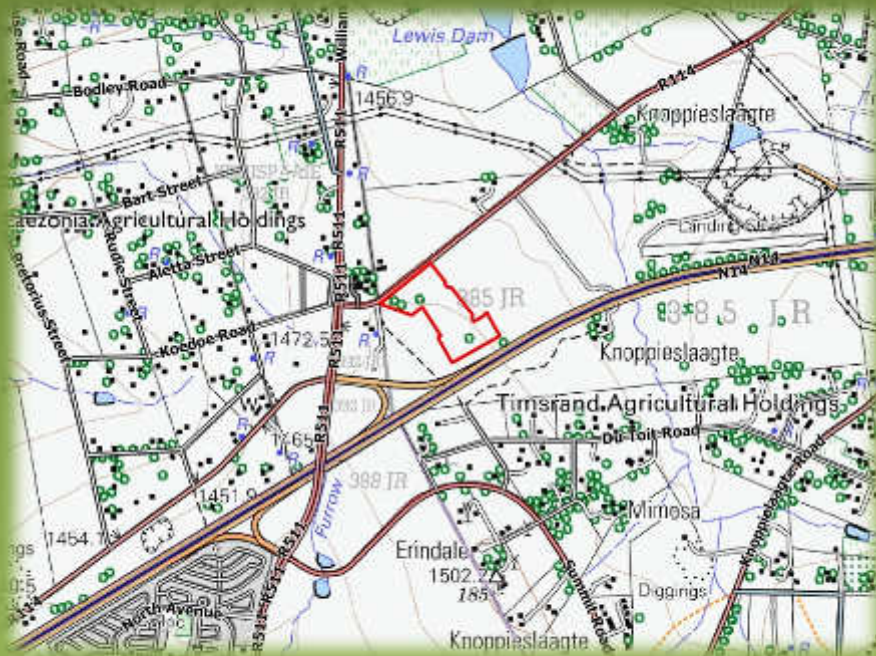


Draft Basic Assessment Report for the proposed Peach Tree X23 Industrial

On part of Portion 109 and part of the Remainder of Portion
331 of the farm Knoppieslaagte 385 JR



November 2016



**BOKAMOSO
LANDSCAPE ARCHITECTS &
ENVIRONMENTAL CONSULTANTS**

P.O. BOX 11375

MAROELANA

0161

TEL: (012) 346 3810

Fax: 086 570 5659

Email: reception@bokamoso.net



Basic Assessment Report in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2014 (Version 1)

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.
2. This application form is current as of 8 December 2014. It is the responsibility of the EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
3. **A draft Basic Assessment Report must be submitted, for purposes of comments within a period of thirty (30) days, to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken.**
4. **A draft Basic Assessment Report (1 hard copy and two CD's) must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application.**
5. Five (5) copies (3 hard copies and 2 CDs-PDF) of the final report and attachments must be handed in at offices of the relevant competent authority, as detailed below.
6. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
7. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
8. An incomplete report may lead to an application for environmental authorisation being refused.
9. **Any report that does not contain a titled and dated full colour large scale layout plan of the proposed activities including a coherent legend, overlain with the sensitivities found on site may lead to an application for environmental authorisation being refused.**
10. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the application for environmental authorisation being refused.
11. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.
12. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.
13. Although pre-application meeting with the Competent Authority is optional, applicants are advised to have these meetings prior to submission of application to seek guidance from the Competent Authority.

DEPARTMENTAL DETAILS

Gauteng Department of Agriculture and Rural Development
Attention: Administrative Unit of the of the Environmental Affairs Branch
P.O. Box 8769
Johannesburg
2000

Administrative Unit of the of the Environmental Affairs Branch
Ground floor Diamond Building
11 Diagonal Street, Johannesburg

Administrative Unit telephone number: (011) 240 3377
Department central telephone number: (011) 240 2500

(For official use only)

NEAS Reference Number:						
File Reference Number:						
Application Number:						
Date Received:						

If this BAR has not been submitted within 90 days of receipt of the application by the competent authority and permission was not requested to submit within 140 days, please indicate the reasons for not submitting within time frame.

N/A

Is a closure plan applicable for this application and has it been included in this report?

No

if not, state reasons for not including the closure plan.

N/A

Has a draft report for this application been submitted to a competent authority and all State Departments administering a law relating to a matter likely to be affected as a result of this activity?

Yes

Is a list of the State Departments referred to above attached to this report including their full contact details and contact person?

Yes

If no, state reasons for not attaching the list.

Have State Departments including the competent authority commented?

Yes

If no, why?

N/A

SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

Project title (must be the same name as per application form):

Peach Tree X 23 Industrial

Select the appropriate box

The application is for an upgrade
of an existing development

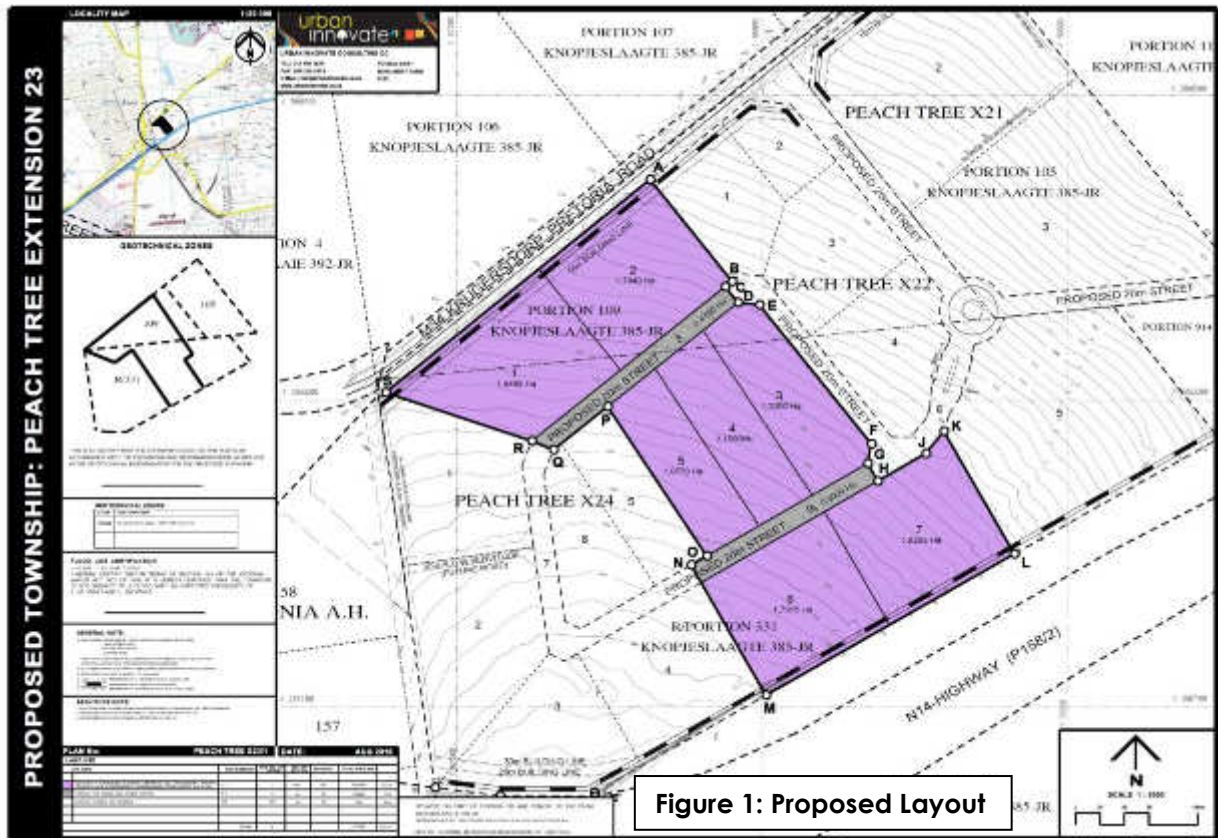
The application is for a new
development

Other,
specify

The proposed development is for the establishment of a light industrial township on a part of Portion 109 and a part of Remainder of Portion 331 of the Farm Knopjeslaagte 385 JR, to be known as **Peach Tree X23**. The proposed development comprises an area of approximately 11.8 hectares. The study area is situated east of the R511 Road and north of the N14, adjacent to the Centurion Flight Academy (Pty) Ltd. The R114 runs along the site's northern boundary. The proposed township will comprise of nine (9) erven zoned as follows:

- Seven (7) erven zoned as "Industrial 2" for the main purpose of Commercial Use and Light Industry. *Industrial 2 zoning allows for Business Buildings, Commercial Use, Light Industry, Cafeteria, Car Wash, Place of Refreshment, Parking Garage, Retail Industry and Shops;* and
- Two (2) erven zoned as "Special" for Access and Access Control.

Please note that the layout illustrates the link this development (Peach Tree X23) has to Peach Tree X21&22 as well as Peach Tree X24. All three of these developments are processed separately with their own applicant (company) and each will run their own town planning application process. This will not be a phased development. The three projects/developments are considered separately which will later on make it possible to sell off one or more of the extensions, should it be required by the applicant. Due to the sites being in close proximity to each other the specialist studies have been done for all the extensions together, however the Town Planning Memorandum is specific to each development as it will be submitted for town planning rights.



Activities Applied for in terms of NEMA:

In terms of Regulation No. R982 published in the Government Notice No. 38282 of 04 December 2014 of the National Environment Management Act (Act No. 107 of 1998) a specific list of activities was identified which could have a detrimental impact on the receiving environment. These listed activities require Environmental Authorization from the Competent Authority, i.e. the Gauteng Department of Agricultural and Rural Development (GDARD). This is still very early in the environmental process and activities applied for will still be confirmed as soon as more information is available.

The application will be submitted for the following activities in terms of the Government Listing Notice 1 (R983), 04 December 2014:

Indicate the number and date of the relevant notice:	Activity No (s) (in terms of the relevant notice) :	Describe each listed activity as per project description:
R. 983 December 2014	Listing Notice 1 Activity 9	The development of infrastructure exceeding 1000 metres in length for the bulk transportation of water or storm water- (i) with an internal diameter of 0,36 metres or more; or (ii) ...- (a) ...; or (b) ...

R. 983 December 2014	Listing Notice 1 Activity 10	The development and related operation of infrastructure exceeding 1000 metres in length for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes (i) with an internal diameter of 0,36 metres or more; or (ii) ...- (a) ...; or (b) ...	
R. 983 December 2014	Listing Notice 1 Activity 27	The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation.	
R. 983 December 2014	Listing Notice 1 Activity 28	Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture or afforestation on or after 01 April 1998 and where such development: (i); or (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare.	
R. 985 December 2014	Listing Notice 3 Activity 4	The development of a road wider than 4 metres with a reserve less than 13,5 metres.	In Gauteng: i. ... ii. ... iii. ... iv. Sites identified as Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) in Gauteng Conservation Plan or in bioregional plans; v. ... vi. ... vii. ... viii. ... ix. ... x. ... xi. ... xii. ...
R. 985 December 2014	Listing Notice 3 Activity 12	The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance	(a) In ..., Gauteng, ... i. ... ii. Within critical biodiversity areas identified in

	purposes undertaken in accordance with a maintenance management plan.	bioregional plans; iii. ... iv. ...
--	---	---

Does the activity also require any authorisation other than NEMA EIA authorisation?

YES	NO X
-----	----------------

If yes, describe the legislation and the Competent Authority administering such legislation

If yes, have you applied for the authorisation(s)?



If yes, have you received approval(s)? (attach in appropriate appendix)

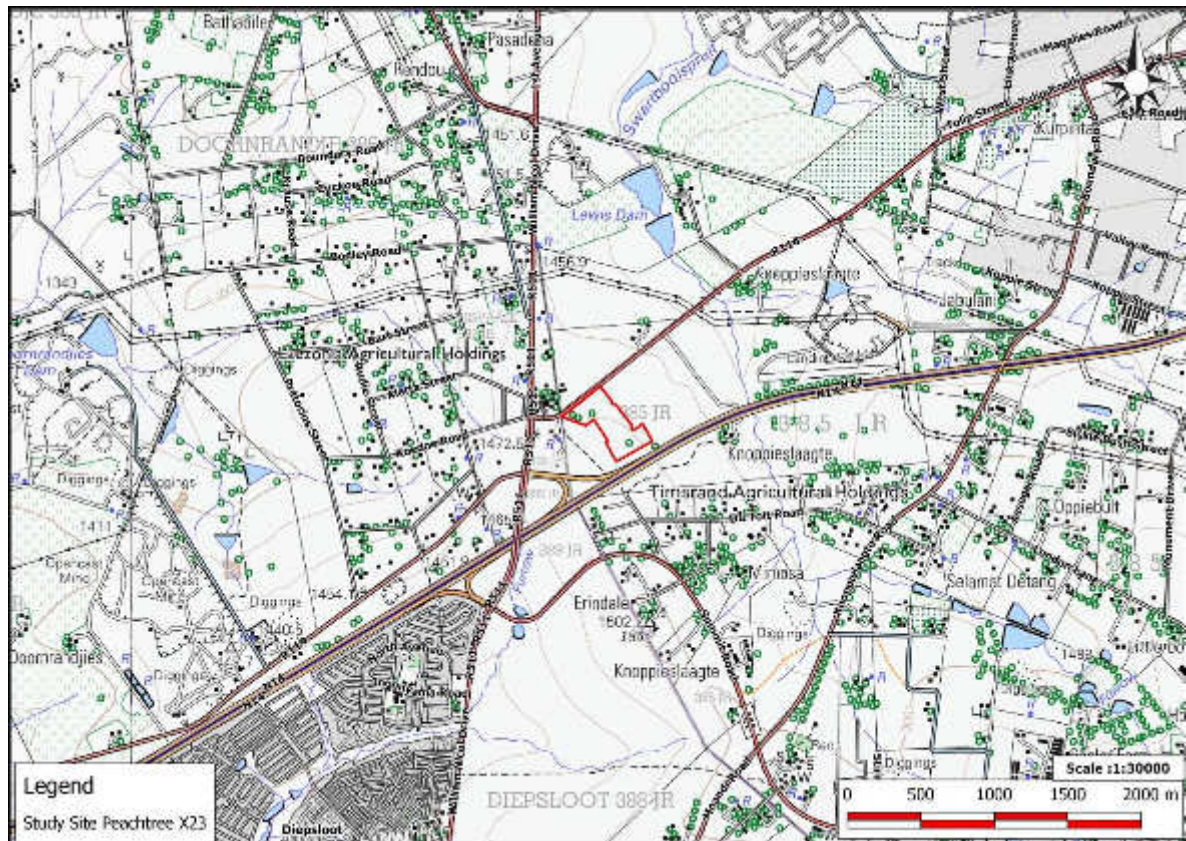


Figure 2: Locality Map

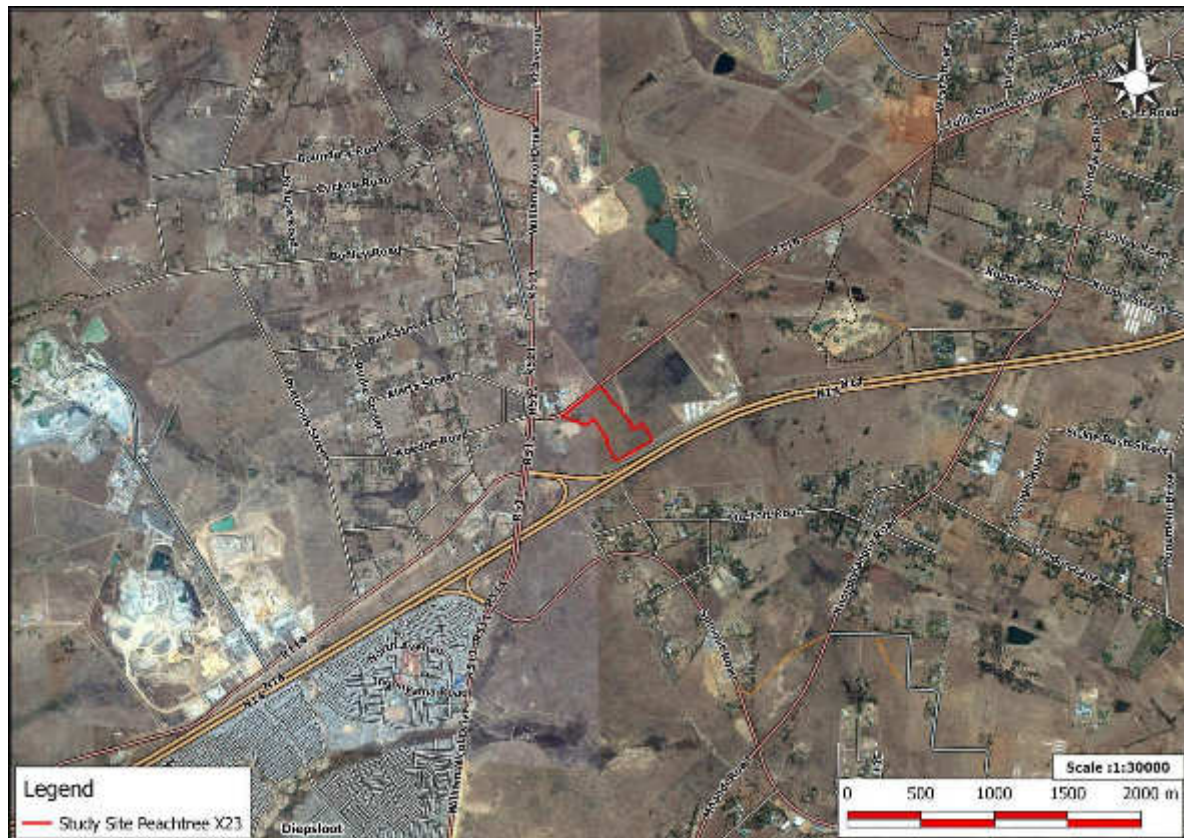


Figure 3: Aerial Map

2. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations:

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	National & Provincial	27 November 1998

The NEMA is primarily an enabling Act in that it provides for the development of environmental implementation plans and environmental management plans. The principles listed in the act serve as a general framework within which environmental management and implementation plans must be formulated.

The Minister of Environmental Affairs and Tourism passed (in April 2006) Environmental Impact Assessment Regulations¹ (the Regulations) in terms of Chapter 5 of the National Environmental Management Act, 1998² (NEMA). The new Regulations came into effect on 3 July 2006.

The Minister of Environmental Affairs passed (in June 2010) the Amended Environmental Impact Assessment Regulations in terms of Chapter 5 of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA). The Regulations were amended once again in 2014. The Amended Regulations came into effect on 8 December 2014, and therefore all new applications must be made in terms of the Amended NEMA regulations and not in terms of the 2010 NEMA Regulations. The purpose of this process is to determine the possible negative and positive impacts of the proposed development on the surrounding environment and to provide measures for the mitigation of negative impacts and to maximize positive impacts.

Notice **No. R 983, R 984 and R 985** of the Amended Regulations list the activities that

indicate the process to be followed. The activities listed in Notice No. R 983 requires that a Basic Assessment process be followed and the Activities listed in terms of Notice No. R 984 requires that the Scoping and EIA process be followed. Notice No. 985 has been introduced to make provision for Activities in certain geographical and sensitive areas.

National Water Act (Act No. 36 of 1998)

National & Provincial

20 August 1998

The purpose of this Act is to ensure that the Nation's water resources are protected, used, developed, conserved, managed and controlled in ways that take into account, amongst other factors, the following:

- Meeting the basic human needs of present and future generations;
- Promoting equitable access to water;
- Promoting the efficient, sustainable and beneficial use of water in the public interest;
- Reducing and preventing pollution and degradation of water resources;
- Facilitating social and economic development; and
- Providing for the growing demand for water-use.



Figure 4: Rivers and Wetland Map

In terms of the section 21 of the National Water Act, the developer must obtain water use licences if the following activities are taking place:

- a) Taking water from a water resource;
- b) Storing water;
- c) Impeding or diverting the flow of water in a water course;
- d) Engaging in a stream flow reduction activity contemplated in section 36;
- e) Engaging in a controlled activity identified as such in section 37(1) or declared under section 38(1);
- f) Discharging waste or water containing waste into a water resource through a pipeline, canal, sewer, sea outfall or other conduit;

- g) Disposing of waste in a manner which may detrimentally impact on a water resource;
- h) Disposing in any manner which contains waste from or which has been heated in any industrial or power generation process;
- i) Altering the bed, banks, course or disposing of water found underground if it is necessary for the safety of people;
- j) Removing, discharging, or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people; and
- k) Using water for recreational purposes.

National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004)	National & Provincial	2004
--	----------------------------------	-------------

The NEMA: AQA serves to repeal the Atmospheric Pollution Prevention Act (45 of 1965) and various other laws dealing with air pollution and it provides a more comprehensive framework within which the critical question of air quality can be addressed.

The purpose of the Act is to set norms and standards that relate to:

- Institutional frameworks, roles and responsibilities
- Air quality management planning
- Air quality monitoring and information management
- Air quality management measures
- General compliance and enforcement.

Amongst other things, it is intended that the setting of norms and standards will achieve the following:

- The protection, restoration and enhancement of air quality in South Africa
- Increased Public Participation in the protection of air quality and improved public access to relevant and meaningful information about air quality.
- The reduction of risks to human health and the prevention of the degradation of air quality.

The Act describes various regulatory tools that should be developed to ensure the implementation and enforcement of air quality management plans. These include:

- Priority Areas, which are air pollution 'hot spots'.
- Listed Activities, which are 'problem' processes that require an Atmospheric Emission Licence.
- Controlled Emitters, which includes the setting of emission standards for 'classes' of emitters, such as motor vehicles, incinerators, etc.
- Control of Noise.
- Control of Odours.

National Heritage Resources Act (Act No. 25 of 1999)	National & Provincial	1999
---	----------------------------------	-------------

The National Heritage Resources Act legislates the necessity and heritage impact assessment in areas earmarked for development, which exceed 0.5ha and linear development exceeding 300m in length. The Act makes provision for the potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures. Permits are administered by the South African Heritage Resources Agency (SAHRA).

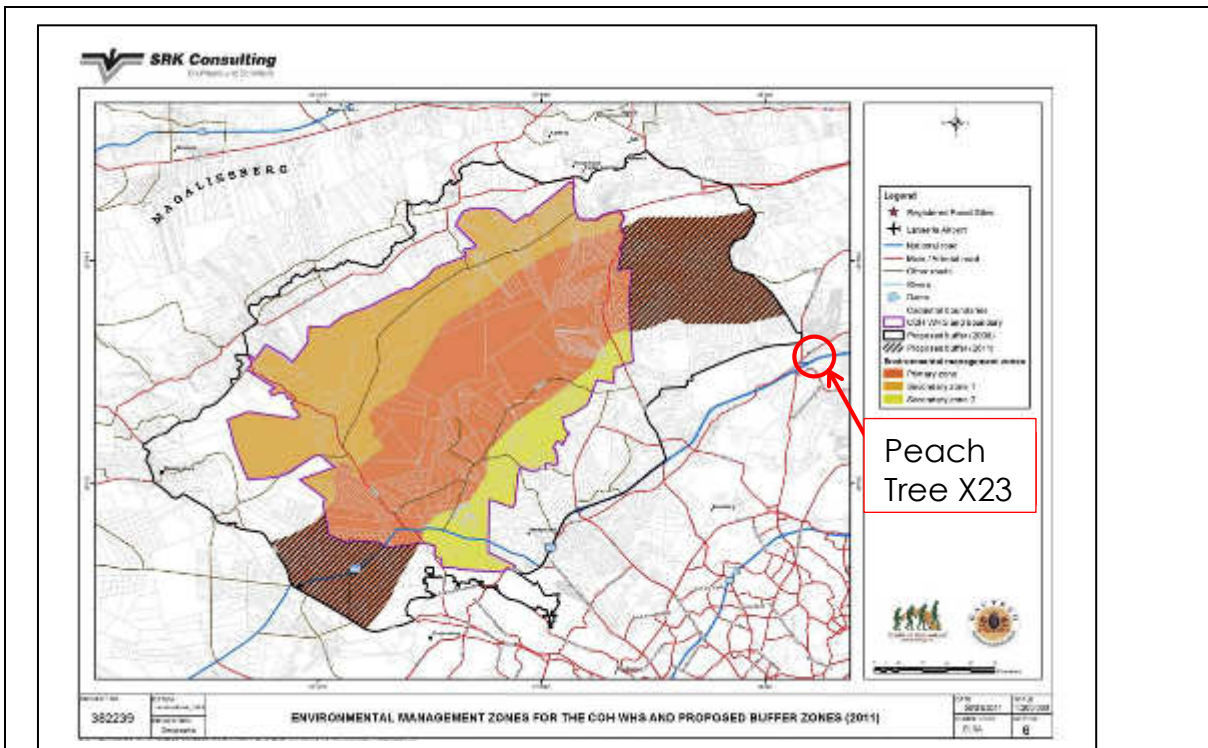


Figure 5: Cradle of Humankind

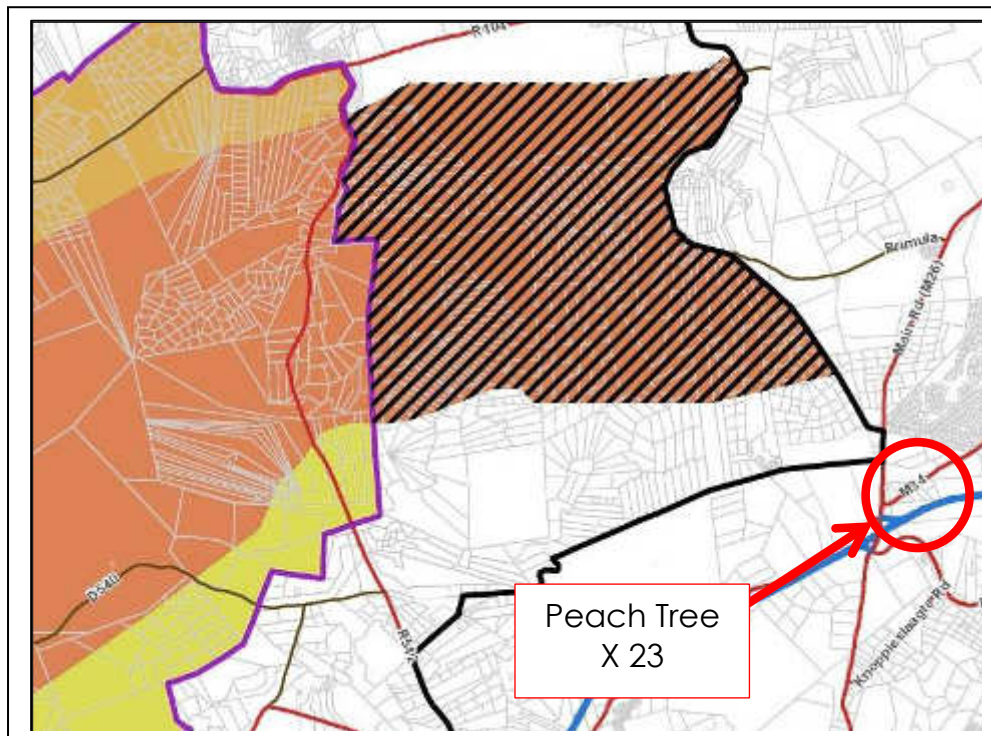


Figure 5a: Enlargement of the Cradle of Humankind

National Environmental Management Protected Areas Act (Act No. 57 of 2003)	National	2003
---	-----------------	-------------

The purpose of this Act is to provide for the protection, conservation, and management of ecologically viable areas representative of South Africa's biological biodiversity and its natural landscapes.

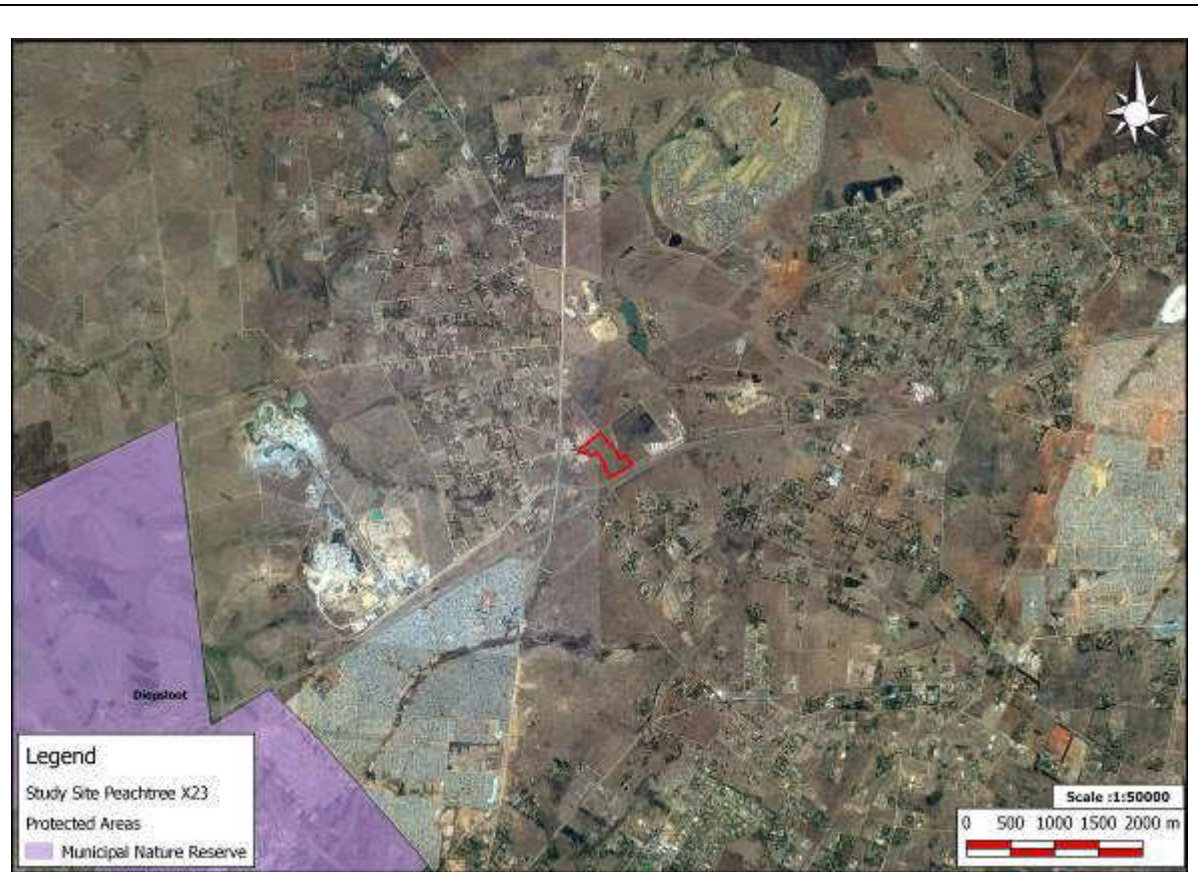


Figure 6: Protected Areas

National Biodiversity Act (Act 10 of 2004)	Environmental Management:	National	2004
---	----------------------------------	-----------------	-------------

The Biodiversity Act provides for the management and protection of the country's biodiversity within the framework established by NEMA. It provides for the protection of species and ecosystems in need of protection, sustainable use of indigenous biological resources, equity, and bio-prospecting, and the establishment of a regulatory body on biodiversity- **South African National Biodiversity Institute.**

Objectives of the Act:

(a) With the framework of the National Environmental Management Act, to provide for:

- (i) The management and conservation of biological diversity within the Republic and of the components of such biological diversity;
- (ii) The use of indigenous biological resources in a sustainable manner; and
- (iii) The fair and equitable sharing among stakeholders of benefits arising from bio-prospecting involving indigenous biological resources;

(b) To give effect to ratified international agreements relating to biodiversity which are binding on the republic;

(c) To provide for co-operative governance in biodiversity management and conservation; and

(d) To provide for a South African National Biodiversity Institute to assist in achieving the objectives of this Act.

Under this Act notices are published in terms of alien and invasive species or threatened ecosystems in order to promote the biodiversity of natural resources and protect species

endemic to South Africa.

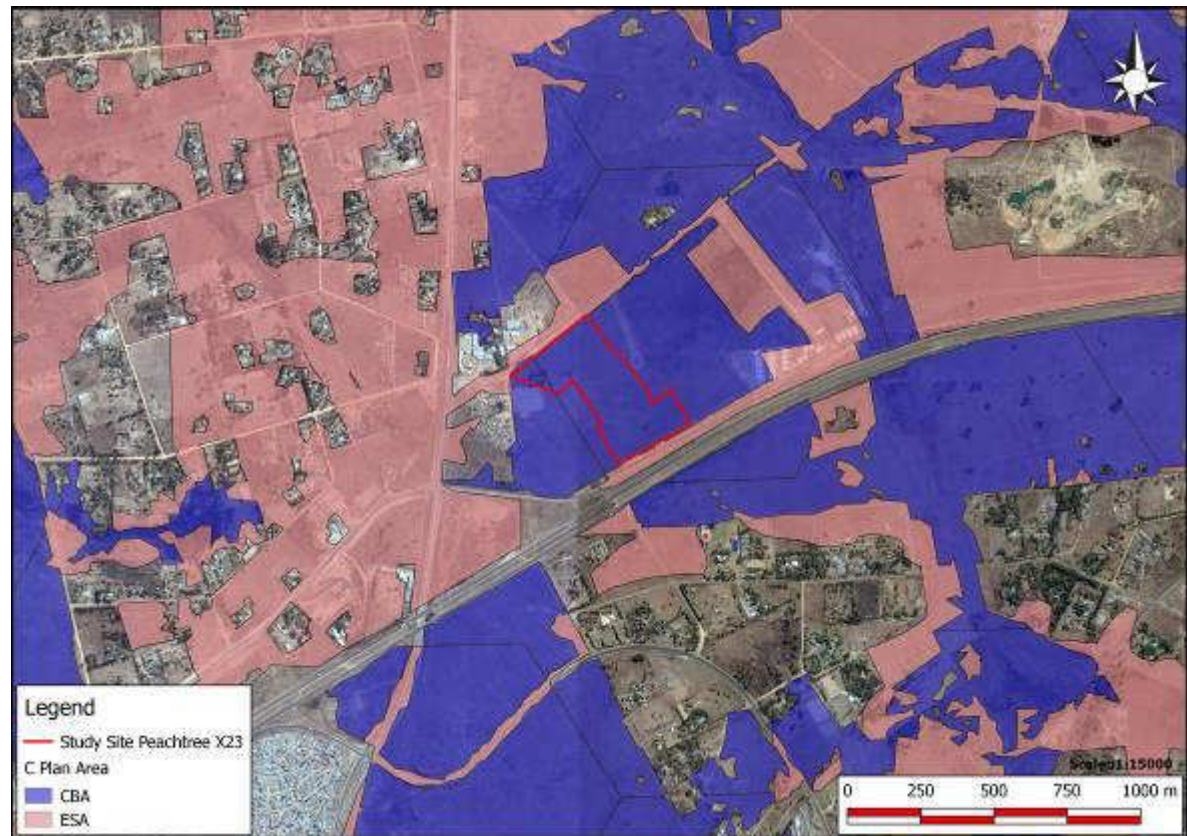


Figure 7: GDARD C-Plan Areas

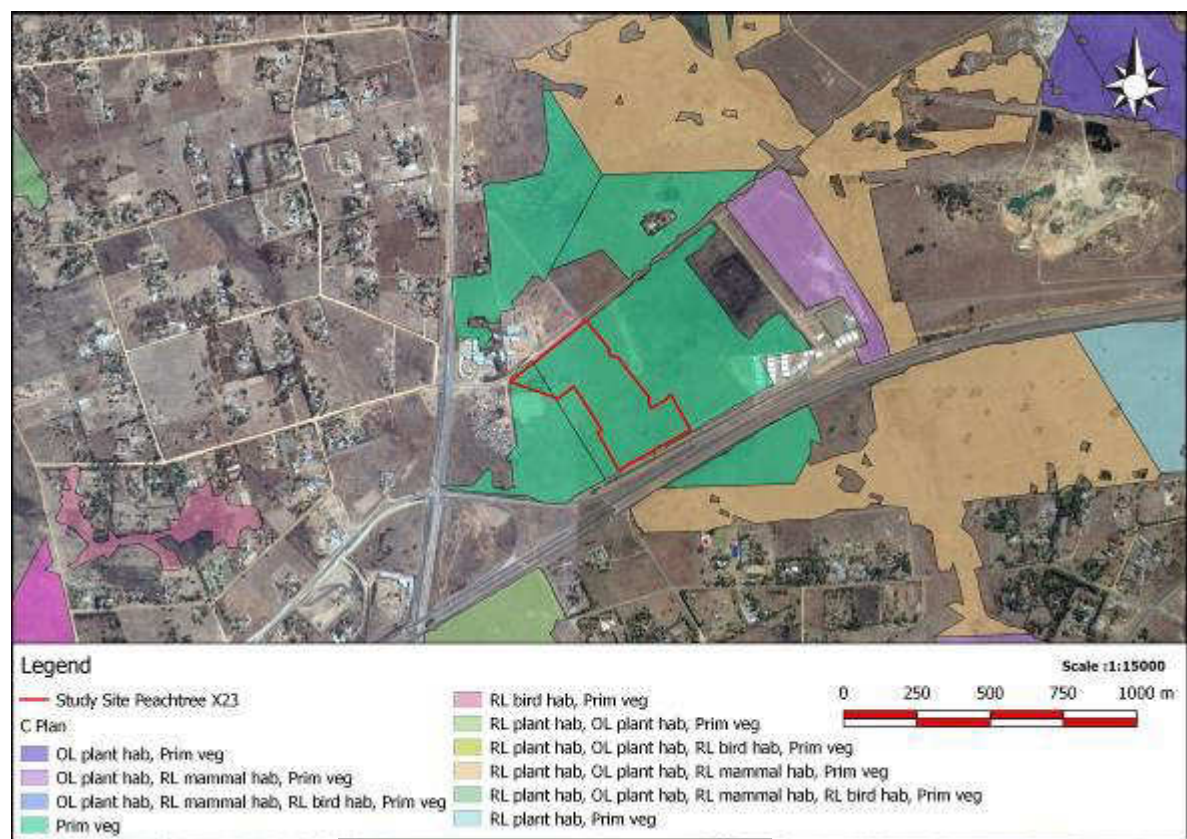


Figure 8: C-Plan Irreplaceable

GDARD Draft Ridges Policy	Provincial	2001
----------------------------------	-------------------	-------------

The biodiversity and socio-cultural value of ridges and their essential role in ecosystem processes will be established in order to show why it is absolutely imperative that the Department adopts a “No-Go” development policy for the ridges of Gauteng. It is important to remember that the quartzite ridges of Gauteng, together with the Drakensberg Escarpment, should be regarded as one of the most important natural assets in the entire region of the northern provinces of South Africa. They are characterized by a unique plant species composition that is found nowhere else in South Africa or the world (Bredenkamp & Brown, 1998). Ridges are important for biodiversity hotspots, Red Data/threatened species, invertebrates, wildlife corridors, ecosystem processes and socio-cultural value (aesthetic value).

A ridge is defined as any topographic feature in the landscape that is characterized by slopes of 5° or more, as determined by means of a GIS digital elevation model.



Figure 9: Ridges Map

Conservation of Agricultural Resources Act (Act No. 43 of 1983)	National	1 June 1983
--	-----------------	--------------------

This act provides for control over the utilization of natural agricultural resources of South Africa in order to promote the conservation of soil, water sources and the vegetation as well as the combating of weeds and invader plants; and for matters connecting therewith.

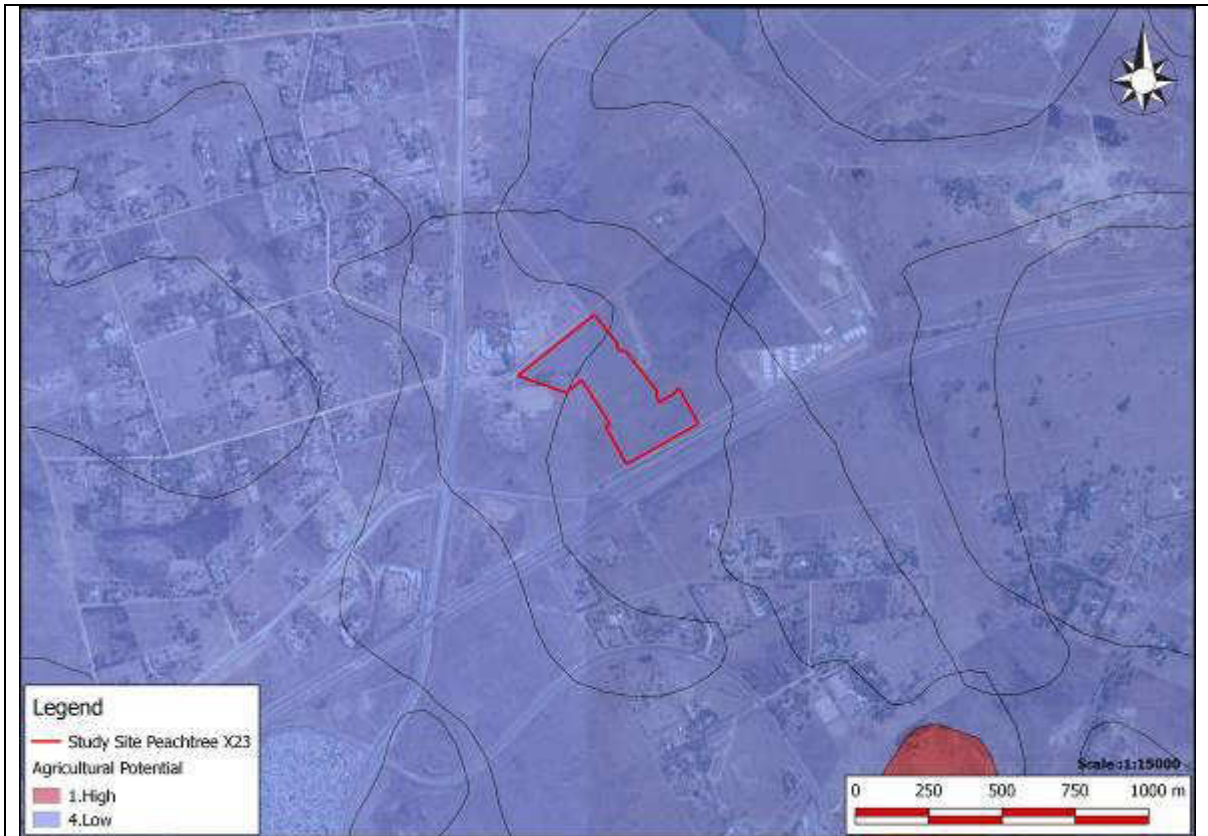


Figure 10: Agricultural Potential

GDARD Agricultural Hub Policy	Provincial	2006
--------------------------------------	-------------------	-------------

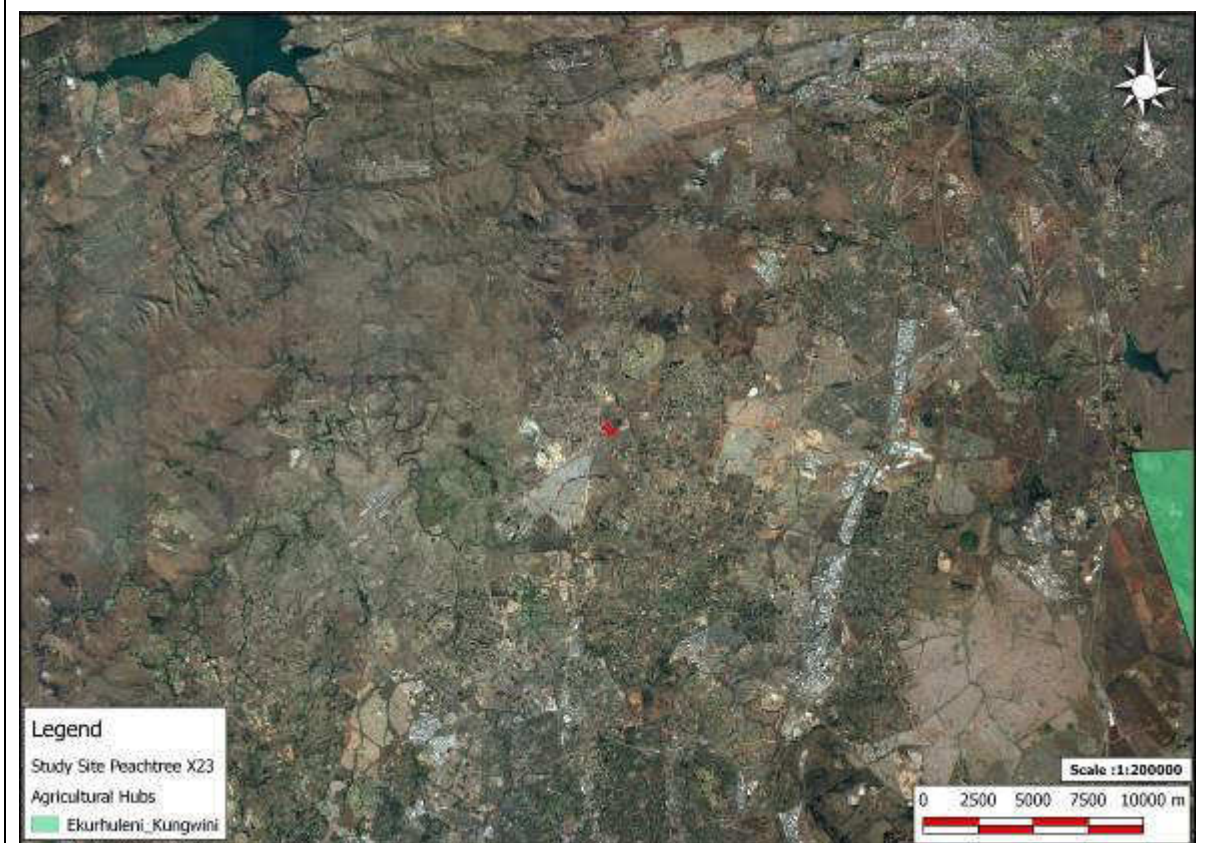


Figure 11: Agricultural Hubs

GDARD identified 7 Agricultural Hubs in Gauteng Province. These hubs are earmarked for agricultural activities and there are policies and guidelines that should be taken into consideration when one plans to develop in these hubs' areas. Urban development is usually not supported in these hubs.

Gauteng Urban Edge	Provincial	2011
---------------------------	-------------------	-------------

According to the Gauteng Department of Economic Development the urban edge is now delineated on a yearly basis and it is the responsibility of the local authorities to request for a yearly amendment to the urban edge. The aim of the Urban Edge Policy is to curb unbridled urban growth.

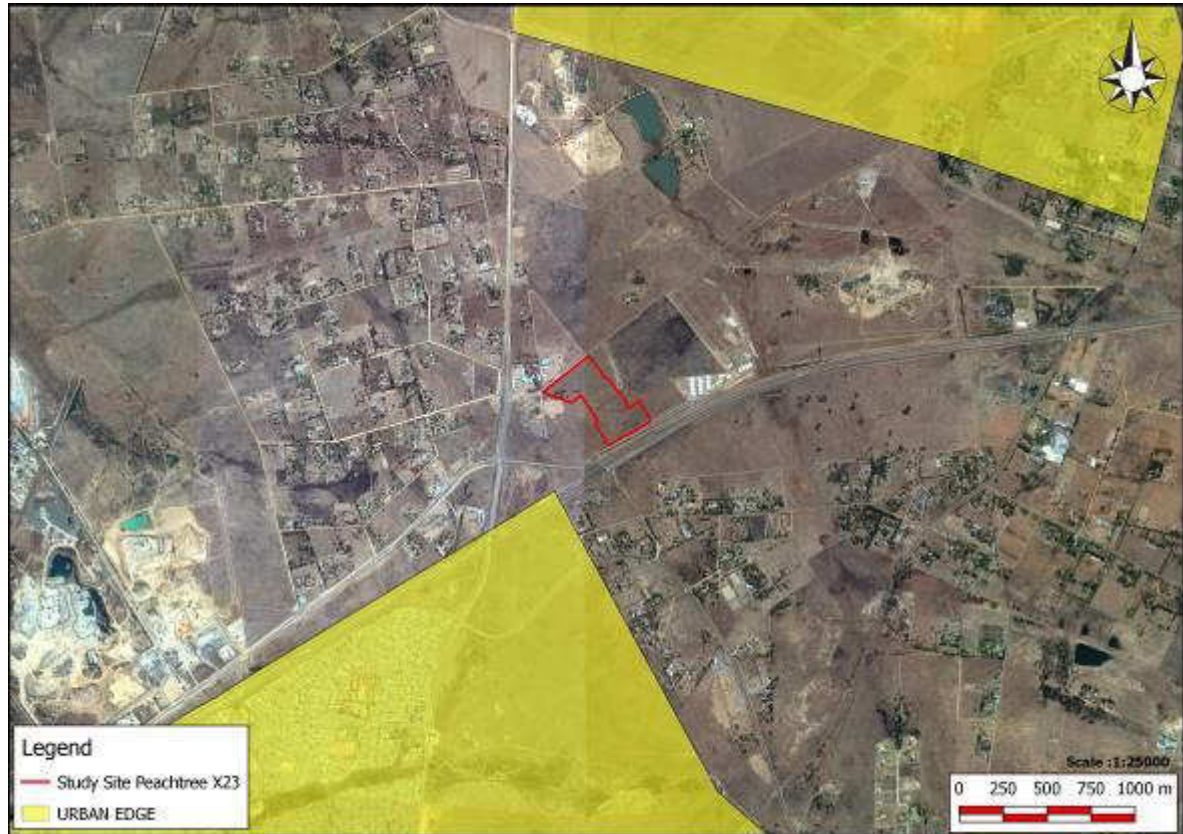


Figure 12: Urban Edge

National Environmental Management: Waste Act (Act 59 of 2008)	National	2008
--	-----------------	-------------

This Act aims to consolidate waste management in South Africa, and contains a number of commendable provisions, including:

- The establishment of a national waste management strategy, and national and provincial norms and standards, for amongst other, the classification of waste, waste service delivery, and tariffs for such waste services;
- Addressing reduction, re-use, recycling and recovery of waste;
- The requirements for industry and local government to prepare integrated waste management plans;
- The establishment of control over contaminated land;
- Identifying waste management activities that requires a license, which currently include facilities for the storage, transfer, recycling, recovery, treatment and disposal of waste on land;

- Co-operative governance in issuing licenses for waste management facilities, by means of which a licensing authority can issue an integrated or consolidated license jointly with other organs of state that has legislative control over the activity; and
- The establishment of a national waste information system.

On 29 November 2013 the Minister of Environmental Affairs and Tourism amended the list of waste management activities that might have a detrimental effect on the environment.

Red Listed Plant Species Guidelines	Provincial	26 June 2006
--	-------------------	---------------------

The purpose of these guidelines is to promote the conservation of Red Listed Plant Species in Gauteng, which are species of Flora that face risk of extinction in the wild. By protecting Red Listed Plant Species, conservation of diverse landscapes is promoted which forms part of the overall environmental preservation of diverse ecosystems, habitats, communities, populations, species and genes in Gauteng.

These Guidelines are intended to provide a decision-making support tool to any person or organization that is responsible for managing, or whose actions affect, areas in Gauteng where populations of Red Listed Plant Species grow, whether such person or organization be an organ of state or private entity or individual; thereby enabling the conservation of the Red Listed Plant Species that occur in Gauteng.

Gauteng Noise Control Regulations	Provincial	1999
--	-------------------	-------------

The regulation controls noise pollution. According to the acceptable noise levels in a residential area situated within an urban area is 55dBA and the maximum acceptable noise levels in a rural area is 45dBA.

Gauteng Transport Infrastructure Act	Provincial	2001
---	-------------------	-------------

The act was created to consolidate the laws relating to roads and other types of transport infrastructure in Gauteng; and to provide for the planning, design, development, construction, financing, management, control, maintenance, protection and rehabilitation of provincial roads, railway lines and other transport infrastructure in Gauteng; and to provide for matters connected therewith.

In terms of Section 46 of the Act, no person may erect, construct, or lay, or establish a structure or object on or over, or below the surface of a provincial road or railway line or land in a building restriction area.

This Act was then amended in 2003, the Gauteng Transport Infrastructure Amendment Act. The aim of this Amendment Act is to amend the Gauteng Transport Infrastructure Act, 2001 so as to amend and insert certain definitions; to provide for the necessary land-use rights with respect to stations and for the necessary powers of the MEC to enter into contracts for road and rail projects; to amend the procedure in relation to route determination; to make a second environmental investigation at the stage of preliminary design of a road or railway line unnecessary where the competent environmental authority decides that the environmental investigation at the stage of route determination is adequate; and to provide for incidental matters.

Occupational Health & Safety Act, 85 of 1993	National & Provincial	1993
---	----------------------------------	-------------

The Act was created to provide 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; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith.

Gauteng Conservation Plan (C-Plan) Version 3.3	Provincial	March 2014
---	-------------------	-------------------

Gauteng Nature Conservation (hereafter Conservation), a component of the Gauteng Department of Agriculture and Rural Development (GDARD) produced the Gauteng Conservation Plan Version 3 (C-Plan 3) in December 2010. The conservation plan was edited on three occasions since then: C-Plan 3.1 was released in July 2011 after it became apparent that some areas were not desirable in Critical Biodiversity Areas (CBAs hereafter). Not all areas were addressed in the first round of editing, so this was done during September 2011 resulting in C-Plan Version 3.2. It was soon released however, that some CBAs became separated by the removal of undesirable areas causing some attributes not to be completely reflective of that CBAs any longer. C-Plan 3.3 became available in October 2011 after this issue was addressed.

The main purposes of C-Plan 3.3 are:

- to serve as the primary decision support tool for the biodiversity component of the Environmental Impact Assessment (EIA) process;
- to inform protected area expansion and biodiversity stewardship programs in the province;
- To serve as a basis for development of Bioregional Plans in municipalities within the province.

Gauteng Provincial Environmental Management Framework	Provincial	2014
--	-------------------	-------------

The Gauteng Department of Agriculture and Rural Development (GDARD) decided to produce an Environmental Management Framework for the whole of Gauteng (GPEMF). The GPEMF replaces all other EMFs in Gauteng with the exception of the Cradle of Humankind World Heritage Site which is incorporated within the GPEMF.

The objective of the GPEMF to guide sustainable land-use management within the Gauteng Province. The GPEMF, inter alia, serve the following purposes:

- To provide a strategic and overall framework for environmental management in Gauteng;
- Align sustainable development initiatives with the environmental resources, developmental pressures, as well as the growth imperatives of Gauteng;
- Determine geographical areas where certain activities can be excluded from an EIA process; and
- Identify appropriate, inappropriate and conditionally compatible activities in various Environmental Management Zones in a manner that promotes proactive decision-making.

The Province has been divided into 5 management zones of which Zone 1: Urban Development Zone and Zone 5: Industrial and Large Commercial focus zone, proposes the exclusion of certain NEMA listed activities in order to streamline development.

