

Final Environmental Scoping Report for the Proposed Valleyview Residential Development on Portion 22 of Farm Naauwpoort 335-JS, Mpumalanga Province



A Project for: Before the Wind Investment 113
(Pty) Ltd



ENGINEERS AND ENVIRONMENTAL CONSULTANTS

Linking People. Promoting Growth.

Tel: +27 (0) 11 798 6458

Email: Melissa.naidoo@rhdhv.com

Building 5, Country Club Estate, 21 Woodlands Drive. Woodmead, 2191



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Melissa Naidoo

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Reviewer: Paul da Cruz

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Approval: Malcolm Roods

Signature

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APPENDIX A: LOCALITY MAP

APPENDIX B: PROCESS FLOW DIAGRAM

APPENDIX C: APPROVAL OF APPLICATION

APPENDIX D: PUBLIC NOTIFICATION

ACRONYMS

DEA	Department of Environmental Affairs
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
ESS	Environmental Scoping Study
ESR	Environmental Scoping Report
I&AP	Interested and Affected Party
NEMA	National Environmental Management Act

1 INTRODUCTION

Before the Wind Investments (Pty) Ltd proposes the development of a mixed-use township development on farm Naauwpoort 335 JS portion 22 known as Valleyview. The portion is placed within the Witbank area adjacent to the Reyno Ridge suburb (Refer to Figure 1 Ward 34 (Refer to Figure 3.)). The proposed site is further situated in an area with a number of different existing and planned land-uses, with the existing Bankenveld Golf Estate adjacent to the site.

To ensure compliance with the EIA regulations (2010) made under section 24 (5) of the National Environmental Management Act - NEMA (Act No. 107 of 1998) (as amended) and environmental best practice, *Before the Wind Investments (Pty) Ltd* appointed SSI Environmental as the independent Environmental Assessment Practitioner (EAP) to conduct the necessary studies to obtain Environmental Authorisation to undertake the proposed project.

In light of the above SSI Environmental appointed a team of experts that are well known in their respective specialist fields to assess the potential environmental impacts that the proposed development may have on the receiving environment.

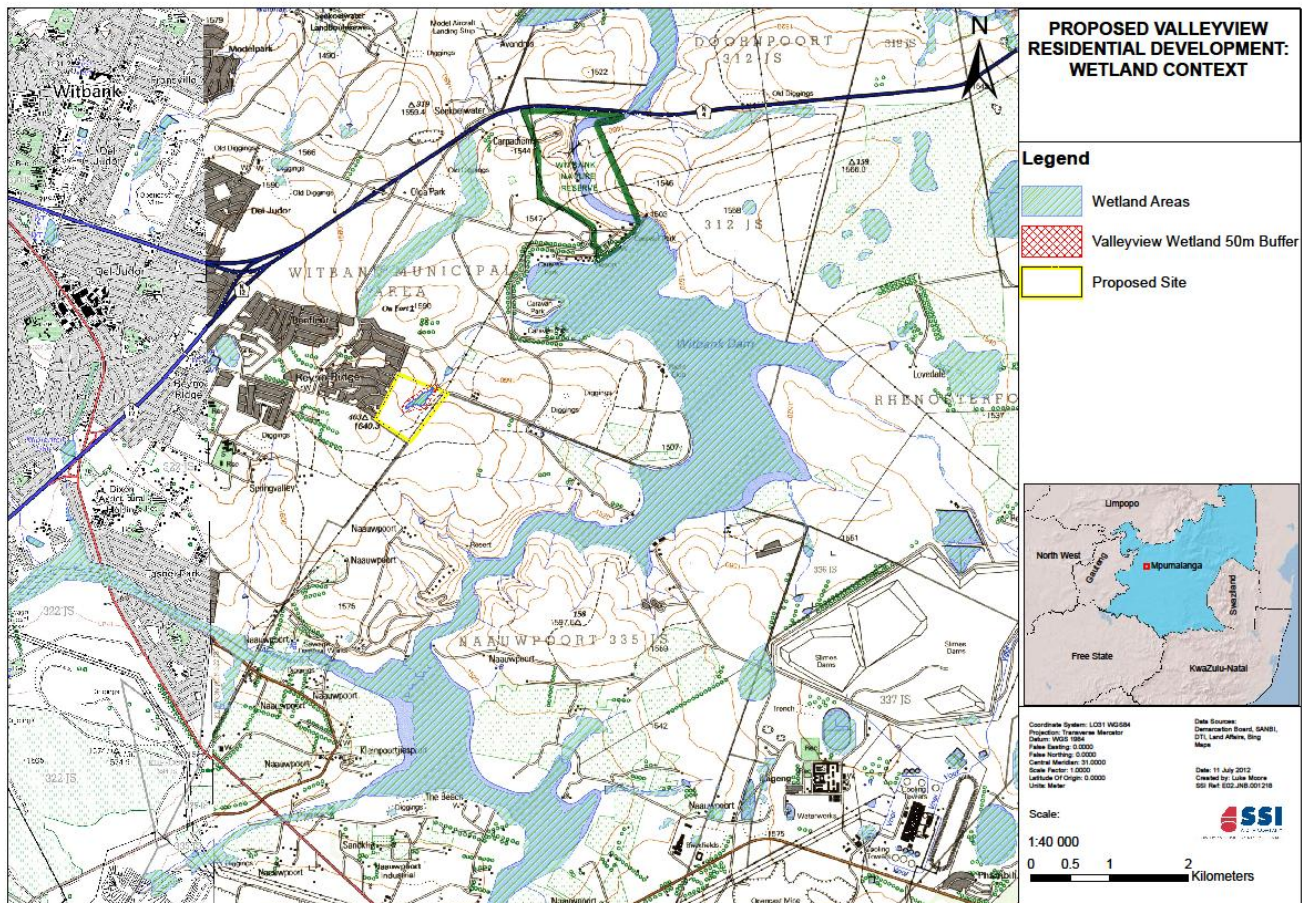


FIGURE 1: LOCALITY MAP

1.1 Approach to the EIA Studies

The environmental impacts associated with the proposed project require investigation in compliance with the Environmental Impact Assessment Regulations (2010) published in Government Notice No. R. 543, R. 544, R. 545 and R. 546 read with Section 24 (5) of the National Environmental Management Act (NEMA-Act No 107 of 1998) (as amended).

The required environmental studies include the undertaking of an Environmental Impact Assessment (EIA) process. This process is being undertaken in two phases:

- Phase 1 - Environmental Scoping Study (ESS) including Plan of Study for EIA; and
- Phase 2 - Environmental Impact Assessment (EIA) Study and Environmental Management Programme (EMPr).

1.1.1 Environmental Scoping Study

The ESS provides a description of the receiving environment and how the environment may be affected by the development of the proposed project. Desktop studies making use of existing information will be used to highlight and assist in the identification of potential significant impacts (both social and biophysical) associated with the proposed project.

Additional issues for consideration will be extracted from feedback from the public participation process, which commenced at the beginning of the Scoping Phase, and will continue throughout the duration of the project. All issues identified during this phase of the study will be documented within this Environmental Scoping Report (ESR). Thus, this ESR will provide a record of all issues identified as well as any fatal flaws, in order to make recommendations regarding the project and further studies required to be undertaken within the EIA phase of the proposed project.

Impacts related to Vegetation and Fauna Heritage, Wetlands, Traffic and Geotechnical conditions have been investigated in this ESS (refer to Table 1).

TABLE 1: SPECIALIST STUDIES UNDERTAKEN AS PART OF THE ESS

SPECIALIST FIELD	ORGANISATION
Wetland Assessment	SSI Environmental
Heritage	Dr Julius CC Pistorius
Geotechnical	Engeolab cc
Traffic Assessment	SSI Transport
Vegetation (Scoping Phase)	De Castro and Brits cc
Fauna (Scoping Phase)	Andrew Deacon
Visual Assessment (EIA phase)	Paul da Cruz

1.1.2 Environmental Impact Assessment Study

The Environmental Impact Assessment Study will aim to achieve the following:

- to provide an overall assessment of the social and biophysical environments of the affected area by the proposed project;
- to undertake a detailed assessment of the preferred site/alternatives in terms of environmental criteria including the rating of significant impacts;
- to identify and recommend appropriate mitigation measures (to be included in an EMPr) for potentially significant environmental impacts; and
- to undertake a fully inclusive public participation process to ensure that I&AP issues and concerns are recorded and commented on and addressed in the EIA process.

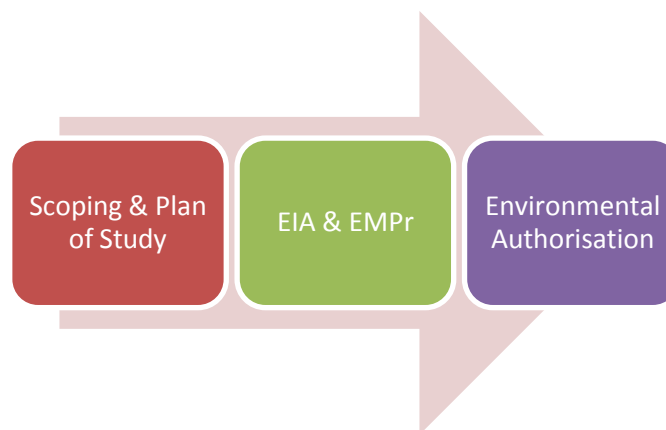


FIGURE 2: ENVIRONMENTAL STUDIES FLOWCHART

1.2 Details of the Environmental Assessment Practitioner

SSI Environmental has been appointed as an Environmental Assessment Practitioner (EAP) by Before the Wind Investments (Pty) Ltd, to undertake the appropriate environmental studies for this proposed project. The professional team of SSI Environmental offers a full spectrum of environmental services and have an excellent track record in Environmental Assessment work.

SSI Environmental has been involved in and/or managed several of the largest Environmental Impact Assessments undertaken in South Africa to date. A specialist area of focus is on assessment of multi-faceted projects, including the establishment of linear developments (national and provincial roads, and power lines), bulk infrastructure and supply (e.g. wastewater treatment works, pipelines, landfills), electricity generation and transmission, the mining industry, urban, rural and township developments, environmental aspects of Local Integrated Development Plans (LIDPs), as well as general environmental planning, development and management.

TABLE 2: DETAILS OF THE EAP

CONSULTANT:	SSI ENVIRONMENTAL
Contact Persons:	Paul Da Cruz and Melissa Naidoo
Postal Address	P.O Box 867 Gallo Manor, 2052
Telephone:	011 798 6458
Facsimile:	011 798 6010
E-mail:	Paul.dacruz@rhdhv.com / melissa.naidoo@rhdhv.com
Expertise:	<p>Paul Da Cruz is an Associate at SSI. He has worked on a number of projects, including Strategic Environmental Assessments, Environmental Impact Assessments, Environmental Management Plans, and Environmental Auditing. He performed the role the project manager for a number of large EIAs. Through his consulting work he gained experience of not only EIA project management, but through experience gained also to offer a rare multi-disciplinary package of specialist skills, including wetland assessment, visual impact assessment, tourism assessment, and avifaunal assessment.</p> <p>Melissa Naidoo is a Senior Environmental Consultant with experience in various facets of environmental management which includes Environmental Impact Assessments, Environmental Management Planning, Environmental Auditing, Public Participation, Environmental training as well as Environmental Management Frameworks. She holds an Honours degree in Environmental Science and Earth Science from the University of Kwa-Zulu Natal and has been part of SSI for a period of two years.</p>

1.3 Structure of the Report

Chapter 1	•Introduction to project and approach to the Environmental Scoping Study
Chapter 2	•Provides the technical description of the project as well as a description of the infrastructure
Chapter 3	•Consideration of alternatives (design/layout, site and do-nothing) for the project
Chapter 4	•Brief scoping of national legislation and guidelines
Chapter 5	•Overview of the public participation process conducted to date
Chapter 6	•A description of the biophysical and social environment
Chapter 7	•A description of the environmental impacts on the biophysical and social environment
Chapter 8	•Conclusions and recommendations of the Environmental Scoping Study
Chapter 9	•Plan of Study for the EIA study including specialist studies required for the EIA study

2 PROJECT DESCRIPTION

2.1 Project Location

The proposed site is located on portion 22 of the Farm Naauwpoort 335 located within the eMalahleni Local Municipality in the Mpumalanga Province as illustrated in Figure 3. The proposed 42ha site is surrounded by established residential communities such as the Reyno Ridge and new developments currently being constructed such as the Bankenveld Golf Estate located on the northern side of the property.

The study area is situated in the south-eastern part of eMalahleni in Mpumalanga adjacent to the existing suburb of Reyno Ridge on the cadastral portion Naauwpoort 335 JS. The property is bordered on the northern side by a local access road and an existing township on the western to north-western side by the existing suburb of Reyno Ridge. The southern boundary at the top of the hill borders on a development that is currently being undertaken. The remaining boundary on the eastern side borders onto vacant land untransformed grassland that extends down to the Witbank Dam approximately 3 km from the site.

The site of the proposed development is currently vacant, having formerly been farming land. The site consists of a drainage line and wetland in its northern part. There is a small dwelling on the south-eastern corner of the site that appears to have been a workers' dwelling. Various grassed vehicle tracks traverse the site. The site comprises largely of rocky substrates that are not suitable for cultivation.

