

RICHBAY CHEMICALS (PTY) LTD

RICHBAY VOSLOORUS CHEMICAL FILLING PLANT

DRAFT SCOPING REPORT, GDARD REF: GAUT 002/19-
20/E0247, DFFE REF: 12/9/11/L210625152748/3//N

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This Draft Scoping Report (Report) for the Proposed Construction of a Filling Plant in the Vosloorus area was prepared by WSP Environmental Proprietary Limited (WSP) on behalf Richbay Chemicals (Pty) Ltd (Client), as part of the application process for Environmental Authorisation.

Unless otherwise agreed by us in writing, we do not accept responsibility or legal liability to any person other than the Client for the contents of, or any omissions from, this Report.

To prepare this Report, we have reviewed only the documents and information provided to us by the Client or any third parties directed to provide information and documents to us by the Client. We have not reviewed any other documents in relation to this Report, except where otherwise indicated in the Report.

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GLOSSARY

ABBREVIATION	MEANING
AEL	Atmospheric Emissions License
AIA	Approved Inspection Authority
AIS	Alien and Invasive Species
AQI	Air Quality Impact Assessment
BA	Basic Assessment
CA	Competent Authority
CARA	Conservation of Agricultural Resources Act
CBA	Critical Biodiversity Area
CRR	Comments and Response Report
DFFE	Department of Forestry, Environment and Fisheries
DSR	Draft Scoping Report
DWS	Department of Water and Sanitation
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EMM	Ekurhuleni Metropolitan Municipality
EMPr	Environmental Management Programme
FSR	Final Scoping Report
GA	General Authorisation
GDARD	Gauteng Department of Agriculture and Rural Development
GHS	Globally Harmonized System
H₂SO₄	Sulphuric Acid

ABBREVIATION**MEANING**

HCL	Hydrochloric Acid
HIA	Heritage Impact Assessment
I&AP	Interested And Affected Party
IDP	Integrated Development Plan
MES	Minimum Emission Standards
MHI	Major Hazardous Installation
NEMA	National Environmental Management Act
NEM: AQA	National Environmental Management: Air Quality Act
NEMBA	National Environmental Management: Biodiversity Act
NEM: WA	National Environmental Management: Waste Act
NFEPA	National Freshwater Ecosystem Priority Areas
NHRA	National Heritage Resources Act
NWA	National Water Act
PIA	Palaeontological Impact Assessment
QRA	Quantitative Risk Assessment
S&EIR	Scoping and Environmental Impact Reporting
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Information System
SANBI	South African National Biodiversity Institute
ToR	Terms of Reference
WMA	Water Management Area
WML	Waste Management Licence
WUL	Water Use License

TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	Purpose of this Report.....	1
1.2	Background Information.....	1
1.3	Environmental Assessment Practitioner	1
1.4	Scoping Terms of Reference.....	2
1.5	Draft Scoping Report Structure	3
1.6	Assumptions and Limitations	5
2	GOVERNANCE FRAMEWORK	7
2.1	Applicable Legislation	7
3	SCOPING METHODOLOGY.....	13
3.1	Application	13
3.2	S&EIR Process and Phasing	13
3.3	Baseline Environmental Assessment	15
3.4	Identification and Evaluation of Potentially Significant Impacts	15
3.5	Stakeholder Engagement	17
4	PROJECT DESCRIPTION	21
4.1	Location of the Proposed Development	21
4.2	Proposed Project Development Activities	26
5	NEED AND JUSTIFICATION	29
6	IDENTIFICATION OF ALTERNATIVES ...	30
6.1	No-Go ALternative.....	30
6.2	Location.....	30
6.3	Type of Activity.....	42
7	DESCRIPTION OF THE BASELINE ENVIRONMENT	43
7.1	Climate.....	43
7.2	Topography.....	45

7.3	Geology	46
7.4	Surface Water	47
7.5	Groundwater	48
7.6	Land Use and Capability	48
7.7	Flora and Fauna.....	50
7.8	Heritage and Archaeology	53
7.9	Palaeontology	53
7.10	Socio-Economic Profile	54
8	IDENTIFICATION OF POTENTIAL IMPACTS	56
8.1	Climate.....	56
8.2	Topography	56
8.3	Geology	56
8.4	Surface Water	56
8.5	Groundwater	57
8.6	Landuse and Capability	57
8.7	Air Quality	57
8.8	Visual	57
8.9	Flora and Fauna Impacts	58
8.10	Heritage	58
8.11	Palaeontology	58
8.12	Socio Economic Profile	58
8.13	Health and Safety	58
8.14	Summary of Potential Impacts.....	59
9	PLAN OF STUDY FOR THE ENVIRONMENTAL IMPACT ASSESSMENT REPORTING PHASE	66
9.1	Terms of Reference	66
9.2	Overview of the EIAR Tasks.....	66
9.3	Description of Alternatives.....	66



9.4	Specialist Studies to be Undertaken	66
9.5	Impact Assessment Methodology	70
9.6	Environmental Impact Assessment Report	74
9.7	Stakeholder and Authority Engagement.....	75
9.8	Notification of Environmental Authorisaton.....	76
9.9	Consultation with Authorities	76
10	WAY FORWARD.....	77

TABLES

TABLE 1-1:	DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER	1
TABLE 1-2:	LEGISLATION REQUIREMENTS AS DETAILED IN GNR 326.....	3
TABLE 2-1:	APPLICABLE LEGISLATION AND POLICIES	7
TABLE 3-1:	SIGNIFICANCE SCREENING TOOL	15
TABLE 3-2:	PROBABILITY SCORES AND DESCRIPTORS.....	16
TABLE 3-3:	SCORE NEGATIVE POSITIVE ...	16
TABLE 3-4:	IMPACT SIGNIFICANCE COLOUR REFERENCE SYSTEM TO INDICATE THE NATURE OF THE IMPACT	17
TABLE 3-5:	INTERESTED AND AFFECTED PARTIES	19
TABLE 4-1:	SITE PHOTOGRAPHS.....	21
TABLE 4-2:	AERIAL IMAGERY OF PROPOSED SITE (GOOGLE EARTH).....	22
TABLE 4-3:	CADASTRAL INFORMATION OF THE SITE.....	26
TABLE 4-4:	PROJECT SITE COORDINATES	26
TABLE 6-1:	PROJECT SITE COORDINATES	31
TABLE 6-2:	PREFERRED ALTERNATIVE – ENVIRONMENTAL SCREENING	32
TABLE 6-3:	SITE ALTERNATIVE 1 – ENVIRONMENTAL SCREENING	33
TABLE 6-4:	SITE ALTERNATIVE 2 – ENVIRONMENTAL SCREENING	33
TABLE 6-5:	SITE SENSITIVITY COMPARISON	34
TABLE 8-1:	SUMMARY OF POTENTIAL IMPACTS	59
TABLE 8-2:	MITIGATION MEASURES.....	62
TABLE 9-1:	PLAN OF STUDY STRUCTURE	66
TABLE 9-2:	SPECIALIST STUDIES	67
TABLE 9-3:	NATURE OR TYPE OF IMPACT	71
TABLE 9-4:	PHYSICAL EXTENT RATING OF IMPACT	72
TABLE 9-5:	DURATION RATING OF IMPACT	72
TABLE 9-6:	REVERSIBILITY OF THE IMPACT	72

TABLE 9-7:	MAGNITUDE RATING OF IMPACT	72
TABLE 9-8:	PROBABILITY RATING OF IMPACT	73

FIGURES

FIGURE 3-1:	S&EIR PROCESS	15
FIGURE 4-1:	PROPOSED RICHBAY FILLING PLANT LOCATION	28
FIGURE 6-1:	DISTRIBUTION JUNXION, PORT OF GAUTENG LOCATION	31
FIGURE 6-2:	ALTERNATIVE SITE LOCATIONS	35
FIGURE 6-3:	PREFERRED SITE ALTERNATIVE LOCATION	36
FIGURE 6-4:	PREFERRED SITE ALTERNATIVE COORDINATES	37
FIGURE 6-5:	SITE ALTERNATIVE1 LOCATION	38
FIGURE 6-6:	SITE ALTERNATIVE 1 COORDINATES	39
FIGURE 6-7:	SITE ALTERNATIVE2 LOCATION	40
FIGURE 6-8:	SITE ALTERNATIVE 2 COORDINATES	41
FIGURE 7-1:	AVERAGE MONTHLY TEMPERATURES IN KATLEHONG, EAST OF JOHANNESBURG (SOURCE: CLIMATE-DATA.ORG)	43
FIGURE 7-2:	AVERAGE MONTHLY PRECIPITATION IN KATLEHONG, EAST OF JOHANNESBURG (SOURCE: CLIMATE-DATA.ORG)	44
FIGURE 7-3:	VOSLOORUS WIND SPEED CHART (SOURCE: METEOBLUE.COM AS PER APRIL 2021)	44
FIGURE 7-4:	VOSLOORUS WIND ROSE (SOURCE: METEOBLUE.COM AS PER APRIL 2021)	45
FIGURE 7-5:	TOPOGRAPHICAL MAP	46
FIGURE 7-6:	GEOLOGY MAP	47
FIGURE 7-7:	SURFACE WATER AND WETLANDS	48
FIGURE 7-8:	LAND COVER MAP	49
FIGURE 7-9:	ECOLOGICAL SENSITIVITY MAP	51
FIGURE 7-10:	HABITAT SENSITIVITY MAP	52

FIGURE 7-11: PALAEONTOLOGICAL SENSITIVITY	53
FIGURE 7-12: UNEMPLOYMENT RATES IN EKURHULENI, GAUTENG PROVINCE AND SOUTH AFRICA	55

APPENDICES

A	EAP CV
A-1	Anri Scheepers
B	EAP DECLARATION OF INTEREST AND UNDERTAKING
C	STAKEHOLDER DATABASE
D	PUBLIC PARTICIPATION
D-1	Advert
D-2	Site Notices
D-3	Email Notifications
D-4	SMS Notifications
E	COMMENTS AND RESPONSES REPORT
F	SCREENING ASSESSMENTS

1 INTRODUCTION

1.1 PURPOSE OF THIS REPORT

This Draft Scoping Report (DSR) documents the process and findings of the scoping phase of the Scoping and Environmental Impact Reporting (S&EIR) process for the proposed development of a Filling Plant in the Vosloorus Area, South-East of Johannesburg.

The DSR aims to provide stakeholders with information on the proposed development including all its considered location, layout and technological alternatives, the scope of the environmental assessment, and the consultation process undertaken through the environmental impact assessment process.

1.2 BACKGROUND INFORMATION

Richbay Chemicals (Pty) Ltd (Richbay) is a chemical manufacturer and international distributor of various speciality cleaning, maintenance, and water treatment chemical products, and is a major exporter of hydrochloric acid (HCl) and sulphuric acid (H₂SO₄) in packed form. Richbay currently undertakes dangerous goods storage (below 80m³) at a site in Vosloorus, Gauteng, however they are proposing to increase the storage capacity and to install a Filling Plant, as such, Richbay has initiated the Environmental Authorisation (EA) process required for the proposed Vosloorus facility.

Richbay intends to undertake the following:

- Phase 1 for the construction of a Filling Plant;
- Phase 2 for the construction of a Acid Regeneration Plant; and
- Phase 3 for construction of a Solvent Filling Plant.

1.3 ENVIRONMENTAL ASSESSMENT PRACTITIONER

WSP Environmental (Pty) Ltd (WSP) has been appointed in the role of Independent Environmental Assessment Practitioner (EAP) to undertake the S&EIR processes for the development of the filling plant. The CV of the EAP is available in **Appendix A**. The EAP declaration of interest and undertaking is included in **Appendix B**. **Table 1-1** details the relevant contact details of the EAP. In order to adequately identify and assess potential environmental impacts, a number of specialists will support the EAP.

Table 1-1: Details of the Environmental Assessment Practitioner

ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)

WSP ENVIRONMENTAL (PTY) LTD

Company Registration:	1995/08790/07
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1.4 SCOPING TERMS OF REFERENCE

The 2014 Environmental Impact Assessment (EIA) Regulations (GNR 326), as amended, identifies the proposed biotechnology plant development as an activity being subject to an S&EIR process due to the applicability of the EIA Listing Notices Government Regulation Notice GNR 325, published on 7 April 2017. In order for the project to proceed it will require an EA from the Gauteng Department of Agriculture and Rural Development (GDARD) and a waste management licence (WML) for the treatment of hazardous waste from the Department of Forestry, Fisheries and Environment (DFFE).

As defined in Appendix 2 of GNR 326, the objective of the scoping process is to, through a consultative process:

- Identify the relevant policies and legislation relevant to the activity;
- Motivate the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location;
- Identify and confirm the preferred activity and technology alternative through an impact and risk assessment and ranking process;
- Identify and confirm the preferred site, through a detailed site selection process, which includes an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all the identified alternatives focusing on the geographical, physical, biological, social, economic, and cultural aspects of the environment;
- Identify the key issues to be addressed in the assessment phase;
- Agree on the level of assessment to be undertaken, including the methodology to be applied, the expertise required as well as the extent of further consultation to be undertaken to determine the impacts and risks the activity will impose on the preferred site through the life of the activity, including the nature, significance, consequence, extent, duration and probability of the impacts to inform the location of the development footprint within the preferred site; and
- Identify suitable measures to avoid, manage or mitigate identified impacts and to determine the extent of the residual risks that need to be managed and monitored.

Public participation is a requirement of scoping; it consists of a series of inclusive and culturally appropriate interactions aimed at providing stakeholders with opportunities to express their views, so that these can be considered and incorporated into the S&EIR decision-making process. Effective public participation requires the prior disclosure of relevant and adequate project information to enable stakeholders to understand the risks, impacts, and opportunities of the Proposed Project. The objectives of the public participation process can be summarised as follows:

- Identify relevant individuals, organisations and communities who may be interested in or affected by the Proposed Project;
- Clearly outline the scope of the Proposed Project, including the scale and nature of the existing and proposed activities;
- Identify viable Proposed Project alternatives that will assist the relevant authorities in making an informed decision;
- Identify shortcomings and gaps in existing information;
- Identify key concerns, raised by Stakeholders that should be addressed in the subsequent specialist studies;
- Highlight the potential for environmental impacts, whether positive or negative; and
- To inform and provide the public with information and an understanding of the Proposed Project, issues and solutions.

1.5 DRAFT SCOPING REPORT STRUCTURE

Table 1-2 cross-references the sections within the DSR with the legislated requirements as per Appendix 2 of GNR 326, published in 2017.

Table 1-2: Legislation Requirements as detailed in GNR 326

APPENDIX 2	LEGISLATED REQUIREMENTS AS PER THE NEMA GNR 982	RELEVANT REPORT SECTION
(a)	Details of	
	the EAP who compiled the report; and	Section 1.2 and Appendix A
	the expertise of the EAP, including a Curriculum Vitae	Appendix A
(b)	The location of the activity, including-	
	The 21 digit Surveyor code for each cadastral land parcel;	Section 5.1
	Where available, the physical address and farm name	Section 5.1
	Where the required information in terms of (i) and (ii) is not available, the coordinates of the boundary of the property.	Section 5.1
(c)	A plan which locates the proposed activities applied for at an appropriate scale, or, if it is-	
	A linear activity, a description of the corridor in which the proposed activity or activities is to be undertaken; or	N/A
	On land where the property has not been defined, the coordinates within which the activity is to be undertaken.	Section 1.2
(d)	A description of the proposed activity, including-	
	All listed and specified activities triggered;	Section 2 Table 2.1
	A description of the activities to be undertaken, including associated structures and infrastructure;	Section 5
(e)	A description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process;	Section 2
(f)	A motivation for the need and desirability for the proposed development including the need and desirability of the activity in the context of the preferred location;	Section 4
(h)	A full description of the process followed to reach the proposed preferred activity, site and location within the site, including-	
	Details of all the alternatives considered;	Section 6
	Details of the public participation undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs;	Section 3.5
	a summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them;	In Final Scoping Report (FSR)

APPENDIX 2	LEGISLATED REQUIREMENTS AS PER THE NEMA GNR 982	RELEVANT REPORT SECTION
	the environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;	Section 7
	the impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts- (aa) can be reversed; (bb) may cause irreplaceable loss of resources; and (cc) can be avoided, managed or mitigated;	Section 8
	the methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives;	Section 3.3
	positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;	Section 8
	the possible mitigation measures that could be applied and level of residual risk;	Section 8
	the outcome of the site selection matrix;	Section 6
	if no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such and	Section 6
	a concluding statement indicating the preferred alternatives, including preferred location of the activity;	Chapter 6
(i)	A plan of study for undertaking the environmental impact assessment process to be undertaken, including-	
	a description of the alternatives to be considered and assessed within the preferred site, including the option of not proceeding with the activity;	Section 6
	a description of the aspects to be assessed as part of the environmental impact assessment process;	Section 8
	aspects to be assessed by specialists;	Section 9.4
	a description of the proposed method of assessing the environmental aspects, including a description of the proposed method of assessing the environmental aspects including aspects to be assessed by specialists;	Section 9.5
	a description of the proposed method of assessing duration and significance;	Section 9.5
	an indication of the stages at which the competent authority will be consulted;	Section 9.7
	particulars of the public participation process that be conducted during the environmental impact assessment process; and	Section 9.7

APPENDIX 2	LEGISLATED REQUIREMENTS AS PER THE NEMA GNR 982	RELEVANT REPORT SECTION
	a description of the tasks that will be undertaken as part of the environmental impact assessment process;	Section 9
	identify suitable measures to avoid, reverse, mitigate or manage identified impacts and to determine the extent of the residual risks that need to be managed and monitored.	Section 9.6
(j)	An undertaking under oath or affirmation by the EAP in relation to-	
	the correctness of the information provided in the report;	Appendix B
	the inclusion of comments and inputs from stakeholders and interested and affected parties; and	Appendix B
	any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested or affected parties;	N/A
(k)	An undertaking under oath or affirmation by the EAP in relation to the level of agreement between the EAP and interested and affected parties on the plan of study for undertaking the environmental impact assessment;	Appendix B
(l)	Where applicable, any specific information required by the competent authority; and	N/A
(m)	Any other matter required in terms of section 24(4)(a) and (b) of the Act.	N/A

1.6 ASSUMPTIONS AND LIMITATIONS

General assumptions and limitations relating to the scoping study and the draft scoping report are listed below:

- The EAP hereby confirms that they have undertaken to obtain project information from the client that is deemed to be accurate and representative of the project;
- Site visits have been undertaken to better understand the project and ensure that the information provided by the client is correct, based on site conditions observed;
- The EAP hereby confirms their independence and understands the responsibility they hold in ensuring all comments received are accurately replicated and responded to within the EIA documentation;
- The comments received in response to the public participation process, are representative of comments from the broader community; and
- The competent authority would not require additional specialist input, as per the proposals made in this report, in order to make a decision regarding the application.

General assumptions and limitations relating to the biodiversity baseline and impact assessment are listed below:

- As per the scope of work, the fieldwork component of the assessment comprised of one assessment only, which was conducted during the wet season;
- This study has not assessed any temporal trends for the respective seasons; and
- Despite these limitations, a comprehensive desktop study was conducted, in conjunction with the detailed results from the surveys, and as such, there is a high confidence in the information provided.

General assumptions and limitations relating to the archaeological heritage impact assessment are listed below:

- Cultural Resources are all non-physical and physical man-made occurrences, as well as natural occurrences associated with human activity. These include all sites, structure and artefacts of importance, either

individually or in groups, in the history, architecture and archaeology of human (cultural) development. Graves and cemeteries are included in this.

- The significance of the sites, structures and artefacts is determined by means of their historical, social, aesthetic, technological and scientific value in relation to their uniqueness, condition of preservation and research potential. The various aspects are not mutually exclusive, and the evaluation of any site is done with reference to any number of these aspects.
- Cultural significance is site-specific and relates to the content and context of the site. Sites regarded as having low cultural significance have already been recorded in full and require no further mitigation. Sites with medium cultural significance may or may not require mitigation depending on other factors such as the significance of impact on the site. Sites with a high cultural significance require further mitigation.
- The latitude and longitude of any archaeological or historical site or feature, is to be treated as sensitive information by the developer and should not be disclosed to members of the public.
- All recommendations are made with full cognizance of the relevant legislation.
- It has to be mentioned that it is almost impossible to locate all the cultural resources in a given area, as it will be very time consuming. Developers should however note that the report should make it clear how to handle any other finds that might occur.

General assumptions and limitations relating to the palaeontological impact assessment are listed below:

- Most development areas have never been surveyed by a palaeontologist or geophysicist.
- Variable accuracy of geological maps and associated information.
- Poor locality information on sheet explanations for geological maps.
- Lack of published data.
- Lack of rocky outcrops.
- Inaccessibility of site.
- Insufficient data from developer and exact lay-out plan for all structures (for this report all required data/information was provided).

Notwithstanding these assumptions, it is the view of WSP that this DSR provides a good description of the issues associated with the project, and a reasonable plan of study for the EIA phase.

2 GOVERNANCE FRAMEWORK

2.1 APPLICABLE LEGISLATION

The South African regulatory framework establishes well-defined requirements and standards for environmental and social management of industrial and civil infrastructure developments. Different authorities at both national and regional levels carry out environmental protection functions. The applicable legislation and policies are shown in **Table 2-1** below.

Table 2-1: Applicable Legislation and Policies

APPLICABLE LEGISLATION AND POLICY	DESCRIPTION OF LEGISLATION
<p>The Constitution of South Africa (No. 108 of 1996)</p>	<p>The Constitution cannot manage environmental resources as a stand-alone piece of legislation hence additional legislation has been promulgated in order to manage the various spheres of both the social and natural environment. Each promulgated Act and associated Regulations are designed to focus on various industries or components of the environment to ensure that the objectives of the Constitution are effectively implemented and upheld in an on-going basis throughout the country. In terms of Section 7, a positive obligation is placed on the State to give effect to the environmental rights.</p>
<p>National Environmental Management Act (No. 107 of 1998)</p> <p>The GDARD is the competent authority</p>	<p>In terms of Section 24(2) of the NEMA, the Minister may identify activities which may not commence without prior authorisation. The Minister thus published GNR 327 (Listing Notice 1), 325 (Listing Notice 2) and 324 (Listing Notice 3) listing activities that may not commence prior to authorisation (7 April 2017).</p> <p>The regulations outlining the procedures required for authorisation are published in GNR 326 [Environmental Impact Assessment Regulations (EIA)] (7 April 2017). Listing Notice 1 identifies activities that require a Basic Assessment (BA) process to be undertaken, in terms of the EIA Regulations, prior to commencement of that activity. Listing Notice 2 identifies activities that require an S&EIR process to be undertaken, in terms of the EIA Regulations, prior to commencement of that activity. Listing Notice 3 identifies activities within specific areas that require a BA process to be undertaken, in terms of the EIA Regulations, prior to commencement of that activity.</p> <p>WSP undertook a legal review of the listed activities according to the proposed project description to conclude that the activities listed in in this section are considered applicable to the development: A S&EIR process must be followed. An EA is required and will be applied for with the GDARD.</p>
<p>Listing Notice 1: GNR 983</p> <p>The GDARD is the competent authority</p>	<p>Activity 27 - <i>The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for:</i></p> <p>(i) <i>the undertaking of a linear activity; or</i></p> <p>(ii) <i>maintenance purposes undertaken in accordance with a maintenance management plan</i></p> <p>Description:</p> <p>The site is a total size of approximately 8 ha, of which over 3 ha is covered by natural vegetation. Potentially, the construction of the plant may see over 1 ha of this natural vegetation being cleared for such construction activities.</p>
<p>Listing Notice 2: GNR 984</p>	<p>Activity 4 - <i>The development of facilities or infrastructure, for the storage, or storage and handling of dangerous goods, where such storage occurs in containers with a combined capacity of more than 500 cubic metres.</i></p>

APPLICABLE LEGISLATION AND POLICY

DESCRIPTION OF LEGISLATION

<p>The GDARD is the competent authority</p>	<p>Description:</p> <p>Chemicals will be temporarily stored in bulk tanks at the filling plant prior to them being decanted and dispatched.</p> <p>At this point, it is anticipated that the plant will have a combined storage capacity of about 2000Mt to 2500Mt.</p> <p>2500Mt is an approximate equivalent to 1.5 million cubic meters. Therefore, the anticipated combined storage exceeds the combined storage of the storage tanks.</p>									
<p>Listing Notice 2: GNR 984</p> <p>The GDARD is the competent authority</p>	<p>Activity 6 - The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding—</p> <p>(i) activities which are identified and included in Listing Notice 1 of 2014;</p> <p>(ii) activities which are included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies;</p> <p>(iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or</p> <p>(iv) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will not exceed 50 cubic metres per day.</p> <p>Description:</p> <p>The proposed activity falls under Category 6: Organic Chemicals Industry, and Subcategory 7.2: Production of Acids of Government Notice Regulation 893 of 2013 , promulgated in line with Section 21 of the National Environmental Management: Air Quality Act 39 of 2004 (NEM:AQA). As such, an Air Quality Impact Assessment (AQIA) is required as part of the EIA process to support the application for an Atmospheric Emissions License (AEL).</p> <table border="1" data-bbox="560 1301 1391 1621"> <thead> <tr> <th>Section 21 category</th> <th>Subcategory</th> <th>Process trigger</th> </tr> </thead> <tbody> <tr> <td>6: Organic Chemicals Industry</td> <td>N/A</td> <td>The use of organic chemicals including 300 tonnes per annum of Formalin (formaldehyde)</td> </tr> <tr> <td>7: Inorganic Chemicals Industry</td> <td>7.2 Production of Acids</td> <td>Secondary production of hydrochloric acid through regeneration.</td> </tr> </tbody> </table>	Section 21 category	Subcategory	Process trigger	6: Organic Chemicals Industry	N/A	The use of organic chemicals including 300 tonnes per annum of Formalin (formaldehyde)	7: Inorganic Chemicals Industry	7.2 Production of Acids	Secondary production of hydrochloric acid through regeneration.
Section 21 category	Subcategory	Process trigger								
6: Organic Chemicals Industry	N/A	The use of organic chemicals including 300 tonnes per annum of Formalin (formaldehyde)								
7: Inorganic Chemicals Industry	7.2 Production of Acids	Secondary production of hydrochloric acid through regeneration.								
<p>Listing Notice 3: GNR 985</p> <p>The GDARD is the competent authority</p>	<p>Activity 10 - The development of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such a storage occurs in containers with a combined capacity of 30 but not exceeding 80 cubic meters.</p> <p>(c) In Gauteng:</p> <p>iv) Sites identified as Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) in the Gauteng Conservation Plan or in bioregional plans;</p> <p>Description:</p>									

APPLICABLE LEGISLATION AND POLICY

DESCRIPTION OF LEGISLATION

	<p>A portion of the site contains natural vegetation that is classified as CBA (Important Area). The filling plant will have a combined storage capacity of about 1.5 million cubic meters at full filling production.</p>
<p>Listing Notice 3: GNR 985 The GDARD is the competent authority</p>	<p>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 purposes undertaken in accordance with a maintenance management plan.;</p> <p>In Gauteng, province:</p> <p>ii) Within Critical Biodiversity Areas or Ecological Support Areas identified in the Gauteng Conservation Plan or bioregional plans;</p> <p>Description:</p> <p>A portion of the site contains natural vegetation that is classified as a CBA. It is anticipated that more than 300 square meters of the CBA will be cleared for constructing the proposed filling plant and its associated infrastructure.</p>
<p>National Environmental Management: Waste Act (59 of 2008) (NEM:WA) The DFFE is the competent authority</p>	<p>In terms of section 19 of the NEM:WA, a list of waste management activities that have, or are likely to have a detrimental effect on the environment were published in GNR 921 (November 2013).</p> <p>WSP undertook a review of the listed activities according to the proposed project description to conclude that Listed Activities 2, 4 and 10 under Category B, Listed Activity 2 under Category C are considered applicable.</p> <p>A Waste Management Licence is required and will be applied for with the DFFE.</p>
<p>GNR 921: Category B The DFFE is the competent authority</p>	<p>Activity 2 - The reuse or recycling of hazardous waste in excess of 1 ton per day, excluding reuse or recycling that takes place as an integral part of an internal manufacturing process within the same premises.</p> <p>Description:</p> <p>Waste HCl will be recycled into Ferric Chloride and a small portion of Calcium Chloride at the acid regeneration plant. It is expected that approximately 30Mt of HCl will be re-processed daily to produce the same amount of Ferric Chloride.</p>
<p>GNR 921: Category B The DFFE is the competent authority</p>	<p>Activity 4 - The treatment of hazardous waste in excess of 1 ton per day calculated as a monthly average; using any form of treatment excluding the treatment of effluent, wastewater or sewage.</p> <p>Description:</p> <p>Waste HCl will be treated into Ferric Chloride and a small portion of Calcium Chloride at the acid regeneration plant. It is expected that approximately 30Mt of HCl will be re-processed daily to produce the same amount of Ferric Chloride.</p>
<p>GNR 921: Category B The DFFE is the competent authority</p>	<p>Activity 10 - The construction of a facility for a waste management activity listed in Category B of this Schedule (not in isolation to associated waste management activity).</p> <p>Description:</p> <p>A filling plant, which will include an acid regeneration plant, will be constructed. The plant will be used for the handling & storage of chemicals, as well as the re-processing of waste HCl to produce Ferric Chloride, as well as the manufacturing of caustic soda.</p>
<p>GNR 921: Category C</p>	<p>Activity 2 - The storage of hazardous waste at a facility that has the capacity to store in excess of 80m³ of hazardous waste at any one time, excluding the storage of hazardous waste in lagoons or temporary storage of such waste.</p>

APPLICABLE LEGISLATION AND POLICY

DESCRIPTION OF LEGISLATION

<p>The DFFE is the competent authority</p>	<p>Description:</p> <p>The filling plant will have a combined storage capacity of about 2 000Mt – 2 500Mt (2 204.6 tons – 2 755.7 tons) at full filling production.</p>
<p>National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)</p>	<p>The National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) (NEMBA) was promulgated in June 2004 within the framework of NEMA to provide for the management and conservation of national biodiversity. The NEMBA’s primary aims are for the protection of species and ecosystems that warrant national protection, the sustainable use of indigenous biological resources, the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources. In addition, the NEMBA provides for the establishment and functions of a South African National Biodiversity Institute (SANBI).</p> <p>SANBI was established by the NEMBA with the primary purpose of reporting on the status of the country’s biodiversity and conservation status of all listed threatened or protected species and ecosystems.</p> <p>The biodiversity assessment identifies CBAs which represent biodiversity priority areas which should be maintained in a natural to near natural state. The CBA maps indicate the most efficient selection and classification of land portions requiring safeguarding in order to meet national biodiversity objectives. As such, an Ecological Assessment will be undertaken as part of the EIA process.</p> <p>The Conservation of Agricultural Resources Act (No. 43 of 1983) (CARA) Regulations with regards to alien and invasive species have been superseded by the National Environmental Management: Biodiversity Act, 2004 (Act no. 10 of 2004) – Alien and Invasive Species (AIS) Regulations which became law on 1 October 2014.</p> <p>Specific management measures for the control of alien and invasive plants will be included in the Environmental Management Programme (EMPr)</p>
<p>The National Water Act (No. 36 Of 1998)</p>	<p>The National Water Act, 1998 (Act No. 36 of 1998) (NWA) provides the framework to protect water resources against over exploitation and to ensure that there is water for social and economic development, human needs and to meet the needs of the aquatic environment.</p> <p>The Act defines water source to include watercourses, surface water, estuary or aquifer. A watercourse is defined in the Act as a river or spring, a natural channel in which water flows regularly or intermittently, a wetland, lake or dam into which or from which water flows, and any collection of water that the Minister may declare a watercourse.</p> <p>Section 21 of the Act outlines a number of categories that require a water user to apply for a Water Use License (WUL) and Section 22 requires water users to apply for a General Authorisation (GA) with the Department of Water and Sanitation (DWS) if they are under certain thresholds or meet certain criteria. The list of water uses that require a WUL under section 21 are presented below:</p> <ol style="list-style-type: none"> a) Taking water from a water resource; b) Storage of water; c) Impeding or diverting the flow of water in a watercourse; d) Engaging in a stream flow reduction activity; e) Engaging in a controlled activity; f) Discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit; g) Disposing of waste in a manner which may detrimentally impact on a water resource;

