AN ASSESSMENT OF MINING COMPANY HOUSING POLICIES: NORTHERN CAPE CASES.

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A Research Report submitted to the Faculty of Engineering and the Built Environment, University of the Witwatersrand, Johannesburg in partial fulfilment of the requirements for the degree of Master of Urban Studies (Housing and Human Settlements).

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DECLARATION

I declare that this research report is my own unaided work. It is being submitted for the Degree of Master of Urban Studies (Housing and Human Settlements) to the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination to any other University.

Signature

12 August 2022

ABSTRACT

Mining towns are challenged with housing issues for miners, the development of informal settlements in surrounding towns and inadequate infrastructure to accommodate the influx of migrant mine labourers. This research reports on the challenges of housing for mine workers in the John Taolo Gaetsewe and ZF Mgcawu District Municipalities. It provides an assessment of mining company housing policies which outline various housing options against the UN-Habitat elements of adequate housing. The options include a homeownership subsidy, rental options, and housing allowance. A qualitative study was undertaken, through semi-structured interviews with the local municipalities, private planning consultants, local community organisations and unions. Findings indicated that housing is a major challenge within the study area, from an availability and affordability perspective. High demand for housing resulted in extremely high property prices, presenting a challenge for low-income earners. The assessment indicated the housing options have varying adequacy depending on finances, worker place of origin or even their preferences as individuals with or without families.

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LIST OF ABBREVIATIONS

ARM	African Rainbow Minerals Limited
CESCR	Committee on Economic, Social and Cultural Rights
COGHSTA	Department of Cooperative Governance, Human Settlements and Traditional Affairs
COGTA	Department of Cooperative Governance and Traditional Affairs
DMR	Department of Mineral Resources
FIFO	Fly-in-fly-out
GDP	Gross Domestic Product
GVA	Gross Value Added
IANRA	International Alliance on Natural Resources in Africa
IDP	Integrated Development Plan
IHSP	Integrated Human Settlements Plan
IMC	Inter-Ministerial Committee
JTGDM	John Taolo Gaetswe District Municipality
KHDC	Khumani Housing Development Company
LED	Local Economic Development
MACUA	Mining Affected Communities United in Action
MPRDA	Mineral and Petroleum Resources Development Act
NCSDF	Northern Cape Provincial Spatial Development
NDP	National Development Plan
PTO	Permission to Occupy
SDF	Spatial Development Framework
SLP	Social and Labour Plan
SPLUMA	Spatial Planning and Land Use Management A
UN	United Nations

CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1 Introduction

The mining industry is regarded as a major contributor to the economic growth of towns close to mining activities. However, in recent years the economic contribution by the mining sector has been declining mainly due to mines downscaling as a result of the decreasing availability of minerals (Cloete and Marais, 2020). Despite the perceived economic benefits, there have been unintended spatial, structural, and socio-economic consequences caused by the mining industry. A few of the unintended consequences include housing challenges for miners; the development of informal settlements in surrounding towns; inadequate infrastructure; and insufficient municipal services and social facilities to accommodate for the influx of migrant mine labourers into the surrounding towns.

Historically, mining was a male-dominated industry, and mining companies housed mine workers in single-sex hostels. Mining companies also provided houses for high-income earners. The hostels and mine houses were not always suitable accommodation for the miners as they were criticised for poor living conditions and several other challenges. In recent years, Marais and Cloete (2009) found that mining companies are evolving in their approach to meet the housing standards required by the Mining Charter. This research will highlight the progress some mining companies have since made.

The research explores the housing challenges for mineworkers in towns near mining operations in the Northern Cape, specifically in Kathu, Kuruman and Postmasburg towns that are located within the John Taolo and ZF Mgcawu District Municipalities. The study will also look at surrounding towns with significant mining activities such as Lime Acres, Danielskuil close to Postmasburg, Hotazel, Black Rock and Santoy villages located north of Kathu.

Several mining companies and operations within the borders of John Taolo Gaetsewe and ZF Mgcawu District Municipalities employ thousands of people from several areas across the province. A low percentage originates from outside the Northern Cape province. The research will focus on various mines within the study area to determine the progression in the transition from hostel housing to the delivery of other forms of adequate housing through homeownership and living-out allowances. The scope to provide improved living conditions has widened since apartheid in line with the guidelines from the Mineral and Petroleum Resources Development Act and the Mining Charter.

Some mining companies within the study area have been developing housing strategies and policies, outlining different approaches to address housing challenges for workers. They also include various housing options that have been made available for employees. The research will assess the adequacy and appropriateness of the housing options outlined in the housing policies in light of the past housing challenges, the needs of the workers, and the alignment with the local government plans.

The research was a qualitative study, interviews were conducted with municipalities, private consultants, local community-based organisations and unions. The research also analysed existing documents such as municipal planning documents, Social and Labour Plans and news articles, to corroborate the findings.

1.2 Background

South Africa is characterised by abundant mineral resources that have contributed to our cities and towns' 'boom and bust'. Pelders and Nelson (2019) argue that despite the substantial economic contributions, mining towns have maintained inadequate socio-economic circumstances over the years. For example, Kathu town has benefited from mining activities leading to exponential growth and expansion of the town. However, economic opportunities and activities are mainly mining dependent or linked, which shows high dependence on the mining industry and less economic sustainability.

Mines are usually located in remote areas, and mining companies worldwide have had to establish towns. This meant constructing housing, infrastructure, and supporting social facilities for their workforce. Marais and Ntema (2018) argue that mining contributes to economic development and employment in mining towns, but it also has adverse effects. These include the lack of housing, poor living conditions and economic dependency on the mining sector resulting in unemployment and poverty post-mining (Pelders and Nelson, 2019).

Single-sex hostels were the main housing options for mineworkers historically, especially the black middle and lower-income earners. Whereas mine houses were mainly reserved for high-income earners (Marais and Cloete, 2009). However, the hostels provided had poor living conditions such as overcrowding, poor services which enabled the spread of diseases. Furthermore, since the hostels were single-sex units, they prevented miners from living with their families, which saw mostly women left behind with families while men travelled to work.

In 2002, a Broad-Based Black Socio-economic Empowerment Charter for the South African Mining and Minerals Industry, termed the 'Mining Charter', was developed as a tool for transformation in the mining industry. The Mining Charter was updated in 2010 and further in

2018. The Mining Charter required mining companies to comply with specific requirements that will ensure decent living conditions for workers in the mining industry, including converting hostels into family and single units. It also promotes the development of Housing and Living Conditions plans for each mining operation to ensure affordable housing and facilitation of homeownership. Provision of security of tenure and the overall integration of human settlements are also priorities of the Mining Charter.

There is substantial literature that provides insights on mine housing in South Africa. A book by Marais, van Rooyen and Burger et al. 2018, titled Mining and Community in South Africa: From small town to iron town provides insightful findings on mine housing in Postmasburg in particular. It highlights the broader mining and housing concerns. It also considers a range of issues i.e., “employment, inequality, business development, worker well-being, governance, municipal finance, planning and the environment” (Marais, Burger, van Rooyen, 2018: i). Literature exists on the role of mining activities in the development of informal settlements, e.g., Marais, Cloete and Denoon-Stevens (2018).

The mining industry is characterised by migrant labour thus, there is literature focusing on housing options suitable for migrants such as the Fly-in-fly-out approach explained by Torkington, Larkins and Gupta (2011). This research report contributes to research on mining company housing and policies related as well as their adequacy for mineworkers. As much as mineworkers have access to housing, it is still unclear how and what adequate housing is in the context of mining towns.

1.3 Problem Statement

The mining industry has contributed significantly to the Northern Cape, specifically the study area. However, the unintended consequences are visible and threaten the livelihoods of the mineworkers and entire communities. There are several housing and socio-economic challenges such as the lack of adequate and affordable housing, growing informal settlements and poor service delivery. There is limited and unsustainable economic opportunities that continue to affect the current and future development of these towns.

However, mining companies have continuously shown progress in their housing delivery approaches for their workers. New approaches have recently emerged from the mining sector, including the development of mining company housing strategies and policies aimed at improving housing delivery and the facilitation of homeownership. It is yet to be proven if these new approaches appropriately address the housing needs of the mineworkers faced with various housing challenges within the study area.

Most mining companies provide a living out allowance for their workers to access 'decent' accommodation wherever they prefer. The allocation of the living out allowance has had the unintended consequence of increasing informal settlements in surrounding mining towns (Marais, van Rooyen, Burger, et al. 2018). There has been an assumption that some workers misappropriate the allowance as they do not use it to pay for decent housing but instead use the allowance to fund other costs and they find cheaper accommodation in informal settlements. Therefore, companies are exploring and extending their housing options to improve their housing offering. This might have an impact on the local housing dynamics while also preparing for the possible closure of their mining operations.

This study assessed the company housing policies to determine the efficacy of the solutions or approaches proposed. It focused on the different housing options available for workers to ensure adequate and affordable housing, the facilitation of homeownership and the overall integration of mine worker housing with existing human settlements.

1.4 Rationale

John Taolo Gaetsewe and ZF Mgcawu municipalities have remote and relatively small towns primarily dependent on mining activities for economic development and opportunities. As noted in the background section, there has been work done showing mineworker housing challenges. However, there is a gap in how companies have recently responded to these challenges through various strategies. My current employer has done extensive work for mining companies, including a focus on mineworker housing.

From this perspective, I chose to research the topic to gain a deeper understanding and explore how mining companies have recently been evolving in their approach to mineworker housing challenges. These approaches do not only benefit mineworkers but have an impact on the broader municipal area. The research complements existing studies on mining and housing in South Africa and the Northern Cape such as Marais et al. (2018) on mining and community in South Africa, Cloete and Marais (2020) on mining in South African coalfields, and Pelders and Nelson (2019) on living conditions for mineworkers. This particular research will provide a recent view on the progression of mine housing strategies. The research specifically focuses on how adequate the identified housing options are in the context of mining towns while introducing the United Nations elements of adequate housing.

1.5 Objectives

The research aims to assess mine housing policies, specifically the different housing options proposed in the policies. It will explore the adequacy of these housing options for mineworkers. The following objectives will guide the study:

a) To identify housing challenges for mine workers in John Taolo Gaetsewe and ZF Mgcawu District Municipalities;

b) To provide a review of the legislative requirements for mine housing;

c) To assess the adequacy of the mine companies approaches to addressing the housing challenge; and

d) Evaluate the alignment between mine housing plans and municipal plans.

1.6 Research Questions

This section presents the overall question for the research and the sub-questions that will guide the research.

1.6.1 Main Question

How adequate are housing options offered by mining companies to workers in John Taolo Gaetsewe and ZF Mgcawu District Municipalities?

1.6.2 Sub-questions

a) What are the housing challenges experienced by mineworkers in the towns within the district municipalities?

b) What are the housing options outlined in the company housing policies?

c) What does adequate housing mean in the context of mining towns?

d) How do municipal housing policies and planning align with the company housing policies?

1.7 Research Methodology

The research follows a qualitative approach. Cresswell (2009:173) describes the approach as one that "employs different philosophical assumptions; strategies of inquiry; and methods of data collection, analysis and interpretation". Mason (2006) highlights that it is vital to employ qualitative thinking in research as it helps understand the complexities of various issues. The qualitative approach also enables the researcher to interact with the participants personally making it easier to further explore various issues to get a bigger picture.

Therefore, realising that housing is a complex phenomenon influenced and impacted by various factors, employing a qualitative approach will assist in understanding these different factors and dimensions of the housing challenge.

This section will explain the methods followed to collect qualitative data for the research.

1.7.1 Research Design

The research followed a case study research strategy, focusing on ZF Mgcawu and John Taolo District Municipalities as shown in Figure 5. The research study area has various towns in these district municipalities including Kathu, Kuruman, Postmasburg and other small towns with significant mining activities, Lime Acres, Danielskuil, Hotazel, Santoy and Blackrock. Case studies are a common research strategy "as they allow for a preservation of holistic and meaningful characteristics of real-life events" (Yin 1994:3).

Data was collected qualitatively through a list of questions developed for semi-structured interviews. Research participants included local municipality officials, private planning consultancies and union representatives. I had also planned to interview certain mining companies to get a deeper understanding of their housing policies. However, efforts to fulfil that were unsuccessful due to their unwillingness to participate. In addition, various secondary data sources were used to substantiate findings. These include mine company social and labour plans, sustainability reports and municipal planning documents. The research followed a case study strategy because it ensured a comprehensive understanding of the housing challenges in the study area. It also allowed for "an empirical inquiry that investigates a contemporary phenomenon within its real-life context especially when the boundaries between phenomenon and context are not evident" (Yin, 1994:13).

Case studies allow the researcher to utilise various data collection methods. Sarantakos (2005) outlines three different types of case studies, intrinsic, instrumental, and collective case studies. Intrinsic case studies are only to understand a particular case and collective case studies look into various studies while instrumental case studies are relevant for investigations into societal issues or a particular theory (ibid.). Therefore, this research used an instrumental case study approach to investigate the mineworker housing issue in the study area. It is important to emphasise the complex nature of housing in our communities. Thus, employing an instrumental research strategy assisted in understanding the housing problem and approaches recommended to address these challenges better.

1.7.2 Research Instruments

Sarantakos (2005) explains that case studies employ various data collection methods. The data for this research was collected through in-depth semi-structured interviews using an interview schedule to guide the interviews. Sarantakos (2005) regards participants as experts on a topic rather than data sources. The research participants were local municipal officials, private urban planning consultants, local community-based organisation representatives and unions or worker representatives.

Interviews were the primary instrument for data collection and were structured to take a maximum of an hour to complete. The initial plan was to have virtual interviews with all the research participants because of Covid-19 restrictions and some research participants living in a different province from myself. However, in the end, some interviews were face-to-face, with Covid-19 protocols observed, and some were telephonic while other interviews were done through Microsoft Teams.

Generic interview schedules are provided as appendices. Interviews focused on what the main housing challenges for mine workers and the broader local municipal area were. They also focused on mine company housing policies and how the respondents viewed these as a solution to housing challenges. Therefore, all the participants were asked about what they think the main housing challenges were within the study area. Municipality officials were asked how the municipality was responding to housing challenges and if they were involved in the development of mining company housing policies. Planning consultants were asked about their role in addressing housing challenges and if they believe the mine housing policies adequately address the challenges.

Table 1 shows all the participants interviewed for this study.

Table 1: Participants interviewed for the research

Respondent	Organisation	Position	Type of interview
Respondent 1	Municipality 1	Official	Face-to-face
Respondent 2	Municipality 1	Official	Face-to-face
Respondent 3	Municipality 2	Official	Email
Respondent 4	Municipality 3	Official	Telephone
Respondent 5	Private Planning Company 1	Senior Consultant	Face-to-face
Respondent 6	Private Planning Company 1	Consultant	Ms Teams
Respondent 7	Private Planning Company 2	Consultant	Telephone
Respondent 8	Local Community-Based Organization for Mining	Local Representative	Telephone

	Affected Communities, Kathu		
Respondent 9	Union	Worker Representative	Telephone

The research also involved an analysis of information from secondary data resources such as the existing municipal planning documents, mining company Social and Labour Plans (SLPs) and Sustainability Reports, and news articles. As noted, the initial idea for this research was to focus on one mining company within the study area However, that did not materialise as the company declined to participate and/or give access to their data including their housing policy due to confidentiality and non-disclosure issues. Therefore, the publicly available data of various mining companies within the study area form part of this research. Study mining companies include the following;

- Kumba Iron Ore, a subsidiary of Anglo American. The company has operations in Kathu and Postmasburg, Sishen Mine and Kolomela mine, respectively;
- Assmang Limited which has operations in Kathu, Postmasburg and Santoy next to Hotazel – Khumani, Beeshoek and Blackrock;
- Petra Diamond with one operation within the study area in Lime Acres, Finsch Mine; and
- Kalagadi Manganese Mine in Hotazel.

1.7.3 Data Analysis

Data analysis in case studies can be completed in various ways, including coding and identifying patterns (Sarantakos, 2005). The interviews were transcribed, and thematic analysis was undertaken. The thematic analysis resulted in identifying the main themes that emerged from the data. This meant identifying repeated observations from the data that answered the research questions.

A multi-criteria assessment was conducted to ascertain the meaning of 'adequate housing' in the context of mining towns. The housing options from mining companies were assessed against the elements of adequate housing as indicated by the United Nations Committee on Economic, Social and Cultural Rights (CESCR) (1991). Additional elements were added to the criteria to further contextualise the assessment of mining towns.

1.8 Study Limitations

There were various limitations encountered during the research and data collection. The major constraint (as explained) was that the mining company initially identified for the study declined to participate and give access to their data including their housing policy due to confidentiality and non-disclosure of company information. As a result, the research relied on public documents of various mining companies obtained from the internet and other company websites. However, this meant that the research then looked into mine housing policies broadly instead of focussing only on Kathu, Kuruman and Postmasburg, hence, the inclusion of other smaller towns and villages.

The other constraint was the non-responsiveness of some of the identified participants. In response to this, I travelled to the study area in an attempt to meet the respondents. However, due to financial constraints, I could only visit the study area once but continued to pursue the research participants through emails and phone calls.

1.9 Ethical Considerations

The University of the Witwatersrand Human Research Committee approved ethical clearance for the research before data collection commenced. The clearance number provided is SOAP148/06/2021. Permission letters were prepared for each organisation in which the research was undertaken research, these are attached in the appendices section. However, for municipalities, I decided to interview one official per municipality due to the unavailability of other officials. Some research participants signed consent forms, and others only provided verbal consent before participating in the interviews.

To adhere to ethical considerations, the research participants were notified that their participation was discretionary and would not result in any compensation. The research participants were notified that they could withdraw from the interview or research without consequence. The participants were informed that their participation would be kept anonymous, and their names or those of their organisations would not be used in the research report. However, it may be easy to identify their organisation given the nature of the towns. Only those that consented to be recorded were recorded during the interview.

Another important ethical consideration is that my employer currently works with some mining companies in the study area. This research was self-funded and is not affiliated with any of my employer's work currently being done. All information gathered is solely used for this research report.

1.10 Report Structure

The report is structured in six chapters, as outlined below.

Chapter 1 (current chapter) presents an introduction into the research report, and it discusses the background to the research and the rationale of this study. The chapter also discusses the methodology followed to assess mining company housing policies in the Northern Cape.

Chapter 2 provides a review of the literature on the challenge of mine housing and policies in South Africa and internationally.

Chapter 3 discusses the context of the case study. An overview of the locality of the study area within the John Taolo Gaetsewe and ZF Mgcawu District Municipalities is provided in this chapter. The chapter also provides a demographic, economic and housing profile of the study area.

Chapter 4 presents findings from the interviews and secondary resources. It provides a current view of the housing situation in the study area, how it impacts the residents, mineworkers, private sector and the local government itself. It provides varying views from the different participants.

Chapter 5 provides an analysis of the findings to understand what housing adequacy means in the context of mining towns. This section provides an assessment of the mine housing options against the elements of adequate housing.

Chapter 6 provides concluding comments and recommendations.

CHAPTER 2: THE CONUNDRUM OF MINE HOUSING AND POLICY

2.1 Introduction

The mining industry performs a massive role in the evolution of local communities and the growth of some towns as indicated earlier. The development of towns around minerals and related resources is linked to the boom and bust cycles that result in economic and social uncertainties in towns that are highly reliant on the industry for social, physical and economic development (Marais, Cloete and Denoon-Stevens, 2018).

The International Institute for Environmental Development (IIED) (2002) conducted research on mining, minerals and sustainable development, The research highlights that there are numerous expectations of the mining industry by society that contribute to the complexities that the industry is facing. Apart from mining minerals, the industry is expected to:

- Drive sustainable economic growth and development;
- Provide employment and infrastructure;
- Provide safe and healthy living conditions; and
- Preserve the environment.