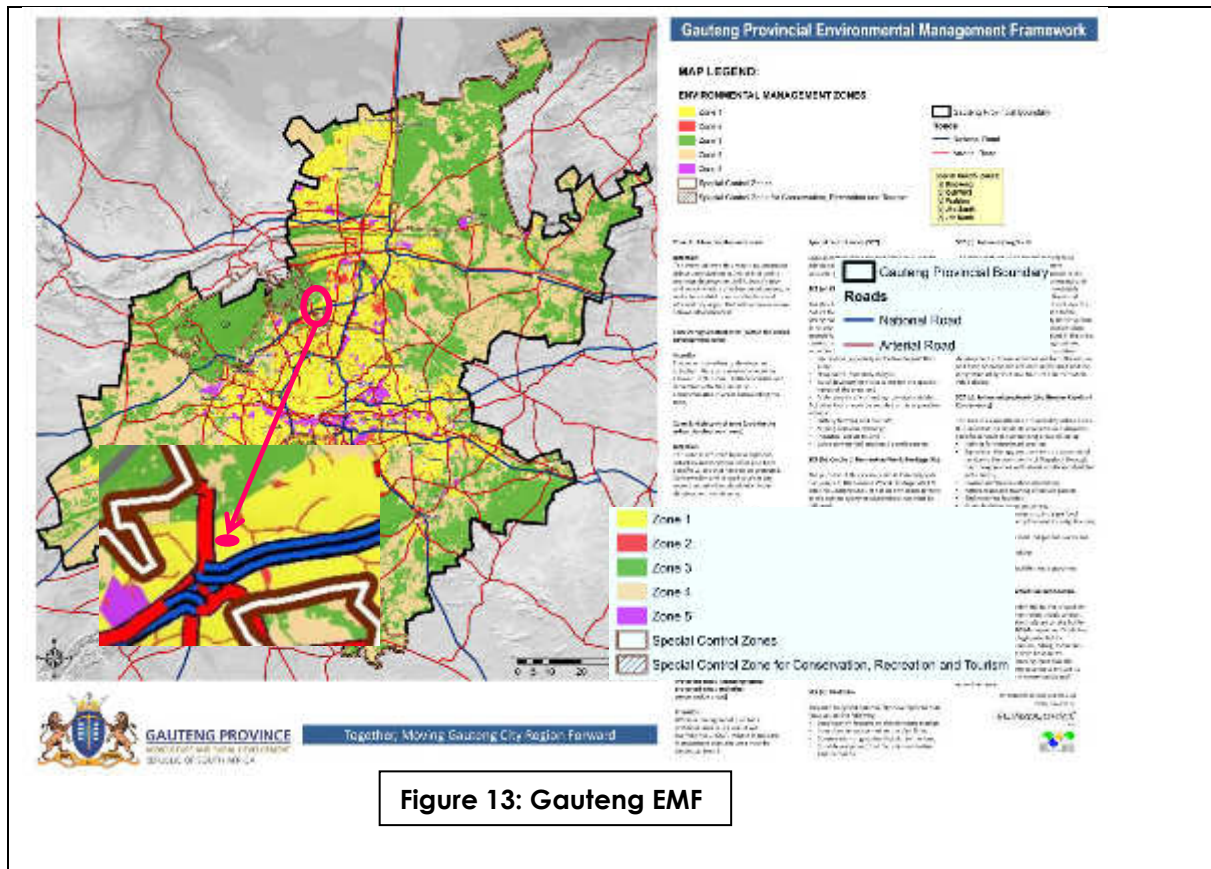


Figure 13: Gauteng EMF

Description of compliance with the relevant legislation, policy or guideline:

Legislation, policy of guideline	Description of compliance
National Environmental Management Act No. 107 of 1998 (as amended)	The application for the proposed township consist of activities listed under Notice R. 983 (Listing No. 1) and R. 985 (Listing No. 3) and therefore a Basic Assessment Report will be submitted to GDARD for consideration of environmental authorisation.
National Water Act (Act No. 36 of 1998)	The proposed development is not subjected to flood lines of any natural stream or water course within an expected frequency of 1:50 and 1:100 years and therefore in terms of Section 21 of the National Water Act, the developer will not need any water- use licenses for the proposed development. Refer to Figure 4 for the Rivers and Wetland Map.
National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004)	During the construction phase, dust and the generation of noise can become a significant factor, especially to the surrounding landowners. However if the development is well planned and the mitigation measures are successfully implemented the proposed township's contribution to air pollution and the generation of air pollution can become less significant. None of the listed activities, according to this Act, have been triggered.
National Heritage Resources Act (Act No. 25 of 1999)	A Heritage specialist has been appointed to conduct a Heritage Impact Assessment which will be included within the FBAR. Due to the study area being in close proximity to the Cradle of Humankind we thought it necessary to conduct a Heritage Impact Assessment. Refer to Figure 5 for the Cradle of Humankind map.
National Environmental Management	The proposed development is not subject to any protected areas. Please refer to Figure 6.

Protected Areas Act (Act No. 57 of 2003)	
National Environmental Management: Biodiversity Act (Act 10 of 2004)	Although one Orange Listed Species were observed, the study site cannot be deemed highly sensitive, on account of agricultural and urban development threatening this ecosystem. According to the GDARD C-Plan, the area is considered a Critical Biodiversity Area (CBA) due to Primary Vegetation. Refer to Figure 7 and 8. HOWEVER, specialists have visited the site and conducted both a Fauna and Flora Assessment. The Flora Assessment showed that the site consist of Secondary Grassland and no longer Primary Vegetation. This Secondary Grassland is isolated from similar grassland vegetation units. It is surrounded by urban development and agricultural activities. The ecological status of this study unit will only decrease as movement of plant species is limited on account of isolation from natural vegetated areas.
GDARD Draft Ridges Policy	There are ridges and transformed ridges situated north-west of the study area. According to the data there are no ridges (or transformed ridges) on the study area.
Conservation of Agricultural Resources Act (Act No. 43 of 1983)	According to the Gauteng Agricultural Potential Atlas (GAPA 3), the proposed Peach Tree X23 are located on land with low agricultural potential. The study area does not fall within any of the Seven Agriculture Hubs identified for the Gauteng province. No Agricultural Potential Study was conducted as the site is very small and within the Gauteng Urban Edge and therefore it is not expected that the site will have high agricultural potential. Due to the aforementioned the site is not considered suitable for agricultural activities.
GDARD Agricultural Hub Policy	The study area is not situated within any of the 7 agricultural hubs identified for Gauteng.
Gauteng Urban Edge	The proposed development site does not fall within the Gauteng Urban Edge. The proposed development is however in very close proximity of urban development. It should however be noted that the proposed site is within an urban development zone according to the Gauteng Provincial Environmental Management Framework – refer to Figure 13.
National Environmental Management: Waste Act (Act 59 of 2009)	No waste management license will be required during the construction or operational phases of the proposed township. Due to the fact that a small amount of solid construction waste will be stored and handled on the site, before it is hauled away and dumped at the nearest registered landfill site.
Gauteng Guidelines on Red Listed Plant Species	Only one Orange Listed Plant Species namely <i>Hypoxis hemerocallidea</i> was recorded on the study site. This Orange-Listed plant species need to be removed and re-planted prior to construction.
Gauteng Noise Control Regulations	Within the construction phase of the proposed development, the impact of noise could be problematic, but such impacts are generally short term. One should note that practical mitigation measures for noise pollution are low, but certain measures can be implemented to mitigate the severity. During the operational phase, there will be no noise impacts. (Please Refer to Appendix H (EMPr) for a list of suitable guidelines and mitigation measures).
Gauteng Transport Infrastructure Amendment Act	All developments in Gauteng must take the Gauteng Road Network as published into consideration and no development may be planned across any provincial or K-route.

Occupational Health & Safety Act, 85 of 1993	Considering the proposed development will occur within an urban environment next to a provincial and national road, the Act not only applies to the persons who will be responsible for construction, but also to the safety of members of the public.
Gauteng Conservation Plan (C-Plan) Version 3.3	As mentioned earlier, according to the GDARD C-Plan, the area is considered a Critical Biodiversity Area (CBA) due to Primary Vegetation. Refer to Figure 7 and 8. HOWEVER, specialists have visited the site and conducted both a Fauna and Flora Assessment. The Flora Assessment showed that the site consist of Secondary Grassland and no longer Primary Vegetation. This Secondary Grassland is isolated from similar grassland vegetation units. It is surrounded by urban development and agricultural activities. The ecological status of this study unit will only decrease as movement of plant species is limited on account of isolation from natural vegetated areas.
Gauteng Provincial Environmental Management Framework	The proposed site occurs within Zone 1 of the GPEMF i.e. urban development zone. Zone 1 is earmarked for urban development. Although the GPEMF have not yet been formally published we have taken these zones into consideration, however the need for social and economic facilities in this area is identified in various planning policies and policy frameworks of the Municipality. The site is in close proximity to a Zone 5 section that is for Industrial and Large Commercial Focus zone. It should however be noted that along the N14 highway, which is the main highway towards the Lanseria International Airport, there is only one small section for Zone 5 (Industrial and Large Commercial Focus Zone) and more such zones would be expected and it is anticipated that more such developments will be applied for along this route as the Lanseria Airport is becoming more well-known and used by the public sector.

3. ALTERNATIVES

Describe the proposal and alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished. The determination of whether the site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment.

The no-go option must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. **Do not include the no go option into the alternative table below.**

Note: After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Please describe the process followed to reach (decide on) the list of alternatives below

Meetings were held with the applicant regarding the proposed development and the vision for the development and the site. Various land uses were discussed and together with Town Planner the need and desires of the area and the public were assessed. Based on these meetings and assessments by professionals a preferred and desired layout was decided upon.

Provide a description of the alternatives considered

No.	Alternative type, either alternative: site on property, properties, activity, design, technology, energy, operational or other (provide details of "other")	Description
1	Proposal - Preferred	The proposed township will comprise of nine (9) erven zoned as follows:

		<ul style="list-style-type: none"> • Seven (7) erven zoned as "Industrial 2" for the main purpose of Commercial Use and Light Industry. <i>Industrial 2 zoning allows for Business Buildings, Commercial Use, Light Industry, Cafeteria, Car Wash, Place of Refreshment, Parking Garage, Retail Industry and Shops;</i> and • Two (2) erven zoned as "Special" for Access and Access Control. <p>Refer to Figure 1 for the layout of the proposed development. Refer to Appendix C for the proposed layout.</p>
2	Alternative 1	Heavy Industrial
3	Alternative 2	
	Etc.	

In the event that no alternative(s) has/have been provided, a motivation must be included in the table below.

The study area is ideal for industrial development (light industrial). The application site has been earmarked by the applicant for an industrial development due to its location, accessibility and the need for this type of development in the area. The study area is situated north of the N14 which is an ideal location for light industrial development.

The applicant also considered a heavy industrial township, however due to the study area situated in close proximity of residential developments this will not be the preferred alternative. A heavy industrial development will have major impacts such as noise, visual and security impacts on the surrounding residents. A heavy industrial development may also have detrimental impacts on the environment and may require additional licenses/permits. The need for light industrial/commercial development is much more suited to the property location than a heavy industrial development.

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the total physical size (footprint) of the proposal as well as alternatives. Footprints are to include all new infrastructure (roads, services etc), impermeable surfaces and landscaped areas:

Proposed activity (**Total environmental (landscaping, parking, etc.) and the building footprint**)

Size of the activity:
11.8 ha

Alternatives:

Alternative 1 (if any)

11.8 ha
Ha/ m²

or, for linear activities:

Proposed activity

Length of the activity:
[]

Alternatives:

Alternative 1 (if any)

[]
m/km

Indicate the size of the site(s) or servitudes (within which the above footprints will occur):

Proposed activity

Size of the site/servitude:

11.8 ha

Alternatives:

Alternative 1 (if any)

11.8 ha

Alternative 2 (if any)

Ha/m²

5. SITE ACCESS

Proposal

Does ready access to the site exist, or is access directly from an existing road?

YES	No
	X
N/A	

If NO, what is the distance over which a new access road will be built

Describe the type of access road planned:

Access to the proposed development will be from a 25m wide road linking from the R114 via another proposed development (Peach Tree X21 and X 22). **Refer to Figure 14, for the site access map.**

The R114 is a link to the R511 which is a Class 2 road and was recently upgraded all the way to Erasmia. This road is also the future K46 with intersection spacing of 600m. The R114 (M34) is a Class 2 road. This road is a normal provincial road and should have intersection spacing of 600m.

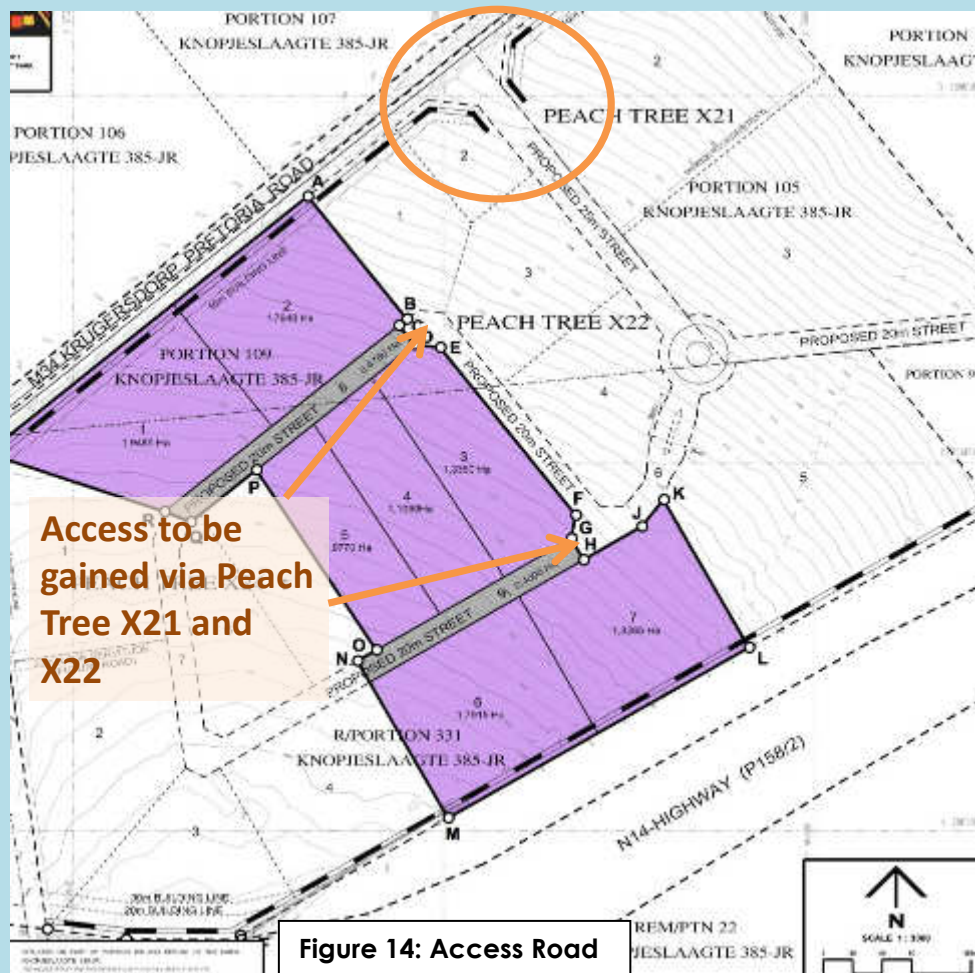


Figure 14: Access Road

Include the position of the access road on the site plan (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

Alternative 1

Does ready access to the site exist, or is access directly from an existing road?

YES	No
	X
N/A	

If NO, what is the distance over which a new access road will be built

Describe the type of access road planned:

This Section will be the same for the Preferred Development and the Alternative.

Access to the proposed development will be from a 25m wide road linking from the R114 via another proposed development (Peach Tree X21 and X 22). **Refer to Figure 14, for the site access map.**

The R114 is a link to the R511 which is a Class 2 road and was recently upgraded all the way to Erasmia. This road is also the future K46 with intersection spacing of 600m. The R114 (M34) is a Class 2 road. This road is a normal provincial road and should have intersection spacing of 600m.

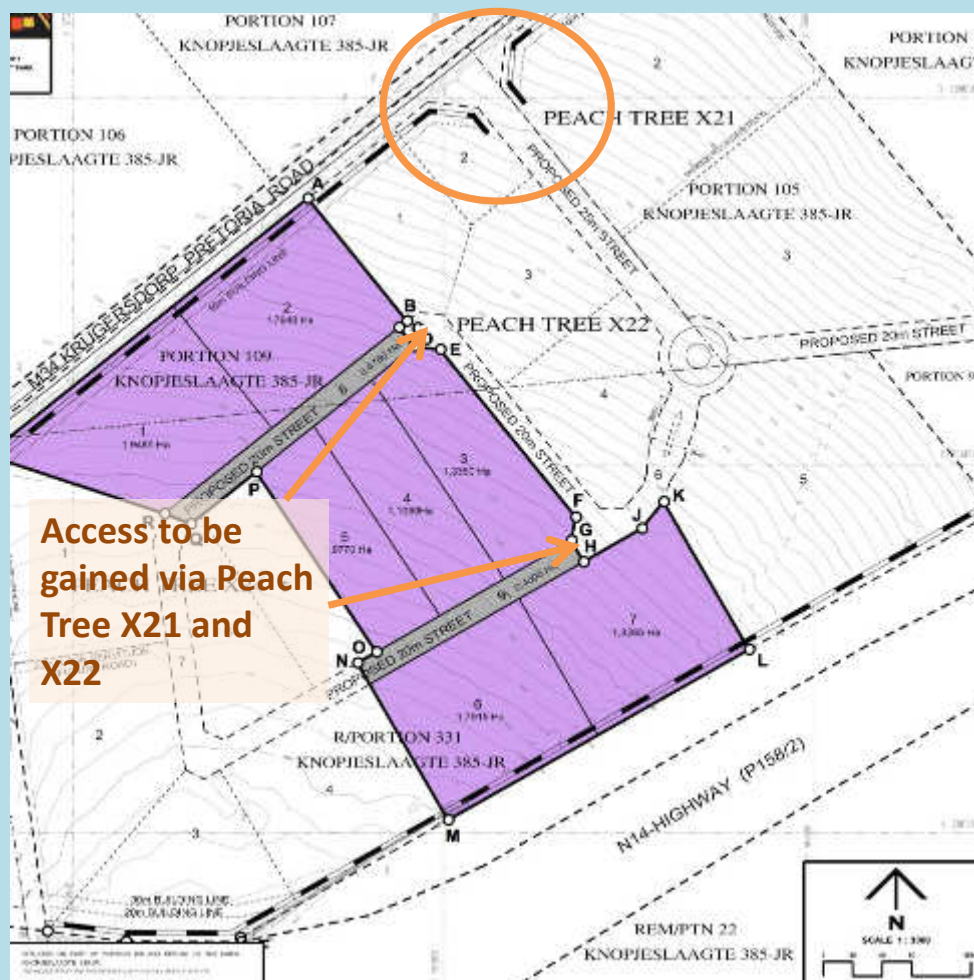


Figure 14: Access Road

Include the position of the access road on the site plan. (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

Alternative 2

Does ready access to the site exist, or is access directly from an existing road?

If NO, what is the distance over which a new access road will be built

[REDACTED]
m

Describe the type of access road planned:

Include the position of the access road on the site plan. (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

PLEASE NOTE: Points 6 to 8 of Section A must be duplicated where relevant for alternatives

Section A 6-8 has been duplicated

0

Number of times

(only complete when applicable)

6. LAYOUT OR ROUTE PLAN

A detailed site or route (for linear activities) plan(s) must be prepared for each alternative site or alternative activity. It must be attached to this document. The site or route plans must indicate the following:

- the layout plan is printed in colour and is overlaid with a sensitivity map (if applicable);
- layout plan is of acceptable paper size and scale, e.g.
 - A4 size for activities with development footprint of 10sqm to 5 hectares;
 - A3 size for activities with development footprint of > 5 hectares to 20 hectares;
 - A2 size for activities with development footprint of >20 hectares to 50 hectares);
 - A1 size for activities with development footprint of >50 hectares);
- The following should serve as a guide for scale issues on the layout plan:
 - A0 = 1: 500
 - A1 = 1: 1000
 - A2 = 1: 2000
 - A3 = 1: 4000
 - A4 = 1: 8000 (±10 000)
- shapefiles of the activity must be included in the electronic submission on the CD's;
- the property boundaries and Surveyor General numbers of all the properties within 50m of the site;
- the exact position of each element of the activity as well as any other structures on the site;
- the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, sewage pipelines, septic tanks, storm water infrastructure;
- servitudes indicating the purpose of the servitude;
- sensitive environmental elements on and within 100m of the site or sites (including the relevant buffers as prescribed by the competent authority) including (but not limited thereto):
 - Rivers and wetlands;
 - the 1:100 and 1:50 year flood line;
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or infested with alien species);
- Where a watercourse is located on the site at least one cross section of the water course must be included (to allow the position of the relevant buffer from the bank to be clearly indicated)

FOR LOCALITY MAP (NOTE THIS IS ALSO INCLUDED IN THE APPLICATION FORM REQUIREMENTS)

- the scale of locality map must be at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map;
- the locality map and all other maps must be in colour;
- locality map must show property boundaries and numbers within 100m of the site, and for poultry and/or piggery, locality map must show properties within 500m and prevailing or predominant wind direction;
- for gentle slopes the 1m contour intervals must be indicated on the map and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the map;
- areas with indigenous vegetation (even if it is degraded or infested with alien species);
- locality map must show exact position of development site or sites;
- locality map showing and identifying (if possible) public and access roads; and
- the current land use as well as the land use zoning of each of the properties adjoining the site or sites.

Refer to Appendix A

7. SITE PHOTOGRAPHS

Colour photographs from the center of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under the appropriate Appendix. It should be supplemented with additional photographs of relevant features on the site, where applicable.

Refer to Appendix B

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity to be attached in the appropriate Appendix.

Refer to Appendix C

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

Note: Complete Section B for the proposal and alternative(s) (if necessary)

PLEASE NOTE: THIS SECTION IS FOR BOTH THE PROPOSED ALTERNATIVE AND ALTERNATIVE 1 AS BOTH ALTERNATIVES ARE SITUATED ON THE SAME STUDY AREA AND THEREFORE THE ENVIRONMENTAL INVESTIGATION IS APPLICABLE FOR BOTH ALTERNATIVES.

Instructions for completion of Section B for linear activities

- 1) For linear activities (pipelines etc) it may be necessary to complete Section B for each section of the site that has a significantly different environment.
- 2) Indicate on a plan(s) the different environments identified
- 3) Complete Section B for each of the above areas identified
- 4) Attach to this form in a chronological order
- 5) Each copy of Section B must clearly indicate the corresponding sections of the route at the top of the next page.

Section B has been duplicated for sections of the route times

Instructions for completion of Section B for location/route alternatives

- 1) For each location/route alternative identified the entire Section B needs to be completed
- 2) Each alternative location/route needs to be clearly indicated at the top of the next page
- 3) Attach the above documents in a chronological order

Section B has been duplicated for location/route alternatives times (complete only when appropriate)

Instructions for completion of Section B when both location/route alternatives and linear activities are applicable for the application

Section B is to be completed and attachments order in the following way

- All significantly different environments identified for Alternative 1 is to be completed and attached in a chronological order; then
- All significantly different environments identified for Alternative 2 is to be completed and attached chronological order, etc.

Section B - Section of Route (complete only when appropriate for above)

Section B – Location/route Alternative No. (complete only when appropriate for above)

1. PROPERTY DESCRIPTION

Property description:
(Including Physical Address and Farm name, portion etc.)

The proposed Peach Tree X23 is for the establishment of a light industrial township on **a part of Portion 109 and a part of Remainder of Portion 331 of the Farm Knopjeslaagte 385 JR, City of Tshwane, Gauteng.**

The study area is situated east of the R511 Road and north of the N14, adjacent to the Centurion Flight Academy (Pty) Ltd. The R114 runs along the site's northern boundary. Major city attractions such as the Zwartkops Raceway and the Gautrain Station are situated in the area.

2. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in decimal degrees. The degrees should have at least six decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

Alternative:

Latitude (S):	Longitude (E):
25°54'23.54"S	28°01'56.02 "E

In the case of linear activities:

Alternative:

- Starting point of the activity
- Middle point of the activity
- End point of the activity

Latitude (S):	Longitude (E):

For route alternatives that are longer than 500m, please provide co-ordinates taken every 250 meters along the route and attached in the appropriate Appendix

Addendum of route alternatives attached

The 21 digit Surveyor General code of each cadastral land parcel

PROPOSAL	T	0	J	R	0	0	0	0	0	0	0	0	0	3	8	5	0	0	1	0	9
	T	0	J	R	0	0	0	0	0	0	0	0	0	3	8	5	0	0	3	3	1
ALT. 1	T	0	J	R	0	0	0	0	0	0	0	0	0	3	8	5	0	0	1	0	9
	T	0	J	R	0	0	0	0	0	0	0	0	0	3	8	5	0	0	3	3	1
ALT. 2																					
etc.																					

3. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
------	--------------------	-------------	-------------	--------------	-------------	------------------

4. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site.

Ridgeline	Plateau	Side slope of hill/ridge	Valley	Plain	Undulating plain/low hills	River front
-----------	---------	--------------------------	--------	--------------	----------------------------	-------------

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

a) Is the site located on any of the following?

Shallow water table (less than 1.5m deep)

Dolomite, sinkhole or doline areas

Seasonally wet soils (often close to water bodies)

Unstable rocky slopes or steep slopes with loose soil

Dispersive soils (soils that dissolve in water)

Soils with high clay content (clay fraction more than 40%)

Any other unstable soil or geological feature

YES	Perched water table could be possible after periods of high rainfall	NO X
		NO X
		NO X
		NO X
		NO X
		NO X
		NO X

An area sensitive to erosion



(Information in respect of the above will often be available at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

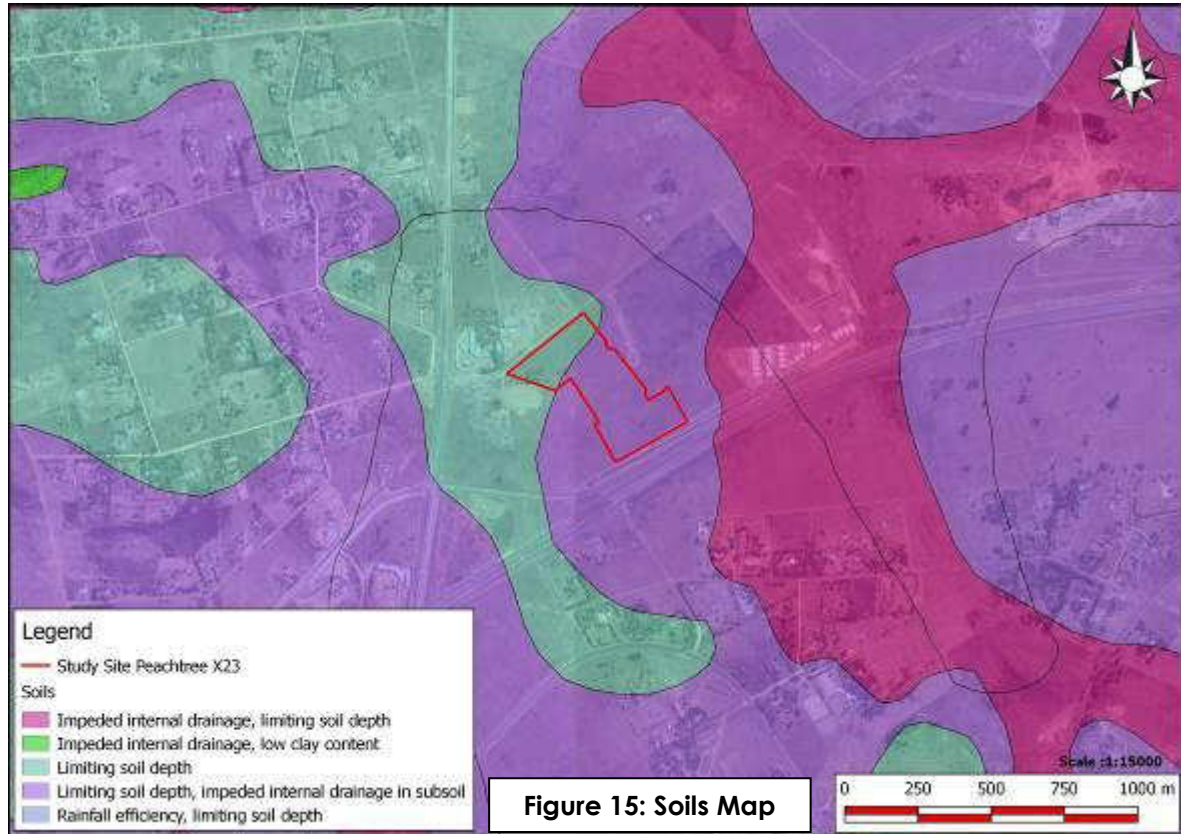


Figure 15: Soils Map

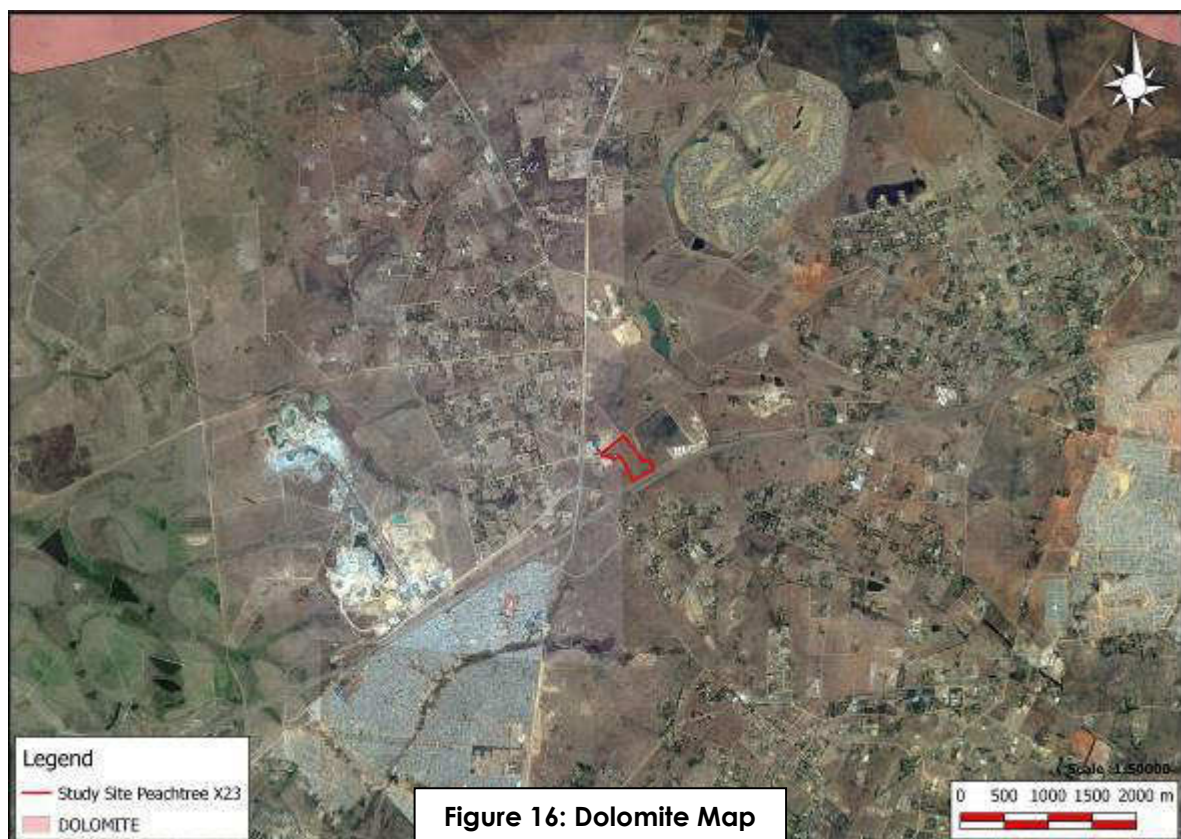


Figure 16: Dolomite Map

b) are any caves located on the site(s)

	NO
	X

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	Longitude (E):

c) are any caves located within a 300m radius of the site(s)

	NO
	X

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	Longitude (E):

d) are any sinkholes located within a 300m radius of the site(s)

	NO
	X

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	Longitude (E):

If any of the answers to the above are "YES" or "unsure", specialist input may be requested by the Department

According to the 1: 50 000 scale geological map the site is underlain by migmatite gneiss (granite) of the Halfway House Suite. The geology of the site was confirmed during a Geological Investigation, granite bedrock was encountered in the test pits. The following materials were encountered on the site:

Ferricrete

Slightly moist, dark brown becoming yellow mottled orange and black, loose, silty, sandy, fine and medium gravel consisting of hard, round, intact, nodular ferricrete and medium ferricrete concretions and with scattered medium sized quartz cobbles was encountered in twenty-three test pits from an average depth of 0,4 meters up to an average depth of 1,0 meters. In nine test pits the back actor refused hardpan ferricrete at an average depth of 0,7 meters.

Granite

Residual granite consisting of slightly moist, greyish white mottled orange and black, firm, intact, clayey sand with medium and large ferricrete concretions and with patches of very soft rock granite was encountered in three test pits from an average depth 0,7 meters up to an average depth of 1,3 meters and slightly moist, greyish white mottled orange, firm, intact, silty sand with very soft rock fragments was encountered in two test pits from an average depth 1,0 meters up to an average depth of 1,6 meters. Very soft rock granite was encountered in sixteen test pits from an average depth of 1,3 meters up to an average depth of 1,7 meters.

The condition encountered on site is very favourable for commercial and light industrial development. Most of the disturbed material will be re-used in the platforms that are typically associated with warehouse type structures.

The site slopes at an average of 4% towards the north east. No ground water was encountered during the investigation. The presence of pedogenic material however indicates that a perched water table could be present during and after periods of high rainfall.

Recommendations as per the Geotechnical Report should be followed concerning all construction activities to the site. **Please refer to Appendix G3**

for the Geotechnical Report.

6. AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 4)?

	NO X
--	-----------------------

Please note: The Department may request specialist input/studies in respect of the above.

7. GROUNDCOVER

To be noted that the location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Indicate the types of groundcover present on the site and include the estimated percentage found on site

Natural veld - good condition % = 40	Natural veld with scattered aliens % = 45	Natural veld with heavy alien infestation % = 15	Veld dominated by alien species % =	Landscaped (vegetation) % =
Sport field % =	Cultivated land % =	Paved surface (hard landscaping) % =	Building or other structure % =	Bare soil % =

Please note: The Department may request specialist input/studies depending on the nature of the groundcover and potential impact(s) of the proposed activity/ies.

Are there any rare or endangered flora or fauna species (including red list species) present on the site

	NO X
--	-----------------------

If YES, specify and explain:

A Flora Assessment was conducted for a larger study area on Portion 105, 109 and the remainder of 331 of the farm Knopjeslaagte 385 JR. Only one Orange Listed Plant Species, namely *Hypoxis hemerocallidea*, was recorded on the larger study site. This Orange Listed Plant Species need to be removed and re-planted prior to construction.

Are there any rare or endangered flora or fauna species (including red list species) present within a 200m (if within urban area as defined in the Regulations) or within 600m (if outside the urban area as defined in the Regulations) radius of the site.

	NO X
--	-----------------------

If YES, specify and explain:

--

Are there any special or sensitive habitats or other natural features present on the site?

YES X	
The site is considered moderately sensitive with a patch that is not sensitive.	

If YES, specify and explain:

Flora:
According to the Ecologist, the study site lies in the Quarter Degree Square

(QDS) 2528CC. Mucina and Rutherford (2006) which forms part of the Egoli Granite Grassland. This vegetation unit is considered Endangered according to the National list of threatened terrestrial ecosystems for South Africa, 2011 (Government Gazette no. 34809, 2011).

The authors described the landscape of the Egoli Granite Grassland as low hills and moderately undulating plains, which support tall grass species such as *Hyparrhenia hirta*, dominating the area. Scattered rocky outcrops and rock sheets form suitable habitats for woody species. This study unit is regarded as moderate sensitive, on account of the high number of species recorded and suitable habitat it provides for several Red List species known to occur in the QDS 2528CC. According to the GDARD five Red List species occur within a 5 km radius from the study site.

The study site was not considered ecological sensitive, due to anthropogenic influences such as urban development threatening this ecosystem. **Refer to Figure 17, for the vegetation sensitivity map.**

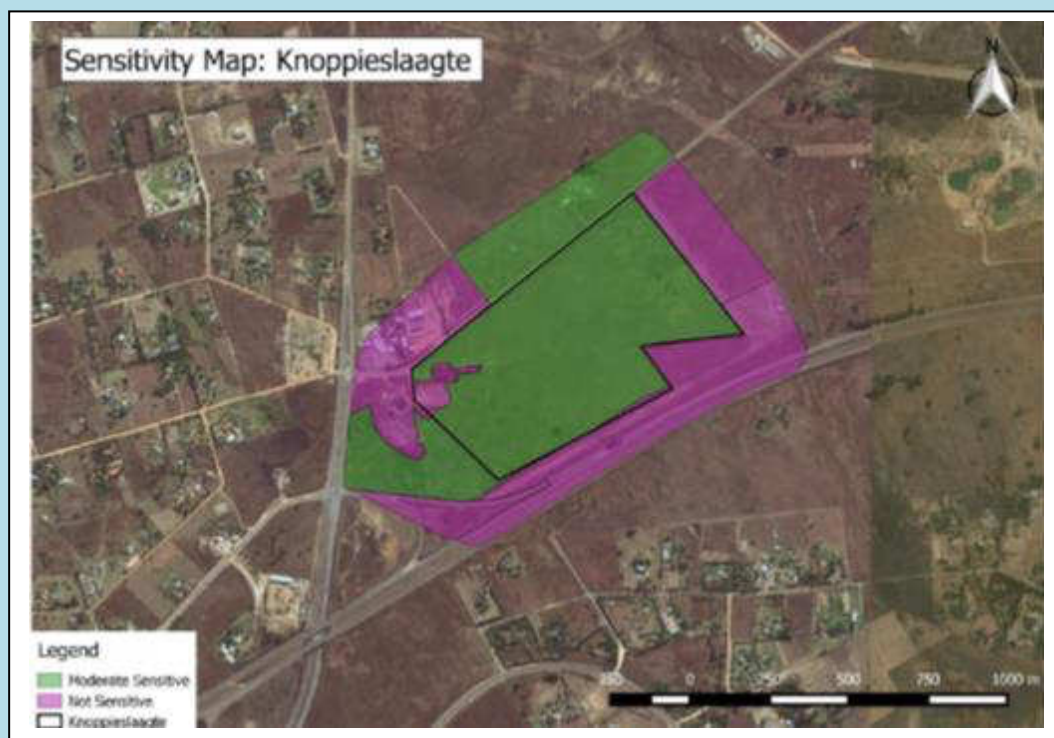


Figure 17: Vegetation Sensitivity Map

Twenty two Red and Orange Listed Species are known to occur in the QDS 2528CC, from which only one Orange Listed Plant Species (*Hypoxis hemerocallidea*) were found on the study site.

The following recommendations have been made by the specialist;

- The above sensitivity map should be used as a decision tool to guide the layout design (**Figure 4**).
- A pre- and post-construction alien invasive control, monitoring and eradication programme must be implemented along with an on-going programme to ensure persistence of indigenous species. A qualified botanist/ecologist should compile and supervise the implementation of

this programme.

- Rehabilitation of natural vegetation should proceed in accordance with a rehabilitation plan compiled by a specialist registered in terms of the Natural Scientific Professions Act (No. 27 of 2003) in the field of Ecological Science.
- Where active rehabilitation or restoration is mandatory, it should make use of indigenous plant species native to the study area. The species selected should strive to represent habitat types typical of the ecological landscape prior to construction. As far as possible, indigenous plants naturally growing within the vicinity of the study area, but would otherwise be destroyed during construction, should be used for re-vegetation/landscaping purposes.
- Only plant species that are indigenous to the natural vegetation of the study site should be used for landscaping in communal areas. As far as possible, plants naturally growing on the development site, but would otherwise be destroyed during clearing for development purposes, should be incorporated into landscaped areas. Forage and host plants required by pollinators should also be planted in landscaped areas.
- In order to minimize artificially generated surface storm water runoff, total sealing of paved areas such as parking lots, driveways, pavements and walkways should be avoided. Permeable material should rather be utilized for these purposes.
- A rescue plan for the Orange Listed Species, *Hypoxis hemerocallidea* needs to be incorporated into the EMP prior to construction.

It was concluded by the specialist that it should be mandatory that the Orange Listed Species *Hypoxis hemerocallidea* be removed and re-planting prior to construction. All alien species in the study site, especially Category 1b must be eradicated as a matter of urgency, to preclude their spreading during the construction phase.

Fauna:

One Faunal habitat type was identified in the study area, namely a Secondary Grassland.

- **Mammals**

The majority of the terrestrial habitats present on the study area experience anthropogenic disturbances, which decrease the probability occurrence of both the Serval (*Leptailurus serval*) and Southern African hedgehog (*Atelerix frontalis*). Isolation from similar natural habitats threatens this Disturbed and Secondary Grassland, as genetic variation amongst species will be reduced. The study area is deemed to have a moderate ecological sensitivity from a mammalian point of view.

- **Herpetofauna**

The specialist deemed the study area unsuitable for threatened and near threatened Herpetofauna. In addition, no suitable habitat for any threatened and/or near threatened Herpetofauna species such as the Striped Harlequin Snake (*Homoroselaps dorsalis*) was observed during the field survey.

- **Avifauna**

The secondary grassland habitat identified within the study area contained a

low Avifaunal diversity and density. The majority of the species observed during the field survey are grassland associated species as well as widespread species adapted to a transformed and/or urban environment. However, suitable breeding and foraging habitat for the regionally Vulnerable White-bellied Korhaan was confirmed to be present within the study area. None of the other threatened and/or near threatened bird species previously recorded within the larger QDS are expected to be resident or rely on the study area for survival. As such it is not feasible to conserve this area since it is not viable as a sustainable habitat for bird species with conservation concerns in the long-term.

• Invertebrate

Invertebrates occur in a wide variety of habitats and can survive even in harsh environments. Therefore, even if the study site is disturbed, numerous invertebrates could occur on site. However, the Secondary Grassland is not particularly suitable for any of the mentioned threatened species listed in the GDARD C-plan v3.3. For example, the Roodepoort Copper Butterfly (*Aloeides dentatis* subsp. *dentatis*) prefers a predictable Grassland habitat where specific ant species are present. The probability of locating this species is unlikely as disturbances decrease the favourability of this specific habitat. No other Threatened or Near Threatened invertebrate species are expected to occur in this particular disturbed Grassland habitat on account of minimal optimal habitat and various anthropogenic disturbances within the habitat units.

Was a specialist consulted to assist with completing this section

YES X	
------------------------	--

If yes complete specialist details

Name of the specialist:	Sampie van Rooyen		
Qualification(s) of the specialist:	Hons BSc. Environmental Sciences: Restoration Ecology		
Postal address:	P.O Box 11375, Maroelana, Pretoria		
Postal code:	0161		
Telephone:	012 346 3810	Cell:	-
E-mail:	corne@bokamoso.net	Fax:	086 570 5659

Are any further specialist studies recommended by the specialist?

	NO X
--	-----------------------

If YES, specify:

--

If YES, is such a report(s) attached?

YES	NO
-----	----

If YES list the specialist reports attached below

--

Signature of specialist:

Date:

April 2016

Please note; If more than one specialist was consulted to assist with the filling in of this section then this table must be appropriately duplicated

If yes complete specialist details

Name of the specialist:	CW Vermeulen		
Qualification(s) of the specialist:	BSc. Biological and Environmental Sciences);		
Postal address:	P.O Box 11375, Maroelana, Pretoria		
Postal code:	0161		
Telephone:	012 346 3810	Cell:	-

E-mail:

Fax:

Are any further specialist studies recommended by the specialist?

YES	NO
	X

If YES, specify:

If YES, is such a report(s) attached?

YES	NO
-----	----

If YES list the specialist reports attached below

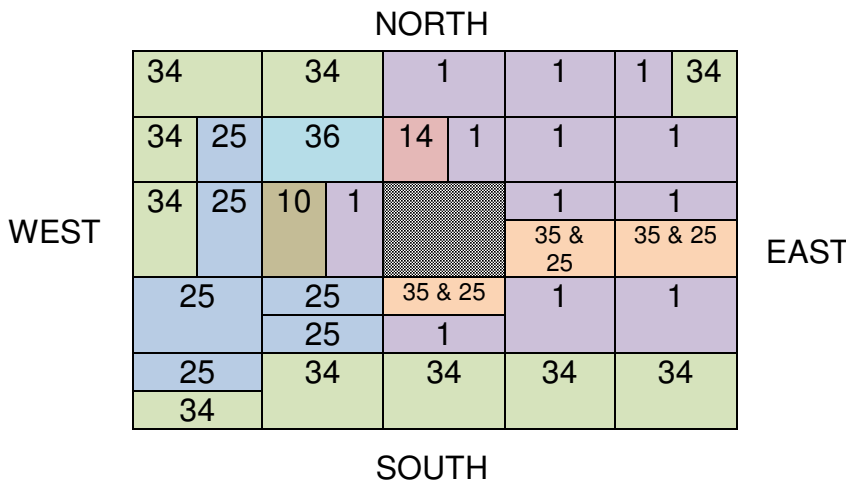
Signature of specialist: _____ Date:

8. LAND USE CHARACTER OF SURROUNDING AREA

Using the associated number of the relevant current land use or prominent feature from the table below, fill in the position of these land-uses in the vacant blocks below which represent a 500m radius around the site

1. Vacant land	2. River, stream, wetland	3. Nature conservation area	4. Public open space	5. Koppie or ridge
6. Dam or reservoir	7. Agriculture	8. Low density residential	9. Medium to high density residential	10. Informal residential
11. Old age home	12. Retail	13. Offices	14. Commercial & warehousing	15. Light industrial
16. Heavy industrial ^{AN}	17. Hospitality facility	18. Church	19. Education facilities	20. Sport facilities
21. Golf course/polo fields	22. Airport ^N	23. Train station or shunting yard ^N	24. Railway line ^N	25. Major road (4 lanes or more) ^N
26. Sewage treatment plant ^A	27. Landfill or waste treatment site ^A	28. Historical building	29. Graveyard	30. Archeological site
31. Open cast mine	32. Underground mine	33. Spoil heap or slimes dam ^A	34. Small Holdings	
Other land uses (describe):	36. Filling Station	35. Flight Academy		

NOTE: Each block represents an area of 250m X 250m, if your proposed development is larger than this please use the appropriate number and orientation of hashed blocks



Note: More than one (1) Land-use may be

indicated in a block

Please note: The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed activity/ies. Specialist reports that look at health & air quality and noise impacts may be required for any feature above and in particular those features marked with an ^A and with an ^N respectively.

Have specialist reports been attached

YES	No
	X

If yes indicate the type of reports below

9. SOCIO-ECONOMIC CONTEXT

Describe the existing social and economic characteristics of the area and the community condition as baseline information to assess the potential social, economic and community impacts.

The developer recognised the need and desirability for an industrial development (light industrial) to be known as Peach Tree X23.

The Centurion West Area is one of the fastest growing regions in the City, even in this current difficult economic climate. A substantial part of these developments are of a commercial and industrial nature, and are thus in a sense “job creator” land-uses. The development will contribute to the tax base of the City of Tshwane in the form of rates and taxes, as well as possible bulk services contributions payable to Tshwane.

The development can be regarded as being desirable and will have several beneficial social and economic impacts on the area, which can be summarised as follow:

- Optimum utilisation of services and infrastructure;
- Increase in property values of surrounding properties; and
- Increased security.

This proposed development could play an important part in the unlocking of the inherent potential of the surrounding properties in the area. It will also contribute to the overall efficiency, sustainability and improved quality and liveability of the greater metropolitan area. The development will ensure the following:

- Infill Development
- New work opportunities in close proximity to place of residence
- Optimal Use of Existing Infrastructure

The Gauteng Spatial Development Framework (GSDF) is intended to serve as an instrument for addressing past spatial imbalances in Gauteng, while at the same time guiding development towards a sustainable, equitable and economically viable future settlement pattern. The objective of the GSDF is to provide an indication of the most desirable settlement pattern for the Gauteng Province. The GSDF is thus envisaged to be a tool that will contribute to the redressing of past spatial imbalances, while at the same time, guiding development towards a sustainable, equitable and economically viable future settlement pattern.

The Gauteng Spatial Development Framework identified critical factors for development in the province, namely:

□ **Contained urban growth:**

To contain urban growth an urban edge was identified to curb urban sprawl. The idea behind the urban edge is to limit development within certain areas of a city. The goal is to curb urban sprawl and thereby protecting the natural environment. One way to do this is to increase the densities of the built environment within the urban edge. This edge is however not set in stone and can be amended if development pressure in the area requires the alteration of this “line” or edge. Normally, areas identified for future development or as future

development nodes are not included within the urban edge of a municipality.

❑ **Resourced based economic development:**

Resource based economic development should result in identification of the economic core. Development should be encouraged in close proximity to existing resources, which includes infrastructure such as roads, water and electricity. The proposed development is situated near existing and adjacent to approved proposed developments and infrastructure networks. Recent similar approved township establishment applications indicate that there is a growing economic base in the area.

❑ **Re-direction of urban growth:**

Developments in economically non-viable areas should be limited and thereby achieving growth within the economic growth sphere. Several new township applications have been approved in the Centurion West area in close proximity to the application site. In terms of the densification strategy, linear zones refer specifically to high activity areas that are located along major routes (M26/ Main Road).

❑ **Increased access and mobility:**

New land development areas should be planned/ design to increase access and mobility of these developments. The proposed land development area could be regarded as accessible due to its locality adjacent to Main Road/ M26, R511 and N14 Highway. The application site can furthermore be regarded as strategically located due to its close proximity to existing residential (formal and informal) townships and it can therefore be argued that it addresses the spatial inequalities of the past through the provision of employment opportunities in close proximity to residences, with a variety of public transport systems being available to the public.

The proposed development will have several beneficial social, economic and ecological impacts once the construction thereof is finalised, which can be summarised as follow:

- Reduction of potential dumping areas and informal settlements.
- Optimum utilisation of services and infrastructure.
- Expansion of municipal infrastructure and services
- Increase in property values of surrounding properties.
- Increased security.
- Eradication of invasive species.
- Compatibility with surrounding land-uses.
- Landscaping could improve fauna numbers and species.

10. CULTURAL/HISTORICAL FEATURES

Please be advised that if section 38 of the National Heritage Resources Act 25 of 1999 is applicable to your proposal or alternatives, then you are requested to furnish this Department with written comment from the South African Heritage Resource Agency (SAHRA) – Attach comment in appropriate annexure

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorized as-

- (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
- (b) the construction of a bridge or similar structure exceeding 50m in length;
- (c) any development or other activity which will change the character of a site-
 - (i) exceeding 5 000 m2 in extent; or
 - (ii) involving three or more existing erven or subdivisions thereof; or
 - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
 - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
- (d) the re-zoning of a site exceeding 10 000 m2 in extent; or
- (e) 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.

Are there any signs of culturally (aesthetic, social, spiritual, environmental) or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including archaeological or palaeontological sites, on or close (within 20m) to the site?

Unsure	
--------	--

If YES, explain:

If uncertain, the Department may request that specialist input be provided to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist if one was already appointed:

A Heritage specialist has been appointed to conduct a Heritage Impact Assessment which will be included within the FBAR. Due to the study area being in close proximity to the Cradle of Humankind we thought it necessary to conduct a Heritage Impact Assessment. **Refer to Figure 5 for the Cradle of Humankind map (earlier in the report).**

Will any building or structure older than 60 years be affected in any way?

	NO X
	NO X

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

If yes, please attached the comments from SAHRA in the appropriate Appendix

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

1. The Environmental Assessment Practitioner must conduct public participation process in accordance with the requirement of the EIA Regulations, 2014.

2. LOCAL AUTHORITY PARTICIPATION

Local authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least thirty (30) calendar days before the submission of the application to the competent authority.

Was the draft report submitted to the local authority for comment?

YES	
X	

If yes, has any comments been received from the local authority?

	NO
	X

If "YES", briefly describe the comment below (also attach any correspondence to and from the local authority to this application):

If "NO" briefly explain why no comments have been received or why the report was not submitted if that is the case.

The Basic Assessment Report is still in Draft form and is now distributed to the I&AP's and stakeholders for review. All comments will be included in the Final Basic Assessment Report.

3. CONSULTATION WITH OTHER STAKEHOLDERS

Any stakeholder that has a direct interest in the activity, site or property, such as servitude holders and service providers, should be informed of the application at least **thirty (30) calendar days** before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders?

	NO
	X

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

If "NO" briefly explain why no comments have been received

The Basic Assessment Report is still in Draft form and is now distributed to the I&AP's and stakeholders for review. All comments will be included in the Final Basic Assessment Report.

4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

The Environmental Assessment Practitioner must ensure that the public participation process is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees and ratepayers associations. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was flawed.

The EAP must record all comments and respond to each comment of the public / interested and affected party before the application report is submitted. The comments and responses must be captured in a Comments and Responses Report as prescribed in the regulations and be attached to this application.

5. APPENDICES FOR PUBLIC PARTICIPATION

All public participation information is to be attached in the appropriate Appendix. The information in this Appendix is to be ordered as detailed below

Appendix 1 – Proof of site notice

Appendix 2 – Written notices issued as required in terms of the regulations

Appendix 3 – Proof of newspaper advertisements

Appendix 4 – Communications to and from interested and affected parties

Appendix 5 – Minutes of any public and/or stakeholder meetings

Appendix 6 - Comments and Responses Report

Appendix 7 –Comments from I&APs on Basic Assessment (BA) Report

Appendix 8 –Comments from I&APs on amendments to the BA Report

Appendix 9 – Copy of the register of I&APs

Refer to Appendix E for the Public Participation information.

SECTION D: RESOURCE USE AND PROCESS DETAILS

Note: Section D is to be completed for the proposal and alternative(s) (if necessary)

PLEASE NOTE: THIS SECTION IS FOR THE PROPOSED ALTERNATIVE

Instructions for completion of Section D for alternatives

- 1) For each alternative under investigation, where such alternatives will have different resource and process details (e.g. technology alternative), the entire Section D needs to be completed
- 4) Each alternative needs to be clearly indicated in the box below
- 5) Attach the above documents in a chronological order

Section D has been duplicated for alternatives times (Complete only when appropriate)

Section D Alternative No. (complete only when appropriate for above)

1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

YES	
X	
Not yet available	

If yes, what estimated quantity will be produced per month?

How will the construction solid waste be disposed of (describe)?

During the construction phase the disposal of solid waste will be the responsibility of the developer. An area on the application site will be earmarked for dumping of solid waste to be disposed of during construction. In order not to have a visual impact on the surrounding residents the waste must be situated carefully. The demarcated area must be easily accessible for dumping trucks to collect waste. The waste will be carted to a registered landfill site.

Where will the construction solid waste be disposed of (describe)?

All solid waste resulting from construction activities will be disposed nearest registered landfill site allowed to take building rubble. No solid waste will be dumped on open or adjacent properties.

Will the activity produce solid waste during its operational phase?

YES	NO
X	
Not yet available	

If yes, what estimated quantity will be produced per month?

How will the solid waste be disposed of (describe)?

This will be the responsibility of the Local Municipality. If the Local Municipality does not have the capacity for waste disposal, the developer will appoint a waste removal company to dispose of the solid waste generated by the Industrial Township.

Has the municipality or relevant service provider confirmed that sufficient air space exists for treating/disposing of the solid waste to be generated by this activity?

	NO X
--	----------------

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

The solid waste will be disposed to the nearest landfill site.

Note: If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

	NO X
--	----------------

If yes, inform the competent authority and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility?

	NO X
--	----------------

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Describe the measures, if any, that will be taken to ensure the optimal reuse or recycling of materials:

It is recommended that all construction waste materials be sorted into recyclable materials and non-recyclable materials and the recyclable materials should be re-used or disposed of by a recycling company.

Liquid effluent (other than domestic sewage)

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

YES	NO X
-----	----------------

If yes, what estimated quantity will be produced per month?

m³

If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the liquid effluent to be generated by this activity (ies)?

YES	NO
-----	----

Will the activity produce any effluent that will be treated and/or disposed of on site?

Yes	NO X
-----	----------------

If yes, what estimated quantity will be produced per month?

m³

If yes describe the nature of the effluent and how it will be disposed.

Not applicable.

Note that if effluent is to be treated or disposed on site the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA

Will the activity produce effluent that will be treated and/or disposed of at another facility?

	NO X
--	----------------

If yes, provide the particulars of the facility:

Facility name:		
Contact person:		
Postal address:		
Postal code:		
Telephone:	Cell:	
E-mail:	Fax:	

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

Not applicable.

