

SCOPING REPORT FOR

**PROPOSED RESIDENTIAL DEVELOPMENT
(TOWNSHIP ESTABLISHMENT) ON
PORTIONS 65 AND 501 OF THE FARM
WATERKLOOF 305 JQ, RUSTENBURG,
NORTH WEST PROVINCE
REF: NWP/EIA/23/2012**

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LIST OF DEFINITIONS, ABBREVIATIONS AND ACRONYMS

BID	Background Information Document
CBD	Central Business District
CARA	Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983)
DAFF	Department of Agriculture, Forestry & Fisheries
DPWRT	Department of Public Works, Roads & Transport
DWA	Department of Water Affairs
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EIR	Environmental Impact Report
EMF	Environmental Management Framework
EMP	Environmental Management Programme
GDP	Gross Domestic Product
GNR	Government Notice Regulation
GPS	Global Positioning System
I&AP	Interested and Affected Party
LUMS	Rustenburg Land Use Management Scheme
MAP	Mean Annual Precipitation
MAR	Mean Annual Runoff
NEMA	National Environmental Management Act, 1998 (Act 107 of 1998) as amended
NWA	National Water Act, 1998 (Act 36 of 1998)
NW DEDECT	North West Department of Economic Development, Environment, Conservation and Tourism
PPP	Public Participation Process
RLM	Rustenburg Local Municipality
ROCLA	Rustenburg Olifantsnek Corridor Landowners Association
SANBI	South African National Biodiversity Institute
SDF	Spatial Development Framework
SEA	Strategic Environmental Assessment
SAHRA	South African National Heritage Resources Act, 1999 (Act No. 25 of 1999)
WMA	Water Management Area

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1 INTRODUCTION

1.1 Background

HydroScience cc, an independent Environmental Assessment Practitioner (EAP), has been appointed by Sunbird Development & Buxtehude Trust, to undertake a full Environmental Impact Assessment (EIA) and submit a Scoping Report as well as an Environmental Impact Report (EIR) to the relevant authority to apply for environmental authorisation for the proposed township establishment (residential development) on Portions 65 and 501 of the farm Waterkloof 305 JQ, Rustenburg, in the North West Province.

As part of the EIA process (Figure 1-1), an application, in terms of the National Environmental Management Act (NEMA), 1998 (Act 107 of 1998), as amended, and associated Regulations of 2010, has been submitted to the North West Department of Economic Development, Environment, Conservation and Tourism (NW DEDECT) in May 2012. On the 23rd of May 2012, an acknowledgement of receipt (including reference number) was received from NW DEDECT and the Public Participation Process (PPP) subsequently commenced.

This Scoping Report contains the relevant and applicable information required for a comprehensive understanding of the project and nature of issues identified during the Scoping Phase of an EIA.

1.2 Details of EAP

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The EAP's who compiled this Scoping Report include Ms Paulette Jacobs (Director, HydroScience) and Ms Louise van Wyk (Senior Environmental Scientist, HydroScience) both of whom have undertaken many EIAs for similar activities, projects and developments. The Curriculum Vitae of the aforementioned professionals, as well as project lists and company profile indicating previous experience in similar projects are included in Appendix A.

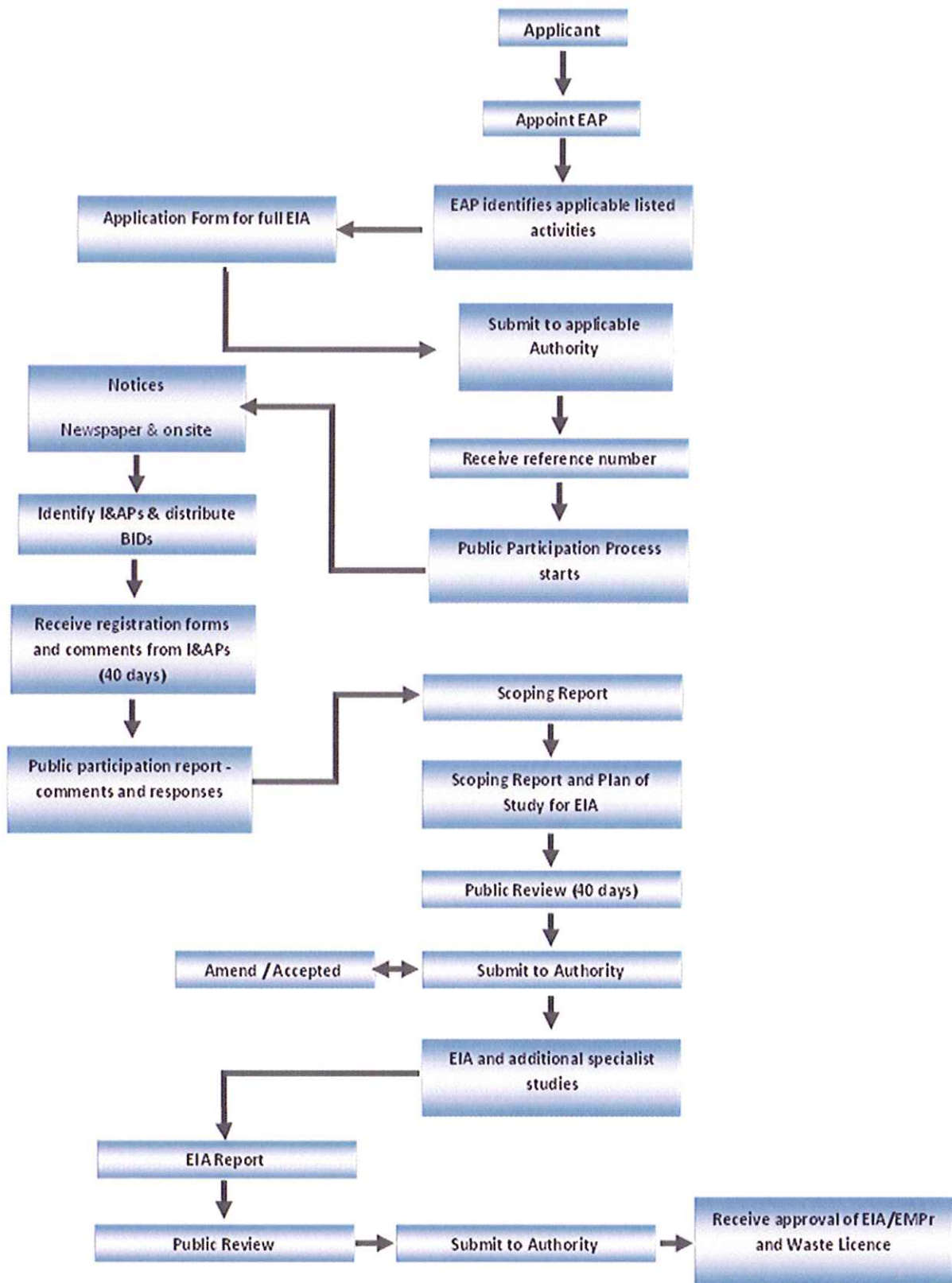


Figure 1-1: Simplified diagram explaining the EIA process

2 DESCRIPTION OF THE ACTIVITY

2.1 Nature

The two (2) farm portions have a combined size of 69.35ha and are currently largely undeveloped but disturbed due to use for agricultural purposes. In the process of developing the site into a residential township, the following main activities will take place:

- Vegetation will be cleared during earth works and construction phase;
- Bulk services (sewage, electricity, water supply and roads) will be installed; and
- Infrastructure (residential dwellings, shops etc) will be built during construction phase.

The planned infrastructure will include:

- Residential units;
- Access and internal roads;
- Amenities such as shops etc; and
- Infrastructure for bulk services (water supply and sewage).

A layout of the residential development will be based on the findings of the specialist studies.

2.2 Motivation

Objective: The main objective of the project is to establish a township (residential development) that will contribute to the development and growth of Rustenburg, consequently adding to the Gross Domestic Product (GDP) of the city as a whole.

Need: According to the Rustenburg Spatial Development Framework (SDF, 2002), continuation of current growth rates implies that Rustenburg will by far be the largest city in the North West Province by 2015. According to the latest draft SDF (2010), the growth rate in the period 2001 - 2007 (6 years) was approximately 4.3% per annum. The latest population figures indicate that the population increased from 395 000 (2001) to 450 000 (2007). The SDF (2002) lists Rustenburg as a top priority investment area due to both high economic potential and high socio-economic need. This implies that any investment in the Rustenburg area is likely to result in a good return, both socially and economically. Furthermore, Rustenburg is listed as one of three "high growth" municipalities. It is however, also considered a water scarce area and expensive water is currently imported to the area.

Rustenburg is historically known to experience shortages of residential accommodation (housing) according to the Rustenburg SDF (2002) as approximately 21% of households resides in informal structures (SDF 2010). It is understood (SDF 2002) that an additional 25 mines may be established in the Region by 2020 and this will only add to the housing shortage in the area. Due to the potential future growth of the population in the Rustenburg area, an additional 57 000 housing units will be required by 2015 (SDF 2010). The proposed residential development (township establishment) is therefore in line with the mandate of the SDF to alleviate the housing shortage and address the need for formal housing presently experienced in the Province and specifically in Rustenburg.

Benefit: A socio-economic benefit to the Rustenburg area and to surrounding landowners to the project site (increase in property value).

3 LEGAL REQUIREMENTS AND GUIDELINES

3.1 Constitution of South Africa, 1996 (Act 108 of 1996)

The Constitution of South Africa, 1996 (Act 108 of 1996) also places a duty on the State to protect the environment. Section 24 states that:

“Everyone has the right

- a. to an environment that is not harmful to their health or well-being; and
- b. to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that
 - i. prevent pollution and ecological degradation;
 - ii. promote conservation; and
 - iii. secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.”

Section 26 also states that:

- Everyone has the right to have access to adequate housing.
- The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of this right.

3.2 National Environmental Management Act (Act 107 of 1998) as amended, and associated Regulations of 2010

The principles underpinning environmental management contained in the National Environmental Management Act (NEMA), 1998 (Act 107 of 1998), must be taken into account by any organ of state in the exercise of any power that may impact on the environment. Section 2 (4a) states that sustainable development requires the consideration of all relevant factors including the following:

- That the disturbance of ecosystems and loss of biological diversity are avoided, or where they cannot be altogether avoided, are minimised and remedied;
- That pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;
- That the development, use and exploitation of renewable resources and the ecosystems of which they are a part do not exceed the level beyond which their integrity is jeopardised;
- That negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.

Government Notice Regulations (GNR) 543, 544, 545 ad 546 of 18 June 2010 contain the regulations pertaining to EIA under sections 24(5), 24M and 44 of the NEMA. The project falls under the listed activities of GNR 545 (Listing Notice 2, 18 June 2010) for which a full EIA is required according to legislation:

Activity 15 – Physical alteration of undeveloped, vacant or derelict land for residential, retail, commercial, recreational, industrial or institutional use, where the total area to be transformed is 20 hectares or more.

