BASIC ASSESSMENT FOR THE PROPOSED DEVELOPMENT OF PROJECT ONE (1) OF THE VOSLOORUS EXTENSION 9 HIGH DENSITY HOUSING PROJECT, EKURHULENI METROPOLITAN MUNICIPALITY

SOCIAL IMPACT ASSESSMENT

DRAFT

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Social and Environmental Consultants

12 February 2016

DECLARATION OF INDEPENDENCE

In terms of the National Environmental Management Act (Act No. 107 of 1998) (NEMA), as amended in respect of the EIA Regulations of December 2014, and GNR 982 published on 4 December 2014, an independent consultant must be appointed to act on behalf of the client. In this regard Batho Earth submits that it has:

- The necessary required expertise to conduct a Social Impact Assessment, including the required knowledge and understanding of any guidelines or policies that are relevant to the proposed process;
- Undertaken all the work and associated studies in an objective and independent manner, even if the findings of these studies are not favourable to the project proponent;
- No vested financial interest in the proposed project or the outcome thereof, apart from remuneration for the work undertaken under the auspices of the above-mentioned regulations;
- No vested interest, including any conflicts of interest, in either the proposed project or the studies conducted in respect of the proposed project, other than complying with the required regulations; and
- Disclosed any material factors that may have the potential to influence the competent authority's decision and/or objectivity in terms of any reports, plans or documents related to the proposed project as required by the regulations.

DOCUMENT STATUS

DRAFT SOCIAL IMPACT ASSESSMENT (BASIC ASSESSMENT)

Date:

12 February 2016

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Signature:

DETAILS OF THE SOCIAL IMPACT ASSESSMENT PRACTITIONER

Ms. Ingrid Snyman holds a BA Honours degree in Anthropology. She has more than fifteen years' experience in the social field. Ms. Snyman has been involved in various Social Impact Assessments during her career as social scientist. These project themes consist of infrastructure development, waste management, road development, water and sanitation programmes, township and other residential type developments. She has also been involved in the design and management of numerous public participation programmes and communication strategies, particularly on complex development projects that require various levels and approaches.

TABLE OF CONTENTS

			Pag	е
1.	INT	ROE	DUCTION	1
1.1 B		Bac	ckground	1
1.3 Purpose of the Basic Social Im		Pur	pose of the Basic Social Impact Assessment Report	2
	1.4	The	e proposed Vosloorus Node Project One	3
	1.5	The	e study area	1
2.	LEC	GAL	REQUIREMENTS AND GUIDELINES	2
3.	SC	OPE	OF WORK AND METHODOLOGY	2
	3.1	Met	thodology	2
	3.1.	.1	Literature Review, Analysis and Desktop Studies	2
	3.1.	.2	Collation of Data	2
	3.2	Pro	filing	2
	3.3	Pro	jection and Estimation of Effects	3
	3.3.	.1	Variables	3
	3.4.	.7	Mitigation and Monitoring	5
	3.5	Gaj	os, Limitations and Assumptions	5
4.	DE	SCR	IPTION OF THE BASELINE ENVIRONMENT	7
	4.1	Gei	neral Description of the Study Area and Site	7
	4.2	Ekι	urhuleni Metropolitan Municipality	7
	4.2.	.1	Wards and settlements in the study area	8
	4.3	Soc	cial Profile	9
	4.3.	.1	Population Figures	9
	4.3.	.2	Age Groups and Gender	9
	4.3.	.3	Population Stability	9
	4.3.	.4	Education and Skills Levels	9
	4.4	Em	ployment and Income1	0
	4.5	Hea	alth and Community Health Services1	0
	4.6	Cri	me1	0
	4.7	Infr	astructure and Services1	0
	4.7.	.1	Basic Service Delivery1	1

Batho Earth

v SIA

4.7.2	Housing	. 11
4.7.3	Transport	12
4.8 Loo	cal Economy	12
5. DESCR CONSTRUC	RIPTION AND ASSESSMENT OF ANTICIPATED IMPACTS DURING T	ГНЕ 13
5.1 Po	pulation Impacts	13
5.1.1	Population change	13
5.1.2	Inflow of Temporary Workers	14
5.1.3	Influx of Jobseekers	15
5.1.4	Accommodation of workforce	17
5.1.5	Employment Opportunities	18
5.2 Co	mmunity and Institutional Activities	20
5.2.1	Local Economic Contribution	20
5.2.2	Impact on the EMM	21
5.3 Ind	dividual and Family Level Impacts	22
5.3.1	Impact on Daily Living and Movement Patterns	22
5.3.2	Impact on Social Networks	24
5.3.3	Impact on Agricultural Practices	24
5.3.4	Health Risks	25
5.3.5	Safety and Security Risks	26
5.4 Co	mmunity Infrastructure Needs	27
5.4.1	Impact on Infrastructure and Services	27
5.5 Inti	rusion Impacts	29
5.5.1	Visual Impact	29
5.5.2	Noise Impact	30
6. DESCR OPERATIO	RIPTION AND ASSESSMENT OF ANTICIPATED IMPACTS DURING T	ГНЕ 31
6.1 Po	pulation Impacts	31
6.1.1	Population Change	31
6.1.2	Employment Opportunities and Skills Inequities	32
6.2 Co	mmunity and Institutional Activities	33
6.2.1	Local Economic Contribution	33

Batho Earth SIA

vi

6.2	.2 Impact on property values
6.2	.3 Impact on Educational Facilities
6.2	.4 Impact on EMM
6.3	Conflicts between Local Residents and Newcomers
6.3	.1 Impact on Social Networks
6.4	Individual and Family Level Impacts38
6.4	.1 Impacts on Daily Living and Movement Patterns
6.4	.2 Health Care
6.4	.3 Safety and Security
6.5	Community Infrastructure Needs41
6.5	.1 Impact on housing market41
6.6	Intrusion Impacts42
6.6	.1 Visual Impact and Sense of Place42
6.6	.2 Noise Impact
7. THI	E NO-GO ALTERNATIVE
8. DE	COMMISSIONING45
9. CO	NCLUDING REMARKS
9.1	General45
9.2	Positive Social Impacts46
9.3	Negative Social Impacts47
9.4	Recommendations47
10. S	OURCES CONSULTED
10.1	Documents49
10.2	Websites49

FIGURES

Figure 1: Map of the study area	. 1
Figure 2: Map of Ekurhuleni Metropolitan Municipality	. 8

GLOSSARY OF ABBREVIATIONS

- EIA: Environmental Impact Assessment
- EMM: Ekurhuleni Metropolitan Municipality
- EMP: Environmental Management Plan
- Ext. Extension
- IDP: Integrated Development Plan
- SIA: Social Impact Assessment

1

1. INTRODUCTION

1.1 Background

As part of the Ekurhuleni Human Settlements Programme, the Ekurhuleni Metropolitan Municipality (EMM) identified five "township complexes" for focused nodal development and regeneration. One of the four township complexes, identified as part of the programme, is the Katlehong/Tokoza/Vosloorus Complex, referred to as the Katorus Complex¹.

The vision of the Katorus Complex is to develop an integrated sustainable development that provides for all the social, economic and infrastructural needs of the local community, while being integrated into the larger surrounding economies (Alberton, Boksburg and Germiston Civic / Transport Core), thereby increasing the potential for integration and equity; through creating accessible areas that are interlinked and focused towards public transport².

Within this Katorus Complex, Project 1 has been identified as the first project to be implemented as part of the Vosloorus nodal development. The EMM is thus proposing the development of high density residential units (3 and 4 Storey walk-ups) on the Remainder of Erf 18383 of Vosloorus Extension 9. The proposed development which will be referred to as the "Vosloorus Node Project One" will further include a retail component at ground floor to address the local economic development needs and housing backlog in the area.

The construction of high density housing is an activity identified in terms of the National Environmental Management Act (NEMA) (Act No. 107 of 1998) as amended, in respect of the Environmental Impact Assessment (EIA) Regulations 2014, and may not commence without environmental authorisation from the Gauteng Department of Agriculture and Rural Development (GDARD).

Glad Africa Environment (Pty) Ltd. (hereafter referred to as GA Environment) has been appointed by the implementing agent, the Development Bank of Southern Africa (DBSA) to conduct a Basic Assessment process for the proposed development. The purpose of a Basic Assessment is to determine significant impacts early in the project cycle so that recommendations can be built into the design and cost-benefit analysis without causing major delays or increased design costs.

GA Environment appointed Batho Earth to conduct a Social Impact Assessment (SIA) as part of the Basic Environmental Impact Assessment (EIA).

¹ Ekurhuleni Human Settlements Department: Vosloorus Node, Project 1: High Density Housing: Scope of Works

² GA Environment. 2015. Draft Scoping Report for the Proposed Development of Project One (1) of the Vosloorus Extension 9 High Density Housing Project

1.2 Definition of a Social Impact Assessment

Burdge (1995) describes a Social Impact Assessment as the "...systematic analysis in advance of the likely impacts a development event (or project) will have on the day-to-day life (environmental) of persons and communities." A SIA therefore attempts to predict the probable impact of a development (before the development actually takes place) on people's way of life (how they live, work, play and interact with one another on a daily basis), their culture (their shared beliefs, customs and values) and their community (its cohesion, stability, character, services and facilities), by:

- Appraising the social impacts resulting from the proposed project;
- Relating the assessed social impacts of the project to future changes in the socioeconomic environments that are not associated with it. This would serve to place the impacts of the project into context;
- Using the measurements (rating) to determine whether the impacts would be negative, neutral or positive;
- Determining the significance of the impacts; and
- Proposing mitigation measurements.

An SIA is thus concerned with the human dimensions of the environment, as it aims to balance social, economic and environmental objectives and seeks to predict, anticipate and understand the potential impacts of development.

The usefulness of an SIA as a planning tool is immediately clear, in that it can assist the project proponent to conceptualise and implement a project in a manner which would see the identified negative social impacts addressed through avoidance or mitigation and the positive impacts realised and optimised. It would also allow the community to anticipate, plan for and deal with the social changes once they come into effect. In this sense then, the SIA is an indispensable part of the Basic Assessment Process and any participative activity (e.g. community involvement in mitigation and monitoring during planning and implementation).

1.3 Purpose of the Basic Social Impact Assessment Report

The aim of the Social Impact Assessment Report as part of the Basic Assessment Process is to:

- Determine the current socio-economic status of the area and the social characteristics of the receiving environment;
- Indicate the anticipated core impact categories and impact areas (possible hot spots);
- Identify anticipated positive socio-economic impacts of the proposed project, including positive impacts and provide management measures for these impacts;
- Identify and highlight negative socio-economic impacts (social hot spots) of the proposed project and indicate mitigation measures to deal with these impacts;
- Present the findings, recommendations and conclusions of the social study.

1.4 The proposed Vosloorus Node Project One³

The proposed site for the Vosloorus Node Project One is a section of vacant land located to the west of the N3 Freeway, just south of the M43 (Bierman/Barry Marais Roads) and east of Sam Sekoati Avenue. The site is adjacent Vosloorus Ext 4 (to the east of the existing suburb) and falls within the jurisdiction of the Ekurhuleni Metropolitan Municipality (EMM). A large informal settlement referred to as Somalia Park has developed to the east of the N3 up to the R103. Further to the east of the R103 lies the Mapleton Agricultural Holdings (A.H.) with the Vredebos area (Mapleton Ext. 10) to the north east of the development and the the N3/M43 intersection. The Botshelong-Empilweni Private Hospital is directly west of the site. Also refer to the map under section 1.5.

The proposed activity entails the planning, design and construction of three to four storey walk-up units at a density of between eighty (80) and a hundred (100) units per hectare. The size of the developable land is approximately 11 hectares and it is anticipated that at least 800-1000 units could be accommodated on the Remainder of Erf 18383 of Vosloorus Extension 9.

The larger area is owned by three different owners, namely the RSA Government, the EMM and a section that is privately owned. Three different zoning categories are still applicable namely Educational, Business 1 and Institutional respectively.

