ANNEXURE H

TURNKEY DEVELOPMENT FOR THE FORMULATION OF A DETAILED PROPERTY PLAN AND SUBMISSION OF TOWN PLANNING APPLICATION (INCLUDING REMOVAL RESTRICTIVE TITLE CONDITIONS) ON PORTION 159 OF THE FARM DIEPKLOOF 319 IQ

ENVIRONMENTAL SCREENING REPORT

FEBRUARY 2019

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I PROJECT DETAILS

Client:	Turning Point Project Management
Report name:	**Environmental Screening Report for Portion 159 of the Farm Diepkloof 319IQ**
Report type:	Environmental Screening Report
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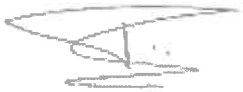

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EXECUTIVE SUMMARY

Environmental significance of the proposed development is low as revealed by various desktop studies. Removal of Threatened and or Protected Species (ToPS) will necessitate an application for a permit from Department of Forestry and Fisheries (DAFF). Other licenses and permits may include removal of graves. This will be confirmed during the detailed Environmental Authorisation application phase (Phase 2).

Environmental significance of the proposed development is presented in the table below.

Environmental Significance

Environmental Feature	Likely Impact
Rivers and Wetlands	Low
Red Data Flora	Low
Red Data Fauna	Low
Heritage	Low
Gauteng Cplan	Low
Social	Low

Possible environmental triggers as per National Environmental Management Act, 1998 (Act N0.107 of 1998). These will be confirmed with the project team and the Competent Authority prior to commencement of the Environmental Authorisation application process. An EMPr will also be developed to guide construction and operational phases of the project.

Possible Environmental Triggers

Listed activity	Description as per regulation
GNR.327 Item 26, 07 April 2017	Residential, retail, recreational, tourism, commercial or institutional developments of 1 000 square metres or more, on land previously used for mining or heavy industrial purposes; — excluding — (i) where such land has been remediated in terms of part 8 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies; or (ii) where an environmental authorisation has been obtained for the decommissioning of such a mine or industry in terms of this Notice or any previous NEMA notice; or (iii) where a closure certificate has been issued in terms of section 43 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) for such land.
GNR.327 Item 28, 07 April 2017	Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development: (i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare;

Listed activity	Description as per regulation
	excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.
GNR.325 Item 15, 07 April 2017	The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for— (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.

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GLOSSARY OF TERMS

The definitions given below are for explanatory purposes only and are applicable to this Environmental Screening Report. In the event that any conflict arises between the definitions contained herein and those contained within the final contract, those within the contract shall prevail.

Alien vegetation:

Alien vegetation is defined as undesirable plant growth which shall include, but not be limited to Category 1 plants (declared weeds), Category 2 plant invaders (commercial value) and Category 3 plant invaders (ornamental value) as set out in the Amended Regulations of the Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983) (CARA). Other vegetation deemed to be alien invasive shall be those plant species that show the potential to occupy in number, any area within the defined construction area. Alien species also include species that are not indigenous species or any indigenous species that has been translocated or is intended to be translocated to a place outside its natural distribution range in nature, but does not include indigenous species that have extended their natural distribution range by natural means of migration or dispersion without human intervention.

EIA Regulations:

Environmental Impact Assessment (EIA) Regulations dated 5 September 1997, published by the Minister of Environmental Affairs and Tourism pursuant to sections 21, 22 and 26 of the Environment Conservation Act,

1989 (Act No. 73 of 1989), as applicable to the Application for Environmental Authorisation. Also refers to Regulations GN R385, R386 and R387 (dated 21 April 2006), Regulations GN R543, R544, R545 and R546 (dated 18 June 2010) and Regulations GN R982, R983, R984 and R985 (dated 4 December 2014) published in terms of Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, as may be applicable to any further Environmental Authorisation requirements of the proposed project, as appropriate.

Environment:

The surroundings in which humans exist and which comprise:

a) The land, water and atmosphere of the earth;

b) Micro-organisms, plant and animal life;

c) Any part or combination of a) and b) and the interrelationships among and between them; and

d) The physical, chemical, aesthetic and cultural properties and conditions of the foregoing that can influence human health and well-being.

(After National Environmental Management Act, 1998 (Act No.107 of 1998)).

Environmental Impact:

Any change to the environment resulting from a construction activity, whether desirable or undesirable. An impact may be the direct, indirect or cumulative consequence of an activity.

Environmental Impact Assessment (EIA):

A process of examining the environmental effects of development (after DEAT, 1998. Guideline Document: EIA Regulations). The assessment requires detailed/specialist studies of key issues that have been identified during the environmental scoping process. Also, "a systematic process of identifying, assessing and reporting environmental impacts associated with an activity and includes basic assessment and S&EIR" (after GN R982 dated 4 December 2014).

Environmental Management Programme (EMP):

A detailed programme of action prepared to ensure that recommendations for enhancing positive impacts and preventing or limiting negative environmental impacts are implemented during the life-cycle of a project.

Alien Vegetation Eradication Programme:

The organised clearing and rehabilitation of land infested by invasive alien plant species.

Hazard:

A source of or exposure to danger.

Mitigate:

The implementation of practical measures to avoid or reduce adverse impacts, or enhance beneficial impacts of an activity.

No-go area:

Area where construction activities are prohibited.

Pollution:

Any change in the environment caused by (i) substances; (ii) radioactive or other waves; or (iii) noise, odours, dust or heat emitted from any activity, including the storage or treatment of waste or substances, construction and the provision of services, whether engaged in by any person or an organ of state, where that change has an adverse effect on human health or well-being or on the composition, resilience and productivity of natural or managed ecosystems, or on materials useful to people, or will have such an effect in the future (after National Environmental Management Act, 1998).

Record of Decision or Environmental Authorisation:

A written statement from the relevant environmental authority that records its approval/rejection of a listed activity (for example, to build or upgrade a section of road). Approval is usually granted with conditions specifying the necessary measures required to prevent or reduce the effects of environmental impacts during the life of a contract.

Rehabilitation:

To re-establish or restore to a healthy, sustainable capacity or state.

Riparian zone:

A zone located next to a stream or river, affected by stream processes such as flooding and deposition of alluvial soil, and supporting a fauna and flora different from the upland slopes.

Site: (compare with "construction area")

Refers to those sections of the existing Portion 159 of the Farm Diepkloof 319IQ.

