that are not treated but are pleasant to the eye considered it have moderate positive effect on aesthetics. The camp's wall is constructed with barbed wire, masonry and corrugated metal sheet and reconstructed many times. Masonry/stone fence have high aesthetical value, even if it is untreated. barbed wire has very low value and expose the untreated inside of the camp which decrease the aesthetic more. Old corrugated metal sheet fence decreases the value of the aesthetical value and poses health danger to passersby.

The below Table (Table 4.9) describe ranking method used in this assessment of aesthetical value of each side of the camp fence. Green color is assigned to factors that contribute to the aesthetics; red is designated to factors that have negative effects on aesthetical value. The yellow color describes factors which has non /small significant effect on the aesthetical value of the surrounding. Abbreviations for compatibility degrees is presented in the below Table. The land use incompatibility matrix used to assess the relationship of the aesthetical value of the camps fence and the surrounding functions provided in the below Table. It helps the research to get the compatibility level of the camp in terms of aesthetics with the surrounding land uses.

Table 4.5:- Ranking

Excellent	Green	Green	Green
Very good	Green	Green	Yellow
Very good	Green	Green	Red
Good	Green	Yellow	Yellow
Moderate	Yellow	Yellow	Green
Low	Yellow	Red	Green
Very low	Red	Red	Green
Very low	Red	Red	Yellow
No aesthetic	Red	Red	Red

Table 4.6:- Abbreviations

Abbreviations
High compatibility (HC)
Medium compatibility (MC)
Neutral/low compatibility (NC)
Medium incompatibility/very low compatibility (MI)
High incompatibility (HI)



Figure 4.5: Public Park (North-West direction)



Figure 4.6: Preparatory school (North-East direction)



Figure 4.7: General hospital (South-East direction) Figure 4.8: shops and kiosks

Table 4.7:- Aesthetical value matrix

esthetical value of the camp fence	Expected esthetical value of the surrounding functions						
	Excellent	Very good	Good	Moderate	Low	Very low	No aesthetic
Excellent	HC						
Very good	MC	HC					
Good	MC	MC	HC				
Moderate	NC	MC	MC	HC			
Low	MI	NC	MC	MC	HC		
Very low	HI	MI	NC	MC	MC	HC	
No aesthetic	HI	HI	MI	NC	MC	MC	HC

Table 4.8:- Aesthetical value compatibility

Direction of contact (perimeter of the camp)	Adjacent land uses expected			
	Study area value	Adjacent land uses	aesthetical value	Compatibility assessment
North-west South-west	Moderate Very low	Hotels, café	Excellent	NC
		Retail shops	Good	MC
		Furniture Display	Good	MC
		Garages	Moderate	HC
		Green area	Excellent	NC
South-west (half)	Very low	Residential	Very good	MI
		Small manufacturing	Moderate	MC
		Residential	Very good	MI
		Garage	Moderate	MC
		Café, retail shops	Good	MI
South-East North-East North-East (half)	No aesthetic Very low Low	Hospital	Excellent	HI
		Offices	Very good	HI
		School	Very good	HI
		School	Very good	NC

The above Table (Table 4.12) shows the compatibility of the camp and the surrounding land uses based on aesthetical value of the camp poses on the area. After getting the aesthetical value of each side of the camp it is compared with the expected and standard aesthetical value of the adjacent land uses and functions. The functions needed different aesthetical value based on their functions. Catering based business-like hotels and cafeterias require to have higher aesthetical value, not only in their vicinity but also their surrounding environments. Visual dimension of these business customers will affect their satisfaction.

In the next Table (Table 4.13) the compatibility and incompatibility assessment based on aesthetical value assessment gained from the above Table is presented numerically for final assessment. The result is to be evaluated both in terms of compatibility and incompatibility index. Where 0 is incompatible and 1 is compatible in compatibility assessment and 0 compatible and 1 is incompatible in incompatibility assessment, shown in the next Table. The percentage of the coverage of different type of functions in each adjacent side will be considered in order to gain the right value. The value will be multiplied with the percentage to gain the right value of each function. One may have high compatibility but may cover small amount of area and the other may have high incompatibility but covers more space than the other one, we cannot take their value as equal which distort the result.

Table 4.9:- Aesthetical value compatibility assessment

Direction of contact (perimeter of the camp)	Adjacent land uses	Compatibility assessment	Coverage percentages	Compatibility Value		Incompatibility Value	
				Assigned value	Total value	Assigned value	Total value
North- west	Hotels, café	NC	15%	0.5	0.0750	0.5	0.0750
	Retail shops	MC	40%	0.75	0.3000	0.25	0.1000
	Furniture						
	Display	MC	7%	0.75	0.0525	0.25	0.0175
	Garages	HC	8%	1	0.08000	0	0.0000
	Green area	NC	30%	0.5	0.1500	0.5	0.1500
TOTAL SUM			100%		0.65		0.29
South- west	Small manufacturing	MC	9%	0.75	0.0675	0.25	0.0225
	Residential	MI	85%	0.25	0.2125	0.75	0.6375
	Garage	MC	6%	0.75	0.0450	0.25	0.0150
TOTAL SUM			100%		0.325		0.675
South- East	Café, retail shops	MI	12%	0.25	0.0300	0.75	0.0900
	Hospital	HI	35%	0	0.0000	1	0.3500
	Offices	HI	30%	0	0.0000	1	0.3000
	School	HI	23%	0	0.0000	1	0.2300
TOTAL SUM			100%		0.03		0.97
North- East	School	HI	100%	0	0.0000	1	1

Based on the above Table (Table 4.13), except north-west side of the camp every other side is incompatible with its adjacent land uses. Most of functions found in the north-west direction of the camp doesn't highly need aesthetic and it doesn't affect them significantly.

Table 4.10:- Aesthetical value compatibility final

Evaluating function (activity) compatibility

	Compatibility Value	Incompatibility Value	Assessment Result
North-west	0.65	0.29	Compatible
South-west	0.325	0.675	Incompatible
South-East	0.03	0.97	Incompatible
North-East	0	1	Incompatible

Functional compatibility is to describe the relationships between different land use types. The relationship can be categorized starting from incompatible to compatible through different assessments of the functional interaction between different land uses. Where, incompatible means these land uses shouldn't be adjacent to each other, if they are adjacent, they impact each other negatively and compatible means these land uses complement and benefit each other, it is very useful to make them adjacent for all parties.

The next Table (Table 4.15) shows the compatibility between the study area (camp) and surrounding land uses functions. The assessment is based on the advantages and disadvantages brought by the camp to the adjacent land uses and their functions and is mainly focused on contributions that the camp provides.

Table 4.11:- Function (activity) compatibility

Land uses	Functions	Compatibility With the camp	Reasoning
North-west			
Hotels, café	Catering services	MI	The camps residence and military personnels are customers but the area it occupies and the customer produced is not proportional, Garages are affected hard they don't have any customer as the camp has its own garages.
Retail shops	Commercial activities	MI	
Furniture Display	Commercial activities	NC	
Garages	Commercial activities	MI	
Green area	Recreational	NC	
South-west			
Residential	Living area	NC	Only residences with kiosks and shops are benefited cause the only to gates are located in this side of the camp
Small manufacturing	manufacturing	MI	
Garage	Repair, services	MI	
South-East			
Café	Catering services	MC	The camp has very low compatibility to the driver training centers cause doesn't provide enough exposure and students. The hospital is private and the economic constrain doesn't let them to choose this hospital.
retail shops	Commercial activities	NC	
Hospital	Health service	MI	
Offices	Government services	MI	
School	Driver training	MI	
North-East			
Schools	Teaching learning	HC	These two educational institutions give services to the camp residences.

Table 4.12:- Function (activity) compatibility value

Land uses	Compatibility With the camp	Coverage percentages	Compatibility Value		incompatibility Value	
			Assigned value	Total value	Assigned value	Total value
North-west						
Hotels, café	MI	15%	0.25	0.03	0.75	0.113
Retail shops	MI	40%	0.25	0.1	0.75	0.3
Furniture						
Display	NC	7%	0.5	0.035	0.5	0.03500
Garages	MI	8%	0.25	0.02	0.75	0.0600
Green area	NC	30%	0.5	0.15	0.5	0.1500
TOTAL SUM		100%		0.34		0.65
South-west						
Small						
manufacturing	NC	9%	0.5	0.045	0.5	0.0450
Residential	MI	85%	0.25	0.212	0.75	0.6375
Garage	MI	6%	0.25	0.015	0.75	0.0450
TOTAL SUM		100%		0.27		0.73
South-East						
Café	MC	12%	0.75	0.090	0.25	0.0300
retail shops	NC	35%	0.5	0.175	0.5	0.1750
Hospital	MI	30%	0.25	0.075	0.75	0.2250
Offices	MI	11%	0.25	0.028	0.75	0.0825
School	MI	12%	0.25	0.03	0.75	0.0900
TOTAL SUM		100%		0.4		0.6
North-East						
Schools	HC	100%	1	1.0	0	0

Table 4.13: Function (activity) compatibility final

	Compatibility Value	Incompatibility Value	Assessment Result
North-west	0.34	0.65	Neutral
South-west	0.27	0.73	Incompatible
South-East	0.4	0.6	Incompatible
North-East	1	0	Compatible

Based on the above Table (Table 4.17), except north-west and north-east sides of the camp the other sides are incompatible with in terms of functionality of the adjacent land uses functions and the camp's function. Most of functions found in the north-west direction of the camp doesn't have significant effect on each other. But if the land use of the camp changed, they will be benefited greatly.

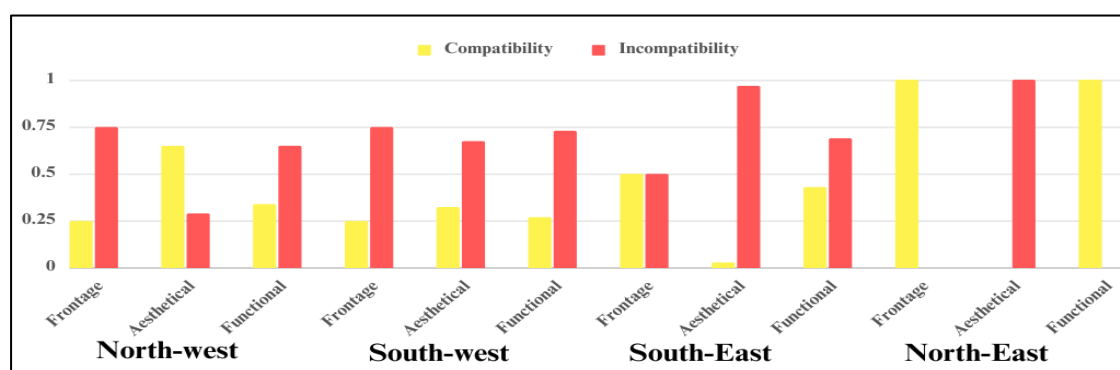
Summary of the current compatibility assessment with adjacent land uses

The total compatibility/incompatibility result is shown in the Table provided below (Table 4.18). The three factors chosen to evaluate the compatibility/incompatibility, frontage activities, aesthetical value and types of functions, were compiled together to determine the total result. The assessment evaluates in terms of all four sides of the camp and their adjacent land uses.

Table 4.14:- Summary of the current compatibility assessment

Direction of contact (perimeter of the camp)		Frontage Compatibility	aesthetical compatibility	function (activity) compatibility	Assessment Result
North- west	Compatibility Value	0.25	0.65	0.34	Incompatible
	Incompatibility Value	0.75	0.29	0.65	
South- west	Compatibility Value	0.25	0.325	0.27	Incompatible
	Incompatibility Value	0.75	0.675	0.73	
South- East	Compatibility Value	0.5	0.03	0.43	Incompatible
	Incompatibility Value	0.5	0.97	0.69	
North- East	Compatibility Value	1	0	1	Compatible
	Incompatibility Value	0	1	0	

In terms of Table 4.18 and Graph 3, except north-east side of the camp all the other sides are incompatible with in terms of all factors chosen to evaluate compatibility/incompatibility assessment. North-east side of the camp shows that it is compatible with the two factors, frontage activities and functionality, aesthetical value shows incompatibility. With we can say that the total camp is incompatible with the adjacent land uses.



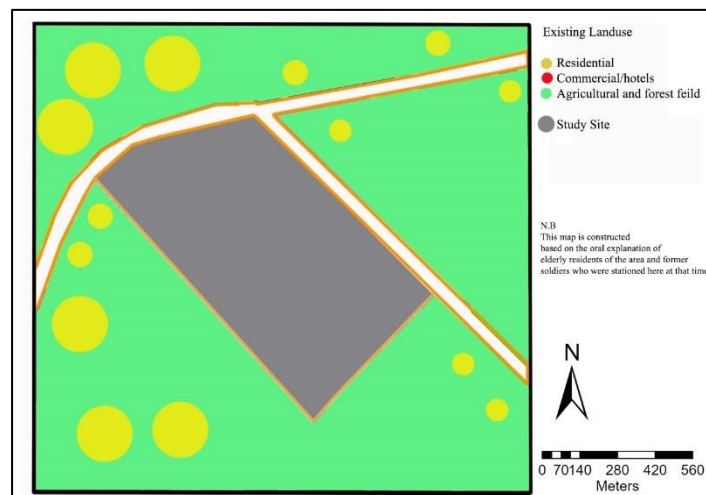
Charts and Graphs 3.3: Summary of compatibility/incompatibility result

4.2.7 Compatibility with the adjacent land uses in the past

The study site (camp) is established around 1955 E.C according to local elders. The surrounding has been and will be in constant change. When the camp established it was surrounded with forest and some agricultural lands. And it was a very good location for military installations. The agricultural land uses and the surrounding forest serve the camp positively by providing the privacy it needed and the camp provide protection and infrastructures for the farmers around.

land use compatibility of the camp with the surrounding land uses before 40 years (1983 G.C)

At this of period time the surrounding area is considered as the out skirt of the city and it was mainly agricultural field and forest land. The following Map was constructed based on the information gathered from local elders and former retired soldiers whom was stationed in this camp at that time. They describe the area and the surrounding function very well. The camp function included training at that time which means there will be military activities that are dangerous to the public, but the camps location is suitable. The below Map (Map 7) shows the Map as described by elderly residence.



Map 4.6: Surrounding land uses before 40 years (1983 G.C)

Even if the type and amount of land uses is limited to the camp, residences and farm land it is necessary to assess the compatibility to the camp. It is predicted that the compatibility will be mostly positive. At this period basic infrastructures like electricity, water and transport are provided by the camp to the surrounding farmers. The camp brought urbanization to the society and some starts to open business taking the soldiers and the camp staff as targeted customers.

Evaluating frontage activity compatibility 1983

As shown in the below Table (Table 4.19) three sides of the camp has high compatibility with their adjacent land uses and one low compatibility in the north-west direction of the camp to residential settlement. This shows the camps location is in terms with the surrounding land uses. The north-west side of the camp score neutral a compatibility assessment, this is because of the residential land use located around.

Table 4.15: Frontage activities compatibility of 1983

Direction of contact (perimeter of the camp)	Study area (camp) frontage activities	Neighboring land use frontage activities	Compatibility result
North-west	Grade E (no openings)	Grade C	NC
South-west	Grade E (2 gates)	Grade E	HC
South-East	Grade E (no openings)	Grade E	HC
North-East	Grade E (1 opening)	Grade E	HC

Table 4.16: Frontage activities compatibility value of 1983

Direction of contact (perimeter of the camp)	Frontage Compatibility result	Coverage percentages of each side	Compatibility Value		incompatibility Value		Assessment Result
			Assigned value	Total value	Assigned value	Total value	
North-west	NC	100%	0.5	0.5	0.5	0.5	Neutral
South-west	HC	100%	1	1	0	0	Compatible
South-East	HC	100%	1	1	0	0	Compatible
North-East	HC	100%	1	1	0	0	Compatible

Evaluating aesthetical compatibility of 1983

The aesthetical value of the camp is not necessary during this period of the time. Land uses and functions that greatly need aesthetic doesn't exist around this time around the camp. Rather this assessment considers this aesthetical compatibility assessment as health and security issues. Untreated shrubs and bushes around the camps perimeter will create a condition where dangerous animal will hide and pose danger for both inside the camp and outside society. The next Table shows how the aesthetical value of the camps perimeter is valued based on previously proposed factors.

Table 4.17: Evaluating aesthetical compatibility of 1983

Direction of contact (perimeter of the camp)	Value Layers									
	vegetation			Fence type/age			Street furniture			
	G	M	B	G	M	B	G	G	B	
	treated	Plain grass	Untreated/s hrubs	Masonry/st one	Corrugated sheet	Barbed wire	Street light	Street furniture	No street furniture	
North-west		*				*			*	Very low
South-west			*			*			*	No aesthetic
South-East			*			*			*	No aesthetic
North-East		*				*			*	Very low

This Table (Table 4.21) indicates the compatible assessment result of aesthetical value. Aesthetical values of all sides of the camp that is obtained from the above Table compared to the expected and necessary aesthetical value of the surrounding land uses. The area is covered with farm land which doesn't need but in order to protect the crops from animals the perimeter of the camp should be treated regularly to prevent it from being swarm by weeds and shrubs and become shelter for these animals.

Table 4.18: Evaluating aesthetical compatibility of 1983

Direction of contact (perimeter of the camp)	Study area value	Adjacent land uses	Adjacent land uses expected aesthetical value	Compatibility assessment
North-west	Very low	Residential	Good	NC
		Farm	No aesthetic	MC
		Residential	Good	MI
South-west	No aesthetic	Farm	No aesthetic	HC
South-East	No aesthetic	Farm	No aesthetic	HC
North-East	Very low	Farm	No aesthetic	HC

After analyzing the produced data, the assessment result stats that all of the camps side are in high compatibility with the surrounding land uses. The data is calculated after assigning each index with the number ranging 1,0.75,0.5,0.25 and 0 it is multiplied by the percentage amount of coverage of each land uses and functions. The next Table (Table 4.23) illustrates how this result is acquired by using the coverage percentage of each type of land uses. Most of the surrounding land use is farm there is a small residential land uses and these land uses doesn't concern on the beauty and aesthetical value of the surrounding nor themselves. In this compatibility/incompatibility assessment factor all resulted in compatible relationship between the camp and the adjacent land uses.

Table 4.19: Evaluating aesthetical compatibility value of 1983

Direction of contact (perimeter of the camp)	Adjacent land uses	Compatibility assessment	Coverage percentages	Compatibility Value		incompatibility Value	
				Assigned value	Total value	Assigned value	Total value
North-west	Residential	NC	3%	0.5	0.015	0.5	0.015
	Farm	MC	98%	0.75	0.735	0.25	0.245
Total Sum					0.75		0.26
South-west	Residential	MI	5%	0.25	0.0125	0.75	0.0375
	Farm	HC	95%	1	0.95	0	0
Total Sum					0.96		0.0375
South-East	Farm	HC	100%	1	1	0	0
North-East	Farm	HC	100%	1	1	0	0

Table 4.20: Evaluating aesthetical compatibility of 1983 final

	Compatibility Value	Incompatibility Value	Assessment Result
North-west	0.75	0.26	Compatible
South-west	0.96	0.0375	Compatible
South-East	1	0	Compatible
North-East	1	0	Compatible

Evaluating function (activity) compatibility 1983

As shown in Table 4.25 that the functional compatibility of the surrounding farm lands and residents with the camp is assessed. Mostly it is resulted that those land uses have compatible functions towards each other. Specially the farmers are beneficial more. The presence of the camp brings many advantages to the surrounding farmers. One of those is transportation, these farmers use the civilian vehicles of the camp to their advantages, they bring fertilizers and other materials. The other is infrastructure like roads and electricity including potable water. This and other things make the relationship between the camp and the adjacent land uses highly compatible, and the assessment result came in all compatible, as shown in Table 4.25.

Table 4.21: Function (activity) compatibility of 1983

Land uses	Functions	Compatibility With the camp	Reasoning
North-west			Residents and farmers are beneficial from the infrastructures and amenities provided by the camp.
Residential	Living	MC	
Farm	Crop production	HC	
South-west			
Residential	Living	MC	
Farm	Crop production	HC	
North-west			
Farm	Crop production	HC	
North-East			
Farm	Crop production	HC	

Table 4.22: Function (activity) compatibility of 1983 value

Land uses	Compatibility With the camp	Coverage percentages	Compatibility Value		incompatibility Value	
			Assigned value	Total value	Assigned value	Total value
North-west						
Residential	MC	3%	0.75	0.0225	0.25	0.0075
Farm	HC	98%	1	0.98	0	0
Total Sum				1		0
South-west						
Residential	MC	5%	0.75	0.0375	0.25	0.0125
Farm	HC	95%	1	0.95	0	0
Total Sum				0.9875		0.0125
South-East						
Farm	HC	100%	1	1	0	0
North-East						
Farm	HC	100%	1	1	0	0

Table 4.23: Function (activity) compatibility of 1983 final

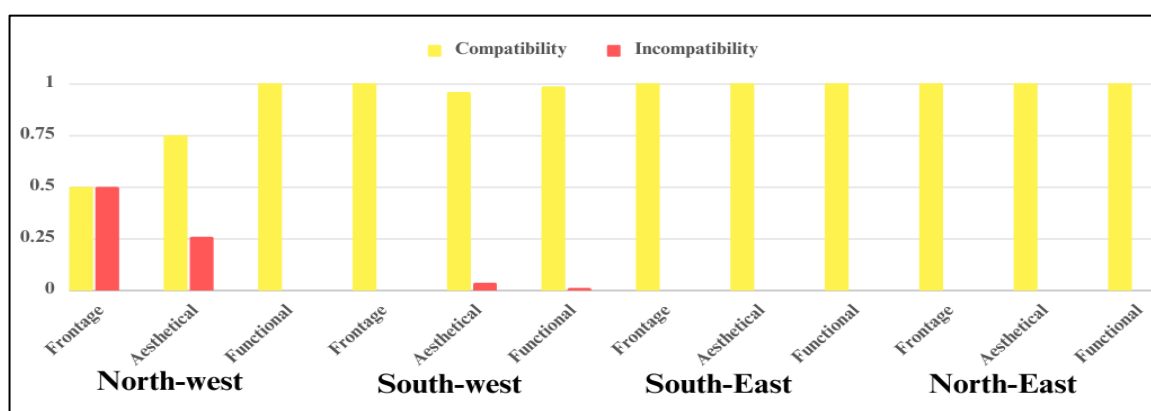
	Compatibility Value	Incompatibility Value	Assessment Result
North-west	1	0	Compatible
South-west	0.9875	0.0125	Compatible
South-East	1	0	Compatible
North-East	1	0	Compatible

Summary of the 1983 compatibility assessment with adjacent land uses

The total compatibility/incompatibility result is shown in the Table 4.28 provided below. The three factors chosen to evaluate the compatibility/incompatibility, frontage activities, aesthetical value and types of functions, were compiled together to determine the total result. The assessment evaluates in terms of all four sides of the camp and their adjacent land uses. All of the camps sides are in compatible with their surrounding in all factors. This shows us that the camp was favorable and necessary for the city as a whole. The result is presented in the following Table 4.28 and Graph 4.4.

Table 4.24: Summary of the 1983 compatibility assessment

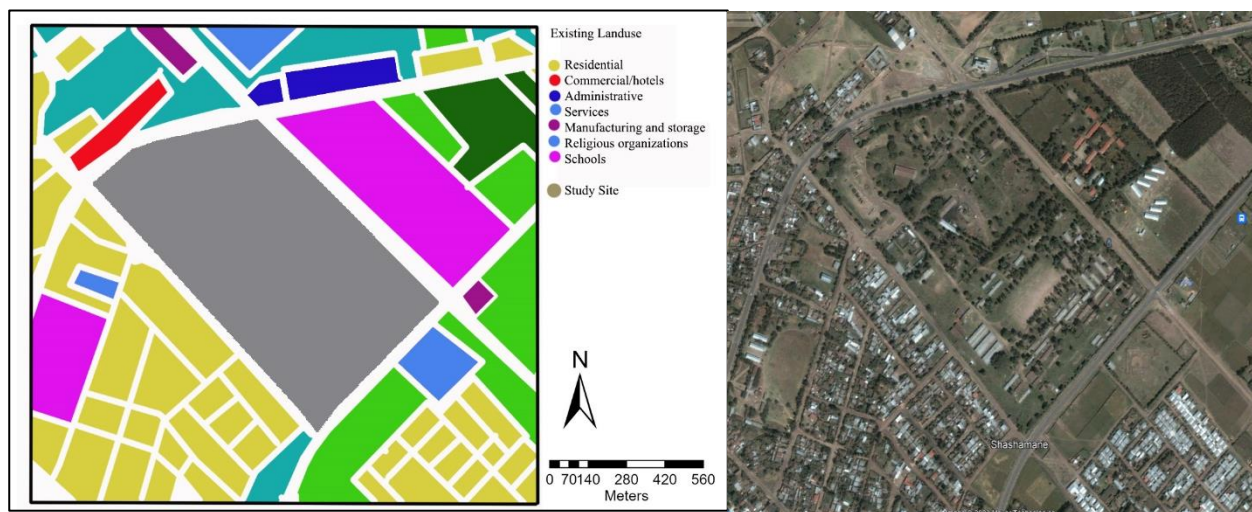
Direction of contact (perimeter of the camp)		Frontage Compatibility	aesthetical compatibility	function (activity) compatibility	Assessment Result
North-west	Compatibility				
	Value	0.5	0.75	1	Compatible
	Incompatibility				
South-west	Compatibility				
	Value	1	0.96	0.9875	Compatible
	Incompatibility				
South-East	Compatibility				
	Value	1	1	1	Compatible
	Incompatibility				
North-East	Compatibility				
	Value	1	1	1	Compatible
	Incompatibility				
	Compatibility				
	Value	0	0	0	
	Incompatibility				



Charts and Graphs 4.4: Summary of the 1983 compatibility assessment

land use compatibility of the camp with the surrounding land uses before 19 years (2004)

This period of time is where the expansion and growth of the city is at its highest more than 250 peoples would come to live permanently in the city and the international roads were constructed which pass alongside the study site (the camp). This create a boom in the economy and construction sector of the city, as observed in the below pic and Map there are many constructions undergoing. Residential plots were leased to peoples which create associations, like retired soldiers. This land leasing expands the residential area. Commercial activities increased in amount and type.



Map 4.7: Surrounding land uses before 19 years (2004)

Figure 4.9: Satellite image of 2004

Evaluating frontage activity compatibility of 2004

Frontage activities is essential for commercial land uses for their business. As the sector shown increases around the camp and the city it is necessary to assess frontage activity compatibility with the camp. The below Table 4.29 show the compatibility assessment result. South-east and north-east sides of the camp shows high compatibility with their adjacent land uses, which is there is very low frontage activity in both sides. South-west side of the camps perimeter and the adjacent land uses which is residential shows medium-incompatibility, as well-north west side indicate it has neutral relationship with the adjacent land uses.

