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DEPARTMENT OF SUSTAINABLE DEVELOPMRNT

IMPLICATIONS OF URBAN EXPANSION IN MABVUKU TAFARA WARD 20, HARARE, ZIMBABWE.

BY

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A PROJECT SUBMITTED TO BINDURA OF SCIENCE AND EDUCATION IN PARTIAL FULFILMENT OF THE REQUIREMENTS OF BACHELOR OF SCIENCE AND EDUCATION HONOURS DEGREE IN DEVELOPMENT STUDIES.

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JUNE 2026

DECLARATION

I, Sharon Munatsi the undersigned, affirm that the dissertation I have submitted is my original work and has not been previously submitted for evaluation or credit at any institution. Furthermore, I attest that all sources l has utilized in the creation of this paper have been properly cited and referenced in their entirety.

Signed 

Date: 8 June 2026

RELEASE FORM

I, Sharon Munatsi hereby declare that the work presented in this dissertation entitled "Implications of Urban Expansion in Mabvuku Tafara Ward 20" has not been submitted for any other degree or professional qualification and that it is the result of independent work. All sources of information have been duly acknowledged through appropriate referencing.

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Date…….

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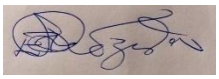
Signature:  Date: 12/08/2026

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DEDICATION

This undergraduate research is dedicated to my beloved family members and cherished friends whose unwavering support and encouragement have been valuable throughout this journey of learning and discovery. With special dedication to Mathew and Jane Munatsi

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I thank God, the Almighty for granting me the opportunity for this study. I also thank my family for their love, financial and moral support throughout the period for this research. My special thanks and foremost appreciation go to my Supervisor Dr E. Pedzisai who was consistent encouragement saw me through my studies and his valuable contributions helped to finish my dissertation I acknowledge with high regard his unwavering availability to my cause and guidance throughout the research project. A special thank you goes to Mabvuku Tafara community members and all stakeholders who spared their valuable time to honestly respond to my interviews and questionnaires.

ABSTRACT

Fast and unplanned growth of urban areas is a global problem that damages local ecosystems and puts pressure on council services in nearby residential areas. In Harare's outer areas, this growth has led to large scale clearing of land for housing. This directly affects water, sewer, and road services while harming sensitive environmental areas. This study examined the spatial changes, key drivers, and environmental effects of urban expansion in Mabvuku Tafara Ward 20 between 2016 and 2025. The ward lies on the eastern edge of Harare Metropolitan Province in Zimbabwe. It covers about 8.5 square kilometers and has a high population. The area is facing serious pressure on both the environment and basic services. The study used a mixed methods approach. Quantitative data were collected from 90 households using stratified questionnaires. Qualitative data came from 12 household interviews, 6 key informant interviews, and field observations. The survey data were analyzed in Microsoft Excel using simple statistics to produce tables, pie charts, and bar graphs. Google Earth Pro satellite images for 2016, 2020, and 2025 were compared visually to show land changes over time. Interview transcripts were analyzed using themes. The satellite comparison showed a large and uncontrolled loss of open land and wetlands to housing between 2016 and 2025. The survey results showed serious gaps in services. Many households reported poor access to water, higher costs for basic services, and almost no formal waste collection. Interviews and field photos revealed weak zoning control, poor enforcement of planning laws, and damage to wetlands caused by illegal dumping. The findings show that growth in Ward 20 is unplanned and driven by peoples need for shelter. It is moving faster than the council can plan or provide services. To address this, the City of Harare must move from reacting to problems after they happen to planning ahead. This should include protecting wetlands with community involvement and improving local infrastructure in a decentralized way. The study concludes that building housing without services is not sustainable. There is an urgent need for policies that limit outward growth and promote joint planning between the council and the community.

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LIST OF ABBREVIATIONS

EMA Environmental Management Act

GIS Geographical Information Systems

GPS Global Positioning System

LED Local Economic Development

NDS National Development Strategy

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CHAPTER ONE: INTRODUCTION AND BACKGROUND

1.1 Introduction

This dissertation explores the consequences of urban expansion within Mabvuku Tafara Ward 20 in Harare, Zimbabwe. The study analyzes patterns of urban expansion within the ward, the factors influencing the rapid expansion, and the impact of urban expansion on the social and economic aspects of the community between 2016 and 2025. Rapid expansion of urban areas in Mabvuku has resulted in pressures on urban housing, infrastructure development, and the environment. This chapter highlights the following: background of the study, research problem, importance of the study, objectives, research questions, scope of the study, definition of terms outline of the study and chapter summary.

1.2 Background of The Study

Urban expansion is a worldwide trend resulting from increasing population, economic development, and migration. In the case of Zimbabwe, especially in the urbanized zones such as Mabvuku Tafara Ward 20, there have been numerous shifts in land use patterns as a result of urban expansion. This expansion tends to be unplanned and, therefore, has adverse effects including environmental degradation, loss of agricultural land, and pressures on infrastructure (Seto. KC, et. al.,2018). It involves the process of establishing informal settlements and the conversion of environmentally sensitive areas resulting in extreme environmental degradation, especially wetland destruction, which is vital in the regulation of water systems (Mangoro et al., 2022).

1.3 Problem Statement

There is a very fast growth rate in Mabvuku Tafara Ward 20 with uncontrolled housing development and the conversion of land from agricultural uses to other purposes. The growth process has been characterized by poor infrastructure, depletion of green areas and wetlands, and strain on basic amenities like water and sanitation. Continued growth of the same nature will result in deterioration of the environment, lower standards of living, and increased disparities in income levels. It is against this background that this research intends to investigate the scale of growth, factors fueling it, and socio-economic effects of the growth.

1.4 Justification

The need for conducting this study arises due to the fact that rapid urban growth is taking place in Mabvuku Tafara Ward 20 but no information is available at the ward level to aid in planning. The lack of such data makes it difficult for policy makers in City of Harare to understand the nature and extent of urban growth taking place in the area. This may lead to generic measures being put in place.

1.5 Significance of the Study

This research is being conducted due to the fact that rapid urban expansion in Ward 20 of Mabvuku Tafara is taking place without any ward-specific data to inform decision-making regarding the same. The policymakers and City of Harare do not have current information on the rate and causes of urban expansion in this ward. This may lead to ineffective intervention programs since they will be based on generic information. Primary data collected from this study will serve as the basis for monitoring. This study will be very important for different stakeholders in various ways. For instance, to the policymakers and planners of the City of Harare, it will offer evidence regarding land usage and planning for the future infrastructure needs of the ward. To the community members, this study will inform them about issues concerning urban expansion and how they can be involved in the planning process. It will also be important to academic researchers as empirical evidence regarding peri-urban expansion in Zimbabwe as opposed to Harare city.

1.6 Research Aim of the Study

The aim of this research is to analyze urban expansion in Mabvuku Tafara Ward 20.

1.6.1 Specific Objectives of the Study

1. To assess urban expansion in Mabvuku Tafara Ward 20 over the past decade (2016 to 2025).

2. To identify the key drivers influencing urban expansion in Mabvuku Tafara Ward 20.

3. To evaluate the socio-economic impacts of urban expansion on the community.

1.6.2 Research Questions

1. What spatial patterns of urban expansion have occurred in Mabvuku Tafara Ward 20 over the past decade?

2. What are the key drivers influencing urban expansion in Mabvuku Tafara Ward 20 over the past decade.

3. How has the community been impacted socially and economically by urban expansion.

1.7 Scope and Delimitation of the Study

This study seeks to examine the issue of urban growth in Mabvuku Tafara Ward 20. The study will concentrate on Ward 20 in Mabvuku Tafara in Harare, Zimbabwe. This research will examine the nature of urban expansion, factors driving it, and socio-economic effects that it causes from 2016 to 2025. Data will be gathered through the collection of information from the people residing in this ward, the local authority, and secondary sources like satellite images and council reports. The research is delimited to only Ward 20, and not any other ward in Mabvuku Tafara, let alone Harare. Socioeconomic effects will be looked at; engineering issues are excluded.

1.8 Definition of Key Words

Environment: Consists of both the living and non-living components found in nature such as the air, water, soil, and ecosystems. They sustain life forms and provide biodiversity (Mastrorillo et al., 2016).

Sustainability: The ability to satisfy the requirements of the current generation without jeopardizing the satisfaction of needs by succeeding generations while balancing environmental, economic, and social considerations (Sachs, 2015).

Urban Growth: Refers to the physical expansion of an urban area into previously rural or peri-urban areas, as a result of population increase and economic development. It is characterized by the transition from agriculture to urban uses (Angel, Parent, and Civco, 2016).

Urbanization: Is the transformation of rural spaces into urban spaces by way of population increase, industrialization, and economic growth (Seto et al., 2019).

1.9 Organisation of The Project

The research is made up of five major chapters starting with Chapter 1 being the Introduction and Background. The chapter starts by giving an insight into what urbanization is all about and how it has been occurring in Mabvuku Tafara Ward 20. The chapter goes ahead to identify the major issues involved in urbanization using a well-defined problem statement. The objectives and aims of the study are identified alongside the research questions that the study intends to answer. The importance of the study for policy makers and other people is highlighted together with the scope and limitations of the research. Urbanization trends will be examined in Chapter 2 of the research in terms of the literature review. Here, one will get a chance to learn about the trends of urbanization globally and regionally together with the causes of urbanization. The socio-economic impacts of urbanization like its effects on job creation and housing will be looked at in this chapter. At the same time, the socio-environmental impact of urbanization will be considered. Chapter 3 will provide details about the methodology of the research by providing information about the research design. This section also elaborates on the techniques of data analysis used, as well as the ethical concerns of the study. Chapter 4 covers Data Presentation, Interpretation, and Discussion. It contains information about the presentation of data using various statistical tables, charts, and graphs, as well as its interpretation in regard to the stated research questions. The findings are discussed in comparison with previous studies, with special emphasis on theoretical and practical implications of the study. Finally, Chapter 5 sums up the research in the form of Summary, Conclusions, and Recommendations. Here, the main findings of the study are summarized, conclusions are drawn, and recommendations are made.

1.10 Chapter Summary

The current chapter outlined the introduction of the research concerning implications of urbanization in Mabvuku Tafara Ward 20. It was indicated that fast and uncontrolled urbanization is happening within the ward with minimal information about its trends, causes, and effects. The chapter highlighted the problem statement of the research, its significance, its purpose, its objective, and three main research questions. Moreover, it was stated what scope the research covers, what its delimitation is, and what definitions of the keywords it uses.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The current chapter will offer an extensively critical review of the theories, conceptual models, and empirical literature on the issue of peri-urban expansion. The main objective of such a literature review lies in setting up the investigation of the structural, institutional, and socioeconomic mechanisms of peripheral city growth against well-established discourses of the global, regional, and national academia. Structurally, the chapter begins with a theoretical grounding of the study based on the framework of Urban Political Ecology. Afterward, a conceptual framework for the operational variables of urban growth is presented. Empirical literature on the subject is considered next from the point of view of global, African, and Zimbabwean discourse, each directly following its thematic section formulated based on the objectives of the research: spatiotemporal dynamics of spatial growth, its drivers, and socioeconomic implications for peripheral communities.

2.2 Theoretical Framework

The main theoretical approach adopted in exploring the changes in the structure and spaces associated with peri-urban development in this research is that of Urban Political Ecology (UPE), which was developed and perfected by radical geographers like Erik Swyngedouw (1996) and Nik Heynen (2006). Urban Political Ecology suggests that the urban environment is not just a neutral physical entity resulting from concentration of people; rather, it is a socio-ecological space whose construction is deeply controversial in terms of political, economic, and institutional dynamics. In this theory, the metabolic changes in the land – for example, when greenfields become housing units – cannot be understood without considering the power dynamics involved, whereby urban space is produced in service of capital accumulation by dominant powers.

There have been extensive uses of the UPE framework in the urban planning literature globally as well as regionally in analyzing complex processes within peripheral lands. As an example, Zimmer (2010) has used UPE to analyze the fragmentation of space as well as unequal water distribution systems in Indian cities. In another case, Lawanson et al. (2012) have used the framework regionally to highlight the encroachment of residences into the wetlands of Lagos, Nigeria, due to weak regulations by the state, thus permitting the dominance of capital over

space formation. It is important to note that the strength of the framework is based on its ability to move beyond simple demographic processes such as the effect of population increase to show how political processes and networks play a central role in directing spatial development. Nonetheless, a weakness of the framework is its emphasis on political macroeconomics while ignoring individual household responses to economic pressures.

Despite this weakness, Urban Political Ecology is undoubtedly an extremely valuable and necessary tool for this research. Even if this approach may overlook the smaller decisions of individual households, its strong emphasis on politics and how they affect the physical landscapes makes it the perfect analysis method for investigating the peri-urban area of Zimbabwe. In relation to the development of Harare, the UPE approach enables this research to analyze how formal tools and means of planning through legislation intersect with, or are circumvented by, other networks, political arrangements, and players within the property market. Through the use of such a methodological approach, the study is no longer limited to explaining the process of land conversion horizontally.

2.3 Conceptual Framework

Conceptual framework for the operationalization of the study has been created to demonstrate how the interaction among institutions, politics, and socio-economics changes the natural environment and hence gives rise to different spatial formations and socio-economic consequences.

