draft Basic Assessment Report

The proposed Residential Development and related facilities
to be located on
Portion 243 (Portion of Portion 76) of the Farm Roodekrans, 183 IQ
MOGALE CITY, GAUTENG

Reference Number: Gaut 002/25-26/E0001

Liselle Du Plessis
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Submitted To:
Gauteng Department of Agriculture, Rural Development & Environment

GAUTENG PROVINCE
AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

ENVIRONMENTAL ASSESSMENT PRACTITIONER

As per the requirements of the National Environmental Management Act: NEMA, 1998 (Act No.107 of 1998), (NEMA) (as amended) and the Environmental Impact Assessment Regulations, 8 December 2014, the following information is pertinent with regards to the Environmental Assessment Practitioner (EAP) that has been appointed for the Basic Impact Assessment for the establishment of various business developments and related uses on Portion 243 (Portion of Portion 76) of the Farm Roodekrans, 183 IQ, Johannesburg, Gauteng.

Contact Details of the Environmental Assessment Practitioner:

Cell: 083 733 6605

Email: Liselle@wlcons.co.za

Postnet Suite #348

Private Bag X11326

Nelspruit, 1200

Qualifications and Relevant Expertise:

- Registered EAP – EAPASA Registration: 2020/1049
- IAIA Registration nr: 7461
- M Sc Environmental Management (UJ)
- B Art. et Scientia (Town and Regional Planning) (UJ)
- Relevant Expertise – see attached company profile

INDEMNITY AND CONDITIONS RELATING TO THIS REPORT

This document has been provided by W & L Consultants cc (W & L) subject to the following limitations:

i) This Document has been prepared for the particular purpose outlined in the W & L proposal and no responsibility is accepted for the use of this Document, in whole or in part, in other contexts or for any other purpose.

ii) The scope and the period of W & L's Services are as described in W & L proposal and are subject to restrictions and limitations. W & L performed an assessment of all possible conditions or circumstances that may exist at the site referenced in the Document relevant to the specific development proposal. If a service is not expressly indicated, do not assume it has been provided. If a matter is not addressed, do not assume that any determination has been made by W & L regarding it.

iii) Conditions may exist which were undetectable given the nature of the enquiry W & L was retained to undertake with respect to the site. Variations in conditions may occur between investigatory locations, and there may be special conditions pertaining to the site which have not been revealed by the investigation and which have not therefore been taken into account in the Document. Accordingly, additional studies and actions may be required.

iv) In addition, it is recognised that the passage of time affects the information and assessment provided in this Document. W & L's opinions are based upon information that existed at the time of the compilation of the Document. It is understood that the Services provided allowed W & L to form no more than an opinion of the actual conditions of the site at the time the site was visited and cannot be used to assess the effect of any subsequent changes in the quality of the site, or its surroundings, or any laws or regulations.

v) Any assessments made in this Document are based on the conditions indicated from published sources and the investigation described. No warranty is included, either express or implied, that the actual conditions will conform exactly to the assessments contained in this Document.

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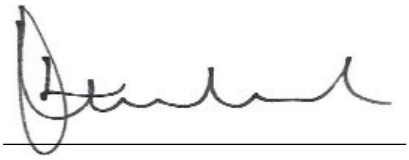
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W & L Consultants cc

DECLARATION OF INDEPENDENCE

I, ***Liselle Du Plessis*****,** declare that -

- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favorable to the Client;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the National Environmental Management Act, 1998 (Act No. 107 of 1998), regulations and any guidelines that have relevance to the proposed activity; I will comply with the Act, regulations and all other applicable legislation;
- I will take into account, to the extent possible, the matters listed in Regulation 8;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct, based on the documentation provided to me for review and inclusion; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of section 24F of the Act.



Liselle Du Plessis
Reg. EAP (EAPASA Registration: 2020/1049)

E: EXECUTIVE SUMMARY

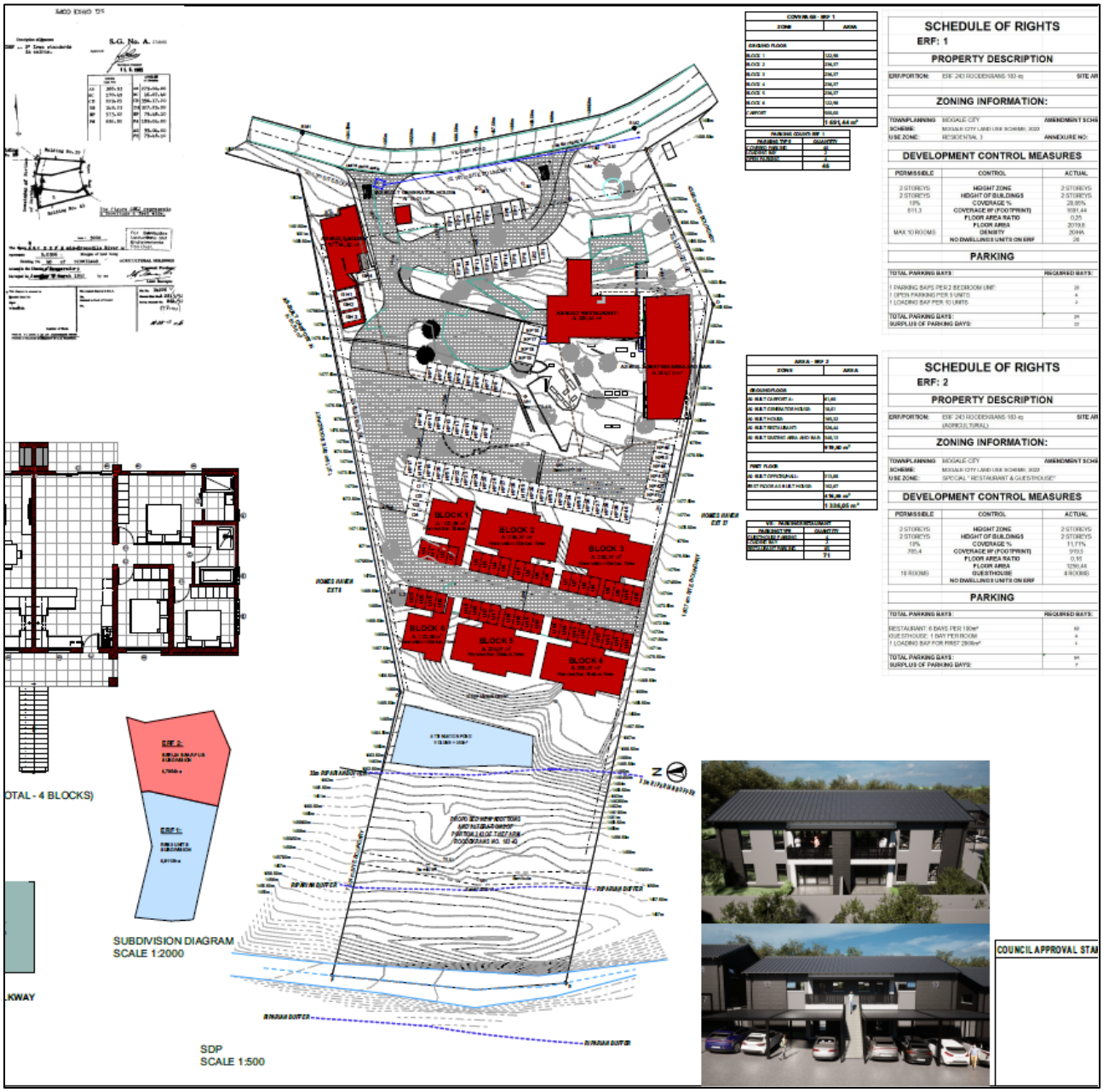
E1. DEVELOPMENT PROPOSAL:

A township establishment application has been submitted to Mogale City Local Municipality for the proposed Homes Haven Extension 65 on Portion 243 (a portion of Portion 76) of the Farm Roodekrans 183 IQ, Johannesburg, Gauteng. The development includes:

- **Erf 1**: 20 residential units
- **Erf 2**: Zoned "Special" to formalize the existing restaurant and guest house
- **Public parking**: To be provided on site

LAND USE	*NO. OF STANDS*	*AREA OF STANDS*	*% OF TOWNSHIP AREA*
"Residential 2"	Erf 1	0,7817 ha	49,89 %
"Special" for Restaurant and Guesthouse	Erf 2	0,7854 ha	50,11 %
TOTAL	**2**	**1,5671 HA**	**100 %**

The layout of the development is as follows:



Please refer to the site development plan and layout plan – **Annexure B**.

