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FINAL ENVIRONMENTAL SCOPING REPORT FOR THE PROPOSED RESIDENTIAL TOWNSHIP ESTABLISHMENT ON THE FARM BESTWOOD 459 RD

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

1. INTRODUCTION

The purpose of this environmental Scoping Report is to broadly and collaboratively identify all the possible issues and impacts from activities associated with the proposed development. This Scoping Report will therefore contain all the information that is necessary for an adequate understanding of the nature of issues identified during the scoping phase of this project. During the EIA process the focus will be placed on identifying and assessing the impacts on the environment, and impact mitigation thereof.

The planning and eventual construction and operation of the proposed development represents the legal trigger for the Environmental Impact Assessment (EIA) process to follow in terms of the List of Activities and Competent Authorities identified in term of Sections 24 & 24D of the National Environmental Management Act (Act No. 107 of 1998) (NEMA), activity numbers 1(p) & 2.

People from the local communities that require work will be given preference in the opportunities that will emanate from the proposed activities. It is expected that this opportunity for employment will contribute to the economic upliftment of the local communities.

1.1 THE EIA PROCESS FOLLOWED

During the course of this study the following actions and steps were followed in accordance with the Regulations set out in Government Notice No. 385 of 21 April, 2006 of the NEMA:

- A terrain assessment of the physical, historical and biological environmental components of the site was undertaken on number of occasions in order to determine which areas would be most suitable (cause the least impact on the environment) for potential development nodes.
- An assessment was made of the ecological characteristics of the area which could potentially be affected by the proposed development.
- The Public Participation process was conducted on 27/10/2007 at which time Background Information Documents were distributed to adjacent landowners as well as other I&AP's (please refer to Appendix 3A for a copy of the Background Information Document as well as proof of the distribution of the BID's). The BID's also included invitations to the public open days.

- Two site notices were erected at several conspicuous locations on the 27/10/2007(please refer to Appendix 3D for a copy of the Site Notice as well as proof of the erection of the Site Notices). The one site notice was placed at the entrance to the premises and the other one was placed approximately 300m to the south on the fence of the reserve of the road to Upington. In addition, two notices were placed in Kathu. One was placed at Shoprite and the other one was placed at the charge office of the SAPS. (See Appendix 3D)

- A public open day was held on 13/11/2007 (14:00 to 20:00) at the Kathu Primary School. All I&AP's attended the public open day, therefore no public open day were held on the 14/11/2007(please refer to Appendix 3F for a copy of the attendance register). This public open day was held for the public to view the proposed planning and conceptual layout plans. This process involved the evaluation and identification of social and economic issues.

- A meeting with land owners of Reitz Small Holdings was held on 19/11/2007 (please refer to Appendix 3G for a copy of the minutes and attendance register).

- The project was advertised on site and in a local newspaper on 1 November, 2007. Advertising, both on site and in the press, was done in English. (Please refer to Appendix 3C for a copy of the press).

- Issues related to social aspects of directly affected landowners and properties were listed during the public open day as well as during the land owners meeting. These issues will be discussed in Appendix 3H

- The anticipated impacts and issues, whether positive or negative, were identified and assessed in order to determine their potential significance and the need for further assessment during the subsequent EIA process.

- A complete Draft Scoping Report was compiled by using desk study data, data from site investigations as well as comments and concerns from the public. This Draft Scoping Report will be made available for public viewing towards the end of February 2008.

During the course of this study the following actions and steps will still be followed in accordance with the Regulations set out in Government Notice No. 385 of 21 April, 2006 of the NEMA:

- Comments and concerns received from I&AP's regarding the Draft Scoping Report will be incorporated into the Final Scoping Report. These comments and concerns will be assessed and integrated with mitigation measures.

- An Application for Authorisation, signed by the Applicant, together with a Declaration of Independence, which was signed by the environmental consultant, will be submitted to the Northern Cape Department of Tourism, Environment and Conservation together with the Final Scoping Report. This was decided after consultation with Mr Reaobaka Molusi, an official of the Northern Cape Department of Tourism, Environment and Conservation. Therefore, a reference number will only be allocated to the project after the submission of the Scoping Report to the Department.

- Once the Northern Cape Department of Tourism, Environment and Conservation accepted the Final Scoping Report, an Environmental Impact Assessment Report with an attached Environmental Management Plan will be compiled. All issues from the Scoping Report will be addressed in the EIA Report as well as issues identified by the Environmental Practitioner as well as by the specialist studies.

- A Draft EIA with attached EMP report will be made available for comments to the registered I&AP's. Comments received from the I&AP's regarding the EIA and EMP report will be incorporated into the Final EIA and EMP report. The focus of the EMP will be to address the potential issues and impacts as referred to in Chapter 4.

- The Final EIA and EMP report will be submitted to the Northern Cape Department of Tourism, Environment and Conservation.

The following specialist studies will be included into the EIA and EMP report:

- Vegetation Survey: A description of the vegetation of the study area, including the identification and assessment of potential Red Data species compiled by Ekotrust cc (Dr N van Rooyen). This Specialist study has already been done on the 25/09/2008. Data from this specialist study has been incorporated into the Draft Scoping Report; however, the Vegetation Survey Report will only be included as an attachment with the EIA report.

- Vertebrate Fauna Study: A description of the vertebrate Fauna of the study area, including the identification and assessment of potential Red Data species compiled by Dr PC Anderson. This Specialist study has already been done in December 2008. Data from this specialist study has been incorporated into the Draft Scoping Report; however, the Vertebrate Fauna Study Report will only be included as an attachment with the EIA report.

- Heritage Impact Assessment: A site visit will be done to identify any Heritage sites. This study will be conducted by Cultmatrix (Dr Robert de Jongh). Cultmatrix specializes in cultural history and archaeology studies, to determine whether there are any sites of

heritage significance within the overall study area and specifically within the areas proposed as development nodes. This specialist report will only be incorporated into the EIA and EMP report.

- Geohydrology Report: VSA GeoConsultants Group will compile a Geohydrology Report. This report will be incorporated into the EIA report.
- Traffic Impact Study: Trafftrans will compile a Traffic Impact Study Report. This report will be incorporated into the EIA report.
- Engineering Services Report: V&V Consulting (Civil Engineer), together with Pienaar & Erwee (Electrical Engineers) will compile an Engineering Services Report. This report will be incorporated into the EIA report.

1.1.1 EAP and Expertise

- EAP: P.N. van der Merwe
- Expertise: Environmental Impact Assessments in Land-use and Infrastructure Development.
- Years of experience: 17. Qualifications: B.Sc. Hons. Environmental Management PU for CHE.

1.1.2 Legislation and Guidelines

The following legislation and guidelines were considered in the compilation of the scoping report:

- NEMA: List of activities and competent authorities identified in terms of sections 24 and 24d of the national environmental management act, 1998, the Act and published in Government Notice No. R. 386 of 2006. The Minister of Environmental Affairs and Tourism has in terms of sections 24 and 24D of the National Environmental Management Act, 1998 (Act No. 107 of 1998), listed the activities in the Schedule. This Notice comes into effect on the date of commencement of the Environmental Impact Assessment Regulations, 2006, made under section 24(5) of the Act and published in Government Notice No. R. 385 of 2006.
- National Water Act (Act 36 of 1998)(English text signed by the President)(Assented to 20 August 1998): To provide for fundamental reform of the law relating to water resources; to repeal certain laws; and to provide for matters connected therewith.
- National Heritage Resources Act (1999): To introduce an integrated and interactive system for the management of the national heritage resources; to promote good government at all

levels, and empower civil society to nurture and conserve their heritage resources so that they may be bequeathed to future generations; to lay down general principles for governing heritage resources management throughout the Republic; to introduce an integrated system for the identification, assessment and management of the heritage resources of South Africa; to establish the South African Heritage Resources Agency together with its Council to co-ordinate and promote the management of heritage resources at national level; to set norms and maintain essential national standards for the management of heritage resources in the Republic and to protect heritage resources of national significance; to control the export of nationally significant heritage objects and the import into the Republic of cultural property illegally exported from foreign countries; to enable the provinces to establish heritage authorities which must adopt powers to protect and manage certain categories of heritage resources; to provide for the protection and management of conservation-worthy places and areas by local authorities; and to provide for matters connected therewith.

1.2 STUDY OBJECTIVE AND PROJECT MOTIVATION

The objective of this Scoping Report is to identify the issues that are associated with the proposed establishment of the Residential Township, in terms of environmental, biophysical and socio-economic aspects, in order to present preliminary *impact mitigation recommendations* that are to be implemented during the design and especially during the construction and "operational" phases of the proposed development.

The developers of the Bestwood Residential Township Development have done an intensive market research for the area. From this research, the following motivation for the project came to light:

1.2.1 Offer to Gamagara Municipality:

- The opportunity to be seen as the new regional centre of the 4 towns;
- To provide, in lieu of bulk contributions, the installation of bulk services such as:
    1. New reservoir site and reservoirs with bulk water supply augmentation by way of new field of boreholes and construction of two 5 Mℓ reservoirs;
    2. New site for sewage treatment works as existing works have reached its design capacity with no space for further extension; and
    3. Upgrade of power supply;

- Benefit of increase in Rates and Taxes;
- Compliments the 5 year action programme i.e.: Upgrading of bulk services; and
- Compliments integrated programme i.e.: New school by end 2009.

1.2.2 Offer to Community:

- Fully integrated town;
- Regional facilities
- Retail and industrial opportunities;
- Hospitality opportunities;
- Schools/ Churches;
- Medical Facilities;
- Sport Facilities
- Security; and
- Job opportunities.

1.2.3 Offer to Mining Industry:

- Providing an integrated township with fully serviced stands and all other amenities;
- Building of top structures to a variety of architectural designs to suite end-users' financial capabilities; and
- Making housing packages available to the mining industry to be leased in batches or to be bought by individuals on outright sale.

1.2.4 Offer to the upliftment of the local community:

- Local contactors will be involved;
- The development will help satisfy the need for job opportunities in the area;
- People will be taught new skills; and
- This will ultimately lead to social upliftment.

1.3 LOCALITY AND STUDY AREA

The proposed activity is situated on the Farm Bestwood 459 RD (Figure 1). The site itself covers part of the Farm on the western side of the Farm Bestwood. The farm is east (adjacent) of the Town Kathu and approximately 12 km North-east of the Sishen Mine. The Farm Bestwood falls within the Northern Cape Province and the Gamagara Municipality. (Please refer also to the Topographical Locality Map in Appendix 1.)

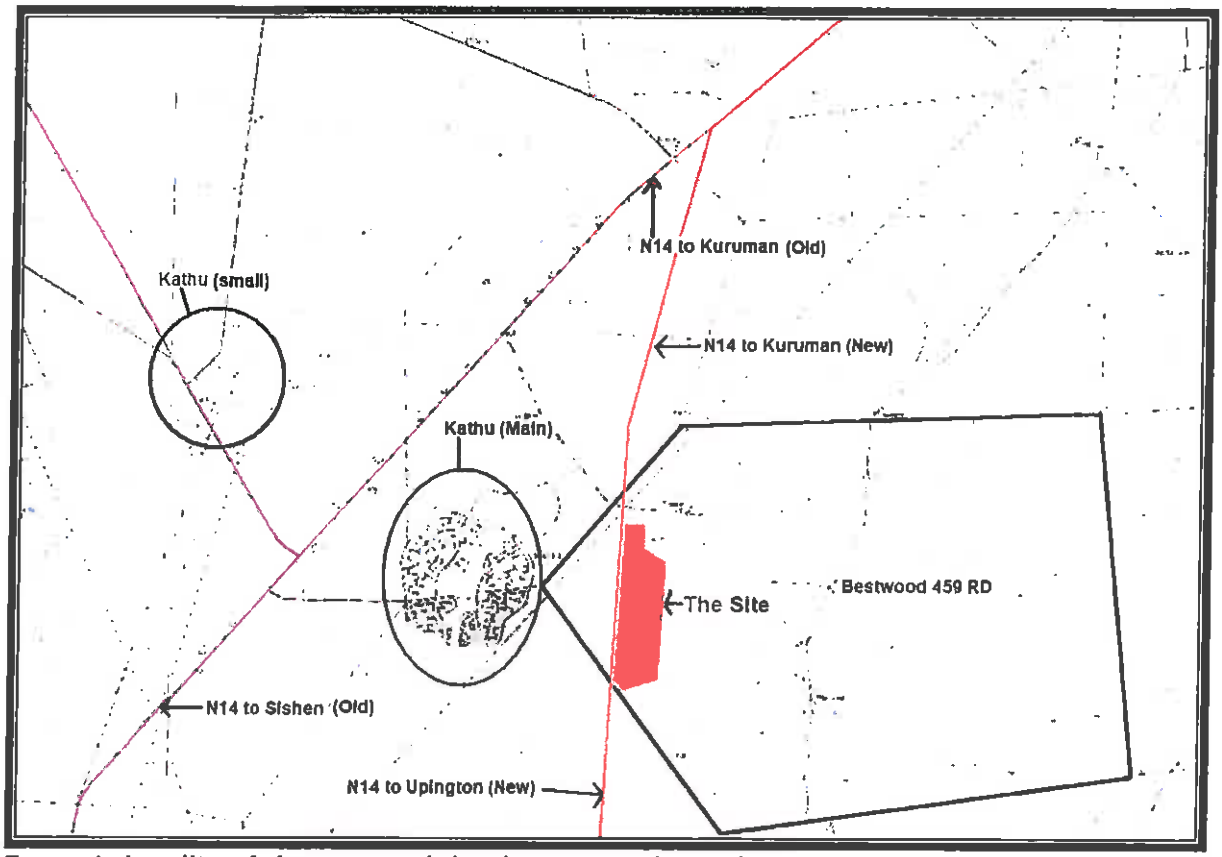


FIGURE 1: Locality of the proposed development node on the Farm Bestwood 459 RD. (a larger copy of the above site plan is available in Appendix 1 and a layout plan is also available in Appendix 2).

Kathu, meaning "town under the trees", after the Camel Thorn forest it is situated in, is the iron ore capital of the Northern Cape Province.

Municipal status was allocated to the town of Kathu during July 1979. At present the municipal area consists of Kathu, Dingleton and Sesheng. Kathu is situated in the Kalahari Region of the Northern Cape - 47 km north of Postmasburg and approximately 45 km north east of Olifantshoek. The municipality originally consisted of 2 towns namely Sishen and Kathu. Yskor started developing the town of Sishen in 1953 - south of the mining area. In 1990 the name Sishen was changed to

Dingleton. Development to the new town, Kathu, began in 1974 after proclamation was finalized in 1972.

Kathu Forest Natural Heritage Site:

In 1995, the Kathu Forest was proclaimed a Natural Heritage Site by the Department of Environment Affairs and included the Sishen Private Nature Reserve (Wildkamp), the farms Kathu, Sims, Hartnolls, Uitkoms, Kathu Town, Kathu Golf Course and Kathu Pan (Laan *et al.* 1995). The Natural Heritage Site covers an area of approximately 4672 ha (Figure 8). The Kathu Forest has been included on the NACOR list as an area of conservation importance in 1978. Currently the conservation status of the Kathu Forest is being addressed by DWAF and according to the Government Gazette of 6 July 2007 (Notice 810 of 2007) an invitation to submit comments on the declaration of Kathu Forest as a 'Protected Woodland' under section 12(1) (C) of the National Forests Act, 1998 (Act No. 84 of 1998) as amended has been published.

A survey of the vegetation of Kathu Forest was done by Macdonald in 1976 and he classified the woodlands into three categories, i.e. the dense stands of *Acacia erioloba* form category 1 dense woodland, while the intermediate dense stands of woodland form category 2, and the open woodlands form category 3. However, the area covered by the NHS includes two other structural types i.e. open to dense bushveld (category 4) and shrubland/thicket (category 5). The main forest, category 1 woodland, are stands of tall *Acacia erioloba* trees occurring in dense patches on deep Kalahari sand. This category appears to be less than 200 ha in size and occurs mainly on the farm Uitkoms and the Sishen Private Nature Reserve (Wildkamp) (Macdonald 1976).

The major part of the Kathu Forest consists of Category 2 *Acacia erioloba* woodland and covers approximately 600 ha of the Farm Uitkoms 463. Other patches of this woodland flank both sides of Vlermuisleegte on the farm Uitkoms and in the northwest of the farm Bestwood 459 (Figure 8). This woodland also forms part of Kathu town and the golf course.

The largest part of the *Acacia erioloba* category 3 open woodland and shrubland is a more open community with a well established grass sward (Macdonald 1976). The sandy soils are shallow with calcrete outcrops in some areas. The dominant plant species are *Acacia mellifera* and the grass *Enneapogon desvauxii*.

Threats to the Kathu Forest mentioned by Van Hoven & Guldemond (1993) and Laan *et al.* (1995) include:

- Overstocking;
- Water extraction from the Kathu aquifers;

- Disturbance by the road network; and
- Chemical control of *Acacia mellifera*.

The current expansion of Kathu town also poses a threat to the Kathu Forest and environs. However, if residential development is only allowed to the south-east, south and west of the town, the Kathu Forest will be safeguarded.

Ecosystem status is based on how much of an ecosystem's original area remains intact, relative to certain thresholds (Driver *et al.* 2004). According to Mucina & Rutherford (2006) and also according to the criteria used in determining the status of ecosystems (Driver *et al.* 2004), the Kathu Bushveld wherein the development is proposed is considered to be 'Least Threatened', therefore more than 80% of the natural habitat is still intact. Currently there is none of this vegetation type conserved in statutory conservation areas, except for the Kathu Forest which is conserved as a Natural Heritage Site, although it is intended to declare the Kathu Forest as a 'Protected Woodland' (NFA, 1998).