APPLICABLE LEGISLATION AND POLICY

DESCRIPTION OF LEGISLATION

	<p>h) Disposing in any manner of water which contains waste from, or which has been heated in. any industrial or power generation process;</p> <p>i) Altering the bed, banks, course or characteristics of a watercourse;</p> <p>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</p> <p>k) Using water for recreational purposes.</p> <p>There are no water uses anticipated for the proposed project, therefore, a WUL is not required.</p>
<p>The National Heritage Resources Act (No. 25 Of 1999)</p>	<p>The National Heritage Resource Act (Act No. 25 of 1999) (NHRA) serves to protect national and provincial heritage resources across South Africa. The NHRA provides for the protection of all archaeological and palaeontological sites, the conservation and care of cemeteries and graves by the South African Heritage Resources Agency (SAHRA), and lists activities that require any person who intends to undertake to notify the responsible heritage resources agency and furnish details regarding the location, nature, and extent of the proposed development.</p> <p>In terms of the Section 38 of NHRA, any person who intends to undertake a linear development exceeding 300m in length or a development that exceeds 5000m² must notify the heritage resources authority and undertake the necessary assessment requested by that authority.</p> <p>In the case of the proposed Filling Plant, a Heritage Impact Assessment (HIA) will be undertaken looking at Archaeology, Heritage and Palaeontology as the site is approximately 80 500m². The proposed project will be brought to the attention of SAHRA, as well as the provincial Heritage Resource Agencies, who will provide comment, and provide the required approval</p>
<p>The National Environmental Management: Air Quality Act (Act 39 Of 2004)</p> <p>The Ekurhuleni District Municipality is the competent authority</p>	<p>According to Section 22 of the NEM: AQA, no person may, without a provisional atmospheric emission licence or an AEL, conduct an activity that is -</p> <ul style="list-style-type: none"> — Listed on the national list anywhere in the Republic; or — Listed on the list applicable in a province anywhere in that province. <p>Listed activities and associated minimum emission standards (MES) were published in Government Notice 248 of 2010, Government Gazette 33064 in-line with Section 21 of NEM: AQA. An amended list of activities was published in Government Notice 893 of 2013, Government Gazette 37054, in Government Notice 551 of 2015, Government Gazette 38863 and further in Government Notice 1207 of 2018, Government Gazette 42013. According to the listed activities and associated minimum emission standards, the proposed operations will trigger the following listed activities:</p> <ul style="list-style-type: none"> — Category 6 Organic Chemicals Industry; — Category 7, Subcategory 7.2 :Production of Acids; and — Subcategory 7.7 Production of Caustic Soda. <p>An AEL will be applied for due to the associated triggers.</p>
<p>The Hazardous Substances Act (No. 15 Of 1973)</p>	<p>The Hazardous Substances Act (No. 15 of 1973) provides measures for the control of substances and certain electronic products that may be toxic, corrosive, irritant, strongly sensitizing or flammable in nature which may cause injury or ill-health to or death of human beings. The Act divides the substances or products into groups in relation to the degree of danger and makes provision for the prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of such substances and products.</p> <p>On review of the national standard SANS 10234:2008 Globally Harmonized System of classification & labelling of chemicals (GHS), WSP noted that a number of the</p>

**APPLICABLE LEGISLATION
AND POLICY**

DESCRIPTION OF LEGISLATION

	<p>chemicals proposed for storage at the site are listed in Appendix A of the Standard, therefore the Standard is applicable.</p> <p>Where substances are produced, used, handled or stored in such a form and quantity that it has the potential to cause a major accident, a Major Hazardous Installation (MHI) designation may be assigned to the facility. Therefore, it is recommended that a risk assessment is undertaken as part of the S&EIR process by an Approved Inspection Authority (AIA) in order to confirm whether the facility will be an MHI.</p>
<p>Ekurhuleni Integrated Development Plan (2017/018)</p>	<p>The main purpose of the Integrated Development Plan (IDP) is to foster more appropriate service delivery by providing the framework for economic and social development within the municipality. In doing so it contributes towards eradicating the development legacy of the past, operationalises the notion of developmental local government and foster a culture of co-operative governance amongst the three spheres.</p> <p>Integrated development planning is a process whereby municipalities prepare strategic development plans for a five-year period. IDPs are the main platform through which sustainable provision of service delivery could be achieved. They intend to promote co-ordination between local, provincial and national government. Once adopted by Council, these plans should inform planning, decision making, budgeting, land management, promotion of local economic development, and institutional transformation in a consultative systematic and strategic manner.</p> <p>The main objective of developing an IDP is the promotion of developmental local government, through the following:</p> <ul style="list-style-type: none"> – Institutionalising performance management in order to ensure meaningful, effective and efficient delivery (monitoring, evaluation and review), speed up service delivery through making more effective use of scarce resources; – Enabling the alignment and direction of financial and institutional resources towards agreed policy objectives and programmes; and – Ensure alignment of local government activities with other spheres of development planning through the promotion of intergovernmental co-ordination. <p>The IDP also aims to:</p> <ul style="list-style-type: none"> – Create a higher level of focus and thereby improve the strategic nature of the document; – Align this strategic document with the limited financial and human resources; – Align the IDP with the activities of the municipality’s departments and other social partners in other spheres of government; and – Align the IDP with the various sector and management plans of the municipality.

3 SCOPING METHODOLOGY

The scoping process was initiated in accordance with Appendix 2 of GNR 326 pertaining to applications subject to an S&EIR process.

3.1 APPLICATION

The application phase will consist of the completion of the appropriate application form by the EAP and the Proponent as well as the subsequent submission and registration of the application for EA with GDARD.

A reference number (Gaut 002/19-20/E0247) was allocated for the EA application by the GDARD. A reference number (12/9/11/L210625152748/3/N) was allocated to the WML by the DFFE. The reference numbers will appear in all subsequent official S&EIR related correspondence with the authorities and the public.

The DSR will be submitted to the GDARD and DFFE along with the application.

3.2 S&EIR PROCESS AND PHASING

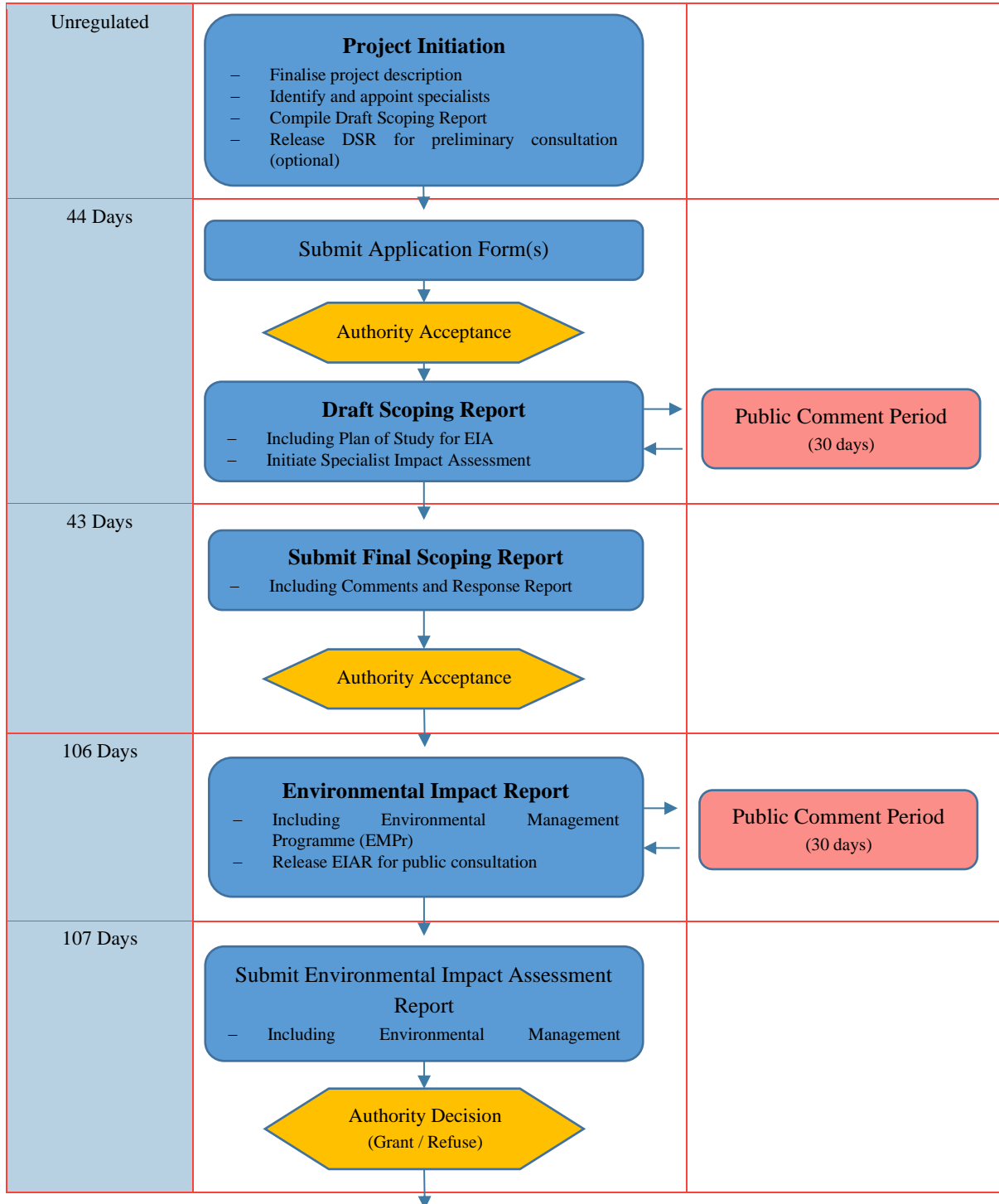
The S&EIR process consists of various phases with associated timelines as defined in GNR 326. The process can generally be divided into four main phases, namely; (i) an unregulated Pre application Phase, (ii) an Application and Scoping Phase (**current phase**), (iii) an Impact Assessment Phase and (iv) Authorisation and Appeal Phase, as indicated in. The S&EIR process is shown in **Figure 3-1**.

The main objectives of the phases can be described as follows:

- Pre-Application Phase:
 - Undertake consultation meetings with the relevant authorities to confirm the required process and general approach to be undertaken;
 - Identify stakeholders, including neighbouring landowners/residents and relevant authorities;
 - Compile a DSR describing the affected environment and present an analysis of the potential environmental issues and benefits arising from the proposed project that may require further investigation in the Impact Assessment Phase;
 - Develop draft terms of reference for the specialist studies to be undertaken in the Impact Assessment Phase; and
 - Inform stakeholders of the proposed project, feasible alternatives and the S&EIR process and afford them the opportunity to register and participate in the process and identify any issues and concerns associated with the proposed project.
- Application and Scoping Phase:
 - Compile and submit application forms to the competent authority and pay the relevant application fees;
 - Incorporate comments received from stakeholders during the pre-application phase into the DSR;
 - Should significant amendments be required, release the updated DSR for a 30 day comment period to provide stakeholders with the opportunity to review the amendments as well as provide additional input if required; and
 - Submit the finalised FSR, following the consultation period, to the relevant authorities, in this case the GDARD and the DFFE, for acceptance/rejection.
- Impact Assessment Phase:
 - Continue to inform and obtain contributions from stakeholders, including relevant authorities, stakeholders, and the public and address their relevant issues and concerns;
 - Assess in detail the potential environmental and socio-economic impacts of the project as defined in the DSR;
 - Identify environmental and social mitigation measures to avoid and/or address the identified impacts;
 - Develop and/or amend environmental and social management plans based on the mitigation measures developed in the Environmental Impact Assessment Report (EIAR);

- Submit the EIAR and the associated EMPr to the competent authority to undertake the decision making process;
- Authorisation and Appeal Phase;
- The GDARD and DFEE to provide written notification of the decision to either grant or refuse EA for the proposed project; and
- Notify all registered I&APs of the decision and right to appeal.

SCOPING & EIA PROCESS



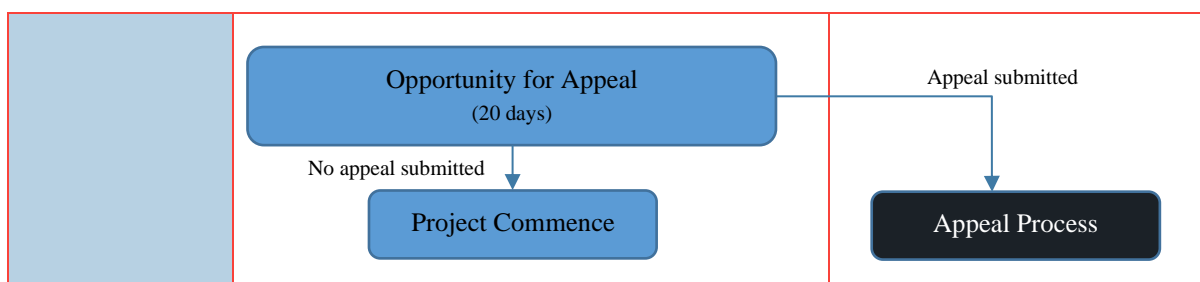


Figure 3-1: S&EIR Process

3.3 BASELINE ENVIRONMENTAL ASSESSMENT

The property where the development will occur is owned by Bulldog Projects (Pty) Ltd and landowner consent has been obtained. The site has been the subject of a number of specialist assessments in support of a parallel planning and statutory approvals process being undertaken for the proposed development. The specialist studies from this process and further research have been utilised to support the Filling Plant statutory application process. Therefore, the description of the baseline environment has been compiled through a combination of site investigations, desktop reviews and information obtained from the specialist assessments. Desktop reviews made use of available information including existing reports, aerial imagery and mapping.

3.4 IDENTIFICATION AND EVALUATION OF POTENTIALLY SIGNIFICANT IMPACTS

The potential impacts associated with the proposed development were determined at both a desktop level based on existing information, as well as the field assessment. The following methodology was used:

- Identify potential sensitive environments and receptors that may be impacted on by the proposed development;
- Identify the type of impacts that are most likely to occur (including cumulative impacts);
- Determine the nature and extent of the potential impacts during the various developmental phases, including, construction, operation and decommissioning;
- Identify potential No-Go areas (if applicable); and
- Summarise the potential impacts that will be considered further in the EIA phase through detailed specialist studies.

Appendix 2 of GNR 326 requires the identification of the significance of potential impacts during scoping. To this end, an impact screening tool has been used in the scoping phase. The screening tool is based on two criteria, namely probability; and, consequence, where the latter is based on general consideration to the intensity, extent, and duration.

The scales and descriptors used for scoring probability and severity are detailed in **Table 3-2** and **Table 3-3** respectively.

Table 3-1: Significance Screening Tool

CONSEQUENCE SCALE

PROBABILITY SCALE		1	2	3	4
	1		Very Low	Very Low	Low
2		Very Low	Low	Medium	Medium

	3	Low	Medium	Medium	High
	4	Medium	Medium	High	High

Table 3-2: Probability Scores and Descriptors

SCORE	DESCRIPTOR
4	Definite: The impact will occur regardless of any prevention measures
3	Highly Probable: It is most likely that the impact will occur
2	Probable: There is a good possibility that the impact will occur
1	Improbable: The possibility of the impact occurring is very low

Table 3-3: Score Negative Positive

SCORE	NEGATIVE	POSITIVE
4	Very severe: An irreversible and permanent change to the affected system(s) or party(ies) which cannot be mitigated.	Very beneficial: A permanent and very substantial benefit to the affected system(s) or party(ies), with no real alternative to achieving this benefit.
3	Severe: A long term impacts on the affected system(s) or party(ies) that could be mitigated. However, this mitigation would be difficult, expensive or time consuming or some combination of these.	Beneficial: A long term impact and substantial benefit to the affected system(s) or party(ies). Alternative ways of achieving this benefit would be difficult, expensive or time consuming, or some combination of these.
2	Moderately severe: A medium to long term impacts on the affected system(s) or party (ies) that could be mitigated.	Moderately beneficial: A medium to long term impact of real benefit to the affected system(s) or party(ies). Other ways of optimising the beneficial effects are equally difficult, expensive and time consuming (or some combination of these), as achieving them in this way.
1	Negligible: A short to medium term impacts on the affected system(s) or party(ies). Mitigation is very easy, cheap, less time consuming or not necessary.	Negligible: A short to medium term impact and negligible benefit to the affected system(s) or party(ies). Other ways of optimising the beneficial effects are easier, cheaper and quicker, or some combination of these.

The nature of the impact must be characterised as to whether the impact is deemed to be positive (+ve) (i.e. beneficial) or negative (-ve) (i.e. harmful) to the receiving environment/receptor. For ease of reference, a colour reference system (**Table 3-4**) has been applied according to the nature and significance of the identified impacts.

Table 3-4: Impact Significance Colour Reference System to Indicate the Nature of the Impact

Negative Impacts (-ve)	Positive Impacts (+ve)
Negligible	Negligible
Very Low	Very Low
Low	Low
Medium	Medium
High	High

3.5 STAKEHOLDER ENGAGEMENT

3.5.1 PURPOSE OF STAKEHOLDER ENGAGEMENT

Stakeholder engagement comprises a series of inclusive and culturally appropriate interactions aimed at providing stakeholders with opportunities to express their views, so that these can be considered and incorporated into the S&EIR process. Effective stakeholder engagement requires the prior disclosure of relevant and adequate project information to enable stakeholders to understand the risks, impacts, and opportunities of the proposed project.

The objectives of the stakeholder engagement process can be summarised as follows:

- Identify relevant individuals, organisations and communities who may be interested in or affected by the Proposed Project;
- Clearly outline the scope of the Proposed Project, including the scale and nature of the existing and proposed activities;
- Identify viable proposed project alternatives that will assist the relevant authorities in making an informed decision;
- Identify shortcomings and gaps in existing information;
- Identify key concerns, raised by Stakeholders that should be addressed in the subsequent specialist studies;
- Highlight the potential for environmental impacts, whether positive or negative; and
- To inform and provide the public with information and an understanding of the proposed project, issues and solutions.

In accordance with the NEMA, GNR 326, Chapter 6, the following activities have taken place or are proposed to take place within the DSR review period or beyond.

3.5.2 WHAT IS AN INTERESTED AND AFFECTED PARTY?

An interested and affected party (I&AP) is defined as any person, group of persons or organisations interested in or affected by an activity, and any organ of state that may have jurisdiction over any aspect of the activity.

- The difference between an I&AP and a registered I&AP:
- An I&AP can be directly or indirectly impacted on by a proposed activity.
- A registered I&AP is a person whose name has been placed on the register of registered I&APs. According to the PPP Guidance document, 2017, only registered I&APs will be notified:

- Of the availability of reports and other written submissions made to the Competent Authority (CA) by the Applicant; and
- Of the outcome of the application, the reasons for the decision, and that an appeal may be lodged against a decision.

For the purpose of this report, registered I&APs will be referred to as Stakeholders.

3.5.3 RIGHTS, ROLES AND RESPONSIBILITIES OF THE STAKEHOLDER

In terms of Chapter 6, specifically Section 43(1) of the NEMA EIA Regulations 2014, as amended, registered stakeholders have the right to bring to the attention of the CA any issues that they believe may be of significance to the consideration of the application. The rights of stakeholder are qualified by certain obligations, namely:

- Stakeholders must ensure that their comments are submitted within the timeframes that have been approved by the GDARD and the DFFE, or within any extension of a timeframe agreed by the Proponent, EAP or CA;
- Disclose to the EAP any direct business, financial, personal or other interest that they might have in the approval or refusal of the application;

The roles of stakeholders in a public participation process usually include one or more of the following:

- Assisting in the identification and prioritisation of issues that need to be investigated;
- Making suggestions on alternatives and means of preventing, minimising and managing negative impacts and enhancing Proposed Project benefits;
- Assisting in or commenting on the development of mutually acceptable criteria for the evaluation of decision options;
- Contributing information on public needs, values and expectations;
- Contributing local and traditional knowledge; and
- Verifying that their issues have been considered.

In order to participate effectively, stakeholders should:

- Become involved in the process as early as possible;
- Register as a stakeholder;
- Advise the EAP of other stakeholders who should be consulted;
- Contribute towards the design of the public participation process (including timeframes) to ensure that it is acceptable to all stakeholders;
- Follow the process once it has been concluded;
- Read the material provided and actively seek to understand the issues involved;
- Give timely responses to correspondence;
- Be respectful and courteous towards other stakeholders;
- Refrain from making subjective, unfounded or ill-informed statements; and
- Recognise that the process is confined to issues that are directly relevant to the application.

3.5.4 STAKEHOLDER IDENTIFICATION

Section 41 of the 2017 EIA Regulations states that written notices must be given to identified stakeholders as outlined in **Table 3-5**.

Relevant authorities (Organs of State) have been automatically registered as I&APs. In accordance with the EIA Regulations, 2014 (as amended), all other persons must request in writing to be placed on the register, submit written comments or attend meetings in order to be registered as stakeholders and included in future communication regarding the project.

Table 3-5: Interested and Affected Parties

NEMA REQUIREMENT	DISCUSSION
<i>(i) the owner or person in control of that land if the applicant is not the owner or person in control of the land</i>	The landowner/s within the project area will be notified of the S&EIR process via email and/or sms.
<i>(ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken</i>	The landowner/s landowners will be notified of the proposed amendment.
<i>(iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken</i>	Adjacent landowners and occupier details will be collected and the landowners notified via a project notification letter sent via email and/or sms notification.
<i>(iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area</i>	The Ward Councillor from Ward 45 City of Ekurhuleni Metropolitan Municipality (EMM) (Makhosi Calinda Lehari) has been included on the stakeholder database.
<i>(v) the municipality which has jurisdiction in the area</i>	The EMM has been included on the stakeholder database.
<i>(vi) any organ of state having jurisdiction in respect of any aspect of the activity</i>	The GDARD has been consulted as the CA regarding the EA application and the DFFE has been consulted as the CA for the WML application.
<i>(vii) any other party as required by the competent authority.</i>	All tiers of government, namely, national, provincial, local government and parastatals have been included on the stakeholder database. Inclusive of: <ul style="list-style-type: none"> — DFFE; — GDARD; — DFFE Biodiversity Conservation Unit; — SAHRA; and — EMM.

3.5.5 NOTIFICATION OF POTENTIAL I&APS

In accordance with GNR 326 Section 41(2)(a-b) site notices were developed (see **Appendix D**) and placed at the following strategic places:

- Site Boundary Fence;
- Rebontsheng Primary School;
- Orhovelani Education Centre; and
- Masithwalisane Secondary School.

Proof of the site notices will be included in the Final Scoping Report.

The site notice serves to inform the occupiers of the land along with the newspaper advert and existing stakeholder database.

In accordance with GN. R 326 41(2)(c) of Chapter 6 an advert will be placed in a newspaper. There are many local languages spoken in the area with English being considered a universal language; therefore, the newspaper advert will be published in English only. A copy of the advert will be included **Appendix D**. Proof of the advert publication will be included in the FSR.

Should the EAP identify an affected stakeholder, and be made aware of his/her existence by the ward councillor, efforts will be made to ensure his/her participation in the stakeholder engagement process [as required by Section 41(2) (e) of Chapter 6].

In addition to the minimum requirements outlined in GNR 326, the EAP will undertake the following:

- Distribution of notification letters to the stakeholders via email and bulk sms (where contact data was available).

Any stakeholder who submits a comment during the course of the process will automatically be registered on the project specific stakeholder database. Comments received during the DSR review period will be included in the FSR as part of the comments and responses report (CRR) in **Appendix D** and submitted to the competent authority.

3.5.6 PUBLIC REVIEW OF THE DRAFT SCOPING REPORT

The DSR will be placed on public review for a period of 30 days from 5 July 2021 to 4 August 2021, at the Proposed Site. The report was also made available on the WSP website (<http://www.wsp-pb.com/en/WSP-Africa/What-we-do/Services/All-Services-A-Z/Technical-Reports/>).

All registered stakeholders and authorising/commenting state departments will be notified of the public review period as well as the locations of the DSRs via email and bulk sms. The abovementioned plan, for notification and provision of reports, will also be utilised for the review of the FSR as well as the EIAR once the EIAR Phase has commenced.

3.5.7 COMMENT AND RESPONSE REPORT

All concerns, comments, viewpoints and questions (collectively referred to as 'issues' will be documented and responded to adequately in a CRR, which will be attached as **Appendix D** of the FSR. The CRR will record the following:

- List of all issues raised;
- Record of who raised the issues;
- Record of where the issues were raised;
- Record of the date on which the issue was raised; and
- Response to the issues.

4 PROJECT DESCRIPTION

4.1 LOCATION OF THE PROPOSED DEVELOPMENT

The site is located approximately 26 km South East of Johannesburg, between the N3 and the R103 roads, and can be accessed using the Waterlands Road that connects to the R103. It is on Portion 86 of Farm Vlakplaats 138/IR, Vosloorus, Gauteng Province. The locality of the site is depicted in **Figure 4-1**. Photographs of the site are provided in **Table 4-1**, in addition historic aerial imagery of the site is provided in **Table 4-2**.

Table 4-1: Site Photographs





Table 4-2: Aerial Imagery of Proposed Site (Google Earth)



6 February 2003



September 2008



25 December 2010



30 June 2013



29 May 2014



28 September 2016



15 August 2019

The site is located in an industrial area and is therefore surrounded by other industrial holdings including:

- A truck and heavy equipment business adjacent to the site (north of the site); and
- A corrosion coating (painting, lining, coating etc.) business opposite the site (east of the site).

Other industrial holdings around the area include scrap yards and salvage yards.

An open grassland is located south of the site, and the township of Vosloorus is located about 150m west of the site, across the N3 highway.

The project site information is indicated in **Table 4-3** below.

Table 4-3: Cadastral Information of the Site

DETAILS REQUIRED AS PER GN.R 326 ANNEX 1 (3)	DETAIL
21 Digit Surveyor General Code of each Cadastral Land Parcel	T 0IR 0000 00000138 00086
Physical Address and Farm Name	Portion 86 of Farm Vlakplaats 138/IR
Landuse Zoning	Industrial

The project site coordinates are indicated **Table 4-4** below.

Table 4-4: Project Site Coordinates

SITE CORNER	LATITUDE	LONGITUDE
Corner 1	26°21.460'S	28°14.046'E
Corner 2	26°21.456'S	28°14.286'E
Corner 3	26°21.579'S	28°14.277'E
Corner 4	26°21.580'S	28°14.057'E
Centre Point	26°21.517'S	28°14.170'E

4.2 PROPOSED PROJECT DEVELOPMENT ACTIVITIES

Richbay proposes to establish a Filling Plant in. The plant will be commissioned in three stages during which the following operational activities will be undertaken:

4.2.1 PHASE 1: FILLING PLANT

Phase 1 of the development is the construction of the Filling Plant. No manufacturing will be undertaken during this phase. At the Filling Plant, various chemicals will be brought in and decanted from bulk tankers to medium sized packages. The packed products will be transferred to the warehouse in preparation for distribution to customers. Palletizing strapping and partial dilutions might be required. Chemicals to be decanted in the Filling Plant include:

- Water purification chemicals: HCl, H₂SO₄, FeCl₃, sodium hypochlorite (NaOCl), caustic soda (NaOH), sodium chlorite liquid (NaClO₂) and sodium metabisulphite (Na₂S₂O₅);
- Nitric acid (HNO₃);
- Formalin (CH₂O);
- Sodium laureth sulphate (SLES, CH₃(CH₂)₁₁(OCH₂CH₂)_nOSO₃Na) 70%;

- Linear alkyl benzene sulphonic acid (LABSA, $C_{18}H_{30}O_3S$);
- Soda ash (Na_2CO_3);
- Chlorine (CL);
- Potassium hydroxide (NaOH) liquid; and
- Phosphoric acid (H_3PO_4).

It is estimated that at full operational capacity, the Filling Plant will have a maximum of 1.155 m³ total storage capacity. All HCl storage tanks will be ducted through the HCl scrubber located in the Acid Regeneration Plant (Phase 2).

4.2.2 PHASE 2: ACID REGENERATION PLANT

Phase 2 includes the construction of an Acid Regeneration Plant for the reprocessing of waste HCl into ferric chloride and a small portion of calcium chloride. This process is detailed as follows:

- Waste acid will go through an iron exchange process and strengthened with HCl (from the Phase 1 Filling Plant);
- The mixture will then be put through an evaporation process (with the use of a paraffin fuelled boiler) to increase the percentage of $FeCl_3$ from approximately 30% to 40-44%;
- $FeCl_3$ will be stored in bulk tanks and then decanted into smaller pack sizes or bulk road tankers for distribution; and
- Waste zinc chloride ($ZnCl_2$) will be sold to the market as a dust suppressor.
- Exhaust emissions from the evaporator will pass through a scrubber to remove HCl from flue gases prior to release.

4.2.3 PHASE 3: SOLVENT FILLING PLANT

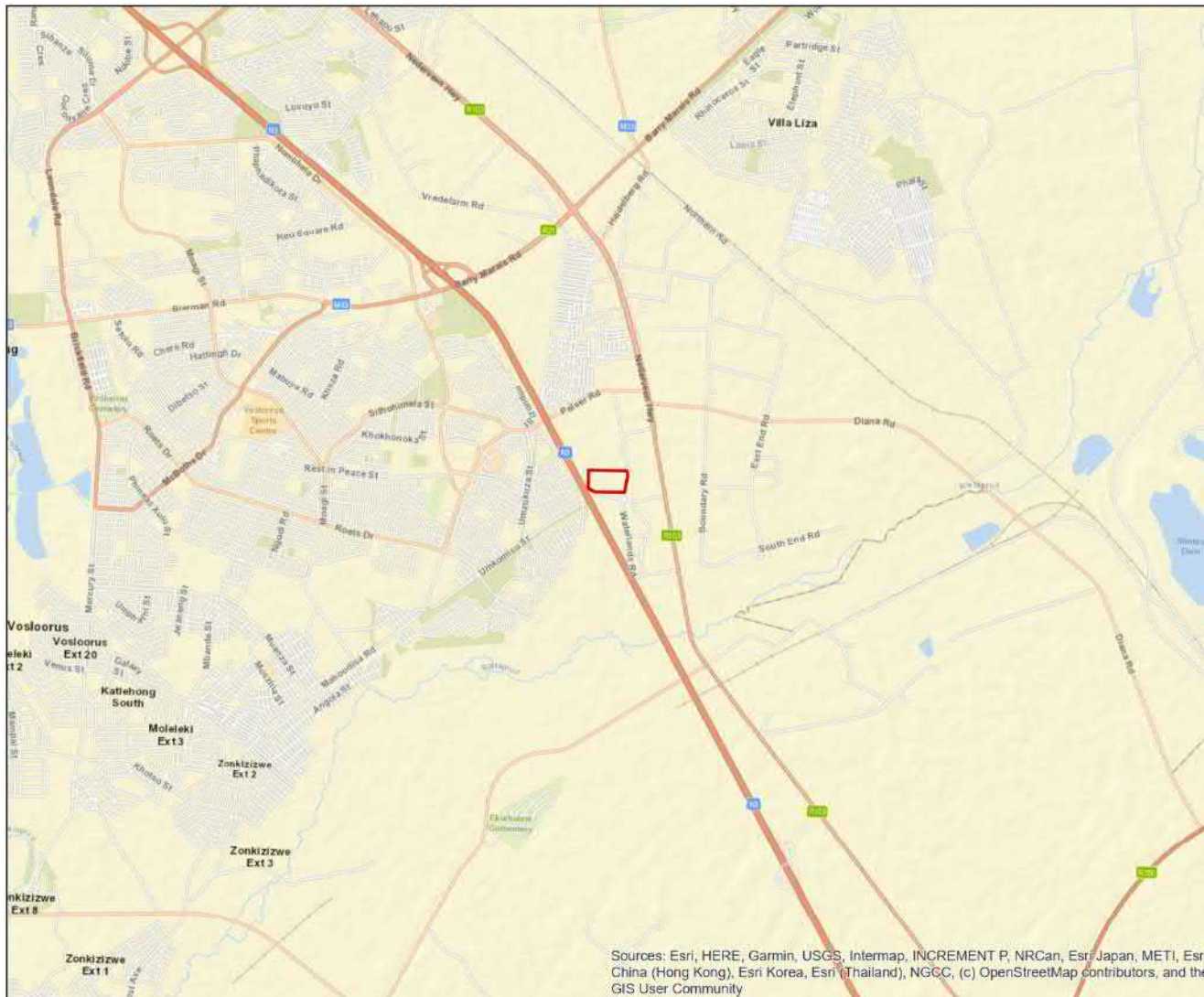
Phase 3 includes the construction of a Solvent Filling Plant. Products will be decanted from bulk storage tanks to medium tanks and then smaller package sizes as required. The packed product is transferred to the warehouse for distribution. Palletizing and strapping might be required.