ABBREVIATIONS

CARA	Conservation of Agricultural Resources Act, 1989 (Act No. 43 of 1989)
COJ	City of Johannesburg
DAFF	Department of Agriculture, Forestry and Fisheries
DEA	Department of Environmental Affairs
DMR	Department of Mineral Resources
DWS	Department of Water and Sanitation
ECA	Environment Conservation Act, 1989 (Act No. 73 of 1989)
EIA	Environmental Impact Assessment
EIR	Environmental Impact Report
EMP	Environmental Management Programme
EMPR	Environmental Management Programme Report
EMS	Environmental Management System
JDA	Johannesburg Development Agency
I&AP	Interested and Affected Party
NBI	National Botanical Institute
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
NFA	National Forests Act, 1998 (Act No. 84 of 1998)
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999)
NWA	National Water Act, 1998 (Act No. 36 of 1998)
PHRAG	Provincial Heritage Resources Agency-Gauteng
ROD	Record of Decision
SAHRA	South African Heritage Resources Agency

1. INTRODUCTION

Various databases from national, provincial and municipal planning schemes were analysed and aerial photographs utilised to create sensitivity maps to assist in the determination of project feasibility. A site visit was undertaken on to verify desktop analyses.

The following environmental aspects were investigated and discussed on subsequent sections:

- Aquatic Features
- Biodiversity
    - Vegetation
    - Fauna
    - Heritage
- Gauteng Conservation Plan

2. LEGAL FRAMEWORK

3.1 CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA ACT, ACT NO. 108 OF 1996

States that everyone has a right to an environment that is not harmful to their health and wellbeing and as such JRA should conduct its business in a manner that does not result in environmental pollution and ecological degradation, that contributes to the conservation of cultural heritage and national economic and social development.

3.2 NATIONAL ENVIRONMENTAL MANAGEMENT ACT, NO 107 OF 1998

This Act provides the legislative framework through which strategic environmental management goals and objectives are to be implemented. It is the basis through which the Environmental Impact Assessment and the Environmental Management Plan were developed and it also provides the mandate for the enforcement of the implementation of the EMPr.

3.3 NATIONAL HERITAGE RESOURCES ACT, NO 25 OF 1999

This Act provides for the protection of heritage resources, which according to the Act is a place, or an object of cultural significance, which includes a place or object of aesthetic, architectural, historical, scientific, social, spiritual, linguistic and technological value. A permit is required for the disturbance, removal or destruction of any heritage site, archaeological site or paleontological site, burial ground, grave, or any public monument or memorial that may be encountered during the construction phase. All excavation related activities are to cease if any artefacts exposed during this exercise, in addition an Archaeologist must be called to site for inspection and possible rescue. Under no circumstances is any artefact to de destroyed or removed without the consent of the South African Heritage Resource Agency.

3.4 NATIONAL WATER ACT, NO 36 OF 1998

The purpose of the Act is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in responsible ways. The Act also calls for JRA to adopt actions that will prevent and remedy the effects of pollution generated by its operations and those that will address emergency incidences.

4.1 Impeding or Diverting the Flow of Water in a Watercourse and Altering the Bed, Banks, Course or Characteristics of a Watercourse

Government Notice No. 1199 of 18 December 2009 replaced Government Notice No. 398 of 26 March 2004 in terms of authorising all or any category of persons to use water in respect of Sections 21(c) and (i) of the NWA, subject to the conditions set out in the Schedule thereto (note, however, that certain areas are excluded from General Authorisation for these water use activities). Adherence to the conditions stipulated in the Schedule should be ensured.

4.2 Control of Alien Vegetation

Government Notice R1048 of 25 May 1984 (as amended by Government Notices R2687 of 6 December 1985 and R280 of 30 March 2001) deals with Regulations promulgated in terms of CARA. In addition to CARA, the Alien and Invasive Species Regulations, 2014 (A&IS) were published under Government Notice

R598 of 1 August 2014 (effective as from 1 October 2014) under NEMBA. Further to the Regulations, a list of alien and invasive species, the Alien and Invasive Species List, 2014, under Government Notice R590 of 1 August 2014 was published. The Regulations must thus be read together with the A&IS list.

The main difference between NEMBA and CARA is that the latter is aimed at the preservation of natural agricultural resources with a view to ensure the maintenance of the production potential of land, which may be affected by weeds and invader plants. CARA only applies in respect of flora (invader plants and weeds), not fauna. NEMBA, on the other hand, is an environmental statute that has a wider scope of the preservation of natural ecological systems (both flora and fauna) of South Africa (within the principles and obligations of environmental and natural resources protection espoused by NEMA. Where there is conflict between CARA and NEMBA, the latter prevails.

4.3 Control Of Development Affecting Natural Forests

The DAFF has developed a set of Policy Principles and Guidelines for Control of Development Affecting Natural Forests (2008) to serve as the basis for decisions and comments made by forestry staff in all regions when dealing with development proposals, land use planning and EIAs affecting natural forests. The policy and guidelines aid the proper implementation of existing legislation, especially the NFA (as amended), which provides the strongest and most comprehensive legislation and mandate for the protection of all natural forests in South Africa. Developments affecting natural forests are also subject to a licence application.

4.4 NHRA Regulations

Government Notice No. R548 of 2 June 2000 (promulgated in terms of section 25 of the NHRA) contain, amongst others, the following minimum qualifications and standards of practice with regard to permit applications for burial grounds and graves (Chapter IX):

A permit will be issued only for exhumation or removal that is to be done:

- Under the supervision of a qualified archaeologist or person approved by the relevant heritage resources authority;

- With due respect for any human remains and the customs and beliefs of any person or community concerned with such grave or burial ground and, when requested, in the presence of such person or community representative; and
- After arrangements have been made for the re-interment of any human remains and the re-interment or curation of any other contents of such grave or burial ground, to the satisfaction of SAHRA or the relevant heritage resources authority, in accordance with Guidelines.

3. PROJECT AREA

The proposed development falls within farm Portion 159 of the Farm Diepkloof 319IQ, in Soweto within City of Johannesburg Metropolitan Municipality. The farm is approximately 30ha. It is bordered by Chris Hani Road (M68) to the north and Western Bypass (N1) to the east (Fig 1 and 2). Chris Hani Baragwanath borders the western section of the property.