Liquid effluent (domestic sewage)

According to the engineer, there are no formal sewer reticulation / bulk connection available in the vicinity of the proposed development. Based on discussions one of the previous land owners has confirmed that a proposal made to council to allow a sewer treatment works (also known as a Package Plant) on portion 109 of the farm of Knopjeslaagte 385 JR was approved as a temporary solution. Based on this it is also our proposal as a temporary solution to install a sewer package plant that will be designed and constructed to a specification that will be in line with council requirements and with

sufficient capacity to service the proposed development until the council main sewer connection is available. This plant is constructed as a mobile unit, consisting of skid mounted containers, 2x12m containers and 1x6m container. These units will be removed once the CTMM connection is available.

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?

If yes, what estimated quantity will be produced per month?

If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the domestic effluent to be generated by this activity (ies)?

YES X	NO
Not yet available	
YES	NO It is requested that City of Tshwane Metropolitan Municipality circulate the Draft Basic Assessment Report to all the necessary sectors within their Department to provide us with comments and confirmation of whether the Municipality will be able to provide services to the proposed development. It has been confirmed that a proposal made to the council to allow a sewer treatment works on Potion 109 of Knopjeslaagte 385 JR was approved as a temporary solution. Refer to Annexure G5 for the approval letter. Based on this it is our proposal as a temporary solution to install a sewer package plant that will be designed and constructed to a specification that will be in line with council requirements and with sufficient capacity to service the proposed development until the council's main sewer connection is available.

Will the activity produce any effluent that will be treated and/or disposed of on site?

YES X	
------------------------	--

If yes describe how it will be treated and disposed off.

Refer to Annexure G5 for a full technical description of the proposed plant.

The internal network will be provided with a 160mm and 200mm HDPE pipe. It will be connected to a sewer package plant that will be constructed on the north eastern side of the development. The development will connect on the municipal sewer reticulation as soon as it is available as an alternative.

Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

	NO X
--	-----------------------

If yes, is it controlled by any legislation of any sphere of government?

Not applicable	
----------------	--

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

The proposed development will not generate any emissions. Some additional vehicle/truck traffic during the construction phase may have an influence but this can be regarded as insignificant.

2. WATER USE

Indicate the source(s) of water that will be used for the activity

municipal	Directly from water board	groundwater	river, stream, dam or lake	Other	the activity will not use water
-----------	----------------------------------	-------------	----------------------------	-------	---------------------------------

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

Not applicable

If Yes, please attach proof of assurance of water supply, e.g. yield of borehole, in the appropriate Appendix
Does the activity require a water use permit from the Department of Water Affairs?

	NO X
--	-----------------------

If yes, list the permits required

However, please take note of the section below regarding an alternative.

If yes, have you applied for the water use permit(s)?

	NO X
--	-----------------------

If yes, have you received approval(s)? (attached in appropriate appendix)

No formal City of Tshwane water reticulation is available in the vicinity of the proposed development, however closer investigation revealed a bulk water line on the western boundary of the development. The civil engineer presumes this line is the property of Rand Water and will provide confirmation of ownership as soon as possible. The bulk line is located on Portion 331 of the Farm Knopjeslaagte 358 JR on the western side of the development.

The proposed alternative is to supply the development with a water connection from the existing water line located over Portion 331. The proposed development's internal network will be supplied with a 110mm \varnothing , 200mm \varnothing and a 250mm \varnothing HDPE pipe class 16. It will connect to the existing 250mm \varnothing water pipe (proposed alternative).

As an **alternative** the development can connect as per the GLS report, however this will not be a cost effective option. The proposed route as identified by GLS in their report will result in having to cross the Swart Booi Spruit, which will require a **water-use license application** that will impact the viability if such a connection point.

These proposed upgrades (alternative 1) are not feasible when the proposed alternative is readily available on site;

- 475 m x 600 mm \varnothing REPLACEMENT pipe (replacing an existing 110 mm \varnothing pipe);
- 460 m x 450 mm \varnothing main pipe;
- 710 m x 450 mm \varnothing main pipe;
- 1 045 m x 355 mm \varnothing main pipe; and
- 1 580 m x 250 mm \varnothing main pipe (this pipe is internal to the development).

These upgrades will require a water use license application.

3. POWER SUPPLY

Please indicate the source of power supply e.g. Municipality / Eskom / Renewable energy source

Eskom confirmed to the Proposed Peach Tree Extensions 15 and 16 Developments that they are presently not able to supply bulk power to those developments, in the near future. Therefore, with Peach Tree X23 development (this development), situated next to those developments, it is recommended that negotiations are entered into with the City of Tshwane, for the supply of bulk power to this development. City of Tshwane: Energy & Electricity Department is in the process of establishing a new 11kV satellite substation in the close vicinity of the existing Copperleaf Golf Estate. This substation should be completed within the next nine months.

Therefore, due to the above-mentioned and the location of this satellite substation, negotiations will be entered into with the CoT, for the supply of bulk power to this proposed development.

It is suggested that this be made a recommendation of the Environmental Authorization that confirmation of electricity should be obtained prior to commencement of construction on site.

If power supply is not available, where will power be sourced from?

Not applicable.

4. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

The following could be considered:

- Where possible energy saving light bulbs must be used in all the units as well as outside.
- Time switches must be used for outdoor lighting.
- Geysers must be fitted with insulation blankets.
- Solar panels can be used to heat the water and geysers and for outdoor lighting.

The developer is committed to search and investigate more solutions and opportunities to increase the sustainability of this development making it a project that will be a landmark on many levels.

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

The following alternative energy sources can be considered:

Hydro Power

This option was rejected because the hydrological conditions required for hydro generation in this area could not be met i.e. water quantity, etc.

Wind turbines

This option was rejected because the wind conditions required cannot be met in this region.

Biomass

This option was rejected because the fuel required for producing electricity is

not locally available, the distance between the source of biomass and the power plant must be short for economic viability.

Gas

This option was rejected because natural gas is not available and the energy spent in processing the gas and transporting it affects the viability of this process.

Coal fired generation

This option was rejected because of the distance from the coal fields and because pollution is not allowed in this area.

Nuclear

This option could not be considered due to South Africa's nuclear policy.

PLEASE NOTE: THIS SECTION IS FOR ALTERNATIVE 1 (HEAVY INDUSTRIAL).

Instructions for completion of Section D for alternatives

- 1) For each alternative under investigation, where such alternatives will have different resource and process details (e.g. technology alternative), the entire Section D needs to be completed
- 4) Each alternative needs to be clearly indicated in the box below
- 5) Attach the above documents in a chronological order

Section D has been duplicated for alternatives times (Complete only when appropriate)

Section D Alternative No. (complete only when appropriate for above)

5. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

YES	<input type="checkbox"/>
X	<input checked="" type="checkbox"/>

If yes, what estimated quantity will be produced per month?

Not yet available

How will the construction solid waste be disposed of (describe)?

During the construction phase the disposal of solid waste will be the responsibility of the developer. An area on the application site will be earmarked for dumping of solid waste to be disposed of during construction. In order not to have a visual impact on the surrounding residents the waste must be situated carefully. The demarcated area must be easily accessible for dumping trucks to collect waste. The waste will be carted to a registered landfill site.

Where will the construction solid waste be disposed of (describe)?

All construction waste will be disposed of at the nearest registered dumping site. No solid waste will be dumped on surrounding open areas or adjacent properties.

Will the activity produce solid waste during its operational phase?

YES	NO
X	<input type="checkbox"/>

If yes, what estimated quantity will be produced per month?

Not yet available

How will the solid waste be disposed of (describe)?

This will be the responsibility of the Local Municipality.

Has the municipality or relevant service provider confirmed that sufficient air space exists for treating/disposing of the solid waste to be generated by this activity?

<input type="checkbox"/>	NO
<input checked="" type="checkbox"/>	X

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

The solid waste will be disposed to the nearest landfill site.

Note: If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

<input type="checkbox"/>	NO
<input checked="" type="checkbox"/>	However, with a heavy industrial development

there will always be a possibility of hazardous waste/substances depending on the type of industries occupying the area.

If yes, inform the competent authority and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility?

NO
X

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Describe the measures, if any, that will be taken to ensure the optimal reuse or recycling of materials:

It is recommended that all construction waste materials be sorted into recycle-able materials and non-recycle-able materials and the recycle-able materials should be re-used or disposed of by a recycling company.

Liquid effluent (other than domestic sewage)

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

NO
X
Once again, with a heavy industrial development there will always be a possibility of hazardous waste/substances depending on the type of industries occupying the area.

If yes, what estimated quantity will be produced per month?
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the liquid effluent to be generated by this activity (ies)?

Will the activity produce any effluent that will be treated and/or disposed of on site?

NO
X

If yes, what estimated quantity will be produced per month?

If yes describe the nature of the effluent and how it will be disposed.

Not applicable.

Note that if effluent is to be treated or disposed on site the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA

Will the activity produce effluent that will be treated and/or disposed of at another facility?

NO
X

If yes, provide the particulars of the facility:

Facility name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

Not applicable.

Liquid effluent (domestic sewage)

According to the engineer, there are no formal sewer reticulation / bulk connection available in the vicinity of the proposed development. Based on discussions one of the previous land owners has confirmed that a proposal made to council to allow a sewer treatment works (also known as a Package Plant) on portion 109 of the farm of Knopjeslaagte 385 JR was approved as a temporary solution. Based on this it is also our proposal as a temporary solution to install a sewer package plant that will be designed and constructed to a specification that will be in line with council requirements and with sufficient capacity to service the proposed development until the council main sewer connection is available. This plant is constructed as a mobile unit, consisting of skid mounted containers, 2x12m containers and 1x6m container. These units will be removed once the CTMM connection is available.

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?

If yes, what estimated quantity will be produced per month?

If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the domestic effluent to be generated by this activity (ies)?

	YES X	NO
	N/A	
	<p>NO</p> <p>It is requested that City of Tshwane Metropolitan Municipality circulate the Draft Basic Assessment Report to all the necessary sectors within their Department to provide us with comments and confirmation of whether the Municipality will be able to provide services to the proposed development. It has been confirmed that a proposal was made to the council to allow a sewer treatment works on Potion 109 of Knopjeslaagte 385 JR was approved as a temporary solution. Refer to Annexure G5 for the approval letter. Based on this it is our proposal as a temporary solution to install a sewer package plant that will be designed and constructed to a specification that will be in line with council requirements and with sufficient capacity to service the proposed development until the council's main</p>	

	sewer connection is available.
--	---------------------------------------

Will the activity produce any effluent that will be treated and/or disposed of on site?

YES	
X	

If yes describe how it will be treated and disposed off.

Refer to Annexure G5 for a full technical description of the proposed plant.

The internal network will be provided with a 160mm \varnothing and 200mm \varnothing HDPE pipe. It will be connected to a sewer package plant that will be constructed on the north eastern side of the development. The development will connect on the municipal sewer reticulation as soon as it is available as an alternative.

Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

	NO
	X
Not applicable	

If yes, is it controlled by any legislation of any sphere of government?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.
If no, describe the emissions in terms of type and concentration:

The proposed development will not generate any emissions. Some additional vehicle/truck traffic during the construction phase may have an influence but this can be regarded as insignificant.

6. WATER USE

Indicate the source(s) of water that will be used for the activity

municipal	Directly from water board	groundwater	river, stream, dam or lake	Other	the activity will not use water
-----------	----------------------------------	-------------	----------------------------	-------	---------------------------------

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

Not applicable

If Yes, please attach proof of assurance of water supply, e.g. yield of borehole, in the appropriate Appendix
Does the activity require a water use permit from the Department of Water Affairs?

	NO
	X

If yes, list the permits required

However, please take note of the section below regarding an alternative.

If yes, have you applied for the water use permit(s)?

	NO
	X

If yes, have you received approval(s)? (attached in appropriate appendix)

No formal City of Tshwane water reticulation is available in the vicinity of the proposed development, however closer investigation revealed a bulk water line on the western boundary of the development. The civil engineer presumes this line is the property of Rand Water and will provide confirmation of ownership as soon as possible. The bulk line is located on Portion 331 of the Farm Knopjeslaagte 358 JR on the western side of the development.

The proposed alternative is to supply the development with a water connection from the existing water line located over Portion 331. The proposed development's internal network will be supplied with an 110mm \varnothing , 200mm \varnothing and a 250mm \varnothing HDPE pipe class 16. It will connect to the existing 250mm \varnothing water pipe (proposed alternative).

As an **alternative** the development can connect as per the GLS report, however this will not be a cost effective option. The proposed route as identified by GLS in their report will result in having to cross the Swart Booï Spruit, which will require a **water-use license application** that will impact the viability if such a connection point.

These proposed upgrades (alternative 1) are not feasible when the proposed alternative is readily available on site;

- 475 m x 600 mm Ø REPLACEMENT pipe (replacing an existing 110 mm Ø pipe);
- 460 m x 450 mm Ø main pipe;
- 710 m x 450 mm Ø main pipe;
- 1 045 m x 355 mm Ø main pipe; and
- 1 580 m x 250 mm Ø main pipe (this pipe is internal to the development).

These upgrades will require a water use license application.

7. POWER SUPPLY

Please indicate the source of power supply e.g. Municipality / Eskom / Renewable energy source

Eskom confirmed to the Proposed Peach Tree Extensions 15 and 16 Developments that they are presently not able to supply bulk power to those developments, in the near future. Therefore, with Peach Tree X 23 developments (this development), situated next to those developments, it is recommended that negotiations are entered into with the City of Tshwane, for the supply of bulk power to this development. City of Tshwane: Energy & Electricity Department is in the process of establishing a new 11kV satellite substation in the close vicinity of the existing Copperleaf Golf Estate. This substation should be completed within the next nine months.

Therefore, due to the above-mentioned and the location of this satellite substation, negotiations will be entered into with the CoT, for the supply of bulk power to this proposed development.

It is suggested that this be made a recommendation of the Environmental Authorization that confirmation of electricity should be obtained prior to commencement of construction on site.

If power supply is not available, where will power be sourced from?

Not applicable.

8. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

The following could be considered:

- Where possible energy saving light bulbs must be used in all the units as well as outside.
- Time switches must be used for outdoor lighting.
- Geysers must be fitted with insulation blankets.
- Solar panels can be used to heat the water and geysers and for outdoor lighting.

The developer is committed to search and investigate more solutions and opportunities to increase the sustainability of this development making it a project that will be a landmark on many levels.

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

The following alternative energy sources can be considered:

Hydro Power

This option was rejected because the hydrological conditions required for hydro generation in this area could not be met i.e. water quantity, etc.

Wind turbines

This option was rejected because the wind conditions required cannot be met in this region.

Biomass

This option was rejected because the fuel required for producing electricity is not locally available, the distance between the source of biomass and the power plant must be short for economic viability.

Gas

This option was rejected because natural gas is not available and the energy spent in processing the gas and transporting it affects the viability of this process.

Coal fired generation

This option was rejected because of the distance from the coal fields and because pollution is not allowed in this area.

Nuclear

This option could not be considered due to South Africa's nuclear policy.

SECTION E: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts as well as the impacts of not implementing the activity (Section 24(4)(b)(i)).

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

The Public Participation for the Peach Tree X23 was done in order to ensure that all Interested and Affected Parties register.

The proposed project was advertised in the Beeld Newspaper on Tuesday, 4 October 2016 (**Refer to Appendix Ei – Proof of Newspaper advertisement**). Site notices were also erected at prominent points adjacent to the application site on 3 October 2016. (**Refer to Appendix Eii – Proof of Site Notice**). Furthermore Flyers were also distributed to residents, land owners, tenants and stakeholders in the surrounding area (**Refer to Appendix Eiii – Written Notices**).

It is the opinion of Bokamoso that the Public Participation was extensive and transparent enough to ensure any comments or issues in regards to the proposed development to be addressed and to suggest possible mitigation measures. Several Interested and Affected Parties have registered on this project.

Summary of response from the practitioner to the issues raised by the interested and affected parties (including the manner in which the public comments are incorporated or why they were not included)

(A full response must be provided in the Comments and Response Report that must be attached to this report):

Please refer to Appendix Eiv for the Comments and Issues Register

2. IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION AND OPERATIONAL PHASE

Briefly describe the methodology utilised in the rating of significance of impacts

significance Description Methodology

The significance of Environmental Impacts was assessed in accordance with the following method:

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

Likelihood	Description	Rating
Improbable	Low possibility of impact to occur either because of design or historic experience	2
Probable	Distinct possibility that impact will occur	3
Highly probable	Most likely that impact will occur	4
Definite	Impact will occur, in the case of adverse impacts regardless of any prevention measures	5

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

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

Intensity	Description	Rating
Low intensity	Natural and man-made functions not affected.	1
Medium intensity	Environment affected but natural and man-made functions and processes continue.	2
High intensity	Environment affected to the extent that natural or man-made functions are altered to the extent that it will temporarily or permanently cease or become dysfunctional.	4

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

Duration	Description	Rating
Short term	<1 to 5 years - Factor 2	2
Medium term	5 to 15 years - Factor 3	3
Long term	Impact will only cease after the operational life of the activity, either because of natural process or by human intervention.	4
Permanent	Mitigation, either by natural process or by human intervention, will not in any way or in such a time span be conducted that the impact can be considered transient.	4

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

$$\begin{aligned}
 \text{The Severity factor} &= \text{Intensity factor} \times \text{Duration factor} \\
 &= 2 \times 3 \\
 &= 6
 \end{aligned}$$

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

Severity Factor	Severity	Rating
Calculated values 2 to 4	Low Severity	2
Calculated values 5 to 8	Medium Severity	3
Calculated values 9 to 12	High Severity	4
Calculated values 13 to 16	Very High severity	5

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

Significance	Rating	Influence
Low significance	Rating 4 to 6	Positive impact and negative impacts of low significance should have no influence on the proposed development project.
Medium significance	Rating >6 to 15	Positive impact: Should weigh towards a decision to continue Negative impact: Should be mitigated to a level where

			the impact would be of medium significance before project can be approved.
	High significance	Rating 16 and more	<p>Positive impact: Should weigh towards a decision to continue, should be enhanced in final design.</p> <p>Negative impact: Should weigh towards a decision to terminate proposal, or mitigation should be performed to reduce significance to at least medium significance rating.</p>

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the construction phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

Proposal – Light Industrial, Commercial

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
PLANNING PHASE				
Adverse Impacts				
Cultural/Historical				
Low Potential for destroying potential paleontological finds.	Low	It is not anticipated that any graves or important cultural findings will be discovered during the construction of the external services.	Low	Low risk of study not being conducted.
Environmental legal compliance				
No financial provision for environmental management during construction and operational phase	Medium	Developer to budget for environmental mitigation measures such as eradication of alien plant within the development site, specialist that might be required if archaeological finds are unearthed during construction, or sensitive fauna or flora is identified during construction. Developer also to budget for ECO to be part of the development team.	Low	Developer might omit budgeting for environmental monitoring
Roads and Traffic				
Impact on provincial and national roads	Medium	Considering the proposed development is in close proximity to the N14 highway, and also borders the provincial road, R114.	Low	GDRT could object to the development
CONSTRUCTION PHASE				
Beneficial Impacts				
Fauna & Flora				
Eradication of invasive species.	High	Eradication of invasive species during the construction phase would benefit the biophysical environment. Not necessary to mitigate.	None	No risk due to positive impact
Social & Economic Environment				
Creation of Job opportunities.	High	The proposed development would create job opportunities during the construction phase. Should the local community not benefit from these opportunities, it could lead to an influx of people from other areas. Only employing people from the local community could mitigate the potential adverse impact.	None	No risk due to positive impact
Reduction of areas that have potential for informal settlements and illegal dumping.	High	The proposed township development will prevent informal settlements and illegal dumping on the proposed development areas.	None	No risk due to positive impact
Increase in the rates and taxes payable to the City of Tshwane Metropolitan Municipality.	High	More rates and taxes will be paid to the City of Tshwane Metropolitan Municipality.	None	No risk due to positive impact
Services				

Upgrading of existing services and the construction of new services.	High	The upgrading of existing services and the establishment of new services will be essential to support the proposed development. The developer will also maintain the existing and established services during the operational phase of the development.	None	No risk due to positive impact
Adverse Impacts				
Flora & Fauna				
Due to the fact that some services (temporary/permanent) will have to be installed the excavations for the proposed services will cause some areas to be exposed due to the loss of some of the existing vegetation coverage.	Medium	Areas where services are installed must be leveled, re-vegetated and rehabilitated as soon as possible to prevent any soil loss.	Low	Loss of some of the existing vegetation coverage could occur if mitigation is not implemented
Uncontrolled activities and access to sensitive areas in the vicinity.	Medium	<ul style="list-style-type: none"> ▪ Dumping of building rubble and other waste on these areas is strictly prohibited; and ▪ No vehicles must be allowed to move in or across sensitive areas. This leaves visible scars and destroys habitat. 	Low	Contractors could disobey signage.
Snaring and hunting of fauna species during the construction phase and the destruction of habitats can have a detrimental effect on some species.	Medium	<ul style="list-style-type: none"> ▪ Strict measures to prevent the hunting/snaring/scaring of fauna species should be implemented; ▪ The gathering of wood should not be allowed on site or on any adjacent properties; ▪ Any person that is caught hunting, snaring or damaging existing vegetation (earmarked to be retained) should be fined. The responsible contractor will also be fined and will have to replace the fauna or flora species as specified by the ECO at the time; ▪ The involved authorities should be informed of the activity, the fine and the replacement specifications; ▪ Caught animals should be relocated to conservation areas in the vicinity; ▪ During the construction phase, noise should be kept to a minimum to reduce the impact of the development on the fauna and the development should be done in phases to allow faunal species to temporarily migrate; and ▪ Where possible, work should be restricted to one area at a time. This will give the smaller fauna species a chance to weather the disturbance in an undisturbed zone close to their natural territories. 	Low	Contractors could disobey signage.
Uncontrolled fires may cause damage and loss to vegetation and fauna in the area.	Medium	<ul style="list-style-type: none"> ▪ If fires are required for cooking and heating purposes, these fires will only be permitted in designated areas on site. The fire area should be an exposed area (no natural veld grass should be in close proximity of the fire area). ▪ Construction workers should only be allowed to smoke in the fire area and fires should preferably be prevented while strong winds are blowing. 	Low	Protected species could be destroyed
Possible spreading of invaders into the natural surrounding areas.	Low	<ul style="list-style-type: none"> ▪ No plants, not indigenous to the area, or exotic plant species should be introduced into the landscaping of the proposed development. 	None	Low risk of invaders spreading into surrounding areas.
Geology & Soils				

<p>Soil erosion</p> <p>During the construction phase temporary measures should be implemented to manage storm water and water flow on the application site. If the storm water and water flow is not regulated and managed on site and it could cause significant erosion of soil, as well as the pollution and siltation.</p>	<p>Medium</p>	<ul style="list-style-type: none"> • Only the identified areas should be cleared of vegetation. This should be done in stages as construction works progress; • Implement temporary storm water management measures that will help to reduce the speed of the water. These measures must also assist with the prevention of water pollution, erosion and siltation; • If excavations or foundations fill up with storm water, these areas should immediately be drained and measures to prevent further water from entering the excavations should be implemented. • Biodegradable matting, geo-textiles and other means of erosion control should be implemented during the construction phase on large exposed areas and where storm water are temporarily channeled; • Any storm water outfalls should be designed and measures should be implemented to prevent erosion and water pollution at these points. Areas around buildings, where gutters and outlets are implemented should be paved; • The services which will be installed in the area, should be designed to run in the same direction as the existing services to make installation and maintenance easy; • Trees may not be planted any closer to services than 1.5 times their mature height; 	<p>None</p>	<p>Soil erosion could occur if mitigation is not implemented</p>
<p>If not planned and managed correctly topsoil will be lost.</p>	<p>Medium</p>	<ul style="list-style-type: none"> • A shake down area at the exits of the construction site should be established where the excessive soil on the tires of the construction vehicles can be brushed off and kept aside for later use during rehabilitation works; • The layout of the construction site should be planned before any construction on the site should commence. The areas where soil will be compacted by construction activities, heavy vehicle movement, site camp, material storage areas and stockpiling areas should be marked out and the topsoil should be removed. • The areas where topsoil will not be removed and which will be conserved during the construction phase should be marked with barrier tape to ensure that vehicles do not move across these areas, and construction activities does not damage the in-situ topsoil. • The removed topsoil should be stored separately from all stockpiled materials and subsoil, according to the stockpiling methods as described below. The stockpiled topsoil should be used for rehabilitation and landscaping purposes after construction has been completed; • The installation of services could leave soils exposed and susceptible to erosion. Soils should be stored adjacent to the excavated trenches that are excavated to install services, and this should be filled up with the in-situ material as the services are installed. All stones and rocks bigger than 80 mm should be removed from the top layer of soil and these disturbed areas should be re-vegetated immediately after works in a specific area are completed to prevent erosion; • Excavations on site must be kept to minimum and done only one section at a time. Excavated soils must be stockpiled directly on the demarcated area on site. 	<p>Low</p>	<p>Soil erosion could occur if mitigation is not implemented</p>
<p>Collapse of structures</p>	<p>Low</p>	<p>Recommendations made by engineers to be incorporated into design and constructed as per design.</p>	<p>Low</p>	<p>Structures collapsing</p>
<p>Climate</p>				
<p>Construction during the rainy season can</p>	<p>Low</p>	<ul style="list-style-type: none"> • It is recommended that the construction phase be scheduled for the winter months 	<p>Low</p>	<p>If mitigation is</p>

cause delays and damage to the environment.		<ul style="list-style-type: none"> especially activities such as the installation of services, foundations, excavations and road construction; It is also recommended that the precautionary measures be taken in order to prevent the extensive loss of soil during rainstorms. Large exposed areas should adequately be protected against erosion by matting or cladding; Measures should be implemented during the rainy season to channel storm water away from open excavations and foundations. 		not implemented, erosion could occur.
Construction during the dry and windy season could cause excessive dust pollution during construction works.	Low	<ul style="list-style-type: none"> Regular and effective damping down working areas (especially during the dry and windy periods) must be carried out to avoid dust pollution that will have a negative impact on the surrounding environment. When necessary, these working areas should be damped down at least twice a day. 	Low	Dust pollution could occur if mitigation is not implemented
Hydrology & groundwater				
The use of insufficient drainage systems.	Medium	<ul style="list-style-type: none"> A storm water management plan should be designed by an engineer to ensure sufficient drainage on site. 	Low	If storm water infrastructure is inadequate, erosion could occur.
Excavated materials that are stockpiled in wrong areas can interfere with the natural drainage.	Medium	<ul style="list-style-type: none"> An area must be allocated for stockpiling of topsoil before any construction take place on the application site. The stockpiles must be situated away from any water source or drainage channel. A sediment fence or barrier must be constructed around the stockpile, to prevent soil from washing away by rain or any water. 	Low	If mitigation is not implemented, topsoil could be lost
Cultural and Archaeology				
Occurrence of cultural historical assets on the proposed development site.	Medium	<ul style="list-style-type: none"> If archeological sites are exposed during construction work, it should immediately be reported to a museum, preferably where an archaeologist is available so that an investigation and evaluation of the site can be made. 	Low	Cultural heritage finds unearthed during construction, could be destroyed
Localized Vibration				
The noise created by earthmoving machinery will result in the greatest increase in ambient levels. This will be short term, being generated only during the day.	Medium	<ul style="list-style-type: none"> All construction activities must be restricted during normal working hours from 7:00 in the morning to no later than 19:00 in the afternoons. 	Low	If mitigation is not implemented residents could complain about nuisance noise.
Air pollution				
Nuisance to neighbours in terms of dust generation due to construction during the dry and windy season.	Medium	<ul style="list-style-type: none"> The application site must be damped at a regular basis with water to prevent dust pollution to nearby residential area and commuters utilising surrounding roads. 	Low	If mitigation is not implemented

				residents could complain about nuisance dust.
Roads and Traffic				
Heavy vehicle traffic increase could disrupt the surrounding landowners' daily routines.	Medium	Heavy vehicles must be instructed to only use the main roads during off-peak hours.	Low	If mitigation is not implemented, traffic flow could be negatively affected.
Restrictions of access to surrounding properties and the study area during construction phases.	Medium	<ul style="list-style-type: none"> To minimize the impacts or risks, heavy construction vehicles should avoid using the local road network during peak traffic times. These vehicles should use only specific roads and strictly keep within the speed limits and abide to all traffic laws. No speeding or reckless driving should be allowed. Access to the site for construction vehicles should be planned to minimize the impact on the surrounding network; and Warning signs should be erected on the roads that these vehicles will use, at big crossings/ access roads and on the site if needed. 	Low	If mitigation is not implemented, residents could complain about accessibility to their properties.
Damage to roads.	Medium	<ul style="list-style-type: none"> Specific roads must be allocated for the use by construction vehicles. 	Low	If mitigation is not implemented, GDRT could object to the development
Safety and Security				
During the construction phase safety and security problems (especially for the surrounding residents) are likely to occur.	Medium	<ul style="list-style-type: none"> Construction must be completed in as short time as possible. No construction worker or relative may reside on the application site during the construction phase. All construction workers must leave the site at the end of a day's work. A security guard should be appointed on site to prevent any security problems. 	Low	If mitigation is not implemented, residents and construction companies could be affected by crime.
The excavations associated with proposed development could pose a safety risk to pedestrians.	Medium	<ul style="list-style-type: none"> The necessary safety precautions must be in place i.e. excavations must be fenced off with barrier tape; signage must be in place to identify excavations. 	Low	If mitigation is not implemented, pedestrians' safety could be at risk.
Construction activities could cause danger to children and animals of the surrounding	Medium	<ul style="list-style-type: none"> Although regarded as a normal practice, it is important to erect proper signs indicating the operation of heavy vehicles in the vicinity of dangerous crossings and access roads 	Low	If mitigation is not

residents.		<ul style="list-style-type: none"> or even with in the development site, if necessary; It is also important to indicate all areas where excavations took place / are taking place and warning signs that clearly indicate areas with excavations must be placed immediately adjacent to excavations; A barrier should be established around dangerous excavation areas; With the exception of appointed security personnel, no other worker, friend or relatives will be allowed to sleep on the construction site (weekends included), in the public open space or on adjacent properties; and No worker should be allowed to enter adjacent private properties without written consent of the legal owners to the contractor. 		implemented the public's safety could be at risk.
Visual Impact				
Dumping of builder's rubble on neighbouring properties.	Low	<ul style="list-style-type: none"> A specific location for building rubble must be allocated on site, to concentrate and collect the building rubble and cart it to a certified landfill site. The allocated area must be out of sight of neighbouring properties to have a less visual impact. 	None	If mitigation is not implemented, pollution could occur.
Stockpile areas for construction materials.	Medium	<ul style="list-style-type: none"> An area on the site must be allocated for the stockpile of construction materials. The area must be situated on the application site, and must be situated to have a minimal visual impact on the neighbouring area. 	Low	If mitigation is not implemented, vehicle accidents could occur.
Veld fires may cause damage to infrastructure, vegetation and neighbouring properties.	Medium	<ul style="list-style-type: none"> A specific area on site must be allocated, which will have the least impact on the environment and surrounding landowners, for fires of construction workers. This allocated area must be far from any structures and no fires may be lit except in the designated location. 	Low	Protected species could be destroyed.
The construction vehicles, the site camp and other construction related facilities will have a negative visual impact during the construction phase.	Medium	<ul style="list-style-type: none"> Before any construction commence on site, an area on site must be demarcated for a site camp. 	Low	If mitigation is not implemented, community complaints could occur.
Waste Management				
Site office, camp and associated waste (visual, air and soil pollution)	Medium	<ul style="list-style-type: none"> Temporary waste storage points on site shall be determined. These storage points shall be accessible by waste removal trucks; These points should not be located in areas highly visible from the properties of the surrounding landowners/ tenants / in areas where the wind direction will carry bad odours across the properties of adjacent tenants or landowners; The site camp and the rest of the study area should appear neat at all times; Waste materials should be removed from the site on a regular basis, to a registered dumping site; and The site camp should not be located in a highly visual area on the study area, or a screen or barrier should be erected as not have a negative impact on the sense of place. 	Low	If mitigation is not implemented, community complaints could be received.

Disposal of building waste & liquids	Medium	<ul style="list-style-type: none"> All the waste generated by the proposed developments must be dumped at a preselected area on site to be carted to a register landfill site; THESE AREAS SHALL BE PREDETERMINED AND LOCATED IN AREAS THAT ARE ALREADY DISTURBED. Small lightweight waste items should be contained in skips with lids to prevent wind littering; All waste must be removed to a recognized waste disposal site/ landfill site on a weekly basis. No waste materials may be disposed of on or adjacent to the site; The storage of solid waste on site, until such time that it may be disposed of, must be in the manner acceptable to the local authority; and Keep records of waste reuse, recycling and disposal for future reference. 	Low	If mitigation is not implemented, pollution might occur.
Light Pollution				
Light pollution during the night, caused by unsympathetic lighting design.	Medium	Lights that direct light beams downwards with low glaring qualities should be used for landscaping and streetlights. The lights should not be directed to glare in ongoing traffic or into the properties of surrounding residents.	Low	If mitigation is not implemented, light pollution during the night might occur.
OPERATIONAL PHASE				
Beneficial Impacts				
Social & Economic Environment				
Creation of temporary and permanent jobs.	Medium	During the operational phase numerous permanent jobs will be created on various levels (house, garden, maintenance, etc.).	None	No risk due to positive impact.
Increasing security in the area.	High	In the long term the proposed development will improve the security of the area. The monitored access points will improve the security of the proposed site and surrounding areas.	None	No risk due to positive impact.
Higher quality of livelihoods.	High	The community's quality of life will increase and more people will be economically active.	None	No risk due to positive impact.
Reduction of areas that have potential for informal settlements and illegal dumping.	High	The proposed township development will prevent informal settlements and illegal dumping on the proposed development area.	None	No risk due to positive impact.
Increase in rates and taxes payable to the City of Tshwane Metropolitan Municipality.	Medium	More rates and taxes will be paid to the CTMM.	None	No risk due to positive impact.
Increase in surrounding property values.	High	If planned and managed correctly, the proposed development could have a positive impact on property values. Due to the proposed theme, the development will generally be in line with the surrounding land uses.	None	No risk due to positive impact.
Visibility and accessibility of study area.	High	The visibility and accessibility of the study area contributes to the study area's ideal suitability for the proposed land use.	None	No risk due to positive impact.
Adverse Impacts				

Fauna and Flora				
Invasive plant species occurrence	Medium	Alien plant eradication to continue during operational phase of the project. Should any alien plant species occur in the areas where construction works and ground works took place, it should be eradicated from the area.	Low	If mitigation is not implemented, invasive plants could spread.
Hydrology				
An increase in surface water runoff to storm water management systems (because of an increase of hard-surfaces such as roofs and paved areas), may have an impact on surface quality and quantities.	Low	<ul style="list-style-type: none"> Storm water through the site should be managed to accommodate the higher quantities of runoff, Sheet flow should be encouraged as far as possible, and channels should be designed sufficiently to address the problem or erosion, and Bio-swale system could be implemented to filter water from paved areas and especially from roads and parking areas to sufficiently clean water of heavy metals and other hazardous materials contained in storm water in a natural manner. This will further provide an opportunity for water to infiltrate the soil, break the energy of storm water and keep the water on site for longer. 	Low	If mitigation is not implemented, erosion could occur.
Leaking pipes could cause ground water pollution risks.	Low	<ul style="list-style-type: none"> Pipes should be inspected on a regular basis; 	None	If mitigation is not implemented, ground water pollution could occur
Light pollution				
The proposed development could cause a significant level of light pollution as the light industrial development will need some security lighting.	Low	<ul style="list-style-type: none"> Lighting within the proposed development, including security lighting, could easily glare into surrounding residences if not designed appropriately. It is recommended that all the lighting on site be designed to point downwards and designed in such a way as to not cause glare dispersal or unnecessary flickering. 	None	If mitigation is not implemented, light pollution might occur.
Pollution				
The generation of Air pollution.	Low	One has to note that on a local scale, the proposed development does not include noxious industries, and therefore specifically would not contribute to any air pollution. As mentioned previously the exhaust fumes of additional vehicles may have an influence, but in this particular instance it is deemed as insignificant, and therefore on a local scale would not have any affect.	Low	If mitigation is not implemented, air pollution might occur.
The generation of noise pollution – Additional traffic generated by the proposed development will have some impact on the ambient noise levels within the area.	Low	As mentioned previously, one has to note that the study area is wedged between many Provincial and National Roads which already generate ambient noise levels that exceed the acceptable levels for urban and residential areas. It is therefore, when one consider the above mentioned, that ambient noise levels generated by this particular development would not be that significant, as the proposed development, is located within an area that already exceed the acceptable noise levels.	Low	If mitigation is not implemented, noise pollution might occur.
Visual Impact				
The proposed development will have some visual impact on the surrounding areas.	Medium	<ul style="list-style-type: none"> It is important that the roofs of all the buildings within the proposed development should not reflect any sunlight; 	Low	If mitigation is not

		<ul style="list-style-type: none"> The colour scheme for the buildings should be taken from the palette of colours in the natural surroundings; Existing trees, if any should be retained as far as possible on the site, in order to soften the visual impact of the buildings associated with the development, and to bring the scale of the large buildings in scale with the surrounding environment; It is also proposed that as many additional indigenous trees be planted in areas that were previously disturbed, in order to soften the harsh visual impact of the proposed development. The planting of additional trees will help to develop a certain character for the site which will fit in with the surrounding environment. 		implemented, the visual impact might occur.
--	--	--	--	---

Alternative 1 – Heavy Industrial

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
PLANNING PHASE				
Adverse Impacts				
Cultural/Historical				
Low Potential for destroying potential paleontological finds.	Low	It is not anticipated that any graves or important cultural findings will be discovered during the construction of the external services.	Low	Low risk of study not being conducted.
Environmental legal compliance				
No financial provision for environmental management during construction and operational phase	Medium	Developer to budget for environmental mitigation measures such as eradication of alien plants within the development site, specialist that might be required if archaeological finds are unearthed during construction, or sensitive fauna or flora is identified during construction. Developer also to budget for ECO to be part of the development team.	Low	Developer might omit budgeting for environmental monitoring
Roads and Traffic				
Impact on provincial and national roads	Medium	Considering the proposed development is in close proximity to the N14 highway, and also borders the provincial road, R114.	Low	GDRT could object to the development
CONSTRUCTION PHASE				
Beneficial Impacts				
Fauna & Flora				
Eradication of invasive species.	High	Eradication of invasive species during the construction phase would benefit the biophysical environment. Not necessary to mitigate.	None	No risk due to positive impact
Social & Economic Environment				
Creation of Job opportunities.	High	The proposed development would create job opportunities during the construction phase. Should the local community not benefit from these opportunities, it could lead to	None	No risk due to positive impact

		an influx of people from other areas. Only employing people from the local community could mitigate the potential adverse impact.		
Reduction of areas that have potential for informal settlements and illegal dumping.	High	The proposed township development will prevent informal settlements and illegal dumping on the proposed development areas.	None	No risk due to positive impact
Increase in the rates and taxes payable to the City of Tshwane Metropolitan Municipality.	High	More rates and taxes will be paid to the City of Tshwane Metropolitan Municipality.	None	No risk due to positive impact
Services				
Upgrading of existing services and the construction of new services.	High	The upgrading of existing services and the establishment of new services will be essential to support the proposed development. The developer will also maintain the existing and established services during the operational phase of the development.	None	No risk due to positive impact
Adverse Impacts				
Flora & Fauna				
Due to the fact that some services (temporary/permanent) will have to be installed the excavations for the proposed services will cause some areas to be exposed due to the loss of some of the existing vegetation coverage.	High	Areas where services are installed must be leveled, re-vegetated and rehabilitated as soon as possible to prevent any soil loss.	Medium	Loss of some of the existing vegetation coverage could occur if mitigation is not implemented
Uncontrolled activities and access to sensitive areas in the vicinity.	High	<ul style="list-style-type: none"> ▪ Dumping of building rubble and other waste on these areas is strictly prohibited; and ▪ No vehicles must be allowed to move in or across sensitive areas. This leaves visible scars and destroys habitat. 	Medium	Contractors could disobey signage.
Snaring and hunting of fauna species during the construction phase and the destruction of habitats can have a detrimental effect on some species.	Medium	<ul style="list-style-type: none"> ▪ Strict measures to prevent the hunting/snaring/scaring of fauna species should be implemented; ▪ Any person that is caught hunting, snaring or damaging existing vegetation (earmarked to be retained) should be fined. The responsible contractor will also be fined and will have to replace the fauna or flora species as specified by the ECO at the time; ▪ The involved authorities should be informed of the activity, the fine and the replacement specifications; ▪ Caught animals should be relocated to conservation areas in the vicinity; ▪ During the construction phase, noise should be kept to a minimum to reduce the impact of the development on the fauna and the development should be done in phases to allow faunal species to temporarily migrate; and ▪ Where possible, work should be restricted to one area at a time. This will give the smaller fauna species a chance to weather the disturbance in an undisturbed zone close to their natural territories. 	Low	Contractors could disobey signage.
Uncontrolled fires may cause damage and loss to vegetation and fauna in the area.	Medium	<ul style="list-style-type: none"> ▪ If fires are required for cooking and heating purposes, these fires will only be permitted in designated areas on site. The fire area should be an exposed area (no natural veld grass should be in close proximity of the fire area). ▪ Construction workers should only be allowed to smoke in the fire area and fires should 	Low	Protected species could be destroyed

		preferably be prevented while strong winds are blowing.		
Possible spreading of invaders into the natural surrounding areas.	Low	<ul style="list-style-type: none"> No plants, not indigenous to the area, or exotic plant species should be introduced into the landscaping of the proposed development. 	None	Low risk of invaders spreading into surrounding areas.
Geology & Soils				
Soil erosion due to drainage systems – During the construction phase temporary measures should be implemented to manage storm water and water flow on the application site. If the storm water and water flow is not regulated and managed on site it could cause significant erosion of soil, as well as the pollution and siltation of water bodies.	Medium	<ul style="list-style-type: none"> Only the identified areas should be cleared of vegetation. This should be done in stages as construction works progress; Implement temporary storm water management measures that will help to reduce the speed of the water. These measures must also assist with the prevention of water pollution, erosion and siltation; If excavations or foundations fill up with storm water, these areas should immediately be drained and measures to prevent further water from entering the excavations should be implemented. Biodegradable matting, geo-textiles and other means of erosion control should be implemented during the construction phase on large exposed areas and where storm water are temporarily channeled; Any storm water outfalls should be designed and measures should be implemented to prevent erosion and water pollution at these points. Areas around buildings, where gutters and outlets are implemented should be paved; The services which will be installed in the area, should be designed to run in the same direction as the existing services to make installation and maintenance easy; Trees may not be planted any closer to services than 1.5 times their mature height; 	None	Soil erosion could occur if mitigation is not implemented
If not planned and managed correctly topsoil will be lost.	Medium	<ul style="list-style-type: none"> A shake down area at the exits of the construction site should be established where the excessive soil on the tires of the construction vehicles can be brushed off and kept aside for later use during rehabilitation works; The layout of the construction site should be planned before any construction on the site should commence. The areas where soil will be compacted by construction activities, heavy vehicle movement, site camp, material storage areas and stockpiling areas should be marked out and the topsoil should be removed. The areas where topsoil will not be removed and which will be conserved during the construction phase should be marked with barrier tape to ensure that vehicles do not move across these areas, and construction activities does not damage the in-situ topsoil. The removed topsoil should be stored separately from all stockpiled materials and subsoil, according to the stockpiling methods as described below. The stockpiled topsoil should be used for rehabilitation and landscaping purposes after construction has been completed; The installation of services could leave soils exposed and susceptible to erosion. Soils should be stored adjacent to the excavated trenches that are excavated to install services, and this should be filled up with the in-situ material as the services are installed. All stones and rocks bigger than 80 mm should be removed from the top layer of soil and these disturbed areas should be re-vegetated immediately after works in a specific 	Low	Soil erosion could occur if mitigation is not implemented

		area are completed to prevent erosion; <ul style="list-style-type: none"> Excavations on site must be kept to minimum and done only one section at a time. Excavated soils must be stockpiled directly on the demarcated area on site. 		
Collapse of structures	Low	Recommendations made by engineers to be incorporated into design and constructed as per design.	Low	Structures collapsing
Climate				
Construction during the rainy season can cause delays and damage to the environment.	Low	<ul style="list-style-type: none"> It is recommended that the construction phase be scheduled for the winter months especially activities such as the installation of services, foundations, excavations and road construction; It is also recommended that the precautionary measures be taken in order to prevent the extensive loss of soil during rainstorms. Large exposed areas should adequately be protected against erosion by matting or cladding; Measures should be implemented during the rainy season to channel storm water away from open excavations and foundations. 	Low	If mitigation is not implemented, erosion could occur.
Construction during the dry and windy season could cause excessive dust pollution during construction works.	Low	<ul style="list-style-type: none"> Regular and effective damping down working areas (especially during the dry and windy periods) must be carried out to avoid dust pollution that will have a negative impact on the surrounding environment. When necessary, these working areas should be damped down at least twice a day. 	Low	Dust pollution could occur if mitigation is not implemented
Hydrology & groundwater				
The use of insufficient drainage systems.	Medium	<ul style="list-style-type: none"> A storm water management plan should be designed by an engineer to ensure sufficient drainage on site. 	Low	If storm water infrastructure is inadequate, erosion could occur.
Excavated materials that are stockpiled in wrong areas can interfere with the natural drainage.	Medium	<ul style="list-style-type: none"> An area must be allocated for stockpiling of topsoil before any construction takes place on the application site. The stockpiles must be situated away from any water source or drainage channel. A sediment fence or barrier must be constructed around the stockpile, to prevent soil from washing away by rain or any water. 	Low	If mitigation is not implemented, topsoil could be lost
Cultural and Archaeology				
Occurrence of cultural historical assets on the proposed development site.	Medium	<ul style="list-style-type: none"> If archeological sites are exposed during construction work, it should immediately be reported to a museum, preferably where an archaeologist is available so that an investigation and evaluation of the site can be made. 	Low	Cultural heritage finds unearthed during construction, could be destroyed
Localized Vibration				
The noise created by earthmoving machinery will result in the greatest increase in ambient levels. This will be short term, being generated only during the	High	<ul style="list-style-type: none"> All construction activities must be restricted during normal working hours from 7:00 in the morning to no later than 19:00 in the afternoons. 	Medium	If mitigation is not implemented residents could

day.				complain about nuisance noise.
Air pollution				
Nuisance to neighbours in terms of dust generation due to construction during the dry and windy season.	High	<ul style="list-style-type: none"> The application site must be damped at a regular basis with water to prevent dust pollution to nearby residential area and commuters utilising surrounding roads. 	Medium	If mitigation is not implemented residents could complain about nuisance dust.
Roads and Traffic				
Heavy vehicle traffic increase could disrupt the surrounding landowners' daily routines.	High	Heavy vehicles must be instructed to only use the main roads during off-peak hours.	Medium	If mitigation is not implemented, traffic flow could be negatively affected.
Restrictions of access to surrounding properties and the study area during construction phases.	High	<ul style="list-style-type: none"> To minimize the impacts or risks, heavy construction vehicles should avoid using the local road network during peak traffic times; These vehicles should use only specific roads and strictly keep within the speed limits and abide to all traffic laws. No speeding or reckless driving should be allowed. Access to the site for construction vehicles should be planned to minimize the impact on the surrounding network; and Warning signs should be erected on the roads that these vehicles will use, at big crossings/ access roads and on the site if needed. 	Medium	If mitigation is not implemented, residents could complain about accessibility to their properties.
Damage to roads.	High	<ul style="list-style-type: none"> Specific roads must be allocated for the use by construction vehicles. 	Medium	If mitigation is not implemented, GDRT could object to the development
Safety and Security				
During the construction phase safety and security problems (especially for the surrounding residents) are likely to occur.	Medium	<ul style="list-style-type: none"> Construction must be completed in as short time as possible. No construction worker or relative may reside on the application site during the construction phase. All construction workers must leave the site at the end of a day's work. A security guard should be appointed on site to prevent any security problems. 	Low	If mitigation is not implemented, residents and construction companies could be affected by crime.

The excavations associated with proposed development could pose a safety risk to pedestrians.	Medium	<ul style="list-style-type: none"> The necessary safety precautions must be in place i.e. excavations must be fenced off with barrier tape; signage must be in place to identify excavations. 	Low	If mitigation is not implemented, pedestrians' safety could be at risk.
Construction activities could cause danger to children and animals of the surrounding residents.	Medium	<ul style="list-style-type: none"> Although regarded as a normal practice, it is important to erect proper signs indicating the operation of heavy vehicles in the vicinity of dangerous crossings and access roads or erven with in the development site, if necessary; It is also important to indicate all areas where excavations took place / are taking place and warning signs that clearly indicate areas with excavations must be placed immediately adjacent to excavations; A barrier should be established around dangerous excavation areas; With the exception of appointed security personnel, no other worker, friend or relatives will be allowed to sleep on the construction site (weekends included), in the public open space or on adjacent properties; and No worker should be allowed to enter adjacent private properties without written consent of the legal owners to the contractor. 	Low	If mitigation is not implemented the public's safety could be at risk.
Visual Impact				
Dumping of builder's rubble on neighbouring properties.	Low	<ul style="list-style-type: none"> A specific location for building rubble must be allocated on site, to concentrate and collect the building rubble and cart it to a certified landfill site. The allocated area must be out of sight of neighbouring properties to have a less visual impact. 	None	If mitigation is not implemented, pollution could occur.
Stockpile areas for construction materials.	Medium	<ul style="list-style-type: none"> An area on the site must be allocated for the stockpile of construction materials. The area must be situated on the application site, and must be situated to have a minimal visual impact on the neighbouring area. 	Low	If mitigation is not implemented, vehicle accidents could occur.
Veld fires may cause damage to infrastructure, vegetation and neighbouring properties.	Medium	<ul style="list-style-type: none"> A specific area on site must be allocated, which will have the least impact on the environment on the environment and surrounding landowners, for fires of construction workers. This allocated area must be far from any structures and no fires may be lit except in the designated location. 	Low	Protected species could be destroyed.
The construction vehicles, the site camp and other construction related facilities will have a negative visual impact during the construction phase.	Medium	<ul style="list-style-type: none"> Before any construction commence on site, an area on site must be demarcated for a site camp. 	Low	If mitigation is not implemented, community complaints could occur.
Waste Management				
Site office, camp and associated waste (visual, air and soil pollution)	High	<ul style="list-style-type: none"> Temporary waste storage points on site shall be determined. These storage points shall be accessible by waste removal trucks; These points should not be located in areas highly visible from the properties of the 	Medium	If mitigation is not implemented,

	High	<p>surrounding landowners/ tenants / in areas where the wind direction will carry bad odours across the properties of adjacent tenants or landowners;</p> <ul style="list-style-type: none"> • The site camp and the rest of the study area should appear neat at all times; • Waste materials should be removed from the site on a regular basis, to a registered dumping site; and • The site camp should not be located in a highly visual area on the study area, or a screen or barrier should be erected as not have a negative impact on the sense of place. 		community complaints could be received.
Disposal of building waste & liquids	High	<ul style="list-style-type: none"> • All the waste generated by the proposed developments must be dumped at a preselected area on site to be carted to a register landfill site; • THESE AREAS SHALL BE PREDETERMINED AND LOCATED IN AREAS THAT ARE ALREADY DISTURBED. • Small lightweight waste items should be contained in skips with lids to prevent wind littering; • All waste must be removed to a recognized waste disposal site/ landfill site on a weekly basis. No waste materials may be disposed of on or adjacent to the site; • The storage of solid waste on site, until such time that it may be disposed of, must be in the manner acceptable to the local authority; and • Keep records of waste reuse, recycling and disposal for future reference. 	Medium	If mitigation is not implemented, pollution might occur.
Light Pollution				
Light pollution during the night, caused by unsympathetic lighting design.	High	Lights that direct light beams downwards with low glaring qualities should be used for landscaping and streetlights. The lights should not be directed to glare in ongoing traffic or into the properties of surrounding residents.	Medium	If mitigation is not implemented, light pollution during the night might occur.
OPERATIONAL PHASE				
Beneficial Impacts				
Social & Economic Environment				
Creation of temporary and permanent jobs.	High	During the operational phase numerous permanent jobs will be created on various levels (house, garden, maintenance, etc.).	None	No risk due to positive impact.
Increasing security in the area.	High	In the long term the proposed development will improve the security of the area. The monitored access points will improve the security of the proposed site and surrounding areas.	None	No risk due to positive impact.
Higher quality of livelihoods.	High	The community's quality of life will increase and more people will be economically active.	None	No risk due to positive impact.
Reduction of areas that have potential for informal settlements and illegal dumping.	High	The proposed township development will prevent informal settlements and illegal dumping on the proposed development area.	None	No risk due to positive impact.
Increase in rates and taxes payable to the City of Tshwane Metropolitan Municipality.	Medium	More rates and taxes will be paid to the CTMM.	None	No risk due to positive

				impact.
Increase in surrounding property values.	High	If planned and managed correctly, the proposed development could have a positive impact on property values. Due to the proposed theme, the development will generally be in line with the surrounding land uses.	None	No risk due to positive impact.
Visibility and accessibility of study area.	High	The visibility and accessibility of the study area contributes to the study area's ideal suitability for the proposed land use.	None	No risk due to positive impact.
Adverse Impacts				
Fauna and Flora				
Invasive plant species occurrence	Medium	Alien plant eradication to continue during operational phase of the project. Should any alien plant species occur in the areas where construction works and ground works took place, it should be eradicated from the area.	Low	If mitigation is not implemented, invasive plants could spread.
Hydrology				
An increase in surface water runoff to storm water management systems (because of an increase of hard-surfaces such as roofs and paved areas), may have an impact on surface quality and quantities.	Low	<ul style="list-style-type: none"> Storm water through the site should be managed to accommodate the higher quantities of runoff, Sheet flow should be encouraged as far as possible, and channels should be designed sufficiently to address the problem or erosion, and Bio-swale system could be implemented to filter water from paved areas and especially from roads and parking areas to sufficiently clean water of heavy metals and other hazardous materials contained in storm water in a natural manner. This will further provide an opportunity for water to infiltrate the soil, break the energy of storm water and keep the water on site for longer. 	Low	If mitigation is not implemented, erosion could occur.
Leaking pipes could cause ground water pollution risks.	High	<ul style="list-style-type: none"> Pipes should be inspected on a regular basis; 	Medium	If mitigation is not implemented, ground water pollution could occur. This risk is higher with heavy industrial developments than with light industrial/ commercial developments
Groundwater Pollution	High	<ul style="list-style-type: none"> Heavy Industrial Areas have high possibilities of releasing hazardous or toxic elements into the environment and cause groundwater pollution. Groundwater monitoring needs to take place and proper oil traps and similar engineering techniques need to be implemented to catch toxins or hazardous substances before it is released into the environment. 	Medium	If mitigation is not implemented groundwater pollution will

				occur.
Light pollution				
The proposed development could cause a significant level of light pollution as the light industrial development will need some security lighting.	High	<ul style="list-style-type: none"> Lighting within the proposed development, including security lighting, could easily glare into surrounding residences if not designed appropriately. It is recommended that all the lighting on site be designed to point downwards and designed in such a way as to not cause glare dispersal or unnecessary flickering. 	Medium	If mitigation is not implemented, light pollution might occur.
Pollution				
The generation of Air pollution.	High	One has to note that on a local scale, the proposed development does not include noxious industries, and therefore specifically would not contribute to any air pollution. As mentioned previously the exhaust fumes of additional vehicles may have an influence, but in this particular instance it is deemed as insignificant, and therefore on a local scale would not have any affect. Heavy Industrial Developments may have severe contribution to air pollution depending on the type of industries.	Medium	If mitigation is not implemented, air pollution might occur.
The generation of noise pollution – Additional traffic generated by the proposed development will have some impact on the ambient noise levels within the area.	High	As mentioned previously, one has to note that the study area is wedged between many Provincial and National Roads which already generate ambient noise levels that exceed the acceptable levels for urban and residential areas. It is therefore, when one consider the above mentioned, that ambient noise levels generated by this particular development would not be that significant, as the proposed development, is located within an area that already exceed the acceptable noise levels.	Medium	If mitigation is not implemented, noise pollution might occur.
Visual Impact				
The proposed development will have some visual impact on the surrounding areas.	High	<ul style="list-style-type: none"> It is important that the roofs of all the buildings within the proposed development should not reflect any sunlight; The colour scheme for the buildings should be taken from the palette of colours in the natural surroundings; Existing trees, if any should be retained as far as possible on the site, in order to soften the visual impact of the buildings associated with the development, and to bring the scale of the large buildings in scale with the surrounding environment; It is also proposed that as many additional indigenous trees be planted in areas that were previously disturbed, in order to soften the harsh visual impact of the proposed development. The planting of additional trees will help to develop a certain character for the site which will fit in with the surrounding environment. 	Medium	If mitigation is not implemented, the visual impact might occur.