GNR 543 stipulates requirements in terms of processes to be followed and information to be included in documentation. The Public Participation Process (PPP) was carried out in accordance with Chapter 6 of NEMA as amended and in support of the Environmental Impact Assessment Regulations, 2010 (GNR 543 section 54 – 57) and associated guidelines.

3.3 Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983)

The aim of the Act is to provide for control over the utilization of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants; and for matters connected therewith.

To achieve this aim, the following objectives are included:

- To provide for the conservation of the natural agricultural resources of the Republic by the maintenance of the production potential of land;
- The combating and prevention of erosion and weakening or destruction of the water sources, and
- The protection of the vegetation and the combating of weeds and invader plants.

3.4 Guidelines

The guidelines considered during the EIA process include:

- Rustenburg Spatial Development Framework (SDF), Urban Dynamics North West 2005 as well as 2010 updated draft.
- Rustenburg Strategic Environmental Assessment (SEA), 2003. Eco Assessments, ecological and environmental consultants in association with African EPA, Motso planning and development consultants, MetroGIS. September 2003.
- Rustenburg Land Use Management Scheme (LUMS), 2005.
- Magaliesberg Protected Environment (MPE) Environmental Management Framework (EMF) and Plan. Draft. October 2007.

4 THE ENVIRONMENTAL CONTEXT OF PROPOSED PROJECT

4.1 Site Description

The proposed township (residential development) will be established on Portions 65 and 501 of the farm Waterkloof 305 JQ, Rustenburg, North West Province. The proposed portions of land are situated approximately 12 km south east from the Rustenburg Central Business District (CBD) on the Dinie Estates Road between the R24 (P16-1 of R30) and R104 (R27). Global Positioning System (GPS) coordinates are 25° 44' 49.81" South and 27° 17' 41.40" East (please refer to the locality map – Figure 4-1). The farm portion is bordered by agricultural land though other residential developments have been applied for (and some have already been approved) in close vicinity to the proposed project area. Figure 4-2 indicates the surrounding land use.

The portions of land included in the project area are currently mostly undeveloped but disturbed due to agricultural use and is zoned for agricultural use. Of the 69 ha proposed to be developed, 62 ha are used for agricultural practices, including maize, tobacco and chillies. The Rustenburg SEA identified mixed land use for the project area (residential/agricultural), which was found to be the case during the initial site visit. The existing/current site layout can be seen in Figure 4-3. Some of the surrounding agricultural holdings are also used for business purposes. Directly across the road from the proposed project area is the Landros convenience and liquor store. Other uses include a wedding venue, Rolan Essential Oils, informal settlements, guest farms etc. Regionally, the property falls within the Rustenburg Local Municipality (RLM), which, in turn, forms part of the Bojanala Platinum District Municipality.

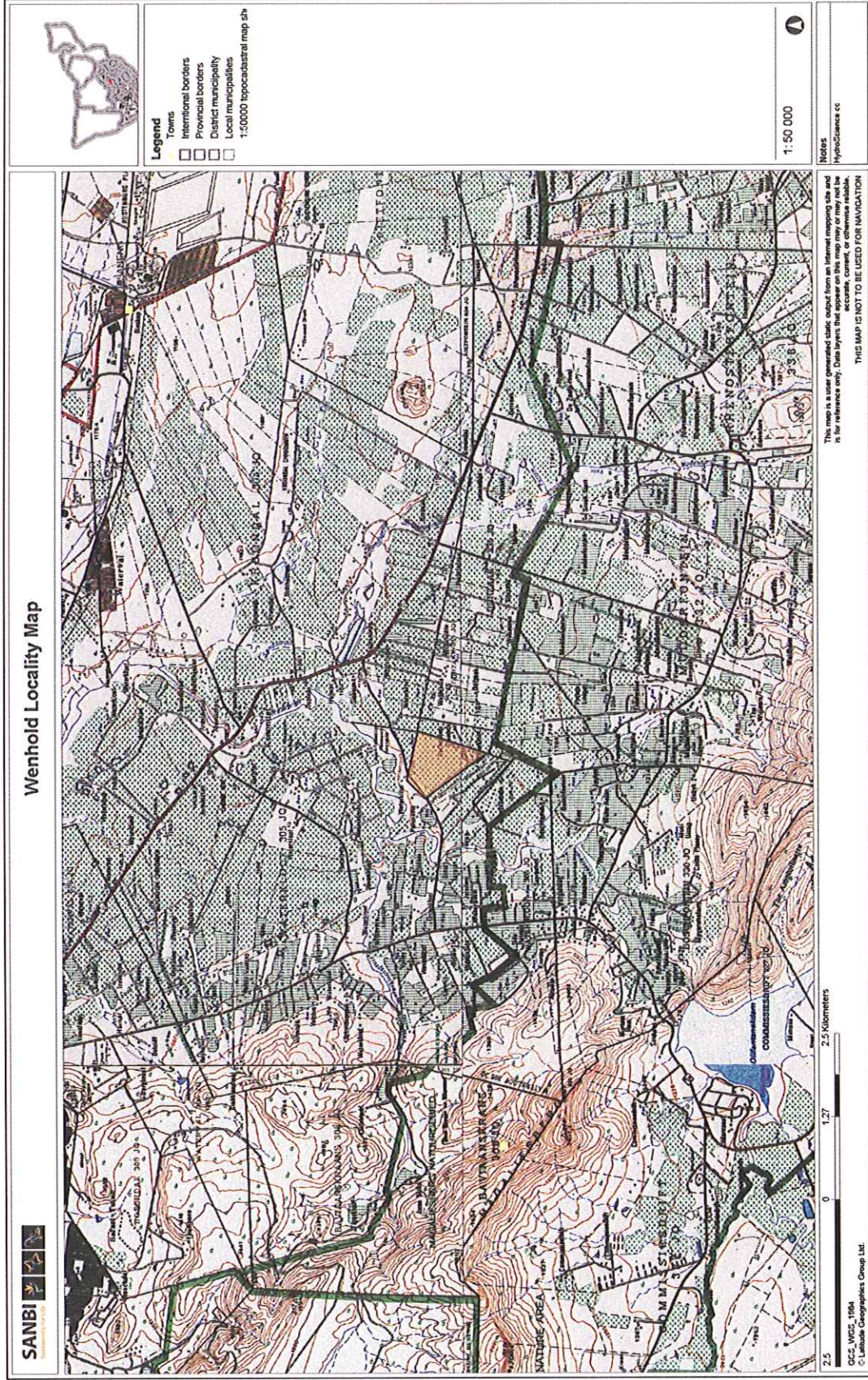


Figure 4-1: The locality of the proposed project area in Rustenburg, North West Province