Solvent chemicals to be stored and decanted are as follows:

- Methanol / ethanol;
- Thinners;
- Shelsol A;
- Formalin;
- Paraffin;
- Benzine;
- Toluene;
- Acetone; and
- Diesel.

It is estimated that at full operational capacity, the Solvent Filling Plant will have a maximum of 352 m³ total storage capacity.

It is proposed that each of the three phases be operated on an individual portion of the site, as such a large enough site is required.



**RICHBAY CHEMICALS
VOSLOORUS FILLING PLANT**

VOSLOORUS FILLING PLANT
LOCATION

Legend

Preferred Alternative

N

0 500 1000 1500 2000
Metres

DATA SOURCE:
APC GIS 10.2

PROJECTION: UTM Zone 35S (WGS1984)

PROJECT TITLE: RICHBAY VOSLOORUS

PROJECT NO: 41101911

SCALE: 1:60 000 AT A4 DATE: 2021/04/08

DRAWN BY: ANNE SCHNEPPERS

REVIEWED BY: ADHELE STRONG

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Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Figure 4-1: Proposed Richbay Filling Plant Location

5 NEED AND JUSTIFICATION

Richbay has existing chemical filling plants in South Africa, however in order to be closer to the northern market in South Africa a Filling Plant is required in Gauteng. The site in Gauteng is centrally located and in close proximity to the major routes in the Province.

Ferric Chloride is used in a wide range of applications in the industrial sector including surface water clarification, heavy metal precipitation, industrial effluent treatment and phosphate precipitation in sewage treatment.

Currently, one company in the country produces and supplies Ferric Chloride to South Africa and other neighbouring countries. This serves as a motivation for Richbay to increase the supply of the product, particularly to the neighbouring countries located further north of the country and a great distance away from the existing supplier. This therefore entails that the Filling Plant located in Vosloorus, will have a competitive advantage owing to the shorter distance to be travelled to transport the product to these neighbouring countries and hence, enhance the economic benefits locally.

Local benefits of the proposed development include benefits to the local economy through possible job creation and local supplier procurement during the construction phase as well as during the operational phase of the development.

6 IDENTIFICATION OF ALTERNATIVES

6.1 NO-GO ALTERNATIVE

The no-go alternative is the option of not undertaking the proposed development and the continuation of the status quo. The following negative impacts would result:

- There will be no economic boost in the region which would have fed into the industrial sector; and
- The anticipated job and skills development opportunities and employment the project presents will not be generated.

Although the no-go alternative sees the continuation of the status quo and leads to missed opportunities, there are positive impacts it provides. These include:

- All negative impacts discussed in Section 8 of this report are avoided;
 - The air quality of the area will not be further affected; and
 - There will be a potential to preserve any heritage and palaeontological resources in the area as the site is flagged as a high-risk area for palaeontological resources.
-

6.2 LOCATION

Three alternative site locations were identified and are discussed below and illustrated **Figure 6-2**.

6.2.1 PREFERRED ALTERNATIVE

The site is located approximately 26 km South East of Johannesburg, between the N3 and the R103 roads, and can be accessed using the Waterlands Road that connects to the R103. It is on Portion 86 of Farm Vlakplaats 138/IR, Vosloorus, Gauteng Province. The locality of the site is depicted in **Figure 6-3**.

The site is situated on the main freight corridor between Durban and Johannesburg, including the N3 highway and Transnet's Natcor railway line, and are being proposed as a way of improving freight logistics in Gauteng and reducing road congestion in and around Johannesburg.

The site is adjacent to the proposed Distribution Junxion, Port of Gauteng (**Figure 6-1**). The Distribution Junxion Port of Gauteng is poised to become South Africa's most desired and optimally located inland port due to its superior location, topography and scale. Like a seaport, this inland port sits on the entry and exit points for imports into and exports out of Gauteng, Southern Africa.

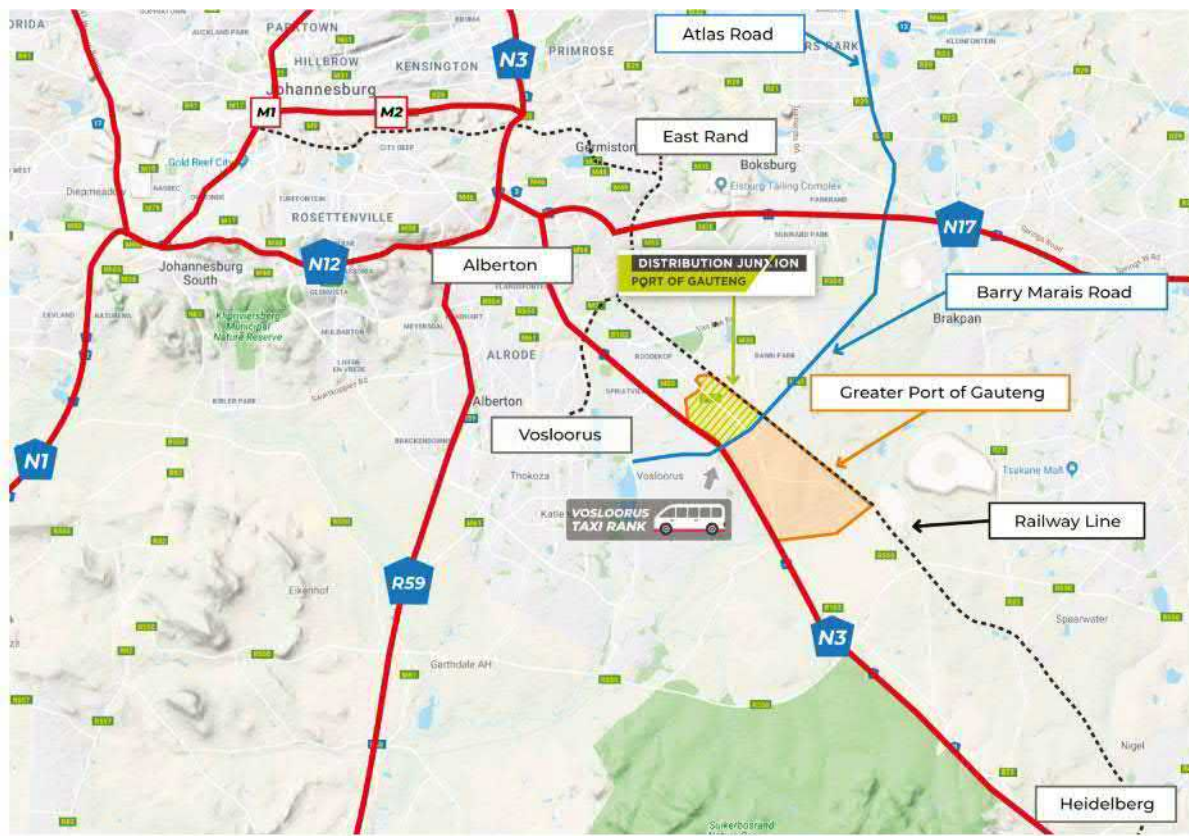


Figure 6-1: Distribution Junxion, Port of Gauteng Location

The site is surrounded by other industrial holdings including:

- A truck and heavy equipment business (approximately 250m north of the site); and
- A corrosion coating (painting, lining, coating etc.) business opposite the site (east of the site).

Other industrial holdings around the area include scrap yards and salvage yards.

An open grassland is located north and south of the site, and the township of Vosloorus is located about 150m west of the site, across the N3 highway.

The project site coordinates are indicated **Table 4-4** and **Figure 6-4**.

Table 6-1: Project Site Coordinates

SITE CORNER	LATITUDE	LONGITUDE
Corner 1	26°21.460'S	28°14.046'E
Corner 2	26°21.456'S	28°14.286'E
Corner 3	26°21.579'S	28°14.277'E
Corner 4	26°21.580'S	28°14.057'E
Centre Point	26°21.517'S	28°14.170'E

Environmental sensitivities associated with the preferred site are indicated in **Table 6-2** and the Screening assessment included in **Appendix F**.

Table 6-2: Preferred Alternative – Environmental Screening

THEME	SENSITIVITY
Development Zones	Air Quality Priority Areas
Agricultural	High Sensitivity
Animal Species	Medium Sensitivity
Aquatic Biodiversity	Low Sensitivity
Archaeological and Cultural Heritage	Low Sensitivity
Civil Aviation	Medium Sensitivity
Defence	Low Sensitivity
Palaeontology	Very High Sensitivity
Plant Species	Medium Sensitivity
Terrestrial Biodiversity	Very High Sensitivity

The preferred location as described in Section 5.1 was chosen based on the following factors:

- The surrounding area is classified as and suitable for industrial activity.
- Much of the site has already been transformed and is currently used for dangerous goods storage and previously as a sand blasting business. A very small portion of natural habitat will be impacted upon by the proposed development.
- The site is located a fair distance from the nearest river/stream, therefore the chances of affecting surface water resources are minor.
- The site is in close proximity to Vosloorus which is part of the integration zones of the Ekurhuleni Metropolitan Municipality.
- The site is situated in close proximity to major export/import routes.

6.2.2 ALTERNATIVE 1

The site is located approximately 28 km East of Johannesburg, between the R23 and the N17 roads. It is on Erf 499 of Apex, Gauteng Province. The locality of the site is depicted in **Figure 6-5**.

There is an existing environmental authorisation for the development of a commercial park, however the authorisation does not include the site specific activities such as the storage of dangerous goods or treatment of hazardous waste.

The site is surround by industries to the north, south and west, to the East there is open grassland. The site immediately adjacent to the North, Erf 451 of Apex, has two ammonia storage tanks bordering Site Alternative 1. This is a concern from a health and safety perspective and is considered risk and as such not preferred.

Environmental sensitivities associated with Site Alternative 1 are indicated in **Table 6-3** and the Screening assessment included in **Appendix F**.

Table 6-3: Site Alternative 1 – Environmental Screening

THEME	SENSITIVITY
Development Zones	Air Quality Priority Areas
Agricultural	High Sensitivity
Animal Species	High Sensitivity
Aquatic Biodiversity	Very High Sensitivity
Archaeological and Cultural Heritage	Very High Sensitivity
Civil Aviation	High Sensitivity
Defence	Low Sensitivity
Palaeontology	Medium Sensitivity
Plant Species	Medium Sensitivity
Terrestrial Biodiversity	Very High Sensitivity

6.2.3 ALTERNATIVE 2

Alternative location 2 for the development has been identified at Portion 107 of Farm Klippoortjie, Calcium Road, Wadeville, Germiston.

The site are industries to the north of the site. The site to the east and west are open grassland. The entire site is classified as a CBA and is within close proximity to/boarders a National Freshwater Ecosystem Priority Areas (NFEPA) wetland, as such, developing in his area will result in a much greater impact on the surrounding sensitive ecosystem. AS such the site is least preferred.

Environmental sensitivities associated with Site Alternative 2 are indicated in **Table 6-4** and the Screening assessment included in **Appendix F**.

Table 6-4: Site Alternative 2 – Environmental Screening

THEME	SENSITIVITY
Development Zones	Air Quality Priority Areas
Agricultural	High Sensitivity
Animal Species	High Sensitivity
Aquatic Biodiversity	Very High Sensitivity
Archaeological and Cultural Heritage	Very High Sensitivity

THEME	SENSITIVITY
Civil Aviation	High Sensitivity
Defence	Low Sensitivity
Palaeontology	Medium Sensitivity
Plant Species	Medium Sensitivity
Terrestrial Biodiversity	Very High Sensitivity

6.2.4 SITE ALTERNATIVE SELECTION

Based on the environmental sensitivity screening (Table 6-5) and a comparison between the sites the sites are very similar. However the proximity to very high sensitive aquatic biodiversity areas makes Alternative 1 and 2 not feasible. In addition, Site Alternative 1 is not feasible due to the proximity of existing ammonia tanks. AS such only the Preferred Site will be further assessed.

Table 6-5: Site Sensitivity Comparison

THEME	SENSITIVITY		
	Preferred Site	Site Alternative 1	Site Alternative 1
Development Zones	Air Quality Priority Areas	Air Quality Priority Areas	Air Quality Priority Areas
Agricultural	High Sensitivity	High Sensitivity	High Sensitivity
Animal Species	Medium Sensitivity	High Sensitivity	High Sensitivity
Aquatic Biodiversity	Low Sensitivity	Very High Sensitivity	Very High Sensitivity
Archaeological and Cultural Heritage	Low Sensitivity	Very High Sensitivity	Very High Sensitivity
Civil Aviation	Medium Sensitivity	High Sensitivity	High Sensitivity
Defence	Low Sensitivity	Low Sensitivity	Low Sensitivity
Palaeontology	Very High Sensitivity	Medium Sensitivity	Medium Sensitivity
Plant Species	Medium Sensitivity	Medium Sensitivity	Medium Sensitivity
Terrestrial Biodiversity	Very High Sensitivity	Very High Sensitivity	Very High Sensitivity



Figure 6-2: Alternative Site Locations

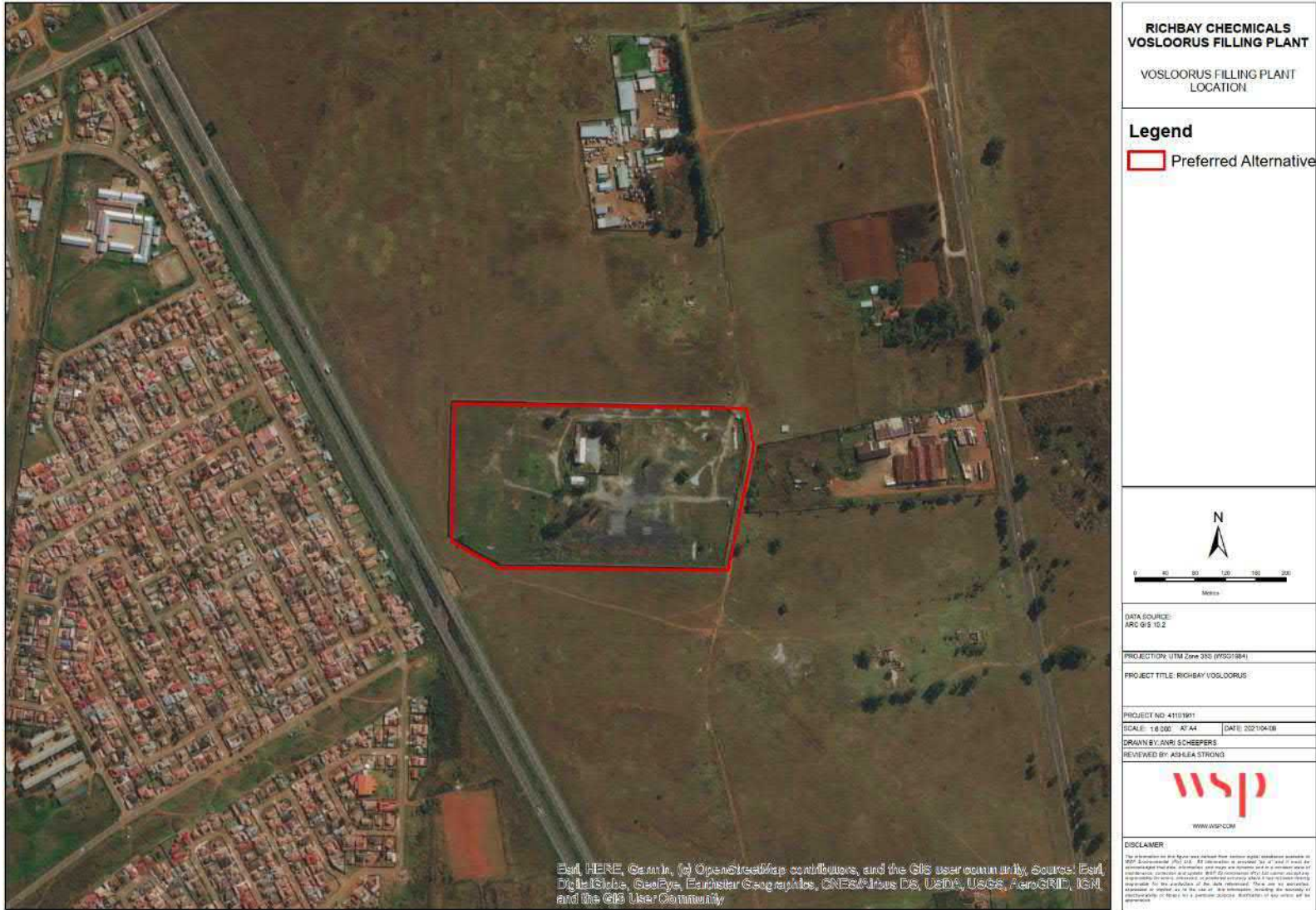


Figure 6-3: Preferred Site Alternative Location



Figure 6-4: Preferred Site Alternative Coordinates



Figure 6-5: Site Alternative1 Location



Figure 6-6: Site Alternative 1 Coordinates



**RICHBAY CHEMICALS
VOSLOORUS FILLING PLANT
VOSLOORUS FILLING PLANT
ALTERNATIVE 2 LOCATION**

Legend

Alternative 2

N

0 50 100 150 200 250
Metres

DATA SOURCE:
ARC GIS 10.2

PROJECTION: UTM Zone 33S (WGS1984)

PROJECT TITLE: RICHBAY VOSLOORUS

PROJECT NO: 41101911

SCALE: 1:8 000 AT A4 DATE: 2021/04/08

DRAWN BY: ANRI SCHEEPERS

REVIEWED BY: ASHLEA STRONG

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Figure 6-7: Site Alternative2 Location



Figure 6-8: Site Alternative 2 Coordinates

6.3 TYPE OF ACTIVITY

Richbay is a long established chemical manufacturer and a major exporter of Hydrochloric Acid and Sulphuric Acid in packed form. Richbay is looking to extend its established business operations by establishing an additional filling plant in Vosloorus.

Currently, one company in the country produces and supplies Ferric Chloride to South Africa and other neighbouring countries. As such, alternative activities (business) have not been assessed. This report is intended to motivate for an EA with regards to the establishment of the filling plant and acid regeneration plant.

7 DESCRIPTION OF THE BASELINE ENVIRONMENT

7.1 CLIMATE

The site is located near the township of Vosloorus, East of Johannesburg.

Rainfall in this area is typical of the Highveld Summer Rainfall region, which receives over 80% of rainfall in the periods between October and April. The region receives an average of about 696 mm of precipitation annually. The least amount of rainfall occurs in June, with an average of 7 mm, and the highest rainfall occurs in January with an average of 119 mm. The variation in the precipitation between the driest and wettest months is approximately 112 mm.

The climate in this region classified as warm and temperate. The annual temperature in the region averages at 16.2°C. Temperatures are highest in January, averaging at around 21.2°C. June has the lowest average temperature of the year, averaging at 9.2°C.

Figure 7-1 and Figure 7-2 depict the average monthly temperatures and average monthly precipitation respectively, for Katlehong (located approximately 6 km west of the site).

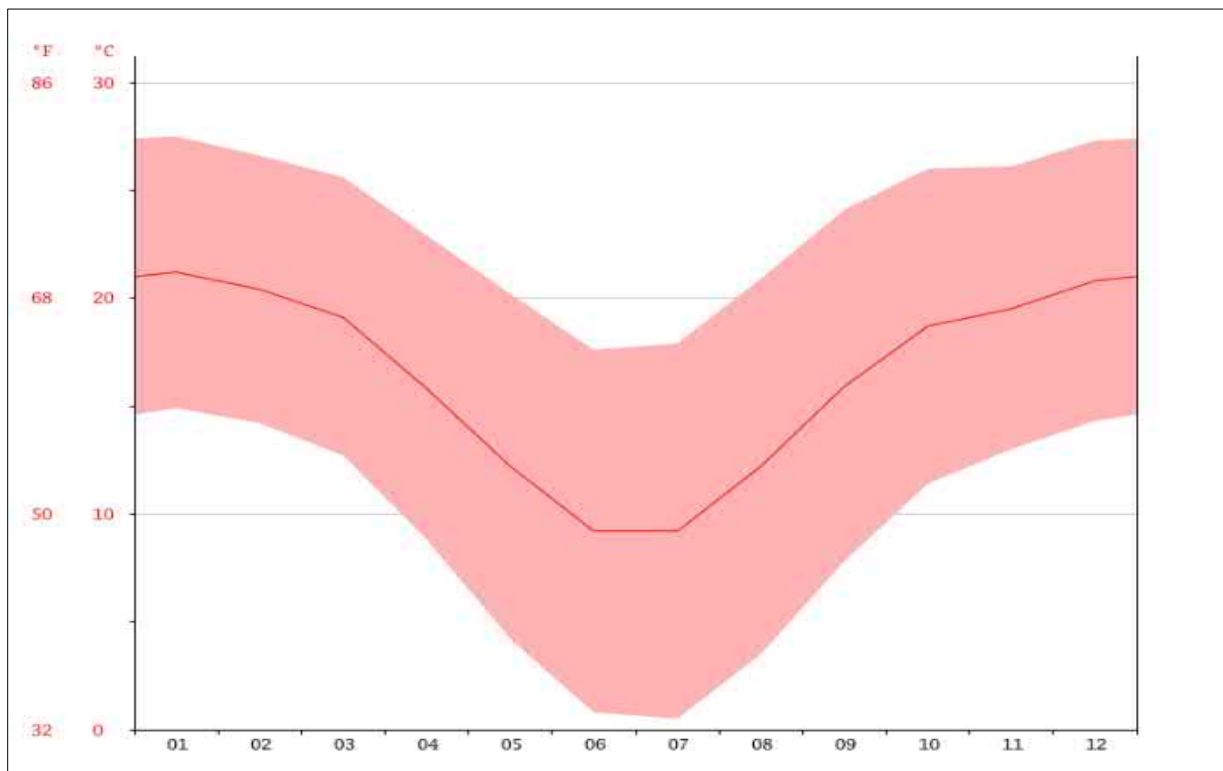


Figure 7-1: Average Monthly Temperatures in Katlehong, East of Johannesburg (Source: *Climate – Data.Org*)

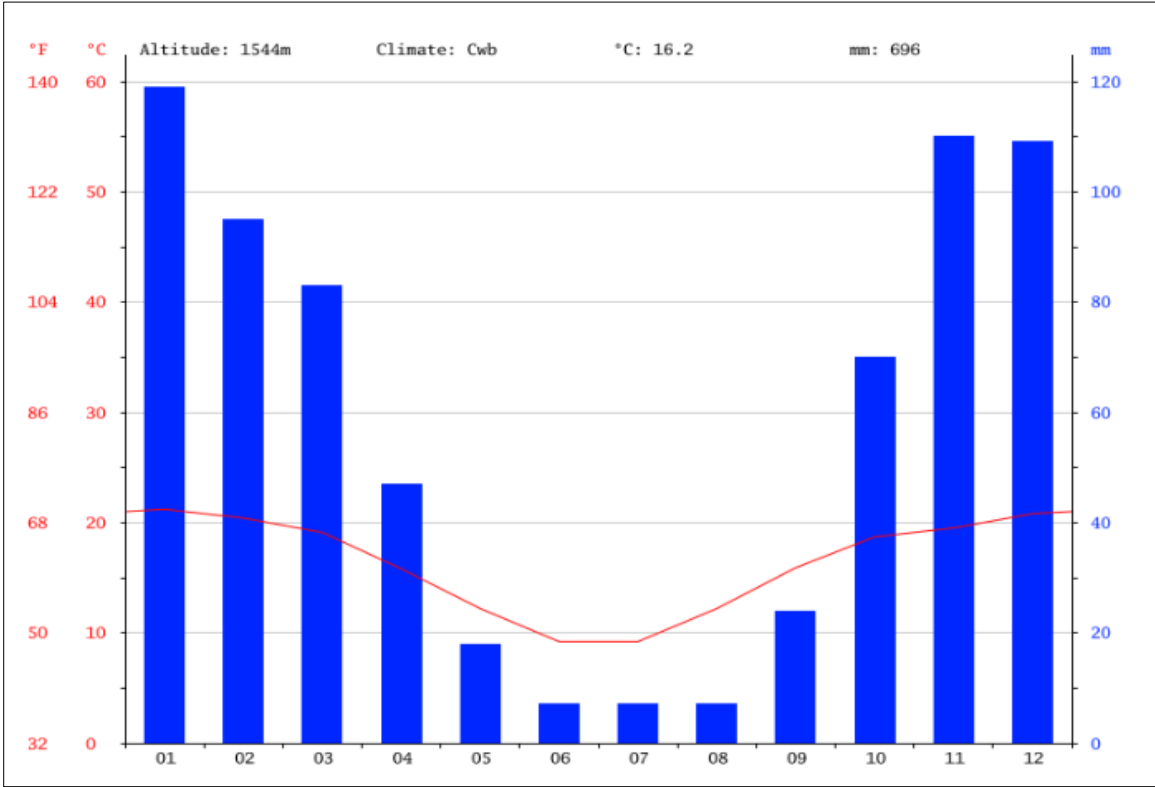


Figure 7-2: Average Monthly Precipitation in Katlehong, East of Johannesburg (Source: Climate – Data.Org)

7.1.1 LOCAL WIND FIELD

Based on the available meteorological data, winds originate predominantly from the North. Wind speeds are generally slow to moderate. Calm conditions, which are defined as wind speeds less than 1 m/s, occur infrequently. Monsoons create steady strong winds on the Tibetan Plateau from December to April, but calm winds from June to October. The chart in **Figure 7-3** below shows the days per month the wind reaches a certain speed around the Vosloorus area.

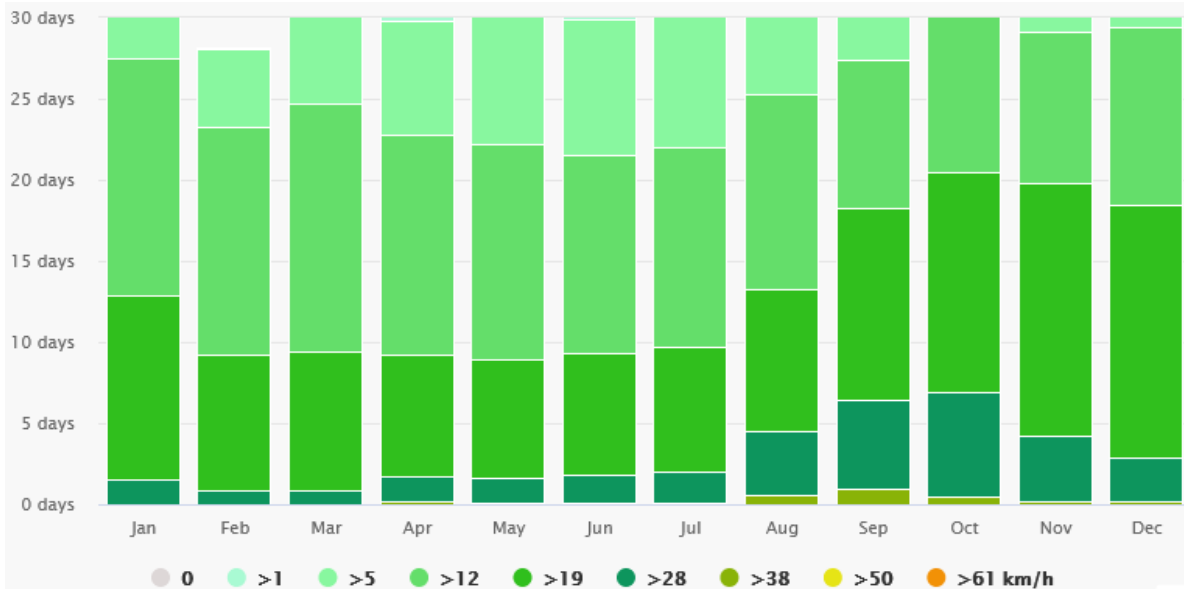


Figure 7-3: Vosloorus Wind Speed Chart (Source: meteoblue.com as per April 2021)

The wind rose in **Figure 7-4** below shows how many hours per year the wind blows from a particular direction around the Vosloorus area.

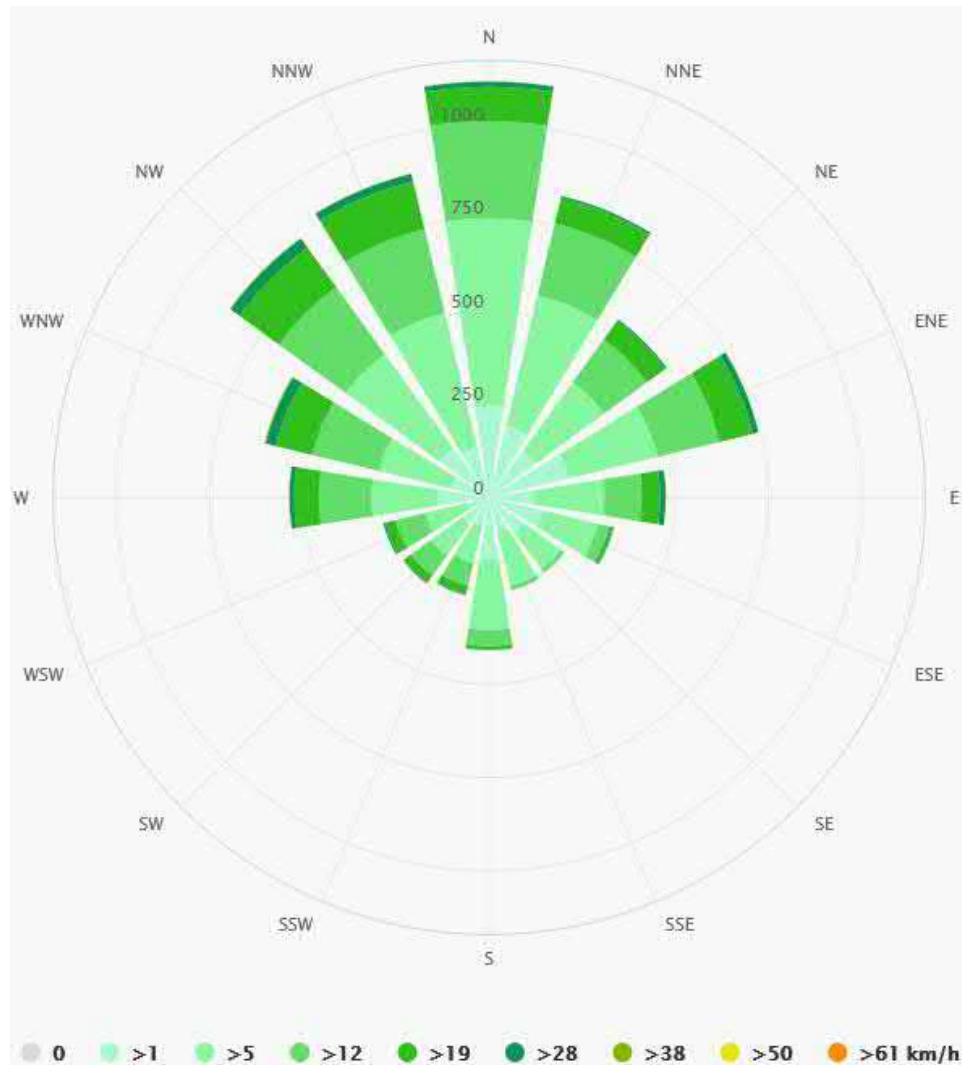


Figure 7-4: Vosloorus Wind Rose (Source: meteoblue.com as per April 2021)

7.2 TOPOGRAPHY

The study area forms part of the regional watershed between the rivers that drain west towards the Atlantic Ocean and those that drain east towards the Indian Ocean. The regional topography can generally be regarded as flat with few outstanding topographical features (EMF, 2008). The following topographical features occur:

- Plains with pans ;
- Undulating plains with pans ;
- Strongly undulating plains ;
- Superimposed river valley (Blesbok Spruit) on plains with pans ;and
- Ridges.