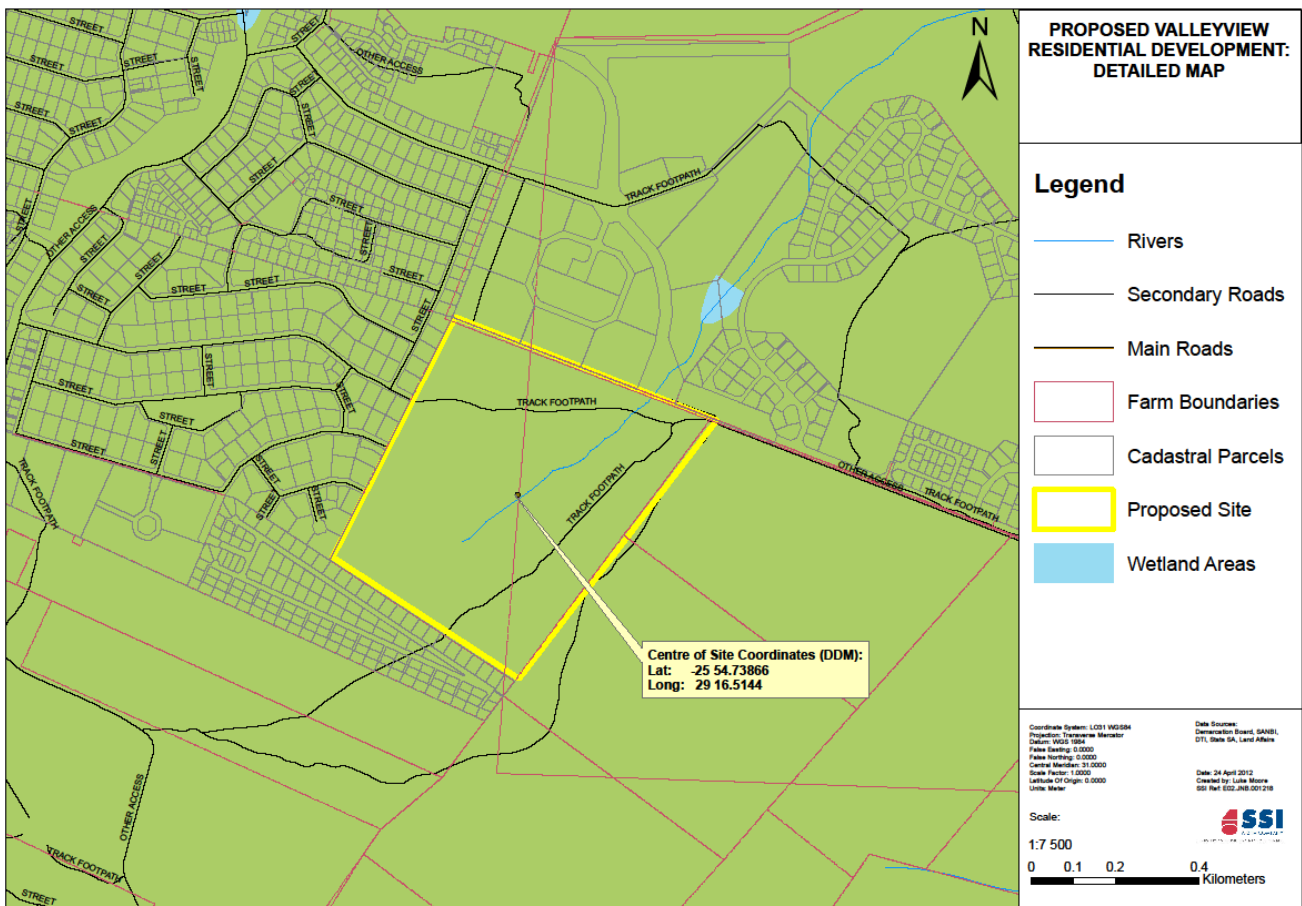


FIGURE 3: PROPOSED VALLEYVIEW DEVELOPMENT – CADASTRAL CONTEXT

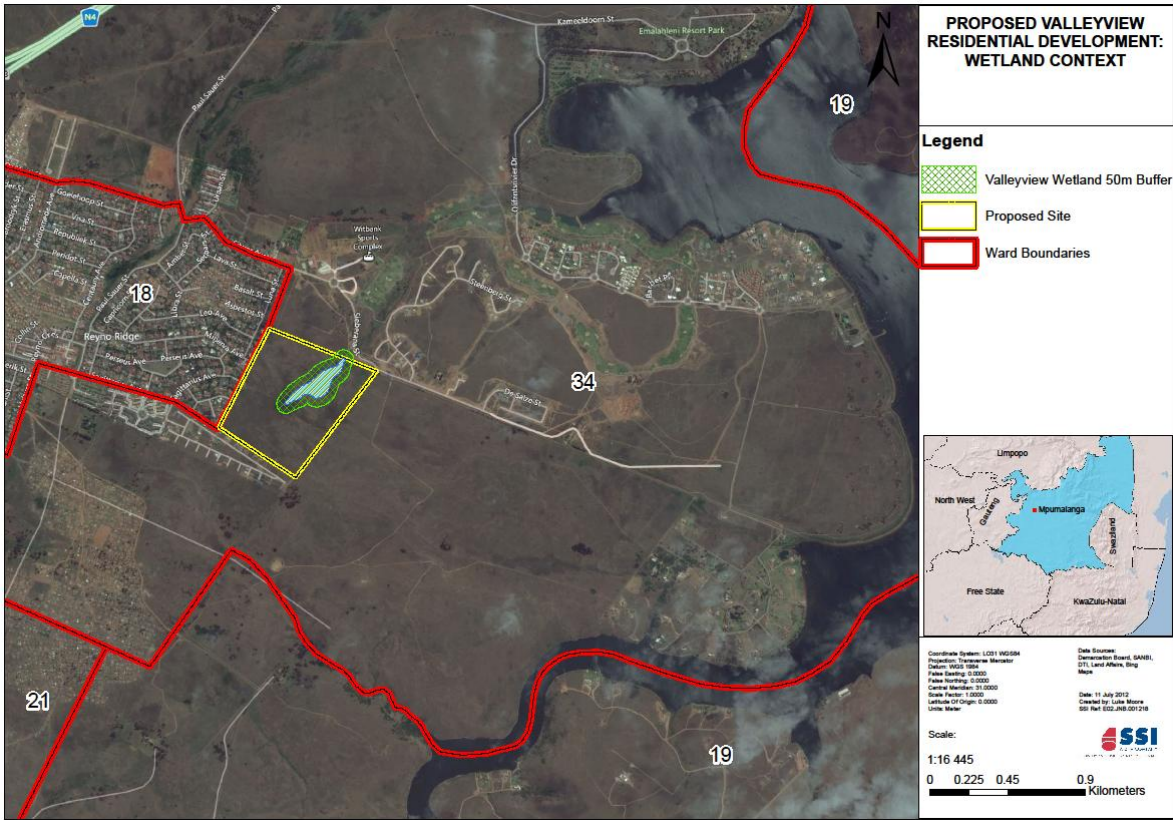


FIGURE 4: WARD MAP



FIGURE 5: GOOGLE IMAGE OF DEVELOPMENT SITE

2.2 Project Technical Description

The proponent is proposing the establishment of a “mature lifestyle” estate, as detailed below. The proposed development of 315 residential stands, private and public roads, access buildings and security buildings fulfils a market need for this type of housing in the study area.

2.2.1 Development description

The proposed development is aimed at the establishment of a Mature Lifestyle Estate/ Residential Estate, situated within the Bankenveld area in Witbank. Each stand would range between 300 -350 m² in extent. The proposed development would be established into two phases:

- Phase 1: 314 Units; and
- Phase 2: 286 Units

Two accesses points located on the West of the site, namely Sagittarius Avenue and Minerva Avenue will be considered as entrance and exist points. In addition an access on the North East corner of the development from Sieberana Street will be considered during Phase 2 of the development.

2.2.2 Height restrictions

The proposed development will be guided by the Architectural guidelines and town planning scheme for Witbank for the area. Based on these guidelines *all town planning regulations must be in accordance to the current Town Planning scheme. Natural ground level shall be deemed to be the level as determined by a registered land surveyor.*

- 1-3 storey structures are being considered
- The height of any part of the structure, excluding chimney stacks shall not exceed 8.5m (max) measured vertically above the NGL

2.2.3 Bulk Services

Prior to the commencement of the EIA process the development team has engaged in numerous consultation meetings between themselves and the eMalahleni Local Municipality to determine the availability of services and their possible linking to the system. The Municipality is currently in favour of the proposed project and will continue to engage with the team to ensure that the services are managed correctly.

Water

The bulk water supply will be obtained from Reservoir Complex C situated on Hans Strydom Avenue. According to the latest eMalahleni Water Services Master plan (2007), the total storage capacity available is 68 m³, whereas the annual average daily usage is approximately 10 m³/day. Based on these figures, there is sufficient bulk storage for the proposed development.

The high / level storage is currently 3 m³, whereas the annual average daily demand is 6,7 m³. The pumps however have a greater capacity than the fire plus peak flow, making the capacity adequate under these circumstances. The only factor limiting the condition of the pumps is the provision of an auxiliary power supply for the booster pumps which would be considered for the development. This would in turn also be of benefit to all users in the area.

A dedicated supply line will be installed from Reservoir C to the development, and thus no additional load will be placed on the existing reticulation.

Sewer

Two sewer network possibilities are being investigated for the supply of the proposed development. The preferred alternative would be based on the requirements of the ELM.

The developer would prefer to connect to the existing system in Reyno Ridge and possibly Ben Fleur which feeds into the Riverview sewer purification works. This alternative is preferred due the system being gravity fed, which simplifies operating conditions. In addition this system excludes the Bankenveld development which no longer feeds into the Riverview wastewater treatment plant, freeing up capacity.

The alternative option considered is to pump the effluent up to the watershed on the Southern boundary of the development, and then to gravitate down to the Naauwpoort wastewater treatment works. This is not technically preferred as it is an extremely expensive option and has more risks within regard to pump failure and resultant spillage into Witbank Dam.

More information regarding the technical details of the project will be provided in the EIA report.

3 PROJECT NEED AND DESIRABILITY

eMalahleni (Witbank) is situated east of Pretoria on the Mpumalanga Highveld and was established in the 1890s. The estimated population of Witbank today is currently 61 093 people as per the 2011 census (database of GeoNames) and is growing considerably. Based on the current IDP 2011- 2012¹ the eMalahleni Municipality is confronted with a huge housing backlog (\pm 40 000 units as per housing plan) as a result of a continuous influx of people (job seekers) into the area. There is a need to prevent the development of social imbalances and extensive conditions of poverty, lack of services, unemployment and lack of infrastructure. It should be noted, however that the majority of the housing need is for low income housing, while the proposed development is aimed at the higher income end of the market. In spite of this, the development is expected to tie into one of the current IDP objectives: "To facilitate the development of sustainable and viable settlements within the municipality" (IDP 2011- 2012)

A market study was conducted for a new residential development on the site in 2008². It is important to note that this study was conducted just prior to the onset of the global financial crisis that began in 2008, and thus certain of the growth projections as reported have not materialised as South Africa has experienced the effects of the ensuing global economic recession. Nonetheless much of the report is relevant in terms of the expected growth of the local economy, as driven by factors such as the need to develop more coal mines due to local and international demand for coal. In addition, the findings of the study with respect to the market of the study area being characterised by:

- high education levels (34% of the population have achieved a tertiary level of education);
- predominantly middle-wage occupations with some higher wage occupations;
- a consumer market characterised by middle to high income households; and
- a population of which a high proportion (72.2%) is considered to be part of the economically active population are all likely to be relevant at the present time.

Based on the Market Study the national population density, especially in the metropolitan areas, increased significantly over the past seven years, mainly driven by the process of urbanisation. Additionally formal sector employment increased by 1.4 million workers or 16.5% from 2000 to 2006. The average annual growth in real household disposable income was about 4.7% in the period between 2000 and 2006. Real economic growth averaged about 4% per annum between 2000 and 2006. This growth performance contributed to the abovementioned growth in formal employment and disposable income which supported the expansion of the housing market and the increasing demand for land for residential development. Although growth in the years since the market study was done has slowed, based on the above it is clear that the need for residential developments has increased, in particular mature living residential housing is required.

The Valley View estate will fulfil a much needed gap in the area providing a safe and friendly estate that would cater for older and retired people. Over the years the need for this facility has increased since the traditional old age homes did not full cater to the needs of the elderly.

A clear need exist within eMalahleni for the establishment of proper care and housing facilities for people over the age of 60. According to the Integrated Development Plan of EMalahleni, 2011 a total number of 12,264 household heads over the age of 60 is currently residing within EMalahleni. Most of these households currently do own a property within EMalahleni; this development will thus cater for existing residents in EMalahleni.

There are currently 5 established retirement homes within the whole of EMalahleni:

- Edenpark Retirement Village (Theunis Janson Street)
- Immergroen Retirement Home (Lukin Street)
- Ever Green Retirement Home (Lukin Street)

¹ 2011- 2012 Emalahleni Local Municipality: Final Integrated Development Plan

² Demacon Market Study: Valley View Market Study: Research and Recommendations. (February 2008) (Source: Registered NPO's in Mpumalanga)

- Witbank Society for the Aged (Theunis Janson Street)
- Huis Betsie Louw (Denise Street)

It is clear from the above that 5 old age homes for a total number of 12 264 households is not an optimal situation. It is thus clear that a need exists for the development of more luxury mature life style estates within EMalahleni.

The development as proposed fits in with the findings of the study that residential demand in the area for entry level economic freestanding / group (at the lower end) to freestanding full title homes (at the higher end).

The desirability of the proposed development needs to be investigated in the context of the area in which it is located. The proposed township extensions are situated within an urban area of eMalahleni between Reyno Ridge and the Bankenveld estate described in chapter 7.4 and 7.6 in this report, the study area consists of a mix of established urban-residential land-uses, and vacant areas that are, or were formerly farming areas. Much of the study area has undergone land-use changes in the recent past from farming areas to areas of new residential development on the outskirts of eMalahleni. The development of the site in question to residential use from its current vacant state is in keeping with this trend, and the development will not be incongruous in terms of its surrounds. The site is bordered on three sides (west, south and north) by existing residential developments; these existing residential areas are middle to high income residences.

Concerns have been expressed by certain of the residences on the immediate boundary of the site in terms of the potential of the development to block existing views from these households. In this respect the development may bring in an element of undesirability; this issue will be further assessed through the conducting of a visual study in the impact phase of the project.

Concerns have also been raised by certain residents in the surrounding area regarding the impact of a further development on the bulk services (sewerage, electricity provision and water supply) to the area that are already under stress and unreliable. This aspect of the development will be further examined in the impact phase of the project.

Lastly, the density and layout of the proposed development can be examined the context of its desirability. The total development site is 42 ha in size of which approximately 30.7 ha is proposed to be developed. The wetland / drainage area situated in the central / northern part of the site will be kept free from development with an accompanying buffer area, thus this ecologically important part of the site will be protected from development and transformation. Thus in the context of its surrounds and layout, the proposed development conforms to its surrounds.

4 PROJECT ALTERNATIVES

In terms of the EIA Regulations, feasible alternatives are required to be considered as part of the environmental investigations. An alternative in relation to a proposed activity refers to the different means of meeting the general purpose and requirements of the activity (as defined in Government Notice R385 of the EIA Regulations, 2006), which may include alternatives to:

- the property on which or location where it is proposed to undertake the activity;
- the type of activity to be undertaken;
- the design or layout of the activity;
- the technology to be used in the activity; and
- the operational aspects of the activity.

All identified feasible alternatives are required to be evaluated in terms of social, biophysical, economic and technical factors.

4.1 Do-nothing Alternative

The do-nothing option would entail not using the site and maintaining the site as is. From certain perspectives this is not a viable option as the site is situated within an urban residential area surrounded by either upcoming or already existing residential communities. By not developing the site, the site will be anomalous in the context of the surrounding urban residential land-uses, and some of the direct and indirect socio-economic benefits (job creation, housing shortages, provision of further housing aimed at the mature living market etc) will not materialise. From an ecological perspective, the site has a certain degree of ecological sensitivity due to the presence of a wetland and rocky outcrops, however much of the ecological linkages between the site and surrounding natural areas have been lost due to the increase in development around the site. Not developing the site will assist in protecting the natural features on the site, however the development as proposed will maintain the wetland and an associated buffer area as an undeveloped area. The do-nothing alternative will be further assessed in the EIA phase of the project.

4.2 Layout Alternatives

Two layout alternatives will be investigated during the Environmental Impact Assessment Phase. These are detailed in the report as the *Preferred Layout* (Figure 6) with the *Alternative Layout* (Figure 7) being the second option. Both options were investigated in terms of the layout for the proposed township establishment to accommodate the wetland. Due to the surrounding access roads and the lack of entrances to the proposed development, the alternative layout was not deemed a feasible option for the proposed facility due to cost and limited access points.

4.2.1 Preferred layout

The preferred layout for the proposed township establishment consists of two security-controlled access points. This option is preferred in terms of cost, access to services and road access. This option is more cost effective than the alternative as no panhandles are included in the layout (see below), thus connecting and aligning the portions of the development, making it easier to service. This option accommodates smoother traffic flow and takes into consideration the surrounding area and access points especially with regard to the access point to the north of the proposed layout that connects with the Bankenveld development (this access point was not taken into consideration in the alternative township layout).



FIGURE 6: PREFERRED ALTERNATIVE

4.2.2 *Alternative township development*

The proposed layout was submitted and approved by the EMalahleni Local Municipality on 15/07/2009 for a different applicant. Since the development the proposed property was purchased by another development company, and the plans re-investigated.