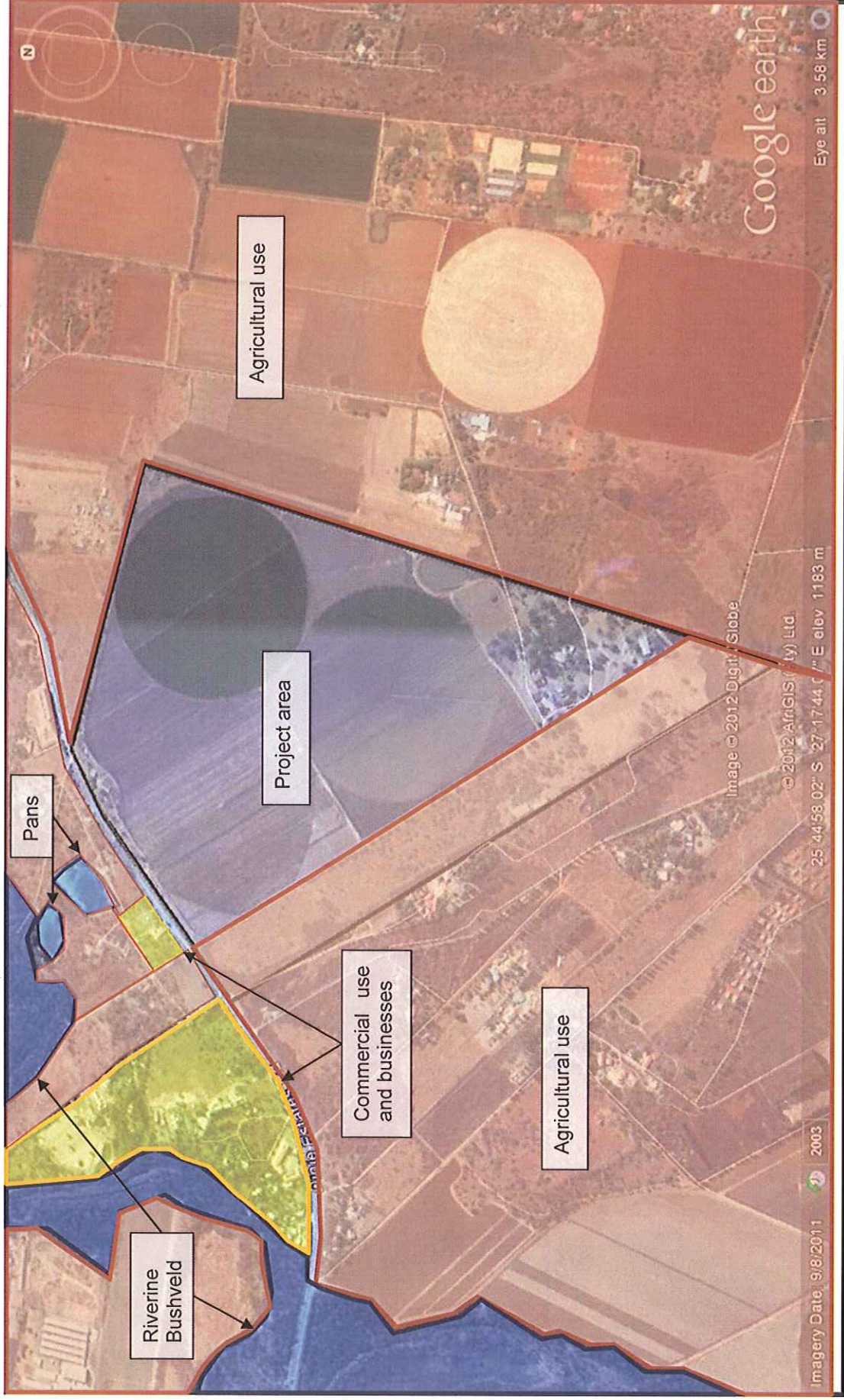


Figure 4-2: Proposed project area and surrounding land use

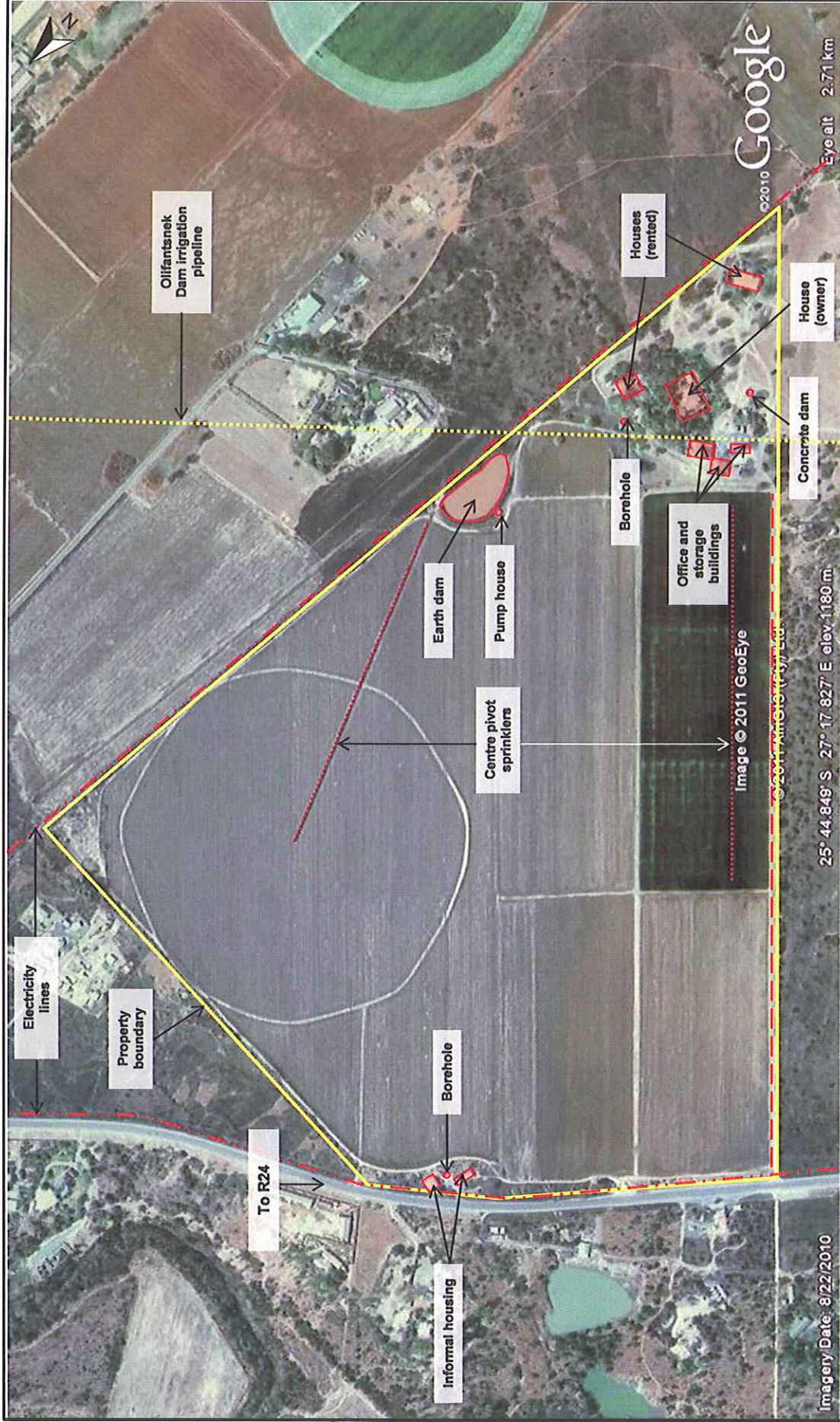


Figure 4-3: Site layout and infrastructure

4.2 Physical Environment

The physical environment includes biotic factors such as fauna and flora as well as abiotic factors such as temperature, wind, precipitation (rainfall), evaporation, air quality, topography, geology and the soil type that is characteristic of this site/area. The information in this section (Section 4.2) was pre-dominantly adapted from the Rustenburg SEA, 2003.

4.2.1 Climate

Rustenburg falls within the Summer Rainfall Climatic Zone. The area is characteristically warm to hot with rainfall that is erratic and extremely variable, ranging from 450 to 750mm per year.

The mean circulation of the atmosphere is predominantly anti-cyclonic throughout the year, except near the surface where meso-scale circulations prevail (Matrix Environmental Consultants, 2001). Fine conditions with little or no rainfall, and light variable winds with a northerly component occur over the region. Elevated inversions, which occur as a result of the anticyclonic subsidence, suppress the diffusion and vertical dispersion of pollutants by reducing the depth of the mixing layer.

Seasonal variations in the position and the intensity of the high pressure cells determine the extent to which the tropical easterly circulation and the circumpolar westerlies are able to impact on the atmosphere over the region. The tropical easterlies, and the occurrence of easterly waves and flows, affect the region throughout the year resulting in airflow with a north-easterly to north-westerly component, but their influence is generally weaker during the winter months.

The winter weather is dominated by perturbations in the westerly circulation as a result of the succession of cold fronts moving over the region. The passage of a cold front is characterised by pronounced variations in wind direction, wind speed, temperature, humidity and surface pressure. Airflow ahead of the cold front has a distinct north-north-westerly to north-easterly component. Following the cold front, the northerly wind is replaced by winds with a distinct southerly component.

During the summer months, the anti-cyclonic belt weakens and shifts southwards, allowing the tropical easterly flow to resume its influence over the region.

Temperature

Temperatures typically range between 16°C and 31°C during the summer months, with daily averages in the order of 26.5°C. During the winter months, the temperature typically ranges between 3°C and 24°C, with an average temperature of 10.9°C. The average annual temperature for Rustenburg is 18.7°C (refer to Table 4-1). Extreme upper and lower ends of the temperature scale have been recorded at 39.1°C and 2.8°C, respectively (Rustenburg SEA, 2003).

Table 4-1: Average monthly temperatures recorded over a 29 year period (Rustenburg weather station no. 05115234)

Month	Average of Daily Temperature (°C)		
	Maximum	Minimum	Mean
January	30.3	17.2	23.8
February	29.4	16.8	23.1
March	28.3	15.0	21.7
April	25.5	11.2	18.3
May	23.3	6.5	14.9
June	20.4	3.2	11.8
July	20.9	2.8	11.8
August	23.7	5.1	14.4
September	27.3	9.6	18.5
October	28.7	12.9	20.8
November	29.4	14.9	22.1
December	30.1	16.1	23.1
Year	26.5	10.9	18.7

Precipitation and Evaporation

The mean annual precipitation (MAP) for Rustenburg (as recorded at Weather Station No. 05115234 at a height of 1 157 metres above mean sea level (mamsl) is given as 650mm. January commonly has the highest precipitation (mean of 134 mm) whereas the month of July has the lowest precipitation (mean of 2 mm). The distribution of rainfall through the remainder of the year is illustrated in Figure 4-3. More than 70% of the annual rainfall occurs between the months of October to February.

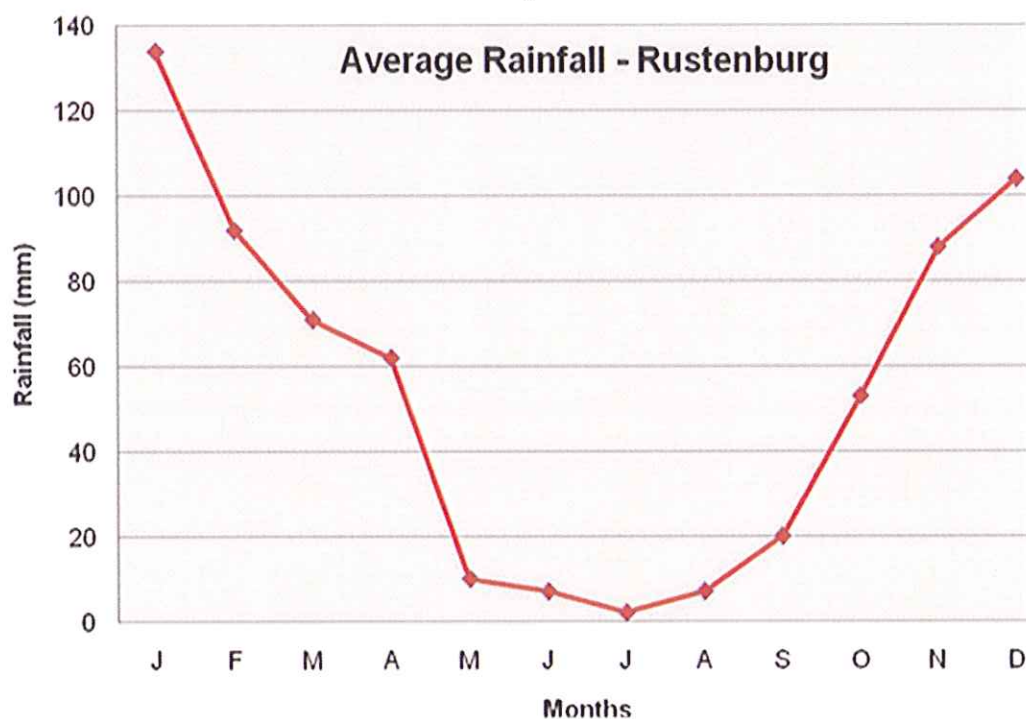


Figure 4-4: Graph indicating the mean monthly rainfall for Rustenburg over a 29 year period

Wind

A spatial and temporal variability exists in the wind field of the Rustenburg region between day and night.

Night-times are characterized by an increase in the number of calms and by the predominance of low velocity wind from the south-easterly sector. The impact of the Magaliesberg range results in south-westerly winds, reflecting the nocturnal (katabatic) air drainage from the range. Winds speeds within built up areas are generally lower.

During the daytime, winds from the south-eastern sector are replaced by airflow with a northerly and westerly component. Increased wind velocities frequently exceed 5 m/s.

4.2.2 Air Quality

The air quality of the Rustenburg area is generally poor (SEA, 2003) and is mainly due to mining activities. It is currently not possible to delineate the zones of poor air quality owing to the non-representative nature of investigations and the short period over which such data is collected. This type of delineation will in future require a more holistic assessment of the air quality of the area.

The current approach adopted by the authorities in attempting to manage the air quality of Rustenburg includes the Compliance Approach where South African guidelines are used to determine performance criteria for any company. These limits are made specific to the licences that are issued to a particular industry.