1.4 PROJECT DESCRIPTION

The Farm Bestwood encompasses 3 300 hectares of land. The proposed site will only cover an area of approximately 200 hectares.

The proposed residential development would make available single residential erven, group/cluster housing, retirement village, sport and recreational facilities, retail nodes, light industrial nodes, hotel/conference/lodge facilities, school/places of worship and hospital/clinic/medical facilities. (Preliminary Layout Plan, Appendix 2).

The total, cumulative footprint of the proposed township developments will be limited in extent to 6% of the total area of the farm. Please note that this footprint includes the Open Space Zone II (footprint size of approximately 7.2ha). The total, cumulative footprint of the proposed township development excluding the Open Space Zone II will be 5,8%. (See Appendix 2).

TABLE 1: Areas of the proposed development, relative to the total area of the site.

USE ZONE	PERCENTAGE OF SITE (200HA) IN %	SIZE (Ha)
Residential Zone I @ 700m²	6.73	13.4595
Residential Zone I @ 640m²	15.13	30.2597
Residential Zone I @ 600m²	10.86	21.7145
Residential Zone I @ 500m²	20.60	41.1949

Residential Zone II	10.63	21.2719
Sub-Total (Residential Zone)	63.95	127.90
Business Zone I	3.10	6.2114
Business Zone II	0.30	0.6000
Sub-Total (Business Zone)	3.40	6.8114
Industrial Zone I	3.33	6.6587
Institutional Zone II	1.61	3.2142
Sub-Total (All Zones excluding Open Space)	4.94	9.8729
Open Space Zone I	3.60	7.2020
Sub-Total (All Zones)	78.89	151.7868
Infrastructure (Streets)	21.11	48.2132
Total	100.00	200.0000

A preliminary town ship lay-out has been prepared for the purposes of this Scoping Report. This lay-out is not final but provides a conceptual image of what is proposed at this stage. It is subject to alterations. (Refer to Appendix 2).

1.5 SERVICE PROVISION (Preliminary Report)

A detailed services provision study was conducted by Mr A de Bruyn of V&V Consulting Engineers to assist in the process. The purpose of a Services Report is to provide the developer with guidelines regarding the provision and standard of services for the subdivision of farmland. This report would include the treatment, supply and management of water, sewerage system, roads, storm water, electricity, fire protection and solid waste. In all instances, the minimum standard of services is in accordance with the General Guidelines for the Provision of Engineering Services for "Residential Townships" ("Red Book"). During this integrated process, mitigation measures will be designed which will be described within the EIA Report. As per the new NEMA Regulations, all detailed investigations will be conducted prior to the submission of the EIA report.

The provision of services to the stands at each of the proposed development nodes is a factor that will be placed under intensive investigation during the EIA process in order to ensure the environmental sustainability and integrity of the project.

1.5.1 Water reticulation

Serious expansion programmes have been announced by all major mining houses operative in the Northern Cape due to Transnet's announcement that the export capacity of the Sishen-Saldanah railway line are receiving urgent attention. The strategic location of Kathu in relation to all envisaged expansions of mining activities make Kathu the preferred location to provide in the need for housing and other amenities which will be generated by the expected growth.

The expected growth will lead to increased pressure on the water sources. AT PRESENT Kathu receives water from underground resources only, but in future it will be imperative for Gamagara Municipality to apply for an allocation of surface water available from the Vaal Gamagara Scheme.

Sufficient water is therefore available for the proposed development. A formal water licence application for the abstraction of groundwater is in process for submission to DWAF to supply in the water needs of this first phase of the development of Bestwood Estates. An application to Sedibeng Water will be submitted to provide for future expansion envisaged for Kathu and to ensure a water supply source with higher assurance of supply.

The water will have to be pumped from the production boreholes to a new ground level reservoir on the proposed development. This system can possibly be linked to the existing Kathu water networks, thereby eliminating the need for water towers and associated energy cost savings. From the reservoir and trunk main line a reticulation network will be installed.

1.5.2 Sewerage reticulation

A standard waterborne sewer reticulation network will be installed for the development. From the pump station the sewage will be pumped to a new 3 Mℓ sewage treatment plant. The proposed position of the new sewage treatment plant was requested by Mr Lategan Botha, former manager technical services of Gamagara Municipality.

1.5.3 Streets

A conceptual road network has been established for the development.

In general, all roads will be constructed to a width of 6,0 m to 7,4 m and designed with 2 - 3 % camber or crossfall and a 300 mm mountable kerb on both sides with an Asphalt surface seal.

The street's pavement structural design will be done in accordance with Draft UTG 3 and the "Redbook". The road classification for the development is class 4 UB.

1.5.4 Storm water system

Normally provision must be made for two stormwater management systems. The major and minor systems. The ruling grade of the development area is approximately 1:3 00 which is not sufficient slope to provide for the installation of stormwater pipes which must be installed at a minimum grade of 1:150. Overland flows will therefore be preferred as far as possible.

The encroachment of runoff from the 100 year frequency design storm on primary roads at the crown of the road should not exceed a depth of 150mm to allow the operation of emergency vehicles such as ambulances and fire tenders.

The encroachment on properties adjacent to roads by the runoff from the major design storm should not exceed the ground level at the back of the footway or boundary of road reserve as applicable. For flat areas and areas located below roads and areas of high runoff such as parking area, special precautions should be taken to protect buildings from flooding. These may include the zoning of such areas for buildings to have ground floor levels above the design flood levels and the flood-proofing of buildings.

1.5.5 Access

Three access points to the development area are proposed from the N14 national route. The northern access to the development is situated directly opposite the existing North Eastern access to Kathu from the N14 national route on the existing entrance to the Farm Bestwood. It is envisaged to link the southern most access also across the N14 with the future major street network of Kathu. Approval for these accesses will have to be obtained from the South African National Roads Agency Limited (SANRAL).

1.5.6 Electrical supply

Gamagara has indicated that they do not have sufficient capacity to provide a supply to this development. At this stage an application has been submitted with ESKOM for a bulk supply to this development. There is a 400 kV/ 132 kV Eskom substation close to this site from which a bulk supply can be obtained if sufficient capacity exists.

The following energy saving measures can also be undertaken to reduce the load demand on the electric networks:

- All cooking to be done by gas; and

- Water heating to be done by solar heating systems.

The complete electrical reticulation of this development will be done by means of underground cable.

The network will consist of the following cables:

- Medium Voltage (MV) cables; and
- Low Voltage (LV) cables.

Miniature substations will be installed to transfer voltages from MV to LV eventually. Meter kiosks with meters will be installed on erf boundaries for individual house connections to be terminated and energy meters to be housed. Provision for street lighting has been made to enhance safety and visibility at night.

Alternative energy sources include the following:

- Solar energy to be utilized effectively for the heating of household water by means of solar power geysers as well as for heating swimming pools.
- Gas appliances could be used, especially for cooking and heating purposes.
- The use of power saving lamps could also help with a reduction on the electricity consumption.

1.6 Alternative Considered

It is difficult in terms of this project. An alternative land-use can be an industrial and commercial land-use. The potential impacts of such an alternative will be of higher significance if one consider aspects such as:

- Higher water-use volumes.
- Bigger potential for air pollution.
- Fewer opportunities for open-space developments.
- Limited opportunities for electricity generation.
- Higher run-off volumes to be generated from extensive hard surfaces such as roofs and parking areas, and;
- Bigger component of heavy vehicle movement to and from the site.

2. ENVIRONMENTAL DESCRIPTION

In order to determine the environmental impacts and identify possible issues associated with the proposed development of the Residential Township Development, it is necessary to provide baseline environmental information. Following comprehensive site investigations and desk studies, as well as discussions with Interested and Affected Parties, the following section provides a description of the environmental conditions and important elements within the study area.

Strong emphasis was placed on the ecological assessment of floristic and faunal elements within the proposed area of development, such that sensitive elements that might adversely be affected by the proposed development could be highlighted. A general assessment of ecological elements does not require detailed floristic and faunal sampling. In the study conducted by Ekotrust CC, plant community descriptions were made based on physiognomic appearances and variations observed in the habitats within the study area, as well as dominant species composition. Focus was placed on the identification of any Red Data or rare species within the study area.

2.1 CLIMATE

Rainfall data for the study area was obtained from the Sishen Weather Station (0356/857AX) over a period of 19 years (please refer to Figure 2 below for the graphical representation of the precipitation information).

The area is defined as summer and autumn rainfall when approximately 89% of the annual rainfall occurs. The area has very dry winters, when approximately 14mm (or approximately 4% of the total rainfall) of rain from July to August were recorded. This indicates an extreme variation in wet and dry cycles throughout the year. The Mean Annual Precipitation is approximately 220-380mm with frequent frost in the winter.

In terms of climate, the rainfall intensity is regarded as the most important element during construction phase, as it can potentially determine the risk of significant sheet and gulley erosion during the development stages. The rainfall intensity refers to the maximum precipitation recorded within a period of 24 hours. Within the study area, the highest rainfall intensity was measured in December (146 mm), which is at the beginning of the wet cycle. Other months with

moderately high rainfall intensities are February (118 mm) and March (113 mm). Therefore, construction during these months should ideally be avoided.

Further, in terms of climate, the scarcity of precipitation is regarded as the most important element during the operational phase, as each dwelling to be built on the site will need water. Over the period of 19 years, 8 months had minimum rainfall of 0mm.

Temperature data for the study area was obtained from the Sishen Weather Station (0356/857AX) over a period of 20 years (please refer to Figure 3 below for the graphical representation of the temperature information).

The climate is very hot in summer (with mean monthly maximum temperatures of 26.7°C) and very cold in winter (mean monthly minimum temperatures are 11.8°C).

The highest mean daily maximum temperatures are 39.7°C in December and 40.0°C in January. On average, these are also the hottest months of the year. The lowest mean daily minimum temperatures were recorded for June (-5.7°C) and July (-6.9°C). The coldest months, on average, are from June to August, during which time frost may occur.

Cloud cover is at its highest between January and March, with a mean cloud cover of 50% or more.

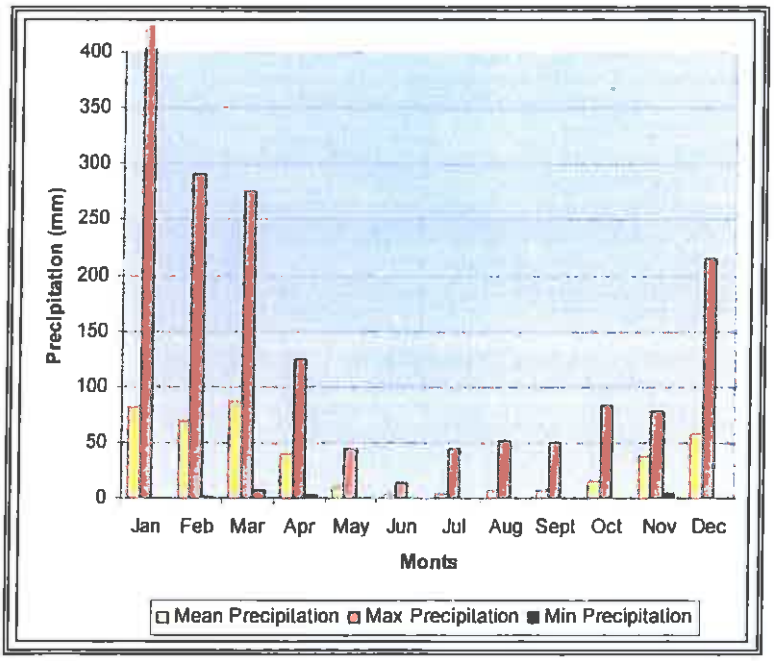


FIGURE 2: Rainfall graph for the Sishen Weather Station

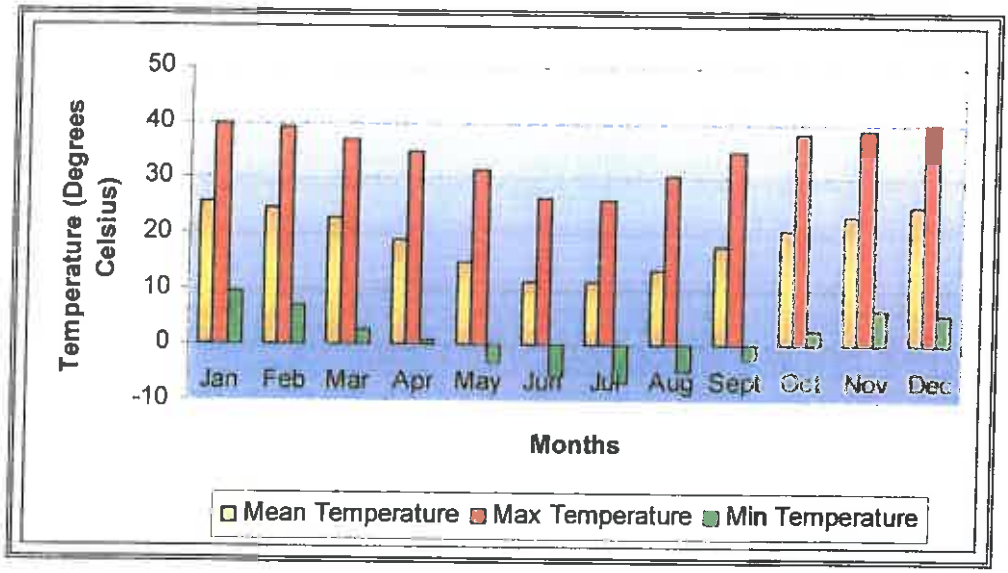


FIGURE 3: Temperature graph for the Sishen Weather Station

2.2 TOPOGRAPHY, SURFACE DRAINAGE AND GEOHYDROLOGY

The term topography refers to the "lay of the land". The topography of an area is determined by the geological history of that area. The topography of the study area is flat. North-east and east of the site are hills classified as Kuruman and Asbestos Hills, forming part of the Asbestos subgroup of the Griqualand West Supergroup (Vaalian).

There are no drainage lines on the site. North-west of the site is one poorly developed drainage line.

According to a geohydrological study conducted by Visser (2006), despite large scale abstractions of water from the Kathu Aquifer, there is a surplus of groundwater available. However, a geohydrological study will be done to further investigate the geohydrology of the area.

2.3 GEOLOGY, LAND TYPES AND SOIL CONDITIONS

The area is underlined by the **Griqualand West Supergroup** (Vaalian), with large areas containing deposits of the Kalahari Group Sediments.

The Griqualand West Supergroup (Vaalian), in this area is divided into two Subgroups, the Campbell Rand Subgroup and the Asbestos Hills Subgroup. These two Subgroups provide the sediment resources for the Iscor mines in the area.

The Campbell Rand Subgroup consists mainly of grey dolomite. It is over 2000m thick and contains the fossilized remains of some of the oldest life forms on earth. Lead deposits occur in places, and economically important limestone lenses are found near the top.

The Asbestos Hills Subgroup follows concordantly upon the Campbell Rand Subgroup. Its lower part, the Kuruman Formation, consists mainly of banded iron formation which contains the crocidolite asbestos deposits of Griqualand West. The upper part (Danielskuil Formation) comprises banded brown jaspilite with minor riebeeckite, amphibolite and shale.

The characteristics which define a land type, namely terrain form, soil pattern and climate, strongly correlate with the topography and geology of the area. There are four different types of land types in the area.

The site itself are characterised by two of these four Land Types. The land type on the northern part of the site is Ah land Type. This type is Red-yellow apedal (massive or single grained disturbing easily) soils (LP1) are freely drained and have a high base status (rich in Calcium). This Land Type further has usually a clay percentage of less than 15%, making it a very sandy soil.

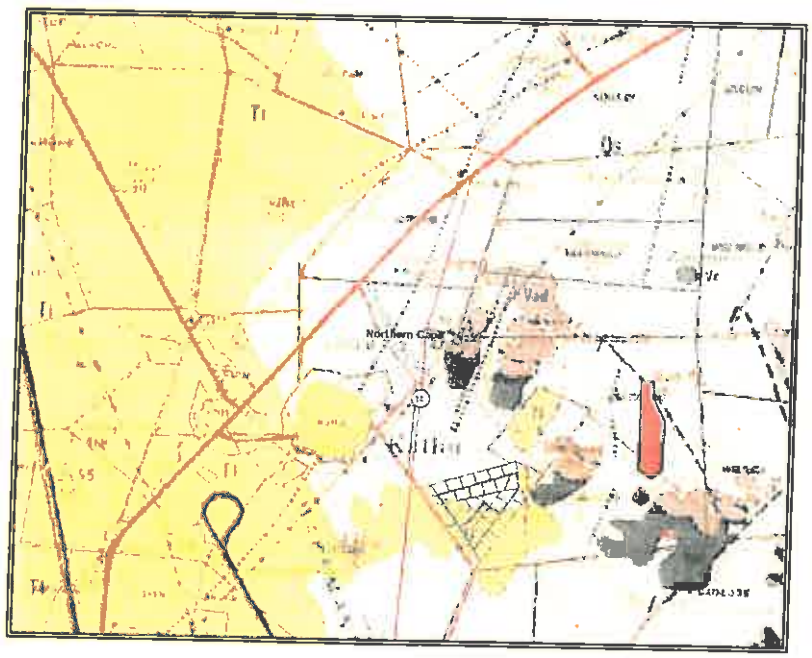


FIGURE 4: Map indicating the Geology of the area. Site locality is indicated in red.