E2. RECEIVING ENVIRONMENT:

The following represents a summary of the receiving environment as presented in the various specialist reports attached to **Annexure G** of the report:

Receiving Environment	Summary	Potential Impacts	Proposed Mitigation Measures
Terrestrial	The property is surrounded with a wall and contains various dwellings and gardens. The property is located within a residential Estate. Regional data indicates that the site is located within the Egoli Granite Grassland vegetation type which is considered Critically Endangered in terms of the 2021 Red List of Ecosystem, published by SANBI. GDARD Conservation plan (C Plan 3.3) indicated that a third of the western side of the site falls within an area considered as "irreplaceable area" and a small part in "Ecological Support Area. The site characteristics confirmed that the entire site was transformed, and that the area designated as "Irreplaceable area" by C Plan 3.3 was subjected to dumping and the area closer to the river was overgrown with black wattles and did not contain any indigenous vegetation. **Sensitivity Rating for the Site (SEI):** The SEI indicated that most of the site had a Very Low Site Ecological Importance with a medium SEI for the riverbanks. This was done to preserve the corridors offered by the riparian system. It must be stated that exotic plants have overgrown the river system and that these alien invasive plants hinder the survival of indigenous plant species.	1. Impact on Vegetation of Egoli Granite Grassland if it was present 2. Establishment and spread of declared weeds and alien invader plants.	• None - The study site is entirely transformed. No vegetation of the Egoli Granite Grassland is present on site. • Almost 60% of plant species present on site is Alien Invasive plant species. These must be controlled and managed appropriately. The adjacent property to the west is a clear example of what would happen if alien invasive plants are left uncontrolled.
Flora	The site characteristics confirmed that the entire site was transformed, and that the area designated as "Irreplaceable area" by C Plan 3.3 was subjected to dumping and the area closer to the river was overgrown with black wattles and did	Establishment and spread of declared weeds and alien invader plants.	• Stockpiles must be controlled to avoid the development of a soil seed

	not contain any indigenous vegetation. There were no plants of Special Conservation Concern recorded on site and the field data corresponds with the data received from the DFFE screening tool which indicated a Low sensitivity for SCC plants. Eight plant species was identified on and around the site that is listed in the Alien and Invasive Species. These plants need to be controlled in accordance with the NEMBA Act. The specialist study concluded that the development would have a Low impact on the vegetation type of the Egoli Granite Grassland as there are no indigenous vegetation left on site. The area identified as irreplaceable area by C Plan 3.3 is currently rubbish dump and areas closer to the river is overgrown with alien invasive plants.		bank of alien plants within the stock-piled soil. • Any alien plants must be immediately controlled. • The river bank must be cleaned in accordance with a maintenance plan and cleared from Alien invasive species such as black wattles and eucalyptus trees. • An on-going monitoring programme should be implemented to detect and quantify any aliens that may become established and provide information for the management of aliens.
Aquatic Biodiversity Assessment	The study site is located within –		• Based on the results of the Department of Water Affaires (DWS) Risk

Quaternary Catchment Area	A21E
Water Management Area (WMA)	Limpopo (WMA 3)
Ecoregion	Highveld – 11.03
Applicable River(s)/Stream	Muldersdrift ser Loop
Impacts observed at the study area	The stream is situated in an urbanised area, surrounded by industrial zones and informal settlements

The main findings of this report have been summarised below:

- The Index of Habitat Integrity Assessment (IHIA) results indicate that the both the site and the Muldersdrift-se-loop is **Largely Modified (D Category)**.
- Most of the water quality constituents did not meet the recommended guidelines. However, the site on the Muldersdrift-se-Loop have high concentrations of nitrites.
- The SASS 5 results indicated that the site had seriously modified ecological Conditions **(E Category)** due to low species diversity and was classed as a **poor-quality,** indicative of eutrophic condition.
- The overall Ecostatus of the Muldersdrift-se-Loop is **Seriously Modified (Category E)** and indicates that a loss and change of natural habitat and biota have occurred.

Assessment, a Water Use License (WUL) is required for the proposed township development in line with Notice 509 of 26 August 2016, which was drafted in accordance with Section 21 of the National Water Act No. 36 of 1998.

- The 32m bufferline as indicated on the layout plan must be maintained.
- The exceeding nutrient levels should continue to be monitored over time to see if it increases and it must be managed accordingly.
- Conduct bi-annual aquatic monitoring in this system (specifically in the wet season). Water quality sampling and diatoms

			sampling should be included during the wetland monitoring. This will lead to good management and intervention practices when and where required. • An Extensive alien invasive management plan should be compiled and implemented. • Access to the riparian area should be restricted except to managing alien invasive species. • Construction run off, and sediment controls should be implemented .

E.3 ENGINEERING SERVICES AND ACCESS:

Engineering Service	Summary	Potential Impacts	Proposed Mitigation Measures
Water	There is an existing water pipe located in Viljoen Road, east of the site, which currently supplies the site with water. Water will be supplied to Erf 1 via a new 110 mm diameter water line that passes through Erf 2 along the northern boundary. A new connection be made from the existing council water line in Viljoen Road which will include for an isolating valve and meter. Erf 2 will obtain its water supply via a new connection off the existing council water line in Viljoen Road. The water demand for the township is calculated at **27.73 Kℓ/day**.	Impacts associated with the installation of the new 110m diameter Line: Trenching, Dust fallout; and Stockpiling of topsoil adjacent to trenches.	Construction footprint to be demarcated with construction tape. Dust fallout must be mitigated with spraying of the area. Water truck to be on site. Topsoil stockpiles to be located adjacent to the trench. Heights to not exceed 2m. tops must be flattened to minimize dust fallout. Topsoil and subsoil to be stockpiled separately.
Sewer	There is an existing council sewer pipe that crosses through the western portion of Erf 1, near the Muldersdrift-se-Loop. A new 160 mm diameter sewer pipe will be installed from the existing council pipe to service both Erf 1 and Erf 2. A manhole and connection	Impacts associated with the installation of the new 160m diameter sewer line: Trenching, Dust fallout; and Stockpiling of topsoil adjacent to trenches.	Buffer line must be clearly demarcated with poles painted red. Construction footprint to be demarcated with construction tape. No indiscriminate driving within the buffer zone will be permitted. Dust fallout must be mitigated with spraying of the area.

	point will be located at the low point of each erf to allow each erf to drain and connect to the existing council line. The total sewer demand for the township will be **27.73 Kℓ/day**.	Vehicles and machinery accessing the buffer area. Site clearance and removal of buffer vegetation to install the required sewer line. Mixing of concrete to construct the manhole. Potential carbon fuel spills and concrete runoff from the mixing area.	Water truck to be on site. Topsoil stockpiles to be located adjacent to the trench. Heights to not exceed 2m, tops must be flattened to minimize dust fallout. Topsoil and subsoil must be stockpiled separately. Pollution Control: Concrete mixing must be done in a bunded container. Spill kits must be on site and used when required.
Stormwater Management	Run-off from Erf 1 and Erf 2 will be collected via a conventional piped storm water system and stored in a trapezoidal grass-lined attenuation pond located on Erf 1. The pond will be sized to accommodate run-off from both erven. Run-off will be released from the attenuation pond via a controlled outlet to discharge onto the flood plain and into the Muldersdrift River.	Construction of the attenuation pond and related stormwater infrastructure. Vehicles and machinery accessing the buffer area. Site clearance and removal of buffer vegetation to install the required sewer line. Potential carbon fuel spills and concrete runoff from the mixing area.	Water Use License is required for the proposed attenuation and release of stormwater.