Problematic emissions in the Rustenburg area include SO₂ and Particulate Matter (PM₁₀, particulate matter sized 10µm). Pollutants also include Nickel (Ni), Vanadium (V) and Chrome VI (CrVI). Some of these impacts are currently being addressed by means of Companies' Regional Air Quality Plans. Other sources such as dusts that are emitted during activities (e.g. mining, traffic, construction and combustion) will require further attention by the relevant authorities.

Sources of particulate emissions within the Rustenburg Region include (SEA, 2003):

- Stack, vent and fugitive emissions from industrial operations and stack emissions from boiler and incinerator operations;
- Fugitive emissions from quarrying and mining operations (including tailings impoundments);
- Various miscellaneous fugitive dust sources, including agricultural activities, wind erosion of open areas, vehicle-entrainment of dust along paved and unpaved roads;
- Household fuel combustion including wood and coal in the region;
- Biomass burning (i.e. veld fires) that contribute particulates, CO (carbon monoxide) and VOC's (volatile organic carbons). The extent of NO_x (nitrogen oxides) emissions depends on combustion temperatures, with minor sulphur oxides (SO_x) being released;
- Vehicle tailpipe emissions (minor source of particulate emissions and CO); and
- Regionally transported air masses comprising well mixed concentrations of aged secondary pollutants.

4.2.3 Topography

The Rustenburg area is typically a combination of slightly undulating plains where more than 80% of the area has slopes of less than 5%, and lowlands, hills and mountains with moderate to high relief (i.e. 50 – 80% of the area has a slope less than 5%).

The site for the proposed township development is located on a gently undulating piece of land that naturally slopes from south to north from 1 190 to 1 173 mamsl (1:75 – relatively flat). This is expected as the surrounding landmass includes the Magaliesberg Mountain Range to the south of the site.

4.2.4 Geology and Geohydrology

The principal geological zone that characterizes the proposed development site consists of the predominantly meta-argillaceous rocks such as slate and hornfels (SEA, 2003).

The Rustenburg area can be subdivided into two aquifer types, namely the Rustenburg Layered Suite to the north of the Magaliesberg, and the Magaliesberg Formation to the south (DWAF, 2000). The proposed site is located to the north of the Magaliesberg and it is therefore assumed that it falls within the Rustenburg Layered Suite aquifer type.

The rocks of the Rustenburg Layered Suite are characterized by a well-developed igneous layering. The mainly mafic rocks include norite, gabbro, magnetite gabbro, anorthosite and pyroxenite. Groundwater occurrence is associated mainly with deeply weathered and fractured mafic rocks. This gives rise to groundwater compartmentalization in the area between Rustenburg and Pretoria.

More than 80% of the boreholes yield less than 2 l/s. This means that the groundwater yield is poor. This is a result of the low permeability of the clay rich soils (i.e. black turf soils) that reduce recharge to underlying aquifers. Consequently water extraction by means of boreholes should not be supported.

The mean water quality for this aquifer type shows that salinity is an important factor in the classification of the water for irrigation purposes. There is also fluctuation in the levels of potassium, sulphate and nitrite.

4.2.5 Soil

In the Rustenburg area, the Mispah-forms of soil are the most dominant, covering the central parts of the area with some miscellaneous bands radiating from the eastern parts. Soils in the Mispah forms can generally be described as lithosols of arenaceous sediments. These soils may be “brown to reddish brown ferruginous lateritic soils” (SEA, 2003).

Two general soil types are identified to occur within the project area (Figure 4-4).

The majority of the site as can be seen by Figure 4-4, is identified to have strongly structured cracking soils, mainly dark coloured and dominated by swelling clays (vertic soils). They may occur associated with one or more of melanic and red structured soils. The soil class associated with this area and general soil description is swelling clays which are high in natural fertility, a high swell shrink potential and are very plastic and sticky.

The general soil description for the small overlap in the south-eastern boundary of the site is red, yellow or greyish soils with a high base status. The soil class associated and identified within this region include freely drained, structureless soils. These soils are favourable for

physical properties may have a restricted soil depth, excessive drainage, high erodibility and low natural fertility.

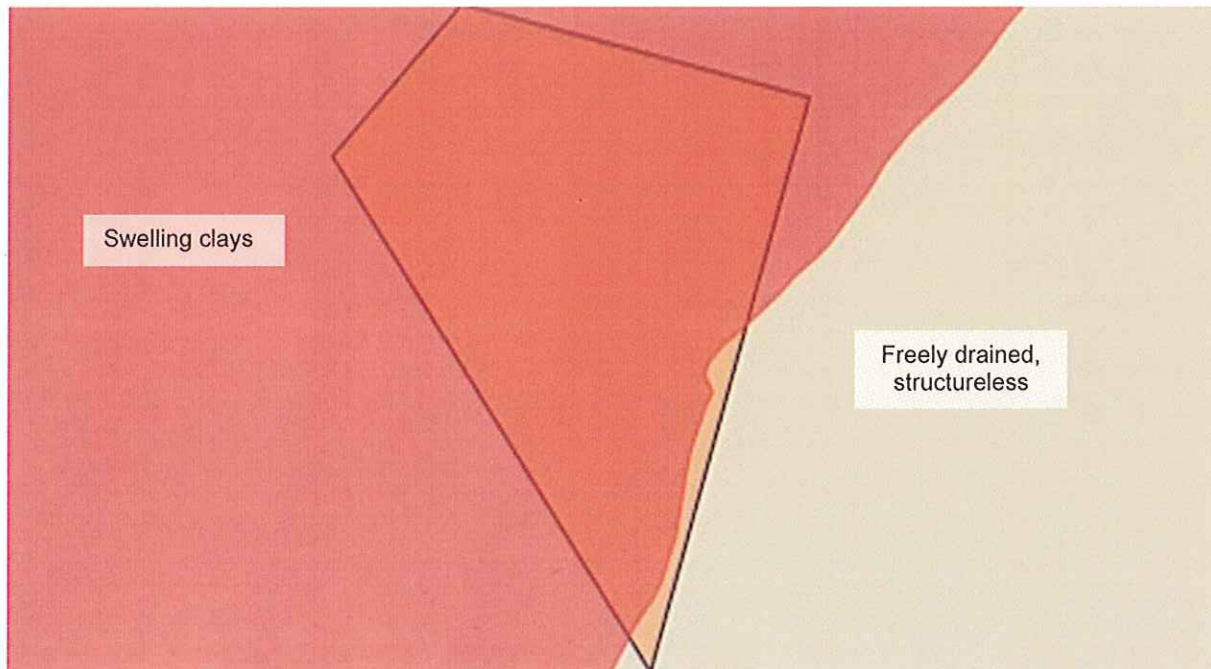


Figure 4-5: Soil classes identified for the project area

4.2.6 Surface Water

The study area falls within the Crocodile (West) Marico Water Management Area and within the A22H quaternary sub-catchment. The surface water information available is as follows:

Water Management Area (WMA):	Crocodile (West) Marico
Catchment Area:	4.26028 km ²
Mean Annual Runoff (MAR):	23.7 mm
Mean Annual Precipitation (MAP):	657.65 mm
Quaternary Catchment:	A22H
Closest water course:	Hex River 1 km east of the project area and 250m north of the project area
Water authority:	DWA North West Province
DWA monitoring:	A2H088 entering the Olifantsnek Dam

4.3 Biotic Environment

The Bojanala District falls within a high biodiversity area of the Province and some significant faunal and floral species may be present in and around the project area.

Although the site predominantly consists of agricultural land, the occurrence of Red Data or protected species is not eliminated. Furthermore, small mammal species, reptiles, birds and arthropods of concern also have a possibility of occurrence.

4.3.1 Fauna

Fauna species of concern identified to occur within the Rustenburg area can be seen in Table 4-2 to 4-5. The probability of occurrence of these species, and the actual species

composition specific to the project area will only be determined once the fauna and flora specialist study is conducted.

Table 4-2: Red Data mammals that are likely to occur within the Rustenburg region

Scientific Name	Common Name	Status
<i>Atelerix frontalis</i>	Hedgehog	Rare
<i>Civettictis civetta</i>	African Civet	Rare
<i>Cleotis percivali</i>	Short-eared Trident Bat	Indeterminate
<i>Crociodura maquassiensis</i>	Maquassi Musk Shrew	Indeterminate
<i>Graphiurus ocellatus</i>	Spectacled Dormouse	Rare
<i>Manis temminckii</i>	Pangolin	Vulnerable
<i>Mellivora capensis</i>	Honey Badger	Vulnerable
<i>Mystromys albicaudatus</i>	White-tailed Mouse	Vulnerable
<i>Orycteropus afer</i>	Aardvark	Vulnerable
<i>Pipistrellus kuhlii</i>	Kuhl's Bat	Indeterminate
<i>Poecilogale a. albinucha</i>	African Striped Weasel	Rare
<i>Proteles cristatus</i>	Aardwolf	Rare
<i>Rhinolophus denti</i>	Dent's Horseshoe Bat	Indeterminate
<i>Suncus infinitesimus</i>	Lesser Dwarf Shrew	Indeterminate
<i>Suncus lixus</i>	Greater Dwarf Shrew	Indeterminate
<i>Zelotomys woosnami</i>	Woosnam's Desert Rat	Rare

Table 4-3: Bird species that are likely to occur within the Rustenburg region

Scientific Name	Common Name	Status
<i>Anthus brachyurus</i>	Short-tailed Pipit	Rare
<i>Apus bradfieldi</i>	Bradfield's Swift	Indeterminate
<i>Ardeotis kori</i>	Kori Bustard	Vulnerable
<i>Botaurus stellaris</i>	Bittern	Vulnerable
<i>Falco peregrinus</i>	Peregrine Falcon	Rare
<i>Glareola pratincola</i>	Red-winged Pratincole	Rare
<i>Gypaetus barbatus</i>	Bearded Vulture	Rare
<i>Gypohierax angolensis</i>	Palmnut Vulture	Rare
<i>Gyps coprotheres</i>	Cape Vulture	Vulnerable
<i>Ixobrychus sturmii</i>	Dwarf Bittern	Indeterminate
<i>Mirafraga chuana</i>	Short-clawed Lark	Indeterminate
<i>Neophron percnopterus</i>	Egyptian Vulture	Endangered
<i>Neotis ludwigii</i>	Ludwig's Bustard	Vulnerable
<i>Polemaetus bellicosus</i>	Martial Eagle	Vulnerable
<i>Porzana pusilla</i>	Baillon's Crake	Indeterminate
<i>Pterocles gutturalis</i>	Yellow-throated Sandgrouse	Indeterminate
<i>Terathopius ecaudatus</i>	Bateleur	Vulnerable
<i>Torgos tracheliotus</i>	Lappet-faced Vulture	Vulnerable
<i>Tyto capensis</i>	Grass Owl	Vulnerable

Table 4-4: Herpetofauna species likely to occur within the Rustenburg region

Scientific Name	Common Name	Status	Probability
<i>Dalophia pistillum</i>	Blunt-tailed Worm-lizard	Peripheral	Moderate
<i>Homoroselaps dorsalis</i>	Striped Harlequin Snake	Rare	Low
<i>Python sebae natalensis</i>	African Rock Python	Vulnerable	Low

Table 4-5: Arthropod species likely to occur within the Rustenburg region

Scientific Name	Habitat	Status	Probability
<i>Acraea machequena</i>	Bushveld	Red Data	Low
<i>Andronymus neander neander</i>	Wetlands/forests	Red Data	Low
<i>Metisella meninx</i>	Wet areas/wetlands	Red Data	Low
<i>Neita neita</i>	Bushveld/Hillsides	Red Data	Low
<i>Spialia paula</i>	Bushveld	Red Data	Low

4.3.2 Flora

Two vegetation types are identified to occur on the proposed project area, Marikana Thornveld and Moot Plains Bushveld (Mucina and Rutherford, 2006). Although large sections of the natural vegetation around the proposed site have been altered by agricultural activities, some Red Data floral species may still occur in the area. Red Data species that might occur within the project grid squares 2527CB and 2527CD as listed by the South African National Biodiversity Institute (SANBI) can be seen in Table 4-6.