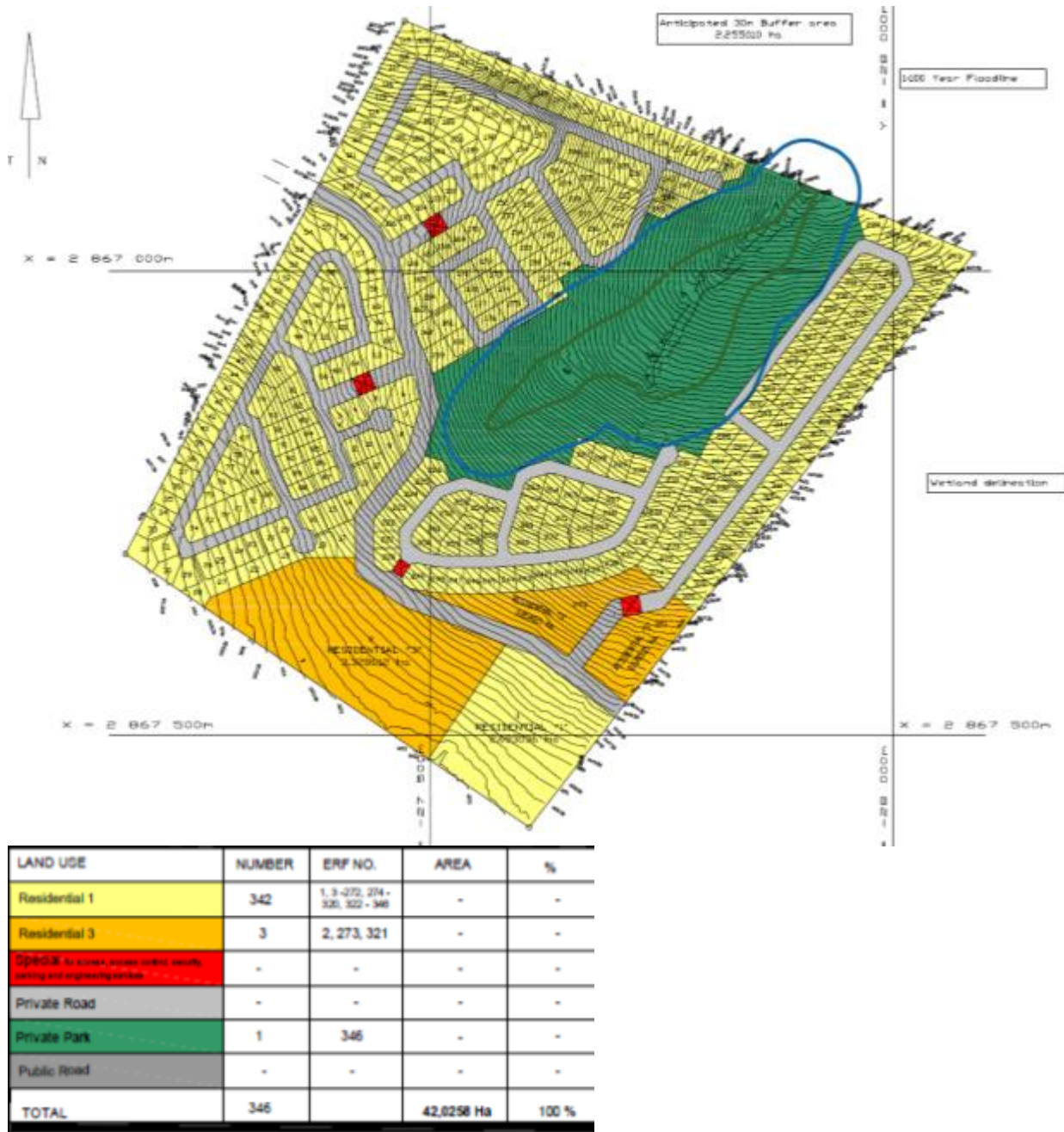


FIGURE 7: ALTERNATIVE LAYOUT

The above layout was deemed not feasible due to the following reasons:

- The cost of internal services were considerably more than the preferred alternative due to the number of panhandle stands;
- The site consisted of only one access point; and
- The layout did not align to existing services such as sewage and water.

5 LEGAL REQUIREMENTS

In order to protect the environment and ensure that the proposed Valleyview Development operates in an environmentally responsible manner, there are a number of significant pieces of environmental legislation that need to be taken into account during this study. These include:

5.1 The Constitution of South Africa

The Bill of Rights, in the Constitution of South Africa (No. 108 of 1996), states that everyone has a right to a non-threatening environment and requires that reasonable measures be applied to protect the environment. This protection encompasses preventing pollution and promoting conservation and environmentally sustainable development. These principles are embraced in NEMA and given further expression.

5.2 National Legislation and Regulations

5.2.1 *National Environmental Management Act (No 107 of 1998)*

The National Environmental Management Act (NEMA) (No. 107 of 1998) (as amended) states that the principles of Integrated Environmental Management (IEM) should be adhered to in order to ensure sustainable development. A vital fundamental of the IEM procedure is accountability to the various parties that may be interested in or affected by a proposed development. Public participation is a requirement of the IEM procedure, in terms of the identification of potentially significant environmental impacts during the Scoping Phase. The IEM procedure aims to ensure that the environmental consequences of development proposals are understood and adequately considered during all stages of the project cycle, and that negative aspects are resolved or mitigated and positive aspects enhanced.

Furthermore, Section 28(1) of the Act states that “every person who causes or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring”. If such pollution cannot be prevented then appropriate measures must be taken to minimise or rectify such pollution.

5.2.2 *EIA Regulations (2010)*

The NEMA EIA Regulations (2010), which replaced the EIA Regulations (2006), were promulgated and came into effect on 02 August 2010. Government Notice 543, regulates the procedure and criteria as contemplated in Chapter 5 of NEMA, relating to the submission, processing and consideration of, and decision on, applications for environmental authorisations for the commencement of activities in order to avoid detrimental impacts on the environment, or where it can not be avoided, ensure mitigation and management of impacts to acceptable levels, and to optimise positive environmental impacts, and for matters pertaining thereto.

The nature of the proposed project includes activities listed in the following Listing Notices – GN R.544 (Listing Notice 1) and GN R.545 (Listing Notice 2) of the EIA Regulations (2010) – refer to Table 3.

TABLE 3: LISTED ACTIVITIES ACCORDING TO LISTING NOTICES 1 AND 2 OF THE EIA REGULATIONS (2010)

LISTED ACTIVITIES	
LISTING NOTICE 1 (GN R.544)	
Activity 9	<p>The construction of facilities or infrastructure exceeding 1000 meters in length for the bulk transportation of water, sewage and storm water –</p> <ul style="list-style-type: none"> (i) with an internal diameter of 0,36 meters or more; or (ii) with a peak throughput of 120 litres per second or more, <p>excluding where:</p> <ul style="list-style-type: none"> a. such facilities or infrastructure are for bulk transportation of water, sewage or stormwater or stormwater drainage inside a road reserve; or b. where such construction will occur in urban areas but further than 32 meters from a watercourse, measured from the edge of the watercourse. <p><u>Description of Activity:</u></p> <p>The proposed development will include the installation of new sewer systems, potable water supply systems and well as stormwater systems. The design, operational requirements and management requirements will be discussed within the EIA process and associated reports.</p>
Activity 11	<p>The construction of:</p> <ul style="list-style-type: none"> (i) canals; (ii) channels; (iii) bridges; (iv) dams; (v) weirs; (vi) bulk stormwater outlet structures; (vii) marina's; (viii) jetties exceeding 50 square meters in size; (ix) slipways exceeding 50 square meters in size; (x) buildings exceeding 50 square meters in size; or (xi) infrastructure or structures covering 50 square meters or more <p>where such construction occurs within a watercourse or within 32 meters from a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p> <p><u>Description of Activity:</u></p> <p>The proposed development area has an existing drainage line located within the extent of the property boundaries and may be affected and/or impacted on during the construction and/or operational phases of the development. Impacting structures may include bridges, culverts and stormwater outlets.</p>
Activity 13	<p>The construction of facilities or infrastructure for the storage, or for the storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 80 but not exceeding 500 cubic meters;</p> <p><u>Description of Activity:</u></p> <p>During the construction phase of the development, the applicant may require the storage and handling of dangerous goods. Based on this assumption this activity may apply.</p>

LISTED ACTIVITIES	
Activity 24	<p>The transformation of land bigger than 1000 square meters in size, to residential, retail, commercial, industrial or institutional use, where, at the time of the coming into effect of this Schedule or thereafter such land was zoned open space, conservation or had an equivalent zoning.</p> <p><u>Description of Activity:</u> The applicant is proposing to develop a 42 hectare site into a residential development.</p>
LISTING NOTICE 2 (GN R.545)	
Activity 15	<p>The physical alteration of underdeveloped, vacant or derelict land for residential, retail, commercial, recreational, industrial or institutional use where the total area to be transformed in 20 hectares or more;</p> <p>Except where such physical alteration takes place for:</p> <ul style="list-style-type: none"> (i) linear development activities; or (ii) agriculture or afforestation where activity 16 in this Schedule will apply. <p><u>Description of Activity:</u> The applicant is proposing to develop a 30.7 hectare site into a residential development.</p>
LISTING NOTICE 3 (GN R.546)	
Activity 12	<p>The clearance of an area of 300 square meters or more of vegetation where 75 % or more of the vegetative cover constitutes indigenous vegetation</p> <ul style="list-style-type: none"> (a) within any critically engendered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; (b) within critical biodiversity areas identified in bioregional plans; (c) within the littoral active zone or 100 meters inland from the high water mark of the sea or an estuary, whichever distance is the greater, excluding where such removal will occur behind the development setback line or erven in urban areas <p><u>Description of Activity:</u> The proposed development area is located within a “highly significant” bioregional zone in accordance with the Mpumalanga MBCP Terrestrial Biodiversity Assessment.</p>

5.2.3 National Water Act (No 36 of 1998)

The major objectives of the National Water Act are to:

- Aid in providing basic human needs;
- Meet the growing demand of water in a sustainable manner;
- Ensure equal access to water and use of water resources;

- Protect the quality of water of natural resources;
- Ensure integrated management of water resources;
- Foster social and economic development; and
- Conserve aquatic and related ecosystems.

5.2.3.1 Water Use

In terms of section 21, the water uses that are recognised for purposes of the National Water Act and that which may be relevant to the proposed development include the following:

SECTION 21 WATER USES

- (c) Impeding or diverting the flow of water in a watercourse.
- (i) Altering the bed, banks, course or characteristics of a watercourse.

In terms of the definitions contained in Section 1 of the National Water Act:

- **“water resource”** includes a watercourse, surface water, estuary, or aquifer
- **“Aquifer”** means a geological formation which has structures or textures that hold water or permit appreciable water movement through them.
- **“Watercourse”** means a river or spring; a natural channel in which water flows regularly or intermittently; a wetland, lake or dam into which, or from which, water flows; and any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse, and a reference to a watercourse includes, where relevant, its bed and banks.

The need for a water use license will be determined during the EIA phase of the study.

5.2.4 The National Heritage Resources Act (No 25 of 1999)

In terms of Section 38 (subject to the provisions of subsections (7), (8) and (9) of the Act), any person who intends to undertake a development categorised as:

- The construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
- The construction of a bridge or similar structure exceeding 50 m in length;
- Any development or other activity which will change the character of a site:
 - Exceeding 5 000 m² in extent;
 - Involving three or more existing erven or subdivisions thereof; or
 - Involving three or more erven or divisions thereof which have been consolidated within the past five years; or
 - The costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
- The re-zoning of a site exceeding 10 000 m² in extent; or
 - Any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority,

must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development. In addition in line with the National EIA Regulations a Heritage Impact Assessment was undertaken at the proposed site.

5.2.5 Occupational Health and Safety Act (No 85 of 1993)

The Occupational Health and Safety Act provides for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work, against hazards to health and safety arising out of or in connection with the activities of persons at work.

5.2.6 Conservation of Agricultural Resources Act (Act No. 43 of 1983)

Conservation of Agricultural Resources Act (Act No. 43 of 1983) all declared alien weeds and declared invader plants must be effectively controlled by the landowner.

5.2.7 Legal Requirements

TABLE 4: LEGAL REQUIREMENTS IN TERMS OF OTHER GUIDELINES, POLICIES AND ENVIRONMENTAL MANAGEMENT INSTRUMENTS

OTHER RELEVANT GUIDELINES, DEPARTMENTAL POLICIES, ENVIRONMENTAL MANAGEMENT INSTRUMENTS
South African National Standard SANS 10103:2008 (<i>The Measurement and Rating of Environmental Noise with Respect to Annoyance and Speech Communication</i>) National Noise Control Regulations (1998)
Mpumalanga Biodiversity Conservation Plan (2006)
eMalahleni Local Municipality Integrated Development Plan 2010/11

6 PUBLIC PARTICIPATION PROCESS

6.1 Aims of the Public Participation Process

The primary aims of the public participation process are:

- to inform interested and affected parties (I&APs) and key stakeholders of the proposed application and environmental studies;
- to initiate meaningful and timeous participation of I&APs;
- to identify issues and concerns of key stakeholders and I&APs with regards to the application for the development (i.e. focus on important issues);
- to promote transparency and an understanding of the project and its potential environmental (social and biophysical) impacts (both positive and negative);
- to provide information used for decision-making;
- to provide a structure for liaison and communication with I&APs and key stakeholders;
- to ensure inclusivity (the needs, interests and values of I&APs must be considered in the decision-making process);
- to focus on issues relevant to the project, and issues considered important by I&APs and key stakeholders; and
- to provide responses to I&AP queries.

6.2 Authority Consultation

The competent authority, Mpumalanga Department of Economic Development, Environment and Tourism (MDEDET) reviewing the project and providing Environmental Authorisation was consulted from the outset of this study.

Authority consultation included the following activities:

- Submission of an application for environmental authorisation in terms of Section 26 of the EIA Regulations (2010) on 19 January 2012.
- Approval of the application documentation by MDEDET was received on 14 June 2012 see **Appendix C**).

6.3 Consultation with Other Relevant Stakeholders

Consultation with other relevant key stakeholders has been undertaken through telephone calls and written correspondence in order to actively engage these stakeholders from the outset and to provide background information about the project during the Environmental Scoping Phase. These stakeholders included:

TABLE 5: KEY STAKEHOLDERS CONTACTED AS PART OF PP PROCESS

CONTACT PERSON	ORGANISATION
Non-Governmental Organisations (NGO's)	
Andrew Rossack	WESSA: Regional Chairperson
Eben van Wyk	Landowners Association- Witbank
PROVINCIAL GOVERNMENT	
Provincial Government	
Mr Norman Mokoena	Department of Public Works, Roads and Transport
Ms B M Mojapelo (Chief Director: Housing and Technical)	Department of Human Settlements
Dr Garth Batchelor	MDEDET: Mpumalanga Department of Economic Development Environment and Tourism
Ningi Mlangeni	Department of Social Development
Wilson Makaringa	Mpumalanga Parks and Tourism Agency
N.T.P. Nhleko	Department of Labour
Dr. L. Cele	Department of Agriculture, Rural Development and Land Administration
Mish Khoza	Department of Agriculture, Rural Development and Land Administration
<i>Philip Hine</i>	SAHRA
Allan Zimbwa	Nkangala District Municipality
District and Local Government (EMalahleni Local Municipality)	
Tebogo Matoane	Municipal Manager
Cllr. L. Malatjie	Mayor
Chris Voigt	Environment Department
Botha Kleynhans	Environment Department
S.S.Lefifi	Community Safety, Security & Liaison
Ward Councillors	
Henro Kruger	Ward 18 (surrounding)
Bongane Nkosi	Ward 19 (Surrounding)
Beauty Shabangu	Ward 21(Surrounding)
Anita Botes	Ward 34
Adjacent Land Owners	
All adjacent landowners were provided a hand delivered Background information document. Notices were left with the security guard at the Bankenveld Estate.	
Other Stakeholders	
Des Farley	Eskom Holdings

6.4 Advertising

In compliance with the EIA Regulations (2010), notification of the commencement of the EIA process for the project was advertised in a local newspaper, namely the *Witbank News* on 23 August 2012 (refer to **Appendix D**). Interested and affected parties (I&APs) were requested to register their interest in the project and become involved in the EIA process. The primary aim of these advertisements was to ensure that the widest group of I&APs possible was informed and invited to provide input and questions and comments on the project.

In addition to advertisements, A2 size site notices in English were placed at the following public places advertising the EIA process for the project:

- Boundaries of property and surrounding streets and areas (See Figure 6 and 7 below).



FIGURE 8: SITE NOTICES PLACED AT THE PROPOSED SITE





FIGURE 9: SITE NOTICES AT BANKENVELD (2 ENTRANCES)

6.5 Identification of Interested and Affected Parties (I&APs)

I&APs were identified primarily through a knock and drop system and through liaising with the Landowners association. Background Information Documents (BIDs) were hand delivered to all I&APs at all homes adjacent to the proposed site. All registered I&APs were thereafter sent a letter informing them of the availability of the draft Environmental Scoping Report (ESR) for review and indicating how they could become involved in the project. The contact details of all identified I&APs are updated on the project database, which is included in **Appendix E**.