Mining companies worldwide have had to establish towns near mines for their workforce from constructing housing and infrastructure services to providing supporting social facilities. Marais and Ntema (2019) argue that as much as mining contributes to economic development and employment in mining towns, it also results in adverse effects, including unintended consequences such as lack of housing and poor living conditions. Furthermore, poor post-mining plans result in unemployment and poverty due to dependency on the mining sector (Pelders and Nelson, 2019).

Housing is generally a critical and contentious issue in South Africa. According to the Republic of South Africa's Constitution, "everyone has the right to access adequate housing" (Republic of South Africa, 1996:11). The Constitution further declares that the state has a responsibility to realise this right through the relevant legislation. However, literature on housing provision in South Africa reveals that government legislation has failed to realise this right as millions of people continue to live in inadequate housing. Mining companies have attempted to fulfil their obligation to provide decent living conditions for their workers by creating mining towns closer to mine operations, and by offering rentals, houses for sale or a living out allowance.

Marais et al. (2018) note that low- and middle-income households in mining towns usually struggle to access affordable and adequate housing. Marais and Ntema (2018) concur and mention that prices for housing in mining towns has become expensive. High prices are a result of the remote nature of the mining towns and the high housing demand created by high population growth rates and migrancy. The lack of access to affordable housing has contributed to the development and growth of informal settlements as mine workers strive for survival and access to affordable housing closer to their workplaces. Peter (2017) notes that housing challenges in mining towns expand over time to affect the mineworkers and the entire communities.

The literature review chapter provides a review of mine housing internationally to enable an understanding of the topic from an international context. This section is followed by a South African mine housing context. The section describes the influence of the mining industry on the South African economy. It further outlines the transition of mine housing from hostel living to single units and housing allowances. The following section briefly describes mine closure indicating the implications thereof on mining communities. The succeeding section defines adequate housing and outlines vital elements that determine housing adequacy according to the United Nations Habitat. The chapter also includes an analysis of South African mining and housing legislation. All the sections draw towards a conceptual framework for the research.

2.2 Mining in the International Context

The minerals and resources industry contributes significantly to the global economy. China is the leading mining country worldwide, with a total production value of approximately USD184 million in 2018 (Garside, 2020). Australia followed China with USD142 million production value. In the same year, Canada ranked 9th, with $30.8 billion of mineral production value following South Africa with $37.8 billion in the top ten leading mining countries in the world (Garside, 2020).

Notwithstanding the significant economic contribution of the mining industry in countries that are still developing within the global south, Moomen (2017) states that there are conflicts over land use between mines and local communities. Moomen (2017: 85) mentions that these developing countries include “Peru, Chile, South Africa, Tanzania and Ghana”. The conflicts noted include displacement of local communities and failure to understand the extent to which these communities are affected by mining activities (ibid.). IIED (2002:142) explains that land disputes stem from “lack of recognised rights, lack of capacity and lack of trust”. Thus, suggests proper consultation, participation and compensation as some of the main elements required in decision making regarding land use and rights. Moomen (2017) adds that mining threatens the existence of other economic activities and results in food insecurity as mining activities expand over agricultural land.

This section will discuss different mine housing approaches from various countries.

2.2.1 Mining Towns

The impact of the mining industry on housing in mining towns is complex and diverse in different locations. De Duren and Osorio (2020) conducted a study to determine the impact of the mining boom on housing expenditure in Peru. The housing expenditure is linked to a “tax scheme that distributes taxes from mining companies to municipalities endowed with mineral activities” (ibid.: 718). They found that municipalities benefiting from the tax scheme had increased housing expenditure compared to those that did not. The increased expenditure shows that there was increased demand for housing in municipalities with mineral activity, which is typical of many other mining towns worldwide. The only difference in the Peru case is that the earnings from the tax scheme enabled municipalities to provide better housing for people that cannot afford housing, thus addressing the lack of affordability.

Mining towns are an attribute of remote mines worldwide. The towns emerged post-discovery of minerals and resources. Marais, McKenzie, Deacon, Nel, and van Rooyen (2018) explain that mining companies built towns and infrastructure to provide housing for mineworkers and support mining activities. Cloete and Denoon-Stevens (2018) state that the South African design of compounds was derived from the Brazilian Diamond Field design, whereby "slave lodges" were established for mineworkers. These slave lodges largely accommodated mine workers and had limited access for non-mine workers. The slave lodges are significant in highlighting the building of hostels in South Africa and their poor designs that contributed to poor housing conditions, single-sex housing, and mine workers' inability to live with their families.

The Australian and Canadian governments performed a major role in the development of mining towns. The governments introduced tax concessions and dispensations for mining companies to build and manage remote mining towns as indicated in Marais, McKenzie, Deacon et al. (2018). These are examples where the government and the mining companies collaborated through incentives to improve housing delivery, thus showing alignment in human settlements planning. Marais, McKenzie, Deacon et al. (2018) state that as the minerals industry in Western Australia grew in the 1960s, mine companies built ten towns for mineworkers with limited access for "non-mining" company workers (ibid. :780). In the 1980s, mining companies started converting these towns from private to public towns.

Hille and Foy (2017) mention that contrary to the Australian efforts, the Russian government constructed "mono towns" for industry workers in the 1930s. Monotowns were settlements built in areas dominated by a single industry or employer, and these provided accommodation for employees in that area. They explain that 40 to 80% of the mining-dominated towns' workforce relied on employment from mines. However, they mention that employees in the minerals and resources industry risked displacement during bust cycles and automation phases. Thus, mine-dominated sectors face reduced employment opportunities and imminent deterioration of such towns during bust cycles and automation phases which had an effect on housing developed to accommodate mineworkers.

There are various towns across the world that were built to specifically accommodate mineworkers that are now considered ghost towns post mine closures. Several mining towns in the United Kingdom were abandoned as the coal industry has been in decline since the 1980s (Strambo, Aung and Atteridge, 2019). Mineworkers and their families are left with little to no prospects of economic stability, difficulty in migrating to other areas to search for employment as they have already invested in housing in those particular towns. This research seeks to understand how various housing options offered by mining companies respond to migrancy in the Northern Cape mining towns: migrancy in terms of workers who originate elsewhere, and how local workers navigate housing within their communities once mining closes down.

2.2.2 The normalisation of mining towns

Cloete and Denoon-Stevens (2018) explain that from the 1980s, there was a decline within the mineral resources industry worldwide. As a result, there was a shift in policy regarding the establishment of new mining towns. Mining companies could handover their towns to the government through a process called “normalisation” (Marais, McKenzie, Deacon et al. 2018:781). This meant companies would focus only on resource extraction. The Australian and Canadian governments also played an essential role in the conversion and development of the mining communities which were previously owned by mining companies. A fringe benefit tax was introduced by the government to urge employers to contribute to the normalisation process (ibid.). IIED (2002) mentions that normalisation ensured that mining companies do not assume the role of government of providing services.

After the normalisation of mining communities, the outsourcing of mineworkers grew. Some countries, such as Russia, Australia and Canada, adopted the fly-in-fly-out (FIFO) approach. Burrows (2016) describes a town built around diamond mining activities in Russia, and the workers could rent out flats for only two weeks as they would fly in and out of that town. This approach "led to the development of workers camps, encouraged housing speculation and block-booking of motels" (Marais and Ntema, 2018:27).

The FIFO approach enabled flexibility for the mineworkers, and it was considered affordable by mineworkers in the remote towns of Russia. However, workers in the FIFO approach experienced social and psychological effects such as depression, substance abuse, and marital problems (Torkington, Larkins and Gupta, 2011). Travelling affected family dynamics as the men would leave their families regularly to live closer to the mine (Burrows, 2016). In addition to this, IIED (2002) states that FIFO contributed to less jobs and business opportunities to communities close to mines.

The FIFO approach promotes non-permanent mining communities, contrary to the South African approach, where policy aims for homeownership and permanency of settlements (Marais et al., 2018). FIFO reduced the impact of mine closures significantly as workers were not permanently settled in those communities. They would easily travel back to their homes and find employment elsewhere without the burden of a permanent asset such as a house in an economically declining environment. IIED (2002: 221) adds that the FIFO approach ensured the continuation of mining in remote areas without developing “traditional mining towns”.

The approach to mine housing differs from country to country. However, the lack of affordability, flexible housing and unsustainability after mine closures seems to be prevalent in all examples presented above. The findings from this research will highlight how South African mining companies are approaching the housing issue, to address unaffordability and provide flexible housing options.

2.3 Minerals and resources industry in South Africa

Netshitenzhe (2018) states that the mining sector was the driver of developing other sectors in South Africa, such as the manufacturing sector. Figure 1 shows the history of the South African Minerals and Resources industry from the first discovery of diamonds in the year 1867 to 2020, when a global pandemic, COVID-19, hit the world.

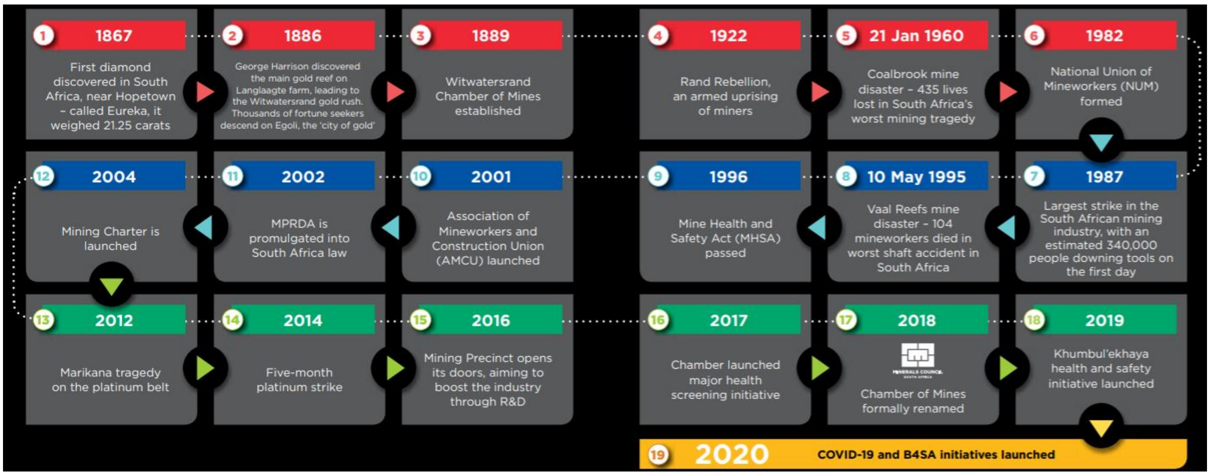

Figure 1: History of the Minerals and Resources Industry in South Africa

Source: Minerals Council of South Africa, Facts and Figure Pock Book 2020

2.3.1 The mining industry as a dominant economic sector

The mining sector contributes substantially to the South African Gross Domestic Product (GDP) as indicated by the Department of Statistics South Africa (2017). The sector's contribution reached a peak in the 1970s, which saw the sector contributing 21% to the country's GDP. The industry was also one of the biggest employers, with about 760 000 employees in 1987. However, the percentage contribution dropped to 8% in 2016. Figure 2 shows the mining sector contribution to GDP between 2010 and 2020.

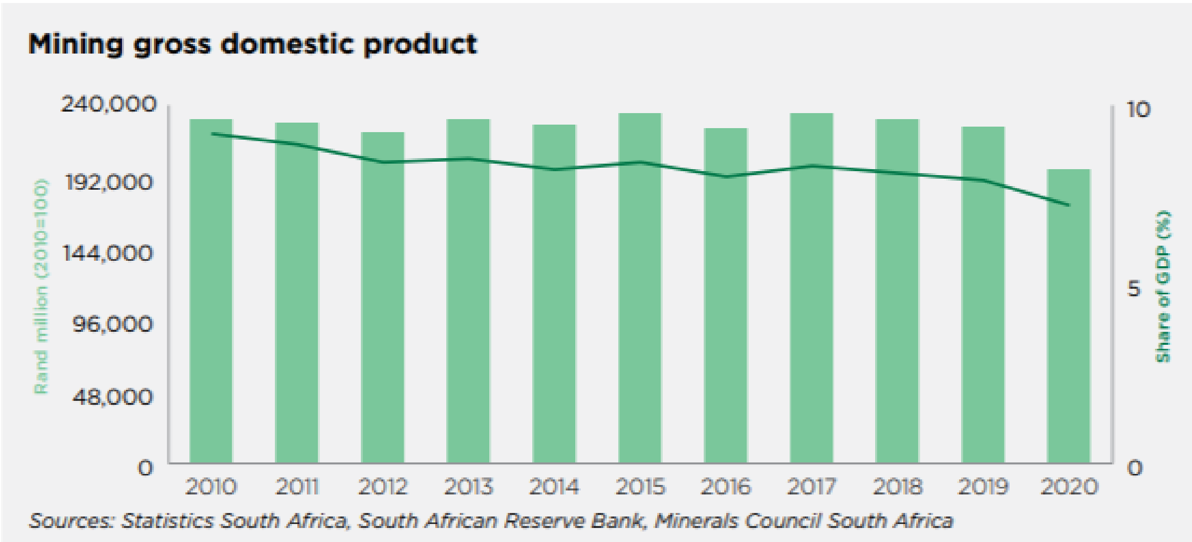

Figure 2: Mining GDP 2010-2020

Source: Minerals Council of South Africa, Facts and Figure Pock Book 2020

Figure 3 illustrates the number of employees within the sector between 2002 and 2020. It shows a downward trajectory mainly from 2008 which the Minerals Council of South Africa attributes to the declining minerals and resources industry.

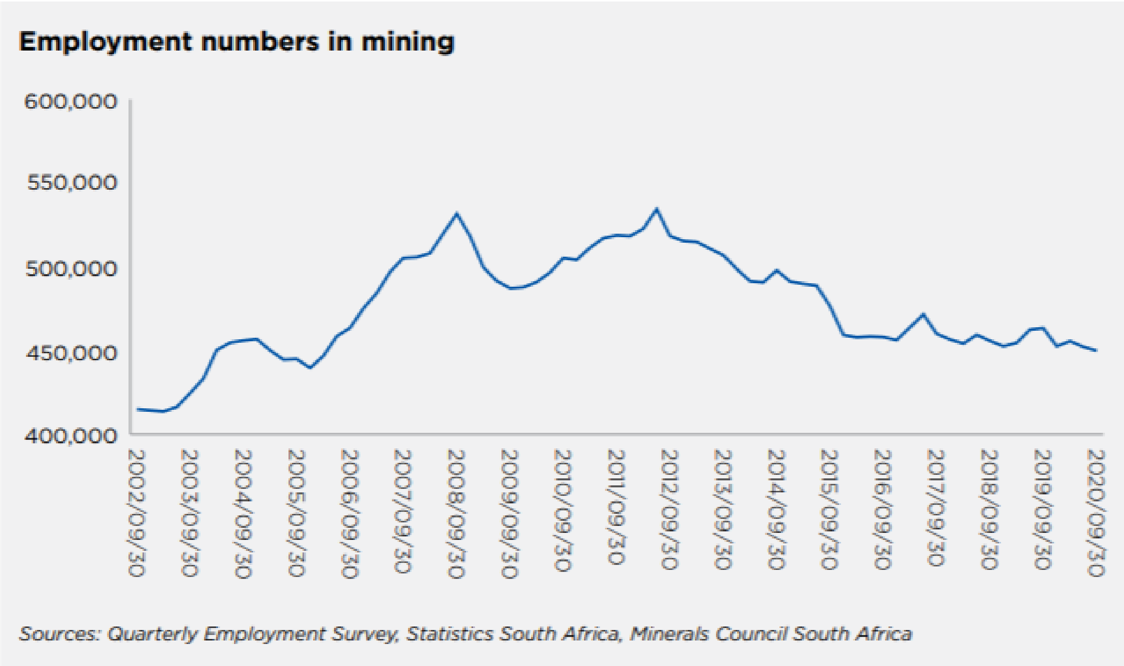

Figure 3: Employment in the mining sector

Source: Minerals Council of South Africa, Facts and Figure Pock Book 2020

Netshitenzhe states that despite reducing the mining sector's contribution since 1994, it is still a significant contributor and employer in South Africa.

2.3.2 Mine housing in South Africa

The history of mining towns in South Africa dates back 100 years (Marais, McKenzie, Deacon et al., 2018). The South African mining towns have a unique component from the rest of the world, the apartheid influence and design. Twenty-seven years post-apartheid South Africa is still addressing spatial and social injustices of apartheid. The mining industry is labour-intensive; thus, mining activities attracted a lot of low skilled job seekers in mining areas. Manhenze (2018) explains that during apartheid mineworkers were housed in mining compounds which were used as a measure to control the movement of the black workforce.

Mining companies developed mining towns and villages to provide housing for their workers. Marais, McKenzie, Deacon, Nel, and van Rooyen (2018) note that mining companies also provided infrastructure and the required social amenities, and the towns were serviced and overseen by the mining companies. Most of these towns have since been transferred to the management of local municipalities, integrated with existing human settlements where possible. However, there is a question of whether municipalities are able to maintain these towns. A recent study by Campbell and Drewes (2018) discusses a partnership between mining companies and the local municipality on service delivery in Postmasburg. There was acknowledgement that the local municipality does not have the capacity and resources to provide high standards of services. Therefore, a partnership was established to ensure shared responsibilities which becomes a huge risk when the mine closes down.

Mine villages and the conversion of hostels

Historically, South African mining communities had single-sex hostels for low-income mine workers and company housing for a few high-income mine workers. As Marais, McKenzie, Deacon et al. (2018:783) explain, there was a racial division in the housing of mine workers; "a black workforce commuting long distances from rural areas were accommodated in mine owned barracks known as hostels, while a white workforce was accommodated in mine housing in mining towns". Mine companies built the hostels primarily for black mineworkers in mining compounds, and these hostels had high occupancy rates.

During apartheid, the compounds acted as control measures of the movement of the black workforce. Compounds were located separately according to race. (Manhenze, 2018). Cloete and Denoon-Stevens (2018:141) indicate that these compounds had high-density male housing. The migrant labour system attracted many low-skilled workers from all over the country and neighbouring countries to mining areas.

Marais, McKenzie, Deacon et al. (2018) note that long-distance black mineworkers who could not find accommodation in hostels were transported in buses in and out of mining areas by mining companies. The long travelling distances and lack of access to housing near the mines resulted in informal settlements, as the workers were seeking accommodation closer to mines. Settling in informal areas was an affordable option for low-income mineworkers. It also created mobility for mineworkers as they could move to wherever they needed to because they did not have fixed assets near their places of work.

The designs of the hostels created poor living conditions and with the overpopulation of mineworkers in those compounds, there was limited space and privacy. There were also complaints of poor health and incidents of violence in these compounds (Cloete and Denoon-Stevens, 2018). The compounds were single-sex, and mineworkers had to live away from their families. Pelders and Nelson (2019) highlight the impact that the living conditions had on the family dynamics of mineworkers as men left their families behind to work in mines.

Marais, Burger and van Rooyen (2018) note that in the middle of the 1980s, there was a shift from full-time employees to contract workers. This resulted in mining companies converting mining towns into private homeownership for mine workers. During that time, there were also calls to convert compounds and hostels into family and single units. Kumba Iron Ore (2017) admits that converting hostel blocks into single units resulted in fewer rooms available for employees. Marais, Cloete and Denoon-Stevens (2018) argue that the conversion process resulted in less accommodation available for workers, leaving other workers with fewer housing options, thus, further fuelling the development and growth of informal settlements close to mining areas.

Marais, van Rooyen, Burger, et al. (2018) state that in the early 1990s, there were also attempts to ensure black mineworkers have access to homeownership in low-density housing, moving away from hostel living. However, this was not possible due to a mining industry bust that happened during that time. The introduction of a Broad-Based Socio-Economic Empowerment Charter for the Mining and Minerals Industry, the Mining Charter in 2002 also strengthened the need for transformation through the conversion of hostels to better housing and living conditions while promoting homeownership for the mineworkers.