Table 4-6: Red data plant species that might occur within the project area (SANBI, 2012)

Family	Species Name	Common Name
AQUIFOLIACEAE	<i>Ilex mitis</i>	Declining
ASPHODELACEAE	<i>Aloe peglerae</i>	Endangered
CRASSULACEAE	<i>Adromischus umbraticola</i>	Near Threatened
HYACINTHACEAE	<i>Ledebouria atrobrunnea</i>	Vulnerable
MESEMBRYANTHEMACEAE	<i>Frithia pulchra</i>	Rare
MESEMBRYANTHEMACEAE	<i>Frithia pulchra</i>	Rare
MYROTHAMNACEAE	<i>Myrothamnus flabellifolius</i>	Data Deficient

Endemic species, meaning species that only occur within South Africa or specific regions of South Africa were also taken into account. Endemic species listed to possibly occur within the project area, as listed by SANBI, can be seen in Table 4-7. Exotic/invasive species that were also listed within the grid square of the project area can be seen in Table 4-8, however it is speculated that due to the disturbed nature of the site, more exotic/invasive species will be identified during the specialist survey.

Table 4-7: Endemic plant species that might occur within the project area (SANBI, 2012)

Family	Species Name
ANACARDIACEAE	<i>Searsia rigida</i>
APOCYNACEAE	<i>Aspidoglossum glabrescens</i>
APOCYNACEAE	<i>Huernia transvaalensis</i>
ARALIACEAE	<i>Cussonia transvaalensis</i>
ASTERACEAE	<i>Vernonia staehelinoides</i>
ASTERACEAE	<i>Berkheya carlinopsis subsp. magalismontana</i>
ASTERACEAE	<i>Berkheya seminivea</i>
ASTERACEAE	<i>Vernonia staehelinoides</i>
CAMPANULACEAE	<i>Wahlenbergia magaliesbergensis</i>
CELASTRACEAE	<i>Gymnosporia polyacanthus subsp. vacciniifolia</i>
CELASTRACEAE	<i>Gymnosporia polyacanthus subsp. vacciniifolia</i>
CRASSULACEAE	<i>Adromischus umbraticola</i>
EUPHORBIACEAE	<i>Euphorbia clavarioides var. truncata</i>
FABACEAE	<i>Indigastrium burkeanum</i>
MALPIGHIACEAE	<i>Triaspis glaucophylla</i>
MALVACEAE	<i>Hermannia grisea</i>
MALVACEAE	<i>Hibiscus marlothianus</i>
MALVACEAE	<i>Hermannia lancifolia</i>
MALVACEAE	<i>Triumfetta sonderi</i>
POACEAE	<i>Sporobolus pectinatus</i>
PORTULACACEAE	<i>Portulaca grandiflora</i>
RHAMNACEAE	<i>Phyllica paniculata</i>
SCROPHULARIACEAE	<i>Craterostigma wilmsii</i>
VITACEAE	<i>Cyphostemma sulcatum</i>

Table 4-8: Exotic/invasive plant species that might occur within the project area (SANBI, 2012)

Family	Species Name
ASTERACEAE	<i>Sonchus maritimus</i>
ASTERACEAE	<i>Tagetes minuta</i>
MOLLUGINACEAE	<i>Mollugo nudicaulis</i>
PORTULACACEAE	<i>Portulaca oleracea</i>
FABACEAE	<i>Senna occidentalis</i>

A specialist site investigation and study will be undertaken to confirm the presence of any significant species during the wet season, October 2012.

4.4 Socio-Economic Environment

The region's economy is derived from a variety of sectors, of which mining and agriculture are the main contributors. Other important sectors include construction, trade and transport.

The mining activities contribute more than 77% of the total GDP in the RLM Area. The area is considered as one of the fastest growing urban areas in South Africa due to the economic impact of the world's three largest platinum mines, which are located in and around the Rustenburg area. These mining houses include Anglo Platinum, Impala Platinum and Lonmin Platinum.

This project specifically aims to address a socio-economic need.

4.4.1 Housing Demand

As mentioned earlier, Rustenburg and surrounding areas are currently experiencing a shortage of residential accommodation (housing) according to the Rustenburg SDF. Assuming the additional 25 mines come on stream in the area within the next two decades as predicted in the Rustenburg SDF, in conjunction with the current growth rate and existing housing shortages, the need for providing accommodation for the people of Rustenburg is ever growing. Even more so, the need for housing in the outlying areas of the RLM such as the proposed project area is now greater than ever. This project aims to provide housing for the growing population of Rustenburg.

4.4.2 Need for Services

In and around the project area, the local community have no direct access to municipal water and is not linked to the municipal sewage management system. Groundwater is used via boreholes. Municipal power lines traverse the site and the property therefore has access to municipal electricity. It is anticipated that the RLM will in the near future extend services to this area, as RLM township developments have already been approved in this region. Rand Water water supply (pipeline in proximity to development) will also be considered as a potential water source in the interim if capacity exists.

5 PROJECT ALTERNATIVES

5.1 Site Alternatives

The applicant has not considered an alternative site as the proposed site is owned by the applicant. Therefore, it is the only available option for the applicant to develop on.

5.2 Activity Alternatives

Alternative 1: Residential township establishment: As the current zoning is agricultural, an application will be submitted for a change of land use from agricultural use to residential use for the purpose of a township establishment. The residential township establishment will provide housing for individuals seeking residential homes within the Rustenburg area.

Alternative 1a: Residential only: Development of the entire site for residential purposes.

Alternative 1b Residential and other: Incorporation of businesses and other facilities into the township. Entrepreneurial opportunities may arise in the form of small business ventures on the property.

Alternatives in terms of water supply:

- Water supply from Rand Water pipeline in proximity to the site.
- Municipal water supply – municipal water supply and sewage management systems do not currently exist on this site or extend to this area. However, a RLM township establishment has already been approved within this area. Therefore, it is anticipated that once these developments start taking place, water supply will be extended to this area. *This is the preferred option.*

Alternatives in terms of sewage management:

- SPUD (Solar-powered dehydration) system
- Link with municipal sewage management system. *This is the preferred option.*

5.3 No-go Alternative

If the proposed project and township establishment is not approved:

- A large section of the property will remain underutilised.
- The already high demand for housing in the Rustenburg area will remain and not be addressed to any extent, resulting in unchanged social-economic conditions.
- Agricultural activities may not continue as the existing contract with the farmer currently farming on the land expires and will not be renewed as the farmer feels that farming is not economically viable on this land. This may result in the land not being used.

6 POTENTIAL ENVIRONMENTAL IMPACTS

As part of the Scoping Phase, potential environmental and socio-economic impacts that may occur as a result of the proposed township establishment (residential development) have been identified in this section. The criterion defined in Table 8.1 will be used to assess the significance of the impacts identified during the Scoping phase. The final decision regarding the significance of any impacts, as well as remedial or mitigation or management measures thereof will be assessed during the EIA phase.

6.1 Land Use

The site, in terms of land use, will change from agricultural use to residential township with mixed uses, as the proposed development will include some commercial facilities for the convenience of local residents. The National Department of Agriculture was consulted with regards to the loss of agricultural land and potentially fertile soil. Department of Agriculture indicated that according to existing soil maps, the project area is considered fertile agricultural land requiring conservation. However, Department of Agriculture recommended that specialist studies be conducted to determine the accuracy of this. Studies and soil analyses are underway to determine the agricultural potential of soil on site. These findings will determine the impact on the land use capabilities.

6.2 Visual Aspects

Currently, although predominantly agriculturally zoned, the landscape in the area also consists of a fair amount of residential/farmsteads and business establishments. The landscape will be locally transformed into a residential township of approximately 69 ha and will consist of residential and commercial properties. Furthermore, as the site slopes slightly to the south and the northern section of the property is proposed to be developed first, the visual impact will be minimal.

6.3 Flora and Fauna

The site is predominantly used for agricultural purposes and therefore the occurrence of natural vegetation and species is limited. However, this does not eliminate the possible presence of Red Data/protected species, or important ecological systems/cycles. A terrestrial ecological specialist study is planned for the wet season (October – December 2012), to determine:

- The vegetation communities of the project area;
- The species composition of the vegetation communities;
- Fauna species and habitat possibilities;
- The presence of species of concern or the determination of the probability of occurrence; and
- The identification of sensitive areas or areas of conservation importance.

6.4 Noise and Air

During the site visit, the most prominent noises noted was that of vehicular traffic passing the site on the connecting road between the R24 and the R104. During the construction phase, construction vehicles will definitely disturb the ambient environment. During the operational phase, a local increase in the number of residents, once the development is completed, will most probably significantly increase the noise levels in the area due to a concentrated influx of people. Aside from vehicular traffic increasing, ambient noise levels will also most probably increase due to people talking, shouting, children playing, dogs barking etc.

However, this is expected for any residential area and will not significantly affect the surrounding environment.

Currently, the sources of air pollution in and around the project site include vehicular exhaust emissions, emissions from fires used by the local community for heating and cooking purposes and more significantly, mining activities. During the construction phase, dust will probably increase with the removal of vegetation and movement of construction vehicles on the bare soil (clearance and earth works), as well as the environmental factors that can contribute, wind and limited precipitation during the dry season. A local increase in the number of residents during the operational phase will increase the levels of vehicular related emissions.

6.5 Traffic

Traffic volumes will most definitely increase in and around the project area, especially on the connecting road between the R24 and the R104. A traffic impact study would be considered to comprehensively assess the potential impacts and provide possible mitigation measures.