Table 4.25: Frontage activity compatibility of 2004

Direction of contact (perimeter of the camp)	Study area (camp) frontage activities	Neighboring land use frontage activities	Compatibility result
North-west	Grade E (no openings)	Grade C	NC
South-west	Grade E (2 gates)	Grade B	MI
South-East	Grade E (no openings)	Grade E	HC
North-East	Grade E (no openings)	Grade E (2 gates)	HC

Table 4.26: Frontage activity compatibility of 2004 final

Direction of contact (perimeter of the camp)	Frontage Compatibility result	Coverage percentages of each side	Compatibility		incompatibility		Assessment
			Value		Value		Result
			Assigned	Total	Assigned	Total	
			value	value	value	value	
North-west	NC	100%	0.5	0.5	0.5	0.5	Neutral
South-west	MI	100%	0.25	0.25	0.75	0.75	Incompatible
South-East	HC	100%	1	1	0	0	Compatible
North-East	HC	100%	1	1	0	0	Compatible

Evaluating aesthetical compatibility of 2004

As the commercial land use and movement of the peoples increase the aesthetical impact of the camp also will increase. Land uses which focus on catering like hotels and cafes amount increase and need an aesthetically pleasant environment. The below Table 4.31 shows factors that are set to evaluate the aesthetical value of the camp's perimeter. In all sides there is no street furniture and most of the vegetation around the fence is plain grass and untreated shrubs. And, half of the wall is being constructed with masonry and barbed wire.

Table 4.27: Aesthetical compatibility of 2004

Direction of contact (perimeter of the camp)	Value Layers									
	vegetation			Fence type/age			Street furniture			
	G	M	B	G	M	B	G	G	B	
	treated	Plain grass	Untreated/s hrubs	Masonry/st one	Corrugated sheet	Barbed wire	Street light	Street furniture	No street furniture	
North-west	*			*					*	Moderate No aesthetic
South-west			*			*			*	
South-west (half)	*			*					*	Moderate No aesthetic
South-East			*			*			*	
North-East	*					*			*	Very low
North-East (half)	*			*					*	
										Low

The below Table 4.32 illustrates the compatibility assessment result for aesthetical compatibility assessment. The garage in the north-west side of the camp and farm land that is found in the south-east direction of the camp are the only high compatibility result. Both functions don't need visual dimension for their business. The residential land uses which is found in the south-west side of the camp and the school which is located in the north-east direction of the camp resulted in high incompatibility assessment.

Table 4.28: Aesthetical compatibility of 2004

Direction of contact (perimeter of the camp)	Study area value	Adjacent land uses	Adjacent land uses expected aesthetical value	Compatibility assessment
North-west South-west	Moderate No aesthetic	Cafe	Excellent	NC
		shops	Good	MC
		Garages	Moderate	HC
		Residential	Very good	HI
South-west (half)	Very low	Residential	Very good	MI
South-East	No aesthetic	Farm land	Farm land	HC
North-East	Very low	School	Very good	HI
North-East (half)	Low	School	Very good	NC

Table 4.29: Aesthetical compatibility value of 2004

Direction of contact (perimeter of the camp)	Adjacent land uses	Compatibility assessment	Coverage percentages	Compatibility Value		incompatibility Value	
				Assigned	Total	Assigned	Total
				value	value	value	value
North-west	Cafe	NC	15%	0.5	0.075	0.5	0.075
	shops	MC	45%	0.75	0.3375	0.25	0.0375
	Garages	HC	40%	1	0.4	0	0
					0.8125		0.1125
Total Sum			100%				
South-west	Residential	HI	100%	0	0	1	1
South-East	Farm land	HC	100%	1	1	0	0
North-East	School	HI	100%	0	0	1	1

Table 4.30: Aesthetical compatibility value of 2004 final

	Compatibility Value	Incompatibility Value	Assessment Result
North-west	0.8125	0.1125	Compatible
South-west	0	1	Incompatible
South-East	1	0	Compatible
North-East	0	1	Incompatible

The above Table 4.34 shows the assessment result gained from the above Tables (Table 4.33 and 4.32). The result indicates that at this time period the camp poses moderate effect on the aesthetic of the surrounding. North-west and south-west sides of the camp have compatible relationship with the surrounding land uses and South-east and North-east sides in contrary shows incompatible results.

Table 4.31: Function (activity) compatibility of 2004

Land uses	Functions	Compatibility With the camp	Reasoning
North-west			
café	Catering services	HC	The camps residence and military personnels are the main customers of the café. Garages are affected because they don't have any customer as the camp has its own garages.
shops	Commercial activities	MC	
Garages	Commercial activities	MI	
South-west			
Residential	Living area	MC	Residents are beneficial from the amenities provided by the camp.
South-East			
Farm Land	Crop production	HC	The camp has high compatibility with the farm. It doesn't disturb the function of the camp. Farmers use the camp to get some services.
North-East			
Schools	Teaching learning	HC	These two educational institutions give services to the camp and surrounding residences.

Evaluating function (activity) compatibility of 2004

Farm land uses, school land uses and café functions score high compatibility assessment result. The café and the school have direct relations with the customers from the camp. The surrounding commercial services main customers at this period of time were soldiers, staff and families living inside the camp. The next Table 4.36 shows the result of function compatibility assessment of the camp with the adjacent land uses.

Table 4.32: Function (activity) compatibility value of 2004

Land uses	Compatibility With the camp	Coverage percentages	Compatibility Value		incompatibility Value	
			Assigned value	Total value	Assigned value	Total value
North-west						
café	HC	15%	1	0.15	0	0
shops	MC	45%	0.75	0.3375	0.25	0.1125
Garages	MI	40%	0.25	0.1	0.75	0.3
Total sum		100%		0.5875		0.4125
South-west						
Residential	MC	100%	1	1	0	0
South-East						
Farm	HC	100%	1	1	0	0
North-East						
School	HC	100%	1	1	0	0

Table 4.33: Function (activity) compatibility of 2004 final

	Compatibility Value	Incompatibility Value	Assessment Result
North-west	0.5875	0.4125	Compatible
South-west	1	0	Compatible
South-East	1	0	Compatible
North-East	1	0	Compatible

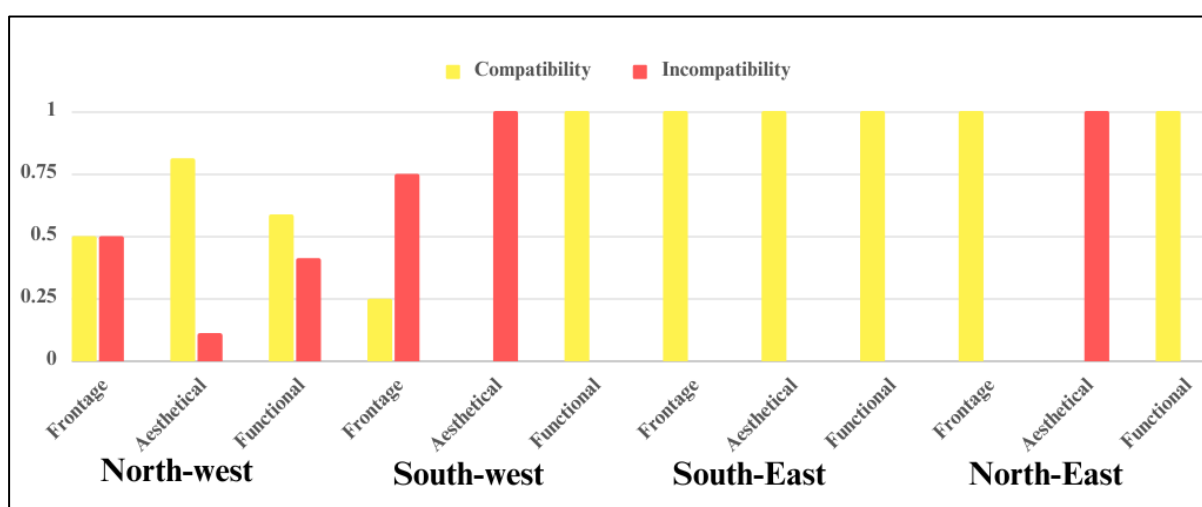
Based on the third evaluating factor which is function compatibility, the camp around 2004 was in high compatible relationship with the adjacent land uses. The camp and the business, the residences and other parts of the society were supportive of each other. As discussed above the camp offers a variety of advantages to the society. The existence of the camp was essential to the peoples living in the surrounding area. Peoples get infrastructure advantages and other supplies from the camp.

Summary of the 2004 compatibility assessment with adjacent land uses

The total compatibility/incompatibility result is shown in the Table provided below (Table 38). The three factors chosen to evaluate the compatibility/incompatibility, frontage activities, aesthetical value and types of functions, were compiled together to determine the total result. The assessment evaluates in terms of all four sides of the camp and their adjacent land uses. All of the camps sides except south-west side are in compatible with their surrounding in all factors. This shows us that the camp was favorable and necessary for the city as a whole. The result is presented in the following Table 38 and Graph 5.

Table 4.34: Summary of the 2004 compatibility assessment

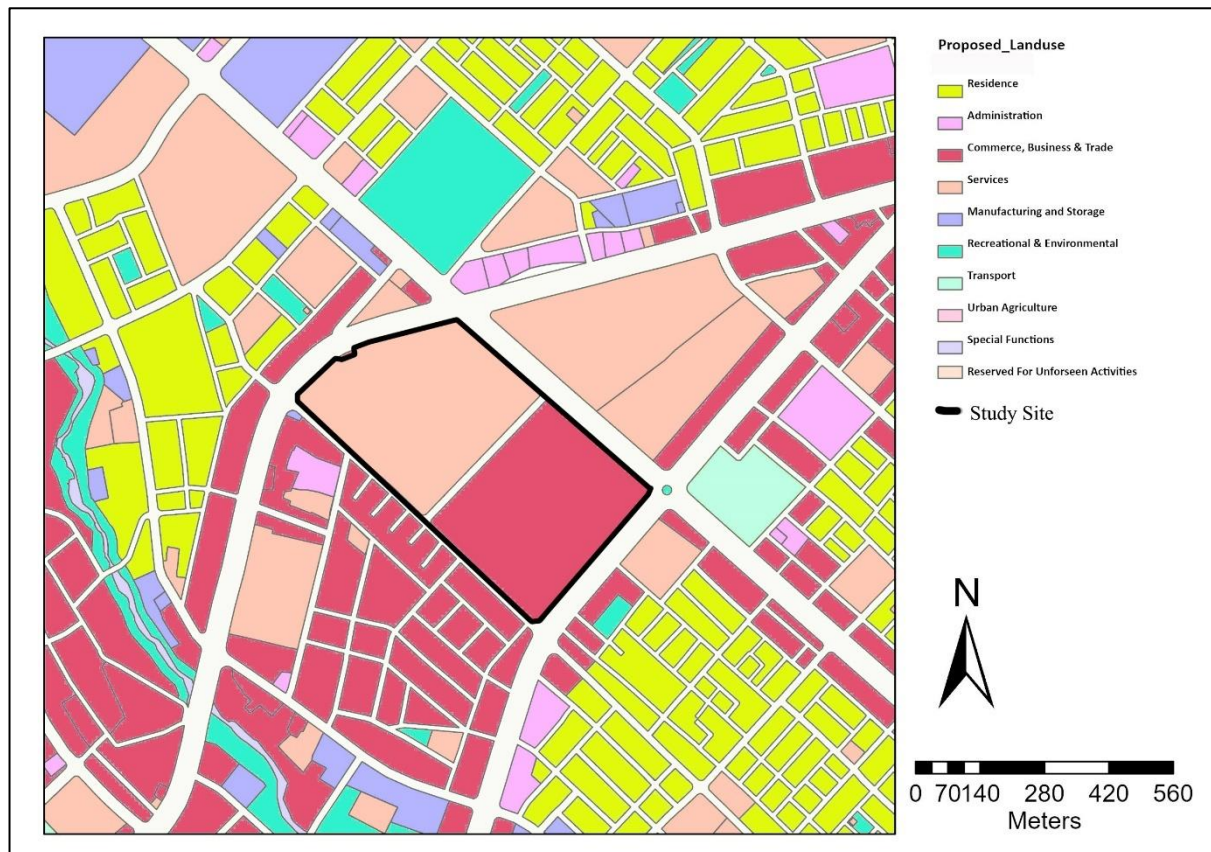
Direction of contact (perimeter of the camp)		Frontage Compatibility	aesthetical compatibility	function (activity) compatibility	Assessment Result
North- west	Compatibility Value	0.5	0.8125	0.5875	Compatible
	Incompatibility Value	0.5	0.1125	0.4125	
South- west	Compatibility Value	0.25	0	1	Incompatible
	Incompatibility Value	0.75	1	0	
South- East	Compatibility Value	1	1	1	Compatible
	Incompatibility Value	0	0	0	
North- East	Compatibility Value	1	0	1	Compatible
	Incompatibility Value	0	1	0	



Charts and Graphs 4.5: Summary of the 2004 compatibility assessment

4.2.8 land use compatibility of the camp with the proposed master plan

The proposed master plan presented in the below Map (Map 4.8) shows the cities administration plan of the future which it is determined based on the expansion and growth of the city. All three sides of the camp are adjacent to commercial land uses that will increase the incompatibility of the camp with the surrounding environment. Half of the camps area is planned to be changed to commercial land uses and the other half for social service land uses.



Map 4.8: Proposed master plan

Evaluating frontage activity compatibility with the proposed master plan

In the proposed master plan north-west, south-west and south-east sides of the camps faces highly commercialized land uses. North-east side is adjacent to school, these school doesn't change or relocated in the proposed land uses. Based on the assessment provided in the below Table the compatibility assessment result in high incompatibility with the proposed master plan on north-west and south-west side of the camp. South-east scores medium incompatibility rate. The north-east direction shows high compatibility with the adjacent land uses, the schools in this side of the camp doesn't have any significant frontage activities and this resulted in high compatibility with the camp.

Table 4.35: Frontage activity compatibility with the proposed master plan

Direction of contact (perimeter of the camp)	Study area (camp) frontage activities	Neighboring land use frontage activities	Compatibility result
North-west	Grade E (no openings)	Grade A	HI
South-west	Grade E (2 gates)	Grade A	HI
South-East	Grade E (no openings)	Grade B	MI
North-East	Grade E (no openings)	Grade E (2 gates)	HC

Table 4.36: Frontage activity compatibility with the proposed master plan

Direction of contact (perimeter of the camp)	Frontage Compatibility result	Coverage percentages of each side	Compatibility		incompatibility		Assessment Result
			Value		Value		
			Assigned value	Total value	Assigned value	Total value	
North-west	HI	100%	0	0	1	0	Incompatible
South-west	HI	100%	0	0	1	0	Incompatible
South-East	MI	100%	0.25	0.25	0.75	0.75	Incompatible
North-East	HC	100%	1	1	0	0	Compatible

Evaluating aesthetical compatibility with the proposed plan

As per the proposed master plan the area is dedicated to commercial zone. The presence of the bus station and commercial activities make the location highly commercialized zone. The functions and land uses need their customers visual dimension to be respected. Catering functions like hotels and cafes surround the camps location and the aesthetics of the camp affect their business. The aesthetical value of camp clearly has a significant impact on the proposed land uses that will surround the camp.

In the next Table (Table 4.41) it is presented that by using vegetation, fence type/age and street furniture factors the aesthetical value of each side is determined. Based on the provided information the half of south-west and the south-east sides of the camp doesn't have any value of aesthetics while, half of the south-west and the north-east sides score very low aesthetical values. Only the north-west side of the camp shows better aesthetical value. Generally, this indicates that the perimeter of the camp has very low aesthetical value which have a big potential to affect the adjacent land uses and functions negatively.

Table 4.37: Aesthetical compatibility with the proposed plan

Direction of contact (perimeter of the camp)	Value Layers									Aesthetical value
	vegetation			Fence type/age			Street furniture			
	G	M	B	G	M	B	G	G	B	
	treated	Plain grass	Untreated /shrubs	Masonry/ stone	Corrugated metal sheet	Barbed wire	Street light	Street	No street furniture	
North-west	*			*					*	Moderate
South-west			*			*			*	No aesthetic
South-west (half)			*	*					*	Very low
South-East			*			*			*	No aesthetic
North-East	*					*			*	Very low
North-East (half)	*			*					*	Low

Table 4.38: Aesthetical compatibility with the proposed plan

Direction of contact (perimeter of the camp)	Study area value	Adjacent land uses	Adjacent land uses expected aesthetical value	Compatibility assessment
North-west	Moderate	Hotels, café	Excellent	NC
		Retail shops	Very good	MC
		Furniture Display	Very good	MC
		Garages and others	Moderate	HC
		Green area	Excellent	NI
South-west	No aesthetic	Proposed Commercial activities (includes catering services and retail shops)	Excellent	HI
South-west (half)	Very low	Small manufacturing	Moderate	MC
		Proposed Commercial activities (includes catering services and retail shops)	Excellent	MI
		Garage and other	Moderate	MC
South-East	No aesthetic	Proposed Commercial activities (includes catering services and retail shops)	Excellent	HI
		Hospital	Excellent	HI
		Offices	Very good	HI
		School	Very good	HI
North-East	Very low	School	Very good	MI
North-East (half)	Low	School	Very good	MC

The Table above Table 4.42) shows the result of aesthetical compatibility assessment between the camp and the adjacent land uses in terms of aesthetical values. The camps aesthetical value from the above Table and the expected aesthetical value of the adjacent land uses were used to get the compatibility result. Most of the compatibility assessment result lean to incompatibility relation with the adjacent land uses of the proposed plan. The garages and small manufacturing land uses are the only which needs only moderate aesthetical value from the camps fences, their activities don't rely on aesthetics.

Table 4.39: Aesthetical compatibility with the proposed plan value

Direction of contact (perimeter of the camp)	Adjacent land uses	Compatibility assessment	Coverage percentages	Compatibility Value		incompatibility Value	
				Assigned value	Total value	Assigned value	Total value
North-west	Hotels, café	NC	20%	0.5	0.1000	0.5	0.1000
	Retail shops	MC	30%	0.75	0.2250	0.25	0.0750
	Furniture Display	MC	10%	0.75	0.0750	0.25	0.0250
	Garages and others	HC	10%	1	0.1000	0	0.0000
	Green area	NC	30%	0.5	0.1500	0.5	0.1500
Total Sum			100%		0.65		0.35
South-west	Small manufacturing	MC	10%	0.75	0.0750	0.25	0.0250
	Proposed Commercial activities		75%				
		HI		0	0.0000	1	0.7500
	Garage and other	MC	15%	0.75	0.1125	0.25	0.0375
Total Sum			100%		0.1875		0.8125
South-East	Proposed Commercial activities	HI	50%	0	0.0000	1	0.5000
	Hospital	HI	25%	0	0.0000	1	0.2500
	Offices	HI	15%	0	0.0000	1	0.1500
	School	HI	10%	0	0.0000	1	0.1000
Total Sum			100%		0		1
North-East	School	MI	50%	0.25	0.1250	0.75	0.3750
	School	MC	50%	0.75	0.3750	0.25	0.1250
Total Sum			100%		0.5		0.5

Table 4.40: Aesthetical compatibility with the proposed plan final

	Compatibility Value	Incompatibility Value	Assessment Result
North-west	0.65	0.35	Compatible
South-west	0.1875	0.8125	Incompatible
South-East	0	1	Incompatible
North-East	0.5	0.5	Neutral

Based on the proposed master plan the camps aesthetical value doesn't much with the expectation of the aesthetical value of the proposed master plan. Specially the south-west and south-east sides of the camp are very incompatible for land uses and functions planed. But North-west side is compatible with the commercial land uses planed for the area. While, North-east direction of the camp exhibits neutral compatibility with the planed land uses.

The result of North-east side of the camp becomes neutral compatibility because of the functions like the current hospital and driving school and including the offices of zone government. These land uses don't want the exposure to customers like commercial functions and land uses. And still the residences of the camp use these functions even though it has small significant.

Evaluating function (activity) compatibility with the proposed master plan

Most of the assessment result of the functional compatibility between the camp and the adjacent land uses shows it is greatly incompatible with each other, as shown in the next Table. The functions of Hospital, offices, school garages and small manufacturing enterprises shows medium incompatibility result with the camp's function and only school function located in the north-east side of the camp shows medium compatibility. The rest of functions surrounding the perimeter of the camp indicate high incompatibility with the function of the camp.

In the Table provided below (Table 4.45) the result of compatible assessment is shown. The North-east direction of the camp still shows compatible status with the adjacent land use, which is the two educational institutions. These educational institutions exist in the proposed plan, there is not much difference with the current compatibility assessment. The rest of the sides shows high incompatibility with the proposed land uses which are mostly commercial land uses and public services.

Table 4.41: Function (activity) compatibility with the proposed master plan

Land uses	Functions	Compatibility With the camp	Reasoning
North-west			
Hotels, café	Catering services	HI	The camps residence and military personnels are customers but the area it occupies and the customer produced is not proportional to the proposed commercial land uses. The number of the residences of the camp is also decreasing gradually.
Retail shops	Commercial activities	HI	
Furniture Display	Commercial activities	HI	
Garages	Commercial activities	HI	
Green area	Recreational	HI	
South-west			
Café, hotels	Catering services	HI	The proposed commercial land uses around this side of the camp will be affected greatly, as the camp decrease their exposure and customers movement.
retail shops	Commercial activities	HI	
Small manufacturing	manufacturing	MI	
Garage	Repair, services	MI	
South-East			
Café, hotels	Catering services	HI	The camp has very low compatibility to the driver training centers cause doesn't provide enough exposure and students. The hospital is private and the economic constrain doesn't let them to choose this hospital.
retail shops	Commercial activities	HI	
Hospital	Health service	MI	
Offices	Government services	MI	
School	Driver training	MI	
North-East			
Schools	Teaching learning	MC	These two educational institutions give services to the camp residences.

Table 4.42: function (activity) compatibility with the proposed master plan final

	Compatibility Value	Incompatibility Value	Assessment Result
North-west	0	1	Incompatible
South-west	0	1	Incompatible
South-East	0	1	Incompatible
North-East	0.75	0.25	Compatible

Table 4.43: Function (activity) compatibility with the proposed master plan value

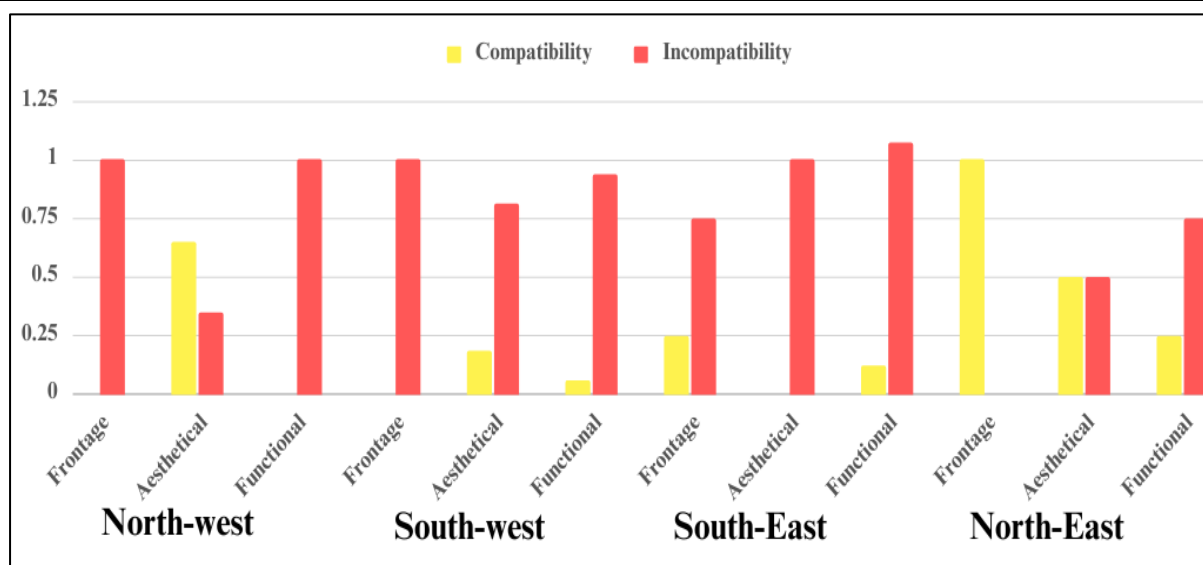
Land uses	Compatibility With the camp	Coverage percentages	Compatibility Value		incompatibility Value	
			Assigned value	Total value	Assigned value	Total value
North-west						
Hotels, café	HI	20%	0	0	1	0.2
Retail shops	HI	30%	0	0	1	0.3
Furniture Display	HI	10%	0	0	1	0.1
Garages	HI	10%	0	0	1	0.1
Green area	HI	30%	0	0	1	0.3
Total sum		100%		0		1
South-west						
Café, hotels	HI	25%	0	0	1	0.25
retail shops	HI	50%	0	0	1	0.5
Small manufacturing	MI	10%	0.25	0.025	0.75	0.075
Garage	MI	15%	0.25	0.0375	0.75	0.1125
Total sum		100%		0.0625		0.9375
South-East						
Café, hotels	HI	20%	0	0	1	0.5
retail shops	HI	30%	0	0	1	0.3
Hospital	MI	25%	0.25	0.0625	0.75	0.1875
Offices	MI	15%	0.25	0.0375	0.75	0.01125
School	MI	10%	0.25	0.025	0.75	0.075
Total sum		100%		0.125		1.073
North-East						
Schools	MC	100%	0.75	0.75	0.25	0.25

Summary of the proposed compatibility assessment with adjacent land uses

The total compatibility/incompatibility result is shown in the Table provided below (Table 4.48). The three factors chosen to evaluate the compatibility/incompatibility, frontage activities, aesthetical value and types of functions, were compiled together to determine the total result. The assessment evaluates in terms of all four sides of the camp and their proposed adjacent land uses. As projected in the Table except the North-east direction of the camp which is compatible with the proposed plan and others score incompatible with the planed land uses around.