To the southern parts of the site the Land Type is Ag, which is also Red-yellow freely drained apedal soils (LP2). These soils are further less than 300mm deep. These soils have a minimal development, usually shallow on hard or weathering rock, with or without intermittent diverse soils.

To the east of the site (in the area of the Kuruman Thornveld), occurs of the Ae Land Type. This type has also red-yellow apedal soils, freely drained, but is however deeper than 300mm. These three land types obtain their characteristics mostly from the Kalahari Group deposits.

The fourth Land Type covers the Kuruman and Asbestos Hills (Falling under the Kuruman Mountain Bushveld). This is the Ib Land Type, which is classified as miscellaneous, rocky areas with limited soils.

2.4 AGRICULTURAL POTENTIAL OF THE STUDY AREA

The land potential, and specifically the agricultural potential of a site, is determined by the combination of climate, soil conditions and slope prevailing in that region or site, resulting in the classification of areas with similar agricultural land potential. These land potential classes range from "Very High Potential" to "Very Low Potential". The Department of Agriculture as mapped the agricultural potential of South Africa. Using this mapping (Agricultural Geo-Referenced Information System [AGIS]) files, it can be seen that the site as well as surrounding the site, the agricultural potential Low. This potential has only reference to grazing as the area has No potential for arable agriculture.

There is however, according to AGIS a temporary irrigation site west of the road, which runs adjacent to the western side of the site. This site is under urban development construction at present.

2.5 FLORA OF THE STUDY AREA

The proposed area is situated in the Kathu Bushveld Vegetation Type. This vegetation type is characterized by the medium-tall tree layer consisting mostly of *Acacia erioloba* (Camel Thorn). The vegetation types on site is then further chatagorized into the *Acacia erioloba* (Camel Thorn)- *Acacia mellifera* (Blackthorn) - *Tarchonanthus camphorates* (Camphor Bush) open to dense woodland, Acacia erioloba - *Tarchonanthus camphorates* - *Eragrostis pallens* (Broom Grass) open woodland, and *Tarchonanthus camphorates* - *Acacia mellifera* shrubland. The Kuruman and Asbestos Hills are situated in the Kuruman Mountain Bushveld Vegetation Type. East of the site occurs the Kuruman Thornveld.

At this period in time, a Flora Specialist Study has already been done, however, the full Specialist study will be attached with the EIA report. The information given below is a summary of the findings from the Specialist study.

Differences in geology, topography, rockiness, drainage, soil texture and soil depth, slope, as well as differences in past management, result in differences in plant communities

1. *Acacia erioloba-Acacia mellifera-Tarchonanthus camphoratus* open to dense woodland

This woodland occurs in the north-eastern part of the site on the farm Bestwood. The community occurs on deep red aeolian sandy soils. The sand layer overlays a limestone layer. However, surface rocks are absent from this community. This community is a continuation of the *Acacia erioloba-Acacia mellifera-Tarchonanthus camphoratus* open to dense bushveld/woodland described by Van Rooyen (2006) for the Wildkamp on the farm Uitkoms 463, northwest of the site (Bestwood 459). This association belongs to the Category 2 woodlands of the Kathu Forest, although it is not included in the Natural Heritage Site.

The dominant tall tree is *Acacia erioloba,* with *Ziziphus mucronata and Acacia mellifera,* occurring scattered in the community. The shrub species present include *Acacia mellifera, Grewia flava, Tarchonanthus camphoratus, Lycium cinereum and Acacia hebeclada.* The dwarf shrubs/bossies are represented by *Chrysocoma ciliata, Elephantorrhiza elephantina, Asparagus* spp., *Hermannia tomentosa, Gnidia polycephala, Monechma divaricatum* and *Plinthus karrooicus.*

The grass layer is poorly developed. The dominant grass species are *Stipagrostis uniplumis, Aristida stipitata, Aristida congesta* subsp. *congesta* and *Eragrostis lehmanniana.* Other grass species include *Eragrostis pallens, Aristida meridionalis, Triraphis andropogonoides* and *Schmidtia pappophoroides.* The most common forb species include *Anthospermum rigidum, Aptosimum decumbens* and *Pollichia campestris.*

2. *Acacia erioloba-Tarchonanthus camphoratus-Eragrostis pallens* open woodland

This open bushveld is a transitional community between the tall woodland on deep sand in the north (association 1), to the low shrubland on shallow limestone in the south (association 3). Surface rocks are mostly absent from this community. This community is related to the *Acacia erioloba-Tarchonanthus camphoratus-Eragrostis pallens* open woodland described by Van Rooyen (2006) for the southern parts of the Wildkamp on the farm Uitkoms, northwest of Bestwood.

The open tree layer is of medium height and includes species such as *Acacia erioloba* and *Ziziphus mucronata.* The shrub layer is characterized by open to dense stands of *Tarchonanthus camphoratus* with scattered individuals of *Acacia haematoxylon, Grewia flava, Acacia mellifera, Gymnosporia buxifolia* and *Dichrostachys cinerea.*

The dwarf shrubs/bossies are represented by *Gnidia polycephala, Elephantorrhiza elephantina, Pentzia incana, Plinthus sericeus, Hermannia tomentosa* and *Asparagus* spp. The most prominent forbs include *Aptosimum decumbens, Pollichia campestris, Aptosimum lineare* and *Geigeria ornativa.*

The most conspicuous grass species are *Aristida meridionalis, Aristida stipitata, Eragrostis trichophora, Eragrostis lehmanniana, Aristida congesta* subsp. *congesta, Eragrostis pallens, Stipagrostis uniplumis* and *Schmidtia pappophoroides.*

3. *Tarchonanthus camphoratus - Acacia mellifera* shrubland

This low shrubland covers most of the site to the south and is dominated by *Tarchonanthus camphoratus*. Small trees of *Acacia erioloba* and *Ziziphus mucronata* occur scattered, while other shrub species occurring on site are *Grewia flava, Acacia mellifera* and *Gymnosporia buxifolia*. This community is related to the *Acacia mellifera-Tarchonanthus camphoratus-Enneapogon desvauxii* shrubveld described by Van Rooyen (2006) for the Wildkamp on the farms Sims and Kathu in the west.

The dwarf shrubs/bossies include species such as *Gnidia polycephala, Asparagus* spp., *Hermannia tomentosa* and *Elephantorrhiza elephantina.* The forb species include *Chrysocoma ciliata, Aptosimum lineare, Geigeria ornativa, Selago dinteri, Aptosimum albomarginatum, Peliostomum leucorrhizum, Helichrysum argyrosphaerum, Lotononis* sp., *Dicoma schinzii* and *Plinthus cryptocarpus.*

Diagnostic grass species include *Enneapogon desvauxii, Heteropogon contortus, Eragrostis echinochloidea* and *Elionurus muticus.* The most prominent grasses are *Eragrostis lehmanniana, Aristida congesta* subsp. *congesta, Aristida meridionalis, Stipagrostis uniplumis, Aristida stipitata, Eragrostis trichophora, Schmidtia pappophoroides* and *Eragrostis pallens.*

2.5.1 Sensitivity of the site:

The area was evaluated in terms of sensitivity and a sensitivity map compiled based on the vegetation types of the area (Figure 5). The parameters that are used to delineate the different categories of sensitivity (low, low-medium, medium-high and high) are the following (Driver *et al.* 2004; Mucina & Rutherford 2006; De Witt *et al.* 2006):

1. Threatened status of the ecosystem (area intact, or degree of transformation)

- If "Least Concern" or 'Least Threatened' e.g. the vegetation type have most of its habitat intact (more than 80%, or the vegetation type is adequately statutory or formally conserved in parks and reserves. **(low)**
- If "Vulnerable" e.g. from 60% to 80% of the vegetation type (ecosystem) is intact; the vegetation type is rich in plant species but are not pristine examples of a vegetation type,

therefore some transformation or disturbance occurred, such as human structures, degraded veldt due to overgrazing and/or bush encroachment. **(medium).**

- If "Endangered" e.g. if about 40% to 60% of the ecosystem is intact, or 40% to 60% transformed due to disturbance, cultivation, alien species etc. or the ecosystem is statutory poorly conserved e.g. less than about 3% conserved. **(medium-high)**
- If "Critically Endangered" e.g. if only 16% to 36% of the ecosystem is intact. The more species-rich the ecosystem, the higher the percentage threshold. This threshold is also known as the biodiversity target: it represents the proportion of each ecosystem one would ideally like to see included in a formal protected area. **(high to very high)**

2. Red Data species

Presence of Red Data fauna and flora in a vegetation type, or the presence of suitable habitat for specific Red Data species **(low to high).**

3. Protected trees

The presence of protected tree species in a plant community should be considered as of **low to medium** conservation value depending on the availability of habitat in the broader region and the protection and management guidelines for these species

4. Endemic plant species

The presence of endemic species should be considered as of **low to medium** conservation value depending on the availability of habitat in the broader region and the protection and management guidelines for these species

5. Terrain type (topography)

The presence of e.g. ridges/outcrops/mountains. All ridges should be considered to have a **high** conservation value. However, this should be seen in the context of the presence of the same habitat in the broader region.

6. Plant community species richness

Species richness per community (number of species) and/or between-habitat diversity (beta-diversity or species turnover). This is also a subjective assessment where the number of species per vegetation type of a specific habitat, e.g. ridge, is compared relative to the number of species found in an unspoilt (pristine) vegetation type of the same habitat type. The species-richness (or

number of species per plot or vegetation type will depend on the region, climate, topography, ecosystem and degree of transformation.

7. Nature of ecological processes (or constraints on the ecological processes), especially hydrological, e.g. drainage lines, migration routes; ridges: **high**.

8. Degree of connectivity and/or fragmentation of the ecosystem

Connectivity with surrounding or adjacent natural areas and/or fragmentation of plant communities, e.g. high connectivity with surrounding similar habitat, or low fragmentation of habitat is considered as **low**

By using above, three communities were identified. These communities are described as the following (See figure 5 below):

Community 1:

Threatened status: Vulnerable - medium to high

Presence of Red Data species: medium

Protected trees: medium

Endemic species: low

Terrain type: low

Plant community species richness: low

Ecological processes: medium

Fragmentation/connectivity/offset areas: high

In summary, the sensitivity of community 1 is regarded as of **medium-high** significance.

Community 2:

Threatened status: Least Threatened - low

Presence of Red Data species: low

Protected trees: medium

Endemic species: low

Terrain type: low

Plant community species richness: low

Ecological processes: low

Degree of fragmentation/connectivity/offset areas: low

In summary, the sensitivity of community 2 is regarded as of **low** significance.

Community 3:

Threatened status: Least Threatened - low

Presence of Red Data species: low

Protected trees: low

Endemic species: low

Terrain type: low

Plant community species richness: low

Ecological processes: low

Fragmentation/connectivity/offset areas: low

In summary, the sensitivity of community 2 is regarded as of **low** significance.

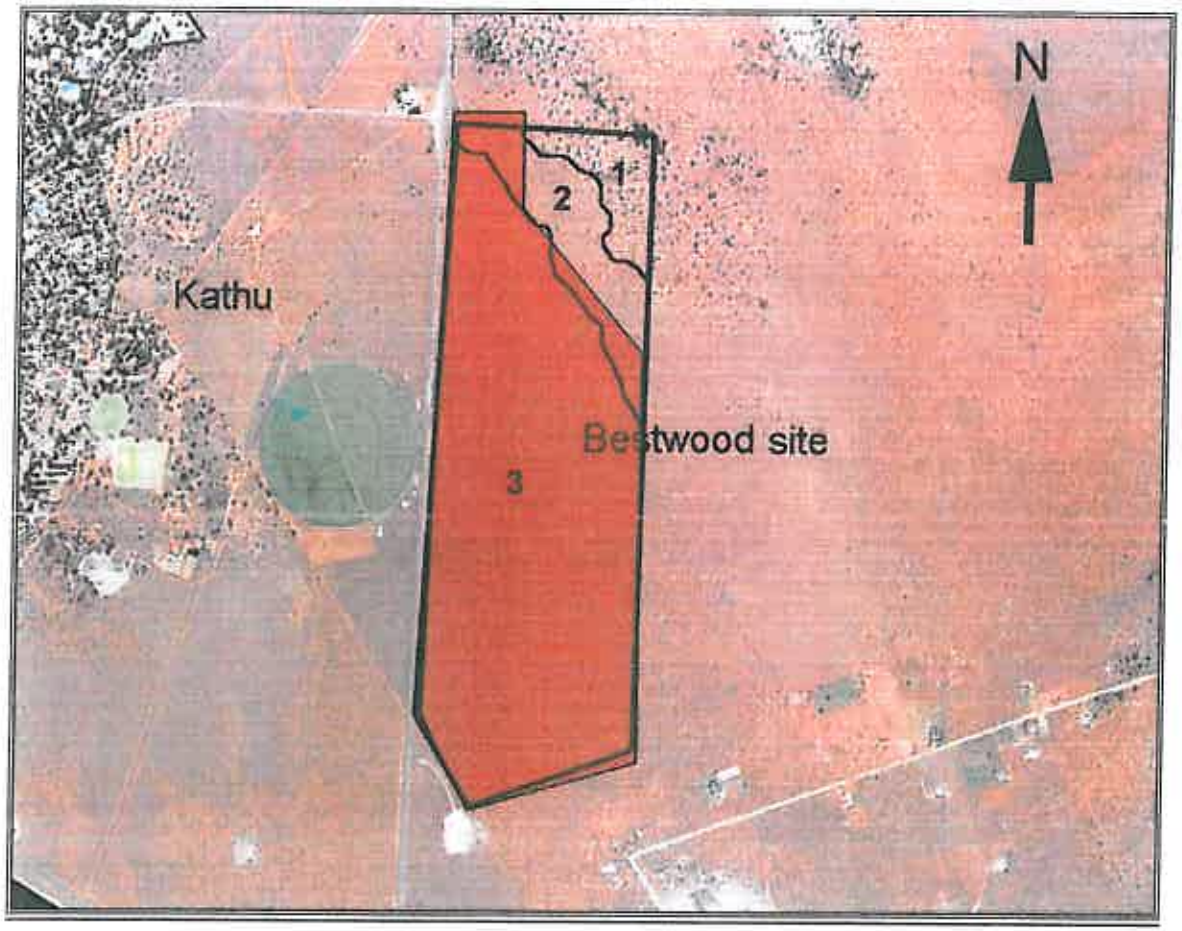


FIGURE 5: Map indicating the Flora of the site. Community 1 is *Acacia erioloba-Acacia mellifera-Tarchonanthus camphoratus* open to dense woodland , 2 is *Acacia erioloba-Tarchonanthus camphoratus-Eragrostis pallens* open woodland and 3 is *Tarchonanthus camphoratus - Acacia mellifera* shrubland. Site is indicated in red.

2.7 FAUNA OF THE STUDY AREA

The site is relatively small. Only 11mammal, 30 birds and two reptile species were recorded. No Red Data Book Species was encountered.

2.7.1 Mamalifauna:

According to available literature, approximately 64 mammal species occur in the Kathu Bushveld. The current composition for Kathu and immediate surrounds indicate a diversity of 38 mammal species. In the site itself only 11 mammal species were identified. This makes 29% of the total mammal species in the Kathu Bushveld.

No Red Data Book species was recorded.

TABLE 2: List of mammalifauna encountered on site:

SCIENTIFIC NAME	COMMON NAME
Orycteropus afer	Aardvark
Sylivacapra grimmia	Common Duiker
Tatera leucogaster	Bushveld Gerbil
Lepus capensis	Cape Hare
Canis mesomelas	Black-backed Jackal
Cryptomus hottentotus	African Mole-rat
Cynictis penicillata	Yellow Mongoose
Hystrix africaeaustralis	Cape Porcupine
Pedetes capensis	Springhare
Xerus inauris	South African Ground Squirrel
Raphicerus campestris	Steenbok

2.7.2 Avifauna:

According to available literature, approximately 204 bird species occur in the Kalahari Thornveld complex. The current composition for Kathu and immediate surrounds indicate a diversity of 164 bird species. In the site itself only 30 bird species were identified. This makes 18% of the total bird species of the Kathu biodiversity.

No Red Data Book species was recorded.

TABLE 3: List of avifauna encountered on site:

SCIENTIFIC NAME	COMMON NAME
Merops apiaster	European Bee-eater
Merops hirundineus	Swallow-tailed Bee-eater
Cuculus clamosus	Black Cuckoo

SCIENTIFIC NAME	COMMON NAME
Nilaus afer	Brubru
Emberiza flaviventris	Golden-breasted Bunting
Serinus atrogularis	Black-throated Canary
Serinus flaviventris	Yellow Canary
Cisticola aridulus	Desert Cisticola
Chrysococcyx caprius	Diderick Cuckoo
Streptopelia capicola	Cape Turtle Dove
Streptopelia senegalensis	Laughing Dove
Oena capensis	Namaqua Dove
Sporopipes squamifrons	Scaly-feathered Finch
Melierax gabar	Gabar Goshawk
Numida meleagris	Helmeted Guinea fowl
Upupa africana	African Hoopoe
Lophotis ruficrista	Red-crested Korhaan
Mirafra africanoides	Fawn-coloured Lark
Ploceus velatus	Southern Masked-weaver
Struthio camelus	Common Ostrich
Prinia flavicans	Black-chested Prinia
Rhinopomastus cyanomelas	Common Scimitarbill
Cerocotrichas paean	Kalahari Scrub-robin
Laniarius atrococcineus	Crimson-breasted Shrike
Plocepasser mahali	White-browed Sparrow-weaver

SCIENTIFIC NAME	COMMON NAME
Lamprotornis nitens	Cape Glossy Starling
Hirundo rustica	Barn (European) Swallow
Psophocichla litsitsirupa	Ground Scraper Thrush
Parisoma subcaeruleum	Chestnut-vented Tit-babbler
Granatina granatina	Violet-eared Waxbill

2.7.3 Herpetofauna:

According to available literature, approximately 40 reptile and 6 amphibian species occur in the Kalahari Thornveld complex. The current composition for Kathu and immediate surrounds indicate a diversity of 16 reptile and two amphibian species. In the site itself only 2 reptile species were identified. This makes for 13% of the total herpetofauna species of the Kathu biodiversity.