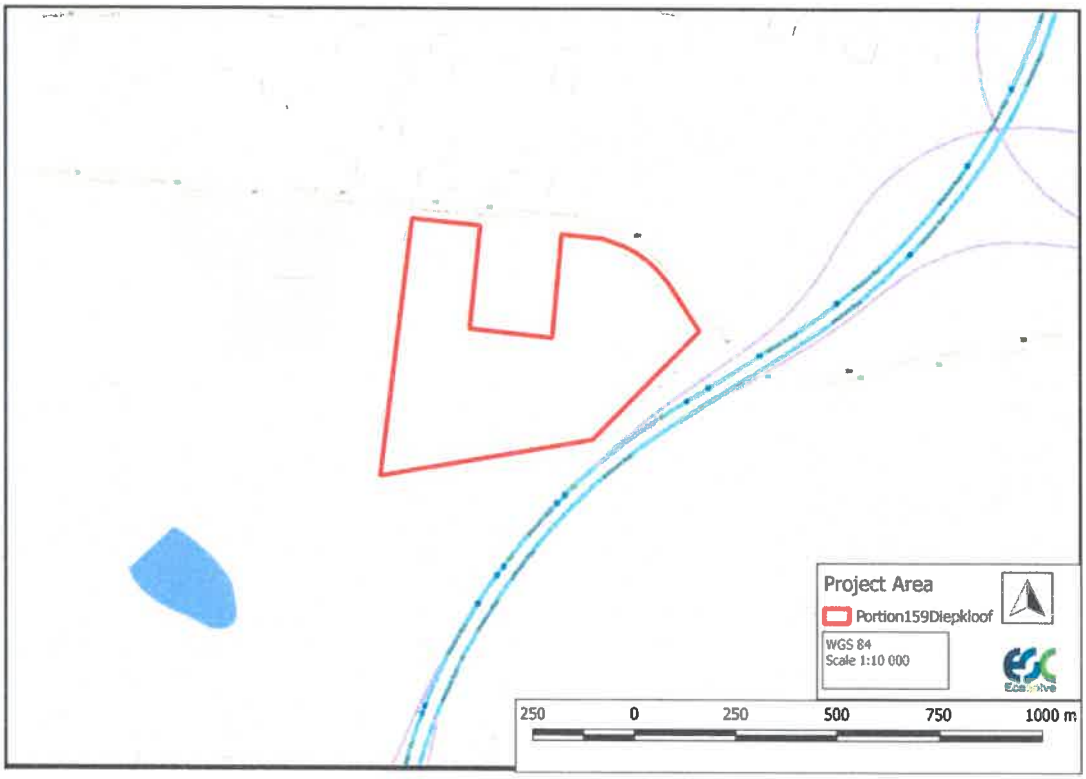


Figure 1: Project area

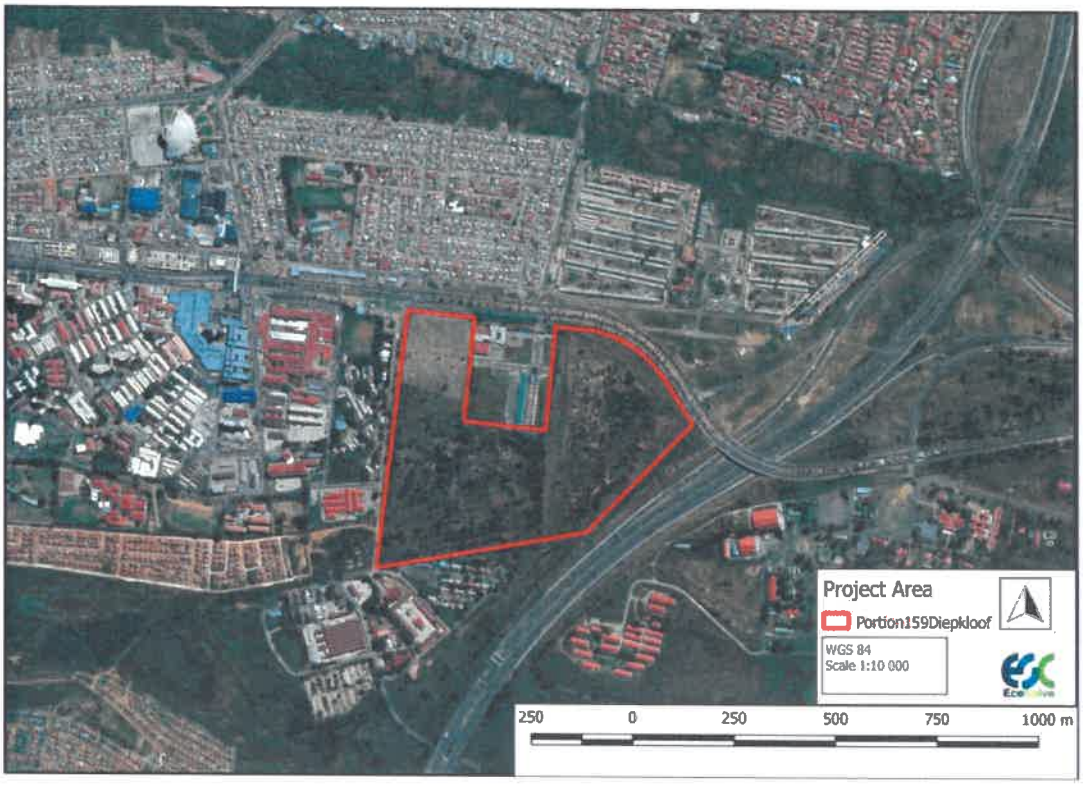


Figure 2: Aerial view of the project area

4. BIOPHYSICAL ENVIRONMENT

4.1. CLIMATE

The Köppen (1931) climatic classification is world-wide recognised as a classic broad climatic classification system. This system is a hierarchical classification system with up to three levels of detail, based on rainfall magnitudes, rainfall seasonality, and rainfall concentration. It also includes durations above or below threshold temperatures on a monthly basis. Input requirements are, therefore, monthly precipitation and temperature data (Schulze et al. 2006). According to the Köppen classification the study area falls, as with most of the Highveld region of South Africa, within the Cwb class, of which the climatic characteristics translate to:

C – Moist with cold winters

w – Dry winters

b – Summers relatively long and cool

The long term Mean Annual Precipitation (MAP) for the two weather stations nearest to the study area is 689 mm/annum (Table 2 and Figure 3) and for Johannesburg weather station 713 mm/annum (Erasmus, 1985). This rainfall is received mainly in the summer months with December and January receiving the highest total rainfall and June and August the least.

Table 1: The Monthly and Mean Annual Precipitation for Klipspruit and Baragwanath weather stations (Erasmus, 1985).

Month	Klipspruit (26° 16' S; 27° 55' E)	Baragwanath (26° 15' S; 27° 59' E)	Average
January	121	104	113
February	99	106	103
March	87	87	87
April	45	36	41
May	20	16	18
June	6	7	7
July	11	13	12
August	7	10	9
September	20	22	21
October	61	62	62
November	97	114	106
December	112	115	114
MAP	686	692	689