Table 4.44: Summary of the proposed master plan compatibility assessment

Direction of contact (perimeter of the camp)		Frontage Compatibility	aesthetical compatibility	function (activity) compatibility	Assessment result
North-west	Compatibility Value	0	0.65	0	Incompatible
	Incompatibility Value	1	0.35	1	
South-west	Compatibility Value	0	0.1875	0.0625	Incompatible
	Incompatibility Value	1	0.8125	0.9375	
South-East	Compatibility Value	0.25	0	0.125	Incompatible
	Incompatibility Value	0.75	1	1.073	
North-East	Compatibility Value	1	0.5	0.25	Compatible
	Incompatibility Value	0	0.5	0.75	

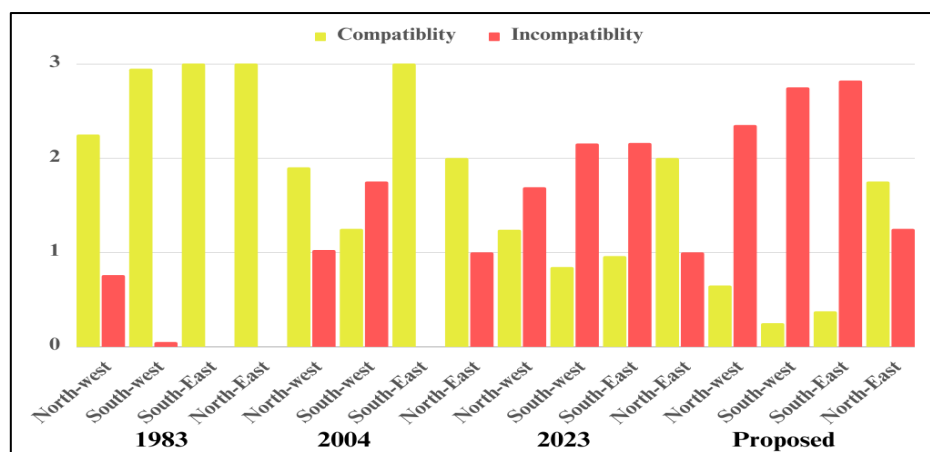


Charts and Graphs 4.6: Summary of the proposed master plan compatibility assessment

4.2.9 General summery of compatibility assessment through time

The below Table (Table 4.49) and the below Graph (Graph 4.7) show the compatibility difference in multiple timelines. The result shows us that as the city expands the compatibility of the camp with surrounding land uses becomes more incompatible. The type of land uses that are adjacent to the camp changes through time to more commercialized land uses which are mostly incompatible with the camps function by different factors. The camp holds this land uses change trends; its function doesn't change which is also incompatible with the land use change.

Years	Perimeter of the camp	Frontage Compatibility	Aesthetical compatibility	Function (activity) compatibility	Assessment result
1983	North-west	Neutral	Compatible	Compatible	Compatible
	South-west	Compatible	Compatible	Compatible	Compatible
	South-East	Compatible	Compatible	Compatible	Compatible
	North-East	Compatible	Compatible	Compatible	Compatible
2004	North-west	Neutral	Compatible	Compatible	Compatible
	South-west	Incompatible	Incompatible	Compatible	Incompatible
	South-East	Compatible	Compatible	Compatible	Compatible
	North-East	Compatible	Incompatible	Compatible	Compatible
2022	North-west	Incompatible	Compatible	Neutral	Incompatible
	South-west	Incompatible	Incompatible	Incompatible	Incompatible
	South-East	Neutral	Incompatible	Incompatible	Incompatible
	North-East	Compatible	Incompatible	Compatible	Compatible
Proposed	North-west	Incompatible	Compatible	Incompatible	Incompatible
	South-west	Incompatible	Incompatible	Incompatible	Incompatible
	South-East	Incompatible	Incompatible	Incompatible	Incompatible
	North-East	Compatible	Neutral	Compatible	Compatible

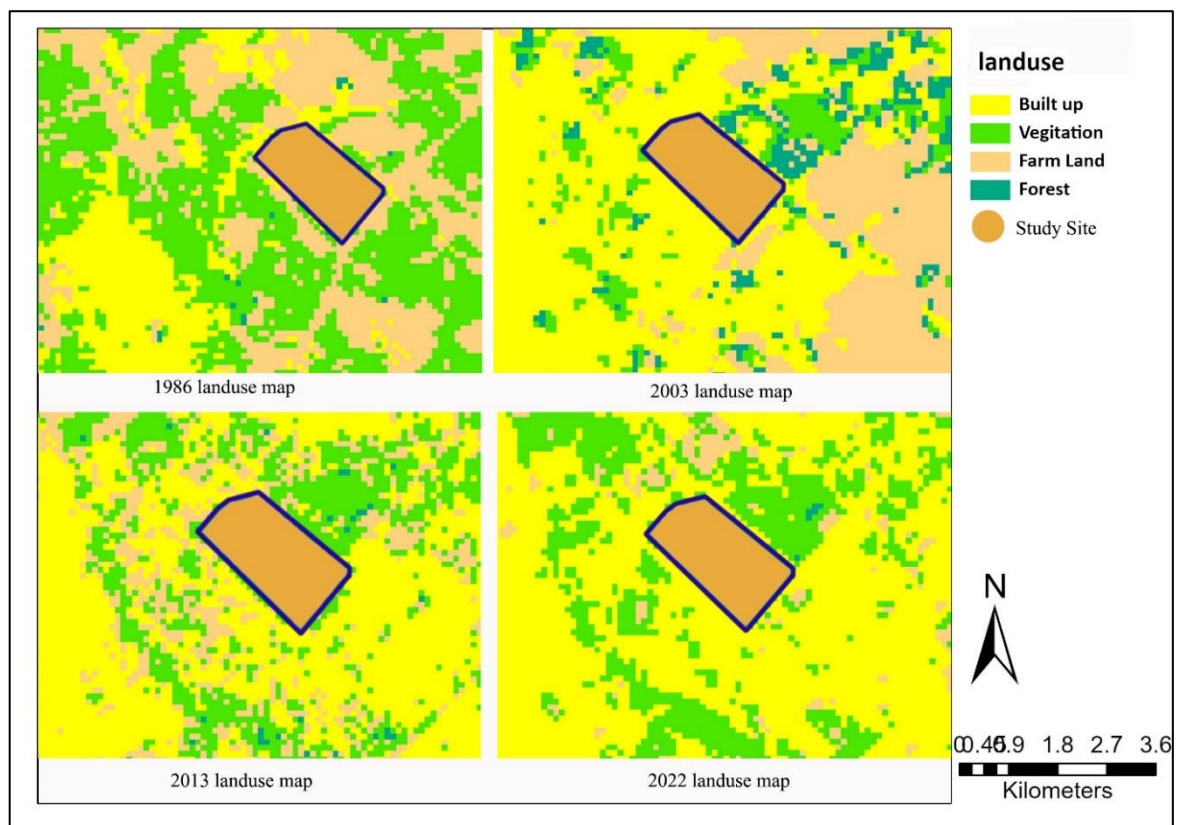


Charts and Graphs 4.7: General summery of compatibility assessment through

4.3 The effect of the camp on the urban expansion of the city

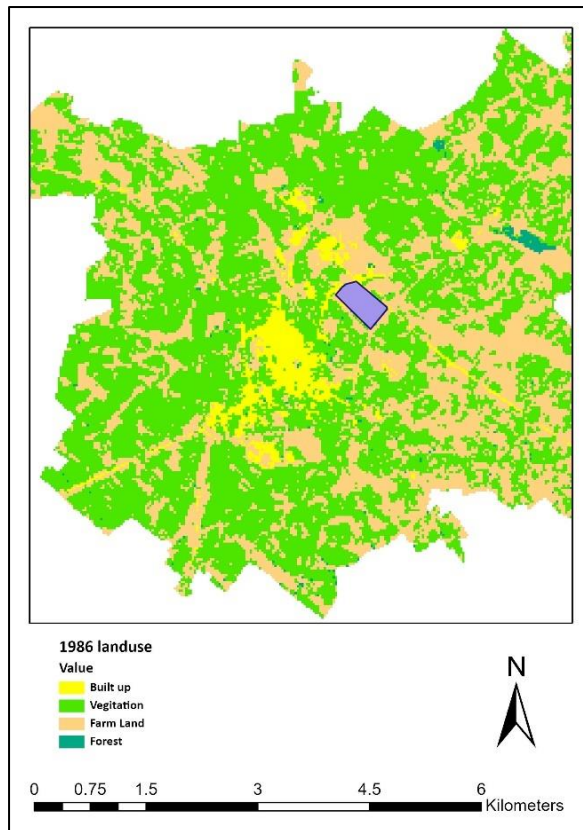
The emergence of Shashemene was the result of commercial activities in the Southern, South-Western and South Eastern Ethiopia. This was hastened by the subsequent political developments. The location of Shashemene on a commercial crossroads played an important role not only for its emergence but also its fast growth. The construction of roads to and through the town to different areas in the south made the town a major commercial and distribution center for both agricultural and industrial products (Getahun Benti 1988 and Gunilla Bjerer, 1985).

The commercial activities were accelerated by the establishment of the camp around 1955e.c. which contribute to the number of populations, provision of infrastructures and exposure to government attention. The next Map illustrates the growth rate of the city with in the span of 40 years and the change in land uses around the camp. When the location was selected it was considered compatible to the function of the camp and far from the main city without considering the expansion rate of the city and the camps influence on the city. The current position of the camp is located in commercial center expanded with in the last two decades and creates land uses incompatibility and negative impact on the economical and sociological aspect of the city and the surrounding area.

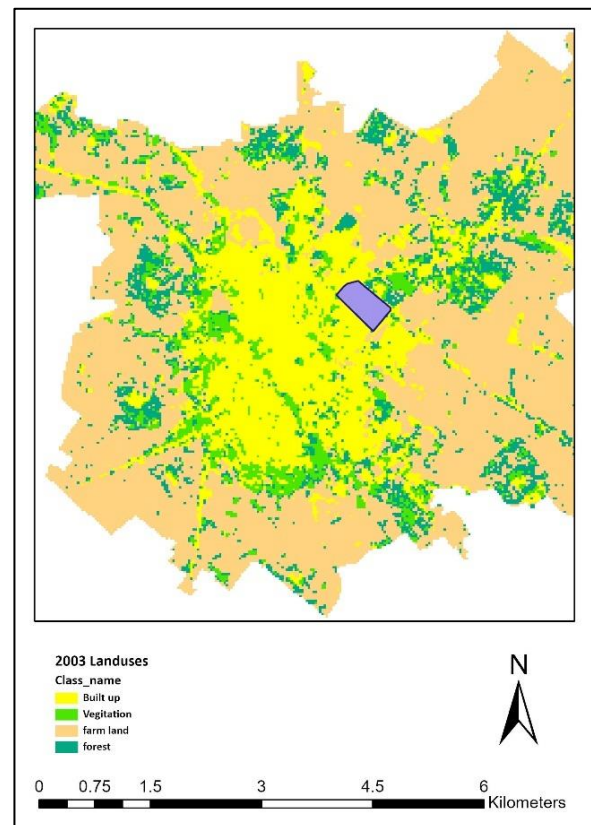


Map 4.9: Urban expansion of the city

4.3.1 effect on expansion between 1986 and 2003



Map 4.10: Map of 1986

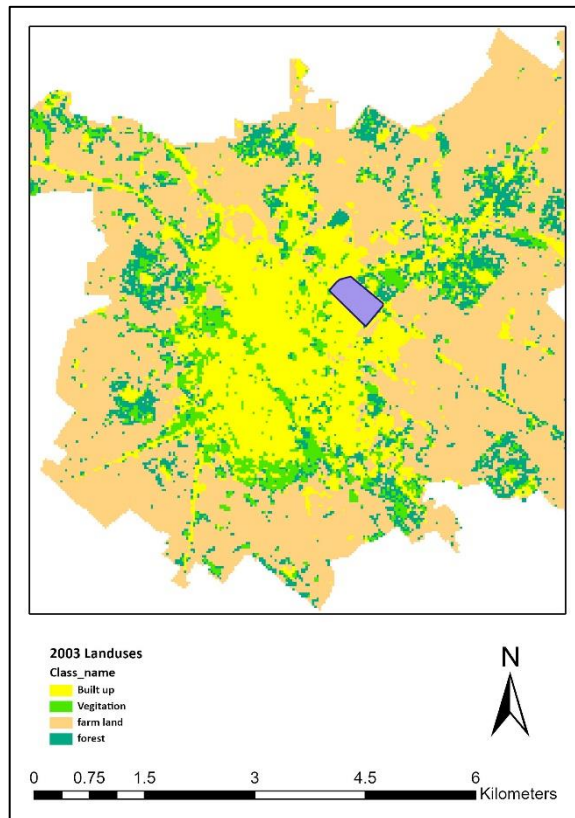


Map 3.11: Map of 2003

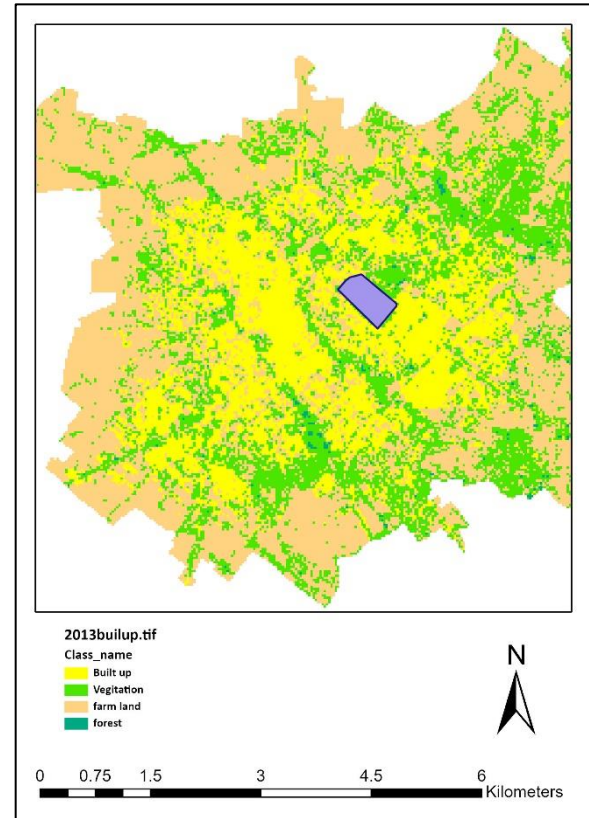
The above Map (Map 4.10 & 4.11) shows the change of the builtup and other landuses that occurred in the span of 17 years. The contribution of the camp in this expansion is vital. At this period of time camps influence towards the cities expansion is positive. During this time the function of the camp includes training of new recruits, garages, oil depots, military and civilian stores, clinic services and some civilian residents. Different kinds of military recruits that came from all over the country stationed here and it increased the number of customers of local business. The camp was one of the main cause of people's movements towards the city which increases the economy of the city.

Not only in the camp but soldiers start to live outside the camp by renting from locals, some military personnel and retired soldiers start to build houses around the camp and other parts of the city and this enhances the construction sector. The camp gives health services to locals and support the transportation area by giving free services. The city's security was also maintained by soldiers whom the camp provides to serve the city especially at night. Generally the camp has a massive positive influence on the city in many sectors.

4.3.2 effect on expansion between 2003 and 2013



Map 4.12: Map of 2003

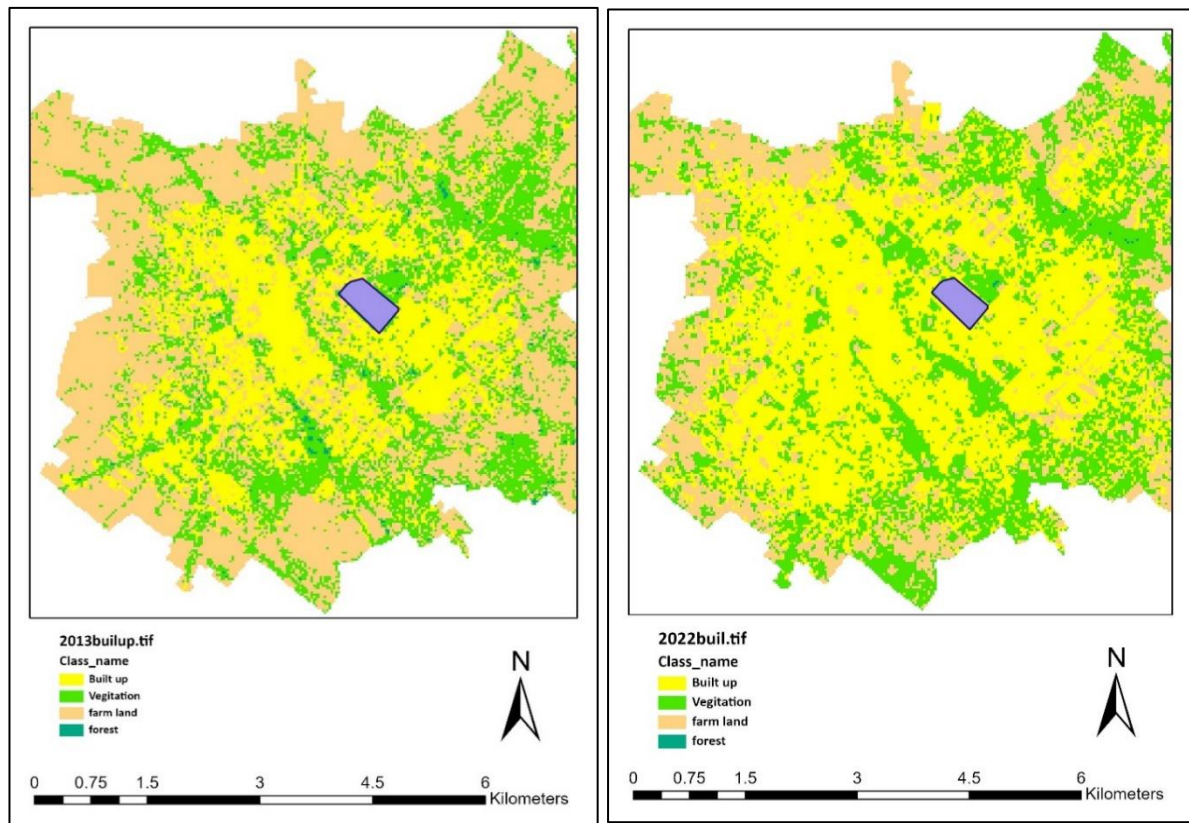


Map 4.13: Map of 2003

As illustrated in the above Map (Map 4.12 & 4.13), within 2003 and 2013 the city grows immensely. At this period the city gets its first master plan which covers a total area of 17,119 hectares. The master plan allocates residential zone around the camp. Leasing and allocating land were at its exponential during this period, as the city gets its master plan. Retired and active military personnels were given land plots to build houses by creating associations. Other professions were also allocated residential land. These leasing and allocation of residential plots expanded the city horizontally.

The camp was engulfed mostly by residential land uses. The benefits that the city gets from the camp decrease through time and the functions and responsibility of the camp decrease greatly. Training new recruits stopped totally as the camp was surrounded with the city's expansion and this halt on recruits training affects one of the main contributors of the camp which is providing customers to local business owners. Other services like garages and storages still exist but their number and functions decreased. The main purpose of the camp changed to residence of soldier's families and stationing of some soldiers temporarily.

4.3.3 effect on expansion between 2013 and 2022



Map 4.14: Map of 2013

Map 4.15: 2022

As presented in the above Maps (Map 4.14 & 4.15) the city expanded greatly. But the expansion occurred in this period is different from the last decade's expansion by the type of the expansions. The city expanded vertically and by variety of land uses. Industry zones and manufacturing sectors were the main focus of the cities municipality. Type of commercial land uses increases and expanded in terms of amount. Residential land use is also expanded but not in the rate of pervious period. Most of them are lands that is grabbed illegally and later become legal this trend increases illegal residential neighborhood.

The camp found itself immersed in very active and diverse commercial center that is in a very high rate. Rather than contributing to the surrounding growth the camp become a problem and challenge to the city. It holds a vital commercial location and prevents the surrounding business from expanding their business and customers. The city administration's new masterplan assigns commercial and public service land uses to the place the camp occupies. In this stage the both vertical and horizontal expansion are affected by the presence of the camp. As discussed above, before some decades the camp was vital to the city's growth, but through time the city grow but the camp stay still which now becomes challenge to the city.

4.3.4 Expansion Speed of Built-Up Area of Shashemene city

To determine the rate of expansion of built-up area this research uses the below formula. In the formula K is the dynamic change rate of an element which is built-up area during the study period (1986-2003-2013-2022); U_a and U_b are the areas of the element at the beginning and end of the study period, respectively; T is the study duration (Yang et al., 2020).

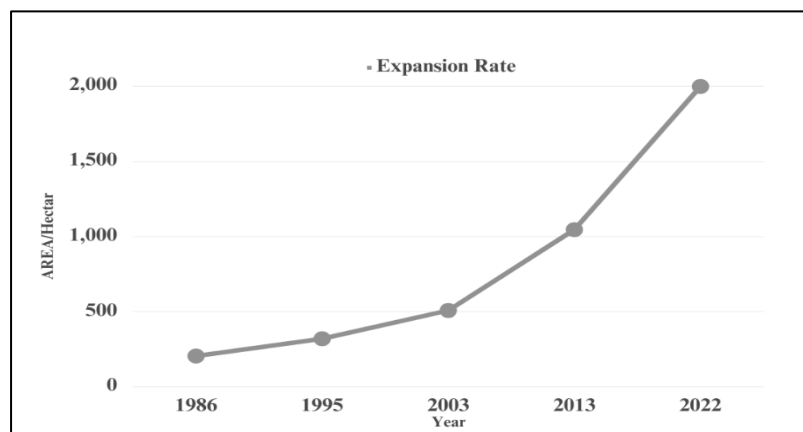
$$K = \frac{U_b - U_a}{U_a} \cdot \frac{1}{T} \times 100\%$$

Formulas 2:- Expansion rate

Based on the information tabulated in the Table (Table 4.50) and Graph 4.8 below that is generated from the above formula, the city's expansion rate is increasing yearly in terms of built-up area. The expansion that occurred from 2003-2013 is the highest of all, the distribution and leasing of residential and other land uses contribute for this high rate of expansion. The expansion of 2013-2022 is also high but it was caused by the economic growth of the city even the city had stopped leasing for sometimes.

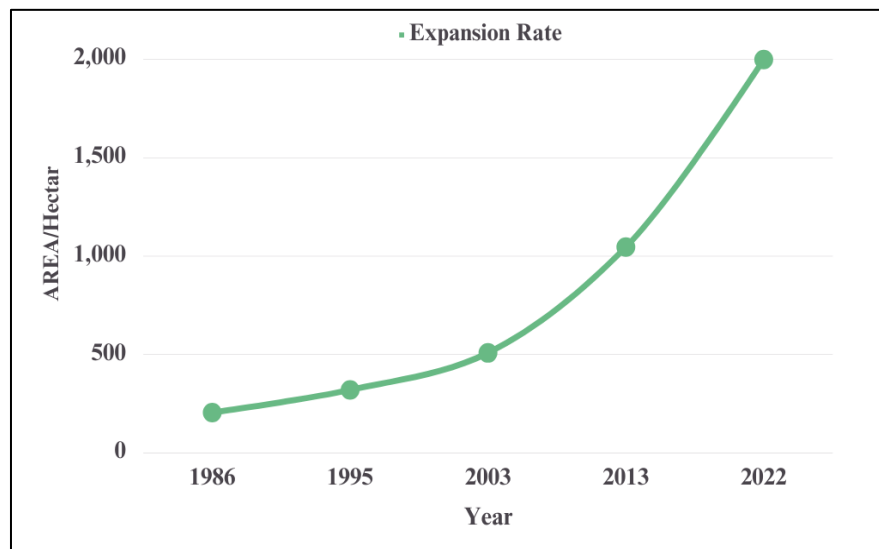
Table 4.45: Urban expansion rate

Duration	Analyzed Year				Increased area in hectares	Expansion percent	Expansion rate	Analyzed Year	Total built- up area in hectares
	1986	2003	2013	2022					
1986-2003	205	508	-	-	303	59.6%	8.6%	1986	205
2003-2013	-	508	1046	-	538	51.4%	10.5%	2003	508
2013-2022	-	-	1046	1999	953	47.7%	10.1%	2013	1046
								2022	1999

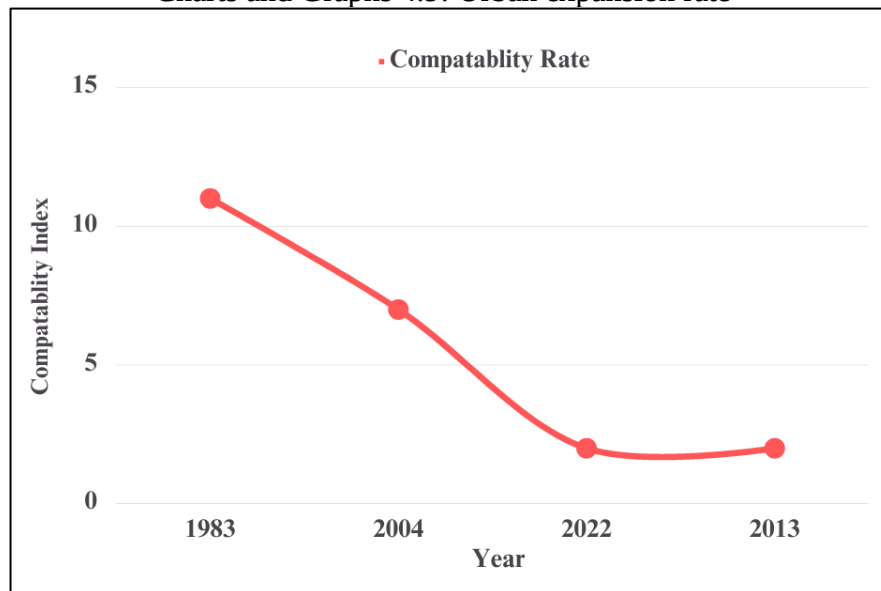


Charts and Graphs 4.8: Urban expansion rate

4.3.5 Relation of camp's compatibility with the expansion of the city



Charts and Graphs 4.9: Urban expansion rate



Charts and Graphs 4.10: Rate of decrease of the compatibility with the adjacent land

The above Graphs (Graphs 4.9 & 4.10) show the rate of the expansion of built-up area and the rate of decrease of the compatibility with the adjacent land uses. As illustrated in the above Graphs the two variables have inverse relationships. The change that brought by the city's expansions are not compatible with the camp's land use and function. The type of land uses that are adjacent to the camp changes through time from residential land uses to commercial. Most of commercial and other land uses functions doesn't much with the activities and function of the camp. Generally, as the expansion and growth of the city increases the compatibility of the camp with the surrounding land uses decrease as much.