No-Go Alternative

Potential impacts	Significance rating of impacts	Proposed mitigation	Significance rating of impacts after mitigation	Risk of the impact and mitigation not being implemented
The no-go alternative will result in no development taking place within the area. No positive impacts are foreseen for the no-go				

alternative, as it would result in the application site remaining in its current state. The present state of the study site is associated with vacant land open to dumping. This poses a risk of water pollution as well as soil pollution.

The social and economic benefits associated with the potential development will not be realized if the development does not go ahead. There will be no job opportunities for the local community during the short and long term.

It should be noted that the development property is surrounded (almost directly) by national and provincial roads as well as informal settlements, a filling station, a warehousing business and a flight academy. Due to the aforementioned, the site is isolated and surrounded by developments and road that will have an edge effect on the development site. Should no development take place the site will continue to degrade due to illegal dumping, informal settlements and the edge effects of roads and other developments.

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

Motivating Memorandum (Appendix G1)
Fauna and Flora Habitat Assessment (Appendix G2)
Geotechnical Report (Appendix G3)
Electrical Report (Appendix G4)
Services Report (Appendix G5)
Traffic Impact Study (Appendix G6)

3. IMPACTS THAT MAY RESULT FROM THE DECOMMISSIONING AND CLOSURE PHASE

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the decommissioning and closure phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

Proposal – PREFERRED ALTERNATIVE

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
Geology & Soils				

Soil erosion, siltation and gully formation.	Medium	Demolition works must be kept to a minimum on site and only be done one section at a time to prevent excessive open soil areas that could lead to soil erosion, siltation and excessive compaction.	Low	If no mitigation measures are implemented, erosion of fill material could occur.
If not planned and managed correctly, topsoil will be lost.	Medium	<ul style="list-style-type: none"> ▪ A shake down area at the exit of the site should be established where the excessive soil on the tires of vehicles can be brushed off and kept aside for later use during rehabilitation works; ▪ The site should be planned before any decommissioning activities take place on site. The areas where soil will be compacted, heavy vehicle movement (on site construction routes), site camp, material storage areas and stockpiling areas should be marked out and the topsoil should be removed; ▪ The areas where topsoil will not be removed and that will be conserved should be marked with barrier tape to ensure vehicles do not move across these areas and decommissioning activities do not damage the in situ topsoil; ▪ The removed topsoil should be stored separately from all stockpiled materials and subsoil, according to the stockpiling methods as described below. The stockpiled topsoil should be used for rehabilitation purposes after decommissioning has been completed; and ▪ Rehabilitation works must be done immediately after the involved works in an area is completed to prevent erosion. 	Low	If no mitigation measures are implemented, loss of topsoil could occur.
Hydrology & Groundwater				
Not reinstating natural run-off/drainage following completion of the decommissioning phase.	Low	Due to construction/decommissioning activities such as excavations and stockpiling, the natural drainage of the area will temporarily be changed. Following completion of the decommissioning phase and completion of rehabilitation, natural drainage should be reinstated to its former (prior to construction) state.	Low	If no mitigation measures are implemented, natural run-off could be negatively altered.
Demolition works during the rainy season can cause unnecessary delays and damage to the environment, especially damage to existing roads in the area.	Low	Should decommissioning take place in the wetter months, frequent rain could cause very wet conditions, which makes it extremely difficult to do the necessary rehabilitation works of disturbed areas. Wet soils are vulnerable to compaction. Wet conditions often causes delays and the draining of water away from the works (in the case of high water tables) into the water bodies of the adjacent properties, could (if not planned and managed correctly) have an impact on the water quality of these water bodies.	Low	If no mitigation measures are implemented, the environment could be damaged.
Fauna & Flora				
Not immediately rehabilitating disturbed areas resulting in spread of invasive plants and weeds.	Medium	Disturbed areas to be rehabilitated as soon as construction has concluded in order to prevent the spread of invasive plants and weeds.	Low	If mitigation measures is not implemented, invasive species might thrive.

No rehabilitation with indigenous plant species resulting in spread of aliens.	Medium	All landscaping should use indigenous plants only, with preference given to endemic plant species where possible.	Low	If mitigation measures is not implemented, invasive species might thrive.
Visual Impact				
Dumping of builder's rubble on neighbouring properties.	Medium	All waste temporarily stored on the construction site during the operational phase has to be removed from the site during the decommissioning phase and prior to the project being regarded as closed.	Low	If no mitigation measures are implemented, pollution could occur resulting in community complaints.
Air quality and noise				
Demolition works during the dry and windy season.	Low	Regular and effective damping down of working areas (especially during the dry and windy periods) must be carried out to avoid dust pollution that will have a negative impact on the surrounding environment. When necessary, these working areas should be damped down at least twice daily.	Low	If no mitigation measures are implemented, dust pollution could occur.
The noise created by decommissioning activities will result in an increase in ambient noise levels. This will be short term, being generated only during the day.	Low	All decommissioning and closure activities must be restricted to normal working hours from 7:00 in the morning to no later than 19:00 in the afternoons. No construction/ decommissioning may take place on Sundays and public holidays.	Low	If no mitigation measures are implemented, noise pollution could occur.
Roads & Traffic				
Heavy vehicle traffic increase could disrupt the surrounding landowners' daily routines.	Medium	Heavy vehicles must be instructed to only use the main roads during off-peak hours.	Low	If no mitigation measures are implemented, residents might complain.
Restrictions of access to surrounding properties.	Medium	<ul style="list-style-type: none"> ▪ To minimise this impacts or risks, heavy vehicles (trucks, bull dowsers, etc.) should avoid using the local road network during peak traffic times; ▪ These vehicles should use only specific roads and strictly keep within the speed limits and abide to all traffic laws. No speeding or reckless driving should be allowed. Access to the site for heavy vehicles should be planned to minimise the impact on the surrounding network; and ▪ Warning signs should be erected on the roads that these vehicles will use, at big crossings/access roads and on the site if needed. 	Low	If no mitigation measures are implemented, residents might complain.
Damage to roads.	Medium	Specific roads must be allocated for the use by heavy vehicles and photos must be taken prior to decommissioning in order to determine if any damage has been done.	None	If no mitigation measures are implemented, road could be

				damaged without being repaired.
Safety & Security				
Decommissioning activities could cause danger to drivers and pedestrians.	Medium	The necessary safety precautions must remain in place until decommissioning phase is concluded i.e. signage must be in place to identify activities in progress.	Low	If no mitigation measures are implemented, erosion of fill material could occur.
Waste Management				
Site office, camp and associated waste (visual, air and soil pollution)	Medium	Temporary site camp and waste storage areas are to be decommissioned. Disturbed areas are to be rehabilitated and returned to its former state (prior to construction commencing).	Low	If no mitigation measures are implemented, sense of place will be negatively affected.
Disposal of builders waste and waste materials.	Medium	<ul style="list-style-type: none"> All waste generated during the decommissioning phase of the project is to be collected and disposed of at a registered landfill site. Records must be kept of waste reused, recycled, and disposed for inspection by authorities. 	Low	If no mitigation measures are implemented, the environment will be polluted.

Alternative 1 – (Heavy Industrial Township)

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
Geology & Soils				
Soil erosion, siltation and gully formation.	Medium	Demolition works must be kept to a minimum on site and only be done one section at a time to prevent excessive open soil areas that could lead to soil erosion, siltation and excessive compaction.	Low	If no mitigation measures are implemented, erosion of fill material could occur.
If not planned and managed correctly, topsoil will be lost.	Medium	<ul style="list-style-type: none"> A shake down area at the exit of the site should be established where the excessive soil on the tires of vehicles can be brushed off and kept aside for later use during 	Low	If no mitigation measures are

		<p>rehabilitation works;</p> <ul style="list-style-type: none"> ▪ The site should be planned before any decommissioning activities take place on site. The areas where soil will be compacted, heavy vehicle movement (on site construction routes), site camp, material storage areas and stockpiling areas should be marked out and the topsoil should be removed; ▪ The areas where topsoil will not be removed and that will be conserved should be marked with barrier tape to ensure vehicles do not move across these areas and decommissioning activities do not damage the in situ topsoil; ▪ The removed topsoil should be stored separately from all stockpiled materials and subsoil, according to the stockpiling methods as described below. The stockpiled topsoil should be used for rehabilitation purposes after decommissioning has been completed; and 		implemented, loss of topsoil could occur.
Hydrology & Groundwater				
Not reinstating natural run-off/drainage following completion of the decommissioning phase.	Low	Due to construction/decommissioning activities such as excavations and stockpiling, the natural drainage of the area will temporarily be changed. Following completion of the decommissioning phase and completion of rehabilitation, natural drainage should be reinstated to its former (prior to construction) state.	Low	If no mitigation measures are implemented, natural run-off could be negatively altered.
Demolition works during the rainy season can cause unnecessary delays and damage to the environment, especially damage to existing roads in the area.	Low	Should decommissioning take place in the wetter months, frequent rain could cause very wet conditions, which makes it extremely difficult to do the necessary rehabilitation works of disturbed areas. Wet soils are vulnerable to compaction. Wet conditions often causes delays and the draining of water away from the works (in the case of high water tables) into the water bodies of the adjacent properties, could (if not planned and managed correctly) have an impact on the water quality of these water bodies.	Low	If no mitigation measures are implemented, the environment could be damaged.
Fauna & Flora				
Not immediately rehabilitating disturbed areas resulting in spread of invasive plants and weeds.	Medium	Disturbed areas to be rehabilitated as soon as construction has concluded in order to prevent the spread of invasive plants and weeds.	Low	If mitigation measures is not implemented, invasive species might thrive.
No rehabilitation with indigenous plant species resulting in spread of aliens.	Medium	All landscaping should use indigenous plants only, with preference given to endemic plant species where possible.	Low	If mitigation measures is not implemented, invasive species might thrive.
Visual Impact				
Dumping of builder's rubble on neighbouring properties.	High	All waste temporarily stored on the construction site during the operational phase has to be removed from the site during the decommissioning phase and prior to the project being regarded as closed.	Medium	If no mitigation measures are implemented,

				pollution could occur resulting in community complaints.
Air quality and noise				
Demolition works during the dry and windy season.	High	Regular and effective damping down of working areas (especially during the dry and windy periods) must be carried out to avoid dust pollution that will have a negative impact on the surrounding environment. When necessary, these working areas should be damped down at least twice daily.	Medium	If no mitigation measures are implemented, dust pollution could occur.
The noise created by decommissioning activities will result in an increase in ambient noise levels. This will be short term, being generated only during the day.	High	All decommissioning and closure activities must be restricted to normal working hours from 7:00 in the morning to no later than 19:00 in the afternoons.	Medium	If no mitigation measures are implemented, noise pollution could occur.
Roads & Traffic				
Heavy vehicle traffic increase could disrupt the surrounding landowners' daily routines.	High	Heavy vehicles must be instructed to only use the main roads during off-peak hours.	Medium	If no mitigation measures are implemented, residents might complain.
Restrictions of access to surrounding properties.	High	<ul style="list-style-type: none"> ▪ To minimise this impacts or risks, heavy vehicles (trucks, bull dowsers, etc.) should avoid using the local road network during peak traffic times; ▪ These vehicles should use only specific roads and strictly keep within the speed limits and abide to all traffic laws. No speeding or reckless driving should be allowed. Access to the site for heavy vehicles should be planned to minimise the impact on the surrounding network; and ▪ Warning signs should be erected on the roads that these vehicles will use, at big crossings/access roads and on the site if needed. 	Medium	If no mitigation measures are implemented, residents might complain.
Damage to roads.	High	Specific roads must be allocated for the use by heavy vehicles and photos must be taken prior to decommissioning in order to determine if any damage has been done.	Medium	If no mitigation measures are implemented, road could be damaged without being repaired.
Safety & Security				
Decommissioning activities could cause danger to drivers and pedestrians.	High	The necessary safety precautions must remain in place until decommissioning phase is concluded i.e. signage must be in place to identify activities in progress.	Medium	If no mitigation measures are implemented, erosion of fill material could occur.

Waste Management				
Site office, camp and associated waste (visual, air and soil pollution)	Medium	Temporary site camp and waste storage areas are to be decommissioned. Disturbed areas are to be rehabilitated and returned to its former state (prior to construction commencing).	Low	If no mitigation measures are implemented, sense of place will be negatively affected.
Disposal of builders waste and waste materials.	Medium	All waste generated during the decommissioning phase of the project is to be collected and disposed of at a registered landfill site. Records must be kept of waste reused, recycled, and disposed for inspection by authorities.	Low	If no mitigation measures are implemented, the environment will be polluted.

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

Motivating Memorandum (Appendix G1)
Fauna and Flora Habitat Assessment (Appendix G2)
Geotechnical Report (Appendix G3)
Electrical Report (Appendix G4)
Services Report (Appendix G5)
Traffic Impact Study (Appendix G6)

Where applicable indicate the detailed financial provisions for rehabilitation, closure and ongoing post decommissioning management for the negative environmental impacts.

Not applicable

4. CUMULATIVE IMPACTS

Describe potential impacts that, on their own may not be significant, but is significant when added to the impact of other activities or existing impacts in the environment. Substantiate response:

Should the proposed development (PREFERRED ALTERNATIVE) be approved, the majority of cumulative impacts will be related to the construction phase.

- Noise pollution may upset residents in the area – to prevent this, construction activities may only take place during the daytime (7:00-19:00);
- Surface water flows will be altered during the construction phase of the proposed development – a storm water management plan must therefore be implemented;
- The construction vehicles and facilities will have a negative impact on the study area and surrounding views – this impact may be minimized by locating the site camp in an area with low visibility from surrounding developments and road networks;
- Dust pollution could cause nuisance to surrounding residents – dust can be effectively controlled through the wetting of exposed surfaces, especially in the winter months;
- Traffic flow could be negatively affected by the proposed construction activities coupled with peak traffic hours. It is thus important that use of access roads be limited to off-peak hours;
- Cumulative negative visual impact on surrounding views due to camp site, movement of construction vehicles, building rubble storage, and construction works etc. This impact may be minimized by locating the site camp and rubble storage area in an area with low visibility from surrounding developments and road networks; and
- During the construction phase some safety problems (especially for the surrounding residents) are likely to occur – in order to minimise this, site workers are not to be allowed to sleep on the construction site at night and provision for adequate security site supervision must be made during the day.

Subsequently, the above mentioned cumulative impacts can be mitigated if activities are correctly planned and measures are implemented to manage activities which could cause any negative cumulative impacts.

One has to note, that the greatest cumulative impact on the site would be if no development takes place. It will furthermore have a great negative impact on the safety of the surrounding urban community. It is therefore recommended that the proposed development is allowed to take place.

5. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that sums up the impact that the proposal and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Proposal - **PREFERRED**

According to the Rural Development Strategy, Future Urban Development Areas are suitable for urban development. The areas are located in close proximity to urban areas of opportunity including employment and social amenities and have low or medium ecological sensitivities. The proposed application site is in close proximity of such amenities such as Pretoria, Johannesburg, Midrand and Hartebeespoortdam, therefore making the location ideally suited for the proposed development. Furthermore the application site is ideally situated in close proximity of major traffic routes. From an environmental point of view, the Gauteng Provincial Environmental Management Framework (EMF) also supports the proposed development as the site falls within Zone 1 of the EMF which is the Urban Development Zone and the intention with this zone is to streamline urban development activities in this area in order to promote development infill, densification and concentration of the urban area and associated development. This will establish more effective and efficient city region which will minimise urban sprawl into urban areas.

The proposed Peach Tree X23 development would not only promote the optimum utilisation of available services in the direct vicinity, but it will also contribute to the upgrading of existing services. The proposed Industrial Development is fully compatible with the proposals of the area, as mentioned above.

The major impacts that is likely to occur during the construction and operational phase:

- **Biodiversity**

The environment will be temporarily affected by the moving of large construction vehicles and the excavations for the services and construction of the development. The impact is therefore considered to be very low, if not negligible.

- **Geology and Soils**

No dolomite is found on the proposed development area. Valuable topsoil may be lost during the construction process. The loss of topsoil can however be minimised through the storage of topsoil in designated stockpiles on site and the re-use thereof within the

landscape component of the development.

- **The Social Environment**

The Public Participation were done by means of a newspaper notice, site notices placed on prominent points on the application site, hand delivered notices to surrounding tenants and landowners and the distributing of notices to stakeholders such as the Local Authorities, Councillors by means of e-mails. Dangerous excavations can cause injury/even death to people if proper precautions are not taken. Crime can also impact the surrounding community from the temporary workers. Social importance, new human activity in the area. Construction vehicles and equipment can be temporarily visually unpleasant for residents.

- **Economic Environment**

The construction and operational phase of the proposed Peach Tree X23 development will create a significant number of employment opportunities for skilled and un-skilled workers.

- **Noise**

The construction phase will cause noise pollution and disturb the receiving community, but can be mitigated with the limitation of construction hours from 7:00 to 19:00 to cause minimal disturbance to the community.

- **Visual**

Construction vehicles and equipment can be visually unpleasant for residents.

- **Service**

No formal City of Tshwane sewerage reticulation is available in the vicinity of the proposed development. **It is proposed to install a sewer treatment plant on site as the temporary alternative until the CoT connection becomes available.**

Alternative 1 (Heavy Industrial Township)

The development for the alternative is a heavy industrial development in terms of principles and mitigation measures.

This alternative development will have a negative impact on the Bio-physical environment as well as the Socio-Economic environment. The

establishment of a heavy industrial township will not be beneficial for the surrounding land uses; in fact the development will have a negative impact through potential noise and air pollution on the surrounding residents. Heavy industrial development (depending on the industry/tenant) may have toxic substances and hazardous waste that need to be disposed of or run into the municipal stream or environment. This may lead to ground water pollution. The N14 situated on the northern boundary of the study area will be visually impacted by the heavy industrial development. Therefore the study area is not ideally located for a heavy industrial development, but rather a light industrial development as the light industrial will not impact the sense of place as there are a few light industrial developments within the area.

Alternative 2

No-go (compulsory)

The "No-Go" option entails that the development area stays in the current state.

The proposed project offers economic turnover as it will provide various employment opportunities to a number of skilled, semi-skilled and unskilled employees during the construction phase. The development in its operational phase will not only create permanent jobs but it will also create permanent jobs associated with community upliftment.

If the "No-Go" option is followed no economic benefits will be acquired. Approval of the proposed development will also result in the optimum utilization of infrastructure and services in the surrounding area.

This holds the benefit to the neighbouring property owners that the site area which will become part of the area will be managed as an additional positive feature. The development of the facility will warrant the upgrading of the security in and around the facility. Residents will most definitely benefit from the improved security in the area.

If the proposed area is not developed it will create an opportunity for informal settlements, which will decrease the ecological value of the area significantly. Therefore, the "No-Go" alternative is not regarded as a viable alternative – please refer to the Section where the No-Go alternative has been discussed in more detail.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

Proposal (PREFERRED) – Light Industrial Township

Having assessed the significance of impacts of the proposal and alternative(s), please provide an overall summary and reasons for selecting the proposal or preferred alternative.

It is evident that based on the biophysical and sociological characteristics, the site is suitable for the proposed development of Peach Tree X23 (only if the project is planned and managed in accordance with an approved Environmental

Management Programme). The development will fit in with the surrounding area due to all the applications currently in process and create job opportunities during the construction and operational phase.

As already indicated, most of the construction related activities could be mitigated to an acceptable level. Furthermore no detrimental ecological impacts are anticipated; in fact the construction activities of the proposed development can lead to an improvement of the ecological conditions on the site as alien and invasive plant species will be eradicated and monitored.

The proposed development will create several job opportunities during the construction and operational phase. If managed correctly, the proposed project could have a significant positive impact on the social and economic environments. As discussed earlier in the report, there is no formal City of Tshwane sewerage reticulation available in the vicinity of the proposed development. It is proposed to install a sewer treatment plant on site as the temporary alternative until the CoT connection becomes available.

In the long term the impact of the proposed development will be more positive than negative for the bio-physical, social and economic environments.

The mitigations and adaptive monitoring outlined in this Basic Assessment and the EMP with respect to potential adverse impacts should result in limited adverse impacts on local and regional, natural and socio-economic resources. Balanced with the overall beneficial positive economic and environmental impacts identified, the potential adverse effects attributable to the proposed development do not constitute a threat to local and regional ecological resources and social systems. No "Fatal Flaws" or adverse impacts that cannot be mitigated are anticipated to be associated with the proposed development.

As a result of the above mentioned information, Bokamoso is of the opinion that the proposed development (only if planned, implemented and managed correctly) will in the long term have a significant positive impact on the larger regional system to which it is linked.

It is therefore requested that the development be allowed to proceed, so long as the mitigation measures contained in this report and in the Environmental Management Programme (Appendix H) are implemented, so as to achieve maximum advantage from beneficial impacts, and sufficient mitigation of adverse impacts.

7. SPATIAL DEVELOPMENT TOOLS

Indicate the application of any spatial development tool protocols on the proposed development and the outcome thereof.

Spatial data was used to determine the agricultural potential, presence of rivers and wetlands and urban edge. Together with the Gauteng Conservation Plan (c-plan) data, the presence of ecological supported areas and protected areas were also established.

8. RECOMMENDATION OF THE PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the Environmental Assessment Practitioner as bound by professional ethical standards and the code of conduct of EAPASA).

YES
X

If "NO", indicate the aspects that require further assessment before a decision can be made (list the aspects that require further assessment):

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

As a result of the abovementioned information, Bokamoso requests that the above development be approved as long as the following are followed:

- All mitigation measures and recommendations as part of the attached Fauna and Flora Habitat Assessment (**Refer to Appendix G2**) must be adhered to.
- The recommendations made in the Engineering Report should be adhered to (**Refer to Appendix G5**);
- Adhere to all the recommendations made in the Geotechnical Report. (**Refer to Appendix G3**)
- It is proposed to install a sewer treatment plant on site as the temporary alternative until the CoT connection becomes available.
- A confirmation letter on the available capacity from Rand Water will need to be obtained prior to construction.
- Should the proposed development not be able to connect to the Rand Water bulk water line it will be required to follow the alternative route suggested by the GLS Report which will result in crossing the Swartbooi Spruit to install the external water pipeline and a Water Use License Application (WULA) will have to be submitted. Should this be the case we recommend that the WULA be made a condition of the Environmental Authorisation.

The attached Environmental Management Programme (EMPr) must be adhered to at all times and the appointed ECO must ensure the developer comply with the EMPr.

9. THE NEEDS AND DESIREBILITY OF THE PROPOSED DEVELOPMENT (as per notice 792 of 2012, or the updated version of this guideline)

The developer recognised the need and desirability for an Industrial Development (light industrial and commercial) to be known as Peach Tree X23. The development will furthermore contribute to the tax base of the City of Tshwane in the form of rates and taxes, as well as possible bulk services contributions payable to Tshwane.

This proposed development could play an important part in the unlocking of the inherent potential of the surrounding properties in the area. It will also

contribute to the overall efficiency, sustainability and improved quality of the greater metropolitan area.

The proposed development of a light industrial and commercial development is ideally situated for such a development due to the N14 situated at the site's south boundary and the private air space/hanger east of the study area. The N14 highway is also the main route to Lanseria International Airport, from the east, and therefore the site location is considered ideal for the type of development.

10. THE PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED
(CONSIDER WHEN THE ACITIVTY IS EXPECTED TO BE CONCLUDED)

10 Years plus

11. ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) (must include post construction monitoring requirements and when these will be concluded.)

If the EAP answers "Yes" to Point 7 above then an EMP is to be attached to this report as an Appendix

EMPr attached

YES
X

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate (this list is inclusive, but not exhaustive):

It is required that if more than one item is enclosed that a table of contents is included in the appendix

Appendix A: Site plan(s) – *(must include a scaled layout plan of the proposed activities overlain on the site sensitivities indicating areas to be avoided including buffers)*

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Route position information

Appendix E: Public participation information

Appendix F: Water use license(s) authorisation, SAHRA information, service letters from municipalities, water supply information

Appendix G: Specialist reports

Appendix H: EMPr

Appendix I: Other information

CHECKLIST

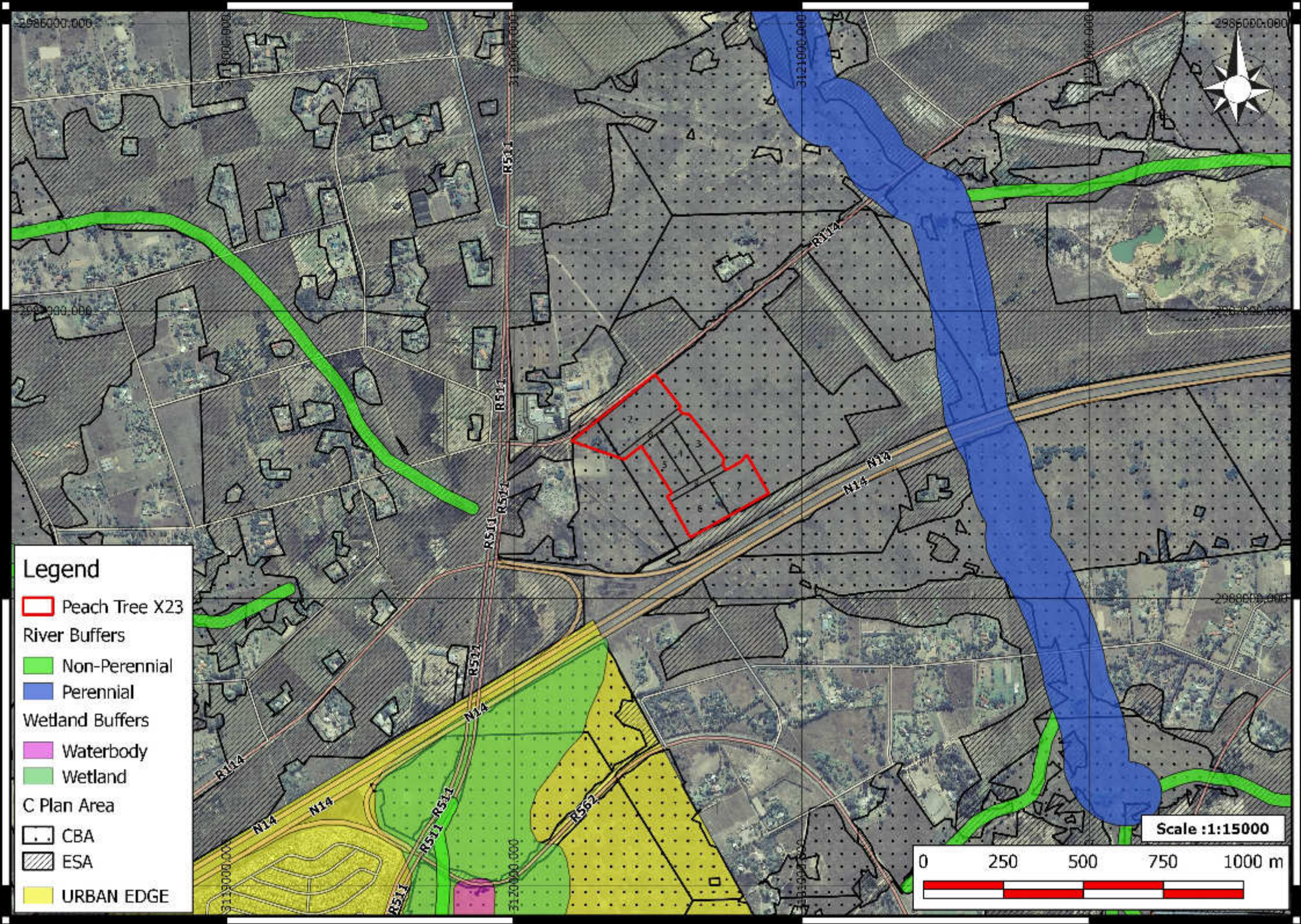
To ensure that all information that the Department needs to be able to process this application, please check that:

- Where requested, supporting documentation has been attached;
 - All relevant sections of the form have been completed.
-



Appendix A

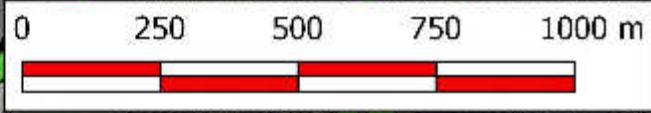
Site Plan(s)



Legend

- Peach Tree X23
- River Buffers
 - Non-Perennial
 - Perennial
- Wetland Buffers
 - Waterbody
 - Wetland
- C Plan Area
 - CBA
 - ESA
 - URBAN EDGE

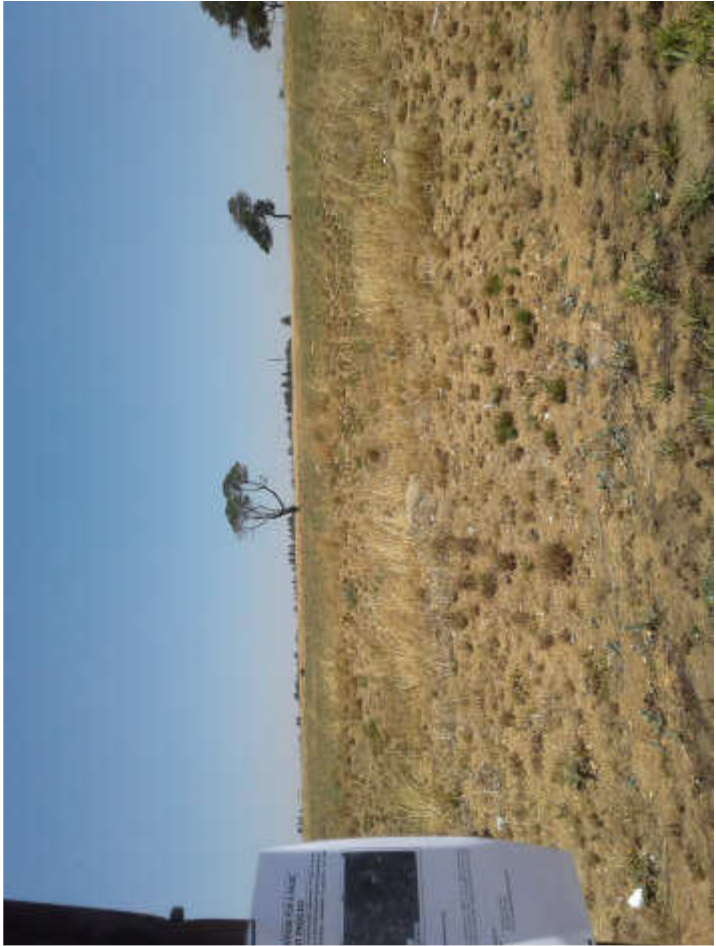
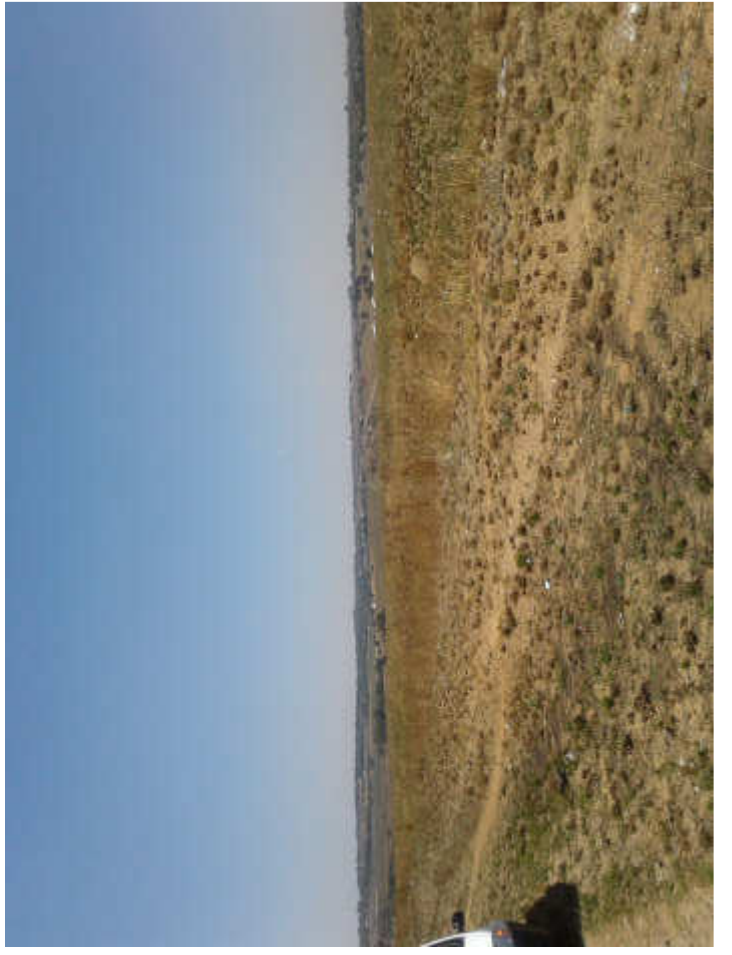
Scale :1:15000





Appendix B

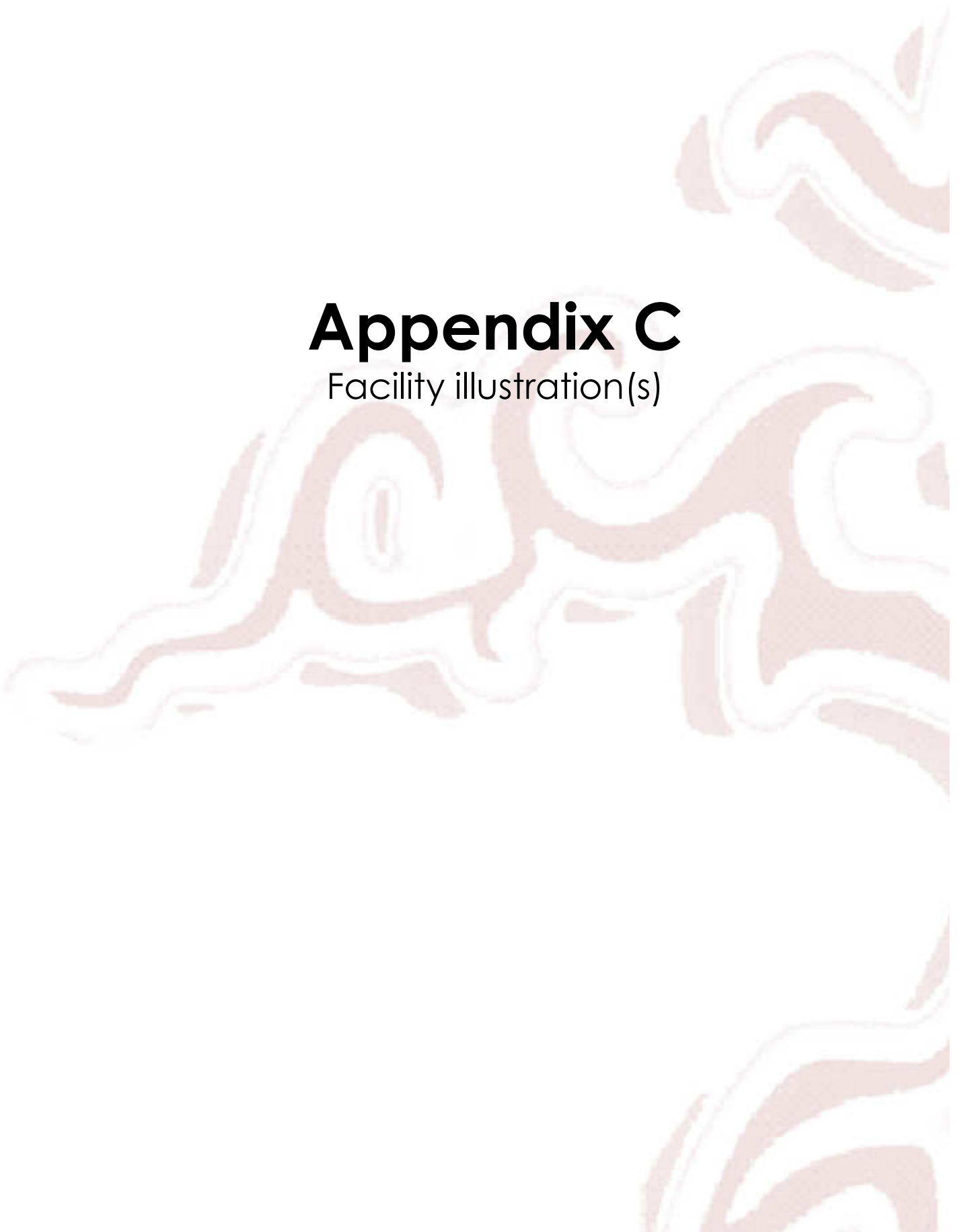
Photographs





Appendix C

Facility illustration(s)

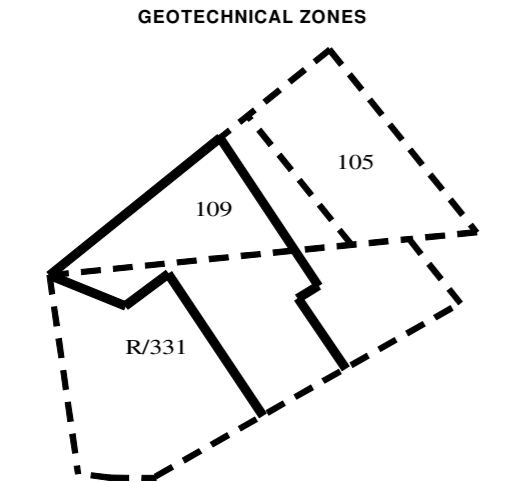


PROPOSED TOWNSHIP: PEACH TREE EXTENSION 23

LOCALITY MAP 1:20 000



urban innovate
 URBAN INNOVATE CONSULTING CC
 TEL: 012 460-0670 PO BOX 27011
 FAX: 086 592 9974 MONUMENT PARK
 E-MAIL: info@urbaninnovate.co.za 0105
 www.urbaninnovate.co.za



THIS IS TO CERTIFY THAT THE TOWNSHIP LAYOUT ON THE PLAN IS IN ACCORDANCE WITH THE PROVISIONS AND RECOMMENDATIONS AS SET OUT IN THE GEOTECHNICAL INVESTIGATION FOR THE PROPOSED TOWNSHIP.

GEOTECHNICAL ZONES:

ZONE	DESCRIPTION
P-C2-S2	THE ENTIRE SITE IS ZONED - NHRC ZONE P/F/L/G/S2

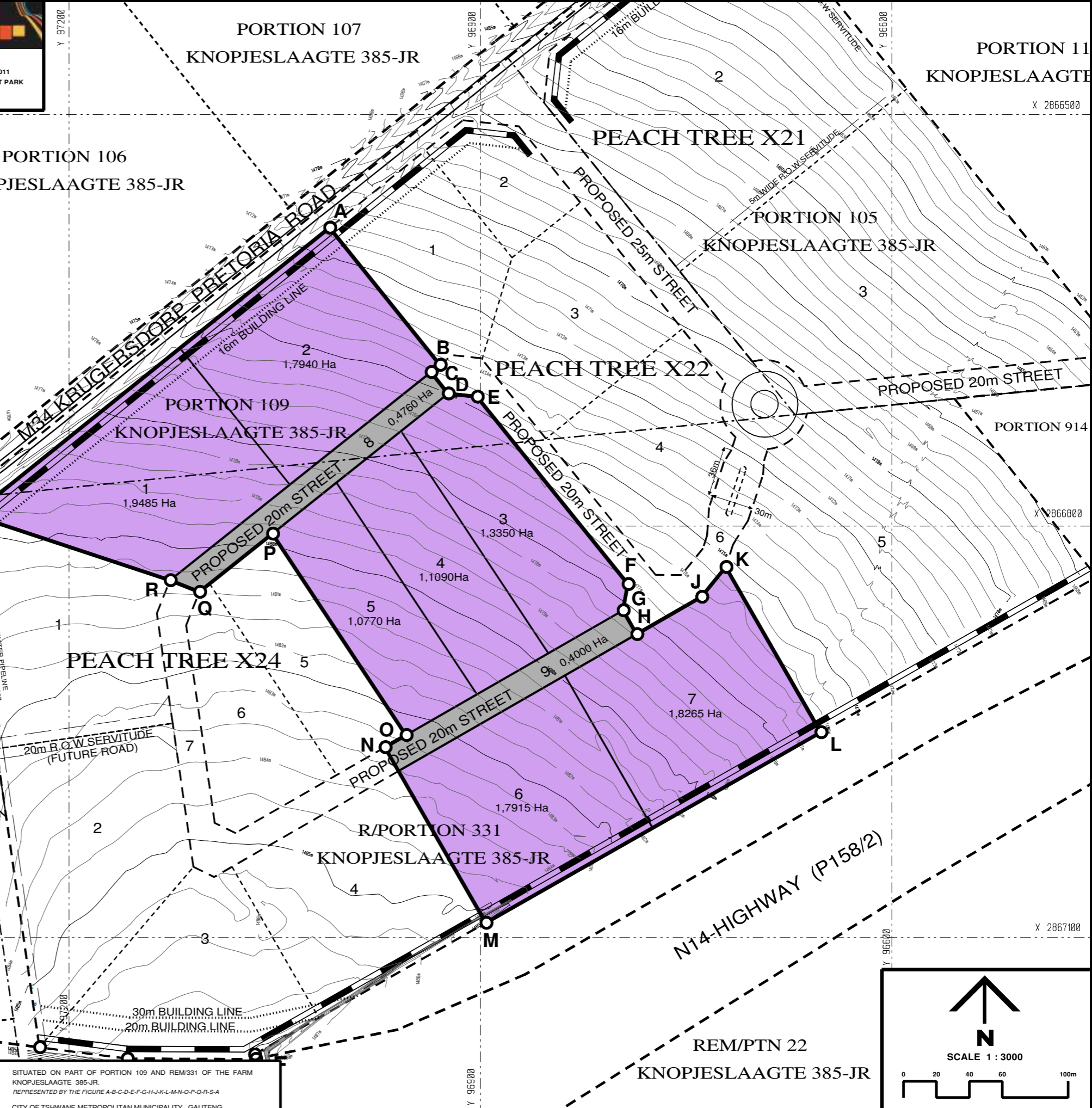
FLOOD LINE CERTIFICATION
 1:50 AND 1:100 YEAR FLOODS
 I HEREBY CERTIFY THAT IN TERMS OF SECTION 144 OF THE NATIONAL WATER ACT, ACT OF 1996, IT IS HEREBY CERTIFIED THAT THE TOWNSHIP IS NOT SUBJECT TO A FLOOD WITH AN EXPECTED FREQUENCY OF 1:50 YEARS AND 1:100 YEARS.

GENERAL NOTE:
 1. CONTOURS: SUPPLIED BY BEA21 SURVEYS LAND SURVEYORS. 1:50M INTERVALS. DATUM: SEA LEVEL. SYSTEM: WGS 84.
 2. THE CONTOURS ARE IN ACCORDANCE WITH REGULATION 18(1) OF THE TOWN PLANNING AND TOWNSHIPS ORDINANCE, 1986.
 3. ALL DIMENSIONS AND AREAS ARE APPROXIMATE PENDING FINAL SURVEY.
 4. PROPOSED PHASES SUBJECT TO CHANGE.
 5. REPRESENTS A GEOTECHNICAL ZONE LINE.
 6. REPRESENTS ALINE OF NO-ACCESS.
 7. REPRESENTS THE RELEVANT BUILDING LINES.

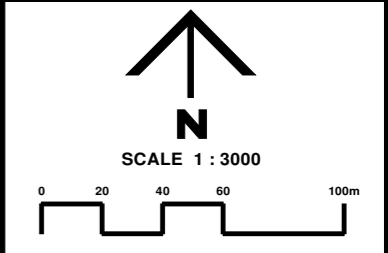
SERVITUDE NOTE:
 1. EXISTING SERVITUDES TO BE INCORPORATED IN THE DESIGN OF THE TOWNSHIP.
 2. PROPOSED 5m WIDE WATER SERVITUDE OVER ERVEN 9 AND 10.
 3. PROPOSED ROW SERVITUDE OVER ERVEN 9 AND 10.

PLAN No: PEACH TREE X23/1 DATE: AUG 2016

USE ZONE	ERF NUMBERS	TOT. NO. OF ERVEN	MIN. ERF SIZE (m ²)	AVERAGE	TOTAL AREA (m ²)
INDUSTRIAL 2 FOR BUSINESS BUILDINGS, COMMERCIAL USE, LIGHT INDUSTRY, CAFETERIA, CAR WASH, PLACE OF RETIREMENT, PARKING GARAGE, RETAIL, INDUSTRY AND SHOPS.	1-7	7	NA	NA	10,8900
SPECIAL FOR ACCESS AND ACCESS CONTROL	8,9	2	NA	NA	0,8800
EXISTING STREETS AND WIDENING	NA	NA	NA	NA	NA
TOTAL		9			11,7700



SITUATED ON PART OF PORTION 109 AND REM/331 OF THE FARM KNOPJESLAAGTE 385-JR.
 REPRESENTED BY THE FIGURE A-B-C-D-E-F-G-H-J-K-L-M-N-O-P-Q-R-S-A
 CITY OF TSHWANE METROPOLITAN MUNICIPALITY, GAUTENG





Appendix D

Route portion information

N/A



Appendix E

Public Participation Information



Appendix Ei

Proof of Newspaper advertisement

RDE
P

3311

000
ORD
DORD.

er, twee
opplan
tkamer.
nderdak
sluit
s.

enaar
00
or ure
01
1289

ISE
R

3325

n-Suid,
im 2 slk -
slk-eenh
middellik
tuth k/u



NOTICE OF APPLICATION FOR A BASIC ASSESSMENT PROCESS

Notice is hereby given that an application for environmental authorisation in terms of the EIA Regulations, 2014 (Regulations in terms of Chapter 6 of the National Environmental Management Act, 1998, as amended) will be lodged with the Gauteng Department of Agriculture and Rural Development.

* **Project Name: Peach Tree Ext 23 Industrial.**

* **Proponent Name: Tembibex (Pty) Ltd**

* **Project Description & Property Description: The proposed Peach Tree Ext 23 Industrial development is for the establishment of an Industrial Township which is situated on Portions 109 & 331 of the Farm Knopjeslaagte 385 JR, City of Tshwane, Gauteng.**

* **Location: The proposed study area is situated east of the R115 Road and north of the N14, adjacent to the Centurion Flight Academy (Pty) Ltd.**

* **Listing Activities Applied for in terms of NEMA Regulations, 4 December 2014: GNR 983 (Listing Notice 1) - Activity 9, 10, 27 & 28.**

GNR 985 (Listing Notice 3) - Activity 4 & 12. (Listed Activities triggered will be confirmed during the Application process)

* **Date of Notice: 4 October - 2 November 2016**

The aforementioned proposed development requires applications subject to a Basic Assessment. Representations with respect to this application may be made by phone, fax or e-mail within 30 days of the date of the notice. Please note that in order to continue to receive information regarding this project, you must register as an I&AP with the contact person listed below.

Queries regarding this matter should be referred to: Bokamoso Landscape Architects and Environmental Consultants CC

Public Participation registration and Enquiries: Juanita De Beer; Project Enquiries: Mary-Lee van Zyl; P.O. Box 11375; Maroelana; 0161; Tel: (012) 346 3810

Fax: (086) 570 5659; www.bokamoso.net

E-mail: reception@bokamoso.net

PEACH TREE X23 INDUSTRIAL DEV

OKT 4(B)4045





Appendix Eii

Proof of Site Notice

NOTICE OF APPLICATION FOR A BASIC ASSESSMENT PROCESS

Notice is hereby given that an application for environmental authorisation in terms of the EIA Regulations, 2014 (Regulations in terms of Chapter 6 of the National Environmental Management Act, 1998, as amended) will be lodged with the Gauteng Department of Agriculture and Rural Development.

Project Name: Peach Tree Ext 23 Industrial.

Proponent Name: Tembibex (Pty) Ltd

Project Description & Property Description: The proposed Peach Tree Ext 23 Industrial development is for the establishment of an Industrial Township which is situated on Portions 109 & 331 of the Farm Knopjeslaagte 385 JR, City of Tshwane, Gauteng.

Location: The proposed study area is situated east of the R115 Road and north of the N14, adjacent to the Centurion Flight Academy (Pty) Ltd.

Listing Activities Applied for in terms of NEMA Regulations, 4 December 2014:

GNR 983 (Listing Notice 1) – Activity 9, 10, 27 & 28.

GNR 985 (Listing Notice 3) – Activity 4 & 12.

(Listed Activities triggered will be confirmed during the Application process)

Date of Notice: 4 October – 2 November 2016

The aforementioned proposed development requires applications subject to a Basic Assessment. Representations with respect to this application may be made by phone, fax or e-mail within 30 days of the date of the notice. Please note that in order to continue to receive information regarding this project, you must register as an I&AP with the contact person listed below.

Queries regarding this matter should be referred to:

Bokamoso Landscape Architects and Environmental Consultants CC

Public Participation registration and Enquiries: **Juanita De Beer**

Project Enquiries: **Mary-Lee van Zyl**

P.O. Box 11375

Maroelana 0161

www.bokamoso.net



Tel: (012) 346 3810

Fax: (086) 570 5659

E-mail: reception@bokamoso.net







Appendix Eiii

Written Notice

NOTICE OF APPLICATION FOR A BASIC ASSESSMENT PROCESS

Notice is hereby given that an application for environmental authorisation in terms of the EIA Regulations, 2014 (Regulations in terms of Chapter 6 of the National Environmental Management Act, 1998, as amended) will be lodged with the Gauteng Department of Agriculture and Rural Development.

Project Name: Peach Tree Ext 23 Industrial.

Proponent Name: Tembibex (Pty) Ltd

Project Description & Property Description: The proposed Peach Tree Ext 23 Industrial development is for the establishment of an Industrial Township which is situated on Portions 109 & 331 of the Farm Knopjeslaagte 385 JR, City of Tshwane, Gauteng.

Location: The proposed study area is situated east of the R115 Road and north of the N14, adjacent to the Centurion Flight Academy (Pty) Ltd.

Listing Activities Applied for in terms of NEMA Regulations, 4 December 2014:

GNR 983 (Listing Notice 1) – Activity 9, 10, 27 & 28.

GNR 985 (Listing Notice 3) – Activity 4 & 12.

(Listed Activities triggered will be confirmed during the Application process)

Date of Notice: 4 October – 2 November 2016

The aforementioned proposed development requires applications subject to a Basic Assessment. Representations with respect to this application may be made by phone, fax or e-mail within 30 days of the date of the notice. Please note that in order to continue to receive information regarding this project, you must register as an I&AP with the contact person listed below.

Queries regarding this matter should be referred to:

Bokamoso Landscape Architects and Environmental Consultants CC

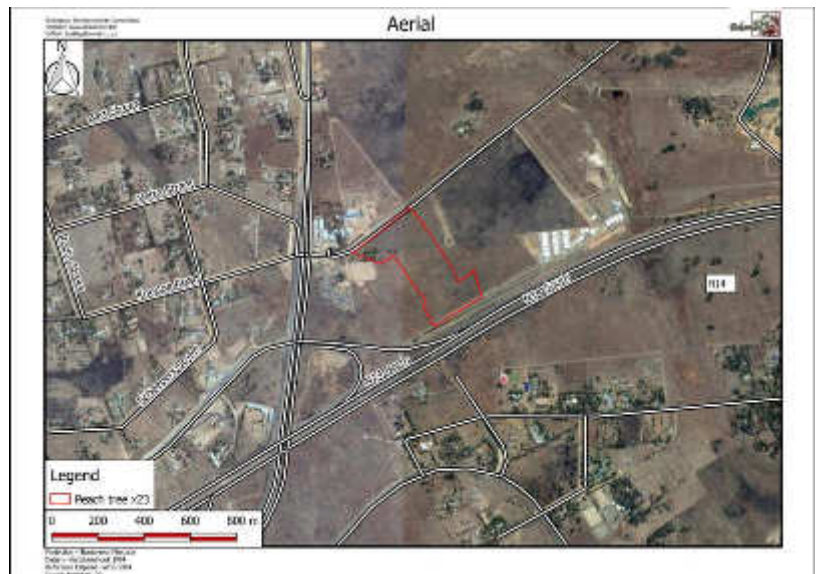
Public Participation registration and Enquiries: **Juanita De Beer**

Project Enquiries: **Mary-Lee van Zyl**

P.O. Box 11375

Maroelana 0161

www.bokamoso.net



Tel: (012) 346 3810

Fax: (086) 570 5659

E-mail: reception@bokamoso.net

LEBOMBO GARDEN BUILDING
36 LEBOMBO ROAD
ASHLEA GARDENS
0081

P.O. BOX 11375
MAROELANA
0161

Tel: (012) 346 3810
Fax: 086 570 5659

E-mail: reception@bokamoso.net
Website: www.Bokamoso.net



Dear Landowner/Tenant

4 October 2016

You are hereby informed that **Bokamoso Landscape Architects and Environmental Consultants CC** were appointed (as EAP) by **Tembibex (Pty) Ltd** to conduct the Basic Assessment Process in terms of the 2014 NEMA EIA Regulations for the proposed **Peach Tree Ext 23 Industrial**.

Project Description:

The proposed Peach Tree Ext 23 Industrial development is for the establishment of an Industrial Township which is situated on Portions 109 & 331 of the Farm Knopjeslaagte 385 JR, City of Tshwane, Gauteng.

In terms of Regulation No. R982 published in the Government Notice No. 38282 of 4 December 2014 of the National Environment Management Act, 1998 (Act No. 107 of 1998) Governing Basic Assessment Procedures (Notice 1 – Governing Notice R983 and Notice 3 Governing Notice R985) of the 2014 amended NEMA Regulations, the EAP must inform all landowners and tenants of properties adjacent to the proposed development.

This letter serves as notification to you, (landowner/tenant) of the property of the proposed development. Bokamoso requests that you supply the contact details of any tenants or other interested and affected parties that may reside or work on the property. Bokamoso will supply these parties with the necessary notification letters.

Alternatively, you are also welcome to distribute copies of your notification to these parties. We will however require proof that you supplied the notices to the tenants, landowners, workers etc. An alternative to the above option is to act as representative on behalf of these parties.

Please confirm within 30 days (via email/fax) that you received the landowners/tenant notification and this letter, please note that you can register throughout the Basic Assessment process. Kindly also confirm the number of tenants, if any, on your property and the preferred method of communication.


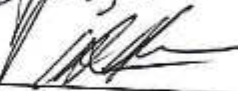
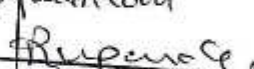

Please may you notify Bokamoso if you are planning to sell your property as the new owners will be required to be registered as an I&AP.

Regards

.....
Lizelle Gregory/Juanita De Beer

Peach Tree Ext 23 Industrial - Landowner Notification

Acknowledgement of Receipt of land owner notification concerning the proposed Peach Tree Ext 23 Industrial Project.