This database will be updated on an on-going basis throughout the EIA process.

6.6 Briefing Paper

A briefing paper or Background Information Document (BID) for the project was compiled in English (refer to **Appendix D**). The aim of this document is to provide a brief outline of the application and the nature of the development. It is also aimed at providing preliminary details regarding the EIA process, and explains how I&APs could become involved in the project. The briefing paper was distributed to all identified I&APs and stakeholders, together with a registration/comment sheet inviting I&APs to submit details of any issues, concerns or inputs they might have with regards to the project.

6.7 Issues Trail

Issues and concerns raised in the public participation process during the EIA process are compiled into an Issues Trail. The ESS-phase Issues Trail has been included into the final Environmental Scoping Report, in which all comments made to date have been captured. This Issues Trail reflects the issues raised by I&APs during consultation, and provides an indication of particular areas within which concerns were underscored.

6.8 Public Review of the Draft Scoping Report

An advert was placed in the *Witbank News* informing I&APs of the application and the availability of the draft ESR and Plan of Study for EIA for review and comment. The *Witbank News* is a weekly community newspaper. The advert appeared on 23 August 2012. A copy of the advertisement is included in **Appendix D**. Additionally, all registered I&APs were notified of the availability of the report in writing.

The draft ESR, together with the Plan of Study for EIA was made available for authority and public review for a total of 40 calendar days from 23 August 2012 to 02 October 2012. In addition, the report was also made available at the following public locations (which are all readily accessible to I&APs) within the study area:

- eMalahleni Municipal Library
- Offices of eMalahleni Local Municipality
- Offices of SSI Engineers and Environmental Consultants (Building 5, Country Club Estate, Woodlands Drive); and
- SSI Environmental website (www.ssi-dhv.com/pages/enviromental/current-projects.php).

6.9 Consultation and Public Involvement

Through consultations with I&APs and Stakeholders, issues for inclusion within the Environmental Scoping Report were identified and recorded.

One Focus Group Meeting (FGM) with the eMalahleni Local Municipality and Ward councillors was held on 06 September 2012 (eMalahleni Local Municipality: council chambers),

The purpose of the FGM was to discuss the key findings of the Scoping phase and provide the representatives with an additional platform to provide input to the EIA process.

In addition to the Stakeholder FGM, one public meeting with I&APs was organised during the public review period of the draft Environmental Scoping Report. The meeting was held at Witbank Civic Theatre – Mandela Street (President Street) Witbank/ eMalahleni)

The primary aim of this meeting was to:

- Disseminate background information regarding the proposed project to I&APs;
- Supply more information regarding the EIA process and the findings of the specialist studies undertaken during the Scoping phase;
- Answer questions regarding the project and the EIA process;
- Obtain feedback from I&APs with respect to the proposed project; and
- Receive input regarding the public participation process.

Stakeholders and I&APs were notified of the Stakeholder Focus Group/Public Meetings using the following methods:

- Invitation letter sent via e-mail, registered mail and/or fax;
- Telephonic dialogue with key Stakeholders;
- Distribution of pamphlets in the Bankenveld and surrounding areas; and
- Liaison with the relevant Ward Councillors and Ward Committee Representatives –

Networking with I&APs, will continue throughout the duration of the project.

Issues/ concerns/comments raised during the FGM:

- Ms A Botes requested that alternative forms of distribution be used to inform I&APs of the EIA process. She is willing to assist the team in initiating this.
- Mr Nkabinde requested that the Mpumalanga Biodiversity Plan be incorporated into the EIA process.

Issues/concerns/comments raised during the Public meeting

- Loss of views;
- Possible reduction in property values;
- Increase in traffic congestion in Reyno Ridge;
- Impact on services: i.e.: power, sewage, water;
- The impact on the Wetland on the Project area; and
- Change in the notification of I&APs during the PP process;

7 GENERAL DESCRIPTION OF THE STUDY AREA

7.1 Topography

The topography of the study area is moderately to strongly undulating. The site occurs on ground that slopes down to the north from a flat area in the southern part of the site. A shallow valley runs through the central northern part of the site in a north-easterly direction. The altitude varies from 1640 m.a.s.l. at the top of the site to 1590 m.a.s.l. on the lower side where the drainage line exits the site.

7.2 Geology and Soils

The geology of the study area is Selons River Formation consisting primarily of rhyolite, a rock type that is the extrusive equivalent of granite. In this area this rock type has also been referred to as felcrite. This geology gives rise to shallow loamy sand soils, predominantly of the Mispah soil form. The drainage line contains deeper, finer grained soils that contain hydric indicators within 1 m of the surface and permanent ground water within this depth range. The land type of the study area, which is an area with largely uniform soils, topography and climate, is the Fa land type (Land Type Survey Staff, 1987), a land type that is generally associated with rocky areas and shallow soils.

7.3 Climate and Local Weather Conditions

7.3.1 Temperature and Humidity

The area typically experiences mild summer temperatures, whilst winters are generally cold with a very high incidence of frost (Mucina & Rutherford, 2006³).

7.3.2 Precipitation

The study site lies in the western part of the Mpumalanga Province, being situated on the eastern Highveld where the Grassland Biome occurs. The climate is highly seasonal in terms of precipitation with rainfall mainly occurring in the summer months. The mean annual precipitation for the site is in the vicinity of 690 mm (South Africa Rain Atlas: <http://134.76.173.220/rainfall/index.html>).

7.4 Social Environment

³ MUCINA, L. AND RUTHERFORD, M.C. (editors) in press. Vegetation map of South Africa, Lesotho and Swaziland: an illustrated guide. *Strelitzia* xx, South African National Biodiversity Institute, Pretoria.

The study area is located in the south-eastern part of eMalahleni (Witbank), in an area into which the town is rapidly expanding. The proposed development site is thus located in an urban context with a remnant rural component in the form of vestiges of open space. The site is bounded to the west and the south by suburbia. To the east and north-east, the site is bounded by the Bankenveld Golf Estate, which offers low density housing.

The eMalahleni Local Municipality (ELM) is situated on the Highveld of Mpumalanga and is approximately 2,677 square kilometres in size. The Municipality consists of a number of small settlements including Balmoral, Kendal, Kriel, Kwaguqa and Ogies. eMalahleni is one of the major urban concentrations in the Nkangala District Municipality and within Mpumalanga as a whole. eMalahleni is located relatively close to Gauteng, adjacent to the N4 and N12 National Roads, which serve as important transport linkages.

Based on the Market Study undertaken by Demacon⁴ the following key factors of the social environment determine the need for a residential development, and are thus reported on in this section:

1. Age profile (% economically active);
2. Level of education;
3. Average annual household income; and
4. Employment status.

7.4.1 Age Profile

The age distribution of a specific area serves as an important indicator, with reference to residential demand. The age profile is also indicative of the life stages present within the market, which also reflects the anticipation of specific commercial and residential behaviour. Figure 8 below indicates the age distribution within the market.

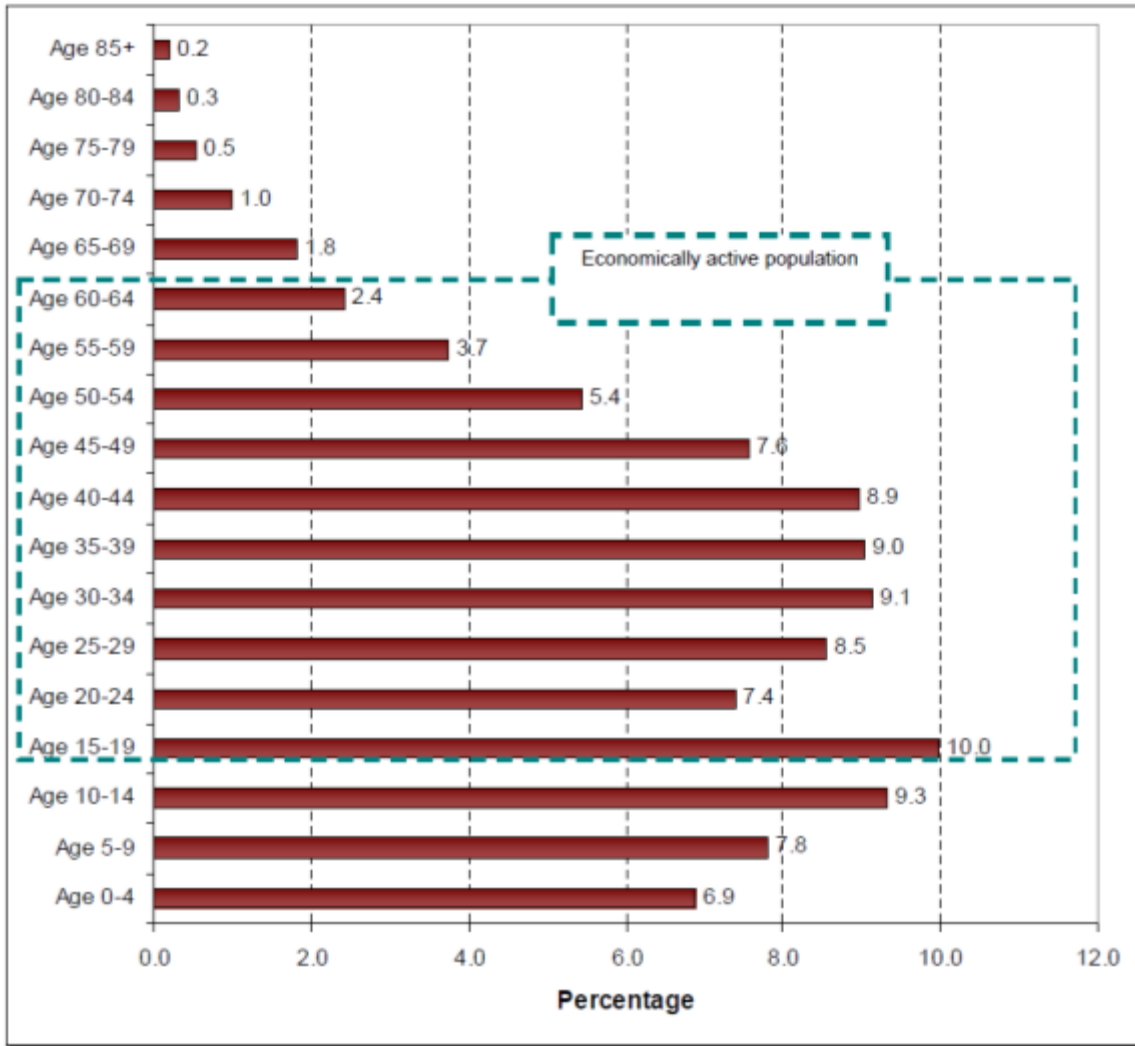


FIGURE 10: AGE PROFILE FOR THE EMAHALENI MUNICIPALITY⁴

The market area is characterised by a relative young and emerging population grouping with around 34% between the ages of 20 and 39 years.

- A large youthful component (10 to 19 years) is present within the market area, 19.3%.
- 14.7% of the population represents children under the age of nine.
- 72.2% of the trade area is considered to be part of the economically active population. (15 to 64 years).

7.4.2 Education Level

The highest level of education achieved by the population is indicative of the level of human development. Furthermore it serves as a proxy for the ability of the proposed development to be absorbed in the local economy.

⁴ DEMACON MARKET STUDIES: Valley View Market Study: Research and Recommendations. (February 2008)

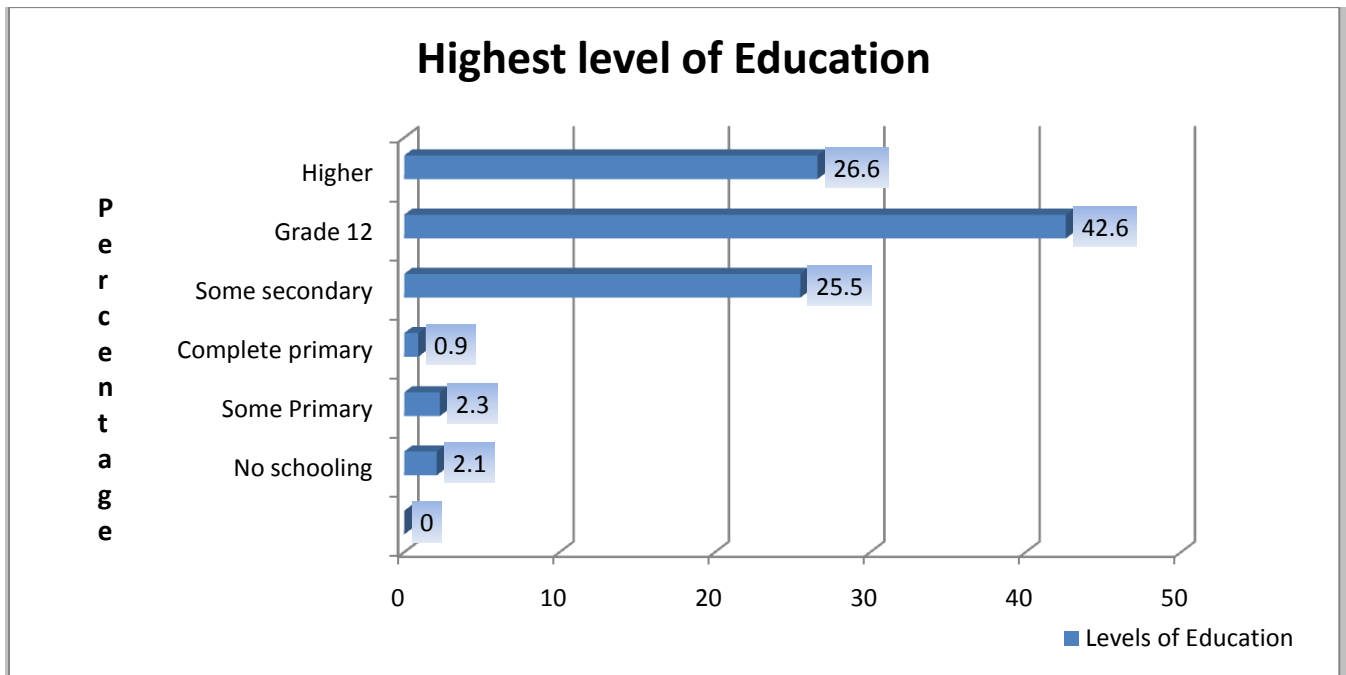


FIGURE 11: HIGHEST LEVEL OF EDUCATION⁵

- 69.2% of the market population has at least Grade 12 (42.6%) or has higher education (26.6%).
- A share of 25.5% of the market population has at least some secondary level of education.
- 0.9% of the market population completed their primary education and 2.3% of the population has some form of primary education.
- A mere 2.1% of the population has no form of education.

⁵ DEMACON MARKET STUDIES: Valley View Market Study: Research and Recommendations. (February 2008)

7.4.3 Average Annual Household Income

The annual household income is indicated in Figure 12 below.

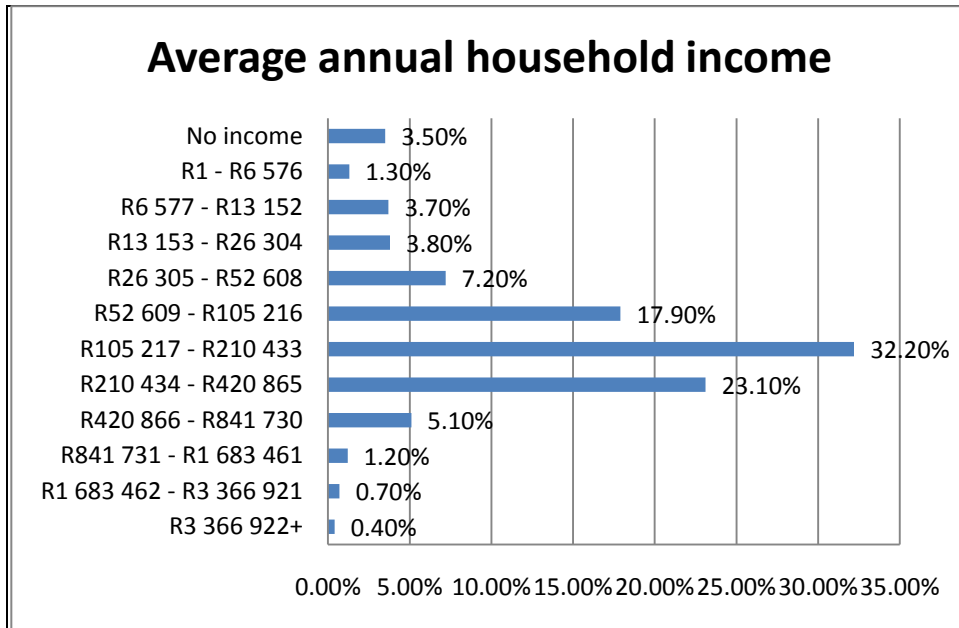


FIGURE 12: AVERAGE ANNUAL HOUSEHOLD INCOME⁶

In summary the income profile reflects a consumer market characterised by middle to high income households. The income of a household also impacts on the general living standard enjoyed, in the sense that income impacts on asset ownership.