The introduction of the living out allowance

Post-apartheid, in the middle of the 1990s, unions started negotiations for living out allowances for mineworkers who preferred not to live in mine housing. In 1998, some mining companies introduced the living out allowances, and these were supposed to subsidise the mineworker's accommodation and encourage homeownership (Pelders and Nelson, 2019). The Housing and Living Conditions Standards developed by the Department of Mineral Resources, in terms of Section 100(1)(a) of the Mineral and Petroleum Resources Development Act (MPRDA), 2002 require mining companies to provide allowances in consultation with the labour unions (Department of Mineral Resources, 2019). It also states that employees can only receive the allowance upon proving that they reside in "decent" accommodation (ibid.:13).

Marais, van Rooyen, Burger, et al. (2018) state that during the mid-2000s, there were criticisms against the living out allowance. They mention that the allowance did not improve mineworkers housing conditions. Instead, allowances contributed to the development of informal settlements. Cloete and Denoon-Stevens (2018) agree that the living out allowance resulted in mineworkers experiencing poor living conditions. They explain that workers used the living out allowance to supplement their lifestyles or support family members elsewhere instead of paying for adequate housing.

Apart from the living out allowance, mining companies also offered rental subsidies for workers to rent out mine houses, with an option to buy the house over time. In this way, mining companies were promoting and encouraging homeownership as required by the Mining Charter. However, the affordability of these housing options for low-income mine workers is questionable. Housing options currently being offered will be discussed comprehensively later in Section 4.4.

2.4 Mine closure in South Africa and internationally

There has been a significant decline in the overall contribution of the mining industry to the global economy. Marais and Cloete (2009) explain that the decline results from minerals depleting, leading to mine closures. Mine closures have long-term effects on housing and the sustainability of mining communities. The argument is that mining companies, government and the local communities are often unprepared for declining minerals and the prospects of mine closure (Du Plessis and Abrahams, 2018). Denoon, Nel and Mphambukeli (2018) reckon that planning for post-mining should be done in the initial stages of mine planning to ensure sustainable development.

Marais, van Rooyen, Burger, et al. (2018) argue that South African policies promote long-term settlements instead of "company-town models". The promotion of long-term settlements poses a threat to mineworkers during mining bust periods as they struggle economically and socially. Ntema, Marais, Cloete and Lenka (2017:31) argue "that generating housing assets in mining settlements promotes place attachment that seldom considers the long-term implications of the social disruption generally associated with downscaling".

Ntema et al. (2017) explain that in the 1990s, a decline in mining in the Free State goldfields resulted in an increase in population and the development of informal settlements as mineworkers left mine hostels to look for housing in other settlements. They highlight that in most cases, mineworkers are usually unskilled to work outside of the mining industry and can hardly afford adequate housing. Strambo, Aung and Atteridge (2019) reported that to address the impacts of coal mine closure, the United Kingdom (UK) government established a trust to support communities affected by the loss of jobs. These are communities that have failed to recover post mine closure.

Winkler, Oikarinen, Simpson, Michaelson and Gonzalez (2016) provide insights on the boom and bust in Calumet, Michigan. They explain that the Calumet town shrunk when the local mine closed as the population decreased by 80%. Strambo, Aung and Atteridge (2019) mention that residents were left unemployed, with health and social issues. The closure of the coalfields did not only affect the mineworkers but the entire communities. Possible advantages within the town were explored, including low rent and the availability of space. Winkler et al. (2016:2) state that the development of the arts industry was explored as "a catalyst for former mining communities to create sustainable futures".

Although not always possible, it is essential to plan way in advance for mine closure and identify possible secondary economies for mining towns that can be developed to lessen dependency on mining activities, thus reducing the impacts of mine closure economically.

IIED (2002) argues that mine closure plans are usually environmentally focussed, neglecting the economic and social aspects. Taking into consideration the fact that most mine are remotely located, workers and communities are left with little to no economic opportunities. They also mention that communities are at risk of losing infrastructure that was provided and maintained by mining companies. Furthermore, mine closure planning should inform individuals on the mine’s objectives to ensure better individual planning and decision making in preparation for mine closure (*ibid*.).

2.5 Defining adequate housing

The Mining Charter (2018) requires mining companies to create decent living conditions and provide adequate housing. However, questions arise on what decent or adequate housing is. According to South African and international law, Segal (2020) explains that every individual has a "right to adequate housing". The South African Grootboom case ruled that adequate housing includes the provision of a house, with supporting services such as water, electricity and sanitation (Tshoose, 2015). Article 11 of the Covenant of the Committee on Economic, Social and Cultural Rights (CESCR) (1991) protects the right to adequate housing. In South Africa, the Constitution serves as the custodian of this right as it is considered a fundamental human right as per Section 26(1) of the Constitution. Rapelang (2013) considers the right to adequate housing as the right to live safely, peacefully and with dignity.

The United Nations CESCR (1991) explains the different vital elements that determine housing adequacy. These include "legal security of tenure, availability of services, affordability; habitability; accessibility; location; and cultural adequacy" (Segal 2020:493). These are further explained below:

- **Legal Security of tenure** requires the housing occupants to have some extent of security of tenure despite the type of tenure involved. Security of tenure ensures legal defence against unlawful evictions.
- **Availability of services, facilities, and infrastructure:** A house is considered adequate if the occupants have access to essential services such as water, electricity sanitation, waste disposal, and emergency services.
- **Affordability** refers to reasonable housing financial costs that do not compromise the acquisition of other basic human needs.

- **Habitability** refers to the physical state of the house, which should have adequate space and provide physical and health safety.
- **Accessibility to adequate housing** refers to access for the poor and disadvantaged groups. It means that anyone that is entitled to a house should be able to have access to adequate housing.
- **Location** refers to the physical location in relation to job opportunities, social services and facilities. Houses should need to be in environmentally safe locations.
- **Cultural Adequacy** is all about preserving cultural identities and diversity.

Segal (2020) also explains that the right to housing does not compel the government to provide housing to everyone. Still, it requires the government to create viable conditions to reduce homelessness and promote progressiveness in housing provision. The right to adequate housing also includes public participation in which the affected parties have a meaningful contribution to all housing development processes that affect them. In the mining industry context, the mineworkers and their representatives need to be included in meaningful consultation to address their priority housing needs. This means, being actively part of the housing policy formulation process.

The main focus of this research is the adequacy and appropriateness of housing for mine workers. The aspects of the right to adequate housing will form a substantial base to measure and substantiate the findings from this research as we get to understand that adequate housing is more than just providing shelter. One of the important points emerging from the previous discussion of mineworker housing in South Africa is the lack of a wide variety of housing and affordability options, hence the reliance on informal dwellings. Various housing and affordability options are also important when considering migrant labour and the development of dual homes.

2.6 Policy Analysis

Policies and legislation have an immense impact on the development of communities affected by mining activities. They guide and compel the government and the minerals industry to live up to certain expectations to ensure the provision of adequate housing in sustainable integrated human settlements. However, ineffective legislation and poor implementation result in blurred roles and responsibilities of the local government and the mining companies.

2.6.1 The Mineral and Petroleum Resources Development Act, 28 of 2002

The Mineral and Petroleum Resources Development Act (MPRDA), 2002, promotes transformation within the minerals industry through redressing historical inequalities. It aims to enforce Section 24 of the Constitution of South Africa by promoting sustainable development within the mineral resources industry while ensuring "justifiable social and economic development" (Muswaka, 2017:23). The MPRDA requires the Minister of Mineral Resources to develop standards for housing and living conditions for the industry. These standards guide the development of housing and living conditions plan by mining companies.

The International Alliance on Natural Resources in Africa (IANRA) (2016) evaluated the impact of policies and legislation on mining communities in Africa. They state that there is a "gap between intention and impact in the MPRDA, which is often determined by debatable underlying assumptions" (IANRA, 2016:12). They argue that the MPRDA fails to acknowledge the communities affected negatively by mining activities and fails to specify requirements for human settlement within mining areas. Manenzhe (2018) agrees with this and states that the government tried to intervene in mining towns without a clear policy position. Almost 20 years after the Act was adopted, the provisions set out are yet to be met by mining companies.

Social and Labour Plans

The Department of Mineral Resources requires mining companies to submit Social and Labour Plans (SLPs) as part of the mineral rights application process (Centre for Applied Legal Studies 2017). SLPs are legal documents required before companies can receive mining rights and are renewable every five years. They aim to promote employment, economic growth and social welfare (Republic of South Africa, 2010). SLPs are also required to be in alignment with the local municipality Integrated Development Frameworks (IDPs).

The Department of Mineral Resources (DMR) has the mandate to enforce SLPs. The Marikana case in the North West is one example of how the DMR failed to enforce the Lonmin mine’s SLP. The mine, through their SLPs, had committed in 2006 to building more than 5000 houses and converting hostels by 2011 (Peter, 2017). However, by 2012 the mine had only built three houses (Amnesty International, 2016). The lack of progress in housing provision and other factors resulted in workers engaging in a protest again low pay and poor living conditions in August 2012, leading to the deaths of 34 mineworkers by the South African Police Service.

Housing and Living Conditions Standards

Mining companies are required to develop housing and living conditions plans according to Section 100(1)(a) of the MPRDA, 2002. The act aims to ensure the creation of decent living conditions for workers in the minerals industry. The standards guide the development of a Housing and Living Conditions Plan for each mining operation. The Housing and Living Conditions Plans are guided by the following principles as outlined in the Housing and Living Conditions Standards (Department of Mineral Resources, 2019: 8-10).

- "Develop social, physical and economic integrated housing development within a mine community,
- Measures to address the housing demand;
- Involvement of mine employees in the housing administrative systems;
- Promote best practices and compliance with minimum norms and standards in relation to the delivery and management of housing; and
- Promote the use of financing schemes in a transparent and accountable manner".

The Housing and Living Conditions Plan aims to ensure that mining companies provide decent housing that is affordable to workers through various housing options, including home homeownership and rental accommodation with rental subsidy payable by the mining company upon provision of proof of decent accommodation by the worker. Where the worker is not receiving a subsidy, a living out allowance is paid provided there is proof of decent accommodation.

2.6.2 Broad-Based Socio-Economic Empowerment Charter for the Mining and Minerals Industry, 2018 (Mining Charter)

A Broad-Based Black Socio-economic Empowerment Charter for the South African Mining and Minerals Industry, the 'Mining Charter' was developed as a tool for transformation in 2002, updated in 2010 and further in 2018. It aims to accelerate change and growth within the minerals industry. Its mission is to "give effect to Section 100 (2)(a) of the MPRDA, Section 9 of the Constitution and harmonise government's transformation policies" (Republic of South Africa, 2018:11).

The Mining Charter emphasises community development and improved standards of housing and living conditions. It required mining companies to convert hostels into family units by 2014, reduce occupancy rates to a single person per room, and increase homeownership. The Charter also endorses the Housing and Living Conditions Standards discussed in the preceding section, which highlights different housing options. Many mining companies have adhered to these requirements, but there is still much work to be done to fulfil the 'Mining Charter' goals.

In May 2020, the Minerals Council of South Africa approached the High Court of South Africa to challenge the legality of the 2018 Mining Charter and also to have some of the provisions in the Mining Charter (Republic of South Africa, 2021) set aside. Three mining host communities with their local representative organisations and trade unions were part of the respondents in this case. The communities and local organisations representing them also sought to challenge the Mining Charter. The community respondents argued that the Minerals Council of South Africa developed the Mining Charter without proper consultation with mining-affected communities. The respondents assert that the Charter does not address the full impact of mining and poverty in those communities (ibid.).

In a judgement on the 21st of September 2021, the court ruling favoured the Minerals Council of South Africa. The High Court ruled that the Mining Charter is not a law but rather a policy not enforceable by law; therefore, it set aside numerous clauses in the Mining Charter none of these directly affects housing.

2.6.3 National Development Plan 2030

The National Development Plan (NDP) was developed in 2012 with a vision to reduce inequality and eradicate poverty by 2030. The NDP identified various actions and actors to realise the economic and social outcomes to achieve Vision 2030. Chapter 8 of the Plan promotes the development of "decent standards of living" and the transformation of the economy (National Planning Commission, 2021:28). It promotes the development of transformed and sustainable human settlements.

The Chapter also states the importance of matching places of work with places of residence, moving away from apartheid planning. Therefore, Netshitenzhe (2018) proposes collaboration by government, stakeholders from the minerals and resources industry, and the labour and civil society to develop an industry vision that will align with the NDP objectives. The NDP acknowledges that housing is a contentious and complex issue, a progressive process of transformation. Thus, the NDP focuses on creating sustainable human settlements; instead of reducing the housing backlog quickly, it promotes quality housing over quantity.

2.6.4 Strategy for Revitalisation of Distressed Mining Towns and Communities, 2012

An Inter-Ministerial Committee (IMC) for the Revitalisation of Distressed Mining Community was established in 2012 after the Marikana massacre in August 2012, where miners were fatally shot by the South African Police Service members while protesting against low pay and poor living conditions, as explained earlier. The strategy was envisioned to promote the development of sustainable, integrated human settlements, improved living conditions, and the socio-economic development of mining communities (Parliamentary Monitoring Group, 2015). It also promoted homeownership as means to address poor housing and living conditions.

There is an argument that this strategy has not yielded the expected results, and mine and mining towns still experience enormous social, economic and physical challenges. The strategy has also been widely criticised for its lack of attention to mining closure prospects and the aftermath of mine closure on mining communities (Manenzhe, 2018).

2.6.5 Spatial Planning and Land Use Management Act, 16 of 2013

The Spatial Planning and Land Use Management Act (SPLUMA) took effect on the 1st of July 2015 to replace the Development Facilitation Act (DFA). SPLUMA aims to address past spatial injustices and create consistency in decision-making processes. SPLUMA requires the different spheres of government to prepare Spatial Development Frameworks (SDFs) that focus on identifying current and future spatial structuring and restructuring elements of every municipality.

Mining companies need to align their plans with the SDFs; however, the SDF does not propose specific spatial planning and land use management requirements in mining towns. It does not guide the development of human settlements and mine closure planning. Mine closures impact land use post-mining: it is expected that the municipal planning framework for land use management will at least guide land usage once mines are closed. Alignment in mining and municipal planning reduces the impacts of mine closure for local communities.

2.7 Implications of legislation and policy on human settlement development

The International Alliance on Natural Resources in Africa (2016) conducted a study on the mining legislation in four countries, Angola, the Democratic Republic of Congo, Zimbabwe, and South Africa. The findings showed that in some cases, the legislation is inadequate while others are poorly implemented. They found that in all the countries mentioned above, there is no acknowledgement of those most affected by mining activities (who are primarily communities in mining towns) in terms of community development, consultation and decision making.

The Mining Affected Communities United in Action (MACUA) organisation also brings up the issue of lack of acknowledgement of the impact of mining in communities by mining policies

(Bruce, 2021) which was part of the argument in the court case discussed above of the Minerals Council of South Africa v the Minister of Mineral Resources and Energy and others. Inadequate policies show the gap between "intention and impact" of the South African policy as discussed by IANR (2016:12).

In attempts to transform the minerals industry and ensure the provision of adequate housing, the South African legislation emphasises homeownership and the development of integrated human settlements, contrary to other international legislation as mentioned earlier. The South African legislation impacts the housing dynamics in mining towns as they have economic uncertainty and high migrancy. Mining boom and busts have been discussed in earlier sections of this report, showing that the minerals industry is quite volatile, affecting the economic longevity of communities.

The volatility of the minerals industry and imminent mine closures affect housing development and the housing market. Mineworkers, including migrant labourers, must access adequate flexible housing that allows free movement without being tied down to an immovable asset should mines shut down. Therefore, policy and legislation should explicitly make provision for such circumstances.

2.8 Conceptual Framework

The conceptual framework clarifies the important concepts used to structure the research. Jabareen (2009:51) explains "a conceptual framework as a network, or a plane, of linked concepts that collectively provide a complete understanding of a phenomenon or phenomena". The study assesses the adequacy of the housing options offered to mineworkers out of mining company housing policies. There is a gap in the literature on what adequate housing is in the context of mining towns. There are references to adequate housing but there seems to be more emphasis on informal settlements being an example of inadequate housing. Therefore, this study will be based on the concept of the “right to adequate housing” as explained in Section 2.5 to further unpack housing adequacy.

The key aspects of the right to adequate housing as explained by the CESCR (1991), are key in defining adequate housing in the context of mining towns. To further contextualise the adequate housing, an additional critical element was added to respond to the issue of migrancy in mining towns. Mining companies, local government and the local communities are key role players required in the development of sustainable mining towns. Figure 4 illustrates a summary of the conceptual framework of this research.

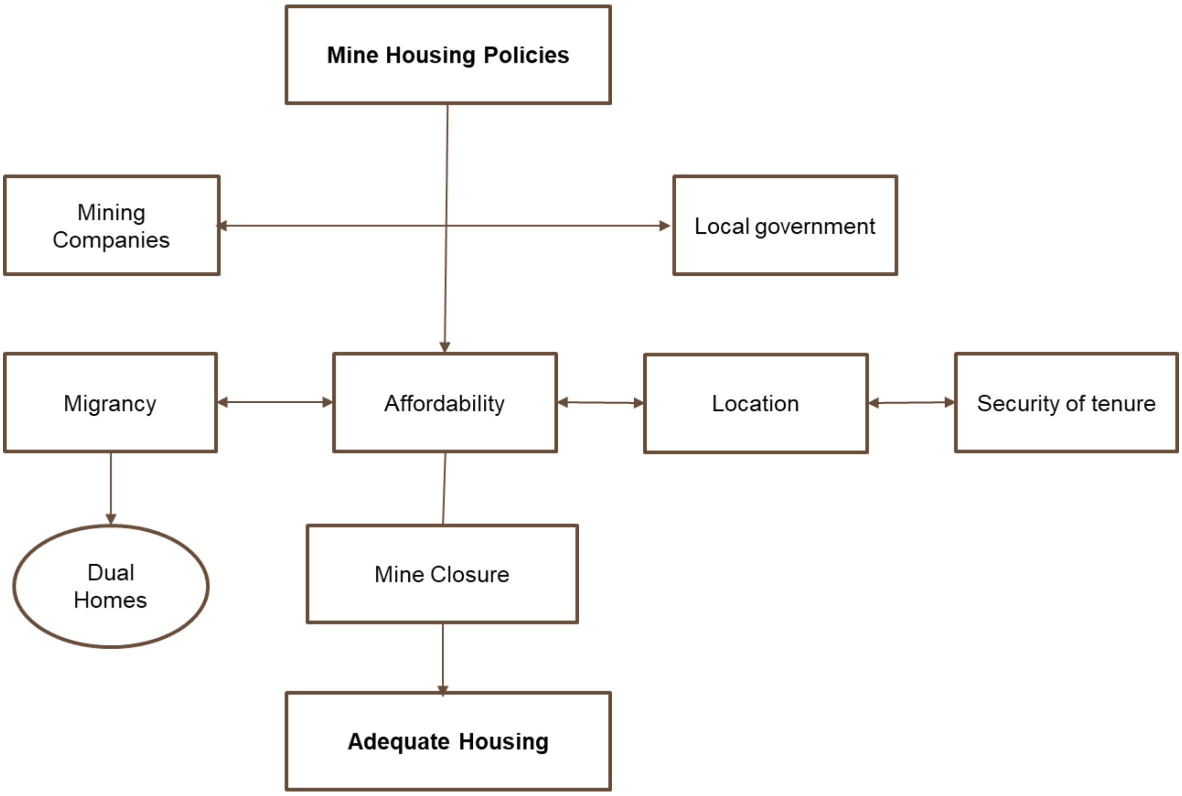

Figure 4: Conceptual Framework

2.9 Conclusion

Housing for mineworkers is a critical component of mining towns that has proved to be complex and challenging for local communities, mining companies, and the government. The conversion of hostels sought to dignify the lives of the mineworkers by improving living conditions and allowing family living. However, almost 20 years after adopting the Minerals and Petroleum Resources Development Act, 28 of 2002, there are still housing challenges in mining towns; hostels still exist in certain parts of the country.