No.	Name	Address	Contact Details	Signature
1	Eagle's Creek Aviation Estate		Email: Fax: Tel:	
2	108 portion of Rappenburg	R114	Email: Fax: Tel: 072272944	
3	106 portion	R114	Email: andree@dransel.co.za Fax: Tel: 02668 917	
4	Reuben Mprudu	Plot 157 & 158 Cnr R114 & R511	Email: Chris.mprudu@gmail.com Fax: Tel:	
5	Lionel Jordt	Laezonia Engen Laezonia	Email: Fax: Tel:	 Engen Laezonia Vat No: 4700196589 Tel: 012 669 0001 Cnr R114 & R511 Laezonia laezonia@oilgro.co.za
6			Email: Fax: Tel:	
7	Nelson Jordim	Pieter Liphonstoe Engen Laezonia	Email: Nelson.Jordim-72@gmail.com Fax: Tel: 021 6593275	
8			Email: Fax: Tel:	
9			Email: Fax: Tel:	
10			Email: Fax: Tel:	
11			Email: Fax: Tel:	
12			Email: Fax: Tel:	
13			Email: Fax: Tel:	
14			Email: Fax: Tel:	
15			Email: Fax: Tel:	

Jordim

List of REGISTERED LETTERS Lys van GEREGISTREERDE BRIEWE



Post Office

(With an insurance option/met 'n versekeringsopsie)

Full tracking and tracing/Volledige volg en spoor

Name and address of sender
Naam en adres van afsender: Bobamase, P.O. Box 11375,
Marcelona Ot61
Peach Tree X21+X22; Peach Tree X23 + Peach Tree X24

Enquiries/Navrae
Toll-free number
Tolvry nommer
0800 111 502

No	Name and address of addressee Naam en adres van geadresseerde	Insured amount Versekerde bedrag	Insurance fee Versekeringsgeld	Postage Posgeld	Service fee Diensgeld	Affix Track and Trace customer copy Plak Volg-en-Spoor-klëntafskrif
1	Engen Petroleum P.O. Box 35, Cape Town, 8000					REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.sapo.co.za RD 799 625 114 ZA CUSTOMER COPY 301028R
2	MINTIQ P.O. Box 70406, Bryanston, Gauteng, 2021					REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.sapo.co.za RD 799 625 128 ZA CUSTOMER COPY 301028R
3	RZT Zelpy 5373 P.O. Box 30805, Faerie Glen, Pretoria, 0043					REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.sapo.co.za RD 799 625 091 ZA CUSTOMER COPY 301028R
4	Russel Anthony Khourie P.O. Box 299, Krugersdorp, 1740					REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.sapo.co.za RD 799 625 105 ZA
5	Hermann Reinhardt Avenant P.O. Box 53197, Wierddorp, 0149					REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.sapo.co.za RD 799 625 074 ZA CUSTOMER COPY 301028R
6	TEMBIBEX P.O. Box 94093, Erasmus, Gauteng, 0023					REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.sapo.co.za RD 799 625 088 ZA CUSTOMER COPY 301028R
7	Airpark Property Development P.O. Box 128, Fourways, 2055					REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.sapo.co.za RD 799 625 030 ZA CUSTOMER COPY 301028R
8	DEXALINX P.O. Box 34093, Erasmus, 0023					REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.sapo.co.za RD 799 625 043 ZA CUSTOMER COPY 301028R
9						
10						
Total Totaal		R	R	R	R	

Number of letters posted
Getal briewe gepos

Signature of client
Handtekening van klient

Signature of accepting officer
Handtekening van aanneembeampte

The value of the contents of these letters is as indicated and compensation is not payable for a letter received unconditionally. Compensation is limited to R100,00. No compensation is payable without documentary proof. Optional insurance of up to R2 000,00 is available and applies to domestic registered letters only.

Die waarde van die inhoud van hierdie briewe is soos aangedui en vergoeding sal nie betaal word vir 'n brief wat sonder voorbehoud ontvang word nie. Vergoeding is beperk tot R100,00. Geen vergoeding is sonder dokumentêre bewys betaalbaar nie. Opsionele versekering van tot R2 000,00 is beskikbaar en is slegs op binnelandse geregistreerde briewe van toepassing.





Appendix Eiv

Comments and Issues Register

**COMMENT AND RESPONSE REPORT-
REPORT FOR THE PROPOSED PEACH TREE EXT 23 INDUSTRIAL PROJECT**

Issue	Commentator	Response
<p>I acknowledge with thanks receipt of your email dated 04 October 2016, addressed to the Director General regarding the subject matter.</p> <p>Kindly note that the matter has been referred to the Deputy Director General: Spatial Planning and Land Use Management: Dr N Makgalemele for attention and response.</p> <p>Should you wish to follow up on this matter, kindly contact Ms Karen: Tel: 012 312 9665. Email: Karen.VanSchalkwyk@ddrdr.gov.za or Ms Baloi: Tel: 012 312 9851. Email: Malebo.Baloi@ddrdr.gov.za</p>	<p>Samuel Masemola Department of Rural Development and Land Reform DGOffice@ddrdr.gov.za 6 October 2016</p>	<p>Noted.</p>
<p>Email received.</p>	<p>Alma Antoinette Maroun mdeyze1260@gmail.com</p>	<p>Bokamoso Environmental notified via email including a Public Notice and Landowner & Tenant Letter to Alma Antoinette Maroun due to the fact that no contact information was available on Windeed Search.</p>
<p>In response to a notice posted on the R114 (attached) with regard to this Proposed Industrial Township, please register me (details below) as an Interested and Affected Party. Please confirm by return of mail that this has been done.</p> <p>The notice had no "Gaut:" reference number – if there is one, please also supply that.</p>	<p>Patrick Fynn fynnovation@gmail.com 8 October 2016</p>	<p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree Ext 23 Industrial Project.</p> <p>We will keep you updated regarding the process in the future.</p> <p>After submission of the Application form a GAUT Reference will be directed to project.</p>

<p>Please register myself as an I&AP for the above-referenced proposal. I am a resident of the adjoining Farm: Doornrandje 386 JR.</p> <p>Do please come back to me to confirm my registration.</p>	<p>Nick Foster Nickfoster155@gmail.com 9 October 2016</p>	<p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree Ext 23 Industrial Project.</p> <p>We will keep you updated regarding the process in the future.</p>
<p>Please register me as an I&AP for the above project.</p> <p>Please confirm receipt of this email.</p>	<p>Ingo von Boetticher Ingo.vonboetticher@gmail.com 9 October 2016</p>	<p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree Ext 23 Industrial Project.</p> <p>We will keep you updated regarding the process in the future.</p>
<p>Kindly register the under mentioned as an interested and affected party in this Basic Assessment Process.</p> <p>GD Watkins L39 Laezonia Email: gary@workinfo.com</p>	<p>Gary Watkins gary@workinfo.com 10 October 2016</p>	<p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree Ext 23 Industrial Project.</p> <p>We will keep you updated regarding the process in the future.</p>
<p>I here with register as an Interested and Affected party for this development as I own Portion 108 of Farm Knopjeslaagte 385 JR, which is directly across the road from this proposed development. Please acknowledge receipt of this mail. Thank you.</p>	<p>Hennie Anenant HennieA@Nedbank.co.za 12 October 2016</p>	<p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree Ext 23 Industrial Project.</p> <p>We will keep you updated regarding the process in the future.</p>
<p>Thank you, please keep me updated, is the property not zoned for residential?</p>		<p>No it is currently zoned as Agricultural/Undetermined. We will keep you updated regarding the process in the future.</p>

<p>Please register the people listed below as interested and affected parties to the proposed development. Regards Richard Angus, Stella Angus, Shane Rorke and Rosemary Rorke.</p>	<p>Richard Angus Richard.bonathaba@gmail.com 12 October 2016</p>	<p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree Ext 23 Industrial Project.</p>
<p>Please register me as an interested and affected party for this project. All communication regarding the application should be communicated to me.</p> <p>I am a owner of Plot 91. As we are staying in a farm area we have only bore holes. Plot owners run out of water during dry season's. We cannot allow any businesses to be build in our farm area as it will contribute to pollution of our ground water. We have a wetland on our property and it is very sensitive to pollution.</p> <p>We bought this property to enjoy the peace and quiet of nature. This project in this area will decrease the value of our property. I am concerned about the status of building an industrial area in a residential/farming area without a proper impact study on the nature including our ground water in this area. The value of our property will also decrease and the environmental will deteriorate when this project is allowed to succeed.</p> <p>Please keep me informed.</p>	<p>Andre Potgieter Andre.potgietr@gmail.com 12 October 2016</p>	<p>We will keep you updated regarding the process in the future.</p> <p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree Ext 23 Industrial Project.</p> <p>We will keep you updated regarding the process in the future.</p> <p>Please note that the Draft Basic Assessment Report contains the assessment of all possible impacts on the environmental and surrounding area/residents. Also note that it will be a light industrial and commercial area and the property is surrounded by major roads (N14, R114 and R511), a flight academy, filling station and a warehousing business opposite the road. There is also an illegal settlement a couple of meters away from the site. Therefore the site is not considered to be situated in an area with pristine vegetation and peace and quiet. Developments in this Urban Zone (according to the GPEMF) will have a positive impact on the value of properties as the need and desirability of the area is in line with the proposed development.</p>
<p>Please could you register me as an Interested and Affected Party in this Application for a Basic Assessment Process for the</p>	<p>Dalene van der Merwe literay@vodamail.co.za</p>	<p>Thank you for your response, we have registered you as an Interested and/or</p>

<p>above-mentioned proposed project. I am a resident of Doornrandje, within the Crocodile River Reserve, which is in close proximity to the Farm Knopjeslaagte.</p>	<p>13 October 2016</p>	<p>Affected Party for the proposed Peach Tree Ext 23 Industrial Project.</p> <p>We will keep you updated regarding the process in the future.</p>
<p>Please register Eagles Creek Business Trust as an IAP for the above proposed development. Please confirm receipt of registration.</p>	<p>Ian Roos Eagles Creek Business Trust ecologic@mweb.co.za 13 October 2016</p>	<p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree Ext 23 Industrial Project.</p> <p>We will keep you updated regarding the process in the future.</p>
<p>Thank you for your notification regarding the development.</p> <p>In terms of the National Heritage Resources Act, No 25 of 1999, heritage resources, including archaeological or palaeontological sites over 100 years old, graves older than 60 years, structures older than 60 years are protected. They may not be disturbed without a permit from the relevant heritage resources authority. This means that prior to development it is incumbent on the developer to ensure that a Heritage Impact Assessment is done. This must include the archaeological component (Phase 1) and any other applicable heritage components. Appropriate (Phase 2) mitigation, which involves recording, sampling and dating sites that are to be destroyed, must be done as required.</p> <p>The quickest process to follow for the archaeological component is to contract an accredited specialist (see the website of the Association of Southern African Professional Archaeologists www.asapa.org.za) to provide a Phase 1 Archaeological Impact Assessment Report. This must be done before any large development takes place.</p> <p>The Phase 1 Impact Assessment Report will identify the archaeological sites and assess significance. It should also make recommendations (as indicated in section 38) about the process to be followed. For example, there may need to be a mitigation phase (Phase 2) where the specialist will collect or excavate material and</p>	<p>Andrew Salomon asalomon@sahra.org.za SAHRA 14 October 2016</p>	<p>Noted. Please note that a Heritage Specialist has been appointed on this project and the report will be in the FBAR.</p>

<p>date the site. At the end of the process the heritage authority may give permission for destruction of the sites.</p> <p>Where bedrock is to be affected, or where there are coastal sediments, or marine or river terraces and in potentially fossiliferous superficial deposits, a Palaeontological Desk Top study must be undertaken to assess whether or not the development will impact upon palaeontological resources – or at least a letter of exemption from a Palaeontologist is needed to indicated that this is unnecessary. If the area is deemed sensitive, a full Phase 1 Palaeontological Impact Assessment will be required and if necessary a Phase 2 rescue operation might be necessary. Please note that a nationwide fossil sensitivity map is now available on SAHRIS to assist with determining the fossil sensitivity of a study area.</p> <p>If the property is very small or disturbed and there is no significant site the heritage specialist may choose to send a letter to the heritage authority motivating for exemption from having to undertake heritage assessments.</p> <p>Any other heritage resources that may be impacted such as built structures over 60 years old, sites of cultural significance associated with oral histories, burial grounds and graves, graves of victims of conflict, and cultural landscapes or viewscapes must also be assessed.</p>		
<p>As a land owner in the area, I hereby register as an interested and affected party with regard to the above application.</p> <p>Please ensure that I receive all reports and other relevant documents, by email to the following address: tiaanvc@gmail.com</p> <p>Please acknowledge receipt of this email, and confirm that I have been registered as requested.</p>	<p>Tiaan van Coppenhagen tiaanvc@gmail.com 19 October 2016</p>	<p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree X23 Industrial Development Project.</p> <p>We will keep you updated regarding the process in the future.</p>
<p>I would like to register as an I&AP for Project Name: Peach Tree X23 Industrial.</p>	<p>Duncan Williams villadunte@gmail.com</p>	<p>Thank you for your response, we have registered you as an Interested and/or</p>

	19 October 2016	Affected Party for the proposed Peach Tree X23 Industrial Development Project. We will keep you updated regarding the process in the future.
<p>Please register me as an I&AP in respect of the above development. Kindly provide all pertinent information to me at the above email address.</p> <p>I understand that Bokamoso Environmental Consultants are busy in my area with the proposed Peach Tree X23 Industrial Development opposite the Engen Petrol Station on the R511.</p> <p>I wish to be registered as an Interested and Affected Party and to receive information regarding all of the above as well as an opportunity to comment on these developments.</p> <p>I want to register as an I&AP for the development of Peach Tree X23.</p>	<p>Yvonne Butler Yvonnebutler37@gmail.com 20 October 2016</p> <p>Dot Henwood oakviewgardens@gmail.com 20 October 2016</p> <p>Monica Gerry Mgerry18@gmail.com 20 October 2016</p> <p>Karen Holtzhausen Karenholt11@gmail.com 20 October 2016</p> <p>Katarina van Stockhausen kina@vst.io 20 October 2016</p>	<p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree X23 Industrial Development Project.</p> <p>We will keep you updated regarding the process in the future.</p> <p>Registered.</p> <p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree X23 Industrial Development Project.</p> <p>We will keep you updated regarding the process in the future.</p> <p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree X23 Industrial Development Project.</p> <p>We will keep you updated regarding the process in the future.</p> <p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree X23 Industrial Development Project.</p>
<p>Please register me as an Interested and Affected Party. I would like more information regarding the planned development to be able to determine how I would be affected as a community member.</p> <p>Please confirm that I have been registered.</p> <p>I am registering as an Interested Party and objecting to the proposed building of the Peach Tree Ext 23 Industrial township in this beautiful area full of unique and indigenous flora and fauna. This area is greatly beneficial to South Africa and it should stay protected from</p>		

<p>potential pollution of its already scarce water basin and industrial development and alike activities that will endanger its nature and tourism business in Gauteng.</p> <p>I would appreciate if you let me know of your developments in this area.</p>		<p>We will keep you updated regarding the process in the future.</p> <p>Please note that the Draft Basic Assessment Report contains the assessment of all possible impacts on the environmental and surrounding area/residents. Also note that it will be a light industrial and commercial area and the property is surrounded by major roads (N14, R114 and R511), a flight academy, filling station and a warehousing business opposite the road. There is also an illegal settlement a couple of meters away from the site. Therefore the site is not considered to be situated in an area with pristine vegetation and peace and quiet.</p>
<p>Could you also kindly confirm the below as registered I&AP.</p> <p>I would also like to state my objection to the proposal, as well as objection to the placement of the notices, which are placed in inaccessible and dangerous (Hijacking) areas, making them unreadable for the surrounding community at large.</p> <p>At the same time your notice, which I have only seen in English, is situated at an informal settlement, where an official African language would be more appropriate on a bilingual application.</p> <p>I trust that this was not done intentionally and will be rectified</p>	<p>Elke Haas Elke.haas@gmail.com 20 October 2016</p>	<p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree X23 Industrial Development Project.</p> <p>We have noted your comments on our Issues and Comments Register.</p> <p>We will keep you updated regarding the process in the future.</p> <p>Please note that the public participation consultant that handed out the notices are equipped in several languages and if anyone did not understand the written notice it was explained to them in their own language.</p>

<p>Please register me as an I&AP for the proposed development.</p>	<p>Marc du Plessis Mdp0001@gmail.com 20 October 2016</p>	<p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree X23 Industrial Development Project.</p> <p>We will keep you updated regarding the process in the future.</p>
<p>Please ensure that I am registered as an IAP for the Peach Tree X23 project.</p> <p>I am a landowner in the area.</p>	<p>Liz Pattison liz@carrpattison.co.za 23 October 2016</p>	<p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree X23 Industrial Development Project.</p> <p>We will keep you updated regarding the process in the future.</p>
<p>Please register me as an I&AP for the proposed Peach Tree X23 Industrial Development.</p>	<p>Gail dmps@absamail.co.za 24 October 2016</p>	<p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree X23 Industrial Development Project.</p> <p>We will keep you updated regarding the process in the future.</p>
<p>I live in gerardsville and would like to register as an I&AP for the development.</p>	<p>Paul Millinger pgmillinger@gmail.com 25 October 2016</p>	<p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree X23 Industrial Development Project.</p> <p>We will keep you updated regarding the process in the future.</p>
<p>Please register me as I&AP on the proposed development.</p>	<p>Esca Coetsee escacoetsee@gmail.com 25 October 2016</p>	<p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree X23 Industrial Development Project.</p> <p>We will keep you updated regarding the process in the future.</p>
<p>I hereby am registering as an I&AP for Peach Tree X23.</p>	<p>Lydia Lemmens</p>	<p>Thank you for your response, we have</p>

	<p>Lydia.pretorius@siemens.com 25 October 2016</p>	<p>registered you as an Interested and/or Affected Party for the proposed Peach Tree X23 Industrial Development Project.</p> <p>We will keep you updated regarding the process in the future.</p>
<p>I hereby register as an interested party.</p>	<p>Nano Matlala matlala@msmminc.co.za 25 October 2016</p>	<p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree X23 Industrial Development Project.</p> <p>We will keep you updated regarding the process in the future.</p>
<p>Please register us as I&AP.</p>	<p>Suzanne van Schalkwyk Suzanne.hugo@gmail.com 26 October 2016</p>	<p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree X23 Industrial Development Project.</p> <p>We will keep you updated regarding the process in the future.</p>



Appendix Ev

Communication to and from
I&AP

juanita@bokamoso.net

From: marylee@bokamoso.net
Sent: 27 October 2016 12:13 PM
To: Juanita de Beer; Ronell
Subject: FW: Peachtree Extn 23. Industrial Township Application!
Attachments: image001.png; image002.jpg; image003.jpg

From: Avenant, H. (Hennie) [mailto:HennieA@Nedbank.co.za]
Sent: Monday, October 17, 2016 10:39 AM
To: marylee@bokamoso.net
Subject: RE: Peachtree Extn 23. Industrial Township Application!:

Dankie.

Hennie Avenant | CICS/MQ | Nedbank Group Technology
105 West Str, Sandton, 2196

☎ Office: +27 (0) 11 500 3770 | 📱 Cell: +27 82 825 9866 | Lync: 011 500 7657 | ✉ E-mail: henniea@nedbank.co.za | web address: www.nedbank.co.za

Nedbank is proud to be Africa's first carbon neutral bank and official conservation partner of the WWF-SA.

From: marylee@bokamoso.net [mailto:marylee@bokamoso.net]
Sent: 17 October 2016 10:32 AM
To: Avenant, H. (Hennie)
Cc: info; Juanita de Beer
Subject: RE: Peachtree Extn 23. Industrial Township Application!:

Goeie dag Hennie,

Nee dit is nie, dis tans nog gezoner Agricultural/Undetermined.

Ons sal jou op hoogte hou met die projek in die toekoms.

Vriendelike Groete,

Mary-lee van Zyl

Senior Environmental Assessment Practitioner



Landscape Architects & Environmental Consultants cc

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: reception@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

Please consider the environment before printing this email

From: Avenant, H. (Hennie) [mailto:HennieA@Nedbank.co.za]
Sent: 12 October 2016 04:55 PM
To: juanita@bokamoso.net
Subject: RE: Peachtree Extn 23. Industrial Township Application!:

Baie dankie hou my asb op hoogte, is die eindom nie op die oomblik gezoner vir behuising nie ?

Hennie Avenant | CICS/MQ | Nedbank Group Technology
105 West Str, Sandton, 2196

Nedbank is proud to be Africa's first carbon neutral bank and official conservation partner of the WWF-SA.

From: juanita@bokamoso.net [<mailto:juanita@bokamoso.net>]
Sent: 12 October 2016 03:21 PM
To: Avenant, H. (Hennie)
Subject: RE: Peachtree Extn 23. Industrial Township Application!:

Dear Hennie Anenant,

Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed **Peach Tree Ext 23 Industrial** Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Avenant, H. (Hennie) [<mailto:HennieA@Nedbank.co.za>]
Sent: 12 October 2016 02:25 PM
To: reception@bokamoso.net
Subject: Peachtree Extn 23. Industrial Township Application!:

Good day, I here with register as an Interrested and Affected party for this development as I own Portion 108 of **Farm Knopjeslaagte 385 JR, which is directly across the road from this proposed development. Please acknowledge receipt of this mail. Thank you**

Peachtree Extn 23. Industrial Township Application!:

Many thanks to Paddy Fynn for typing out the following (as the notice is badly positioned!). (See **copy Notice attached**).

NOTICE OF APPLICATION FOR A BASIC ASSESSMENT PROCESS

Notice is hereby given that an application for environmental authorisation in terms of the EIA Regulations, 2014 (Regulations in terms of Chapter 6 of the National Environmental Management Act, 1998, as amended) will be lodged with the Gauteng Department of Agriculture and Rural Development.

Project Name: Peach Tree Ext 23 Industrial

Proponent Name: Tembibex (Pty) Ltd

Project Description & Property Description: The proposed Peach Tree Ext 23 Industrial development is for the establishment of an Industrial Township which is situated on **Portions 109 & 331 of Farm Knopjeslaagte 385 JR**, City of Tshwane, Gauteng.

Location: The proposed study area is situated east of the R115 (sic) Road and north of the N14, adjacent to the Centurion Flight Academy (Pty) Ltd.

Listing Activities Applied for in terms of NEMA Regulations, 4 December 2014:

GNR 983 (Listing Notice 1) – Activity 9, 10, 27 & 28.

GNR 985 (Listing Notice 3) – Activity 4 & 12.

(Listed Activities triggered will be confirmed during the Application process)

Date of Notice: 4 October – 2 November 201

The aforementioned proposed development requires applications subject to a Basic Assessment Representations with respect to this application may be made by phone, fax or e-mail within 30 days of the date of the notice. Please note that in order to continue to receive information regarding this project, you must register as an I&AP with the contact person listed below.

Queries regarding this matter should be referred to:

Bokamoso Landscape Architects and Environmental Consultants CC

Public participation registration and Enquiries: **Juanita De Beer**

Project Enquiries: **Mary-Lee van Zyl**

Tel: (012) 346 3810

P.O. Box 11375




Fax: (086) 570 5659

Maroelana 0161

E-mail: reception@bokamoso.net

Hennie Avenant | CICS/MQ | Nedbank Group Technology

105 West Str, Sandton, 2196

 Office: +27 (0) 11 500 3770 |  Cell: +27 82 825 9866 | Lync: 011 500 7657 |  E-mail: henniea@nedbank.co.za | web address: www.nedbank.co.za

Nedbank is proud to be Africa's first carbon neutral bank and official conservation partner of the WWF-SA.

Nedbank disclaimer and confidentiality notice:

This email may contain information that is confidential, privileged or otherwise protected from disclosure. If you are not an intended recipient of this email or all or some of the information contained therein, do not duplicate or redistribute it by any means. Please delete it and any attachments and notify the sender that you have received it in error. Unless specifically indicated, this email is neither an offer or a solicitation to buy or sell any securities, investment products or other financial product or service, nor is it an official confirmation of any transaction or an official statement of Nedbank. Any views or opinions presented are solely those of the author and do not necessarily represent those of Nedbank. Nedbank Ltd Reg No 1951/000009/06.

The following link displays the names of the Nedbank Board of Directors and Company Secretary. [<http://www.nedbank.co.za/terms/DirectorsNedbank.htm>]

If you do not want to click on a link, please type the relevant address in your browser

Nedbank disclaimer and confidentiality notice:

This email may contain information that is confidential, privileged or otherwise protected from disclosure. If you are not an intended recipient of this email or all or some of the information contained therein, do not duplicate or redistribute it by any means. Please delete it and any attachments and notify the sender that you have received it in error. Unless specifically indicated, this email is neither an offer or a solicitation to buy or sell any securities, investment products or other financial product or service, nor is it an official confirmation of any transaction or an official statement of Nedbank. Any views or opinions presented are solely those of the author and do not necessarily represent those of Nedbank. Nedbank Ltd Reg No 1951/000009/06.

The following link displays the names of the Nedbank Board of Directors and Company Secretary. [<http://www.nedbank.co.za/terms/DirectorsNedbank.htm>]

If you do not want to click on a link, please type the relevant address in your browser

Nedbank disclaimer and confidentiality notice:

This email may contain information that is confidential, privileged or otherwise protected from disclosure. If you are not an intended recipient of this email or all or some of the information contained therein, do not duplicate or redistribute it by any means. Please delete it and any attachments and notify the sender that you have received it in error. Unless specifically indicated, this email is neither an offer or a solicitation to buy or sell any securities, investment products or other financial product or service, nor is it an official confirmation of any transaction or an official statement of Nedbank. Any views or opinions presented are solely those of the author and do not necessarily represent those of Nedbank. Nedbank Ltd Reg No 1951/000009/06.

The following link displays the names of the Nedbank Board of Directors and Company Secretary. [<http://www.nedbank.co.za/terms/DirectorsNedbank.htm>]

If you do not want to click on a link, please type the relevant address in your browser

juanita@bokamoso.net

From: DG Office <DGOffice@drdlr.gov.za>
Sent: 06 October 2016 04:32 PM
To: juanita@bokamoso.net
Subject: T2016-1129: PEACH TREE EXT 23 INDUSTRIAL - PUBLIC PARTICIPATION PROCESS
Attachments: image1870f9.JPG

Good day

I acknowledge with thanks receipt of your email dated 04 October 2016, addressed to the Director General regarding the subject matter.

Kindly note that the matter has been referred to the Deputy Director General: Spatial Planning and Land Use Management: Dr N Makgalemele for attention and response.

Should you wish to follow up on this matter, kindly contact Ms Karen: Tel: 012 312 9665. Email: Karen.VanSchalkwyk@drdlr.gov.za or Ms Baloi: Tel: 012 312 9851. Email: Malebo.Baloi@drdlr.gov.za

Kind regards

Samuel Masemola (Mr)
Office of the Director-General
Dept of Rural Development and Land Reform
TEL: + 27 12 312 8911 or
FAX: + 27 12 323 6072
184 Jacob Mare (Jeff Masemola) Street, **PRETORIA**. Room 246 Old Building



Together we move South Africa forward

juanita@bokamoso.net

From: juanita@bokamoso.net
Sent: 24 October 2016 11:24 AM
To: Elke Haas
Subject: RE: Registration as I &AP for Peach Tree Ext23 industrial Project by Tembibex (Pty) Ltd
Attachments: image001.jpg

Dear Elke Haas,

Thank you for your response, Bokamoso Environmental has registered you as an Interested and/or Affected Party for the proposed ***Peach Tree Ext 23 Industrial*** Project.

We have noted your comments on our Issues and Comments Register.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Elke Haas [mailto:elke.haas@gmail.com]

Sent: 20 October 2016 10:43 AM

To: juanita@bokamoso.net

Subject: Fwd: Registration as I &AP for Peach Tree Ext23 industrial Project by Tembibex (Pty) Ltd

Good morning Juanita

Thank you for the registration as I&AP for Peachtree x20, could you also kindly confirm the below as registered I&AP?

I am aware of your internet troubles, hence the resend.

Thank you very much

Elke Haas

----- Forwarded message -----

From: **Elke Haas** <elke.haas@gmail.com>

Date: Fri, Oct 14, 2016 at 7:33 AM

Subject: Registration as I &AP for Peach Tree Ext23 industrial Project by Tembibex (Pty) Ltd

To: reception@bokamoso.net, Mercia Komen <merciam@crocodileriverreserve.co.za>, Helen Duigan <hduigan@gmail.com>, Gary Watkins <gary@workinfo.com>, Responses Eia <eiareponses@gmail.com>

Good morning

Please herewith register me as an I&AP to the above and keep me informed on any further progress in this matter.

I would also like to state my objection to the proposal, as well as objection to the placement of the notices, which are placed in inaccessible and dangerous (HIjacking) areas, making them un readable for the surrounding community at large.

At the same time your notice, which I have only seen in English, is situated at an informal settlement, where an official African language would be more appropriate on a bilingual application.

I trust that this was not done intentionally and will be rectified.

Rgds

Elke Haas
084 593 1938
Laezonia resident

juanita@bokamoso.net

From: juanita@bokamoso.net
Sent: 06 October 2016 11:18 AM
To: mdeyzel260@gmail.com
Subject: Peach Tree Ext 23 Industrial - Public Participation Process
Attachments: Peach Tree Ext 23 - Public Notice BA.pdf; image001.jpg; Peach Tree Ext 23 - Landowner Tenants Letter.pdf

Dear Alma Antoinette Maroun,

Please refer to the attached Public Notice & Landowner and Tenant Letter regarding the proposed ***Peach Tree Ext 23 Industrial*** Project.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

juanita@bokamoso.net

From: juanita@bokamoso.net
Sent: 04 October 2016 11:53 AM
To: RudzaniM; 'jgrobler@geoscience.org.za'; msebesho; 'asalomon@sahra.org.za'; 'keetm@dwaf.gov.za'; 'SiwelaneL@dws.gov.za'; 'tshifaror@dwa.gov.za'; 'mathebet@dwa.gov.za'; 'maphata.ramphele@gauteng.gov.za'; 'paia@eskom.co.za'; 'central@eskom.co.za'; kumen govender; nkoneigh; mmpshe; 'loveous.tampane@transnet.net'; CLCC; magezi.mhlanga@drdlr.gov.za; dgoffice@drdlr.gov.za; Fhulufhedzan Rasimphi (Fhulufhedzan.Rasimphi@drdlr.gov.za); schmidk; daddyT@tshwane.gov.za
Subject: Peach Tree Ext 23 Industrial - Public Participation Process
Attachments: Peach Tree Ext 23 - Public Notice BA.pdf; image001.jpg

Dear Interested and/or Affected Parties,

Please refer to the attached Public Notice regarding the proposed **Peach Tree Ext 23 Industrial** Project.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: juanita@bokamoso.net
Sent: 10 October 2016 09:59 AM
To: 'armand@eaglescreek.net'
Subject: Peach Tree X21 & X22; Peach Tree X23 and Peach Tree X24 - Public Participation Process
Attachments: image001.jpg; Public Notice Peach Tree X21 & X22.pdf; Peach Tree Ext 23 - Public Notice BA.pdf; Peach Tree Ext 24 - Public Notice BA.pdf

Dear Armand,

Your telephonic conversation with Corné Niemandt refers.

Please refer to the attached Public Notices for the abovementioned projects.

If you want to register as an Interested and/or Affected Party (I&AP) for each of these abovementioned projects, you are more than welcome to register via email.

Hope this finds you well.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: juanita@bokamoso.net
Sent: 26 October 2016 10:23 AM
To: gary@workinfo.com; 'fynnovation@gmail.com'; nickfoster155@gmail.com; ingo.vonboetticher@gmail.com; HennieA@Nedbank.co.za; richard.bonathaba@gmail.com; 'andre.potgietr@gmail.com'; 'literay@vodamail.co.za'; 'Ian Roos'; tiaanvc@gmail.com; 'Paul Millinger'; 'IG'; 'Liz Pattison'; 'Monica Gerry'; 'Dot Henwood'; 'Yvonne Butler'; Karen Holtzhausen (karenholt111@gmail.com); mdp0001@gmail.com; Katarina v. Stockhausen (kina@vst.io); elke.haas@gmail.com; 'Duncan&Terry'; 'esca Coetzee'; 'Lemmens, Lydia'
Subject: Peach Tree X21 & X22; Peach Tree X24 and Peach Tree Ext 23
Attachments: image001.jpg; Public Notice Peach Tree X21 & X22.pdf; Peach Tree Ext 24 - Public Notice BA.pdf

Dear Interested and/or Affected Parties,

Please note that you are registered as an Interested and/or Affected Party (I&AP) for the proposed Peach Tree Ext 23 Industrial Project.

Bokamoso Environmental would like to notify you kindly that there are also the following proposed developments directly next to the abovementioned project:

- Peach Tree Ext 21 & Ext 22 Industrial; and
- Peach Tree Ext 24 Development.

These projects have also been advertised in a newspaper and notices have been erected on site and distributed to surrounding landowners.

Please refer to the attached Public Notices regarding the proposed Peach Tree Ext 21 & X22 and Peach Tree Ext 24.

You are more than welcome to register as an I&AP for the directly proposed developments.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: juanita@bokamoso.net
Sent: 25 October 2016 03:42 PM
To: Lemmens, Lydia
Cc: eiaresponses@gmail.com
Subject: RE:
Attachments: image001.jpg

Dear Lydia Lemmens,

Thank you for your response, Bokamoso Environmental has registered you as an Interested and/or Affected Party for the proposed *Peach Tree X20, Peach Tree X23 and for the Prospecting Right for Beryl, Limestone, Iron Ore, Gold and Copper* Projects.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Lemmens, Lydia [mailto:lydia.pretorius@siemens.com]
Sent: 25 October 2016 03:40 PM
To: juanita@bokamoso.net
Cc: eiaresponses@gmail.com
Subject:

----- Confidential -----

Good afternoon

I hereby am registering as an I&AP for:

- Peachtree x20
- Peachtree x23
- The prospecting application in Hennopsriver

With best regards,
Lydia Lemmens

Siemens Proprietary Limited
CF RIC RH-AFR ZA

300 Janadel Avenue
Midrand 1685, Südafrika
Tel.: +27 11 652 2329
Fax: +27 86 506 5712
Mobil: +27 83 743 4728
<mailto:lydia.pretorius@siemens.com>

Disclaimer and Confidentiality Note

This e-mail communication, its attachments, if any, and any rights attaching to it are, unless the context clearly indicates otherwise, the property of Siemens (Pty) Ltd. It is confidential, private and intended for the addressee only. If you are not the intended recipient and receive this communication in error, you are hereby notified that any review, copying, use, disclosure or distribution in any manner whatsoever is strictly prohibited. Please notify the sender immediately that you have received this e-mail in error and delete the e-mail and any copies of it. Views and opinions expressed in this e-mail are those of the sender unless clearly stated as those of Siemens (Pty) Ltd. Siemens (Pty) Ltd accepts no liability for any loss or damage whatsoever, and howsoever incurred or suffered resulting or arising from the use of this e-mail communication and/or its attachments. Siemens (Pty) Ltd does not warrant the integrity of this e-mail communication nor that it is free of errors, viruses, interception or interference. Siemens (Pty) Ltd, its divisions and subsidiary companies (“Siemens”) expressly excludes sections 11, 12, and 13 of the Electronic Communications and Transactions Act, 25 of 2002 (“the ECT”) in respect of e-contracting. No data message or electronic communication will be recognised as having a legal contractual status under the ECT Act. All agreements concluded by Siemens will only be legally binding when reduced to physical writing and physically signed by a duly authorised representative of Siemens. For more information about Siemens (Pty) Ltd, visit our website at www.siemens.com

Siemens Proprietary Limited (Incorporated in South Africa)
Company Registration Number: 1923/007514/07
Registered Address: 300 Janadel Avenue, Halfway House 1685
VAT Registration Number: 4790104428
Chairman: KJ Helmrich*
Chief Executive Officer: SU Dall’Omo*
Chief Financial Officer: SJ Mueller*
Executive Director: R Nkuhlu, C Klaas
Non-Executive Directors: TK Rathmann*; Dr MI Survé
Alternate Directors: I Amod; MK Becker*
Company Secretary: U Akwiwu
* German

juanita@bokamoso.net

From: juanita@bokamoso.net
Sent: 10 October 2016 10:24 AM
To: fynnovation@gmail.com
Subject: RE: APPLICATION FOR A BASIC ASSESSMENT PROCESS - Peach Tree Ext 23 Industrial Township
Attachments: image001.jpg

Dear Patrick Fynn,

Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed **Peach Tree Ext 23 Industrial** Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Patrick Fynn [mailto:fynnovation@gmail.com]
Sent: 08 October 2016 10:30 PM
To: reception@bokamoso.net
Cc: 'Elke Haas'; Barbara (@gmail)
Subject: APPLICATION FOR A BASIC ASSESSMENT PROCESS - Peach Tree Ext 23 Industrial Township

ATTENTION: Juanita De Beer

In response to a notice posted on the R114 (attached) with regard to this Proposed Industrial Township, please register me (details below) as an Interested and Affected Party. Please confirm by return of mail that this has been done.

The notice had no "Gaut:" reference number – if there is one, please also supply that.

Regards

Patrick Fynn
Plot 129, Laezonia A/H, 0026 Tshwane.
H : 012 669 3223
M: 082 574 5609
E : Fynnovation@xsinet.co.za
P : POBox 56046
Wierdapark

juanita@bokamoso.net

From: juanita@bokamoso.net
Sent: 25 October 2016 12:55 PM
To: esca Coetzee
Subject: RE: I&AP registration Esca Coetzee
Attachments: image001.jpg

Dear Esca Coetzee,

Thank you for your response, Bokamoso Environmental has registered you as an Interested and/or Affected Party for the proposed *Peach Tree X20, Peach Tree X23 and for the Prospecting Right for Beryl, Limestone, Iron Ore, Gold and Copper* Projects.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: esca Coetzee [mailto:escacoetzee@gmail.com]

Sent: 25 October 2016 11:45 AM

To: [Juanita@bokamoso.net](mailto:juanita@bokamoso.net)

Subject: Fwd: I&AP registration Esca Coetzee

Good day

[Juanita@bokamoso.net](mailto:juanita@bokamoso.net)

Please register me as I&AP on the following projects:

Peachtree x20

Peachtree x23

Prospecting application in Hennopsriver

Regards

Esca Coetzee

082 875 6800

juanita@bokamoso.net

From: juanita@bokamoso.net
Sent: 13 October 2016 11:42 AM
To: Ian Roos
Subject: RE: IAP registration for Peach Tree X23
Attachments: image002.jpg; image003.jpg

Dear Ian Roos,

Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed **Peach Tree Ext 23** Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Ian Roos [mailto:ecologic@mweb.co.za]
Sent: 13 October 2016 11:20 AM
To: reception@bokamoso.net
Cc: juanita@bokamoso.net; 'Armand'
Subject: IAP registration for Peach Tree X23

Please register Eagles Creek Business Trust as an IAP for the above proposed development.
Please confirm receipt of registration.

Regards

Ian Roos
ecologic AFRICA
Cell: 083 635 7315
Tel: 012 661 4863
Fax: 012 661 5251
ecologic@mweb.co.za
PO Box 8079
Centurion
0046



juanita@bokamoso.net

From: juanita@bokamoso.net
Sent: 10 October 2016 10:21 AM
To: nickfoster155@gmail.com
Subject: RE: Juanita de Beer. REF: Peach Tree Xtn 23 Industrial Township
Attachments: image001.jpg; image002.png; image003.png

Dear Nick Foster,

Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed **Peach Tree Ext 23 Industrial** Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Nick Foster [mailto:nickfoster155@gmail.com]
Sent: 09 October 2016 07:48 AM
To: Bokamoso Landscape Architects & Environmental Consultants
Subject: FAO: Juanita de Beer. REF: Peach Tree Xtn 23 Industrial Township

Hi Juanita,

Please register myself as an I&AP for the above-referenced proposal. I am a resident of the adjoining Farm: Doornrandje 386-JR.

Do please come back to me to confirm my registration.

Kind regards

NICK FOSTER

Foster and Dalton (Pty) Ltd

Cell: 073 039 3996

Office: 011 025 6559

Fax: 086 632 5577

Skype: nick.foster5

<https://www.facebook.com/fosteranddalton/>

www.fosteranddalton.co.za



DISCLAIMER: This message is for the named person's use only. It may contain confidential, proprietary or legally privileged information. No confidentiality or privilege is waived or lost by any mistransmission. If you receive this message in error, please immediately delete it and any copies of it from your system, destroy any hard copies of it and notify the sender. You must not, directly or indirectly, use, disclose, distribute, print, or copy any part of this message if you are not the intended recipient. Any views expressed in this message are those of the individual sender, except where the message states otherwise and the sender is authorised to state them to be the views of Foster and Dalton (Pty) Ltd.

From: juanita@bokamoso.net
Sent: 24 October 2016 11:26 AM
To: Katarina v. Stockhausen
Cc: eiaresponses@gmail.com
Subject: RE: Objection to the proposed Peach Tree Ext 23 Industrial township
Attachments: image001.jpg

Dear Katarina van Stockhausen,

Thank you for your response, Bokamoso Environmental has registered you as an Interested and/or Affected Party for the proposed ***Peach Tree Ext 23 Industrial*** Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Katarina v. Stockhausen [mailto:kina@vst.io]

Sent: 20 October 2016 10:45 AM

To: juanita@bokamoso.net

Cc: eiaresponses@gmail.com

Subject: Objection to the proposed Peach Tree Ext 23 Industrial township

Dear Sir or Madam,

I am registering as an INTERESTED PARTY and objecting to the proposed building of the Peach Tree Ext 23 Industrial township in this beautiful area full of unique and indigenous flora and fauna.

This area is greatly beneficial to South Africa and it should stay protected from potential pollution of its already scarce water basin and industrial development and alike activities that will endanger its nature and tourism business in Gauteng.

I would appreciate if you let me know of your developments in this area.

Kind regards,

Katarina von Stockhausen
OWNER OF THE
PORTION 2 OF THE FARM ROODEKRANS 492JQ

juanita@bokamoso.net

From: juanita@bokamoso.net
Sent: 26 October 2016 10:36 AM
To: Mr Matlala
Subject: RE: Peachtree developments
Attachments: image001.jpg; image002.jpg

Dear Mr Matlala,

Thank you for your response, Bokamoso Environmental has registered you as an Interested and/or Affected Party for the proposed ***Peach Tree X21 &22, Peach Tree X23, Peach Tree X24 and the Prospecting Right of Beryl, Limestone, Iron Ore, Gold and Copper*** Projects.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Mr Matlala [mailto:matlala@msmminc.co.za]
Sent: 25 October 2016 07:58 PM
To: juanita@bokamoso.net
Subject: Re: Peachtree developments

PLEASE REFER TO THE SUBJECT.



CEO: Nano Matlala
MSMM Inc.
Lembede Tambo Pitjje Chambers
905 Cnr Orient and Stanza Bopape Str
Arcadia
Pretoria
Tel: 087 232 1799

Email: matlala@msmminc.co.za

On 25 Oct 2016, at 08:13, juanita@bokamoso.net wrote:

Dear Mr Matlala,

Thank you for your response, please refer to the project names?

Thank you.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training

description: description: description: [cid:image004.jpg@01cdf311.5caabf60](#)

Landscape Architects &

Environmental Consultants

T: (+27)12 346 3810 1 F: (+27) 86 570 5659 1 E: juanita@bokamoso.net 1
www.bokamoso.net

36 Lebombo Street, Ashlea Gardens, Pretoria 1 P.O. Box 11375 Maroelana
0161

-----Original Message-----

From: Mr Matlala [<mailto:matlala@msmminc.co.za>]

Sent: 24 October 2016 05:10 PM

To: Juanita@bokamoso.net

Subject: Peachtree developments

I hereby register as an interested party.

Nano Matlala.

Sent from my iPhone

From: juanita@bokamoso.net
Sent: 24 October 2016 12:25 PM
To: ingo.vonboetticher@gmail.com
Subject: RE: Peach Tree Ext 23 Industrial
Attachments: image001.jpg

Dear Ingo von Boetticher,

Thank you for your response, Bokamoso Environmental has registered you as an Interested and/or Affected Party for the proposed *Peach Tree Ext 20 & the proposed Peach Tree Ext 23 Industrial* Projects.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Ingo von Boetticher [mailto:ingo.vonboetticher@gmail.com]
Sent: 24 October 2016 09:45 AM
To: reception@bokamoso.net
Cc: Elke Haas; Mercia Komen; Nick Foster; esca Coetzee; Elmar Meyer; eiaresponses@gmail.com
Subject: Re: Peach Tree Ext 23 Industrial

Dear Juanita

In addition to the prospecting application in Hennopsriver - which I violently oppose - please register me as I&AP for:

- Peachtree X20 Residential and Retail development
- Peachtree X23 - Industrial development

Please confirm

Regards

Ingo

Ingo von Boetticher

Cell:(+27) 079 921 1187

Email: ingo.vonboetticher@gmail.com

On 9 October 2016 at 19:24, Ingo von Boetticher <ingo.vonboetticher@gmail.com> wrote:
Please register me as I & AP for the above project.

Please confirm receipt of this email.

Regards

Ingo

Ingo von Boetticher

Cell:(+27) 079 921 1187

Email: ingo.vonboetticher@gmail.com

juanita@bokamoso.net

From: juanita@bokamoso.net
Sent: 12 October 2016 01:24 PM
To: richard.bonathaba@gmail.com
Subject: RE: Peach Tree Ext 23 Industrial

Dear Richard Angus,

Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed Peach Tree X23 Industrial Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training

description: description: description: [cid:image004.jpg@01cdf311.5caabf60](#)

Landscape Architects &

Environmental Consultants

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net

36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

-----Original Message-----

From: Richard Angus [mailto:richard.bonathaba@gmail.com]
Sent: 12 October 2016 12:39 PM
To: reception@bokamoso.net
Subject: Peach Tree Ext 23 Industrial

Dear Juanita De Beer

Please register the people listed below as interested and affected parties to the proposed development Regards
Richard Angus Stella Angus Shane Rorke Rosemary Rorke

richard.bonathaba@gmail.com

juanita@bokamoso.net

From: juanita@bokamoso.net
Sent: 10 October 2016 10:16 AM
To: ingo.vonboetticher@gmail.com
Subject: RE: Peach Tree Ext 23 Industrial
Attachments: image001.jpg

Dear Ingo von Boetticher,

Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed **Peach Tree Ext 23 Industrial** Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Ingo von Boetticher [mailto:ingo.vonboetticher@gmail.com]
Sent: 09 October 2016 07:25 PM
To: reception@bokamoso.net
Cc: Elke Haas; Mercia Komen; Nick Foster; esca Coetzee; Elmar Meyer
Subject: Peach Tree Ext 23 Industrial

Please register me as I & AP for the above project.

Please confirm receipt of this email.

Regards

Ingo

Ingo von Boetticher

Cell:(+27) 079 921 1187
Email: ingo.vonboetticher@gmail.com

juanita@bokamoso.net

From: juanita@bokamoso.net
Sent: 24 October 2016 11:33 AM
To: Karen Holtzhausen
Subject: RE: Peach Tree Ext 23 Industrial
Attachments: image001.jpg

Dear Karen Holtzhausen,

Thank you for your response, Bokamoso Environmental has registered you as an Interested and/or Affected Party for the proposed ***Peach Tree Ext 23 Industrial*** Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Karen Holtzhausen [mailto:karenholt111@gmail.com]

Sent: 20 October 2016 12:07 PM

To: juanita@bokamoso.net

Subject: Fwd: Peach Tree Ext 23 Industrial

----- Forwarded message -----

From: **Karen Holtzhausen** <karenholt111@gmail.com>

Date: Thu, Oct 20, 2016 at 12:02 PM

Subject: Peach Tree Ext 23 Industrial

To: reception@bokamoso.net

Cc: eiareponses@gmail.com

Good day Juanita,

Please register me as an Interested and Affected Party. I would like more information regarding the planned development to be able to determine how I would be affected as a community member.

Please confirm that I have been registered.

Regards

Karen Holtzhausen
Plot 91 Bundi rd

Doornrandjes

Email: karenholt111@gmail.com

Cell: 072 093 3361

juanita@bokamoso.net

From: juanita@bokamoso.net
Sent: 19 October 2016 03:27 PM
To: tiaanvc@gmail.com
Subject: RE: Peach Tree Ext 23 Industrial development
Attachments: image001.jpg

Dear Tiaan Van Coppenhagen,

Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed **Peach Tree X23 Industrial Development** Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Tiaan Van Coppenhagen [mailto:tiaanvc@gmail.com]
Sent: 19 October 2016 07:41 AM
To: reception@bokamoso.net
Subject: Peach Tree Ext 23 Industrial development

Good day

As a landowner in the area, I hereby register as an interested and affected party with regard to the above application.

Please ensure that I receive all reports and other relevant documents, by email to the following address:

tiaanvc@gmail.com

Please acknowledge receipt of this email, and confirm that I have been registered as requested.

Regards

--

Tiaan van Coppenhagen
Cell: +27 (0)82 876 7498
tiaanvc@gmail.com

juanita@bokamoso.net

From: juanita@bokamoso.net
Sent: 13 October 2016 11:51 AM
To: literay@vodamail.co.za
Subject: RE: Peach Tree Ext 23 Industrial, Portions 109 & 331 of Farm Knopjeslaagte 385 JR Tshwane
Attachments: image001.jpg

Dear Dalene van der Merwe,

Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed **Peach Tree Ext 23 Industrial** Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Dalene van der Merwe [mailto:literay@vodamail.co.za]
Sent: 13 October 2016 11:38 AM
To: reception@bokamoso.net
Subject: Peach Tree Ext 23 Industrial, Portions 109 & 331 of Farm Knopjeslaagte 385 JR Tshwane

Dear Juanita De Beer

of Bokamoso Landscape Architects and Environmental Consultants CC

Re: Peach Tree Ext 23 Industrial, Portions 109 & 331 of Farm Knopjeslaagte 385 JR Tshwane

Please could you register me as an Interested and Affected Party in this Application For A Basic Assessment Process for the above mentioned proposed project. I am a resident of Doornrandje, within the Crocodile River Reserve, which is in close proximity to the Farm Knopjeslaagte.

--

Kind regards

Dalene van der Merwe
083 779-4143

Plot 30
Doornrandje

juanita@bokamoso.net

From: juanita@bokamoso.net
Sent: 12 October 2016 03:21 PM
To: HennieA@Nedbank.co.za
Subject: RE: Peachtree Extn 23. Industrial Township Application!
Attachments: image002.jpg; image003.png

Dear Hennie Anenant,

Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed **Peach Tree Ext 23 Industrial** Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Avenant, H. (Hennie) [mailto:HennieA@Nedbank.co.za]
Sent: 12 October 2016 02:25 PM
To: reception@bokamoso.net
Subject: Peachtree Extn 23. Industrial Township Application!:

Good day, I here with register as an Interrested and Affected party for this development as I own Portion 108 of **Farm Knopjeslaagte 385 JR, which is directly across the road from this proposed development. Please acknowledge receipt of this mail. Thank you**

Peachtree Extn 23. Industrial Township Application!:

Many thanks to Paddy Fynn for typing out the following (as the notice is badly positioned!). (See **copy Notice attached**).

NOTICE OF APPLICATION FOR A BASIC ASSESSMENT PROCESS

Notice is hereby given that an application for environmental authorisation in terms of the EIA Regulations, 2014 (Regulations in terms of Chapter 6 of the National Environmental Management Act, 1998, as amended) will be lodged with the Gauteng Department of Agriculture and Rural Development.

Project Name: Peach Tree Ext 23 Industrial

Proponent Name: Tembibex (Pty) Ltd

Project Description & Property Description: The proposed Peach Tree Ext 23 Industrial development is for the establishment of an Industrial Township which is situated on **Portions 109 & 331 of Farm Knopjeslaagte 385 JR**, City of Tshwane, Gauteng.

Location: The proposed study area is situated east of the R115 (sic) Road and north of the N14, adjacent to the Centurion Flight Academy (Pty) Ltd.

Listing Activities Applied for in terms of NEMA Regulations, 4 December 2014:

GNR 983 (Listing Notice 1) – Activity 9, 10, 27 & 28.

GNR 985 (Listing Notice 3) – Activity 4 & 12.

(Listed Activities triggered will be confirmed during the Application process)

Date of Notice: 4 October – 2 November 201

The aforementioned proposed development requires applications subject to a Basic Assessment Representations with respect to this application may be made by phone, fax or e-mail within 30 days of the date of the notice. Please note that in order to continue to receive information regarding this project, you must register as an I&AP with the contact person listed below.

Queries regarding this matter should be referred to:

Bokamoso Landscape Architects and Environmental Consultants CC

Public participation registration and Enquiries: **Juanita De Beer**

Project Enquiries: **Mary-Lee van Zyl**

Tel: (012) 346 3810

P.O. Box 11375

Fax: (086) 570 5659

Maroelana 0161

E-mail: reception@bokamoso.net

Hennie Avenant | CICS/MQ | Nedbank Group Technology

105 West Str, Sandton, 2196

📞 Office: +27 (0) 11 500 3770 | 📱 Cell: +27 82 825 9866 | 🗨️ Lync: 011 500 7657 | ✉️ E-mail: henniea@nedbank.co.za | web address: www.nedbank.co.za

Nedbank is proud to be Africa's first carbon neutral bank and official conservation partner of the WWF-SA.

Nedbank disclaimer and confidentiality notice:

This email may contain information that is confidential, privileged or otherwise protected from disclosure. If you are not an intended recipient of this email or all or some of the information contained therein, do not duplicate or redistribute it by any means. Please delete it and any attachments and notify the sender that you have received it in error. Unless specifically indicated, this email is neither an offer or a solicitation to buy or sell any securities, investment products or other financial product or service, nor is it an official confirmation of any transaction or an official statement of Nedbank. Any views or opinions presented are solely those of the author and do not necessarily represent those of Nedbank. Nedbank Ltd Reg No 1951/000009/06.

The following link displays the names of the Nedbank Board of Directors and Company Secretary.

[<http://www.nedbank.co.za/terms/DirectorsNedbank.htm>]

If you do not want to click on a link, please type the relevant address in your browser

From: juanita@bokamoso.net
Sent: 24 October 2016 12:10 PM
To: Monica Gerry
Subject: RE: Peach tree x 20 and 23
Attachments: image001.jpg

Dear Monica Gerry,

Thank you for your response, Bokamoso Environmental has registered you as an Interested and/or Affected Party for the proposed *Peach Tree Ext 20 & Peach Tree Ext 23* Projects.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Monica Gerry [mailto:mgerry18@gmail.com]

Sent: 20 October 2016 08:29 PM

To: Juanita@bokamoso.net

Subject: Peach tree x 20 and 23

I want to register as an I &AP for the developments of Peach tree x 20 and x23. My cell nr is 072 138 3260.

Thank you

Monica Gerry

From: juanita@bokamoso.net
Sent: 24 October 2016 12:04 PM
To: Gary Watkins
Subject: RE: Peachtree x23 - industrial development opposite the ENGEN garage
Attachments: image004.jpg; image005.png; image006.png; image007.png

Dear Gary Watkins,

Thank you for your response, Bokamoso Environmental has registered you as an Interested and/or Affected Party for the proposed ***Peach Tree Ext 23 Industrial*** project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Gary Watkins [mailto:gary@workinfo.com]
Sent: 20 October 2016 07:53 PM
To: Juanita@bokamoso.net
Subject: Peachtree x23 - industrial development opposite the ENGEN garage

Please register me as an Interested and Affected Party

Plot 39 Bodley Road Laezonia

Best regards

Gary Watkins

Managing Director

BA LLB

Email: gary@workinfo.com

Tel: +27 (0)861 967 5463 (Office) | +27 (0)11 462 0982 | Cel: 082 416 7712 | Fax: 086 719 8451

<http://www.workinfo.com> | <http://www.caselaw.co.za> | Join us on:   

Human Resource & Industrial Relations Consulting Services and Placements

Workshops | Consulting | Recruitment | Software | Surveys | Subscriptions

From: juanita@bokamoso.net
Sent: 24 October 2016 01:14 PM
To: IG
Cc: eiaresponses@gmail.com
Subject: RE: Please register me as a I&AP in the Peach tree 3 developments
Attachments: image002.jpg; image003.jpg

Dear Gail,

Thank you for your response, Bokamoso Environmental has registered you as an Interested and/or Affected Party for the proposed *Peach Tree Ext 20, Peach Tree Ext 23 and for the Prospecting Right for Beryl, Limestone, Iron Ore, Gold and Copper* Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: IG [mailto:dmops@absamail.co.za]
Sent: 24 October 2016 12:50 PM
To: juanita@bokamoso.net
Cc: eiaresponses@gmail.com
Subject: RE: Please register me as a I&AP in the Peach tree 3 developments
Importance: High

Dear Juanita,

You have Three developments - 1: Peachtree x20 – residential and retail development.

2: Peachtree x 23 – Industrial development opposite Engen garage

3: Prospecting application in Hennopsriver.