Roads	No external road upgrades are required. The site is not affected by a provincial road. The area is well serviced by public transport services and no additional facilities are required.	Impacts associated with the construction of internal roads: Dust fallout, primer spills, and residual asphalt left at the construction area.	Pollution control: primer drums to be stored in a bunded area. Spill kits must be used for the removal of residual asphalt and primer spills. Polluted soil to be dumped at a licensed facility.
Access	Access will be taken directly from Viljoen Road.	Impact associated with the construction of an entrance: Dust fallout, primer spills, and residual asphalt left at the construction area.	Pollution control: primer drums to be stored in a bunded area. Spill kits must be used for the removal of residual asphalt and primer spills. Polluted soil to be dumped at a licensed facility.

E4. IMPACT SUMMARY:

E4.1 Receiving Environment

Receiving Environment	Summary	Environmental Impact Statement
Terrestrial Environment	• Residential estate location • Previously Egoli Granite Grassland (Critically Endangered). • Now fully transformed; no natural vegetation remains. • C-Plan value contradicted by actual condition. • SEI Very Low, Medium near riverbanks.	**Impact Significance:** Low **Extent:** Local **Duration:** Permanent **Intensity:** Low **Residual Impact (Post-Mitigation):** Negligible
Flora	• No SCC plants. • Dominated by alien invasive species.	**Impact Significance:** Low **Extent:** Local

	• DFFE screening tool rates site as Low sensitivity. • 'Irreplaceable' designation compromised by degradation.	**Duration:** Long-term **Intensity:** Low **Residual Impact (Post-Mitigation):** Low
Aquatic Biodiversity	• Site within Muldersdrift-se-Loop catchment. • Ecological state: Seriously Modified. • Poor species diversity and high nitrite levels. • Requires WUL under NWA.	**Impact Significance:** Moderate **Extent:** Local to regional **Duration:** Long-term **Intensity:** Moderate **Residual Impact (Post-Mitigation):** Low

GAUTENG PROVINCE
AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

Basic Assessment Report in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2014 (Version 1/2022)

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.
2. This template is current as of April 2022. It is the responsibility of the EAP to ascertain whether subsequent versions of the template have been published or produced by the competent authority.
3. A draft Basic Assessment Report must be submitted, for purposes of comments within a period of thirty (30) days, to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken.
4. **A draft Basic Assessment Report must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority (uploaded to the EIA online system) empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application. The EIA online system can be accessed at https://eia.gauteng.gov.za.**
5.
6. **A copy (PDF) of the final report and attachments must be uploaded to the EIA online system. The EIA online system can be accessed at https://eia.gauteng.gov.za.**
7. **Draft and final reports submitted in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) must be emailed to environmentsue@gauteng.gov.za.**
8. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
9. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
10. An incomplete report may lead to an application for environmental authorisation or Waste Management License being refused.
11. Any report that does not contain a titled and dated full colour large scale layout plan of the proposed activities including a coherent legend, overlain with the sensitivities found on site may lead to an application for environmental authorization or Waste Management License being refused.
12. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the application for environmental authorisation or Waste Management License being refused.
13. The applicant must fill in all relevant sections of this form. Incomplete applications will not be processed. The applicant will be notified of the missing information in the acknowledgement letter that will be sent within 10 days of receipt of the application.
14. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.
15. Although pre-application meeting with the Competent Authority is optional, applicants are advised to have these meetings prior to submission of application to seek guidance from the Competent Authority.

DEPARTMENTAL DETAILS

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

Ground floor, Umnotho House, 56 Eloff Street, Johannesburg

Administrative Unit telephone number: (011) 240 3051/3052
Department central telephone number: (011) 240 2500

(For official use only)

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

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

Not applicable

Is a closure plan applicable for this application and has it been included in this report? **No**

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

The application is for a residential development. The decommissioning and closure of the development is not foreseen for the next 20 – 45 years. A closure plan will be compiled by the relevant Contractor/Developer and submitted to the Department when and if required.

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

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

If no, state reasons for not attaching the list.

Have State Departments including the competent authority commented? **No**

If no, why?

Awaiting comments - public participation process is being conducted

SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

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

The proposed Residential Development and related facilities to be located on Portion 243 (Portion of Portion 76) of the Farm Roodekrans, 183 IQ, **CITY OF JOHANNESBURG:**

The application is to:

- retain the Berlin Restaurant (operating since 1999) on Erf 2;
- incorporate a small Guest house with 10 rooms on Erf 2, and
- develop Erf 1 with 20 dwelling units (25/ha)

Select the appropriate box

The application is for an upgrade of an existing development		The application is for a new development	X	Other, specify	

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

YES X	NO

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

(1) An application was submitted by Hunter Theron Inc Town Planners to Mogale Local Municipality in terms of Section 51 of the Mogale City Spatial Planning and Land Use Management By-Law, 2018, for the establishment of a township to allow for the development of Res 2" – 20 units; 10 rooms (guest house) and 674.57m² ("As built" area) restaurant and bar200m² were previously approved under a consent use application.

(2) The proposed activities trigger the following water-uses in terms of the National Water Act 1998 (Act, No 36 of 1998):

• Section 21(c) & (i): Impeding or Diverting the flow of water in a watercourse and altering the bed, banks, course or characteristics of a watercourse

If yes, have ~~you~~ the town planners & WUL Specialist, applied for the authorisation(s)?	**YES X**	NO
If yes, have ~~you~~ the town planners 7 WUL Specialist received approval(s)? (attach in appropriate appendix):	YES	**NO X**

2. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
Constitution of The Republic of South Africa Act, 1996 (Act No 108 of 1996)	National & Provincial	1996

The National Water Act 1998 (Act No 36 Of 1998) [NWA]	National & Provincial	1998
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	National & Provincial	27 November 1998
National Web based Environmental Screening Tool: The Screening Tool allows for the generating of a Screening Report referred to in Regulation 16(1)(v) of the Environmental Impact Assessment Regulations 2014, as amended whereby a Screening Report is required to accompany any application for Environmental Authorisation	National and Provincial	GNR 960, 5 July 2019
Requirements for biodiversity assessments Version 2. Directorate of Nature Conservation, Department of Agriculture and Rural development.	Provincial	2014
Listed Activities as per Listing Notices 1 & 3 of the EIA Regulations, 2014 (amended)	National & Provincial	2014 (amended)
National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004): Publication of Lists of Critically Endangered, Endangered, Vulnerable and Protected Species	National & Provincial	2007
GDARD (Gauteng Department of Agriculture and Rural Development). Gauteng Conservation Plan: Version 3.3	Provincial	2011, 2014
Gauteng Provincial Environmental Management Framework	Provincial	2 March 2018
GDARD, 2014. *Red List Plant Species Guidelines.* Compiled 26 June 2006 and updated in September 2014. Biodiversity Management Directorate, Department of Agriculture and Rural development.	Provincial	2014
Gauteng Spatial Development Framework, 2040 - • Nodal Review Policy 2019/20	Provincial	2018
Muldersdrift Precinct Plan, 2024	Provincial	2024
Spatial Planning and Land Use Management Act, 2013 (SPLUMA - act 16 of 2013):	National	2013

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

Legislation, policy of guideline	Description of compliance
Constitution of The Republic of South Africa Act, 1996 (Act No 108 of 1996)	Section 24 of the Constitution of South Africa No. 108 of 1996 states *that "…everyone has the right (a) to an environment that is not harmful to their health or well-being; and (b) to have the environment protected, for the benefit of present and future generations through reasonable legislative and other measures that (c) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development."* This protection encompasses preventing pollution and promoting conservation and environmentally sustainable development. **Project Specific:** By obtaining an environmental authorization for the development proposal, the development must prescribe and comply with all conditions and requirements set out in the Environmental Impact Regulations 2014 (amended), the National Environmental Management Act, 1998 as well as the National Water Act, 1998. Complying to all the prescribed regulations and acts, ensures that an ecologically sustainable development is developed, that protects the watercourse and the natural resources present in the receiving environment whilst promoting justifiable economic- and social development.
The National Water Act 1998 (Act No 36 Of 1998) [NWA]	The National Water Act, Act 36 of 1998 aims to manage the national water resources to achieve sustainable use of water for the benefit of all water users. This requires that the quality of water resources be protected which also requires integration of the management of water resources with the delegation of powers to institutions at the regional or catchment level. **Project Specific:** According to the National Wetland Map 5, the development site is affected by a watercourse. The land use proposal will therefore affect existing water resources. Please refer to the relevant Map in Appendix B. The same is indicated on the Critical Biodiversity Map. Please refer to the attached map in Appendix B. The impact assessment report will therefore assess the nature and state of the watercourse and the functionality thereof. A water use license application will be submitted for the project, as the site is located within the 500m regulated area as defined in Section 21(c) of the Act.
Environmental	The National Environmental Management Act (Act No. 107 of 1998) (NEMA) provides for cooperative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for