The development will be phased. Phase 1 would be on a section of land owned by the EMM and zoned for Business 1. Part of the scope of works for the project is to rezone this particular erf to Business 2, to enable the development of a mix of commercial units on ground level and residential units above.

The site has two major constraints, that is, the Eskom servitudes and medium risk dolomite

The proposed housing project will complement the redevelopment of the existing Nguni and Sotho hostels in the Vosloorus area and will further be supported by the development of the planned Vosloorus railway station and transit oriented development around the station, inclusive of additional commercial and residential uses.

³ GA Environment. 2015. Draft Scoping Report for the Proposed Development of Project One (1) of the Vosloorus Extension 9 High Density Housing Project

1.5 The study area

Figure 1: Map of the study area



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2. LEGAL REQUIREMENTS AND GUIDELINES

In South Africa, the National Environmental Management Act, 1998 (NEMA), as amended in respect of the EIA Regulations of December 2014, and GNR 982 published on 4 December 2014, provides the legal framework for the correct use and management of the environment. In specific, Section 24 of NEMA provides for both the Minister and MEC to identify activities or areas in which certain activities may not be undertaken in absence of an environmental authorization.

Many developments undertaken by both public and private sector organisations require, by legislation, a Basic Environmental Impact Assessment, which is depended on the type, scale and size of the specific development.

Together with the NEMA EIA Regulations the assessment of the social environment came in place and thus the origin for undertaking a Basic Social Impact Assessment (SIA). The guidelines from NEMA thus also apply to a SIA.

3. SCOPE OF WORK AND METHODOLOGY

3.1 Methodology

The broad steps followed as part of the Basic Social Impact Assessment are discussed below.

3.1.1 Literature Review, Analysis and Desktop Studies

The literature review and desktop studies assisted the consultants in establishing the social setting and characteristics of the study area, as well as the key economic activities.

3.1.2 Collation of Data

Primary data assisted the consultants in establishing the baseline environment, social fabric, as well as the key economic activities of the core communities.

Secondary data, which was not originally generated for the specific purpose of the study, were gathered and analysed for the purposes of the study. Such data included the census data, project maps, local histories, planning documentation such as the draft Integrated Development Plans (IDP) and Strategic Development Frameworks (SDF) of the EMM.

3.2 Profiling

Profiling involves a description of the social characteristics and history of the area being assessed, an analysis of demographic data, changes in the local population, and the land-use pattern in the study area, as well as any other significant developments in the area and thus social character over time. The profiling process is a combination of secondary and primary research, site visits, and consultation. This could include information on:

- Historical background;
- Social characteristics;
- Culture, attitudes and socio-psychological conditions;
- Population characteristics;
- Community and institutional structures;
- Community resources; and
- Broad economic impacts.



The broad profiling will typically include descriptions regarding the following:

- The social trends and current conditions;
- The land-use in the area;
- The demographical profile and social characteristics of the host community;
- Other potential developments in the area;
- The local and regional economy; and
- Potential economic links between the proposed project and its environs.

3.3 **Projection and Estimation of Effects**

A baseline assessment indicates the current reality in the social and related aspects of the affected environment. A baseline assessment is necessary to enable a logical and theoretically sound analysis of social impacts. It forms part of the process of identifying important cause-and-effect relationships and a comparative framework for anticipated changes and impacts.

The output of this phase is the impact matrix and mitigation measures.

3.3.1 Variables

The following variables are typically assessed (Burdge, 1995) as part of the Social Impact Assessment:

- Population impacts;
- Community/institutional arrangements;
- Conflicts between local residents and newcomers;
- Individual and Family level impacts;
- Community infrastructure needs; and
- Intrusion impacts.

For assessing the impacts associated with the proposed project, the above variables were adapted to allow the assessment of the full range of social impacts relevant to the specific project. These variables would relate to the construction and operational phases of the proposed project.

3.4 Significance Criteria

Each impact identified was assessed in terms of probability (likelihood of occurring), scale (spatial scale), magnitude (severity) and duration (temporal scale). To enable a scientific approach to the determination of the environmental (social) significance (importance), a numerical value was linked to each rating scale.

The following criteria were applied to the impact assessment for the Basic SIA.

3.4.1 Magnitude of the Impact

Under this rating criterion, the magnitude (intensity) of the impact was described using a rating continuum of minor to very high.

- Minor (2)
- Low (4)
- Moderate (6)

- High (8)
- Very high/Don't know (10)

3.4.2 Duration of the Impact

This served as an indication of what the anticipated lifespan of the impact would be:

•	Immediate		(1)
•	Short-term (0-5	years)	(2)
•	Medium-term	(5-15 years)	(3)
•	Long-term (ceas	ses with the operational life)	(4)
•	Permanent		(5)

3.4.3 Scale of the Impact

This category served to describe the geographical focus of an impact and was based on the demarcation of the study area. Within the impact tables, the impact variables were conceptually related to the demarcation of the study area. This served to indicate where the impact would most likely prevail.

- None (0)
- Site only (1)
- Local (2)
- Regional (3)
- National (4)
- International (5)

3.4.4 Probability of the Impact

This referred to the likelihood of the impact occurring i.e.

- None (0)
- Improbable (1)
- Low probability (2)
- Medium probability (3)
- Highly probable; and (4)
- Definite / Don't know (5)

3.4.5 Significance Points Formula

Once the above factors had been ranked for each impact, the significance of each was assessed using the following formula:

$SP = (M + D + S) \times P$

Where:

- **S** = scale of impact rating
- **D** = duration of impact rating
- **M** = magnitude rating
- \mathbf{P} = probability of occurrence

The maximum value is 100 significance points. Depending upon the numerical value, potential impacts were rated as:

High – more than 60 significance points

 The impacts will have a major influence on the proposed development and/or environment and will require significant mitigation or avoidance. The impacts may have the "no-go" implication of portions of the development regardless of any mitigation measures that could be implemented.

Moderate - between 30 and 60 significance points

• The impacts will have a moderate influence on the proposed development and/or environment. The impact can be ameliorated by a modification in the project design or implementation of effective mitigation measures, etc.

Low – less than 30 significance points

• The impacts will have a minor influence on the proposed development and/or environment. These impacts require some attention to modification of the project design where possible, or alternative mitigation.

3.4.6 Cumulative Impacts

The possible cumulative impacts will also be considered. Cumulative impact, in relation to an activity, means the impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.

3.4.7 Mitigation and Monitoring

Where negative impacts are identified, mitigation measures (ways of reducing impacts) will be provided, and where positive impacts are identified, ways of enhancing these impacts will also be mentioned. Where no mitigation is feasible, this will be stated and the reasons given.

3.5 Gaps, Limitations and Assumptions

With regards to the SIA undertaken, the following should be noted:

- A SIA aims to identify possible social impacts that could occur in future. These impacts are based on existing baseline information. There is thus always an uncertainty with regards to the anticipated impact actually occurring, as well as the intensity thereof. Impact predictions have been made as accurately as possible based on the information available at the time of the study.
- Sources consulted are not exhaustive and additional information can still come to the fore to influence the contents, findings, ratings and conclusions made.

- Demographic information was dependent on statistics from StatsSA, as well as municipal documentation. The information is thus still based on 2011 statistics. The demographic changes that took place since then which could have possible impacts on the intensity of the anticipated social impacts should thus be kept into consideration. The lack of more recent demographic data is therefore seen as a limiting factor, although it is not anticipated to influence the outcome of the report.
- Additional information may become known or available during a later stage, which could not have been allowed for at the time of the study.
- Technical and other information provided by the client is assumed to be correct.
- Individuals view possible social impacts differently due to their association with the anticipated impact. Impacts could therefore be perceived and rated differently than those contained in the SIA Report.

4. DESCRIPTION OF THE BASELINE ENVIRONMENT

Each community is unique as it is shaped by its social networks, cultural influences, values and norms, politics and the infrastructure in the area. The report therefore provides an overview of the social characteristics of the area in order to determine its current capacity and its ability to manage change.

4.1 General Description of the Study Area and Site

Gauteng is the smallest province in South Africa, with only 1.4% of the total land area, but it is highly urbanised, with the largest concentration of individuals within the cities of Johannesburg and Pretoria. As of 2011, it had a population of nearly 12.3 million, making it the most populous province in South Africa, though the smallest area.

Gauteng Province is divided into three metropolitan municipalities, namely City of Tshwane, City of Johannesburg and Ekurhuleni, as well as two district municipalities which are further divided into seven local municipalities respectively.

The study area for the proposed project falls within the jurisdiction of the Ekurhuleni Metropolitan Municipality.

4.2 Ekurhuleni Metropolitan Municipality

The Ekurhuleni Metropolitan Municipality (EMM) was established in 2000. It covers a vast area from Germiston in the west to Springs and Nigel in the east. It has a total land area of ± 2000 km² that accommodates a total population of ± 3 million (Census 2011). This constitutes 5.4% of the national population and makes up 25.5% of Gauteng's population. The population density is approximately 1 609 people per km², making Ekurhuleni one of the most densely populated areas in the country and province⁴.

In terms of land use, Ekurhuleni comprises three main components, namely:

- A central, east-west orientated mining and industrial activity belt which served as the core around which the nine towns Alberton, Benoni, Boksburg, Brakpan, Edenvale/Lethabong, Germiston, Kempton Park/Tembisa, Nigel and Springs were established;
- Residential developments surrounding the above-mentioned activity belt; and
- Rural/agricultural areas to the northeast and in the central portion of the area.

Four major concentrations of historically disadvantaged communities exist in the area. All of these communities are situated on the outskirts of the main urban area and are in the areas furthest removed from where the bulk of job opportunities are situated. These four communities are Tembisa, the Katorus complex, the Kwatsaduza complex and the Daveyton/Etwatwa complex. These areas accommodate approximately two thirds of the total population in the area, with the majority of these again in the Katorus complex.

⁴ Ekurhuleni Metropolitan Municipality: IDP, Budget and SDBIP 2013/14 – 2015/16

Even though large parts of the mining belt are vacant due to past mining activities and the constraints it poses in this regard, some of the areas offer substantial opportunities for infill development within and adjacent to the mining belt, between the central activity corridor and the marginalised township areas on the periphery.

The following map indicates the location of Katlehong, Vosloorus within the EMM. Tokoza is in close proximity to Katlehong and situated just north west of Katlehong.



Figure 2: Map of Ekurhuleni Metropolitan Municipality

4.2.1 Wards and settlements in the study area

The study area falls within the area referred to as the Katorus Complex. It is made up of the Katlehong, Tokoza and Vosloorus areas which represent one of the largest concentrations of marginalized communities in the southern region of the EMM. It is estimated that the population of the Katorus Complex is approximately 410 000, but this figure could have increased due to the in-migration experienced in the larger area. The complex is situated west of the N3 freeway and is approximately 20km south of the Germiston and Boksburg CBD and about 15km south east of the Alberton CBD. The complex is currently served by rail on its eastern boundary and through its centre towards it southern boundary.

The proposed site for the development falls within Ward 45 of the EMM. Ward 45 includes the densely populated area of Vosloorus, including the Somalia Park informal settlement as well as Villa Liza Ext. 1 and 8. It is furthermore characterised by the less densely populated Mapleton Agricultural Holdings (A.H.) and the farm Roodekraal 133 IR. Only a small section of Ward 45 lies to the west of the N3. Adjacent wards which could have an influence on the impacts associated with the project are therefore Ward 95 directly to the north of the proposed

development and north of the M43 but west of the N3, Ward 46 to the southwest and Wards 44 and 47 further west.

The Densification Framework: Status Quo: Analysis & Findings Document (2008) indicated that Ward 45 had a population of 31 266 individuals and approximately 8 700 households with an average household size of 3.5. The average population density for the Ward was 2 183 people per km². The neighbouring ward 46 and 95 had a much higher population density. It should be noted that these figures have possibly increased since the Community Survey of 2007.

4.3 Social Profile

4.3.1 Population Figures

The total population within the EMM was calculated at 3 178 470 in the 2011 Census.