INDEPENDENT VARIABLES

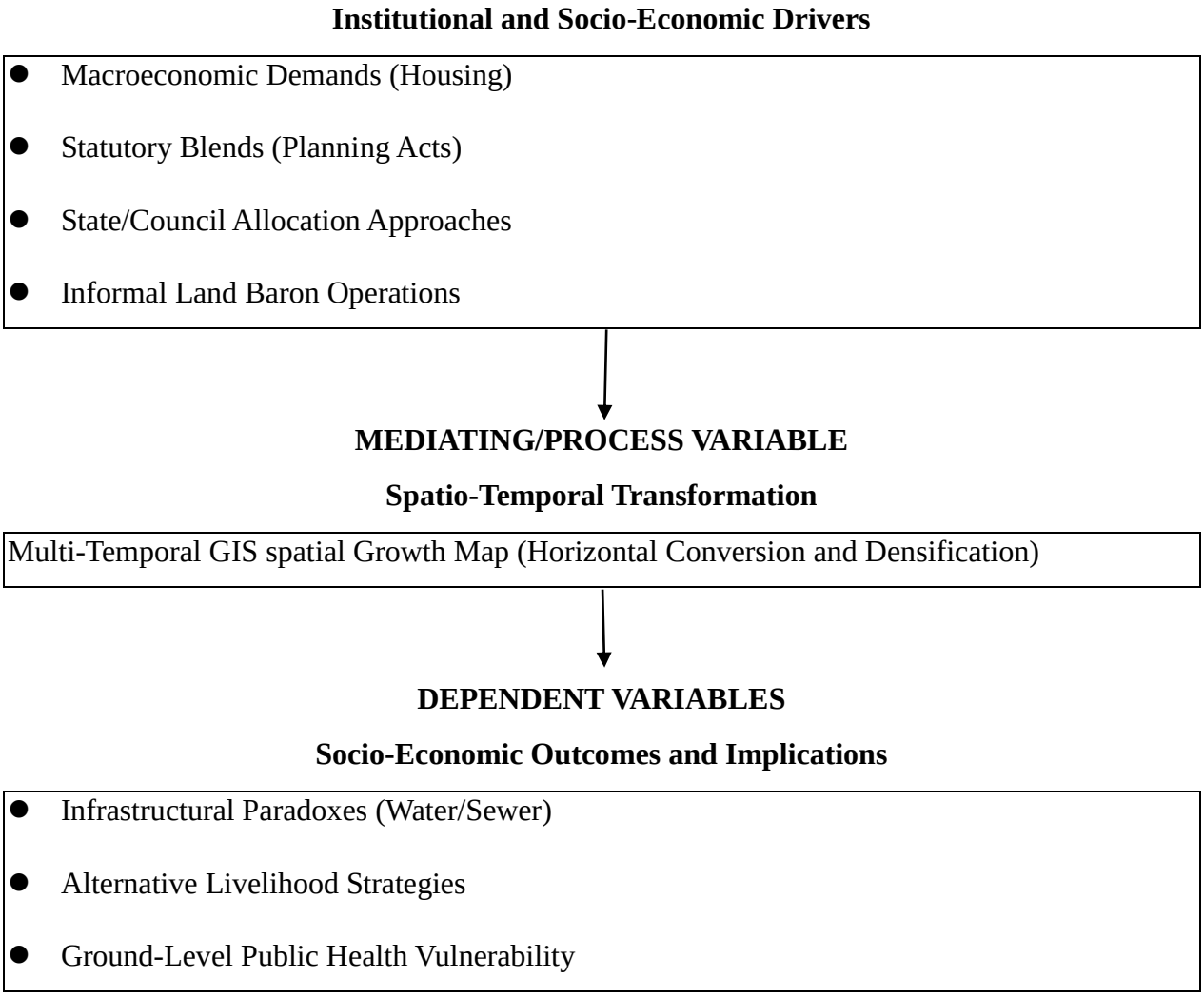

Fig 2.1: Conceptual Framework

As shown in the above conceptual map, the theoretical framework assumes that the independent variables include both institutional and socioeconomic determinants. These are, for instance, the economic demand for housing; the relevant legislation, such as the Regional Town and Country Planning Act; the approach to land distribution employed by municipalities; and finally, the activities of the informal land traders. The next step includes the mediation variable, and the latter is the actual physical transformation of land through its spatio-temporal alteration. In order to observe the rate of horizontal expansion and densification of land plots, this stage uses multi-temporal GIS spatial growth mapping. Finally, these physical changes result in the dependent variables, including the socioeconomic consequences on the ground. Such consequences may include, for example, an institutional infrastructure paradox (the payment of services while

lacking utilities), alternative methods of survival of families, and serious public health risks due to the self-provision of drinking water and sanitation facilities.

2.4 Spatio-Temporal Trends and Patterns of Spatial Growth

Globally, the patterns of growth experienced in urban areas in the last decade can be best described through the use of spatio-temporal discontinuous and dispersed horizontal growth which is often referred to as urban sprawl or leapfrogging. Seto et al. (2011) conducted a meta-analysis on the global trends of urban land use from multi-temporal remote sensing data. From their findings, it was revealed that global urban land cover had been growing at a rate two times faster than the population of these urban centers. According to Angel et al. (2011), in both developed nations and rapidly developing economies, such pattern of urban growth can often be explained through the use of speculative consumption of peripheral agriculture lands and the use of motorways. In general, researchers studying this trend from satellite data recognize that contemporary patterns of growth no longer follow the typical concentric and continuous patterns but instead are characterized by dispersed polycentric clusters that permanently change the ecological landscape.

On a regional level, throughout Africa, the spatial temporal characteristics of urban sprawl depict explosive, unplanned horizontal expansion that constantly outstrips the provision of minimum grid infrastructure. Urban sprawl in sub-Saharan Africa has been described to be distinctively different from other forms of sprawl in history due to its occurrence in the face of industrial decline, causing suburban areas to take on characteristics of informal settlement survival tactics. Fragkias et al. (2013) report that peri-urban growth patterns in African urban regions have largely been found to be horizontally oriented in that there is a continuous transformation of community-owned communal and green fields to residential land use. Research using satellite remote sensing technology on some major African urban centers like Nairobi and Accra reveals that as a result, such trends lead to a highly fragmented spatial arrangement in which the pace of construction development overwhelms municipal regulation.

At the national level in Zimbabwe, empirical studies regarding the geographical patterns suggest a massive structural move of the country’s important cities to rural, agriculturally dominant zones, which has gained considerable momentum since 2010. According to Chirisa (2014), the spread of important urban areas such as Harare and Bulawayo can be regarded as an intense

geographical encroachment into sensitive wetlands and the adjoining commercial farms. National research in the realm of urban geography, using geographic information systems, shows that the growth trend is very conflicting because it oscillates between a low-density form of land grabbing and high-density unplanned residential development (Zimunya 2023). Geographers at the local level point out that the reason behind the non-structural nature of urban expansion lies in the strong administrative limitations experienced by the national government, resulting in a lack of continuity in the urban structure, along with unprecedented ecological buffer zone losses in the periphery of metropolitan cities.

2.5 Key Drivers Influencing Urban Expansion

On a global scale, the major factors contributing to the spread of urban areas stem from processes related to global capital accumulation, demographic changes, and speculation in the property market. According to the literature on this topic, the global focus lies on the desperate need for economic gains which results in huge migration flows of people who move from rural to urban areas, thereby providing the foundation of urban housing demand (United Nations 2022). Moreover, when considering the case of countries belonging to the Global North, as well as emerging economies in Asia, the processes of urban expansion are actively promoted through state-sponsored infrastructure projects, corporate land banks, and mortgage systems (Seto et al. 2012).

In regional dynamics, the factors that influence growth within urban areas in Africa differ greatly from the international experience in that they have moved away from funding by corporate capital to institutional failure, demography, and an equivalent process of land allocation. It is clear from the studies of regional experts that although demography through rural-to-urban migration continues to be a strong force in growth as a result of economic decline in the countryside, the opening up of urban peripheries takes place as a result of lack of institutional capacity and the corruption of the municipal planning system (Fox 2012). The planning system in many African countries is governed by a set of plans developed during the colonial era, which is completely inadequate for handling the modern demand for cheap accommodation.

The modern-day drivers behind the expansion of cities in Zimbabwe are rooted in a web of factors, including macroeconomic instabilities, shortages of formal housing provision, and total collapse in terms of planning enforcement in the local area. It is noted in national literature that

the economic instability has created an unprecedentedly high demand for affordable housing in Zimbabwe since formal urban rentals have become totally unsustainable among the urban poor (Moyo and Nyoni 2022). The inability of the local government institutions such as the City of Harare to provide serviced land leads to a bypass in the system whereby land without any services is provided directly to the housing co-operatives and private development corporations (Chigora 2022). According to Dube (2023), this institutional failure has led to the emergence of politically connected "urban land barons" who use administrative loopholes, abuse provisions of the Regional Town and Country Planning Act and sell off public buffer areas for housing purposes.

2.6 Socio-Economic Impacts of Urban Expansion

At the global level, there is a stark dichotomy between economic empowerment and socio-ecological marginalization caused by urban sprawl. In this regard, the current body of global knowledge highlights the way horizontal growth causes significant transformations in land use, resulting in considerable economic gains associated with the rise of real estate and creation of different types of jobs in construction, transport, and commercial industries (World Bank 2020). At the same time, there is an ongoing pattern related to the forced eviction of indigenous peri-urban farmers who are deprived of their means of subsistence in the form of their agrarian land. The global academic discourse also provides much information about unorganized suburban expansion causing an acute strain on municipal resources and resulting in the unequal distribution of public services.

In terms of regional impacts, the socio-economic consequences of peripheral development can be observed in Africa through an ongoing cycle of infrastructural poverty and extreme public health threats. This is due to the fact that peripheral growth in Africa takes place entirely beyond the realm of previously established services, leading to the creation of completely unserviced regions, devoid of any municipal tap water, sewage connections, or electricity supplies (Cobbinah et al. 2015). As research in the region indicates, this infrastructural disadvantage compels millions of African families to fend for themselves in terms of meeting their needs through informal, unregulated economic activities (Awotona 2019). Most importantly, it must be noted from an academic perspective on health issues in Africa's peripheral areas that without

centralized sewage disposal, poor families resort to building their own septic systems alongside shallow hand-dug wells on individual plots.

At the national level, studies conducted in Zimbabwe present a depressing view of the socio-economic and infrastructure realities surrounding peri-urban areas in the country today. Scholars at the national level have articulated a significant "infrastructure paradox" whereby people living in the periphery are fully integrated into the urban area through the imposition of rates from taxation, yet they are completely forgotten about in terms of provision of utilities (Musarurwa 2022). Literature indicates that the complete inability of local councils to provide tap water and waste disposal facilities has driven residents to rely mainly on solar boreholes or toxic open wells as means of survival (Nyoni 2023). On economic levels, literature shows an aggressive transformation of domestic residential spaces into tuck shops, workshops, and rental sub-divisions due to the tough economic situation of high inflation (Chirisa and Mlambo 2022). However, this practice leads to loss of neighborhood security, creation of conflict in terms of heavy traffic, and loss of social cohesion within the community.

2.7 Identification of Research Gaps

Despite the valuable contributions that the above literature makes to our understanding of the socioeconomic consequences of urbanization as well as the institutional problems involved in it in Zimbabwe, there is one serious methodological and contextual deficiency in their research approach. Indeed, in terms of the methodologies applied, all the reviewed studies conducted in the country at the national level (Chigora, 2022; Dube, 2023; Musarurwa, 2022) apply either purely qualitative or static approaches and focus primarily on subjective household interviews and the use of questionnaire matrices. What has not been done to date is any research at the local level involving the combination of advanced spatiotemporal remote sensing methods with microdata obtained from household surveys in order to document the land-use dynamics over a particular period of time. The current study fills this very gap. Instead of applying any theoretical frameworks related to urbanization, this research applies an extremely combined approach based on multi-temporal satellite imagery in order to show what changes occurred over the past decade (between 2016 and 2025), along with verifying the spatial results with ground-level metrics obtained from household survey data.

2.8 Summary

This chapter gave an exhaustive, scholarly synthesis of the literature pertaining to the research aims of the study. This chapter effectively grounded the dissertation in the realm of Urban Political Ecology, confirming that peri-urban change is caused by institutional power inequalities and governance deficits rather than impartial growth in numbers. By reviewing literature at the global, regional, and national level, the analysis identified the disorganized trends of horizontal sprawl, identified the institutional weaknesses as well as the network of land barons involved in the process of expansion, and highlighted the infrastructural dilemmas facing households on the periphery. Lastly, by identifying a distinct void in spatial empirical literature in Zimbabwe, this chapter justified the methodology used in the following chapter of the study.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the researcher shall explain the research methods used to analyse the expansion of urban areas and their effects on Mabvuku Tafara Ward 20. This includes information about the study area, research approach, target population, sampling techniques, research instruments and methods used for data collection, techniques used in data analysis, reliability and validity of the findings, ethics involved in the research, as well as limitations of the research.

3.2 Study Area

Mabvuku Tafara Ward 20 is an urban community located roughly 15 kilometres to the east of Harare's city centre in Zimbabwe. The community falls within the Epworth District, and it shares borders with Msasa Park to its western side, Ruwa to the east, and the Harare-Mutare Highway to its northern boundary. Initially, the community was a planned suburb developed during the era of colonial rule. However, due to population pressure and economic difficulties, Mabvuku Tafara Ward has been undergoing uncontrolled urban expansion (Moyo & Ndlovu, 2023).

The ward occupies an area of approximately 8.5 square kilometres, comprising formal settlements found in Mabvuku and Tafara suburbs and informal settlements created in marginal lands like wetlands and roadside areas. In the last decade (2016-2025), the ward has been experiencing notable changes in land use, where available open land has been utilized for residential purposes, backyard shacks, and small-scale trading activities in kiosks. As a result, the pressure on utilities like water and sanitation as well as the transportation network has increased immensely. A map of the study area will be provided below in Figure 3.1 showing the ward boundaries, the informal settlement pattern, major roads, and land uses.