- A share of 3.5% of households within the market area earn no income at all.
- 32.2% of the households receive between R105 217 and R210 433 per annum.
- 62.6% receives more than R105 217.
- The weighted average annual household income within the primary market area is R218 718 per annum or R18 227 per month (2008).

7.4.4 Employment Status

Figure 13 indicates the employment and unemployment status of the trade area which impacts on disposable income patterns. It also indicates the percentage of the trade area population not economically active. Level of employment, coupled to household size is also indicative of dependency ratios. (Valley View Market Study: Research and Recommendations. February 2008).

⁶ DEMACON MARKET STUDIES: Valley View Market Study: Research and Recommendations. (February 2008)

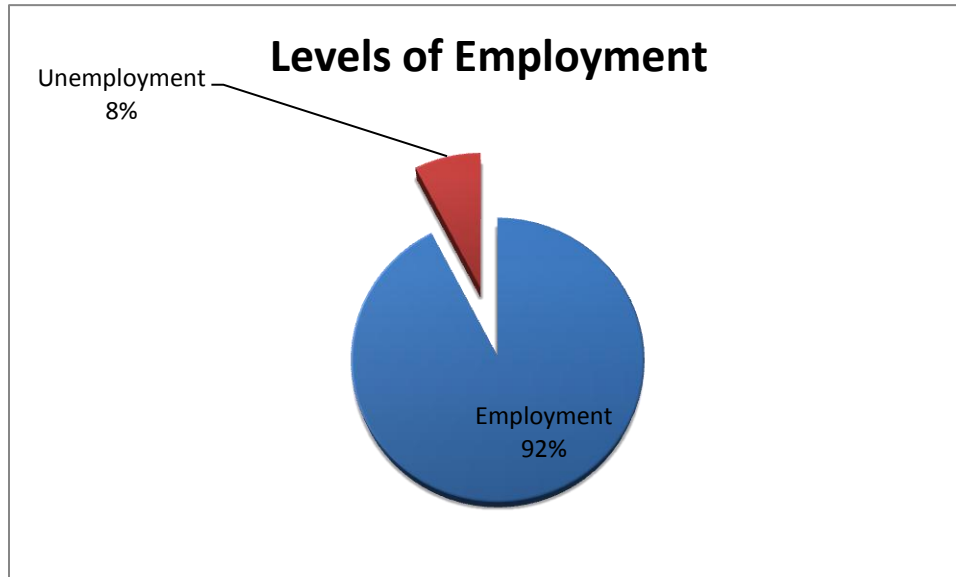


FIGURE 13: LEVEL OF EMPLOYMENT WITHIN EMALAHLENI LOCAL MUNICIPALITY IN THE PERIOD PRIOR TO 2008⁷

The above figure details the following:

- The largest segment of the economically active workforce is economically active (64.9%).
- Approximately 92% of the market population is employed.
- 8% of the market population is unemployed, which suggests a relatively low dependency ratio.

7.4.4.1 Occupation Profile

The occupation profile is an important indicator of anticipated community income, serving as proxy for the level of community wealth and stability. The presence of white and blue collar occupations serves as indication of a higher income profile or lower income profile consumer market. Figure 14 indicates the occupation profile of the consumer market.

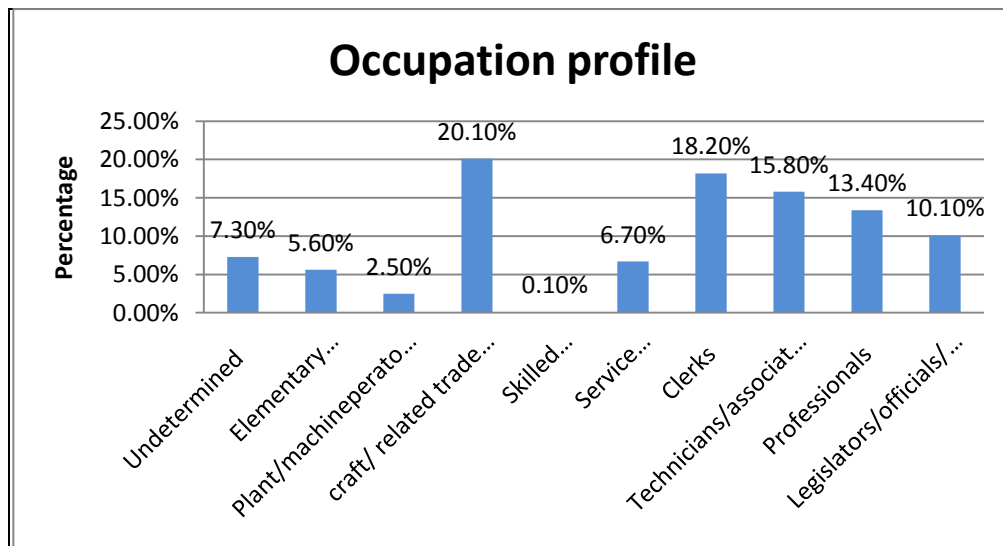


FIGURE 14: OCCUPATION PROFILE⁸

⁷ DEMACON MARKET STUDIES: Valley View Market Study: Research and Recommendations. (February 2008)

- The number of craft / related trades workers (20.1%) is notable within the market area.
- Other dominant occupations within the market area include:
 - Clerks (18.2%)
 - Technicians / Associate professionals (15.8%)
 - Professionals (13.4%)

The occupation profile reflects a diverse market segment. It is evident that the most dominant component of the economically active consumer market is found in middle wage occupations with some higher wage occupations. This indicates a market area with middle to high income occupations.

7.4.5 Average Annual Household Income

The annual household income is indicated in Figure 15 below

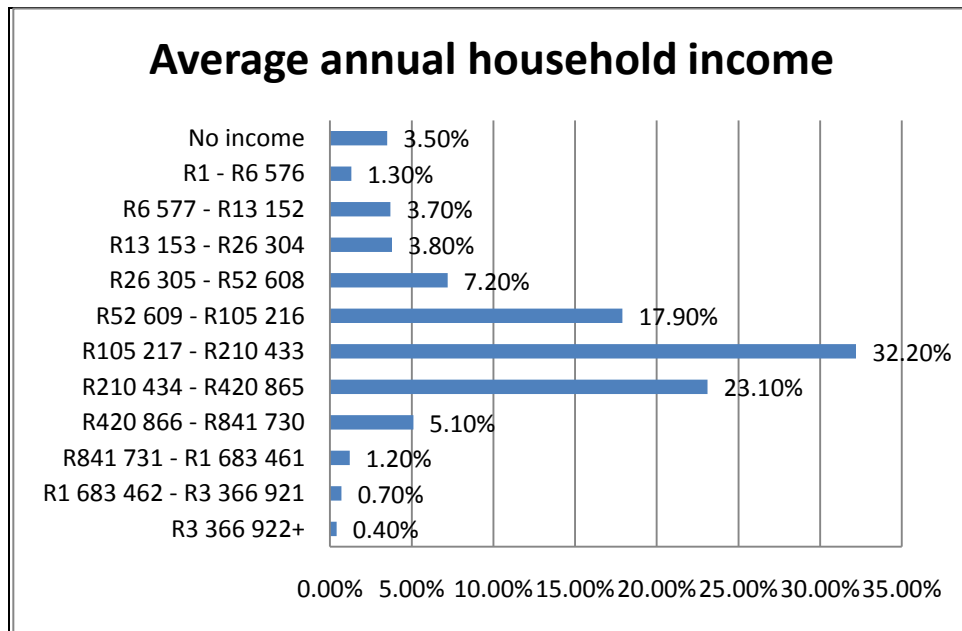


FIGURE 15: AVERAGE ANNUAL HOUSEHOLD INCOME⁹

In summary the income profile reflects a consumer market characterised by middle to high income households. The income of a household also impacts on the general living standard enjoyed, in the sense that income impacts on asset ownership.

- A share of 3.5% of households within the market area earn no income at all.
- 32.2% of the households receive between R105 217 and R210 433 per annum.
- 62.6% receives more than R105 217.
- The weighted average annual household income within the primary market area is R218 718 per annum or R18 227 per month (2008).

⁸ DEMACON MARKET STUDIES: Valley View Market Study: Research and Recommendations. (February 2008)

⁹ DEMACON MARKET STUDIES: Valley View Market Study: Research and Recommendations. (February 2008)

7.5 Visual Environment

The visual environment of the wider area in which the development is proposed consists of a mix of natural and anthropogenic components which means that the area will be likely to be visually influenced by differing visual factors. As described above the site is currently vacant, consisting of natural grassland, but is surrounded by a number of existing and developing residential developments. The visual character of the wider area to the west can thus be described as largely urban in nature, but this reflects a recently changing baseline from a much more rural visual character that previously existed in the area. The visual character of the area surrounding the site has changed in the last decade as the suburbs of Witbank have extended into this area with the growth of the town. This factor is important as described below. The landscape has not completely changed, however, and there are significant parts of the landscape in the vicinity of the site that are natural in character – i.e. open grasslands typical of this part of the Mpumalanga Highveld. A large part of the landscape to the north-east (across from the Witbank Dam) forms part of the Witbank Nature Reserve, and thus has been (and will continue to be) preserved in its natural form. A portion of areas to the east and north-east of the site are still undeveloped, engendering the area with a partly natural visual component. This natural component to the landscape is enhanced by the presence of the Witbank Dam to the north, a very large open water body which can be considered to be a scenic component within the landscape. The nearby Duvha Power Station and associated cooling towers are a prominent feature within the landscape which engenders an industrial component to the landscape.

The terrain in the wider study area is undulating in nature, consisting of broad valleys. The presence of sloping ground typically entails that aspect is important in determining the viewshed that is visible to a viewer located at a certain point within the landscape. In the context of the development site, it is located within the southern side of the Klein Olifants River valley, and is thus located on sloping ground with a north-facing aspect. The views from the northern part of the development site are thus typically focussed to the north and north-east, with the surrounding higher lying ground to the south and west ‘enclosing’ or restricting the viewshed. The southern part of the development site is located on flatter, higher-lying ground, and thus enjoys a wider panorama of views. Importantly the neighbouring residences bordering the development site to the south and west of the development are located on this higher-lying ground and currently are presented with views to the north and north-east over the development site. These views are considered to be important, as a number of such owners of these residences have expressed in writing the value placed in these views over the area to the north and the east, both in terms of the sense of place, but also in terms of property value. It will thus be important that the EIR-phase consider the potential impact of the proposed development on these views, through the undertaking of a visual impact assessment.

7.6 Land-use

The site is untransformed and, although it was previously used as rangeland, it is not currently being utilised. The site comprises largely of rocky substrates that are not suitable for cultivation, hence the site was only suitable to be used for grazing. All properties surrounding the area are used for residential purposes. A school is located in close proximity to the site as well.

7.7 Fauna

Based on the Faunal assessment undertaken by Dr Andrew Deacon (Fauna Report for the Valley View development), the untransformed grassland on the site has the potential to harbour 131 animal species, including 5 Red Data birds and 2 threatened mammals. The seasonal marsh wetland may be a refuge for 84 faunal species of which one bird and one mammal species are considered threatened.

The following endemic reptile species are expected to occur in the study area:

Endemic to South Africa

- Spotted house snake (*Lamprophis guttatus*)
- Aurora house snake (*Lamprophis aurora*)
- Spotted harlequin snake (*Homoroselaps lacteus*)
- Sundevall's garter snake / Longtailed garter snake (*Elapsoidea sundevalli media*)

Endemic to southern Africa

- Bibron's blind snake (*Typhlops bibroni*)
- Common brown water snake (*Lycodonomorphus rufulus*)
- Sundevall's shovel-snout (*Prosymna sundevalli sundevalli*)
- Cross-marked grass snake / Montane grass snake (*Psammophis crucifer*)
- Rinkhals (*Hemachatus hemachatus*)
- Southern rock agama (*Agama atra*)
- Van Son's thicktoed gecko (*Pachydactylus vansonii*)

No Red Data reptile species are expected to be found in the area (Branch, 1988; Emery et. al., 2002)¹⁰. Of the birds, only the Pied Starling that is expected to occur in the Valleyview area is endemic to South Africa. The following bird species that *may* occur on the site are Red-listed in South Africa:

- Lesser Kestrel (*Falco naumanni*)
- Secretarybird (*Sagittarius serpentarius*)
- Stanley's Bustard (*Neotis denhami*)
- White-bellied Korhaan (*Eupodotis caffra*)
- African Grass Owl (*Tyto capensis*)

The impacts of the proposed development on fauna will be assessed in more detail during the EIA phase of the development.

7.8 Flora

Most of the site is untransformed and the vegetation assessment identified two major natural plant communities on site, namely grassland and marsh wetland. There are also areas that have been disturbed and are not in good condition (Degraded areas), or which have been invaded by alien plants (Alien trees), but these represent a very small part of the site. The grassland occurs on shallow soils with variable rock cover and tends to have high species richness and turnover. The drainage line is a valleyhead seepage area classified from a vegetative perspective as seasonal marsh wetland. The grassland and marsh wetland are both considered to be sensitive and to have high conservation value.

According to the most recent vegetation map of the country (Mucina et al., 2005) the study area falls within Rand Highveld Grassland. The conservation status of the vegetation type is Endangered (Driver *et al.*, 2005 and Mucina *et al.*, 2006)¹¹, and whilst the conservation target is 24%, only 1% is currently protected and 41% is considered to be transformed, mostly by cultivation (35%) followed by forestry and urbanisation (3% each) (Mucina & Rutherford, 2006¹²).

The seasonal marsh wetland vegetation unit found on site is regarded as being of significant conservation value and of high sensitivity for the following reasons:

¹⁰ Emery, A.J., Lotter, M., Williamson, S.D. 2002. Determining the conservation value of land in Mpumalanga. Mpumalanga Parks Board.

¹¹ MUCINA, L., RUTHERFORD, M.C. & POWRIE, L.W. (editors) 2005. Vegetation map of South Africa, Lesotho and Swaziland. South African National Biodiversity Institute, Pretoria. ISBN 1-919976-22-1

¹² MUCINA, L., HOARE, D.B., LÖTTER, M.C., DU PREEZ, P.J., RUTHERFORD, M.C., SCOTT-SHAW, C.R., BREDEKAMP, G.J. AND POWRIE, L.W. In press. Grassland Biome. In: Mucina, L. & Rutherford, M.C. (eds.) Vegetation map of South Africa, Lesotho and Swaziland: an illustrated guide. *Strelitzia* 16. South African National Biodiversity Institute, Pretoria.

- Such wetlands constitute an important and restricted habitat type for a variety of plants and animals.
- The indigenous riparian vegetation, including the marsh vegetation of drainage lines such as those occurring in the study area, throughout the Highveld region of the Mpumalanga Province is under great threat from factors such as alien invasive plant species (Henderson & Musil, 1987¹³), altered hydrological patterns, reduced water quality, ploughing and overgrazing. Any remaining area of untransformed wetland must therefore be regarded as of elevated conservation importance.
- A river or drainage line is a 'longitudinal ecosystem', and its condition at any point is a reflection not only of all upstream activities within the river/drainage line, but also of all activities in the adjacent and upstream parts of the catchment (O'Keefe, 1986¹⁴).