Projections anticipate that the population figures would be near 4 million by 2025⁵. Based on these figures it is estimated that by the year 20205, approximately 1 650 595 people will have to be housed. The current density of the EMM will also increase significantly.

4.3.2 Age Groups and Gender

The largest section of the population (72%) within the EMM falls within the 15 to 64 years age category.

As typical in a developing country such as South Africa, the largest population group of the EMM falls within the 15 to 64 years of age group, which makes the provision of education and job creation imperative. It also implies that there is a significant portion of the population that are able to participate in the local economy as a source of labour. It further continues to put pressure on the future economic development in the area, as well as on the delivery of housing, basic services and social facilities.

4.3.3 Population Stability

The population stability is influenced by the in-migration of outsiders to the area which consist of foreigners, as well as individuals from other areas within South Africa. This in-migration, which is thus mostly attributed to people in search of employment and housing, has further socioeconomic consequences such as additional pressure on the EMM and the business sector to provide employment opportunities, as well as the provision of social infrastructure and services.

4.3.4 Education and Skills Levels

The majority of the local population of the EMM has some form of secondary schooling followed by those that have completed secondary school. Only 8% of Ekurhuleni's population has a post-matric qualification and about 92% of the employed in the municipal area are required only in unskilled or semi-skilled job opportunities. It is thus highly likely that the overall skills levels in the local area of Vosloorus are also low.

⁵ Setplan. 2008. Densification Framework: Status Quo: Analysis & Findings Document

The municipality should thus embark on a programme to ensure a suitable environment for education and training for all within the EMM. Efforts should also be focused on ensuring that learners complete their secondary education.

4.4 Employment and Income

Within Ekurhuleni the unemployment rate is as high as 30%. Most of the residents including these in informal settlements in the city survive on relatives, hand-outs, and Government grants. Most of these residents are on the margins of poverty and destitute. These residents engage in the informal sector enterprise which is not accommodated by the commercial business sector or the banks⁶.

The high unemployment rate remains a challenge to the municipality and for the region as a whole. Priority should thus be given to addressing the issue.

4.5 Health and Community Health Services

Within the EMM the prevalence of HIV/Aids is high. The impact on the local economy will be significant as it is likely that the disease will have a major impact on the supply of labour in the foreseeable future. It further places more pressure on social services as health service and care is required for people affected by HIV/Aids and orphans. There would thus be an increased need for counselling and support centres.

4.6 Crime

With regards to crime and local crime rates, Ekurhuleni experiences similar high rates of crime as the rest of South Africa. The EMM Growth and Development Strategy stated that "Crime and domestic violence, including violence against women and children, are at unacceptably high levels, especially in some of the marginalised and poverty stricken areas. This influences the quality of life worsened by current stresses and poor economic opportunities. It is thus anticipated that the study area also experience high levels of crime.

The nearest police stations to the study area include the Vosloorus Police Station to the northeast of the site and north of Bierman Road, the Dawn Park Police Station in Boksburg and the Katlehong Police Station.

4.7 Infrastructure and Services

Although there is an extensive infrastructure network in the EMM area, these are aging quickly. The decay would thus require extensive investment into renewals, maintenance and/or decommissioning. Within the study area there are various roads and railway line to the west of the site. A new proposed Vosloorus station is planned which would assist in accessibility of the area to the rest of Vosloorus and also to places of work.

⁶ Ekurhuleni Metropolitan Municipality. 2013. IDP, Budget and SDBIP 2013/14 – 2015/16

Community facilities, shopping complexes and a light industrial area are also in close proximity to the site. As indicated, the Botshelong-Empilweni Private Hospital is directly to the west of the proposed development site.

4.7.1 Basic Service Delivery

With regards to electricity provision, the existing urban areas within the EMM are reticulated and served by the municipality. Selected urban areas in the north and south fall within the Eskom supply area, as well as the farms and agricultural holdings outside the urban areas, which are also mostly served by Eskom. The electricity infrastructure however is ageing and subject to frequent maintenance and even replacement. Electricity outages, as a result of breakdowns, thus hamper future development in the area.

Rand Water supplies potable water to the EMM, who is responsible for the water distribution to its customers. The water infrastructure is also old and in need of continued maintenance and upgrading. Some of this old infrastructure has already caused major environmental and economic problems in the area due to overdue upgrading.

The treatment of wastewater is undertaken by the East Rand Water Care Company (ERWAT).

Tons of refuse is collected annually and disposed of at various landfill sites throughout the metropolitan area. The main landfill sites which are used on a daily basis by the municipality include Platkop, Rietfontein, Weltevreden, Rooikraal and Simmer and Jack.

4.7.2 Housing

Large numbers of residents in the jurisdiction of the EMM still live in overcrowded informal settlements without adequate access to engineering and social infrastructure. The City has within its urban fabric 122 informal settlements of which 20% are upgradable for various reasons. This then leaves the EMM with the burden of 80% of informal settlements which accommodates more than 400 000 of its residents which are not being targeted for redevelopment given that there is inadequate resource to do so. Many of these informal settlements are also situated on land not suitable for housing. Backyard shacks and overcrowding are common problems. It is not anticipated that these problems could easily be eradicated as the influx to the area is expected to continue. This is worsened by the scarcity of well-located land suitable for housing development.

Although a large number of subsidy linked serviced stands and houses have been provided in Ekurhuleni during the last decade, the rate of housing delivery is still falling far short of the demand.

The current housing backlog in the EMM is estimated at 144 000 units⁷. As the population is anticipated to increase significantly, housing would remain a priority area. Even though the provision of housing is a serious challenge, the EMM aims to house their residents in integrated and functional sustainable human settlements. A variety in housing options and typologies with the necessary social infrastructure are required to create sustainable communities.

⁷ Ekurhuleni Metropolitan Municipality: IDP, Budget and SDBIP 2013/14 – 2015/16

The Vosloorus node also lacks housing diversity and a wide range of housing typologies. Limited higher-density housing options, such as walk-ups are not common. The proposed development which would cater for the development of higher-density housing option therefore offers some assistance in addressing the housing needs in the Vosloorus area.

4.7.3 Transport

Ekurhuleni has a network of roads, airports, railway lines, telephones, electricity grids and telecommunications supporting a well-established industrial and commercial complex. Some of the major road network linkages, such as the N3, N12, N17, R21 and R24, form part of the road network. The EMM area is well served with a rail network and linkages to Johannesburg, Tshwane and the rest of Gauteng and South Africa. Ekurhuleni can furthermore be regarded as the transportation hub of the country due to the presence of the OR Tambo International Airport, the busiest airport in Africa.

Within the Vosloorus area, there is a taxi rank and railway line with a planned commuter railway station. Once constructed, the planned Vosloorus Station would serve the larger Vosloorus area as well as the planned development⁸.

4.8 Local Economy

The EMM economy is large and quite diverse. The biggest contributor to the local economy is the manufacturing sector, which places a huge demand on labour with the steel and fabricated metal products serving as inputs into other areas' economies. Ekurhuleni is thus not benefiting from direct capital investments as a result of the automotive sector developments. Other important sectors in the Ekurhuleni economy are finance, commercial services, trade and transport. The primary sectors (agriculture and mining) play a very small role in the current economy of the Metro.

The Growth and Development Strategy identified four strategic issues that are critical for the EMM from an economic development perspective. These relate to unemployment, slow economic growth, skills development, market constraints, development incentives and the development of SMMEs.

Over the period 1996 to 2011, however, Ekurhuleni's economy grew by an estimated average of 3.2% per annum.

The Ekurhuleni economy, however, does not have sufficient capacity to absorb all the new entrants into the labour market and therefore the informal sector plays a critical part in the economy.

The EMM should thus ensure economic growth by creating an enabling environment with the focus of developing a viable small business sector, enhancing economic capacity, and leveraging private investment in order to create jobs and increase the tax base.

⁸ GA Environment. 2015. Draft Scoping Report for the Proposed Development of Project One (1) of the Vosloorus Extension 9 High Density Housing Project

5. DESCRIPTION AND ASSESSMENT OF ANTICIPATED IMPACTS DURING THE CONSTRUCTION PHASE

5.1 **Population Impacts**

5.1.1 Population change

Population change refers to the change in the size and density, as well as demographic profile of the local community.

At this stage it is unknown how many individuals could be employed during the construction phase of the project. The responsibility of sourcing labour would likely be with the appointed contractor through the use of community liaison officers and the councillors.

It can thus not yet be determined how many of these construction workers would be from elsewhere and who would be sourced locally. If all individuals would be from outside the study area, it could result in some population increase in the area during the construction phase (estimated at \pm 12 months). It is however anticipated that some of the workforce would be locally sourced which would not only lessen this temporary negative impact, but would also assist in some form of capacity building among those locals. The creation of employment among the local community members of Ward 45 and the rest of the Vosloorus area is critical.

The positive impact associated with an increase in the population size during the construction phase relate to the increase in buying power. Informal traders would definitely be able to benefit from this situation.

NATURE OF IMPACT	POPULATION CHANGE	
Phase	Construction	
Magnitude (m)	Low (4)	
Duration of impact (d)	Short term (2)	
Scale of impact (s)	Local (2)	
Probability of occurrence (p)	Medium probability (3)	
Level of significance (SP)	Low (24)	
$SP = (M+D+S) \times P$		
Mitigation measures		

Maximise the use of local labour and contractors where p

- Maximise the use of local labour and contractors where possible by developing a strategy to involve local labour in the construction process.
- Introduce contractual obligations for contractors to source and use local labour as far as possible.
- If feasible, undertake a skills audit of the available workforce within the closest communities within the area or make use of existing databases.
- It is recommended that local individuals applying for work should submit their Curriculum Vitae (CV's) through local community structures. Some proof of residence should be attached.
- Project requirements should be discussed with community representatives to avoid unrealistic expectations among local community members

NATURE OF IMPACT	POPULATION CHANGE
Level of significance after mitigation	Low
Cumulative or Residual Impacts	Increased impacts on service delivery and infrastructure due to the pressure of additional individuals within the area although only temporary.
	Possible increased medium-term buying power

5.1.2 Inflow of Temporary Workers

This variable refers to the inflow of temporary workers as well as the potential conflict between locals and these "outsiders".

The construction phase is expected to last 12 months and could result in the employment of various individuals. At this stage no information is available with regards to the number of construction workers that could be employed. The majority of these jobs would fall within the unskilled and semi-skilled category.

Although it is difficult to determine the number of construction workers and contractors that could be hired from within the local community and the composition of any "outside of the area" workers during the construction phase, it is anticipated that the inflow of temporary workers could have a negative impact due to the already densely populated settlements found in the area especially for those residents living in close proximity to the construction site. The intensity of the impact would depend on the conduct of the workers (e.g. with regards to noise, pollution, safety and security issues and so forth) and whether these workers would be accommodated within the area. As various negative impacts could materialise during after hour activities, it is recommended that workers be transported to and from site on a daily basis.

Due to the urban environment in which the construction would take place, it is unlikely that a construction camp where workers would be housed would be required. In addition, workers could be sourced locally or if from outside the area, could commute between their residential area and the construction site. This would immediately lessen the negative impacts associated with a medium-term inflow of workers, especially during the peak construction period.

The possibility of conflict between locals and outsiders due to jobs being a "scarce commodity" should also be noted and dealt with in a pro-active manner. Care should be taken not to employ foreigners or even people from outside the area while locals remain jobless.

Hence, the employment of locals would be critical in mitigating negative aspects associated with this social impact category.