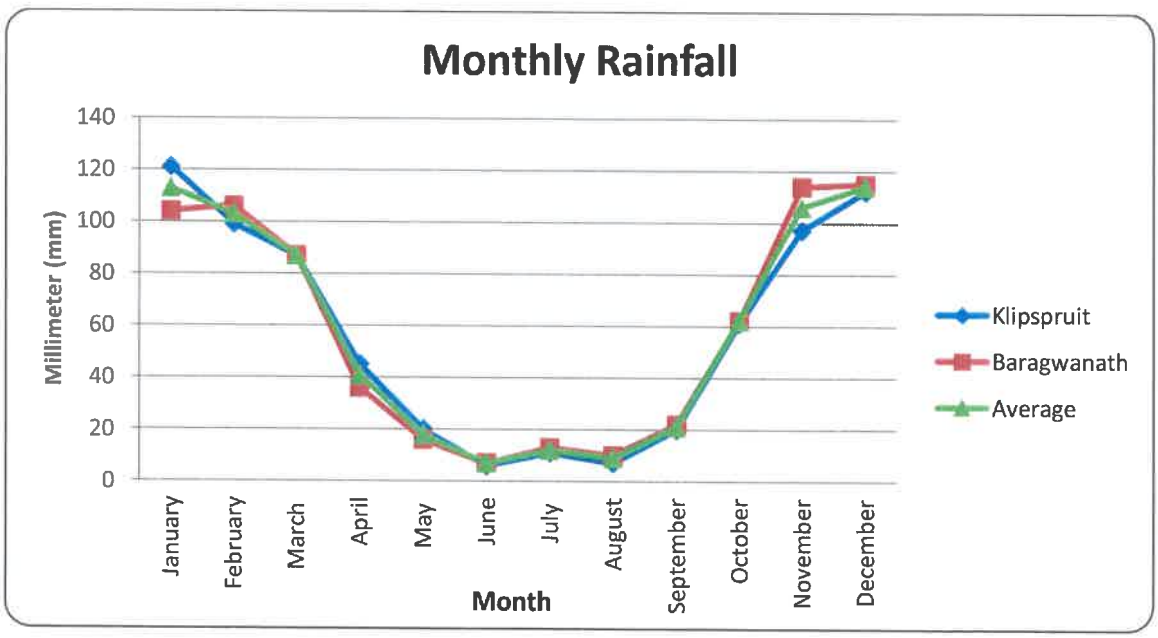


Figure 3: Monthly rainfall distribution for the study area (Erasmus, 1985)

Data from the nearest SAWS weather station situated in Johannesburg (26° 08' S 28° 14' E) shows the average maximum daily temperature to be 22°C and the average minimum daily temperature 10°C (Table 1). The expected first date of occasional frost is 3 May while the expected first date of regular frost in the study area is about 30 May. The expected date of last regular frost is about 25 August while the expected date of last occasional frost is about 30 September (AGIS, 2008).

4.2. TOPOGRAPHY, GEOLOGY & SOILS

The topography and terrain morphology of an area is important as it influence climatic and edaphic conditions, thereby indirectly contributing to microclimatic and biological diversity. The more variety in terrain morphology the more variety in microclimatic and biological diversity and vice versa. The study area has a relatively high variety in terrain morphology. According to the National Land Type Classification (Kruger 1973, Hammond 1964) the study area includes three terrain types, namely 1. Level plains with some relief 2. Plains with open low hills or ridges 3. Rolling or irregular plains with high hills or ridges

4.3. AQUATIC FEATURES

The project area falls within Upper Vaal WMA quaternary catchment C22A (Figure 5 and 6). The main tributary is Klip Rivier. The Klip River drains the southern Witwatersrand region. It flows primarily southwards until it joins the Vaal River at Vereeniging. The Klip River catchment incorporates the southern part of Johannesburg, one of the most developed urban complexes in Africa.

Consequently, the Klip Rivier catchment is one of the most heavily impacted river systems in South Africa and is subjected to various types of pollution. Increasing rates of urbanisation, industrialisation and population growth have aggravated the significance of water pollution as a threat to the wetland resources in the Klip Rivier catchment. The Upper Klip Rivier in the south is located in an area of urban development and past mining activity, and is subject to intense pressure from human activities. In addition to water scarcity, a large percentage of drinking water is lost due to degradation of the water supply infrastructure, water wastage and leakages. The main concerns from an environmental perspective are the impacts of the increasing demands on water resources, and the impact of pollution on downstream impoundment and on users of this water source. The downstream communities, which are exposed to raw sewage and polluted streams and rivers, face serious health hazards. According to DWA 2013, the Present Ecological Status (PES) of the catchment area is considered a Class E, or seriously modified. The biological integrity of the Klip Rivier system is considerably impaired and water quality objectives are hardly ever met (Table 1). Alterations to the system include:

- A completely modified hydrological regime - the strong seasonality of rainfall in this area is cancelled by more constant contributions from treated wastewater;
- A change in the chemical quality of water and rain water largely reaches the river via urban run-off, effluent discharge and mine drainage;
- Changes in stream morphology brought about by the building of weirs, bridges, recreational facilities etc., and
- Degradation and destruction of natural riparian habitats as a result of formal and informal urbanisation, and industrial, agricultural and domestic activities close to the river banks.

Table 2: Water Quality Objectives for the Klip River Catchment

Variable	Ideal	Acceptable	Tolerable	Unacceptable
EC (mS/m)	<45	45 - 70	70 - 100	>100
Chemical Oxygen Demand (mg/l)	<20	20 - 35	35 - 55	>55
Suspended Solids (mg/l)	<5	5 - 15	15 - 25	>25
Dissolved Oxygen	<9	5 - 9	4 - 5	<4
pH	6.5 - 8.5	-		<6.5; >8.5
Phosphate (as PO4 in mg/l)	<0.2	0.2 - 0.4	0.4 - 0.6	>0.6
Sodium (mg/l)	<50	50 - 70	70 - 100	>100
Sulphate (mg/l) E. coli (per 100 ml) – in stream	<80 <10	80 -10 - 200 100	200 - 500 100 - 1000	>500 >1000

Wetlands and rivers occur north and south of the project area. These are however, located far away from the project area. The project area also falls outside 1:100yr floodlines. This will therefore not trigger a water use licence application process.

Recreational activities within the surrounding water courses include a wide range of noncontact, intermediate contact and full contact recreation including:

Riparian home ownership;

- Picnicking;
- Fishing;
- Birdwatching and enjoyment of nature; and
- Swimming;

These activities are particularly popular at impoundments in the urban areas of the Witwatersrand, which serve as important recreational hubs for city dwellers. Fishing is a popular recreational pastime in these impoundments and in the Klip Rivier itself, but generally the fish species caught are not considered sensitive. The fact that fish may be consumed by fishermen, however, raises the issue of health. The Vaal Barrage, into which the Klip Rivier flows is also a key recreational area for both permanent residents and, in particular for weekend visitors.