The site is generally categorised as flat, and lies at about 1550 m above mean sea level. This is indicated in the topography map in **Figure 7-5** below.

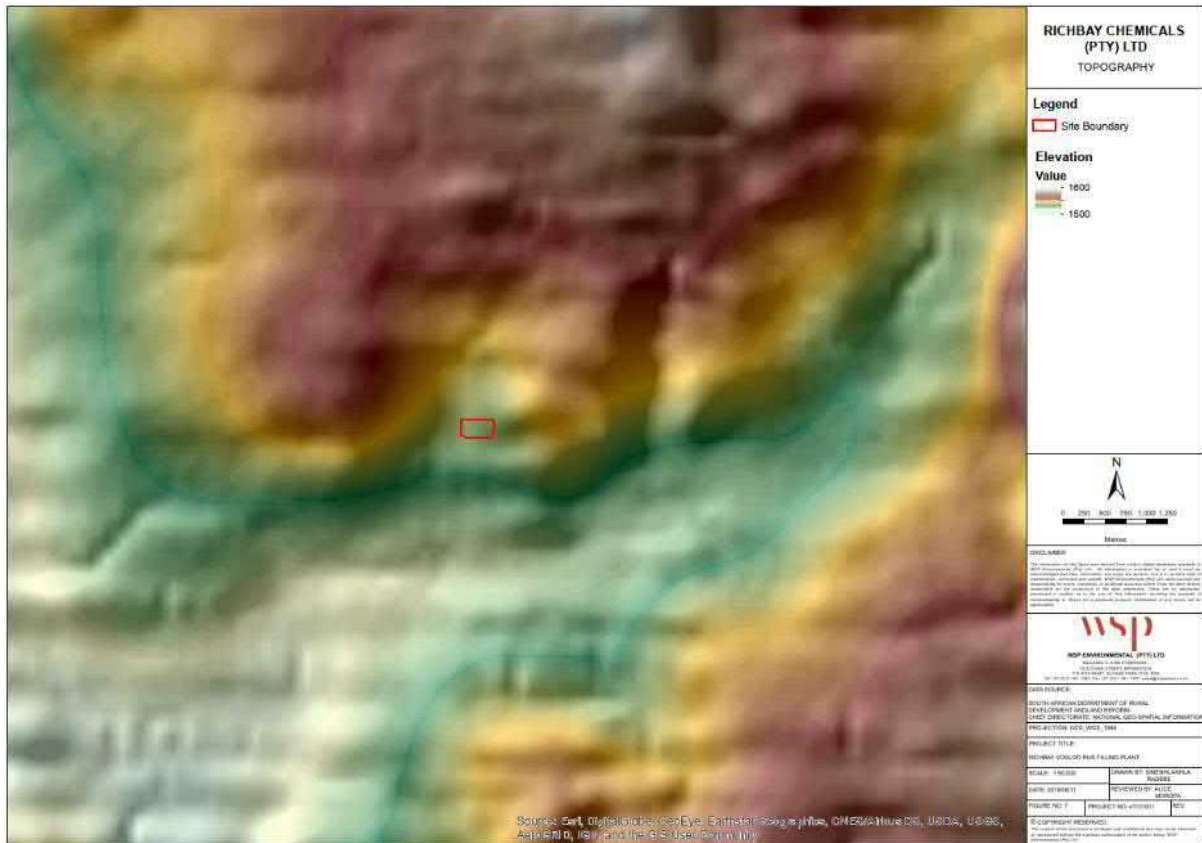


Figure 7-5: Topographical Map

7.3 GEOLOGY

The study area is mainly underlain by dolomites that form part of the Chuniespoort Group (Vmd). The Chuniespoort Group is made up of chemical and biochemical sediments such as dolomite, chert, limestone and banded iron formation, carbonaceous shale is also present. Cave formation in the dolomite is a major concern in developing areas, especially in the 1500m thick dolomite of the Malmani Subgroup. Chemical sediments such as fine grained limestone and dolomite is made up of deposits of organically derived carbonate shells, particles or precipitate. Dolomite is magnesium-rich limestone formed from algal beds and stromatolites.

During a field survey by the specialist, the area is very disturbed, there are several chert piles stacked near the perimeter fence. The surface is covered with gravel and a house and several other buildings are present. A sand-blasting industry is currently operative. Only chert can be found on the surface and the geological map is shown in **Figure 7-6** below.

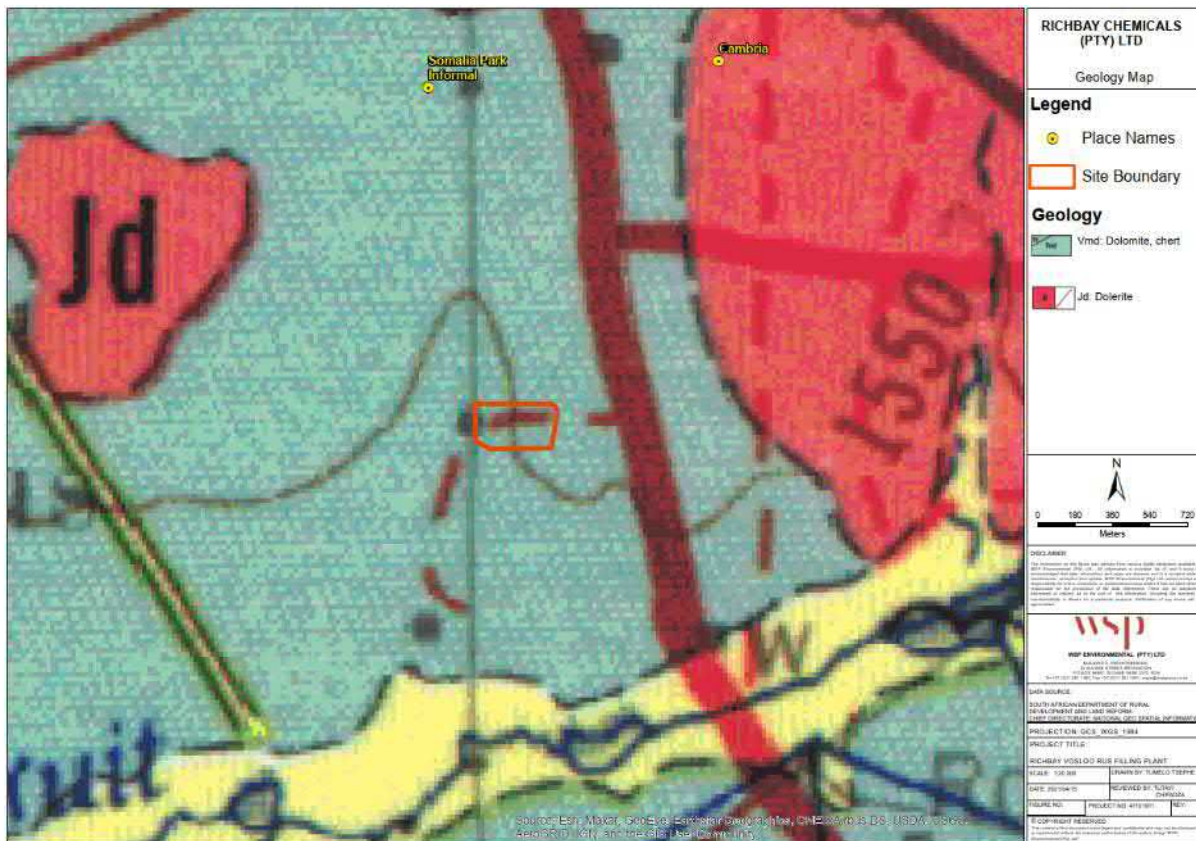


Figure 7-6: Geology Map

7.4 SURFACE WATER

The project site is located within the Upper Vaal Water Management Area (WMA) within the C22C Quaternary drainage region.

The site is located approximately 1.5km north of the Rietspruit River that flows in a south-westerly direction into the Suikerbosrand Nature Reserve. No river or stream traverses the site and it is located about 1km north of the nearest wetland. Clean storm water from the site and its immediate surrounds drain into a culvert that is located less than a kilometre South West of the site (**Figure 7-7**).



Figure 7-7: Surface Water and Wetlands

The site is located more than 500m away from any water resources.

7.5 GROUNDWATER

The study area is dominated by dolomite of the Chuniespoort Group and tillites of the Dwyka group, both of which carry water. Dolomite rock possesses a system of discontinuities (fractures, joints and faults) which act as preferential solution passages for water ingress. The presence of various geological structures, such as faults, fissures, and fracture zones, as well as contact zones of intrusions such as dykes and sills, dictate the occurrence of groundwater (EMF, 2008). Karst Aquifers are infiltrated by rainwater containing weak carbonic acid dissolves dolomites resulting in caves and cavities that may facilitate the formation of sinkholes, especially if the water from these cavities is extracted through boreholes.

Boreholes with the highest yield are found in the dolomites that occur from Wadeville to a point south of Vosloorus. This high recharge of underground water and significant underground flow results in low density surface drainage in dolomitic areas (EMF, 2008).

Groundwater quality in the study area is generally acceptable for any use. In some areas contamination with chlorides, sulphates and nitrates has been recorded and care should be taken with groundwater used for human consumption.

7.6 LAND USE AND CAPABILITY

Land uses in the Ekurhuleni Metropolitan Municipality include the following:

- Mining;
- Industry;
- Residential; and
- Agriculture.

The manufacturing industry is the primary economic activity of the municipality with a range of light and heavy industrial activity distributed across the Isando, Spartan and Jet park areas, west of the OR Tambo International

Airport. The older, and heavier industrial area is located in the central part of the municipality, which comprises of Boksburg East, Anderbolt, Benoni South and Apex industrial areas. Further to the east are the smaller industrial areas, including Brakpan, Springs, Pretoriusstad and Prosperita (MSDF, 2015).

Agricultural activity in the municipality occurs mainly in the Bapsfontein area, where a large number of agricultural businesses have been established. Mining in the Germiston-Boksburg area, the Benoni-Brakpan-Springs area and the Spring-Nigel area has since declined and no longer makes a significant contribution to the economic activity in the municipality.

The site is located in an industrial area and is therefore surrounded by industrial holdings including:

- A truck and heavy equipment business adjacent to the site (north of the site);
- A corrosion coating (painting, lining, coating etc.) business opposite the site (east of the site);and
- Scrap yards and salvage yards.

An open grassland is located south of the site, and the township of Vosloorus is located about 150m west of the site, over the N3 highway.

Currently the site is used for a sand blasting business and as such, much of it has been transformed. The property contains the following:

- A sand blast open space which has been completely transformed and contains no vegetation;
- Change rooms for workers on site;
- A security building;
- A workshop were sandblasted material is painted; and
- Patches of natural grassland

Figure 7-8 depicts the land cover in and around the project site.



Figure 7-8: Land Cover Map

7.7 FLORA AND FAUNA

The site falls within the Carletonville Dolomite Grassland of the Grassland biome. The vegetation type is characterized and dominated by the following grass species:

- *Aristida congesta*;
- *Brachiaria serrata*;
- *Cynodon dactylon*;
- *Digitaria tricholaenoides*;
- *Diheteropogon amplexans*;
- *Eragrostis chloromelas*;
- *Eragrostis racemosa*;
- *Heteropogon contortus*;
- *Loudetia simplex*;
- *Schizachyrium sanguineum*;
- *Setaria sphacelata*; and
- *Themeda triandra*.

This vegetation type is considered to be Vulnerable (Driver et al., 2005 and Mucina et al., 2006), with a conservation target of 24%. Only a small extent of the vegetation unit is currently protected, whilst 23% is considered to be transformed, mostly by cultivation (17%), urbanization (4%), forestry (1%) and mining (1%) (Mucina et al. 2006).

A desktop ecological sensitivity assessment of the site was undertaken based on the Gauteng Conservation Plan Versions 3.3 (C-Plan 3.3).

The ecological sensitivity of the site is illustrated in **Figure 7-9**. Although a portion of the site is classified as a CBA, it has been noted that much of the CBA south of the site has been transformed into what is now the open sand blasting area. The remaining CBA portion, still covered with natural vegetation, is located on the western portion of the site.

CBAs are areas required to meet biodiversity targets for ecosystems, species and ecological processes. As such, these are areas that need to be maintained in a natural or near-natural state in order to ensure the continued existence and functioning of species and ecosystems, as well as the delivery of ecosystem services.

The primary purpose of CBAs is to inform land-use planning, and the land-use guidelines attached to CBAs' aim to promote sustainable development by avoiding loss or degradation of important natural habitat and landscapes in these areas and the landscape as a whole.

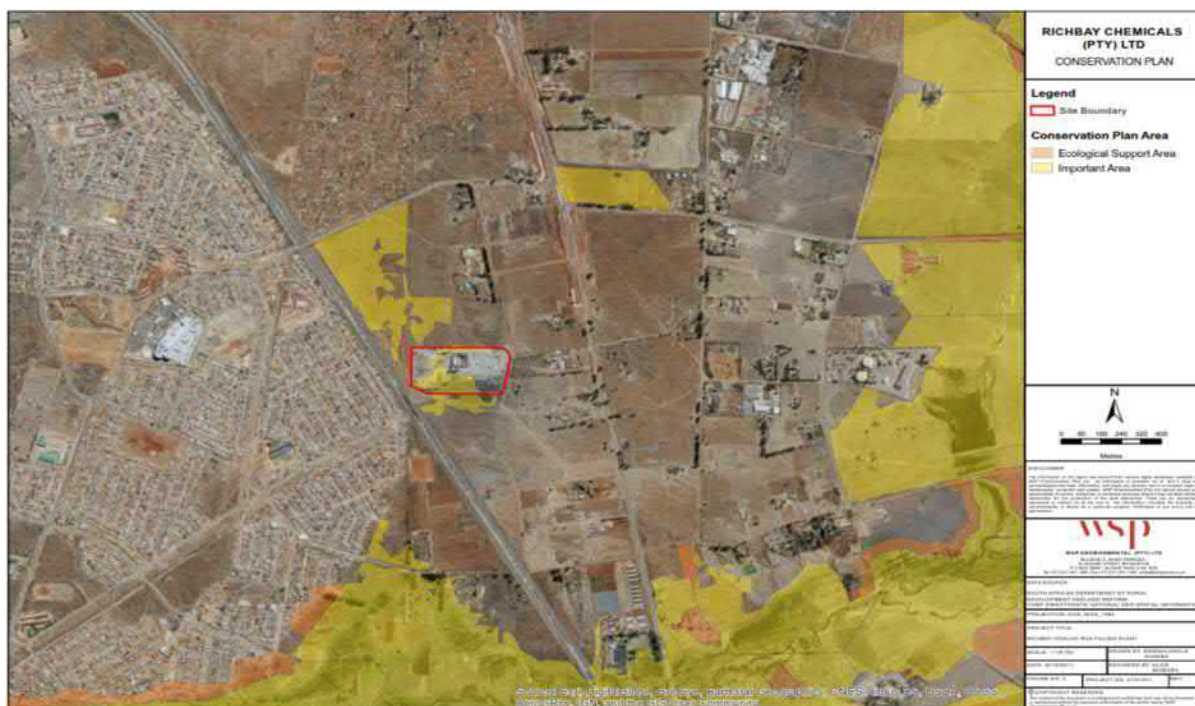


Figure 7-9: Ecological Sensitivity Map

The Biodiversity Company conducted a biodiversity baseline and impact assessment. The field survey for the project area was conducted on the 20th of November 2019 by one terrestrial ecologists. During the survey the floral and faunal communities within and surrounding the project development footprint were assessed. The project area was ground-truthed on foot, which included spot checks in pre-selected areas to validate desktop data. Photographs were recorded during the site visit and some are provided in this section of the report.

7.7.1 HABITAT ASSESSMENT

Two primary habitats were delineated for this assessment, namely: degraded grassland and transformed areas. The delineated areas are discussed below and visual representations from the field survey.

The degraded grasslands are the areas which were considered to have been altered from their natural state, sections of bare soil and low grass cover are visible due to a combination of over grazing and anthropogenic activities. This habitat has been degraded to a low ecological state.

Transformed areas have been historically and currently denuded of natural vegetation in order to construct building and other infrastructure. Portions of this habitat type are covered by the existing infrastructure within the project area which comprises of buildings, roads and a large wall. Sandblasting was the main activity taking place within the project area.

7.7.2 VEGETATION ASSESSMENT

The vegetation assessment was conducted throughout the extent of the project area. A total of 46 tree, shrub and herbaceous plant species were recorded in the project area during the field assessment. Plants listed as Category 1 alien or invasive species and plants listed in Category 2 or as ‘not indigenous’ or ‘naturalised’ according to NEMBA were noted and recorded in Table 8 of the assessment report.

7.7.3 ALIEN AND INVASIVE PLANTS

Eleven (11) Category 1b invasive plant species were recorded within the project area and it is recommended that an alien invasive plant management programme be implemented in compliance of section 75 of the Act.

7.7.4 AVIFAUNA

Twelve (12) bird species were recorded in the project area during the November 2019 survey based on either direct observations, vocalisations, or the presence of visual tracks & signs. The species were noted in Table 9 and Figure 10 of the assessment report.

7.7.5 MAMMALS

No mammals were observed in the project area, this is ascribed to the disturbed nature of the project area along with a large number of impacts and human presence.

7.7.6 HERPETOFAUNA (REPTILES AND AMPHIBIANS)

Two reptile species were recorded in the project area and the third species (Rinkhals) was confirmed based on communication with local people that are currently working on site (Table 10 and Figure 11 of the assessment report). No amphibians were recorded, this is attributed to the lack of suitable wet areas in the project area.

7.7.7 SITE SENSITIVITY

A least concerned sensitivity was given to those areas that have been impacted upon by the anthropogenic activities, such as buildings, sandblasting, paved areas, and roads. This area does not offer habitat for faunal or flora species.

The area given a low sensitivity are the degraded grassland that has been impacted and has been modified from its original condition, this area does however still offer habitat to more adaptable species. The sensitivity map is shown in below.

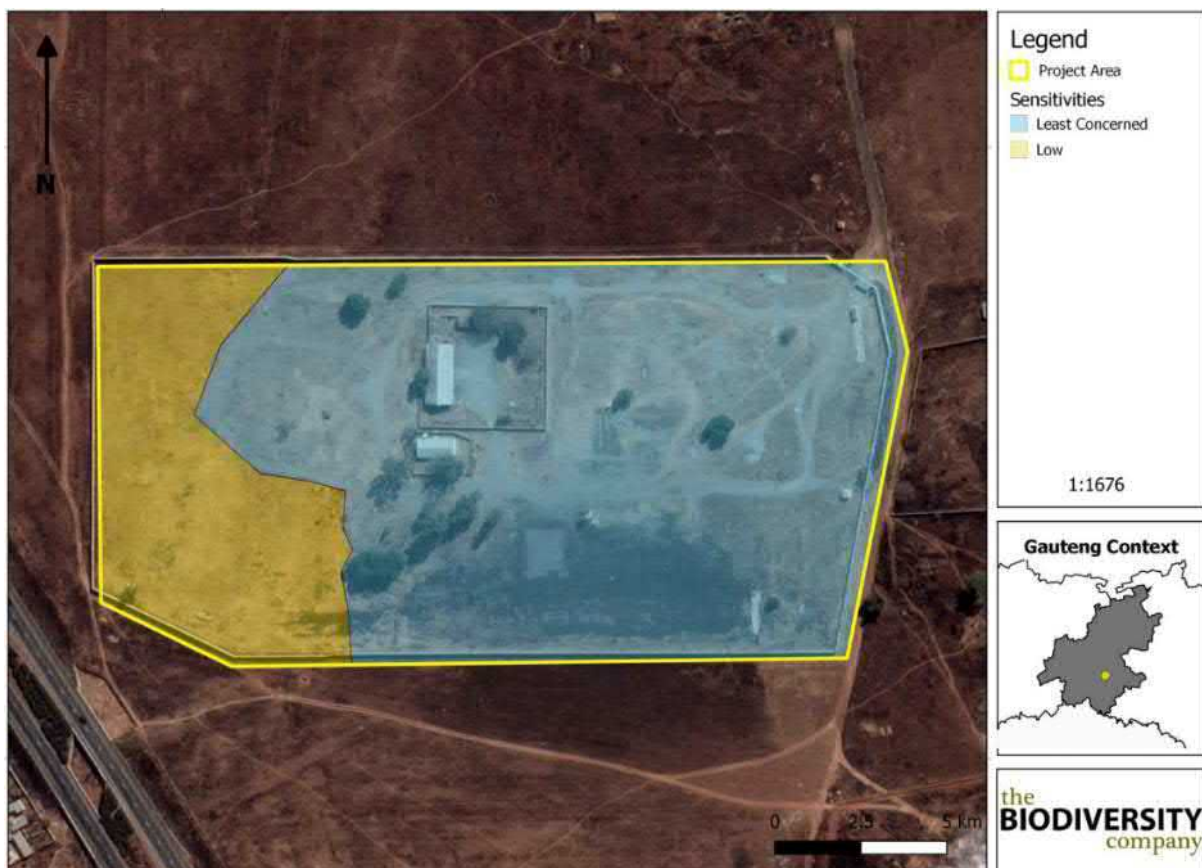


Figure 7-10: Habitat Sensitivity Map

7.8 HERITAGE AND ARCHAEOLOGY

Archaeos conducted an Archaeological Heritage Impact Assessment on the site and the findings are used to provide a baseline for the site. The methodology for the study included a survey of literature and a field survey. The latter was conducted according to generally accepted HIA practices and was aimed at locating all possible objects, sites and features of cultural significance in the area of proposed development.

No sites of archaeological nature or any historical buildings were found during the survey, as such, the proposed development may continue following any comments from SAHRA.

7.9 PALAEOONTOLOGY

A palaeontological desktop assessment was undertaken to determine the sensitivity, and therefore likelihood of occurrence of palaeontological resources within the site. As can be seen from **Figure 7-11** the site falls within a very high palaeosensitive area, entailing that there is potentially a high chance of incurring palaeontological resources on site. As such, a field assessment and protocol for finds was conducted to confirm if there are any palaeontological resources.

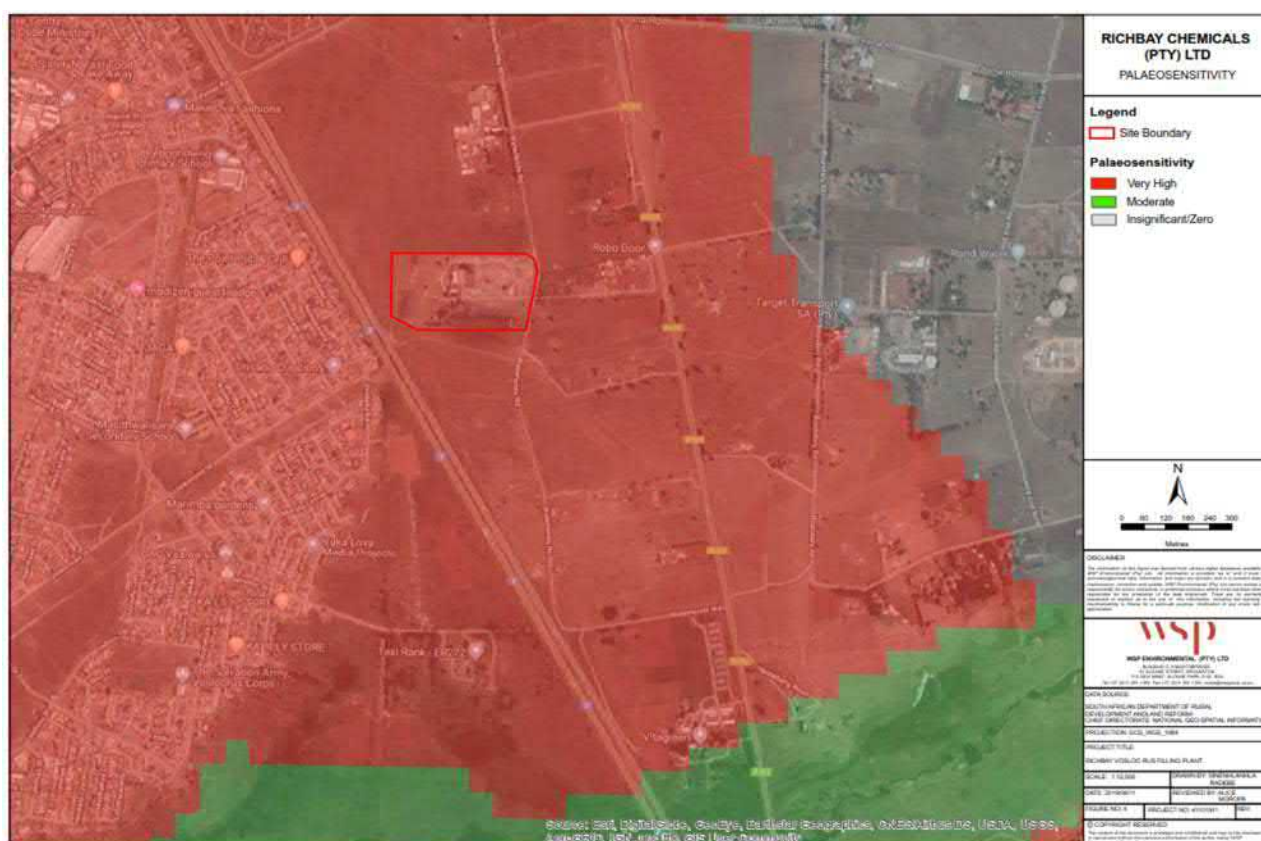


Figure 7-11: Palaeontological Sensitivity

The Phase 1: Field Study was undertaken in October 2019 in the summer in hot and dry conditions. Fossils in South Africa mainly occur in rocks of sedimentary nature and not in rocks from igneous or metamorphic nature. Therefore, if there is the presence of sedimentary strata the palaeontological sensitivity can generally be LOW to VERY HIGH, and here locally HIGH for the Malmani Subgroup, Chuniespoort Group, Transvaal Supergroup (SG 2.2 SAHRA APMHOB, 2012).

Stromatolites are common in the Malmani dolomites, accepted to be the fossil remnants of the simplest single-celled organisms. They are finely layered, concentric, mound-like structures formed by microscopic algal organisms (Norman and Whitfield 2006). Chert may contain fossils such as echinoids or sponges if nodular, although not common and is rated unlikely.

The field observation found that the area is very disturbed. There are several chert piles stacked near the perimeter fence, the surface is covered with gravel and a house, and several other buildings are present. A sand-blasting industry is currently operative. Livestock are also present but only chert can be found on the surface.

7.10 SOCIO-ECONOMIC PROFILE

7.10.1 POPULATION

According to the 2016 Community Survey, EMM has an estimated population of 3 379 1042 with a population growth rate of 2.47%. This represents over 6% of the population of South Africa (IDP, 2016/17).

Major shifts seem to have occurred in the population composition by broad age groups between 2011 and 2016, for example the promotion of the young, the 0-14-year age group increasing from 24% to 35% and that of elderly, the 65+ population more than doubling from 4% to 9%.

7.10.2 EDUCATION

The education levels have improved at the EMM since 2001. Overall improvement in the level of education is visible with an increase in the number of people with 'matric' or higher education. The percentage of the population not going to school has decreased from 9.2% in 2001 to 3.6% in 2011. The number of people with 'matric and a certificate/diploma' increased with an average annual rate of 4.82%, with the number of people with a 'matric and a Bachelor's' degree increasing with an average annual rate of 6.33% (IDP, 2017/2017).

7.10.3 LABOUR

EMM's Economically Active Population (EAP) was 1.64 million in 2015, which constitutes about 48.47% of its total population of 3.38 million, and roughly 25.32% of the total EAP of the Gauteng Province. The municipality has seen an annual increase in the EAP of 2.33% between 2005 to 2015, 0.464 percentage points lower than the growth in the EAP of Gauteng's for the same period (IDP, 2017/2017)

In 2015, EMM employed 1.19 million people, which is 23.92% of the total employment in Gauteng and 7.71% of total employment in South Africa. The municipality's average annual employment growth rate of 2.54% exceeds the average annual labour force growth rate of 2.33%.

7.10.4 UNEMPLOYMENT

In 2015, the unemployment rate in Ekurhuleni was 29.72%, which is higher than that of Gauteng and South Africa (25.28%) as can be seen in **Figure 7-12** below.

EMM has witnessed a steady increase in the unemployment rate from 2009. In 2006 the unemployment rate was 26.6%, and rose to 29.7% in 2015.

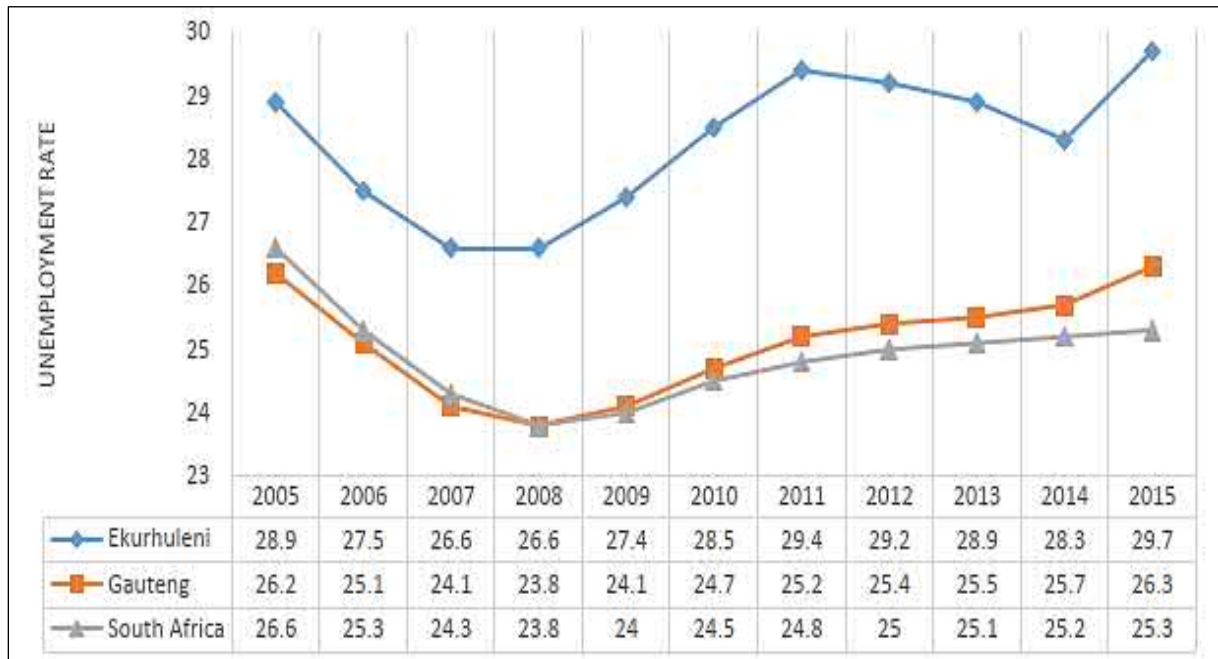


Figure 7-12: Unemployment Rates In Ekurhuleni, Gauteng Province and South Africa

8 IDENTIFICATION OF POTENTIAL IMPACTS

The scoping phase of an S&EIR process is aimed to identify those potential impacts that are most likely to be significant and which need to be assessed as part of the S&EIR process. The determination of anticipated impacts associated with the proposed development is a key component to the S&EIR process. This Chapter identifies the perceived environmental and social effects associated with the proposed project. The assessment methodology indicated in Section 3.3.