4. 4 Social activities

4.4.1 Social activities of camp residents

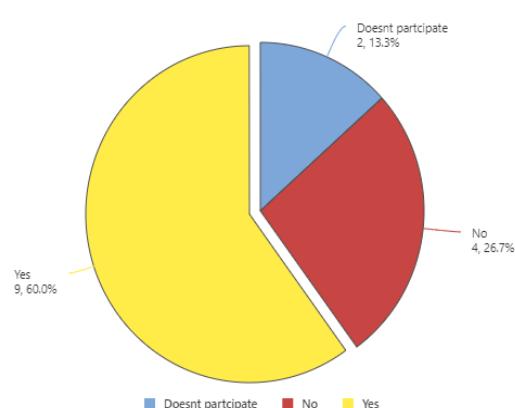
The Table below shows (Table 4.51) the results of a survey that asked 15 peoples whom lives inside the camp whether they participate in social activities and whether they participate in social activities that happened outside the camp. 86.7% of the respondents answer that they participate in social activities and out of them 69.2% said they have been participating outside the camp.

The pie Chart (pie Chart 4.11) illustrates the percentages of response to the question “do you think living inside the camp makes it hard for attending social activities outside the camp?”. Around 60% of the respondents says that they have been influenced by living inside the camp and the rest of respondents whom said they are participating social activities thinks that the camp doesn’t have a significant effect on their involvement on social activities that happened outside the camp.

The factors that led most respondents to say they have been affected are, as shown in the Table below (Table 4.51), distance which have 25% of the responses, security issue by 21.9 %, isolated environment consists 18.8% of the respondents, similarity of profession and norm difference have 12.5% and economy have 9.4% of the responses respectively.

Table 4.46: Response of residents of the camp

Do you participate in social activities?	Do you participate in social activities that are outside the camp?			Total
	Doesn't participate	No	Yes	All
No	2	0	0	2
% of Row	100.00	0.00	0.00	100.00
% of Column	100.0	0.0	0.0	13.3
Yes	0	4	9	13
% of Row	0.00	30.77	69.23	100.00
% of Column	0.0	100.0	100.0	86.7
All	2	4	9	15
% of Row	13.33	26.67	60.00	100.00
% of Column	100.0	100.0	100.0	100.0



Charts and Graphs 4.11: Response of residents of the camp to "do you participate in social activities?"

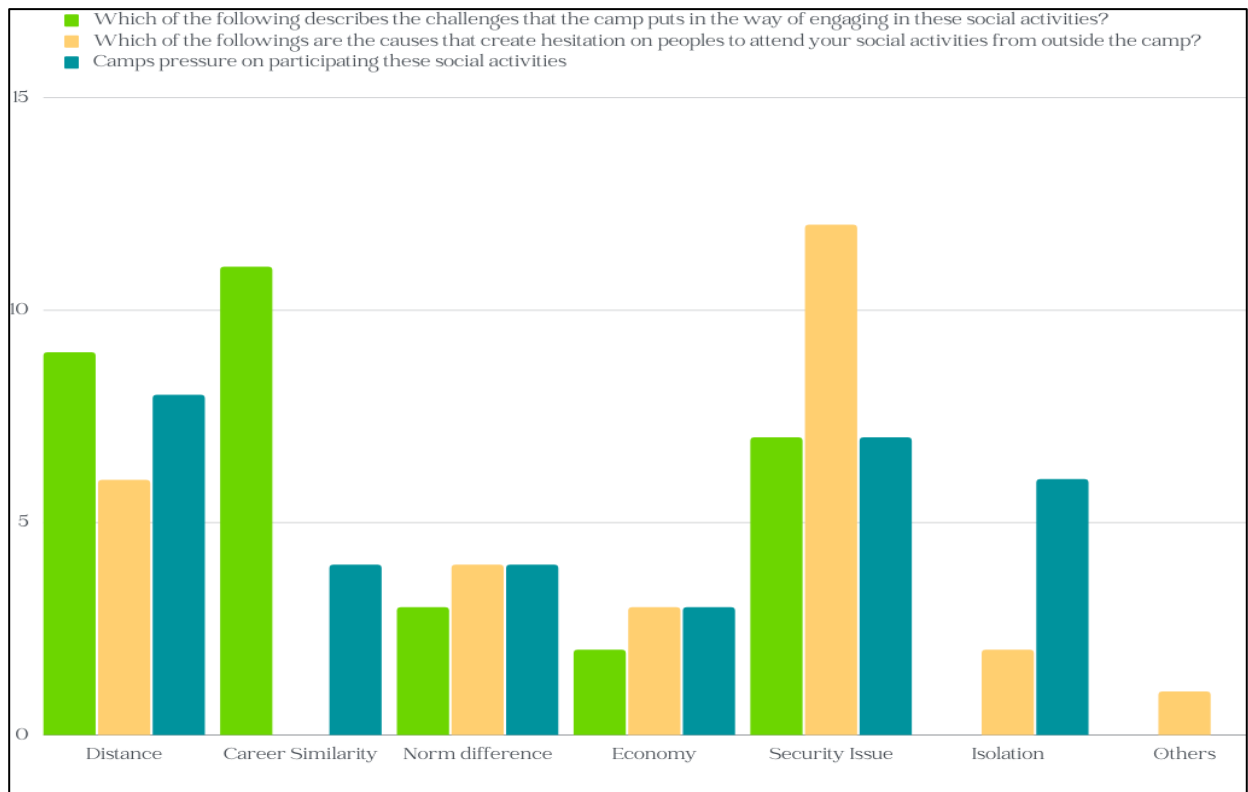
Table 4.47: Response of residents of the camp

	Do you invite peoples from outside the camp?		Do you think living in the camp create challenges to invite peoples from outside the camp in your social parties?		Do people hesitate or fear to attend your social parties from outside?	
	count	Percent	count	Percent	count	Percent
Yes	10	66.67	13	86.67	14	93.33
No	5	33.33	2	13.33	1	6.67
Total	15	100	15	100	15	100

Based on this survey, show in the Table above (Table 4.52), a majority of people do invite individuals from outside the camp to their social parties which is 66.67% of the respondents. 86.67% of the respondents believe that living in the camp creates challenges to inviting people outside the camp to their social gatherings. cause of the challenges, major percentage of people (93.33%) from outside the camp hesitate or fear attending social parties hosted by those living in the camp. only 13.33% of the respondents think the camp doesn't pose a significant challenge and 6.67% of people from outside the camp feels free.

Table 4.48: Challenges that the camp poses on peoples living inside

Indicators	Which of the following describes the challenges that the camp puts in the way of engaging in social activities?		Which of the followings are the causes that create fear or hesitation on peoples to attend your social activities from outside the camp?		Percent of Cases	Camps pressure on participating in these social activities that are outside the camp.	
	Responses		Responses			Responses	
	N	Percent	N	Percent		N	Percent
Distance	9	28.1%	6	21.4%	42.9%	8	25.0%
Career Similarity	11	34.4%	-	-	-	4	12.5%
Norm difference	3	9.4%	4	14.3%	28.6%	4	12.5%
Economy Security	2	6.3%	3	10.7%	21.4%	3	9.4%
Issue	7	21.9%	12	42.9%	85.7%	7	21.9%
Isolation	-	-	2	7.1%	14.3%	6	18.8%
Others	-	-	1	3.6%	7.1%	-	-
Total	32	100.0%	28	100.0%	200.0%	32	100.0%



Charts and Graphs 4.12: Challenges that the camp poses on peoples living inside
 The above Table (Table 4.53) and Graph (Graph 4.12) show the various challenges that the camp poses on peoples living inside in engaging in different social activities, the camps pressure on participating in social activities that are outside the camp and causes that create fear or hesitation on peoples from outside the camp to attend social activities inside the camp. The summarized challenges include:

- Distance:** according to the respondents the camps vast area and its only two gates create long distance to walk. This creates a physical distance between peoples that influences their level of intimacy and emotional connection with their friends and families. These peoples explain that they have a great connection with peoples that are near to them and meet frequently. This shows close proximity usually indicates a stronger bond and may facilitate more communication, while greater distance may lead to reduced interactions, less emotional closeness, and a weaker connection. Distance can impact the frequency, quality, and effectiveness of communication. 28.1% the answer by respondents that live inside the camp mentioned distance as a challenge to actively participate in social interactions and occasions and distance holds 21.4% of the answer that it creates fear towards guests from outside the camp. 25% of the challenges that makes participating in social occasions outside the camp is distance.

- **Career similarity:** Some campers may prefer to interact with people who have similar career goals or backgrounds as them. Even though most of the respondents were wife's and children of military personnels the similarity of their spouse's career brings challenge. They are more comfortable and confident with peers who share their aspirations and challenges. The challenges that came with being military personnel family are different and connected to fear of leaving loved ones any time anywhere. This emotional connection with their and their spouses career create a gap in social interaction with other peoples that are outside the camp. 34.4% of the answer shows that career similarity has a high effect on social interaction with others specially with different careers and 12.5% of the answer tells as career is the main challenge for peoples to participate socially inside the camp.
- **Norm difference:** based on the respondents answer some peoples from outside the camp may encounter difficulties in adapting to the norms and expectations of the camp culture. They may feel confused, frustrated, or offended by the rules, values, or behaviors of the camp staff or other people's living inside. Peoples whom lives inside the camp lives with asset of military rules for a long period of time and adopt it to their lifestyle. This encourages the norm and cultural difference between them and outside societies. Out of the responses of peoples living inside the camp 9.4% says norm difference has its own share of making it hard for social interactions and 12.5% for participating in social activities outside the camp.
- **Economy:** peoples living inside the camp have limited and known financial resources and face economic hardships that prevent them from participating in social activities. They have to save money and support their families while attending the camp. The military personnels salary is not enough to sustain normal life rather than additional expenses. The economic hardship prevents them from social activities which needs some investment like weddings, birthday parties, vacations etc. the peoples from the outside the camp feel obligated to give gifts and support in times of social parties that will be hosted by the camp residents. 6.3% of the responses suggest that economy has effect on their overall social activities and 10.7% of the response says it is one of the causes that create hesitation to outside peoples to participate social activities inside the camp. Out of the responses 9.4% said that it creates challenge to participate in social activities outside the camp.

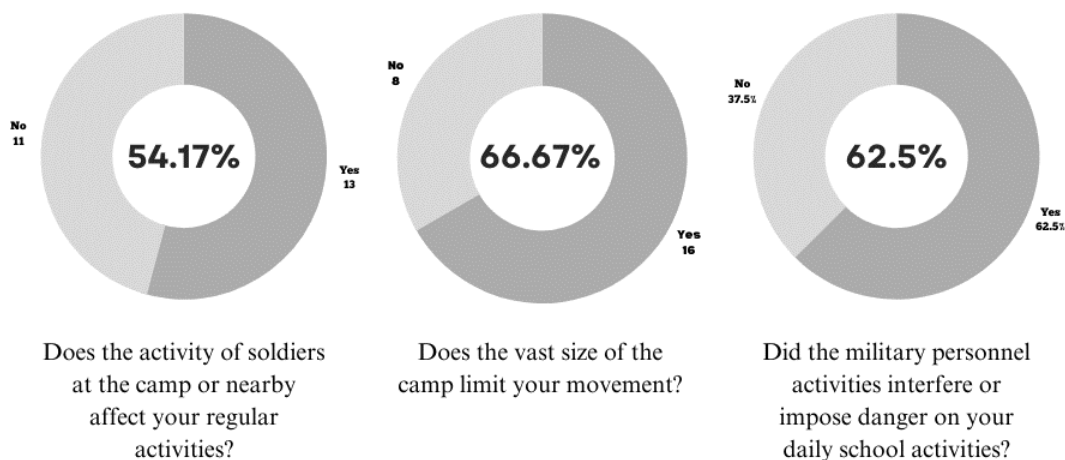
- **Security issue:** this is the main challenge of social interaction and occasions as the study area is military camp. Organizing social parties and inviting peoples from outside the camp creates difficulty for peoples living inside the camp and for peoples invited from outside the camp it creates a great fear and hesitation, because they need to pass the gate and fulfill the requirements to enter. The time limit and curfew set by the camp's management is also one of the challenges. Security issue is the main concern for peoples inside the camp to participate and invite peoples from outside with 21.9% of the responses for both. And it holds a big percentage of 42.9% of the responses of causes that creates fear or hesitation to outside peoples to participate in social occasions that are inside the camp.
- **Isolation:** the compound they live in, the profession they have or their family member does, their economic status and social status creates a strong feeling of isolation. Even if they interact with outside the camp residents the feeling of isolation is there to affect their social interaction. Isolation holds 7.1% of the response for the causes that creates fear and hesitation on outside the camp peoples and accounts 18.8% of the challenge that are posed by the camp on participating in social activities outside the camp.
- **Others:** other challenges that are mentioned by the respondents of outside the camp peoples with the account of 3.6% of the responses are fear of being harassed and denied entry because of their political views. Some respondents don't like how they are treated around the gate when requesting entry even if they fulfill the necessary requirements. Others doesn't like the compounds look, its untreated and looks like abandoned as they mentioned. Some are not comfortable in fact of it is military camp.

In summary, the main challenges faced by individuals both living inside and outside the camp in attending, inviting and organizing social activities are career similarity, norm differences and security issues with a majority percentage as shown in the above Table 4.53. Economy, isolation, and other unspecified factors are also the main challenges created by the camp.

Effect on Daily livelihood activities (surrounding society)

As the below pie Charts (Charts and Graphs 4.13) describes, the activity of soldiers at the camp or nearby affects the regular activities of 54.17% of the respondents (13). The answers of the respondents are mostly depended on the proximity of their houses to the camp. The respondent whom says no are mostly far away from the camp but the nearby houses inclined to choose yes and face the challenges greatly. The challenges that are described by the respondents are the military vehicles movement, blockage of roads as security measures, indiscriminate detentions in time of unrests, warnings around the perimeter of the camp and others.

The vast size of the camp seems to limit the movement of 16 respondents or 66.67% of the total sample (24 people). The respondents that say that camps area affect their movement are people which travels mostly to the other side of the camp daily due to work and school. This information shows that the area of the camp has a significant effect on the movement of the surrounding residents and it affects their daily activities in terms of distance, time waste and physical exhausting.



Charts and Graphs 4.13: Response of residents of the camp on social activities

Military personnel activities interfere or impose danger on daily school activities for 62.5% (15 out of 24) of respondents, while 37.5% (9 out of 24) said they do not. Educational institutions that are found around the camp faces a great challenge in their daily activities. The movement of students is monitored and surveyed by guards at the towers of the camp. The road that is shared by the camp and both educational institutions (Shashemene TVET and Preparatory school) will be blocked in times of needs this action will interfere with the educational activities which even sometimes result in halt of the educational process.

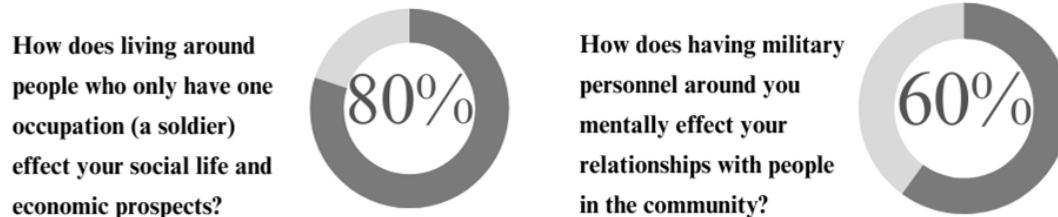
Effect on social interaction

One's social life and career prospects may be significantly impacted by living with people who solely work as soldiers. This question got a "Yes" response from 80% of the respondents, indicating that they think it has an impact on their social and financial status. Their exposure to other professions is limited by being surrounded by people in only one kind of profession. To imagine and plan for economic progress, there is a lack of information and role models as a result. The respondents feel, specially the educated, the void when discussing economic situations with other people's living outside the camp.

Table 4.49: Response of residents of the camp on social interaction

How does living around people who only have one occupation (a soldier) effect your social life and economic prospects?			How does having military personnel around you mentally effect your relationships with people in the surrounding community?		
	Count	Percent		Count	Percent
No	3	20.00	Negative	6	40.00
Yes	12	80.00	Positive	9	60.00
Total	15	100.0%		15	100.0%

Based on the Table above (Table 4.54) and pie Chart below (Chart 4.14), 60% of respondents reported a negative effect on their relationships with people in the community cause of living with military personnel around, while 40% reported a positive effect. Respondents daily interaction with external peoples is clearly influenced by their experience developed while living in the camp with military rule and military personnels. The strict laws practiced in the camp has affected how the respondents conduct themselves in social interactions which is different from how other peoples behaves. This diffrence will result in miscommunication and misunderstood by both parties.



Charts and Graphs 4.14: Response of residents of the camp on social interaction

The responses on the above Table (Table 4.54) and Chart (Chart 4.14) shows how peoples whom lives inside the camp stated their opinion on effects of living in the camp in social interaction. The response is summarized as, living in a camp can have additional effects on social interaction such as quarrels with the surrounding society accounts 11.5%, both behavioral differences and economic challenges score 26.9% of the response, and feeling isolated with the highest 34.6% score. These effects can impact individuals' ability to connect with others and may lead to further social challenges.

Table 4.50: Additional effects

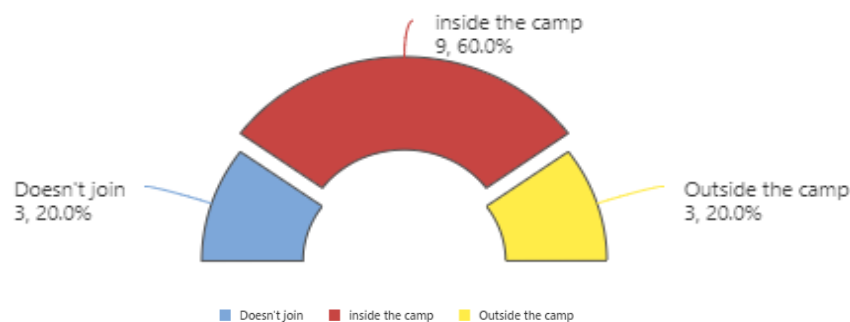
What additional effects does live in a camp have on social interaction?	Responses		Percent of Cases
	N	Percent	
Quarrels with the surrounding society	3	11.5%	23.1%
Behavioral Difference	7	26.9%	53.8%
Economy	7	26.9%	53.8%
Being Isolated	9	34.6%	69.2%
Total	26	100.0%	200.0%

- Isolation with the highest account was mentioned as the major effect of living inside the camp. These peoples live in a compound that is a monotonous society in terms of profession and family status and economy level. Their interaction with other peoples is constrained and dictated by the camps rule, their interaction will be limited. The loss of connection with others eventually creates feeling of isolation.
- Behavioral difference with coverage of 26.9% of the respondent's answer have a great effect on the respondents. The living condition of living inside the camp have a big impact and influence on the behavior of the residents. Specially peoples whom grows inside the camp exhibits behaviors that are different of the surrounding society greatly. These different behaviors are the results of growing under a military rule, being surrounded by military personnel, raised in a same and stagnant society and living with similar peoples with similar living conditions.
- Isolation and behavioral difference with other peoples will lead to misunderstanding and miscommunication, if it is not controlled it will eventually grow to quarrels and violence. Youths and children whom lives inside the camp are susceptible to physical and emotional violence which is influenced by the military rule which they grow in.

4.4.2 Social organizations

Selection of social organizations

The below Chart (Chart 4.15) shows the relationship between the selection of social organizations and living in the camp. 80% respondents said they have joined social organizations and the rest 20% didn't join any social organizations at all. 75% of the respondents whom said that they have joined social organization, they chose to be included in the social organizations which are based in the camp and the rest formed by outside society.

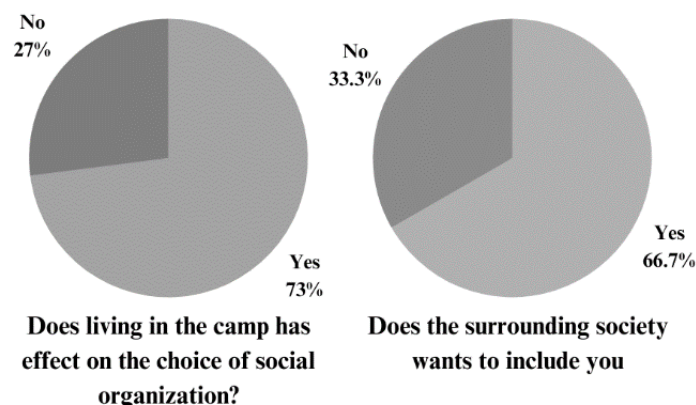


Charts and Graphs 4.15: Response for selection of social organization

The social organizations mentioned in this paper includes traditional unions like Iders, religious associations like 'tsewa' and other social associations. These associations are created informally by group of peoples which are related by same living area, same work place, same religion and other common activities. This character of social organization formation pushes the people to associate with people that are connected with one or more similarities which are mentioned above.

The pie Chart (Chart 4.16) below shows the result of the responses for the question 'does living in the camp has effect on the choice of social organization?'. Around 73% of the respondents says that it has direct effect on their choice, and the rest say it doesn't have any significant effect on their choices. The above Table lists the causes that the respondents think it affect their choice of social organizations.

And also 66.7% of the respondents think that the outside society doesn't want to include them or hesitate. These respondents think the response that they receive from the social organization they want to join is passive and has a sense of hesitancy. Some respondents mentioned that during lockdowns in the camp some social organizations that are formed outside the camp doesn't consider the case and punish them for lateness.



Charts and Graphs 4.16: Effect on selection of social organization

The causes that the residents of the camp think that the surrounding societies social organizations reason not to include them and the effect of the camp on the selection of social organizations are summarized as follows norm difference 31.3% and 18,2%, distance 31.3% and 40.9%, economy difference 18.8% and 22.7%, 6.3% and 13.6 difference in professionalism and others causes with 4.5% and 12.5%. Other causes includes that the political view difference. Distance to travel from the camp to outside and vice versa, the profession similarity that is all of the camp residents are families of soldiers or are soldiers, it is believed that by many causes the camp residents have distinctive characteristics, the economy which is very low inside the camp and other unspecified causes. Other causes include the monthly fee, the systems, and type of the social organizations.

Table 4.51 : Reasons for not to include the camp residents

	factors do you believe that makes it harder that outside societies to accept you.		Causes that affect your selection of social organizations	
	Responses		Responses	
	N	Percent	N	Percent
Distance	5	31.3%	9	40.9%
Career Similarity	1	6.3%	3	13.6%
Norm difference	5	31.3%	4	18.2%
Economy	3	18.8%	5	22.7%
Others	2	12.5%	1	4.5%
Total	22	100%	22	100.0%

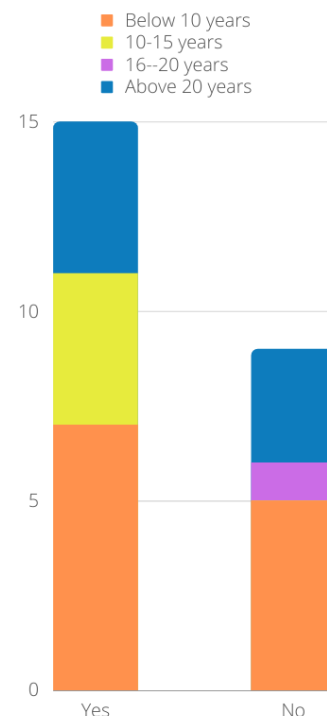
4.5 Psychological effects of the camp

4.5.1 Psychological pressure by the camp and its residences

From the data given in the below Table (Table 4.57) and Graph (Graph 4.17), it can be seen that: out of the 24-respondent surveyed: 62.5% of the people doesn't like being close to the military camp and 37.5% of the people doesn't mind being close to the military camp. The respondents that don't like being close to the camp gives reasons like the heaviness of the camp in fact of it is military institutions. Many people relate military installations with war and violence which creates fear. The power the military camp and military personnels have is unlimited which some soldiers manipulate to boost to others and get what they want, this leads to the respondent's negative reaction towards the camp. In times of political and social unrest the camp and its surrounding are in high alert for security issues. In these times any kind of measurements would be applied to any one that's near to the camp including arrest and physical and verbal violence. This and other causes create psychological impact on the residences of the surrounding society and some said they are triggered when they see the camp.

Table 4.52: Responses for the question 'are you afraid being close to a military camp?'

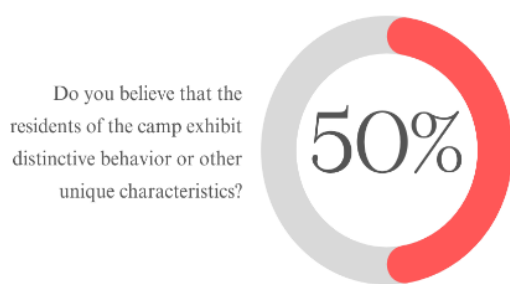
How long did you live in this neighborhood?	Are you afraid being close to a military camp?		Total
	No	Yes	
10-15 years	0	4	4
% of Row	0.0	100.0	100.0
% of Column	0.00	26.67	16.67
16--20 years	1	0	1
% of Row	100.0	0.0	100.0
% of Column	11.11	0.00	4.17
Above 20 years	3	4	7
% of Row	42.9	57.1	100.0
% of Column	33.33	26.67	29.17
Below 10 years	5	7	12
% of Row	41.7	58.3	100.0
% of Column	55.56	46.67	50.00
All	9	15	24
% of Row	37.5	62.5	100.0
% of Column	100.00	100.00	100.00



Charts and Graphs 4.17: Responses for the question 'are you afraid being close to a military camp?'

The data tabulated in the below pie Chart (Chart 4.19) shows that there is an equal split in opinions, with 50% of respondents believing that the residents of the camp exhibit distinctive behavior or other unique characteristics, and the other 50% not believing so. This indicates that there is varying individual experiences and perspectives among the respondents.

In the Graph below (Graph 4.18) respondents' reasons why they chose yes for the question "Do you believe that the residents of the camp exhibit distinctive behavior or other unique characteristics?" is presented. Communication problem holds the highest percentage of 26.9%, inferiority complex with 23.1% and superiority complex with 19.2% holds second and third place respectively. anger with score of 19.2% listed in forth as the reason and arrogance with 11.5% listed last.