NATURE OF IMPACT	INFLOW OF TEMPORARY WORKERS
Phase	Construction
Magnitude (m)	Moderate (6)
Duration of impact (d)	Short term (2)



NATURE OF IMPACT	INFLOW OF TEMPORARY WORKERS	
Scale of impact (s)	Local (2)	
Probability of occurrence (p)	Medium probability (3)	
Level of significance (SP)	Moderate (30)	
$SP = (M+D+S) \times P$		
Mitigation measures		

- Maximise the use of local labour and contractors where possible by developing a strategy to involve local labour in the construction process e.g. communicate the construction requirements through the local leaderships such as the ward councillors, residents associations and representatives of the EMM, and advertise in the local newspapers in the local languages.
- Construction workers falling within the semi-skilled to unskilled category should be sourced from the local population, where possible, to avoid conflict arising between locals and the outside workforce, but also to limit the need for a temporary accommodation facility
- An awareness/communication campaign with regards to the appointment of contractors should be launched to ensure transparency and an understanding among the community members of the process followed.
- Unrealistic employment expectations should not be created.
- Specify the conduct of contract workers in worker related management plans and employment contracts.
- Workers should be transported to site on a daily basis. Preferably, from a social perspective an
 accommodation facility should not be constructed on site. If this cannot be avoided, the
 contractors should ensure that "outside" workers reside in suitable facilities and not establish
 informal houses (if required).
- The development of informal vending "stations" where food and small goods are sold should be properly managed, to avoid littering, safety risks and possible environmental pollution

Level of significance after mitigation	Low
Cumulative or Residual Impacts	Inflow of jobseekers to the site in addition to the inflow of the construction workers
	Possible cumulative inflow of workers should the construction of the rail development (rail extension and rail station) and/or re- development of the hostel in Vosloorus occur at the same time

5.1.3 Influx of Jobseekers

During the construction phase it is expected that there would be an influx of outsiders to the area searching for work. The EMM already experiences an in-migration of outsiders to areas in close proximity to mining and industrial areas or places where mostly semi-skilled and unskilled resources could be utilised. This thus results in the rapid increase in the number of people occupying settlements and illegal squatting.

It is therefore highly likely that there would be an influx of jobseekers to the area surrounding the proposed project site as the construction would require semi-skilled and unskilled labour as well

as due to the location of the site to already densely populated areas where unemployment levels are high. The intensity of this impact would thus depend on:

- The number of locals actually being employed;
- The number of "outside" jobseekers finding temporary employment at the development; •
- The number of outsiders that remain in the area after the construction period has ceased; •
- Whether an accommodation facility for construction workers would be established or whether these outsiders illegally settle in the vicinity of the construction site or make use of backyard shacks within the existing townships;
- The ability of the project proponent and the EMM to manage an influx of outsiders (pro-active planning); and
- The possibility of social conflict between these outsiders and the local population.

The direct and indirect (cumulative) impacts associated with the influx of outsiders could thus put pressure on service delivery (e.g. housing), the existing infrastructure and it could create an additional socio-economic burden for the EMM. The construction related impacts of this variable could thus be more intense during the peak construction period and could materialise in the medium term should these outsiders remain in the area. The intensity would, however, depend on the extent of the influx.

NATURE OF IMPACT	INFLUX OF JOBSEEKERS	
Phase	Construction	
Magnitude (m)	Moderate (6)	
Duration of impact (d)	Short term (2)	
Scale of impact (s)	Regional (3)	
Probability of occurrence (p)	Medium probability (3)	
Level of significance (SP)	Moderate (33)	
$SP = (M+D+S) \times P$		
Mitigation measures		

- Develop a strategy to minimise the influx of outsiders to the area.
- The development, publication and widespread dissemination of a recruitment policy could serve to encourage local employment and reduce the potential influx of jobseekers to the area
- · Communities should be informed of the labour requirements and recruitment process to limit unrealistic expectations and to possibly lessen the number of jobseekers loitering at the construction area.
- The establishment of a labour desk to deal with jobseekers could be investigated.
- No temporary workers should be employed from jobseekers gathering at the construction site.
- The unskilled and semi-skilled positions should be filled by permanent residents from the surrounding areas where possible. Proof of residence should be provided when applying for jobs.
- The applicant and contractors should ensure a fair and transparent recruiting process to limit the potential for conflict between locals in search of employment
- Informal vendors at the construction site should be strictly managed to avoid conflict, as well as environmental pollution.

NATURE OF IMPACT		INFLUX OF JOBSEEKERS
Level of significance after mitigation	Moderate	
Cumulative or Residual Impacts	Possible pe associated c Possible ind jobseekers b Sub-letting o to the influx and on the e	rmanent settlement of job seekers in the area with umulative impacts creased inflow of large numbers of jobseekers and eing unsuccessful in obtaining employment at this project f properties or rooms (backyard shacks) could increase due of jobseekers putting more pressure on the land available xisting infrastructure
	Possible cun rail developn of the hostel	nulative inflow of jobseekers should the construction of the nent (rail extension and rail station) and/or re-development in Vosloorus occur at the same time

5.1.4 Accommodation of workforce

At this stage it is unclear where the construction workforce would be accommodated. The requirement for accommodation would further depend on the number of locals that could be employed.

The presence of an accommodation facility usually results in social conflict (e.g. between residents and outsiders, misconduct of workers and so forth) and associated environmental impacts. Such facilities are also generally perceived to serve as conduits of criminal activities. The likelihood of this impact negatively impacting on the local residents is thus high due to the development being planned directly adjacent already densely populated areas. Failure to effectively manage such a facility would thus increase the likelihood of the negative impacts actually materialising.

The location of the proposed site in an urban environment, however, would not necessitate the development of temporary accommodation facilities. This impact category thus received a low probability rating. Accommodation facilities are also **not** recommended from a social perspective but mitigation measures were still included below.

NATURE OF IMPACT	ACCOMMODATION OF WORKFORCE
Phase	Construction
Magnitude (m)	Moderate (6)
Duration of impact (d)	Short term (2)
Scale of impact (s)	Local (2)
Probability of occurrence (p)	Low probability (2)
Level of significance (SP)	Low (20)
$SP = (M+D+S) \times P$	



NATURE OF IMPACT

ACCOMMODATION OF WORKFORCE

Mitigation measures

- The creation of a temporary accommodation facility near the construction area is not preferred or recommended from a social perspective and should not be implemented.
- Should the development of a temporary accommodation facility be inevitable it must be managed in an environmentally and socially acceptable manner to avoid any social conflict and environmental pollution. The accommodation facility should also include sufficient water supply, waste removal, electricity, lighting and emergency services. Illegal and disruptive practices associated with the construction camp should be avoided.
- The local SAPS in the area should be kept informed of the planned developments to ensure that they would be able to adequately deal with any type of disruptive behaviour.

Level of significance after mitigation	Low		
Cumulative or Residual Impacts	Possible negative impacts with the construction of the accommodation facility itself		
	Possible long term environmental pollution		
	Social conflict which could lead to violence		

5.1.5 Employment Opportunities

This aspect refers to the extent to which employment opportunities emerging from the proposed project match the job skills of the unemployed in the area, as well as the creation of new job opportunities and employment equity of minority groups.

The EMM IDP highlighted that the construction sector needs to be a trigger in the economy, whether it is in the building of infrastructure or housing. The housing policy has suggested that cooperative ventures be used in housing construction and this could be organised to sustain long-term prospects for local people. Material supply chains need to be localised and job creation in construction must also be linked to ongoing services in maintenance work such as plumbing, electrical work, woodwork and light manufacturing. The provision and maintenance of infrastructure, such as road and storm water drainage, thus links directly to the construction sector of the economy.

The construction phase is expected to last approximately one year and could thus lead to the employment of some individuals thereby serving as "trigger in the economy." The majority of employment opportunities created by construction projects usually involve unskilled and semi-skilled labour (e.g. bricklaying, plasterers, painting, carpenters, sheet metal workers, electricians, plumbers and so forth) with some skilled and highly skilled categories. It is therefore expected that numerous locals would have the necessary skills which would make them employable in the unskilled and semi-skilled sections. A labour desk should aim to determine what these people's occupations are and if these are applicable to the employment sectors associated with the proposed development.

Although the jobs created during the construction phase are only temporary, and the number of locals to be employed remains uncertain, one could still view it as a positive injection into the community due to the social character of the population within the study area and specifically Vosloorus and the Somali Park area. These temporary jobs could be a "lifesaver" for many unemployed people in the area living in absolute poverty. It could also be the first opportunity for many to enter the job market and uplift themselves to be more employable in future.

The proposed project could further result in capacity building through on-site training and skills development opportunities which could, as stated in EMM IDP, "sustain long-term prospects for local people". The improvement of skills levels to attract and support local economic growth is thus of critical importance and the proposed development could play a positive role in this regard.

NATURE OF IMPACT	EMPLOYMENT OPPORTUNITIES
Phase	Construction
Magnitude (m)	Moderate (6)
Duration of impact (d)	Short term (2)
Scale of impact (s)	Regional (3)
Probability of occurrence (p)	Highly probability (4)
Level of significance (SP)	Moderate (44) (+)
$SP = (M+D+S) \times P$	
Enhancement measures	

- Maximise the use of local labour by contractors where possible. Project contracts between the applicant and the main contractor should stipulate the use of local labour for unskilled and semi-skilled positions and tasks
- If feasible undertake a skills audit of an available workforce within the closest communities.
- Establish a local material supply chain linked to ongoing services in maintenance work such as plumbing, electrical work, woodwork and light manufacturing.
- The provision and maintenance of infrastructure, such as road and storm water drainage, should further be considered as possible local opportunities.
- Cooperative ventures forming part of this housing construction project could be organised to sustain long-term prospects for the local people.
- Enhance on a capacity building and skills development strategy to lessen any possible skills disparity between the local skills available and the requirements of the project. This should link with the EMM's initiatives with regards to tender advice centres, cooperatives and other SMME support mechanisms.

Level of significance after enhancement	Moderate (+)
Cumulative or Residual Impacts	Possible lack of available skills
	Opportunity to improve local skills in the area

NATURE OF IMPACT		EMPLOYMENT OPPORTUNITIES
	Long term prospect	s for local people

5.2 Community and Institutional Activities

5.2.1 Local Economic Contribution

The social aspects with regards to the possible impact on the local economy relates to the following issues:

- The direct socio-economic impact as a result of the construction activities;
- The socio-economic development of local businesses and entrepreneurs as a result of local procurement; and
- The indirect socio-economic impacts as a result of the construction activities.

The development will create a significant demand for housing goods and services (material and interiors). During the construction phase some minor local economic benefits may thus be realised through the purchase and/or contract of local goods and services associated with the construction industry such as cement, bricks, glass and wood, therefore stimulating production in these industries.

Temporary indirect local socio-economic benefits are anticipated to materialise through the increased buying power of construction workers. Local businesses and service providers in the direct vicinity of the project site (e.g. the food chains situated in the shopping centre to the north west of the site) are anticipated to experience a sudden increase in sales and service demands, which could continue until the development has been completed. On site vendors could further directly benefit from the situation.

Overall, a positive impact on the local and regional economy is foreseen, although it could be focused on specific suppliers and manufacturers only

NATURE OF IMPACT	LOCAL ECONOMIC CONTRIBUTION	
Phase	Construction	
Magnitude (m)	Moderate (6)	
Duration of impact (d)	Short term (2)	
Scale of impact (s)	Regional (3)	
Probability of occurrence (p)	Medium probability (3)	
Level of significance (SP)	Moderate (33) (+)	
$SP = (M+D+S) \times P$		
Enhancement measures		
• The EMM and the contractors should develop a database of local companies, including credible Small Medium and Micro Enterprises (SMMEs) that could qualify as potential service providers prior to the initiation of the tender process, to enable these local companies and SMMEs to be		

involved with the tender process.

N	IATURE OF IMPACT		LOCAL ECONOMIC CONTRIBUTION
٠	Even if local companies an	d SMMEs wou	ld be considered during the construction phase of the
	project, the tender process should be based on competitive business principles and the quality		
	of services to be rendered t	o ensure adhe	rence to standards and to maximise overall welfare
٠	Implement contractual requirement for contractors to procure goods and services locally and/or		
	regionally as far as possible).	
٠	• From a community perspective, enterprise development is a key enhancement measure in this		
	regard.		
٠	• Formalisation of informal traders and the construction of a trading shelter for informal traders		
	should be investigated. This action should be managed by the EMM and planned with the		
	inputs of the local residents associations and councillor of Ward 45.		
L	evel of significance after	Moderate (+)	
е	nhancement		
C	cumulative or Residual	More robust	ocal economy
h	npacts		

5.2.2 Impact on the EMM

The proposed Vosloorus development is a municipal initiative, assisted by the DBSA as implementing agent. It should, however, be noted that a project of this nature would result in an increase in the requirements for basic infrastructure and services such as roads, medical services, stormwater infrastructure, safety and security services, electricity, water and sewage and so forth. The municipality would thus have to meet the infrastructural requirements e.g. bulk water supply. Careful planning is thus required to enable the EMM to meet the operational requirements and to avoid any budget constraints.