Management Act No. 107 of 1998 as amended.	coordinating environmental functions exercised by organs of the State, as well as to provide for matters connected therewith. Section 2 of NEMA establishes a set of principles that apply to the activities of all organs of state that may significantly affect the environment. These include the following: • Development must be sustainable; • Pollution must be avoided or minimised and remedied; • Waste must be avoided or minimised, reused or recycled; • Negative impacts must be minimised; and • Responsibility for the environmental health and safety consequences of a policy, project, product or service exists throughout its life cycle. Section 28(1) states that: "*Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring*." If such degradation/pollution cannot be prevented, then appropriate measures must be taken to minimise or rectify such pollution. These measures may include: • Assessing the impact on the environment; • Informing and educating employees about the environmental risks of their work and ways of minimising these risks; • Ceasing, modifying or controlling actions which cause pollution/degradation; • Containing pollutants or preventing movement of pollutants; • Eliminating the source of pollution; and • Remedying the effects of pollution. **Project Specific:** Theis abutted by a natural resource, namely a watercourse (Muldersdrift-se-Loop). According to the screening tool report the watercourse and it's associated buffers is classified as a CB area. Therefore, the land use proposal is a listed activity, and in terms of the EIA Regulations promulgated in terms of NEMA and requires that a Basic Assessment process be followed to obtain authorization for the activities, as per the EIA Regulations (2014) promulgated in terms of NEMA. The BA process is designed to ensure that all potential impacts and risks are identified and mitigated to acceptable levels, to ensure compliance with Section 28 (1) of the Act.

National Web based Environmental Screening Tool:	The Screening Tool allows for the generating of a Screening Report referred to in Regulation 16(1)(v) of the Environmental Impact Assessment Regulations 2014, as amended whereby a Screening Report is required to accompany any application for Environmental Authorisation.

Project Specific:

A Screening Tool Report was generated by the EAP on 02/10/2024. Based on the Screening Tool Report generated, the development site is located:

- Egoli Granite Grassland;
- CBA 1 and CBA 2 area, and
- ESA 1 and 2 area.

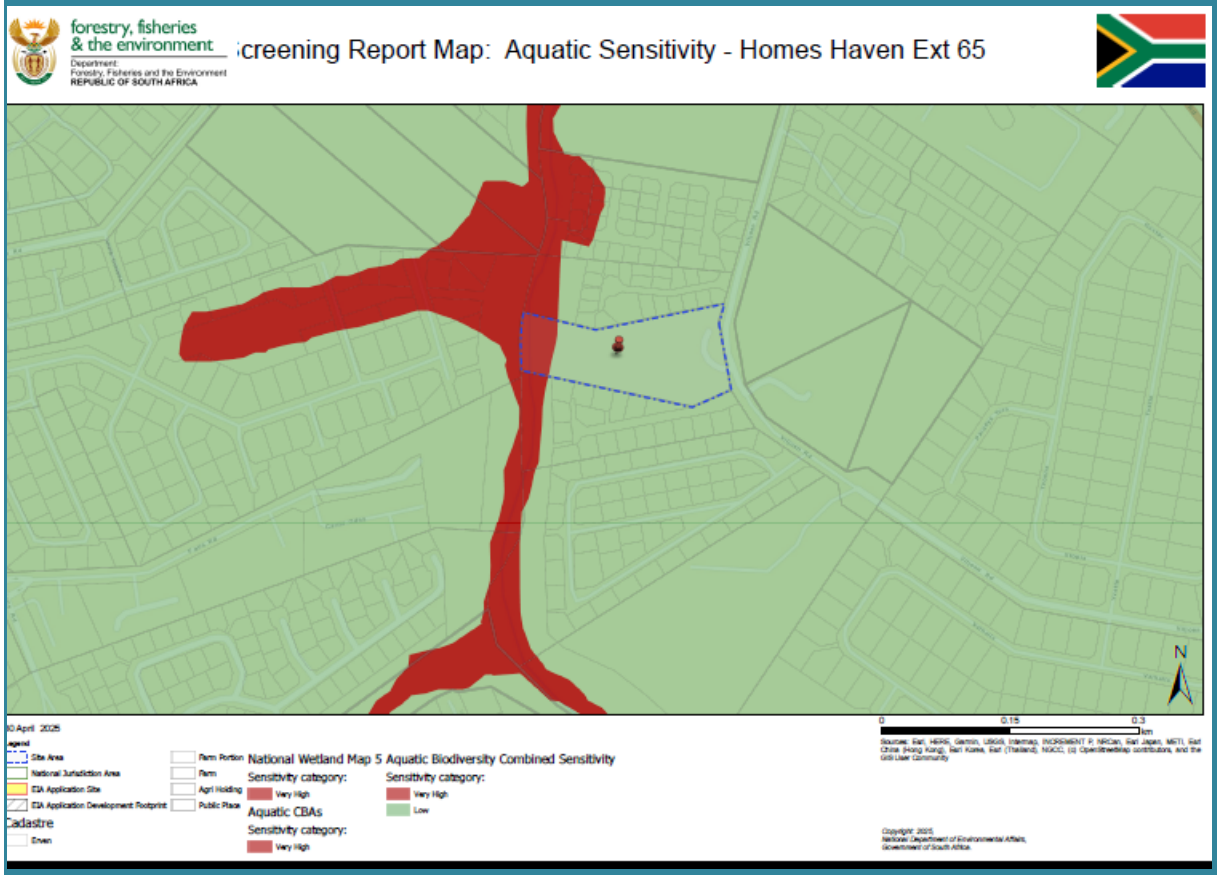
MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