6.6 Surface water

There are no natural surface water resources such as rivers/wetlands on the proposed project area. A constructed dam forms part of the irrigation water supply for the agricultural practices.

However, during the construction phase, concern can arise from:

- Contamination of surface water runoff through improper waste disposal; and
- Improper storm water and sewage management, which is also applicable during the operational phase.

Mitigation and management measures must be put in place for these potential occurrences as part of a comprehensive Environmental Management Programme/Plan (EMP).

6.7 Groundwater

Two boreholes are currently utilised on the project area. There is no intended use of groundwater for the residential development. Because water from the municipal supply or Rand Water pipeline will be utilised, the impacts on the groundwater are related to that of the surface water impacts.

During the project phases, the following can impact groundwater quality:

- Contamination of groundwater through improper waste disposal including sewage disposal and treatment.

6.8 Socio-Economic

The provision of formal housing for the local people in the area will be a positive impact. Schools, churches and shops are located within 3 km of the proposed development. Other facilities and amenities (police, hospitals etc) are located around the CBD. The establishment of a housing development in this area could promote the establishment of these facilities closer to the community and may provide opportunities for entrepreneurs to establish small businesses.

6.9 Heritage

According to the applicant, the main residence on the project area is more than 60 years old. It is therefore of heritage value as the house was built during the 1st World War. For this reason, the main residence will be kept intact with minor alterations. A heritage specialist study will also be conducted to ensure appropriate mitigation is applied and to determine any other features of heritage importance.

6.10 Cumulative Impacts

Holistically, the establishment of a township in the project area will uplift not only the local area, but the Province as a whole. However, for the township to be sustainable, studies need to be conducted to ensure that sewage, waste and storm water is managed properly. Any environmental impacts identified during the Scoping or EIA phases must be sufficiently and effectively mitigated in order to reduce the probability of cumulative impacts that may occur as a result of the proposed development.

7 PUBLIC PARTICIPATION

7.1 Introduction

The Public Participation Process (PPP) forms an integral part of the EIA process and it is one of the important aspects of the process to obtain environmental authorisation. Its aim is to provide all interested and affected parties (I&APs) with clear, accurate and comprehensible information about the proposed project, its alternatives, the possible environmental impacts and the management thereof. In addition, the process seeks to provide I&APs with the opportunity to indicate their viewpoints on issues and concerns regarding the proposed project, alternatives and / or decisions.

This process therefore enhances transparency and accountability in decision making as it allows all I&APs to suggest ways of avoiding, reducing or mitigating potential negative impacts of the proposed project and enhance positive impacts. All inputs from the I&APs are considered in the planning of the project and consequently clear recording of all issues and concerns raised was maintained in a comments and response register. This register is updated when new issues or concerns are raised.

This section of the report provides a methodical description of the PPP followed. It also contains a complete record of any public notices, details of all registered I&APs and all communications to and from I&APs pertaining to the application.

7.2 Approach

The aim of the PPP is not only to adhere to the required legislation, but also to give as many stakeholders and I&APs as possible an opportunity to be actively involved in this process.

The PPP has been carried out in accordance with Chapter 6 of the NEMA as amended and in support of the EIA Regulations, 2010. Based on these Regulations published in terms of Sections 54 to 57 of GNR 543 of NEMA, the following steps were undertaken:

- Potential I&APs were identified through conducting a site visit, previous work in the area and having discussions with the local community, through notices placed on site (Figure 7-1 and Plate 7-1) and through placing a notice in the local newspaper, The Rustenburg Herald (22 June 2012; see Appendix B);
- Further notice of the application was given to the identified I&APs (see Table 7-1) through the distribution of written notices, in the form of Background Information Documents (BIDs), via e-mail, post and hand delivery (Appendix B);
- A stakeholder register of I&APs was compiled in terms of Regulation 57 that includes national, provincial and local authorities, government departments, organisations and neighbours that may have an interest in the proposed project. BIDs were distributed to all these stakeholders (Table 7-1);
- I&APs were given more than 40 days (22 June to 5 September 2012) to comment on the proposed application. Any concerns that have been raised by I&APs were acknowledged, noted and addressed (Table 7-2) by the Environmental Assessment Practitioner (EAP);
- Furthermore, all registered I&APs will be given 40 days (6 September – 17 October 2012) to comment, in writing, on the Scoping Report - prior to submission to the competent authority, the North West Department of Economic Development, Environment, Conservation and Tourism (NW DEDECT) in October 2012;
- Another 40 days will be allocated to I&APs to comment on the Draft Full EIA report once completed and inclusive with all the specialist studies conducted; and

- A recorded summary of concerns raised by I&APs, as well as the responses from the EAP, will be kept throughout the entire process.

7.3 Public Awareness

7.3.1 Site Notices

Three (3) notices (measuring 800mm x 600mm) were placed at the site on 22 June 2012 at locations where they would be most visible to the public concerned. This included the entrance to the project area, next to Dinie Estate Road half way through the project area and where the project area ends, on the boundary. Each notice contained details regarding the applicant (Sunbird Development & Buxtehude Trust), the nature of the activity to take place (Township Establishment – residential development), the locality of the project (Portions 65 and 501 of the farm Waterkloof 305 JQ, Rustenburg) and the contact details of the EAP (See Plate 7-1). The placement of the site notices were recorded by taking photographs of the placed notices on site as well as by recording the GPS coordinates of these positions (Plate 7-1). These notices will remain on the site throughout the duration of the process. Figure 7-1 indicates the notices placed on site from an aerial view.

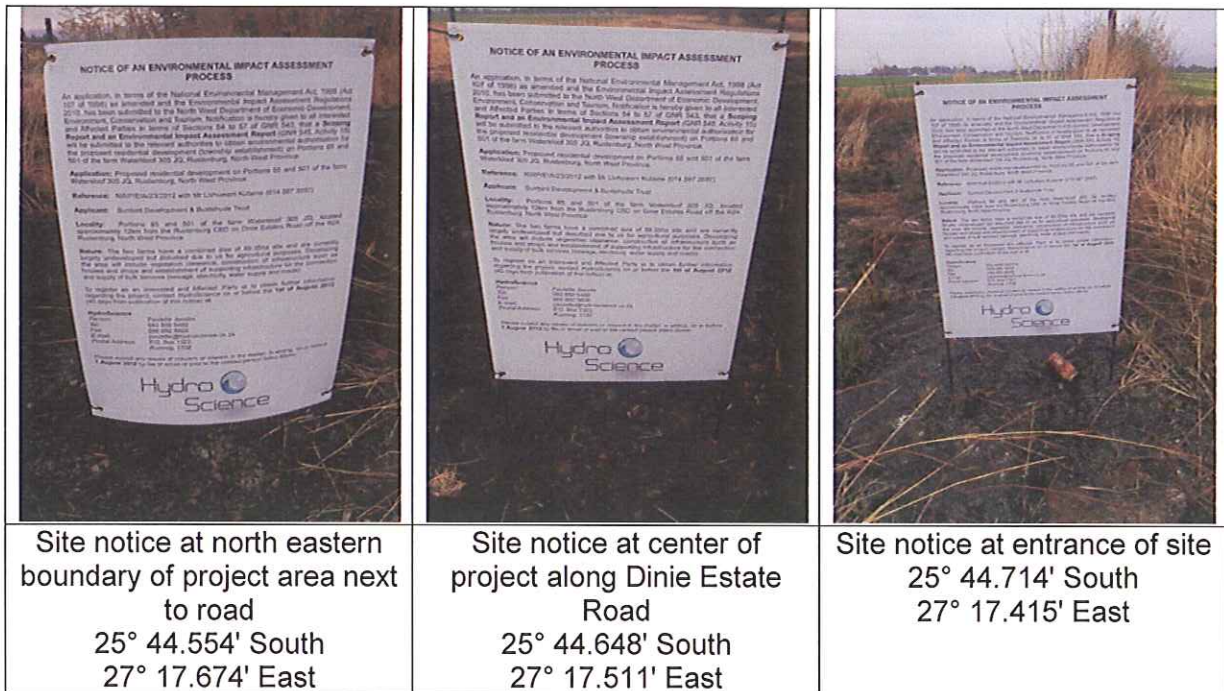




Plate 7-1: Notices placed on site as part of the Public Participation Process

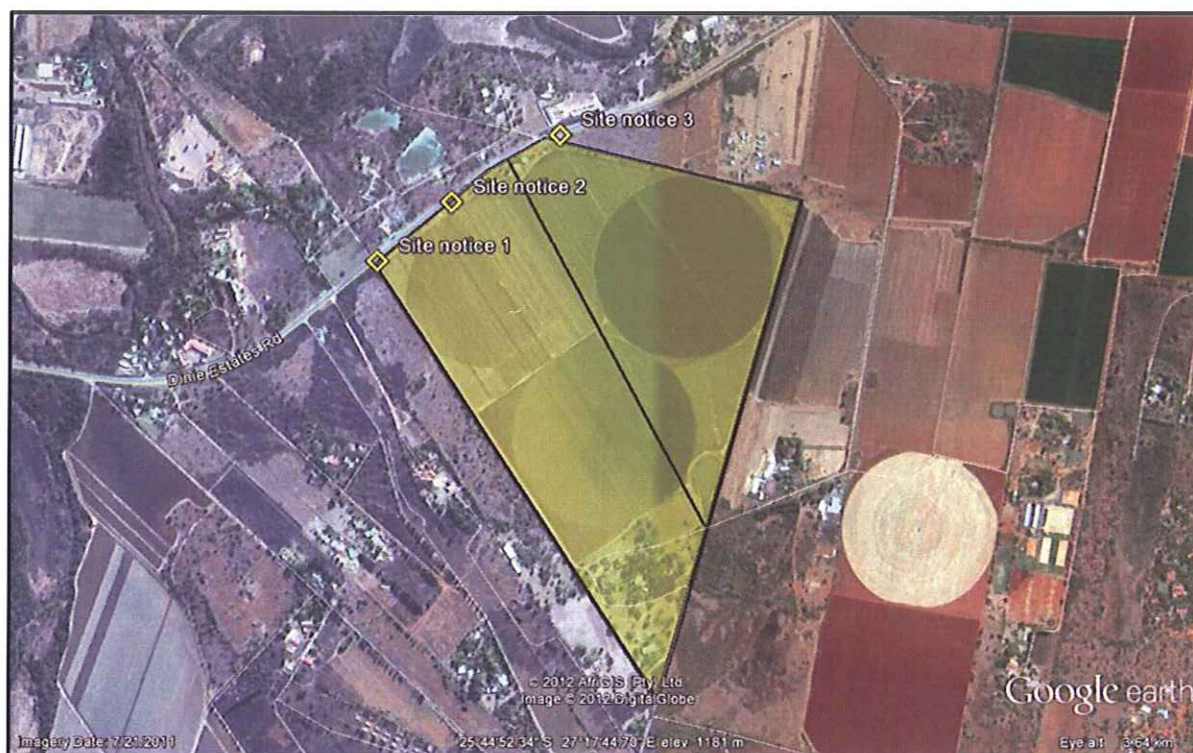


Figure 7-1: Location of site notices Google™

7.3.2 Newspaper Advertisement

A newspaper advertisement regarding the project was placed in the Rustenburg Herald, page 20, published on the 22 June 2012 (Appendix B). The aim of placing an advertisement in the local newspaper was to create a greater awareness of the project and to invite a broader range of I&APs to register and be part of the process.