Figure 4: Wetland areas in the vicinity of the study area

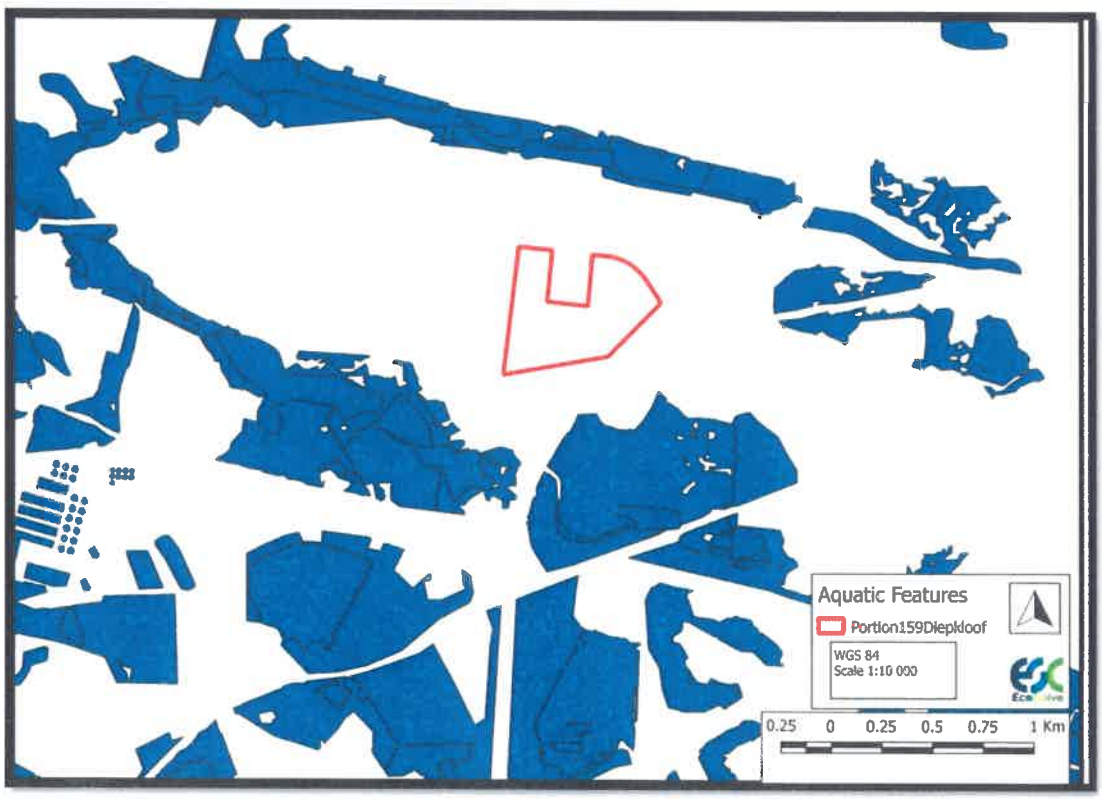


Figure 5: Aquatic features

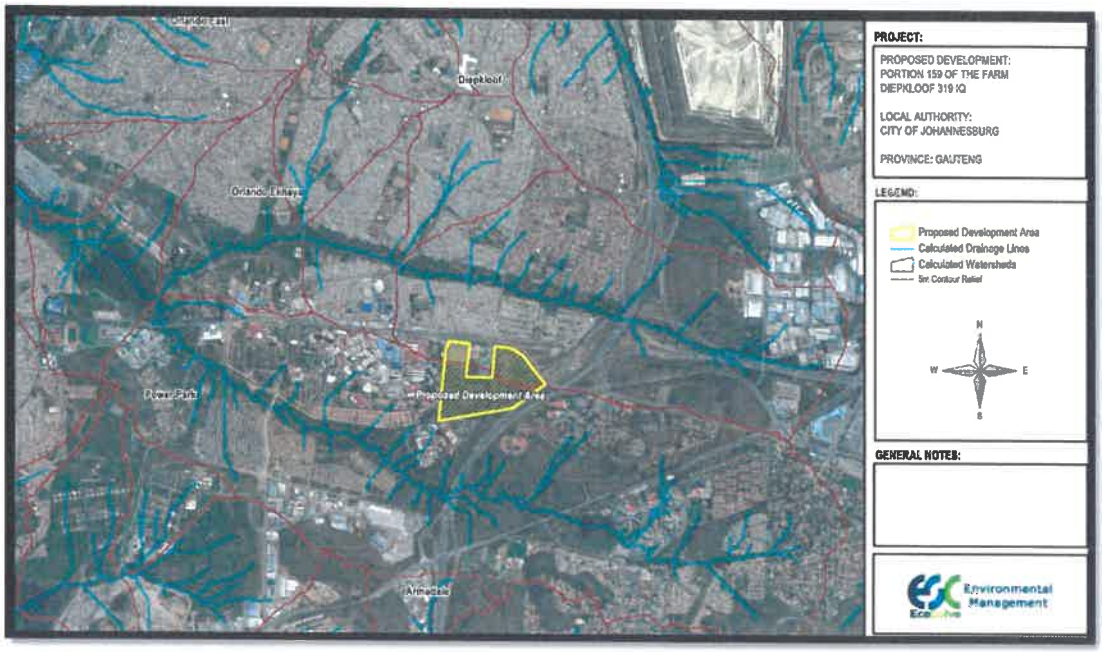


Figure 6: Surface hydrology

The dominant vegetation in the wetlands are reedbeds (*Phragmites communis* and *Typha capensis*), which are expanding because of nutrient enrichment of the river system and alteration of river banks. Many wetlands are thus artificially created as a result of human activities. They do, however, provide a sanctuary for birdlife, small animals and aquatic life. No threatened fauna and flora are known to occur either in the Klip river catchment or in the riparian vegetation, although the rare rock catfish, *Austroglanis sclateri* has been observed.

4.4. VEGETATION TYPES

To broadly describe the vegetation of the study area, reference is made to the classification carried out for South Africa, Lesotho and Swaziland, by Mucina & Rutherford (editors) (2006). With this system the region was classified into 435 zonal and azonal vegetation types, using a three-level hierarchy of mapping units, namely Biome, Bioregion and Vegetation Unit. In addition to data on vegetation distribution, data sources on topography, geology, soils, land types and climatic zones were also used (Mucina & Rutherford 2006). The study area contains one vegetation type - Soweto Highveld Grassland (Figure 3). This diversity in vegetation types can mainly be ascribed to the topographical and geological range within the study area as well as the altitude and climate.

4.4.1. Soweto Highveld Grassland

This vegetation unit occurs in Mpumalanga, Gauteng (and to a very small extent also in neighbouring Free State and North-West) Provinces. It lies in a broad band roughly delimited by the N17 road between Ermelo and Johannesburg in the north, Perdekop in the southeast and the Vaal River (border with the Free State) in the south. It extends further westwards along the

southern edge of the Johannesburg Dome (including part of Soweto) as far as the vicinity of Randfontein. In southern Gauteng it includes the surrounds of Vanderbijlpark and Vereeniging as well as Sasolburg in the northern Free State. The altitude ranges from 1 420–1 760 m.