Pro-active planning, budgeting and "start-up funding" could minimise the negative impacts with regards to the provision of adequate services and infrastructure.

NATURE OF IMPACT	IMPACT ON EMM
Phase	Construction
Magnitude (m)	Moderate (6)
Duration of impact (d)	Short term (2)
Scale of impact (s)	Local (2)
Probability of occurrence (p)	Highly probable (4)
Level of significance (SP)	Moderate (40)
$SP = (M+D+S) \times P$	
Mitigation measures	

• Resources of the EMM should be allocated to determine and plan for the development and implementation of the required infrastructure linked to this housing and retail development.

• Realistic local economic development plans, which include the improvement and provision of the required economic infrastructure and the encouragement of micro, small and medium

ſ	NATURE OF IMPACT	
	businesses should be developed to assist	in this regard
٠	Financial planning for the additional infras	tructure is critical
٠	The EMM should, in collaboration with t	he implementing agent, undertake a detailed audit of
	services and infrastructure requirements	that should be implemented and when these would be
	required	
٠	Detailed communication and planning in t	erms of the service and infrastructure needs should be
	dealt with by the various departments of the	he EMM.
٠	Additional service and infrastructure nee	eds for this mixed land use development should be

assimilated with the local IDP and economic strategies.	
Level of significance after	Low
mitigation	
Cumulative or Residual	Lack of implementation of sufficient infrastructure and services
Impacts	associated with the proposed mixed land use development
	resulting in environmental pollution

5.3 Individual and Family Level Impacts

5.3.1 Impact on Daily Living and Movement Patterns

The presence of construction workers and jobseekers in the area could impact on the living and movement patterns of the neighbouring landowners such as residents of Vosloorus Ext. 4 and especially those nearest to the development (e.g. Sephooka, U-Nonqane, Le-Tsiavava, Thlapolome and Um-kota Streets). Misbehaviour of construction workers, increased fire risks, imposing on the existing social networks of existing residents (alcohol abuse, prostitution etc.) and possible increase in crime, as well as general construction activities (noise, dust, safety) are all concerns that could impede the daily living and movement patterns of nearby residents.

Should building material and goods required for the construction be transported from the larger nearby urban areas such as Alberton, Boksburg, Brakpan, Germiston, Alrode, Pretoria and Johannesburg, heavy vehicles making use of local roads could increase the risk of accidents and in worst cases damage road surfaces. Non-compliance to speed limits and dust pollution created on-site due to these vehicles are also some of the nuisance and disruption impacts which would have a negative impact on the surrounding landowners' daily living and movement patterns.

Access to the site during the construction phase could be from the M43, the slipway from the M43 just west of the proposed development or Sam Sekoati Avenue. Due to the distance of the N3 and the existing commercial development along the M43, as well as the location of electricity infrastructure, it is unlikely that direct access from the M43 could be obtained. Should the slipway just west of the site be used, the informal parking of taxis to the eastern side of the shopping centre along this road should be considered. The level of pedestrian movement in this area would be of concern. Entrance to the site from Sam Sekoati Avenue should also be carefully planned and clearly indicated as this road is frequently used by residents. Informal traders and those making use of the open area along the road as well as pedestrians should be considered when planning the entrance to the site.

The Botshelong-Empilweni Private Hospital is regarded as a sensitive receptor and traffic calming measures near the facility should be put in place.

NATURE OF IMPACT	IMPACT ON DAILY LIVING AND MOVEMENT PATTERNS
Phase	Construction
Magnitude (m)	Moderate (6)
Duration of impact (d)	Short term (2)
Scale of impact (s)	Local (2)
Probability of occurrence (p)	Highly probable (4)
Level of significance (SP)	Moderate (40)
$SP = (M+D+S) \times P$	
Mitigation measures	

• Strict security measures should be put in place. Security personnel should be on site on a permanent basis.

- Construction workers should be confined to the construction area as far as possible
- Construction workers should wear uniforms or identity tags to be easily identified.
- Criminal incidents should be communicated to the local SAPS in Midrand.
- Noise should be kept to the minimum.
- Construction activities should keep to normal working hours e.g. 7 am until 5 pm.
- The construction area should be fenced to avoid unauthorised entry by animals or children.
- Construction vehicles should make use of the N3 and M43 for the transportation of materials.
- Construction vehicles should adhere to the speed levels.
- The implementation of speed humps along local roads should be investigated.
- Access roads and entrances to the site should be carefully planned to limit any intrusion impacts, noise and dust pollution, as well as to limit any risks of accidents.
- Property owners surrounding the construction areas should be informed of the construction schedules and activities
- Construction vehicles and those transporting materials and goods should be inspected to ensure that these are in good working order and not overloaded.
- Source material and goods locally as far as possible to limit transportation of these over long distances
- On-site gravel roads should be sprayed with water to limit dust pollution during the construction phase
- Dust suppression methods should be strictly implemented if and where required

Level of significance after mitigation	Moderate
Cumulative or Residual Impacts	Cumulative impacts on the local roads due to construction related traffic and increase in people movement
	Possible cumulative inflow of workers and jobseekers should the construction of the rail development (rail extension and rail station)

NATURE OF IMPACT		IMPACT PATTERI	ON NS	DAILY	LIVING	AND	MOVEMENT
	and/or re-dev time	velopment o	of the	hostel i	n Vosloor	US OCCI	ur at the same

5.3.2 Impact on Social Networks

The introduction of outsiders could result in interference in community affairs. It is also common for construction workers, being separated from their families, to embark on short-term unsustainable relationships with local women resulting in long-term negative social consequences, even changing the family structures of the present community. Even though construction would take place in a densely populated area, based on the length of the construction period and the estimated size of the construction workforce, this impact, however, is perceived to be of a low magnitude.

NATURE OF IMPACT		IMPACT ON SOCIAL NETWORKS		
Phase		Construction		
Magnitude (m)		Low (4)		
Duration of impact (d)		Short term (2)		
Scale of impact (s)		Local (2)		
Probability of occurrence (p))	Medium probability (3)		
Level of significance (SP)		Low (24)		
$SP = (M+D+S) \times P$				
Mitigation measures	Mitigation measures			
Local labour should be sourced as far as possible				
Employment and the sensitivities surrounding this issue should be carefully dealt with				
 Safety and security measures and guidelines should be implemented 				
Consult with local structures regarding employment matters				
• Good conduct of construction workers should be sought through awareness campaigns on the				
subject				
• Community awareness programmes focused on the possible negative impact of unsustainable				
relationships on the social networks should be embarked on by the EMM.				
Level of significance after	Low			
mitigation				
Cumulative or Residual	Changes in the social structure and family life of the residents of			
Impacts	the area due to an outside construction workforce			

5.3.3 Impact on Agricultural Practices

Spillages from construction activities could occur which could lead to groundwater contamination as a result of the construction activities. No agricultural activities are currently taking place in close proximity to the site. Any water related pollution would thus be of concern for the agricultural holdings to the east of the N3 and east of the proposed site in the event that their resource use would be affected. From a social perspective, the probability of the impact occurring is however deemed low.

NATURE OF IMPACT		IMPACT ON AGRICULTURAL PRACTICES	
Phase		Construction	
Magnitude (m)		Low (4)	
Duration of impact (d)		Short term (2)	
Scale of impact (s)		Local (2)	
Probability of occurrence ())	Improbable (1)	
Level of significance (SP)		Low (8)	
$SP = (M+D+S) \times P$			
Mitigation measures			
Construction activities should be undertaken as stipulated in the EMP			
Level of significance after	Low		
mitigation			
Cumulative or Residual	Possible impact on resource use		
Impacts			

5.3.4 Health Risks

The presence of an outside workforce (especially consisting of mostly male workers) is usually associated with the increase in Sexually Transmitted Diseases (STDs). It is however impossible to determine which persons would form part of the workforce or who intends to move into the area and what their STDs and HIV/AIDS status is.

Even if the manifestation and significance of this impact cannot be known, the increase in the spread and prevalence of STDs and HIV/Aids during the construction phase of a project would always be a source of concern, especially in the study area with its large young population and infection rate. This could result in a more desperate need for the extension of basic health care services in the area, which is already under pressure at the moment.

The construction activities in itself further increases the risks of construction related accidents and injury to the workforce. The increased traffic expected on the local roads further intensifies this risk.

NATURE OF IMPACT	HEALTH IMPACTS
Phase	Construction
Magnitude (m)	Moderate (6)
Duration of impact (d)	Short term (2)
Scale of impact (s)	Local (2)



NATURE OF IMPACT		HEALTH IMPACTS
Probability of occurrence (p)		Highly probable (4)
Level of significance (SP)		Moderate (40)
$SP = (M+D+S) \times P$		
Mitigation measures		
 The EMM should extend the current HIV/AIDS awareness and support programmes with a additional focus on the construction workforce and residents Local labour should be employed as far as possible. First aid supplies should be available at various points at the construction site Emergency and health services should be notified of the construction schedule and perconstruction periods The general health of construction workers should be monitored on an on-going basis 		V/AIDS awareness and support programmes with an orce and residents s possible. arious points at the construction site be notified of the construction schedule and peak s should be monitored on an on-going basis
Level of significance after	vel of significance after Moderate	
mitigation Cumulative or Residual Impacts	Cumulative i population g construction Long term n	impacts on the local clinics due to annual general prowth, the population increase associated with the workers and jobseekers negative social impacts on the family life and social en individuals are infected with HIV/Aids

5.3.5 Safety and Security Risks

An increase in the number of people in one area is also associated with an increase in crime. The construction phase of the proposed project could result in negative impacts on the safety of the public, especially on the more vulnerable sectors of the community such as the poor, children and the elderly.

Further safety concerns during the construction phase relate to children accessing the construction site, unauthorised entry to the construction site, and the movement of heavy vehicles or machinery in close proximity to existing residential areas and on roads used by large numbers of pedestrians.

An increased risk of veld fires due to the presence of construction workers and construction related activities on site could also be of concern. Fires could pose a threat to nearby residents and houses in the area of the construction site.

NATURE OF IMPACT	SAFETY AND SECURITY IMPACTS
Phase	Construction
Magnitude (m)	Moderate (6)
Duration of impact (d)	Short term (2)
Scale of impact (s)	Local (2)
Probability of occurrence (p)	Medium probability (3)
Level of significance (SP)	Moderate (30)

NATURE OF IMPACT

SP = (M+D+S) x P

SAFETY AND SECURITY IMPACTS

Mitigation measures

- Local labour should be employed as far as possible to limit the number of outsiders in the area.
- The movement of construction workers should be confined to the work site to avoid any increased safety and security risks.
- Before construction commences, representatives from the EMM, the ward councillors and Residents Associations (if any), as well as neighbouring communities should be informed of the details of the construction company, size of the workforce and construction schedules.
- Construction workers should be easily identified as part of the construction team by e.g. wearing specific clothing and/or identity tags.
- Criminal incidents should be communicated to the workforce to ensure a general awareness of the safety situation in the area.
- Operational safety risks should be addressed as part of the Occupational Health and Safety Act (1993)
- A Fire/Emergency Management Plan should be developed and implemented. It is important that
 this management plan and associated communication channels are developed at the outset of
 the construction phase. It would be important to regularly review the functionality and efficiency
 of such a plan in conjunction with the local emergency teams, representatives of the EMM and
 neighbouring landowners
- Open fires for cooking and related purposes should not be allowed on site.
- Appropriate firefighting equipment should be on site and construction workers should be appropriately trained for fire fighting
- The construction area should be fenced or access to the area should be controlled to avoid animals or unauthorised people entering the area without authorisation.
- Speed limits on the local roads should be enforced.
- Speeding of construction vehicles must be strictly monitored

Level of significance after mitigation	Low
Cumulative or Residual	Increased crime levels
Impacts	Increased safety risks on the local roads
	Possible cumulative inflow of workers and jobseekers should the construction of the rail development (rail extension and rail station) and/or re-development of the hostel in Vosloorus occur at the same time

5.4 Community Infrastructure Needs

5.4.1 Impact on Infrastructure and Services

Impacts on infrastructure development and maintenance during the construction phase of the project mainly refer to the possible impact of an additional temporary workforce entering the area

and the construction of accommodation facilities for these outsiders. The intensity of this impact would depend on the number of locals used during the construction phase. Also, as mentioned above, the development of a construction camp where workers would be housed is not a certainty and is not recommended from a social perspective which further lessens the impact on the need for such infrastructure.