Hope this helps.

Regards,

Gail

From: juanita@bokamoso.net [mailto:juanita@bokamoso.net]
Sent: 24 Oktober 2016 11:29 AM
To: IG
Cc: eiaresponses@gmail.com
Subject: RE: Please register me as a I&AP in the Peach tree 2 developments

Dear Gail,

Please refer to the correct project name on the abovementioned subject.

Thank you.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: IG [mailto:dmps@absamail.co.za]
Sent: 20 October 2016 11:09 AM
To: juanita@bokamoso.net
Cc: eiaresponses@gmail.com
Subject: Please register me as a I&AP in the Peach tree 2 developments
Importance: High

Hi Juanita,

Please register me as I & AP for the two developments.

Please ensure all relevant information is sent to me.

Thank you,

Gail

dmps@absamail.co.za

From: juanita@bokamoso.net
Sent: 13 October 2016 08:37 AM
To: andre.potgietr@gmail.com
Subject: RE: Project Name: Peach Tree Ext. 23, Industrial
Attachments: image001.jpg

Dear Andre Potgieter,

Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed **Peach Tree Ext 23 Industrial** Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Andre Potgieter [mailto:andre.potgietr@gmail.com]
Sent: 12 October 2016 09:56 PM
To: reception@bokamoso.net
Cc: eiaresponses@gmail.com
Subject: Project Name: Peach Tree Ext. 23, Industrial

Good day

Please register me as a interested and effected party for this project. All communication regarding the application should be communicated to me.

I am a owner of Plot 91. As we are staying in a farm area we have only bore holes. Plot owners run out of water during dry season's. We cannot allow any businesses to be build in our farm area as it will contribute to pollution of our ground water. We have a wetland on our property and it is very sensitive to pollution.

We bought this property to enjoy the peace and quite of nature. This project in this area will decrease the value of our property. I am concerned about the status of building an industrial area in a residential / farming area without a proper impact study on the nature including our ground water in this area. The value of our property will also decrease and the environment will deteriorate when this project is allowed to succeed.

Please keep me informed.

Kind regards

juanita@bokamoso.net

From: juanita@bokamoso.net
Sent: 24 October 2016 10:53 AM
To: Duncan&Terry
Subject: RE: Project Name: Peach Tree Ext 23 Industrial.

Dear Duncan Williams,

Thank you for your response, Bokamoso Environmental has registered you as an Interested and/or Affected Party for the proposed Peach Tree X23 Industrial Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training

description: description: description: <cid:image004.jpg@01cdf311.5caabf60>

Landscape Architects &

Environmental Consultants

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net

36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

-----Original Message-----

From: Duncan&Terry [mailto:villaduntel@gmail.com]
Sent: 19 October 2016 02:30 PM
To: Bokamoso
Subject: Project Name: Peach Tree Ext 23 Industrial.

I would like to register as an I&AP for Project Name: Peach Tree Ext 23 Industrial.

Duncan Williams, plot 124, 5th Avenue, Gerhardsville Cell 0741473870

juanita@bokamoso.net

From: juanita@bokamoso.net
Sent: 24 October 2016 11:31 AM
To: Marc du Plessis
Cc: eiaresponses@gmail.com; Louis Hugo; bomax@mtnloaded.co.za
Subject: RE: Prospecting application: Portion 209, Hennopsrivier 489JQ
Attachments: image001.jpg

Dear Marc du Plessis,

Thank you for your response, Bokamoso Environmental has registered you as an Interested and/or Affected Party for the **proposed Peach Tree X20 and proposed Peach Tree X23** Projects.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Leombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Marc du Plessis [mailto:mdp0001@gmail.com]

Sent: 20 October 2016 11:21 AM

To: juanita@bokamoso.net

Cc: eiaresponses@gmail.com; Louis Hugo; bomax@mtnloaded.co.za

Subject: Re: Prospecting application: Portion 209, Hennopsrivier 489JQ

Good day Juanita,

I thank you for your response.

Please also add me as a I&AP to two other studies, namely:

Peachtree x20 - residential and retail development, 1st of 3 phases presently > 500 units

Peachtree x23 - industrial development opposite the Engen garage.

Yours,
M. du Plessis

On Thursday, October 20, 2016, <juanita@bokamoso.net> wrote:

Dear Marc du Plessis,

Thank you for your response, we have registered you as an Interested and/or Affected Party for the **Prospecting Right for Beryl, Limestone, Iron, Ore, Gold and Copper** Project.

We have noted your comments on our Issues and Comments Register.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



Landscape Architects &

Environmental Consultants

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net

36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Marc du Plessis [mailto:mdp0001@gmail.com]

Sent: 18 October 2016 08:37 AM

To: reception@bokamoso.net

Cc: Louis Hugo

Subject: Prospecting application: Portion 209, Hennopsrivier 489JQ

Good day to you,

With regard to the public meeting held,

on 17 October 2016 @ Velmore, I would like to raise a issue.

With prospecting and/or mining, it will inevitably cause a high influx of persons entering the area for the purpose of working in site. Even if only prospecting is to take place, there will still be alot of crew

ie. drill rig operators, land surveyors, banksmen, site managers, etc

My concern is with all the extra people coming into the area, it is certain to affect the security of the surrounding area.

The people movement in and out of the study area, will cause a crime escalation.

Added to the problem is that this prospecting proces will be in the area fir aprox 2-5years,

in light of this, im almost certain that somewhere along the line, the workers or crew of the site will get disgruntled about something. And resulting aftermath will be protest action, as history has proven itself on numerous occasion....

I do not however appreciate for a moment even the possibility that a violent protest may occur right in our midst.

With any activity where persons commute back and forth, it is a given that with it, also will come elements of society that is unwanted.

I urge you to take this into consideration as the Gerrardsville and surrounding area, are already streched to keep crime at bay.

I assure you, the affected tesidents, really do not and will not tolerate any situation that even has a likelihood of affecting the safety and security of the area.

Please confirm receival of this mail,

And also please confirm that this concern will be included in your report.

Yours,

M. du Plessis

079 105 1303

--

Marc du Plessis
+ 27 79 105 1303

--

Marc du Plessis
+ 27 79 105 1303

From: juanita@bokamoso.net
Sent: 25 October 2016 09:21 AM
To: Paul Millinger
Subject: RE: Register as an eip
Attachments: image001.jpg

Dear Paul Millinger,

Thank you for your response, Bokamoso Environmental has registered you as an Interested and/or Affected Party for the proposed *Peach Tree X20, Peach Tree X23 and for the Prospecting Right for Beryl, Limestone, Iron Ore, Gold and Copper* Projects.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Paul Millinger [mailto:pgmillinger@gmail.com]
Sent: 25 October 2016 09:08 AM
To: juanita@bokamoso.net
Subject: RE: Register as an eip

Hi.

Peachtree x20
Peachtree x23
Prospecting application in hennops river

Thank you

Paul Millinger

On 25 Oct 2016 08:27, <juanita@bokamoso.net> wrote:

Dear Paul Millinger,

Thank you for your response, can you please refer to the project names.

Thank you.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



Landscape Architects &

Environmental Consultants

T: [\(+27\)12 346 3810](tel:+27123463810) | F: [\(+27\) 86 570 5659](tel:+27865705659) | E: juanita@bokamoso.net | www.bokamoso.net

36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Paul Millinger [mailto:pgmillinger@gmail.com]

Sent: 25 October 2016 08:09 AM

To: Juanita@bokamoso.net

Subject: Register as an eip

Good morning

I live in gerardsville and would like to register as an EIP for the three matters that yoy are dealing with around our area.

My details are
Paul Millinger
Plot 27 Akasia str
Gerardsville
0828238287

Thank you

Paul Millinger
0828238287

From: juanita@bokamoso.net
Sent: 10 October 2016 11:52 AM
To: Gary Watkins
Subject: RE: Register as an Interested and Affected Party
Attachments: image004.jpg; image005.png; image006.png; image007.png

Dear Gary Watkins,

Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed **Peach Tree Ext 23 Industrial** Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Gary Watkins [mailto:gary@workinfo.com]
Sent: 10 October 2016 11:38 AM
To: juanita@bokamoso.net
Subject: RE: Register as an Interested and Affected Party

Peach Tree Ext 23 Industrial
ProponentL Tembibex Pty Ltd

Best regards

Gary Watkins

Managing Director

BA LLB

Email: gary@workinfo.com

Tel: +27 (0)861 967 5463 (Office) | +27 (0)11 462 0982 | Cel: 082 416 7712 | Fax: 086 719 8451

<http://www.workinfo.com> | <http://www.caselaw.co.za> | Join us on:   

Human Resource & Industrial Relations Consulting Services and Placements
Workshops | Consulting | Recruitment | Software | Surveys | Subscriptions

From: juanita@bokamoso.net [mailto:juanita@bokamoso.net]
Sent: Monday, October 10, 2016 9:43 AM
To: gary@workinfo.com
Subject: RE: Register as an Interested and Affected Party

Dear Gary Watkins,

Thank you for your response, please refer to the Project Name.

Thank you.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Gary Watkins [<mailto:gary@workinfo.com>]

Sent: 09 October 2016 09:23 PM

To: reception@bokamoso.net

Cc: eiareponses@gmail.com

Subject: Register as an Interested and Affected Party

Bokamoso Landscape Architects and Environmental Consultants CC

Public participation registration and Enquiries: Juanita De Beer

Project Enquiries: Mary-Lee van Zyl

Tel: (012) 346 3810

P.O. Box 11375

Fax: (086) 570 5659

Maroelana 0161

E-mail: reception@bokamoso.net

www.bokamoso.net

Kindly register the undermentioned as an interested and affected party in this Basic Assessment Process.

GD Watkins

L39 Laezonia.

Email: gary@workinfo.com

Best regards

Gary Watkins

Managing Director

BA LLB

Email: gary@workinfo.com

Tel: +27 (0)861 967 5463 (Office) | +27 (0)11 462 0982 | Cel: 082 416 7712 | Fax: 086 719 8451

<http://www.workinfo.com> | <http://www.caselaw.co.za> | Join us on:   

Human Resource & Industrial Relations Consulting Services and Placements

Workshops | Consulting | Recruitment | Software | Surveys | Subscriptions

juanita@bokamoso.net

From: juanita@bokamoso.net
Sent: 24 October 2016 12:21 PM
To: Liz Pattison
Subject: RE: Registration as an IAP
Attachments: image001.jpg; image002.jpg

Dear Liz Pattison,

Thank you for your response, Bokamoso Environmental has registered you as an Interested and/or Affected Party for the proposed *Peach Tree Ext 20, Peach Tree Ext 23 and for the Prospecting Right for Beryl, Limestone, Iron Ore, Gold and Copper* Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Liz Pattison [mailto:liz@carrpattison.co.za]
Sent: 23 October 2016 09:00 PM
To: juanita@bokamoso.net
Cc: eiareponses@gmail.com; Compacr Management (Pty) Ltd
Subject: Registration as an IAP
Importance: High

Good evening Juanita

Please ensure that I am registered as an IAP for the following projects

- Peachtree x20
- Peachtree x23
- Prospecting application in Hennopsriver

I am a landowner in the area

Thank you

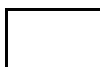
Kind regards

Liz Pattison

Mobile: +27 82 606 0039

The information in, or attached to, this email message is confidential and may be subject to legal privilege and client confidentiality. If you are not the intended recipient of this email, please notify the sender immediately by return e-mail or by telephone, and delete this message from your system; you may not print, store, forward or copy this message or any part of it, nor may you disclose, or allow information in this message to be disclosed, to any other person.

Carr Pattison Consulting cc cannot be held liable for any harm or loss resulting from malicious software code or viruses in this message or attachments, including any data corruption that may result.



Virus-free. www.avast.com

juanita@bokamoso.net

From: juanita@bokamoso.net
Sent: 24 October 2016 11:39 AM
To: Yvonne Butler
Subject: RE: Registration as an I&AP in respect of Peachtree x23 - Industrial development.
Attachments: image001.jpg

Dear Yvonne Butler,

Thank you for your response, Bokamoso Environmental has registered you as an Interested and/or Affected Party for the proposed ***Peach Tree Ext 23 Industrial*** Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Yvonne Butler [mailto:yvonnebutler37@gmail.com]

Sent: 20 October 2016 12:21 PM

To: juanita@bokamoso.net

Subject: Registration as an I&AP in respect of Peachtree x23 - Industrial development.

Good Afternoon

Please register me as an I&AP in respect of the above development.
Kindly provide all pertinent information to me at the above email address.

Thank you
Yvonne Butler
0833071096

From: juanita@bokamoso.net
Sent: 24 October 2016 11:53 AM
To: Dot Henwood
Subject: RE: Registration as I&AP.
Attachments: image001.jpg

Dear Dot Henwood,

Thank you for your response, Bokamoso Environmental has registered you as an Interested and/or Affected Party for the proposed ***Peach Tree Ext 20, Peach Tree Ext 23 and for the Prospecting Right for Beryl, Limestone, Iron Ore, Gold and Copper*** Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Dot Henwood [mailto:oakviewgardens@gmail.com]

Sent: 20 October 2016 03:09 PM

To: Juanita@bokamoso.net

Subject: Registration as I&AP.

Hi Juanita!

I understand that BOKAMOSO Environmental Consultants are busy in my area with three EIA applications, namely:

Peachtree x 20 - Residential & Retail Development

Peachtree x 23 - Industrial Development opposite the Engen Petrol Station on the R 511

Prospecting Application to mine portion 209, Hennopsriver.

I wish to be registered as an Interested & Affected Party and to receive information regarding all of the above as well as an opportunity to comment on these developments.

Kind regards,
Dorothy Ann Henwood.

95 A Boundary St,
Doornrandje.
0848075633

From: juanita@bokamoso.net
Sent: 26 October 2016 03:50 PM
To: Suzanne
Cc: eiaresponses@gmail.com; Hugo van Schalkwyk
Subject: RE: Registration as I&AP for Laezonia proposed projects
Attachments: Public Notice Peach Tree X21 & X22.pdf; Peach Tree Ext 24 - Public Notice BA.pdf; image001.jpg

Dear Suzanne van Schalkwyk,

Thank you for your response, Bokamoso Environmental has registered you as an Interested and/or Affected Party for the proposed ***Peach Tree X20, Peach Tree X23 and for the Prospecting Right of Beryl, Limestone, Iron Ore, Gold and Copper*** Project.

We will keep you updated regarding the process in the future.

Bokamoso Environmental would like to notify you kindly that there are also the following proposed developments directly next to the abovementioned project:

- Peach Tree Ext 21 & Ext 22 Industrial; and
- Peach Tree Ext 24 Development.

These projects have also been advertised in a newspaper and notices have been erected on site and distributed to surrounding landowners.

Please refer to the attached Public Notices regarding the proposed Peach Tree Ext 21 & X22 and Peach Tree Ext 24.

You are more than welcome to register as an I&AP for the directly proposed developments.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Suzanne [mailto:suzanne.hugo@gmail.com]
Sent: 26 October 2016 11:24 AM
To: juanita@bokamoso.net
Cc: eiaresponses@gmail.com; Hugo van Schalkwyk
Subject: Registration as I&AP for Laezonia proposed projects

Dear Juanita

Please register us as I&AP for:

- Peachtree x20 - residential and retail development
- Peachtree x23 - industrial development
- Prospecting application in Hennopsriver

Hugo and Suzanne van Schalkwyk
8 Lewis Street, Laezonia
Cell: 0828522550
email: suzanne.hugo@gmail.com

Please could you confirm when done.

Thank you.

--

Blessings
Suzanne van Schalkwyk



Appendix Evi

List of Interested and Affected
Parties

REGISTERED INTERESTED AND AFFECTED PARTIES

Please include all authorities as well as attendees from the public meetings

PROJECT TITLE: _____

CONTACT	NAME	PHONE	FAX	E-MAIL
Client	Tembibex (Pty) Ltd			
Competent Authority - GDARD				
City of Tshwane	Rudzani			RudzaniM@tshwane.gov.za
Council Geo-Science	J. Grobler			jgrobler@geoscience.org.za / msesho@geoscience.org.za
SAHRA	Andrew Salomon			asalomon@sahra.org.za
DWS	Lilian Siwelane			keetm@dwaf.gov.za ; siwelanel@dwa.gov.za ; tshifaror@dwa.gov.za ; mathebet@dwa.gov.za
PHRAG	Maphata Ramphele			maphata.ramphele@gauteng.gov.za
Eskom				paia@eskom.co.za ; central@eskom.co.za
GDRT	Kurmen Governder			kurmen.govender@gauteng.gov.za
Randwater	Natalie Koneight			nkoneigh@randwater.co.za
Spoornet	Loveous Tampane			impshe@randwater.co.za loveous.tampane@transnet.net
Department of Land Claims	Ms Nomfundo Gobodo			CLCC@drdlr.gov.za ; magezi.mhlanga@drdlr.gov.za ; DGOffice@drdlr.gov.za ; Fhulufhedzan.Rasimphi@drdlr.gov.za
SANRAL	Klaus Schmidt			schmick@nra.co.za
Ward Councillor - Ward 106 City of Tshwane	Tsela Cedrick	Cell: 082 410 6490		daddyT@tshwane.gov.za
Local Newspaper	Beeld Newspaper			

Dept/ Company/ Private	NAME	PHONE	FAX	E-MAIL
Private	Gary Watkins	Cell: 082 416 7712/011 462 0982		gary@workinfo.com
Private	Patrick Fynn	Cell: 082 574 5609/012 669 3223		fynnovation@gmail.com
Private	Nick Foster	Cell: 073 039 3996/011 025 6559		nickfoster155@gmail.com
Private	Ingo von Boetticher	Cell: 079 921 1187		ingo.vonboetticher@gmail.com
Private	Hennie Anenant	Cell: 082 825 9866/011 500 3770		HennieA@Nedbank.co.za
Private	Richard Angus			richard.bonathaba@gmail.com
Private	Andre Potgieter			andre.potgieter@gmail.com
Private	Dalene van der Merwe	Cell: 083 779 4143		literav@vodamail.co.za
Eagles Creek Business Trust	Ian Roos	Cell: 083 635 7315		ecologic@mweb.co.za
Private	Tiaan van Coppenhagen	Cell: 082 876 7498		tiaanvc@gmail.com
Private	Paul Millinger			pmmillinger@gmail.com
Private	Gail			dmps@absamail.co.za
Private	Liz Pattison	Cell: 082 606 0039		liz@carpattison.co.za
Private	Monica Gerry			mgerry18@gmail.com
Private	Dot Henwood	Cell: 084 807 5633		oakviewgardens@gmail.com
Private	Yvonne Butler	Cell: 083 307 1096		yvonnebutler37@gmail.com
Private	Karen Holzhausen	Cell: 072 093 3361		karenholt11@gmail.com
Private	Marc du Plessis			mdp0001@gmail.com
Private	Katarina van Stockhausen			kina@vst.io
Private	Elke Haas			elke.haas@gmail.com



Appendix F

Water use license(s)
authorisation, SAHRA
information, service letters from
municipalities, water supply
information



an agency of the
Department of Arts and Culture

T: +27 21 462 4502 | F: +27 21 462 4509 | E: info@sahra.org.za
South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Andrew Salomon
Tel: 021 462 4502
Email: asalomon@sahra.org.za
CaseID: 10192

Date: Friday October 14, 2016
Page No: 1

Letter

In terms of Section 38 of the National Heritage Resources Act (Act 25 of 1999)

Attention: Tembix (Pty) Ltd

The proposed Peach Tree Ext 23 Industrial development is for the establishment of an Industrial Township which is situated on Portions 109 & 331 of the Farm Knopjeslaagte 385 JR, City of Tshwane, Gauteng.

Thank you for your notification regarding this development.

In terms of the National Heritage Resources Act, no 25 of 1999, heritage resources, including archaeological or palaeontological sites over 100 years old, graves older than 60 years, structures older than 60 years are protected. They may not be disturbed without a permit from the relevant heritage resources authority. This means that prior to development it is incumbent on the developer to ensure that a **Heritage Impact Assessment** is done. This must include the archaeological component (Phase 1) and any other applicable heritage components. Appropriate (Phase 2) mitigation, which involves recording, sampling and dating sites that are to be destroyed, must be done as required.

The quickest process to follow for the archaeological component is to contract an accredited specialist (see the web site of the Association of Southern African Professional Archaeologists www.asapa.org.za) to provide a Phase 1 Archaeological Impact Assessment Report. This must be done before any large development takes place.

The Phase 1 Impact Assessment Report will identify the archaeological sites and assess their significance. It should also make recommendations (as indicated in section 38) about the process to be followed. For example, there may need to be a mitigation phase (Phase 2) where the specialist will collect or excavate material and date the site. At the end of the process the heritage authority may give permission for destruction of the sites.

Where bedrock is to be affected, or where there are coastal sediments, or marine or river terraces and in potentially fossiliferous superficial deposits, a Palaeontological Desk Top study must be undertaken to assess whether or not the development will impact upon palaeontological resources - or at least a letter of exemption



an agency of the
Department of Arts and Culture

T: +27 21 462 4502 | F: +27 21 462 4509 | E: info@sahra.org.za
South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Andrew Salomon
Tel: 021 462 4502
Email: asalomon@sahra.org.za
CaseID: 10192

Date: Friday October 14, 2016
Page No: 2

from a Palaeontologist is needed to indicate that this is unnecessary. If the area is deemed sensitive, a full Phase 1 Palaeontological Impact Assessment will be required and if necessary a Phase 2 rescue operation might be necessary. **Please note that a nationwide fossil sensitivity map is now available on SAHRIS to assist with determining the fossil sensitivity of a study area .**

If the property is very small or disturbed and there is no significant site the heritage specialist may choose to send a letter to the heritage authority motivating for exemption from having to undertake further heritage assessments.

Any other heritage resources that may be impacted such as built structures over 60 years old, sites of cultural significance associated with oral histories, burial grounds and graves, graves of victims of conflict, and cultural landscapes or viewsapes must also be assessed.

Should you have any further queries, please contact the designated official using the case number quoted above in the case header.

Yours faithfully

Andrew Salomon
Heritage Officer: Archaeology
South African Heritage Resources Agency

John Gribble
Manager: Maritime and Underwater Cultural Heritage Unit / Acting Manager: Archaeology, Palaeontology and Meteorites Unit
South African Heritage Resources Agency

Our Ref: 10192



an agency of the
Department of Arts and Culture

T: +27 21 462 4502 | F: +27 21 462 4509 | E: info@sahra.org.za
South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Andrew Salomon
Tel: 021 462 4502
Email: asalomon@sahra.org.za
CaseID: 10192

Date: Friday October 14, 2016
Page No: 3

ADMIN:

Direct URL to case: <http://www.sahra.org.za/node/373788>
(GDARD, Ref:)



Appendix G

Specialist Reports



Appendix G1

Motivating Memorandum

1. GENERAL INFORMATION

- 1.1 Application is hereby made in terms of Section 16(4) of the City of Tshwane Land Use Management By-Law (2016) for the establishment of a township situated on a part of Portion 109 and a part of the Remainder of Portion 331 of the farm Knopjeslaagte 385-JR (hereinafter referred to as “the subject properties”), to be known as Peach Tree Extension 23.
- 1.2 The intension is to obtain land use rights to enable the establishment of a township, which will comprise of seven (9) erven zoned as follows:
- Seven (7) erven zoned “Industrial 2” for the main purposes of “Commercial Use” and “Light Industry”, subject to certain conditions;
 - Two (2) erven zoned “Special” for “access and access control”.
- 1.3 According to the City of Tshwane Town Planning Scheme 2008 (revised 2014) the “Industrial 2” zoning allows for “Business Buildings, Cafeteria, Car Wash, Commercial Use, Light Industry, Parking Garage, Parking Site, Place of Refreshment, Retail Industry, and Shops” subject to certain conditions.
- 1.4 It is confirmed that the proposed township name has been reserved by the Toponymy Unit of the Tshwane City Planning and Development Department (letter of confirmation of township name attached as **Annexure A**).
- 1.5 This memorandum provides the relevant property information, and motivates the merits of the development proposal from a development planning perspective.

2. PROPERTY INFORMATION

2.1 Locality

- 2.1.1 The subject properties are situated to the east of the R511, between the R114 (M34) to the north and the N14-Highway to the south in Knopjeslaagte. The site is furthermore situated to the south-west of the Copperleaf Golf Estate and the north-east of Diepsloot West. Leazonia Agricultural Holdings are also located directly west of the site. A locality plan is attached hereto as **Annexure B**.

2.2 Property description, ownership and extent

- 2.2.1 The details related to description, ownership and size of the subject properties are provided in the table below:

PROPERTY DESCRIPTION	REGISTERED OWNER	DEED OF TRANSFER NUMBER	SIZE
Knopjeslaagte 385 JR: Portion 109	Tembibex (Pty) Ltd	T145496/2004	8.5653 hectares
Knopjeslaagte 385 JR: Portion 331	Dexalink (Pty) Ltd	T100157/1992	43.2787 hectares

- 2.2.2 Deeds of Transfer T145496/2004 and T100157/1992 and the relevant Power of Attorney documents (with proof of Company Registration) are respectively attached as **Annexures C** and **D**.

2.2.4 The following Surveyor General diagrams relate to the subject properties, and are attached as **Annexure E**:

- Diagram A6872/1946 – Portion 109 of the farm Knopjeslaagte 385 JR.
- Diagram A7234/1989 – Portion 331 of the farm Knopjeslaagte 385 JR.

2.3 **Mortgage Bonds, Conditions of Title, Servitudes and Mineral Rights**

2.3.1 **Mortgage Bonds**

The subject properties are not encumbered by any bonds.

2.3.2 **Conditions of Title**

A Conveyancers' Report has been prepared and is attached hereto as **Annexure F**.

A part of the Remainder of Portion 331 (a Portion of Portion 23) of the farm Knopjeslaagte 385 JR is subject to the following conditions of title in terms of Deed of Transfer T100157/1992 which may prove to be restrictive to the proposed development:

- Condition (1) on page 3 of Deed of Transfer T100157/1992 which reads as follows:
 - (I) *“kragtens Notariële Akte 594/1972S is die reg aan ELEKTRISITEITSVOORSIENING-KOMMISSIE verleen om elektrisiteit oor die hierinvermelde eiendom te vervoer, tesame met bykomende regte en onderworpe aan voorwaardes soos meer volledig sal blyk uit genoemde Akte en soos aangedui deur figure cd en ef op aangehegde Kaart.”*
- Condition (2) on page 3 of Deed of Transfer T100157/1992 which reads as follows:
 - (II) *“Aan ‘n Reg van Weg 6 meter wyd ten gunste van die RESTERENDE GEDEELTE van Gedeelte 23 van die genoemde plaas, groot 85,1994 hektaar, soos aangedui deur die figuur TUVWXYZT op die genoemde Kaart L.G. No. A 7234/1989.”*
- Condition (3) on page 7 of Deed of Transfer T100157/1992 which reads as follows:
 - (III) *“By virtue of Notarial Deed of Servitude K9594/2005S dated 23 November 2005 the within mentioned property is subject to a servitude as follows:*

The servient owner hereby gives to the City Council a servitude perpetuity over that portion of the servient property substantially in accordance with the figure marked on the sketch plan annexed thereto marked A measuring approximately 5m² (such servitude area to be duly surveyed and reflected on and approved Surveyor General's diagram for registration purposes) (the servitude area) with the right to use the said Servitude are in perpetuity to convey portable water with ancillary rights..”

These conditions can be removed by way of Court Order or when dealing with the Conditions of Establishment during the proclamation of the township, provided a certificate from the Land Surveyor can be obtained confirming the conditions does not affect the relevant property.

A part of Portion 109 (a Portion of Portion 105) of the farm Knopjeslaagte 385 JR is subject to the following conditions of title in terms of Deed of Transfer T145496/2004 which may prove to be restrictive to the proposed development:

- Condition (1) on page 3 of Deed of Transfer T145496/2004 which reads as follows:

- (1) *“The land may not be subdivided nor may any share in it or portion of it be sold, leased or disposed of in any way without the written approval of the controlling authority as defined in Act 21 of 1940.”*
- Condition (2) on page 3 of Deed of Transfer T145496/2004 which reads as follows:
- (2) *“Not more than one dwelling-house together with such outbuildings as are ordinarily required to be used in connection therewith shall be erected on the land except with the written approval of the controlling authority as defined in Act 21 of 1940.”*
- Condition (3) on page 3 of Deed of Transfer T145496/2004 which reads as follows:
- (3) *“The land shall be used for residential and agricultural purposes only and no store or place of business or industry whatsoever may be opened or conducted on the land without the written approval of the controlling authority as defined in Act 21 of 1940.”*
- Condition (4) on page 3 of Deed of Transfer T145496/2004 which reads as follows:
- (4) *“No building or any structure whatsoever shall be erected within a distance of 37,78 metres from the centre line of the road, without the written approval of the controlling authority as defined in Act 21 of 1940.”*

The consent of the controlling authority will be obtained upon approval of the application for township establishment.

2.3.3 Servitudes

A Land Surveyor Certificate has been prepared and is attached hereto as **Annexure G**.

A part of Portion 109 of the farm Knopjeslaagte 385 JR Diagram SG A6872/1946

- There are no servitudes that affect the proposed township

A part of the Remainder of Portion 331 of the farm Knopjeslaagte 385 JR Diagram SG A7234/1989

1. The portion is subject to a right of way servitude 6m wide as indicated on the SG Diagram that does not affect the proposed township.
2. The portion is subject to a servitude for Electrical Power lines as indicated on the SG Diagram that does not affect the proposed township.
3. The portion is subject to Water Pipeline Servitude 5m wide as indicated on the SG Diagram and does not affect the proposed township.

2.3.4 Mineral Rights

Written confirmation has been requested from the Department of Minerals and Resources that the proposed development complies in all respects with the requirements emanating from the Minerals and Energy Act, and proof of submission is attached hereto as **Annexure H**.

2.4 Zoning

- 2.4.1 The subject properties are currently zoned *“Undetermined”* in terms of the Tshwane Town-Planning Scheme, 2008 (revised 2014).

- 2.4.3 The relevant Zoning Certificates are attached hereto as **Annexure I**.
- 2.4.4 **Annexure J** hereto contains the relevant Zoning Map illustrating the zoning pattern of the surrounding area, which indicates predominantly “Undetermined” zonings.

3. PHYSICAL CHARACTERISTICS OF THE SUBJECT PROPERTIES

3.1 Gradient

- 3.1.1 The subject properties slope and drains towards the northwest with the highest lying point at the 1 485m contour line, and the lowest point at the 1 471m contour line.
- 3.1.2 Detailed contours are indicated on the Township Layout Plan, attached hereto as **Annexure K**.
- 3.1.3 Consulting civil engineers have been appointed to confirm whether the township is affected by flood lines with an expected frequency of 1:50 years or 1:100 years. It is expected that the subject properties will not be affected by the afore-mentioned flood lines, but will be confirmed and certified by the consulting engineer.

3.2 Geotechnical Conditions

- 3.2.1 Louis Kruger Geotechnics CC has prepared a geotechnical report (attached hereto as **Annexure L**), which report confirms that the soil conditions will not hamper the development potential of the site.
- 3.2.2 Fourteen test pits were excavated, logged and described to profile the soil conditions of the subject properties.
- 3.2.3 With reference to **Annexure L** it is confirmed that the subject properties are underlain by hillwash, nodular ferricrete and very soft rock granite with soft patches. The site is classified as NHBRC Zone P (Fill, perched water table)-C2-S2.
- 3.2.4 The application will also be circulated to the controlling authority for comment – the Council for Geoscience - as prescribed.

3.3 Environmental Considerations

- 3.3.1 Bokamoso Landscape Architects & Environmental Consultants has been appointed to obtain the relevant environmental authorisation, as the proposed development does not encompass a listed activity in terms of relevant environmental legislation, i.e. the National Environmental Management Act. A copy of the Executive Summary of the Basic Assessment Report is attached hereto as **Annexure M**.
- 3.3.2 The application will also be circulated to the relevant authority for comment (GDARD) as prescribed.

4. DEVELOPMENT PROPOSAL

- 4.1 As indicated on the proposed Township Layout Plan (**Annexure K**), provision is made for nine (9) erven zoned as follows:

ERF NR.	PROPOSED ZONING	PROPOSED USE	PROPOSED ERF SIZE
1	Industrial 2	Business Building, Cafeteria, Car Wash, Commercial Use, Light Industry , Parking Garage and Parking Site, Place of Refreshment, Retail Industry and Shop.	1,9485 hectares
3	Industrial 2	Business Building, Cafeteria, Car Wash, Commercial Use, Light Industry , Parking Garage and Parking Site, Place of Refreshment, Retail Industry and Shop.	1,7940 hectares
3	Industrial 2	Business Building, Cafeteria, Car Wash, Commercial Use, Light Industry , Parking Garage and Parking Site, Place of Refreshment, Retail Industry and Shop.	1,3350 hectares
4	Industrial 2	Business Building, Cafeteria, Car Wash, Commercial Use, Light Industry , Parking Garage and Parking Site, Place of Refreshment, Retail Industry and Shop.	1,1090 hectares
5	Industrial 2	Business Building, Cafeteria, Car Wash, Commercial Use, Light Industry , Parking Garage and Parking Site, Place of Refreshment, Retail Industry and Shop.	1,0770 hectares
6	Industrial 2	Business Building, Cafeteria, Car Wash, Commercial Use, Light Industry , Parking Garage and Parking Site, Place of Refreshment, Retail Industry and Shop.	1,7915 hectares
7	Industrial 2	Business Building, Cafeteria, Car Wash, Commercial Use, Light Industry , Parking Garage and Parking Site, Place of Refreshment, Retail Industry and Shop.	1,8265 hectares
8	Special	Access and Access Control	0,4760 hectares
9	Special	Access and Access Control	0,4000 hectares

- 4.2 These aforementioned land use rights will be incorporated into the Tshwane Town-Planning Scheme, 2008 (revised 2014).
- 4.3 Access to the proposed development will be obtained via a proposed public street from the M34 (R114) Pretoria Krugersdorp Road as indicated on the proposed township layout plan.
- 4.4 Parking will be provided in accordance with the provisions of the Tshwane Town-Planning Scheme, 2008 (revised 2014).
- 4.5 The proposed development will be subject to the approval of a site development plan and building plans. These plans will address the siting of buildings, building lines, height, privacy of adjacent property owners, etc.

-
- 4.6 The proposed conditions of establishment are attached hereto as **Annexure N**.
- 4.7 The proposed scheme documents are attached hereto as **Annexure O**.

5. ELECTRICAL AND CIVIL ENGINEERING SERVICES

- 5.1 Consulting engineers have been appointed to conduct electrical and civil services reports.
- 5.2 Elektroplan Consulting Engineers CC has compiled an electrical services report (attached as **Annexure P**), which report recommends that the developer enters into negotiation with the City of Tshwane for the supply of bulk power to the development.
- 5.3 CivilConsult was appointed by the registered property owner as consulting engineers for Peach Tree Extension 23, i.e. a part of Portion 109 and a part of the Remainder of Portion 331 of the farm Knopjeslaagte 385-JR. **Annexure Q** hereto contains a copy of the civil services report, conducted by Civil Consult Engineers dated June 2016.

Civil Engineering services are discussed in great detail in the service report. All design standards to be followed for the design of infrastructure will be based on the technical requirements of the Engineering Department of the City of Tshwane for the provision of municipal services.

The design of the water reticulation will be done in accordance with the latest edition of the Design Guidelines for Water Reticulation and Supply issued by the Water and Sanitation Division of the City of Tshwane. No formal City of Tshwane water reticulation is available in the vicinity of the proposed development.

Sewer design will be done according to the Tshwane Manual for the Design of Streets and Storm Water, issued by the Town Engineer's office of the City of Tshwane. No formal City of Tshwane sewer reticulation is available in the vicinity of the proposed development. Permanent and Interim Solutions are listed and discussed in the relevant services report.

- 5.4 According to the report, the proposed development may require the upgrading of existing engineering infrastructure and the developer will enter into services agreements with the Municipality, as required.
- 5.5 The amount of Bulk Services Contributions for civil services payable to the City of Tshwane will be determined with the compilation of the services agreements.

6. TRAFFIC ENGINEERING

- 6.1 Route 2 Transport Strategies Consulting was appointed in September 2015 to compile a traffic impact study for peach Tree Extension 23. The scope of the report includes an assessment on the roads that are to be affected by the development; peak hours' analysis of traffic volumes and also assessment scenarios. The report proposes the following:
- Provision of a 1.5m wide sidewalks along the site frontage on the M34(R114) and internal roads;
 - The main access road should have two lanes in and two lanes out;
 - The implementation of bus and mini-bus taxi layby's on both sides of the new road to the access road along the M34;
 - A detailed site development plan should be compiled showing parking, on-site circulation and refuse removal.

The report's findings state that, based on the site observations, the existing and base traffic volumes shown in the figures, as well as the mentioned capacity analyses, it can be said that the proposed development traffic will not have an impact on the weekly AM and PM peak hour intersection capacities, although the M34 and Road to Access intersection needs to be signalised. Please refer to the traffic impact study, attached as **Annexure R**:

7. POLICIES

7.1 National Development Guidelines

7.1.1 **Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013)**

Section 7 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) confirms that the following principles apply to spatial planning, land development and land use management:

7(a) *The principle of spatial justice, whereby:-*

- (i) *Past spatial and other development imbalances must be redressed through improved access to and use of land.*

It is our opinion that the greater community of this area will benefit from the development proposal through various new housing and employment opportunities.

The development will enhance the urban environment through the strengthening of economic growth and strategic densification of future development zones, as required in terms of the RSDF.

- (ii) *Spatial development frameworks and policies at all spheres of government must address the inclusion of persons and areas that were previously excluded, with an emphasis on informal settlements, former homeland areas and areas characterised by widespread poverty and deprivation.*
- (iii) *Spatial planning mechanism, including land use schemes, must incorporate provisions that enable redress in access to land by disadvantaged communities and persons.*
- (iv) *Land use management system must include all areas of a municipality and specifically include provisions that are flexible and appropriate for the management of disadvantaged areas, informal settlements and former homeland areas.*
- (v) *Land development procedures must include provisions that accommodate access to secure tenure and incremental upgrading of informal areas.*
- (vi) *A Municipal Planning Tribunal considering an application before it, may not be implemented or restricted in the exercise of its discretion solely on the ground that the value of land or property is affected by the outcome of the application.*

Principles (7)(a) (ii) to (vi) relates to obligations imposed on local government, and in this regard the legislation is clear in respect of the procedures to facilitate the development to the property.

7(b) *The principle of spatial sustainability, whereby spatial planning and land use management systems must:-*

- (i) *Promote land development that is within the fiscal, institutional and administrative means of the Republic.*

The proposed development, as motivated, complies with the fiscal, institutional and administrative means of the Republic as well as the Local Authority.

Development Policies (RSDF for Region 4), related administration and laws and the National Environmental Management Act, 1998, do allow for the application, as submitted, to be entertained.

- (ii) *Ensure that special consideration is given to the protection of prime and unique agricultural land.*

In terms of Municipal policy, the property is earmarked for future urban land uses, not agricultural use. The Municipal policy is also due for review in the near future, which is to include the property and surroundings in the development zone.

- (iii) *Uphold consistency of land use measures in accordance with environmental management instruments.*

This principle relates to obligations imposed on local government, and in this regard the legislation is clear in respect of the procedures to facilitate the development to the property.

- (iv) *Promote and stimulate the effective and equitable functioning of land markets.*

This principle relates to obligations imposed on local government, and in this regard the legislation is clear in respect of the procedures to facilitate the development to the property.

- (v) *Consider all current and future cost to all parties for the provision of infrastructure and social services in land developments.*

This principle relates to obligations imposed on local government, and in this regard the legislation is clear in respect of the procedures to facilitate the development to the property.

- (vi) *Promote land development in locations that are sustainable and limit urban sprawl.*

The subject properties border onto the urban edge of the City of Tshwane and will not contribute to urban sprawl, as it entails a brownfield development. Other similar developments in the area has recently been approved by Council and a services masterplan will be done in the near future to service the area.

According to relevant policy guidelines of the Municipality (i.e. the Regional Spatial Development Framework for Region 4, 2013), the subject properties are earmarked for purposes of future urban development. Development pressure and the availability of developable land is channelling development opportunities into the area.

- (vii) *Result in communities that are viable.*

The proposed development is in close proximity to residential, commercial, lifestyle and educational opportunities and will therefore ensure that there are sufficient residents in the general area to make full use of such facilities. As mentioned above, the site is located in a future development zone, which has been activated by other similar

developments and applications being approved by Council in the area.

7(c) The principle of efficiency, whereby:-

- (i) *Land development optimises the use of existing resources and infrastructure.*

The proposed development will promote efficient land development, as it entails the establishment of a place of work in close proximity to place of residence. A mixture of land-uses will result in a better functioning urban environment. The proposed development will fit into the planned redevelopment of the area and create much needed housing opportunities within the municipality.

The subject properties are strategically situated in relation to transportation routes, e.g. the M34 Road, R511, Ruimte Road and the N14 freeway. These routes connect the application site to the surrounding areas and municipalities on a provincial scale.

The availability of services, capacity of said services, and upgrades required will be determined and confirmed in the relevant Engineering Service Reports, as per the documentation included hereto as part of the application documentation.

- (ii) *Decision-making procedures are designed to minimise negative financial, social, economic or environmental impacts.*

This principle relates to obligations imposed on local government, and in this regard the legislation is clear in respect of the procedures to facilitate the development to the properties.

- (iii) *Development application procedures are efficient and streamlined and timeframes are adhered to by all parties.*

This principle relates to obligations imposed on local government, and in this regard the legislation is clear in respect of the procedures to facilitate the development to the properties.

7(d) Principal of spatial resilience whereby flexibility in spatial plans, policies and land use management systems are accommodated to ensure sustainable livelihoods in communities most likely to suffer the impacts of economic and environmental shocks.

This principle relates to obligations imposed on local government, and in this regard the legislation is clear in respect of the procedures to facilitate the development to the property.

7(e) The principle of good administration, whereby:-

- (i) *All spheres of government ensure an integrated approach to land use and land development that is guided by the spatial planning and land use management systems as embodied in this Act.*

This principle relates to obligations imposed on local government. The application will be circulated to relevant internal municipal departments for their comments.

- (ii) *All government departments must provide their sector inputs and comply with any other prescribed requirements during the preparation or amendment of spatial planning frameworks.*

This principle relates to obligations imposed on local government.

- (iii) *The requirements of any law relating to land development and land use are met timeously.*

This principle relates to obligations imposed on local government.

- (iv) *The preparation and amendment of spatial plans, policies, land use schemes as well as procedures for development applications, include transparent processes of public participation that afford all parties the opportunity to provide inputs on matters affecting them.*

This principle relates to obligations imposed on local government. It is also confirmed that the application will be advertised by the applicant in the prescribed manner.

- (v) *Policies, legislation and procedures must be clearly set in order to inform and empower members of the public.*

This principle relates to obligations imposed on local government.

7.1.2 National Development Plan - 2030

The National Development Plan identifies five principles for spatial development: spatial justice, spatial sustainability, spatial resilience, spatial quality and special efficiency.

It confirms that South African cities are highly fragmented, as little has been achieved in reversing apartheid geography. The Plan proposes that the situation be addressed by establishing new norms and standards: amongst others by densifying cities, improving transport and locating jobs where people live.

The containment of urban sprawl is particularly highlighted in the Plan, confirming that sprawl be contained and reversed (if possible), “... as denser forms of development are more efficient in terms of land usage, infrastructure cost and environmental protection.”

The proposed development aligns with the vision of the National Development Plan, as it will promote compaction of the city and limiting urban sprawl (by means of infill development), as well as by establishing a place of work in close proximity to residential opportunities, which will result in reduced travel times. More housing opportunities will be provided within the municipal area, which will include low to medium density housing opportunities.

7.2 Provincial Development Guidelines

7.2.1 Gauteng Spatial Development Framework, 2011

The Gauteng Spatial Development Framework (SDF), 2011, was, amongst others, compiled to specify a clear set of spatial objectives for municipalities to achieve in order to ensure realisation of the future provincial spatial infrastructure; and to enable and direct growth.

The SDF aims to articulate the spatial objectives of the Gauteng region to assist the alignment of neighbouring municipalities’ spatial plans. It is proposed that key principles in local municipality SDFs should include (applicable to this application):

- Promotion of densification in specific areas to utilise resources more efficiently;
- Establishment of a hierarchy of nodes and supporting existing development nodes.

The SDF confirms on page 128 that “it remains the intension to limit urban sprawl as a fundamental tenet or urban growth policy and to promote the intentions of intensification and densification, together

with a transformed urban structure that de-emphasises the need for outward expansion of the urban system”.

The SDF furthermore identified four critical factors for development in the province, relevant to this development:

- **Contained urban growth:**

To contain urban growth, an Urban Edge was identified to curb urban sprawl. The idea behind the urban edge is to limit development within certain areas of a city. Only certain types of developments are allowed on the outside of the urban edge. The goal is to curb urban sprawl and thereby protecting the natural environment. One way to do this is to increase the densities of the built environment within the urban edge.

This edge is however not set in stone and can be amended if development pressure in an area requires the alteration of this “line” or edge. Normally, areas identified for future development or as future development nodes are not included within the urban edge of a municipality. Amendments to the relevant spatial legislation and frameworks of the municipality usually later include these areas within the edge, so the development potential can be unlocked. Approval of net land-use rights and applications in an area indicates that the characteristics of the area have changed over the years.

- **Resourced based economic development:**

Resource based economic development should result in identification of the economic core. Development should be encouraged in close proximity to existing resources, which includes infrastructure such as roads, water and electricity.

The proposed development is situated near existing and adjacent to approved proposed developments and infrastructure networks. Recent similar approved township establishment applications indicate that there is a growing economic base in the area.

- **Re-direction of urban growth:**

Developments in economically non-viable areas should be limited and thereby achieving growth within the economic growth sphere. The western Tshwane area is a fast growing development area in Tshwane, and growth should be encouraged in the precinct. Several new township applications have been approved in close proximity and adjacent to the application site, indicating the growth trend towards this region. Further development pressure is also mounting.

- **Increased access and mobility:**

New land development areas should be planned/design to increase access and mobility of these developments. The proposed land development area could be regarded as accessible due to its strategic location in close proximity to the M34, R511 and N14 Highway.

7.3 Local Development Guidelines

7.3.1 Integrated Development Plan (IDP), 2011-2016

The City of Tshwane has adopted an Integrated Development Plan (IDP) for 2011-2016 in terms of Section 25 of the Local Government, Municipal Systems Act, 2000 (Act 32 of 2000), which plan integrates and coordinates plans and aligns the resources and capacity of the Municipality to implement these plans. The compilation of Spatial Development Frameworks forms part of the IDP.

Strategic Objective 2 of the IDP (economic growth and development and job creation) and Strategic Objective 3 (sustainable communities) is particularly relevant to the proposed development.

The City of Tshwane further more seeks to focus its efforts to complement National and Provincial Government to accomplish the following strategic objectives:

- Provide quality basic services and infrastructure;
- Facilitate higher and shared economic growth and development;
- To fight poverty, build clean, healthy, safe and sustainable communities;
- Foster participatory democracy through a caring, accessible and accountable service;
- To ensure good governance, financial viability and optimal institutional transformation with capacity to execute its mandate.

The Strategic Levers emanating from the city's macro and long-term strategy, including the medium-term plan reflect Tshwane's attempts in actively working towards achieving the targets set out at national and provincial level. This is to ensure that the CoT succeeds in achieving its vision of the leading international African Capital City of excellence that empowers the community to prosper in a safe and healthy environment. Throughout the IDP, the Tshwane Municipality is focused to ensure:

- Encourage economic growth within the city, making it more competitive in global markets;
- Manage physical integration and compaction of the city and improve the quality and liveability within;
- Ensure the communities well-being by making services more available to all, enhancing these services and making them more affordable.

The proposed development will encourage economic growth, lead to compaction of the city through infill development, and ensure the well-being of the community by providing a much needed services and making it more available. It will also optimise the use of the existing municipal services network. It is in-line with the directives of the current planning policy and principles. The proposed development will enable job creation during both the construction and operational phases, and will promote the sustainable use of land resources, land ownership and housing opportunities.

7.3.2 Metropolitan Spatial Development Framework (MSDF), 2012

The MSDF was compiled to realise the vision of the City of Tshwane through spatial restructuring and to integrate all aspects of spatial planning. The "Smart Growth" approach to growth management entails the management of the physical growth of cities and is central to the implementation of the MSDF, and favours brownfield development and promotion of the mixing of compatible land uses (*"doing the right thing in the right place in the right way at the right time"*).

The MSDF also encourages infill development and the consolidation of secondary or emerging nodes to create primary nodes as opposed to leapfrog development. The MSDF describes various strategies which guide the development of retail facilities, i.e. renewal strategy, maintenance strategy, expansion strategy, new growth areas strategy, nodal strategy and nodal interchange strategy. In terms of these parameters, the proposed development can be described as an Expansion Strategy.

These overall objectives are supported by specific objectives:

- To stimulate economic growth;
- Utilise possible future growth and new developments to restructure and improve the urban form;
- Promote the availability of public transport; and
- Create healthy, comfortable and safe living and working environments for all.

Urban densification is seen as an important part of the spatial restructuring of the Tshwane Metropolitan area. This concept relates to: (1) An increase in the levels of access to goods, employment opportunities and public transport systems; (2) Viability of public transport systems; and (3) Optimal usage of land as a scarce resource.

The context of the application site is such that it is located adjacent to the build-up area of Copperleaf Golf Estate as well as to the Diepsloot area. Recent applications for township establishment were also approved by Council (Peach Tree X15 and X16) just to the south-east of the application site. Vacant land is a scarce resource, thus the developer seized the opportunity to develop the vacant property. As a result, the proposed development is in line with the principles dealing with containment of growth and compaction of urban development.

The proposed development stimulates economic growth by providing taxable residential, commercial, and industrial property, thereby creating additional revenue for the CoT and adding buying power to the local economy. The proposed development will enhance the image of the area by developing vacant land which has been neglected.

7.3.3 Regional Spatial Development Framework: Region 4, 2013

The Regional Spatial Development Framework (RSDF) (2013) for Region 4 earmarks the subject properties for purposes of future urban development. The properties are situated outside the demarcated urban edge of 2013. In terms of RSDF's Density Map, the properties fall in a low density residential area.

The RSDF concedes that the future urban development area "*represents a natural direction for growth of the metropolitan area and region*", subject to the provision of essential services and the LSDF for the area (i.e. Monavoni and Western Farms Development Framework, 2008).

The following development guidelines are proposed in the future urban area:

- Development that is in line with the Monavoni and Western Farms Development Framework;
- Contribution towards the goals of the City Strategy and MSDF;
- Availability of bulk engineering services;
- Protection of environmental sensitivity of the area;
- Proximity to other existing supporting social facilities, economic opportunities, retail and recreation;
- Physical features that may define the development (e.g. railway lines, watersheds, provincial roads, environmental areas);
- Provision of community facilities (e.g. schools, medical facilities, police stations).

The spatial development framework for the region is based on an integrated urban lattice on which densification and intensification of systems can take place in an integrated manner. A set of linear systems form the framework of the urban development lattice and relays urban energy from the traversing highways to lower order roads where it can be converted into physical development and economic growth. Existing and future mass transport routes are and should be integrated into the urban system.

The application site is located adjacent to the R511, N14-Highway and the M34, which has been identified by the RSDF as part of the **east-west** development mobility spines in the area which is defined as an arterial along which traffic flows with minimum interruption. In essence, the proposed township establishment is thus in line with the proposals of the RSDF.

7.3.4 Monavoni and Western Farms Development Framework, 2008

In terms of the Monavoni and Western Farms Development Framework (2008), the subject properties is situated within Zone 9: Agricultural Zone, while approved townships Peach Tree Extensions 15 and 16, situated to the south of the subject properties, is situated in Zone 2: Low Density Residential Zone (maximum nett density: 25 dwelling units per hectare).

The Proposed Development Edge also runs between the subject properties and nigh approved townships Peach Tree Extensions 15 and 16, situated to the south of the subject properties. The Framework confirms that geotechnical conditions on the subject properties are “intermediate”, which also applies to nearby approved townships Peach Tree Extensions 15 and 16, situated to the south of the subject properties.

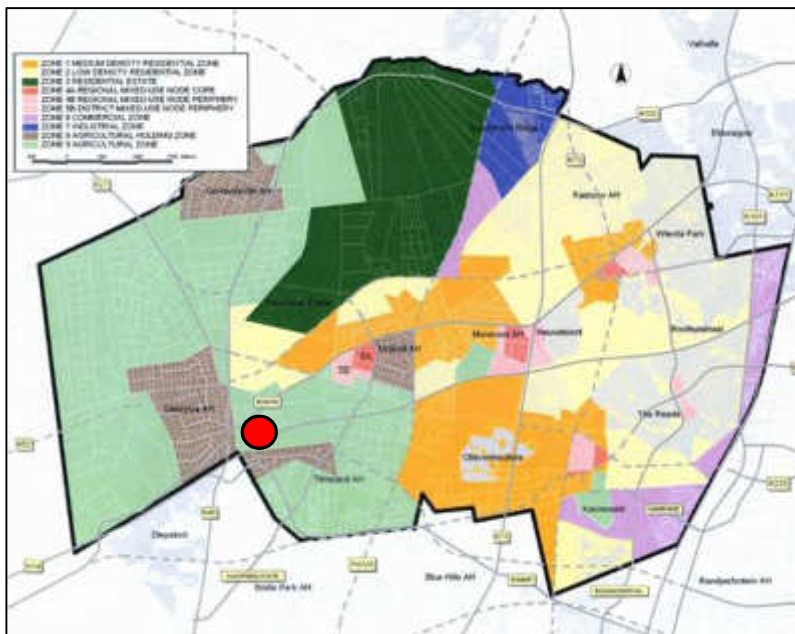


Figure 4: Monavoni & Western Farms Spatial Framework

The Framework also indicates that both the subject properties and adjacent approved townships Peach Tree Extensions 15 and 16, situated to the south of the subject properties, have low agricultural potential and medium development suitability.

8. MOTIVATION AND BURDEN OF PROOF

8.1 Need

- 8.1.1 A part of Portion 109 and a part of the Remainder of Portion 331 of the farm Knopjeslaagte 385-JR is located in an area where several new residential and mixed use developments and townships have been developed in recent years or are planned in the near future. This is mainly due to the high demand in developable land in close proximity to built-up areas and access routes. These townships are located all around the application site. It is necessary to accommodate and consider the land uses of the surrounding existing and proposed uses as well as residential townships in the area in the layout of the proposed township establishment.
- 8.1.2 The locality of the application site adjacent to the existing urban edge and in a future development zone and also major through routes and highways, are vitally important. The accessibility of the site is one of its major advantages. Access to the proposed township will be from the M34 (R114), which links with the R511 and also the N14-Highway. The site of application's close proximity to Copperleaf Golf Estate, Diepsloot-West, Laezonia AH, Gerhardsville and Mnandi AH.
- 8.1.3 Open and vacant, unutilized land within a build-up or developing area can be perceived as a weakness due to the security threat that vacant land imposes, as well as the negative influence it has on the image of a neighbourhood. Unused agricultural land or vacant land, which implies lower densities, makes the provision of essential municipal services less viable and more expensive to provide. By developing the existing land, the development of urban fibre can be stimulated through the strengthening of the future development node and region. The proposed land use rights of the erven accommodated in the township, Peach Tree Ext 23, are in accordance with the proposals of the Integrated Development Plan (IDP), as the IDP earmarks this area for mixed uses.
- 8.1.4 The proposed development will positively influence the income base of the Municipality. The income generated by rates is a function of land value, which is in turn a function of the land use. The establishment of the township broadens the economic base of the area. The development will also ensure the following:
- Infill development – The application site is a vacant portion of land situated adjacent to an existing and future residential townships, within the Municipality.
 - New work opportunities in close proximity to place of residence – as a large labour force (skilled, semi-skilled and unskilled) is available in close proximity to the proposed development.
 - Optimal use of existing infrastructure.
- 8.1.5 It is important to mention the issue of sustainability in terms of motivating the need for the development. According to the definition of Social Sustainability, the following themes are relevant (own extract):
- Basic needs (which includes Housing and Employment)
 - Identity, sense of place and culture
 - Social mixing and cohesion
 - Well-being, happiness and quality of life

The social sustainability of the development can be derived from the fact that it will fulfil in the basic needs of the future inhabitants of the development. This will contribute to the well-being and quality of life of these people.