The issues identified stem from those aspects presented in **Chapter 7** of this document as well as project description provided. Each significant issue identified is to be investigated further during the S&EIR process. Non-significant issues will be scoped out of the study with reasonable consideration given within the Scoping Report.

8.1 CLIMATE

There will be limited expected changes to the climate due to the proposed construction of the project and the main source will be carbon emissions from machines vehicles on the site during site clearance. The clearance of natural vegetation will impact the carbon storing potential of the area and hence influence climate change, however, to a small extent. No further studies are proposed within the EIA.

8.2 TOPOGRAPHY

The site is generally categorised as flat, and lies at about 1550 m above mean sea level.

The potential impacts of clearing the site vegetation, construction of the plant building, potable water, sewer and storm water infrastructure to establish the filling plant will have little to no impact on the general topography of the site.

8.3 GEOLOGY

The study area is mainly underlain by dolomites that form part of the Chuniespoort Group.

The potential impacts of clearing the site vegetation, construction of the plant building, potable water, sewer and storm water infrastructure to establish the filling plant will have little to no impact on the geology of the site. However, structural investigations should be conducted by the engineering team prior to construction.

8.4 SURFACE WATER

The site is located within the C22C Quaternary drainage region. No river or stream traverses the project site. The site is located approximately 1.5km north of the Rietspruit River that flows in a south-westerly direction into the Suikerbosrand Nature Reserve. Clean storm water from the site and its immediate surrounds drain into a culvert that is located less than a kilometre South West of the site.

It is not anticipated that the construction activities will leave any impacts on the surface water resources.

During the operational phase however, oil and chemical spills from the plant may be washed into the clean storm water culvert, thereby contaminating the clean surface runoff that is discarded into the natural environment. A storm water attenuation system will be established on site.

8.5 GROUNDWATER

The study area is dominated by dolomite of the Chuniespoort Group and tillites of the Dwyka group, both of which carry water. Dolomite rock possesses a system of discontinuities (fractures, joints and faults) which act as preferential solution passages for water ingress.

Boreholes with the highest yield are found in the dolomites that occur from Wadeville to a point south of Vosloorus, where the site is located. This high recharge of underground water and significant underground flow results in low-density surface drainage in dolomitic areas (EMF, 2008)

There is a potential to contaminate groundwater resources through the infiltration of any fuels, oils or lubricants used by construction vehicles and machines as well as any potential contaminants.

The infiltration of spilled chemicals during the operation of the plant may potentially contaminate groundwater resources that are fed into surrounding boreholes.

8.6 LANDUSE AND CAPABILITY

A significant portion of the study site has already been transformed by the sandblasting operations being carried out there. The remaining portion comprises of patches of natural grassland. As such, the landuse of the site will remain as that of being a transformed area used for industrial purposes.

The anticipated change in land use is that of clearing the remaining natural habitat available on site for constructing the plant and its associated infrastructure. As a result, the site in its entirety will be transformed into an industrial / built up area with no natural landscape remaining.

Potential contamination by chemical spillages may reduce the land capability of the site, rendering it less capable of supporting the succession of a natural habitat should the plant be decommissioned in future.

8.7 AIR QUALITY

The Ekurhuleni region is reported to have the poorest air quality in the country, owing to the intensive industrial activity in this region, as well as household fuel burning.

Vegetation clearing and earthmoving activities undertaken during the construction phase will result in the emission of dust particles.

The operational processes associated with the treatment of HCl and the production of caustic soda will emit various oxides into the surrounding atmosphere, which due to the dispersive properties of gasses, may affect or contribute to the regional atmospheric pollution and decrease in air quality.

8.8 VISUAL

The site is located in an industrial area and is surrounded by various industrial holdings. The site is currently utilised for a sand blasting business and contains a workshop and change house used to support the sand blasting operations. The western portion of the site however, remains natural and is covered by a patch of natural grassland. Furthermore, the northern and southern surrounds of the site maintain a natural landscape that is uninterrupted by any buildings.

The construction/erection of the plant will transform the remaining natural landscape of the site to a built up area, thereby further reducing the extent of the natural scenery of the surrounds, however the site is already fenced off prohibiting visual impacts.

8.9 FLORA AND FAUNA IMPACTS

As, mentioned, the site falls within the Carletonville Dolomite Grassland, which is considered vulnerable. The site contains natural grassland vegetation, confined to the western portion of the project area that and is classified as a CBA.

The construction of the plant will inevitably result in the clearance of the natural vegetation present on site, thereby further impacting the remaining critical biodiversity habitat.

The removal of the remaining habitat will further disturb and possibly cause the loss of small mammals and reptiles that are unable to escape the construction activities.

8.10 HERITAGE

It is understood that all activities relating to the plant will be confined to the fenced off project site. No heritage resources were observed during the site assessment, and as such, very little or no heritage impacts are anticipated during all phases of the development.

No sites of archaeological nature or any historical buildings were found during the HIA conducted, however, the proposed development may continue following any comments from SAHRA.

8.11 PALAEOLOGY

Based on the South African Heritage Resources Information System (SAHRIS) tool, the area is in a red zone for palaeontology, which is very high risk for presence of palaeontological resources (**Figure 7-11**).

Land clearance for construction will be non-intrusive, however the construction of the actual plant building, pipelines and storm water infrastructure will to an extent, be intrusive. The intrusive construction activities can lead to the unearthing and damage to palaeontological resources.

No impacts with regards to palaeontological resources are anticipated during operation of the plant. This is because all the palaeontological impacts are expected to be realised during the construction phase where there will be intrusive activities.

8.12 SOCIO ECONOMIC PROFILE

As indicated before, the region has underdeveloped infrastructure, suppressed industrial and agricultural development, high levels of poverty and elevated unemployment at 43.7%. Furthermore, the area has high population living under the poverty line.

There will be little positive impacts during the construction and operational phases. The construction phase will create temporary employment for contractors needed to plan, design and construct the plant. Several more personnel will be employed on a permanent basis during the operational phase.

8.13 HEALTH AND SAFETY

The proposed project task pose a health and safety risk. The Occupational Health and Safety Act (85 of 1993) will have to be enforced at all project levels.

During construction, the employees are exposed to health and safety hazards from the mechanical machines and equipment used on the site. The operational phase health and safety impacts are expected to be limited to loading and unloading of heavy equipment as well as via the storage and handling of any hazardous material onsite. The biggest risk is associated with the handling, storage and use of the hazardous substances on the site.

8.14 SUMMARY OF POTENTIAL IMPACTS

The potential environmental and social impacts are described in **Table 8-1** below.

Table 8-1: Summary of Potential Impacts

ENVIRONMENT	IMPACT DESCRIPTOR/DISCUSSION	Potential Impact	Character	Probability	Consequence	SIGNIFICANCE (BEFORE MITIGATION)	Further study required
Climate	Climate change due to emissions from vehicles and machines clearing the site as well as through vegetation removal.	Climate change	Negative	1	1	Very Low	No
Topography	The clearance of land using machinery will be non-intrusive. Intrusive operations will occur when individual activities occur, however, these are expected to be minimal. The construction of the plant and of potable water, sewer and storm water pipelines will be intrusive, however, the area will be filled in and levelled soon after establishment.	Change in topography / slope	Negative	1	1	Very Low	No
Geology	The clearance of land using machinery will be non-intrusive and will not affect the geology of the site. The individual activities will have to be evaluated when proposed. The construction of the plant and of potable water, sewer and storm water pipelines will be intrusive but to a very low extent to affect.	Stability of the area	Negative	1	1	Very Low	No
Ecology	A portion of the site is classified as a terrestrial CBA which will be cleared for individual activity use. The	Loss of habitat / ecosystems	Negative	3	3	Medium	No

ENVIRONMENT	IMPACT DESCRIPTOR/DISCUSSION	Potential Impact	Character	Probability	Consequence	SIGNIFICANCE (BEFORE MITIGATION)	Further study required
	clearing of vegetation will lead to loss of habitat and ecosystem. Small mammals and reptiles inhabiting the site will also be disrupted and disturbed by the construction activities. A baseline study was conducted during this phase.	Destruction of smaller animals	Negative	3	3	Medium	
Air Quality	The clearance, road, power lines and pipelines construction will pose some low risk with regards to carbon and dust emissions. The reprocessing of waste HCl and manufacturing of caustic soda will release gases into the surrounding atmosphere.	Dust and exhaust emissions during clearance	Negative	2	2	Low	Yes
Noise Emissions	The presence of vehicles and machinery of the site which will cause noise to the receiving environment. This will be amplified as the individual activities are considered.	Noise from vehicles, machines and clearance activities	Negative	2	2	Low	No
Land Capability	There will be clearing of the remaining natural habitat available on site for the purpose of constructing the plant and its associated infrastructure. As a result, the site in its entirety will be transformed into an industrial/ built up area with no natural landscape remaining. Potential contamination by chemical spillages may also reduce the land capability of the site, rendering it less capable of supporting the succession of a natural habitat should the plant be decommissioned in future.	Impact on land capability	Negative	2	2	Low	No

ENVIRONMENT	IMPACT DESCRIPTOR/DISCUSSION	Potential Impact	Character	Probability	Consequence	SIGNIFICANCE (BEFORE MITIGATION)	Further study required
Soil, Hydrology and geohydrology	There is potential of soil contamination by oils or fuel from the machines and vehicles.	Soil contamination	Negative	2	1	Very Low	No
	Washing away of spilled chemicals, oils/fuels from vehicles, machines as well as effluents with surface runoff into surface water resources or the surrounding natural environment. There are no nearby watercourses around the site.	Contamination of surface water resources	Negative	2	2	Low	No
	Infiltration of leaked or spilled chemicals, oils/fuels from vehicles, machines as well as the chemical stores to groundwater resources.	Contamination of groundwater resources	Negative	2	2	Low	No
Heritage	Damage and demolition of any heritage resources	Damage and demolition of any heritage resources	Negative	1	3	Low	Yes
Palaeontology	Damage and demolition of palaeontological resources.	Damage of palaeontological resources	Negative	4	3	High	Yes
Visual	The construction/erection of the plant will completely transform the remaining natural landscape of the site to a built up area, thereby further reducing the extent of the natural scenery of the surrounds.	Visual impact on adjacent land users	Negative	1	1	Very Low	No
Socio-economic	The project will provide a few temporary jobs during the construction phase and several more permanent jobs during the operational phase.	Provision of employment and skills development	Positive	4	2	Medium	No

ENVIRONMENT	IMPACT DESCRIPTOR/DISCUSSION	Potential Impact	Character	Probability	Consequence	SIGNIFICANCE (BEFORE MITIGATION)	Further study required
	Furthermore, the local economy will be boosted due to the injection of investments which will cause a spin off in other sectors.	Boost in local economy	Positive	1	1	Very Low	No
Health and Safety	The proposed project task pose a health and safety risk. The Occupational Health and Safety Act (85 of 1993) will have to be enforced at all project levels.	Physical injury of personnel due to mobile machinery and equipment.	Negative	4	3	High	No
		Personnel injury due to exposure to hazardous substances.	Negative	4	3		Yes

The possible mitigation measures that could be applied to the potential impacts identified in **Table 8-1** are shown in **Table 8-2**.

Table 8-2: Mitigation Measures

ENVIRONMENT	MITIGATION MEASURES
Topography	<ul style="list-style-type: none"> — Ensure that appropriate rehabilitation is done after construction to ensure that there is little to no change in the topography of the site. — All infrastructure will be designed with closure in mind.
Geology	<ul style="list-style-type: none"> — Follow the approved procedures during site clearance, construction of roads, power lines pipelines and avoid heavily intrusive operations. — Follow the approved engineering designs when conducting individual activities.

ENVIRONMENT**MITIGATION MEASURES**

Ecology	<ul style="list-style-type: none">— The development area must be specifically demarcated so that during the construction phase and operational phase, only the demarcated areas be impacted upon. No persons should be allowed to enter the surrounding habitats under any circumstances;— Areas that were denuded during construction need to be re-vegetated with indigenous vegetation to prevent erosion during flood events. This will also reduce the likelihood of encroachment by alien invasive plant species;— Waste management must be a priority, this of relevance during the construction phase when a construction camp will be set up. It is recommended that all waste be removed from site on a weekly basis to prevent rodents and pests entering the site;— The storage of the construction material to be built are not to be stored for extended periods of time or on any other areas than the demarcated project area;— The storage and decanting of chemicals must be in a bunded area with the required volume;— A spill management plan must be put in place to ensure that should there be any chemical spill out or over that it does not run into the surrounding areas;— Inspections and monitoring of the infrastructure for leaks must be done on a regular basis;— Leaking equipment must be repaired immediately or be removed from site to facilitate repair; and— The contractors used for the construction should have spill kits available prior to construction to ensure that any fuel, oil or hazardous substance spills are cleaned-up and discarded correctly;— No trapping, killing or poisoning of any wildlife is to be allowed on site and within the surrounding area, including snakes, birds, lizards, frogs, insects or mammals;— Staff should be educated about the sensitivity of faunal species and measures should be put in place to deal with any species that are encountered during the construction process;— The duration of the construction should be minimized to as short term as possible, in order to reduce the period of disturbance on fauna and flora;— An Environmental Compliance Officer (ECO) should be appointed to do weekly site visits to ensure that the above-mentioned mitigations are strictly adhered to; and— The area where storage tanks and filling are to take place needs to be lined with industry standard linings to prevent spilling of the corrosive and toxic substances into the surrounding areas.
Air Quality	<ul style="list-style-type: none">— Conduct dust suppression during construction to minimise dust emissions from the site activities.— Ensure that all vehicles and machines are adequately maintained to minimise emissions.— All issues/complaints must be recorded in the complaints register.

ENVIRONMENT**MITIGATION MEASURES**

Noise Emissions	<ul style="list-style-type: none">– Ensure that all vehicles and machines are adequately maintained to minimise any potential noise emissions.– Retrofit silencers to any machinery that has the potential to emit noise at levels higher than the acceptable emissions limits.– Conduct occupational health surveys to ensure that the noise emissions do not exceed the acceptable occupational limits (85 dBA).– All issues/complaints must be recorded in the complaints register.
Land Capability	<ul style="list-style-type: none">– Ensure all oil and chemical spills are cleaned up– Ensure that the site is paved or has impermeable surface to limit the infiltration of contaminants if the individual activity allows it.– Oils, greases, diesel and other chemicals will be stored in the prescribed manner and within bunded areas to prevent soil contamination.
Soil, Hydrology and Geohydrology	<ul style="list-style-type: none">– Draw up a stormwater management plan to control the flow of stormwater and limit the potential of dirty water from mixing with clean water sources.– Acquire spill kits to clean up any hydrocarbon or chemical spills during construction and operation.– Ensure that the site is paved or has impermeable surface to limit the infiltration of contaminants if the individual activity allows it.– All incidents must be reported to the responsible site officer as soon as they occur.– Material Safety Data Sheets will be updated regularly and be available on site.– Employees must be issued with appropriate PPE.– Waste may be temporarily stored on site (less than 90 days) before being disposed off appropriately at a registered hazardous waste disposal facility.– Oils, greases, diesel and other chemicals will be stored in the prescribed manner and within bunded areas to prevent soil contamination.– Mitigate against soil erosion, storm water run-off control.– Sustainable erosion control measures (for wind and water erosion) will be implemented and maintained where necessary in areas disturbed by the construction operations or the existing erosion control measures will be maintained.– Dirty and clean water will be separated by implementing clean and dirty water systems/structures prior to construction to prevent pollution of clean water runoff. The clean and dirty water systems and structures will be properly designed (according to Regulation 704 of the National Water Act).
Heritage	<ul style="list-style-type: none">– Construction activities should be conducted carefully and all activities ceased if any archaeological, cultural and heritage resources are discovered. The SAHRA should be notified and investigation conducted before any activities can commence.

ENVIRONMENT**MITIGATION MEASURES**

Visual	<ul style="list-style-type: none">– Ensure that all site disturbances are limited to areas where structures will be constructed.– Ensure that contractors and staff are well managed and adhere to the mitigation and management measures stipulated in this report.– Paint structures to blend with colours of the surrounding environment.– All infrastructure will be planned and implemented to such an extent to ensure that all blend into the surrounding topography as far as feasible (from a visual perspective new infrastructure will be the same as existing infrastructure).
Socio-Economic	<ul style="list-style-type: none">– Consider the use of local labour for the project in order to benefit the local community.– Where possible, use local suppliers for all required machinery or material.
Health and Safety	<ul style="list-style-type: none">– HSE officer will monitor safety conditions during construction activities;– Ensure employees are properly trained to use specific equipment or machinery;– Train personnel on how to deal with snake encounters, as well as encounters with other dangerous animals known to occur in the area;– Provide suitable personal protective equipment (PPE);– Conduct site and safety induction to raise awareness of the risks associated with the site;– Conduct regular toolbox talks as refreshers to improve health and safety;– Develop safe work instruction method statements that should be used by employees in completing their tasks;– Train all relevant personnel on handling, use and storage of hazardous substances;– Provide Material Safety Data Sheets (MSDS) for all hazardous substances kept onsite; and– All visitors should undergo site induction and be made aware of the risks associated with the site.

9 PLAN OF STUDY FOR THE ENVIRONMENTAL IMPACT ASSESSMENT REPORTING PHASE

9.1 TERMS OF REFERENCE

Table 9-1 outlines the structure of the plan of study as required in terms of Annexure 2 of GNR 326.

Table 9-1: Plan of Study Structure

PLAN OF STUDY CHAPTER	INFORMATION REQUIREMENT AS PER GNR 326
Description of EIA Tasks	A description of the tasks that will be undertaken as part of the environmental impact assessment process.

9.2 OVERVIEW OF THE EIAR TASKS

The EIA phase will consist of the following tasks; each of these tasks is detailed separately in the following sub-sections:

- Specialist studies;
 - Continuation of Authority and stakeholder engagement;
 - Assessment of the significance of potential impacts; and
 - Preparation of the EIAR.
-

9.3 DESCRIPTION OF ALTERNATIVES

The EIA process identifies two types of project alternatives:

- Concept Level Alternatives which relates to the site, technology and process alternatives; and
- Detailed Level Alternatives which relates to working methods and mitigation measures,

The feasibility of the higher level concept alternatives have been considered and assessed within Section 6 of the DSR. The Detailed Level Alternatives will be addressed within the EIAR.

9.4 SPECIALIST STUDIES TO BE UNDERTAKEN

Table 9-2 below outlines the specialist studies that were identified during the Screening Assessment and verified during a site verification assessment. Where the specialist studies is deemed not applicable a motivation is provided to that effect.

Table 9-2: Specialist Studies

SPECIALIST STUDY	APPLICABILITY	SCOPE OF WORK (IF REQUIRED)
Agricultural Assessment Impact	Based on the site verification the majority of the site is disturbed and there are no agricultural potential remaining. As such it is deemed that a specialist study is not required.	N/A
Archaeological and Cultural Heritage Impact Assessment	A Archaeological and Cultural Heritage Impact Assessment will be undertaken by Archaeos Culture & Cultural Resource Consultants	<ul style="list-style-type: none"> – Undertaking a literature survey; – Undertaking a physical field survey; – All sites, objects, features and structures identified will be documented; – Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value; – Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions; – Recommend suitable mitigation measures to minimize possible negative impacts on the cultural resources by the proposed development; – Review applicable legislative requirements; and – Compile a report.
Palaeontology Assessment Impact	A Palaeontological Assessment will be undertaken by Dr H Fourie.	<ul style="list-style-type: none"> – Undertaking a literature survey; – Undertaking a Phase 1 field study; – Background information on the project. – Description of the property of affected environment with details of the study area; – Description of the geological setting and field observations; – Background to palaeontology of the area; and – Heritage rating.
Terrestrial Biodiversity Impact Assessment	A Biodiversity Assessment will be undertaken by The Biodiversity Company.	<ul style="list-style-type: none"> – Desktop description of the baseline receiving environment specific to the field of expertise (general surrounding area as well as site specific environment); – Identification and description of any sensitive receptors in terms of relevant specialist disciplines (biodiversity) that occur in the project area, and the manner in which these sensitive receptors may be affected by the activity; – Identify ‘significant’ ecological, botanical and faunal features within the proposed development areas; – Identification of conservation significant habitats around the project area which might be impacted by the proposed development; – Site visit to verify desktop information; – Provide a map to identify sensitive receptors in the project area, based on available maps, database information & site visit verification; and

SPECIALIST STUDY	APPLICABILITY	SCOPE OF WORK (IF REQUIRED)
		<ul style="list-style-type: none"> — Identification of risk factors associated with the developments.
Aquatic Biodiversity Impact Assessment	<p>The site is located approximately 1.5km north of the Rietspruit River that flows in a south-westerly direction into the Suikerbosrand Nature Reserve. No river or stream traverses the site and it is located about 1km north of the nearest wetland.</p> <p>As such it is deemed that a specialist study is not required.</p>	N/A
Hydrology Assessment	<p>The site is located approximately 1.5km north of the Rietspruit River that flows in a south-westerly direction into the Suikerbosrand Nature Reserve. No river or stream traverses the site and it is located about 1km north of the nearest wetland.</p> <p>As such it is deemed that a specialist study is not required.</p>	N/A
Noise Impact Assessment	<p>The site is adjacent to the N3 highway. The nearest community is located on the opposite side of the N3 to the south and it is not anticipated that the filling plant will be audible.</p> <p>As such it is deemed that a specialist study is not required.</p>	N/A
Traffic Impact Assessment	<p>It is estimated that there will be 8 trucks a day and 15-30 light vehicles. The site has been used as an industrial facility for numerous years and this is not considered a significant increase.</p> <p>As such it is deemed that a specialist study is not required.</p>	N/A
Geotechnical Assessment	<p>A desktop Geotechnical Assessment will be undertaken by WSP.</p>	<ul style="list-style-type: none"> — Obtain dolomite stability reports and associated information on sites surrounding the proposed development site from the Council for Geoscience (CGS); — Review existing information for the site; — Create a general geotechnical model for the site area; — Determine the potential for dolomite stability problems on the site; — No site investigations are proposed; and — The report will be provided in letter format.

SPECIALIST STUDY APPLICABILITY SCOPE OF WORK (IF REQUIRED)

<p>Socio-Economic Assessment</p>	<p>It is anticipated that 50 employment opportunities will be generated during the construction phase and 45 during the operational phase. This is a low number.</p> <p>As such it is deemed that a specialist study is not required.</p>	<p>N/A</p>
<p>Plant Species Assessment</p>	<p>A Biodiversity Assessment will be undertaken by The Biodiversity Company.</p>	<ul style="list-style-type: none"> – Desktop description of the baseline receiving environment specific to the field of expertise (general surrounding area as well as site specific environment); – Identification and description of any sensitive receptors in terms of relevant specialist disciplines (biodiversity) that occur in the project area, and the manner in which these sensitive receptors may be affected by the activity; – Identify ‘significant’ ecological, botanical and faunal features within the proposed development areas; – Identification of conservation significant habitats around the project area which might be impacted by the proposed development; – Site visit to verify desktop information; – Provide a map to identify sensitive receptors in the project area, based on available maps, database information & site visit verification; and – Identification of risk factors associated with the developments.
<p>Animal Species Assessment</p>	<p>A Biodiversity Assessment will be undertaken by The Biodiversity Company.</p>	<ul style="list-style-type: none"> – Desktop description of the baseline receiving environment specific to the field of expertise (general surrounding area as well as site specific environment); – Identification and description of any sensitive receptors in terms of relevant specialist disciplines (biodiversity) that occur in the project area, and the manner in which these sensitive receptors may be affected by the activity; – Identify ‘significant’ ecological, botanical and faunal features within the proposed development areas; – Identification of conservation significant habitats around the project area which might be impacted by the proposed development; – Site visit to verify desktop information; – Provide a map to identify sensitive receptors in the project area, based on available maps, database information & site visit verification; and – Identification of risk factors associated with the developments.
<p>Air Quality Impact Assessment</p>	<p>An Air Quality Assessment will be undertaken by WSP</p>	<ul style="list-style-type: none"> – Undertake a baseline assessment of the current meteorological and ambient air quality situation in the area surrounding the proposed plant.

SPECIALIST STUDY	APPLICABILITY	SCOPE OF WORK (IF REQUIRED)
		<ul style="list-style-type: none"> – Compile a comprehensive emissions inventory for the proposed plant. – Use a Level Two (AERMOD) atmospheric dispersion model to determine the air quality impacts associated with the proposed plant. – It is understood only one plant at one location requires assessment. – Compile an Atmospheric Impact Report, detailing all findings from the baseline assessment, emissions inventory and dispersion modelling simulations; – Provide recommendations on the scope of any mitigation measures to reduce the air quality associated with the proposed plant; and – Compile and submit an AEL for the proposed plant.
Hazardous Installation Risk Assessment	A Hazardous Risk Assessment will be undertaken by Major Hazard Risk Consultants	<ul style="list-style-type: none"> – Conduct a quantitative risk assessment (QRA). – Development of accidental spill and fire scenarios for the facility. – Using generic failure rate data (for tanks, pumps, valves, flanges, pipework, gantry, couplings and so forth), determination of the probability of each accident scenario. – For each incident developed, determination of consequences (such as thermal radiation, domino effects, toxic-cloud formation and so forth). – For scenarios with off-site consequences (greater than 1% fatality off-site), calculation of maximum individual risk (MIR), taking into account all generic failure rates, initiating events (such as ignition), meteorological conditions and lethality.

9.4.1 AIR QUALITY IMPACT ASSESSMENT

9.4.2 MAJOR HAZARD INSTALLATION

9.5 IMPACT ASSESSMENT METHODOLOGY

The EIAR uses a methodological framework developed by WSP to meet the combined requirements of international best practice and NEMA, Environmental Impact Assessment Regulations, 2014, as amended (GN No. 326) (the “EIA Regulations”).

As required by the EIA Regulations (2014) as amended, the determination and assessment of impacts will be based on the following criteria:

- Nature of the Impact;
- Significance of the Impact;
- Consequence of the Impact;
- Extent of the impact;
- Duration of the Impact;

- Probability of the impact;
- Degree to which the impact:
 - can be reversed;
 - may cause irreplaceable loss of resources; and
 - can be avoided, managed or mitigated.

Following international best practice, additional criteria have been included to determine the significant effects. These include the consideration of the following:

- Magnitude: to what extent environmental resources are going to be affected;
- Sensitivity of the resource or receptor (rated as high, medium and low) by considering the importance of the receiving environment (international, national, regional, district and local), rarity of the receiving environment, benefits or services provided by the environmental resources and perception of the resource or receptor); and
- Severity of the impact, measured by the importance of the consequences of change (high, medium, low, negligible) by considering inter alia magnitude, duration, intensity, likelihood, frequency and reversibility of the change.

It should be noted that the definitions given are for guidance only, and not all the definitions will apply to all of the environmental receptors and resources being assessed. Impact significance was assessed with and without mitigation measures in place.

9.5.1 METHODOLOGY

Impacts are assessed in terms of the following criteria:

- a) The nature; a description of what causes the effect, what will be affected and how it will be affected.

Table 9-3: Nature or Type of Impact

NATURE OR TYPE OF IMPACT DEFINITION

Beneficial / Positive	An impact that is considered to represent an improvement on the baseline or introduces a positive change.
Adverse / Negative	An impact that is considered to represent an adverse change from the baseline, or introduces a new undesirable factor.
Direct	Impacts that arise directly from activities that form an integral part of the Project (e.g. new infrastructure).
Indirect	Impacts that arise indirectly from activities not explicitly forming part of the Project (e.g. noise changes due to changes in road or rail traffic resulting from the operation of Project).
Secondary	Secondary or induced impacts caused by a change in the Project environment (e.g. employment opportunities created by the supply chain requirements).
Cumulative	Impacts are those impacts arising from the combination of multiple impacts from existing projects, the Project and/or future projects.

b) The **physical extent**.

Table 9-4: Physical Extent Rating of Impact

SCORE	DESCRIPTION
1	the impact will be limited to the site;
2	the impact will be limited to the local area;
3	the impact will be limited to the region;
4	the impact will be national; or
5	the impact will be international;

c) The duration, wherein it is indicated whether the lifetime of the impact will be:

Table 9-5: Duration Rating of Impact

SCORE	DESCRIPTION
1	of a very short duration (0 to 1 years)
2	of a short duration (2 to 5 years)
3	medium term (5–15 years)
4	long term (> 15 years)
5	permanent

d) Reversibility: An impact is either reversible or irreversible. A scale of the level of reversibility if an impact is How long before impacts on receptors cease to be evident.

Table 9-6: Reversibility Of The Impact

SCORE	DESCRIPTION
1	The impact is immediately reversible.
3	The impact is reversible within 2 years after the cause or stress is removed; or
5	The activity will lead to an impact that is in all practical terms permanent.

e) The magnitude of impact on ecological processes, quantified on a scale from 0-10, where a score is assigned.

Table 9-7: Magnitude Rating of Impact

SCORE	DESCRIPTION
-------	-------------

0	small and will have no effect on the environment.
1	minor and will not result in an impact on processes.
2	low and will cause a slight impact on processes.
3	moderate and will result in processes continuing but in a modified way.
4	high (processes are altered to the extent that they temporarily cease).
5	very high and results in complete destruction of patterns and permanent cessation of processes.

- f) The probability of occurrence, which describes the likelihood of the impact actually occurring. Probability is estimated on a scale where:

Table 9-8: Probability Rating of Impact

SCORE	DESCRIPTION
1	very improbable (probably will not happen).
2	improbable (some possibility, but low likelihood).
3	probable (distinct possibility).
4	highly probable (most likely).
5	definite (impact will occur regardless of any prevention measures).

- g) The significance, which is determined through a synthesis of the characteristics described above (refer formula below) and can be assessed as low, medium or high;
- h) The status, which is described as either positive, negative or neutral;
- i) The degree to which the impact can be reversed;
- j) The degree to which the impact may cause irreplaceable loss of resources; and
- k) The degree to which the impact can be mitigated.