Service delivery in the EMM area is hampered due to the past settlement patterns, distances between settlements and physical features such as the mining operations found throughout the municipal area. In addition to the existing service delivery challenges, a development of this nature would require additional basic infrastructure and services such as roads, stormwater infrastructure, emergency services, safety and security services, electricity, as well as water and sewage for the houses at the proposed development. These infrastructural developments are usually required to be implemented in a short period of time adding to the financial burden of the EMM.

It should be noted that there is an Eskom servitude on the site. Planning and design should take this into consideration to ensure that no structures are constructed within the servitude area. Cumulative impacts in terms of service provision on other service providers such as Eskom for the provision of new distribution power lines could also transpire.

The negative impact (additional pressure) on the infrastructure development and maintenance therefore remains a critical issue to be addressed and successfully dealt with prior to the construction phase of the proposed project. Hence, infrastructure development should not be isolated from existing services. This thus calls for a successful integration of the additional services into the existing service delivery system of the EMM.

Resources should therefore be allocated to extend the existing infrastructure linked to this housing programme. As stated in the IDP "...all of these (*programmes*) provide for realistic local economic development plans, which include the improvement and provision of the required economic infrastructure and the encouragement of micro, small and medium businesses..." to assist in this regard.

NATURE OF IMPACT	IMPACT ON INFRASTRUCTURE AND SERVICES	
Phase	Construction	
Magnitude (m)	Moderate (6)	
Duration of impact (d)	Short term (2)	
Scale of impact (s)	Regional (3)	
Probability of occurrence (p)	Highly probable (4)	
Level of significance (SP)	Moderate (44)	
$SP = (M+D+S) \times P$		
Mitigation measures		
• An integrated planning process should be initiated to pro-actively determine the infrastructure		

• All integrated planning process should be initiated to pro-actively determine the initiastructure requirements and service needs to enable the EMM to supply and install these associated infrastructure and services.

NATURE OF IMPACT		IMPACT ON INFRASTRUCTURE AND SERVICES
Maximise the employment of locals where		possible
Level of significance after mitigation	Low	
Cumulative or Residual Impacts	Cumulative p due to the loo	ressure on the provision of services and infrastructure cal population growth

5.5 Intrusion Impacts

5.5.1 Visual Impact

The social impact associated with the impact on the sense of place relates to the change in the landscape character and visual impact of the proposed development during the construction phase.

Disturbance of the environment during the construction phase would lead to temporary negative visual impacts, although it is expected to diminish once the construction phase has been completed. Properties in close proximity to the development would be mostly affected, as well as commuters making use of the N3, M43 and Sam Sekoati Avenue. The construction site would also be clearly visible from some residents' dwellings such as those directly to the south and west of the site.

These impacts are only of a temporary nature and are not expected to have any significant negative impacts on the property owners.

NATURE OF IMPACT		VISUAL IMPACT	
Phase		Construction	
Magnitude (m)		Low (4)	
Duration of impact (d)		Short term (2)	
Scale of impact (s)		Local (2)	
Probability of occurrence (p))	Medium probability (3)	
Level of significance (SP)		Low (24)	
$SP = (M+D+S) \times P$			
Mitigation measures	Mitigation measures		
 The construction site should be kept litter free Site rehabilitation on certain sections of the site should occur as soon as the construction process allows The architectural theme should be considered to have as limited negative visual impact as possible. 			
Level of significance after mitigation	Low		
Cumulative or Residual Impacts	Change in landscape character		

5.5.2 Noise Impact

Noise related impacts created during the construction phase of the project are highly probable. These are anticipated to emanate from heavy vehicles travelling to and from the site, the noise created by the "reverse indication" of the trucks, and the noise generated by the general construction activities. This noise could be particularly intrusive, although the area would not, from a social perspective, be classified as an area with existing low ambient noise levels.

NATURE OF IMPACT		NOISE IMPACT	
Phase		Construction	
Magnitude (m)		Low (4)	
Duration of impact (d)		Short term (2)	
Scale of impact (s)		Local (2)	
Probability of occurrence ()	Highly probable (4)	
Level of significance (SP)		Moderate (32)	
$SP = (M+D+S) \times P$			
Mitigation measures	Mitigation measures		
 Construction vehicles should be in a good working order Ensure that all vehicles comply with noise abatement regulations Construction activities should be kept to normal working hours e.g. 7 am until 5 pm during weekdays 			
Level of significance after mitigation	Low		
Cumulative or Residual Impacts	None anticipa	ated	

6. DESCRIPTION AND ASSESSMENT OF ANTICIPATED IMPACTS DURING THE OPERATIONAL PHASE

6.1 **Population Impacts**

6.1.1 Population Change

The proposed Vosloorus Node Project One could provide housing opportunities to at least 1 080 households. This development would thus result in a population change with severe impacts in terms of its size and density. This sudden increase and above normal annual increase in the local population in Ward 45 would put additional pressure on the already challenged local infrastructure and services. These severe impacts would start to manifest in the short term but is furthermore expected to continue to be apparent in the long term.

Given the regional context, the population change is not perceived to have significant "new" social impacts that are not already experienced due to the in-migration of various individuals to the EMM area on a continuous basis. The rating below refers to the impact on a local scale only.

The positive impact associated with an increase in the population size relate to the increase in the localised buying power and increased tax base of the municipality.

NATURE OF IMPACT	POPULATION CHANGE	
Phase	Operational	
Magnitude (m)	High (8)	
Duration of impact (d)	Long-term (4)	
Scale of impact (s)	Local (2)	
Probability of occurrence (p)	Highly probable (4)	
Level of significance (SP)	Moderate (56)	
$SP = (M+D+S) \times P$		
Mitigation measures		
 A phased approach in terms of the development should be followed as this could spread population change impacts over a couple of years A phased approach could allow associated infrastructure and services to be implemented to accommodate the additional population Pro-active planning with regards to infrastructure and service needs by the EMM is imperative Implementation and/or upgrading of the necessary infrastructure and services e.g. roads and water supply are required. 		
LevelofModeratesignificanceaftermitigation	Moderate	
CumulativeorShort termResidual ImpactsChange in impacts	Short term boost to the local economy Change in population size and density with resultant socio-economic impacts	

6.1.2 Employment Opportunities and Skills Inequities

Once the development has been completed, the only direct employment opportunities that could become available would mainly relate to the retail component/shopping centre. The latter could include e.g. supermarkets, electronic goods shops, arcades, clothing shops, general dealer shops, internet cafes and so forth. Indirect opportunities could be sought through the establishment of a local material supply chain linked to ongoing services in maintenance work such as plumbing, electrical work, woodwork and light manufacturing. The provision and maintenance of infrastructure, such as road and storm water drainage, should further be considered as possible local opportunities.

Further indirect positive employment impacts are the indirect economic spin-offs and indirect job opportunities created as a result of the proposed development and the associated increase in the population with their increased expenditure and increased need for goods and services. Local businesses in the area might thus experience more concentrated economic activities and as a result employ additional personnel. The indirect opportunities, however, are still anticipated to have a limited impact on the actual unemployment levels in the area.

Access of a large number of residents to employment however, still remains a source of concern. Care should be taken to ensure that the employment status of the newcomers remain positive to create a stable local economy and to guarantee the socio-economic stability of the area.

NATURE OF IMPACT		EMPLOYMENT OPPORTUNITIES
Phase		Operation
Magnitude (m)		Moderate (6)
Duration of impact (d)		Long term (4)
Scale of impact (s)		Regional (3)
Probability of occurrence (p)		Medium probability (3)
Level of significance (SP)		Moderate (39)
$SP = (M+D+S) \times P$		
Mitigation and enhancement measures		
 The Local Economic Development Plan (LED) of the EMM should take note and address the issue of local employment creation with the assistance of the local economic sectors. The increased population should thus be incorporated into the larger economic systems to ensure local economic prosperity and resilience 		
Level of significance after	Moderate	
enhancement		
Cumulative or Residual	Economic	growth and development and possibly some
Impacts	diversification	on of the local economy

6.2 Community and Institutional Activities

6.2.1 Local Economic Contribution

Once the housing project has been completed, the proposed project would assist in generating more investment into the area, lead to further economic benefits (bigger buying power in the area), economic growth opportunities and economic spin-offs (e.g. entrepreneurial development). Indirect forward employment opportunities are thus generated by new homeowners who have a demand for consumer products such as household appliances and furniture. Further to the above, some employment opportunities could be created e.g. security guards, garden maintenance and cleaning staff.

The financial or economic success would thus depend on how well the newcomers' needs are met by the local retail section forming part of the development and by the business sector located in nearby urban centres such as Alberton, Boksburg, and Brakpan, and even Johannesburg. The positive returns of this impact would thus depend on the community's plans to economically benefit from the increase in the population.

NATURE OF IMPACT	LOCAL ECONOMIC CONTRIBUTION AND PROCUREMENT
Phase	Operation
Magnitude (m)	Moderate (6)
Duration of impact (d)	Long term (4)
Scale of impact (s)	Regional (3)
Probability of occurrence (p)	Highly probable (4)
Level of significance (SP)	Moderate (52) (+)
$SP = (M+D+S) \times P$	
Enhancement measures	

• Maximise the employment of local individuals, entrepreneurs and SMME's as part of the development e.g. at the institutional/educational facilities and business sector

- The increased population should thus be incorporated into the larger economic systems to ensure local economic prosperity and resilience.
- The EMM could assist SMME's to become involved in the procurement of capital goods, consumables and services. Such a programme should be implemented in conjunction with the local development programmes in the surrounding communities. It could focus on providing support and technical advice to entrepreneurs and/or SMMEs to enable them to supply goods and materials to the residents in the long term.

Level of significance after enhancement	Moderate (+)
Cumulative or Residual Impacts	Economic growth and development and some diversification of local economy due to this proposed development and other smaller economic developments in the area

6.2.2 Impact on property values

A development of this extent would have a long term impact on the adjacent property values as a result of the impact on the sense of place and the influence on the market demand.

Residential properties as part of the Vosloorus development could be in competition with the existing properties in the surrounding residential areas of Vosloorus. Competition for properties could even start prior to construction. Properties forming part of the new development would be much sought after due to the high population density in Ward 45 and the surrounding wards, as well as the existing situation whereby properties in the area are not readily available. It should thus be ensured that the development of the houses is of such a standard that prospective buyers would in fact be willing to buy or rent property in the area.

In terms of commercial properties the impact could differ, because for businesses situated in close proximity to the high density component it could be beneficial, due to the possible increased business demand that such a development could offer.

Most studies with regards to property values however included the hedonic pricing method where the price of a property is determined by its characteristics such as property size, the quality of the neighbourhood in which the property is situated, the condition of the house structure, quality or availability of local schools, crime rates and features included in the property e.g. recreational uses and so forth. It is thus difficult to provide a general indication of the impact on the property values as it would definitely depend on the hedonic pricing structure applied to each individual property and the location in terms of the new development.

It is however imperative that uncontrolled urban sprawl is contained and that the development is implemented based on best practice and according to all Environmental, as well as Construction (building) Regulations and Guidelines.