The review of the policy framework shows that there is a deficit in planning and enforcement of plans. Mining companies are mandated to create decent living conditions and facilitate homeownership as outlined in their Housing and Living Conditions Plans. They are also legally bound to fulfil their plans outlined in SLPs to create employment, economic growth, and social welfare for the communities, and these plans are required to be in line with the local municipal IDP.

Mineworkers require decent housing and living conditions, which can be achieved through proper planning and consultation. The purpose of this research is to assess housing options tabled by mining companies for mineworkers, assess their adequacy across different spaces and times. It explores the right to adequate housing in terms of affordability, habitability, accessibility and location.

CHAPTER 3: A CASE OF JOHN TAOLO GAETSEWE AND ZF MGCAWU DISTRICT MUNICIPALITIES

3.1 Introduction

The study aims to explore the housing challenges experienced by mineworkers living in the towns of Kathu, Kuruman and Postmasburg, located in the John Taolo Gaetsewe and ZF Mgcawu District municipalities. It also explores the housing challenges in the neighbouring towns Lime Acres, Danielskuil, Hotazel, Black Rock and Santoy villages. These towns have significant mining activities in their vicinity that impacted the towns housing situations. Iron ore, diamond, and manganese mining are the dominant mining activities in the region.

These mining activities in the region are mainly concentrated in Joe Morolong, Gamagara, and Tsantsabane Local Municipalities (John Taolo Gaetsewe Municipality Integrated Development Plan (IDP), 2020-21, ZFM IDP, 2021-22). There are fewer mining activities in Ga-Segonyana Local Municipality, and this municipality is considered one of the primary sources of mine labourers for surrounding mining activities. The dominant economic contributors to these municipalities are mining and agriculture; these two sectors are considered the largest employers in these municipalities. The mining companies that operate within the study area include the following:

- Kumba Iron Ore;
- Kalagadi Manganese Resources;
- South32;
- Assmang;
- United Manganese of Kalahari;
- Finsch Diamond Mine; and
- PPC Lime.

This chapter will provide a contextual background of the mining municipalities and towns mentioned above. It will highlight the demographics and socio-economic profiles of these towns as well as the current housing situation. This chapter will also include an analysis of the local planning policies and how these impact the current housing situations in the mining industry.

3.2 The locality of the study area

The study area lies within the Gamagara Mining Development Corridor, which "comprises the mining belt of the John Taolo Gaetsewe and ZF Mgcawu districts and runs from Lime Acres and Danielskuil to Hotazel in the north" (Tsantsabane IDP, 2021-22:24). John Taolo District Municipality is located in the Northern Cape Province. It has three local municipalities, namely, Gamagara, Ga-Segonyana and Joe Morolong local municipalities. ZF Mgcawu District Municipality is located within the mid-northern part of the province. It consists of five local municipalities, including Kgatelopele and Tsantsabane local municipalities.

Figure 5 illustrates the locality of the study area.

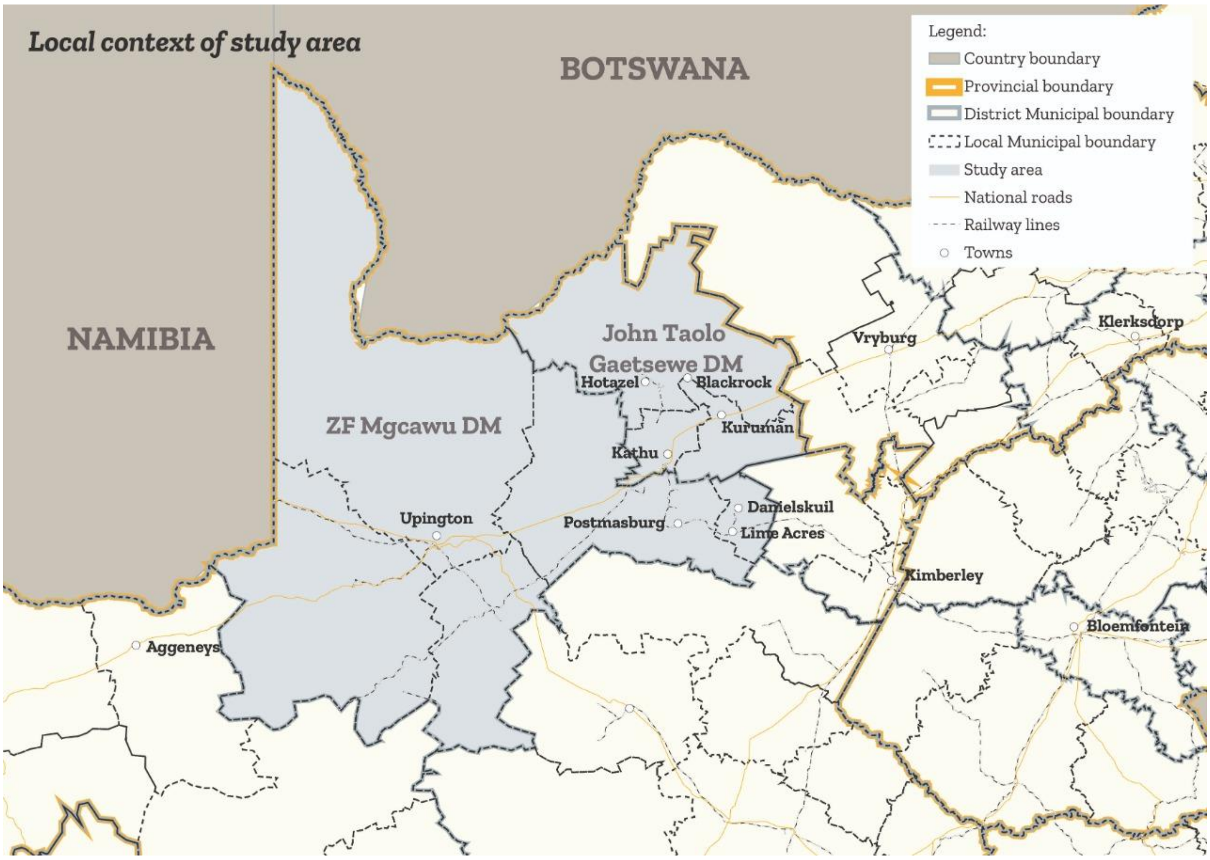

Figure 5: Location of the Study Area

Source: Spatial Data from Municipal Demarcation Board, 2018, Map compiled by Rachel Tshuma (2021)

- Kathu is within the boundaries of Gamagara Local Municipality between Upington and Vryburg, approximately 200km from Upington and 280km from Kimberley. It is connected to the main urban centres of Johannesburg, Bloemfontein, Windhoek and Cape Town by the N14.
- Kuruman is along the N14 within the boundaries of Ga-Segonyana Local Municipality north of Postmasburg.

- Postmasburg is approximately 200km from Kimberly and Upington. It is the main town of the Tsantsabane Local Municipality, and it consists of the main town, and four established townships: Postdene, Newton, Whitecity and Boichoko.
- Lime Acres and Danielskuil are in Kgatelopele Local Municipality east of Postmasburg.
- Hotazel, Santoy and Blackrock are mining villages located in Joe Morolong Municipality north of Kathu.

Figure 6 indicates the location of mining operations in the study area.

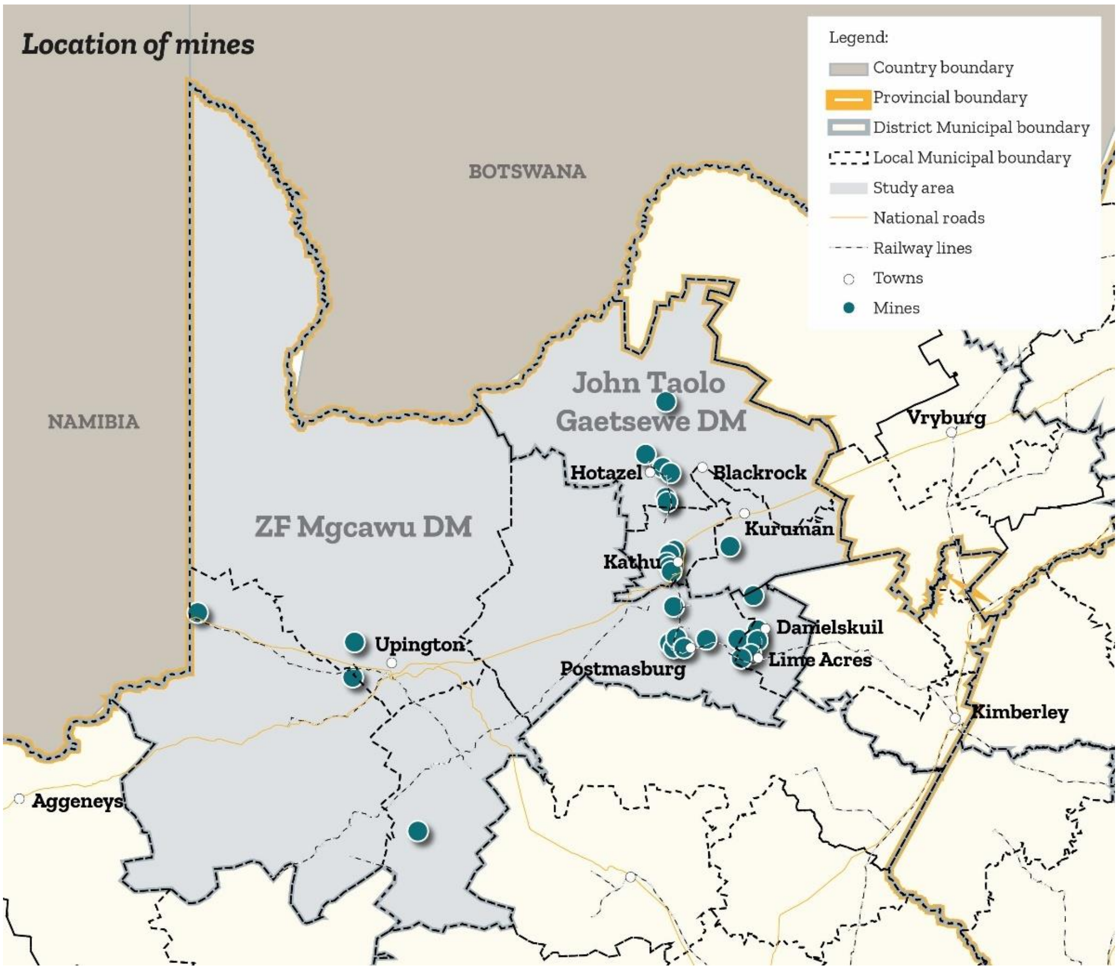

Figure 6: Location of mines in the study area

Source: Source: Spatial Data from MapIT, Municipal Demarcation Board, 2018, Map compiled by Rachel Tshuma (2021)

3.3 Demographics and Socio-Economic Profile

Since the 2011 Census, the study area has experienced positive growth in the population, with John Taolo Gaetsewe increasing 1.7% from 2011 to 2016. (John Taolo Gaetsewe District Municipality IHSP, 2019). Table 2 shows population growth in John Taolo Gaetsewe municipality. Two of the three local municipalities indicate a positive increase, while Joe

Morolong has had negative growth. The positive growth in the two municipalities results from the expansion and growth of mining activities in these municipalities and surrounding municipalities. This corroborates views from the literature review that due to mining activities, Kathu grew and expanded exponentially leading to a high demand for housing.

Table 2: John Taolo Gaetsewe District Municipality Population

Municipality	Census 2011	Census 2016	% Annual Growth
John Taolo Gaetsewe	224 799	242 264	1.7%
Joe Morolong	89 530	84 201	-1.4%
Ga-Segonyana	93 651	104 408	2.5%
Gamagara	41 617	53 956	5.8%

Source: John Taolo Gaetsewe District Municipality Integrated Human Settlement Sector Plan, 2019

ZF Mgcawu accounted for 21.1% of the total population in the province in 2018 (Department of Cooperative Governance and Traditional Affairs (CoGTA), 2020). Table 3 shows that Tsantsabane Municipality had the most increase in population, with an annual growth rate of 2.6% between 2008 and 2018. The 2018 figures shown in the table are projected amounts.

Table 3: ZF Mgcawu District Municipality Population

Municipality	Census 2011	2018 (projection)	% Average Annual Growth Rate
ZF Mgcawu	236 783	266 001	1.53%
Tsantsabane	35 093	40 900	2.61%
Kgatelopele	18 687	21 601	2.53%

Source: IHS Markit Regional eXplorer version 1750 in Department of Cooperative Governance and Traditional Affairs, 2020

ZF Mgcawu municipality is characterised by over 60% of Coloured people, followed by Africans at 29.6% (CoGTA, 2020). In contrast, John Taolo is characterised by 83.5% of Africans, followed by Coloured people at 10%. Asian and Indian people are considered the minority, with less than 1% in both districts.

The study area has a fair distribution of social facilities and numerous educational facilities. However, according to the Tsantsabane IDP (2021-22), there is a pressing need for more educational facilities in Postmasburg to cater for the increase in population and the anticipated high future population growth rates.

3.4 The Economy

The economy of the study area is dominated by mining and agriculture sectors, with mining considered the most significant economic contributor and employer in the districts. Mining has generally declined in South Africa since the 1990s due to mineral depletion (Marais et al., 2018). However, there have been expansions of existing mines and new mines in the study area, which has kept the economy going and the towns expanding. The Tsantsabane Municipality (2021/2022) IDP states that three new mines had been established in the municipal area in the previous two years. Mining companies in the study area have varying estimated lifespans. For instance, the Afrimat Demaneng mine has an expected lifespan of 4 years, and the Blackrock Mine has approximately 30 years.

The economy and employment opportunities in Kathu are a result of mining activities. Mining contributes approximately 78% to the Gross Value Added (GVA) of the Gamagara Municipality (Gamagara IDP, 2021). In recognition and acknowledgement of the over-reliance on mining, the Gamagara IDP (2021:64) indicates that the municipality has identified potential for the municipality "to develop into a commercial and industrial town over and above the mining spin-offs" through Local Economic Development (LED).

The Ga-Segonyana IDP (2021-22) explains that the municipality is characterised mainly by the service industry, agriculture, tourism and commercial sectors contributing to the overall municipal and district economy. Trade and government services are the most significant contributors to the district's Growth Domestic Product (GDP). According to the municipal IDP, Kuruman hosts many industrial activities that have been showing steady growth over the past ten years. Joe Morolong municipality offers the least contribution to the district GVA.

The mining industry also drives the economy of the ZF Mgcawu District Municipality. The industry contributed 21.3% of the total GVA in the district in 2018 (CoGTA, 2020). Postmasburg, Danielskuil and Lime Acres are the central areas for the municipalities mining activities. From 2018 to 2023, it was projected that the district would grow at an average annual rate of -1,20%. The negative growth indicates a decline in the contribution of the mining sector, factoring in mine closures that are likely to happen within that period. Figure 7 below shows the volatility of the primary sector in the district.

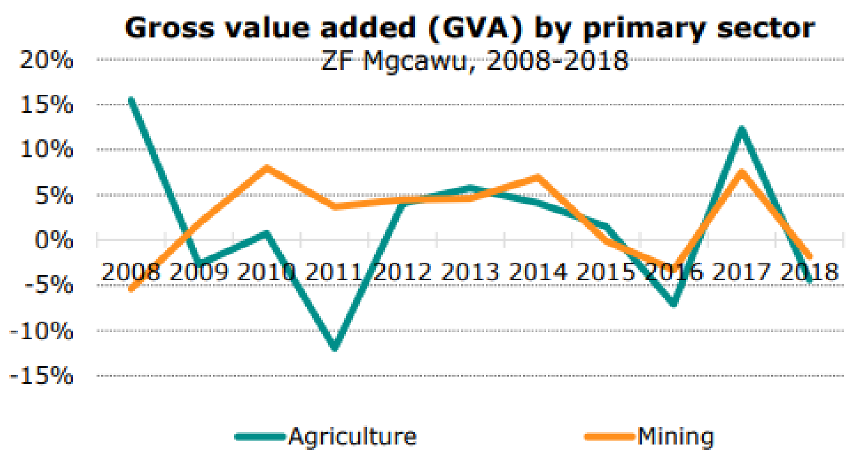

Figure 7: GVA by primary sector in ZF Mgcawu District Municipality

Source: Department of Cooperative Governance and Traditional Affairs, 2020

Danielskuil and Lime Acres in Kgatelopele municipality are services and mining centres with development potential (Kgatelopele Local Municipality, 2019). Figure 8 indicates the socio-economic potential of the municipality. The property market has the highest negative potential, associated with high prices and high demand for housing. According to the Kgatelopele Spatial Development Framework, the development potential of the municipality has decreased, and the "primary economic base is likely to experience fluctuations and be sensitive to external shocks" (ibid.:51).

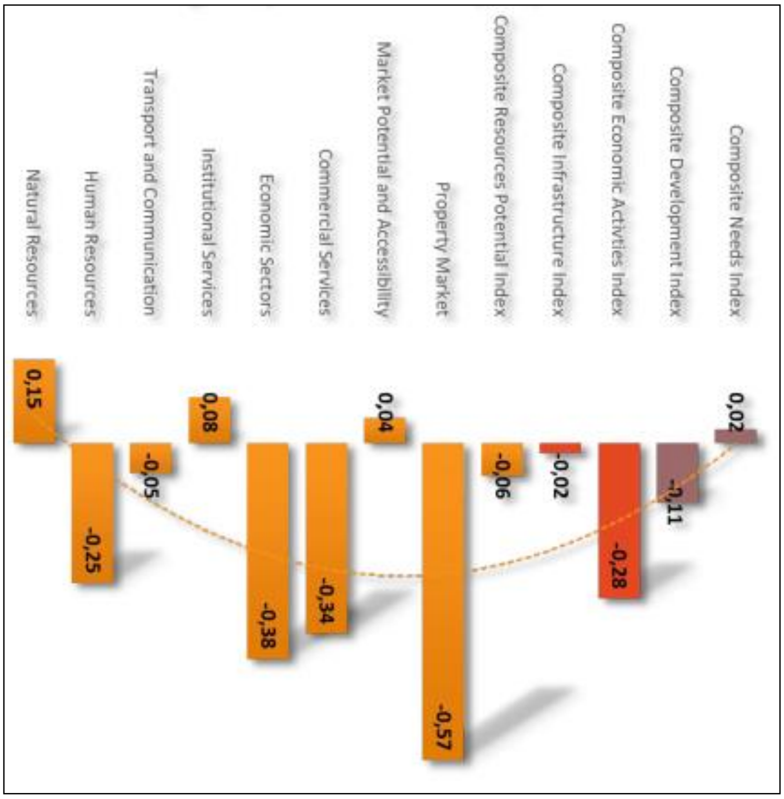

Figure 8: Socio-economic potential of Kgatelopele Municipality

Source: Kgatelopele Spatial Development Framework, 2019:51

Tsantsabane municipality conducted a business survey to ascertain the development and growth potential of local micro-businesses in Postmasburg (Tsantsabane IDP, 2020-21). The municipal survey indicated that new businesses had been established in the past five years in the construction, food, and retail sectors. However, these businesses are servicing the mining industry, indicating the need for secondary businesses independent from the mining industry. As highlighted in the literature review, IIED (2002) stresses the need for sustainable economic growth through secondary economies that are independent from the mining industry to reduce mine closures' economic impact on small remote towns like these.

3.5 Housing Status Quo in the study area

The need for accommodation has increased due to growth in mining activities, with more growth in Kathu and Postmasburg than in the other towns. Marais and Cloete (2009) write that the housing challenges in these towns, especially Kathu, result from several factors, such as the expansion of mining activities and some mining companies selling their residential properties. The sale of residential properties was influenced by various reasons, including the need to focus on the core business of mining. However, the sale of mine-owned houses impacted the property market as the housing demand increased significantly, thus increasing property prices rapidly. An increase in property prices resulted in housing affordability issues, especially for middle- and low-income mineworkers.