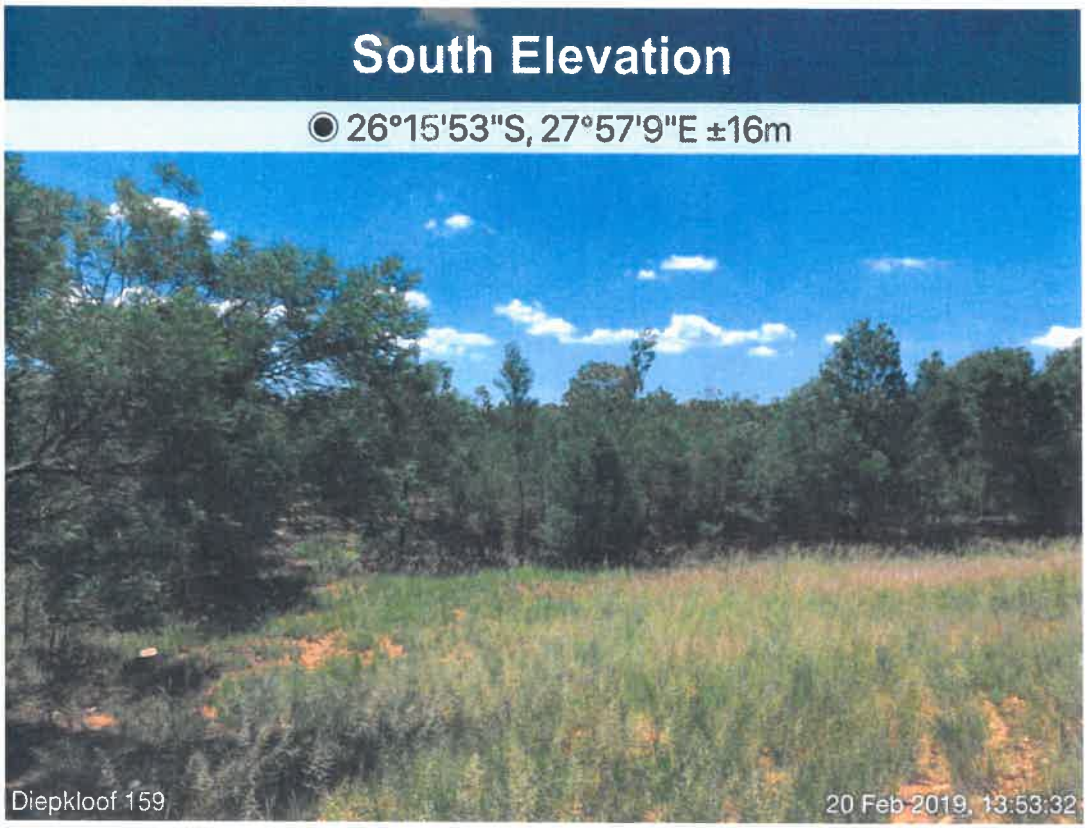
It occurs on gently to moderately undulating landscape on the Highveld plateau supporting short to medium high, dense, tufted grassland dominated almost entirely by *Themeda triandra* (Rooi grass) and accompanied by a variety of other grasses such as *Elionuris muticus* (Wire grass), *Eragrostis racemosa* (Small heart grass), *Heteropogon contortus* (Spear grass) and *Tristachya leucothrix* (Trident grass). Only small scattered wetlands, narrow streams and occasional ridges or rocky outcrops interrupt the continuous grassland cover. The geology consists mainly of shale, sandstone or mudstone of the Madzarinwe formation (Karoo supergroup).

Conservation status

Currently considered endangered. Only a handful of patches statutorily conserved (Waldrift, Krugersdorp, Leeuwkuil, Suikerbosrand, and Rolfe's Pan Nature Reserves) or privately conserved (Johanna Jacobs, Tweefontein, Gert Jacobs, Nikolaas and Avalon Nature Reserves, Heidelberg Natural Heritage Site). Almost half of the area already transformed by cultivation, urban sprawl, mining and building of road infrastructure. Some areas have been flooded by dams (Grootdraai, Leeukuil, Trichardtsfontein, Vaal and Willem Brummer dams). Erosion is generally very low (93%).

4.5. SITE VEGETATION

The vegetation is mainly dominated by *Hyparrhenia hirta* (Common Thatching Grass) and *Tagetes minuta* (Khaki weed) and black wattle (*Acacia mearnsii*). Topsoil and vegetation disturbance due to littering, topsoil excavations, building waste disposal, remnant construction foundations, etc. are common.



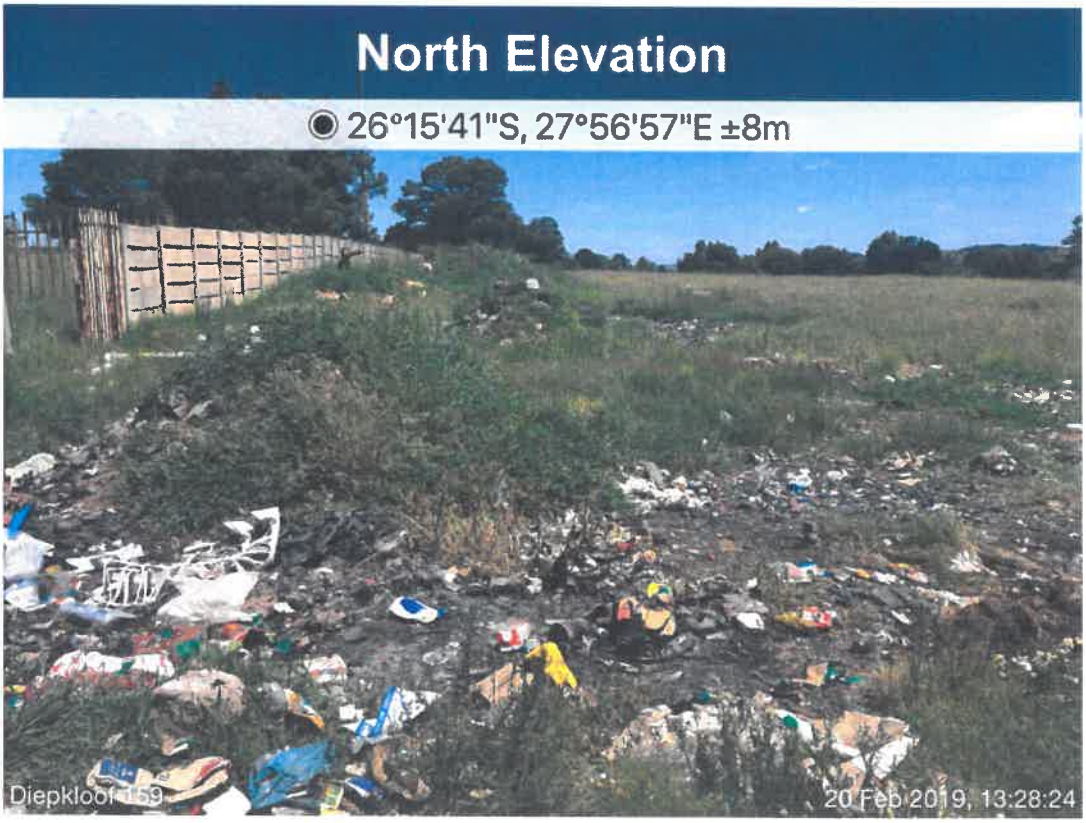


Figure 7: The transformed grassland zone is located mainly on highly disturbed areas due to the presence of litter and other forms of topsoil disturbance.