No Red Data Book species was recorded. And no amphibians were encountered on site.

TABLE 4: List of herpetofauna encountered on site:

SCIENTIFIC NAME	COMMON NAME
Agama agama aculeata	Ground Agama
Pedioplanis lineoocellata pulchella	Spotted Sand Lizard

2.7.4 Sensitivity of the site:

The Red Data status of each species can be one of the following:

- **Least Concern:** Widespread and abundant taxa are included in this category, which has been evaluated against the criteria and does not qualify for any of the other categories;

- **Data Deficient:** There is inadequate information available to make a direct or indirect assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied and its biology well known, but appropriate data on abundance and/or distribution are lacking. Data Deficient is therefore not a category of threat;

- **Near Threatened:** A taxon is Near Threatened when it has been evaluated against the criteria and does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for or is likely to qualify for a threatened category in the near future;

- **Vulnerable:** Such a taxon is not Critically Endangered or Endangered but the best available evidence indicates that it is facing a high risk of extinction in the wild in the medium-term future;

- **Endangered:** When a taxon is not Critically Endangered but is facing a *very high* risk of extinction in the wild in the near future;

- **Critically Endangered:** When the best available evidence indicates that the taxon is facing an *extremely high* risk of extinction in the wild in the immediate future, based on an assessment of the criteria.

No Red Data Species occurred on site during the Faunal Survey.

2.8 ELEMENTS OF CULTURE HISTORICAL IMPORTANCE

During the site investigations for the Scoping stage, focus was also placed on the presence of any stone built structure, ruins, grave sites, complete built structures and the presence of artefacts. Based on preliminary observations no such features occur within the proposed area of development. It is therefore not identified as an issue at this stage.

A Heritage Impact Assessment, as part of the Environmental Impact Assessment stage of the application process, will be conducted in accordance with the National Heritage Resources Act (Act 25 of 1999) by Dr R. C. de Jong of Cultmatrix cc.

The aim of the full HIA investigation will be to identify and assess, if any, heritage features and to recommend heritage management mitigation measures and monitoring programmes aimed at reducing the risks of adverse impacts. This input to be evaluated by SAHRA will be included in the EIA stage to follow. However, this Scoping report is made available to SAHRA for comments.

However, the assessment up to now of the terrain did not reveal issues related to heritage significance or impact on elements of historical or heritage value.

3. PUBLIC PARTICIPATION

3.1 INTRODUCTION

A public participation process was conducted as part of the Environmental Scoping process, to gather information from the community that could ultimately affect the decision-making process concerning the planning, construction and operational phases of the proposed development. The communities and public have been identified as Interested and Affected Parties (I&AP's). The I&AP's have been given the opportunity to participate in this process and their comments, whether positive or negative, will influence the decision of the Authorities and the developer's final actions.

The public participation process aims to enlighten the public on the positive and negative aspects that the proposed development will have on their immediate surroundings. Negative comments and objections received from I&AP's prompt the developer(s) to enact change in their proposed course of action. The developer is compelled to mitigate to an acceptable status the significant impacts, as well as consider suitable alternatives as identified during the process.

3.2 OBJECTIVES OF THE PUBLIC PARTICIPATION PROCESS

The public participation process has the following objectives:

- To inform Interested and Affected parties of the proposed development;
- To provide an opportunity for I&AP's to raise environmental issues/concerns and make suggestions;
- To promote transparency and an understanding of the project and its consequences;
- To serve as a structure for liaison and communication with I&AP's;
- To serve as a data gathering mechanism (of local knowledge) for the Environmental Scoping Study.

To summarise, the objective of the ongoing public participation process is to promote openness and transparency concerning the proposed Residential Township during the length of the project.

The process should by no means be regarded as a vehicle to temper opposition or objections. Any conclusions agreed upon must be socially, financially and technically acceptable and feasible in order to meet the requirements of both the NEMA and the vision of the proponent.

3.3 THE GUIDELINES FOLLOWED FOR THE PUBLIC PARTICIPATION PROCESS

The Public Participation Process (PPP) for this project was conducted by Rock Environmental Consulting, and undertaken strictly according to the Regulations listed under Chapter 5 of the Department of Environmental Affairs and Tourism (DEAT) Regulations in terms of Chapter 5 of the NEMA). The process was open and transparent.

3.4 PUBLIC PARTICIPATION PROCESS FOLLOWED

The following public participation process was conducted for the proposed development:

- Identification of key Interested and Affected Parties
- Compilation and distribution of the Background Information Document
- Placement of press notices informing the Public of the proposed development
- Placement of site notices
- Conducting the public open days and adjacent landowners meeting
- Correspondence with I & AP's, and addressing I & AP's comments

3.4.1 Identification of key Interested and Affected Parties

I&AP's were identified by means of a site visit and consultation with local residents who are familiar with the area and their neighbours. Subsequently, the relevant landowners and associations were informed of the development by issuing them with a Background Information Document / BID (Appendix 3A). The list of I&AP's that were informed is given on the Acknowledgement of Receipt, which is attached herewith as Appendix 3B. The complete list of identified I&AP's consists of the I&AP's who independently registered themselves, through the submission of the Comment and Registration Sheet (Appendix 3E) that was attached to the BID and those who attended the open day public meeting (given in Appendix 3E) and Landowners Meeting (given in Appendix 3G). This register will be updated throughout the EIA process to follow. Thus far, the following Authorities have participated in the process:

- C Joachim - Municipal Manager of Gamagara Local Municipality;

- Mr L Botha - Technical Manager of Gamagara Local Municipality;
- Q Hinana - HOD, Community Service Gamagara Local Municipality;
- Mr G van Dyk of DWAF;
- Mr A Olivier - Ward councillor; and
- Dr JE Drewes - Erioloba Consulting, Housing Consultant to Assmang Ltd (Khumani Mine).

Thus far, the list of key identified I&AP's includes:

- Mr E Cronje of REMAX;
- Mr M de Waal of REMAX;
- Mr S le Roux of Rooisand Ontwikkeling;
- Ms A Nel of Kumba Resources;
- Septamber of the nearby Shell Garage;
- H Van Niekerk of Laerskool Kathu;
- CJ van Wyk of Laerskool Kathu;
- G Vos of AIDA;
- J van Rensburg of Reitzhof Plot 29;
- Mr J Smith of Reitz Hoewes; (Chairman of the landowners committee)
- Mr D Reitz (Reitz Landbou) of Reitz Hoewes;
- A Jacobs of Reitzhof Plot 10 and 11;
- Mr P Duvenhage - Adjacent landowner;
- Mr J Markram - Adjacent landowner;
- Mr J Steyn - Adjacent landowner;
- Mrs S Markram - Reitzhof; and
- PZK Beleggings 3000 CC, Owner of Portions 48 and 4, Bestwood 459 RD

(See Appendix 5B and 5F for more I&AP's).

I&AP's, and the relevant Authorities, is given 30 days to comment on the Draft Scoping Report. All the comments, concerns and issues raised by the I&AP's and the Authorities will be considered during the next phase of the EIA process which is the EIA Report.

3.4.2 Compilation and distribution of the Background Information Documents (BID)

The aim of a BID is to provide all I&AP's with a brief description of the proposed development. The BID also contains the details of the proponent and the environmental consultant. Furthermore, it serves as an overview of the public participation process.

The BID invites the I&AP's to the public open days, informing the interested parties of the date, time and venue of the meeting.

The BID for the proposed Residential Township Developments was either hand delivered, faxed or e-mailed to the surrounding land owners and other I&AP's in the study area on 27/10/2007, 08/11/2007 and 09/11/2007. BID's were also placed at the entrance to the Local Municipality Offices.

A comment sheet was attached to the BID, which the I&AP's were asked to complete and return to Rock Environmental Consulting if they had any suggestions or comments.

Please refer to Appendix 3A for a copy of the BID and to Appendix 3B for the Acknowledgment of Receipt of the BID's. Where the BID's were emailed or faxed to I&AP's (as indicated on the Acknowledgement of Receipt pages), proof of such correspondence can be provided if required by any authority.

3.4.3 Placement of the press advertisement

In accordance with the EIA regulations two press notices were placed in the local newspapers, namely the Kathu Gazette dated 03/11/2007 and Kuruman Bulletin dated 01/11/2007. Press notices are crucial to create awareness of the project and to reach a broader range of interested and affected parties.

Please refer to Appendix 3C for a copy of the press notice that appeared in the local newspaper.

3.4.4 Placement of on-site notice(s)

The proposed area for development is situated in a rural area with limited traffic (vehicular and pedestrians) passing by. Therefore, to inform as broad a range of I&AP's as possible, several locations were strategically chosen to place the site notice. This included the placement of four site notices in English at the following locations:

- One site notice was placed at the current access to the premises and another on the fence approximately 300m to the south along the N14.
- One at the South African Police Department in Kathu;
- One on the notice board at Shoprite in Kathu

The site notices also provided an opportunity to invite interested parties to the open day.

Please refer to Appendix 5D for copies of the site notices, as well as for the accompanying photographs that serve as proof of the placement of these notices on and around the site.

3.4.5 Public Open Day(s)

Two public open days were held on the property at the Kathu Primary School. The purpose of the public meetings was to inform all I&AP's of the proposed development by means of an information session on the project. As the Kathu Primary School is a well-known, accessible and central feature of the town and community, it was a favourable location for the public open day. The open days were held on 12/11/2007 & 13/11/2007, from 14:00 - 20:00. I&AP's were invited to attend these public open days any time between the time frames given, during which time they had the opportunity to ask questions concerning the development, view the layout plans and proposed building style images, sign a form to register as an I&AP as well as submit the Comment and Registration Sheet that was attached to the BID. This would then serve to qualify them as Registered I&AP's. The EIA process was explained and all the comments received were collected, to be addressed in the EIA process.

The public open days were advertised in the local newspapers (The Kathu Gazette and The Kuruman Bulletin), the background information document and on the site notices.

Please refer to Appendix 3F for a copy of the attendance register of the public open days. The additional I&AP's who registered, as per the submission of the Registration and Comment Sheets completed and returned to Rock Environmental Consulting OR via their email and/or fax requests are included in Appendix 5E.

3.4.6 Land owners meeting

It was requested by the landowners of the Reitz Small Holdings to have a meeting with Rock Environmental Consulting (Pty)Ltd to discuss further matters regarding the proposed development. This meeting, which was accompanied by the civil engineer on the project, was held on the Reitz Small Holdings on the 19/11/2007. Please refer to Appendix 3G for a copy of the attendance register of the Land owners meeting. Refer also to appendix 3I for Minutes of the Meeting with Reitz Small Holdings.

3.4.7 Feedback from I&AP's

The closing date for registration and comment delivery from I&AP's during the first public participation phase was within 30 days from the date of publication of the last advertisement, which was the 03/01/2007. This period has lapsed, however, comments were still accepted long after this date and REC wil continue to do so throughout the duration of the project up to the final submission of the Environmental Impact Assessment Report. The challenge is to address comments and concerns to the best practical means and details available at that time.

The complete list of comments received from I&AP's can be viewed in Appendix 3H. The questions and comments received are addressed in Appendix 3H. Rock Environmental Consulting has ensured that copies of this Scoping Report is available to all I&AP's and Authorities for Comments.

3.5 ADDRESSING THE COMMENTS AND QUESTIONS RECEIVED FROM THE I&AP'S

Answers to questions and feedback to I&AP's comments' are provided in Appendix 3H (original comments on Registration and Comment Sheets, attached in Appendix 3E). Comments and questions that have not been fully addressed during the scoping phase have been included in the Terms of Reference for the subsequent phase of the EIA process. The objective of the scoping process is mainly to identify the issues for addressing in the second phase of the EIA process. It is the opinion of the consultant that no issues were identified during the scoping process that could potentially constitute a fatal flaw in the development of the proposed Residential Development.

3.6 CONCLUSIONS OF THE PUBLIC PARTICIPATION EXERCISE

The proposed development has generally been met with a positive attitude from the community at large. Some negative concerns were noted from the Reitz Agricultural Holdings. These have mainly been raised out of concern that there will not be enough water for the proposed residential development. These concerns have been noted but it is concluded at this stage that they can be mitigated in a sustainable manner. This Scoping Report, and the EIA report to follow will serve to

clarify, consider and sustainably mitigate remaining and significant concerns that the participating I&AP's might have.

In conclusion, the public participation exercise has provided adequate information to enable an understanding of what the proposed development would entail and also to list and address the concerns and comments together with local information in the specialist reports compiled for this Scoping Report. Through addressing all comments and questions received from the I&AP's, and through the compilation of a detailed Scoping Report for Comments, the consultant has attempted to promote a better understanding of the activities of the proposed development and to provide as much information concerning technical aspects of the development; especially where water availability and similar such aspects are concerned. Please refer to the comments and responses report in Appendix 3I.

In conclusion, it is regarded by the EAP that the scoping exercise undertaken for the proposed Residential Township Development on the Farm Bestwood has satisfied the requirements for Public Participation Process.

4. ACTIVITIES, IDENTIFIED IMPACTS AND PRELIMINARY IMPACT ASSESSMENT

4.1 INTRODUCTION AND METHODOLOGY

This section provides a list of the biophysical and social issues and impacts that can be expected as a result of the proposed development. Some of the issues are localised in their effects, whilst others could influence a more extensive area.

The identification and brief descriptions of the relevant physical, biological, socio-economic and cultural issues were conducted under the following headings in Table 6:

- Environmental aspects: defined as those actions on site that may potentially have an environmental impact;
- Environmental component to be impacted upon;
- Locality / applicable zone of the impact; and
- Nature and description of the impact.

An impact significance rating and evaluation, for the listed aspects, will form part of the EIA process/report to follow the environmental scoping process. Most of the identified and anticipated negative impacts listed below will only take effect once the construction of the proposed development commences; the main period of positive impact occurrence is during the long term "operational" phase.

4.2 ACTIVITIES AND IMPACTS IDENTIFIED, WITH PRELIMINARY ASSESSMENT

The description and identification of anticipated impacts is based on the listing of **environmental aspects.** Environmental aspects, for the purposes of this document, is the term used to *describe the actions that may have an impact on one or more of the environmental components listed.* It is important to note that aspects that are clearly definable have been used in preference to those that are duplicative, redundant, difficult to measure, and/or obscure.

An impact is defined as *any change in the physical, chemical, biological, cultural, and/or socio-economic environmental system that can be attributed to human activities relative to alternatives*

under study for meeting a project need. Therefore, the identified environmental aspects are said to have an impact on the components listed above if they result in change. One of the most important objectives of conducting and Environmental Impact Assessment is to identify and evaluate these aspects and impacts. Consequently, the environmental management plan (EMP) will consist of the preferred mitigation and management options for the identified impacts assessed as being significant. These will be described within the EIA (and EMP) report to follow.

The environmental aspect and the resultant impact can become manifest during the **construction phase (C)** and/or the **operational phase (O)**, which is the stage when the phased development of the Residential Township Establishment is complete and fully functional. The largest (negative - bio-physical and positive - socio-economic) impacts resulting from the environmental aspects are anticipated during the construction phase, while the significant positive impacts (socio-economic) will manifest during the operational phase. Therefore, the mitigation measures that are implemented during the construction phase especially should serve to sufficiently alleviate the temporary, negative impacts and optimise the positive impacts caused by the construction activities.

4.3 PRELIMINARY IMPACT ASSESSMENT FOR THE PROPOSED DEVELOPMENT

The following table provides a list of activities (environmental aspects) that will occur on site and it provides an outline of the potential impacts that these actions will have on the environment, the anticipated effects on the visual character of the site as well as impacts on the biophysical and social aspects.

TABLE 5: List of activities (environmental aspects) that will occur on site, the potential impacts that these activities may have on the environment and a description of the nature of the impact (c: construction stage; o: operational phase)

ENVIRONMENTAL ASPECT AND PROJECT STAGE C: construction stage O: operational phase	ENVIRONMENTAL COMPONENT THAT MAY BE AFFECTED	LOCALITY / APPLICABLE ZONE OF THE IMPACT	NATURE AND DESCRIPTION OF THE POTENTIAL IMPACT/ISSUE
Vegetation clearance for the footprint/foundation of the residential unit on each stand (C). Clearance of vegetation in the establishment of infrastructure (C) including the new sewage treatment plant.	Soil layers, soil surface, indigenous vegetation cover.	See the Conceptual Layout Plan (Appendix 2).	The removal of vegetation cover, such that the soil surface is exposed, may lead to increased soil erosion in certain areas. The existing vegetation will be permanently removed to accommodate the footprint of the build-up areas. Where the removal of surface vegetation is of a temporary nature only, the establishment of weeds is a threat. The topsoil layer is required to rehabilitate the area (i.e. for landscaping the area).
Vegetation clearance for the footprints/foundations of all other buildings/structures on site, potentially including a club house, wind turbines etc. (C)	Soil layers, soil surface, indigenous vegetation cover.	The locality of such structures will only be finalised during the EIA process to follow.	The impacts are the same as described above.