7.3.3 Background Information Document

BIDs, containing information regarding the proposed project, were distributed to adjacent land owners as well as all other I&APs (Table 7-1) via e-mail, post, fax or hand-delivery as part of the notification process. Furthermore, BIDs were also distributed to local, provincial as well as national authorities, applicable government departments (such as the Department of Water Affairs, Department of Environmental Affairs and Department of Agriculture), and the Ward Councillor for the area. The BIDs were distributed between 22 June and 13 July 2012 and it included a locality map, as well as the registration/response form. After distribution of the BIDs, I&APs were given at least 40 days to register as an I&AP and to be included in the process of the project. The responses received thus far can be seen in Table 7-2.

7.4 Stakeholder Register

Any concerns that were raised by I&APs during the process so far were recorded and addressed by the EAP where possible at this stage of the project (see Table 7.2). All proof of communication can be seen in Appendix B.

Furthermore, all registered I&APs will be given an opportunity to comment, in writing, on the Scoping Report before its submission to the competent authority, NW DEDECT.

Table 7-1: Registered I&AP's for the proposed project

NEIGHBOURING LAND OWNERS, RESIDENTS AND BUSINESSES						
Name	Company/ Department	Tel	Fax	Postal address	E-mail	Interaction
J. Marais	Neighbour	082 920 5056		PO Box 320, Kroondal, 0350	jmtoh@vodamail.co.za	Hand-delivered BID: 2012-06-21
P. Halder	Neighbour to the south of project area	072 445 3956		PO Box 266, Kroondal, 0350		Hand-delivered BID: 2012-06-22
J. Swarts	Neighbour to the east Marula 339JQ	083 520 5768	086 603 7133	PO Box 3391, Rustenburg, 0300	steineck@polka.co.za	Hand-delivered BID: 2012-06-22
R. van der Westhuizen	Neighbour across the road from project area	082 491 1169		PO Box 467, Kroondal, 0350	landdros@vodamail.co.za	Hand-delivered BID: 2012-06-22
T. Niewenhuizen	Neighbour to the north- east	076 562 8064		PO Box 3475, Rustenburg, 0300	tienie.nieuwwenhuizen@yahoo.co m	Hand-delivered BID: 2012-06-22
L. Coetzee	Neighbour west from project area	072 243 6293		PO Box 108, Kroondal, 0350		Hand-delivered BID: 2012-06-29
F. Nel	Neighbour	087 965 4468		PO Box 220, Kroondal, 0350		Hand-delivered BID: 2012-06-29
D.S. Jensen	Neighbour to the north of the project area	083 717 2278	012 460 5047	7 Fairway Str, Waterkloof 2, Pretoria	sanswerner@gmail.com	Hand-delivered BID: 2012-06-29
J. van Heerden	Neighbour				johan@edgefin.co.za	Emailed BID: 2012-07-13
W. van Wyk	Neighbour to the north of the project area	072 650 2344			rb@ida.co.za	Hand-delivered BID: 2012-06-29

Mr Eddy Asling	From the area	082 454 5737				edpauls@mweb.co.za	Responded to newspaper ad
P. Grabe	Xstrata	082 808 3292	014 590 2498			pgrabe@xstrata.co.za	Responded to newspaper ad
E.B. Wenhold		082 783 6978		PO Box 236, Kroondal, 0350		mabeu@vodamail.co.za	Responded to newspaper ad
Mrs Venter	Waterkroon eiendomme	084 9541128		PO Box 626, Kroondal, 0350		waterkroon@pitani.co.za	Emailed BID: 2012-06-21
Jemile Balt	Rustenburg Olifantsnek Corridor Landowners Association (ROCLA)	082 600 5222		PO Box 681, Kroondal, 0350		Sylviab456@gmail.com	Emailed BID: 2012-06-21
Shaun Grant	ROCLA	082 652 1890				shalom@mweb.co.za	Emailed BID: 2012-06-21
Mr. C. de Bruyn	North West Environmental Forum	082 823 3815		Postnet 47, Private Bag X82245, Rustenburg, 0300		chrisedbruyn@mweb.co.za	Emailed BID: 2012-06-21
Mrs Jafarleen Shashaoka	Rand Water	011 682 0976				'jshashao@randwater.co.za'	Emailed BID: 2012-07-04
Kobus Vorster	Eskom	083 255 2341		PO Box 619, Rustenburg, 0300		VorsteK@eskom.co.za	Emailed BID: 2012-07-13

AUTHORITIES						
Local Municipality: Rustenburg Local Municipality (RLM)						
Name	Company / Department	Tel	Fax	Postal Address	E-mail	Interaction
Mr Thato Molwantwa	RLM: Town planning			PO Box 16 Rustenburg, 0300	tmolwantwa@rustenburg.gov.za	Emailed BID: 2012-06-21
Mr Jan Pieters	RLM: Town planning				jpieters@rustenburg.gov.za	Emailed BID: 2012-06-21
Ms Mpho Hlaoli	RLM: Town planning	076 544 4019			mhlaoli@rustenburg.gov.za	Emailed BID: 2012-06-21
Ms Tsibi Ruele	RLM: Town planning (assistant Mr Molwantwa)				truele@rustenburg.gov.za	Emailed BID: 2012-06-21
Mr Walter Senne	RLM: Waste management	014 590 3101			wsenne@rustenburg.gov.za	Emailed BID: 2012-06-21
Ms Kelebogile Mekgoe	RLM: Environmental management	087 942 2603	014 590 3070		kmekgoe@rustenburg.gov.za	Emailed BID: 2012-06-21
Mr Tshepo Lenake	RLM: Environmental management	083 961 0591			tlenake@rustenburg.gov.za	Emailed BID: 2012-06-21
Ms Ziyanda Mateta	RLM: Water & sanitation	082 813 3358			zmateta@rustenburg.gov.za	Emailed BID: 2012-06-21
Office of the Speaker	RLM: Ward councillor				speaker@rustenburg.gov.za	Emailed BID: 2012-06-21
Mr. Sematu Clr. Pogiso	Ward Councillor	073 319 1659 082 365 0633	086 212 5022			ssematu@webmail.co.za pogisotsienyane2@webmail.co.za
District Municipality: Bojanala Platinum District Municipality						
Name	Company / Department	Tel	Fax	Postal address	E-mail	Interaction
Mrs Lynette	Bojanala Platinum District Municipality: Environmental	014 594 2332			lynettel@bojanala.gov.za	Emailed BID: 2012-06-21

Provincial Government: North West Department of Economic Development, Environment, Conservation and Tourism (NW DEDECT)						
Name	Company/ Department	Tel	Fax	Postal address	E-mail	Interaction
Ms. T. Nitoko	NWDETECT(Biodiversity Management and Conservation)	018 389 5925		Private Bag X2039 Mmabatho 2735	tntloko@nwppg.gov.za	Emailed BID: 2012-06-21
Ms. Livhuwani Kutame	NW DEDECT (EIA)	014 597 3597			LEKutame@nwppg.gov.za	Emailed BID: 2012-06-21
Ms. Lebo Lecoge	NW DEDECT	018 389 5677			klecoge@nwppg.gov.za	Emailed BID: 2012-06-21
Mr. Mashudu Nemutandani	NW DEDECT (Protected Natural Environments)	073 884 4469			mnemutandani@nwppg.gov.za	Emailed BID: 2012-06-21
Mr Steven Mukhola	NW DEDECT Mahikeng Head Office				smukhola@nwppg.gov.za	Emailed BID: 2012-06-21
Department of Environmental Affairs (National)						
Name	Company/ Department	Tel	Fax	Postal Address	E-mail	Interaction
Mr Albi Modise		012 310 3132			amodise@environment.gov.za	Emailed BID: 2012-06-21
Department of Agriculture, Forestry and Fisheries (DAFF)						
Name	Company/ Department	Tel	Fax	Postal Address	E-mail	Interaction
Mr. B. Msoni	DAFF				CDESRM@nda.agric.za CDESRM@daff.gov.za	Emailed BID: 2012-06-21
Mr David Kleyn	National Department of Agriculture	012 319 7484			davidkl@nda.agric.za	Emailed BID: 2012-06-21

Department of Water Affairs (DWA)						
Name	Company/ Department	Tel	Fax	Postal Address	E-mail	Interaction
Ms Caroline Shai	DWA Hartbeespoort Dam office				shaiC@dwa.gov.za	Emailed BID: 2012-06-21
Mr C Lobakeng	DWA	083 629 8991			LobakengC@dwaf.gov.za	Emailed BID: 2012-06-21
Mr Peet Venter	DWA – Hartbeespoort Dam Office	082 807 6098			VenterP@dwaf.gov.za	Emailed BID: 2012-06-21
Mr Justice Maluleka	DWA – Regional Office in Pretoria	012 392 1355			JusticeM@dwaf.gov.za	Emailed BID: 2012-06-21
Ms Sebenzile Nshangase	DWA – Hartbeespoort Dam Office	012 253 1093/4			NishangaseS@dwaf.gov.za	Emailed BID: 2012-06-21
Ms C. Theunissen	DWA - Hartbeespoort Dam Office				TheunissenC@dwaf.gov.za	Emailed BID: 2012-06-21
Department of Public Works, Roads and Transport (DPWRT)						
Name	Company/ Department	Tel	Fax	Postal Address	E-mail	Interaction
Mr Lobakeng	NW DPWRT				lobakengk@nwppg.gov.za	Emailed BID: 2012-06-21
Department of Housing (MEC Support; communication; development & planning)						
Name	Company/ Department	Tel	Fax	Postal Address	E-mail	Interaction
Mr Kelepile Thaganyane	NW Department of Housing	018 387 3689			kthaganyane@nwppg.gov.za	Emailed BID: 2012-06-21
Mr S.P. Ramagaga		018 387 5303			sramagaga@nwppg.gov.za	Emailed BID: 2012-06-21
Ms Kelebogile Tshenkeng		018 388 2391			ktshenkeng@nwppg.gov.za	Emailed BID: 2012-06-21
South African Heritage Resources Agency (SAHRA)						
Name	Company/ Department	Tel	Fax	Postal Address	E-mail	Correspondence
Ms Lynette van Damme	South African Heritage Resource Agency	021 462 4502			svandamme@sahra.org.za	Emailed BID: 2012-06-21