Charts and Graphs 4.19: Responses on distinctive behavior of the camps residents



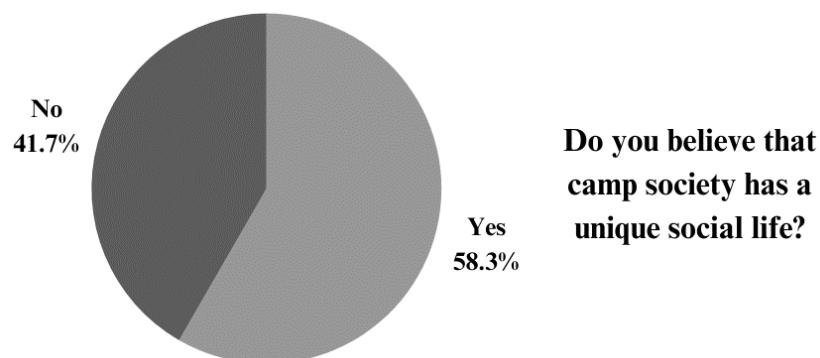
Charts and Graphs 4.18: Distinctive behaviors of the camp residents

- Superiority, that have 19.2% of responses, can occur when military families believe themselves to be above others due to their association with the military. This can be a result of the pride and honor felt towards their service member. In some respondent's experience if their superiority status is not respected, they will be prone to arrogance and aggressive.
- Arrogance with 11.5% account of the response, can be associated with feelings of entitlement or being overly proud of one's military family member. This pride may lead to boasting or acting superior to others, creating an environment of hostility and disrespect.
- Inferiority, 23.1 % of the responses, can also affect military families as they may struggle with the separation from their loved one and the challenges this may bring to

their daily lives. Peoples whom lives inside the camp may feel inferior when attempting to handle household responsibilities, deal with financial stress, or cope with emotional hardships without the support of their partner or parent which is unavailable most of the time because of military deployments. These feelings may lead to self-doubt and a lack of confidence in the family's ability to function properly especially when noticing other family's daily life and support and love the get from their family member.

- Anger, with 19.2% of the responses is one of the common emotions experienced by these families, and it can arise from various situations and circumstances, such as: Military families face frequent separations due to deployments, training exercises, or other assignments, These periods of separation can be challenging both emotionally and practically: Lack of support or understanding from non-military friends and family: Military families may feel isolated from non-military friends and family who do not understand the unique challenges of military life. Both superiority and inferiority will also lead to anger and violence.
- Military families find it difficult to adjust to civilian life, resulting in communication challenges, 26.7% of the responses, with friends and extended family members who have not experienced the military lifestyle and its consequences. Family members may be unsure of how much to share or how to explain the unique challenges they face, their point of view, their feelings and requesting help and support.

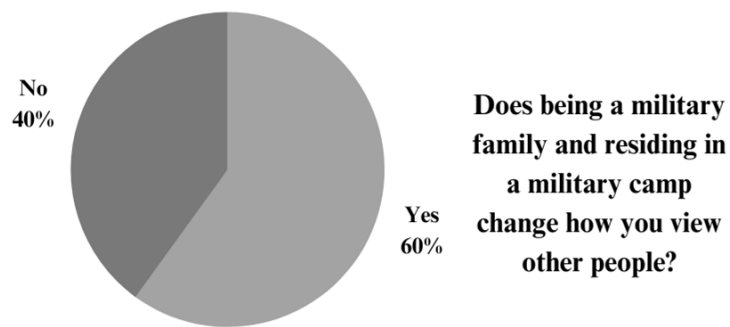
In relative to the information gathered on the behavior of the camp society the researcher asked the surrounding society, if the camps residents have a unique social life. The below pie Chart (Chart 4.20) shows that, 58.33% of the respondents that live in the surrounding neighborhood believes that camp society has a unique social life, due to the environment they live in, while 41.67% do not believe so.



Charts and Graphs 4.20: Response to 'Do you believe camp society has a unique social

Perception of the camps residents to others

Based on the social life difference the camp residents were asked if it seems that being a military family and residing in a military camp does change how they view others, as 60% (9 out of 15) of the respondents indicated that it does. However, there are still those who feel that it does not affect their view of others, which makes up 40% (6 out of 15) of the respondents.



Charts and Graphs 4.21: Perception of the camps residents to others

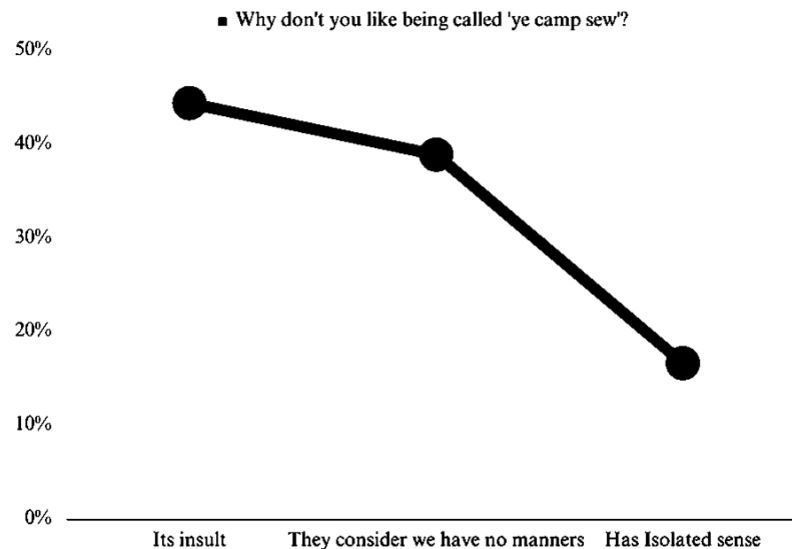
Being a military family and residing in a military camp can potentially change how they view other people, but this is subjective and depends on individual experiences and perspectives. Living in a military environment exposes families to a unique blend of cultures, values, and experiences that can impact their outlooks on life. The cultural and norm difference between these two different communities that is created by the one society living in a military compound and being military family, changes and affects their views towards each other.

Impact of being referred as ‘ye camp sew/የካምፕ ሰው’

Locally people who lives in the camp are referred to as ‘ye camp sew’ which not only points the place they live but also implies the way of life and character of the residents. It seems that 100% of the respondents (15 out of 15) do not like to be referred to as "ye camp sew.". Most of the time this term is used to attack and in negative The below Graph show that the majority of people with the score of 44.4% consider being referred to as “ye camp sew” to be insulting.

As per respondents of the residence of the camp the term is mostly used referring to bad characteristics that the surrounding society thought they have. Among the respondents 38.9% of individuals feel that it leads others to believe they have no manners, as mentioned earlier the term is mostly connected to behaviors like arrogance, mannerless conducts, prone to verbal and physical violence and others characteristics and term inflicts such meanings to the receiver end.

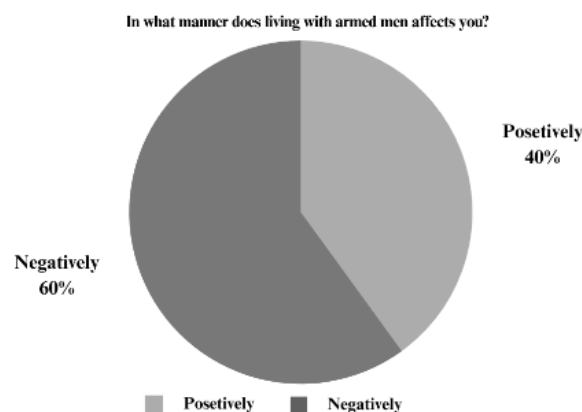
Additionally, 16.7% of people think that it has an isolating sense to it. The meaning of the term ‘ye camp sew/የካምፒ ሰው’ refers who they are, where they live, what’s their economic status, what’s their family situation and their personal characteristics, which is their sensitive issues and isolates and hurts their feeling when others used on them. Overall, the majority do not prefer to be referred to as “ye camp sew” primarily because they find it offensive and believe it reflects poorly on their social and personal lives.



Charts and Graphs 4.22: Reason for not liking to be called 'ye camp sew'

4.5.2 View on armed and military personnels

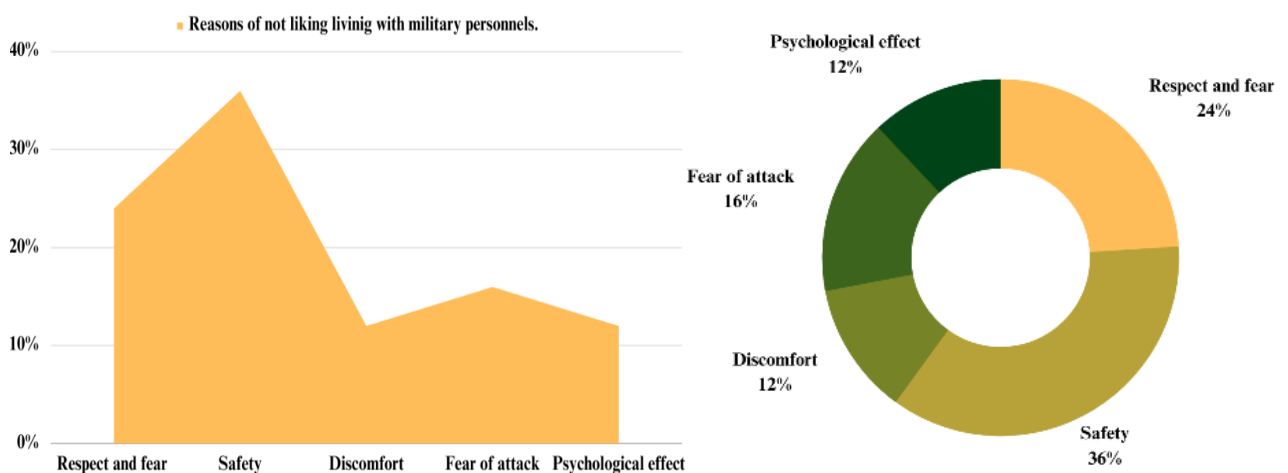
The residents of the camp were asked how living with armed military personnel affects you? The below pie Chart (Chart 4.23) shows that 60% of respondents are affected negatively while living with armed personnels, the rest 40% said they are affected positively. All of the respondents explain their points of view on this topic as shown in the below Graph.



Charts and Graphs 4.23: View on armed and military personnels

Some of the impacts the respondents mentioned are summarized and listed as follows:

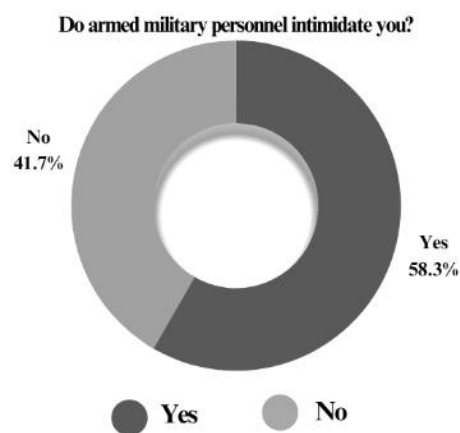
- Respect and fear by outside society have 24% of the responses: Living with military personnel may garner a sense of respect or fear from others because of their family member profession and the association with a powerful organization.
- The second effect mentioned was Safety with accounts of 36% of the responses. Some individuals may feel safer living with armed military personnel due to their training and ability to protect others. They may feel more secure knowing that someone is nearby who can handle potential threats.
- Discomfort was also mentioned by 12% of the total responses, some people feel uncomfortable living with armed military personnel. They might not agree with their profession or feel uneasy around firearms.
- Fear of attack with 16% of the responses also mentioned: Living with armed military personnel could increase the fear of becoming a target for an attack. It might make individuals feel more vulnerable or be a constant reminder of potential dangers. In the last few years camp residences feel the fear of being attack because of the military actions and political turmoil the city and the country faces.
- At last psychological effects by 12% of the responses: Living with armed military personnel could have psychological impacts on individuals. Specially children and peoples whom grow up inside are affected mostly. The set of rule the camp is governed are not suitable and comfortable for civilian population and impacted the respondents highly.



Charts and Graphs 4.24: Reasons for not liking living with armed personnels

The surrounding society members were asked if they are intimidated by the soldiers and armed military personals. From the data provided in the below pie Chart (Chart 4.25), it seems that 58.33% (14 people) are intimidated by armed military personnel, while 41.67% (10 people) are not. Many emotions and personal feelings have their part in feelings when in contact with military personnels. The presence of armed military personnel evokes a strong image of power and authority. The respondents point out that the irresponsible and erratic display of power is the main reason for them to be intimidated by military personnels. Some people say they feel intimidated by the sheer presence of the military and the weapons they carry. Aggressive interaction and perception with the civilian society will affect and harm the image of the military. These peoples will have negative ideas about the military at all and could spread this type of negative information to others.

The presence of military personnel often indicates high levels of tensions or potential conflict, which can generate increased anxiety among people living in the area. In recent years' experience, when people see group of military personnel their immediate though would be "is there problem?". This and other causes lead peoples to feel intimidated when they notice military personnels.

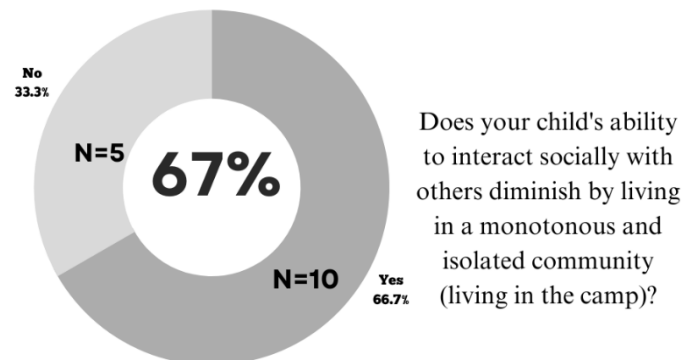


Charts and Graphs 4.25: - Response on intimidation of armed

4.5.3 Effect on psychology of children's living inside and the surrounding

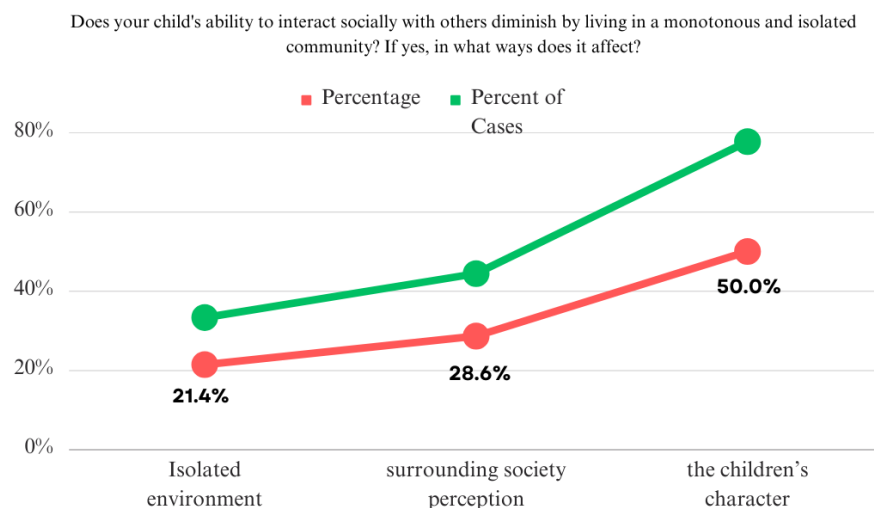
Based on the gathered data that is provided in the Chart below (Chart 4.26), 66.67% of the polled respondents believe that a child's ability to interact socially with others does diminish by living in a monotonous and isolated community which is the camp, while 33.33% believe it does not. Social interaction and communication skills are typically developed through regular

interactions with a diverse group of people, which helps the child learn various social cues, norms, and behaviors.



Charts and Graphs 4.26: Effect on child ability to interact

In this military camp community, a child may have limited opportunities to interact with others or may only interact with a small group of people which consists of soldiers and military personnels and immediate family members. This can lead to a lack of exposure to different perspectives, ideas, and social dynamics, which may hinder the development of well-rounded social skills. As a result, the child may face difficulties in adapting to new environments or engaging with people who have different backgrounds and views.



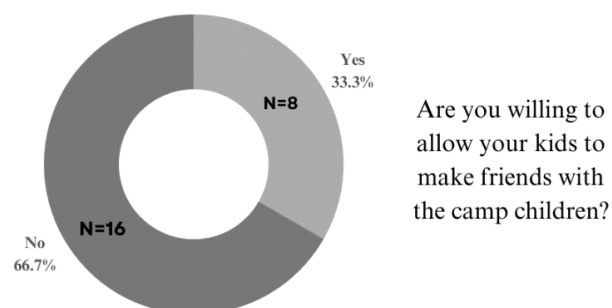
Charts and Graphs 4.27: Causes on effect on child ability to interact

The above Graph (Graph 4.27) shows the reason the respondents answer yes, a child's ability to interact socially with others can diminish by living in a monotonous and isolated community. The respondents say living in such an environment affects children in several ways:

- The first is Isolated environment with score of 21.4%: Being isolated and not having many opportunities for social interaction can limit a child's ability to develop and practice essential social skills. They may find it challenging to establish and maintain friendships or understand social cues and norms.
- Secondly Surrounding society perception is mentioned by 28.6% of the answers: Living in an isolated community can lead to a limited or skewed understanding of the world and different societal norms. As a result, children's perceptions of society and cultural diversity may be limited, which can hinder their ability to adapt and interact with individuals from the surrounding society.
- Lastly and the mostly mentioned reason is the children's character with the account of 50.0%: The lack of social interaction and exposure to diverse perspectives can impact a child's personality and character development. It may lead to them being introverted, socially anxious, or less empathetic towards others. Additionally, they may struggle with communication, problem-solving skills, and teamwork, which are essential for successful social interactions and relationships. In summary, living in a military camp with monotonous community can negatively impact a child's social development and ability to interact with others.

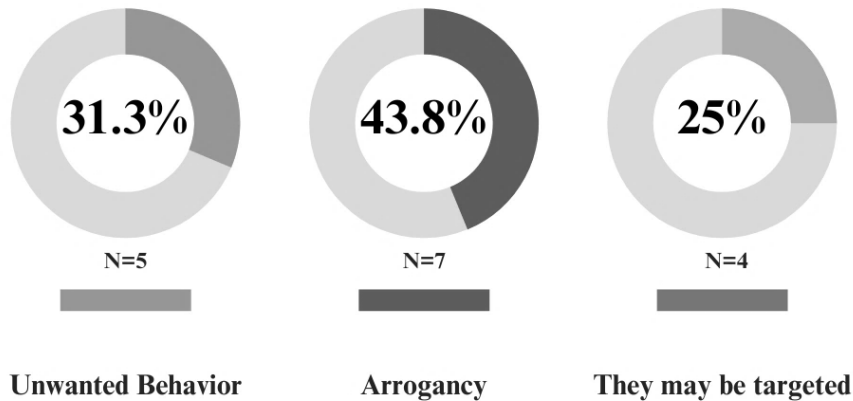
Social interaction of Childrens with each other

It is obvious that the difference in living environment and condition could affect the social interaction of Childrens whom lives in the camp with the surrounding societies Childrens. Specially families of the surrounding society are concerned more. The survey shows that 16 people out of 24 with the accounts 66.67% of the answers are not willing to allow their kids to make friends with camp children, while 8 people with 33.33% of responses are willing. The respondents mention their reasons to not allow or restrict their children from forming friendship with the children from the camp, even if they are sympathetic to those camp children, they think they are bad influence to their children.



Charts and Graphs 4.28: Willingness of parents on interaction with camps

Are you willing to allow your kids to make friends with the camp children?... If you chose no, why?



Charts and Graphs 4.29: Reasons for not allowing kids to make friends with camp children

The reasons for not allowing kids to make friends with camp children are organized as follows:

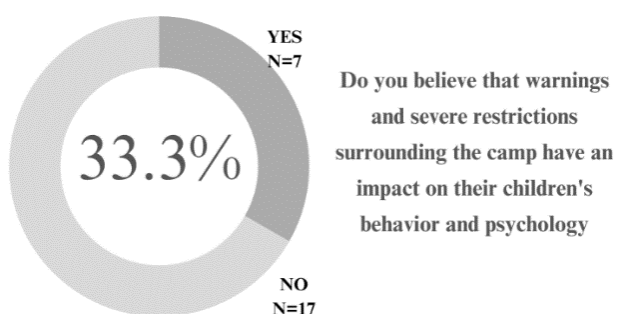
- firstly, mentioned was unwanted Behavior: with the account of 31.3% of responses are concerned about the potential influence of unwanted behavior from camp children on their kids. Military children might exhibit unwanted behavior as a result of stress, frustration, or anxiety related to their military family lifestyle of uncertainty of the return of their parent from deployment and assignment there are assigned in. Some military children might demonstrate physical or verbal aggression toward others because of the type of people they are surrounded with that are set to solve problems with violent acts and physical solutions.
- The second and the most mentioned reason is their behavior of Arrogance: and holds 43.8% of responses believe that camp children may display arrogance because they belong to soldier families, which can affect their kids' friendship. They may feel a sense of entitlement or superiority due to their association with the military and their parents' service. This could lead them to think they deserve special treatment or privileges that other children don't receive. Some respondents noticed this kind of acts by children from the camp. Just as the military has a strict hierarchical structure and codes of conduct, military children may expect similar respect and obedience from their peers. This can lead to arrogant behaviors, such as disobeying rules or disregarding the authority of teachers and supervisors.
- The last reason will be Potential Target: by 25.0% of responses feel that their kids may become targets if they are friends with camp children. During the unrest that occurred in the last few years in the city, attackers were aiming to children of military personnel

as a response to the measure the military takes against them. This makes the surrounding society to consider to limit and stop their children friendship with the camp children. These parents take such unfair and bad decisions in order to protect their own children.

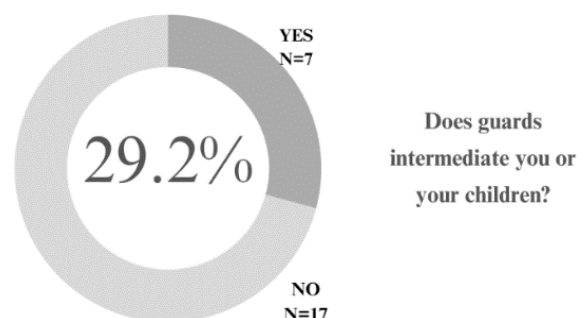
Other psychological impact

Out of 24 people, 17 with the value of 70.83% answered that guards do not intermediate them or their children, while 7 (29.17%) said yes, guards do intermediate them or their children. Military guards can potentially intimidate children depending on factors like the circumstances, the presence of weapons, and the demeanor of the guards. The unfamiliarity of the situation and the imposing uniforms can also contribute to a child feeling intimidated. Childrens are exposed to movies that include military action scenes which implant violent ideas to their mind. When the children see uniformed soldiers, this implanted thought of violence will be triggered.

The majority of the participants by 37.50% do not believe that the warnings and severe restrictions surrounding the camp have an impact on their children's behavior and psychology. However, there is a significant portion with 33.33% that believes the opposite, with a potential impact on their children. Children who are constantly surrounded by warnings and severe restrictions may develop increased levels of fear and anxiety due to the perceived threat in their environment. The perception of these children about military is affected by the blunt and direct threat posed by varies types of signs and warnings that creates fear and intimidations.



Charts and Graphs 4.30: Effect of warning signs on children



Charts and Graphs 4.31: If guards intimidate children

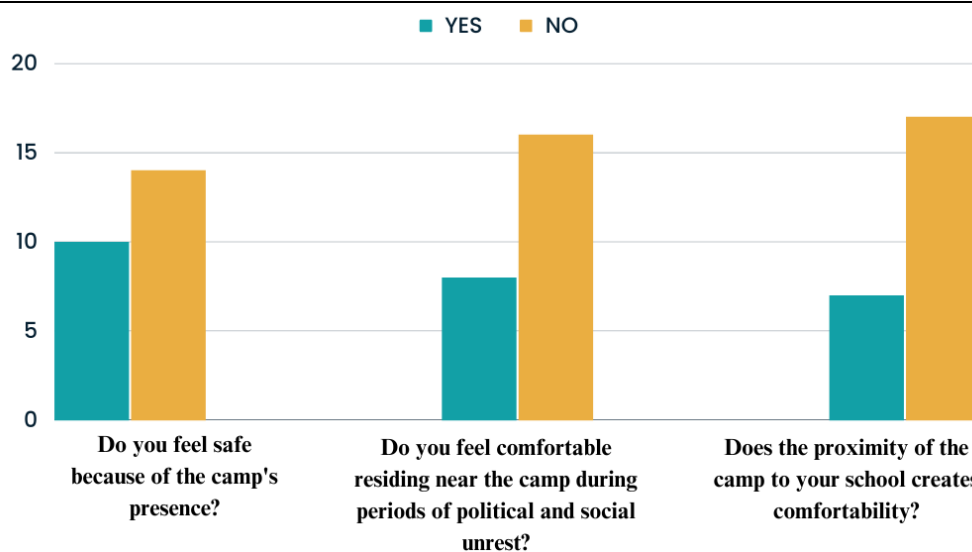
4.5.4 Safety of peoples working and living around

Based on the responses that is described in the Table (Table 4.58) and Graph (Graph 4.32) below, only 41.6% of participants that live in the surrounding society feel safe due to the camp's presence, while 58.3% doesn't feel safe living and working around the camp. Their reasons to feel what the they feel is listed in the next Table 4.58. Also, a significant number of respondents from the surrounding neighborhood that is around 16 respondents (66.67%) feel uncomfortable residing near the camp during periods of political and social unrest. The survey presented in the Table (Table 4.58) and Graph (Graph 4.32) below shows that the proximity of the camp to the school creates comfortability for 29.2% (7 out of 24) of the respondents, while 70.8% (17 out of 24) of respondents do not feel comfortable with it.

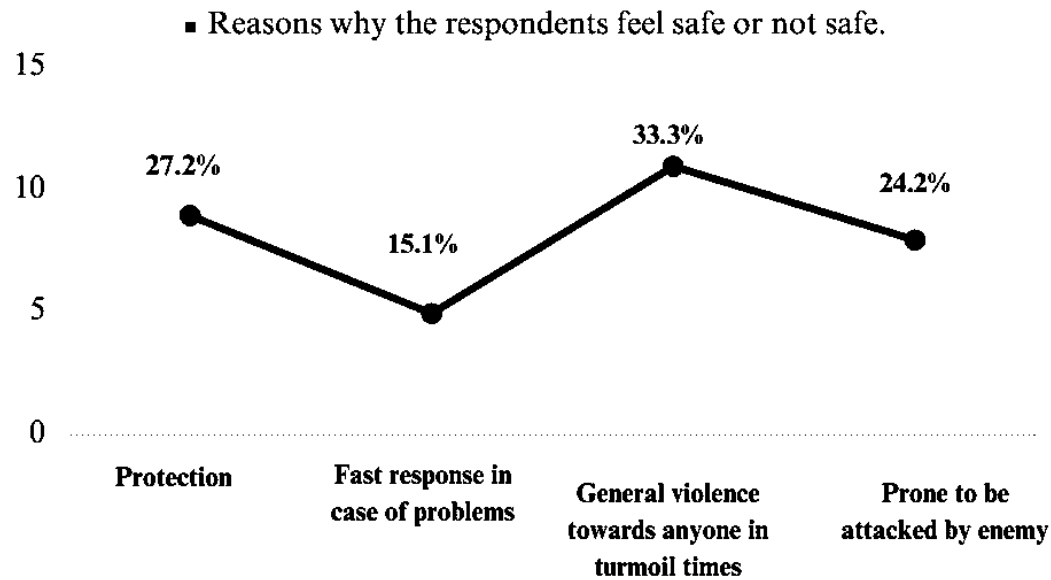
Therefore, the majority of respondents of peoples living in the surrounding societies and students and stuff of the nearby educational institutions do not find it comfortable whether in peace times or in political unrest periods. Both types of the respondents mentioned their reasons and causes to feel safe or not or comfortable or uncomfortable and presented in the next Tables and Graphs (Graph 4.33).