Table 3: List of common plant species occurring in the Transformed Grassland zone (exotic species indicated with an asterisk).

Species	Growth form	Species	Growth form
Acacia karroo	Tree	Hyparrhenia hirta	Grass
*Acacia mearnsii	Tree	Melinis repens	Grass
Aristida congesta	Grass	*Oxalis obliquifolia*	Geophyte
Brachiaria brizantha	Grass	*Plantago lanceolata*	Forb
**Conyza albida*	Forb	*Pogonarthria squarrosa*	Grass
**Conyza bonariensis*	Forb	**Schkuhria pinnata*	Forb
Crassula sp.	Forb	*Searsia lancea*	Tree
Cynodon dactylon	Grass	*Searsia pyroides*	Tree
**Datura stramonium*	Forb	*Senecio inornatus*	Forb
Dichrostachys cinerea	Shrub	*Senecio lydenburgensis*	Forb
Eragrostis chloromelas	Grass	**Solanum mauritianum*	Shrub
Eragrostis curvula	Grass	*Sporobolus stapfianus*	Grass
Eragrostis plana	Grass	*Stoebe vulgaris*	Forb
Felicia filifolia	Forb	**Tagetes minuta*	Forb
Felicia muricata	Forb	*Tephrosia sp.*	Forb
Guilleminea densa	Forb	*Urochloamosambicensis*	Grass
Helichrysum nudifolium	Forb	**Verbena aristigera*	Forb
Helichrysum rugulosum	Forb	**Verbena bonariensis*	Forb

4.6. PLANT SPECIES OF SPECIAL CONCERN

No species of concern were recorded. The reason for their absence is likely due to the highly disturbed nature of the vegetation and the fact that most of the Red Data species are not directly associated with the immediate study area. However, some of the listed species are small and inconspicuous, and their presence cannot be completely ruled out.

4.7. ROCKY OUTCROPS

Rocky outcrops are geological features that encompass a wide variety of physical environments, including escarpments, overhangs, cliffs, tors, boulder-heaps and insular domes (inselbergs). They support high levels of species diversity and endemism, and provide stable micro-climates for thousands of years. They provide critical breeding sites for many top order mammalian and avian predators; nesting sites for colonial species such as seabirds, bats and swifts and ecological refuges for ancient lineages.

Rocky outcrops within the study area nave been mainly transformed by illegal dumping of rubble and litter. Many are no longer providing unique habitats as a result.

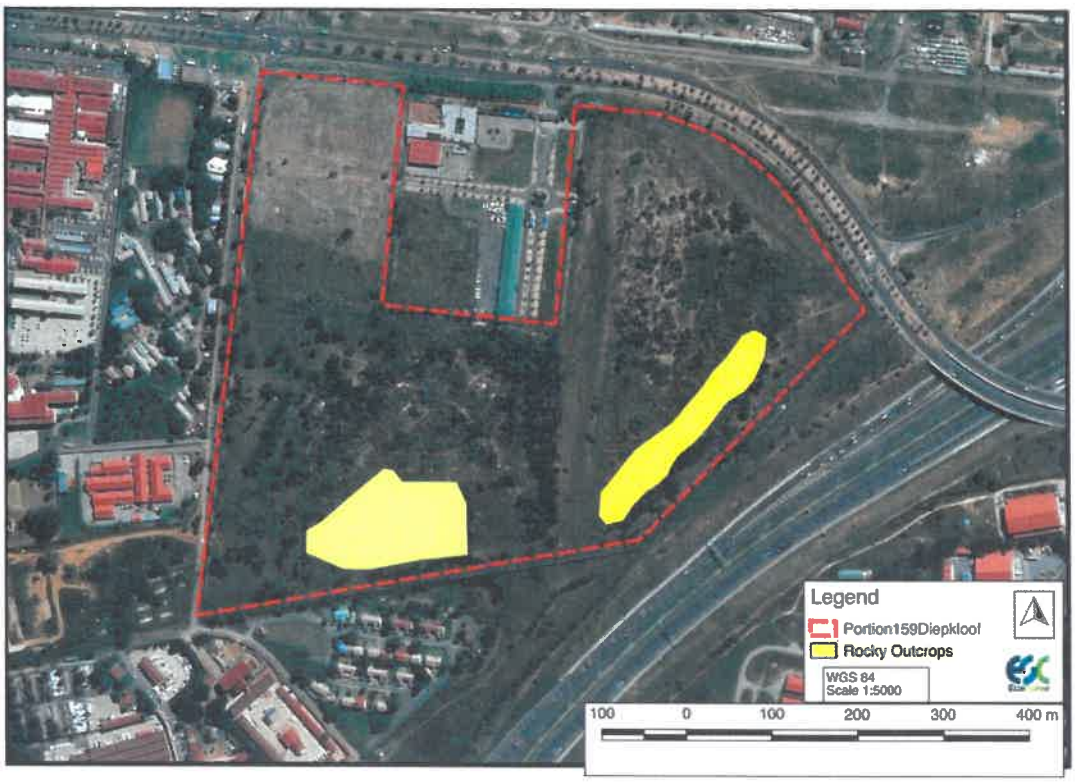


Figure 8: Rocky outcrops

4.8. GAUTENG CONSERVATION PLAN (C-PLAN)

According to Gauteng Conservation Plan version 3.3 (C Plan 3.3), the proposed area does not fall within any of the areas identified as Critical Biodiversity Areas (CBAs) –Irreplaceable or Ecological Support Areas (ESA) – Important (Figure 9).

CBAs require moderate to high levels of protection and/or management. Various moderate impact land management options exist, but ecological structure and functioning must be preserved. Ecological Support Areas are supporting zones required to prevent the degradation of Critical Biodiversity Areas and Protected Areas. These may include areas that are degraded or even transformed if these areas still play an important role in supporting CBAs.