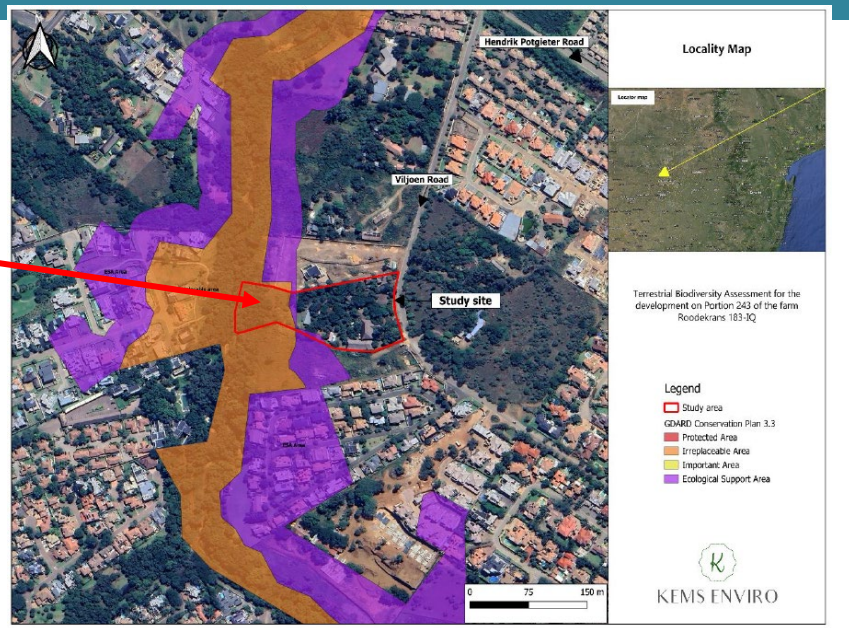
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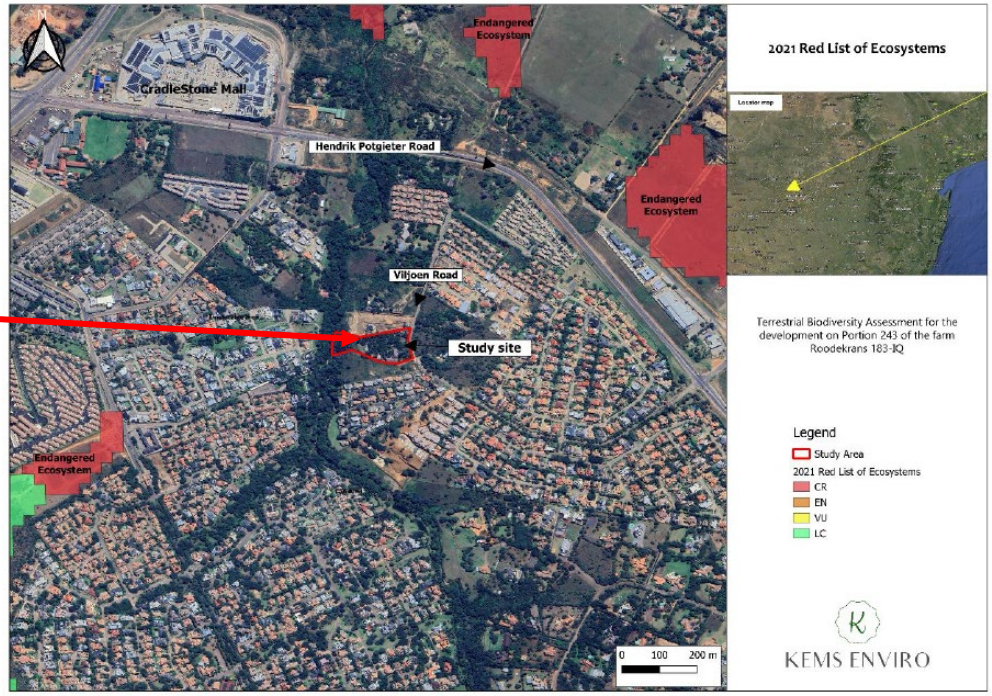
Sensitivity Features:

Sensitivity	Feature(s)
Very High	CBA 1
Very High	CBA 2
Very High	ESA 1
Very High	ESA 2
Very High	CR_Egoli Granite Grassland

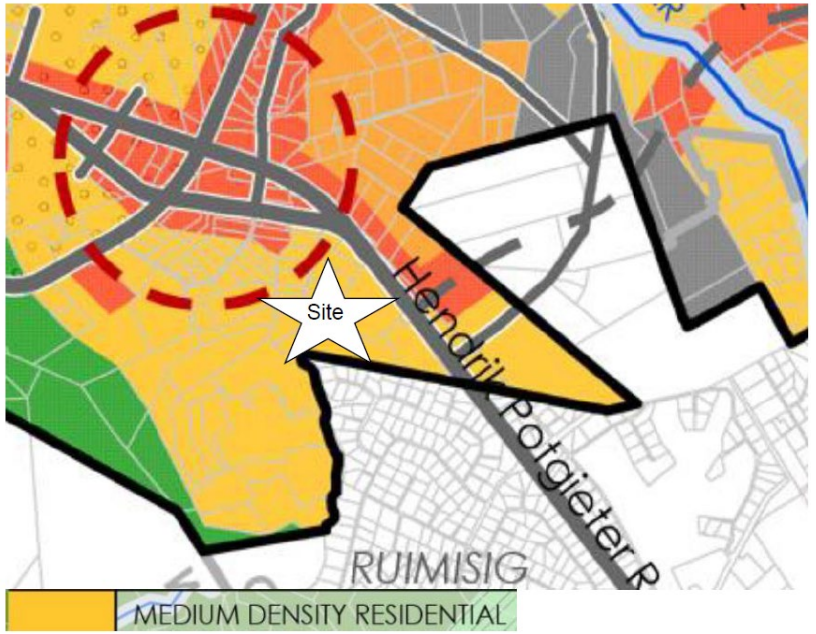
	Furthermore, the study site is east and adjacent to the Muldersdrift-se-Loop. The river is indicated on the Wetland 5 Map:  A riparian and aquatic assessment were undertaken for the site and will discussed and assessed in the Impact Assessment Section of the Report.
Minimum requirements for	The Minimum Requirements for Biodiversity Assessments (2014) issued by the Gauteng Department of Agriculture and Rural Development (GDARD) are directly applicable to the proposed development of 20 residential units adjacent to the Muldersdrift-se-Loop in Mogale City. These

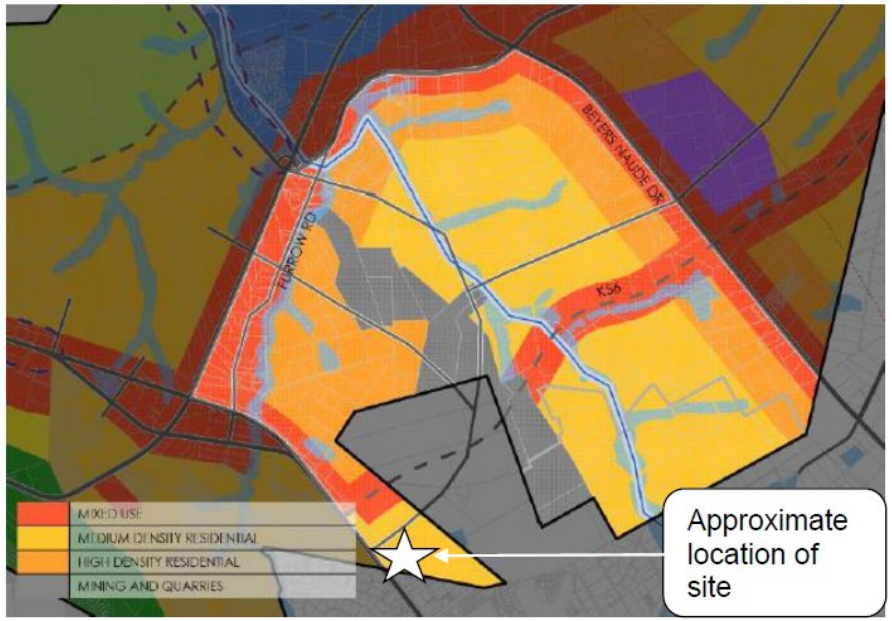
Biodiversity Assessments, 2014 of the Gauteng Department of Agriculture and Rural Development (GDARD, 2014)	guidelines are designed to ensure that developments within ecologically sensitive areas are planned and executed with due consideration for biodiversity conservation. **Project Specific:** Due to the location of the site adjacent to the Muldersdrift-se-Loop, a Riparian and Aquatic Assessment was undertaken for the development. The riparian delineation was based on the legislatively required methodology as described by DWAF (2008), now known as the Department of Water Affairs and Sanitation (DWS). The methodology is known as the Identification and Delineation of Wetlands and Riparian Areas. The wetland/riparian delineation procedure is aimed at identifying the outer edge of the temporary zone of the wetland or the riparian area, which marks the boundary between the riparian area and adjacent terrestrial areas. A buffer zone was demarcated as per the minimum requirements. The 2014 guidelines stipulate a minimum 30-meter buffer zone around wetlands and riparian areas within the urban edge. If the Muldersdrift-se-Loop or its adjacent areas are classified as wetlands or riparian zones, the development must incorporate these buffer zones into its planning to mitigate impacts on these sensitive ecosystems. Considering the aforementioned a 32m buffer was delineated.
Listed Activities as per Listing Notices 1 & 3 of the EIA Regulations, 2014 (amended)	The following listed activities are applicable to the proposed activity: • Listing Notice 1, activity nr 27; and • Listing Notice 3, activity nr 12. **Project Specific:** **a. Listing Notice 1, 27:** *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) the undertaking of a linear activity; or* *(ii) maintenance purposes undertaken in accordance with a maintenance management plan.* The proposed development site is larger than 1ha and a wetland is located west and east of the western boundary of the site. The aforementioned areas fall within a CBA, ES 1 and - 2 area. Therefore, activity nr 27 of Listing Notice 1 is applicable to this application.