7.8.1 Threatened plants

According to Provincial Ordinances, a number of plant species are protected in Mpumalanga Province, whether they are considered to be threatened or not. This includes, but is not limited to, the following common names: ferns, Flame lilies, Christmas bells, Pineapple flowers, Clivia, Nerine, Crinum, Ground lily, Fire lily, Irises, and all orchids.

On the basis of this list, a number of plants occurring in the study area may fall within this category, including those listed in Table 6

TABLE 6: PLANTS OCCURRING IN THE STUDY AREA THAT ARE PROTECTED ACCORDING TO NATURE CONSERVATION ORDINANCES

Boophone disticha

Xerophyta retinervis

Chlorophytum fasciculatum

Hypoxis iridifolia

Hypoxis rigidula

Gladiolus vinosomaculatus

Pellaea calomelanos

7.9 Water Resources

The site is located within the wider Olifants River catchment. The upper Olifants River flows through the wider study area, being dammed as part of the Witbank Dam; much of the wider reach of the Olifants River that occurs within this quaternary catchment forms part of this impoundment. The site falls within the quaternary catchment B11G, one of the upper catchments of the wider river system, located downstream of the confluence with the Steenkoolspruit and Tweefonteinspruit tributaries. The wetland on the site is located close to the northern (downstream) end of the quaternary catchment. From the northern boundary at which the wetland exits the site, the wetland flows north into the Witbank Dam.

¹³ HENDERSON, L & MUSIL K.J. (1997) *Plant Invaders of the Transvaal*. Botanical Research Institute: Pretoria

¹⁴ O' KEEFE, J.H. (ed.) 1986. The conservation of South African rivers. South African National Scientific Programmes Report No. 131, CSIR, Pretoria.

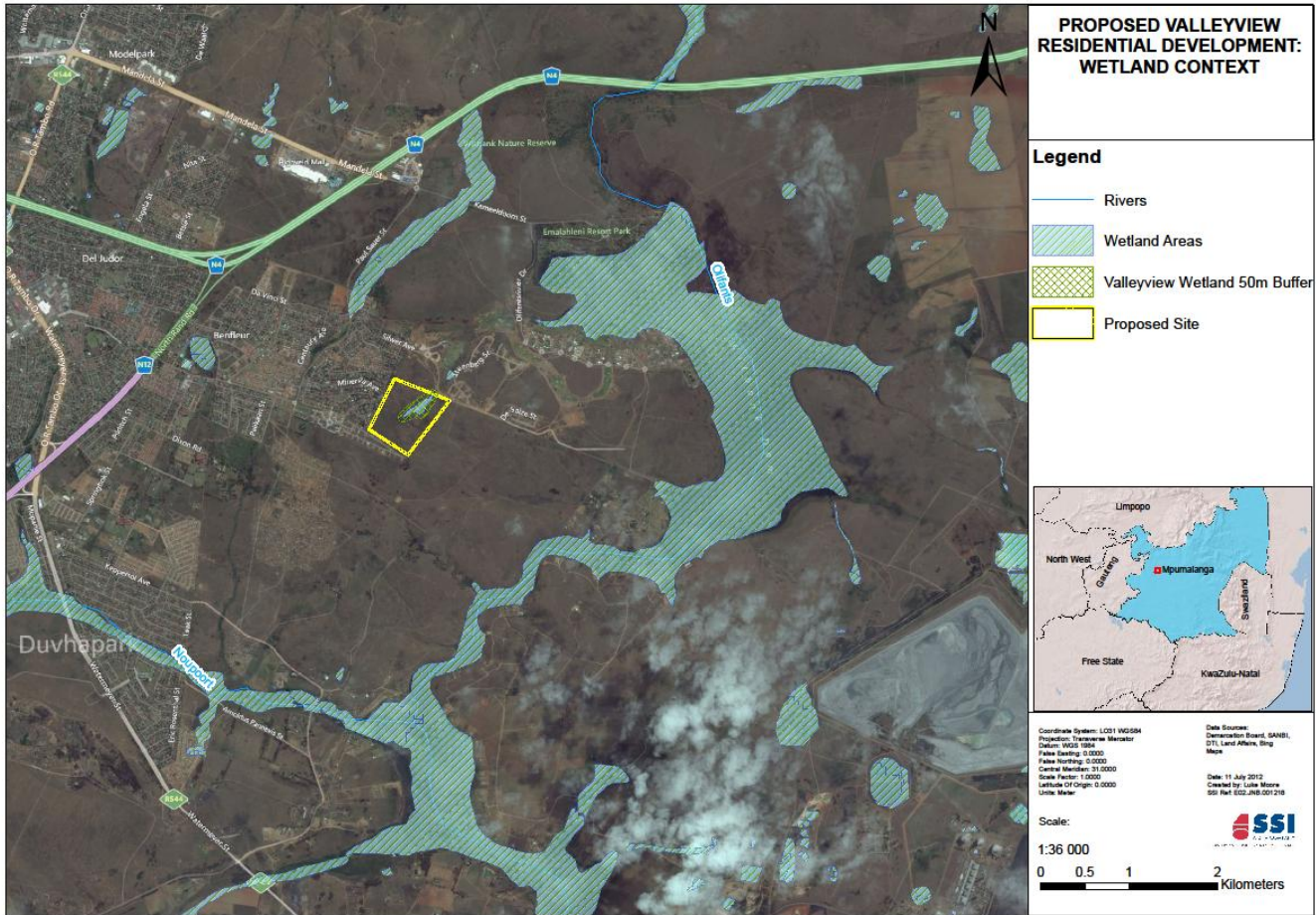


FIGURE 16: SURFACE WATER AREAS WITHIN THE SURROUNDING AREA

7.10 Wetland

A wetland has been identified on the site of the proposed development and is thus a critical aspect of the proposed development. A detailed wetland assessment and delineation study will be undertaken for the EIR phase of the EIA.

Wetlands can be found all across a landscape. The landscape can be divided up into a number of units, each of which can contain wetlands. Wetlands occurring on these different terrain units typically differ in terms of their formative processes and hydrological inputs, and thus differ in terms of their functionality. The wetland hydrogeomorphic (HGM) approach to wetland classification which uses hydrological and geomorphological characteristics to distinguish primary wetland units has been used to classify wetland types in South Africa (Kotze et al, 2005; SANBI, 2009). This approach has been used, and the classification system has been recently updated as part of the National Wetland Classification System for South Africa (SANBI, 2009¹⁵). Under this classification system the wetland type occurring on the site is the **valleyhead seep**. The valleyhead seep wetland typically occurs at the head of valley bottoms where the terrain typically becomes steeper, rising out of the valley bottom. There is thus an important seepage component to the hydrological input to this type of wetland, but hydrological inputs also originate from runoff generated from the surrounding local catchment during rainfall events.

¹⁵ SANBI, 2009, Further Development of a Proposed National Wetland Classification System for South Africa, Primary Project Report. Prepared by the Freshwater Consulting Group (FCG) for the South African National Biodiversity Institute (SANBI).



FIGURE 17 – VIEW OF THE VALLEYHEAD IN WHICH THE WETLAND OCCURS

The presence of sloping terrain and groundwater seepage within the wetland on the site entails that colluvial processes (i.e. processes driven by gravitational forces), rather than fluvial deposition (which are dominant in valley bottom wetlands), are the main drivers of wetland formation on this site. The dynamics of groundwater seepage on the site are not properly known, but it is possible that groundwater discharge is related to the presence of the outcropping of bedrock in the western part of the site. An area in which groundwater seepage is likely to be concentrated is found at the head of the wetland. This is evident by a slightly different vegetation composition to the downstream wetland and the presence of an old shallow well that was presumably dug by the previous farmers to abstract this shallow groundwater. Downstream of this flatter area at the very head of the valley, surface water drainage is concentrated in a poorly defined valley floor, which gradually becomes more defined at the northern end of the site where the wetland begins to change in form to a channelled valley bottom, as evident by the presence of a channel at the northern end of the site.

The study area lies in the western part of the Mpumalanga Highveld where the grassland biome is predominant. Grassveld vegetation thus characterises the entire study area. The development site and the study area falls within the Rand Highveld Grassland vegetation type (Mucina & Rutherford, 2006¹⁶), and as such naturally consists of undulating grasslands. The wetland on the study site shares these vegetation characteristics and is largely grass dominated.

7.11 Heritage

The Phase I HIA study for the proposed new residential development revealed that remains with no cultural historical significance such as household remains that date from the last few decades, consisting of foundations for houses, middens and scatters of household debris such as glassware, tin plates, ruins of dwellings occupied until recently and associated with wrecks of vehicle and other modern household rub occur on the project site.

¹⁶ MUCINA, L., RUTHERFORD, M.C. & POWRIE, L.W. (editors) 2005. Vegetation map of South Africa, Lesotho and Swaziland. South African National Biodiversity Institute, Pretoria. ISBN 1-919976-22-1

The only notable heritage artefact as outlined in Section 3 of the National Heritage Resources Act [No 25 of 1999] encountered on the site and which has historical significance was a bucket-pump. The bucket-pump which seems to be in a relatively good condition is standing in the valley near the central part of the development site. This piece of equipment qualifies as a heritage artefact as it may be approaching sixty years in age. This piece of equipment may even be older than sixty years (Figure 21). This artefact is also significant because:

- it is not in general use any longer and is becoming a scarce and rare piece of equipment
- it demonstrates a certain level of technological achievement during a specific period in the past and
- it can be used (e.g. in a museum) to demonstrate aspects of life ways of the past.



FIGURE 18: BUCKET PUMP

8 POTENTIAL IMPACTS ASSOCIATED WITH THE PROJECT

This Environmental Scoping Study (ESS) aims to identify the potential positive and negative impacts (both biophysical and social) associated with the proposed Valley View Development. The following potential environmental impacts have been considered for the proposed project:

8.1 Construction Phase

TABLE 7: POTENTIAL CONSTRUCTION PHASE IMPACTS

AFFECTED ENVIRONMENT	ANTICIPATED IMPACT
Biodiversity (fauna and flora)	<ul style="list-style-type: none"> • Physical damage or destruction of Red Data or Threatened species. • Destruction of sensitive / pristine habitat types such as rocky outcrops, wetlands and streams through clearing of land. • Disruption of migration movements. • Loss of foraging and breeding habitat. • Fragmentation and isolation of remaining areas of natural vegetation on common flora and fauna species.
Avifauna	<ul style="list-style-type: none"> • Loss and destruction of habitat for birds during clearing of project area. • Disturbance of breeding species due to noise from construction activities.
Social	<ul style="list-style-type: none"> • In-migration to the area by job seekers. • Provision of employment opportunities. • Safety of people as a result of increased traffic. • Health concerns for nearby communities as a result of construction labour force. • Economic spin offs as a result of procurement of services from the local community.
Noise	<ul style="list-style-type: none"> • Disturbance from noise generated from activities such as drilling, seismic testing; blasting, digging of foundations and vehicle movement.
Heritage	<ul style="list-style-type: none"> • Potential destruction of objects of heritage value. • Excavation of objects known or expected to exist in the area.
Topography	<ul style="list-style-type: none"> • Alteration of topography due to stockpiling of soil, building material, debris and waste material on site.
Geohydrology (groundwater) and Hydrology (surface water)	<ul style="list-style-type: none"> • Impact of blasting on the ground water table (i.e. structural damages to fissures in underground rocks affecting groundwater availability for abstraction) • Contamination of surface and ground water due to spillage, leakage, incorrect storage and handling of chemicals, oils, lubricants, fuel and other hazardous substances.

AFFECTED ENVIRONMENT	ANTICIPATED IMPACT
Waste	<ul style="list-style-type: none"> • The potential waste streams for the project include general, hazardous and sewage waste. • General waste generated on site includes domestic waste and building rubble. General waste will not have a significant impact on the environment provided that the correct waste streams are used for the disposal of the waste. • Hazardous waste will be generated through the spillage of diesel. All material cleared after a spillage must be treated as hazardous waste and disposed off at a hazardous waste disposal site. • Generation and disposal of sewage waste of temporary construction toilets.
Health and Safety	<ul style="list-style-type: none"> • The safety of the construction staff could be compromised unless adequate safety measures are implemented. • The safety measures outlined in the draft Environmental Management Programme (EMPr) must be adhered to during construction.

8.2 Operational Phase

TABLE 8: POTENTIAL OPERATION PHASE IMPACTS

AFFECTED ENVIRONMENT	ANTICIPATED IMPACT
Biodiversity (fauna and flora)	<ul style="list-style-type: none"> • Disturbance of surrounding flora and fauna species. • Death and injury of animals due to accidental contact with vehicle movement; and snaring, poisoning or trapping by personnel working on the site.
Traffic	<ul style="list-style-type: none"> • Traffic congestion at all major intersections.
Social	<ul style="list-style-type: none"> • Increased stress placed on municipal bulk services (i.e. water and sewerage) which are currently problematic
Wetland	<ul style="list-style-type: none"> • The erosion and/or sedimentation of the wetland as a result of poor stormwater management. • Alien vegetation encroachment associated with the above mentioned disturbances.
Visual	<ul style="list-style-type: none"> • Alteration of the components of the landscape which retain a natural character. • Alteration of the current sense of place of the area. • Potential obstruction of views (in which value is placed in terms of aesthetics and property value) from properties bordering onto the development site (to the west and the south)

8.3 Decommissioning Phase

At this point of the project planning process, the necessity for and timing of decommissioning of the proposed project is not known. However, like construction impacts, de-commissioning impacts are inherently temporary in duration. Impacts relating to de-commissioning and rehabilitation activities (demolition, landscaping, compaction etc.) will be addressed within the EIA phase and in the Environmental Management Programme.

8.4 Cumulative Impacts

Cumulative impacts associated with the project will be further investigated in detail during the impact phase of the EIA study.

9 CONCLUSIONS AND RECOMMENDATIONS

This Environmental Scoping Study (ESS) for the proposed Valley View development has been undertaken in accordance with the Environmental Impact Assessment Regulations (2010) published in Government Notices R. 543 of 18 June 2010 read with Section 44, of the National Environmental Management Act, 1998 (Act No. 107 of 1998).

In line with Regulation 28 (Part 3) of the EIA Regulations, this issues-based ESS aimed to identify and provide:

- A description of the proposed activity;
- A description of the environment that may be affected by the activity and the manner in which the physical, biological, social, and economic aspects of the environment may be affected by the proposed activity;
- The identification of all legislation and guidelines applicable to the development;
- A description of environmental issues and potential impacts, including cumulative impacts, that have been identified;
- Details of the public participation process conducted to date; and
- A Plan of Study for Environmental Impact Assessment (refer to Chapter 9) including the methodology that will be adopted in assessing the potential impacts that have been identified, including specialist studies or specialised processes that will be undertaken.

Based on the Environmental Scoping Study (ESS) undertaken, it can be concluded that there are no fatal flaws associated with the project. Potential environmental impacts have been highlighted and will be further investigated in the EIA phase. The methodology that will be used for assessment of potential significant impacts is contained in Chapter 9 (Plan of Study for EIA).

10 PLAN OF STUDY FOR ENVIRONMENTAL IMPACT ASSESSMENT

Potential environmental impacts (biophysical and social) associated with the proposed Valleyview development have been identified in the Environmental Scoping Study (ESS). No fatal flaws or highly significant impacts have been identified to date. All potentially significant and cumulative impacts will be further investigated and assessed within the Environmental Impact Assessment (EIA) phase of the project. Mitigation measures will be contained in the Environmental Management Programme (EMPr) to be compiled during the EIA phase. Mitigation measures recommended in the ESS will also be included in the EMPr.

The EIA phase will aim to adequately assess and address all potentially significant environmental issues in order to provide the MDEDET with sufficient information to make an informed decision regarding the proposed project.