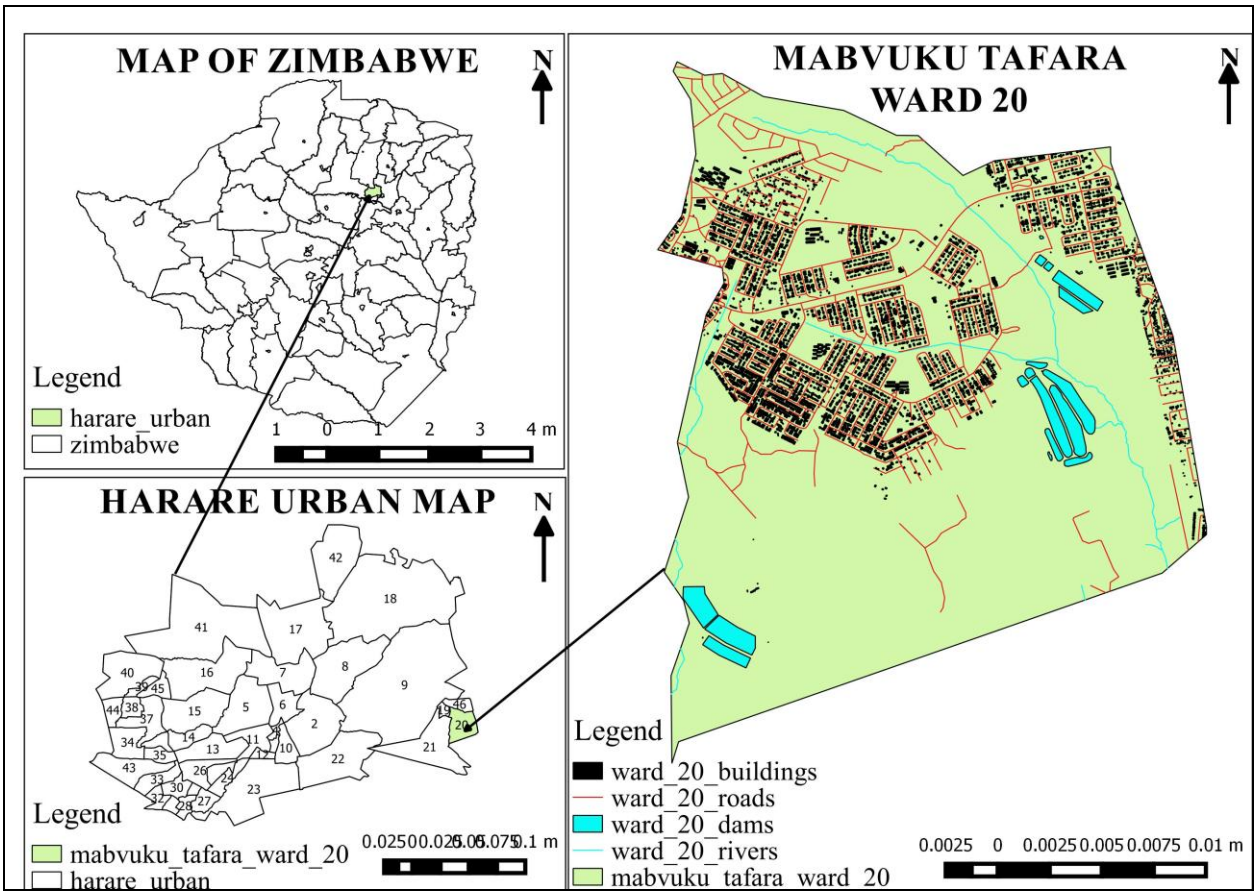

Fig 3.1: Mabvuku Tafara Ward 20 (Source: Quantum Geographical Information Systems Software)

3.3 Research Design

The study applied a case study methodology, which entails a multidimensional examination of complex phenomena in a natural setting (Yin, 2018, as cited in Chikwanha & Dube, 2024). In order to address the issues associated with the expansion of cities into suburban areas, an example of such a suburb is the Mabvuku Tafara Ward 20. Case studies are important as they permit the researcher to consider unique circumstances surrounding an issue while at the same time coming up with findings that can be generalized to other similar situations. The investigation adopted a mixture of quantitative and qualitative approaches whereby the quantitative component entailed quantifying spatial transformations and percentages while the qualitative part entailed uncovering the experiences of members of the community with respect to socio-economic impacts.

3.4 Targeted Population

Target population for this research was categorized into two operational categories to give an extensive coverage of the issue of urban sprawl. The first category was composed of all household heads occupying the ever-growing territory of Mabvuku Tafara Ward 20. They made up the group of the target population since they are directly affected by socio-economic implications, strain on infrastructure, and the changes that take place in the surrounding environment. The other group consisted of institutional key players with either a professional or legal mandate to engage in activities related to urban sprawl. They include municipal town planners from Harare City Council, environmental management officers from the Environmental Management Agency, and the ward councilor for that particular area.

3.5 Sample Size and Sampling

The following is how the study identifies the sampling technique that will aid in selecting a sample from the larger target population in order to come up with valid conclusions. The study employs a mixed methods design where a combination of probability selection and mathematical estimation techniques is adopted in coordinating between the quantitative and qualitative components, respectively, of the study in order to ensure a balanced mixed methodology. This implies that the results of the statistical estimations on infrastructure strain and economic strain will be reinforced with context-rich institutional and residential testimonies.

3.5.1 Sample Size

Sample size refers to the actual quantity or number of subjects/observations selected from the sampling frame for inclusion in the research. In this study, the sample size of households in the quantitative component was calculated using the rule of thumb approach. According to Creswell and Poth (2018), the rule of thumb is a smart way of making an estimation of samples in statistical terms where an estimation technique involving strategically determined percentages of 1% to 10% of the targeted population is employed. Lower percentages of around 1%-3% are generally used where the baseline population is large.

In this case, the target population for the randomly selected residential areas under the expansion zones was 4,900 households. The investigator decided to employ a 2% ratio, which is statistically a good fraction to maintain a balance between representation and practicality. A ratio larger than 2% would give rise to many participants who would be located in an extremely vast

geographical area. This would make the transportation and printing expenses very high for an independent investigator, with the data set being extremely complicated for the novice investigator to analyze.

With these considerations in mind, a 2% ratio was highly appropriate in this situation. Hereunder, the mathematical computation of the required sample size for this quantitative investigation:

Sample Size (n) = 2% of 4,900 households

n = 2 of 100× 4,900

n = 98 households

Consequently, ninety-eight (98) indicates the specific number of respondents who were chosen to participate in the quantitative part of the survey through the administration of structured household surveys. In the case of qualitative sampling, the sample targets were set based on the criterion of data saturation. This is the theoretical moment during data collection when any additional interviews no longer provide any new information, trends, or perspectives. In terms of the residential narratives line, in-depth face-to-face interviews were supposed to be conducted with a variety of residents in order to analyze their individual experience. The other line, that of institutional key informants, required a panel of experts to conduct a proper analysis of the land management process at the municipality level.

3.5.2 Sampling Techniques

Stratified random sampling was adopted as the main approach of probability sampling to conduct the quantitative surveys among households. Stratified random sampling was used to categorize the increasing geographical areas of the ward into distinct socio-spatial categories depending on housing conditions, that is, distinguishing between formal existing housing, formal allotments, and informal backyards. Random grid routes were then plotted in the different strata to choose certain household heads, giving each household an equal non-zero possibility of selection. Stratified random sampling is one of the probability sampling approaches where a diverse population is divided into various mutually exclusive sub-groups referred to as strata, depending on common attributes among which random independent samples are chosen (Cochran, 1977; Elfil and Negida, 2017).

Purposive sampling was the method of non-probability sampling used to recruit the participants for the qualitative interviews conducted among the inhabitants of the area and among the institution's key informants. Purposive sampling is a non-probability sampling method in which the researchers selectively chose certain participants owing to their distinctive characteristics or experience with the topic of inquiry. Purposive sampling is an approach of non-probability sampling whereby the researcher selects specific individuals with distinct qualities, expertise, or firsthand experiences related to the topic of research due to their rich insights, rather than by chance, in order to achieve the research objectives (Campbell et al., 2020; Stratton, 2024).

3.6 Data Collection Instruments

The collection of data in the mixed-methods methodology used in this research required the development of a diverse array of instruments to ensure that data is collected at all levels of operation. This is done through structured questionnaires, semi-structured interviews, checklist observations, and secondary data in the form of satellite imagery.

3.6.1 Questionnaire

The questionnaire for the household was administered by the researcher in physical form to ninety-eight randomly sampled household heads in the three identified housing strata. The questionnaire included both closed-ended questions that made use of the Likert scale and open-ended questions to determine the gaps in the infrastructure, cost of utilities, and livelihood changes, and to get opinions about the community as a whole. But only 90 complete answers were retrieved for analysis out of 98 households, with a response rate of 91.8%, forming the basis of the empirical evidence used for analysis in Chapter Four. A questionnaire refers to an instrument that is formally structured and includes a series of questions aimed at getting quantitative answers.

3.6.2 Interview Guide

A total of two semi-structured interview guides were designed and implemented in person during the qualitative component of the study. One of the interviews involved residential interviews, which were conducted with 12 long-term residents on their personal household encounters with rent increases, water supply issues, and local land displacements. Key informant interviews were conducted with 6 carefully selected institutional experts such as municipal town planners,

council officials, environmental management experts, and the ward councilor using an interview guide that addressed the issues of zoning loops, administrative obstacles, and legal problems of enforcing policy under the Regional Town and Country Planning Act. All interviews were done manually and through audio recordings up to the point of achieving data saturation. Interview guides are qualitative research tools that provide a set of flexible open-ended questions aimed at leading the researcher's data collection process in an interview situation (Bryman, 2016).

3.6.3 Observation Guide

The observation guide was practically conducted by the researcher through systematic walks in the ward to document signs of changes in the ecosystem. The tool was employed to document the types of structural building materials used in extension constructions, identify environmental degradation areas, and confirm the physical state of degraded natural wetland systems. While undertaking these observations in the field, photos were taken to document illegal sites where waste was being dumped, housing intrusions into public green spaces, and the absence of drainage facilities for use as photographic proof that validated the stories from the respondents. Observation guide is a list of systematic checks undertaken to document the physical, behavioral, and spatial conditions directly observed in the research environment (Saunders et al., 2019).

3.6.4 Secondary Spatial Data (Satellite Imagery)

High-resolution satellite imagery data was retrieved directly from the Google Earth Pro database. In this context, the researcher utilized the Google Earth Pro database to obtain orthorectified raster satellite images spanning a ten-year period in approximately five-year spans using three reference points: April 20, 2016, May 18, 2020, and June 22, 2025. Such digital datasets can be used to measure and visualize the changes in the physical growth of urban infrastructure and the loss of green space due to expansion through horizontal residential development in these reference years. Secondary spatial data is geographic/environmental data acquired by other organizations but which are subsequently utilized as baseline data for geographical studies (Vanderhoven et al., 2016).

3.7 Piloting

Before the full-scale data collection, the research undertook a pilot survey to determine the appropriateness of the tools used in the context, their linguistic and internal validity. This

consisted of distributing the structured questionnaire to 10 households chosen from an adjoining ward with similar peri-urban characteristics, making sure that these subjects were not included in any way in the subsequent analysis. This pilot test helped identify problems of ambiguity in the questions on socio-economic impacts owing to the use of complicated vocabulary of planning jargon; this problem was subsequently corrected. In addition, the time taken to complete the questionnaire was optimized to 15 minutes.

3.8 Data Collection Procedure

The data collection process was done in a systematic process consisting of three stages. This was done through the following three stages in order to ensure proper methodology is used. The first stage was to extract the Google Earth historical images for the purpose of mapping the boundary changes at the time of the ward. The second stage was where the researcher walked around the geographic tracks for the allocation of the questionnaires, explaining the aims of the study and later collecting them within 48 hours. The total number of respondents who responded to the questionnaire was 90 people. In stage 3, which was carried out for a period of three weeks, there was an interview of 12 households and six key informant interviews among professionals.

3.9 Data Presentation and Analysis

Quantitative and qualitative datasets underwent independent analyses before undergoing synthesis in the final stage of the analysis process. The quantitative dataset comprising 90 validated household questionnaires was analyzed independently using Microsoft Excel where the descriptive statistics formulas were executed to get frequencies, percentages, and mean values for mapping the gaps in infrastructure and socio-economic challenges. Visual representations of the findings were derived from structured tables, pie charts, and comparative bar charts. For the secondary data on satellite images, the Google Earth Pro images taken at various intervals from 2016 to 2020 and to 2025 were subjected to visual comparative analysis to actively determine the expansion boundaries of the settlement pattern.

The qualitative data that had been collected through 12 residential interviews, 6 key informant transcriptions, and observation fieldnotes have been analyzed using the thematic framework approach to analysis. There is a clear sequence to this process which includes; text familiarization, first level coding, theme identification, structure of themes mapped to objectives,

theme definition, and write-up of themes. Qualitative data was presented in the form of verbatim statements derived from the residents for them to speak out their experience on the issue at hand. Moreover, field photographs obtained during the walk-through were incorporated directly into the analysis in order to visually confirm the state of the environment and infrastructure. Triangulation was done by comparing the visual satellite pictures against the percentage values in charts and tables.

3.10 Ethical Considerations

This research strictly adhered to the rules set by Bindura University of Science Education in terms of conducting research in line with ethical codes for research within the institution. Prior to the start of data collection activities, an introductory letter confirming academic research clearance and approval was obtained from the Faculty of Science and Engineering, Department of Geography. In addition, the researcher promised to respect the socio-cultural values, traditions, norms, and community leadership procedures within the study location.

Absolute confidentiality of the informants' identity as well as their safety was ensured by maintaining total anonymity since there was no collection of any personal names, exact house numbers or other identifying marks, and all the informants were coded with different alphanumeric codes. Prior to each data collection phase, the informants were made aware that their participation in the process was voluntary, and that they had the liberty to withdraw anytime they wanted. Besides, explicit consent was also sought separately to take any pictures of private properties and conduct interviews.