NATURE OF IMPACT	IMPACT ON PROPERTY VALUES
Phase	Operation
Magnitude (m)	Moderate (6)
Duration of impact (d)	Long term (4)
Scale of impact (s)	Regional (3)
Probability of occurrence (p)	Medium probability (3)
Level of significance (SP)	Moderate (39)
$SP = (M+D+S) \times P$	
Enhancement measures	

• Sub-letting of properties as part of the development should be prevented and discouraged.

- Infrastructure and services as part of the proposed development should be properly maintained.
- The road infrastructure should be maintained and in future roads should be upgraded when required (e.g. resurfacing or widening where traffic volumes warrant such upgrades).
- An increase in the population density could result in the increase in criminal activities. Proactive measures by the community and local policing structures as well as the SAPS should be implemented to combat and prevent heightened criminal activities.

NATURE OF IMPACT		IMPACT ON PROPERTY VALUES
• Public open spaces forming part of the development should be kept clean and be encouraging		
recreational use		
Level of significance after	Moderate	
enhancement		
Cumulative or Residual	Possible pos	itive impact on property values due to densification
Impacts	and formalise	ed development without uncontrolled urban sprawl

6.2.3 Impact on Educational Facilities

The following primary schools are situated in the larger study area and in close proximity to the proposed Vosloorus development:

- Bopang Kgotso Primary;
- Rebontsheng Primary;
- Ndlelenhle Primary;
- Abinala Primary;
- Thembakazi Primary;
- Mthimkulu Primary

The nearest school, the Bopang Kgotso Primary School had 1 539 registered learners in 2014 with 112 Gr. R learners⁹. Of the above listed schools, this is the only known school within Ward 45 situated to the west of the N3. A situation exists where secondary school learners should travel further distances to attend the limited number of secondary schools in Vosloorus.

An estimate of 1 080 households could be accommodated as part of the proposed Vosloorus Node Project One development. This increased population figures would significantly increase the need for early learning facilities for infants, as well as primary schools for younger schoolchildren and secondary schools. All children of home owners, however, might not be of school going age at the same time. It should further be noted that some of these children could already be accommodated at the existing schools in the area as some of the "new" residents would most likely be from the local area. It is, however, difficult to determine the real need of the new home owners at this stage.

The exact number of school going children is thus difficult to determine, but it is still clear that there would be a large number of school going children that would have to be accommodated in the local area in the long term. The Bopang Kgotso Primary School which is closest to the development might not be able to accommodate the "new" learners due to it possibly being at capacity. Secondary school learners would also have to travel far distances to attend school e.g. to the Phineas Xulu Secondary School or the Illinge Secondary School, both in Vosloorus Ext. 1

⁹ www.schools4sa.co.za

(Ward 44) or to the Erasmus Monareng Secondary School located in Vosloorus Ext. 2 (Ward 64) or the Thuto Lesedi Secondary School in Ward 46.

The proposed development would thus add to the need for additional schools in the study area, due to the densification. It should, however, be noted that as part of the priority projects for the Vosloorus node, the construction of a primary school (Priority Project no. 5) within Vosloorus Ext. 16 (Ward 44) located to the north west of the proposed housing site is planned¹⁰. It is not known when the construction could start, or the number of learners that would be accommodated. Due to the proximity to the proposed development the issue remains problematic for primary school learners due to the inability to travel unsupervised for far distances.

Should no additional schools be built, the increase in learner numbers, would result in existing school classes becoming even more overcrowded thereby negatively impacting on the learning experience and possibly on the learners' achievements. Additional infrastructure such as classrooms, furniture, recreational facilities and sanitation facilities would further be required at these schools which currently cannot be provided. Long term spill-over effects could also be felt at schools throughout the larger area.

Failure to address the educational needs could seriously hamper the success of the development and the long term socio-economic stability of the community.

NATURE OF IMPACT	IMPACT ON EDUCATIONAL FACILITIES	
Phase	Operation	
Magnitude (m)	Moderate (6)	
Duration of impact (d)	Long term (4)	
Scale of impact (s)	Local (2)	
Probability of occurrence	Highly probable (4)	
(p)		
Level of significance (SP)	Moderate (48)	
$SP = (M+D+S) \times P$		
Mitigation measures		
• The developer and EMM should take note of the possible negative impact on the existing		
schools and should aim to address the issue, in cooperation with the Department of Education.		
• Although education and training is not a local authority competency, the EMM would have to		
consider the possible negative impact and motivate to the Dept. of Education to cater for all the		
learners in the area and for future learners.		
Level of significance after	Moderate	
mitigation		

¹⁰ Ekurhuleni Human Settlements Department: Vosloorus Node, Project 1: High Density Housing: Scope of Works

NATURE OF IMPACT	IMPACT ON EDUCATIONAL FACILITIES	
Cumulative or Residual	Negative socio-economic development due to difficulties	
Impacts	experienced with regards to the educational process and learning	
	experiences of learners	

6.2.4 Impact on EMM

It should be noted that the EMM would benefit from the proposed development by means of the increased tax base and service provisions to the development. This increased income base could be used to address the larger community's needs and ensure services to the wider area.

NATURE OF IMPACT		IMPACT ON EMM
Phase		Operation
Magnitude (m)		Moderate (6)
Duration of impact (d)		Medium-term (3)
Scale of impact (s)		Local (2)
Probability of occurrence (p)		Highly probable (4)
Level of significance (SP)		Moderate (44)
$SP = (M+D+S) \times P$		
Mitigation measures		
• Infrastructure should be maintained and proper services should be provided on an ongoing		
basis.		
Level of significance after	Moderate	
mitigation		
Cumulative or Residual	Lack of sufficient infrastructure and services associated with the	
Impacts	proposed development resulting in possible environmental pollution	

6.3 Conflicts between Local Residents and Newcomers

6.3.1 Impact on Social Networks

It is anticipated that the majority of the prospective property buyers or lessees would be from various urban areas in Gauteng and/or Vosloorus, although of different cultures (e.g. Zulu, Xhosa, Tswana, Sotho etc.) speaking various languages with some difference in income levels. Due to the existing mixed social fabric of residents in the larger area of Vosloorus, the proposed development is however not expected to introduce and enhance social differences. The community's social interaction is anticipated to be able to continue.

Due to the history in South Africa, possible conflict between South Africans and foreigners should also be taken into account. It is critical to ensure that South Africans are the beneficiaries of the proposed development through the provision of housing and employment opportunities to them, as an intense competition for jobs, commodities and housing could spark conflict or even violence.

NATURE OF IMPACT		IMPACT ON SOCIAL NETWORKS
Phase		Operation
Magnitude (m)		Moderate (6)
Duration of impact (d)		Medium-term (3)
Scale of impact (s)		Local (2)
Probability of occurrence (p)		Medium probability (3)
Level of significance (SP)		Moderate (33)
$SP = (M+D+S) \times P$		
Mitigation measures		
 An ongoing communication channel between the project developers (EMM and DBSA), and the local representatives should be established. Safety and security issues should be addressed and pro-active measures should be implemented to limit any criminal activities in the area. 		
Level of significance after mitigation	Low	
Cumulative or Residual Impacts	Conflict betwe local communi	en those that are perceived as "outsiders" and the ty members
	Possible increa	ase in criminal activities

6.4 Individual and Family Level Impacts

6.4.1 Impacts on Daily Living and Movement Patterns

The area is characterised by diverse transportation modes ranging from privately owned vehicles to taxis and buses that serve the residents and workers in the area. There is a fairly extensive network of commuter rail lines in the larger area, and the proposed new station would make this service more accessible to those commuters.

Minibus taxis remain one of the most popular modes of public transport in the area. Due to a large number of people travelling within the study area on a daily basis, some congestion is likely along the major movement routes during peak hour traffic.

Once the development has been completed, additional traffic created by residents and visitors travelling to and from the residential area could impact on the existing and new residents' daily living and movement patterns. More vehicles are mostly expected on Sam Sekoati Avenue and the M43. Access to the development should thus be carefully planned. Further accesses to the proposed development and road upgrading should ensure that the risk of accidents is limited.

A large part of the residents would continue to make use of public transport facilities. Road designs should thus consider the construction of pedestrian walkways, as well as taxi and bus ranks. Taxi and bus stop shelters are recommended and/or should link with the existing services and routes.

As the development would include a retail section, it is anticipated that there would be various pedestrian and vehicle movement to support these businesses. Intrusions in this regard should be planned to still ensure the least impact on the residents' daily living and movement patterns.

NATURE OF IMPACT	IMPACTS ON DAILY LIVING AND MOVEMENT PATTERNS	
Phase	Operation	
Magnitude (m)	High (8)	
Duration of impact (d)	Long term (4)	
Scale of impact (s)	Local (2)	
Probability of occurrence	Medium probability (3)	
(p)		
Level of significance (SP)	Moderate (42)	
$SP = (M+D+S) \times P$		
Mitigation measures		
Speed limits on the local roads should be enforced.		
• Bus and taxi stop shelters, as well as pedestrian walkways should cater for the increased		
population.		
• The main arterial roads in the study area should be maintained and/or upgraded to be able to		
accommodate the increase in traffic volumes.		

- The retail section should preferably be situated and accessible from limited high access street frontages.
- Car parking areas and structures should be located so that they do not dominate the development or street frontage
- The building should be designed to ensure and maintain the privacy of the residential component even though a retail component would form part of the development.

Level of significance after mitigation	Moderate to Low
Cumulative or Residual	Possible increase in traffic congestion
impacts	Possible increase in risk of accidents

6.4.2 Health Care

The proposed development is situated directly to the east of the Botshelong-Empilweni Private Hospital. This facility mainly caters for those that can afford private medical care. New residents who are employed are likely to have medical cover and will therefore also make use of the private facility. The poorer section of the community however would not experience the benefits of such a facility within the area as they would be dependent on public healthcare.

The increased population figures could intensify the need for additional adequate primary health care clinics. Existing clinics in the area include the services provided to the community as part of the Botshelong-Empilweni Private Hospital, two clinics within Vosloorus Ext. 9 as well as the Jabulane Dumani Clinic and T.B. Unit. Should these clinics be at capacity, the existing services

would not be able to accommodate the increased population in short periods of time once all have settled within the new development. Longer queuing, travelling further distances to clinics and possible impacts on working hours and productivity could occur.

NATURE OF IMPACT	HEALTH RISKS	
Phase	Operation	
Magnitude (m)	Moderate (6)	
Duration of impact (d)	Long term (4)	
Scale of impact (s)	Local (2)	
Probability of occurrence	Medium probability (3)	
(p)		
Level of significance (SP)	Moderate (36)	
$SP = (M+D+S) \times P$		
Mitigation measures		
 Investigate the possible extension of health services and/or clinic hours in conjunction with the Department of Health. 		
Level of significance after mitigation	Moderate	
Cumulative or Residual Impacts	Possible improved primary health care services	

6.4.3 Safety and Security

The completion of the proposed development would suddenly lead to a significant increase in the local population count. Crime levels in the area could thus increase just based on the increase in the population figures. As indicated previously, the crime levels in the area are relatively high. The existing situation and the population increase could thus warrant the extension of the local police service. It is uncertain whether this would be achievable, but failure to attend to possible criminal activities and the enforcement of strict security measures, as well as lack of appointment of additional police personnel could result in negative impacts on the quality of life of all the residents involved.

Safety and security features form part of the Vosloorus Node Project One development as it is planned to fence the development and have access control. Further security measures that could be implemented could include security guards patrolling the area, and the placement of security cameras and lighting at strategic places.

In addition, it is critical that the local SAPS with the assistance of community members and other law enforcement agencies respond effectively to any criminal activities in the area. A local programme must ensure that the appropriate policing resources, solutions and tactics are assigned and implemented to address the specific safety and security needs, demands and desires of the area.