The significance is determined by combining the above criteria in the following formula:

Significance = (Extent + Duration + Reversibility + Magnitude) x Probability

[S=(E+D+R+M) ×P]

Where the symbols are as follows:

SYMBOL	CRITERIA	DESCRIPTION
S	Significance Weighting	
E	Extent	Refer to Table 9-4
D	Duration	Refer to Table 9-5
M	Magnitude	Refer to Table 9-7
P	Probability	Refer to Table 9-8

The significance weightings for each potential impact are as follows:

OVERALL SCORE	SIGNIFICANCE RATING (NEGATIVE)	SIGNIFICANCE RATING (POSITIVE)	DESCRIPTION
< 30 points	Low	Low	where this impact would not have a direct influence on the decision to develop in the area
31 - 60 points	Medium	Medium	where the impact could influence the decision to develop in the area unless it is effectively mitigated
> 60 points	High	High	where the impact must have an influence on the decision process to develop in the area

The impact significance without mitigation measures will be assessed with the design controls in place. Impacts without mitigation measures in place are not representative of the proposed development's actual extent of impact, and are included to facilitate understanding of how and why mitigation measures were identified. The residual impact is what remains following the application of mitigation and management measures, and is thus the final level of impact associated with the development. Residual impacts also serve as the focus of management and monitoring activities during Project implementation to verify that actual impacts are the same as those predicted in this EIR.

9.6 ENVIRONMENTAL IMPACT ASSESSMENT REPORT

Once the DSR has been submitted to the proposed project will proceed into detailed EIA phase, which involves the detailed specialist investigations. WSP will produce a Draft EIAR after the completion of the required specialist studies. The Draft EIAR will provide an assessment of all the identified key issues and associated impacts from the Scoping phase. All requirements as contemplated in the GNR 326 EIA Regulations will be included in the Draft EIAR. The Draft EIAR will contain, inter alia, the following:

- Details of the EAP who prepared the report and the expertise of the EAP to carry out the S&EIR process, including a curriculum vitae;
- The location of the activity, including the 21 digit Surveyor General code of each cadastral land parcel, where available, the physical address and farm name; and the coordinates of the boundary of the property or properties;
- A plan which locates the proposed activity or activities applied for as well as the associated structures and infrastructure at an appropriate scale;

- A description of the scope of the proposed activity, including all listed and specified activities triggered and being applied for; and a description of the associated structures and infrastructure related to the proposed project;
- A description of the policy and legislative context within which the development is located and an explanation of how the proposed development complies with and responds to the legislation and policy context;
- A motivation for the need and desirability for the proposed development, including the need and desirability of the activity in the context of the preferred location;
- A motivation for the preferred development footprint within the approved site;
- A full description of the process followed to reach the proposed development footprint within the approved site;
- Details of the public participation process undertaken;
- A summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them;
- The environmental attributes associated with the development footprint alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;
- The impacts and risks identified including the nature, significance, consequence, extent, duration and probability of the impacts;
- The methodology used in determining and ranking of potential environmental impacts and risks;
- Positive and negative impacts;
- An assessment of each identified potentially significant impact and risk;
- The possible mitigation measures that could be applied;
- An environmental impact statement;
- A description of any assumptions, uncertainties and gaps in knowledge;
- A reasoned opinion as to whether the proposed activity should or should not be authorised;
- An undertaking under oath or affirmation by the EAP; and
- An EMPr.

9.7 STAKEHOLDER AND AUTHORITY ENGAGEMENT

9.7.1 PUBLIC PARTICIPATION PROCESS

Public participation during the EIA phase revolves around the review and findings of the environmental impact assessment, which will be presented in the Draft EIAR. All stakeholders will be notified of the progress to date and availability of the Draft EIAR, via mail, email and/or SMS. A legislated period of 30 consecutive days will be allowed for public comment. Reports will be made available in the following way:

- Distribution for comment at central public places, which were used during the Scoping phase;
- The document will be made available to download from the WSP website; and
- Copies of CDs will be made available on request.

A public meeting required in order to reach the majority of the stakeholders especially the landowners as the land is communally owned. The meeting will be facilitated by key members of the project team. The public meeting would be to present the findings of the impact assessment and address issues of concern raised during the Scoping phase.

The EIA phase will provide the following information to I&APs:

- Initial Site Plan;
- Alternatives;
- A description of activities and operations to be undertaken;
- Baseline information;

- Specialist studies;
- Impact assessment;
- Management measures;
- Monitoring and measuring plan; and
- Closure details.

The information outlined above will be presented in one or more of the following:

- Notifications;
- Scoping Report;
- EIAR; and
- EMPr.

All comments received during the EIA phase will be recorded in the comments and response report (CRR), which will be included in the draft and final EIAR. The final EIAR will incorporate public comment received on the Draft EIAR and will be made available for public review with hard copies distributed mainly to the authorities and key stakeholders.

9.8 NOTIFICATION OF ENVIRONMENTAL AUTHORISATION

All stakeholders will receive a letter at the end of the process notifying them of the authority's decision, thanking them for their contributions, and explaining the appeals procedure.

9.9 CONSULTATION WITH AUTHORITIES

It is envisaged that consultation with the GDARD and the DFFE will coincide with the compilation of the following key documents:

- DSR;
- FSR;
- Draft EIAR/EMPr; and
- Final EIAR/EMPr.

10 WAY FORWARD

This DSR contains:

- A description of the existing and proposed activities;
- A description of the alternatives considered to date;
- An outline of the proposed process to be followed;
- Information on the proponent, EAP and stakeholders who have chosen to participate in the project;
- An outline of the environment in which the project falls;
- Information on the potential environmental impacts to be studied in more detail during the EIAR phase of the project; and
- Information on the proposed specialist studies to be undertaken.

A number of environmental impacts have been identified as requiring some more in-depth investigation and the identification of detailed mitigation measures, namely transport and air quality. Therefore, a detailed EIA is required to be undertaken in order to provide an assessment of these potential impacts and recommend appropriate mitigation measures.

The recommendation of this report is that detailed specialist studies for terrestrial ecology and heritage are undertaken on the proposed project. The scope of work required in the EIA phase of the project is included in the ToR for EIA in this DSR.

This DSR is available for review from **5 July 2021 to 4 August 2021**. All issues and comments submitted to WSP will be incorporated in the CRR of the FSR.

The DSR will be submitted to the delegated competent authorities responsible for authorising this project.

If you have any further enquiries, please feel free to contact:

WSP Environmental (Pty) Ltd
Attention: Anri Scheepers
PO Box 98867, Sloane Park, 2152
Tel: 011 361 1390
Fax: 011 361 1381
E-mail: Anri.Scheepers@wsp.com

APPENDIX

A EAP CV



APPENDIX

A-1 ANRI SCHEEPERS



ANRI SCHEEPERS, BA

Principal Consultant (Environmental Services), Environment & Energy



CAREER SUMMARY

Anri graduated from the University of Johannesburg with a BA honours in Geography in 2007, and has thirteen years work experience. Anri is a principal environmental consultant and team coordinator for the Planning and Advisory Services unit.

Anri has been involved in numerous mining and industrial projects in South Africa. Anri has experience with diamond, gold, platinum, chrome, coal and manganese mining and processing operations. The projects include Environmental and Social Impact Assessments, Amendment processes and Environmental Management Programme consolidation and alignment processes. She has project managed numerous multi disciplinary projects in various sectors in South Africa and has experience with the International Finance Corporation Performance Standards and African Development Bank Guidelines.

Years with the firm

8

Years of experience

13

Areas of expertise

Stakeholder Engagement

Water Use License Applications

Environmental Authorisation Processes

Environmental Management Plans

Waste Management

Legal Compliance Assessments

Environmental Due Diligence and Liability Assessments

Environmental Management Systems

Languages

English

Afrikaans

Anri is qualified as a Lead Auditor and has undertaken legal compliance auditing, including environmental authorisations, waste management licences, water use licences and environmental performance assessments. In addition, she has undertaken general site assessments to determine compliance against, local, provincial and national environmental legislation. Anri has also been involved in environmental due diligence and liability assessments.

Anri's roles and responsibilities include the management of Environmental Authorisation and Waste Management Licence Processes (Basic Assessments and Scoping and Environmental Impact Assessment Reporting), Water Use Licence Application Processes and Auditing.

EDUCATION

Bachelor of Arts (Honours), Geography, University of Johannesburg, Gauteng, South Africa 2007

Bachelor of Arts, Geography, University of Johannesburg, Gauteng, South Africa 2006

ADDITIONAL TRAINING

Environmental-Law Mine Closure, Centre for Environmental Management, South Africa 2019

Snake Awareness, Scorpion Awareness and First Aid for Snakebite and Scorpion Sting, African Snakebite Institute 2016

Environmental Management Systems ISO 14001 Audit: Lead Auditor, Centre for Environmental Management, South Africa 2014

IWRM, Water Use Authorisations, and Water Use Licence Applications – Procedures, Guidelines, IWWMPs and Pitfalls, Carin Bosman Sustainable Solutions, South Africa 2012

ISO 14001 Environmental Management Systems (EMS), Implementation and Auditing, Centre for Environmental Management, South Africa 2011

IEMA Approved Foundation Course in Environmental Auditing, Aspects International, South Africa 2009

PROFESSIONAL EXPERIENCE*Environmental Authorisation Processes*

- Jet Park Warehouse Development, Gauteng (2020-2021). Project Manager. Basic Assessment Process for the development of a commercial park within a 30m from a wetland and within a critical biodiversity area. Client: Sable Place Properties
- Vosloorus Filling Plant, Vosloorus, Gauteng (2019-2020). Project Manager. Environmental authorisation process for the proposed dangerous goods filling plant. Client: Richbay Chemicals
- Mbabane – Manzini Corridor Dam (Nondvo Dam), Hhohho Region, Eswatini (2018-2019). Project Manager. An Environmental and Social Impact Assessment for the proposed Nondvo Dam in Eswatini (previously Swaziland). Client: Government of the Kingdom of Eswatini, Ministry of Natural Resources and Energy, Department of Water Affairs
- Sappi Ngodwana Reservoir, Mpumalanga (2020): Project Manager. Basic Assessment Process for the construction of a reservoir within a critical biodiversity area. Client: Sappi Southern Africa
- Demolition and Rehabilitation of Infrastructure at West Wits Business Operations, Carletonville, Gauteng (2019): Project Manager. A contaminated land assessment and environmental authorisation process for the decommissioning and rehabilitation of selected infrastructure West Wits Operations. Client: AngloGold Ashanti
- Kranspoort Cattle Feedlot Basic Assessment Process, Kranspoort, Mpumalanga, South Africa (2018): Project Director. A Basic Assessment Process and Waste Management Plan for the proposed development of a cattle feedlot. Client: Department of Rural Development and Land Reform
- Amandelbult Section Dangerous Goods and Railway Extension Final Basic Assessment Report, Thabazimbi, Limpopo (2017-2018): Project Director. The Basic Assessment Process for the proposed installation of diesel tanks and the extension of a railway line at the Amandelbult Section, Tumela Mine. Client: Anglo American Platinum Limited
- Anglo Platinum Water Separation Project, Rustenburg, North West, (2016-2017): Project Manager. The Basic Assessment process for the proposed refurbishment of an existing pipeline and installation of new pipelines as part of the Water Infrastructure Upgrade Project. Client: Anglo American Platinum Limited
- Sasol Energy Technology Blending Facility Upgrade Project, Sasolburg, Free State, South Africa (2017): Project Manager. Basic Assessment Process for the installation of dangerous goods tanks at the Sasol One Site. Client: Sasol Energy Technology, a Division of Sasol Oil (Pty) Ltd
- Sasol Energy Technology Blending Facility Upgrade Project, Sasolburg, Free State, South Africa (2017-2018): Project Manager. Basic Assessment process for the construction of a fuel drum storage warehouse adjacent to the existing underground fuel storage tanks at the Fuel Blending Facility on the Sasol One site. Client: Sasol Energy Technology, a Division of Sasol Oil (Pty) Ltd
- Section 24G Application Process for Rappa Holdings, Germiston, Gauteng (2017-2018): Project Manager. Undertaking the rectification process for six historic rectification applications. Client: Rappa Holdings (Pty) Ltd
- Environmental Authorisation Process for the SO₂ Abatement Plant at Mortimer Smelter, Swartklip, North West, South Africa (2016-2017): Project Manager. Undertaking a Scoping and Environmental Impact Reporting Process to ensure compliance with the National Environmental Management Air Quality Act (No. 39 of 2004). Client: Anglo American Platinum Limited

- Environmental Authorisation Process for the SO₂ Abatement Plant at Polokwane Smelter, Polokwane, Limpopo, South Africa (2016-2017): Project Manager. Undertaking a Scoping and Environmental Impact Reporting Process to ensure compliance with the National Environmental Management Air Quality Act (No. 39 of 2004). Client: Anglo American Platinum Limited
- Environmental Authorisation for a Private Vehicle Proving Ground Development, Northern Cape, South Africa (2016): Project Manager. A Scoping and Environmental Impact Reporting Process for a private vehicle proving ground. Client: Ingen | Aix GmbH
- Establishment of the Proposed Rietvlei Opencast Coal Mine, Mpumalanga, South Africa (2016-2018): Project Manager. This project involved repeating the environmental authorisation process with the DMR as the competent authority, for the establishment of an opencast coal mine north of Middelburg. Client: Rietvlei Mining Company
- Environmental Authorisation for Blue Sphere, Nigel, Gauteng, South Africa (2014): Consultant. This project includes an environmental impact assessment, environmental management programme report, water use license application, waste management license application and an atmospheric emissions licence application as well as the public participation process for the existing and proposed processes for Blue Sphere in Nigel. Client: Blue Sphere Investments and Trading 103 (Pty) Ltd
- Environmental Authorisation for the Proposed Construction and Operation of Two Furnaces and Associated Infrastructure at Transalloys, eMalahleni, Mpumalanga, South Africa (2014): Consultant. The project entailed undertaking an environmental authorisation (by way of a scoping and environmental impact reporting process), including an atmospheric emissions licence application and waste management licence application process for the construction of two new 75MVA submerged arc furnaces that will primarily produce silicomanganese. Client: Transalloys (Pty) Ltd
- Section 24G Rectification Process for the Storage of Dangerous Goods for Much Asphalt, Gauteng, South Africa (2014): Project Manager. Much Asphalt was required to undertake a Section 24G Rectification Process for the unlawful storage of dangerous goods on a number of their sites. Zaffar was involved in the compilation of the Section 24G application forms. Client: Much Asphalt (Pty) Ltd
- M14 Furnace Environmental Authorisation, Meyerton, Gauteng, South Africa (2012): Consultant. The project entailed undertaking an environmental authorisation, including an atmospheric emissions licence application process, in terms of the National Environmental Management Act (No. 107 of 1998) for the construction of an 81MVA furnace that will produce Ferromanganese and Silicomanganese. Client: Samancor Manganese (Pty) Ltd
- Basic Assessment Process for the Proposed Expansion and Upgrading of the Raw Materials Stockyard at Metalloys, Meyerton, Gauteng, South Africa (2011): Consultant. The project included the undertaking of an environmental authorisation process, by way of a basic assessment process, and the amendment application of an atmospheric emissions licence. The project involved the expansion and The project entailed undertaking an environmental authorisation, including an atmospheric emissions licence application process, in terms of the National Environmental Management Act (No. 107 of 1998) for the construction of an 81MVA furnace that will produce Ferromanganese and Silicomanganese upgrading of the existing Raw Materials Stockyard at the Samancor Meyerton Works (Metalloys site). Client: Samancor Manganese (Pty) Ltd
- Proposed new Sinter Plant: Mamatwan Mine, Hotazel, Northern Cape, South Africa (2010): Consultant. This project included an environmental impact assessment, environmental management programme report addendum and water

use license application as well as the public participation process for a proposed sinter plant at the Mamatwan Mine in the Northern Cape. Client: Hotazel Manganese

Environmental Management Plans

- Refurbishment (Fit-Out) of the 8th Floor in 140 West Building, South Africa (2020): Project Manager. Compilation of the Environmental Management Plan for the refurbishment of an office space in order to acquire a Green Star SA – Office v1 certification by the Green Building Council of South Africa. Client: Goldman Sachs
- Environmental Management Plan for the South Sudan Feeder Roads, South Sudan (2019): Project Director. Compilation of an Environmental Management Plan for the construction of the Kayango Market to A43 Road in South Sudan. Client: United Nations Office for Project Services (UNOPS)
- Environmental Programme for the Proposed Knightsbridge Development, Bryanston, Gauteng, South Africa (2015): Project Manager. Compilation of a Green Star Rating Environmental Programme for the Proposed Knightsbridge Development. Client: Emira Property Fund
- J.P Morgan Chase & Company, 1 Fricker Road EMP ECO, Illovo, Gauteng, South Africa (2017): Project Manager. An EMP was compiled for the proposed refurbishment of the office building to attain a Green Star rating and is also responsible for conducting the first EMP compliance audit and training of the DEO to carry out subsequent audits. Client: J.P Morgan Chase & Company
- Compilation of Environmental Management Plans - West Plant Metalloys, Meyerton, Gauteng, South Africa (2011): Consultant. The project included the undertaking of an environmental risk assessment for all facilities and activities at West Plant. Environmental management plans were compiled from the results of the risk assessments. Client: Samancor Manganese (Pty) Ltd Metalloys

Environmental Management Programme Reports

- Separation of the Union Section Operational Environmental Management Programme (and Addendums) into ‘Carved Out’ versus ‘Retained’ categories, Swartklip, North West Province, South Africa (2017): Project Manager. The Section is in possession of an approved Environmental Management Programme as well as numerous addendums for mining, concentrating and smelting operations. The Section is in a restructuring process which involves the selling and/or disenfranchising of certain of the operations. WSP/PB restructured the Sections’s consolidated Environmental Management Programme to align with the future goals/strategies of the Mine. Client: Anglo Platinum Limited - Rustenburg Platinum Mines Limited
- EMPR Updates – Vaal River and West Wits Operations, Gauteng and North West, South Africa (2014-2016): Project Manager. The alignment of the West Wits (WW) and Vaal River (VR) Operations Environmental Management Programme Reports (EMPR) in accordance with the requirements of the Mineral and Petroleum Resources Development Act (No. 28 Of 2002) (MPRDA). Client: AngloGold Ashanti (Pty) Ltd
- Environmental Management Programme Report Consolidation and Alignment of Union Mine: Rustenburg Platinum Mines, North-West, South Africa (2014): Project Manager. The EMPR consolidation and alignment process combined the original EMPR and authorised EMPR amendments into a complete and comprehensive document, which will become the overarching EMPR for the mine lease area and will be used as a concise management tool for all employees operating within mine lease area. Client: Anglo American Platinum Ltd

Waste Management

- Construction and Operation of a Waste Treatment Facility, Middelburg, Mpumalanga (2016-2018): Project Manager. The Scoping and Environmental Impact Reporting process for the construction and operation of a Health Care Risk Waste treatment facility in Middelburg. Client: Vikela Afrika Waste Care CC
- Applications for Samancor Manganese (Pty) Ltd Metalloys in terms of section 20 of the Environment Conservation Act 73 of 1989, Meyerton, Gauteng, South Africa (2014): Consultant. The project entailed applications, by way of risk assessments, in terms of section 20 of the Environmental Conservation Act, for the North Plant Sludge Dam, West Plant Sludge Dam, Bag Filter Material storage Facilities and Slag Stockpiles at Metalloys. Subsequent to the receipt of the waste management licences in terms of the National Environmental management: Waste Act (No. 59 of 2009) an amendment process was also undertaken. Client: Samancor Manganese (Pty) Ltd
- Applications for Afrisam, Vanderbijlpark, in terms of section 20 of the Environment Conservation Act 73 of 1989. Vanderbijlpark, Gauteng, South Africa (2014): Consultant. The project entailed applications in terms of section 20 of the Environmental Conservation Act, for the slag stockpiles at Afrisam, Vanderbijlpark. Subsequent to the receipt of the waste management licences in terms of the National Environmental management: Waste Act (No. 59 of 2009) an amendment process was also undertaken. Client: AfriSam South Africa (Pty) Ltd
- Waste Management Licence Application for The Existing And New Waste Management Facilities At Columbus Stainless Complex In Middleburg, Mpumalanga Province, South Africa (2014): Project Manager. Columbus Stainless (Pty) Ltd (Columbus) proposes to license existing waste management facilities and a new hazardous waste store within the footprint of the Columbus Complex. The Environmental Authorisation process by way of Scoping and Environmental Impact Reporting is required in order to license the said facilities. The facilities requiring licensing involve, but is not limited to: storage, recovery, bailing and treatment. WSP is responsible for obtaining a Waste Management License for the said activities via the Department of Environmental Affairs in line with relevant legislation. Client: Columbus Stainless (Pty) Ltd
- Establishment of a Waste Monitoring Committee, Meyerton, Gauteng, South Africa (2011): Consultant. The project included the identification of potential members for the monitoring committee and the establishment of the committee. The establishment of the committee included the compilation of the constitution and committee meetings. Client: Samancor Manganese (Pty) Ltd

Water Use Licence Applications

- Water Use Licence Application Process for the SO₂ Abatement Plant at Anglo American Platinum Limited: Polokwane Smelter, Polokwane, Limpopo, South Africa (2017-2018): Project Manager. The project involved the management of specialist along with the compilation and submission of the technical documentation. Client: Anglo American Platinum Ltd: Polokwane Metallurgical Complex
- Rietvlei Coal Mine Water Use Licence Application and Integrated Water and Waste Management Plan, Middelburg, Mpumalanga, South Africa (2016 – 2017): Project Manager. The project involved the compilation of the Integrated Water and Waste Management plan for all water uses proposed at the Greenfileds Rietvlei Opencast Coal Mining Operation. Client: Rietvlei Mining Company (Pty) Ltd
- Metalloys Water Use Licence Application, Meyerton, Gauteng, South Africa (2009): Assistant. This project involved compiling and submitting water use licence applications for all water use licence activities being undertaken at Metalloys. Subsequently a water use licence amendment process was also undertaken. Client: Samancor Manganese (Pty) Ltd

Environmental Authorisation Amendments/Renewals

- Amendment of the Vodacom Dangerous Good Environmental Authorisations, Midrand, Gauteng (2021): Project Manager. The amendment process of the environmental authorisations to amend auditing and monitoring conditions. Client: Vodacom South Africa
- Transfer of the West Wits Operations EMPR to Harmony Gold (2020): Project Manager. The amendment of the EMPR to transfer the West Wits Operations EMPR to Harmony Gold. Client: AngloGold Ashanti Limited
- Amandelbult Section Bus and Taxi Terminal Part 2 Amendment Process, Thabazimbi, Limpopo (2020-2021): Project Manager. The amendment process of the existing Environmental Management Programme Report to formalise the bus and taxi terminal. Client: Rustenburg Platinum Mines
- Sibanye Rustenburg Platinum Mine Part 2 Amendment Process, Rustenburg, North West (2018): Project Manager. The proposed amendment of the Environmental Management Programme Report to excluded activities which will not take place and to ensure alignment of the management measures. Client: Sibanye-Stillwater
- Zibulo Colliery Part 2 Amendment Process, Mpumalanga (2018-2019): Project Manager. The amendment of the Zibulo Colliery Environmental Management programmes for the inclusion of a new coal stockpile. Client: Anglo American Inyosi Coal
- Scaw Metal Waste Treatment and Disposal Facility Part 2 Amendment (2018-2019): Project Manager. The amendment of the Scaw Waste Management Licence to include different waste types. Client: Scaw South Africa
- The transfer of Authorisations for Union Mine (2018): Project Manager. The transfer a Waste Management Licence and ECA Permit in terms of the Part 1 Amendment Process. Client: Anglo American Platinum Limited
- The transfer of Authorisations for Anglo American Platinum Rustenburg Section (2018): Project Manager. The transfer a two Waste Management Licences in terms of the Part 1 Amendment Process. Client: Anglo American Platinum Limited
- Amendment of the Sibanye Rustenburg Platinum Mines Environmental Management Programme, Rustenburg, North West (2018): Project Manager. A Part 2 Amendment Process was undertaken to limit the EMPR to activities have commenced or will be undertaken. Client: Sibanye-Stillwater
- Amendment Process for the Copper Smelting and Casting Plant at Rappa Resources, Germiston, Gauteng (2017-2018): Project Manager. A Part 2 Amendment Process for the installed Copper Smelting and Casting Plant at Rappa Resources. Client: Rappa Resources (Pty) Ltd
- Renewal of the Technopack Eastern Cape Waste Management Licence, Springs, Gauteng (2017): Project Manager. The Waste Management Licence was renewed to ensure the continuation of the plant operations at Enstra. Client: Technopack Eastern Cape (Pty) Ltd
- The Impala Platinum Springs Waste Management Licence Amendment, Springs, Gauteng (2018): Project Manager. A Part 1 Amendment Process was undertaken in order to amend some of the conditions of the Waste Management Licence. Client: Impala Platinum Refineries
- Environmental Authorisation Amendment Process for the Ventilation Shaft at Siphumelele 1 Mine, Rustenburg, North-West, South Africa (2016): Project Manager. Part 2 Amendment Process for the proposed establishment of the Ventilation Shaft at Siphumelele 1 Mine. Client: Rustenburg Platinum Mines Limited

Stakeholder Engagement

- Minimum Emissions Standard Postponement Application for Nulandis Lilianton and Modderfontein (2018-2019): Project Manager. Undertaking the stakeholder engagement process in support of the Nulandis Lilianton and Modderfontein Minimum Emissions Standard Postponement Application. Client: Nulandis
- Minimum Emissions Standard Postponement Application for Sappi Ngodwana (2019): Project Manager. Undertaking the stakeholder engagement process in support of the Sappi Ngodwana Minimum Emissions Standard Postponement Application. Client: Sappi Southern Africa
- Minimum Emissions Standard Postponement Application for AEL Interlligent Blasting Modderfontein (2018-2019): Project Manager. Undertaking the stakeholder engagement process in support of the Modderfontein Site Minimum Emissions Standard Postponement Application. Client: AEL Intelligent Blasting
- Identification of Interested and Affected Parties for Omnia Sasolburg, Sasolburg, Free State, South Africa (2018): Project Manager. The identification of interested and affected parties in terms of Clause 4.1 and 4.2 of ISO 14001:2015. Client: Omnia Fertilizer a Division of Omnia Group (Pty) Ltd
- Re-establishment of a Monitoring Committee for Metalloys, Meyerton, Gauteng, South Africa (2015 – 2016): Project Manager. The re-establishment of a Monitoring Committee for four of the Waste Management Facilities at Samancor Manganese, Metalloys. Client: BHP Billiton Metalloys (Pty) Ltd
- Stakeholder Engagement for Mooi-Mgeni Transfer Scheme Phase 2, Rosetta Village, Kwazulu- Natal, South Africa (2009): Assistant. This project involved undertaking the public participation process for the Mooi-Mgeni Transfer Scheme Phase 2, which will primarily encompass the construction of the proposed Spring Grove Dam and an associated transfer pipeline from the proposed dam to the Mpofana River. Client: Department of Water Affairs and Forestry (DWAf)

Legal Compliance

- AfriSam Regulation 34 Audits (2020-2021): Lead Auditor. Undertaken the Regulation 34 Compliance Audits for various AfriSam Operations (Eikenhof, Roodekrans, Ladysmith, Umlaas, Pietermaritzburg, Rooikraal). Client: AfriSam
- EMPR Regulation 34 Audits at Mogalakwena Section, Limpopo, South Africa (2020): Lead Auditor. Undertaking nine compliance audits in accordance with Regulation 34 of the EIA Regulations and compilation of seven statements of confirmation that the activities have not yet commenced. Client: Rustenburg Platinum Mines.
- Desktop Review of the Impala EMPR 2019 Audit (2020): Lead Auditor. A desktop review was undertaken to determine whether any changes has been made to the operations at Impala that could influence compliance. Client: Impala Platinum
- External Waste Management Licence Audit at Impala Platinum, Gauteng, South Africa (2016, 2018 and 2020): Lead Auditor. External compliance audit of the WML for the Salvage Yard at Impala Springs. Client: Impala Platinum Refiners
- External Water Use Licence Audit of the Rustenburg Operations, North West, South Africa (2020): Lead Auditor. Undertaking the Water Use Licence for the Waterval Smelter and Anglo Converter Plant, Rustenburg Base Metal Refinery and Precious Metals Refinery. Client: Rustenburg Platinum Mines.
- Impala Platinum Regulation 34 and Waste Management Licence Audits, Rustenburg (2019): Lead Auditor. Undertaking seven compliance audits in accordance with Regulation 34 of the EIA Regulations. Client: Impala Platinum

- Surface Operations Regulation 34 Audits (2019): Lead Auditor. Undertaking the Regulation 34 audits for the Vaal River, Mine Waste Solution and West Wits Operations. Client: AngloGold Ashanti Limited
- Used Oil Industry Audits, Countrywide, South Africa (2014-2019): Lead Auditor. Country-wide environmental compliance auditing of the South African recycled oil industry, comprising sixteen oil refinery operations, and twenty nine drum re-conditioning plants. The audits are primarily focussed on compliance to legislation and ensuring that each site follows international best practice. The audits include a review of the refineries ISO14000 auditor's findings, and tracking of compliance in regards to corrective actions. Client: OSE Foundation
- Sasol Third Party Audits, Johannesburg, Gauteng, South Africa (2017): Project Manager. Undertaken compliance assessments of three environmental authorisations and two water use licence for Sasol Gas. Client: Sasol Gas
- External Environmental Compliance Audit - Tarlton Intermixture Fractionator Plant, Gauteng, South Africa (2014 and 2016): Lead Auditor. An external environmental compliance audit of the record of decision for the Transnet Pipelines Tarlton Intermixture Fractionator Plant was undertaken in order to establish whether Transnet Pipelines are compliant with the conditions specified therein. The audit was undertaken by means of site observations, interviews and verification of available information. Client: Transnet Pipelines (GOC) Ltd
- Waste Management Licence for the Remediation and Decommissioning of Tar Residue Pits, Rustenburg, North-West, South Africa (2015): Lead Auditor. A close-out audit was undertaken to compile compliance with the Waste Management Licence conditions during remediation and decommissioning. Client: Anglo Platinum Limited - Rustenburg Platinum Mines Limited
- Water Use Licence Audit for the Landau Colliery, Mpumalanga, South Africa (2014): Auditor. The audit of the Water Use Licence was conducted in accordance with the relevant requirements of the National Water Act and conditions stipulated therein. The audit report included a summary of findings and compliance criteria, as well as recommendations for future corrective and preventative actions if required. Client: Anglo American Thermal Coal
- Waste Management License Audit for the Slagment Operation, Vanderbijlpark, Gauteng, South Africa (2014): Lead Auditor. This project involved the annual environmental compliance auditing for AfriSam's Slagment Operation in Vanderbijlpark in Gauteng Province. The audit included AfriSam's compliance to the conditions of their waste management license. Client: AfriSam South Africa (Pty) Ltd
- Legal Compliance Audit, Olifantsfontein, Province, South Africa (2012): Lead Auditor. The project included undertaking a legal compliance audit of the atmospheric emissions licence and waste management licence at A-Thermal Retort Technologies (Pty) Ltd. A-Thermal, in Olifantsfontein. Client: A-Thermal retort Technologies (Pty) Ltd
- Metalloys Water Use Licence Audit, Meyerton, Gauteng, South Africa (2012): Auditor. The project entailed undertaking a compliance verification audit of the water use licence conditions of Metalloys. Recommendations were also provided in the audit report for non-compliance or potential concerns. Client: Samancor Manganese (Pty) Ltd
- M14 Furnace Legal Compliance Audit, Meyerton, Gauteng, South Africa (2010 & 2012): Auditor. The project included undertaking a legal compliance audit at Samancor Manganese (Pty) Ltd (Metalloys) to verify their compliance to the conditions of the record of decision issued for the M14 Furnace and the associated atmospheric emissions licence. Client: Samancor Manganese (Pty) Ltd
- Annual Audit of the Record of Decision and Environmental Management Plan for the Fouriespruit Stream diversion and Old Slag Area, Meyerton, Gauteng, South