3.11 Limitations of The Study

Some of the methodological limitations that came up during the process of conducting this research include; first, the issue of recall bias posed a major problem because, at times, some of the residential participants could not clearly remember the exact order in which the physical infrastructures came up during the 10-year time frame. This limitation was dealt with successfully by relying on the use of multi-temporal satellite images from Google earth which provided an unbiased point of reference to establish the exact dates when the physical infrastructures came up. Second, the issue of access constraints arose due to suspicion among some participants about land ownership.

3.12 Chapter Summary

The current chapter has elucidated the comprehensive mixed methods research design used to explore the spatial and socioeconomic dynamics involved in urbanization within Ward 20. With a Convergent Parallel Design that incorporates a sampling matrix that includes 90 questionnaires, 12 resident interviews, and 6 key informants, the research has set up an empirical research pipeline that can incorporate both quantitative spatial data as well as qualitative stories from the people. The use of household surveys, key informant interviews, field observations, and satellite imagery comparisons conducted using Microsoft Excel constitutes multi-triangulation analysis. The empirical information has been presented through tables, pie charts, bar graphs, field observation images, and respondent quotations, which are based on stringent ethical approval.

CHAPTER 4: DATA PRESENTATION, INTERPRETATION AND DISCUSSION

4.1 Introduction

The current chapter highlights the presentation and discussion of the empirical findings obtained from the field in order to analyse the consequences of urbanization in Mabvuku Tafara Ward 20. The data obtained from the questionnaires administered to households, in-depth interviews conducted with local residents and observations made while in the field will be presented in order to reveal the nature of the changes occurring within the ward. In doing so, the response rate of the people interviewed as well as the demographics of these respondents will first be analysed. This is then followed by the presentation of the findings grouped under relevant themes to capture the essence of the research.

4.2 Response Rate

This section describes the levels of response to the questionnaire and completion of the qualitative interviews. In the case of the qualitative research portion of this study, the sampling method is based on data saturation, whereby interviews will be carried out in the field until saturation level is reached. Table 4.1 highlights the results of this process.

Table 4.1*: Research Instruments Response and Completion Summary*

Research Instrument	**Targeted Sample**	**Actual Participated**	**Response Rate (%)**
Household Questionnaire	98	90	91.8
Resident Interviews	Data Saturation	12	Saturation Achieved
Key Informant Interviews	Data Saturation	6	Saturation Achieved

[Source: Primary Data]

The relatively high number of questionnaire returns shows that nearly all of the chosen respondents took part in this survey. From an academic standpoint, the results mean that the

obtained figures can be considered reliable and form a base to comprehend the situation in the community as a whole. The data saturation for interviews implies that the study was able to cover the whole range of views on the matter from both residents' and institutions' perspectives. This makes it possible to conclude that the field data obtained during this process is sufficient enough to answer all of the set research questions because there is enough evidence of the phenomenon itself, as well as related stories and planning ideas.

4.3 Demographic Characteristics

The section below analyses the background of the 90 respondents that responded to the household survey questions. It is important to know the nature of the respondents, especially their gender, age, occupation, and period of residence in order to be able to understand why they have such views about urbanization and services provision.

Table 4.2*: Summary of Respondent Demographics*

Demographic Metric	Category	Total Respondents (n=90)	Percentage (%)
Gender	Female	52	58
	Male	38	42
Age Group	18–29 Years	11	12
	30–45 Years	41	46
	46–60 Years	26	29
	Over 60 Years	12	13
Employment Status	Informally/Self-Employed	58	64
	Unemployed/Pensioner	18	20
	Formally Employed	14	16
Length of Residence	More than 10 Years	37	41

	5–10 Years	34	38
	Less than 5 Years	19	21

[Source: Primary Data]

This increased female representation can be expected since, in most typical urban areas in Zimbabwe, women are normally at home dealing with the housework and managing micro-businesses within the community. Thus, the research is able to gather valuable information concerning domestic issues, such as access to water and management of urban waste. The data analysis indicates that, among the respondents interviewed, the largest number belong to the economically productive age of 30-60 years old. People within this age category are the main consumers and developers of land and constructions within the ward. Concerning livelihood sources, there is also no surprise in the huge prevalence of informal activities and self-employment among residents. As the formal employment opportunities are scarce in the region, the population resorts to home-based tuckshops, urban agriculture, vending, and traditional occupations. As a consequence, due to unstable income, the process of construction of houses becomes difficult, as well.

Finally, there is also a good balance between the duration of stay of respondents between long-time residents and newcomers. Interviewing respondents who have stayed more than a decade in Ward 20 enables the researcher to get first-hand information about how the area has evolved physically from being an open area to being populated. At the same time, interviewing newcomers who stayed only five years helps get information on the problems encountered by the new settlers in the newly expanded areas. These traits of the respondents' backgrounds affirm that they possess the requisite experience in discussing urbanization.

4.4 Spatial Patterns and Trends of Urban Expansion (2016–2025)

This chapter is concerned with the first research objective, which focuses on the growth trends and changes in spatial patterns of Mabvuku Tafara Ward 20 over the last ten years. Data used in the analysis includes quantitative surveys, descriptive responses from residents, views from institutions, and observations made during field visits.

4.4.1 The Rate of Physical Development and Land-Use Transformation

This theme addresses the speed at which urban growth has occurred as well as the types of land that have been physically changed to facilitate such growth during the last decade.

In the house-hold survey conducted by the researcher, the question posed to respondents was: "What would you say is the rate of physical development and building in Ward 20 in the last decade?" Figure 4.1 shows how they responded.

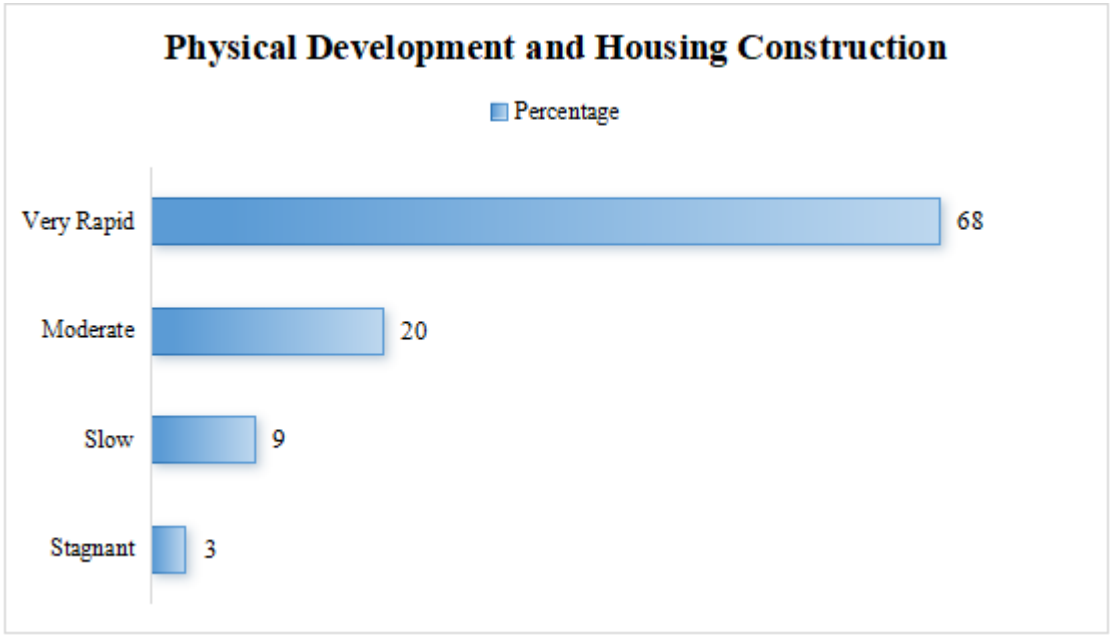

Fig 4.1: Physical Development and Housing Construction (n=90) [Source: Primary Data]

It can be seen from the data that there is a great unanimity among the locals regarding the rapid growth of the suburb. The reason behind choosing such a large number in the 'fastest' category is that the growth is taking place aggressively, and cannot be regarded as a gradual or slow structural change process.

For finding out in which area this growth was taking place, the researcher put forth the question: "Which land-use category has undergone the maximum physical change in your area?"

Table 4.3: *Most Visible Land-Use Transformations*

Land-Use Conversion Category	Respondents (n=90)	Percentage (%)
Open green spaces / Recreational lands	43	48
Agricultural land / Cultivation fields	29	32
Wetland areas	11	12
Institutional or public facility areas	7	8
No significant conversion observed	0	0

[*Source: Primary Data]*

From the statistical analysis, it is clear that the main targets of this expansion are the open communal lands and farming lands. The clear trend thus shows that the suburbs open space structure is being changed into one of development of housing. Thus, the above finding helps answer the first objective.

In the qualitative research method involving interviews of local residents about the environmental change experienced in their neighbourhood, some participants gave a first-hand account of the environmental change and its effects as follows:

"The speed and direction in which housing development has taken place have been alarming during the last decade. Open spaces that were once available for recreational purposes or farming land have all been converted into huge structures in just a matter of months."

Another interviewee expressed:

"...children can no longer enjoy open parks or playgrounds since all the open areas have been pegged out and sold off as housing stands..."

In order to understand the situation regarding this spatial development trend through an institutional perspective, the researcher undertook an interview with key informants. One of these is an expert in urban planning who works in the local council and who recognizes that:

"...the pace of spatial development witnessed within Mabvuku Tafara Ward 20 in the past decade has been unprecedented, and large swaths of agricultural buffer lands have been turned into housing stands..."

On their part, another official working in urban planning gave information about the particular zones being transformed, saying that:

"...the wetlands and open spaces that were supposed to serve as the lungs of the suburb have witnessed the largest conversions to housing land..."

As part of the field visit, a systematic transect walk was conducted in the ward to confirm the changes. Huge pieces of land, which were used for agricultural purposes by the communities or open greenways, were cleared up. In their stead was a dense line of houses, both finished and semi-finished, together with newly erected fences as seen in Plate 4.1.



Plate 4.1: Semi-Finished Houses in Mabvuku Tafara Ward 20 [Source: Primary Data]

The physical changes in Ward 20 exemplify the nature of horizontal sprawl in its most aggressive form, in which there has been a systematic compromise made of the natural environmental barriers, in response to the lack of residential properties within the area. The evidence clearly meets the requirements of the first research objective, because the nature of the spatial change

during the period under discussion was that of an unrestricted conversion of open and agricultural lands into residential areas.

The above trend brings into light an important aspect of the research problem, as far as there can be no doubt that uncontrolled physical growth, which consistently overtakes environmental planning measures, results in the creation of an unsustainable residential pattern that eliminates public recreational areas and interferes with the natural environment. Given the extent of the damage reported on, which corresponds fully with the experience of residents and planners, it becomes obvious that the development of the ward in question takes place without proper coordination. As a result, the whole suburb ends up with an extremely congested environment.

4.4.2 Predominant Types of Infrastructural Structures

This theme assesses the physical features and size of the new buildings being set up within the increasing territory of the ward.

In the household survey, the investigator inquired from the respondents on the nature of the new building infrastructure being set up in their area. Table 4.4 depicts their findings.

Table 4.4: *Predominant Type of New Infrastructural Structures*

Structural Type Category	**Respondents (n=90)**	**Percentage (%)**
Residential housing structures	83	92
Commercial or retail properties	5	6
Light industrial or manufacturing workshops	2	2
Public/Civic infrastructure	0	0

[Source: Primary Data]

The evidence clearly shows that the physical growth of Ward 20 is almost purely one involving shelter. The lack of any new civic or social structures points to an imbalance in terms of physical growth because the structures are not geared towards developing the infrastructure needed to accommodate a growing populace.

Community members were asked about the physical features of the new residential buildings. One interview participant stated how buildings had grown to be larger than those in municipal homes:

"the older parts of the ward had smaller 150-200 square metres stands which had 3-roomed core houses constructed using old cement blocks. In the newer wards, however, the stands are much bigger ranging from 300 square metres enabling individuals to construct homes with 5-10 rooms."

Another informant emphasized the inconsistent quality of the material used in the construction of the new residential buildings, pointing out that:

"...there is a total mixture of styles in terms of how the homes being constructed look; some of them are huge houses constructed using face bricks and cement blocks, while those who are financially restrained use farm bricks to construct their houses."

For the institutional and structural aspects of the trend, interviews were conducted with key informants. The civil engineer involved in a local development of lands explained that there are certain expansion zones where professional practices are being followed because:

"...not everything about the expansion is happening haphazardly since certain developed areas have hired private engineering firms to construct the roads, water and storm water drainage networks in these areas before building homes."

An urban planning expert on the other hand warned about a certain problem associated with all the expansion zones as follows:

> *"In your assessment, to what extent do the expansion plans in Ward 20 correspond to the official master plans and designs for zoning layouts? They are very fragmented. Although there is proper structuring within zones which have been engineered, there are other zones which are comprised of self-made farm brick structures, thus ignoring the formal approval process by the council."*

In the course of conducting the study in the field, the researcher noticed that there is very clear distinction between the two types of structures found in Ward 20. Older zones were characterized by standardized structures of 3-roomed cement block houses on small plots while new expansion

zones had larger, modern structures comprising of 5 to 10 room houses on large 300 square meter plots constructed using face bricks, cement bricks and farm bricks. In some pockets which have been engineered, the physical layout was clearly designed, with good drainage channels and water pipes alongside the roads. Figure 4.2 depicts the two types of housing structures.