Marais and Cloete (2009) highlight a different perspective on the housing delivery issue, and they question the need for permanent residences for migrant labourers. They also indicate that a 2007 survey revealed that "93% of the respondents indicated that they are residing in their current location only because of its proximity to the workplace and to employment opportunities," which are mostly mining activities (ibid.: 2009:35). Naumann and Greiner (2017) also mention that most migrant labours in Kathu cannot purchase houses as the prices are too high. Thus, townships and peri-urban settlements around these towns are the only affordable options for these mineworkers.

The lack of affordable housing has significantly increased the growth of informal settlements, housing demand, and backlog. The John Taolo Gaetswe District Municipality Integrated Human Settlements Plan (JTGDM IHSP) (2019-20) highlights that Kuruman is a low-density town with underutilised open spaces to the north and north-west of the town for residential development. The availability of open spaces contrasts with Kathu and Postmasburg, which have few vacant land parcels for residential developments.

A property markets analysis done during the Tsantsabane Municipality SDF (2015) preparation indicated a drastic rise in residential property values in 2008, which subsequently increased the need for rental housing. The Gamagara IDP 2020-2021 indicates that the high demand for accommodation also increased the rental accommodation prices in Kathu, leading to an increase in illegal and backyard dwellings.

According to the JTGDM IHSP (2019-20), the Gamagara Municipality started upgrading informal settlements in Kathu. Gamagara Municipality has a housing backlog of approximately 7 300, and Ga-Segonyana Municipality has approximately 7 500 (John Taolo Gaetsewe District Municipality, 2019). Table 4 indicates the number of informal settlement units within the study area. Land invasions and illegal land use further exacerbated the housing backlogs. Marais et al. (2018:1104) write that "an informal housing structure represents some form of temporary accommodation that does not require a large investment". This analogy explains the rapid increase of such dwellings. People would instead settle in an informal settlement which is also considered flexible, especially for migrant mineworkers who might be in that town only due to employment opportunities. Most of these workers might already have houses in their hometowns or elsewhere.

Table 4: Informal settlements

Municipality	Number of Informal Settlements units
Tsantsabane Local Municipality (SDF, 2014)	5123
Gamagara Local Municipality (SDF, 2021)	1038
Kgatelopele Local Municipality (SDF, 2019)	476
Gasegonyana Local Municipality (IHSP, 2018/19)	4353

Source: Tsantsabane SDF (2014), Gamagara SDF (2021), Kgatelopele SDF (2019) and Gasegonyana IHSP (2018/19)

The John Taolo Gaetsewe Integrated Human Settlements Plan mentions that most households in informal settlements in Gamagara Municipality earn below R3 500 (John Taolo Gaetsewe Municipality, 2019). The low income explains why housing affordability is a significant challenge as it has also been established earlier that a high demand for housing resulted in high property prices. Figure 9 shows informal settlements in Postmasburg and Kathu.

Figure 9: Informal Settlements in Postmasburg and Kathu

(Source: Author's photograph, 11 September 2021)

The JTGDM IHSP (2019-20) lists critical housing delivery challenges in these towns. These include the lack of land to accommodate new residential developments in response to population growth, the small number of units approved according to budget availability and increasing the housing backlog. There is also a lack of supporting infrastructure bulk services. Growth in informal settlements and backyard dwellings increases the pressure on current infrastructure services and contributes to an even higher housing backlog. Therefore, one can conclude that there is a mismatch between the supply of and demand for housing in these towns.

3.5.1 Mining company housing

Kathu in Gamagara Municipality was founded in the 1980s due to the establishment of Iscor's mining operations. Kathu originally included Sesheng town, which was a mining compound with hostels for mineworkers. In the 1990s, mining companies started converting hostels and transferring their mining towns to municipal ownership. Marais and Cloete (2009) mention that when mining companies sold their residential properties in Kathu, a housing shortage increased, so did the housing prices. Kumba Iron Ore mine collaborated with the local government to provide housing for their workers in Kathu. The workers were offered three tenure options: individual ownership, instalment sale agreements, and rental housing.

Another significant housing project that the Kumba Iron Ore mine embarked on was the resettlement of the Dingleton village to Siyathemba township in Kathu. The mine expanded, which led to residents' exposure to a hazardous environment (Huisman, 2019). By 2019, Kumba had moved about 3 400 people from the village; only 2% of the residents had refused to move. The mine in Kathu founded a new township along with social and community services. The International Alliance on Natural Resources in Africa (2016) emphasises that active community participation and adequate compensation are critical for a successful resettlement project. IIED (2002) concurs and adds that resettlement should preserve the community's standards of living and social ties. According to the mine, the Dingleton resettlement, the residents were consulted and fairly compensated (Jooste, 2019).

Marais, Cloete and Denoon-Stevens (2018:1104) write that Postmasburg was a "sleepy little town" until 2010 when Assmang relocated mineworkers from their company town into Postmasburg. In addition to that, in 2011, Kumba opened a new mine, increasing the population and housing needs in Postmasburg (Marais, van Rooyen and Burger, 2018). To address the housing need of their workers, Assmang has constructed over 1000 houses to date in Postmasburg. The mine also offers rental housing and individual ownership through a capital subsidy "linked to a housing allowance and instalment-based sale instead of a mortgage" (Marais et al., 2018:1105).

Table 5 provides an overview of the planned houses by mining companies in the three towns.

Table 5: Planned mine houses

Mine	Area	2014	2015-2018	2019-2023
Assmang Khumani Iron Ore, Assmang Beeshoek Iron Ore, Blackrock Mine Operations (Nchwaning & Gloria)	Postmasburg	90	Mine is not in a position to give information as this depends on the planning of the mine.	Mine is not in a position to give information as this depends on the planning of the mine.
	Kathu	35		
	Kuruman	81		
Kalagadi Manganese	Kathu, Kuruman, Hotazel		The mine has compiled a Housing Feasibility study, but it has not been approved. It plans to build more than 300 houses in Kuruman,	

			Kathu and Hotazel within the next three years.	
Sishen (Kumba)	Kathu	-		1000

Source: JTGDM Integrated Human Settlements Plan, 2019-20:36

There are nine Batswana traditional authorities within the study area; 7 are in Joe Morolong Municipality and the rest in Ga-Segonyana Municipality (CoGTA, 2020). Joe Morolong is a rural area consisting of approximately 80% of the land under the management of traditional leaders. Land under traditional authority poses a challenge for the local government to provide housing and services and it becomes critical for mining companies to provide housing in these areas. A good example of such is Hotazel and Blackrock villages which are still considered mining villages.

Mineworkers come from different parts of the district, the province and even outside of the province. The influx of migrant labourers increases the demand for housing units and different types of housing tenure to accommodate the needs of the miners. Thus, housing developments should consider all workers and their different housing needs. Marais and Cloete (2009) explain that the main challenge with developing sustainable human settlements in these mining towns is low development indicators due to their remoteness and single economies. Dependency on the mining sector, which has a lifespan dependent on the availability of minerals, is another major challenge in these towns that IIED (2002) has alluded to. It results in unsustainable economic growth for that particular area.

3.6 Contextualised Planning Policy

3.6.1 Spatial Development Frameworks

The Northern Cape Provincial Spatial Development (NCSDF) (2012) promotes urban integration, affordable housing, and densification. The NCSDF aims to create urban designs with residences near work areas while maintaining high living standards. As much as the NCSDF acknowledges the impact of mining on housing, it does not provide any specific planning guidance relating to mine housing.

According to the Tsantsabane SDF (2015), in 2014, the residential requirements for Postmasburg were approximately 9 968 units which are estimated to increase by up to 18 699 units in 2025. The SDF notes that there is minimal vacant land for future residential developments due to the town's rapid growth. According to the SDF, the town is experiencing immense pressure to develop due to the mining boom, with residential developments rapidly increasing in the outskirts of the town, which increases the need to prioritise infill and densification of residential developments to cater for the housing demand.

The Kgatelopele municipal SDF assessed the development potential of the municipality and its needs to determine the area's suitability for investment. This assessment also assisted in identifying housing needs according to the population sizes of the towns. However, the SDF shows a dim picture of the property market in the main towns, Danielskuil and Lime Acres, which had a negative development potential in 2018. Therefore, the SDF proposes integration and engagements with the mining sector to address housing challenges while promoting spatial transformation.

SDFs should provide for future spatial developments of human settlements, which means considering the impact of mining on population growth and the area's development potential to provide planning guidance for such.

3.6.2 Integrated Development Plans

Municipalities are required to prepare Integrated Development Plans (IDP) by the Municipal Systems Act. These IDP's are five year plans which are reviewed and updated each year. The IDP includes a chapter on the housing sector for that particular municipality, and it sets out housing delivery goals, the planning, and the implementation of housing projects. The IDP also include programmes and projects from mining company SLPs. However, these projects are mostly community development projects. Housing and infrastructure are not included in SLPs which make it difficult for either party to plan for these aspects collaboratively.

The Gamagara IDP (2020-22:3) indicates the need to develop "strong building inspectorate division and stringent law enforcement" to address mushrooming informal and backyard dwellings. The Gamagara IDP also highlights the need for affordable rental accommodation in Kathu. The Ga-Segonyana IDP (2021-22) highlights the challenge of rapid mining development in the municipal area, and it mentions the pressure that this development places on municipal resources and infrastructure services.

According to the ZF Mgcawu IDP, limited housing capacity within the district negatively affects housing delivery. The Tsantsabane IDP (2021-22) acknowledges the impact of mining on the demand for housing and the need to address informal settlements within five to ten years. It mentions the importance of public-private partnerships (including mining companies) in achieving this goal.

3.6.3 Integrated Human Settlements Sector Plans

Integrated Human Settlement Sector Plans provide a strategic direction for the transformation of human settlements. The Plans outline housing challenges and proposals within municipalities. The main challenge has been addressing the housing backlog and providing adequate housing, which is a right according to Section 26 of the Constitution of South Africa (JTGDM IHSP (2019-20)). The municipalities should aim to provide adequate housing by understanding the magnitude of the housing need and demand. However, municipal planning documents do not provide an explicit definition of what adequate housing is. Instead, Table 6 shows how adequate housing is defined in the municipal planning documents, which mainly focuses on the type of physical structure of the house.

Assessing housing adequacy according to the table below, together with the provisions made by the United Nations Committee on Economic, Social and Cultural Rights (CESCR) (1991), would help to understand the level of housing provided to mineworkers in these towns. According to this table, it is clear that informal settlements are considered inadequate housing. However, the UN elements give further clarification on the adequacy of a house, for example, mineworkers that live in a house or brick block structure on a separate stand but have structural challenges with the housing, ceilings falling in. The UN elements will look into the habitability of that house. Chapter 5 will refer to this table and the UN elements.

Table 6: Adequate versus Inadequate housing

Adequate Housing	Inadequate Housing
House or brick/ concrete block structure on a separate stand or yard or a farm	Traditional dwelling/ hut/ structure made of traditional materials
Flat or apartment in a block of flats	Informal dwelling (shack in a backyard)
Cluster house in a complex	Informal dwelling (shack; not in a backyard; e.g. in an informal/ squatter settlement or on a farm)
Townhouse (semi-detached house in a complex)	Caravan/ tent
Semi-detached house	
House/ flat/ room in backyard	
Room/ flatlet on a property or larger dwelling/ servants quarters/ granny flat	

Source: JTGDM Integrated Human Settlements Sector Plan, 2019-20:39

Mining companies located in Kathu play a vital role in the development of low-cost and rental housing. The JTGM IHSP (2019-20) mentions that Kumba Mine donated land parcels for human settlement purposes. The IHSP highlights the importance of densification and acquiring more land to accommodate the future demand due to anticipated growth in mining activities.

3.7 Conclusion

The municipal plans do not clearly define the housing needs and challenges for mineworkers in the municipal strategic plans. However, there is an acknowledgement from the local plans that economic and employment opportunities provided by mining activities contribute to an influx of migrant labourers thus, increasing the housing demand and informal settlements. Specific plans or approaches need to be included in the municipal plans as it is clear that the mining industry has a significant impact on sustainable human settlements. The increase in demand for housing must be considered when planning for future human settlements to ensure developments provide adequate development of housing for mineworkers.

CHAPTER 4: MINE HOUSING POLICIES IN THE NORTHERN CAPE

4.1 Introduction

The chapter presents findings from the interviews and secondary data on mine housing in Gamagara, Tsantsabane and Ga-Segonyana Local Municipalities in which the focus study areas are located. Additional areas, Hotazel, Lime Acres and Danielskuil towns, were also included in the research as they significantly impact the housing situation in the study areas. The research aimed to assess mining company housing policies in the Northern Cape, focusing on housing options provided by mining companies to address mineworker housing.

The main observation in these areas is a general lack of affordable housing caused by an influx of people searching for job opportunities. This has put immense pressure on the local municipalities and mining companies as demand surpasses supply. This has also contributed largely to the development of informal settlements and stressed infrastructure in these towns. The findings will be discussed further in the following sections.

4.2 Current mine company housing status

The key study areas where the majority of the mineworkers reside are proclaimed public towns. However, there are small towns that are still regarded as mining villages. These are Lime Acres, Santoy and Hotazel. Black Rock Mine provides housing, services and maintenance to their villages, i.e., the Black Rock and Santoy villages.

Information gathered from the interviews and secondary data indicates that the major mining companies within the study area mainly provide accommodation to their permanent employees through single-family houses, single units, and flats. They also offer rental accommodation to both contractors and permanent employees at affordable rental tariffs. The Hotazel Manganese Mine employs local people to encourage family living as workers will not move from their current houses. They provide employees with an accommodation allowance (South32, 2018). However, there is no indication on the mine's SLP that they do provide physical housing. Most SLP projects included in the municipal IDPs are social projects run by the mining companies. They do not include housing plans which shows lack of coordinated planning by both mining companies and municipalities.

Many mineworkers employed in the mines located in Hotazel travel daily from either Kathu or Kuruman. As there are fewer mines in Kuruman than Hotazel, Kuruman is a large sending area to all the mining areas within the study area. It is considered a "sleeping town" for workers working in Postmasburg, Kathu and Hotazel (Respondent 7, Private Planning Consultant, September 2021). Some workers choose to stay with their families in Kuruman, and some cannot afford housing in other towns. An interview with a representative from a local community-based organization indicated that workers travel almost 80km daily from Kathu to Kuruman to get to Hotazel as there is poor road infrastructure (Respondent 8, representative of community organisation, October 2021). He mentions that travelling in poor road conditions has resulted in numerous road accidents on the R31 to Hotazel town.

Research shows that all mines within the study area that previously had hostel blocks have completed the conversion of those hostels into single units as required by legislation. Kumba Iron Ore also provides a range of housing options, including company accommodation, where some 58% of the permanent employees live (Kumba Iron Ore, 2020). The company also provides rental flats in Kathu to employees in the "Professional in Training" programme (Kumba Iron Ore, 2017:31). Figure 10 shows the Sesheng Flats owned by Kumba Iron Ore.

Figure 10: Kumba Iron Ore Sesheng Flats

(Source: Author's photograph, 11 September 2021)

The Kumba Sustainability Report (2020) mentions that there was a housing study that was undertaken for Kumba to determine the "living conditions of their employees, homeownership aspirations and creditworthiness" (Kumba Iron Ore, 2020:69). The study showed that 95% of the mineworkers live in formal houses, with only 2% living in informal settlements. The housing study also revealed that about 7% of contractors at Kumba live in informal settlements (ibid). This contradicts some of the literature discussed that portrays a much bigger percentage of mineworkers living in informal settlements.

Finsch Diamond Mine, located in Lime Acres, about 50km away from Postmasburg, provides accommodation to permanent employees and contractors through their housing policy. The mine employs 946 permanent employees and about 2000 contractors (Petra Diamond, 2019). The mine owns 1300 mixed units to accommodate workers; these include houses, flats and single accommodation. Research shows that Finsch Mine is one of the few mines that provide various housing options for contractors. The mine has duplex units that cater for contractors (Petra Diamond, 2019). It also has 30 spaces that accommodate two contractors per unit, and these are premade mobile units suitable for temporary residential accommodation. They also have single rooms with a canteen that provide employees with three meals a day. These are flexible housing units suitable for people that do not want to settle permanently in the area.

The mine indicates in their SLP that they are not selling their housing assets yet and that a "Private Home Ownership Scheme is in place to assist employees" (Petra Diamonds, 2019:172). However, there hasn't been any take up on that scheme. It is unclear why there has been no take-up, because according to an interview with a union representative, mineworkers in Danielskuil have shown interest in buying their own houses (Respondent 9, worker representative, November 2021). Respondent 9 states that the mine does not offer houses for purchase which has an impact on some miners who are close to retirement. These workers will have to vacate their current houses to find accommodation elsewhere, which is not sustainable. Table 7 shows the housing allocation and units available in the mine.

Table 7: Finsch Diamond Mine Housing Units

Type of units	**Allocation**	**Number of units**
Family Accommodation	Finsch Dimond Mine employees	632
	Service Level Agreement Employees (Contractors)	126
	Families working in the region	18
	Privately Rented	78
	Vacant/ Renovations	30
Single Accommodation	Single rooms with shared ablution	224
	Single rooms complete with kitchenette and/or bathroom	86
	1 bedroom + kitchen/lounge and bathroom	18
	2 bedroom + kitchen/lounge and bathroom	22
	3 Bedrooms + kitchen/lounge and bathroom	18

Source: Petra Diamonds Finsch Diamond Mine SLP, 2019

Contrary to the Finsch housing model, the Beeshoek approach includes an opportunity for ownership. Beeshoek Iron Ore mine near Postmasburg has 357 housing units in the town.

These include 80 rental units as well as 200 houses that have been sold to employees (Assmang, 2019). The company also has 125 empty stands in the town developed as part of the company's housing strategy and policy. The housing strategy and policy promote homeownership and are creating an environment that allows workers to take up or look into homeownership by making serviced stands available for those employees who want to build their own houses.

4.3 Housing challenges and needs identified

4.3.1 Local government Challenges

The district and local municipalities in which the study area is located face numerous housing-related challenges. As mentioned in previous sections, the mining industry boom resulted in many challenges, such as the influx of labourers and people in ZF Mgcawu and John Taolo Gaetsewe District Municipalities. This resulted in a huge housing backlog as residential accommodation demand greatly exceeds supply, increasing house prices and rentals.

An official in one of the local municipalities indicated that the municipality is challenged by the lack of land for housing developments (Respondent 1, Municipal Official, September 2021). They mentioned that the majority of the vacant land is either owned privately or in the hands of traditional authorities. There are nine traditional authorities in John Taolo Gaetsewe District Municipality; two are located in Ga-Segonyana Municipality, the Batlharo Ba-ga Motlhware and the Batlhaping Ba-ga Jantjie (CoGTA, 2020). This affects plans for housing development as they must acquire land first, which can turn into an expensive and time-consuming exercise.

Another issue from the interviews was that local municipalities depend on the district and provinces to implement housing programmes. They do not have the capacity and are not accredited to provide housing. This results in lower housing allocations than required, combined with a slow delivery pace due to a lack of funding and available land. There is also an issue of lack of cooperation amongst the different sectors in government, whereby the province plans housing developments without the knowledge of the local municipality. Respondent 2, Municipal Official (September 2021) also indicated that mining companies develop their housing policies independently. This results in a mismatch of housing and available bulk infrastructure and social facilities.