Table 4.53: Responses of participants from outside the camp

	Do you feel safe because of the camp's presence?		Do you feel comforTable residing near the camp during periods of political and social unrest?		Does the proximity of the camp to your school creates comfortability?	
	Count	Percent	Count	Percent	Count	Percent
YES	10	41.6	8	33.33	7	29.2
NO	14	58.3	16	66.67	17	70.8
N=	24	100	24	100	24	100

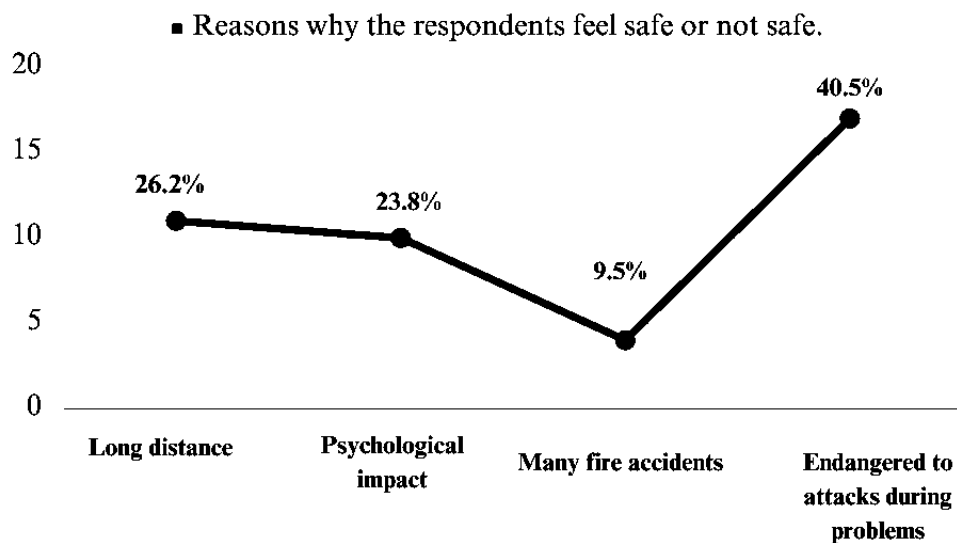


Charts and Graphs 4.32: Safety and comfortability of the adjacent residents



Charts and Graphs 4.33: Reasons why they feel safe or not

Based on the responses, it seems that a majority of people with accounts of 27.2% feel safe due to the camp's presence as it provides protection. These peoples responded that the presences of military camp and personnels will provide protection for their life, businesses and home intentional or unintentionally. The crime rate around the camp is zero compared to other parts of the city and it is safe to move at any time except if there is any command post or other safety measures. About a quarter of the respondents by 15.1% score feel safe because of the fast response in case of problems which needs military action. Also, it is around military camp any other emergency response needed from municipality will be provided immediately.



Charts and Graphs 4.34: Reasons why respondents feel safe or unsafe

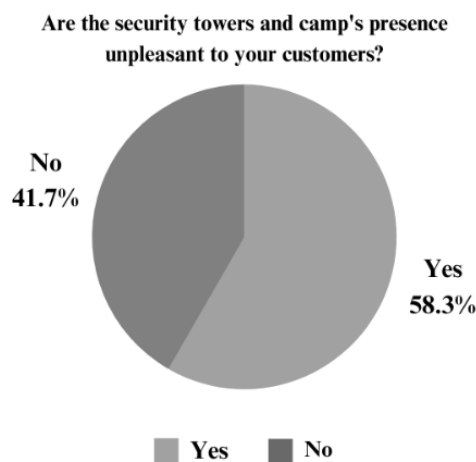
However, there is also concern among some people as they feel they are in danger; 33.3% of the responses shows some respondents believe that they are prone to being attacked by enemies due to the camp's presence, the respondents says that the experience of the recent years and some other camps in other cities make them to worry that someday the attack will come and they will be caught in the middle. and 24.2% are worried about general violence towards anyone during tumultuous times.

Overall, it appears that most people don't feel safe, because there are valid concerns about potential danger associated with the camp. The above Graph shows how the proximity of the camp to the school creates some levels of discomfort on students and staff members of the schools for various reasons:

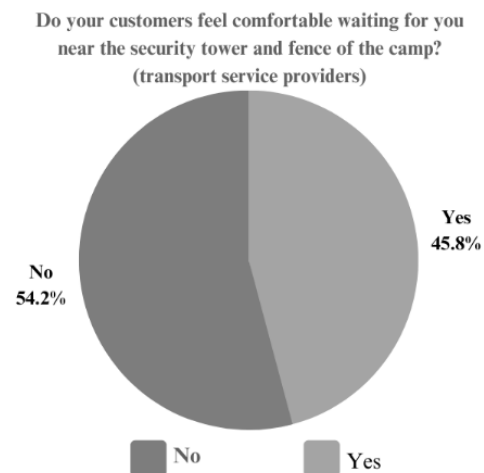
- The first to be mentioned is long distance with 26.2% (11% of the respondents): Some students find it challenging to cover the distance between the camp and the school, which might cause fatigue or difficulty reaching the campus on time.
- The second is psychological impact/fear with 23.8% of responses: The close proximity of the camp to the school can lead to feelings of anxiety or fear, which can be distracting and potentially impact the students' learning process.
- The other previously undermined cause is fire accidents 9.5% of respondents mentioned it: The presence of the camp near the school increases the risk of fire accidents, compromising the safety of students and staff. The current physical condition of the camp is dominated by dry and untreated shrubs and plants, the buildings and electrical installations are poorly constructed.
- The last summarized reason is endangered to attacks during political problem times with the accounts of 40.5% of the responses: The camp's proximity to the school puts students and staff at higher risk of being targeted during any potential conflicts or attacks, adding a layer of security concerns.

4.5.5 Impact of the camp's gate and towers and warning signs

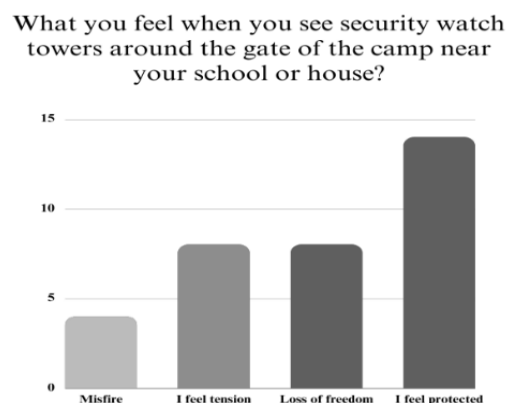
Based on the survey information on the Graph below (Graph 4.35) Out of 24 of local business owners, 58.33% of their customers (14 people) find the security towers and camp's presence unpleasant, while the other 41.67% (10 people out of 24 respondents) find them unpleasant. The presence of security towers and a camp may make some customers feel uncomfortable, as they might associate these structures with high control, or surveillance in the area. Some customers think if they make an honest mistake the response of the guards will be harsh and unprecedented. The Graph below provided below Out of the 24 'bajaj' transport service providers surveyed, 11 of them with the account of 45% feel comfortable waiting near the security tower and fence of the camp, while 13 customers (55%) do not feel comfortable as described by the transport service providers. Being surveyed all the time is burden to a person to conduct himself very carefully, a simple mistake will lead to bad interaction with the guards.



Charts and Graphs 4.35: Customers comfortability (local business owners)



Charts and Graphs 4.36: Customers comfortability (transport service providers)



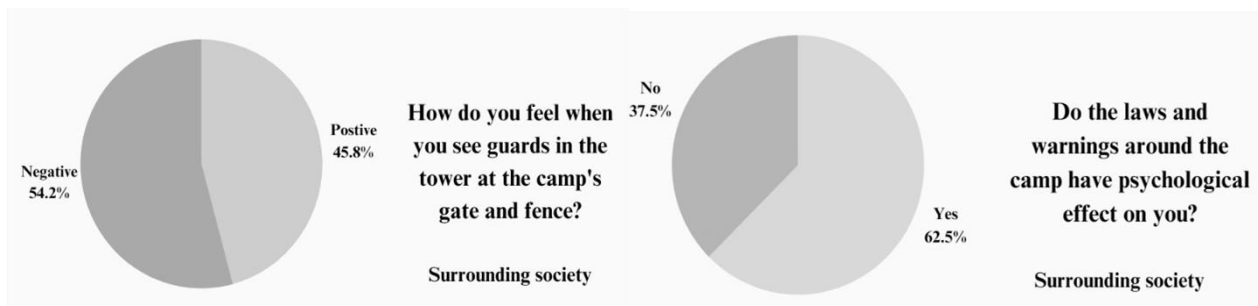
Charts and Graphs 4.37: Feelings when noticing security towers and gates around school or home

Students of the adjacent schools asked ‘What you feel when seeing security watch towers around the gate of the camp near your school or house?’, the responses are as follows:

- Afraid of Misfire with 11.8% of the responses (4 responses), some students point out their fear of misfire due to a simple human error or irresponsible handling of firearms. Some soldiers that are easily triggered and doesn’t have self-control with firearm poses a great danger to the students and the residents.
- Feeling of tension was mentioned by 23.5% (8 responses) of the responses, watching armed military personnels around will reminded of them that there is danger around.
- Loss of freedom with 23.5% (8 respondents) they mentioned that they have to act in certain manner around and the restriction of movement and some actions the students feel loss of freedom to do and act as the want.
- And the final and positive answer is Feel protected with the highest counts of 41.2% (14 respondents).

From the data gathered from the surrounding societies, it is observed that: 54.17% of people have a negative reaction when they see guards in the tower at the camp's gate and fence, these respondents connect military personals with violence and political idea. 45.83% of people have a positive reaction to the same situation.

The majority of respondents 15 out of 24 with the account of 62.5%, indicate that the laws and warnings around the camp affect them psychologically. Which means they are intimidated, feel anxious when passing nearby the perimeter, it dictates power and authority and so on. The use of words and type of sentences are in command and threatening sense. The fact that the compound is military camp, the warnings are taken seriously and people are concerned when passing by. However, 37.5% of respondents say that they are not affected by these warnings or laws.



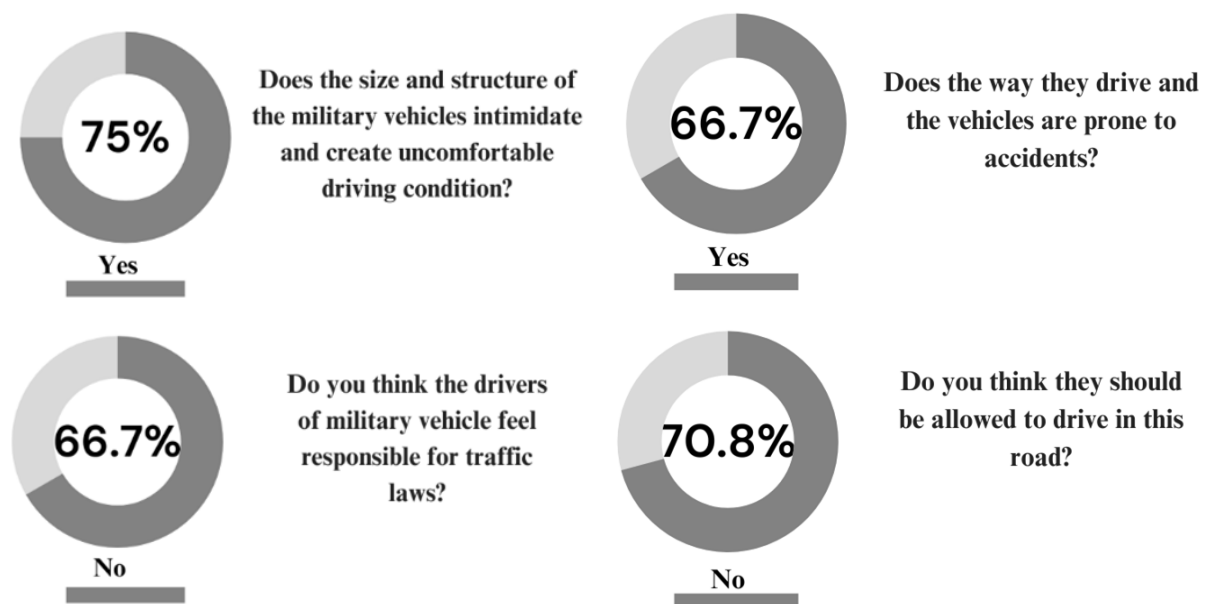
Charts and Graphs 4.39: Comfortability around camp gates and towers (local residents)

Charts and Graphs 4.38: Warning signs and laws around the camp have psychological effect

4.5.6 Danger of military vehicles on transport providers and pedestrians

From the data gathered from transport service providers, it appears that the majority of military vehicle drivers (66.7%) doesn't respect the traffic laws. Most of transport service providers with the account of 75%, feels intimidated or uncomfortable due to the size and structure of their vehicles. The data provided (Chart 4.40) shows that out of the 24 people surveyed, 16 people (66.7%) believe that the way they drive and the vehicles they use are prone to accidents, while 8 people (33.3) think otherwise. Out of the respondents, 70.8% think they should not be allowed to drive on the road and 29.2% think they should still be allowed.

The military vehicles are designed for different type of natural terrain, while driving in the cities the structure of these vehicle hinders the traffic movement. They are very big and tall; this will affect the driver's sight near him. Intimidate the civilian, create a worry that something is not right special in political situations. The drivers are trained to drive in different scenarios that are very differ from the situations in the city, this creates dangerous situations. The fact that these vehicles are military they are considered immune to traffic laws. The drivers derive in erratic and unmannered way and disturb the surrounding traffic.



Charts and Graphs 4.40: Effect of military vehicles on transport providers and pedestrians



Figure 4.10: Transport service (bajaj) around South-East direction



Figure 4.11: Transport service (bajaj) around North-West direction

Other effects of the camp

Table 4.54: Other effects

What other affect do the camp imposes?	Responses	
	N	Percent
Limited movement around	16	24.2%
No beauty / cleanness	20	30.3%
Can't work around in times of problems/command post laws	23	34.8%
Some guards/soldiers are aggressive towards us	7	10.6%
Total	66	100.0%

The camp imposes several effects on the people: first limited movement around 24.2% of respondents reported limited movement around the camp due to laws and restrictions. Secondly low aesthetics / cleanness 30.3% of respondents noted the lack of beauty and cleanness in the camp. The perimeter of the camp is not treated, this lead to create dirty and weed occupied fences. Third, can't work around in times of problems/command post laws 34.8% of respondents mentioned a lack of available work and the impact of command post laws. Fourth, some guards/soldiers are aggressive towards us 10.6% of respondents reported experiencing aggression from some guards or soldier.

4.6 Economic Factors

To improve service delivery and good governance through project construction management and implementation finance budgeting as well as resource mobilization is critical. The financial performance of the city shows that its efficiency for recurrent and capital expenditure has been improving. Shashemene city administration has been made its greater effort by enhancing service delivery and by increasing infrastructural coverage to eradicate poverty and improve the welfare of the community. Expenditure budget is deliberately allocated for salary, recurrent, and capital projects (Shashemene city profile).

4.6.1 Lease value of the study area

Relation to revenue collected

State revenue and municipal revenue collection was achieved in 2013 was **354,615,422.97** birr and **112,956,654.61** birr respectively. In the year 2014, state revenue and municipal revenue collection was achieved **598,689,502.34** birr and **169,070,793.68** birr respectively. The total revenue collection of the city within two years, in 2013 and 2014, was **467,572,078** and **767,760,296** birrs respectively. As the city, average total revenue collection growth rate within two years was **617,666,187**.

Table 4.55: Lease value of the study site

Type of land use	Camps area per land use in m2	grade	Starting lease investment per m2 by birr	Minimum income	Maximum lease investment per m2 by birr	Maximum income in birr
commercial	104000	1	1150	119,600,000	5304.32	551,649,280
Civic services	120000	1	1150	138,000,000	5304.32	636,518,400
Total	224000			257,600,000		1,188,167,680

Out of 22.4 hectares of the camp, the city proposed half of the site to commercial land uses and civic service land use. The commercial land use includes functions like hotels, restaurant, motels, grocery stores and other many commercial services. The civic services

include cultural and welfare services that helps to enhance the society culturally and socially. Based on the minimum and maximum starting lease investment set by the Oromia regional state the proposed commercial area of the current camp the city will get minimum of 119,600,000 birr and maximum of 551,649,280 birr.

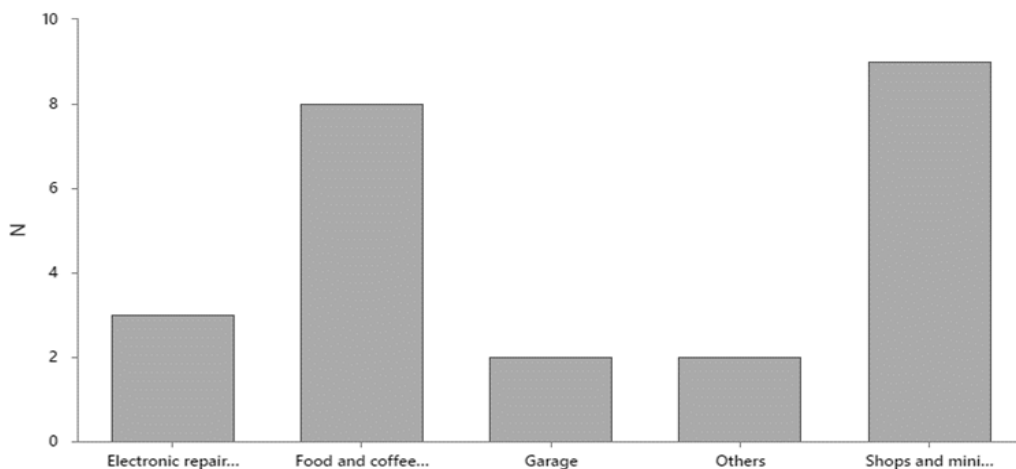
Table 4.56: Comparison of the lease value and the city budget

Non municipality and Municipality budget of 2014 respectively	Minimum income of the proposed camp site (both commercial and civic service)		Maximum income of the proposed camp site (both commercial and civic service)	
		Percentage comparing to the budget		Percentage comparing to the budget
318,698,506.57	119,600,000	37.5%	551,649,280	173%
	138,000,000	43.3%	636,518,400	199.7%
192,848,772.45	119,600,000	62%	551,649,280	286%
	138,000,000	71.6%	636,518,400	330%

The above Table (Table 4.61) shows the income that can be gained by leasing the camp area and compares the income with the city budgets (municipality and non-municipality) of 2014. which shows the lease income can have a significant impact on the city's budget if incorporated. Only the area that is proposed to commercial land use have a value of 37.5% of non-municipality budget and 62% of municipality at its minimum leasing limit. And at maximum leasing amount it can have the value of 173 %of non-municipality budget and 286% of municipality budget. The other half which is proposed to be for civic services also have 43.3% of non-municipality budget and 71.6% of municipality at its minimum leasing limit. And at maximum leasing amount it can have the value of 199.7% of non-municipality budget and 330% of municipality budget. The last two Tables show that the leasing income have a significant impact on the finances of the city.

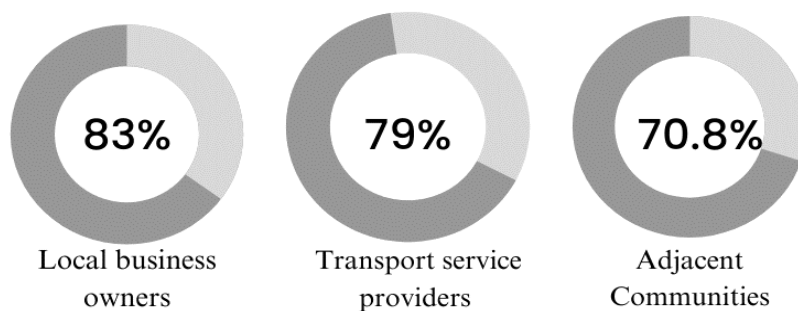
4.6.2 How does the camp affect you?

Type of business the respondents own



Charts and Graphs 4.41: Type of business the respondents own

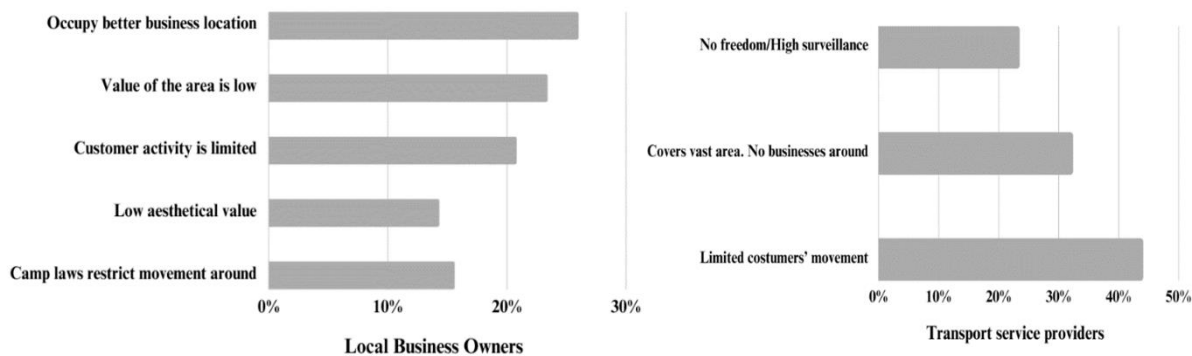
Most of the business found in this area includes shops and similar business-like kiosks which have the majority of the responses with 40%, food and coffee services with 33.3%, Garages 6.7%, electronic repair shops 6.7% and others 13.3% which include non-permanent shops, fast food services which is served around any open and suitable spaces. The survey results that conducted by asking “how does the camp affect you?” to local business owners, transport service and adjacent communities shows that out of 24 respondents, 83.33%, 79% and 70.8% says that the camp affects their business respectively. Each groups gives different reasons how the camp affects their business.



Charts and Graphs 4.42: The camps effects on respondents' business

The presence of the camp affects local businesses and individuals in several ways, as demonstrated by the responses in the below Graph (Graph 4.44): the first is better business location occupation: 26% of respondents shared that the camp occupies a better business location, limiting their potential success or growth in that prime area. Second, Low value of the area for business: 23.4% of respondents reported that the value of the area for their

business is low, mainly due to the presence of the camp. Third, Limited customer activity: 20.8% of respondents expressed that customer activity around their businesses is limited as a result of the camp, which may be affecting their profitability. Fourth, Low aesthetic value: 14.3% of respondents mentioned that the camp negatively impacts the overall aesthetic value of the area, which may further deter customers or potential businesses. Fifth, Camp laws restricting movement: 15.6% of the respondents claimed that the camp has certain laws in place which restrict their or customers' movement around the area, causing inconvenience and potential loss of business.



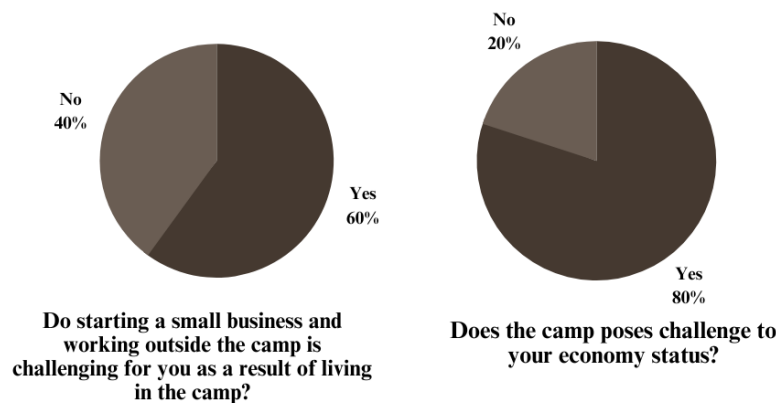
Charts and Graphs 4.44: Impacts of the camp on business of local business owners Charts and Graphs 4.43: Effect on local transport service providers income

The Graph above shows (Graph 4.43) vast compound of the camp does affect transport service in several ways. Firstly, 23.5% of respondents mentioned that there is a lack of freedom and a controlled environment within the compound, which may negatively impact their business. Secondly, 32.4% of respondents pointed out that the vast area of the camp results in few businesses surrounding it. The lack of neighboring businesses leads to decreased of movement of people. Lastly, 44.1% of respondents highlighted limited customer movement within and outside the vast compound of the camp. With restricted movement, customers may not have easy access to the transport providers.

In summary, the vast compound of the camp indeed impacts both transport-based businesses operating nearby and local business owners greatly, through factors such as a controlled environment, the absence of surrounding businesses, and limited customer movement. These factors may lead to various challenges that could hinder the success of transport business providers in the area. And affects businesses and individuals by occupying better business locations, lowering the area's value, limiting customer activity, negatively impacting aesthetics, and restricting movement due to camp laws. These factors contribute to potential business and revenue loss and community dissatisfaction.