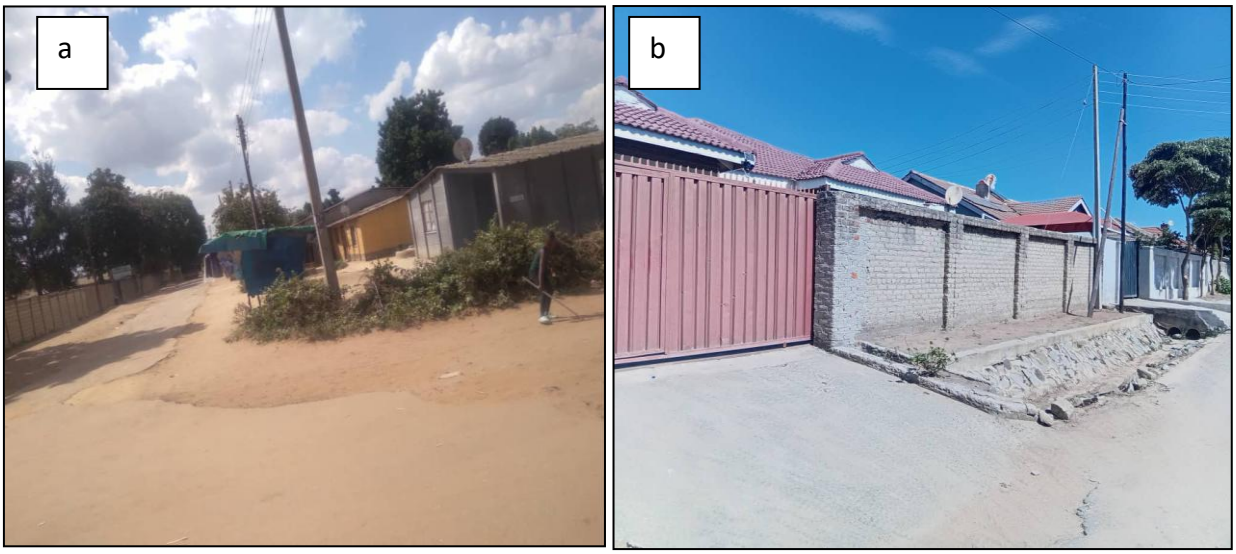

Plate 4.2: Old core houses (a) and new big houses (b) in Ward 20. [Source: Primary Data]

The structure of ward 20 indicates that there is a pattern whereby the physical growth of the settlement is both conventional and unconventional in terms of municipal planning being overtaken by more spacious private planning. In this case, the hypothesis meets its first objective since urban development within the years 2016-2025 has led to a significant increase in land size from 150 square metres to 300 square metres with 5-10 rooms each.

This new structure of the problem defines the nature of the research problem. In addition to the informal huts and structures, there is also development through better building of suburbs using different types of construction materials such as face bricks and farm bricks. Additionally, the participation of the civil engineers in certain sections of Ward 20 shows that this particular section of the growth is very well organized and includes advanced water drainage systems to correct for the problems associated with the old urban sprawl. The high proportion of houses in

the survey corresponds to the physical presence of huge modern houses seen on the ground. This shows that this part of the growth can be defined as the development of a high density suburb.

4.5 Key Drivers Influencing Urban Expansion

The current segment of the discussion focuses on fulfilling the second aim of this study by highlighting the major driving forces behind urban growth in Mabvuku Tafara Ward 20. These driving forces behind physical growth have been revealed through the use of data gathered using resident questionnaires, thematic questions based on resident and key informant interview guides, physical verifications on-site, photography, and satellite images.

4.5.1 Local Housing Demand and Market Preferences

This issue highlights the social and microeconomic forces that drive the expansion of population and housing into the peripheral zones of Ward 20, examining the demand for affordable housing within this community, as well as the geographical characteristics that make this ward attractive.

In order to test the theory of real estate dynamics at work locally, the researcher assessed the attitudes toward the pressure of housing needs within the community and the force of the demand for affordable housing in the growth process. Figure 4.2 represents these findings numerically.

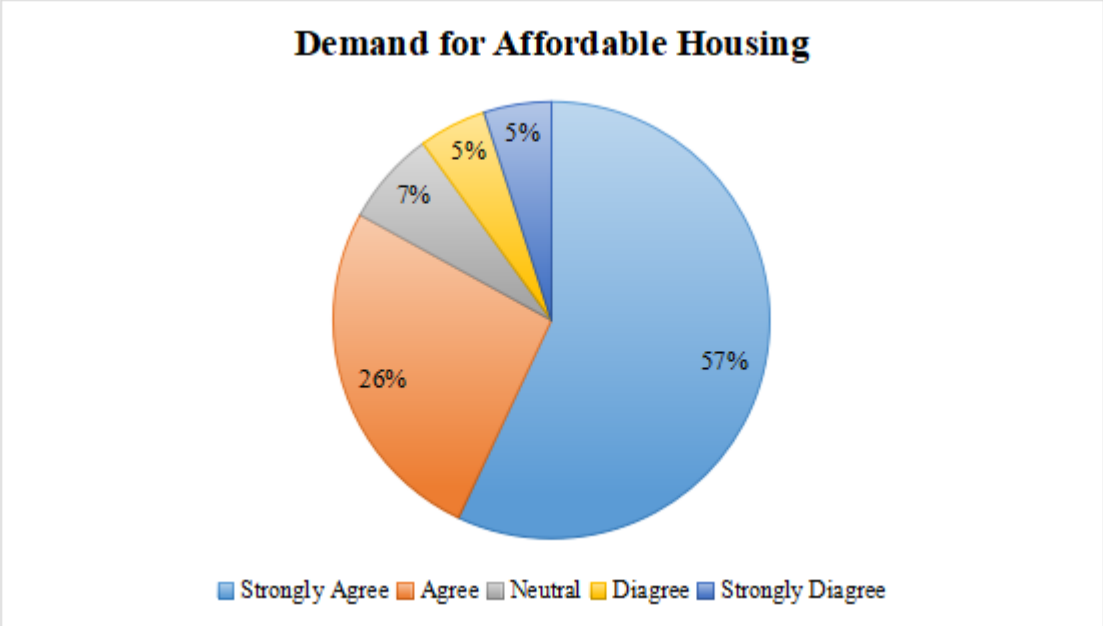

Fig 4.2: Demand for Affordable Housing as the Primary Driver (n=90) [Source: Primary Data]

It is important to note the statistical trend showing that a large number of the residents agree that the shortage of affordable housing has been the driving force of growth in the area. In this regard, it is safe to conclude that the growth that has been occurring is due to the overall shortage of affordable housing in the city, and thus, fulfilling the second objective of the research.

As regards the reason why Ward 20 was chosen in particular rather than any other suburb in the metropolis, the following excerpt from an interview with one of the residents gives some indication into the issue at hand:

> *"...the major reason why people prefer Ward 20 is the fact that there is more land space offered. A person may purchase a piece of 300 square meters at the same cost of buying only a small backyard in other dense suburbs."*

One of the respondents was appreciative of the strategic geographical location of the locality, stating that:

"…this ward is very appealing since it lies within a distance from important transport links leading to areas of industry and business in Harare, thus allowing property holders to commute to work and construct their homes more easily."

Concerning the institutional planning perspective, it was made clear by the key informants how urban dynamics were changing the population distribution patterns towards this area. An expert in land development mentioned that problems in other places served as a pull factor:

> *"...property value inflation and critical shortages of infrastructure in central Harare keep pushing middle-to-low income earners eastwards, creating a significant absorption centre in Mabvuku-Tafara."*

Another crucial informant from a local development agency explained some other factors affecting land value:

> *"…the demand has been driven by the changes in the economy, where people want to avoid being continuous backyard tenants; people consider Ward 20 as one of the few places where land value enables people to acquire permanent family property gradually."*

The researcher found visible proof of this high level of demand for housing during the site visit. The study area had features that included continuous infill housing, where practically all of the

open areas within and around the existing formal housing blocks had already been occupied by ongoing building processes. Plate 4.3 below demonstrates the huge quantity of bricks in the development areas, which indicates the rapid pace of construction of private property to satisfy this need.



Plate 4.3: Bricks by the roadside in developing areas in ward 20. [Source: Primary Data]

The flurry of real estate business taking place within Ward 20 clearly demonstrates the fact that the physical expansion of the suburb is essentially determined by the underlying structural imbalance between the growing population on one hand and lack of affordable public housing on the other hand. This conclusion answers the second research question by demonstrating that the process of expansion in the suburb is far from being accidental; rather, it is a logically sound strategy for households trying to avoid excessive costs associated with living in the inner cities in favour of bigger and more valuable 300 square meter stands. The most important point about such process is that, when housing demand operates as the leading factor behind the development of a suburb, expansion proceeds solely for the sake of maximizing the number of residences. Such an approach ignores the parallel development of infrastructure.

4.5.2 Institutional Frameworks

Theme three focuses on issues of regulation, finance, and administration associated with urban growth. In this context, the study examines waiting list techniques used officially by the municipality, activities carried out informally through land banking firms, as well as the informal network run by land barons that altogether determine the process of land delivery in Ward 20.

In this regard, the researcher delved into administrative processes of land delivery and requested respondents to name the major institutional aspect which contributes to faster land delivery in the area. This is reflected in Table 4.5.

Table 4.5: *Institutional Factors Allocating Land*

Institutional / Structural Factor Category	**Respondents (n=90)**	**Percentage (%)**
Informal land allocations by land barons or administrative lapses	41	46
Private corporate developers and land banking transitions	26	29
Municipal partnership land allocations to clear waiting lists	15	17
Regular local authority direct land delivery systems	8	8

[*Source: Primary Data]*

From the data, it can be observed that standard urban land delivery processes contribute little to growth. Rather, it can be seen that a cumulative 75% of respondents indicated that informal allocations by land barons and private corporate land banking were the dominant forces responsible for physical growth. The study has therefore proven that horizontal development is greatly influenced by structural changes and position within the market place. This provides evidence for research objective number two.

To find out more about the reasons for these figures, the qualitative methods showed how the municipal authorities dealt with their housing shortage problem. According to interviews with key informants at the municipal housing office, the housing crisis in the city had reached such proportions that it was necessary for the municipality to allocate substantial areas of land to

housing cooperatives and private landowners as a means of reducing this ever-growing list of applicants.

The qualitative findings showed that this strategy of development by the municipality interacted with the issue of real estate investment in that private land banking was an active mechanism in which this municipal strategy occurred. Property developers who had been holding large tracts of peri-urban lands for some time now anticipating increased demands on housing in the entire city started developing land into high density stands. In order to make good profits in terms of obtaining premium prices in sales to the end-users, formal developers ensured that the layout was fully serviced in terms of roads, drainage system, water piping, and electrification prior to selling at premium prices. These findings were supported by one of the key informants in the real estate industry as follows:

> *"The huge rise in demand for houses over the last decade makes land banking extremely profitable. Huge corporations owning huge tracks of undeveloped lands have converted their land banks into high density developments. The formal developers ensure that the land is fully serviced before selling at premium prices to high income earners."*

In direct opposition to these corporate compounds with all their services, the findings revealed the existence of another, more messy route of land acquisition carried out by politically savvy land barons. This route thrived due to administrative errors and the failure of the local municipality to have any enforcement officers. Instead of constructing roads and other infrastructures, the land barons infiltrated unserviced municipal land parcels, greenways, and town planning buffer zones. In the case of the informal actors, there was no need for following formal procedures of waiting lists; rather, the land was divided informally, and unserviced stands were sold to desperate families with the promise of future servicing. As one informant stated,

> *"Whereas corporate developers had constructed proper roads and lines for the costly stands, the land barons infiltrated the unserviced lands in the greenways and municipal buffer zones. The land barons avoided all waiting lists, crudely divided the lands using tape measure, and sold unserviced lands to desperate families."*

One resident pointed out how the dualism of such systems led to a spatial conflict between the two:

"...it is a dualistic system of land management in the ward. While on the other side of the ward there are expensive fully serviced stands resulting from formal land banking, on our side of the ward, the land barons took charge, ensuring we had no water or drainage as they only cared about making money from the sale of stands."

To explore these governance patterns, the researcher studied multi-temporal satellite imagery for the years 2016, 2020 and 2025. Through the study of satellite tracking, the researcher found an institutional signature in the form of agricultural lands being gradually converted to residential plots from green open land bank fields to the east periphery of the ward. Some physical degradation of the landscape into a chaotic pattern was also identified, typical of land baron intervention. Plate 4.4 represents a physical manifestation of this informal track as the land was used for informal housing layouts, with no water, drainage, or formal grids present.



Plate 4.4: Informal Settlement in Mabvuku Tafara [Source: Primary Data]

The institutional environment in Ward 20 demonstrates that urban growth results from the interplay of institutional clearance approaches employed by the municipality, corporate land banking, and predatory behaviour exhibited by land barons. These mechanisms provide evidence for the researches second goal in showing that urban growth is expedited through both high-quality private servicing and informal plot sales. At the same time, they compound the main

issue of the research by dividing the ward into two disparate geographic spaces. As corporations employ land banking to sell serviced plots at higher prices to help clear out the councils waiting list, the land barons respond to the market pressure to offer serviced but precarious plots. The resultant dichotomy of urban planning illustrates that, without rigorous monitoring by the municipality, market forces enable separate governance networks to dictate the rules of the game, resulting in the development of a fractured suburb that is virtually impossible to unify.

4.6 Socio-Spatial and Economic Implications of Urban Expansion

This part deals with the third research objective, which entails an analysis of the socio-economic impact of physical growth in Mabvuku Tafara Ward 20. The discussion revolves around the socio-economic impact of physical growth through two major topics that address the infrastructure and changes in the structure of the communities. This involves consideration of the views raised during the household surveys, interviews with residents and key informants, physical verification of the site, and satellite images from different years.