ENVIRONMENTAL ASPECT AND PROJECT STAGE C: construction stage O: operational phase	ENVIRONMENTAL COMPONENT THAT MAY BE AFFECTED	LOCALITY / APPLICABLE ZONE OF THE IMPACT	NATURE AND DESCRIPTION OF THE POTENTIAL IMPACT/ISSUE
Excavations for the foundations of the residential units and all other building structures, as listed above (C). This includes the actions related to the construction of the new sewage treatment plant.	Soil layers, vegetation and faunal habitats.	Development areas, as indicated on the Conceptual Layout Plan in Appendix 2.	The existing vegetation will be permanently removed to accommodate the foundations of the building structures. The total extent of the excavations for foundations will be finalised during the EIA process to follow. A specialist geo-technical report, to be compiled for the EIA process, will give indications as to the suitability of the underlying geological material for construction purposes at each proposed development node.

ENVIRONMENTAL ASPECT AND PROJECT STAGE C: construction stage O: operational phase	ENVIRONMENTAL COMPONENT THAT MAY BE AFFECTED	LOCALITY / APPLICABLE ZONE OF THE IMPACT	NATURE AND DESCRIPTION OF THE POTENTIAL IMPACT/ISSUE
Vegetation clearance for the establishment of the internal road network on site (C and O)	Soil surfaces, vegetation cover, aesthetic quality, surface water runoff and storm water drainage.	The detailed road layout map is not yet available. Roads will be established to each of the development zones and all other project infrastructure. A conceptual road network has been formulated at this early stage. The Environmental Impact Assessment to follow will result in detailed road layout through further consideration of important environmental planning principles.	The removal of surface vegetation cover can lead to increased soil erosion, especially during the rainy season. Therefore, these areas will need to be surfaced as soon after vegetation stripping as possible. Incorrect design of access and internal roads can be problematic in terms of surface water runoff (can lead to erosion at outlet areas) and storm water drainage (damming and ponding of the surface water may occur). The internal road network will have a negative impact on the aesthetic quality of the site, in the form of above-ground scars across the landscape. Gravel roads will be implemented to the greatest extent possible.

ENVIRONMENTAL ASPECT AND PROJECT STAGE C: construction stage O: operational phase	ENVIRONMENTAL COMPONENT THAT MAY BE AFFECTED	LOCALITY / APPLICABLE ZONE OF THE IMPACT	NATURE AND DESCRIPTION OF THE POTENTIAL IMPACT/ISSUE
Provision of street/house lighting and electricity to development.	Illumination will affect the visual character of the site at night.	Along the internal road network, and at each of the residential zones.	Street lights will be provided along the road network within the development area; the spacing and type to be provided will fit the theme/ethos of the proposed development. The site falls within the EsKom Supply region and electrical engineers have been appointed to oversee the installation of electrical services. The illumination from the street lights will cause a light intrusion to the area, negatively impacting on the aesthetic quality of the site.
Stockpiling of excavated material (C)	Soil and vegetation cover.	Precise location still to be determined; the impacts on soil and vegetation will occur wherever stockpiles are established. Wherever possible, the stockpiles should be placed in the Buffer Area, as described below.	Stockpiles cause compaction of the soil, which promotes the establishment of weed species. The establishment of weeds greatly reduces the pristine quality of the natural vegetation on site. Stockpiles should not be situated within 200 m from any water bodies or water courses, as sedimentation transport into such systems is undesirable. Furthermore, stockpiles should not be situated in the sensitive environment described in the Flora Study.

ENVIRONMENTAL ASPECT AND PROJECT STAGE C: construction stage O: operational phase	ENVIRONMENTAL COMPONENT THAT MAY BE AFFECTED	LOCALITY / APPLICABLE ZONE OF THE IMPACT	NATURE AND DESCRIPTION OF THE POTENTIAL IMPACT/ISSUE
Stockpiling building materials (C)	Soil and vegetation cover.	It is recommended that a 15 m width perimeter around the footprints of building structures is established. This is called the "Buffer Area", in which stockpiling and vegetation modifications may occur.	Stockpiles will need to be established for the storage of aggregate, bricks and cement. As mentioned, stockpiles cause compaction of the soil surface, which leads to the growth of unwanted weed species.
Water for the development (to be supplied from the boreholes) (O)	Groundwater resources, and water courses.	Boreholes on the farm in the vicinity of the proposed development phases.	The extraction of groundwater for domestic and other uses may influence the ground water resource. A geo hydrological study, still to be conducted, will reveal if sufficient water resources are available internally to meet the requirements of water supply to all the development zones envisaged. The abstractable volume of groundwater available per day and the recharge amount will be determined. It will determine if the ground water level of the aquifer will be affected or not.

ENVIRONMENTAL ASPECT AND PROJECT STAGE C: construction stage O: operational phase	ENVIRONMENTAL COMPONENT THAT MAY BE AFFECTED	LOCALITY / APPLICABLE ZONE OF THE IMPACT	NATURE AND DESCRIPTION OF THE POTENTIAL IMPACT/ISSUE
Water reticulation installation, including excavation of service trenches (C)	Soil layers and vegetation cover.	Along the length of the route of the underground water piping. (The layout of the water reticulation on site is still to be determined - All possibilities, in terms of design and boreholes to be used, will be evaluated during the EIA process.	Where the removal of vegetation is of a temporary nature only (as is the case with the installation of a water reticulation network) the establishment of weed/invasive species is a threat. The topsoil layer is required to rehabilitate the vegetation in these areas, where vegetation has been temporarily removed. The Geotechnical Study revealed that excavation difficulty can be expected when excavating service trenches.
Installation and operation of sewerage reticulation systems.	Soil layers, vegetation cover and groundwater.	Final designs and layouts yet to be determined.	Vegetation removal and soil excavations will take place where underground sewage tanks are installed. The temporary exposed soil surface that will result will be susceptible to erosion and pioneering exotics. However, the exposed areas can be re-vegetated and rehabilitated.
Maintenance of sewerage reticulation system (O)	Groundwater quality.	In the immediate vicinity of any sewage treatment plant	Leaking or faulty sewerage pipes, or systems not correctly installed could contaminate the groundwater resources, which will affect the entire study area. Regular maintenance and inspection of the sewerage system will prevent the risk of contamination of the environment.

ENVIRONMENTAL ASPECT AND PROJECT STAGE C: construction stage O: operational phase	ENVIRONMENTAL COMPONENT THAT MAY BE AFFECTED	LOCALITY / APPLICABLE ZONE OF THE IMPACT	NATURE AND DESCRIPTION OF THE POTENTIAL IMPACT/ISSUE
Provisions for storm water i.e. storm water drainage (C)	Soil surfaces, vegetation cover and drainage patterns.	Areas where surface water run-off is collected i.e. like from roof gutters and roof structures, as well as road surfaces.	Correct and efficient storm water drainage systems must be installed. Poorly designed storm water outlets will result in increased surface run-off volume and speed, which could lead to the creation of erosion gullies. All road surfaces generate storm water, which should be controlled by preventing the storm water from crossing the road. Storm water must be allowed to spread out gradually over a large surface area to protect the soil surface against erosion.
Maintenance of storm water management systems (O)	Soil surfaces, drainage patterns and surface water.	In all areas where storm water management systems have been created.	Maintenance of storm water outlets is required to ensure that they don't get blocked (i.e. no longer fulfil their function) or result in erosion.

ENVIRONMENTAL ASPECT AND PROJECT STAGE C: construction stage O: operational phase	ENVIRONMENTAL COMPONENT THAT MAY BE AFFECTED	LOCALITY / APPLICABLE ZONE OF THE IMPACT	NATURE AND DESCRIPTION OF THE POTENTIAL IMPACT/ISSUE
Construction of all building structures associated with the proposed development (C)	Soil surfaces, vegetation, faunal component and aesthetic character.	Refer to the Layout Plan (Appendix 2).	Several development zones will be built. These and other structures will be erected according to the specified design parameters, concerning the building materials, design and colours allowed etc. Very limited landscaping / gardening (indigenous plants only) will be allowed. The construction of development zones and other infrastructure in the rural setting of the proposed development area will negatively impact on the aesthetic character of the site. Many additional impacts may occur if the EMP, Architectural Guidelines, Rules of Conduct and all other regulations are not adhered to.
Generation of construction waste (C)	Soil, vegetation, aesthetic quality of the site and surface water run-off, water and ground water resources.	All construction sites and directly adjacent areas within Residential Township Establishment.	Waste, such as building rubble and empty cement bags can be a negative visual impact if not collected and disposed of correctly. Further to littering the site and adjacent areas, poor control and illegal dumping of construction waste can pollute surface water run-off, as well as lead to the promulgation of weed species.

ENVIRONMENTAL ASPECT AND PROJECT STAGE C: construction stage O: operational phase	ENVIRONMENTAL COMPONENT THAT MAY BE AFFECTED	LOCALITY / APPLICABLE ZONE OF THE IMPACT	NATURE AND DESCRIPTION OF THE POTENTIAL IMPACT/ISSUE
General building maintenance (O)	Visual and aesthetic quality, also surface water quality and vegetation cover.	The study area at large.	The design and nature of buildings and their general finishing will determine the impact of the proposed development on the visual quality of the study area. The proposed building structures will be aesthetically pleasing and will be of colours that are as complimentary to their natural surroundings i.e. only natural colours will be allowed). Maintenance of the township as a whole will prevent a further negative impact on the visual quality of the study area. The disposal of building rubble (both during construction and maintenance) causes impacts on the natural environment (including faunal ecology, surface water and vegetation) if disposed of illegally. Compaction of soil surfaces and the propagation of weeds are typical impacts. An architect has been appointed by the applicant.
Road maintenance (O)	Vegetation and soil surface conditions, as well as social well-being of the residents Residential Township.	No specific locality. The road network throughout the development will need to be maintained.	Poorly maintained roads cause abnormal soil erosion. Therefore, road maintenance is essential to ensure an effective and usable road network within the estate.

ENVIRONMENTAL ASPECT AND PROJECT STAGE C: construction stage O: operational phase	ENVIRONMENTAL COMPONENT THAT MAY BE AFFECTED	LOCALITY / APPLICABLE ZONE OF THE IMPACT	NATURE AND DESCRIPTION OF THE POTENTIAL IMPACT/ISSUE
Collection and disposal of solid domestic waste (C and O)	Aesthetic quality, surface water run-off, subsurface and groundwater quality, vegetation and fauna.	The site and directly adjacent areas.	Poor waste collection and handling will pollute the environment (affecting fauna, groundwater, surface water and aesthetic environment). No illegal dumping of domestic waste will be tolerated. Practical design and layout of waste collection/storage facilities is essential. Untidy collection facilities and windblown refuse can cause human / animal conflicts, as foul odours from such areas will attract wild animals and cause other problems (pests / diseases), as well as water pollution.
Collection and disposal of construction waste (C)	Aesthetic quality, subsurface and ground water quality, vegetation and fauna.	Any locality at which construction activities are to occur.	No construction waste may be illegally dumped into the surrounding areas, as the effects of illegal dumping on the environment are devastating. Poor waste collection and handling will have a negative impact on several environmental aspects. A waste collection agreement between the applicant and the local authority will be essential.
Temporary employment created during the construction phases of the proposed development(C)	Social aspects	All sites where construction related activities are to take place.	There will be positive impacts in terms of social upliftment and job creation within the broader region.

ENVIRONMENTAL ASPECT AND PROJECT STAGE C: construction stage O: operational phase	ENVIRONMENTAL COMPONENT THAT MAY BE AFFECTED	LOCALITY / APPLICABLE ZONE OF THE IMPACT	NATURE AND DESCRIPTION OF THE POTENTIAL IMPACT/ISSUE
Long term employment opportunities and wealth to be generated by the proposed development (O)	Social aspects	Kathu and surrounding settlements.	There will be positive impacts in terms of social upliftment and job creation within the broader region.
Transportation of workers to and from the development site (C)	Air quality, soil surface and social aspects (including traffic and worker safety).	The road network within the Residential Township Development, and the N14 Road.	Vehicles used to transport workers must never be overloaded; worker safety is of utmost importance. Vehicles used to transport workers must not exceed the speed limit and no vehicle may deviate from the existing routes on the Farm Bestwood, to ensure safety of the workers and conservation of the area. Poorly maintained vehicles will have a large negative impact on air quality.
Construction camp establishment (c)	Aesthetic impacts, social aspects, subsurface and groundwater quality, generation of domestic waste, vegetation removal, soil surface compaction and faunal impacts.	Location still to be determined.	The generation of domestic waste, as well as the provision of sewage facilities, within the construction camp could potential impact on the aesthetics of the site as well as the quality of subsurface and groundwater if not properly managed and implemented. The removal of sections of natural vegetation would most likely be needed for the establishment of the camp, and soil surfaces would become compacted as a result of activities within the camp.

ENVIRONMENTAL ASPECT AND PROJECT STAGE C: construction stage O: operational phase	ENVIRONMENTAL COMPONENT THAT MAY BE AFFECTED	LOCALITY / APPLICABLE ZONE OF THE IMPACT	NATURE AND DESCRIPTION OF THE POTENTIAL IMPACT/ISSUE
Housing of workers during construction (C)	Aesthetic character, soil and vegetation, surface water quality and social aspects.	The possibility of housing construction workers on site.	The establishment of housing for workers will have a localised impact on the soil and vegetation cover of the chosen site, as well as potentially having a negative impact on the quality of surface water - as a result of domestic waste, and sanitation facilities for example, if these are not properly addressed. Living conditions must be adequately addressed to reduce potential impacts on human health.
Sanitation provision to workers during the working day (C)	Subsurface soil, surface water and subsurface water quality.	Sufficient chemical toilets should be provided for workers within walking distance of all construction activities.	Subsurface soil contamination and contamination of surface/subsurface water quality could occur if the ablution facilities provided are not according to standard. A temporary impact is possible; however, it can easily be prevented.
Movement of construction vehicles on site (C)	Air quality, soil and vegetation cover.	Potential impacts will be restricted predominantly to existing roads on the site.	Movement will cause limited or localised disturbances and temporary soil compaction, which promotes the establishment of weed species. Dust will be generated by vehicular movements on site.

ENVIRONMENTAL ASPECT AND PROJECT STAGE C: construction stage O: operational phase	ENVIRONMENTAL COMPONENT THAT MAY BE AFFECTED	LOCALITY / APPLICABLE ZONE OF THE IMPACT	NATURE AND DESCRIPTION OF THE POTENTIAL IMPACT/ISSUE
Maintenance of construction vehicles (C)	Soil, vegetation and surface water.	Within the construction camp(s).	In the event of on-site repairs and servicing, soil surfaces, vegetation, and run-off may be locally contaminated. Spillage of fuel through faulty bowsers is a possibility, if not controlled. It is anticipated that no fuel storage facilities will occur on the site other than temporary storage of diesel in drums.
Traffic safety on the main road (C and O)	Social aspects.	The N14 to Kathu.	The access point to the site is via this National Road; therefore motorists using the main road may be negatively impacted on by slow moving construction vehicles.
Noise generation by operating air compressors, excavators and other heavy machinery. Noise is also generated by the construction workers (C)	Impacts on faunal species and surrounding land owners.	Areas on and surrounding site at which construction activities take place.	Excessive noise levels on site may negatively impact upon the behaviour and movements of site fauna. The significance rating and mitigation of this potential impact will need to be dealt with effectively in the EIA report. Surrounding land owners may also potentially be negatively impacted upon by excessive noise levels on site during construction.

4.3.1 Cumulative Impact

According to the definition 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. The potential cumulative impact identified is the use of ground water resource. This has been identified during scoping as an important issue to asses and address. The geo-hidrological study to be finalized will review whether sufficient water resources are available. The results of this study will reveal the significance of the impact on ground water resource. More detail on water provision and sewage handling will be provided in the final services report to be attached to the EIA report.

Cumulative impact on other physical components such as natural vegetation and animal life, air quality and visual impact is not regarded at this stage as of high significance, due to the out stretched and spacious nature of the landscape.

5. SIGNIFICANCE RATING METHODOLOGY OF IMPACTS

The **Significance** of Environmental Impacts is to be assessed by means of the following method:

Significance is the product of probability and **severity. Probability** describes the likelihood of the impact actually occurring, and is rated as follows:

- Improbable - Low possibility of impact to occur either because of design or historic experience.

  Rating = 2

- Probable - Prominent possibility that impact will occur.

  Rating = 3

- Highly probable - Most likely that impact will occur.

  Rating = 4

- Definite - Impact will occur regardless of any prevention measures

  Rating = 5

The **severity rating** is calculated from the *factors* given to **intensity** and **duration**. Intensity and duration factors are awarded to each impact, as described below.

The **Intensity factor** is awarded to each impact according to the following method:

- Low intensity - Nature and/or man made functions not affected and a minor impact may occur.

  Factor 1

- Moderate intensity - Environment affected but natural functions and processes can continue though often in a slightly altered manner.

  Factor 2

- High intensity - Environment affected to the extent that natural functions are altered to the extent that it will temporarily or permanently cease.

  Factor 4

Duration is assessed and a *factor* awarded in accordance with the following:

- Short term - ≤ 1 to 5 years

  Factor 2

- Moderate term - 5 - 15 years

  Factor 3

- Long term - Impact will only cease after the operational life of the activity, either because of natural process or by human intervention.