A large infrastructure enhancement exercise, in order to service the proposed development, will have a positive influence on the surrounding properties and members of the local community. The demand for investment in infrastructure to eradicate backlog and create a platform for economic growth within South African and especially in this part of the City of Tshwane is much needed. Due to the current demand, the government and development finance institutions can only provide a portion of this development's housing requirements and it is therefore crucial that private sector investors and the public cooperate in funding efforts. The capital cost for the development will be essentially borne by the developer, while new housing opportunities are provided, additional civil services are provided and job creation is ensured, while economic growth is taking place.

One of the most positive influences of this development will be the number of employment opportunities that it will create. The construction phase will create temporary employment, while the operational phase of the residential-, retail-, security-, and municipal uses will create numerous permanent job opportunities.

- 8.1.6 The need for the proposed development is also recognised by the Municipality's approval of similar land use applications in the immediate vicinity. The proposed development is also consistent with approved land use policies (e.g. the RSDF, MSDF and IDP). The need for the proposed development is substantiated by the principles of the IDP, i.e. the infill of vacant land and the optimal use of existing infrastructure, as well as from current market forces.

8.2 Desirability

- 8.2.1 The development can be regarded as being desirable and will have several beneficial social and economic impacts on the area, which can be summarised as follow:
- Optimum utilisation of services and infrastructure.
 - Increase in property values of surrounding properties.
 - Increased security.
 - Compatibility with surrounding land uses.
 - Increased housing opportunities

The proposed mixed land use development will act as a catalyst for the sustainable development of the larger precinct, as identified in the RSDF for the region. Even though other developments are taking place in the area, this development will help the remaining inherent potential of the surrounding land to be unlocked.

- 8.2.2 The proposed development will contribute to the overall efficiency, sustainability and improved quality and liveability of the greater Tshwane metropolitan area, especially in the south western part. The following factors are important:
- **Urban Form:** Several areas around the application site are in the process of being developed. Other similar land-use applications are currently underway.
 - **Character of the Environment:** The area in question is characterized by vacant and unused agricultural land in close vicinity to the application site. The agricultural use of the land in the area has diminished of the years as infrastructure, urban development and other factors such as crime changed the makeup of the area. Land-uses currently being considered by Council are mainly residential of nature. The proposed township to be known as Peach Tree Extension 23 will positively contribute to the existing character of the area.

- Influence to the Area: The proposed development will fit in with the existing and developing urban form and character of the area. It will uplift the area aesthetically and economically and might attract other potential developers to the area as well. Thus, in effect, it might have a very positive financial influence to the precinct. Furthermore, the proposed development is adjacent of other already developed and planned residential townships within the area. It will thus eliminate urban sprawling to some extent as well.

8.2.3 The application site can furthermore be regarded as strategically located due to its close proximity to existing residential (formal and informal) townships and it can therefore be argued that it addresses the spatial inequalities of the past through the provision of employment opportunities in close proximity to residences, with a variety of public transport systems being available to the public. The township will ensure employment opportunities for skilled, semi-skilled and unskilled employees during the construction and the operational phases, as discussed above.

The proposed development will have several beneficial social, economic and ecological impacts once the construction thereof is finalised, which can be summarised as follow:

- Reduce the potential dumping areas and informal settlements;
- Optimum utilisation of services and infrastructure;
- Expansion of municipal infrastructure and services;
- Increase in property values of surrounding properties;
- Increased security;
- Eradication of invasive species;
- Compatibility with surrounding land uses; and
- Landscaping could improve fauna numbers and species.

As mentioned above, the proposed development will include transportation facilities and will be easily accessible through public transport. The need for social and economic facilities in this area is identified in various planning policies and policy frameworks of the Municipality. The development will provide much needed residential and retail facilities as well as light industrial components for the area, and thus make a positive contribution with regards to social welfare.

8.2.4 Taking into account the characteristics of the area and the accessibility of the site, the proposed township could be regarded as desirable and strategically situated within a developing residential area. The proposed development will contribute positively to the improvement of the character of the area. As mentioned above, the accessibility of the proposed township from the R511, M34 (R114) and also the N14 Highway furthermore contributes to the development potential of the application site and surroundings.

8.2.5 The development proposal is also consistent with, and will promote, the land use policy guidelines of the Municipality.

8.3 Compliance with SPLUMA principles

8.3.1 With reference to Section 7.1.1 of this Memorandum, it is confirmed that the development proposal complies with the principles of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013).

8.4 Public interest in terms of Section 47(2) of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013)

8.4.1 The proposed development is in the public interest, as the land use rights is consistent with approved policy guidelines on national, provincial and local level.

8.4.2 The proposed development will provide a greater choice in retail and residential opportunities to the public.

8.5 Facts and circumstances of application in terms of Section 42 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013)

8.5.1 Application is made in terms of Section 16(4) of the City of Tshwane Land Use Management By-Law (2016) for the establishment of a township on Portion 109 and Rem/331 of the farm Knopjeslaagte 385 JR, to be known as Peach Tree Extension 23.

8.5.2 The township will comprise of seven (7) erven zoned as follows:

- Seven (7) erven zoned “Industrial 2” for the main purposes of “Commercial Use” and “Light Industry”, subject to certain conditions;

8.5.3 The proposed land use rights align with approved policy guidelines on national, provincial and local level.

8.6 Rights and obligations of affected parties in terms of Section 42 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013)

8.6.1 The rights and obligations of affected parties will be taken into account in the following manner:

- The application will be advertised in the prescribed manner by the publications of notices in the Gauteng Provincial Gazette, Beeld and Citizen, by the simultaneous display of a notice on site and notification to adjacent property owners.
- The City Planning Department will circulate the application for comments from internal departments of the Municipality. Any concerns raised will have to be dealt with to the satisfaction of the relevant department.
- The applicant will circulate the application to relevant external departments/institutions for comment.

8.7 Impact on engineering services, social infrastructure and open space in terms of Sections 42 and 49 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013)

8.7.1 The impact of the proposed development will be confirmed by the client’s consulting engineers, the internal departments of the Municipality and relevant external departments/institutions who will be afforded an opportunity to comment on the application.

8.7.2 Any adverse impacts will be mitigated and addressed by suitable solutions, which may include service agreements and payment of bulk contributions to upgrade existing services infrastructure.

8.7.3 Engineering services have also been discussed in Section 5 and 6 of this memorandum. More detailed information is available in the relevant Annexures attached hereto.

8.8 Reply to objections

8.8.1 The applicant will reply to any valid objections to the application.

8.8.2 The advertisements will comply with the requirements of the relevant provincial legislation and as well as those in terms of the City of Tshwane Land Use Management By-Law (2016).

The rights of potential objectors and or interested parties will be brought to the attention of probable objectors and or interested parties in terms of the requirements of the City of Tshwane Land Use Management By-Law (2016).

9. CONCLUSION

- 9.1 Application is made in terms of Section 16(4) of the City of Tshwane Land Use Management By-Law (2016) for the establishment of a township on a part of Portion 109 and a part of the Remainder of Portion 331 of the farm Knopjeslaagte 385-JR, to be known as Peach Tree Extension 23.
- 9.3 Taking into account the contextual characteristics of the area, the accessibility of the application site and its location within close proximity to various public amenities, the proposed township for which there is a proven need could be regarded as strategically situated within a developing and sought-after area.
- 9.4 The application clearly indicates the land- use rights, scheme documents, diagrams, layout plans, need and desirability, co-ordinated harmonious development and all other relevant requirements in terms of provincial legislation.
- 9.5 We trust that Council will evaluate and consider the application on its merit.



Tel: 012 460 0670
Fax: 086 592 9974
E-mail: info@urbaninnovate.co.za

PO Box 27011
Monument Park
0105

LIST OF ANNEXURES

ANNEXURE A	-	Proof of reservation of Township Name
ANNEXURE B	-	Locality Plan
ANNEXURE C	-	Deeds of Transfer
ANNEXURE D	-	Company Resolutions, Power of Attorneys, proof of Company Registration
ANNEXURE E	-	SG Diagrams
ANNEXURE F	-	Conveyancer's Report
ANNEXURE G	-	Land Surveyor Certificate
ANNEXURE H	-	Letter to Department of Mineral Resources
ANNEXURE I	-	Zoning Certificates
ANNEXURE J	-	Zoning Map
ANNEXURE K	-	Proposed Township Layout Plan
ANNEXURE L	-	Geotechnical Report
ANNEXURE M	-	Basic Assessment Executive Summary
ANNEXURE N	-	Proposed Conditions of Establishment
ANNEXURE O	-	Proposed Scheme Documents
ANNEXURE P	-	Electrical Engineering Services Report
ANNEXURE Q	-	Civil Engineering Services Report
ANNEXURE R	-	Traffic Impact Study
ANNEXURE S	-	List of adjacent properties



Appendix G2

Fauna and Flora Habitat
Assessment

FAUNA HABITAT ASSESSMENT FOR PORTION 331, 109, 105 OF THE FARM KNOPJESLAAGTE 385-JR, CENTURION



Report Authors: CW Vermeulen; SE van Rooyen

Compiled by: Corné Niemandt

Reviewed: Reinier F. Terblanche (Pr.Sci.Nat, Reg. No. 400244/05)

April 2016



**Landscape Architects &
Environmental Consultants: Specialist Division**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: corne@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

Review of

FAUNA HABITAT ASSESSMENT FOR PORTION 331, 109, 105 OF THE FARM KNOPJESLAAGTE 385-JR, CENTURION

Review: July 2016

Reviewer: Reinier F. Terblanche

(M.Sc, *Cum Laude*; Pr.Sci.Nat, Reg. No. 400244/05)

APPROACH OF REVIEWER TO ECOLOGICAL REVIEWS

Ecological studies and applied ecology comprise the consideration of a diversity of factors, even more so in South Africa with its exceptional high floral and faunal diversities, various soil types, geological formations and diversity of habitats in all its biomes. Therefore it would be easy to add onto or show gaps in any ecological impact assessment, rehabilitation actions or management plans stemming from ecological assessments. The approach followed here is to review the ecological study in a reasonable context and focus on the successful fulfilment of the aims of the study within the limits of cost and time.

**ECOLOGICAL REVIEW: FAUNA HABITAT ASSESSMENT FOR PORTION 331, 109,
105 OF THE FARM KNOPJESLAAGTE 385-JR, CENTURION, APRIL 2016**

Findings of the review

- The report contains details of the expertise of the persons who prepared the report and a declaration that the person who prepared the report is acting independently.
- The aims of the report are clear.
- The report provides references and descriptions of the principles and guidelines to be taken into account for fauna habitat assessment.
- Acceptable methods and limitations have been given in detail to reach the goal of the assessment.
- Relevant laws and guidelines have been mentioned and integrated.
- The report gives a clear assessment of the status fauna at the site and also added an extensive literature survey and existing knowledge survey.
- The recommendations and the conclusion are consistent with the aims of the report.
- It is to be commended that the report is economical and practical so that it adds value to the team effort of addressing the management and future of the habitats at the site.

Overall the report appears to be relevant, detailed enough for the purposes of this study and complete and finally addressing the key issues at stake.



Reinier F. Terblanche M.Sc. Ecology; Pr.Sci.Nat, Reg. No. 400244/05

Specialists

Specialist investigators: Mr. S.E. van Rooyen (M.Sc. Restoration Ecology and Botany candidate); CW Vermeulen (B.Sc. Biological and Environmental Sciences); Mr. Corné Niemandt (M.Sc. Plant Science; B.Sc. Honours Zoology)

Declaration of independence:

The specialist investigators responsible for conducting this particular specialist vegetation study declare that:

- We consider ourselves bound to the rules and ethics of the South African Council for Natural Scientific Professions (SACNASP);
- At the time of conducting the study and compiling this report we did not have any interest, hidden or otherwise, in the proposed development, except for financial compensation for work done in a professional capacity;
- Work performed for this study was done in an objective manner. Even if this study results in views and findings that are not favourable to the client/applicant, we will not be affected in any manner by the outcome of any environmental process of which this report may form a part;
- We declare that there are no circumstances that may compromise our objectivity in performing this specialist investigation. We do not necessarily object to or endorse the proposed development, but aim to present facts, findings and recommendations based on relevant professional experience and scientific data;
- We do not have any influence over decisions made by the governing authorities;
- We have the necessary qualifications and guidance from professional experts (registered Pr. Nat. Sci.) in conducting specialist reports relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- This document and all information contained herein is and will remain the intellectual property of Bokamoso Environmental: Specialist Division. This document, in its entirety or any portion thereof, may not be altered in any manner or form, for any purpose without the specific and written consent of the specialist investigators.
- We will comply with the Act, regulations and all other applicable legislation;



S.E. van Rooyen



CW Vermeulen



Corné Niemandt

Table of Contents

1. INTRODUCTION	7
2. SCOPE AND OBJECTIVE OF ASSESSMENT	7
3. STUDY AREA	8
4. METHODS	8
5. RESULTS	9
5.1 Secondary Grassland	9
6. MAMMAL HABITAT ASSESSMENT	11
6.1 Methods	11
6.2 Specific Requirements	12
6.3 Results	13
6.3.1 Mammal habitats identified	13
6.3.2 Expected and observed Mammal species	13
6.3.3 Threatened and Red Listed Mammal species	14
6.4 Findings	15
7. HERPETOFAUNA HABITAT ASESSMENT	15
7.1 Methods	15
7.2 Specific Requirements	16
7.3 Results	16
7.3.1 Herpetofauna habitats identified	16
7.3.2 Expected and observed Herpetofauna species	16
7.3.3 Threatened and Red Listed Herpetofauna species	18
7.4 Findings	18
8. AVIFAUNA HABITAT ASSESSMENT	18
8.1 Methods	18
8.2 Specific Requirements in terms of Red Data Avifaunal species	19
8.3 Avifaunal Habitats identified	20
8.3.1 Threatened and Near Threatened bird species:	22
8.4 Findings and Conclusion	24
9. INVERTEBRATE HABITAT ASSESSMENT	25
9.1 Methods	25
9.2 Specific Requirements	26

9.3 Results.....28

9.3.1 Invertebrate habitats identified28

9.3.2 Expected and observed Invertebrate species28

8.3.3 Threatened and Red Listed Invertebrate species29

9.4 Findings29

10. OVERALL FINDINGS AND IMPLICATIONS30

11. LIMITATIONS30

12. RECOMMENDATIONS31

13. CONCLUSION32

14. LITERATURE SOURCES32

FIGURES:

Figure 1: Locality Map.....8

Figure 2: Habitats Identified.....9

Figure 3: Secondary Grassland.....10

Figure 4: Suitable White-bellied Korhaan habitat.....23

Figure 5: Fauna and Avifauna Sensitivity Map.....30

1. INTRODUCTION

Bokamoso Environmental Consultants CC; Specialist Division was appointed to conduct a Basic Faunal Habitat Assessment for the proposed mixed use development on Portion 331, 109, 105 of the farm Knopjeslaagte 385-JR, Centurion, also known as Peach Tree Extensions.

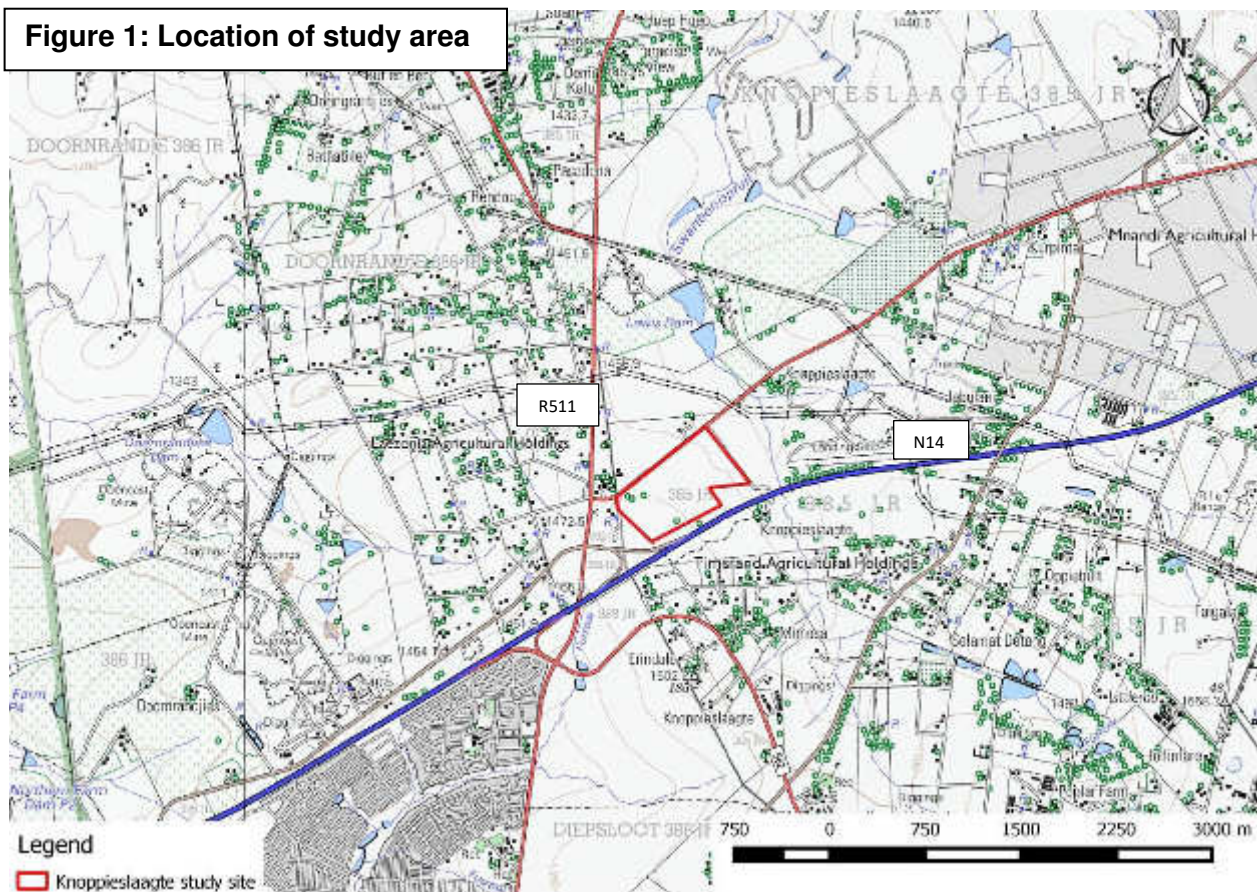
This report is based on the faunal species present on the study area as well as species that could potentially occur. The report acts as an overview of the probable and/or known occurrence of following faunal groups; Mammals, Reptiles, Amphibians, Birds and Invertebrates.

2. SCOPE AND OBJECTIVE OF ASSESSMENT

- To qualitatively and quantitatively assess the significance of the habitat components and current general conservation status of the property
- Comment on ecological sensitive areas within the study area
- Comment on connectivity with natural vegetation and homogeneous habitats surrounding the study area
- To provide a list of faunal species which occur or might occur, and to identify species of conservation importance
- To highlight potential impacts of the proposed development on the fauna judge to be present on the study site, and
- To provide management recommendations to mitigate negative and enhance positive impacts should the proposed development be approved.

3. STUDY AREA

The study area is situated in Centurion, Gauteng, on portion 331, 109, 105 of the farm Knopjeslaagte 385-JR. The study area is situated east of the R115 Road and north of the N14, adjacent to the Centurion Flight Academy (Pty) Ltd (**Figure 1**). The study site is about 45 ha in size, is located 1469 meters above sea level and is located in the quarter degree square (QDS) 2528CC. The study area is homogenous with regards to vegetation and falls in the Egoli Granite Grassland, declared as Endangered (Government Gazette no. 34809, 2011).



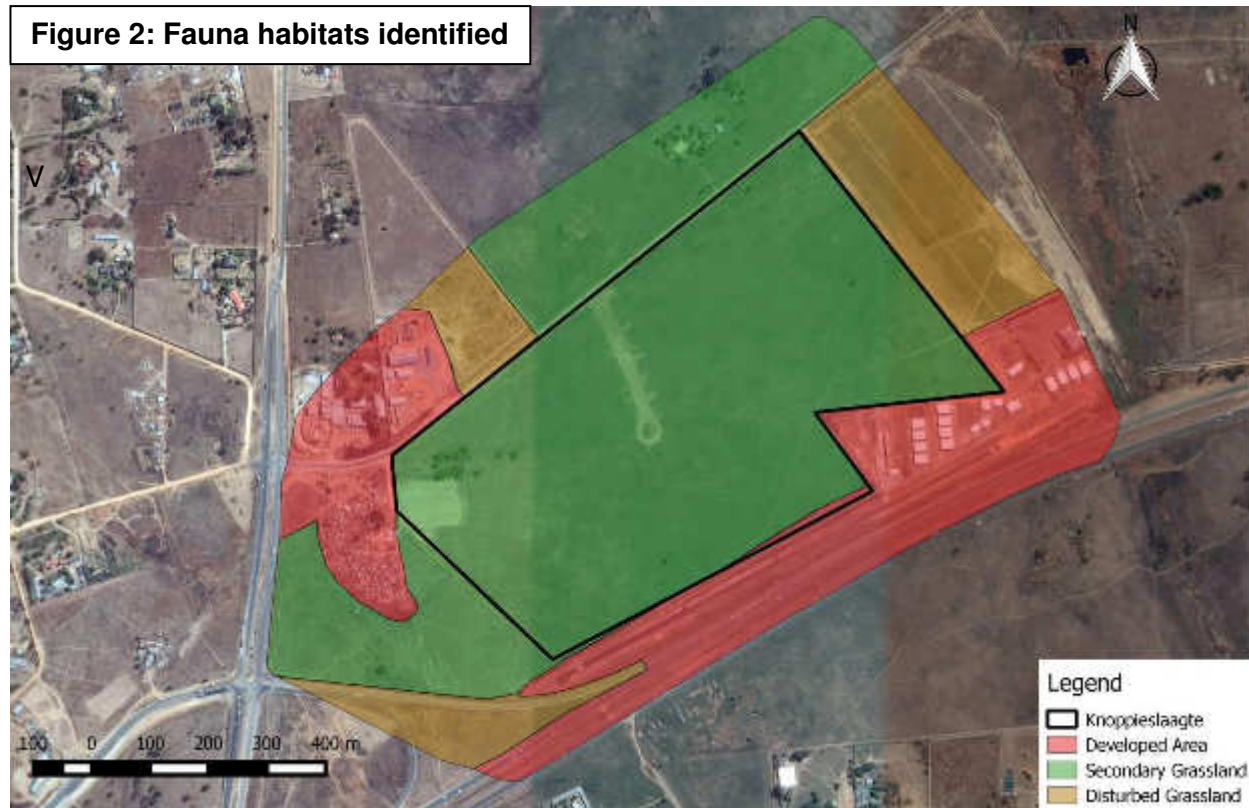
4. METHODS

Before conducting a field survey a desktop assessment was conducted to note the prevalent faunal species occurring on or near the study area. A list of expected species was compiled and used as a reference during the field survey to ensure that faunal species that should theoretically occur were not overlooked. All distinct faunal habitats were identified on site, after which each habitat was assessed to record the associated faunal species for each of the

respective faunal group (Mammals, Herpetofauna, Invertebrates and Avifauna) present in that specific habitat.

5. RESULTS

One faunal habitat type was identified in the study area, namely a Secondary Grassland (**Figure 2**).



5.1 Secondary Grassland

This study unit contains various anthropogenic disturbances in the form of footpaths, littering, mowing of grass and alien vegetation encroachment in the eastern corner. Adjacent to the study site is an Airport, which creates noise disturbances. The majority of the study area is dominated by graminoid species such as *Eragrostis* spp., *Schizachyrium sanguineum*, *Heteropogon contortus*, *Andropogon* spp., *Aristida* spp. and *Hyparrhenia hirta*. Encroachment of *Seriphium plumosum* is also observed. Fairly high floristic species richness appears to remain which apparently enhances the favourability of this habitat for several fauna species (**Figure 3**).



Figure 3: Secondary Grassland

6. MAMMAL HABITAT ASSESSMENT

This part of the report focuses on the probable and/or known occurrence of Threatened and Near Threatened mammal species as well as mammal species with conservation concern based on the habitats present on the study area.

Special attention was paid to the evaluation of the quantitative and qualitative habitat conditions of Threatened and near Threatened mammal species judged to have a probable occurrence in the study area. Mitigation measures to lesser the impacts and effects of the proposed development were suggested where applicable. The secondary objective of this investigation was to gauge which mammals might still reside in the study area and to compile a complete list of mammal diversity.

6.1 Methods

A three hour field survey was conducted on the 20th of April 2016, during which all observed mammal species as well as all the potential mammal habitats on the study area was identified. Following the field survey a desktop assessment was conducted to add additional mammal species expected to occur in the study area on account of their individual habitat preferences in accordance with the habitats identified on the study area. Mammal occurrence probability can be attributed to the well recorded and known distributions of South African mammals as well as the quantitative and qualitative nature of the habitats present on site. Moreover the 500 meters surrounding the study area was scanned for any additional mammal habitats.

Field Survey

Before the commencement of the field survey a list of expected mammal species was compiled to use as a reference in the field. All the Threatened and Near Threatened mammals with distribution ranges overlapping the study area were included in the aforementioned reference list. These species were prioritized and special attention was paid in terms of identifying their associated habitat preferences and noting signs of their occurrence. The field survey was conducted by means of random transect walks in each habitat. During the field survey mammal species were identified in accordance with individual habitat preferences as well as actual observations and signs such as spoor, droppings, burrows and roosting sites indicating their presence (Stuart & Stuart, 2011).

Desktop Survey

On account of the fact that the majority of mammals are nocturnal, hibernating, secretive and/or seasonal it is increasingly difficult to confirm their presence or absence by means of actual observations alone. Therefore a number of authoritative tomes such as field guides, databases and scientific literature were utilized to deduce the probable occurrence of mammal species. The Animal Demography Unit: Virtual Museum (<http://vmus.adu.org.za/>) was consulted to verify the records and occurrence of recorded mammal species in the 2528CCQDS. The Gauteng Conservation Plan (C-plan v3.3) was consulted to evaluate ecologically sensitive areas associated with mammals. A comprehensive list of probable mammalian occurrence with reference to the study area was compiled on account of the well-known and documented distributions of mammals in South Africa, especially in the Gauteng province.

The occurrence probability of mammal species was deduced in accordance with a species' distribution and habitat preferences. Where a species' distribution range was found to overlap with the study area and its preferred habitat was present, the applicable species was deemed to have a high occurrence probability on or near the study area.

In the case where the preferred habitat of a species' were found to be suboptimal on the study area, however its distribution range still overlapped the study area, the applicable species' occurrence probability was deemed to be medium.

When the habitat preferences of a species were absent from the site, the applicable species was deemed to have a low occurrence probability regardless of its distribution range.

6.2 Specific Requirements

During the field survey attention was paid to note any signs of potential occurrence of Threatened and/or Near Threatened species.

These species include:

Southern African hedgehog (*Atelerix frontalis*), Woodland Dormouse (*Graphiurus murinus*), White-tailed rat (*Mystromys albicaudatus*), and several bat species including Blasius's/Peak-Saddle Horseshoe Bat (*Rhinolophus blasii*), Darling's Horseshoe Bat (*Rhinolophus darlingi*), Geffroy's Horseshoe Bat (*Rhinolophus clivosus*), Hildebrandt's Horseshoe Bat (*Rhinolophus*

hildebrandtii), Scheiber's Long-Fingered Bat (*Miniopterus schreibersii*) and Temminck's Hairy Bat (*Myotis tricolor*).

Mammal species listed according to IUCN as Near Threatened: Southern African Hedgehog (*Atelerix frontalis*), Schreiber's Long-Fingered Bat (*Miniopterus schreibersii*), Temminck's Hairy Bat (*Myotis tricolor*), Horseshoe Bat (*Rhinolophus clivosus*), Darling's Horseshoe Bat (*Rhinolophus darling*) and Hildebrandt's Horseshoe Bat (*Rhinolophus hildebrandtii*).

6.3 Results

6.3.1 Mammal habitats identified

During the habitat assessment only one distinct mammalian habitat was identified in the study area, namely Secondary Grassland (**Figure 2**).

The Secondary Grassland provides excellent habitat for smaller rodents and insectivorous mammals such as shrews, Slender Mongoose (*Galerella sanguineus*), Marsh Mongoose (*Atilax paludinosus*), Scrub Hare (*Lepus saxatilis*), Four-striped grass mouse (*Rhabdomys pumilio*) and house cats and dogs. The Grassland habitat is degraded as it regularly experience disturbances such as grass cutting and trampling and illegal dumping. The isolated nature of this habitat decreases the occurrence probability of locating robust terrestrial mammals such as Common Duiker (*Sylvicapra grimmia*) or Steenbok (*Raphicerus campestris*). The occurrence probability of nomadic mammal species such as the African Hedgehog is highly unlikely on account of the degraded and isolated status of this Grassland habitat.

On account of the current status of both the habitats identified in the study area, the ecological status is deemed to be low sensitive (**Figure 5**).

6.3.2 Expected and observed Mammal species

Table 1: Mammal species observed or expected to occur.

	Scientific Name	Common Name	Red List Category	Occurrence Probability
1.	<i>Aethomys</i>	Veld rats	Not listed	4
2.	<i>Atelerix frontalis</i>	Southern African Hedgehog	Near Threatened	1
3.	<i>Canis mesomelas</i>	Black-backed Jackal	Least Concern	3

4.	<i>Crocidura hirta</i>	Lesser Red Musk Shrew	Data Deficient	3
5.	<i>Crocidura silacea</i>	Lesser Gray-brown Musk Shrew	Data Deficient	3
6.	<i>Cryptomys hottentotus</i>	Southern African Mole-rat	Least Concern	3
7.	<i>Cynictis</i>	Yellow Mongoose	Not listed	4
8.	<i>Dendromus mystacalis</i>	Chestnut African Climbing Mouse	Least Concern	3
9.	<i>Epomophorus wahlbergi</i>	Epomophorus wahlbergi	Least Concern	1
10.	<i>Felis catus</i>	Domestic Cat	Introduced	4
11.	<i>Genetta maculata</i>	Common Large-spotted Genet (Rusty-spotted Genet)	Least Concern	3
12.	<i>Genetta genetta</i>	Common Genet	Least Concern	3
13.	<i>Genetta tigrina</i>	Cape Genet	Least Concern	3
14.	<i>Graphiurus murinus</i>	Forest African Dormouse	Least Concern	3
15.	<i>Hystrix africaeaustralis</i>	Cape Porcupine	Least Concern	2
16.	<i>Leptailurus serval</i>	Serval	Near Threatened	3
17.	<i>Lepus saxatilis</i>	Scrub Hare	Least Concern	5
18.	<i>Mastomys coucha</i>	Southern African Mastomys	Least Concern	4
19.	<i>Neoromicia capensis</i>	Cape Serotine	Least Concern	3
20.	<i>Rattus</i>	Genus Rattus	Not listed	5
21.	<i>Rattus rattus</i>	Roof Rat	Least Concern	4
22.	<i>Rhabdomys pumilio</i>	Xeric Four-striped Grass Rat	Least Concern	5
23.	<i>Scotophilus dinganii</i>	Yellow-bellied House Bat	Least Concern	4
24.	<i>Tatera</i>		Not listed	2

*The occurrence probability of the mammal species listed below are indicated as follows:
 Not likely to occur - 1, Low occurrence probability - 2, Medium occurrence probability - 3, High occurrence probability - 4, **Confirmed occurrence - 5**
 Red Data species ranked as defined in Friedmann and Daly's S.A. Red Data Book of the mammals of South Africa.

6. 3.3 Threatened and Red Listed Mammal species

The listed shrews (**Table 1**) are not necessarily threatened; they are listed as a precautionary measure as a result of their unknown status. Musk shrews are widespread and commonly found in residential gardens throughout Gauteng, as such they are generally assumed to be abundant. The conservation status of musk shrews are however still to be determined and as such they are listed as Data Deficient.

Suitable habitat for the Serval (*Leptailurus serval*) was observed in the Secondary Grassland, as this habitat is approx. 500m away from a dam, connected to a water course. This particular species prefer wetlands and grasslands close to water. The Secondary Grassland habitat is

also favourable habitat for the Southern African hedgehog (*Atelerix frontalis*), as it prefer grassland areas. The probability for these species occurring there is unlikely, on account of the continuous human disturbances affecting this habitat. The habitat units discussed in this report is also subjected to isolation from nearby natural habitat units, which limits movement for any fauna species listed in **Table 1**.

6.4 Findings

The terrestrial habitat on the study area experience anthropogenic disturbances, which decreases the probability occurrence of both the Serval (*Leptailurus serval*) and Southern African hedgehog (*Atelerix frontalis*). It is therefore not expected that any threatened mammal species occur in the study area. Furthermore, isolation from similar natural habitats could influence the small mammals likely to occur in the study area, as genetic variation amongst species could be reduced. Based on the findings of this report the study area is deemed to have a moderate ecological sensitivity from a mammalian point of view.

7. HERPETOFAUNA HABITAT ASESSMENT

7.1 Methods

Habitat types identified in the study area was recorded, and a combined species list was compiled for the possible presence of herpetofauna species, considering the knowledge of their preferred habitats. Field guides such as those of du Preez & Carruthers (2009), Marais (2004), and (Alexander & Marais 2007) were used for identification and habitat description of herpetofauna species.

A desktop study was conducted to identify suitable habitats for the threatened herpetofauna species known to occur in the QDS 2528CC. The Animal Demography Unit: Virtual Museum (<http://vmus.adu.org.za/>) was consulted to verify the occurrence of herpetofauna species previously recorded within the QDS 2528CC. The Gauteng Conservation Plan (C-plan v3.3) was consulted to evaluate ecologically sensitive areas.

The majority of herpetofauna species are nocturnal, poikilothermic secretive and seasonal, which makes it difficult to observe them during field surveys. In this case the presence of

herpetofauna species was examined on habitat preferred by selected species and respective documented ranges.

7.2 Specific Requirements

Adequate amount of random transect walks in the study site was attempted to identify herpetofauna and invertebrate species. Emphasis on specific Red List species that might occur on the study site:

- Striped Harlequin Snake (*Homoroselaps dorsalis*)

7.3 Results

7.3.1 Herpetofauna habitats identified

The Secondary Grassland provides no conspicuous standing or flowing water bodies in the study area which decreases the niche preference for amphibian species (Du preez & Carruthers, 2009). Also, no medium or large sized rocks were observed which decreases the probability of finding reptile species in this habitat (**Table 2 and 3**). Termite mounds are absent from study area, which lessens the probability of finding reptiles, particularly the Striped Harlequin Snake (*Homoroselaps dorsalis*). The Secondary Grassland habitat does however provide a suitable habitat for some *Agama* species as well as nomadic reptile species.

7.3.2 Expected and observed Herpetofauna species

No amphibians or reptiles were observed during the survey. Five amphibian species and 30 reptile species have been recorded and are expected to occur in the QDS 2528CC (**Tables 2 & 3**).

Table 2: Amphibian species deducted to occur.

	<i>Scientific Name</i>	Common Name	Red List Category	Occurrence Probability
1.	<i>Schismaderma carens</i>	Red Toad	Least Concern	4
2.	<i>Sclerophrys capensis</i>	Raucous Toad	Least Concern	3
3	<i>Sclerophrys gutturalis</i>	Guttural Toad	Least Concern	4
4.	<i>Tomopterna cryptotis</i>	Tremelo Sand Frog	Least Concern	2
5.	<i>Tomopterna natalensis</i>	Natal Sand Frog	Least Concern	2

*The occurrence probability of the amphibian species listed below are indicated as follows:
 Not likely to occur - 1, Low occurrence probability - 2, Medium occurrence probability - 3, High occurrence probability - 4, **Confirmed occurrence - 5**

Table 3: Reptile species observed and/or deducted to occur.

#	Scientific Name	Common Name	Red List Category	Occurrence Probability
1.	<i>Agama aculeata distanti</i>	Distant's Ground Agama	Least Concern	3
2.	<i>Afrotyphlops bibronii</i>	Bibron's Blind Snake	Least Concern	2
3.	<i>Agama atra</i>	Southern Rock Agama	Least Concern	1
4.	<i>Aparallactus capensis</i>	Black-headed Centipede-eater	Least Concern	2
5.	<i>Atractaspis bibronii</i>	Bibron's Stiletto Snake	Least Concern	1
6.	<i>Boaedon capensis</i>	Brown House Snake	Least Concern	4
7.	<i>Causus rhombeatus</i>	Rhombic Night Adder	Least Concern	4
8.	<i>Cordylus vittifer</i>	Common Girdled Lizard	Least Concern	2
9.	<i>Crotaphopeltis hotamboeia</i>	Red-lipped Snake	Least Concern	4
10.	<i>Dasypeltis scabra</i>	Rhombic Egg-eater	Least Concern	4
11.	<i>Gerrhosaurus flavigularis</i>	Yellow-throated Plated Lizard	Least Concern	3
12.	<i>Hemachatus haemachatus</i>	Rinkhals	Least Concern	4
13.	<i>Hemidactylus mabouia</i>	Common Tropical House Gecko	Least Concern	2
14.	<i>Homoroselaps dorsalis</i>	Striped Harlequin Snake	Near Threatened	1
15.	<i>Homoroselaps lacteus</i>	Spotted Harlequin Snake	Least Concern	1
16.	<i>Lamprophis aurora</i>	Aurora House Snake	Least Concern	4
17.	<i>Leptotyphlops scutifrons conjunctus</i>	Eastern Thread Snake	Not listed	1
18.	<i>Lycodonomorphus inornatus</i>	Olive House Snake	Least Concern	2
19.	<i>Lycophidion capense capense</i>	Cape Wolf Snake	Least Concern	1
20.	<i>Lygodactylus capensis capensis</i>	Common Dwarf Gecko	Least Concern	4
21.	<i>Naja annulifera</i>	Snouted Cobra	Least Concern	2
22.	<i>Pachydactylus affinis</i>	Transvaal Gecko	Least Concern	4
23.	<i>Pachydactylus capensis</i>	Cape Gecko	Least Concern	3
24.	<i>Panaspis wahlbergii</i>	Wahlberg's Snake-eyed Skink	Least Concern	1
25.	<i>Prosymna sundevallii</i>	Sundevall's Shovel-snout	Least Concern	1
26.	<i>Psammophis brevirostris</i>	Short-snouted Grass Snake	Least Concern	3
27.	<i>Psammophylax rhombeatus rhombeatus</i>	Spotted Grass Snake	Least Concern	4
28.	<i>Pseudaspis cana</i>	Mole Snake	Least Concern	4

29.	<i>Rhinotyphlops lalandei</i>	Delalande's Beaked Blind Snake	Least Concern	3
30.	<i>Trachylepis capensis</i>	Cape Skink	Least Concern	3

*The occurrence probability of the reptile species listed below are indicated as follows:
 Not likely to occur - 1, Low occurrence probability - 2, Medium occurrence probability - 3, High occurrence probability - 4, **Confirmed occurrence - 5**

7.3.3 Threatened and Red Listed Herpetofauna species

No threatened species are expected to occur in the study area. No suitable habitat for the Striped Harlequin Snake (*Homoroselaps dorsalis*) was found to be present in the study area. It is highly unlikely for this particular species to occur in or around the study area as multiple disturbances and sub-optimal habitat was observed.

7.4 Findings

It seems that the largest part of the grassland habitat on the study area was utilized for agricultural activities in the form of agricultural lands in the past. Other disturbances, mostly anthropogenic, within the secondary grassland include vegetation harvesting, illegal dumping, and spreading of alien invasive species. Consequently, owing to the disturbed nature of the habitat it seems unlikely to be suitable for threatened and near threatened herpetofauna, including the Striped Harlequin Snake (*Homoroselaps dorsalis*) was observed during the field survey.

8. AVIFAUNA HABITAT ASSESSMENT

8.1 Methods

A field survey was conducted on the 20th of April 2016. A total of 3 hours was spent on the study area whilst conducting the field survey. Before conducting the field survey, a desktop assessment was conducted to document the prevalent avifaunal species occurring on or near the study area. A list of expected species was compiled and used as a reference guide during the field survey to ensure that bird species that should theoretically occur within the study area were not overlooked. All discrete avifaunal habitats were identified on site, after which each habitat was assessed to document the associated avifaunal composition by means of random

transect walks. Species were identified by actual sightings, calls as well as signs of presence in the form of eggshells, nests, droppings and feathers (Stuart & Stuart, 2000). Where necessary, species were verified using Sasol Birds of Southern Africa (Sinclair *et al.*, 2011).

By consulting the Southern Africa Bird Atlas Project 1 and 2 (SABAP2), a comprehensive species list could be compiled for the 2528CC QDS and the 2550_2800 pentad. SABAP2 is the follow-up project to the Southern African Bird Atlas Project (referred to as SABAP1). SABAP1 took place from 1987-1991. The second bird atlas project started on 1 July 2007 and plans to run indefinitely. The project aims to map the distribution and relative abundance of birds in Southern Africa. The field work for this project is done by more than one thousand nine hundred volunteers, known as citizen scientists. The unit of data collection is the pentad, five minutes of latitude by five minutes of longitude, squares with sides of roughly 9 km (SABAP2).

The species list for the QDS can however not be used as an accurate list in terms of the species actually occurring within the study area since it covers a larger area, as well as a larger variety of habitat types. In order to compile an accurate species list for the study area, all the species previously recorded in the 2528CC QDS were considered, and added or eliminated based on the habitat types present on the study area as well as the habitat preferences of individual species.

8.2 Specific Requirements in terms of Red Data Avifaunal species

According to the Gauteng Department of Agriculture and Rural Development's (GDARD) requirements for Biodiversity Assessments, Version 3.3 (March 2014), as well as for any other Red Data species: Eleven threatened and near threatened bird species were prioritized for inclusion into the Gauteng C-Plan based on:

1. Threat status (2 Endangered (**EN**), 5 Vulnerable (**VU**) and 4 Near Threatened (**NT**)).
2. Whether the species was actually present, on a frequent basis, in the province. Vagrants, erratic visitors or erratic migrants to the province (Tarboton *et al.*, 1987) have been excluded from the conservation plan.
3. Whether the threat was due to issues related to land use planning. Species which are impacted on mostly by threats such as poisoning were excluded.

Important Threatened and Near Threatened Bird species regional conservation status (only those favoring grassland habitats) (Taylor *et al.*, 2015):

- Blue Crane (*Anthropoides paradiseus*) **NT**
- African Marsh-Harrier (*Circus ranivorus*) **EN**
- White-bellied Korhaan (*Eupodotis senegalensis*) **VU**
- Secretarybird (*Sagittarius serpentarius*) **VU**
- African Grass-Owl (*Tyto capensis*) **VU**
- Abdims Stork (*Ciconia abdimii*) **NT**
- Verreauxs Eagle (*Aquila verreauxii*) **VU**

8.3 Avifaunal Habitats identified

One avifaunal habitat namely Secondary Grassland was identified within the study area. The Secondary Grassland habitat contains mostly grass and forb vegetation and is dominated by *Eragrostis* spp. and *Hyparrhenia hirta*. Secondary Grassland habitat generally has a low to medium avifaunal species richness as a result of the highly specialised environment. A number of widespread bird species such as Bishops and Widowbirds (*Euplectes* sp.), Sparrows (*Passer* sp.), Doves (*Streptopelia* sp.), Lapwings (*Vanellus* sp.), Swallows (*Hirundo* sp.) and Cisticolas (*Cisticola* sp.) were present within the grassland habitat. Connectivity with surrounding homogenous habitats was found to be low as a result of various developments, including residential, agricultural and industrial, in the surrounding area. A number of disturbances such as grass harvesting, unpaved roads and tracks, trampling, illegal rubble dumping and alien vegetation encroachment were also noted within this habitat unit. The study area is situated directly adjacent to an airfield to the east and a provincial road to the south. Both the road and the airfield is a source of noise pollution which negatively impacts avifauna within and around the study area.

Due to the on-going disturbances within the secondary grassland habitat unit and because the habitat is isolated from homogeneous grasslands, the sustainability in terms of the continual well-being and persistence of this grassland habitat is unlikely. On account of the aforementioned low connectivity and other disturbances including noise pollution from the adjacent airfield and provincial road, the study area provides sub-optimal habitat for threatened and near threatened bird species and was identified with a moderate avifaunal sensitivity.

Table 3: Bird species recorded during the field survey:

	Common English name	Taxonomic name
1.	Bishop, Southern Red	<i>Euplectes orix</i>
2.	Canary, Black-throated	<i>Crithagra atrogularis</i>
3.	Cisticola, Desert	<i>Cisticola aridulus</i>
4.	Cisticola, Zitting	<i>Cisticola juncidis</i>
5.	Crow, Pied	<i>Corvus albus</i>
6.	Dove, Laughing	<i>Streptopelia senegalensis</i>
7.	Dove, Red-eyed	<i>Streptopelia semitorquata</i>
8.	Egret, Western Cattle	<i>Bubulcus ibis</i>
9.	Fiscal, Southern	<i>Lanius collaris</i>
10.	Francolin, Orange River	<i>Scleroptila levaillantoides</i>
11.	Guineafowl, Helmeted	<i>Numida meleagris</i>
12.	Ibis, African Sacred	<i>Threskiornis aethiopicus</i>
13.	Ibis, Hadida	<i>Bostrychia hagedash</i>
14.	Kite, Black-shouldered	<i>Elanus caeruleus</i>
15.	Lark, Rufous-naped	<i>Mirafra africana</i>
16.	Longclaw, Cape	<i>Macronyx capensis</i>
17.	Masked-weaver, Southern	<i>Ploceus velatus</i>
18.	Myna, Common	<i>Acridotheres tristis</i>
19.	Palm-swift, African	<i>Cypsiurus parvus</i>
20.	Pipit, African	<i>Anthus cinnamomeus</i>
21.	Prinia, Tawny-flanked	<i>Prinia subflava</i>
22.	Quail, Common	<i>Coturnix coturnix</i>
23.	Quailfinch, African	<i>Ortygospiza atricollis</i>
24.	Stonechat, African	<i>Saxicola torquatus</i>
25.	Swallow, Greater-striped	<i>Hirundo cucullata</i>
26.	Swift, Little	<i>Apus affinis</i>
27.	Swift, White-rumped	<i>Apus caffer</i>
28.	Turtle-dove, Cape	<i>Streptopelia capicola</i>
29.	Waxbill, common	<i>Estrilda astrild</i>
30.	Whydah, Pin-tailed	<i>Vidua macroura</i>
31.	Widowbird, Long-tailed	<i>Euplectes progne</i>

The study area was found to hold a low avifaunal species richness and density. The various disturbances identified within the grassland habitat as well as its close proximity to the provincial road and airfield can be held accountable for the low avifaunal species richness and species density.

8.3.1 Threatened and Near Threatened bird species:

Table 4: Threatened and near threatened bird species previously recorded within the 2528CC QDS.

	Species name	Latest Date Record (Year)	Red Data: (Regional; Global)	Taxonomic name	Rep Rate (%)	Occurrence Probability
1.	Crane, Blue	Prior to 2007	NT, VU	<i>Anthropoides paradiseus</i>	1.6	0
2.	Duck, Maccoa	Prior to 2007	NT, NT	<i>Oxyura maccoa</i>	0.06	0
3.	Eagle, Martial	Prior to 2007	EN, VU	<i>Polemaetus bellicosus</i>	0.16	0
4.	Eagle, Verreauxs'	Prior to 2007	VU, LC	<i>Aquila verreauxii</i>	1.275	0
5.	Falcon, Lanner	2010	VU, LC	<i>Falco biarmicus</i>	2.44	0
6.	Falcon, Red-footed	Prior to 2007	NT, NT	<i>Falco vespertinus</i>	0.08	0
7.	Finfoot, African	Prior to 2007	VU, LC	<i>Podica senegalensis</i>	0.08	0
8.	Grass-owl, African	2012	VU, LC	<i>Tyto capensis</i>	2.06	0
9.	Kingfisher, Half-collared	Prior to 2007	NT, LC	<i>Alcedo semitorquata</i>	0.32	0
10.	Korhaan, White-bellied	2016	VU, LC	<i>Eupodotis senegalensis</i>	1.97	2
11.	Marsh-harrier, African	Prior to 2007	EN, LC	<i>Circus ranivorus</i>	0.16	0
12.	Roller, European	2012	NT, LC	<i>Coracias garrulus</i>	1.11	0
13.	Stork, Abdims's	2012	NT, LC	<i>Ciconia abdimii</i>	3.58	0
14.	Stork, Black	Prior to 2007	VU, LC	<i>Ciconia nigra</i>	0.16	0
15.	Stork, Yellow-billed	Prior to 2007	EN, LC	<i>Leptoptilos crumeniferus</i>	0.08	0
16.	Vulture, Cape	Prior to 2007	EN, EN	<i>Gyps coprotheres</i>	0.16	0

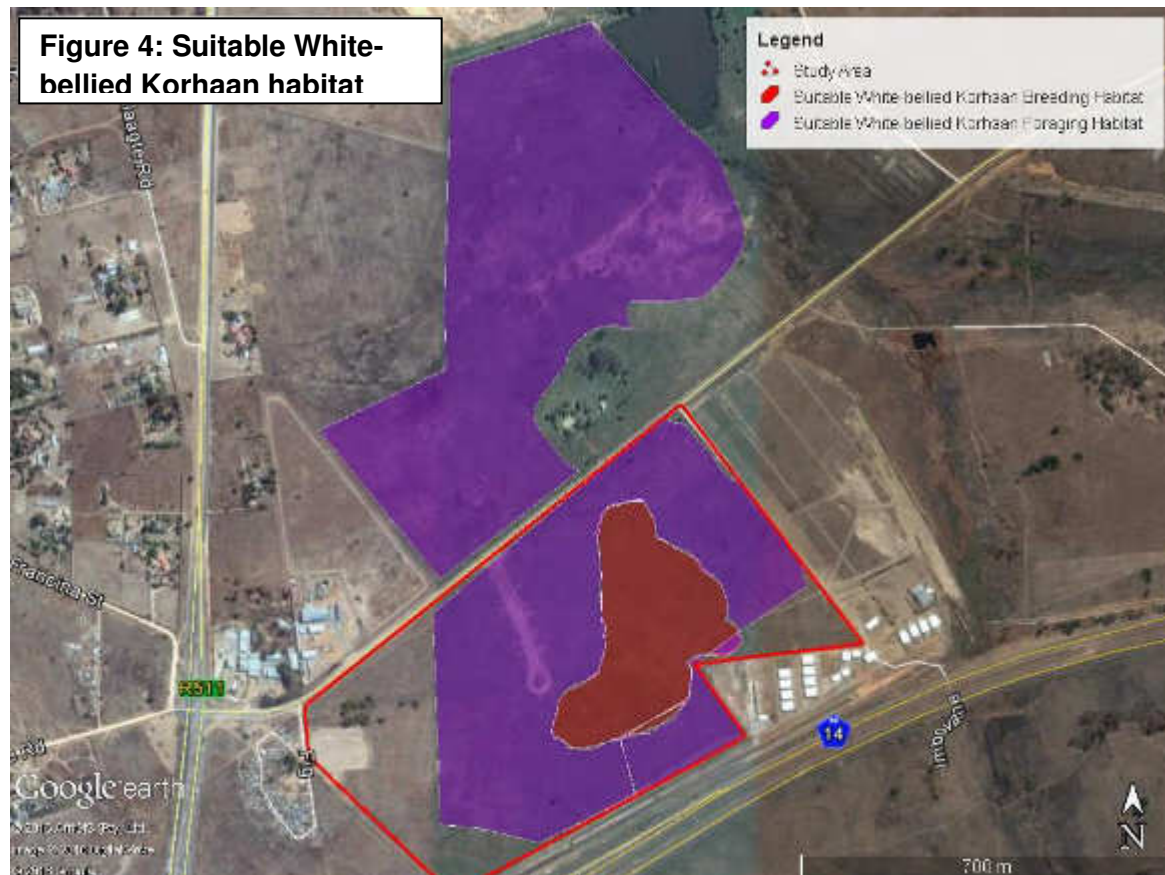
A total of 16 threatened and near threatened bird species have previously been recorded within the 2528CC QDS (Table 4). Eleven (11) of which have not yet been recorded within the 2550_2800 pentad since the commencement of the second South African Bird Atlas Project (SABAP2) in 2007. Therefore these species are highly unlikely to recur as they have not been recorded in the pentad in the past 9 years. Three of the above listed species have been recorded within the pentad within the past 4 years. They are: African Grass-owl, European Roller, Abdims Stork and White-bellied Korhaan. Only one of these species has been recorded within the pentad during 2016, namely the White-bellied Korhaan. With the exception of White-bellied Korhaan, all the species listed in Table 2 are highly unlikely to be resident on or near the study area since they are predominantly recorded as vagrants and/or occasional visitors. In addition, most of these species were recorded in habitats not present within the study area, although present within the larger quarter degree square. On account of the habitats present

within the study area, none of the species listed above, with the exception of White-bellied Korhaan are likely to occur or be resident within the study area.

White-bellied Korhaan (*Eupodotis senegalensis*) Occurrence Probability:

The secondary grassland habitat unit was found to hold suitable foraging and breeding habitat for the regionally Vulnerable White-bellied Korhaan (*Eupodotis senegalensis*). As a result of this observation a thorough habitat assessment was conducted with the aim of mapping out optimal breeding and foraging habitat for this species in and around the study area to determine if the study area could sufficiently support a breeding pair of White-bellied Korhaan in the long term.

Firstly the optimal breeding habitat for White-bellied Korhaan was identified and mapped. Thereafter all suitable foraging habitat on and around the study area was identified and mapped. The surface areas for each of the abovementioned areas were calculated with the purpose of determining the total surface area accounting for suitable and sustainable breeding and foraging habitat as required by the White-bellied Korhaan within and around the study area (Figure 4).



As per the Gauteng Conservation Plan Version 3.3 (GDARD, 2014) the following habitat requirements were set out for the White-bellied Korhaan (*Eupodotis senegalensis*):

This species is internationally listed as Least Concern and is locally seen to be Vulnerable (Ekstrom & Butchart, 2004; Barnes, 2000). The White-bellied Korhaan occurs in grassland and open woodland (Tarboton et al., 1987). Habitat was modelled as un-fragmented suitable habitat associated with clusters of confirmed White-bellied Korhaan records. All unsuitable habitat including agricultural holdings, actively cultivated fields, and fragments of suitable habitat <100 ha were excluded. For Vulnerable species listed under the IUCN Red List Criteria of B, C or D; Pfab and colleagues (2011) recommend that all populations must be conserved *in situ*. Gauteng's proportional contribution to the national target would be 120 breeding pairs. Estimates based on species forage requirements and densities suggest a requirement of 120 ha per pair.

Table 5. The surface areas of the White-bellied Korhaan habitat survey are as follows:

White-bellied Korhaan (<i>Eupodotis senegalensis</i>) habitat survey	
Identified Area	Surface Area (hectares)
Suitable breeding habitat	8.56 ha
Suitable foraging habitat	80 ha
Total suitable Grass-owl habitat	88.56 ha
Suitable habitat required as per Gauteng C-Plan V 3.3	120 ha

The result of the White-bellied Korhaan habitat survey indicates that the surface area of available suitable habitat within and directly surrounding the study area does not meet the requirements as set out in the Gauteng Conservation plan V3.3. As such it is not feasible to conserve this area since it is not viable as a sustainable White-bellied Korhaan habitat in the long-term without active management. Consequentially, the secondary grassland within the study area was deemed to have a moderate avifaunal sensitivity.