	b. Listing Notice 3, 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. C. Gauteng: (ii) Within Critical Biodiversity Areas or Ecological Support Areas identified in the Gauteng Conservation Plan or bioregional plans. The screening tool indicates that Egoli Granite grassland may be present on the site. Should this be found on site, this listing notice will be applicable to the site.
GDARD (Gauteng Department of Agriculture and Rural Development). Gauteng Conservation Plan: Version 3.3	The C-Plan v3.3 identifies Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) within Gauteng. If the proposed development site falls within or near these designated areas, the guidelines require specific mitigation measures to preserve ecological integrity. **Project Specific:** The study site was evaluated in terms of C Plan 3.3. The site is located within an area identified as an "irreplaceable area" and a small piece of "Ecological Support Area" in terms of Gauteng Conservation Plan 3.3:  **Figure 4: Gauteng C Plan 3.3**

GDARD, 2014. *Red List Plant Species Guidelines.* Compiled 26 June 2006 and updated in September 2014. Biodiversity Management Directorate, Department of Agriculture and Rural development.	The 2022 Red List of Ecosystems replaced the 2011 List of Threatened Ecosystems in need of protection. The remaining extent of vegetation types as captured and released by SANBI is illustrated on the maps below. The 2021 Red List of Ecosystems illustrates the remaining extent of the vegetation type. **Project Specific:** A desktop study of the habitats of the Red List and Orange List species known to occur in the area was done before the site visit. Information about the Red List and Orange List plant species that occur in the area was obtained from GDARD. Various Acts and Ordinances were consulted about the protected plant species and species of special concern that might occur along the route. The Guidelines issued by GDARD to plant specialists as well as various publications were consulted about the habitat preferences of the Red List and Orange List species concerned. The list of plants recorded was obtained from SANBI and consulted to verify the record of occurrence of the plant species seen along the proposed route. It is noted that the study area is indicated as entirely transformed in the map  Figure 6: 2022 Red List of Ecosystems

Gauteng Spatial Development Framework, 2030	**Summary of key objectives related to Urban Form:** **1.** Focusing development on strategically targeted nodes and corridors where high density, mixed-use developments are promoted in conjunction with an integrated public transport system. **2.** Focusing on urban renewal, clustering, densification and infill development in conjunction with an urban development boundary in order to limit sprawl and create densities that support effective public transport systems. **3.** Supporting and renewing secondary cities and smaller towns, which will in turn support rural development. **4.** Preventing development in sensitive areas, discouraging development in peripheral locations and promoting development in central and strategic areas such as the urban development zones and 'industrial development zones' identified in the GPEMF 2014. **Summary of the key Spatial Development Strategies:** • "Building an Economic Network" focuses on creating a functionally and spatially integrated and connected economic network in support of the polycentric provincial whole, it is not only about creating the necessary thresholds and optimisation of locational advantages but is also a key mechanism with which to reduce fragmentation and achieve social integration. • "Capitalising on Proximity" considers the patterns of intensification, densification and economic, social and infrastructure investment in the broader provincial polycentric entity in relation to the economic and transportation network. The aim of this strategy is to create greater proximity to opportunities in the province for a larger percentage of residents and to improve conditions in areas that already have a degree of proximity. • The "Managing New Settlement Development" strategy seeks to manage the outward growth of the city, with the aim of ensuring that new settlements do not lead to spatial inefficiencies and spatial, economic and social polarization. **Project Specific:** The proposed land use must be assessed in terms of the development objectives summarised in the section above. The proposed church site will be in an area that is currently undergoing rapid development and will align with the proposed objective of building a sustainable society located in close proximity to social amenities, taking into consideration the broader provincial patterns related to transportation, and infrastructure investment, with the main aim to mitigate urban sprawl and develop compact communities.

Muldersdrift Precinct Plan, 2024	The Muldersdrift Precinct Plan provides a comprehensive framework for guiding future development and spatial transformation within the Muldersdrift area of MCLM. One of the visions of the Muldersdrift Precinct is to create a functional, socially integrated precinct focused on i.e. balancing development and protecting environmental sensitive areas. Key objectives of this policy, which are applicable to this application, are i.e.: • Economic Growth and Job creation: To foster local employment and attract investment • Inclusive Housing Development : Providing a range of housing typologies and densities to meet diverse socio-economic needs, with emphasis on accessibility and environmental carrying capacity. **Project Specific:** In terms of the plan below (extract on page 5 of the Policy), the site is located in a MEDIUM DENSITY ZONE: In line with the sub-precinct plans, the site is located in Sub-Precinct 3. The proposed land uses in this sub-precinct are: *Medium density residential in the eastern portion, and Higher density residential south of the existing mines and quarries and along the mixed-use areas.* 



With reference to the above it is clear that the proposed land uses are supported by this policy.

3. ALTERNATIVES

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

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

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

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

No alternatives are proposed. Please refer to motivation below.

Provide a description of the alternatives considered

<table>
<tr><th>No.</th><th>Alternative type, either alternative: site on property, properties, activity, design, technology, energy, operational or other(provide details of “other”)</th><th>Description</th></tr>
<tr><td>1</td><td>Proposal</td><td>The land use proposal is as follows:
<table>
<tr><th>LAND USE</th><th>NO. OF STANDS</th><th>AREA OF STANDS</th><th>% OF TOWNSHIP AREA</th></tr>
<tr><td>“Residential 2”</td><td>Erf 1</td><td>0,7817 ha</td><td>49,89 %</td></tr>
<tr><td>“Special” for Restaurant and Guesthouse</td><td>Erf 2</td><td>0,7854 ha</td><td>50,11 %</td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td>TOTAL</td><td>2</td><td>1,5671 HA</td><td>100 %</td></tr>
</table>
The applicable development controls are as follow:

Erf 1:

• Use Zone: Residential 2

• Density: 25 units per hectare, therefore 20 units will be developed.

• Access: a right of way servitude across Erf 1, will provide access to the units.

Erf 2:

• Use Zone: “Special” to accommodate the existing restaurant and allow for the proposed guest house.

• Parking:

o Restaurant: 6 spaces per 100m^2 floor area Sufficient dedicated on-site loading and delivery space to the satisfaction of the</td></tr>
</table>

		municipality ○ **Guest House:** 1 space per guest room. Loading spaces : 1 space per first 2000m^2 floor area, or part thereof and 1 space per every floor area thereafter **Engineering Services:** • **Water:** Water will be supplied to Erf. 1 via a new 110 mm diameter water line that passes through Erf 2 along the northern boundary. It is proposed that a new connection be made from the existing council water line in Viljoen Road which will include for an isolating valve and meter. A hydrant and isolating valve will also be installed at the access to Erf 1. • **Sewer:** There is an existing council sewer pipe that crosses through the western portion of Erf 1, near the Muldersdrift-se-Loop. It is proposed that a new 160 mm diameter sewer pipe be installed from the existing council pipe to service both Erf 1 and Erf 2. A manhole and connection point will be located at the low point of each erf, to allow each erf to drain and connect to the existing council line. • **Electricity:** According to the electrical Engineer – "*A mini-sub was installed on Homes Haven Ext 8, which is located north and adjacent to this site. Both townships, Homes Haven Ext 8 and Ext 65 have the same owner. Sufficient electrical capacity is available on the mini-sub to provide both townships with electrical power.*" • **Access:** Access to the development will be taken from Viljoen road. There will be no access control at the access point and no vertical structures (guard house) are proposed at this point at the access point.
2	Alternative 1	
3	Alternative 2	

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

No alternatives are provided. The motivation is as follows:

1. **Ownership & Development Proposal:** The subject site is owned by the Applicant. The applicant is the current owner of the restaurant on the property. The intension is to retain the existing restaurant and house. The restaurant will be retained, whilst the house will be transformed into a guest house with 10 rooms catering for 20 occupants. Residential units will be developed on the remainder of the property will be developed, ttherefore no other property was identified by the Applicant.

2. **Access:** Access will be taken from Viljoen road, an existing road. No upgrades are required.
3. **Layout:** The layout takes cognizance of the environmental constraints identified i.e. the riparian area of the Muldersdrift-se-Loop and the 32m buffer zone delineated. The layout does not encroach into the buffer zone.
4. **Desirability:** The development proposals align with the Muldersdrift precinct plan and the site is located within an existing residential area and therefore compliments development currently taking place in the area.