4.6.1 Utility Infrastructure Strain and Service Delivery Deficits

Theme 2 investigates the physical pressure exerted on urban utility services through residential development growth, focusing on a comparison of structural differences between private company-led developments and unserviced peripheries.

The structural effects resulting from residential expansion were investigated through asking the respondents to evaluate the current state of service delivery in regards to their construction. Table 4.6 shows the matrix used in evaluating the state of service delivery among the 90 respondents.

Table 4.6: *Resident Evaluation of Utility Infrastructure and Service Delivery*

Utility Service Category	Worsened/Severely Deficient (%)	No Change/ Static (%)	Improved/Self-Serviced (%)
Municipal Tap Water Supply	88	10	2
Waste and Refuse Removal	74	22	4
Sewage and Wastewater Drainage	51	13	36
Electricity Grid Connectivity	43	21	36

[*Source: Primary Data]*

The results from the quantitative matrix portray a very fragmented infrastructural setup. While public facilities such as piped water and garbage collection are perceived to be predominantly lacking, there is a clear divergence in the case of sewage and electricity, whereby more than one-third of the community indicated working systems.

The reason for the marked disparity according to the qualitative results was found to be rooted in an infrastructure paradox where despite the lack of engagement in direct service delivery on behalf of the municipal administration, private corporations and community members have bridged the gap. The key informants who were drawn from local housing cooperatives indicated that private developers installed localized systems of sewage disposal, electricity hook-ups, and boreholes before selling off stands.

According to the qualitative testimonies, this was only prevalent within the existing structures in corporate zones. The emerging areas faced serious survival issues due to these conditions. A resident in one of the newly developed peripheral areas narrated their daily fight for water supply:

> *"...the municipality has not put any pipe or tapped water source in our area but they keep on asking us monthly water and electricity bills; we have no other way to survive but to beg for water or buy it from our neighbours who had dug private boreholes using their financial capabilities, and those of us without means end up having to dig our own deep well in our yards."*

A key informant from an urban planning consultancy explained the dangers associated with deep well water sourcing:

> *"...with many households using local aquifers through uncontrolled boreholes and deep wells which are not controlled by a municipal plan, the local water table will be continuously depleted. Most importantly, digging deep wells in small stands near uncontrolled septic tanks puts the public at serious risk for ground water contamination."*

The researcher found that whereas corporate areas had well-planned electrical poles and individual solar-powered water pumps, the new peripheries had dumping areas in the open. The municipality did not provide garbage collection trucks although the services were actively billed; hence, people had the habit of disposing of their domestic waste along the fringes of the access paths. This situation is depicted in Plate 4.5 where the uncollected heap of domestic waste can be seen in roads close to the durahalls.



Plate 4.5: Uncollected Waste in roads (Source: Primary Data)

4.6.2 Altered Social Dynamics and Livelihood Strategies

According to the research, while corporate neighbourhoods enjoyed good planning for the positioning of the electricity poles and personal solar water pumps, the newly created peripheries had dumping grounds which were exposed to the public domain. The local authority did not

supply garbage trucks even as the services were charged for, and therefore, people had a habit of dumping their domestic waste around the edges of the access roads. This is illustrated in Figure 4.5 by the pile of domestic waste left uncollected.

Table 4.7: *Resident Perceptions of Socio-Economic Transitions*

Socio-Economic Impact Statement	**Positive (%)**	**Neutral (%)**	**negative (%)**
Expansion created new income and local job opportunities	78	9	13
Spatial growth increased crime and vulnerability	67	14	19
Community trust and social cohesion have strengthened	12	21	67

[*Source: Primary Data]*

The quantitative information demonstrates the social contradiction between people's beliefs. Over seventy-five percent of the population believes that the development of spaces is their source of income. However, over sixty-six percent have seen a notable decrease in safety and a breakdown in the sense of community trust.

The qualitative results show how the constant flow of new property owners and building works turned this area into an economic hub. The need for homes created a huge domino effect within the local job market, which provided work opportunities for different technical workers. One resident, employed in the construction industry, shared his experience of this economic development:

"...this growth has been a godsend for local youth. Everywhere, there have come groups dedicated to contracting in buildings locally. Our builders are getting contracts left and right for wall construction, carpenters are busy with roof installation, while our local plumbers, electricians, and solar installation teams have found plenty of work because all those constructing here want their own power and water."

Apart from construction, however, it became apparent that changes were being deliberately made to the physical space of the houses in order to derive some form of economic benefit.

With the influx of hundreds of construction workers as well as new residents moving into the area, many people were transforming their homes into commercial enterprises. This involved opening up gateways for the creation of tuckshops, roadside stands, and canteens selling rice, sadza, and chips to labourers passing through.

In addition, the bigger houses were subdividing their properties in order to cater for the increasing number of tenants. An interviewee further provided the following information about this trend:

> *"Today, our roads are filled with market activities. They run car wash businesses out of their gateways. If a landlord has some vacant space in his courtyard, he builds temporary structures where he can accommodate additional people. All of this is earning him a good deal of money very quickly."*

However, the results from the qualitative research revealed a more disturbing aspect of this phenomenon. The sudden appearance of various populations, which were transient and had no official police station or municipality and lacked even basic street lighting, caused considerable deterioration in the traditional sense of trust within the community. Interview subjects all described a breakdown of social cohesion within the community.

> *"Even while the economy is booming, our peaceful neighbourhood has become disturbed. Since the rapid expansion of our area has not been preceded by any social planning or security force whatsoever, our neighbourhood has seen a rise in criminal activities like burglaries, prostitution and general crime. There is no one whom we can say we know anymore, and the strong social relationship among the old blocks has been turned into fear and mistrust."*

In the field observation, the researcher managed to observe such socio-spatial changes. Using satellite imagery ranging between 2016 and 2025, the researcher was able to confirm the transformation from the use of open green domestic yards to that of highly congested parcels where the residential units were developed up to the boundary lines. Plates 4.6 to Plate 4.8 provide satellite imagery acquired from Google Earth, depicting the utilization of open space in Mabvuku Tafara between 2016 and 2025.



Plate 4.6: Mabvuku Tafara Ward 20, April 20 2016 [Source: Google Earth]



Plate 4.7: Mabvuku Tafara Ward 20, May 18 2020 [Source: Google Earth]

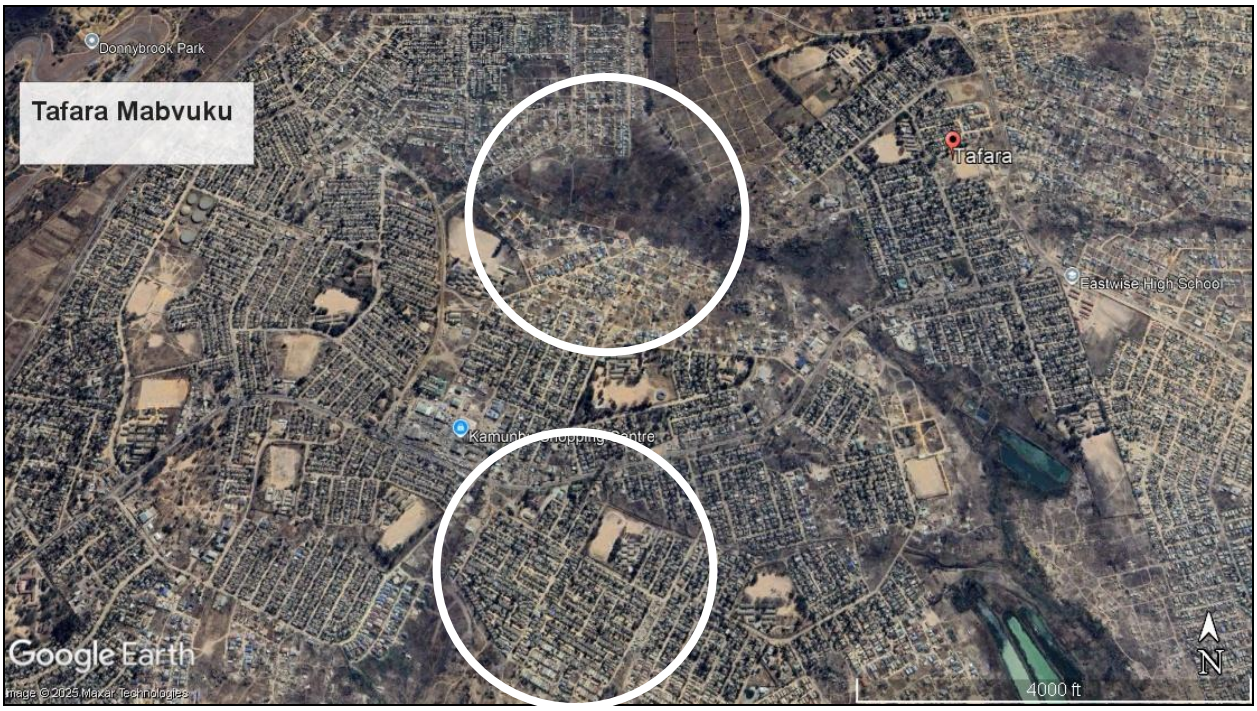

Plate 4.8: Mabvuku Tafara Ward 20, June 22 2025 [Source: Google Earth]

The observer noted a thick cluster of such activities which were functioning directly from their domestic lands. In Plate 4.9, one can see a picture of such a socio-spatial transformation with the help of a complete encroachment upon the residential wall/gate of a roadside tuckshop and informal canteen, indicating how these local families had transformed their properties to benefit from the peri-urban economic boom.



Plate 1Plate 4.9: Informal Trading in Newly Developed Area in Mabvuku Tafara [Source: Primary Data]

It is evident from the socio-economic and spatial factors pointed out above that the physical development of Ward 20 serves as both an advantage and disadvantage. It answers the third question of inquiry by indicating that although the physical growth of the ward contributes towards creating an informal economy generating employment opportunities for building contractors, food vendors, and landlords, it exceeds the capacity of the institutions involved, thereby posing more problems in the way. Since the municipality charges rates but does not provide any corresponding infrastructure, a highly fragmented and privatised means of survival is in effect now. While corporate businesses have private sanitation services such as boreholes and private sewage systems, poorer parts have turned to using unsafe boreholes built in backyards next to septic tanks. Together with high crime rates and over-crowded plots evident from satellite images, it suggests that unless some urgent action is taken formally, all economic advantages that accrue due to the growth of the ward will go waste.

4.7 Discussion of Findings

In this part, the empirical findings that have been gathered from Mabvuku Tafara Ward 20 are placed in context by directly referencing them to the already existing spatial planning regulations, urbanisation patterns, and socio-economic theories discussed in Chapter 2. The

thematic similarities and differences in light of the comparisons between the numerical data, oral evidence, and spatial geographic information system data, based on the local and regional literature, are drawn out and explained in terms of how they have resulted in a peri-urban phenomenon in Harare.

4.7.1 Spatio-Temporal Trends and Patterns of Urban Expansion

It has been shown that Ward 20 has seen fast growth characterized by a forty-two per cent outward transformation of land from agriculture and greenfield into densely populated residential land over a period of one decade resulting in very fragmented land use at the urban fringe. This conclusion drawn from the research findings agrees with the trend highlighted in Zimunya (2023) whereby a fast-growing population in the city of Harare leads to outward development and expansion at the direct cost of destruction of agricultural land in the outskirts. This expansion is consistent with the warnings raised in Chigora (2022) that failure to have an effective planning structure in the locality will result in unplanned urban sprawl.

However, the key difference that comes into play in relation to Zimunya's description of the horizontal expansion of peripheral areas (2023) lies in the actual physical form of Ward 20 versus the general description of horizontal expansion offered by Zimunya (2023). While Zimunya (2023) defines peripheral expansion as unbridled growth into expansive rural hinterlands, Ward 20's horizontal expansion is one that involves intense compression and segregation along the suburban fringes.

What makes the situation in Ward 20 so unique is that the horizontal expansion has been constrained geographically and hence confined into a highly dense area, rather than being able to spread out into suburban sprawl. This difference is entirely due to geography. Ward 20 finds itself locked in a small spatial envelope, confined between the already developed and densely populated parts of Mabvuku in the West and the commercial farms on the East.

4.7.2 Key Drivers Influencing Urban Expansion in Zimbabwe

From the study, it emerges that the growth of the urban environment in the ward results mainly from a great micro-demand for affordable housing and economic activities, which has been taken advantage of by parallel land allocation systems and land barons in light of legislative enforcement failures. This observation resonates well with the observations made by Moyo and

Nyoni (2022), according to whom, the explosive development of informal peripheral settlements arises out of the dire housing and economic crises in such regions, particularly where there exists greater demand for affordable housing than formal municipal housing supply. On the other hand, the existence of significant private players and land bankers in the ward also corroborates the claims made by Mabasa and Chikozho (2022), where they observe that dynamic changes in social behaviour coupled with young people's pursuit for modern amenities lead to quick migration to the urban fringes.

Additionally, the disintegration of the spatial planning mechanisms in the ward is consistent with the findings of Dube (2023) as the application of planning schemes in line with the Regional Town and Country Planning Act and Urban Councils Act remains constantly hampered by inefficient bureaucracy, political manipulations and total unavailability of urban council resources, resulting in unregulated urban sprawl.

Nevertheless, there is one crucial distinction made by the two theories concerning how the forces mentioned are dealt with within the institutional framework. As Moyo and Nyoni (2022) identify general market demand for being the main reason for the urban sprawl while Dube (2023) identifies lack of resources as a universal problem causing poor urban planning, the results of Ward 20 indicate the opposite.

In Ward 20, the unique distinguishing factor that stands out is that the spatial planning system has been purposefully sidestepped by the local authorities so as to encourage immediate but unserviced settlement in order to avoid their own administrative responsibilities. The cause behind this distinction is due to the financial structure deficits within the National Development Strategy 1, which is described in detail by Mlambo (2023). Since the City of Harare has purposefully adopted a strategy of allocating unserviced land to housing cooperatives, which would help in solving their mounting list of council houses to build, it is easier for them to accept the illegal spatial development due to the generation of instant revenue.