10.1 Approach to undertaking the EIA Phase of the Project

The following points below outline the proposed approach to undertaking the EIA phase of the project. It is believed that the proposed approach will adequately fulfil the competent authority's (MDEDET) requirements, the requirements of the EIA Regulations (2010) and the objectives of environmental best practice, so as to ensure transparency and to allow an informed decision regarding the project to be made.

10.1.1 Authority Consultation

Ongoing consultation with MDEDET, the eMalahleni Local Municipality, Ward Councillors, and all other authorities identified during the Environmental Scoping Study (ESS) phase of the project (and further ones that may be identified during the EIA phase) will continue throughout the duration of the project. Authority consultation is therefore seen as a continuous process that takes place until completion of the environmental investigations.

10.1.2 Aims of the Environmental Impact Assessment

The EIA will aim to achieve the following:

- to supplement, where necessary, the assessment of the social and biophysical environments affected by the development during the Scoping study;
- to assess impacts on the study area in terms of environmental criteria;
- to identify and recommend appropriate mitigation measures for potentially significant environmental impacts;
- to complete an Environmental Management Programme (EMPr) for the inclusion of proposed mitigation measures; and
- to undertake a fully inclusive public participation process to ensure that I&AP issues and concerns are recorded and addressed.

10.1.3 Detailed Studies to be undertaken in the EIA Phase

The following detailed specialist assessments have already been undertaken prior to SSI being appointed to undertake the EIA studies, or will be conducted in the EIA phase in order to provide a better indication of the extent of the impacts expected from the proposed construction and operational phases of this development.

- Biodiversity Assessment (to be undertaken during the impact phase)
- Geotechnical Impact Assessment (undertaken prior to SSI having been appointed)
- Wetland Assessment (to be undertaken during the impact phase)
- Heritage Assessment (undertaken during feasibility)
- Traffic Assessment (to be undertaken during the impact phase)
- Visual Impact Assessment (to be undertaken during the impact phase)

10.1.4 Impact Assessment Methodology

The potential environmental impacts associated with the project will be evaluated according to its nature, extent, duration, intensity, probability and significance of the impacts, whereby:

- **Nature:** A brief written statement of the environmental aspect being impacted upon by a particular action or activity.
- **Extent:** The area over which the impact will be expressed. Typically, the severity and significance of an impact have different scales and as such bracketing ranges are often required. This is often useful during the detailed assessment phase of a project in terms of further defining the determined significance or intensity of an impact. For example, high at a local scale, but low at a regional scale;
- **Duration:** Indicates what the lifetime of the impact will be;
- **Intensity:** Describes whether an impact is destructive or benign;
- **Probability:** Describes the likelihood of an impact actually occurring; and
- **Cumulative:** 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.

TABLE 9: CRITERIA TO BE USED FOR THE RATING OF IMPACTS

CRITERIA	DESCRIPTION			
EXTENT	National (4) The whole of South Africa	Regional (3) Provincial and parts of neighbouring provinces	Local (2) Within a radius of 2 km of the construction site	Site (1) Within the construction site
DURATION	Permanent (4) Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient	Long-term (3) The impact will continue or last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter. The only class of impact which will be non-transitory	Medium-term (2) The impact will last for the period of the construction phase, where after it will be entirely negated	Short-term (1) The impact will either disappear with mitigation or will be mitigated through natural process in a span shorter than the construction phase
INTENSITY	Very High (4) Natural, cultural and social functions and processes are altered to extent that they permanently cease	High (3) Natural, cultural and social functions and processes are altered to extent that they temporarily cease	Moderate (2) Affected environment is altered, but natural, cultural and social functions and processes continue albeit in a modified way	Low (1) Impact affects the environment in such a way that natural, cultural and social functions and processes are not affected
PROBABILTY OF OCCURANCE	Definite (4) Impact will certainly occur	Highly Probable (3) Most likely that the impact will occur	Possible (2) The impact may occur	Improbable (1) Likelihood of the impact materialising is very low

Significance is determined through a synthesis of impact characteristics. Significance is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. The total number of points scored for each impact indicates the level of significance of the impact.

TABLE 10: SIGNIFICANCE RATING OF CLASSIFIED IMPACTS

Low impact (4 - 6 points)	A low impact has no permanent impact of significance. Mitigation measures are feasible and are readily instituted as part of a standing design, construction or operating procedure.
Medium impact (7 - 9 points)	Mitigation is possible with additional design and construction inputs.
High impact (10 - 12 points)	The design of the site may be affected. Mitigation and possible remediation are needed during the construction and/or operational phases. The effects of the impact may affect the broader environment.
Very high impact (13 - 16 points)	Permanent and important impacts. The design of the site may be affected. Intensive remediation is needed during construction and/or operational phases. Any activity which results in a “very high impact” is likely to be a fatal flaw.
Status	Denotes the perceived effect of the impact on the affected area.
Positive (+)	Beneficial impact.
Negative (-)	Deleterious or adverse impact.
Neutral (/)	Impact is neither beneficial nor adverse.

The suitability and feasibility of all proposed mitigation measures will be included in the assessment of significant impacts. This will be achieved through the comparison of the significance of the impact before and after the proposed mitigation measure is implemented. Mitigation measures identified as necessary will be included in an EMP. The EMP will form part of the Environmental Impact Report (EIR).

10.1.5 Environmental Impact Report

The EIR will contain the following:

- Details of the EAP who compiled the report and their expertise to carry out an EIA;
- Detailed description of the activity/ies;
- A description of the environment that might be affected by the activity and the manner in which the physical, biological, social, economic and cultural aspects of the environment may be affected by the proposed activity;
- Details of the public participation process conducted during the Scoping Phase and the ongoing consultation during the EIA phase;
- Description of the need and desirability of the activity including advantages and disadvantages that the activity may have on the environment and the community that may be affected by the activity;
- An indication of the methodology used in determining the significance of potential environmental impacts;
- A summary of the findings and recommendations of any specialist report or report on a specialised process;
- A description of all environmental issues that were identified during the environmental impact assessment process, an assessment of the significance of each issue and an indication of the extent to which the issue could be addressed by the adoption of mitigation measures;

- An assessment of each identified potentially significant impact, including cumulative impacts, the nature of the impact, the extent and duration of the impact, the probability of the impact occurring, the degree to which the impact can be reversed, the degree to which the impact may cause irreplaceable loss of resources and the degree to which the impact can be mitigated;
- A description of any assumptions, uncertainties and gaps in knowledge;
- An opinion as to whether the activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation;
- An environmental impact statement which contains a summary of the key findings of the environmental impact assessment; and a comparative assessment of the positive and negative implications of the activity.
- A draft Environmental Management Programme (EMPr) and
- Copies of any specialist reports and reports on specialised processes.

10.1.6 Draft Environmental Management Programme (EMPr)

During the compilation of the EIA, a draft EMPr will be compiled in accordance with the EIA Regulations (2010). The draft EMPr will provide the actions for the management of identified environmental impacts emanating from the project and a detailed outline of the implementation programme to minimise and/or eliminate the anticipated negative environmental impacts. The draft EMPr will provide strategies to be used to address the roles and responsibilities of environmental management personnel on site, and a framework for environmental compliance and monitoring.

The EMPr will include the following:

- Details of the person who prepared the EMPr and the expertise of the person to prepare an EMPr;
- Information on any proposed management or mitigation measures that will be taken to address the environmental impacts that have been identified in the EIR, including environmental impacts or objectives in respect of operation or undertaking of the activities, rehabilitation of the environment and closure where relevant;
- A detailed description of the aspects of the activity that are covered by the draft EMPr;
- An identification of the persons who will be responsible for the implementation of the measures;
- Where appropriate, time periods within which the measures contemplated in the draft EMPr must be implemented;
- Proposed mechanisms for monitoring compliance with the EMPr and reporting thereon;
- An environmental awareness plan; and
- Procedures for managing incidents which have occurred as a result of undertaking the activity and rehabilitation measures.

10.2 Public Participation Process

The primary aims for the public participation process include the following:

- meaningful and timeous participation of I&APs;
- promoting transparency and an understanding of the proposed project and its potential environmental (social and biophysical) impacts;
- accountability for information used for decision-making;

- serving as a structure for liaison and communication with I&APs;
- assisting in identifying potential environmental (social and biophysical) impacts associated with the development; and
- the needs, interests and values of I&APs must be considered in the decision-making process.

10.2.1 Advertising

The primary aim of adverts in the EIA phase is to provide information regarding the availability of reports for public review, as well as, if necessary, the advertisement of dates of public meetings.

10.2.2 Identification of and Consultation with Key Stakeholders

The identification of I&APs and key stakeholders will continue into the EIA phase of the project as the public participation process is a continuous process that runs throughout the duration of an environmental study.

10.2.3 I&AP Database

All I&AP information (including contact details), together with dates and details of consultations and a record of all issues raised is recorded within a comprehensive database of I&APs. This database will be updated on an on-going basis throughout the project, and will act as a record of the communication/involvement process.

10.2.4 Consultation and Public Involvement

Consultation with I&APs is considered to be critical to the success of any EIA process. Therefore, one-on-one consultation (via telephone calls, fax and emails) and a public meeting (if necessary) during the EIA phase will be undertaken. The aim of this process will be to provide I&APs with details regarding the process and to obtain further comments regarding the project. Minutes of all meetings held will be compiled and forwarded to all attendees. These minutes will also be included in the EIR.

10.2.5 Issues Trail

All issues, comments and concerns raised during the public participation process of the EIA study will be compiled into an Issues Trail. This Issues Trail will be incorporated as part of the EIR.

10.2.6 Public and Authority Review of the Draft Environmental Impact Report

The draft EIR will be made available at public places for public review and comment. The draft EIR will also be submitted to MDEDET simultaneously. A 40 calendar day period will be allowed for this review process. An advertisement indicating the availability of this report for public scrutiny will be placed in the local newspaper. I&APs registered on the project database will be notified of the availability of this report by correspondence.

10.2.7 Authority Review of the Environmental Impact Report

After the public review period, all relevant comments received from the public will be considered and included into a final EIR. This final document will be submitted to MDEDET for final review and decision-making. All registered I&APs will also be provided with an opportunity to comment on the final EIR.

10.2.8 Environmental Authorisation

On receipt of the environmental authorisation for the project, I&APs registered on the project database will be informed and its associated terms and conditions by correspondence.

11 REFERENCES

Bigen Africa Services, (2007). EMalahleni Water Services Master Plan Final Draft April 2007. EMalahleni Local Municipality

eMalahleni Local Municipality, (2012-2013). Integrated Development Plan (IDP)

eMalahleni Local Municipality, (2010). Spatial Development Framework (SDF)

Nkangala District Municipality, (2012-2013). Integrated Development Framework (IDP)

APPENDIX A: LOCALITY MAP

PROPOSED VALLEYVIEW RESIDENTIAL DEVELOPMENT: WETLAND CONTEXT

Legend

-  Wetland Areas
-  Valleyview Wetland 50m Buffer
-  Proposed Site




Coordinate System: LO31 WGS84
 Projection: Transverse Mercator
 Datum: WGS 1984
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 False Northing: 0.0000
 Central Meridian: 31.0000
 Scale Factor: 1.0000
 Latitude Of Origin: 0.0000
 Units: Meter

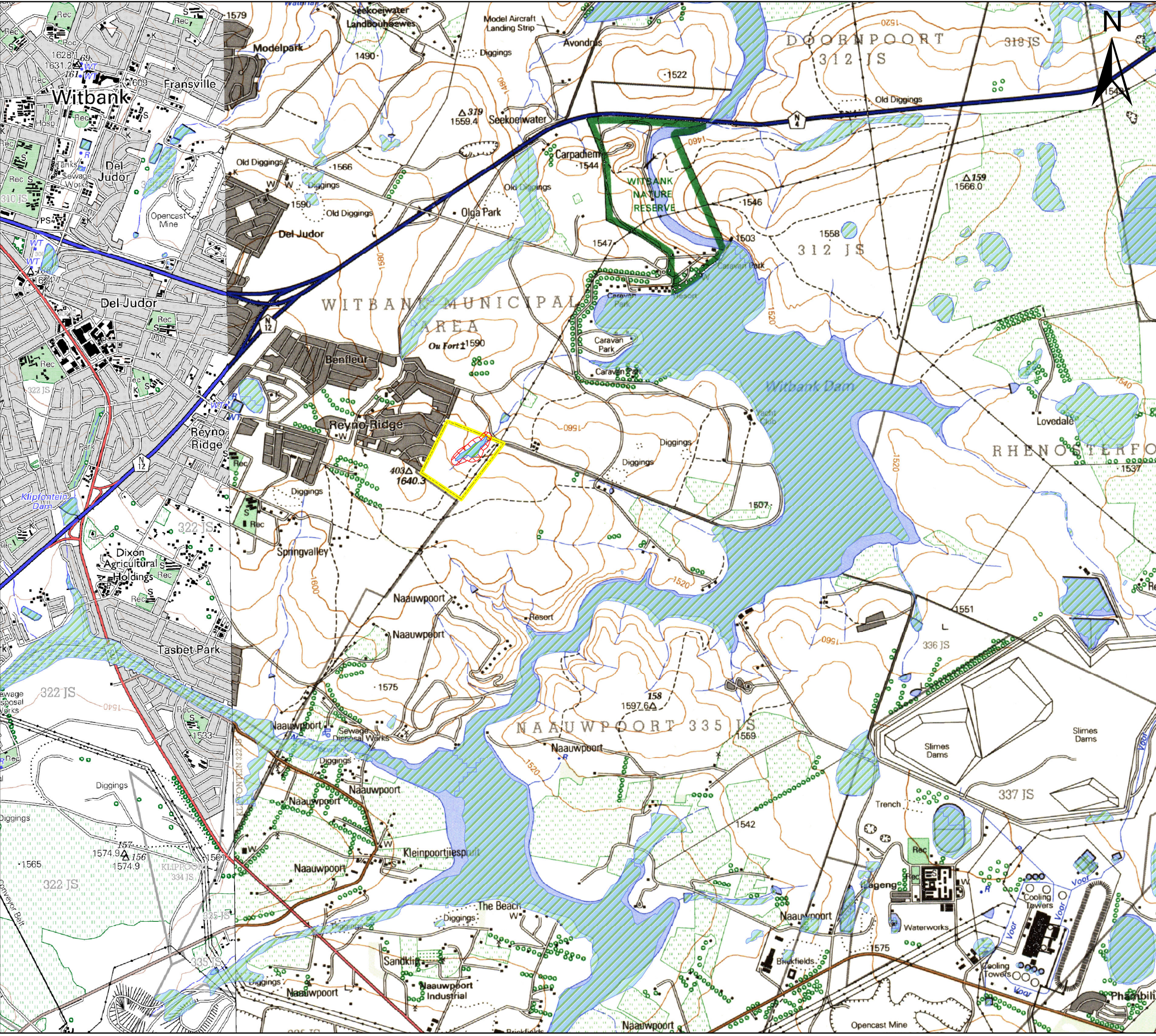
Data Sources:
 Demarcation Board, SANBI,
 DTI, Land Affairs, Bing
 Maps