Limited capacity to provide bulk infrastructure services seems to be a widespread challenge across all the local municipalities within the study area. An interview with a municipal official reiterated what is already in the municipal Integrated Development Plans and Human

Settlements Plans. Municipalities are faced with dilapidated and old infrastructure (Respondent 3, Municipal Official, September 2021). This results from a lack of funding for maintenance and upgrading infrastructure as towns continue to grow faster due to expanding mines. The municipal official believes that the growth and urbanization in these towns was not anticipated; therefore, bulk infrastructure is under pressure. This challenge has adverse effects on housing development, and it is one of the reasons that some planned housing developments have been stalled (Respondent 2, Municipal Official, September 2021).

When asked if the municipalities can respond to housing challenges, both respondents from the private sector and the municipalities echoed the same sentiment. Because of the lack of funding and skilled professionals, the local municipalities are incapacitated to address housing challenges (Respondent 2, Municipal Official, September 2021). According to the Northern Cape Department of Cooperative Governance, Human Settlements and Traditional Affairs (COGHSTA), there is a "lack of retention and recruitment strategy for officials with scarce skills" (COGHSTA, 2015:23). This affects the delivery of housing and service provision.

4.3.2 Mineworker housing challenges

The interviews and secondary data show that housing provision for mineworkers has improved from hostels to single and family units. Where mining companies cannot provide physical housing, an accommodation allowance is provided to ensure access to adequate housing. However, the mineworkers continue to face housing challenges as mines continue to expand and the population in the towns continues to rise. The biggest challenge is access to affordable housing, especially for the lower-income band groups (Respondent 6, Private Planning Consultant, October 2021).

A representative from a local community-based organization mentioned a lack of housing in these towns as some of the local mines do not provide housing for their employees. This results in workers travelling long distances to and from work. They also mentioned that these roads are in bad conditions resulting in several accidents. I witnessed a relatively new informal settlement that developed directly opposite a mining operation during a visit to the study area. The informal settlement is located along the R325, approximately 20km away from Postmasburg and about 70km from Kathu. An informal conversation with a man I met in that settlement indicated that he and many other people work at the mine across the road (personal communication, September 2021). He mentioned that he comes from Kuruman, and it was too far to travel from Kuruman to the mine, seeing that the mine neither provides housing nor transport.

Figure 11 is a photo of the informal settlement mentioned above. There are no services in this settlement. Therefore, this settlement will be considered inadequate according to the elements of the UN-Habitat elements and according to Table 6 which identified informal dwellings as inadequate housing.

Figure 11: Informal settlement between Kathu and Postmasburg.
(Source: Author's photograph, 11 September 2021)

Mining companies also admit that they have a shortage of housing for their employees. Kumba is faced with a housing shortage of about "200 houses" at their Kolomela mining operation in Postmasburg (Kumba Iron Ore, 2017:69). An interview with a municipal official highlighted that housing for contractors was a massive problem in these towns as mining companies tend to cater only for their permanent employees, leaving the municipality burdened with providing housing for them.

A representative from a local community-based organization also mentioned that housing prices are very high, and mineworkers cannot afford to buy houses or rentals. A search on Property24 shows that rents in Postmasburg range from R8 500 for a one-bedroom apartment to R15 500 monthly for a three-bedroom house. In Kathu, fully furnished one-bedroom apartments range from R8 000 to R16 000 per month. These units are targeted at contractors. However, Burger and Geldenhuys (2018) found that mine company employed workers earn more than contractors, which raises the question of whether contractors can afford to pay these steeply-priced rentals.

Of the three towns, Kuruman seems to have affordable rentals from R4 000 to R7 000. Unfortunately, I could not find mineworker income data that will assist in conclusively declaring that these rentals are expensive. However, from engagements with the different respondents from the municipalities, private sector and community-based organizations, one can assume that affordability is a serious concern. A worker representative from one of the unions indicated that lower-income band workers can earn as little as R3 500. Affordability will be discussed in more detail in the following chapter.

Another critical challenge is that some mineworkers only have access to houses that do not cater for their families, such as single units. This either results in them travelling long distances or spending more money as they have to pay for rental accommodation while still supporting their families. However, single units are very suitable for migrants who do not want to move with their families or workers who choose these units as a money-saving mechanism.

4.4 Housing options available to mineworkers

This section will discuss different housing options provided by mining companies within the study area and those that affect the study area. Several documents, including Social and Labour Plans (SLPs) and mining company Sustainability Reports, were scanned to obtain these different housing options.

The African Rainbow Minerals Limited (ARM) and Kumba have many mining operations across the study areas. The ARM and Kumba Sustainability Reports (2020) state that the companies have housing strategies and policies to ensure decent accommodation for their employees as per the Mining Charter. The housing policies promote homeownership by facilitating various housing options and education on creditworthiness and how the mineworkers can access other government housing options.

4.4.1 Housing allowance/ living out allowance

The housing allowance is aimed at enabling workers to rent housing either within the company houses or privately. The main advantage of this option is that it provides flexibility for those mineworkers who do not want to own a house in the study area. Engagements with different private consultants indicated that some people already own houses elsewhere, in the villages or other towns within the study area; therefore, the housing allowance assists in affording rental accommodation closer to mines. Hotazel Manganese Mine, which has a large workforce from Kuruman, provides accommodation allowances to their employees (Hotazel Manganese Mine, 2018). They mention that this allowance allows for the employees to continue living with their families.

However, housing allowances have been long associated with the development of informal settlements as indicated in the literature review. The research did not find any systems in place to ensure allowances are used for housing purposes. Thus, there is no guarantee that workers will use the allowance for housing purposes.

4.4.2 Homeownership scheme and Housing Subsidy

The Mining Charter advocates for the facilitation of homeownership by mining companies. Several mining operations within the study area have a homeownership scheme in which they facilitate and encourage employees to participate. According to the Kumba housing study, over 70% of the employees are interested in homeownership (Kumba, 2020). Therefore, the company provides a once-off grant to workers to buy a mine house or a private sale. Stewart and Drewes (2018:166) mentioned as opposed to Assmang, Kumba did not have a "…formal homeownership strategy" as it offered only a rental tenure option. Findings indicate that there has been progression as the company is working on a new housing policy that will promote homeownership. Assmang, though their Khumani Housing Development Company (KHDC) also offers a once-off capital contribution (R290 000) for workers to acquire their own house on a sliding scale with low-income earners receiving more contribution than high-income earners (Stewart and Drewes, 2018).

In addition to the homeownership scheme, mining companies also offer a housing subsidy to facilitate homeownership further. Kumba has about 3500 employees who rent houses from the company, which is more than half of the permanent employees in Kumba (Kumba, 2020). A "transitional arrangement" for a bond subsidy and a rent-to-buy scheme to promote homeownership are planned to form part of the new housing policy (Kumba, 2020:70). Black Rock mine, located about 70km from Kuruman, facilitates homeownership through subsidizing serviced stands and offers a decent contribution towards payments of those houses (Assmang, 2017).

According to the Beeshoek Mine SLP 2019-2024, employees who bought mine houses receive a monthly subsidy for ten years of between R2 200 and R2 600 based on the income bands as indicated in Table 8, with a total of R4 656 802 paid between July 2017 and June 2018 (Assmang, 2019:78). The SLP further mentions that employees with private houses receive an amount of R1 458 monthly. In the 2020/21 financial year, Black Rock reported that it planned to contribute approximately R7 185 636 towards housing subsidies (Assmang 2017:53).

Table 8: Monthly homeownership subsidy

Band	Monthly subsidy for ten years
A-B3	R2 680
B4-B5	R2 650
C1-C2	R2 610
C3-C5	R2 560

D1-D2	R2 520
D3-D4	R2 395
E	R2 275

Source: Assmang Beeshoek Mine SLP 2019

4.4.3 Homeownership Creditworthiness and Financial Support

Some mining companies within the study areas also offer financial education support to their employees to facilitate homeownership as the Mining Charter requires. According to a planning consultant with experience in mine housing in the study area, there have been instances where employees can afford decent housing in the towns (Respondent 6, Private Planning Consultant, September 2021). Still, they struggle to find affordable housing due to financial burdens and the inability to manage their finances. Therefore, this support is imperative to ensure financial accountability and the facilitation of homeownership.

4.4.4 Tribal Land subsidy

Mining companies also aim to develop inclusionary housing options and facilitate homeownership for employees that reside in tribal or traditional authority areas. These are mainly rural areas of Ga-Segonyana and Joe Morolong municipalities which are managed by Batswana traditional authorities. These employees have limited access to homeownership due to constraints brought about by traditional authority status, such as the lack of formal title deed ownership. Hence, they cannot secure housing finance from financial institutions (Respondent 5, Private Planning Consultant, September 2021). Assmang provides a subsidy of R1000 monthly for ten years to qualifying employees (Assmang, 2019).

The Table below summarises the advantages and disadvantages of the housing options discussed above.

Table 9: A comparison of housing options

Housing option	Advantage	Disadvantage
Housing allowance/ living out allowance	• Provides flexibility on where housing can be acquired • Provides extra income for existing homeowners	• Due to high property prices, allowance might not be enough for adequate housing • Associated with informal settlements
Homeownership scheme and Housing Subsidy	• Facilitates homeownership through a bond subsidy • Opportunity to buy a mine house or private house	• Qualification for a subsidy based on a selection criterion • Buying a private house means owner if fully responsible for

	• Provides a rent-to-buy arrangement • Subsidised serviced stands to build own house • Low-income earners get more once-off grant contribution	maintenance while rented houses are maintained by the mine
Tribal land subsidy	• Facilitates homeownership in traditional authority areas	• Subsidy might not be enough to build a house • Based on a qualification criterion

4.5 Mine housing post-mine closure

This section highlights the life of mines within the study area, according to different sources, mine company SLPs, mine websites and internet searches. This is to highlight how long the mining activities are set to continue. One of the interviewees mentioned, "mines do not close because resources are finished; it is primarily a financial viability issue" (Respondent 5, Private Planning Consultant, September 2021). However, at the time of data collection, the following life of mines are expected.

Table 10: Expected Life of mine

Mine	Expected life of mine	Source
Afrimat, Demaneng Mine	4 years	https://www.engineeringnews.co.za/print-version/afrimat-unpacks-how-its-recent-acquisitions-are-settling-in-2021-08-05
Afrimat, Jenkins Mine	20 years	
Beeshoek Mine	6 years	African Rainbow Minerals Sustainability Report, 2020:9
Black Rock Mine	30 years	Black Rock Social and Labour Plan 2016-2021:13
Finsch Diamond Mine	25 years	Fincsh Diamond Mine Social and Labour Plan, 2018-2022:13
Kalagadi Manganese	19 years	Mining Weekly, 27 May 2020
Khumani Mine	20 years	African Rainbow Minerals Sustainability Report, 2020:9
Kolomela Mine	14 years	https://www.angloamericankumba.com/our-business/operations
Sishen Mine	13 years	Sishen Mine Social and Labour Plan, 2017-2021:9

Hotazel Manganese Mines	30 years	Hotazel Manganese Mines Social and Labour Plan, 2018:8

The John Taolo District Municipality Integrated Human Settlements Plan mentions non-alignment of housing plans within the government and with the private sector. This non-alignment of plans will affect mining communities upon mine closure in terms of economic prospects and service provision. Mining companies also need to plan how to dispose of houses they own in the study area. Kumba Iron Ore mentions that these houses can be converted to retirement units or sold (Kumba Iron Ore, 2017). The question remains, who will buy those houses when the economic prospects of the towns are unknown? The selling option also has to take into consideration the time frames for loans by financing institutions. This means plans to sell have to be concluded about 15-20 years before mine closure unless the mine will offer subsidized houses.

As the mining industry is a dominant economic contributor in the study area, it is also essential to plan possible mine closures. A local municipality official indicated that as much as there are numerous businesses within the area, they are all servicing the mining industry. This shows the extent of dependence on the mining sector. There also seems to be an understanding that these mines still have a lot of mining life, as shown in **Error! Reference source not found.**; thus, there are no active attempts or programmes to ensure economic diversification post mine closures. International Institute for Environmental Development (IIED) (2002) highlights that the nature of the mining industry does not always provide sustainable economic development. However, sustainable economic development can be achieved through good governance and economic resources for long-term investment. This is something that local municipalities (local economic development units) should start driving vigorously to start identifying and developing potential supplementary long-term economic sectors.

4.6 Conclusion

There are numerous mining companies and operations within the study area, all providing various housing options to their mineworkers. The chapter presented findings from the interviews and secondary data on Kathu, Kuruman, Postmasburg, Hotazel, Lime Acres and Danielskuil towns. The research aimed to assess mining company housing policies focusing on housing options provided by these mining companies to address mineworker housing.

However, interviews and secondary sources revealed that only a few mining companies have housing policies and strategies, usually prepared only for the company and they are not necessarily public documents. These housing policies are meant to inform mining companies on the housing needs of the employees to develop various housing options that respond to the requirements set by the Department of Minerals Resources. Larger mining companies in the areas provide a range of housing options for their employees, while the smaller companies focus on only housing allowances.

There is a general shortage of affordable housing in these towns which is a result of high property prices. An influx of people searching for job opportunities has meant a high demand for housing which saw the property prices rising significantly. This has put immense pressure on the local municipalities and mining companies as demand surpasses supply. Hence, the need to develop various housing options to address housing challenges for mineworkers. The housing or living out allowance is the standard option across the industry while other options differ from mine to mine. Some mines offer a housing subsidy for workers interested in buying houses, either a mine-owned house or a private sale. However, this option is available to certain qualifying workers, same as those interested in building or buying a house in tribal areas.

CHAPTER 5: HOUSING ADEQUACY WITHIN THE MINING INDUSTRY

5.1 Introduction

This chapter provides an analysis of the findings through various themes that emanated from the findings. The themes have been incorporated with the elements of housing identified by the UN Habitat. These themes include housing affordability; locality; service delivery, migrancy and mine closure. A multi-criteria assessment of the data against the housing options provided by mining companies will provide a summary of the analysis chapter. The chapter responds to the research question on what adequate housing means in the context of mine employee housing.

5.2 Exploring the adequacy of mineworker housing

In meeting the mandate to provide adequate housing according to Section 26 of the South African Constitution, municipalities profile the housing need or backlog according to the number of people in need of housing and the dwelling types they reside in within the municipal area (John Taolo Gaetsewe District Municipality, 2017). As mentioned earlier, municipal planning documents do not provide an explicit definition for adequate housing. The Housing and Living Conditions Standards aim to ensure that the industry realizes the mineworkers' constitutional right to adequate and decent housing. The Standards also do not explicitly define adequate housing, but they outline the principles that the mining companies should consider when planning for housing for workers (Department of Mineral Resources, 2019). The principles include key elements required for the development of adequate housing.

An additional element of adequate housing has been added for this research. High migrancy rates characterize mining towns as a result of mining activities. Findings highlighted that people move from one place to another in search of opportunities. Therefore, responses to housing challenges by mining companies must include housing options that consider migrancy. The following sub-sections will discuss the key UN-Habitat elements of adequate housing incorporated with the main themes from the findings. The sections discusses how these are relevant within the mining towns context in developing adequate housing for mineworkers.

5.2.1 Legal Security of Tenure

Mineworkers have access to different tenure types within the study area. The most common are rental accommodation and homeownership, usually legally binding tenure types through lease and sale agreements. Considering that, large parts of the study area fall within traditional authorities, it is important to discuss security of tenure as one of the main themes from the findings. Some mineworkers that reside in tribal authority areas have what is called a "Permission to Occupy" (PTO) certificate, which allows them to live on that particular piece of land (Respondent 5, Private Planning Consultant, September 2021). PTOs are regarded as a valid and recognizable right (Kassier, 2019). They protect occupants from illegal eviction; however, occupants cannot acquire loans from financial institutions to either enhance their houses or build new houses. Hence, the establishment of the tribal land subsidy to facilitate adequate housing development in tribal authorities.

5.2.2 Availability of services, facilities and infrastructure

The Housing and Living Conditions Standards require mining companies to ensure housing developments include access to basic services. Therefore, service provision was identified as an important theme emanating from the literature and the findings. Most mine houses provided within the proclaimed towns of a local municipality acquire services from the local municipality. The mining companies service mine villages that are still owned by mines by offering water, sanitation and electricity services. Kumba built a primary school, a police station, a clinic and a library in Siyathemba which houses the community moved from the Dingleton village. Through their Social and Labour Plan local economic development, mining companies undertake various projects that contribute to social development and provision of facilities.

Generally, the study area has adequate community and social facilities. The John Taolo Integrated Human Settlements Plan (2019-20) indicates that there is a need for a fully functional fire station. There is also a need for additional health facilities such as hospitals and clinics, in Kathu, there is one hospital, a private one. There are also limited recreational facilities and shops in certain areas located in the villages (Respondent 8, representative of community organisation, October 2021).

Facility	Gamagara	Ga-Segonyana	Joe Morolong*	Total JTGDM
Primary schools	7	32	70	109
Intermediates/Middle schools	1	8	25	34
Secondary/ High schools	3	11	12	26
Combined	-	-	1	1
Independent	4	1	-	5
LSEN	-	1	-	1
Colleges	1	-	-	1

Facility	Gamagara	Ga-Segonyana	Joe Morolong	Total JTGDM
Libraries	4	4	2	10
Community centres	4	7	18	29
Religious centres	Unknown	Unknown	Unknown	Unknown
Municipal offices	2	1	2	5
Post offices	3	4	5	13
Police stations	4	3	5	12
Fire stations	1	1	0	2
Children's Home	0	0	0	0
Community information centres	0	1	0	1

Figure 12: Community and social facilities

Source: John Taolo Gaetsewe District Municipality IHSP 2019

A Tsassamba Committee was established in 2008 in Postmasburg to address bulk infrastructure and services (Campbell and Drewes, 2018). This is the partnership mentioned in section 2.3.2 including the Tsantsabane Local Municipality and the two major mines in the study area, Kumba and Assmang. As mentioned in that section this was in response to bulk infrastructure challenges in the area that have a knock-on effect on housing developments for mineworkers. However, engagements with most of the participants indicated that bulk infrastructure and services remain a challenge in the study area. Municipal official interviewed all concur that infrastructure challenges are a result of ageing infrastructure, lack of technical capacity and funding for maintenance (John Taolo Gaetsewe District Municipality, 2019).

This element affects the adequacy of several housing options depending on the location of the house. If the house is privately owned or located within a town then the local services authority is responsible for service provision, poor service delivery is then beyond the mine's control.

5.2.3 Affordable housing

Affordability is one of the key challenges that mineworkers are dealing with in attaining accommodation within the study area. A common theme from the interviews with the municipal officials and the community-based organization was that housing in the study area is costly, and so are the rental rates. As mentioned above, rental accommodation ranges from R4 000 monthly in Kuruman to R16 000 in Kathu. The housing options provide financial assistance and support for qualifying workers, and it is up to mineworkers to take up the support provided to acquire adequate housing.

The John Taolo Gaetsewe Integrated Human Settlements Plan mentions that most households in informal settlements in Gamagara Municipality earn under R3 500 (John Taolo

Gaetsewe Municipality, 2019). Respondent 9, worker representative (November 2021) indicated that mineworkers in the lower bands in the Northern Cape earn less than an average of R3 500 per month, some getting as little as R3 300 per month after deductions. This shows that these miners can't afford housing from the market explained above. Figure 13 below shows the average salary by commodity, indicating a monthly income of approximately R13 000. The average is presumed to be inclusive of management income which is much higher than lower-income bands. Thus, is not a true reflection of what the low level mine workers get paid. According to engagements with the union representative, as indicated above, some lower-income band workers earn as little as R3500 per month. Burger and Geldenhuys (2018) mention that some workers indicated that they received less than R5 000 while mining companies disputed this amount.