4.7.3 Socio-Economic and Infrastructure Implications

This research showed a paradoxical trend where the local municipal authority is seen collecting service charges from residents but failing to ensure access to basic amenities such as piped water, garbage collection services, and roads, thereby forcing people to establish their own makeshift

water supply systems. This is consistent with findings highlighted by Musarurwa (2022), who pointed out that informal and expanding urban peripheral areas have been shown to lack basic infrastructure, thus reducing the quality of living conditions for those residing there and exposing them to various environmental risks. The transformation of the frontyards of residential dwellings in Ward 20 into informal tuckshops and canteens can be related to the research carried out by Nyoni (2022), who stated that the growth of the informal economy is a natural reaction to urbanization because this offers an alternative means of living for people whose livelihood is affected due to failure of formal sectors to provide employment opportunities.

However, there is one major distinction when assessing the public health risks that come with such local adaptation measures to cope with adverse economic situations. Whereas Nyoni (2022) sees informal economic diversification and domestic spatial adaptation as good indicators of household resilience, the empirical observations made in Ward 20 reveal that these localities face serious physical vulnerability and a total collapse in terms of neighbourhood safety.

What distinguishes the case of Ward 20 is the practice of digging very large open wells right beside the septic tanks that have been self-constructed by residents in the unserviced extensions. What makes the distinction in this case is that this unhealthy practice is a product of the interaction between local spatial regulation and economic pressures. In line with Dube (2023) on the Urban Councils Act, planning deficiencies at the bureaucratic level cannot provide necessary infrastructure, but zoning regulations still require smaller three hundred square metres residential stands. Residents, in turn, due to the past economic troubles and high inflation rates in Zimbabwe, cannot wait for engineering extensions to arrive; thus, they start to dig shallow wells in these tiny stands, leading to contamination of groundwater in an area-specific way.

4.8 Chapter Summary

The above mentioned results from the research carried out on Mabvuku Tafara Ward 20 have been analyzed and discussed in line with the three research objectives formulated during the formulation of this study. Through the use of multi-temporal spatial imagery, along with quantitative and qualitative data from household survey questionnaires and interviews respectively, the findings showed the fast forty-two per cent growth of the ward horizontally and the factors responsible for its growth and also analyzed the infrastructure deficiencies and public health problems brought about by such expansion. The chapter ends off with an academic

discussion in which these field results are critically reviewed in relation to the local laws as well as the literature review contained in chapter two.

CHAPTER 5: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The current chapter offers a complete wrap-up of the study by presenting a summary of the empirical evidence, major conceptual implications of the findings, and suggested policy measures in connection with the expansion process in Mabvuku Tafara Ward 20. The chapter starts with a factual presentation of the empirical evidence gathered during the research process for every identified objective. Following the empirical summary, conceptual implications of the findings are provided, showing what the obtained data implies for the further development of Harare City's governance. From these implications, practical recommendations are put forward for urban policy makers. Finally, key research gaps are briefly outlined in the conclusion section of this chapter.

5.2 Summary of Findings

The initial research objective aimed at understanding the trends and patterns of growth in terms of space and time of Ward 20. Multi-temporal imagery data alongside physical verification found out that there had been a fast forty-two percent growth of the built-up residential areas within Ward 20 from 2016 to 2025. The physical growth pattern had occurred in a very fragmented and leapfrog nature resulting in Greenfield ecologies and communal grazing land being turned into low-rise residential zones. The space occupied by the physical growth had been through spatial compression due to fixed edges for commercial farming on one side and fixed residential zone on the other.

The second research objective aimed at identifying some of the critical forces driving this expansion. The quantitative analysis of the questionnaire data and the qualitative data from the interviews made it evident that expansion is being strongly driven by a very critical demand for cheap housing by low and middle-income earners, coupled with the changing dynamics in land delivery. The City of Harare, through its government officials, was able to accelerate this trend by giving unserviced plots of land to both housing co-operatives and developers as a strategy of addressing the overwhelming housing waiting list. This led to the creation of a lack of enforcement mechanisms within institutions which, in turn, encouraged speculative investment

in land and urban land barons to divide and sell off municipal buffer zones through illegal subdivision schemes.

Research Objectives – Objective Three considered the social-spatial, economic, and infrastructural impacts of such fast growth on the local area. Household survey data indicated that there was an acute infrastructural irony, in that eighty-eight per cent of the populace had to contend with very poor quality municipal tap water, while seventy-four per cent suffered from solid waste problems owing to their inability to receive any kind of solid waste services, despite the fact that they paid active service rates to the municipality. This has led to spatial division within the ward between self-service corporate layouts employing private solar boreholes, and the unserviced peripheral extensions occupied by poorer individuals using shallow backyard wells. In terms of the economy, seventy-eight per cent of all households have managed to transform their domestic environments into income-generating enterprises using methods such as tuckshops, building trades, and rental subdivisions.

5.3 Conclusions

From the findings that have been obtained from this research work, the following are the main conclusions made about peri-urbanization.

There has been greater urban growth in the Harare region compared to the mechanics involved in the planning process making the planning process a reactive measure as opposed to the proactive measure. It has been observed that the forty-two percent physical growth of Ward 20 does not indicate effective urbanization, but it is instead an institutional dislocation problem. The planning process in this case has allowed physical occupation of the area several years before infrastructure is put in place by the municipal authorities.

The formal local government institution has itself contributed in a structural sense towards the growth of informal, un-serviced peripheral development. While being legally required to exercise strict regulatory control under the Regional Town and Country Planning Act, the local government has resorted to employing land allocation to outside cooperatives as a means of clearing out its backlog of work. The failure to fulfill this responsibility on their part has resulted in the overlap between formal and informal territories, enabling other political structures to take advantage of the resultant vacuum.

The stringent adherence to plot regulations during the colonial era under extreme state infrastructure collapse creates a devastating public health threat. According to the findings of the study, the spatial configuration of Ward 20 poses significant ecological risks. Enforcing plots in a high density of three hundred square metres without providing central sewage and water systems leads to a dangerous combination of shallow open wells and septic tanks in a limited space. Such an arrangement will guarantee the future contamination of groundwater reserves, constituting a devastating time bomb for waterborne disease epidemics.

This peri-urban housing has transformed itself into much more than a mere space for domestic living, into a commercial resource of high density. As instability prevails in the wider economy, it becomes necessary for residents to make changes to their physical spaces in order to harness any potential profits from their constructions. Although this commercialization of peri-urban spaces offers a great deal to young people of the area through job creation, it totally ruins the zoning pattern of the ward, resulting in extreme congestion, traffic jams, and total lack of security.

5.4 Recommendations

For the resolution of structural problems observed in the analysis above as well as the guarantee of sustainable future development, the following policy initiatives are recommended:

i. There must be a moratorium imposed by the city of Harare to allocate unserviced lands, and an “Infrastructure First” approach must be mandated in future plans for development. There should be no more allocation of land to housing cooperatives and corporate investors until all off-site infrastructures, particularly the trunk sewer lines, the main water pipes, and access roads, are in place. Future planning approvals must require infrastructure connectivity to put an end to the current trend of unserviced development expansion.

ii. There needs to be an overhaul of the structure of the minimum plot sizes of peri-urban areas which lack services. For those peripheral areas where extension of the towns water supply will not happen in the immediate future, the zoning laws should be changed to make the minimum plot size eight hundred square metres instead of three hundred square metres. This is due to the fact that there needs to be a sufficient distance between any septic tanks and bore holes for scientific reasons.

iii. The Harare City Council needs to form a Joint Institutional Enforcement Task Force in order to end the system of parallel systems allocating land in the ward. In order to take control of the borders of the ward once more, the council will need to form an enforcement agency that comprises of municipal planners, government auditors, and law enforcement agencies, which must map out all the informal layouts using geographic information systems.

iv. The local government must develop an LED strategy that will enable the formalization of informal economic changes in the ward. Instead of launching crackdowns on residents' backyard businesses, town planners need to develop serviced commercial nodes on major traffic routes in the ward. By ensuring that such activities are shifted from backyards to formally designated markets equipped with effective solid waste management and solar-powered water supply systems, the local government will be able to safeguard its citizens without compromising local jobs generated by the construction industry.

5.5 Areas for Further Research

In addition to having been successful in mapping the socio-spatial and institutional processes related to urban growth within the Mabvuku Tafara Ward 20, there were also some other issues identified that would require further academic research in the future. In particular, more attention should be paid to thorough microbiological and chemical analysis of the water from the backyard wells and private boreholes in order to establish the exact rate of underground fecal and nitrate pollution due to the impact of nearby septic tanks. Moreover, longitudinal academic research should be done in order to estimate the economic and environmental implications of horizontal residential spill over on the adjacent commercial farms.

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APPENDICES

Appendix 1: Key Informant Interview Guide for Urban Planning and Land Management Experts

Introduction and Informed Consent

My name is Sharon Munatsi, a final-year research student at Bindura University of Science Education. In partial fulfillment of my degree requirements, I am conducting a study on the implications of urban expansion in Mabvuku Tafara Ward 20. This interview guide is specifically designed to gather expert insights from key informants involved in urban planning, local governance, and land management.

Your participation is entirely voluntary, and you retain the right to withdraw from the interview at any stage without penalty. All information shared will be treated with the utmost confidentiality and anonymity; your identity will not be disclosed in the final report. The data gathered will be used strictly for academic purposes, and a summary of the research findings will be made available to you upon completion of the study. Thank you for your time and expertise.

Section A: Background Information

6. Can you please describe your professional role, designation, and years of experience regarding urban planning, land administration, or local governance within the Harare Metropolitan area?

Section B: Spatial Patterns and Trends of Urban Expansion (Objective 1)

7. How would you describe the rate and nature of spatial growth in Mabvuku Tafara Ward 20 over the past decade (2016–2025)?

8. What specific geographical zones or land-use types (e.g., agricultural, wetlands, buffer zones) have experienced the most significant conversions to residential or commercial use?

9. In your assessment, to what extent does the physical expansion of Ward 20 align with the official master plans and zoning layout designs of the local authority?

10. What monitoring mechanisms or geospatial tools does your department utilize to track and manage the physical boundaries of urban growth in this area?

Section C: Key Drivers Influencing Urban Expansion (Objective 2)

11. From a planning perspective, what are the primary socio-economic factors driving the increased demand for land and rapid horizontal expansion in Ward 20?

12. How have legislative frameworks, policy changes, or political dynamics influenced land allocation and subsequent urban growth patterns in this specific community?

13. To what extent do infrastructure deficits or real estate development trends in the broader Harare area push demographic movements toward Mabvuku Tafara?

14. What challenges or limitations do local authorities encounter when enforcing institutional policies and regulatory frameworks meant to guide urban growth in this ward?

Section D: Socio-Economic Impacts of Urban Expansion (Objective 3)

15. How has the spatial growth of Ward 20 impacted the capacity, delivery, and strain on existing public infrastructure and municipal utilities?

16. In what ways has this expansion reshaped the local economy, particularly regarding employment patterns, formal and informal business growth, and land values?

17. What are the noticeable consequences of this physical expansion on the social fabric, community safety, and living conditions of the long-term residents?

18. From your expert standpoint, what strategic policy interventions or sustainable planning frameworks should be implemented to mitigate the negative outcomes of urban growth in Mabvuku Tafara?

Thank you once again for your valuable time, cooperation, and professional insights. I want to confirm that the confidentiality and anonymity of your contributions are strictly warranted.

Appendix 2: Interview Guide for Community Residents of Mabvuku Tafara Ward 20

Introduction and Informed Consent

My name is Sharon Munatsi, and I am a final-year research student at Bindura University of Science Education. As part of my academic requirements for my Bachelor of Science Honors Degree in Development Studies, I am conducting a study titled "Implications of Urban Expansion in Mabvuku Tafara Ward 20." This interview guide is intended to gather primary data from local residents regarding their personal experiences and perceptions of the changes occurring in the ward.

Your participation in this interview is entirely voluntary, and you are free to decline to answer any question or withdraw from the study at any point without any form of penalty. All information you provide will be kept strictly anonymous and highly confidential. Your name will not appear anywhere in the research report, and the data will be used solely for academic purposes. If you wish, a summary of the final research findings will be shared with you once the project is finalized. Thank you for choosing to contribute to this study.

Section A: Background Information

1. For how many years have you lived in Mabvuku Tafara Ward 20, and what type of housing setup do you currently reside in?

Section B: Perceived Changes and Spatial Growth Patterns (Objective 1)

2. What specific physical or developmental changes have you observed in your immediate neighborhood and the surrounding area over the past decade (2016–2025)?

3. What types of new structures, facilities, or properties have been built in areas that used to be open spaces, fields, or natural terrain?

4. How would you describe the speed and direction of housing construction and land occupation in this community over the last ten years?

Section C: Community Perceptions on the Drivers of Expansion (Objective 2)

5. In your opinion, what are the main reasons why so many people and businesses are building or moving into Mabvuku Tafara Ward 20?

6. How have local practices, land distribution methods, or decisions by leadership affected the way residential plots are being opened up in your area?

7. What factors do you believe make this specific ward a preferred destination for new developments compared to other parts of the city?

Section D: Socio-Economic Impacts on the Community (Objective 3)

8. In what ways has the continuous growth of the area altered your everyday living conditions and the state of your household environment?

9. How has the expansion of the neighborhood affected the availability, reliability, and quality of essential basic services like water supply, electricity, sanitation, and healthcare?

10. What changes, if any, have you observed regarding work opportunities, local trading, or the overall economic wellbeing of families in this community?