NATURE OF IMPACT	SAFETY AND SECURITY ISSUES
Phase	Operation
Magnitude (m)	Moderate (6)
Duration of impact (d)	Long term (4)
Scale of impact (s)	Local (2)
Probability of occurrence (p)	Highly probable (4)
Level of significance (SP)	Moderate (48)
$SP = (M+D+S) \times P$	
Mitigation measures	
 The development should implement safety and security features as part of the development e.g. fencing, access control, security guards patrolling the area, and the placement of security cameras at strategic places. Sub-letting should not be allowed to ensure that the quality of life of the residents in the area remain high. The local policing services should respond effectively and timeously to any criminal activities, but should further focus on street crimes, assaults, and robberies. Pedestrian ways, entrances, driveways, car parking areas and common open space should be adequately lit to ensure security for residents and visitors at night 	
Level of significance after	Moderate
mitigation Cumulative or Residual Impacts	Possible increase in overall crime levels

6.5 Community Infrastructure Needs

6.5.1 Impact on housing market

During the public participation process undertaken for the IDP of the EMM, the provision of housing was identified as one of the key priorities for the Vosloorus area. The presence of large informal settlements and backyard shacks is symptomatic of the fact that the rate of housing provision in the region is inadequate at present.

Within the EMM the current housing backlog is estimated at 144 000 units. Development in this regard is hampered by the availability of land. Land that is available is mostly on dolomite.

The proposed development would assist in addressing the future housing needs in the area, especially based on the profile of the large number of poor and unemployed communities surrounding the site. The majority of prospective buyers or lessees could also be drawn from the surrounding areas, as individuals falling within the higher to middle income sectors in the nearby

townships would most probably be able to afford housing within the Vosloorus Node Project One development.

The project would assist with the diversification of available housing opportunities which could maximise the benefits for the local poor communities.

NATURE OF IMPACT	IMPACT ON HOUSING
Phase	Operation
Magnitude (m)	Moderate (6)
Duration of impact (d)	Long term (4)
Scale of impact (s)	Local (2)
Probability of occurrence	Highly probable (4)
(p)	
Level of significance (SP)	Moderate (48)
$SP = (M+D+S) \times P$	
Mitigation measures	
 Mitigation measures discussed under all sections would be applicable here to ensure an integrated development. The "new" home owners should be informed about the rights and responsibilities that come with securing title deeds for their homes. 	
Level of significance after	Moderate
mitigation	
Cumulative or Residual	Integrated development
Impacts	Sound township development

6.6 Intrusion Impacts

6.6.1 Visual Impact and Sense of Place

The proposed development will have a permanent visual impact on the currently "undisturbed" site on which it would be located, but should also be viewed against the backdrop of the area. The area surrounding the site is characterised by existing infrastructure (power lines also on site), roads, traffic movement, littering on site as well the densely populated Vosloorus area. The development is not expected to significantly influence the sense of place, considering that the area is already being subjected to infrastructure, increased urbanisation levels, and industrial activity. Although the buildings would be clearly visible, it is anticipated that it would, over time, blend in with the rest of the environment, gradually changing the sense of place perception.

This impact is then rated of a low magnitude as the proposed development's physical features would make it a pleasant feature, by attending to the building design, integrated lighting, appropriate signage, and landscaping.

NATURE OF IMPACT	VISUAL IMPACT AND SENSE OF PLACE	
Phase	Operation	
Magnitude (m)	Low (4)	
Duration of impact (d)	Long term (4)	
Scale of impact (s)	Local (2)	
Probability of occurrence	Medium probability (3)	
(p)		
Level of significance (SP)	Moderate (30)	
$SP = (M+D+S) \times P$		
Mitigation measures		
• Building designs should take the character of the area into account and should not detract from		
the existing sense of place		
• Designing of walls, roofs and buildings should be done in such a manner to blend in with the		
natural environment.		
• Lighting issues should receive the attention it deserves to avoid any light pollution at night.		
Landscaping or architectural features and structures should be used to limit intrusions.		
• Visual impacts should be limited by the use of trees, or with type of buildings, landscape		
features or different surface treatments		
The mitigation measures of the Visual Impact Assessment should be strictly implemented		
Level of significance after	Moderate to Low	
mitigation		

6.6.2 Noise Impact

Impacts

Cumulative or Residual

Once the development has been fully completed, general noise levels would increase due to the in-migration of additional people to the area and the activities associated with their daily living and movement patterns. Noise would further be generated by the vehicles of the property owners. It is however not anticipated that specific significant noise generating activities would be present. The existing residents within the area would probably adapt to the changing environment and would "get used" to the additional "general daily noise" associated with this type of development.

Severe change in landscape character

Care should be taken, however, to limit excessive noise as the hospital as sensitive receptor is situated directly to the west of the proposed development.

NATURE OF IMPACT	NOISE IMPACT
Phase	Operation
Magnitude (m)	Low (4)
Duration of impact (d)	Long term (4)
Scale of impact (s)	Local (2)

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NATURE OF IMPACT	NOISE IMPACT	
Probability of occurrence	Medium probability (3)	
(p)		
Level of significance (SP)	Moderate (30)	
$SP = (M+D+S) \times P$		
Mitigation measures		
• As part of urban planning possible sources of excessive noise should be identified. The layout		
design should then aim to address this issue to avoid excessive noise sources to be located		
next or near the hospital as sensitive receptor.		
Vegetation could assist in limiting disturbing noise.		
• Speed limits should be implemented along the major routes to ensure that the lowest disturbing		
sound arise from the motor vehicles.		
Level of significance after	Low	
mitigation		
Cumulative or Residual	Increased noise due to urbanisation and densification	
Impacts		

7. THE NO-GO ALTERNATIVE

If the proposed Vosloorus Node Project One is not constructed, the social impacts as part of the construction phase would not occur and the status quo in the area would therefore remain. In cases of negative impacts, this could be a positive outcome for some. Long term possible negative impacts on the daily living and movement patterns, intrusion impacts, possible noise pollution, safety and security risks, concerns with regards to educational opportunities, impact on local health services and overall change of character of the site would also be negated.

The most important social impact with regards to the no-go alternative would result in a significant loss in terms of addressing the housing needs in the EMM area. Meeting housing needs remains one of the EMM's biggest challenges. Furthermore, the possible extension of informal settlements in the already densely populated areas in close proximity to the proposed development would not be curbed.

The opportunity costs would include the loss of employment and business opportunities associated with the construction phase of the project, as well as the long term economic benefits for local businesses, industries and service providers due to the increased population figures and the retail section of the project.

The need for low-income housing opportunities to assist the residents of Vosloorus and to ensure urban integration is a critical issue. Therefore, due to the housing needs within the EMM, it is not recommended that the no-go alternative be pursued.

8. DECOMMISSIONING

Decommissioning refers to the actual dismantling of the infrastructure and/or replacement of the infrastructure with newer technology. At this stage, it is not anticipated that the housing development would be decommissioned.

However, renovations or replacement of certain infrastructure is likely to only take place within the long term. It is therefore recommended that a detailed Social Impact Assessment be undertaken at that stage to determine the actual impacts on the changing social environment.

Possible social impacts to be experienced during renovations or the replacement of infrastructure with newer technology options would be similar to the impacts described as part of the construction process, although more limited in extent.

9. CONCLUDING REMARKS

9.1 General

From the above Social Assessment as part of the Basic Assessment, the following conclusions can be drawn:

 The proposed development could be accommodated without severely negatively compromising the day to day life of the communities in close proximity to the site. In most cases, the negative social impacts resulting from the proposed development are not perceived to be a threat to the quality of life of the residents of the area, but rather as nuisance factors.

- From a social perspective, in terms of the location of the specific housing development the following should be noted:
 - The development is in close proximity to the existing township of Vosloorus and could serve as integration link between these nodes. It is not perceived to contribute to urban sprawl and inefficient types of land use.
 - The development is situated next to major routes in the area (the N3, M43 and R103) which links various urban nodes. Access should thus be carefully planned but is perceived to be appropriate.
 - Depending on the number of local labour to be employed and the source of labour (e.g. Vosloorus, and other nearby townships) the development is not expected to result in excessive commuting by the bulk of the construction workers.
 - The retail section of the proposed development would serve the needs of the local community.

At this stage there is no evidence of attitude formation against the proposed development, but sensitive issues should be noted and attended to, to avoid any possible mobilisation against the proposed project.

It is expected that the proposed development would be supported should it be undertaken in a responsible and sustainable way.

The proposed development should, from a social point of view, be considered by the authorities (Gauteng Department of Agriculture and Rural Development (GDARD)).

9.2 Positive Social Impacts

The proposed project would have the following anticipated positive social impacts:

- The Vosloorus housing development provides houses but could also assist in the vision of creating sustainable human settlements. It would furthermore provide more choices in terms of typologies and tenure, give residents access to economic opportunities, and provide the necessary social amenities to ultimately lead to improved quality of life. This choice in terms of housing types could encourage social mix and integration.
- The demand for retail and business property in the townships has been steadily increasing as residents seek to cut travelling distance in pursuit of particular services. The development would meet that demand.
- Local skills would most probably be available which could make locals employable during the construction phase of the project. If on-site skills development and training would be implemented, the benefits of the short term employment could be maximised.
- The proposed project is expected to result in some positive impacts on job opportunities in the area, although the majority of these jobs would be limited and only of a temporary nature. The development would not significantly reduce the unemployment rate of the area, but it would still contribute to relieving poverty in the area.
- The EMM's tax base would be extended resulting in improved income due to the proposed development.

Although the above positive impacts are limited in extent, the impact thereof should be considered in view of the socio-economic profile of the communities of the area.

9.3 Negative Social Impacts

In terms of the negative social impacts the following should be noted:

- The negative social impacts can, in most cases, be successfully mitigated.
- The influx of jobseekers to the area could result in possible social clashes with the local community and place additional strain on the existing services and infrastructure.
- The population change could create various social challenges and would result in the need for the upgrading or extension of certain municipal infrastructure and services.
- The need for additional education facilities and possible health services should be addressed.
- The proposed development is expected to impact on the daily living and movement patterns especially with regards to the increase in traffic to and from the site. The presence of construction workers in the area is also a source of concern, particularly with regards to the impact on safety.
- There would be some impact on the sense of place, although it is expected that this negative impact would be of a low magnitude.
- Negative health, safety and security impacts (especially during the construction phase) are probable and should be addressed as far as possible.
- Intrusion impacts relate to noise, air and visual impacts.

9.4 Recommendations

Recommendations to mitigate negative impacts and to enhance positives are:

- The improved income generated by the proposed project should be used to ensure enhanced service delivery and infrastructure developments in the area. This would thus add to ensuring that the broader community also experience the benefits created by the proposed development.
- Safety and security issues should preferably be addressed prior to the construction phase.
- Social benefits in terms of training, skills development and the use of local labour should be aspired to. Should these skills be transferable to other employment sectors it would result in further sustainable benefits.
- It is imperative that local labour be sourced otherwise no benefits would accrue to the locals, apart from those obtaining new improved accommodation. Apart from job creation during the construction phase, locals should also be allowed an opportunity to be included in a list of possible local suppliers and service providers.
- Maximising the use of local labour during the construction phase would also ensure direct local benefits from the proposed development, and this could prevent conflict between the local community members, outsiders and the proponent as such. Such an approach would also limit some negative impacts associated with the influx of large construction teams (possible increase in crime, pressure on infrastructure, social conflict and so forth) the construction of and activities at construction camps, the spread of HIV and so forth.

- Securing of jobs is a sensitive issue which should be carefully dealt with.
- A comprehensive skills audit could assist as basis for the local employment programme.
- Attention should be given to the extension and improvement of the existing HIV/Aids awareness programmes.
- The property owners and community members should be kept informed of progress, decisions taken with regards to the development and construction schedules.
- The Vosloorus Node Project One development should ensure quality sustainable housing to ensure safe, productive and quality living conditions which would assist in attaining social and economic development
- Efficient public transportation opportunities for the poor should be linked to the housing development to allow residents to commute to and from places of employment.
- Safe places for children to play should be established.
- The designs should cater for sufficient recreational areas spread out on the property and easily accessible to all the residents.
- The scheme should be child friendly and should accommodate the needs of the aged and disabled.

10. SOURCES CONSULTED

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