Table 7-2: Comments and Response Register

Comment received from:	Date received and date responded:	Comment / concern:	Response:
P. Grabe (Xstrata)	2012-06-21 2012-06-21	Please clarify and send project boundaries	Map and boundaries sent 2012-06-21
J. Balt (ROCLA)	2012-06-27 2012-06-27	<ul style="list-style-type: none"> Underground water Access to main road 	<ul style="list-style-type: none"> Underground water will not be utilised for the development. Traffic impact will be investigated.
L. Coetzee (neighbour)	2012-06-27 2012-06-27	Required confirmation that the township establishment wasn't for low cost housing	Confirmed 2012-06-27
Johan van Heerden (neighbour)	2012-07-13 2012-07-13	<ul style="list-style-type: none"> Sewage system to be used Electricity supply 	<ul style="list-style-type: none"> Sewage systems under consideration Existing municipal power supply.
Mr Kobus Vorster (Eskom)	2012-07-16 2012-07-16	Requested additional information.	Sent BID and map through 2012-07-16
David Klein (National Department of Agriculture)	2012-06-21 2012-08-10	Fertile agricultural land that cannot be lost.	Specialist studies underway to determine agricultural soil potential.
E.B. Wenhold	2012-07-18 2012-07-18 2012-07-26	<ul style="list-style-type: none"> Rezoning from agricultural to residential development. Infrastructure - Roads, existing roads are not designed for increased traffic and access to residential areas cause problems. The supply of water and re-use of grey water. Sewage spillage and pollution of agricultural land and rivers. Housing and control over labourers during construction to prevent squatting 	<ul style="list-style-type: none"> Noted and aware of this requirement. Traffic impacts will be investigated and discussions will be held with DPWRT regarding access. Water supply from RLM or Rand Water considered. No reuse of grey water planned. Mitigation and management measures will be implemented to prevent pollution (EMP). Mitigation and management measures will be implemented to prevent squatting during construction.

8 PLAN OF STUDY FOR EIA

This section sets out the proposed approach to the EIA phase of the project. The main activities that will take place during the EIA phase include the undertaking of specialist studies (Section 8.1); assessing the significance of identified potential impacts (Section 8.2) and compilation of an Environmental Management Programme/Plan (EMP) for the construction and operational phases of the project (Section 8.3). Stakeholder engagement as anticipated during the EIA phase is also discussed (Section 8.4). The EIA report will contain details of the EAP who compiled the report and a brief description of their expertise relevant to the project. It is anticipated that the same project team who compiled this Scoping Report will compile the EIA.

8.1 Proposed Specialist Studies

Specialist studies will be required to determine the full impact that the proposed project may have on the receiving environment. Specialist studies recommended to be undertaken during the EIA phase include a specialist investigation into geotechnical aspects; specialist fauna and flora investigation; traffic study; and a heritage impact assessment. The aims of the proposed specialist studies are briefly outlined in this section. The findings and recommendations made in the specialist studies will be integrated into the EIA report and the specialist reports will be included as appendices to the EIA report.

8.1.1 Geotechnical

The scoping phase identified that a geotechnical study is required to determine the underlying geology and soil type of the site. This information is necessary for construction specifications, for example how drainage on the site will be established and how the foundations of the structures must be constructed. Also to determine agricultural potential of the soil found on the project area. From the specialist study the following needs to be determined:

- Geological material, soil types, earth structures and foundations required;
- Development specifications according to these findings;
- Agricultural potential of the soil; and
- Impacts and mitigations measures needed if any.

8.1.2 Fauna and Flora

The construction phase will have an impact on the vegetation located on the site and this will consequently have an impact on the fauna of the area. Removal of the vegetation will definitely occur in the area where the township is to be developed. Therefore, the following aspects will be determined through a flora and fauna survey:

- List of plant and faunal species that occur on the site as well as vegetation communities identified;
- Any Red Data/protected/endemic species that occur on the site or calculation on the probability of occurrence based on site conditions and habitat;
- Sensitive areas that need to be avoided;
- Identification of impacts on all species; and
- Mitigation and management measures on how the impacts can be reduced.

8.1.3 Traffic

A traffic impact study will be considered. Currently, the only access road to the proposed development is on the connecting road between the R24 and the R104, which is already

used by many local residents, especially those travelling back and forth from the nearby community of Kroondal. Access to the development will be discussed with the DPWRT.

8.1.4 Heritage

A heritage study will be conducted to determine any sites of concern e.g. graves, historical buildings. These sites (if any) will then be avoided or further mitigation will be suggested. The historical building/house found on site will not be disturbed, except for minor alterations as communicated by the applicant.

8.2 Impact Assessment Methodology

The criteria defined in Table 8-1 will be used to assess the significance of the impacts identified in this study. The final decision regarding the significance of an impact will take the following aspects into account:

- Intensity/severity of an aspect;
- Timing of an aspect;
- Probability of occurrence of the impacts;
- Duration of an impact; and
- Extent of an impact.

Table 8-1: Criteria for assessing significance of impacts

DURATION (D)		
Short term	6 months	1
Decommissioning	18 months	2
Life of project	3 years	3
Post rehabilitation	Time for re-establishment of natural systems	4
Residual	Beyond the project life	5
EXTENT (E)		
Site specific	Site of the proposed development	1
Local	Farm/site and surrounding farms/site	2
District	Rustenburg Local Municipality	3
Regional	Bojanala District Municipality	4
Provincial	North West Province	5
National	Republic of South Africa	6
International	Beyond RSA borders	7
PROBABILITY (P)		
Almost Certain	100% probability of occurrence – is expected to occur	5
Likely	99% - 60% probability of occurrence – will probably occur in most circumstances	4
Possible	59% - 16% chance of occurrence – might occur at some time	3
Unlikely	15% - 6% probability of occurrence – could occur at some time	2
Rare	<5% probability of occurrence – may occur in exceptional circumstances	1
SEVERITY (S)		
Catastrophic (critical)	Total change in area of direct impact, relocation not an option, death, toxic release off-site with detrimental effects, huge financial loss	5
Major (High)	> 50% change in area of direct impact, relocation required and possible, extensive injuries, long term loss in capabilities, off-site release with no detrimental effects, major financial implications	4
Moderate (medium)	20 – 49% change, medium term loss in capabilities, rehabilitation / restoration / treatment required, on-site release with outside assistance, high financial impact	3
Minor	10 – 19% change, short term impact that can be absorbed, on-site release, immediate contained, medium financial implications	2

Insignificant (low)	< 10 % change in the area of impact, low financial implications, localised impact, a small percentage of population				1
RISK ESTIMATION (RE) (Nel, 2002)					
PROBABILITY	SEVERITY				
	Insignificant (1)	Minor (2)	Moderate (3)	Major (4)	Critical (5)
Almost certain (5)	H	H	E	E	E
Likely (4)	M	H	H	E	E
Possible (3)	L	M	H	E	E
Unlikely (2)	L	L	M	H	E
Rare (1)	L	L	M	H	H
E	Extreme risk – immediate action required, detail considerations required in planning by specialists – alternatives to be considered				4
H	High risk – specific management plans required by specialists in planning process to determine if risk can be reduced by design and management and auditing plans in planning process, taking into consideration capacity, capabilities and desirability – if cannot, alternatives to be considered, senior management responsibility				3
M	Moderate risk – management and monitoring plans required with responsibilities outlined for implementation, middle management responsibility				2
L	Low risk – management as part of routine requirements				1
IMPACT SIGNIFICANCE					
Negligible	The impact is non-existent or insubstantial, is of no or little importance to any stakeholder and can be ignored.				
Low	The impact is limited in extent, even if the intensity is major; whatever its probability of occurrence, the impact will not have a significant impact considered in relation to the bigger picture; no major material effect on decisions and is unlikely to require management intervention bearing significant costs.				
Moderate	The impact is significant to one or more stakeholders, and its intensity will be medium or high; therefore, the impact may materially affect the decision, and management intervention will be required.				
High	The impact could render development options controversial or the entire project unacceptable if it cannot be reduced to acceptable levels; and/or the cost of management intervention will be a significant factor in project decision-making.				
Very high	Usually applies to potential benefits arising from projects.				

The impacts that may result from the development of the site or the significance of these impacts can be minimised/reduced if mitigation or management measures are put in place. These mitigation/management measures should ensure that the development takes into consideration the environment and the impacts that are predicted so that development can co-exist with the environment as a basis for planning.

8.3 Draft Environmental Management Plan/Programme

Impacts that may occur as a result of the proposed project will be mitigated through management measures that aim to minimise potential impacts or minimise their significance. Such measures will be summarised in a draft EMP for the authority's consideration.

8.4 Consultation with I&APs

Extensive public consultation has been undertaken during the Scoping Phase of the project and therefore, certain aspects such as press advertising; distribution of a background information document; and on-site notices, which have already been undertaken, will not be repeated during the EIA phase.

The relevant authorities have been informed (see Table 7-1) and will be kept up to date with regards to the progress of the project. No further meetings with authorities have been planned but will take place if required and/or requested. If any of the regulatory authorities require a meeting, such a meeting can be arranged at the earliest convenience of all parties.

The following tasks will be undertaken as part of the public consultation process during the EIA phase of the project:

- **Authority comments:** Further efforts will be made to obtain comments from the authorities who have as yet not provided comments.
- **I&AP comments:** Further efforts will be made to obtain comments from I&APs which have as yet not responded.
- **Infrastructure:** Feedback from infrastructure and services organizations such as Telkom, Eskom, RLM, Rand Water and the DPWRT will be requested.
- **Notice:** The on-site notices will remain for the duration of the EIA process.
- **Stakeholder register:** The existing stakeholder register will be revised and updated – this is an on-going process and will continue for the duration of the project.
- **Formal consultation:** On-going stakeholder consultation with interested and affected individuals where appropriate and those that registered. A focus group meeting may be held if required.
- **Addressing concerns:** Address the concerns raised by I&APs in terms of assessing their impacts.
- **Comment/issues and response table:** The table summarising the issues of concern raised by I&APs as well as the response of the EAP will be updated as new issues, comments or concerns are received and will be kept updated throughout the entire process and will form part of the EIA report.
- **EIA report review:** I&APs will be notified that the EIA report is available for comment once the specialist studies have been completed and the findings collated into a report. I&APs will be invited to review the report and submit any comments they may have prior to the report being submitted to the authorities for consideration.

9 CONCLUSION

This Scoping Report reflects I&APs issues and comments that were raised to date during the scoping phase of the EIA, and has been made available for public review prior to submission to NW DEDECT for consideration. The report meets the requirements of the relevant EIA regulations under NEMA.