11. How has the ongoing growth and demographic shift impacted social interactions, safety levels, and the general relationships among neighbors?

12. Looking back at the past decade, what distinct benefits or advantages has the community gained from this expansion?

13. What major difficulties, challenges, or worries are you currently facing as a resident due to the physical growth of the ward?

Section E: Resident Recommendations and Future Development

14. What specific measures or actions do you think local authorities should take to manage the ongoing growth of Mabvuku Tafara Ward 20 more effectively?

15. How can ordinary community members be given a meaningful voice and a regular role in the planning and execution of future developments in your ward?

Thank you very much for your cooperation, time, and valuable contributions to this academic study. I want to reassure you that the confidentiality and anonymity of your inputs are fully guaranteed.

Appendix 3: Questionnaire for Community Residents

Introduction and Informed Consent

My name is Sharon Munatsi, a final-year research student at Bindura University of Science Education. In partial fulfillment of my degree requirements for a Bachelor of Science Honors Degree in Development Studies, I am conducting a study on the implications of urban expansion in Mabvuku Tafara Ward 20.

Your participation in this study is completely voluntary, and you reserve the right to withdraw at any stage without any penalty. All information collected through this questionnaire will be treated with the utmost confidentiality and anonymity. Your identity will not be disclosed, and your responses will be aggregated and used strictly for academic purposes. Thank you for your time and contribution to this study.

Section A: Demographic Characteristics

- Gender:

  [ ] Male

  [] Female

  [] Prefer not to say

- Age Category:

  [] 18 – 25 years

  [] 26 – 35 years

  [] 36 – 45 years

  [] 46 – 55 years

  [] 56 years and above

- Current Employment Status:

[] Formally employed

[] Self-employed / Informal trader

[] Unemployed

[] Retired

[] Student

- Period in years of residing in Mabvuku Tafara Ward 20:

[] Less than 2 years

[] 2 – 5 years

[] 6 – 10 years

[] More than 10 years

Section B: Spatial Patterns and Trends of Urban Expansion (Objective 1)

- Have you noticed any physical or land-use changes in your neighborhood over the past decade (2016–2025)?

[] Yes

[] No

- How would you describe the overall rate of physical development and housing construction in Ward 20 over the past decade?

[] Very Rapid

[] Moderate

[] Slow

[] Stagnant

- Which of the following land-use categories has experienced the most visible physical transformation in your area? (Select the main one)

[] Open green spaces / Recreational lands

[] Agricultural land / Cultivation fields

[] Institutional or public facility areas

[] Wetland areas

[] No significant conversion observed

- What is the predominant type of new infrastructural structures establishing in your neighborhood?

[] Residential housing structures

[] Commercial or retail properties

[] Light industrial or manufacturing workshops

[] Public/Civic infrastructure

Section C: Key Drivers Influencing Urban Expansion (Objective 2)

- To what extent do you agree that the local demand for affordable housing is the primary driver of physical expansion in Ward 20?

[] Strongly Agree

[] Agree

[] Neutral

[] Disagree

[] Strongly Disagree

- In your opinion, what is the main institutional or structural factor accelerating land allocation and expansion in this ward?

[] Local authority land delivery systems

[] Private sector property developments

[] Informal land allocations or administrative lapses

[] Population pressure from rural-urban migration

- How regular is the communication or engagement between local government representatives and residents regarding the authorization of new land developments?

[] Regularly

[] Occasionally

[] Never

Section D: Socio-Economic Impacts of Urban Expansion (Objective 3)

- Overall, how has the physical expansion of Ward 20 affected your general household living conditions?

[] Positively improved

[] Remained unchanged

[] Negatively affected

- Please indicate the specific changes you have experienced in the availability and reliability of the following basic services over the past decade.

Service Category	**Improved**	**No Change**	**Worsened**
Municipal Water Supply			
Electricity Grid Access			
Public Healthcare Services			
Public Transport Systems			
Waste Collection and Sanitation			

- How has the spatial growth of the ward affected local economic activities and livelihood opportunities?

[] Increased employment and localized business opportunities

[] Decreased economic spaces and ruined existing livelihoods

[] Had no noticeable impact on the local economy

- What change have you observed regarding social interactions, neighborly relations, and community cohesion as a result of the growing population?

[] Social relations have become stronger and more supportive

[] Social relations have remained the same

[] Social relations have weakened or become strained

Section E: Strategic Interventions and Recommendations

- What do you consider to be the most pressing concern resulting from the ongoing urban expansion in your ward that requires immediate attention?

_____

_____

_____

- What specific recommendation would you give to local planning authorities to improve the management of urban expansion in Mabvuku Tafara Ward 20?

_____

_____

_____

- Would you be willing to actively participate in future local community planning forums or consultative workshops regarding land development in your area?

[] Yes

[] No

Thank you once again for your cooperation and valuable insights. Your input is vital to this research, and the confidentiality of your contribution is completely warranted.

Appendix 4: Field Observation Checklist and Guide for Mabvuku Tafara Ward 20

Objective: To visually verify and document the physical footprint, spatial patterns, infrastructure status, environmental conditions, and socio-economic markers resulting from urban growth within Ward 20.

Section A: Protocol and Field Preparations

Materials: Ensure the researcher has a calibrated GPS device, a high-resolution camera, maps of Ward 20 boundaries, and copies of this numbered observation instrument.

Route Planning: Observations must follow a systematic transect walk plan (crossing the ward from west to east and north to south) to eliminate spatial bias and ensure comprehensive coverage of old settlements, new construction boundaries, and transitions zones.

Section B: Narrative Field Observation

1. Physical Built Environment Dynamics

Item 1.1: Housing Density and Infill Patterns

Observe the spatial clustering of buildings. Is construction dense and continuous, or are there massive open spaces between new houses? Note if residential infill is converting previous open buffer zones.

Field Observations:

_____

_____

Photo Ref(s):

Item 1.2: Structural Typologies and Permanence

Observe the types of residential buildings being established. Note the mix of permanent brick-and-mortar homes versus makeshift, temporary wooden/zinc structures or incomplete structures.

Field Observations:

_____

_____

Photo Ref(s):

Item 1.3: Commercial Land-Use Encroachment

Identify the presence of new commercial or retail activities within previously quiet residential spaces. Document any newly established shopping complexes, fuel service stations, or home-based tuck-shops.

Field Observations:

_____

_____

Photo Ref(s):

2. Infrastructure Expansion and State of Utilities

Item 2.1: Road Network and Connectivity

Document the extension of roads leading into newer housing clusters. Note whether the newly cleared pathways are tarred, structured gravel, or raw unpaved dirt tracks, and evaluate their physical drivability.

Field Observations:

_____

_____

Photo Ref(s):

Item 2.2: Water Infrastructure and Domestic Access Points

Look for visual evidence of public utility infrastructure. Note the presence, functionality, and community usage of municipal water pipelines, communal boreholes, neighborhood storage tanks, or private shallow wells.

Field Observations:

_____

_____

Photo Ref(s):

Item 2.3: Electrical Power Grid Extension

Observe the availability of power infrastructure in newly expanded areas. Record the presence of municipal overhead power poles, transformers, or widespread reliance on household solar panel systems.

Field Observations:

_____

_____

Photo Ref(s):

Item 2.4: Drainage and Storm Water Systems

Examine the edges of transport routes for structured drainage. Note the existence of concrete storm drains versus unlined earth ditches, and look for signs of blockages, silt accumulation, or standing water.

Field Observations:

_____

_____

Photo Ref(s):

3. Environmental and Spatial Preservation

Item 3.1: Wetland Encroachment and Land Degradation

Carefully survey local water pathways, streams, and ecologically fragile wetlands. Note any active residential building, landscape clearing, or localized urban cultivation taking place inside these protected spaces.

Field Observations:

_____

_____

Photo Ref(s):

Item 3.2: Solid Waste Management Practices

Examine how household waste is handled across different zones of the ward. Document the occurrence of active municipal collection trucks or designated dump skips versus the presence of informal open trash burning or illegal dumping sites.

Field Observations:

_____

_____

Photo Ref(s):

4. Public Services and Socio-Spatial Dynamics

Item 4.1: Access to Civic and Institutional Facilities

Locate key social facilities serving the newly expanded population. Assess the physical presence and general structural state of local schools, community clinics, recreational halls, and public parks.

Field Observations:

_____

_____

Photo Ref(s):

Item 4.2: Proliferation of Informal Layouts and Disparities

Observe any stark physical transitions within the neighborhood. Document areas with visible socio-economic disparities, such as highly upgraded, affluent modern properties directly adjacent to crowded, unplanned informal shacks.

Field Observations:

_____

_____

Photo Ref(s):

Section C: Comprehensive Field Summary Notes

To be filled out by the researcher immediately following the conclusion of each field mapping exercise.

- General Spatial Summary (Describe direction and physical nature of the expansion boundary observed):

_____

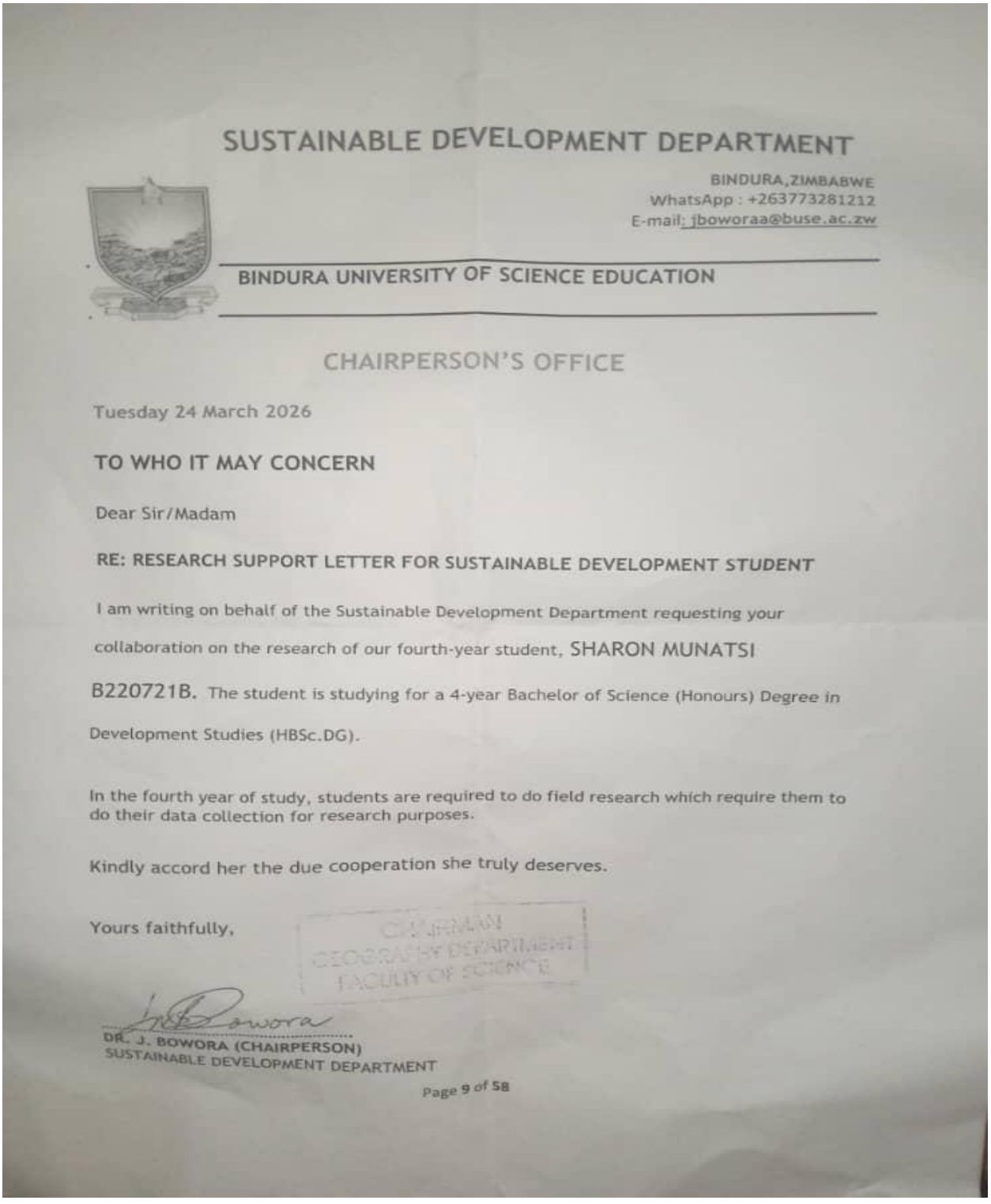
_____

- Primary Institutional and Visual Anomalies (Any notable variances between town planning rules vs. physical reality on the ground):

_____

_____

Appendix 5: Approval Letter from Bindura University of Science Education



SUSTAINABLE DEVELOPMENT DEPARTMENT

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BINDURA UNIVERSITY OF SCIENCE EDUCATION

CHAIRPERSON'S OFFICE

Tuesday 24 March 2026

TO WHO IT MAY CONCERN

Dear Sir/Madam

RE: RESEARCH SUPPORT LETTER FOR SUSTAINABLE DEVELOPMENT STUDENT

I am writing on behalf of the Sustainable Development Department requesting your collaboration on the research of our fourth-year student, SHARON MUNATSI B220721B. The student is studying for a 4-year Bachelor of Science (Honours) Degree in Development Studies (HBSc.DG).

In the fourth year of study, students are required to do field research which require them to do their data collection for research purposes.

Kindly accord her the due cooperation she truly deserves.

Yours faithfully,

CHAIRMAN
GEOGRAPHY DEPARTMENT
FACULTY OF SCIENCE

DR. J. BOWORA (CHAIRPERSON)
SUSTAINABLE DEVELOPMENT DEPARTMENT

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