Date: 11 July 2012
 Created by: Luke Moore
 SSI Ref: E02.JNB.001218

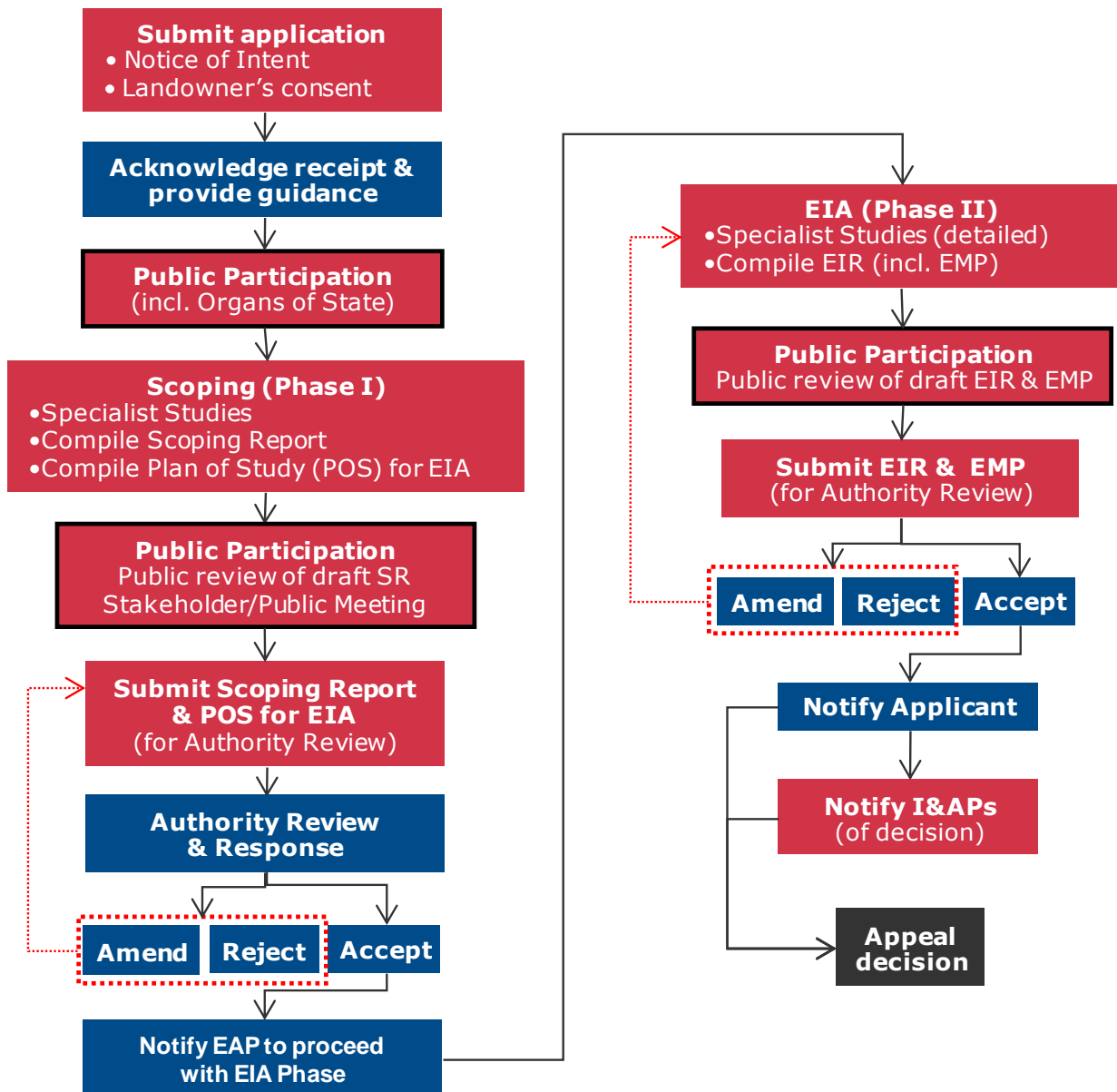
Scale:
 1:40 000



0 0.5 1 2 Kilometers



APPENDIX B- PROCESS FLOW DIAGRAM



APPENDIX C- APPROVAL OF APPLICATION FORM MDEDET

MPUMALANGA PROVINCIAL GOVERNMENT

Building No. 4
No. 7 Government Boulevard
Riverside Park Extension 2
Nelspruit
1200
South Africa



Private Bag X 11215
Nelspruit, 1200
Tel: 013 766 4004
Fax: 013 766 4614
Int: +27 13 766 4004
Int: +27 13 766 4614

Department of Economic Development, Environment and Tourism

Litiko Letekutfutukiswa
Kwetemnotfo, Simondzwo netekuVakasha

Umngango WezokuThuthukiswa
KoMnotho, iBhoduluko nezamaVakatjho

Departement van Ekonomiese
Ontwikkeling, Omgewing en Toerisme

Enquiries: Martha Seshweni ,Cnr Botha & Northey Str, Pavillion Building Witbank, 1035, Tel: 013 690 2595
Email: mmseshweni@mpg.gov.za
Reference: 17/2/3N-170

Attn: Malcolm Roods
SSI Engineering and Environmental Consultants (Pty) Ltd
P o. Box 861
Gallo Manor
2052

Fax no: 011 798 6001
Tel no: 011 798 6442

Dear Sir

APPLICATION FOR ENVIRONMENTAL AUTHORISATION: THE PROPOSED RESIDENTIAL DEVELOPMENT ON PORTION 22 OF THE FARM NAAUWPORT 335 JS, MPUMALANGA PROVINCE.

The Department confirms having received the application form for environmental authorisation of the abovementioned project on 30th May 2012. The application is hereby accepted, and you may proceed with the Scoping Report process required in terms of the Environmental Impact Assessment Regulations, 2010.

The application has been assigned the reference number **17/2/3N-170**. Kindly quote this reference number in any future correspondence in respect of the application, and in all methods of notification used during the public participation process.

The responsible officer is **Martha Seshweni** and all correspondence must be directed to: The Deputy Director, Environmental Impact Management, Nkangala District Office, marked for the attention of the responsible officer.

Please note that in terms of the provisions of Regulation 67, this application will lapse if the applicant fails for a period of 6 months to comply with a requirement of the EIA Regulations, 2010, or if reasons for failure to comply are not communicated in writing to and accepted by this Department.

Please draw the applicant's attention to the fact that the activity may not commence prior to an environmental authorisation being granted by the Department.

Yours faithfully



MS. DINEO TSWAI
DEPUTY DIRECTOR

DATE: 11/06/2012



APPENDIX D- PUBLIC NOTIFICATION DOCUMENT

ENVIRONMENTAL IMPACT ASSESSMENT

Background Information Document

**ENVIRONMENTAL IMPACT ASSESSMENT (SCOPING AND EIA) FOR THE
PROPOSED VALLEYVIEW RESIDENTIAL DEVELOPMENT ON PORTION 22 OF THE
FARM NAAUWPOORT 335-JS EMALAHLENI LOCAL MUNICIPALITY,
MPUMALANGA PROVINCE.**

May 2012



ENGINEERS AND ENVIRONMENTAL CONSULTANTS

WHAT DOES THIS DOCUMENT TELL YOU?

This document aims to provide you, as an Interested and/or Affected Party (I&AP), with background information regarding the application for Environmental Authorisation for the proposed Residential Development on Portion 22 of the Farm Naauwpoort 335-JS, Emalahleni Local Municipality, Mpumalanga Province. (Refer to *Appendix A: Locality Map*), as well as the required environmental studies to be undertaken. Any person, company, authority or other entities that might be directly or indirectly affected by the proposed activity can register as an Interested or Affected Party (I&AP). This includes, but is not limited to landowners, tenants, municipal and provincial authorities, interest groups, Non-Government Organisations and conservation groups.

This document further indicates how you can become involved in the project, receive information, or raise issues which may concern and/or interest you. The sharing of information forms the basis of the Public Participation Process and offers you the opportunity to become actively involved in the project from the outset. Input from I&APs ensures that all potential environmental issues are considered within the context of the proposed development.

STUDY AREA

The proposed development is situated on Portion 22 of the Farm Naauwpoort 335 JS Emalahleni Local Municipality, Mpumalanga Province. The property portion extent is 42 ha and abutted by residential developments including Reyno Ridge and the Bankeveld Golf Estate in Witbank.

SITE DESCRIPTION

The development site is currently vacant, although it was previously used as rangeland. The remains of a dwelling on the south-eastern corner of the site appear to have been a workers

dwelling. Much of the site comprises largely of rocky outcroppings that are not suitable for cultivation, as well as a central drainage line flowing through the Bankeveld Golf Estate towards the Witbank Dam.

PROJECT DESCRIPTION

The project applicant, Before The Wind Investment 113 (Pty) Ltd has appointed SSI Environmental, as an independent Environmental Assessment Practitioner (EAP), to undertake environmental studies to identify and assess all potential environmental impacts associated with the proposed project. The applicant proposes to develop the site for residential use and a proposed 315 residential stands and associated infrastructure will form part of the application. The existing drainage line will form part of a public open space on the site.

The lay-out of the proposed development as well as engineering service requirements including sewage, water, electricity, refuse disposal and stormwater management will be defined and assessed in the EIA Process.

POTENTIAL ENVIRONMENTAL IMPACTS ASSOCIATED WITH THE PROPOSED PROJECT

Potential environmental impacts associated with the proposed development have been identified and will be assessed in the Environmental Impact Assessment (EIA) study. Specialist inputs which will form part of the EIA study includes:

SPECIALIST FIELD	ORGANISATION
Biodiversity	Bathusi Environmental Consulting
Wetland	SSI Engineers and Environmental Consultants – Environmental
Traffic Impact Assessment	SSI Engineers and Environmental Consultants – Transport

In addition, the applicant undertook a number of additional specialist assessments in the past which will also form part of the EIA study. These assessments include:

SPECIALIST FIELD	ORGANISATION
Faunal Assessment (2007)	Dr Andrew Deacon
Vegetation Assessment (2007)	De Castro and Brits CC
Heritage Assessment (2006)	Dr JCC Pistorius
Geotechnical Investigations (2007)	P.G Hansmeyer

Listing Notice	Activities
Listing Notice 1, GN. R.544	9, 11, 12, 13, 24
Listing Notice 2, GN. R.545	3, 15
Listing Notice 3 GN R.546	12

The EIA application and assessments will be submitted to the Mpumalanga Department of Economic Development, Environment and Tourism (MDEDET) for review and approval.

ENVIRONMENTAL STUDIES

An Environmental Impact Assessment (EIA) is an effective planning and decision-making tool, which allows for the identification of potential environmental consequences of a proposed project.

Listed activities to be applied and assessed in the EIA study will include:

As part of this EIA process all I&APs will be actively involved through a public participation process. The project will consist of three major phases as illustrated in *Figure 3*:

- 1) **Phase 1: Application for Environmental Authorisation;**
 - 2) **Phase 2: Environmental Scoping Phase; and**
 - 3) **Phase 3: Environmental Impact Phase Study and Environmental Management Programme (EMPr)**
- These three phases will culminate in the approval or rejection of the project i.e. positive or negative Environmental Authorisation.



Figure 1: Project timeline

WHAT IS YOUR ROLE?

If you consider yourself an I&AP for the proposed project, we encourage you to make use of the opportunities created by the Public Participation Process to become involved in the process and raise the issues and concerns which affect and/or

interest you, and about which you require more information.

By completing and submitting the accompanying registration form, we will ensure that you are registered as an I&AP for the project, and that your concerns or queries regarding the project

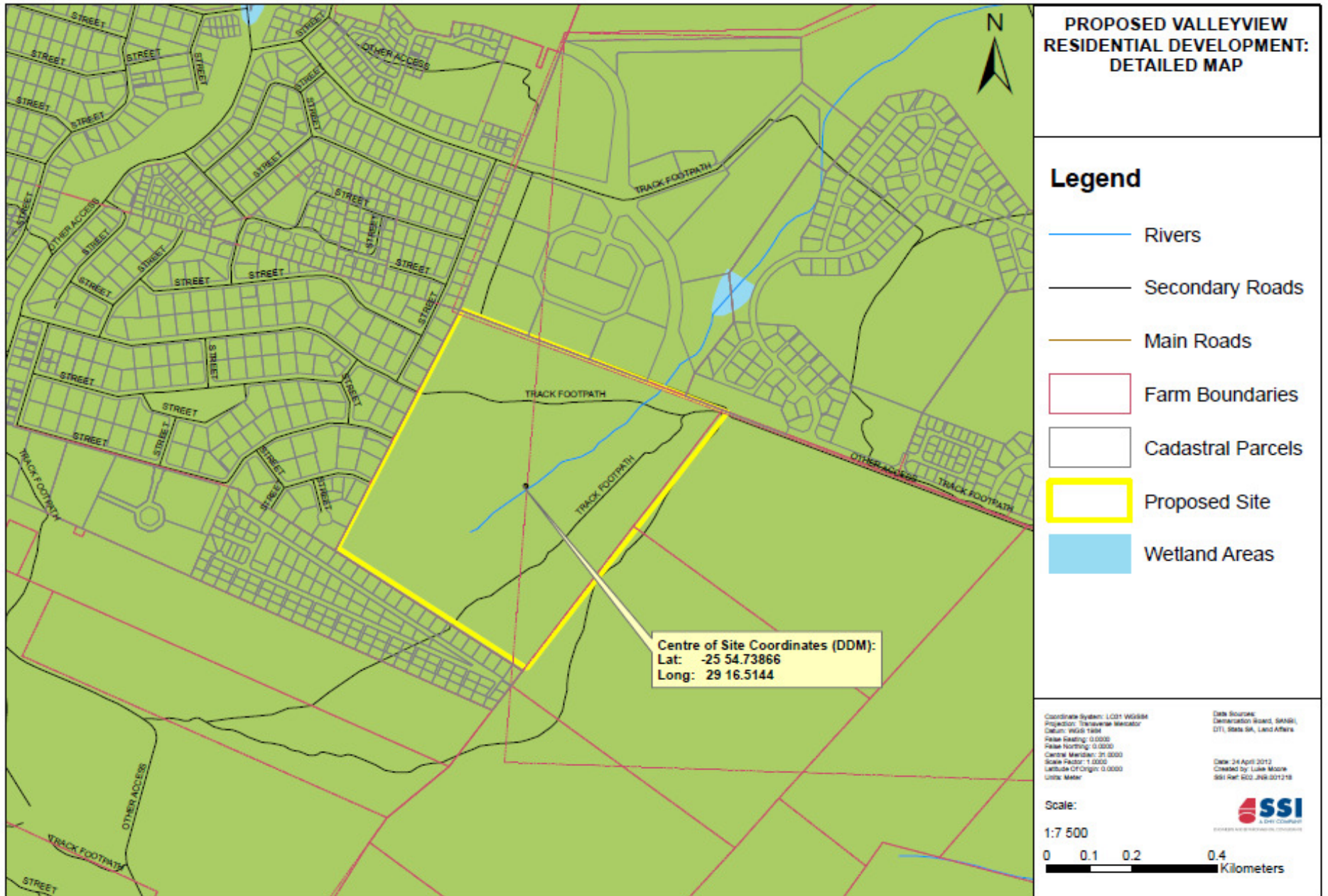
will be noted and assessed as part of the process. We will also ensure that you are provided with future information pertaining to the project as well as the availability of the draft and final Environmental Reports (i.e. Scoping and EIR) for comment.

PO Box 867
Gallo Manor
2052
☎: 011 798 6434 / 📠: 011 798 6010/
✉: hopem@ssi.co.za

COMMENTS AND QUERIES

Please direct all comments, queries or issues to:
Hope Mokolane
SSI Engineers and Environmental Consultants

APPENDIX A: PROJECT LOCALITY MAP



**ENVIRONMENTAL IMPACT ASSESSMENT (SCOPING AND EIA) FOR THE PROPOSED
RESIDENTIAL DEVELOPMENT ON PORTION 22 OF THE FARM NAAUWPOORT 335-JS,
EMALAHLENI LOCAL MUNICIPALITY, MPUMALANGA PROVINCE.**

REGISTRATION AND COMMENT FORM

KINDLY COMPLETE THIS FORM IN DETAIL AND RETURN IT TO:

Hope Mokolane
SSI Engineers and Environmental Consultants
P.O Box 867
Gallo Manor
Woodmead, 2052

Telephone: 011 798 6434
Fax: 011 798 6010
Email: hopem@ssi.co.za

PERSONAL DETAILS:

Title: First Name:

Surname:

E-Mail:

Telephone: Fax:

Organisation (if applicable):

Capacity (e.g. Chairperson, member, etc):

Physical Address:

Town: Code:

Postal Address:

Town: Code:

1. What is your main area of interest with regards to the proposed project?

.....
.....
.....
.....
.....

2. Do you have any points of concern or support regarding the proposed project?
If "yes", please briefly list these in point form:

YES/NO

.....
.....
.....
.....
.....

3. Are there any additional stakeholders who you feel should be consulted with regards to the proposed project?

If "yes" please list their names and contact details below:

YES/NO

.....
.....
.....

.Please add more pages if necessary