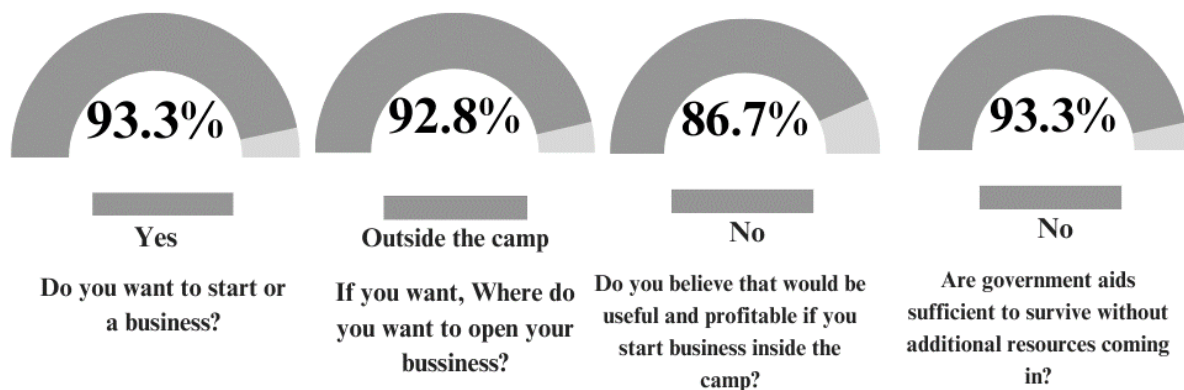
4.6.3 Business opportunities

Business opportunities around the area is impacted negatively by the camp presence greatly, as the area is becoming one of the new city center with high growth rate. It affects the ability and possibility of starting new business and expanding the existing one. The first victims are soldier families living inside the camp. The respondents are asked “Do starting a small business and working outside the camp is challenging for you as a result of living in the camp?” 9 out of 15 respondents says it is challenging opening business while living in the camp, illustrated in the below pie Chart. The pie Chart below (Chart 4.45) shows that 80% says generally living in the camp poses challenge to economy status of themselves.



Charts and Graphs 4.45: camps effect on business and economic opportunities

Out of the 15 participants, 12 do not pursue a second career or job or own a business which accounts 80% of total participants. On the other hand, 3 people do have a second career, job or own a business which covers 20% of total participants. And 2 Of the 3 participants who have business manage coffee house and 1 owns kiosk. These peoples underlines that the camp create many problems which make them less competitive with other businesses.



Charts and Graphs 4.46: Respondents desire to own business

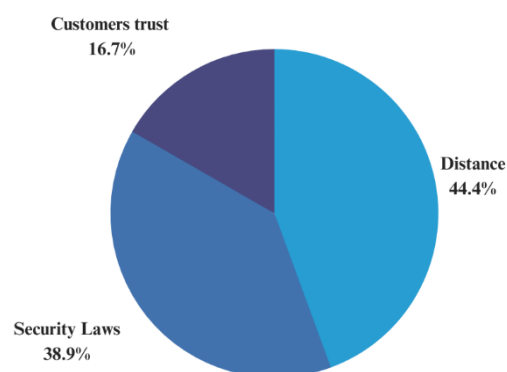
The above Chart (Chart 4.46) shows the respondents preferences on their desire on starting a business and the location they want (Inside camp, Outside camp). From 15 respondents that resides inside the camp 14 (93.3%) said that they want to open business. Regarding the preferred location for starting a business: All 14 people who want to start a business (100% of those who want to start a business, 93.3% of all respondents) prefer to start the business outside the camp. The one respondent who wants to open inside the camp said she wanted to address the camps society. The majority of participants in the survey believe that starting a business inside the camp would not be useful and profitable, with 86.67% score. The residents explains that the government salary and other aids are not sufficient to live and manage a family with score of 93.3% of respondents and the challenges are hard to create another income sources. The challenges posed by the camp are summarized in the below Chart (Chart 4.47).

Table 4.57: Responses on business owning

Do you pursue a second career or job?	Do you own a business?		Total	Type and number of the business	
	No	Yes		Type	No.
No	12	0	12		
% of Row	100	0	100		
% of Column	100	0	80		
Yes	0	3	3	Coffee House	2
% of Row	0	100	100		
% of Column	0	100	20		
All	12	3	15		
% of Row	80	20	100		
% of Column	100	100	100	Shop/kiosk	1

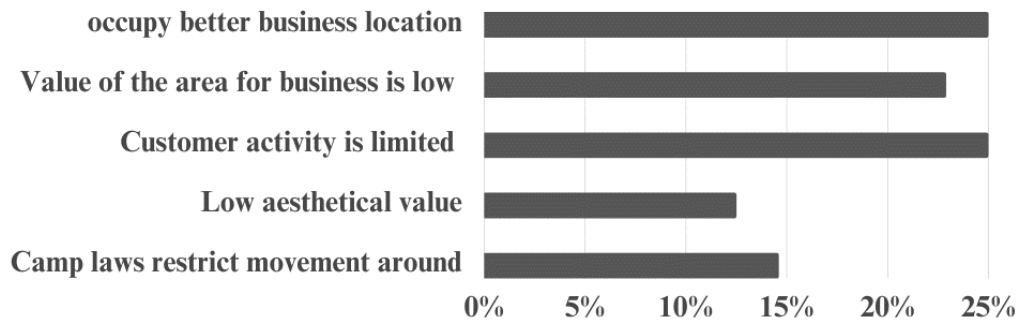
Table 4.58: Causes affect doing and owning business

Causes affect doing and owning business	Responses	
	N	Percent
Distance	8	44.4%
Security Laws	7	38.9%
Customers trust to come inside the camp	3	16.7%
Total	18	100.0%



Charts and Graphs 4.47: Causes affect doing and owning business

The above Graph (Chart 4.47) and Table (Table 4.63) show the causes affecting owning business and their respective response rates in percentages. The major causes that were mentioned by the respondents is distance with 44.4% of responses, the second place is security laws that scores 38.9% of responses, Customers' trust in coming inside the camp holds 16.7% of responses.



The camps challenges noted by the adjacent societies

Charts and Graphs 4.48: How the camp affects the surrounding society

The above Graph (Graph 4.48) illustrates how the camp affects the surrounding society, as summarized below: one of the main affects is occupying better business location with accounts of 25.0% of respondents. The second cause is value of the area for business is low due to the camp with 22.9% (N = 11) of respondents reported that the camp lowered the value of the area for business which decreases area of exposure. The third will be limited customer activity which is: 25.0% (N = 12) of respondents. The fourth is low aesthetic value by score of 12.5% (N = 6) of the respondents expressed that the camp negatively affected the aesthetics of the area which repel customers and create bad working environment. The last one is camp laws which restricts movement in and out of the camp specially for outside peoples, with 14.6% (N = 7) of respondents.

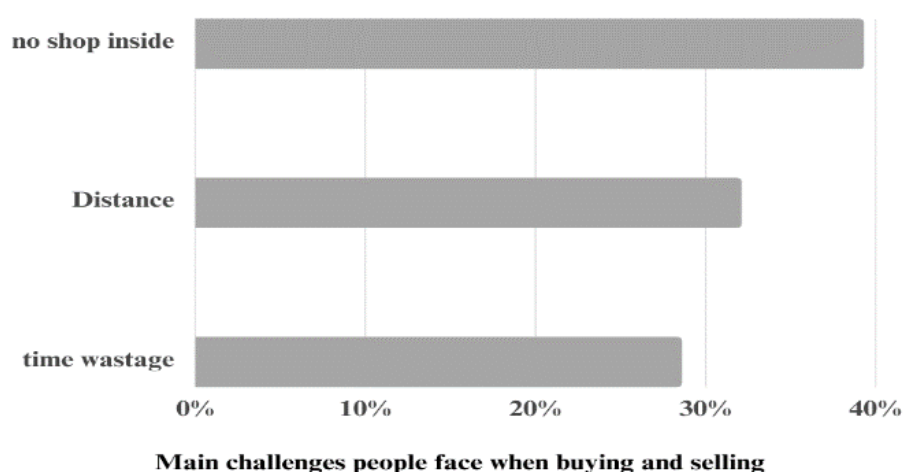
4.6.3 Marketing

The next Table (Table 4.64) discusses the camp's influence on Shopping of the residents. It shows that out of 15 respondents, 14 which covers 92.86% of them believe that the camp does not have enough stores and kiosks, while only one respondent with 6.67% value believes that the camp has enough stores and kiosks and doesn't matter them because they are not settled in the camp. And most people around 86.67 % find marketing (buying and selling) challenging while living in a camp and the rest 13.33% of the respondents thinks it is not that much of a problem.

Table 4.59: Marketing (buying and selling) challenging

Does the camp have enough stores and kiosks?	Is marketing (buying and selling) challenging when you live in a camp?		Total
	No	Yes	
No	1	13	14
% of Row	7.14	92.86	100.00
% of Column	50.00	100.00	93.33
Yes	1	0	1
% of Row	100.00	0.00	100.00
% of Column	50.00	0.00	6.67
All	2	13	15
% of Row	13.33	86.67	100.00
% of Column	100.00	100.00	100.00

The Graph below (Graph 4.49) shows the main challenges in the camp when buying and selling. 39.3% mentioned the absence of shops inside the camp, forcing customers to look for options elsewhere. 32.1% reported distance as a significant issue, with 81.8% of respondents having to travel long distances to reach desired shops or marketplaces. Time wastage, the third major issue, 72.7% of respondents see it as a challenge, suggesting many customers spend much time seeking desired products or services. Overall, the key challenges are a lack of shops, distance to reach outside shops, and time wasted while searching.



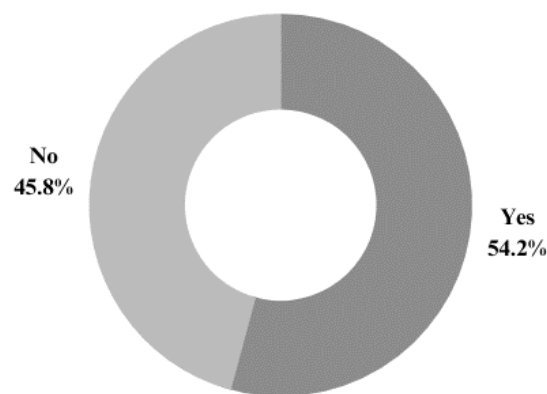
Charts and Graphs 4.49: Main challenges in the camp in buying and

4.6.4 Customer Attraction

The below Chart (Chart 4.50) shows the respondents answer to questions of: Are the residents of the camp regular customers? And are the security towers and camp's presence unpleasant to your customers? They respond yes 13% and 14% and no 11% and 10% respectively. Nearly half of the residents are not customers of the business located around the camp. Many factors contribute to this information starting from location.

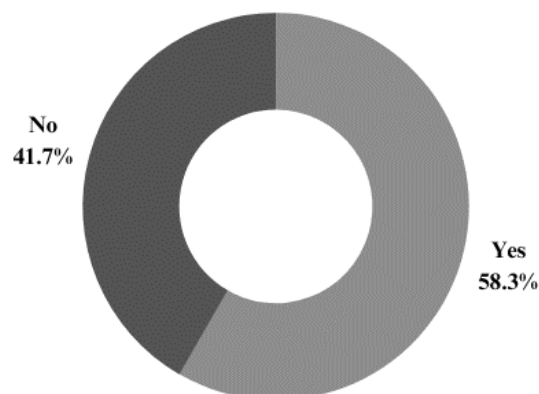
The camp has only two gates the business around the gate responded that the camps residents are regular customers, but business which located far from the gates are inclined to answer that the camps residents are not their customers.

Are the residents of the camp regular customers?



Charts and Graphs 4.50: Are the residents' regular customers?

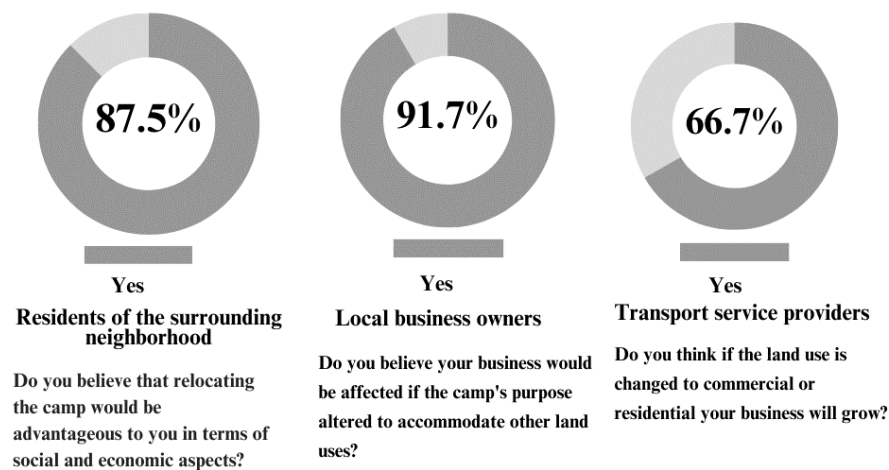
Are the security towers and camp's presence unpleasant to your customers?



Charts and Graphs 4.51: Customers response to towers and

4.7 Respondents' view on relocation of the camp and its benefits

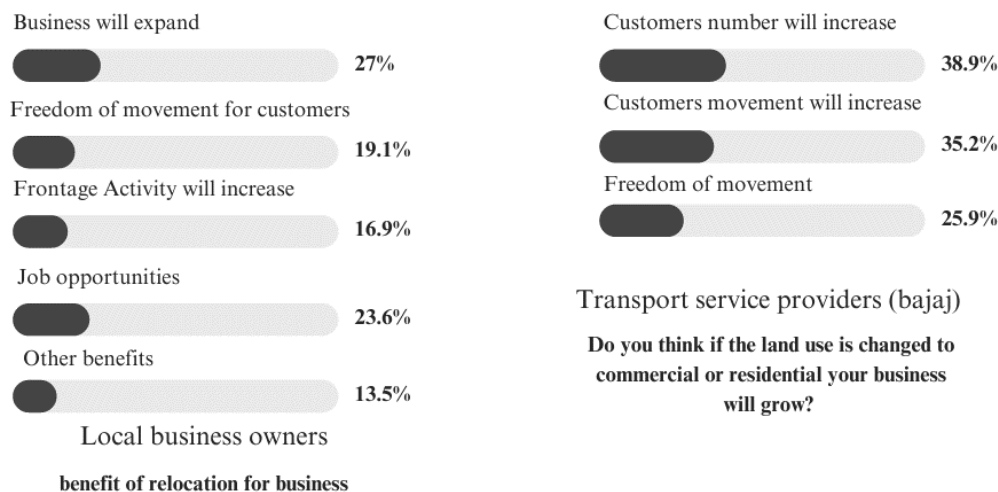
To find out the perspectives of a select group of participants on the suitability of the location and their thoughts on relocating the camp, several questions were posed via questioners and interviews. Respondents go into detail about why they think the camp should be moved and why the present location is problematic. Based on the responses of respondents shown in the below Chart (Chart 4.52), out of respondents from residents of the adjacent neighborhoods, 87.5% of the respondents do think that relocating the camp would be in their favor, while 12.50% believe it doesn't have that much effect in their life, these respondents are mostly retired military personnels. Most of business owner and transport service providers respondents, with 91.7% score and 66.7% respectively, said that their business will be affected positively and discuss their reasoning. two businesses, or 8.33%, do not believe their business would be affected by the change, these business targeted customers are the camp residents and soldier mainly.



Charts and Graphs 4.52: Views of respondents on relocation of the camp

Based on the respondent's (local business owners) response that is presented in the Graph below (Graph 4.53) the benefits of relocation for business that the respondents explain summarized as: firstly, Business expansion which accounts 27%: Relocating to a new location can provide businesses with the opportunity to expand their operations, tap into new markets, and reach a larger customer base. second, Freedom of movement for customers score 19.1%: A more accessible or convenient location can make it easier for customers to visit the business, leading to more foot traffic and potential sales. Third, Increased frontage activity with 16.9% of the response: Relocating to a high-visibility location can increase the business's exposure to potential customers, attracting more people to the storefront and

raising brand awareness. Fourth, Job opportunities by 23.6% holds the second main cause: Expanding business operations can lead to the creation of new jobs, both for existing employees who may be transferring to the new location and for new employees hired to support the increased workload. Fifth, Other benefits with 13.5%: Other potential benefits of business relocation include reduced operating costs, access to better infrastructure and facilities, proximity to suppliers and partners, and improved quality of life for employees.

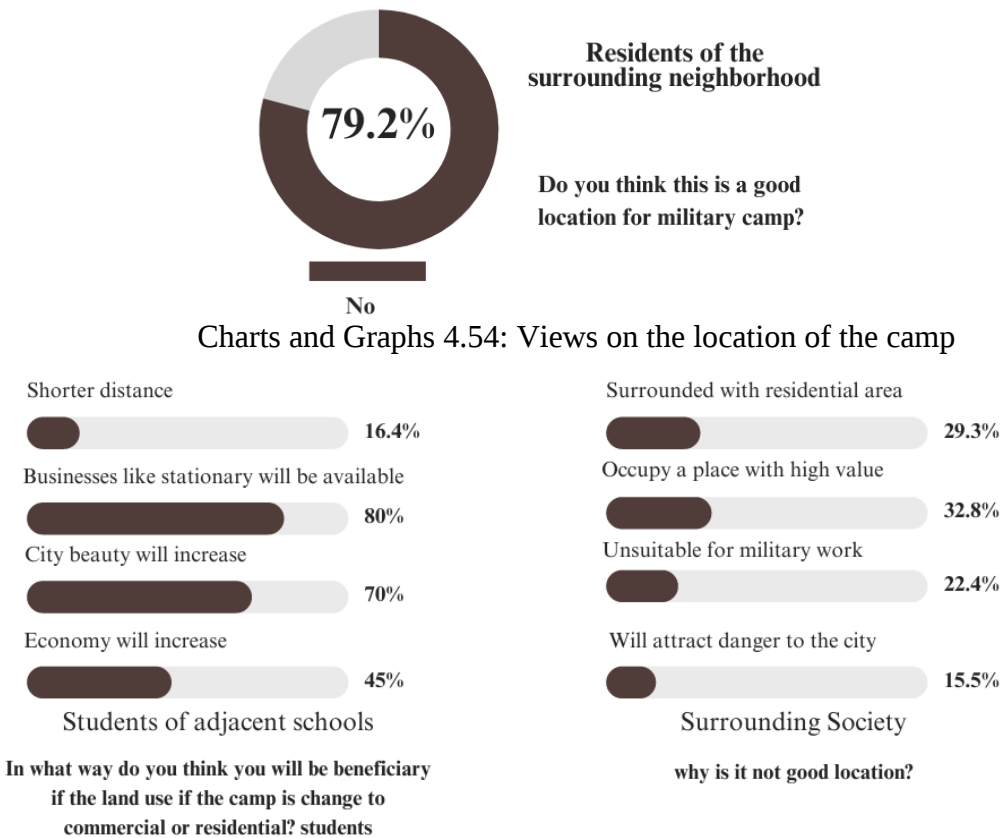


Charts and Graphs 4.53: Effect of relocation on businesses

The Graph above (Graph 4.53) shows how many respondents whom provides transport service (bajaj) believe that if the land use is changed to commercial or residential, their transport business will grow in several ways. First, with the increase in residential or commercial activity, there will be a higher number of potential customers in the area. As indicated by 38.9% of the respondents. This growth in customers can lead to more benefit for the transport service business. Second, as 35.2% of responses suggest, customers' movement will increase. This means that there could be higher foot traffic or vehicle traffic in the area. Finally, 25.9% of cases mentioned that freedom of movement is a potential benefit.

The other survey is focused on the opinion of surrounding society on the location of the camp, if it is a good or bad location, shown in the Graph below, 79.2% of respondents said it is not good location for military camp. Based on the responses presented in the below Graph (Graph 4.54), the respondent that says it is not good states their reasons as follows: the first is surrounded with residential area scores 29.3% of the respondents believe that having a military camp in close proximity to residential areas is not ideal. The second reason

is occupying a place with high value by 32.8% of the respondents think that the location for the military camp holds a high value which can be better utilized for other purposes like housing or commercial establishments. The third reason is unsuitable for military work by score of 22.4% of the respondents believe that the location is not suitable for military work. the presence of civilian establishments that may hinder military activities. The last reason is it will attract danger to the city with 15.5% of the respondents are concerned that having a military camp in this location will increase the risk of danger in the city, possibly making it a target for enemies or terrorists.



Charts and Graphs 4.55: Benefit if the camp relocates

The above Graph (Graph 4.55) describes how the students of adjacent school get benefited, If the land use of the camp is changed to commercial or residential: the first benefit is shorter distances to school with score of 16.4% of respondents. The second merit is increased business and amenities: 30.1% of respondents think that this change can lead to more businesses and amenities in the area, providing them with more options for shopping, entertainment, and other services. The third benefit is enhanced city beauty with score of 21.9% of the respondents. the last-mentioned benefit is economic growth: 31.5% of respondents believe that converting the camp into commercial or residential spaces will boost the local economy.

4.8 Discussion summery

The results of the compatibility evaluation discussed in the chapter above demonstrate that the camp gets more incompatible with time. According to the evaluation, all of the camp's sides were compatible with the nearby land uses in 1983, three of them were incompatible in 2004 and 2022, and one side was compatible in the city's projected master plan. This explains why the relationship between the camp and nearby land uses becomes more unsuitable as the city develops. As time goes on, the types of land use next to the camp shift to more commercialized ones that are often incompatible with how the camp's functions for a variety of reasons listed in the above chapter.

As Teleai (2007) states that a piece of developed land with a certain land use type may 'repel' certain adjacent land use types, according to the concept of a negative spatial interaction, depending on whether the land use type is developed in a vertical or horizontal direction. This is because there are considerable negative spatial externalities. The existence of such an effect suggests that its worth falls when the quantity or intensity of incompatible neighboring land uses grows.

The outcome also demonstrates that the camp's land use is inconsistent with both city policy and plan and the trend in land use change, which makes it incompatible with nearby land uses. The local business owners' activities will be impacted by this incompatibility with the nearby land uses, and as Teleai (2007) notes, the utility and flexibility of the location would decline. The camp occupies a location where the economy will grow and other services that improve peoples' living conditions will be available, which has a significant impact on the living conditions of the neighboring societies.

By reducing different types of pollution, raising well-being and the value of urban space, compatibility between adjacent land uses improves safety, welfare, and environmental health (Cheniki et al., 2019). According to the literature, the study area's compatibility deteriorates over time as the incompatibility of neighboring land uses increases, which could have negative effects on the community's safety, welfare, and health.

The city's expansion analysis results indicate the impact of the camps' location on the city's expansion. The camp was one of the primary expansion elements that boosted the city's economy before 40 years ago. The result reveals that the camp's influence on the growth of

the city has diminished over time to the point where it is currently impeding that growth. This has the effect of suppressing the city's potential economic growth.

Social effect analysis of the camp categorized in to social activities and social organizations. Social activities include the analysis of social activities of camp residents, effect on Daily livelihood activities (surrounding society) and effect on social interaction, while social organizations analyze focuses on Selection of social organizations. The outcome suggests the camp has an impact on all of the aforementioned variables. This highlights how the camp's proximity disrupts and has an impact on both the social lives of camp residents and the community at large. Distance, security issue, isolated environment, similarity of profession, norm difference and economy are the causes that affects the social activities and selection of social organizations. These causes have different count in different survey questions but as a general they are the most listed by the respondents.

The distance and less-connectivity of the camp residents and the outside creates a physical barrier between peoples that influences their level of intimacy and emotional connection with their friends and families. However, distance is a factor that permeates all interpersonal and financial interactions (Erol & Ordoñez, 2020). This shows close proximity usually indicates a stronger bond and may facilitate more communication, while greater distance may lead to reduced interactions, less emotional closeness, and a weaker connection. And the distance created by the camp impact the frequency, quality, and effectiveness of communication between families, friends and neighbors.

The residents of the camp are more comfortable and confident with peers who share their aspirations and challenges that are in the same career. People have favorable feelings of attraction for others when they believe themselves to be similar to them. These parallels include a wide range of characteristics that are often divided into demographic (such as race, gender, ethnicity, socioeconomic status, and age) and psychological (such as personality, values, hobbies, religion, education, and career) categories (Abbasi et al., 2023).

This closeness supported by the similarity of carer will create a gap in the interaction between the surrounding societies. Norm difference other peoples may feel confused, frustrated, or offended by the rules, values, or behaviors of the camp staff or other people's living inside. Peoples whom lives inside the camp lives with asset of military rules for a long period of time and adopt it to their lifestyle, this will result misunderstanding with the outside society.

Due to their financial hardships, they are unable to participate in social events that require financial expenditures, such as weddings, birthday celebrations, vacations, etc. Because they or family member all work in the same field, the majority of camp residents make about the same amount of money. They are more likely to associate with others of similar economic standing due to this similarity in income. The security precautions implemented by the camp, as well as the time restrictions and curfew established by the camp management, are additional difficulties that make it difficult for both communities to engage socially.

Three primary factors influence how social structure, particularly social networks, affects economic outcomes. First, social networks have an impact on the amount and quality of information. Actors rely on individuals they know because a lot of information is ambiguous, nuanced, and difficult to verify. As a result, they don't trust impersonal sources. Second, as rewards and penalties have a greater impact when they come from personally known individuals, social networks are a significant source of both. Third, trust emerges, if it exists, in the setting of a social network. By trust, I mean the assurance that others will act in the "right" way despite an obvious balance of incentives to the contrary (Granovetter, n.d.).

The above-mentioned causes contribute to the feeling of isolation and they pressure the camps residents to associate to other camp residents. When mixed with other societies camps residents may feel discriminated and search their equal. The insufficient amount and/or quality of interpersonal connections, including those that happen at the individual, group, and/or community level, is a multidimensional construct known as social isolation (Clair et al., 2021).

The psychological pressure of the camp and its residents, views of armed and military personnel, the impact on children living in the camp and in the neighborhood, the safety and danger of people working and living there, the public's perception of the camp's gate and towers, warning signs, and the danger military vehicles pose to pedestrians and those providing transportation. The majority of these criteria indicate that the camp has a big impact on the people living there and the surrounding societies.

The residents of the neighboring community explain the behaviors displayed by camp residents, which include superiority, arrogance, as well as inferiority, anger, and communication issues. Superiority may develop when military families think they are better than everyone else because of their connection to the military. Arrogance is often linked to feelings of entitlement or having excessive pride in a family member who serves in the

military. Military families may experience inferiority because they may find it difficult to live apart from a loved one and face other difficulties as a result. These feelings, especially when compared to other families' everyday lives and the support and affection they receive from their family members, may cause self-doubt and a lack of faith in the family's capacity to function successfully.

One of the frequent emotions felt by these families is anger, which can be caused by a variety of events and circumstances, including: Military families may feel alienated from non-military friends and relatives who are unaware of the particular difficulties of military life. Both feelings of superiority and inferiority will result in rage and violence. Military families experience communication difficulties with friends and extended family who have not lived the military lifestyle and its effects.