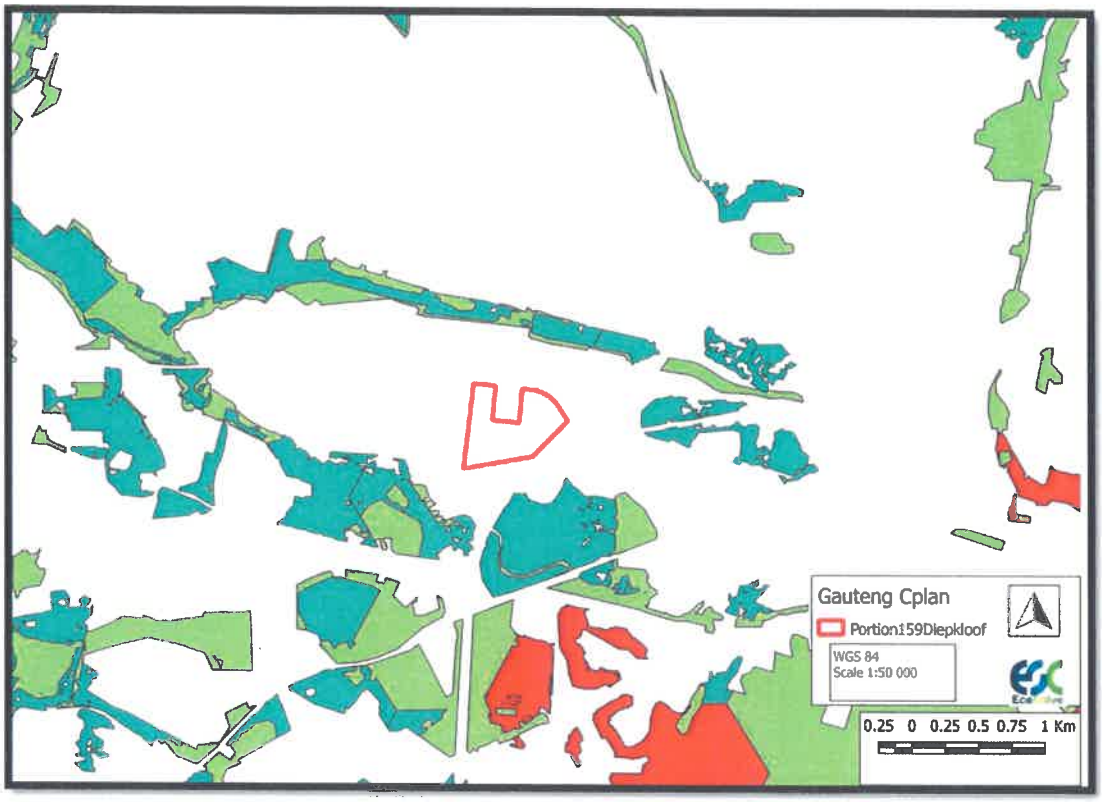


Figure 9: Conservation Plan Map

5. SOCIAL ENVIRONMENT

5.1 VISUAL

Scenic value can be described as the reaction to aesthetics of the environment as perceived by an individual or a group and therefore it is a very subjective perception. In terms of the surrounding landscape compatibility, the proposed development will fit into an existing landuse, as the area is predominantly industrial/residential. The visual receptors in the area will consist of people currently utilising the area in terms of the infrastructure already established.

5.2 HERITAGE

Phase I HIA study was indicates that no objects of any cultural (archaeological or historical) origin or significance were found on site. Phase HIA report will be submitted to the Provincial Heritage Resources Agency of Gauteng (PHRAG) for comment/approval in terms of Section 38 of the National Heritage Resources Act (Act 25 of 1999).

The establishment of Soweto is, like Johannesburg, linked directly to the discovery of Gold in 1885 (Marais, 2019). Thousands of people from around the world and South Africa flocked to the new town to seek their fortunes or to offer their labour. Within 4 years Johannesburg was the second largest city. More than half the population was black, most living in multiracial shanty towns near the gold mines in the centre of the town. As the gold mining industry developed, so did the need for labour increase. Migrant labour was started and most of these workers lived in mine compounds. However other workers had to find their own accommodation often in appalling conditions (Marais, 2019).

The first residents of what is now known as Soweto were located into the area called Klipspruit in 1905 following their relocation from "Coolietown" in the centre of Johannesburg as a result of an outbreak of bubonic plague. The Johannesburg City Council took the opportunity to establish racially segregated residential areas. Some residents were to be relocated to Alexandra Township (near the present day Sandton). This group comprised Black, Indian and Coloured families and they received freehold title to their land (this was subsequently reversed by the Apartheid Government). Only Black families were located into Klipspruit and the housing was on a rental basis. Klipspruit was subsequently renamed Pimville (Marais, 2019).

During the 1930's the demand for housing for the large numbers of black people who had moved into Johannesburg grew to such an extent that new housing was built in an area known as Orlando, named after the first administrator Edwin Orlando Leaky.

In the 1940's a controversial character James Mpanza led the first land invasion and some 20000 squatters occupied land near Orlando. James Mpanza is known as the "Father of Soweto".

In 1959 the residents of Sophiatown were forcefully removed to Soweto and occupied the area known as Meadowlands. Sir Earnest Oppenheimer, the first chairman of the Anglo-American Corporation, was appalled by the housing shortage and was instrumental in arranging a loan for the construction of additional housing and this is commemorated by the Oppenheimer Tower in Jabulani

Although no objects of heritage importance were identified, it should be noted that the possibility of unearthing archaeological or historical features or objects is always present. Should any such features be identified during the construction or development process, activities on site will have to cease and a heritage specialist should be brought in to further investigate the objects or features and provide guidance as to how the development may proceed.

5.3 Noise

Noise control must form part of the planning stage of any development. During the construction phase, noise may be generated as a result of construction related activities such as: the use of machinery and equipment, and the movement of construction vehicles etc. These potential noise impacts must be mitigated.

5.4 Air Quality

Vehicles travelling on exposed surfaces, earthworks as well as wind are the main generators of dust. The nuisance and aesthetic impacts associated with the dust generated during the construction phase should be mitigated and dust suppression measures should be implemented.

6. CONCLUSIONS AND RECOMMENDATIONS

Environmental significance of the proposed development is low as revealed by various desktop studies.

Removal of Threatened and or Protected Species (ToPS) will necessitate an application for a permit from Department of Forestry and Fisheries (DAFF). Other licenses and permits may include removal of graves. This will be confirmed during phase 2 of the project.

Due to proximity to communities and legislative requirements of NEMA, public consultations will become central to applying for the various licenses. Public participation provides the opportunity for interested and affected parties to participate and to ensure that their needs and requirements are considered. In so doing, ownership of the project is vested in both the project proponent and the community.

Table 4: Environmental Significance

Environmental Feature	Likely Impact
Rivers and Wetlands	Low
Red Data Flora	Low
Red Data Fauna	Low
Heritage	Low
Gauteng Cplan	Low
Social	Low

Possible environmental triggers as per National Environmental Management Act, 1998 (Act N0.107 of 1998). These will be confirmed with the project team and the Competent Authority prior to commencement of the Environmental Authorisation application process. An EMPr will also be developed to guide construction and operational phases of the project.

Table 5: Possible Environmental Triggers

Listed activity	Description as per regulation
GNR.327 Item 26, 07 April 2017	Residential, retail, recreational, tourism, commercial or institutional developments of 1 000 square metres or more, on land previously used for mining or heavy industrial purposes; — excluding — (i) where such land has been remediated in terms of part 8 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies; or (ii) where an environmental authorisation has been obtained for the decommissioning of such a mine or industry in terms of this Notice or any previous NEMA notice; or (iii) where a closure certificate has been issued in terms of section 43 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) for such land.
GNR.327 Item 28, 07 April 2017	Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development:

Listed activity	Description as per regulation
	(i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare; excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.
GNR.325 Item 15, 07 April 2017	The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for— (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.

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