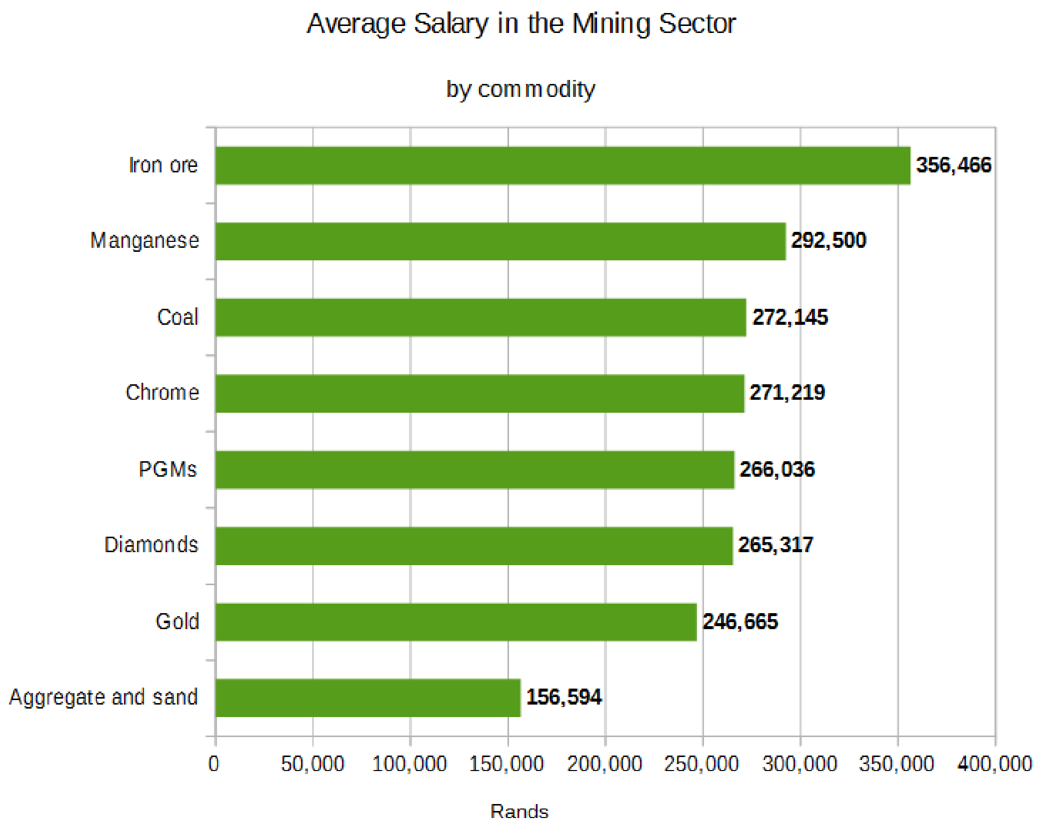

Figure 13: Average salaries in the mining sector

Source: Business Tech, 19 June 2017

The proportion of workers in the lower bands varies from mine to mine and is also influenced by the type of mining. There are generally 5 categories of bands from A-E, A being the lowest band. Lower bands (A & B) workers usually make up more than 50% of the entire company workforce (Respondent 5, Private Planning Consultant, January 2021). However, efforts to obtain an indication of income per salary bands were unsuccessful.

5.2.4 Habitable housing

As mentioned before, habitability refers to the physical state of the house, which is expected to be of adequate space and to provide physical and health safety. Adequate space is relational and dependent on how many people live in the house. For example, single accommodation units are not suitable for families, while family units may not be big enough for a particular family. During data collection, engagement with different people indicated dissatisfaction in the type of houses available either in terms of space or health and safety. Respondent 6 a private planning consultant (October 2021) indicated that there are mineworkers who are not satisfied with the physical conditions of their houses, as they believe inferior material was used to build the houses. Therefore, there are health and safety concerns in which some houses are cracking and ceilings falling in. Table 6 defines standalone house or brick structures as adequate housing. However, in this case, workers live in such structures, but they are inadequate as they pose a health risk.

The UN-Habitat also explains that housing should not be developed in polluted or hazardous areas. An example of a settlement that was located in a hazardous area is the Dingleton village near Kathu. Due to the mine expansion, the Dingleton community was exposed to harmful mining activities which prompted the mine to relocate the Town to Siyathemba Township in Kathu. For this research, workers living in informal settlements are most affected by poor living conditions as a result of little to no service delivery such as sanitation and refuse removal.

5.2.5 Access to housing

Accessibility relates to access to adequate housing for the poor and disadvantaged groups. The housing policies and strategies provide a wide range of housing options, and they cater for all workers in all the different bands. The homeownership and housing subsidy option is provided for qualifying workers who will be able to pay back the housing loan, this means they must earn a certain income and also have a clear credit record. However, it excludes lower-income bands who cannot buy houses who only have access to housing or living out allowance to rent a house provided they can present proof that they reside in decent accommodation. It is unclear what decent accommodation is in this context, there is no explicit definition of it. However, Table 6 would be a simple way to define adequate and inadequate housing which would generally qualify informal settlements as inadequate housing.

5.2.6 Locality

Previously, mining companies built their mine villages close to mining operations. However, due to the remoteness of most mining operations, this is no longer a widely conducted practice because of maintenance and services challenges when the mine closes. Mining companies are building or acquiring houses within the existing townships. However, this also means there is a long distance to travel to workplaces (mines). Some mining companies offer transport using busses to transport their employees (Respondent 8, representative of community-based organisation, October 2021).

As mentioned earlier, Kuruman is considered a sleeping or dormitory town with very few mining activities happening. This means there are a lot of people living in Kuruman and working in neighbouring towns.

Figure 14 shows the location of Kuruman in relation to mines in Hotazel and Kathu. The map corroborates statements by Respondent 8, a representative of a community-based organisation, that many workers travel long distances, more than 20kms from Kuruman to Hotazel and Kathu. Kathu is located approximately 60kms from Kuruman and Hotazel is located about 72kms away.

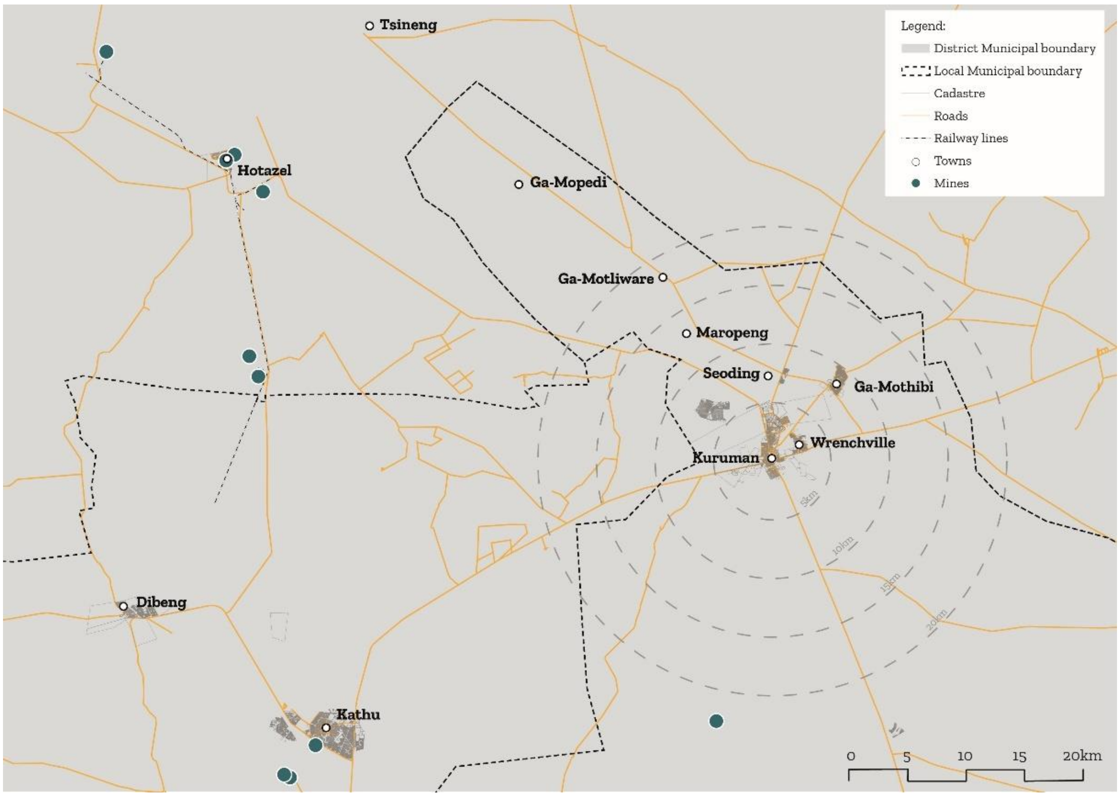

Figure 14: Kuruman in relation to Mines in Hotazel and Kathu

Source: Source: Spatial Data from MapIT, Municipal Demarcation Board, 2018, Map compiled by Rachel Tshuma (2021)

Figure 15 illustrates the location of Kathu in relation to major mining operations in the town. There is a shorter travel distance from Kathu compared to Kuruman. There is a possibility that some workers travel from other towns but considering that Kathu is a mining town, it is assumed that most workers have accommodation within the town.

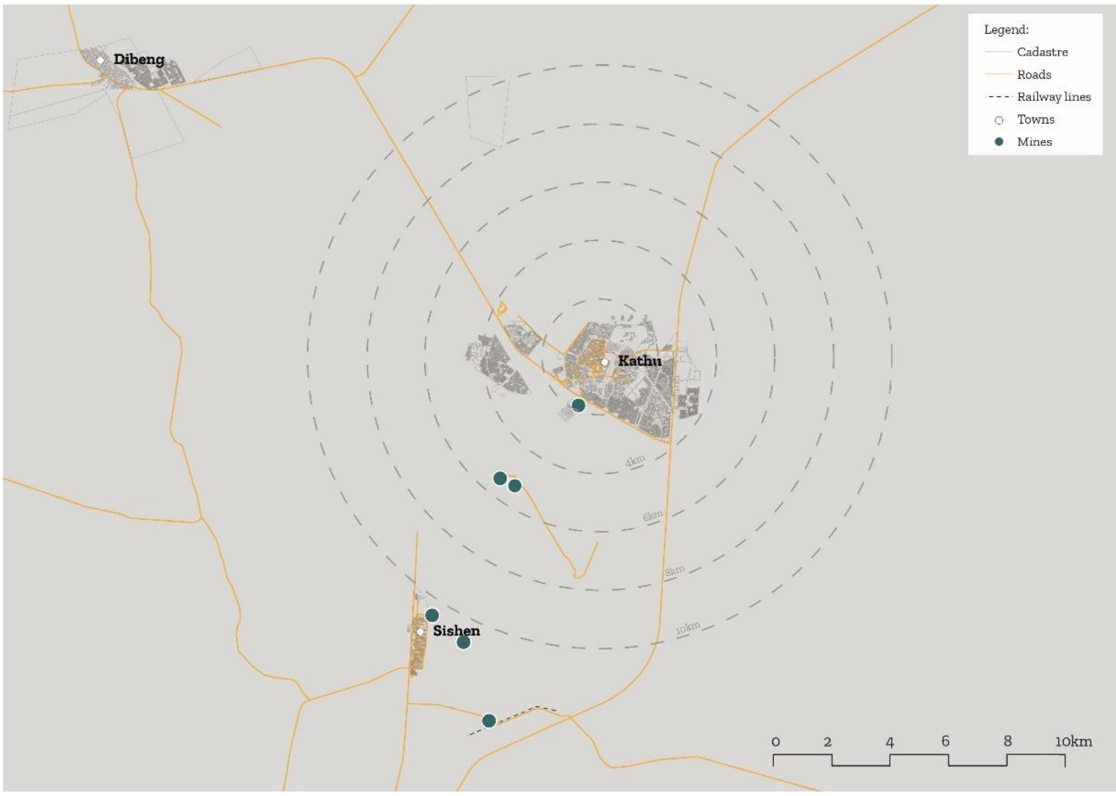

Figure 15: Location of Kathu in relation to Mines

Source: Source: Spatial Data from MapIT, Municipal Demarcation Board, 2018, Map compiled by Rachel Tshuma (2021)

There is a concentration of mining operations in Postmasburg, Danielskuil and Lime Acres as illustrated in Figure 16. Most mining activities in these towns are located near the urban residential areas.

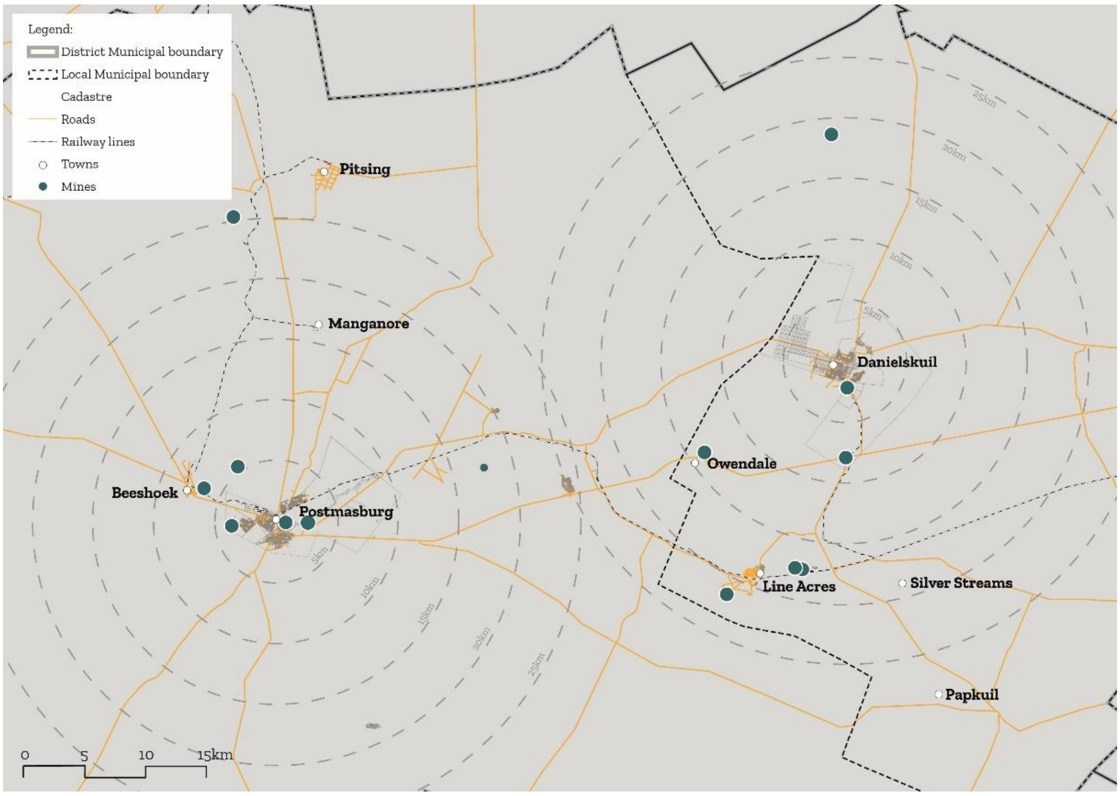

Figure 16: Location of Postmasburg, Danielskuil and Lime Acres in relation to Mines

Source: Source: Spatial Data from MapIT, Municipal Demarcation Board, 2018, Map compiled by Rachel Tshuma (2021)

5.2.7 Cultural Suitability

A visit to the study area highlighted cultural diversity as an important theme to take into consideration when planning adequate housing in the area. There are different groups of races in the area, including coloured, black and white people. There are also different types of housing options available, single units, standalone houses and tribal settlements. As far as this element is concerned, observations confirm cultural diversity in the area, and mining companies' housing options respond to this element as they are accessible to all mineworkers.

The housing options include a housing subsidy for qualifying workers who reside in tribal areas. Figure 17 shows the location of traditional authorities within the study area. Some mineworkers prefer to live in tribal areas for various reasons, including affordability, the need to preserve their cultural heritage and the need to stay with families (Respondent 7, Private Planning Consultant, October 2021). The proportion of workers that might require tribal land subsidy depends on the location of the mine. Mines located in Joe Morolong are closer to traditional authority areas, therefore Black Rock mine in Hotazel will probably have a higher number of workers interested in the tribal subsidy as opposed to works at Kolomela mine in Postmasburg.

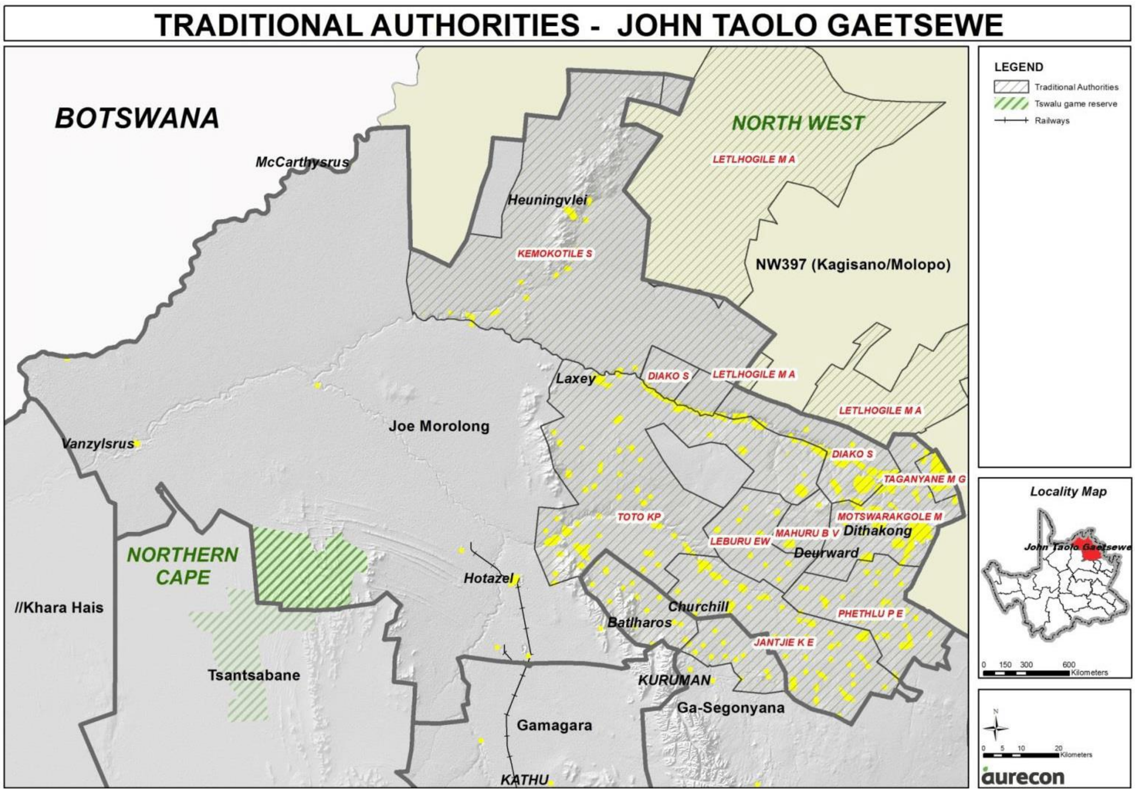

Figure 17: Traditional authorities in John Taolo Gaetsewe

Source: John Taolo Gaetsewe Integrated Human Settlements Sector Plan, 2019/2020

Note: The yellow highlights in the map represent both urban and rural residential areas in John Taolo Gaetsewe District Municipality.

5.2.8 Response to migrancy

Adequate mine housing should allow for flexibility and mobility. As mentioned above, mining towns are characterized by high migrancy rates; therefore, housing developments should cater for such. Mine employees in mining towns originate from different areas around the country. It is interesting to note that over 60% of workers within the study area originate from the Northern Cape, specifically from John Taolo Gaetsewe and ZF Mgcawu District Municipalities. Table 11 indicates the major sending areas for mines located within the study area. Kuruman is considered a major labour sending area, a sleeping town for mineworkers close to the town.