Africa (2009 & 2010): Lead Auditor. A legal compliance audit on the record of decision and the associated environmental management plan was undertaken to establish whether the upgrading of the existing stream diversion and the closure and rehabilitation of the old slag disposal area comply with the conditions contained therein. Client: Samancor Manganese (Pty) Ltd

- Goedgevonden Mine Water Use Licence Audit, Ogies, Mpumalanga, South Africa (2009): Auditor. The project entailed undertaking a compliance verification audit of the water use licence conditions of Goedgevonden Mine. Recommendations were also provided in the audit report for non-compliance or potential concerns. Client: Xtrata Coal South Africa

Environmental Due Diligence and Liability Assessments

- Environmental Due Diligence for Rolfes Chemicals, Germiston, Gauteng, South Africa (2014): Auditor. Environmental Due Diligence for the acquisition of a Processing Plant and associated facilities. Client: Rolfes Chemicals Alberton
- Environmental and Social Due Diligence of 22 FMCG facilities, Country-wide, South Africa (2014): Lead Auditor. Transactional Environmental and Social Due Diligence for the acquisition of 22 FMCG facilities mainly in the food manufacturing and consumer formulated chemical sectors situated across South Africa for an international private equity and real estate investor. Client: Confidential
- Environmental and Social Due Diligence of Medrock, Johannesburg, South Africa (2014): Lead Auditor. Transactional Environmental and Social Due Diligence for the acquisition of three medical supplies facilities situated in Johannesburg. Client: Confidential

Site Assessments

- The development and expansion at Two Rives Platinum Mine (2021): Project Manager. Environmental Screening for the proposed expansions at the existing Two Rivers Platinum Mine. Client: Two Rivers Platinum Mine
- The Development of a Filling Plant, Vosloorus, Gauteng (2019): Project Manager. Environmental screening for the proposed chemical filling plant. Client: Richbay Chemicals
- Springfield Coal Mine, Meyerton, Gauteng (2019): Project Manager. Site and Legal Review for the Proposed Springfield Coal Mine. Client: Glubay Coal
- The Development of Thermal Power Plant and Solar PV Plant, Nacala, Mozambique (2018): Project Manager. Environmental and social screening for the alternative sites in terms of the International Finance Corporation Performance Standards on Environmental and Social Sustainability. Client: Confidential
- Gap Analysis for the Northern Pit Development at Zibulo Colliery, Mpumalanga (2018): Project Manager. Undertaking a gap analysis of the proposed development of an opencast pit in the northern section of the approved mining right area for Zibulo Colliery, Mpumalanga. Client: Anglo American Inyosi Coal (Pty) Ltd
- Screening Assessment of Proposed Waste Management Facility at Vodacom Campus, Midrand, Gauteng, South Africa (2017). Project Manager. Screening assessment to prepare a business case based on the facts so that the options for Vodacom's development vs. the potential requirement to identify an alternative site can be objectively evaluated by Vodacom. Client: Vodacom Group Limited
- Site Assessment of a culvert on Sappi Forest Property, plantation Nooitgedacht – Camelot South, Ngodwana, Mpumalanga, South Africa (2015): Project Manager. A site assessment of a recently completed culvert development on Sappi Forest property, plantation Nooitgedacht – Camelot South, Mpumalanga. The purpose of the site assessment is to evaluate the works undertaken on site in respect of the National Environmental Management Act (107 of 1998) as amended and National



ANRI SCHEEPERS, BA

Principal Consultant (Environmental Services), Environment & Energy

Water Act (36 of 1998) and relevant regulations promulgated under these acts.
Client: Sappi Southern Africa Limited

- Legal Assessment for the a Proposed Development of a barley Malting Process in Alrode, Germiston, Gauteng, South Africa (2013): Senior Consultant. Undertaking of legal assessment to identify and assess potential scenarios based on environmental assessment triggers for the proposed development at erven 283, 289 and 1607 in Alrode Extension 2. Client: South African Breweries (Pty) Ltd

Environmental Management Systems

- Voorspoed Internal ISO 14001 Audit, Klerksdorp, Free State, South Africa (2010): Auditor. An internal audit was undertaken of the Voorspoed Mine, ISO 14001 System. During the audit conformance to ISO 14001 and the effective implementation of such was assessed. Client: De Beers Group Services (Pty) Ltd
- Venetia Internal ISO 14001 Audit, Musina, Limpopo, South Africa (2009): Auditor. An internal audit was undertaken of the Venetia Mine, ISO 14001 System. During the audit conformance to ISO 14001 and the effective implementation of such was assessed. Client: De Beers Group Services (Pty) Ltd

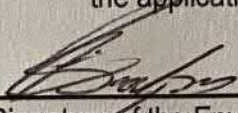
APPENDIX

B EAP DECLARATION OF INTEREST AND UNDERTAKING

6. The independent Environmental Assessment Practitioner

I, Anri Scheepers, declare under oath that I –

- act as the independent environmental assessment practitioner in this application ;
- do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2010;
- have and will not have no vested interest in the proposed activity proceeding;
- have no, and will not engage in, conflicting interests in the undertaking of the activity;
- undertake to disclose, to the competent authority, any material information that have or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the Environmental Impact Assessment Regulations, 2006;
- will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;
- will keep a register of all interested and affected parties that participated in a public participation process; and
- will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not.


Signature of the Environmental Assessment Practitioner:

WSP Group Africa (Pty) Ltd
Name of company:

14 June 2021
Date:

Signature of the Commissioner of Oaths:

Date:

Designation:

Official stamp (Above)



Ex officio COMMISSIONER OF OATHS (RSA)

Danita De Wet

CERTIFIED FINANCIAL PLANNER

F.S.B 14045

13 Flamingo Street, Beyerspark, Boksburg 1459

Certified a true copy of the original

APPENDIX

C STAKEHOLDER DATABASE





ORGANISATION	TITLE	NAME	SURNAME	POSITION
AUTHORITIES				
DFFE Biodiversity Conservation Unit	Mr	Stanley	Tshitwamulomoni	
DFFE Biodiversity Conservation Unit	Ms	Portia	Makitla	
DFFE Biodiversity Conservation Unit	Ms	Thobekile	Zungu	
DFFE Biodiversity Conservation Unit	Mr	Seoka	Lekota	
GDARD		Tendani	Rambuda	
GDARD		Nkhumeleni	Rambasa	
GDARD		Andani	Ramuhulu	
GDARD	Mr	Steven	Mukhola	
DFFE Waste	Mr	Shiba	Sebone	
DFFE Waste	Mr	Lucas	Mahlangu	
SAHRA				
Local Authorities				
Ekurhuleni Metropolitan Municipality	Mr	Stewart	Green	Divisional Head for Legislative Compliance, Environmental Development Department
Ekurhuleni Metropolitan Municipality	Mr	Sifiso	Ndwandwe	
Ekurhuleni Metropolitan Municipality	Ms	Sibongile	Buthelezi	
Ekurhuleni Metropolitan Municipality	Mr	Vhengani	Munyayi	
Ekurhuleni Metropolitan Municipality		Imogen	Mashazi	Contact Person
Ekurhuleni Metropolitan Municipality	Cllr	Makhosi Calinda	Lehari	Ward 45 Councillor
Ekurhuleni Metropolitan Municipality	Mr	Samukelo	Futshane	AQ Directorate
Ekurhuleni Metropolitan Municipality	Mr	Bongani Maswati	Mdluli	
Ekurhuleni Metropolitan Municipality	Mr	Edmund	van Wyk	AQ Directorate
Ekurhuleni Metropolitan Municipality	Mr	Flip	Visser	AQ Directorate
Surrounding Landowners				
Portion 84 of Vlakplaats, 138/IR (T106140/2006)	Mr	Andries	Coetzer	17 % Owner
	Ms	Shelley May Dawn	Rohland	17% Owner
	Mr	Graeme Robert	van Bergen	17% Owner

Building C
Knightsbridge, 33 Sloane Street
Bryanston, 2191
South Africa

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www.wsp.com

	Ms	Mandy	Coetzer	
	Ms	Wendy	van Bergen	
	Ms	Heidi	Rohland	17% Owner
	Mr	Charles John Max	Rohland	17% Owner
	Mr	Nicholas Basil	Rohland	17% Owner
Portion 82 of Vlakplaats, 138/IR (T37951/1990)	Mr	Eduardo	Cerimele	
Portion 220 of Vlakplaats, 138/IR (T87280/2008): Sam Lubbe Inv Pty Ltd	Mr	Mandla Samuel	Lubbe	
Portion 85 of Vlakplaats, 138/IR (T157904/2002): Kgabang Ma-Afrika Chicken Farm CC	Ms	Them bani Maria	Mathebula	Director
	Ms	Dineo Cornelia	Mhlongo	Director
	Ms	Nios Tswarelo	Malatole	Director
	Ms	Ntebaheng Emelda	Ledwaba	Director
	Ms	Odry Joyce	Ntlwane	Director
Portion 87 of Vlakplaats, 138/IR (T14786/1986): Battery Systems Pty Ltd	Mr	Jacob Lourens Carolus	De Waal	Director
	Mr	Johan Dawid	Kruger	Director
Portion 89 of Vlakplaats, 138/IR (T81051/2018)	Mr	Them bekile Pilgrims	Mdiniso	Owner
Portion 187 of Vlakplaats, 138/IR (T39823/2000): Trade Prop Ventures No 42 CC	Mr	Andre Marius	Bierman	Member
	Mr	Johannes Jacobus Petrus	Bierman	Member
	Ms	Elsie Susanna	Nezar	Member
Bulldog Projects Pty Ltd	Mr	Michael	Book	Landowner
Registered Stakeholders				
Rebontsheng Primary School	Principal		Monyake	
Masithwalisane Secondary School	Principal		Moloyi	

APPENDIX

D PUBLIC PARTICIPATION

Public Participation Documentation will be available in Final Scoping Report

APPENDIX

D-1 ADVERT

Public Participation Documentation will be available in Final Scoping Report

APPENDIX

D-2 SITE NOTICES

Public Participation Documentation will be available in Final Scoping Report

APPENDIX

D-3 *EMAIL* *NOTIFICATIONS*

Public Participation Documentation will be available in Final Scoping Report

APPENDIX

D-4 SMS NOTIFICATIONS

Public Participation Documentation will be available in Final Scoping Report

APPENDIX

E COMMENTS AND RESPONSES REPORT

Comments are Responses Report will be available in Final Scoping Report

APPENDIX

F SCREENING ASSESSMENTS



**SCREENING REPORT FOR AN ENVIRONMENTAL AUTHORIZATION AS
REQUIRED BY THE 2014 EIA REGULATIONS – PROPOSED SITE
ENVIRONMENTAL SENSITIVITY**

EIA Reference number: Gaut 002/19-20/E0247

Project name: Vosloorus Filling Plant

Project title: Vosloorus Filling Plant - Preferred Site

Date screening report generated: 20/05/2021 21:46:18

Applicant: Richbay Chemicals

Compiler: Anri Scheepers

Compiler signature:
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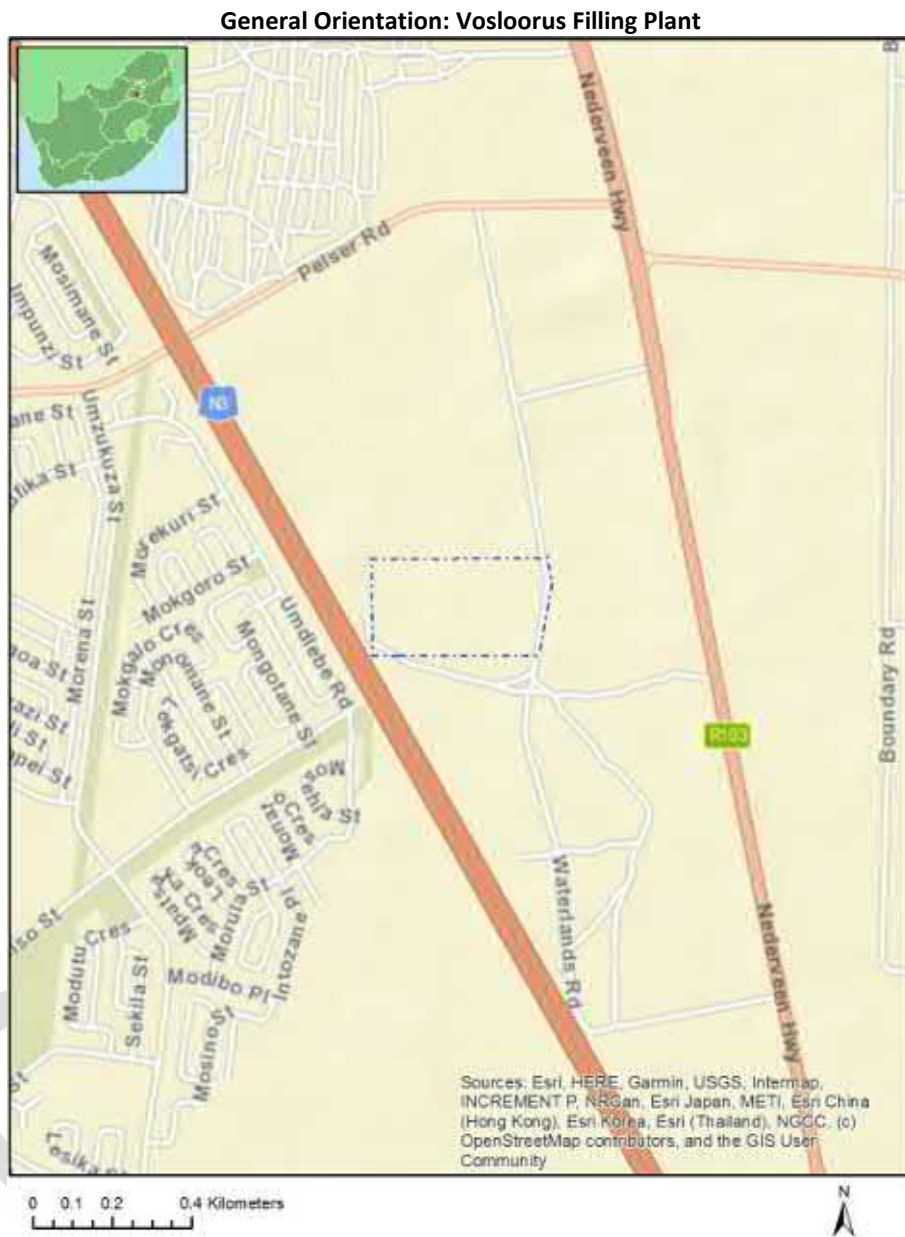
Application Category: Infrastructure | Localised infrastructure | Storage | Dangerous Goods | Chemicals

Table of Contents

Proposed Project Location	3
Orientation map 1: General location	3
Map of proposed site and relevant area(s)	4
Cadastral details of the proposed site	4
Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area	4
Environmental Management Frameworks relevant to the application	5
Environmental screening results and assessment outcomes	5
Relevant development incentives, restrictions, exclusions or prohibitions	5
Map indicating proposed development footprint within applicable development incentive, restriction, exclusion or prohibition zones	7
Proposed Development Area Environmental Sensitivity	7
Specialist assessments identified	8
Results of the environmental sensitivity of the proposed area	10
MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY	10
MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY	11
MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY	12
MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY	13
MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY	14
MAP OF RELATIVE DEFENCE THEME SENSITIVITY	15
MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY	16
MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY	17
MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY	18

Proposed Project Location

Orientation map 1: General location



Map of proposed site and relevant area(s)



Cadastral details of the proposed site

Property details:

No	Farm Name	Farm/ Erf No	Portion	Latitude	Longitude	Property Type
1	VLAKPLAATS	138	0	26°21'4.38S	28°12'44.26E	Farm
2	VLAKPLAATS	138	86	26°21'31.04S	28°14'10.38E	Farm Portion

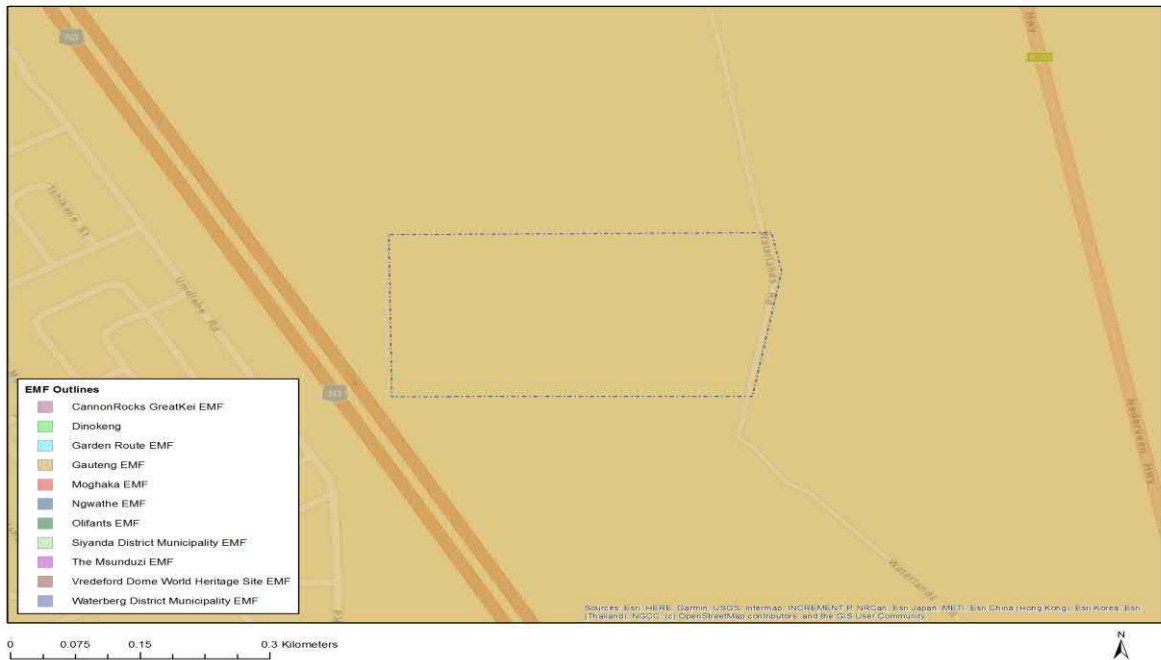
Development footprint¹ vertices:
No development footprint(s) specified.

Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area

No	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	14/12/16/3/3/1/569	Solar PV	Approved	2.7

¹ “development footprint”, means the area within the site on which the development will take place and includes all ancillary developments for example roads, power lines, boundary walls, paving etc. which require vegetation clearance or which will be disturbed and for which the application has been submitted.

Environmental Management Frameworks relevant to the application



Environmental Management Framework	LINK
Gauteng EMF	https://screening.environment.gov.za/ScreeningDownloads/EMF/Zone_1, Zone 2, Zone 3, Zone 4, Zone 5.pdf

Environmental screening results and assessment outcomes

The following sections contain a summary of any development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmental sensitive features on the site based on the site sensitivity screening results for the application classification that was selected. The application classification selected for this report is:

Infrastructure | Localised infrastructure | Storage | Dangerous Goods | Chemicals.

Relevant development incentives, restrictions, exclusions or prohibitions

The following development incentives, restrictions, exclusions or prohibitions and their implications that apply to this site are indicated below.

Incentive, restriction or prohibition	Implication

Strategic Transmission Corridor-Central corridor	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/GN11316February2018.pdf
Gauteng EMF-Urban development zone 1	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Zone1.pdf
Air Quality-Highveld Priority Area	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/HIGHVELD_PRIORITY_AREA_AQMP.pdf

OFFICIAL

Map indicating proposed development footprint within applicable development incentive, restriction, exclusion or prohibition zones

Project Location: Vosloorus Filling Plant



Proposed Development Area Environmental Sensitivity

The following summary of the development site environmental sensitivities is identified. Only the highest environmental sensitivity is indicated. The footprint environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed.

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme		X		
Animal Species Theme			X	

Aquatic Biodiversity Theme				X
Archaeological and Cultural Heritage Theme				X
Civil Aviation Theme			X	
Defence Theme				X
Paleontology Theme	X			
Plant Species Theme			X	
Terrestrial Biodiversity Theme	X			

Specialist assessments identified

Based on the selected classification, and the environmental sensitivities of the proposed development footprint, the following list of specialist assessments have been identified for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of the site situation.

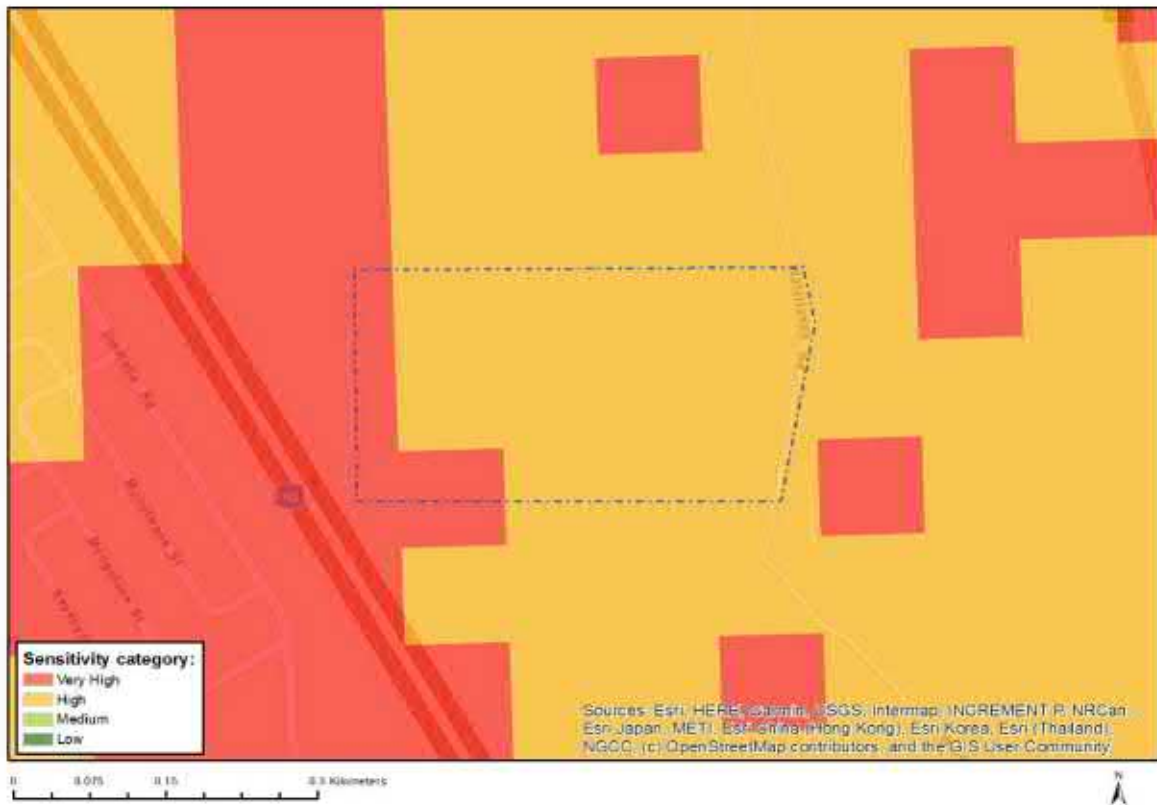
N	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Agriculture_Assessment_Protocols.pdf
2	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
3	Palaeontology Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
4	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf
5	Aquatic Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf
6	Hydrology Assess	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf

	ment	
7	Noise Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Noise_Impacts_Assessment_Protocol.pdf
8	Traffic Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
9	Geotechnical Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
10	Socio-Economic Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
11	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf
12	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf

Results of the environmental sensitivity of the proposed area.

The following section represents the results of the screening for environmental sensitivity of the proposed site for relevant environmental themes associated with the project classification. It is the duty of the EAP to ensure that the environmental themes provided by the screening tool are comprehensive and complete for the project. Refer to the disclaimer.

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Land capability;09. Moderate-High/10. Moderate-High
Medium	Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Mammalia-Chrysospalax villosus
Medium	Aves-Circus ranivorus

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY

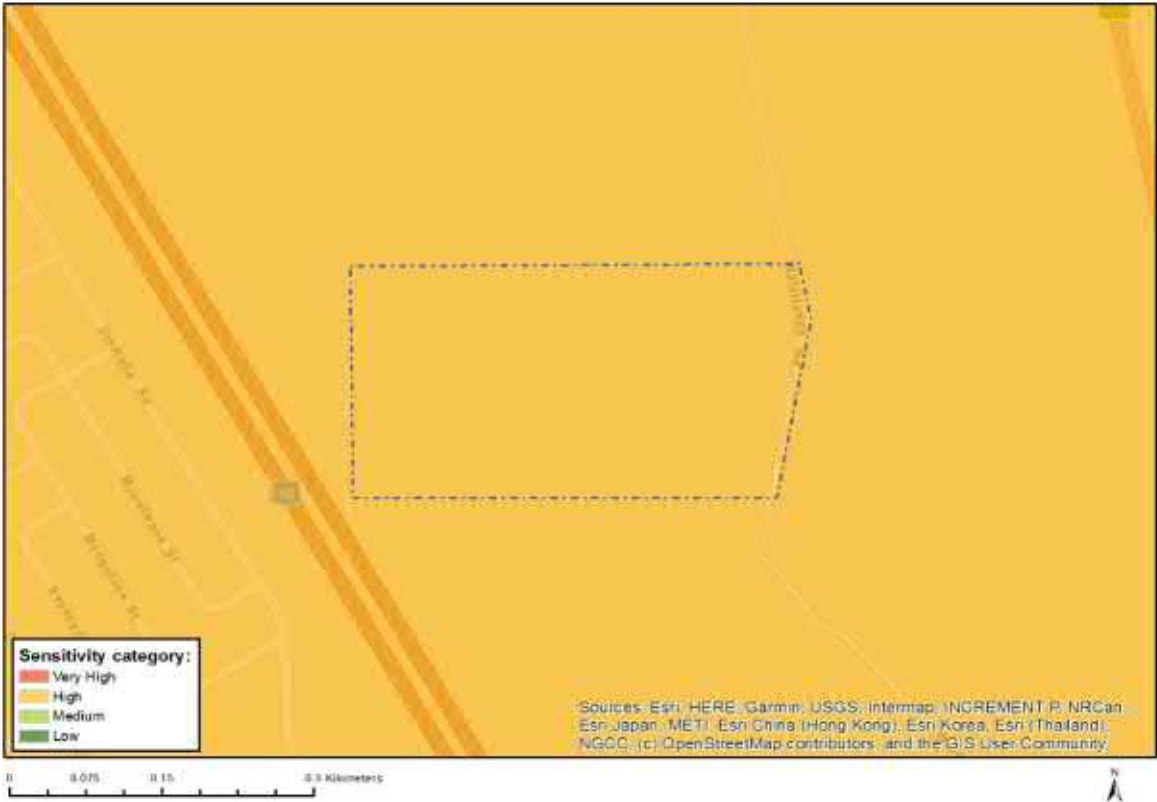


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Between 15 and 35 km from a civil aviation radar
Medium	Between 15 and 35 km from a major civil aviation aerodrome
Medium	Between 8 and 15 km of other civil aviation aerodrome

MAP OF RELATIVE DEFENCE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	Features with a Very High paleontological sensitivity

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at aiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Khadia beswickii
Medium	Sensitive species 1147
Medium	Brachycorythis conica subsp. transvaalensis
Medium	Sensitive species 1248

**SCREENING REPORT FOR AN ENVIRONMENTAL AUTHORIZATION AS
REQUIRED BY THE 2014 EIA REGULATIONS – PROPOSED SITE
ENVIRONMENTAL SENSITIVITY**

EIA Reference number: Gaut 002/19-20/E0247

Project name: Vosloorus Filling Plant

Project title: Vosloorus Filling Plant - Alternative Site 1

Date screening report generated: 24/05/2021 11:26:21

Applicant: Richbay Chemicals

Compiler: Anri Scheepers

Compiler signature:
.....

Application Category: Infrastructure | Localised infrastructure | Storage | Dangerous Goods | Chemicals

Table of Contents

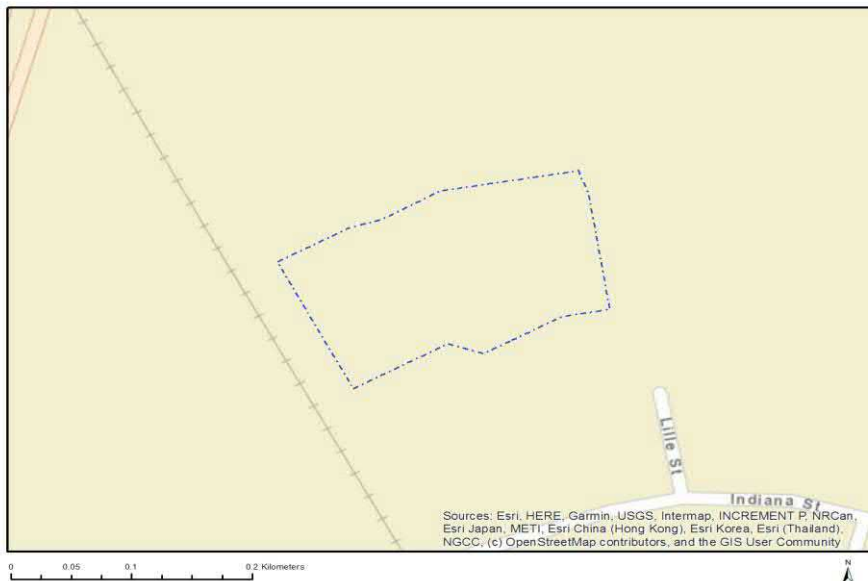
Proposed Project Location	3
Orientation map 1: General location	3
Map of proposed site and relevant area(s)	4
Cadastral details of the proposed site	4
Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area	4
Environmental Management Frameworks relevant to the application	5
Environmental screening results and assessment outcomes	5
Relevant development incentives, restrictions, exclusions or prohibitions	5
Map indicating proposed development footprint within applicable development incentive, restriction, exclusion or prohibition zones	7
Proposed Development Area Environmental Sensitivity	7
Specialist assessments identified	8
Results of the environmental sensitivity of the proposed area	10
MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY	10
MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY	11
MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY	12
MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY	13
MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY	14
MAP OF RELATIVE DEFENCE THEME SENSITIVITY	15
MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY	16
MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY	17
MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY	18

Proposed Project Location

Orientation map 1: General location



Map of proposed site and relevant area(s)



Cadastral details of the proposed site

Property details:

No	Farm Name	Farm/ Erf No	Portion	Latitude	Longitude	Property Type
1	APEX	449	0	26°12'40.4S	28°19'28.1E	Erven
2	RIET FONTEIN	115	0	26°13'51.87S	28°19'18.67E	Farm
3	RIET FONTEIN	115	191	26°12'36.39S	28°19'30.22E	Farm Portion

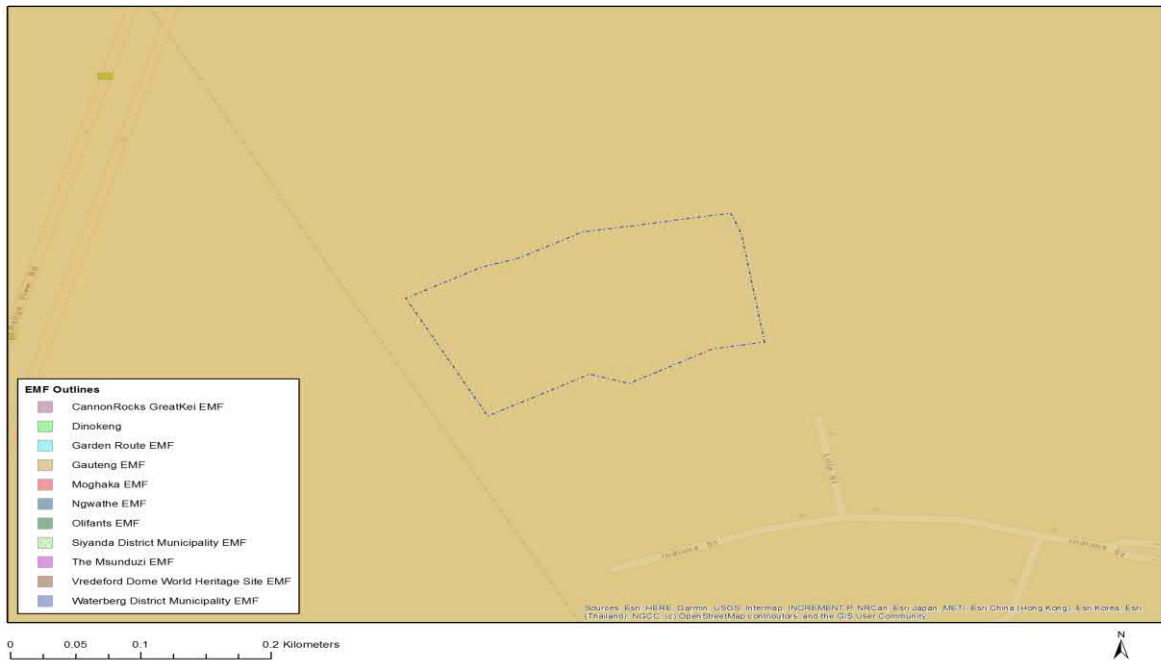
Development footprint¹ vertices:
No development footprint(s) specified.

Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area

No	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	14/12/16/3/3/1/569	Solar PV	Approved	17.6

¹ "development footprint", means the area within the site on which the development will take place and includes all ancillary developments for example roads, power lines, boundary walls, paving etc. which require vegetation clearance or which will be disturbed and for which the application has been submitted.

Environmental Management Frameworks relevant to the application



Environmental Management Framework	LINK
Gauteng EMF	https://screening.environment.gov.za/ScreeningDownloads/EMF/Zone 1, Zone 2, Zone 3, Zone 4, Zone 5.pdf

Environmental screening results and assessment outcomes

The following sections contain a summary of any development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmental sensitive features on the site based on the site sensitivity screening results for the application classification that was selected. The application classification selected for this report is:

Infrastructure | Localised infrastructure | Storage | Dangerous Goods | Chemicals.

Relevant development incentives, restrictions, exclusions or prohibitions

The following development incentives, restrictions, exclusions or prohibitions and their implications that apply to this site are indicated below.

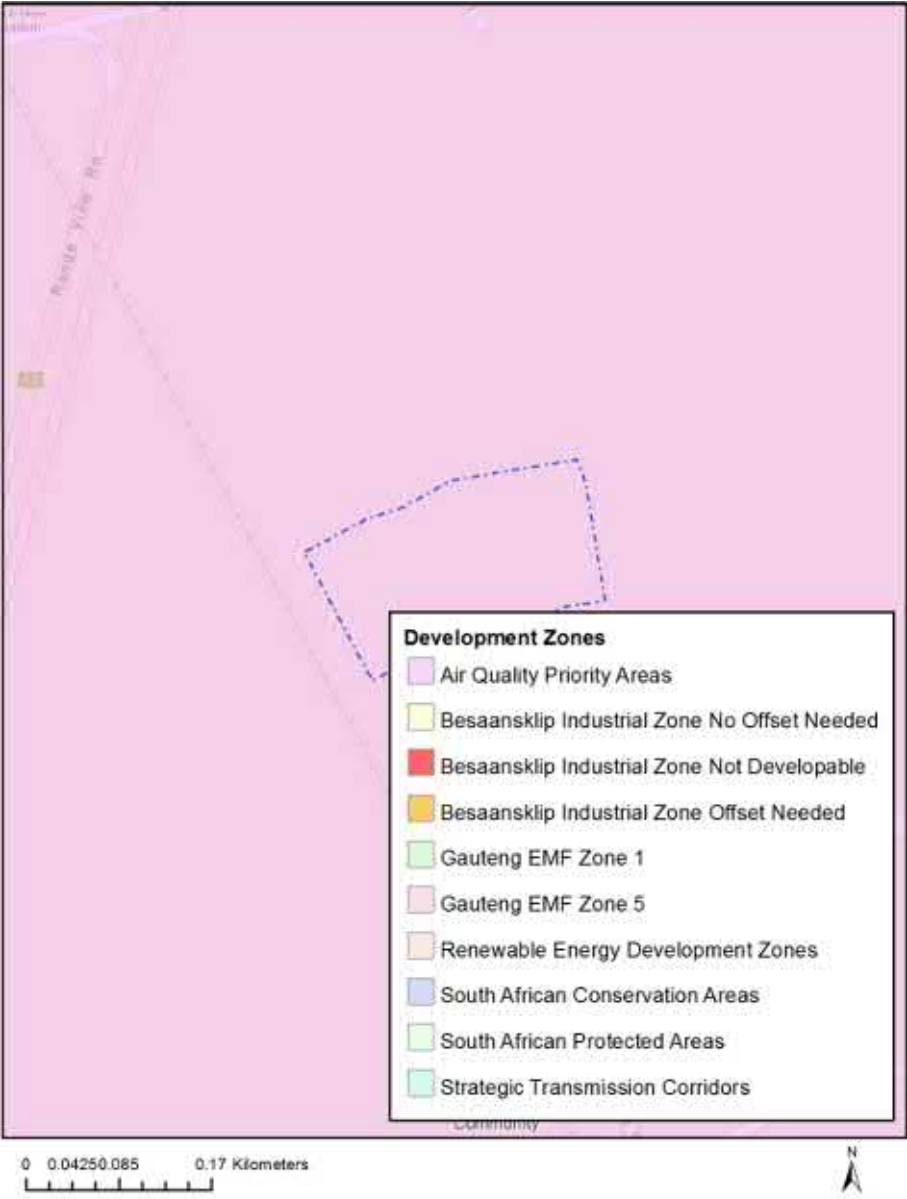
Incentive, restriction or prohibition	Implication

Strategic Transmission Corridor-Central corridor	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/GN11316February2018.pdf
Gauteng EMF-Urban development zone 1	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Zone1.pdf
Gauteng EMF-Industrial and large commercial focus zone 5	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Zone2.pdf
Air Quality-Highveld Priority Area	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/HIGHVELD_PRIORITY_AREA_AQMP.pdf

OFFICIAL

Map indicating proposed development footprint within applicable development incentive, restriction, exclusion or prohibition zones

Project Location: Vosloorus Filling Plant



Proposed Development Area Environmental Sensitivity

The following summary of the development site environmental sensitivities is identified. Only the highest environmental sensitivity is indicated. The footprint environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed.

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme		X		
Animal Species Theme		X		

Aquatic Biodiversity Theme				X
Archaeological and Cultural Heritage Theme	X			
Civil Aviation Theme		X		
Defence Theme				X
Paleontology Theme	X			
Plant Species Theme			X	
Terrestrial Biodiversity Theme	X			

Specialist assessments identified

Based on the selected classification, and the environmental sensitivities of the proposed development footprint, the following list of specialist assessments have been identified for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of the site situation.

N	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Agriculture_Assessment_Protocols.pdf
2	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
3	Palaeontology Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
4	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf
5	Aquatic Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf
6	Hydrology Assess	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf

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7	Noise Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Noise_Impacts_Assessment_Protocol.pdf
8	Traffic Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
9	Geotechnical Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
10	Socio-Economic Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
11	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf
12	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf

Results of the environmental sensitivity of the proposed area.

The following section represents the results of the screening for environmental sensitivity of the proposed site for relevant environmental themes associated with the project classification. It is the duty of the EAP to ensure that the environmental themes provided by the screening tool are comprehensive and complete for the project. Refer to the disclaimer.

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Land capability;09. Moderate-High/10. Moderate-High

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Aves-Tyto capensis
Medium	Invertebrate-Clonia uvarovi
Medium	Mammalia-Chrysospalax villosus
Medium	Insecta-Aloeides dentatis dentatis
Medium	Insecta-Lepidochrysops procera
Medium	Aves-Circus ranivorus

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	Within 5km of a Grade I Heritage site

MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Within 15 km of a civil aviation radar
High	Between 8 and 15 km from a major civil aviation aerodrome
High	Within 8 km of other civil aviation aerodrome

MAP OF RELATIVE DEFENCE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

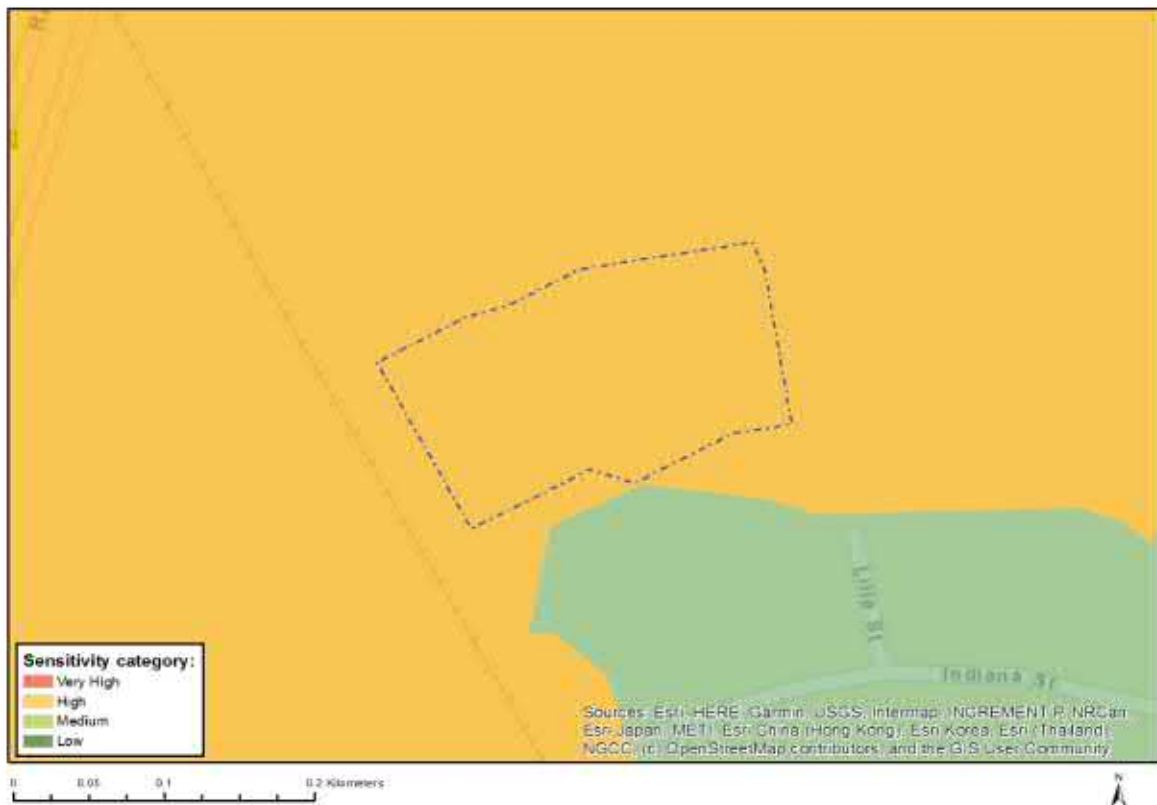


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	Features with a Very High paleontological sensitivity

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Sensitive species 1252
Medium	Sensitive species 691

**SCREENING REPORT FOR AN ENVIRONMENTAL AUTHORIZATION AS
REQUIRED BY THE 2014 EIA REGULATIONS – PROPOSED SITE
ENVIRONMENTAL SENSITIVITY**

EIA Reference number: Gaut 002/19-20/E0247

Project name: Vosloorus Filling Plant

Project title: Vosloorus Filling Plant - Alternative Site 2

Date screening report generated: 24/05/2021 11:56:24

Applicant: Richbay Chemicals

Compiler: Anri Scheepers

Compiler signature:
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Application Category: Infrastructure | Localised infrastructure | Storage | Dangerous Goods | Chemicals

Table of Contents

Proposed Project Location	3
Orientation map 1: General location	3
Map of proposed site and relevant area(s)	4
Cadastral details of the proposed site	4
Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area	4
Environmental Management Frameworks relevant to the application	5
Environmental screening results and assessment outcomes	5
Relevant development incentives, restrictions, exclusions or prohibitions	5
Map indicating proposed development footprint within applicable development incentive, restriction, exclusion or prohibition zones	7
Proposed Development Area Environmental Sensitivity	7
Specialist assessments identified	8
Results of the environmental sensitivity of the proposed area	10
MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY	10
MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY	11
MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY	12
MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY	13
MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY	14
MAP OF RELATIVE DEFENCE THEME SENSITIVITY	15
MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY	16
MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY	17
MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY	18

Proposed Project Location

Orientation map 1: General location



Map of proposed site and relevant area(s)



Cadastral details of the proposed site

Property details:

No	Farm Name	Farm/ Erf No	Portion	Latitude	Longitude	Property Type
1	KLIPPOORTJE	110	0	26°15'49.75S	28°12'4.62E	Farm
2	KLIPPOORTJE	110	107	26°16'21.7S	28°12'13.43E	Farm Portion

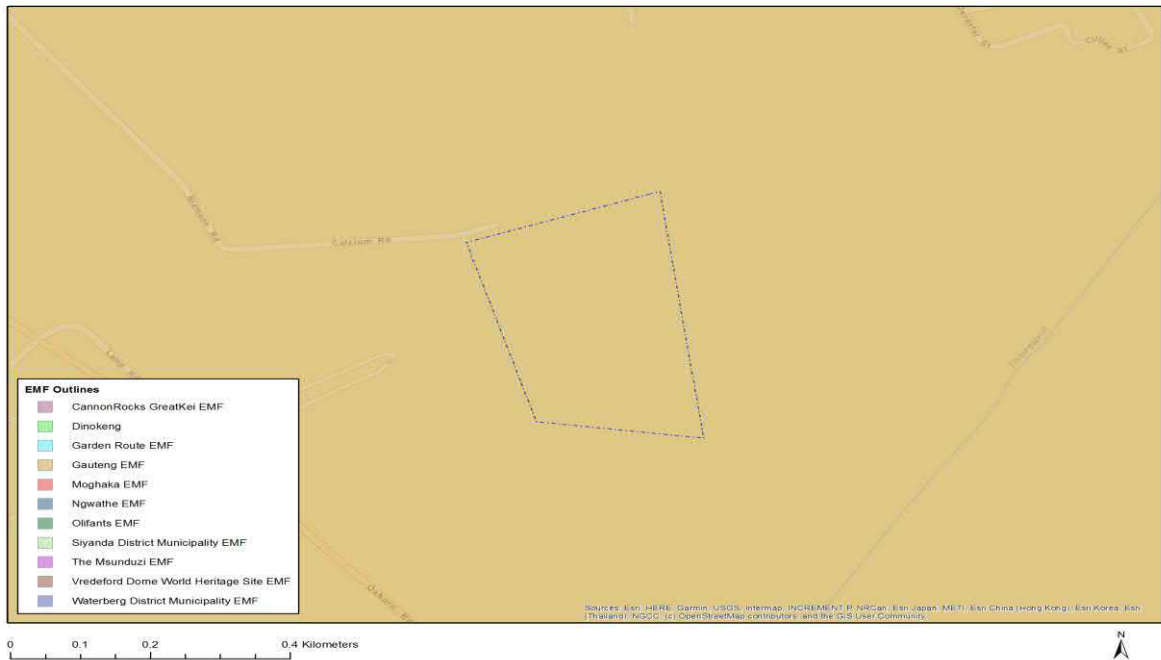
Development footprint¹ vertices:
No development footprint(s) specified.

Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area

No	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	14/12/16/3/3/1/569	Solar PV	Approved	9.9
2	12/12/20/2530	Solar PV	Approved	25.4
3	12/12/20/2551	Solar PV	Approved	25.4

¹ "development footprint", means the area within the site on which the development will take place and includes all ancillary developments for example roads, power lines, boundary walls, paving etc. which require vegetation clearance or which will be disturbed and for which the application has been submitted.

Environmental Management Frameworks relevant to the application



Environmental Management Framework	LINK
Gauteng EMF	https://screening.environment.gov.za/ScreeningDownloads/EMF/Zone 1, Zone 2, Zone 3, Zone 4, Zone 5.pdf

Environmental screening results and assessment outcomes

The following sections contain a summary of any development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmental sensitive features on the site based on the site sensitivity screening results for the application classification that was selected. The application classification selected for this report is:

Infrastructure | Localised infrastructure | Storage | Dangerous Goods | Chemicals.

Relevant development incentives, restrictions, exclusions or prohibitions

The following development incentives, restrictions, exclusions or prohibitions and their implications that apply to this site are indicated below.

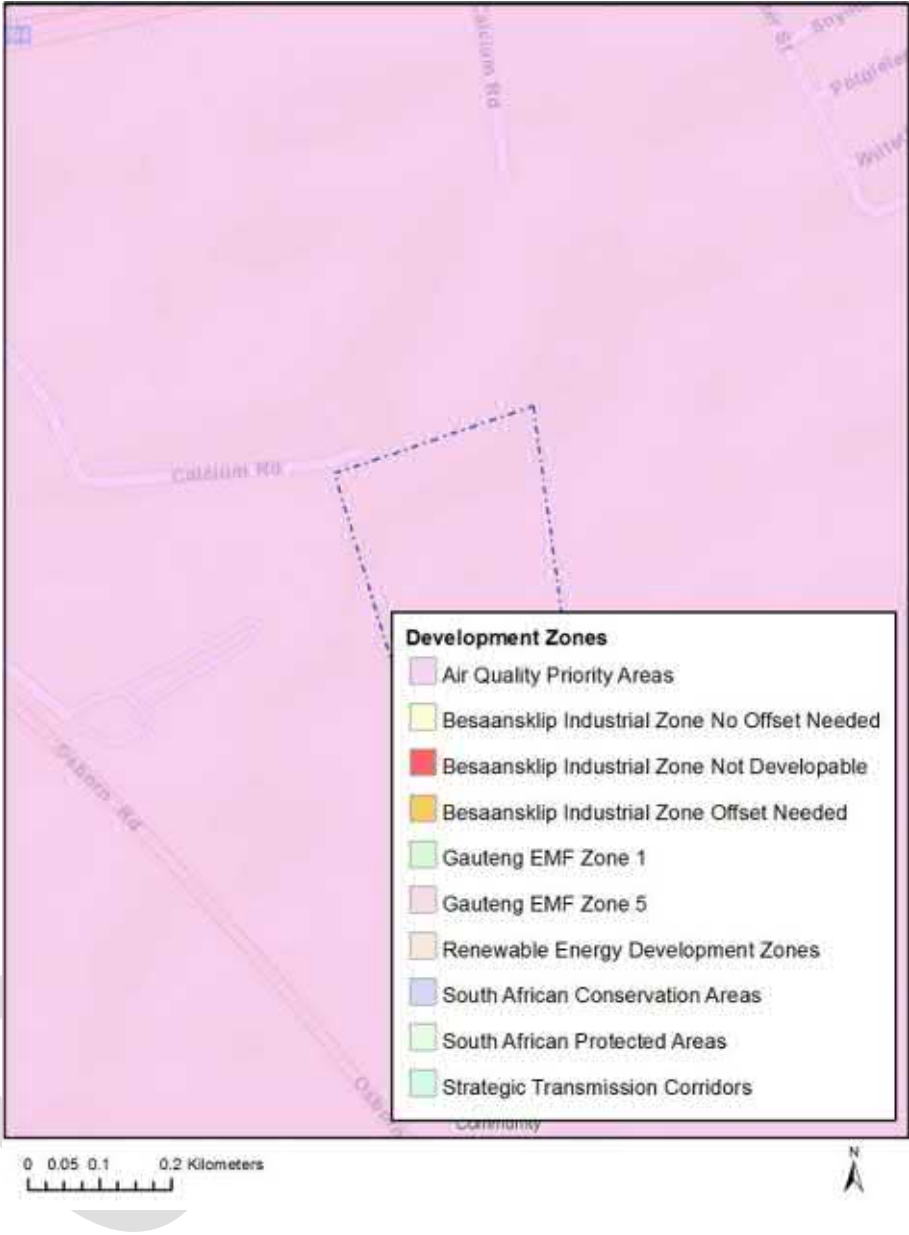
Incentive, restriction or prohibition	Implication

Strategic Transmission Corridor-Central corridor	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/GN11316February2018.pdf
Gauteng EMF-Urban development zone 1	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Zone1.pdf
Gauteng EMF-Industrial and large commercial focus zone 5	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Zone2.pdf
Air Quality-Highveld Priority Area	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/HIGHVELD_PRIORITY_AREA_AQMP.pdf

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Map indicating proposed development footprint within applicable development incentive, restriction, exclusion or prohibition zones

Project Location: Vosloorus Filling Plant



Proposed Development Area Environmental Sensitivity

The following summary of the development site environmental sensitivities is identified. Only the highest environmental sensitivity is indicated. The footprint environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed.

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme		X		
Animal Species Theme		X		

Aquatic Biodiversity Theme	X			
Archaeological and Cultural Heritage Theme	X			
Civil Aviation Theme		X		
Defence Theme				X
Paleontology Theme			X	
Plant Species Theme			X	
Terrestrial Biodiversity Theme	X			

Specialist assessments identified

Based on the selected classification, and the environmental sensitivities of the proposed development footprint, the following list of specialist assessments have been identified for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of the site situation.

No	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Agriculture_Assessment_Protocols.pdf
2	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
3	Palaeontology Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
4	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf
5	Aquatic Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf
6	Hydrology Assess	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf

	ment	
7	Noise Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Noise_Impacts_Assessment_Protocol.pdf
8	Traffic Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
9	Geotechnical Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
10	Socio-Economic Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
11	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf
12	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf

Results of the environmental sensitivity of the proposed area.

The following section represents the results of the screening for environmental sensitivity of the proposed site for relevant environmental themes associated with the project classification. It is the duty of the EAP to ensure that the environmental themes provided by the screening tool are comprehensive and complete for the project. Refer to the disclaimer.

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY

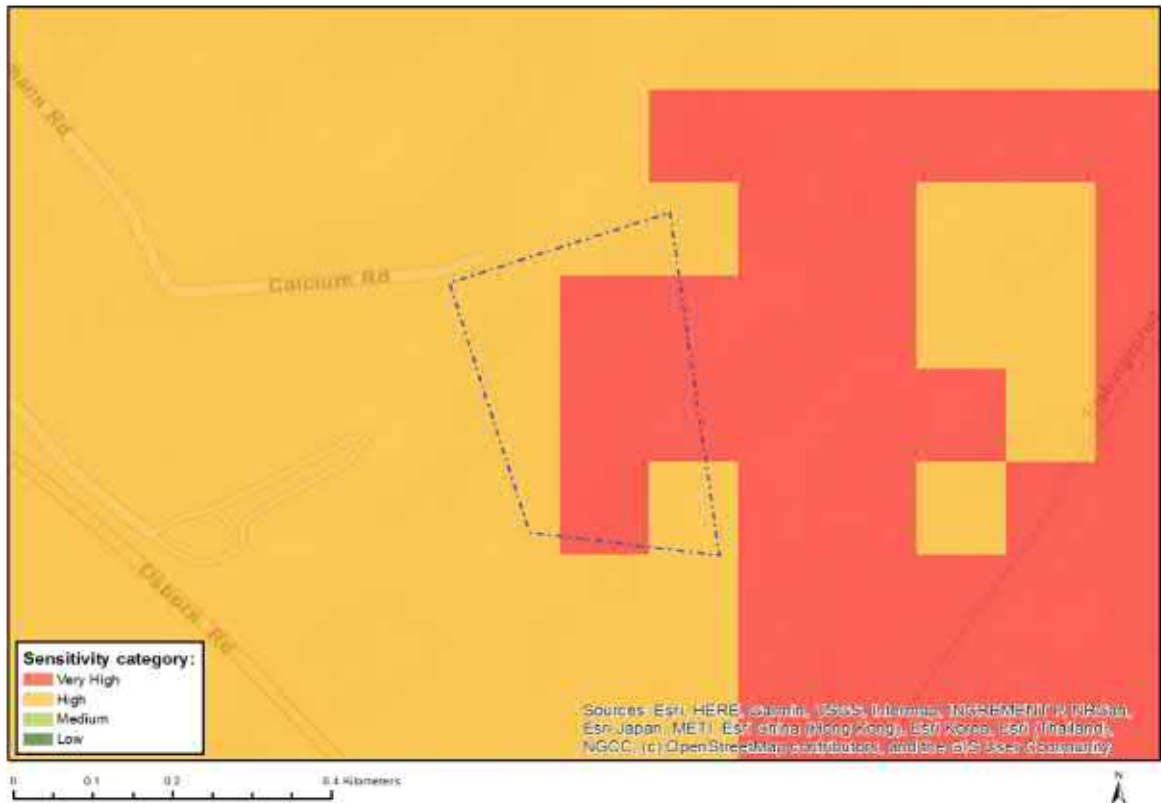


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Land capability;09. Moderate-High/10. Moderate-High
Medium	Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Aves-Circus ranivorus
Medium	Invertebrate-Clonia uvarovi
Medium	Mammalia-Chrysospalax villosus
Medium	Mammalia-Hydrictris maculicollis
Medium	Aves-Tyto capensis

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	Within 5km of a Grade I Heritage site

MAP OF RELATIVE DEFENCE THEME SENSITIVITY

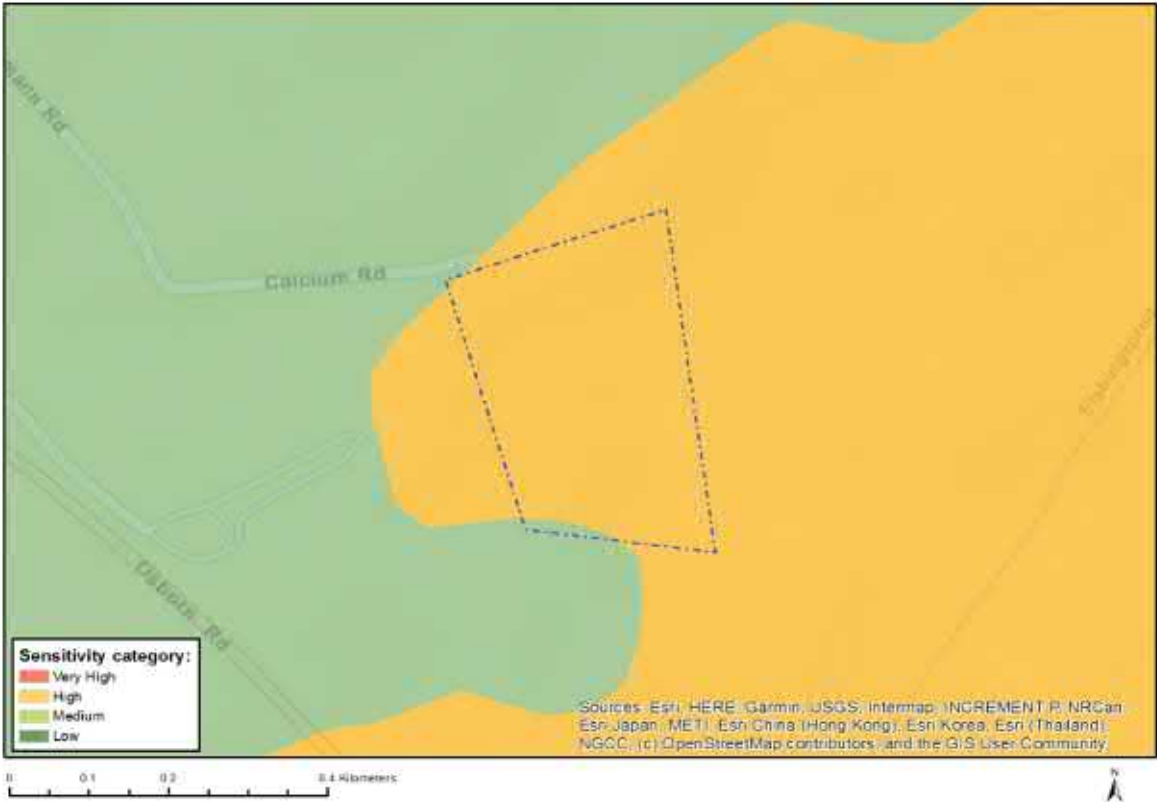


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

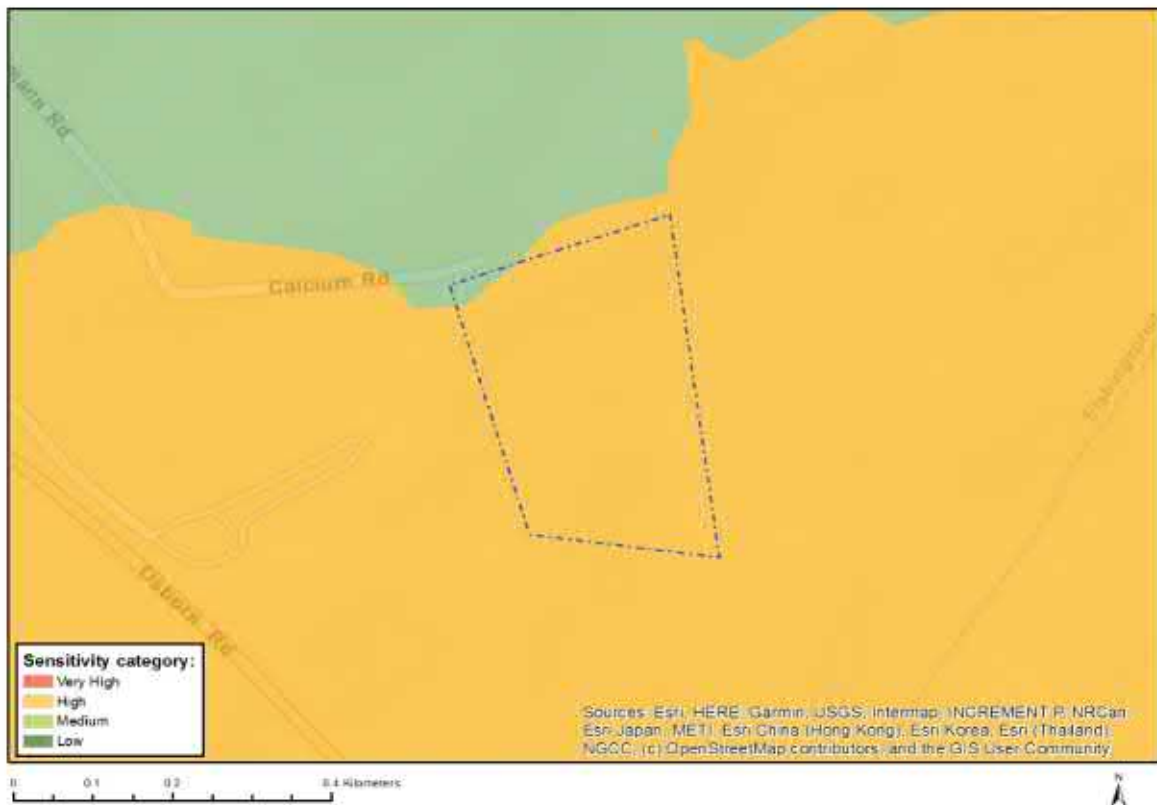


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Features with a Low paleontological sensitivity
Medium	Features with a Medium paleontological sensitivity

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Medium	Sensitive species 1252
Medium	Khadia beswickii
Medium	Sensitive species 1147
Medium	Brachycorythis conica subsp. transvaalensis
Medium	Sensitive species 1248