8.4 Findings and Conclusion

The secondary grassland habitat identified within the study area contained a low avifaunal diversity and density. The majority of the species observed during the field survey are grassland associated species as well as widespread species adapted to a transformed and/ or urban environment. However, suitable breeding and foraging habitat for the regionally Vulnerable White-bellied Korhaan was confirmed to be present within the study area. The surface area of

the aforementioned habitat did however not meet the requirements for the specific species as set out in the Gauteng Conservation plan V3.3 (2014). None of the other threatened and/or near threatened bird species previously recorded within the larger QDS are expected to be resident or rely on the study area for survival. As such it is not feasible to conserve this area since it is not viable as a sustainable habitat for bird species with conservation concerns in the long-term. The surrounding land use and disturbance in the form of roads, urbanization, illegal dumping, alien vegetation encroachment, trampling, habitat transformation and limited connectivity significantly reduces the probable occurrence of any additional terrestrial threatened and near threatened bird species. The close proximity of the Airfield and provincial road further reduces the occurrence possibility of bird species with conservation concerns, since most of these species are highly specialised and extremely sensitive to transformation and disturbances within their preferred habitat.

9. INVERTEBRATE HABITAT ASSESSMENT

9.1 Methods

A field survey was conducted on the 20th of April 2016. The survey consisted of two random walked transects. The dominant invertebrate species and possible suitable habitats for Red List invertebrate species were noted and sampled if necessary. Habitat characteristics for species present were derived from a survey and descriptions given in the field guide by Picker *et al.* (2004). Red Listed Species were consulted online for conservation status of Red List species (IUCN 2015; GDARD 2014). All insects were identified by using the field guide by Picker *et al.* (2004). Red Listed Butterflies were identified according to Henning *et al.* (2009).

A desktop study was done to identify suitable habitats for the Red List invertebrate species known to occur in the QDS 2528CC. The Animal Demography Unit: Virtual Museum (<http://vmus.adu.org.za/>) was consulted to verify the record of occurrence of invertebrate species recorded within the QDS 2528CC.

The majority of invertebrate species are nocturnal, poikilothermic secretive and seasonal, which makes it difficult to observe them during field surveys. In this case the presence of invertebrate species was examined on habitat preferred by selected species and respective documented ranges.

9.2 Specific Requirements

During the desktop study and field survey attention was given to note any signs of potential occurrence of Threatened species.

According to the GDARD C-Plan (2014), these species include the:

Roodepoort Copper Butterfly (*Aloeides dentatis* subsp. *dentatis*), Highveld Golden Opal (*Chrysoritis aureus*), Stobbia's Fruit Chafer Beetle (*Ichneustoma stobbiai*) and Highveld Blue Butterfly (*Lepidochrysops praeterita*), which are all regarded as Vulnerable (regionally and/or nationally).

Roodepoort Copper Butterfly (*Aloeides dentatis* subsp. *dentatis*):

This butterfly is proposed for Endangered (Henning *et al.*, 2009) and Mecenero *et al.* (2013), based on its limited distribution and possible decline in quality and extent of remaining habitats. Suitable habitat around known localities was mapped off satellite imagery. A 100 % target was set for these areas, though it is worth noting that the entire area is within existing Protected Areas, and hence does not influence the outcome of the Gauteng C-Plan v3.3.

This species is typically found in Carletonville Dolomite Grassland at an elevation of 1 500 to 1 900 m. The species is only known from Ruimsig (Roodepoort), Heidelberg (Suikerbosrand – from two localities) and Klipriviersberg (west of Suikerbosrand). The species has a range of approx. 70 km². All known localities of this species occur in reserves; however the threat of habitat modification due to environmental changes remains (Henning *et al.*, 2009).

The larval food plant of this species at Ruimsig Reserve is *Hermannia depressa* and at Suikerbosrand *Lotononis eriantha*. The presence of the food plant alone will not ensure the presence of the butterfly (Henning *et al.*, 2009). Population control of this butterfly species probably takes place owing to finite facilities in *Lepisiota* ant nests. Males are strongly territorial and need open patches as territorial sites (Henning *et al.*, 2009).

Highveld Golden Opal (*Chrysoritis aureus*) (= Heidelberg Copper):

This butterfly is proposed to be listed as Vulnerable by (Henning *et al.*, 2009) and being upgraded to Endangered by Mecenero *et al.* (2013). Highveld Golden Opal is host plant (*Clutia pulchella*) and host ant (*Crematogaster* species) specific, and known from a handful of localities

on the Heidelberg-Balfour-Greylingstad ridge system (Terblanche & van Hamburg, 2003; Henning *et al.*, 2009). The habitat structure of these localities is similar as a tree stratum is absent. It is currently protected in the Alice Glockner Nature Reserve, the Suikerbosrand Nature Reserve and in National Heritage Site No. 14 (Terblanche & van Hamburg, 2003; Henning *et al.*, 2009).

The habitat preference of this species is on south-facing, well-drained slopes with shallow humus in the two vegetation types Andersite Mountain Bushveld and Gold Reef Mountain Bushveld, belonging to the Central Bushveld Bioregion of the Savanna Biome (Mucina & Rutherford, 2006). Frost and fire may both therefore be important ecological factors that sustain a suitable habitat for *Chrysoritis aureus* (Terblanche *et al.*, 2003).

It is possible that the species is under-recorded. Known localities were buffered by 500m and the full extent of this area was included as a target. Modelling for the species was based on SABCA atlas and data from site visits, and this resulted in the development of a model which reflected the high altitude ridge systems which host the species.

Stobbia's Fruit Chafer Beetle (*Ichneustoma stobbia*):

Although not listed, it appears that this species of beetle would qualify as Vulnerable under the IUCN Red List criteria. An expert driven mapping approach was used for the species to map the area likely to be occupied by the beetle at known localities. All suitable, untransformed habitat in the vicinity of known records were mapped as suitable, occupied habitat for the species. No attempt was made to predict the occurrence of additional populations in other areas. A 100% of the confirmed habitat and the extended mapped suitable habitat were targeted.

This species in particular only occur in small fragments in pristine grassland along the Transvaal Magaliesberg system. This rare Fruit Chafer Beetle is mostly endemic to Gauteng Province, with a single population occurring in the adjacent parts of North West Province (Kruger & Scholtz, 2008).

Highveld Blue Butterfly (*Lepidochrysops praeterita*):

Although the species is classified as Vulnerable, it is proposed for Endangered (Henning *et al.*, 2009), based on a limited distribution and the extent of mining and agricultural activities within its range. It is largely endemic to Gauteng, specifically in the Carletonville area, but extends into the Potchefstroom area in the North West and Sasolburg in the Free State. No conservation

measures are in place (Henning *et al.*, 2009). The species is found on a few koppies and rocky hillsides between Potchefstroom area in the North West and Sasolburg in the Free State.

Known localities were buffered by 500m and the full extent of this area was included as a target. Modelling for the species was based on South African Butterfly Conservation Assessment (SABCA) atlas and data from site visits. The model refined the basic distribution by incorporating slope and aspect, and removed unsuitable land cover classes and areas smaller than the smallest known patch of habitat occupied by the species.

The vegetation types where this species have been recorded are the Soweto Highveld Grassland and Rand Highveld Grassland in the Mesic Highveld Grassland Bioregion of the Grassland Biome (described in Mucina & Rutherford, 2006). The larval food plant of this species is *Ocimum obovatum*.

9.3 Results

9.3.1 Invertebrate habitats identified

The Secondary Grassland is the only habitat on site. Invertebrates occur in a wide variety of habitats in various environmental and disturbed conditions. The presence of common species such as grasshoppers (Order: *Orthoptera*), grassland adapted mantids (Order: *Mantoidea*) and stick insects (Order: *Phasmatoidea*) are expected.

9.3.2 Expected and observed Invertebrate species

Table 4: Invertebrate species deducted to occur.

	<i>Scientific Name</i>	<i>Common name</i>	<i>Red List Category</i>	<i>*Occurrence Probability</i>
1.	<i>Aloeides dentatis</i> subsp. <i>dentatis</i>	Roodepoort Copper Butterfly	Endangered	2
2.	<i>Chrysothrix aureus</i>	Heidelberg Copper Butterfly	Endangered	1
3.	<i>Ichnestoma stobbiai</i>	Stobbia's Fruit Chafer Beetle	Vulnerable	1
4.	<i>Lepidochrysops praeterita</i>	Highveld Blue Butterfly	Endangered	1

*The occurrence probability of the invertebrates species listed below is indicated as follows:
Not likely to occur - 1, Low occurrence probability - 2, Medium occurrence probability - 3, High occurrence probability - 4, **Confirmed occurrence - 5.**

8.3.3 Threatened and Red Listed Invertebrate species

No Red List species are recorded or expected to occur in the study area due to unsuitable habitat requirements.

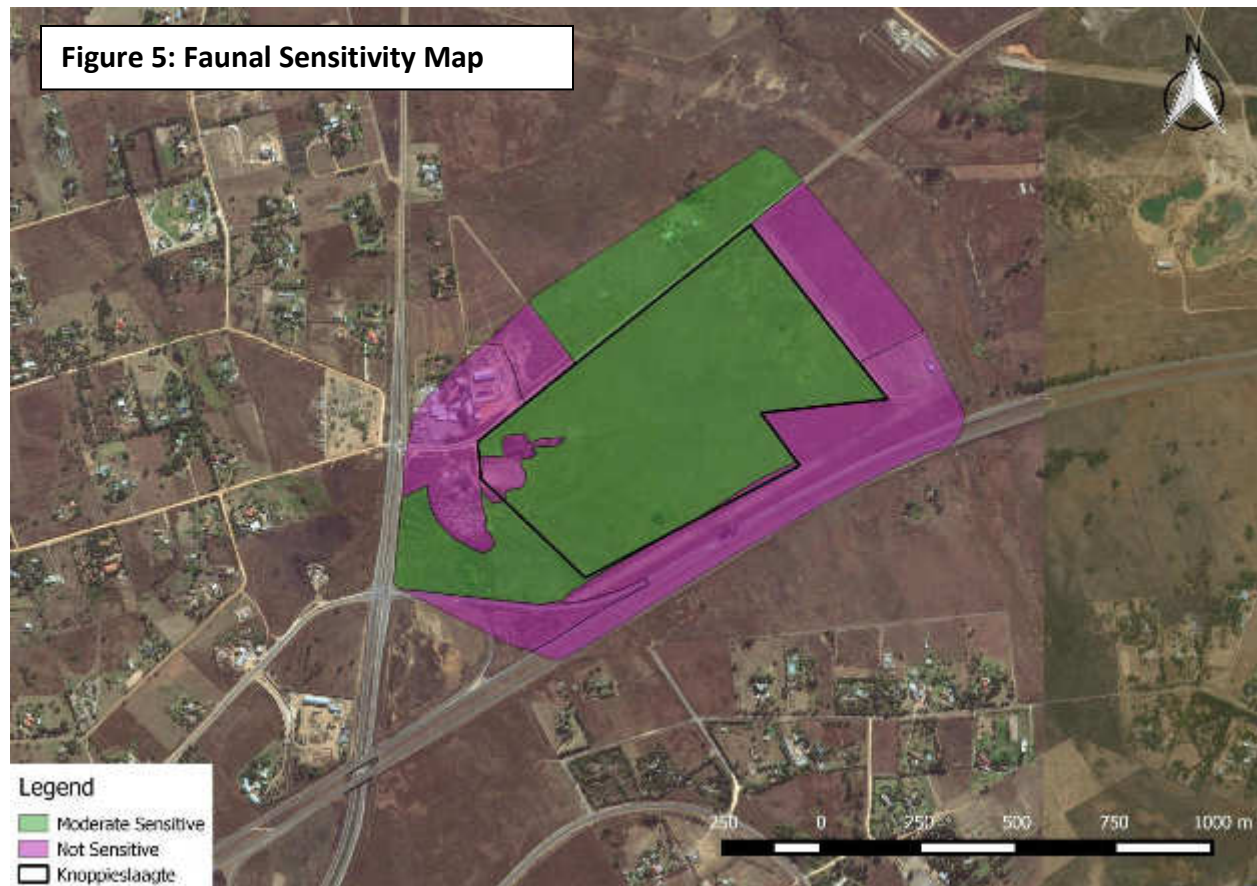
9.4 Findings

The Secondary Grassland is not particularly suitable for any of the mentioned threatened species listed in the GDARD C-plan v3.3. For example, the Roodepoort Copper Butterfly (*Aloeides dentatis* subsp. *dentatis*) prefers a predictable Grassland habitat where specific ant species are present. The probability of locating this species is unlikely as disturbances decrease the favourability of this specific habitat.

No other Threatened or Near Threatened invertebrate species are expected to occur in this particular disturbed Grassland habitat on account of minimal optimal habitat and various anthropogenic disturbances within the habitat units.

10. OVERALL FINDINGS AND IMPLICATIONS

The study area consists of only the secondary grassland habitat. This habitat generally supports common fauna species and is not particularly suitable to support any Threatened or Near Threatened fauna species. Thus, the habitat identified on study area was considered to be moderately ecological sensitive from a faunal perspective (**Figure 5**).



11. LIMITATIONS

Even though considerable care is taken to ensure accuracy and professionalism of this fauna report, environmental assessment studies are limited in scope, time and budget. Several years are needed to derive a 100% accurate report based on intensive field collecting and observations where all seasons are considered to account for fluctuating environmental conditions and migrations. Since environmental impact studies deal with dynamic natural systems additional information may come to light at a later stage.

The desktop study made up the largest part of the data used to conclude the distribution of Red Data species which were sourced by making use of the Animal Demography Unit: Virtual

Museum data basis. Any limitations in the above mentioned data basis will in effect have implications on the findings and conclusion of this assessment.

Therefore, Bokamoso Environmental: Specialist Division cannot accept responsibilities for conclusions and mitigation measures made in good faith with the limited available information at the time of the directive. This report should be viewed and acted upon considering these limitations.

12. RECOMMENDATIONS

If the proposed industrial township development is approved:

- An appropriate management authority that must be contractually bound to implement the Environmental Management Programme/Plan (EMPr) and Record of Decision (RoD) by the competent authority during the constructional and operational phase of the development should be identified and informed of their responsibilities with regards to this.
- Induction should be done for all civil contractors and for each building contractor prior to them commencing on site to discuss the EMPr and RoD.
- Prior to any activities commencing on site, all construction staff should be briefed in an environmental induction regarding the environmental status and requirements of the site. This should include providing general guidelines for minimizing environmental damage during construction, as well as education with regards to basic environmental ethics, such as the prevention of littering, lighting of fires, etc.
- Construction should be restricted to areas deemed to have a low ecological sensitivity (Refer to **Figure 5**).
- It is recommended that prior to the commencement of construction activities' initial clearing of all alien vegetation should take place.
- The contractor must ensure that no faunal species are trapped, killed or in any way disturbed during the constructional phase.
- It is recommended that all concrete and cement works be restricted to areas of low ecological sensitivity and defined on site and clearly demarcated. Cement powder has a high alkalinity pH rating, which can contaminate and affect both soil and water pH dramatically. A shift in the pH can have serious consequences on the functioning of soil, vegetation and fauna.

- To ensure minimal disturbance of faunal habitat it is recommended that construction should take place during winter, outside the reproductive season of the species present on site.
- Construction, vegetation clearing and top soil clearing should commence from a predetermined location and gradually commence to ensure that fauna present on the site have enough time to relocate.
- When construction is completed, disturbed areas should be rehabilitated using vegetation cleared prior to construction to ensure that the habitat stays intact and that faunal species present on the site before construction took place, return to the area.
- Outside lighting should be designed to minimize impacts on fauna. All outside lighting should be directed away from sensitive areas. Fluorescent and mercury vapour lighting should be avoided and sodium vapour (yellow) lights should be used wherever possible.
- Forage and host plants required by pollinators should also be planted in landscaped areas.
- Where possible, indigenous trees naturally growing on the site should be retained as part of the landscaping. Measures to ensure that these trees survive the physical disturbance from the development should be implemented. A tree surgeon should be consulted in this regard.
- In order to minimize artificially generated surface storm water runoff, total sealing of paved areas such as parking lots, driveways, pavements and walkways should be avoided. Permeable material should rather be utilized for these purposes.

13. CONCLUSION

The recommendations and mitigation measures above should be followed and correctly implemented to ensure the ecological environment is not negatively affected. The study area is not regarded as ecologically sensitive (Figure 5) from a faunal perspective, thus the proposed construction of the industrial township will have no detrimental influence on the faunal species in the study area.

14. LITERATURE SOURCES

- ALEXANDER, G. J., MARAIS, J. A. 2007. *Guide to the Reptiles of Southern Africa*. Random House Struik, Cape Town. ISBN-13: 9781770073869.
- ANIMAL DEMOGRAPHY UNIT. 2016. Virtual Museum. Accessed at <http://vmus.adu.org.za/?vm>.

- BARNES, K.N., (ED.) 2000. *The Eskom Red Data Book of Birds of South Africa, Lesotho and Swasiland*. BirdLife South Africa, Johannesburg.
- BIRDLIFE SOUTH AFRICA. 2016. BirdLife South Africa official Checklist of Birds in South Africa 2016. <http://www.birdlife.org.za/publications/checklists>
- DU PREEZ, L., CARRUTHERS, V. A. 2009. *Complete Guide to the Frogs of Southern Africa*. Struik Nature, Cape Town.
- FRIEDMAN, Y. AND DALY, B. 2004. *Red data book of the mammals of South Africa: A conservation assessment*. Johannesburg, CBSG-EWT
- GDARD. 2006. Ridges Guidelines.
www.gdard.gpg.gov.za/Documents1/RidgesGuidelines_2.pdf.
- GDARD. 2014. Technical Report for the Gauteng Conservation Plan (Gauten C-Plan v3.3). Gauteng Department of Agriculture and Rural Development: Nature Conservation Directorate. 60 pages.
- HARRISON, J.A., ALLAN, D.G., UNDERHILL, L.G., HERREMANS, M., TREE, A.J. PARKER, V. & BROWN, C.J. (EDS.). 1997. *The Atlas of Southern African Birds*. Vol. 1 & 2. BirdLife South Africa, Johannesburg.
- HENNING, G. A., TERBLANCHE, R. F. & BALL, J. B. 2009. *South African Red Data Book: butterflies*. South African National Biodiversity Institute Biodiversity Series 13: 63-64.
- HOCKEY, P.A.R., DEAN, W.R.J. & RYAN, P.G. 2005. *Roberts Birds of Southern Africa VIIIth Edition*, The Trustees of the John Voelcker Bird Book Fund, Cape Town
- IUCN. 2015. *The IUCN Red List of Threatened Species. Version 2015-4*. <<http://www.iucnredlist.org>>. Downloaded on 19 November 2015.
- KEARNS, C. A., INOUE, D. W. & WASER, N. M. 1998. Endangered mutualisms: The conservation of plant-pollinator interactions. *Annual Review of Ecology and Systematics* 29, 83-112.
- KRUGER, U. & SCHOLTZ, C.H. 2008. Phylogeography and Conservation of the Rare South African Fruit Chafer *Lchnestoma stobbiai* (Coleoptera: Scarabaeidae). *Evolusionary Biology from Concept to Application*: Springer-verlag Berlin Heidelberg, 2008.
- MammalMAP. 2016. Virtual Museum of African Mammals. Accessed at <http://mammalmap.adu.org.za/>
- MARAIS, J. 2004. *'n Volledige Gids tot die Slange van Suider-Afrika*. Struik Uitgewers, Kaapstad.

- MARAIS, M & PEACOCK, F., 2008. *The Chamberlain guide to Birding Gauteng*, Mirafr Publishing, CTP Book Printers, Cape Town.
- MECENERO, S., BALL, J. B., EDGE, D. A., HAMER, M. L. HENNING, G. A., KRÜGER, M., PRINGLE, E. L., TERBLANCHE, R. F., WILLIAMS, M. C. 2013. Conservation Assessment of Butterflies of South Africa, Lesotho and Swaziland: Red List and Atlas. Safronics, Animal Demography Unit, Cape Town.
- MUCINA, L., AND RUTHERFORD, M. C. 2006. *The Vegetation of South Africa, Lesotho and Swaziland*. Strelitzia 19. South African National Biodiversity Institute, Pretoria.
- PFAB, M. 2001. *Development guidelines for ridges*. Department of agriculture, conservation, environment and land affairs, South Africa.
- PFAB, M.F., VICTOR, J.E. & ARMSTRONG, A.J. (2011). Application of the IUCN Red Listing system to setting species targets for conservation planning purposes. *Biodiversity and Conservation*, 20(5), 1001-1012.
- PICKER, M. D., GRIFFITHS, C., WEAVING, A. 2004. *Field Guide to Insects of South Africa*. Struik Publishers, South Africa.
- SAMWAYS, M. J. 1994. *Insect Conservation Biology*. Chapman & Hall.
- SAMWAYS, M., HATTON, M. 2000. *Palmnut Post*, Volume 3, No 2, 9-11.
- SKINNER, J. D. AND CHIMIMBA, T. C. 2005. *The Mammals of the Southern African Subregion*. 3rd edition. Cambridge University Press.
- SIBALI, L. L., OKWONKWO, J. O. AND MCCRINDLE, R. I., 2008. Determination of selected organochlorine pesticide (OCP) compounds from the Jukskei River catchment area in Gauteng, South Africa. *Water SA*, 34(5), pp.611-621.
- SINCLAIR I., & HOCKEY P & TARBOTON, W. 2011. *Sasol Birds of Southern Africa*. Struik, Cape Town.
- SOUTHERN AFRICAN BIRD ATLAS PROJECT 2. SOUTH AFRICA, LESOTHO, BOTSWANA, NAMIBIA, MOZAMBIQUE, SWAZILAND, ZIMBABWE, ZAMBIA. 2016. Animal Demography Unit. University of Cape Town. www.sabap2.adu.org.za. accessed on 28 March 2016.
- SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI). Threatened terrestrial ecosystems for South Africa (2011): Soweto Highveld Grassland. Available from Biodiversity GIS website (<http://bgis.sanbi.org/ecosystems/showecosystem.asp?CODE=Gm%2010>), accessed on 16 March 2016.

-
- STUART, C., AND STUART, M. 2015. *Stuart's Field Guide to Mammals of Southern Africa*. Struik Nature, South Africa
 - STUART, C., STUART, T. 2000. *A Field Guide to the Tracks & Signs of Southern and East African Wildlife*. 3rd edition. Struik Publishers, Cape Town.
 - Tarboton, W., Kemp, M.I., & Kemp, A.C. 1987. *Birds of the Transvaal*. Transvaal Museum, Pretoria.
 - Taylor, M.R., Peacock, F. & Wanless, R.M. 2015. The 2015 Eskom Red Data Book of BIRDS of South Africa, Lesotho and Swaziland. BirdLife South Africa. Gauteng.
 - TAYLOR, P.J. 2000. *Bats of Southern Africa*. University of Natal Press: Pietermaritzburg.
 - TERBLANCHE, R.F., MORGENTHAL, T.L. & CILLIERS, S.S. 2003. The vegetation of three localities of the threatened butterfly species *Chrysoritis aureus* (Lepidoptera: Lycaenidae). *Koedoe* 46(1): 73-90.
 - TERBLANCHE, R.F. & VAN HAMBURG, H. 2003. The taxonomy, biogeography and conservation of the myrmecophilous *Chrysoritis* butterflies (Lepidoptera: Lycaenidae) in South Africa. *Koedoe* 46(2): 65-81.
 - WILLIAMS, M. 1994. *Butterflies of southern Africa. A field guide*. Southern Book Publishers.

Flora Assessment for Portion 331, 109, and 105 of the Farm Knopjeslaagte 385-JR, Centurion



Report Author: S.E. van Rooyen

Reviewed by: Dr. J.V. van Greuning (Pr. Sci. Nat. reg. no. 400168/08)

April 2016



**Landscape Architects &
Environmental Consultants:
Specialist Division**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: corne@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

Specialists

Specialist investigators: Mr. S.E. van Rooyen (M.Sc. Restoration Ecology and Botany candidate)

Declaration of independence:

The specialist investigators responsible for conducting this particular specialist vegetation study declare that:

- I consider myself bound to the rules and ethics of the South African Council for Natural Scientific Professions (SACNASP);
- At the time of conducting the study and compiling this report we did not have any interest, hidden or otherwise, in the proposed development, except for financial compensation for work done in a professional capacity;
- Work performed for this study was done in an objective manner. Even if this study results in views and findings that are not favourable to the client/applicant, we will not be affected in any manner by the outcome of any environmental process of which this report may form a part;
- I declare that there are no circumstances that may compromise our objectivity in performing this specialist investigation. We do not necessarily object to or endorse the proposed development, but aim to present facts, findings and recommendations based on relevant professional experience and scientific data;
- I do not have any influence over decisions made by the governing authorities;
- I have the necessary qualifications and guidance from professional experts (registered Pr. Nat. Sci.) in conducting specialist reports relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- This document and all information contained herein is and will remain the intellectual property of Bokamoso Environmental: Specialist Division. This document, in its entirety or any portion thereof, may not be altered in any manner or form, for any purpose without the specific and written consent of the specialist investigators.
- I will comply with the Act, regulations and all other applicable legislation;



S.E. van Rooyen

VERIFICATION STATEMENT

This communication serves to verify that the flora report compiled by S. E. van Rooyen has been prepared under my supervision, and I have verified the contents thereof.

Declaration of independence: I, Dr. J.V. van Greuning (Pr. Sci. Nat. reg. no. 400168/08) declare that I:

- am committed to biodiversity conservation but concomitantly recognise the need for economic development. Whereas I appreciate the opportunity to also learn through the processes of constructive criticism and debate, I reserve the right to form and hold my own opinions and therefore will not willingly submit to the interests of other parties or change my statements to appease them.
- abide by the Code of Ethics of the S.A. Council of Natural Scientific Professions
- act as an independent specialist consultant in the field of Botany
- am subcontracted as specialist consultant by Bokamoso Environmental Consultants for the proposed Mixed Use development on Portion 331, 105, 109 of the farm Knoppieslaagte 385-JR described in this report.
- have no financial interest in the proposed development other than remuneration for work performed
- have or will not have any vested or conflicting interests in the proposed development
- undertake to disclose to Bokamoso Environmental Consultants and its client as well as the competent authority any material information that have or may have the potential to influence the decision of the competent authority required in terms of the Environmental Impact Assessment Regulations, 2014.



Dr. J. V. van Greuning

Table of Contents

1. INTRODUCTION.....	5
2. OBJECTIVES OF THE STUDY	5
3. SCOPE OF STUDY	5
4. STUDY AREA.....	6
4.1 Regional vegetation	6
4.2 The study site.....	6
5. METHODS.....	7
6. RESULTS	7
6.1 Study Units	7
6.2 Red and Orange List species	8
6.3 Medicinal and Alien species.....	8
6.4 Secondary Grassland	9
6.4.1 Composition & Connectivity.....	9
6.4.2 Red and Orange List species	10
6.4.3. Medicinal and Alien species	10
6.4.4 Sensitivity.....	10
7. FINDINGS AND POTENTIAL IMPLICATIONS.....	12
8. DISCUSSION, RECOMMENDATIONS AND MITIGATION MEASURES.....	13
9. CONCLUSIONS	14
10. LITERATURE and LAW SOURCES.....	15
Annexure A: Red Data Flora (confidential)	17

1. INTRODUCTION

Bokamoso Environmental: Specialist Division was commissioned to conduct a flora assessment for the proposed light industrial development on Portion 331, 105, and 109 of the Farm Knopjeslaagte 385-JR, Centurion. The objective was to conduct a floristic species survey to determine which species occur in the site of the proposed development. Special attention was given to possible habitats for Red and Orange List plant species that may occur in the area. Furthermore, the ecological integrity and sensitive habitats of the site were investigated.

2. OBJECTIVES OF THE STUDY

- To assess the habitat component and current ecological status of the area;
- To identify and list the plant species occurring on the site and indicate whether they are Red and Orange List species;
- Make recommendations if any Red and Orange List species are found;
- To indicate the sensitive habitats of the area;
- To highlight the current impacts on the flora of the site; and
- Provide recommendations to mitigate negative impacts and enhance positive impacts on the current flora should the proposed development be approved.

3. SCOPE OF STUDY

This report:

- Lists all plant species, including alien species, recorded during the flora survey;
- Provides recommendations on Red and Orange List plant species;
- Indicates medicinal plant species recorded;
- Comments on ecological sensitive areas;
- Comments on current impacts affecting the flora of the site;
- Evaluates the conservation importance and significance of the area in and adjacent to the proposed development, with special emphasis on the current status of threatened species; and
- Provides recommendations to mitigate or reduce negative impacts, should the proposed development be approved.

4. STUDY AREA

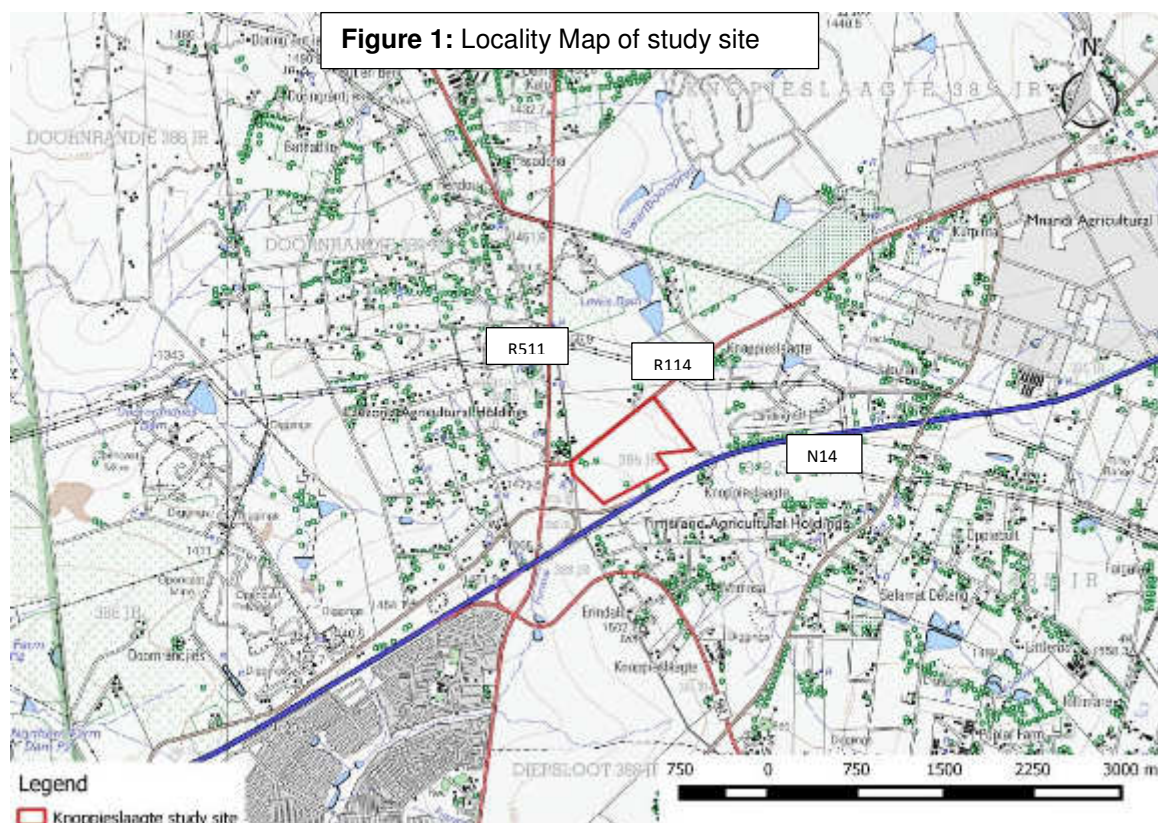
4.1 Regional vegetation

The study site lies within the Quarter Degree Square (QDS) 2528CC, which according to Mucina and Rutherford (2006) forms part of the Egoli Granite Grassland. This vegetation unit is considered Endangered according to the National list of threatened terrestrial ecosystems for South Africa, 2011 (Government Gazette no. 34809, 2011).

Less than 3 % of the targeted 24 % of the Egoli Granite Grassland is conserved in several nature reserves. The authors described the landscape of the Egoli Granite Grassland as low hills and moderately undulating plains, which support tall grass species such as *Hyparrhenia hirta*, dominating the area. Scattered rocky outcrops and rock sheets form suitable habitats for woody species (Mucina and Rutherford, 2006). This grassland is regarded as degraded as over utilisation created a species poor vegetation unit (Mucina and Rutherford, 2006).

4.2 The study site

The site for the proposed light industrial development on Portion 331, 109, and 105 of the farm Knopjeslaagte 385-JR, Centurion is situated east of the R115 Road and north of the N14, adjacent to the Centurion Flight Academy (Pty) Ltd (**Figure 1**). The study site is about 45 ha in size.



5. METHODS

The study site was visited on the 20th of April 2016. For each study unit identified, a species list was compiled for all plants recorded, using the adequate number of sampling plots (100 m by 25 m). Field guides such as those by Germishuizen and Meyer (2003), Koekemoer *et al.* (2014), Pooley (1998), van Ginkel *et al.* (2011), van Oudtshoorn *et al.* (2014), van Wyk and Malan (1998) and van Wyk (2013) were used to identify the species. The herbarium of the University of Pretoria (H.G.W.J. Schweickerdt Herbarium, University of Pretoria) was also visited to confirm the correct identification of species.

The survey also included information about the occurrence of Red and Orange List plant species obtained from GDARD (Pfab, 2002; Pfab and Victor, 2002) (Annexure A). The Red List Plant Species Guidelines and Requirements for Biodiversity Assessments v3. issued by GDARD (2014) was consulted. A desktop study was done to identify suitable habitats for the Red and Orange List plant species known to occur in the QDS 2528CC. The plant species list for this QDS obtained from SANBI (Plants of Southern Africa: an online checklist) was consulted to verify the record of occurrence of the plant species recorded at the site. The Gauteng Conservation Plan (C-plan v3.3) was also consulted to evaluate ecologically sensitive areas (GDARD. 2014b).

Each study unit was further assessed for the occurrence of alien plant species (Bromilow, 2010) and any form of disturbance. Alien species are included in the species lists (indicated in bold in the relevant tables) as they suggest the particular state of each study unit. For each alien species the Category is indicated according to the Alien and Invasive species lists (2014) amended in NEMBA (National Environmental Management: Biodiversity Act (ACT NO, 10 OF 2004) (Department of environmental affairs. 2014).

For each plant species, the medicinal properties were assessed (van Wyk *et al.*, 2013). Medicinal plants are marked with an asterisk in the respective tables (**Table 4**).

6. RESULTS

6.1 Study Units

The vegetation of the study site consists of Secondary Grassland, therefore no different study units was distinguished. (**Figure 2**):

The plant species found in the study unit is listed in **Table 4**.



Figure 2: Vegetation map indicating different study units identified in the study site

6.2 Red and Orange List species

Twenty-two Red and Orange List species are known to occur in the QDS 2528CC (**Annexure A**), from which one Orange List plant species (*Hypoxis hemerocallidea*) was found on the study site. According to the GDARD five Red List species occur within a 5 km radius from the study site. The chance of finding these species on the study site is very low, as the study site experiences some disturbances from human activities as well as isolation from similar vegetation units.

6.3 Medicinal and Alien species

The number of medicinal plant species for each study unit is indicated in **Table 1** and in species list (**Table 4**). The species are indicated with an asterisk. Five medicinal species were listed in the study site.

Table 1 The number of plant species recorded per study unit, including the total number of medicinal and alien plant species.

Study unit	Total number of species	No. of medicinal species	No. of alien species
Secondary Grassland	65	5	11

The number of alien plant species for the study unit is indicated in **Table 1 & 2**, and in species lists (**Table 4**). The species are indicated in bold. The Secondary Grassland study unit has a low alien species richness compared to the total number of species identified (**Table 1**). These alien plant individuals are scattered over the study unit, forming no conspicuous stands dominated by alien species.

Table 2 Number of alien plant species per study unit and numbers in different categories.

Study unit	Total number of alien species	CAT 1b	CAT 2	Not declared
Secondary Grassland	11	4	1	6

Category 1b alien species are major invaders that need to be removed (Act No. 43 of 1983), as amended. These alien species must be contained, and in many cases they already fall under a government sponsored management programme such as Working for Water. Alien invasive species in this Category may not be owned, imported into South Africa, grown, moved, sold, given as a gift or dumped in a waterway.

All Category 2 declared weeds should likewise be removed (Act No. 43 of 1983), as amended, unless a permit is obtained to control it in a demarcated area or a biological control reserve.

6.4 Secondary Grassland

6.4.1 Composition & Connectivity

This study unit is dominated by the graminoid layer (**Table 3**), which include species such as *Eragrostis* spp., *Schizachyrium sanguineum*, *Heteropogon contortus*, *Andropogon* spp., *Aristida* spp. and *Hyparrhenia hirta* (**Figure 3**). Dominant forb species such as *Commelina africana*, *Dicoma anomala*, *Felicia muricata*, *Helichrysum nudifolium* var. *nudifolium* and *Wahlenbergia undulata* were also observed. One particular dwarf shrub, *Seriphium plumosum*, is encroaching in this study unit (**Figure 3**). None the less, the ecological status of this Secondary Grassland is good, with fairly high species richness.

Table 3 Number of species recorded in each growth form

GROWTH FORM	TOTAL NUMBER OF SPECIES
Shrub/Tree	5
Graminoid	30
Forb	26

Succulent	2
Geophyte	2

This Secondary Grassland is isolated from similar grassland vegetation units. It is surrounded by urban development and agricultural activities. The ecological status of this study unit will only decrease as movement of plant species is limited on account of isolation from natural vegetated areas.

6.4.2 Red and Orange List species

One Orange List species *Hypoxis hemerocallidea* was observed in abundance on the study site (**Annexure A**). This study unit also provides suitable habitat for *Boophone disticha*, *Brachycorythis conica* subsp. *transvaalensis*, *Habenaria kraenzliniana*, *Melolobium subspicatum* and *Pearsonia bracteata* (**Annexure A**). The probability of locating these species is unlikely on account of human disturbances and isolation from similar vegetation units.

6.4.3. Medicinal and Alien species

Eleven alien plant species occur on the study unit, of which four are category 1b invaders and should be removed from the study unit (**Table 2**). Six species remain uncategorised.

Five medicinal species were observed in this study unit (**Table 1**).

6.4.4 Sensitivity

This study unit is regarded as moderate sensitive, on account of the high number of species recorded and suitable habitat it provides for several Red List species known to occur in the QDS 2528CC. This study unit is also isolated from similar vegetation units, which limit the probability of locating any of the Red List species mentioned in **Annexure A**.

Table 4 Species list for Disturbed Grassland study unit.

Scientific name	Invasive category
<i>Acacia mearnsii</i>	2
<i>Aloe cf. zebrina</i>	
<i>Andropogon eucomus</i>	
<i>Andropogon schirensis</i>	
<i>Aristida congesta</i> subsp. <i>congesta</i>	
<i>Aristida stipitata</i>	
<i>Babiana hypogae</i>	
<i>Barleria</i> sp.	
<i>Bidens pilosa</i>	

<i>Brachiaria nigropedata</i>	
<i>Bulbostylis hispidula</i> subsp. <i>pyriformis</i>	
<i>Chamaecrista mimosoides</i>	
<i>Chlorophytum</i> cf. <i>transvaalense</i>	
<i>Cleome maculata</i>	
<i>Commelina africana</i>	
<i>Commelina erecta</i>	
<i>Cymbopogon caesius</i>	
<i>Cynodon dactylon</i>	
<i>Cyperus</i> sp.	
<i>Datura ferox</i>	1b
<i>Dichrostachys cinerea</i> subsp. <i>africana</i> *	
<i>Dicoma anomala</i>	
<i>Diheteropogon amplectens</i>	
<i>Eleusine coracana</i>	
<i>Eragrostis chloromelas</i>	
<i>Eragrostis curvula</i>	
<i>Eragrostis gummiflua</i>	
<i>Eragrostis nindensis</i>	
<i>Eragrostis superba</i>	
<i>Eucalyptus camaldulensis</i>	1b
<i>Felicia muricata</i>	
<i>Gnaphalium luteo-album</i>	
<i>Haplocarpha scaposa</i>	
<i>Helichrysum nudifolium</i> var. <i>nudifolium</i> *	
<i>Heteropogon contortus</i>	
<i>Hilliardiella oligocephala</i> *	
<i>Hyparrhenia hirta</i>	
<i>Hypoxis hemerocallidea</i> *	
<i>Hypoxis iridifolia</i>	
<i>Indigofera</i> sp.	
<i>Lactuca inermis</i>	
<i>Ledebouria revoluta</i>	
<i>Melia azedarach</i>	1b
<i>Melinis repens</i>	
<i>Monsonia angustifolia</i>	
<i>Panicum natalense</i>	
<i>Paspalum dilatatum</i>	
<i>Perotis patens</i>	
<i>Persicaria lapathifolia</i>	
<i>Pinus</i> sp.	
<i>Pogonarthria squarrosa</i>	
<i>Polygala hottentotta</i>	
<i>Scabiosa columbaria</i> *	
<i>Schizachyrium sanguineum</i>	
<i>Schoenoplectus</i> sp.	
<i>Seriphium plumosum</i>	
<i>Sporobolus africanus</i>	
<i>Striga elegans</i>	
<i>Tagetes minuta</i>	
<i>Themeda triandra</i>	

<i>Trachypogon spicatus</i>	1b
<i>Trichoneura grandiglumis</i>	
<i>Urelytrum agropyroides</i>	
<i>Urochloa panicoides</i>	
<i>Verbena bonariensis</i>	
<i>Wahlenbergia undulata</i>	

Alien species indicated in bold; Medicinal species indicated with (*)



Figure 3: Secondary Grassland dominated by *Hyparrhenia hirta* and *Schizachyrium sanguineum*

7. FINDINGS AND POTENTIAL IMPLICATIONS

The study site consists of one study unit, dominated by the graminoid vegetation layer. Although one Orange List species was observed, the study site cannot be deemed ecologically high sensitive due to anthropogenic influences such as urban development threatening this ecosystem (**Figure 4**). These factors also isolate this study unit, which will ultimately result in the distinction of important individual plant species located in this Secondary Grassland. It is strongly advised that the Orange List species *Hypoxis hemerocallidea* be relocated from the site prior to construction.

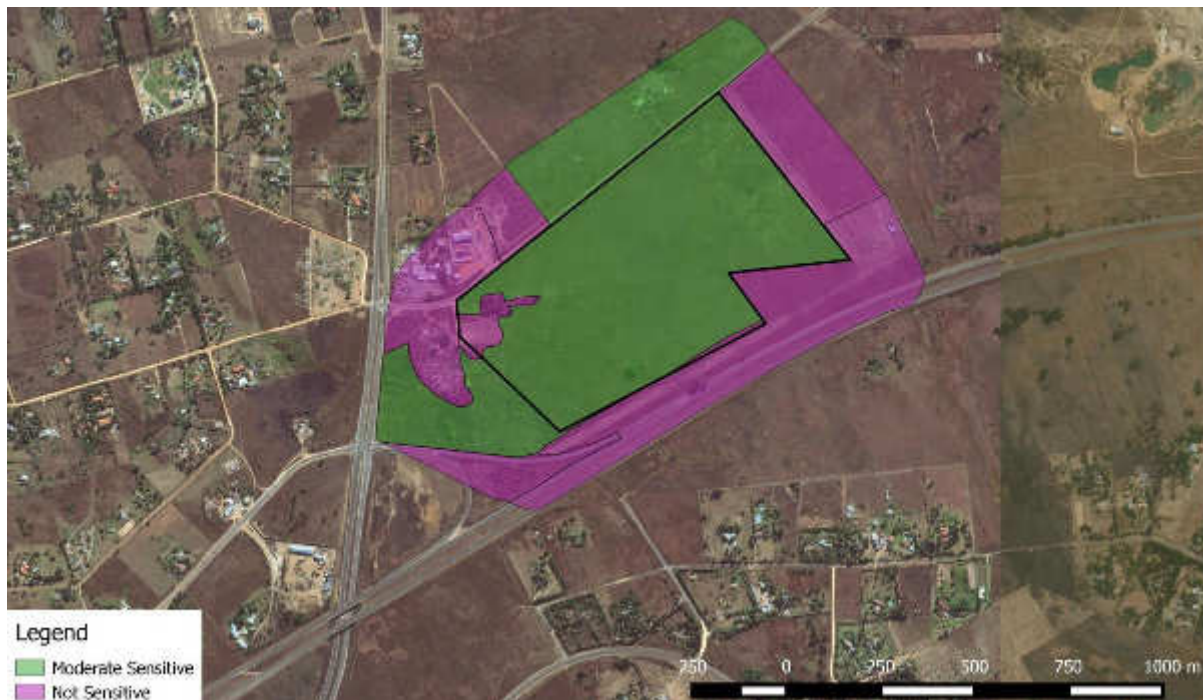


Figure 4: Sensitivity map of study site

8. DISCUSSION, RECOMMENDATIONS AND MITIGATION MEASURES

Competent and appropriate management authority should be appointed to implement the Ecological Management Plan (EMP) and Environmental Impact Assessment (EIA) conditions throughout all phases of development, including the operational phase. The EMP should comply with the *Minimum Requirements for Ecological Management Plans* according to GDARD. The EMP and EIA should take into account all recommendations and mitigation measures as outlined by all Flora assessments conducted for the EIA process. The following recommendations and mitigation measures are proposed:

- The attached sensitivity map should be used as a decision tool to guide the layout design (**Figure 4**).
- A pre- and post-construction alien invasive control, monitoring and eradication programme must be implemented along with an on-going programme to ensure persistence of indigenous species. A qualified botanist/ecologist should compile and supervise the implementation of this programme.
- Rehabilitation of natural vegetation should proceed in accordance with a rehabilitation plan compiled by a specialist registered in terms of the Natural Scientific Professions Act (No. 27 of 2003) in the field of Ecological Science.

- Where active rehabilitation or restoration is mandatory, it should make use of indigenous plant species native to the study area. The species selected should strive to represent habitat types typical of the ecological landscape prior to construction. As far as possible, indigenous plants naturally growing within the vicinity of the study area, but would otherwise be destroyed during construction, should be used for re-vegetation/landscaping purposes.
- Only plant species that are indigenous to the natural vegetation of the study site should be used for landscaping in communal areas. As far as possible, plants naturally growing on the development site, but would otherwise be destroyed during clearing for development purposes, should be incorporated into landscaped areas. Forage and host plants required by pollinators should also be planted in landscaped areas.
- In order to minimize artificially generated surface storm-water runoff, total sealing of paved areas such as parking lots, driveways, pavements and walkways should be avoided. Permeable material should rather be utilized for these purposes.
- A rescue plan for the Orange List species, *Hypoxis hemerocallidea* needs to be incorporated into the EMP prior to construction.

9. CONCLUSIONS

The removal and relocating of the Orange List species *Hypoxis hemerocallidea* prior to construction is mandatory. All alien species in the study site, especially Category 1b must be eradicated as a matter of urgency, to preclude their spreading during the construction phase.

10. LITERATURE and LAW SOURCES

Bromilow, C. 2010. *Problem plants of South Africa*. Briza Publications, Pretoria.

Department of environmental affairs. 2014. National environmental management: Biodiversity Act 2004 (ACT NO, 10 OF 2004) Alien and invasive species lists. www.gpwonline.co.za.

GDARD. 2012. Red List Plant Species Guidelines. Compiled 26 June 2006 with minor edits in January 2012. Obtained from Lorraine Mills (Lorraine.Mills@gauteng.gov.za).

GDARD. 2014a. Requirements for Biodiversity Assessments version 3. Gauteng Department of Agriculture and Rural Development: Biodiversity Management Directorate. 24 pages.

GDARD. 2014b. Technical report for the Gauteng Conservation Plan (Gauteng C-Plan v3.3). Gauteng Department of Agriculture and Rural Development: Nature Conservation Directorate. 60 pages.

Germishuizen, G. and Meyer, N.L. 2003. Plants of southern Africa: an annotated checklist. Strelitzia 14, National Botanical Institute, Pretoria.

Government Gazette no. 34809. 9 December 2011. 1002 National Environmental Management: Biodiversity Act (10/2004): National list of ecosystems that are threatened and in need of protection. <http://biodiversityadvisor.sanbi.org/wp-content/uploads/2012/10/20111209-National-Gazette-No-34809-of-09-December-2011-Volume-558.pdf>.

Government Gazette no. 37885. 1 August 2014. R. 598 National Environmental Management: Biodiversity Act (10/2004): Alien and Invasive Species Regulations. www.gpwonline.co.za.

Henderson, L. 2001. *Alien weeds and invasive plants*. Plant Protection Research Institute, Agricultural Research Council, Pretoria.

Henderson, L. 2007. Invasive, naturalized and casual alien plants in southern Africa: a summary based on the Southern African Plant Invaders Atlas (SAPIA). *Bothalia*, **37**(2): 215–248.

IUCN. 2015. IUCN Red List Categories. Prepared by the IUCN Species Survival Commission. Gland, Switzerland.

Koekemoer, M., Steyn, H.M. and Bester, S.P. 2014. Guide to Plant Families of southern Africa. Strelitzia 31. South African National Biodiversity Institute, Pretoria.

Mucina, L. and Rutherford, M.C. 2006. The vegetation of South Africa, Lesotho and Swaziland. Strelitzia 19. South African National Biodiversity Institute, Pretoria.

Pfab, M.F. 2002. Priority ranking scheme for Red Data plants in Gauteng, South Africa. *South African Journal of Botany* **68**: 299-303.

Pfab, M.F. and Victor, J.E. 2002. Threatened plants of Gauteng, South Africa. *South African Journal of Botany* **68**: 370-375.

Pfab, M.F. 2014. *GDARD Requirements for Biodiversity Assessments*. Version 3. Gauteng Department of Agriculture and Rural Development: Nature Conservation Directorate.

Pooley, E. 1998. *A field to the wild flowers of Kwazulu-Natal and the eastern region*. Natal Flora Publications Trust, Durban.

Raimondo, D., Van Staden, L., Foden, W., Victor, J.E., Helme, N.A., Turner, R.C., Kamundi, D.A. and Manyama, P.A. 2009. *Red Data List of South African Plants*. Strelitzia 25, South African National Biodiversity Institute, Pretoria.

South African National Biodiversity Institute (SANBI). Threatened terrestrial ecosystems for South Africa (2011): Egoli Granite Grassland (Gm 10). Available from Biodiversity GIS website (<http://bgis.sanbi.org/ecosystems/showecosystem.asp?CODE=Gm%2010>), accessed on 16 March 2016.

van Ginkel, C.E., Glen, R.P., Gordon-Gray, K.D., Cilliers, C.J., Muasya, M., and van Deventer, P.P. 2011. Easy identification of some South African Wetland Plants (Grasses, Restios, Sedges, Rushes, Bulrushes, Eriocaulons and Yellow-eyed grasses). WRC Report No TT 479/10. ISBN: 978-1-4312-0066-5.

van Oudtshoorn, F. 2014. *Guide to grasses of southern Africa*. Briza Publications, Pretoria.

van Wyk, B. and Malan, S. 1998. *Field guide to the wildflowers of the Highveld*. Struik Publishers, Cape Town.

van Wyk, B. and van Wyk, P. 2013. *Field guide to trees of southern Africa*. Struik Publishers, Cape Town.

van Wyk, B-E., Van Oudtshoorn, B., and Gericke, N. 2013. *Medicinal plants of South Africa*. Briza Publications, Pretoria.

The following information is to remain confidential and is not meant for the general public. Please do not distribute under any circumstances without the permission from GDARD.

Annexure A: Red Data Flora (confidential)

The following Red Data floral species are listed for the QDC 2528CC. An indication is also provided if the species was recorded on site.

SPECIES	FLOWERING SEASON	SUITABLE HABITAT	CRITERIA	CATAGORY (¹ global; ² national)	OBSERVED
<i>Adromischus umbraticola</i> subsp. <i>umbraticola</i>	September-January	Rock crevices on rocky ridges, usually south-facing, or in shallow gravel on top of rocks, but often in shade of other vegetation.	A2	Near Threatened ¹	Not observed No Suitable habitat
<i>Boophone disticha</i>	October-January	Dry grassland and rocky areas.	N/A	Declining ²	Not observed Suitable habitat
<i>Bowiea volubilis</i> subsp. <i>volubilis</i>	September-April	Shady places, steep rocky slopes and in open woodland, under large boulders in bush or low forest.	B	Vulnerable ²	Not observed No suitable habitat
<i>Brachycorythis conica</i> subsp. <i>transvaalensis</i>	January-March	Short grasslands, hillsides, on sandy gravel overlying dolomite, sometimes also on quartzites; occasionally open woodland; 1000 - 1705m.	A3	Endangered ²	Not observed Suitable habitat Recorded within 5km radius from study site

<i>Callilepis leptophylla</i>	August-January & May	Grassland or open woodland, often on rocky outcrops or rocky hillslopes.	N/A	Declining ²	Not observed No suitable habitat
<i>Ceropegia decidua</i> subsp. <i>pretoriensis</i>	November-April	Direct sunshine or shaded situations, rocky outcrops of the quartzitic Magaliesberg mountain series, in pockets of soil among rocks, in shade of shrubs and low trees, can be seen twining around grass spikes.	A1	Vulnerable ¹	Not observed No suitable habitat
<i>Cheilanthes deltoidea</i> subsp. <i>silicicola</i>	November-June	Southwest-facing soil pockets and rock crevices in chert rock.	A2	Vulnerable ¹	Not observed No suitable habitat Recorded within 5km radius from study site
<i>Cleome conrathii</i>	March-May; December-January	Stony quartzite slopes, usually in red sandy soil, grassland or open to closed deciduous woodland, all aspects.	A3	Near Threatened ¹	Not observed No suitable habitat
<i>Crinum macowanii</i>	October-January	Grassland, along rivers, in gravelly soil or on sandy flats.	N/A	Declining ²	Not observed No suitable habitat
<i>Dicliptera magaliesbergensis</i>	February-April	Forest, savanna (Riverine forest and bush).	A1	Vulnerable ¹	Not observed No suitable habitat Recorded within

					5km radius from study site
<i>Drimia sanguinea</i>	August-December	Open veld and scrubby woodland in a variety of soil types.	B	Near Threatened ²	Not observed No suitable habitat Recorded within 5km radius from study site
<i>Eucomis autumnalis</i>	November-April	Damp, open grassland and sheltered places.	N/A	Declining ²	Not observed No suitable habitat
<i>Gunnera perpensa</i>	October-March	In cold or cool, continually moist localities, mainly along upland streambanks.	N/A	Declining ²	Not observed No suitable habitat
<i>Habenaria barbertoni</i>	February-March	In grassland on rocky hillsides.	A2	Near Threatened ¹	Not observed No suitable habitat
<i>Habenaria kraenzliniana</i>	February-April	Terrestrial in stony, grassy hillsides, recorded from 1000 to 1400m.	A3	Near Threatened ¹	Not observed Suitable habitat Recorded within 5km radius from study site

Flora Assessment Report: Industrial Township for Farm Knopjeslaagte 385 JR

<i>Habenaria mossii</i>	March-April	Open grassland on dolomite or in black sandy soil.	A1	Endangered ¹	Not observed No suitable habitat
<i>Holothrix randii</i>	September-October	Grassy slopes and rock ledges, usually southern aspects.	B	<i>Holothrix randii</i>	Not observed No suitable habitat
<i>Hypoxis hemerocallidea</i>	September-March	Occurs in a wide range of habitats, from sandy hills on the margins of dune forests to open rocky grassland; also grows on dry, stony, grassy slopes, mountain slopes and plateaux; appears to be drought and fire tolerant.	N/A	Declining ²	Observed
<i>Ilex mitis</i> var. <i>mitis</i>	October-December	Riverbanks, streambeds, evergreen forests.	N/A	Declining ²	Not observed No suitable habitat
<i>Lithops lesliei</i> subsp. <i>lesliei</i>	March-June	Primary habitat appears to be the arid grasslands in the interior of South Africa where it usually occurs in rocky places, growing under the protection of surrounding forbs and grasses.	B	Near Threatened ²	Not observed No suitable habitat
<i>Melolobium subspicatum</i>	September-May	Grassland.	A1	Vulnerable ¹	Not observed Suitable habitat Recorded within 5km radius from

					study site
<i>Pearsonia bracteata</i>	December-April	Plants in Gauteng and North West occur in gently sloping Highveld grassland, while those in the Wolkberg were collected from steep wooded slopes and cliffs in river valleys.	A3	Near Threatened ¹	Not observed Suitable habitat

CONFIDENTIAL