Table 11: Labour Sending Areas for mines in the study area

Province	Khumani Mine (% total)	Kolomela Mine (% total)	Fincsh Diamond Mine (% total)	Hotazel Manganese Mines (% total)	Beeshoek Mine (% total)

Northern Cape	**69%**	**86%**	**73%**	**94%**	**62%**
Eastern Cape	3%				4%
Free State	4%				4%
Gauteng	4%				4%
KwaZulu Natal	1%				1%
Limpopo	2%				3%
Mpumalanga	1%				2%
North West	10%		13%		15%
Western Cape	3%				4%
Other		14%	14%	6%	0.8%

Source: Beeshoek Social and Labour Plan (2019-2024), Khuman Social and Labour Plan (1017-2022) Kolomela Mine Social and Labour (2015-2019), Finsch Diamond Mine Social and Labour Plan (2018-2022) and Hotazel Manganese Mines Social and Labor Plan (2018)

Therefore, housing adequacy in mining towns should consider migrancy through rental and temporal accommodation to cater to employees with no interest in owning housing in the area due to ownership elsewhere. Research showed that mining companies are responding to migrancy through their housing options. However, it is not clear what happens to owned houses post mine closure and workers decide to move back to their original homes.

5.3 Impact of mine closure

The life of mines discussed in the previous sections highlight the longevity of the various mines which may be cut shorter due to financial constraints. Hence, the importance of planning for mine closure in the early stages of mining taking into consideration all three aspects of sustainable development: social, economic and environmental. The housing options should contribute to sustainability, however, as indicated earlier, some mining companies only offer rental options. Despite this being an advantage to migrant labourers who prefer rental options, this has a huge impact on local workers that plan to retire within the same area. The remoteness of the mine also plays a role in the type of housing options required to potentially reduce the impacts of mine closure.

5.4 Multi-Criteria Assessment

This section summarises the adequacy of mining companies' responses to housing challenges for their employees. The main research question interrogates the adequacy and affordability of mine housing options for mineworkers in Kathu, Kuruman and Postmasburg. Therefore, the summary assesses the housing options against the elements of adequate housing, considering all the data collected from the engagements with identified participants and secondary resources. The assessment also considers the principles outlined in the Housing and Living Conditions Standards (Department of Mineral Resources, 2019: 8-10).

The Homeownership and housing subsidy scheme option lack affordability and accessibility, as not every mineworker qualifies for the homeownership grant and can afford to buy houses. The options include rental accommodation, which can apply to either mine housing or private housing.

A housing allowance allows workers to find decent private accommodation, but it is possible that workers may not use it for accommodation. It has also been associated with informal settlements as workers can receive it but still live there for various reasons, one of them being lack of affordability.

The tribal land subsidy lacks affordability, as interviews indicated that workers believe the subsidy is insufficient. Living in tribal areas might be the worker's preference or due to lack of affordability, but it is also far from many mining operations.

Table 12: Mine housing adequacy

HOUSING OPTIONS	SECURITY OF TENURE	AVAILABILITY OF SERVICES AND INFRASTRUCTURE	AFFORDABILITY	HABITABILITY	ACCESSIBILITY	LOCATION	CULTURAL ADEQUACY	RESPONSE TO MIGRANCY
Homeownership and housing subsidy scheme	✓	✓	×	✓	×	✓	✓	✓
Housing or living out allowance	×	≠	×	≠	✓	≠	✓	✓
Homeownership Creditworthiness and Financial Support	n/a	n/a	n/a	n/a	✓	n/a	✓	✓
Tribal land housing subsidy	✓	✓	×	≠	✓	×	✓	✓

Legend	Description
✓	Adequate
×	Inadequate
≠	Dependent on other factors/ neutral

5.5 Conclusion

Many mining companies in the study area offer various housing options for their workers, and this is the progression from hostels provided in mining villages in the past. Hostels have been converted into single and family units, and houses have been built in existing townships for either sale or rental. The options provide a wide range for mineworkers and somewhat address the elements of adequate housing for mineworkers.

However, based on interviews the housing options don't appear to address affordability sufficiently. Creditworthiness and financial education support can only assist workers if they have "sufficient" income. Sufficient in this case is subjective but refers to income that can sustain the worker's livelihood and they still have extra income left. Efforts to obtain income indications per income band were unsuccessful, hence the tentative assumptions. The options respond to migrancy as there is no discrimination on where the worker wants to buy or build their house. The housing allowance allows for rentals in mine-owned housing and wherever a worker can find decent accommodation.

CHAPTER 6: CONCLUDING COMMENTS AND RECOMMENDATIONS

6.1 Concluding comments

Housing is generally a complex issue for the government and a huge challenge for the low-income earners even more so in remote mining towns. The mining industry has contributed significantly to the economy, but critiques show that it has done social damage in our communities, from the development of hostels which were considered poor living spaces, to the reliance on migrant labourers. The conversion of hostels sought to dignify the lives of the mineworkers by improving living conditions and allowing family living. However, almost 20 years after adopting the Minerals and Petroleum Resources Development Act, 28 of 2002, critical housing challenges persists in mining towns.

Mineworkers require decent housing and living conditions, which can be achieved through proper planning, consultation and alignment between all relevant stakeholders. The purpose of this research was to assess the appropriateness of housing options tabled by mining companies for mineworkers, by incorporating the key aspects of the right to adequate housing as explained by the United Nations Committee on Economic, Social and Cultural Rights (CESCR) (1991). These elements include affordability, security of tenure, cultural adequacy and accessibility. To further contextualise the topic, response to migrancy was added as it plays a critical role in mining towns.

The international literature on the conundrum of mine housing highlights various housing models developed for mineworkers ranging from monotowns in Russia built to accommodate a particular industry, slave lodges in Brazil, to mining towns established by mining companies in collaboration with the government in Australia and Canada. The literature also mentions a shift from mining towns to fly-in-and fly-out accommodation. These were applauded for reducing the impact of mine closures.

The review of the policy framework showed that there is a deficit in planning, implementation and monitoring of housing plans from both the mining sector and the local government. Mining companies are mandated to create decent living conditions and facilitate homeownership as outlined in their Housing and Living Conditions Plans. They are also legally bound to fulfil their plans outlined in SLPs to create employment, economic growth, and social welfare for the communities, and these plans are required to be in line with the local municipal IDP. However, there seems to be a misalignment between local municipalities and the mining companies. Interviews with municipal officials revealed that mining companies develop their housing policies independently, there is no consultation with the municipality.

Municipal plans and frameworks state that economic and employment opportunities provided by mining activities contribute to an influx of migrant labourers thus, increasing the housing demand and informal settlements. However, there are no specific plans or approaches to address these challenges. A collective increase in demand for housing must be considered when planning for future human settlements to ensure developments provide adequate housing for mineworkers.

Mining companies within the study area all provide various housing options to their mineworkers. However, interviews and secondary sources revealed that only a few mining companies have housing policies and strategies, usually prepared only for the company, which are not necessarily public documents. These housing policies are meant to inform mining companies on the housing needs of the employees to develop various housing options that respond to the requirements set by the Department of Minerals Resources. Larger mining companies in the areas provide a range of housing options for their employees including housing subsidies to buy a mine-owned house or a private one, while the smaller companies focus on only housing allowances.

Data was collected from local municipalities, private consultants, miners, local community-based organizations through semi-structured interviews. Secondary data sources such as municipal planning documents, mining company Social and Labour Plans were also considered to gain a better understanding of the topic. Affordability was found to be a major challenge for mineworkers especially those in lower-income bands. They cannot afford to access adequate housing due to high property prices. An influx of people searching for job opportunities has also resulted in the development of informal settlements in these towns putting immense pressure on the local municipalities and mining companies as demand surpasses supply.

Various housing options provide a wide range for mineworkers and somewhat address the elements of adequate housing. The affordability and accessibility elements are lacking in the options. The housing options alone will not address these elements, there needs to be a review of what mineworkers in the lower bands earn and if that is proportionate to the property market. Only then can creditworthiness and financial education support be valuable.

6.2 Recommendations

The research provided an assessment of housing adequacy in mining towns against the key aspects of the right to adequate housing as described by the United Nations CESCR. The housing options provided tend to focus on the immediate need but do not address the housing challenge completely. Therefore, the following is recommended.

- To allow for flexibility for the migrant labourers instead of focusing on permanent housing, there is a need to review the South African housing legislation;
- Meaningful involvement of local municipalities when developing mining company housing policies, to gain a better understanding of the housing challenges municipal wide. This also allows both parties to develop collective housing programmes. It also assists the municipality in planning for bulk infrastructure services;
- Further studies are required on how legislation and policy can promote sustainable human settlements post mine closure to reduce the adverse impacts. Studies should also include an investigation of how municipalities prepare for mine closures as interviews with municipal officials did not explicitly clarify how that process is undertaken as it wasn’t considered urgent. There is a belief that mining in the study area still has a long life of about 20-30 years;
- Local municipalities should develop strategies in consultation with the mining sector to efficiently develop land for housing, including densification and infill development as there is limited developable state-owned land in these towns; and
- An in-depth study is required on the effectiveness of homeownership creditworthiness and financial education support provided to mineworkers in attempts to address affordability issues, especially for low-income bands workers.

6.3 Conclusion

The research aimed to assess mining company housing policies, particularly the housing options proposed for mine workers in the Northern Cape. Different mining companies offer various housing options from housing allowances and homeownership subsidies. The main question of the research was to investigate the adequacy of the housing options offered by mining companies to workers in John Taolo Gaetsewe and ZF Mgcawu District Municipalities. The investigation revealed housing challenges faced by mineworkers but also confirmed some of the known challenges, for example, low wages.

The review of the policy framework showed that there is a deficit in planning, implementation and monitoring of housing plans from both the government and the mining sector. The review also answered the question of alignment between municipal housing policies and mining housing policies. Interviews with municipal officials revealed that mining companies develop their housing policies independently, there is no consultation with the municipality. This needs to be addressed as the housing challenges continue to affect both parties.

The analysis of the literature review and the findings highlighted five main themes that are impacting on the development of adequate mine housing. These are: affordability, locality, migrancy, mine closure and service provision. The analysis incorporated the themes with the UN Habitat elements of adequate housing. The research highlights that there are persisting challenges in the development of adequate housing.

Research showed that smaller mining companies only provide a housing allowance while larger companies like Kumba Iron Ore and Assmang provide a wider range of options. These large companies offer different options that respond to the needs of different workers. However, they do not seem to address affordability issues sufficiently according to interviews conducted. Affordability challenges are exacerbated by high property and rental prices within the study area. Lower income band mineworkers find themselves seeking shelter in informal settlements, partly to high prices and also due to the remoteness of mining activities.

The Homeownership and housing subsidy scheme option lack in affordability and accessibility, as only qualifying workers are considered. The qualifying criteria include medium to high-income bands with a good credit record. However, this criterion is restrictive as it excludes lower income bands workers. These workers may still qualify for a rental accommodation subsidy, which can apply to either mine housing or private housing. There are also companies offering a tribal land subsidy, this indicates the flexibility of the options as it allows for workers preferring to live in their villages to continue to do so. However, findings showed that workers believe the subsidy is insufficient for them to build or improve on their current houses.

Finsch Diamond Mine provides rental accommodation and they do not plan to sell any of their housing stock to their workers. It is unclear what the mine plans to do with their housing stock should the mine close down. This approach is risky for local workers who prefer buying houses for retirement. However, this might be adequate for migrant labourers who do not intend to buy houses in that particular area. It also reduces their mine closure impact as they will be able to conveniently move to other areas with economic opportunities.

In conclusion, progression in the provision of adequate mine housing is visible. However, it cannot be achieved through silo planning, partnerships and coordinated planning are required to deliver adequate housing for mineworkers. There is a need for various housing and affordability options to cater for all workers at different income levels and localities. The South African mining industry can also learn from international organisations, for example, the implementation of the FIFO approach. As IIED indicated, the mining industry should strive to achieve sustainability and reduce the impacts of mine closure. The best way to achieve that is through active engagement and participation from all interested and affected parties.

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APPENDICES

A. Ethics Clearance

Ethics clearance number provided: **SOAP148/06/2021**

B. Plagiarism Declaration

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UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

PLAGIARISM DECLARATION TO BE SIGNED BY ALL HIGHER DEGREE STUDENTS

SENATE PLAGIARISM POLICY: APPENDIX ONE

I Rachel Tshuma (Student number: 2411180) am a student registered for the degree of MUS (HHS) in the academic year 2022.

I hereby declare the following:

- I am aware that plagiarism (the use of someone else's work without their permission and/or without acknowledging the original source) is wrong.
- I confirm that the work submitted for assessment for the above degree is my own unaided work except where I have explicitly indicated otherwise.
- I have followed the required conventions in referencing the thoughts and ideas of others.
- I understand that the University of the Witwatersrand may take disciplinary action against me if there is a belief that this in not my own unaided work or that I have failed to acknowledge the source of the ideas or words in my writing.

Signature: ______________ Date: 14 February 2022

C. Participant Information Sheet

SCHOOL of ARCHITECTURE PLANNING

An assessment of recent mining company housing policies: Northern Cape Cases

Dear Sir / Madam,

My name is Rachel Tshuma and I am a Masters student in Urban Studies (Housing and Human Settlements) at the University of the Witwatersrand, Johannesburg. As part of my studies, I have to undertake a research project, and I am conducting research on the impact of mining on housing in mining towns and how mining companies are addressing this challenge, specifically for their employees in Kathu, Kuruman and Postmasburg under the supervision of Prof. Alison Todes. The aim of this research is to provide an assessment of a mine company's housing policy which details different housing options for workers. The assessment will include the affordability, accessibility, and appropriateness of the housing options available for employees in light of the past challenges, the needs of the employees, and the alignment with the local municipal plans.

As part of this project, I would like to invite you to take part in an interview. This activity will involve answering questions during a single interview and will take up to an hour. With your permission, I would also like to audio record the interview using a digital device during a virtual meeting or face to face. This recording will be stored in a password protected computer and only the researcher will have access to this recording. It will be deleted after five (5) years.

There will be no personal costs to you if you participate in this project, You will not receive any direct benefits from participation but there are no disadvantages or penalties if you do not choose to participate or if you withdraw from the study. You may withdraw at any time or not answer any question if you do not want to. The interview will be completely confidential and anonymous as I will not be asking for your name or any identifying information, and the information you give to me will be held securely and not disclosed to anyone else. I will be using a pseudonym (false name) to represent your participation in my final research report. If you experience any distress or discomfort at any point in this process, we will stop the interview or resume another time.

If you have any questions during or afterwards about this research, feel free to contact me on the details listed below. This study will be written up as a research report. If you wish to receive a summary of this report, I will be happy to send it to you. The data collected from this research project will be stored in a password protected computer and will be kept for five (5) years. If you have any concerns or complaints regarding the ethical procedures of this study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email **hrecnon-medical@wits.ac.za**

Yours sincerely,
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D. Participant Consent Sheet

An assessment of recent mining company housing policies: Northern Cape Cases

Name of Researcher: Rachel Tshuma

I, ……………………………………….., agree to participate in this research project. The research has been explained to me and I understand what my participation will involve. I agree to the following:

(Please circle the relevant options below).

I agree that my participation will remain anonymous	YES	NO
I agree that the researcher may use anonymous quotes in his / her research report	YES	NO
I agree that the interview may be audio recorded	YES	NO

…………………………………… (signature)
…………………………………… (name of participant)
…………………………………… (date)

…………………………………… (signature)
Rachel Tshuma (name of person seeking consent)

E. Generic Interview Schedules

1. Municipalities

Participant Details

Institution:
Position/role:
Sex: M/F: Other___________________________

A. General Demographic Information

i. How long have you been working for this Municipality?

ii. Where do you live?

B. Housing and Socio-economic challenges in Kathu, Kuruman and Postmasburg

i. What are main challenges in these towns?

ii. How is the municipality responding to these challenges?

iii. Does the municipality have capacity to respond to these challenges?

iv. What is the economic growth trajectory of these towns?

v. What is your view on the development status and future of the mining industry in these towns?

C. Housing Strategy

i. Do you know about mine housing strategies?

ii. Do they adequately address the housing challenge?

iii. What interventions or initiatives are in place to respond to socio-economic challenges in these towns?

iv. Are there any government housing development programmes planned for these areas?

v. Are mine workers catered for in these developments?

vi. What is the progress of these developments?

vii. What are the constraints in implementing these developments?

viii. Are there plans for densification and infill developments in these towns?

ix. What is the main source of funding for housing developments?

x. Does the Municipality own land in these towns?

xi. Is there a possibility of donating this land to mine companies for housing development?

xii. Who are the main stakeholders working with the municipality?

xiii. Does the municipality have partnerships with the municipality?

D. Legislature and planning instruments

i. How does the housing strategy/policy respond to the possibility of mine closure?

ii. Does the housing strategy align with the municipal plans?

iii. Do mine SLPs align with the Integrated Development Plan (IDP) and the SDF?

E. Other

i. Are there any initiatives aimed at diversifying the economy in these towns?

ii. Any other thoughts on mining and housing?

2. Planning Consultants

A. Housing and Socio-economic challenges in Kathu, Kuruman and Postmasburg

i. What are the main challenges in these towns?

ii. What is the economic growth trajectory of these towns?

iii. What is your view on the development status and future of the mining industry?

B. Housing Policy

i. What are the housing needs of workers?

ii. What kind of interventions are required to address the housing issue in these towns?

iii. How has your company assisted mining companies and municipalities in addressing the challenges?

iv. Is the mine housing policy adequate in addressing housing challenges?

v. Do municipality plans adequately address the housing challenge?

vi. Is there potential for densification and infill developments in these towns?

vii. How can mine companies support the municipalities to develop integrated human settlements?

viii. Does the housing policy consider the possibilities of mine closure?

C. Legislature and planning instruments

i. Does the housing policy align with the municipal plans?

ii. Do Social Labour Plans (SLPs) align with the IDP and other municipal plans

D. Other

i. How can the private sector partner with the municipalities and the mining companies?

ii. Any other thoughts on mining and housing?

3. Interview Schedule – Unions

A. General Demographic Information

a. How long have you been working for the union?

b. How long has the union been representing workers at this mine?

c. Where do you live?

B. Housing and Socio-economic challenges in Kathu, Kuruman and Postmasburg

a. What are the main critical challenges in these towns?

b. How is the Company responding to these challenges?

c. Do you think the mine is adequately responding to these challenges?

d. Does the Company provide social facilities in these towns?

e. What are the workers housing needs?

C. Company housing strategy/policy

a. Do you know if the company has a Housing Policy?

b. Were the unions involved in the formulation of the policy?

c. Who were the other stakeholders?

d. Where there engagements with the workers?

e. How were the strategy options decided on?

f. Does the Company provide any housing to the workers?

g. What kind of housing is provided to workers?

h. What type of housing do workers need?

i. What criteria is used in the provision of housing?

j. How much does it cost?

k. Where do they provide this housing?

l. Are the workers satisfied with the houses they currently live in?

m. Where do workers originally come from?

n. Do they come with their families?

o. Do they own houses elsewhere?

p. Is the mine working together with the municipality?

q. If so, are unions part of the engagements between the company and the municipality?

r. Where are the miners planning to retire to?

s. Are workers interested in buying houses?

t. Where do they plan to buy the houses?

u. Has the mine discussed the possibility of mine closure with the workers?

v. How do you see worker housing needs in the context of the possibility of mine closure?

4. Local community organisation

A. Housing and Socio-economic challenges in Kathu, Kuruman and Postmasburg

i. What are the main challenges in these towns?

ii. What is your view on the economic growth direction of these towns?

iii. What is your view on the development status and future of the mining industry?

B. Housing Policy

i. In your experience and observations, what are the housing needs of workers?

ii. What kind of interventions are required to address the housing issue in these towns?

iii. How has your organisation assisted mining companies and municipalities in addressing the challenges?

iv. Do you know of a mine housing policy?

v. Is the mine housing policy adequate in addressing housing challenges?

vi. How can the private sector partner with the municipalities and the mining companies?

vii. Any other thoughts on mining and housing?