According to camp residents who responded to the questionnaire, the phrase "ye kamp sew/" is frequently used to refer to undesirable traits that the community believed them to exhibit. This term is considered as an insult by some peoples. The phrase encompasses the family's entire way of life, revealing their residence, socioeconomic standing, and family status. When other people use the term negatively, it makes them feel ashamed of their family, lifestyle, and economic standing, especially it is hard on children. Due to the way they are seen by the local societies and the teasing, the participants who live in the camp feel unwanted, insecure, and isolated.

According to the findings of the study, the leasing income could significantly impact the city's budget if incorporated after the area be turned into a commercial or other use. The results of a survey after asking local business owners, transportation providers, and residents of nearby communities "How does the camp affect you (economically)?" reveal that the presence of the camp has a variety of negative effects on nearby residents as well as local businesses, as shown by the following responses: business location occupation, low business value of the area, limited customer activity, low aesthetic value, and camp laws restricting movement. Also, the result shows business opportunities around the area are impacted negatively by the camp presence greatly, as the area is becoming one of the new city center with high growth rate. It affects the ability and possibility of starting new business and expanding the existing one. The first victims are soldier families living inside the camp. The major causes that were mentioned by the respondents are distance, security laws and Customers' trust in coming inside the camp.

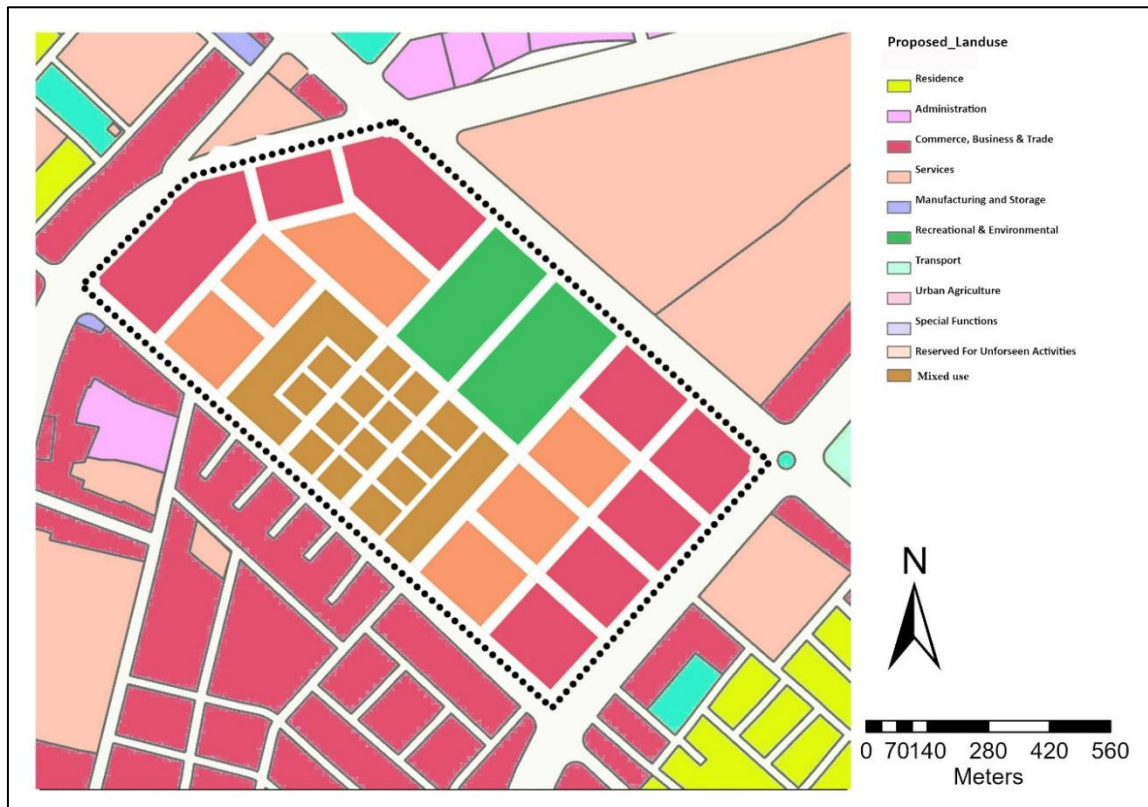
CHAPTER FIVE:

LAND USE DESIGN AND HOUSING PROPOSAL

5.1 Land use design

To solve the afore-mentioned challenges and problems arose by the camp the researcher proposes alternative land use plan as input to the city's master plan and solve these challenges for a better living condition and a better city. The plan is done in respect to the land use change pattern and the master plan.

It consists mainly commercial, mixed use, recreational and residential land uses. The road patterns are aligned to the existing roads and streets for better access. The residential zone is found in the center of the study area. It is surrounded by mixed use land uses and recreational space, this will give a benefit of buffering from the commercial zones. And, better access for commercial and public service land uses for the residence while their privacy and security intact. The commercial zones are compliance to the adjacent commercial blocks. This will increase the frontage activities and exposure of these business and the pedestrian and commercial activity of the area will increase. These businesses will create job opportunities for the local residents.



Map 5.1: Land use design

Complement with the expansion of the city and land use change trend

The proposal land use design is designed by considering the compatibility assessment result and expansion rate discussed in the past chapter. All four sides of the camp are compatible to its adjacent land uses in terms of functions. These planned land uses are in order with the land use change trend the area is used to, and also it is in accordance with the proposed master plan of the city proposed by the municipality. which enhances the growth and expansion of the city.

Economic benefits

The area will generate huge amount of income to the city. Only by leasing the city can get up to 1 billion birrs, and also millions in the yearly income of tax from the land uses. The changing of the camp to commercial and mixed-use trends will benefits the local business owners by exposing them to customers and changing the surrounding environment. Peoples who residents in the camp and surrounding society will have an opportunity to increase their income and expand their business. The land value of the area will increase exponentially as it changed to commercial land uses.

Social and psychological relation enhancement

The proposal land use tries to address the challenges and problems that the camp poses on social and psychological status of peoples who lives both inside and outside the camp. Distance and isolation were one of the problems that affect both sides of society. By this proposal it is solved by providing a living condition were both societies live together. Mixed use apartments which include peoples from the camp. The camp residents will have a chance and opportunities to grow their income and be in the same status of their surround, were this was one of the social and psychological impact. Social organizations and other social activities will be easier to access and join as they live together.

Good city image

Public parks and recreational centers were provided in the direction of the schools. The students and staff from the adjacent schools will have a recreational space where they spent their free time to interact with close ones. The societies which include the camp residences will have a medium to interact with peoples. The area is adjacent to the newly improved bus station which serve for thousands of travelers, the development of the area will benefit these travelers and will put good impression on passersby.

5.2 Proposal on Housing of military families

The mixed-use land use proposed in the planning is available for all interested parties. But some apartments will be reserved to military families, whom were living in the camp. The ground floor will be distributed to these military families in order to support their income. This integration to other societies by making them live in same building and area will solve the social and psychological challenges created by distance, economic difference, career monotonous, isolated environment and security restrictions.

The residents of the camp will be given a range of choice on type of housing that the government offered based on their income level and family size. The government and the military also can provide with different types of financial support and political help to the families of military personnel. These housing choices includes: -

- **Own**

This housing type is for military families which wants to own their own houses. These families can live any where they want. The government will provide building land for these military families which requested by organizing in associations, specially retired soldiers. The administration will provide support starting from helping in lending money to leasing land.

- **Rent**

This option includes renting a house where they want. The government will provide them with different financial support and options. These financial supports includes paying the whole rent or some percentage of the rent. And also provide in financial opportunities to cover the rent by their own.

- **On-site**

This is the main and preferred housing choices. Apartments that are proposed in the proposal land use planning will be offered to the military families and local residents to incorporate them to the society. These apartments buildings may be offered as a reward, rental and temporary housing. These on-site housing have many advantages which includes business area, business opportunities and amenities.

CHAPTER SIX:

CONCLUSION AND RECOMMENDATION

6.1 Conclusions

The research exploring the effects of the existing military camp on the expansion and socio-economic aspect of the city: the case of Shashemene city is based on the problems and challenges that are posed by the camp on the city. It is more emphasize in the surrounding neighborhoods and the camp itself.

For the problem identified in the research problem statement three objectives and research questions were developed. Then after the methodology is designed to achieve objectives and answer the research questions. By using the descriptive research approach, the researcher gathered data that characterizes, investigates, and quantifies social phenomena, notably problems, difficulties, and circumstances that are pervasive in the society at a given moment. In this study, a longitudinal time horizon was used to collect information from the same sample at various periods in time and place. To answer the first research question compatibility assessment index was applied and LULC change was analyzed. And to answer the second and third question, descriptive research approach was used.

compatibility assessment index was developed by calculating factors such as frontage activity, aesthetics and functions. Functions were analyzed only to the extent that they substantially impair the ability of adjacent land uses to continue their existing function. The compatibility assessment is also done through different time lines (1983,2004,2022 and proposed land use) to get the compatibility result with changing land use pattern. The result shows that the current compatibility assessment results incompatibility in three sides of the camp and one compatibility in north-east direction of the camp, were educational institutions are located. LULC change analysis describes that the camps influence becomes more negative on the city's urban expansion as time goes. The expansion rate resulted as 8.6% in period of 1986-2003, 10.5% in period of 2003-2013 and 10.1% in period of 2013-2022.

To examine the effect on urban functions three factors were selected which are social activities, psychological impact and economic effect. For social activities Effect on Daily livelihood activities (surrounding society), Effect on social interaction and Selection of social organizations were taken as an evaluating factor and the response of participants frequency and percentage were taken as descriptive approach. The most frequent answer was

selected as a result, which all of these factors shows that the camp affects the social life of both the camp residents and neighborhood societies greatly.

Psychological pressure on residences, view on armed and military personnels, effect on psychology of children's living inside and the surrounding, safety and danger of peoples working and living, the view of peoples on the camps gate and towers and warning signs and danger posed by military vehicles on transport providers and pedestrians were the factors used to assess the effect of the camp on psychology of peoples living inside and outside the camp. Were all of these factors shows that the camp has a big impact on the psychology and mind state of the society negatively. Lease income, Business opportunities, Marketing and Customer Attraction were the main ideas that the economic impact were studied. In which all are affected greatly by the camp. When the area's lease income is calculated and contrasted to the city's annual budgets, it becomes clear that the leases would make a significant difference if included in the budget, if the area could be transformed to different land uses, such as mixed-use, residential, and commercial. The annual tax from a variety of business that will be allocated in this region will increase the city's revenue and encourage civic development.

6.3 Recommendations

This study has examined the effects of the military camp on the city and the surrounding community through analysis and discussions. The aforementioned chapters analyze and discuss the camp's social, economic, and psychological effects, as well as how they may have affected the city's urban growth. The difficulties and impediments that the camp brings to those who live there, the neighborhoods around them, local business owners, providers of transit services, and students and personnel at the nearby schools are addressed. In order to solve these problems some recommendations are offered by the researcher.

Management context

- The administrators of the camp and the city officials should discuss and meet regularly in order to solve the problems arose by the camp.
- • For effective outcomes that are advantageous to both parties, both parties should present and discuss each other's plans and strategies.
- The surrounding society should be included in the future decision focusing on the camp.

Relocation of the camp

- The location of the camp should be changed.
- While selecting the replacement the cities plan and policy should be taken to considerations.
- The expansion rate of the city should be taken into consideration while choosing the replacement location in order to predict the future land use of the area.
- The adjacent land uses of the military camp should be allocated after assessing and studying compatibility of the land uses.
- The area around the newly relocated camp has to have buffering zones planned and included.
- Spatial planning that takes into account the optimal distribution of these particular land uses by doing extensive study on their effects.

Social enhancement

- Civilians that live inside of the camp should be incorporated with the surrounding societies and live separately from the military.
- Create a space where peoples of both sides meet and form social interactions.

- Incorporate the existing social network like Ekub or cooperatives formed in both societies, and design spaces for it so it can be used as both a social and economic support system.
- Provide housing to military families that is located and integrated with civilian societies.
- Provide a medium that military families are exposed to different type of societies and professionals.

Economic enhancement

- Providing a space for military families to support their income.
- Increase the exposure of these peoples to the commercial and business sector of the city.
- Financial support from the government to support entrepreneurship and encourage new business.

Psychological protection

- Creating living environment that combine different types of societies and integrating them in different social structures.
- Warning and cautions signs should be put in a way that they don't intimidate and create anxiety on children's and surrounding societies.
- Providing counseling for military families, to support them specially in times of deployment and assignments.

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APPENDIX

Questionnaire

Questionnaire for military families living inside the camp

Dear respondent, thank you in advance for your willingness to participate in my survey. My name is **Tsegaw Admasu**. I am a student at Adama Science and Technology University, pursuing my Master's Degree in Urban Planning and Design. The aim of this questionnaire is to collect data for the study entitled, *“Exploring the effects of the existing military camp on the expansion and socio-economic aspect of the city: the case of Shashemene city.”*. The data you provide will be used exclusively for my master's thesis. Recognizing the invaluable role that your responses have for successful completion of this research, you are kindly requested to provide all relevant and genuine data, to the best of your understanding. Regarding your privacy, I would like to assure you that your responses will be kept confidential and used for the purpose of this academic research only. If you have any feedback or need for further clarification, please do not hesitate to contact me through my cell phone +251926181693 (Tsegaw Admasu) or email address tsegawadmasu09@gmail.com.

With best regards.

General instruction

- No need of writing your name.
- By reading all questions, answer it by ticking in the box provided ☒
- Fill the blank spaces by reading carefully.

Part One: Background Characteristics of Respondents

1. Age: ☐ 20-30 ☐ 31 -40 ☐ 41 -50 ☐ above 51

2. Sex: ☐ Male ☐ Female

3. Level of education:

- | | | |
|---|--|---|
| ☐ Primary school | ☐ 9-10(high school) | ☐ 11-12(preparatory) |
| ☐ Diploma | ☐ Degree | ☐ Above degree |

4. Occupation:

- ☐ Student ☐ Self employer ☐ Government Job ☐ NGO ☐

Other_____

5. Marital status: ☐ Single ☐ Married ☐ Divorced ☐ Widowed
6. Number of families: ☐ 1 to 3 ☐ 4 to 6 ☐ 7 to 9 ☐ 10 and above
7. Age categories of the children's: 0-6_____6-15_____15-20_____20-30_____Above 30_____
8. number of children's living with you currently: _____
9. Living in this camp: ☐ Below 10 years ☐ 10 to 15years ☐ 16 to 20years ☐ above 20years

Part two: - Information related to social associations (organizations)

1. Do you participate in social groups like "Ider, Ekub, and other associations"? ☐ Yes
☐ No
2. If you've joined, was it mostly created by the societies in the camp or the societies in the surrounding area? ☐ Camp ☐ surrounding area
3. Does living in the compound influence your decision on social organizations type?
☐ Yes ☐ No
4. Which of the following factors influences your decisions on choosing social organization?
☐ Location and distance ☐ Similarity in Occupation (profession)
☐ Cultural (norm) difference ☐ Economic level and difference
☐ Others _____

5. Are there any concerns about admitting you in their social organizations because you are from the camp? ☐ Yes ☐ No
6. If yes, which of the following factors do you believe makes it harder that outside societies to accept you into their groups?
☐ Location (distance) ☐ Similarity in Occupation (profession)
☐ Cultural (norm) difference ☐ Economic level and difference
☐ Others _____

7. Do you believe that living in the camp has an impact on your social interactions with the surrounding society? ☐ Yes ☐ No

Part three: - Information related to social activities

1. Do you participate in social events like weddings, funerals, and other holidays?
☐Yes ☐No
2. If yes, do you participate in these events that are outside of the camp? ☐Yes ☐No
3. Do you believe that living in a camp makes it difficult to attend these social events?
☐Yes ☐No
4. Which of the following describes the challenges that the camp puts in the way of engaging in these social activities?
☐Location (distance) ☐Type of Occupation(soldier) ☐Cultural (norm) difference
☐Economic level ☐Security reasons ☐Isolation
☐Others _____

5. Do you invite people from outside the camp to your social parties? ☐Yes ☐No
6. Do you think living in the camp create challenges to invite peoples from outside the camp in your social parties? ☐Yes ☐No
7. Which of the following describes the challenges that the camp puts in the way of engaging in these social activities?
☐Location (distance) ☐The Camps Security law ☐Cultural (norm) difference
☐Economic level ☐Isolation
☐Others _____

8. Do people hesitate or fear to attend your social parties from outside? ☐Yes ☐No
9. Which of the followings are the causes that create fear or hesitation on peoples to attend your social activities from outside the camp?
☐Location (distance) ☐The Camps Security law ☐the existence of military personnels
☐Cultural (norm) difference ☐Economic level ☐Isolation
☐Others _____

10. Does living in a camp or being referred to as "ye camp sew" cause problems at social events? ☐Yes ☐No

11. Based on social interaction and economic considerations, is living within a military camp comfortable and preferable? ☐Yes ☐No
12. Describe Why you chose? _____
13. Does being a military family and residing in a military camp change how you view other people? ☐Yes ☐No
14. How does living around people who only have one occupation (a soldier) effect your social life and economic prospects? ☐Yes ☐No
15. Does your child's ability to interact socially with others diminish by living in a monotonous and isolated community? ☐Yes ☐No
16. If yes, in what ways does it affect? _____
17. What additional effects does living in a camp have on social interaction?_____
18. Does having military personnel around you mentally effect your relationships with people in the community? ☐Yes ☐No
19. In what manner does living with armed military personnel affects you?
☐Negatively ☐Positively
20. Why? _____
21. Do you like to be referred to as "ye camp sew"? ☐Yes ☐No
22. If you chose no, why? _____

Part Four: - Information related to economic status

1. Do you pursue a second career or job? ☐Yes ☐No
2. Do you own a business? ☐Yes ☐No
3. If yes, what type of business do you own? _____
4. Do starting a small business and working outside the camp pose challenges for you as a result of living in the camp? ☐Yes ☐No
5. If so, which of the following issues do you believe is the cause of the problems?
☐Location ☐security risk ☐camps law ☐customers confidence to come to the camp
☐other_____
6. Does living in a camp put an obstacle to your overall economic growth? ☐Yes ☐No
7. Does the camp have enough stores and kiosks? ☐Yes ☐No
8. Is marketing (buying and selling) challenging when you live in a camp? ☐Yes ☐No

9. If yes, why? _____
10. Do you want to start a business? ☐ Yes ☐ No
11. If you want, Where? ☐ Inside the camp ☐ Outside the camp
12. Do you believe that would be useful and profitable if you start business inside the camp?
☐ Yes ☐ No
13. What kinds of difficulties do you expect? _____
14. Are government aids sufficient to survive without additional resources coming in?
☐ Yes ☐ No

Questionnaire for Military personnels stationed in the camp

Part One: Background Characteristics of Respondents

1. Age: ☐ Below 20 ☐ 20-30 ☐ 31 -40 ☐ 41 -50 ☐ above 51
2. Sex: ☐ Male ☐ Female
3. Military Rank:
- ☐ Primary school ☐ Second lieutenant ☐ Lieutenant
- ☐ Captain ☐ Major ☐ Lieutenant colonel
- If other specific _____
5. Marital status: ☐ Single ☐ Married ☐ Divorced ☐ Widowed
6. Deployment status: - ☐ Temporary ☐ Permanent
9. if temporary, for how much long?

Part Two: - Information related to the impact of the military camp position to military personnels work

1. Do you appreciate that the camp is in the middle of the city? ☐ Yes ☐ No
2. Are you in favor of changing the current location? ☐ Yes ☐ No
3. If you chose yes, why? _____

4. Is the existing site appropriate for your work activities? ☐Yes ☐No
5. If you chose no, why? _____
6. Is the fact that you live with families an obstruction to your work and assignments?
☐Yes ☐No
7. Does the camp's proximity to a civilian community effect your work?
☐Yes ☐No
8. If you chose no, why? _____
9. Does the presence of civilian neighborhoods around the camp affect your work? ☐Yes
☐No
10. If you chose no, why? _____
11. Does the relationship with the community and its members' daily activities affect your work? ☐Yes ☐No
12. If you chose yes in how does it affect your work? ☐Negative ☐Positive
13. Do you believe that the work you did poses a threat to society? ☐Yes ☐No
14. If you selected "yes," list the risks associated with your work.

15. Is the infrastructure, in particular the nearby road, suitable for your work? ☐Yes ☐No

Questionnaire for communities living in nearby neighborhoods

Part One: Background Characteristics of Respondent

1. Age: ☐ 20-30 ☐ 31 -40 ☐ 41 -50 ☐ above 51
2. Sex: ☐ Male ☐ Female
3. Level of education:

☐ Primary school	☐ 9-10(high school)	☐ 11-12(preparatory)
☐ Diploma	☐ Degree	☐ Degree and above
4. Occupation:

☐ Student	☐ Self employer	☐ Government Job	☐ NGO
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If other specific _____
5. Marital status: ☐ Single ☐ Married ☐ Divorced ☐ Widowed

6. Number of families: ☐ 1 to 3 ☐ 4 to 6 ☐ 7 to 9 ☐ 10 and above
7. Age categories of the children's: 0-6____6-15____15-20____20-30____Above 30____
8. number of children living with you currently: _____
9. Living in this neighborhood: ☐ Below 10 years☐ 10 -15years ☐ 16 - 20years ☐ above 20years

Part Two: - Information related to the impact of the military camp on the surrounding neighborhood

1. Do you like being close to a military base? ☐Yes ☐No
2. Do you believe that the residents of the camp exhibit distinctive behavior or other unique characteristics? ☐Yes ☐No
3. If you chose yes, please explain the reason why in the space provided here.

4. Does the activity of soldiers at the camp or nearby affect your regular activities? ☐Yes ☐No
5. Do you feel safe or in danger because of the camp's presence? ☐Secure ☐Endanger
6. Please provide specific details about your choice.

7. Does the vast size of the camp limit your movement? ☐Yes ☐No
8. Do you believe the camp's presence has an impact on your economy? ☐Yes ☐No
9. Do you believe that relocating the camp would be advantageous to you in terms of social and economic aspects? ☐Yes ☐No
10. Do you feel intimidated or impacted by the camp's rules surrounding the perimeter of the camp? ☐Yes ☐No
11. Do armed military personnel intimidate you? ☐Yes ☐No
12. Do you feel comforTable or uncomforTable residing near the camp during periods of political and social unrest? ☐ComforTable ☐UncomforTable
13. Do you believe that camp society has a unique social life? ☐Yes ☐No
14. Are you willing to allow your kids to make friends with the camp children? ☐Yes ☐No
15. If you chose no, why? _____

16. Do you believe that the warnings and severe restrictions surrounding the camp have an impact on your children's behavior and psychology? ☐Yes ☐No
17. Do you believe that if the camp were to be replaced with other land uses, your economic and social situation would improve? ☐Yes ☐No
18. If you chose yes, why? _____
19. How do you feel when you see guards in the tower at the camp's gate and fence?
☐Positive ☐Negative
20. Does guards intermediate you or your children? ☐Yes ☐No

Questionnaire for Local business owners

Part One: Background Characteristics of Respondents

1. Age: ☐ 20-30 ☐ 31 -40 ☐ 41 -50 ☐ above 51
2. Sex: ☐ Male ☐ Female
3. Level of education:
- ☐ Primary school ☐ 9-10(high school) ☐ 11-12(preparatory)
- ☐ Diploma ☐ Degree ☐ Degree and above
- 4.Type of business you owned: _____
5. Marital status: ☐ Single ☐ Married ☐ Divorced ☐ Widowed
6. Number of families: ☐ 1 to 3 ☐ 4 to 6 ☐ 7 to 9 ☐ 10 and above
9. Working since: ☐ Below 10 years ☐ 10-15years ☐ 16-20years ☐ above 20years

Part Two: - Information related to the impact of the military camp on the surrounding business owners

1. Does the camp's presence in your neighborhood have an impact on your business?
☐Yes ☐No
2. If yes, please elaborate? _____
3. Are the residents of the camp regular customers? ☐Yes ☐No

4. Do you believe your business would be affected if the camp's purpose altered to accommodate other land uses? ☐Yes ☐No
5. In what manner does it will be affected? ☐Positive ☐Negative
6. Please list the benefits that relocating the camp will provide you and your organization.
7. Are the security towers and camp's presence unpleasant to your customers? ☐Yes ☐No

Questionnaire for students and teachers in the surrounding schools

Part One: Background Characteristics of Respondents

1. Age: ☐ 15-20 ☐ 20-30 ☐ 31 -40 ☐ 41 -50 ☐ above 51
2. Sex: ☐ Male ☐ Female
3. Level of education:

☐ Primary school	☐ 9-10(high school)	☐ 11-12(preparatory)
☐ Diploma	☐ Degree	☐ Degree and above
Other _____		
4. school or college: _____

Part Two: - Information related to the impact of the military camp on students and teachers

1. Does the proximity of the camp to your school creates comfortability? ☐Yes ☐No
2. If yes describe how? _____
3. Does the location of the camp elongate your journey to school? ☐Yes ☐No
4. Did the military personnel activities interfere or impose danger on your daily school activities? ☐Yes ☐No
5. Do the laws and warnings around the camp have psychological effect on you? ☐Yes ☐No
6. What you feel when you see security watch towers around the gate of the camp near your school or house? _____
7. Do you think this is a good location for military camp? ☐Yes ☐No
8. If you chose no, describe why is it not good location. _____
9. In what way do you think you will be beneficiary if the land use if the camp is change to commercial or residential?

Questionnaire for public transport service (bajaj) providers

Part One: Background Characteristics of Respondents

1. Age: ☐ 20-30 ☐ 31 -40 ☐ 41 -50 ☐ above 51

2. Sex: ☐ Male ☐ Female

3. Level of education:

☐ Primary school ☐ 9-10(high school) ☐ 11-12(preparatory)

☐ Diploma ☐ Degree ☐ Degree and above

4. Marital status: ☐ Single ☐ Married ☐ Divorced ☐ Widowed

5. working in this rout for: _____

Part Two: - Information related to the impact of the military camp on transport service providers

1. Does the vast compound of the camp affect your business? ☐ Yes ☐ No

2. If yes describe how? _____

3. Do your customers feel comfortable waiting for you near the security tower and fence of the camp? ☐ Yes ☐ No

4. Do you think if the land use is changed to commercial or residential your business will grow? ☐ Yes ☐ No

5. If yes describe how? _____

6. What other affect do the camp imposes? _____

7. Do you think the drivers of military vehicle feel responsible for traffic laws? ☐ Yes ☐ No

8. Does the way they drive and the vehicles are prone to accidents? ☐ Yes ☐ No

9. Do you think they should be allowed to drive in this road? ☐ Yes ☐ No

10. Does the size and structure of the military vehicles intimidate and create uncomfortable driving condition? ☐ Yes ☐ No