  Factor 4

- Permanent - Mitigation, either by natural process or by human intervention, will not occur in such a way or in such a time span that the impact can be considered transient.

  Factor 5

The **severity rating** is obtained from calculating a severity factor, and comparing the severity factor to the rating in the table below, for example:

The Severity factor Intensity factor X Duration factor

2 X 3 = 6

A Severity factor of 6 (six) equals a Severity Rating of Moderate severity (Rating 3) as per table below:

Table 1: Severity Ratings

	FACTOR
Low Severity (Rating 2)	Calculated values 2 to 4
Moderate Severity (Rating 3)	Calculated values 5 to 8
High Severity (Rating 4)	Calculated values 9 to 12
Very High Severity (Rating 5)	Calculated values 13 to 16 and mo

Severity factors below 3 indicate no impact

A Significance Rating is calculated by multiplying the Severity Rating with the Probability Rating:

The significance rating should influence the development project as described below:

- Low significance (calculated Significance Rating 4 to 6)
  - Positive impact and negative impacts of low significance should have no influence on the proposed development project
- Moderate significance (calculated Significance Rating ≥ 7 to 12)
  - Positive impact

    Should indicate that the proposed project should be approved

    Negative impact:
  - Should be mitigated or mitigation measures should be formulated before the proposed project can be approved
- High significance (calculated Significance Rating ≥ 13 to 18)

6. CONCLUSION

The purpose of this Environmental Scoping Report has been threefold:

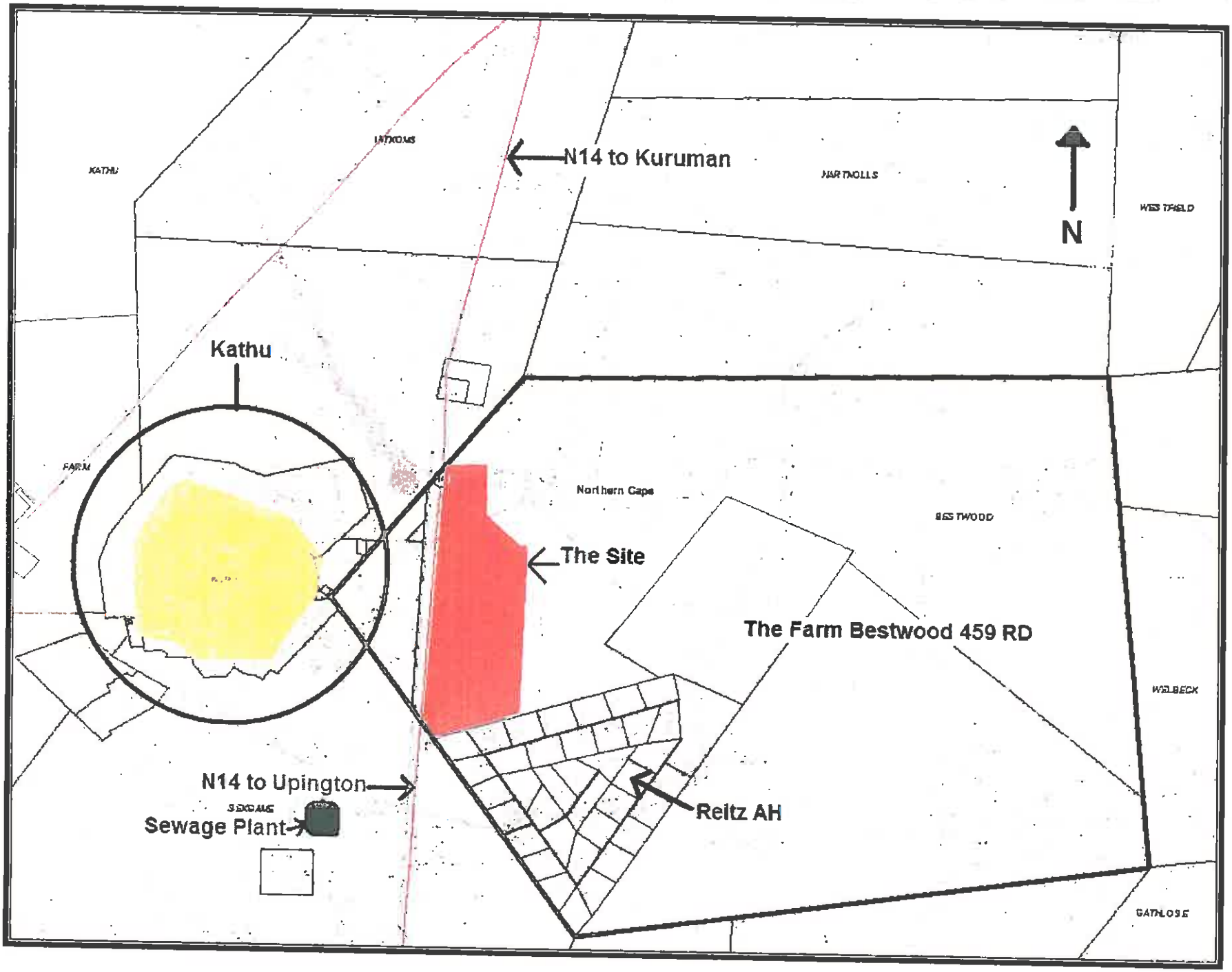
- To provide a project description, and an overview of the proposed development activities on site.
- To provide a description of all the important environmental elements of the study terrain.
- To provide descriptions of anticipated/identified biophysical and social-economic impacts that could potentially occur as a result of the proposed development. This may be expanded upon during the next phase when the EIA report is completed.

The second phase of the Environmental Impact Assessment (EIA) process for the proposed development of the Residential Township Development will follow this scoping process in the form of an Environmental Impact Assessment Report. All anticipated and potential significant impacts that have been identified for the development will be evaluated in terms of their significance, during the EIA process. More detailed information will be included in the EIA report on the following aspects:

- Heritage resources and impacts in the form of a HIA.
- Characteristics of the terrain of the newly proposed sewage treatment plant area.
- Perhaps more details on the services provision, especially water availability and demand and affect if any on the ground water resource.
- Sewage treatment.

Measures to mitigate the potentially negative impacts of certain aspects to be carried out on site will also be formulated during the EIA process and through the compilation of an effective Environmental Management Plan (EMP).

The essence of any EIA process is aimed at ensuring informed decision-making and environmental accountability, as well as to assist in achieving environmentally sound and sustainable development. This is achieved by conducting an analysis of the potential impacts that a proposed development may have on the physical, environmental and social aspects of the concerned area (as



Locality map (1:50 000) of proposed residential township establishment on the farm Bestwood 459 RD

PROPOSED TOWNSHIP

PART OF THE REMAINING PORTION OF THE FARM BESTWOOD NO 459 RD

AUTHORITY: GAMAGARA MUNICIPALITY
REFERENCE NUMBER: ...

REGISTERED OWNER:
MAGDALENA JOHANNA ELIZABETH CAWOOD

USE ZONE	NR. OF ERVEN	AREA (ha)
Res. Zone I @ 700m²	±185	13.4595ha
Res. Zone I @ 640m²	±460	30.2597ha
Res. Zone I @ 600m²	±355	21.7145ha
Res. Zone I @ 500m²	±800	41 1949ha
Residential Zone II	±600	21.2719ha
Business Zone I	1	6.2114ha
Business Zone II	6	0.6000ha
Industrial Zone I	1	6.6587ha
Institutional Zone I	1	3.2142ha
Open Space Zone II	7	7.2020ha
Streets	-.	48.2132ha
TOTAL	±2416	200.0000ha

USE ZONE	% OF TOWN	ERF NRS
Res. Zone I @ 700m²	6.73%	..
Res. Zone I @ 640m²	15.13%	.
Res. Zone I @ 600m²	10.86%	..
Res. Zone I @ 500m²	20.60%	...
Residential Zone II	10.63%	..
Business Zone I	3.10%	...
Business Zone II	0.30%	...
Industrial Zone I	3.33%	...
Institutional Zone I	1.61%	...
Open Space Zone II	3.60%	...
Streets	21.11%	...
TOTAL	100.00%	-.

STREET INFORMATION	
Street length	±24 6km
Gradient of terrain	±1:...

SIZE OF RESIDENTIAL I ERVEN	
Minimum	Ruling
500m²	592m²

1. Proposed ..... Extension ... is denoted by Fig. ABCDEFA and measures 200 ha.
2. All distances & areas are measured in m² or hectares and are approximate pending final survey.
3. Contours conform to the standards laid down in the Townships Ordinance, 1934 and obtained from the Orthophoto Map Series 1:10000.
4. Access to all portions shall be to the satisfaction of the Local Authority.

..... 1530

	AMENDMENTS
DATE	NOTES
.... 07	Submission of township application

PLAN
TOWN AND REGIONAL PLANNERS
ENVIRONMENTAL CONSULTANTS

P.O. BOX 1516;
GROENKLOOF: 0027
54B VAN WOUW STREET;
GROENKLOOF
TEL/FAX: (012) 346 0283
E-MAIL:
degraaff@absamail.co.za

NAME: G.H de Graaff

This is to certify that the township is not affected by floodwaters (1.50 & 1.100 years flood lines) in terms of the specifications of Section 144 of the Water Act (36/1998).

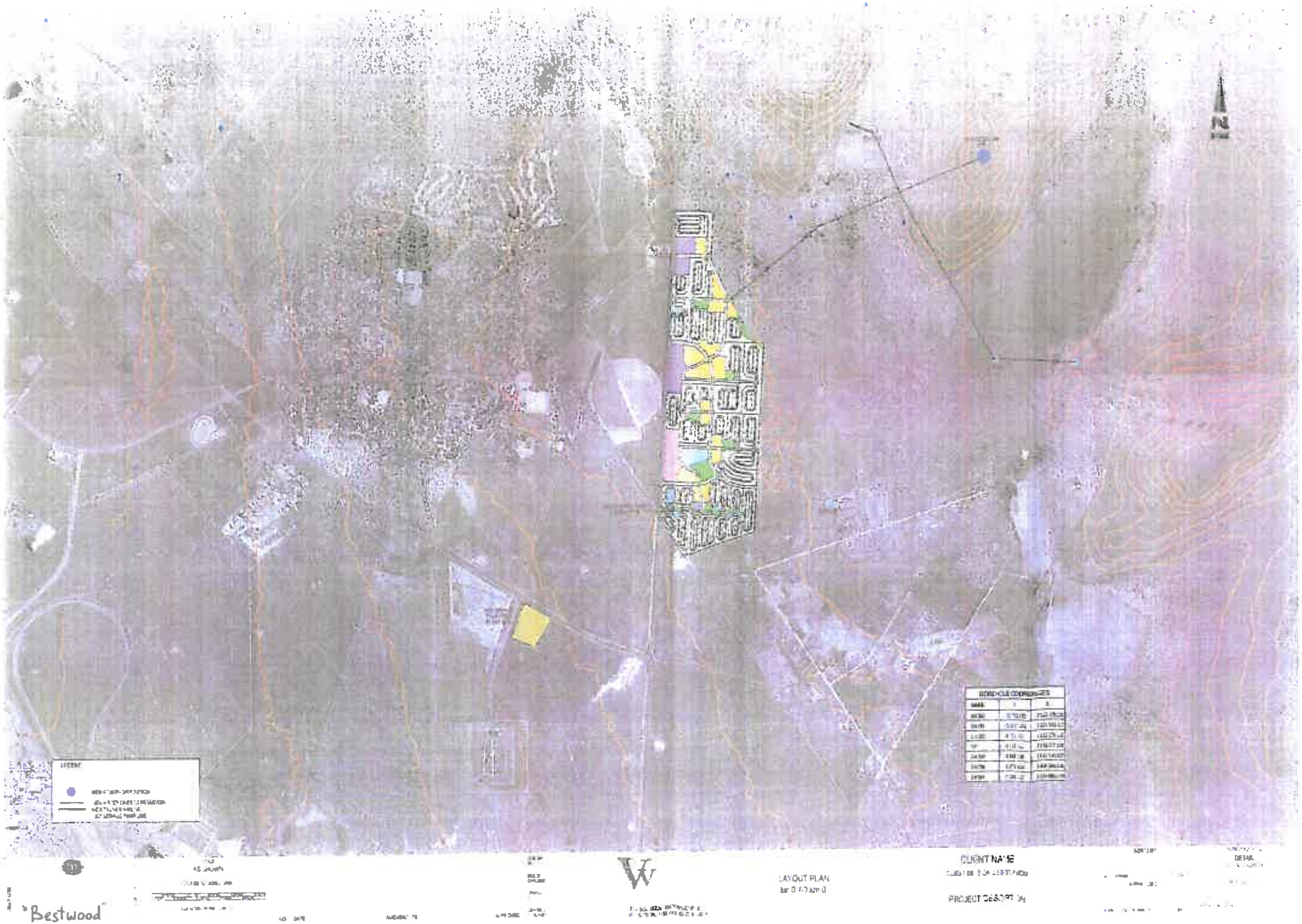
PR NO·

Name:
Company

DESIGNED & DRAWN: HK

Drawing No: KAT2

SCALE 1:7 500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LAYOUT PLAN
CLIENT NAME
PROJECT DESCRIPTION
Bestwood

APPENDIX 3A

BACKGROUND INFORMATION DOCUMENT

ROCK ENVIRONMENTAL CONSULTING (PTY) LTD

ROCK ENVIRONMENTAL CONSULTING (PTY) LTD

BACKGROUND INFORMATION DOCUMENT

PROPOSED RESIDENTIAL DEVELOPMENT ON A 200 HA PORTION OF THE FARM BESTWOOD - 459 RD

27 OCTOBER 2007

APPLICANT:	ENVIRONMENTAL CONSULTANT:
Katu Property Developers (Pty) Ltd Suite 36 Private Bag X 2005 Menlyn Retail Park Pretoria South Africa 0063	ROCK ENVIRONMENTAL CONSULTING (PTY) LTD Mr. Stephan van den Berg / Pieter van der Merwe P.O. BOX 40541 MORELETA PARK 0044 Tel: (012) 997 4742 Fax: (012) 997 0415 E-mail: stephan.rock@lantic.net

1. PURPOSE OF THIS DOCUMENT

- To notify any Interested and Affected Parties (I&APs) of the Environmental Impact Assessment (EIA) Regulations in accordance with stipulations made in Government Notice N385 of 21 April, 2006 published in terms of Chapter 5 of the National Environmental Management Act (Act No. 107 of 1998),
- Provide I&APs with an overview of the project,
- Provide I&APs with a Location Map indicating the location of the proposed development,
- To open a register which contains the names and addresses of all persons who have submitted written comments or attended meetings with the Applicant or Environmental Assessment Practitioner (EAP).

2. INTRODUCTION AND STATEMENT OF INDEPENDENCE

2.1 FULL ENVIRONMENTAL IMPACT ASSESSMENT FOR THE PROPOSED DEVELOPMENT ON THE FARM BESTWOOD NO 429 RD.

Notice is given in terms of EIA Regulations-Government Notice No. N385 and the National Environmental Management Act (Act No. 107 of 1998) that the proposed activity will take place on the farm Bestwood No. 429 RD, situated adjacent to the N14 National road diagonally opposite Kathu Motors (Shell).

Rock Environmental Consulting (Pty) Ltd has been appointed as the independent environmental consultant to the project in order to complete the Environmental Impact Assessment (EIA) process, in terms of Chapter 3 of Government Notice No. N385, published on 21 April 2006.

The full EIA process aims to provide an opportunity for Interested and Affected Parties (I&APs) to comment on the proposed development, such that relevant information exchanges will enable the EIA process to focus the study on reasonable and relevant issues, predominantly relating to environmental impacts that the proposed activity may have. The Scoping Report, and Environmental Impact Assessment Report, to be compiled by Rock Environmental Consulting (Pty) Ltd will focus on the possible issues and impacts associated with the proposed development on the property in question. Where negative impacts are identified, recommendations will be made to mitigate such impacts.

3. PROJECT DESCRIPTION

3.1 LOCATION

The proposed property is located on the farm Bestwood No. 429 RD, and is located adjacent to the N14 National road diagonally opposite Kathu Motors (Shell). The proposed sewage treatment plant will be located directly east of the existing sewage treatment dam, along the R31 road. Please refer to Appendix 1.

3.2 PROJECT DESCRIPTION

THE PROPOSED DEVELOPMENT WILL INVOLVE THE FOLLOWING ACTIVITIES:

- The phased developments of residential dwellings, which will be driven by demand, of a 200 ha portion of the farm Bestwood No. 429 RD, which covers a total surface area of 3300 ha.
- The establishment of associated infrastructure such as access roads, water reservoir, sewage plant, electricity provision and storm-water infrastructure.

4. ENVIRONMENTAL STUDY PROCESS

The Environmental Impact Assessment process consists of two main components, namely (i) the technical/biophysical process and (ii) the public participation process.

- The technical process includes, but is not limited to, the following aspects:
  - Terrain investigations;
  - The identification and assessment of biophysical elements within the study area;
  - Ecological plant and animal sensitivities of the area, including Red Data species investigations;
  - Assessment of the cultural history of the terrain; and
  - Compilation of an Environmental Scoping Report, Environmental Impact Assessment Report and Environmental Management Plan.
- The public participation process includes:
  - Compilation of a database of stakeholders and Interested and Affected Parties;
  - Legal notices of the environmental process (press advertisement and on-site);
  - Dissemination of information to stakeholders and I&APs, and
  - Identification of environmental, as well as social issues and concerns, as raised by I&APs or other relevant stakeholders.

The public participation process is conducted in parallel with the Environmental Impact Assessment process (technical/biophysical process). The public participation process does not aim to promote agreement amongst I&APs or quell possible opposition against a project. The process is transparent to all involved. Additionally, it is considered important to involve I&APs as early in the Environmental Assessment process as possible, to ensure informed decision-making and effective participation throughout the study.

5. PUBLIC OPEN DAY

You are invited to attend a public information session with regards to the proposed development on the 12th and 13th of November 2007, from 14:00 till 20:00 at the Kathu Primary School.

6. COMMENTS / OBJECTIONS

Kindly submit the attached Registration and Comment Sheet, to register as an Interested and Affected Party, with possible issues and concerns relating to the proposed development, as well as any additional I&APs that you would like to be involved in the process, to the **Environmental Consultant** (refer to the contact details given above).

The Registration and Comment Sheet should reach us no later than 30 days after the receipt of this Background Information Document and the advertisement of the project on site.

We thank you for your interest and for taking the time to read through this document.

REGISTRATION AND COMMENT SHEET:

PROPOSED DEVELOPMENT ON THE FARM BESTWOOD No 429 RD

Please complete and return as soon as possible, but no later than 27 November to:

Mr Stephan van den Berg, PO Box 40541, Moreleta Park, 0044

Tel: (012) 997 4742 Fax: (012) 997 0415 e-mail: stephan.rock@lantic.net

---

Title_____Initials_____Surname_____

Organisation/Firm /Position/Nature of Involvement in the project e.g. property owner:

_____

Street / Physical Address:

_____

Postal address:

_____

Postal Code: _____

Telephone Work: _____ Telephone Home:_____

Cell phone: _____ Fax: _____

E-mail: _____

COMMENTS:

1. Are there any comments, concerns or suggestions you would like to contribute regarding the proposed development?

_____

_____

_____

_____

_____

2. Are there additional role-players whom we should involve in the process? If yes, please state their names, contact numbers and organisation and / or position.

_____

_____

APPENDIX 3B

ACKNOWLEDGEMENT OF RECEIPT OF THE BACKGROUND INFORMATION DOCUMENT

ROCK ENVIRONMENTAL CONSULTING (PTY) LTD

PROPOSED RESIDENTIAL DEVELOPMENT ON THE FARM BESTWOOD NO 459 RD, KATHU, NORTHERN CAPE

Proof of Receipt Register

DATE	INITIALS & SURNAME	ADDRESS/FARM NAME	POSTAL ADDRESS	TELEPHONE	FAX / EMAIL ADDRESS	SIGNATURE
27/10/2007	HAR van Niekerk	Laerskool Kathu.	Posbus 300 Kathu	053 723 1121.	053 723 1825	[signature]
27/10/200	Donnie.	Reitz Landbou		082 303 8624. 053 723 3271	(H) 053 723 2970	
	Reitz	Lewes		05372 32271.		
27/10/200	als September.	Shell Garage	PO Box 474. Kathu 8446	053 7233268 0	053 7231233.	[signature]

Proposed Residential Development on a 200ha portion of the farm Bestwood - 459 RD						
Identified Interested and Affected Parties (I&Aps)						
Name	**Organisation / Designtion**	**Cellphone**	**Tellephone**	**Fax**	**Email**	**Postal Address**
C.J. Van Wyk	Kathu Laerskool		053 723 1740			PO Box 416, Kathu, 8224
M. de Waal	REMAX		053 723 2888		madeleinemrbond@telkomsa.net	
E. Cronje	REMAX	083 371 4164			madeleinemrbond@telkomsa.net	
H. Van Niekerk	Laerskool Kathu	082 303 8624	053 723 1121	053 723 1825		
J. Van Rensburg	Plot 29, Reitzhof	083 578 7293				
A. Jacobs	Plot 10 x 11, Reitzhof	083 300 6904			razdi.warmblood.stud@lantic.net	Posbus 204, Kathu, 8224
G Vos	AIDA	082 801 1844	053 723 1048		aidakuruman@telkomsa.net	
Donnie Reitz	Reitz Landbou, Reitz Hoewes		053 723 3271(k),			
			053 723 2970 (h)			
Mrs September	Shell Garage		053 723 3268	053 723 1233		PO Box 474, Kathu, 8446
Lategan Botha	Technical Manager, Gamagara municipality			053 723 2021	lateganb@gamagara.co.za	
Quincible Hinana	H.O.D.: Community Service, Gamagara Mun.		053 723 2021			
Mnr. C. Joachim	Mun. Manager, Gamagara Mun.	083 636 0006	053 723 2221			
Andrew Olivier	Councilor	053 255 6877				
Johan Smit	Reitz Hoewes	083 308 4279	053 739 2558(w),			
			053 723 3155(h)			
Piet Duvenhage	Adjacent land owner		053 723 2351			
Japie Steyn	Adjacent land owner	082 458 6864			Japie.Steyn@kioltd.com	
Jarrot Markramn	Adjacent land owner	083 440 1344	053 712 2802			
Anel Marais	Kumba Resources	083 304 0915				
Gawie van Dyk	DWAF		053 831 4125			
Steve le Roux	Rooisand Ontwikkeling	083 652 2710	021 852 2710		councit@iafrica.com	

APPENDIX 3C

COPY OF THE PRESS ADVERTISEMENT

ROCK ENVIRONMENTAL CONSULTING (PTY) LTD

verskyn.
s Speurder

drank was. Die beskuldigde het op 29 Oktober 2007 in die Landdroshof te Kathu verskyn. Ondersoekbeampte in die saak is Speurder Inspekteur G Miles.

ide a huge breakthrough when Detective Constables om the local detective branch followed information and spectively 21 and 25 years of age, from Boichoko /illem Botha (46) of Haakbosdraai Newtown Postmasburg /een the night of Monday 22 October 2007 and the early 7 at Veepos behind Steenwerke Postmasburg. Two sheep carcasses taken. The suspects will

STMASBURG

ent Assualt Robbery

asburg are investigating a case of t and robbery, after a 40 year old town Postmasburg was sodomised 300 in cash by three unknown men 2 October 2007 at approximately ar Newtown (dam) Postmasburg. It victim was on his way home from a d when he was grabbed by the three urns to sodomise him and when n of his money that was in the pocket d removed. The victim was taken to e for an examination.

OSTMASBURG

npted Murder

masburg are investigating a case of urder, after a 30 year old member of d a shot with his service pistol in the vife but missed her on Tuesday 23 t approximately 21:40 at Postdene is alleged that the suspect and the serious argument when the incident was injured in the incident. The police he suspect was arrested on the scene. eared in court on Wednesday 24 d the case was postponed to Friday 25 bail application.

die ontydige gebruik van roteerligte n die publiek naamlose oproepe aan el word. Hulle vra dat die korrekte k is Paul Moolman 073 799 5800 en

NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Notice is hereby given, in terms of Regulation 56 (Government Notice 385 of 21 April 2006) published in Chapter 5 of the National Environmental Act (Act No. 107 of 1998), of the intent to conduct a full Environmental Impact Assessment with the intent to submit an Application for Authorization for the following:

Project Description:
PROPOSED TOWNSHIP DEVELOPMENT ON A 200ha PORTION OF THE FARM BESTWOOD No. 429 AND ASSOCIATED INFRASTRUCTURE SUCH AS ACCESS ROADS, SEWAGE PLANT, WATER RESERVIOR, ELECTRICITY PROVISIONS AND STORMWATER INFRASTRUCTURE.

Project Location:
The proposed development is located on the farm BESTWOOD No. 429, diagonally opposite Kathu Motors (Shell), and directly adjacent to the N14 National road on the eastern side. The sewage plant will be located directly east of the existing sewage treatment dam, along the R31 road.

Public Open Day:
Public information sessions will be held on 12 & 13 November 2007, from 14:00 to 20:00 at the Kathu Primary School.

Applicant:
Kathu Property Developers (Pty) Ltd

Environmental Consultant:
Rock Enviromental Consulting (Pty) Ltd
P O Box 40541, Moreleta Park, Pretoria, 0044
Tel: 012 997 4742 Fax: 012 997 0415
Email: stephan.rock@lantic.net

In order to register as an interested and/or affected party, or to obtain more information on the proposed development, please submit you name, contact details and interest in the matter within 30 days of the publication date of the above mentioned advertisement.

APPENDIX 3D

SITE NOTICE AND SUPPORTING PHOTOGRAPHS

ROCK ENVIRONMENTAL CONSULTING (PTY) LTD

NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

27 October 2007

Notice is hereby given, in terms of Regulation 56 (Government Notice 385 of 21 April 2006) published in Chapter 5 of the National Environmental Act (Act No. 107 of 1998), of intent to conduct a full Environmental Impact Assessment with the intent to submit an Application for Authorization for the following:

Project Description:
PROPOSED TOWNSHIP DEVELOPMENT ON A 200ha PORTION OF THE FARM BESTWOOD No. 459, AND ASSOCIATED INFRASTRUCTURE SUCH AS ACCESS ROADS, SEWAGE PLANT, WATER RESERVIOR, ELECTRICITY PROVISIONS AND STORMWATER INFRASTRUCTURE.

Project Location:
The proposed development is located on the farm BESTWOOD No. 429, diagonally opposite Kathu Motors (Shell), and directly adjacent to the N14 National road on the eastern side. The sewage plant will be located directly east of the existing sewage treatment dam, along the R31 road.

Applicant:
Katu Property Developers (Pty) Ltd

Environmental Consultant:
Rock Environmental Consulting (Pty) Ltd.
PO Box 40541
Moreleta Park
Pretoria
0044
Tel: (012) 997 4742 Fax: (012) 997 0415
Email: stephan.rock@lantic.net

REC
ROCK ENVIRONMENTAL CONSULTING (PTY) LTD

Publication of Advertisement:
In the Kuruman Bulletin, dated 1 November 2007

In order to register as an interested and/or affected party, or to obtain more information on the proposed development, please submit your name, contact details and interest in the matter within 30 days of the publication date of the above mentioned advertisement.

Proof of Site Notices

Figure 1: Site Notice on site at the current access.

Figure 2: Site Notice on site 300m south from the current access.

Figure 3: Site Notice on site at the Police Department in Kathu.

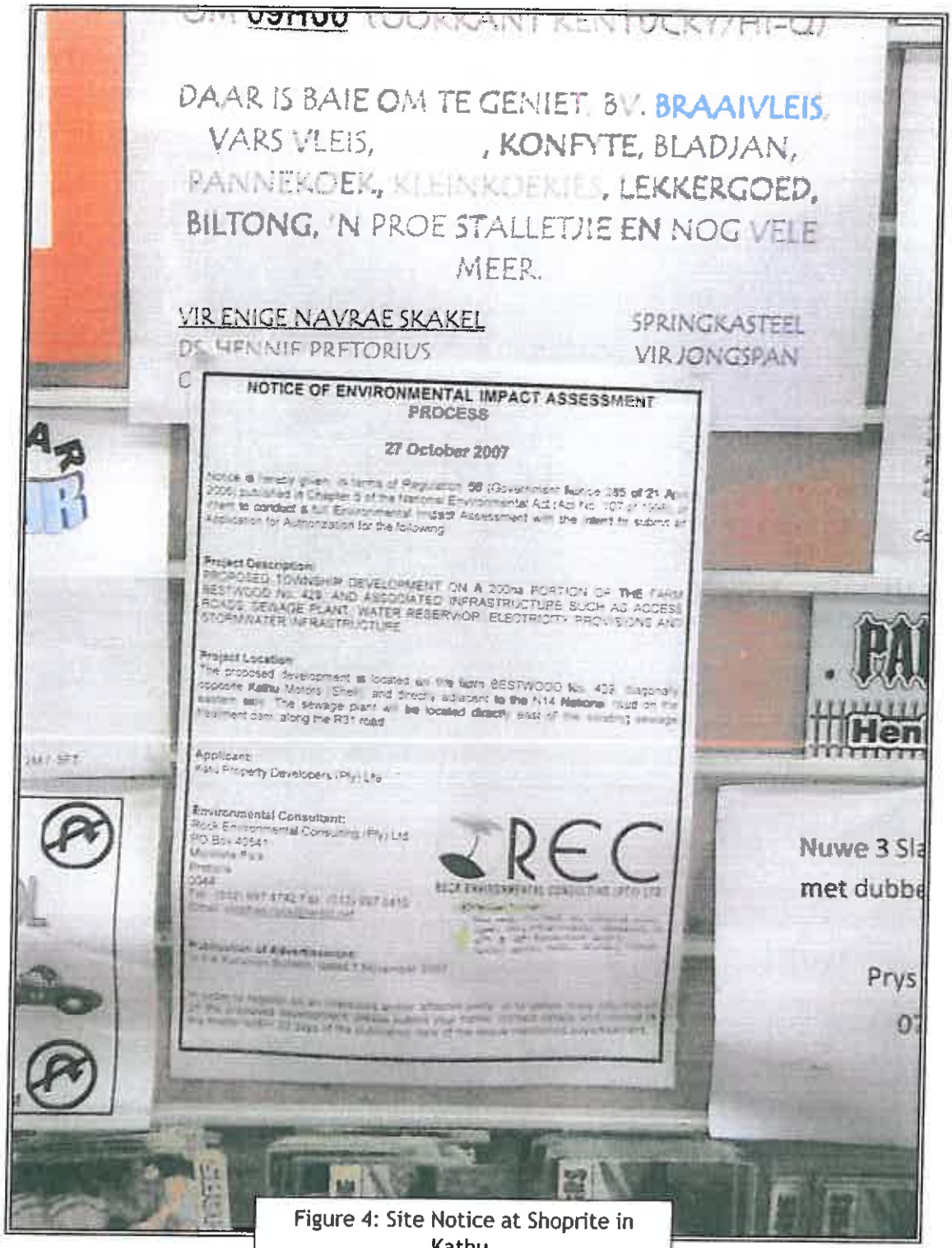

Figure 4: Site Notice at Shoprite in Kathu.

APPENDIX 3E

COMMENTS AND REGISTRATION SHEETS RECEIVED FROM I&AP'S

ROCK ENVIRONMENTAL CONSULTING (PTY) LTD

JAN S. DE VILLIERS
ATTORNEYS

ROCK ENVIRONMENTAL CONSULTING (PTY) LTD
P O BOX 40541
MORELETA PARK
0044

BY FAX: 012 997 0415

RJ Feenstra/
Mr Stephen Van den Berg / Pieter van der Merwe
ROELOF FEENSTRA
+27 21 809 6009
0865106828
roelof@jans.co.za

OUR REFERENCE
YOUR REFERENCE
ADDRESS INQUIRIES TO
DIRECT LINE
DIRECT TELEFAX
E-MAIL

29 March 2008

Block B 2nd floor
De Wagenweg Office Park
Stellantia Road
P O Box 1008
Stellenbosch, 7599
Tel +27 21 809 6000
Fax +27 21 887 1091
Docex 10 Stellenbosch
info@jans.co.za
www.jans.co.za

Dear Sirs

KATU PROPERTY DEVELOPERS (PTY) LTD
PROPOSED RESIDENTIAL ON A PORTION OF THE FARM BESTWOOD 429.
OUR CLIENT: PZK BELEGGINGS 3000 CC (PZK)

We act on behalf of PZK the registered owner of Portions 48 and 4 of the Farm Bestwood No 459 generally known as the Rooisand Residential Development which is apparently directly adjacent to the portion of the property on which the proposed development is envisaged.

Can you please provide us with a copy of your Environmental Impact Assessment report on the development and the Scoping Report, if available.

Yours faithfully
JAN S. DE VILLIERS

Per:
RJ FEENSTRA

REGISTRATION AND COMMENT SHEET:

PROPOSED DEVELOPMENT ON THE FARM BESTWOOD No 429 RD

Please complete and return as soon as possible, but no later than 27 November to:

Mr Stephan van den Berg, PO Box 40541, Moreleta Park, 0044

Tel: (012) 997 4742 Fax: (012) 997 0415 e-mail: stephan.rock@lantic.net

---

Title Dr Initials JE Surname Drewes

Organisation/Firm /Position/Nature of involvement in the project e.g. property owner:

Eriloba Consulting - Housing Consultant to Assmang Ltd. (Khumani JMine)

Street / Physical Address:

Corner of Borchard and Hoffman Streets, Potchefstroom

Postal address:

PO Box 19858, Noordbrug

Postal Code: 2522

Telephone Work: 018 299 2543 Telephone Home:

Cell phone: 082 416 0935 Fax: 018 299 2543

E-mail: ernst-drewes@nwu.ac.za

COMMENTS:

1. Are there any comments, concerns or suggestions you would like to contribute regarding the proposed development?

2. Are there additional role-players whom we should involve in the process? If yes, please state their names, contact numbers and organisation and / or position.

REGISTRATION AND COMMENT SHEET:

PROPOSED DEVELOPMENT ON THE FARM BESTWOOD No 429 RD

Please complete and return as soon as possible, but no later than 27 November to:

Mr Stephan van den Berg, PO Box 40541, Moreleta Park, 0044

Tel: (012) 997 4742 Fax: (012) 997 0415 e-mail: stephan.rock@lantic.net

Title Me Initials S Surname Markram

Organisation/Firm /Position/Nature of Involvement in the project e.g. property owner:

Street / Physical Address:
Reitzhof, Kathu

Postal address:
P.O Box 1181, Kathu

Postal Code: 8446

Telephone Work: - Telephone Home: —

Cell phone: 083 9984030 Fax:

E-mail: Sandra.Markram@kioltd.com

COMMENTS:

1. Are there any comments, concerns or suggestions you would like to contribute regarding the proposed development?

- Fewer houses.
- Not directly situated against the Nile.
- Fence around the area.
- No boreholes.

2. Are there additional role-players whom we should involve in the process? If yes, please state their names, contact numbers and organisation and / or position.

Sishen Iron Ore Mine (— Water + Sewerage)

APPENDIX 3F

PUBLIC MEETING ATTENDANCE REGISTER

ROCK ENVIRONMENTAL CONSULTING (PTY) LTD

PROPOSED RESIDENTIAL DE\ LOPMENT ON A 200 HA PORTIO OF THE FARM BESTWOOD – 459 RD

Date: 13 November 2007

LIAISON WITH I&AP'S – OPEN DAY

Venue: Katu Primary School

Time: 14:00-20:00

Name	Organisation / Designation	Telephone Number / Fax Number	E-mail address/ Postal Address	Signature
C.J. van wyk	Kathu Laerskool	723 1740	Box 416 Kathu. 8224.	
M. de Waal.	RE/MAX	053 7232888	madeleinemibond@telkomsa.net	
E Cronje.	Remax	083 371 4164	"	E Cronje.
H van Niekerk.	Kathu laerskool.	053-7231121	—	
J v. Reenen	Plot 29 Reitzhof	083 578 7293	—	
M. Jacobs	Plot 10 + 11 Reitzhof	Posbus 2041 Kathu. 083 300 6904	razor.warmblood.stud@lantic.net Reitzhof 10	
G Vos	AIDA	082-8011846 053-7231048	aidakuruman@Telkomsa.net	

PROPOSED RESIDENTIAL DE\ LOPMENT ON A 200 HA PORTIO OF THE FARM BESTWOOD – 459 RD

LIAISON WITH I&AP'S – OPEN DAY

Date: 12 November 2007

Venue: Katu Primary School

Time: 14 00-20:00

Name	Organisation / Designation	Telephone Number / Fax Number	E-mail address/ Postal Address	Signature
P vd Merwe	REC	012 9974742 012 9970415	racke@lantic.net	[signature]

APPENDIX 3G

LAND OWNERS MEETING ATTENDANCE REGISTER

ROCK ENVIRONMENTAL CONSULTING (PTY) LTD

PROPOSED RESIDENTIAL DEVELOPMENT ON A 200 HA PORTION OF THE FARM BESTWOOD – 459 RD

LIAISON WITH I&AP'S – MEETING WITH LAND OWNERS

Date: 19 November 2007

Kreitz Small Holding J.

Name	Organisation / Designation	Telephone Number / Fax Number	E-mail address/ Postal Address	Signature
H MARKRAM	PLOT 20	083 998 4001		
S. Markram	Plot 20	083 998 4030	Sandra.markram@kioltd.com.	S Markram
P. MARKRAM	PLOT 30	073 973 6624		
A. Markram	"	079 922 458		
D. KEITZ	REITZHOF NO1.	053 7233271.		
G. Olivier	Plot 15	082 4944483	gertoli4@lantic.net	
W. WIESE	Plot 41	079 265 9444	wikus.wiese@KIOLTD.com	
C H ENSLIN	Reitzhof 35.	083 716 164.		
C. CLARSSENS	Reitzhof 26.	083 940 849.	chris.claassens@KIOLTD.com	
N DU PLOOY	PLOT 24 REITZHOF	083 307 1693	Normanduplooy@gmail.com	
W A Enslin	Plot 35	083 743 6960	Wilma.Enslin@KIOLTD.com.	
G JORDAAN	Plot 32	053-723-1060	Postbus 915	

PROPOSED RESIDENTIAL DEVELOPMENT ON A 200 HA PORTION OF THE FARM BESTWOOD – 459 RD

LIAISON WITH I&AP'S – MEETING WITH LAND OWNERS

Date: 19 November 2007

[Reitz Small Holdings]

Name	Organisation / Designation	Telephone Number / Fax Number	E-mail address/ Postal Address	Signature
GP van Zyl	Plot 9	0835218079		[signature]
[illegible] WALDECK	Plot 21	0781667715		[signature]
JJ Fleming (Kobus)	Plot 18	0847045011 Mev 0839291708 Mnr		R Fleming
Ems v Rensburg	Plot 33	0738688648 053 72 31314		[signature]
HS Griffiths	Plot 8	05372 31064. 0837547498.		[signature]
J H Smit	PLOT 38	053-7392558 083 308 4279	Bus 1111 Kath Johan.Smit@kiolta.com	[signature]
~~H Jacobs~~	~~Plot 10+11~~			
H. Jacobs	Plot 10+11	083 300 6904 Razoi.Wonmbloed.Stud.@lantic.net		[signature]

APPENDIX 3H

COMMENTS AND RESPONSES REPORT

ROCK ENVIRONMENTAL CONSULTING (PTY) LTD

COMMENTS AND RESPONSES REPORT FOR THE PROPOSED TOWNSHIP DEVELOPMENT ON THE FARM BESTWOOD:

NAME	ORGANISAION	CONTACT DETAILS	COMMENTS/CONCERNS	RESPONSE GIVEN
Ms S Markram	Land Owner	(c) 083 998 4030 (email) Sandra.markram@kioltd.com	⅄ Fewer houses to be built were proposed. ⅄ She proposed that the site is not directly situated against the N14. ⅄ She questioned if a fence will surround the development. ⅄ She raised concerns regarding the boreholes.	⅄ It depends on the urban framework of Kathu on the amount of houses that may be built. This subject will be further discussed in the EIA report. ⅄ The site directly situated against the N14 has the benefits of reducing environmental impacts due to the building of access roads. ⅄ This matter will be discussed with the applicant and information will be provided in the EIA report. ⅄ This matter will be studied in full detail by the geo-hydrologist. This information will be incorporated into the EIA report.

APPENDIX 31

MINUTES OF MEETING HELD

ROCK ENVIRONMENTAL CONSULTING (PTY) LTD

ROCK ENVIRONMENTAL CONSULTING (PTY) LTD

MINUTES OF THE MEETING WITH THE OWNERS OF THE REITZHOF SMALL HOLDINGS

PROPOSED RESIDENTIAL DEVELOPMENT ON A 200 HA PORTION OF THE FARM BESTWOOD - 459 RD

MEETING ON THE 19TH NOVEMBER 2007

APPLICANT:	ENVIRONMENTAL CONSULTANT:
Katu Property Developers (Pty) Ltd Suite 36 Private Bag X 2005 Menlyn Retail Park Pretoria South Africa 0063	ROCK ENVIRONMENTAL CONSULTING (PTY) LTD Mr. Stephan van den Berg / Pieter van der Merwe P.O. BOX 40541 MORELETA PARK 0044 Tel: (012) 997 4742 Fax: (012) 997 0415 E-mail: stephan.rock@lantic.net

1. WELCOME

Mr Johan Smith, Chairman of the Reitzhof Small Holding landowners association, welcomed the landowners present and expressed his appreciation towards REC to communicate the project components as part of the Environmental Scoping process and report.

2. INTRODUCTION

Mr Van der Merwe from REC explained the EIA process in detail and set out the reason for the meeting ,being an opportunity for the community to express their concerns and views on the proposed development.

The project details were explained with the assistance of Mr Annes de Bruyn on matters related to water and sewage provision.

Mr Van der Merwe emphasized to the members that the purpose of the meeting is not to provide clear answers on the issues or questions but to put the issues and questions on record so that these can be addressed to the best means during the EIA process. He also explained that the Environmental Scoping Report and the EIA Report will be made available to the public for comment.

3. COMMENTS AND ISSUES

The following comments and issues were raised and the meeting. The issues were categorized under different subjects:

3.1 CRIME AND SECURITY

The following issues and concerns were raised:

- The members are concerned about the negative effect the proposed development will have on crime and general security, especially during the construction stages of the project.
- The view was expressed that workers may reside in the adjacent area bordering the proposed development site. If this would happen it was felt that it will have a negative effect on the security of the people on the Reitzhof Small Holdings.
- According to attendants to the meeting it is often the labourers that it appointed on a daily basis ("Dagloners") that may cause security problems.
- Will there be a guarantee from the Contractor(s) that their actions will not create security and crime problems.
- Can the Contractor(s) be held responsible or laible if it can be proved that construction actions are associated with crime or security at the Reitzhof SH.

3.2 RESPONSIBILITIES OF THE CONTRACTOR

The question was raised with respect to what the responsibilities of the contractor were in terms of the control of squatting in and around of the proposed development site and where and how accommodation will be provided for workers in a safe and healthy manner.

Where would the accommodation of construction workers take place during the development stages of the project?

3.3 WATER RELATED ISSUES

A general concern is the impact of the proposed development on the ground water resource for the Reitzhof Small Holding area. Several cases were mentioned where the level of the ground water table were affected by mining activities in the Kathu region. The concerns are that this proposed development when sourced from ground water resource, will have impact on the ground water availability of the adjacent landowners.

The issue of a possible cumulative impact on the ground water resource was also mentioned.

Mr D. Reitz requested that all the applications for water use to be submitted for approval by DWAF, must be copied to all members of the Reitzhof SM.

Finally the view was expressed that all mayor role players must work together on the matters related to water.

4. CLOSURE

The meeting was closed by Mr Johan Smith, thanking everybody for their attendance.

APPENDIX 4

PLAN OF STUDY FOR ENVIRONMENTAL IMPACT ASSESSMENT

ROCK ENVIRONMENTAL CONSULTING (PTY) LTD

ROCK ENVIRONMENTAL CONSULTING (PTY) LTD

1172 Lara Street
P.O. Box 40541
Moreleta Park
0044

PLAN OF STUDY FOR ENVIRONMENTAL IMPACT ASSESSMENT PROCESS FOR THE PROPOSED RESIDENTIAL DEVELOPMENT ON THE FARM BESTWOOD 459 RD, KATHU

Prepared for: ANNES DE BRUYN

On behalf of: ANNES DE BRUYN / FRED CAWOOD
KATHU PROPERTY DEVELOPERS (PTY) LTD
SUITE 36 PRIVATE BAG 2005
MENLYN RETAIL PARK
0063

Author: SALOME VENTER
ROCK ENVIRONMENTAL CONSULTING (PTY) LTD.
P.O. BOX 40541
MORELETA PARK
0044

12 February 2008

Tel: +27 12 997 4742
Fax: +27 12 997 0415
E-mail: rockec@lantic.net
Reg. No 99/28567/07
Director: PN van der Merwe B Sc(Hon) B Sc (Hon) Environmental Management

DOCUMENT DISTRIBUTION

COPY NO.	ATTENTION	NAME AND ADDRESS OF CONCERN
1	Head of Department	NP Department of Tourism Environment and Conservation Private Bag X6102 KIMBERLEY 8300
2	Applicant	KATHU PROPERTY DEVELOPERS (PTY) LTD Mr. Annes de Bruyn Mr. Fred Cawood
3	Author	Rock Environmental Consulting (Pty) Ltd P.O. BOX 40541 MORELETA PARK 0044
4	Mr L Botha Technical Services Manager	Gamagara Municipality PO Box 1001 KATHU 8446
5	Mr G van Dyk	Department of Water Affairs and Forestry Private BagX6101 KIMBERLEY 8630
6	Provincial Manager	South African Heritage Resources Agency PO Box 1930 KIMBERLY 8300
7	Mr J Smith Chairman of Reitz Holdings	PO Box 1111 Kathu 8446
8	All adjacent landowners	Public Library

1. BASIC PROJECT INFORMATION

Environmental Consultant (EAP):

ROCK ENVIRONMENTAL CONSULTING (PTY) LTD

P.O. Box 40541

MORELETA PARK

0044

Contact: Salome Venter

E-mail : rockode@lantic.net

Telephone : (012) 997 4742

Fax : (012) 997 0415

1.1. DETAILS OF THE PROPOSED ACTIVITIES.

Although it was covered in the Environmental Scoping Report, it is important to note that the Conceptual Layout Plan of the proposed residential development on the Farm Bestwood 459 RD, was firmly based on environmental and practical considerations. This was achieved by several site investigations and through the use of aerial photographs and detailed contour plans. Following an investigation of the former mentioned aspects, including the level of disturbance of the vegetation present, the following was determined:

- The Environmental Impact Assessment (EIA) process and report will focus on the assessment of the possible issues and impacts associated with the proposed development of the Residential Development. The EIA Report will provide as much technical, environmental and socially applicable information as possible, in order to assist the Department in making an informed decision regarding the proposed Residential Development on the Farm Bestwood 459 RD. Potential social impacts will also be thoroughly investigated.
- The Environmental Scoping report served to identify all the potential environmental, social and economic impacts that could potentially result from the proposed development. The EIA process and report will now serve to elaborate and assess the significance of the impacts that have been identified to date.
- An evaluation of the so called "NO GO" option and any reasonable and feasible alternatives will also be included in the EIA report.
- It is requested by the environmental consultant that I&AP's kindly reveal all their needs and requirements timeously, in terms of possible additional information that may be requested during the evaluation process of the project.

2. TASKS AND METHODOLOGY TO BE PERFORMED

The study will entail the following steps:

- The significance assessment of all the potential impacts identified in the environmental scoping report.
- The evaluation of the so called "NO GO" option and any reasonable and feasible alternatives to the proposed development.
- An evaluation of the need and desirability of the proposed development.
- A summary of specialist reports produced for the project.
- An Environmental Impact statement for the proposed activity will be established.
- A preliminary Environmental Management Plan (EMP) will be produced which will provide mitigation recommendations for the potentially negative impacts arising from the proposed development.

2.1. ENVIRONMENTAL ASSESSMENT STAGE

The assessment of the prevailing environmental conditions will be based on the following steps and elements:

- Project Description
- Biophysical elements (climate, land types, flora and fauna, topography and surface drainage, slope and catchment, geology, soils etc.)
- Red Data fauna and flora investigations are deemed necessary.
- Cultural/historical elements of importance
- The results of the geotechnical and engineering services reports.
- Land use of the surrounding area
- Visual and aesthetic characteristic of the area
- Public Participation Process (see below)

2.2. PUBLIC PARTICIPATION

The Public Participation process will be an open and interactive process involving the adjacent land owners, surrounding rural communities and other interested and affected parties (I&AP's), such as the local authority and community services. It is a useful tool that assists in the assessment of impacts, both positive and negative, that the development may have on the surrounding community and their activities. The process allows for the notification of the registered I&AP's of both positive and negative impacts associated with the proposed development. It also assists the planners of the project to adjust their course of action and/or planning to some extent, should this be required as a result of high negative impacts anticipated to be detrimental to the environment as a result of the proposed development.

2.3 SPECIALIST INPUT REQUIRED

The following specialist studies are deemed, by the EAP, to be necessary in order to establish a true reflection of the potential environmental impact associated with, and the long term sustainability of, the proposed development.

- Specialist Geohydrological report
- Specialist Heritage Impact Assessment
- Specialist Red Data Report and Floral Assessment of the Terrain
- Specialist Red Data Report and Faunal Assessment of the Terrain
- Engineering Services Report

We kindly request that the Department should inform us if they perceive any additional specialist information to be necessary. We also kindly request that they inform us of their decision regarding this matter well in advance.

2.4 IMPACT AND ISSUE ASSESSMENT IN THE ENVIRONMENTAL IMPACT ASSESSMENT REPORT

It is essential to provide detailed information on the nature and layout of the proposed residential development on the Farm Bestwood 459 RD. The assessment and evaluation of issues and impacts will be conducted through an analysis of the environmental aspects associated with the project and how these aspects will interact with the prevailing or, where possible, the future environmental conditions. Positive as well as negative impacts will be discussed. All development aspects during the possible future **construction and operational** phases of the development will be assessed.

It is also anticipated that the rating of impacts and issues will be conducted by using a quantitative rating method. The impacts and issues will be rated according to the nature, probability, extent and duration of the impacts, from which an impact significance rating will be calculated.

2.5 ENVIRONMENTAL MANAGEMENT PLAN (EMP)

Recommendations to reduce the impacts of the proposed development on the environment will be provided, which will focus on the impacts anticipated during the construction and operational phases of the proposed residential development; these impact mitigation recommendations will be included in an *Environmental Management Plan (EMP)* as a separate chapter to the report. The EMP will focus on measures to be taken or implemented during all stages of the proposed project. This EMP will serve as a positive action, and must ensure that the impact on the biophysical and social environment is mitigated to satisfactory levels.

3. TIME FRAME

Several site visits have been conducted to obtain an overview of the environmental setting of the project. There will be close cooperation between the various members of the project team, especially the applicant, project engineers, project architects and the environmental consultant - in order to integrate the planning and design of the development towards careful consideration of the environmental impacts associated with the project.

3.1. ANTICIPATED SCHEDULE

The following time frames are anticipated:

- Public Participation Process for the EIA exercise - as described in the previous section.
- Make the EIA report available for comments upon its completion (30 day comment period).
- Incorporate any additional public comments in to the report and then submit it to Northern Province Department of Tourism Environment and Conservation.

Please do not hesitate to contact us if there are any queries. We will contact your office for the arrangement of a site visit with the relevant official on the project as soon as possible, once such an official has been assigned to the project. We would greatly appreciate it if the same official could stay involved throughout the process to reduce the risk of time delays.

Please confirm receipt of this document by fax to the following number:

(012) 997 0415.

Thanking you in advance,

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Salome Venter

For: Rock Environmental Consulting (Pty) Ltd