4. PHYSICAL SIZE OF THE ACTIVITY

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

	Size of the activity:
Proposed activity ***(Total environmental (landscaping, parking, etc.) and the building footprint)***	15 671m²
Alternatives:	
Alternative 1 (if any)	
Alternative 2 (if any)	

or, for linear activities:

	Length of the activity:
Proposed activity	N/A
Alternatives:	
Alternative 1 (if any)	
Alternative 2 (if any)	
	m/km

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

	Size of the site/servitude:
Proposed activity	15 671m²
Alternatives:	
Alternative 1 (if any)	
Alternative 2 (if any)	
	Ha/m²

5. SITE ACCESS

Proposal

Does ready access to the site exist, or is access directly from an existing road?	**YES X – access will be taken from Viljoen Road.**	NO
If NO, what is the distance over which a new access road will be built	m	

Describe the type of access road planned:

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

Alternative 1

Does ready access to the site exist, or is access directly from an existing road?	YES	NO
If NO, what is the distance over which a new access road will be built	m	

Describe the type of access road planned:

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

Alternative 2

Does ready access to the site exist, or is access directly from an existing road?	YES	NO
If NO, what is the distance over which a new access road will be built	m	

Describe the type of access road planned:

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

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

Section A 6-8 has been duplicated **0** Number of times

(only complete when applicable)

6. LAYOUT OR ROUTE PLAN

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

- the layout plan is printed in colour and is overlaid with a sensitivity map (if applicable);
- layout plan is of acceptable paper size and scale, e.g.
  - A4 size for activities with development footprint of 10sqm to 5 hectares;
  - A3 size for activities with development footprint of > 5 hectares to 20 hectares;
  - A2 size for activities with development footprint of >20 hectares to 50 hectares);
  - A1 size for activities with development footprint of >50 hectares);

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

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

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

7. SITE PHOTOGRAPHS

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

8. FACILITY ILLUSTRATION

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

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

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

Instructions for completion of Section B for linear activities

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

Section B has been duplicated for sections of the route **0** times

Instructions for completion of Section B for location/route alternatives

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

Section B has been duplicated for location/route alternatives **0** times (complete only when appropriate)

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

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

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

Section B - Section of Route **0** (complete only when appropriate for above)

Section B – Location/route Alternative No. **0** (complete only when appropriate for above)

1. PROPERTY DESCRIPTION

Property description: (Including Physical Address and Farm name, portion etc.)	Portion 243 (Portion of Portion 76) of the Farm Roodekrans, 183 IQ, Mogale City

2. ACTIVITY POSITION

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

Alternative:	**Latitude (S):**	**Longitude (E):**
	-26.068225°	27.842068°



In the case of linear activities:

Alternative:

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

Latitude (S):	**Longitude (E):**
°	°
°	°
°	°

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

Addendum of route alternatives attached **N/A**

The 21 digit Surveyor General code of each cadastral land parcel:

- PTN 243 (PTN OF PTN 76) FARM ROODEKRANS 183 IQ:

PROPOSAL:	**T**	**0**	**I**	**Q**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**8**	**3**	**0**	**0**	**2**	**4**	**3**
ALT. 1																					
ALT. 2																					

3. GRADIENT OF THE SITE

Indicate the general gradient of the site.

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

4. LOCATION IN LANDSCAPE

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

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

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

Shallow water table (less than 1.5m deep)	YES	**NO X**
Dolomite, sinkhole or doline areas	YES	**NO X**
Seasonally wet soils (often close to water bodies)	**YES X**	NO
Unstable rocky slopes or steep slopes with loose soil	YES	**NO X**
Dispersive soils (soils that dissolve in water)	YES	**NO X**
Soils with high clay content (clay fraction more than 40%)	YES	**NO x**
Any other unstable soil or geological feature	YES	**NO X**
An area sensitive to erosion	YES	**NO X**

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

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

YES	**NO X**

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

Latitude (S):	**Longitude (E):**
°	°

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

YES	**NO X**

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

Latitude (S):	**Longitude (E):**
°	°

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

YES	**NO X**

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

Latitude (S):	**Longitude (E):**
°	°

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

6. AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 4)?	YES	**NO X**

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

7. GROUNDCOVER

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

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

Natural veld - good condition % =	Natural veld with scattered aliens % =	Natural veld with heavy alien infestation % =	**Veld dominated by alien species % = 100**	Landscaped (vegetation) % =
Sport field % =	Cultivated land % =	Paved surface (hard landscaping) % =	Building or other structure % =	Bare soil % =

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

Are there any rare or endangered flora or fauna species (including red list species) present on the site	YES	**NO X**

If YES, specify and explain:

Are there any rare or endangered flora or fauna species (including red list species) present within a 200m (if within urban area as defined in the Regulations) or within 600m (if outside the urban area as defined in the Regulations) radius of the site.	YES	**NO X**

If YES, specify and explain:

Are there any special or sensitive habitats or other natural features present on the site?	YES	**NO X**

If YES, specify and explain:

Was a specialist consulted to assist with completing this section	**YES X**	**NO**

If yes complete specialist details:

Name of the specialist:	**Report 1:** **Aquatic Biodiversity Impact Assessment Report:** Marinus Du Preez
Qualification(s) of the specialist:	• MSc Zoology • SASS5 Accredited • Pri.Sci.Nat
Name of Specialist:	**Report 2:** **Terrestrial Biodiversity Assessment Report:** Arno van den Berg KEMS Enviro
Qualification(s) of the specialist:	• M. Sc. Environmental Management • B. Sc Hons. Botanical sciences • SACNASP Reg. No. 400036/15
Lead Consultant	BioBlue

Postal address:	829 Cronstedt Street, Moreleta Park,		
Postal code:	0181		
Telephone:		Cell:	082 578 1132
E-mail:	info@bioblue.co.za	Fax:	

Are any further specialist studies recommended by the specialist?	YES	**NO X**
If YES, specify:		
If YES, is such a report(s) attached?	**YES X**	NO
If YES list the specialist reports attached below		

The following Reports are attached:

Aquatic Biodiversity Impact Assessment Report

Terrestrial Biodiversity Assessment Report

Signature of specialist:	Original Reports are attached

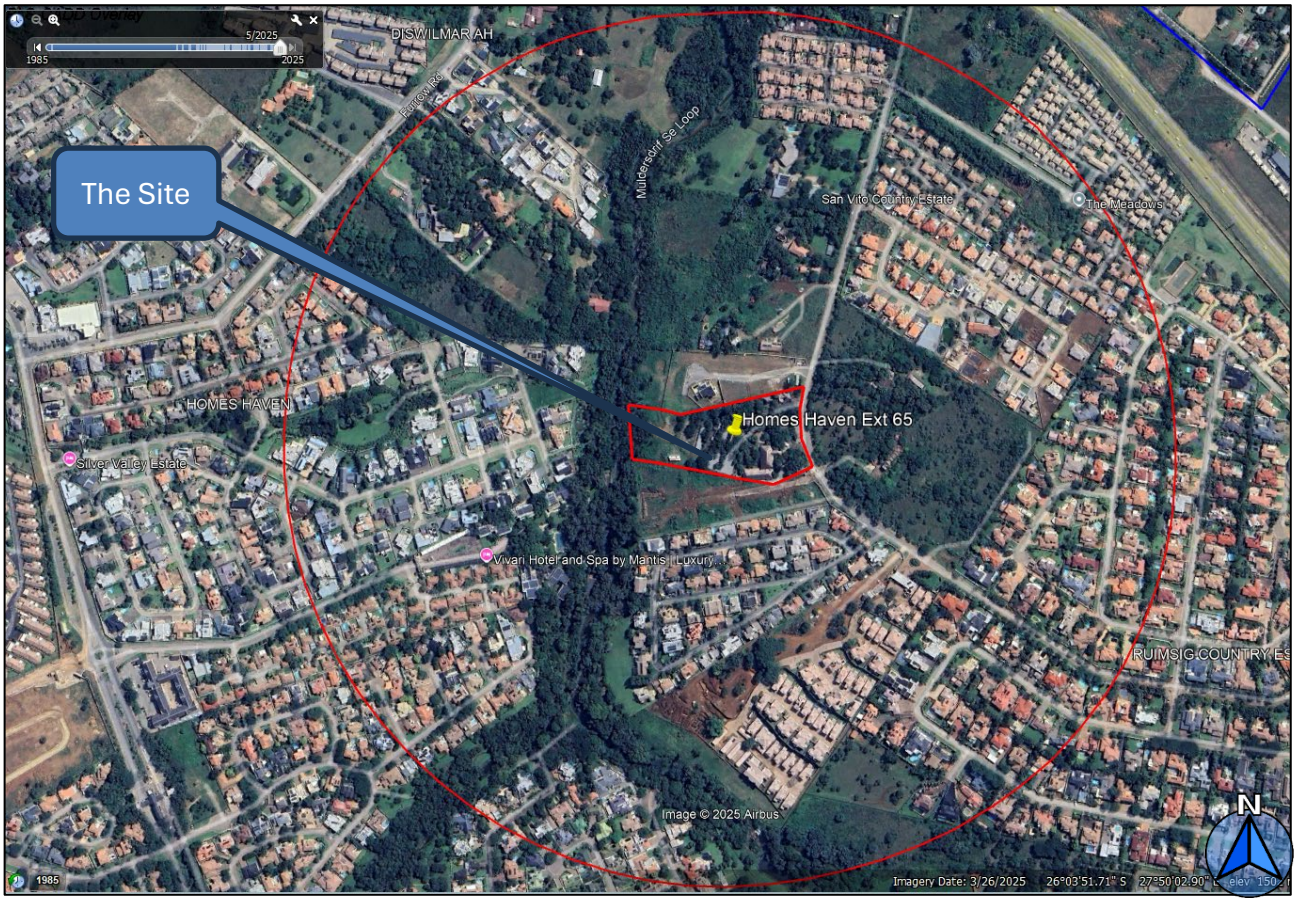
Please note; If more than one specialist was consulted to assist with the filling in of this section then this table must be appropriately duplicated

8. LAND USE CHARACTER OF SURROUNDING AREA

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

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

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



NORTH

8	2	4	9,8	8,9
8	2	4	98	8,9
9,8	2		9	8
9,8	2	8	9	8,9
9,8	2	9	9	8,9

= Site

WEST

EAST

SOUTH

Note:

More than one (1) Land-use may be indicated in a block

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

Have specialist reports been attached	YES X	NO

If yes indicate the type of reports below

- Town Planning Memorandum

9. SOCIO-ECONOMIC CONTEXT

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

1. SOCIO-ECONOMIC PROFILE

While specific socio-economic data for Ruimsig Country Estate is limited, insights can be drawn from the broader Mogale City Local Municipality:

• **Population Growth:** The municipality's population increased from approximately 414,636 in 2019 to an estimated 434,188 in 2022.

• **Age Distribution:** About 33% of the population is between 15 and 34 years old, indicating a youthful demographic.

• **Gender Distribution:** Slightly more males (50.2%) than females (49.8%).

Given the estate's characteristics and location, it's reasonable to infer that residents may have higher-than-average income levels and access to quality services.

Estate Characteristics

Ruimsig Country Estate is known for its secure, upmarket residential environment, featuring:

- Modern homes with architectural designs;
- Proximity to amenities such as shopping centers, schools, and recreational facilities;
- Access to major roads, including the M47.

The estate's appeal lies in its combination of suburban tranquility and accessibility to urban centers.

2. KRUGERSDORP AND RUIMSIG PROPERTY MARKET OVERVIEW – MAY 2025:

Krugersdorp Property Market Overview

Sales Trends

- **Market Activity:** Krugersdorp maintains a stable property market with consistent sales volumes.
- **Property Types:** The market offers a diverse range of properties, including freehold homes, sectional title units, and vacant land.

Average Property Sizes

- **Stand Sizes:** The average stand size in Krugersdorp varies by suburb, with larger stands typically found in areas like Noordheuwel and Rangeview.

Secure Living vs. Freehold Homes

- **Security Estates:** There is a growing preference for secure estates, especially among families and professionals seeking enhanced safety and community amenities.
- **Freehold Properties:** Traditional freehold homes remain popular, particularly in established suburbs, offering larger plots and more customization options.

RUIMSIG PROPERTY MARKET INSIGHTS

Pricing Trends

- **Freehold Homes:** The median listing price for freehold homes in Ruimsig is approximately R3,840,000.
- **Sectional Title Units:** Townhouses and apartments have a median price of around R1,185,000.

Property Sizes

- **Freehold Homes:** These properties often feature spacious layouts with 3 to 5 bedrooms, catering to families seeking ample living space.
- **Sectional Title Units:** Typically range from 2 to 3 bedrooms, appealing to young professionals and small families.

Demand for Secure Living

- **Security Estates:** Ruimsig is known for its secure estates, such as Ruimsig Country Estate, which offer controlled access, communal facilities, and a sense of community, making them highly desirable.

Popular Areas in Mogale City

- **Noordheuwel:** Offers a mix of modern and traditional homes with good schools and amenities.
- **Rangeview:** Known for its scenic views and larger properties.
- **Krugersdorp North:** Features a variety of property types and is close to the town center.
- **Ruimsig:** Attracts buyers looking for upscale living in secure estates with proximity to golf courses and shopping centers.

References

• Property24: www.property24.com
• MyProperty South Africa: www.myproperty.co.za
• Private Property: www.privateproperty.co.za
• Lightstone Property Data: www.lightstoneproperty.co.za

10. CULTURAL/HISTORICAL FEATURES

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

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-
(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
(b) the construction of a bridge or similar structure exceeding 50m in length;
(c) any development or other activity which will change the character of a site-
(i) exceeding 5 000 m2 in extent; or
(ii) involving three or more existing erven or subdivisions thereof; or
(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
(d) the re-zoning of a site exceeding 10 000 m2 in extent; or
(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

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

If YES, explain:

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

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

Will any building or structure older than 60 years be affected in any way?	YES	**NO X**
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	**NO X**

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

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

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

2. LOCAL AUTHORITY PARTICIPATION

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

Was the draft report submitted to the local authority for comment?	**YES X**	NO
If yes, has any comments been received from the local authority?	**YES**	**NO X**

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

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

Report was emailed to Mogale Municipality – Environmental Department. Currently awaiting comments from the Department. This section will be updated once comments are received. An email reminder will be sent.

3. CONSULTATION WITH OTHER STAKEHOLDERS

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

Has any comment been received from stakeholders?	YES	**NO X**

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

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

DBAR was emailed to the relevant landowners. Proof is Attached in Appendix E4. Currently awaiting comments from stakeholders and I & AP's. This section will be updated once comments are received.

4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

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

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

5. APPENDICES FOR PUBLIC PARTICIPATION

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

Appendix 1 – Proof of site notice

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

Appendix 3 – Proof of newspaper advertisements

Appendix 4 –Communications to and from interested and affected parties

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

Appendix 6 - Comments and Responses Report

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

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

Appendix 9 – Copy of the register of I&APs

SECTION D: RESOURCE USE AND PROCESS DETAILS

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

Instructions for completion of Section D for alternatives

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

Section D has been duplicated for alternatives | **N/A** | times | (complete only when appropriate)

Section D Alternative No. | N/A | (complete only when appropriate for above)

1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

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

YES X	NO

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

Unknown m^3

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

Waste generated during the construction phase will be disposed of as follows:

- A registered waste removal company will be used – SKIPS will be provided on site for storage and removal of waste.
- Separation and recycling of waste will be encouraged:
  - Plastic sheeting, -wrap etc will be stored in a clearly demarcated container.
  - Empty cement bags will be stored separately from general rubble.
  - Rubble will be stored in a designated area.
  - Recycling containers, bottles etc. at the eating area will be promoted. Recycling bins will be provided.

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

- The waste will be taken to a registered landfill site. All waste slips will be kept on site for inspection purposes.
- Empty cement bags will be taken to a landfill suite that accepts hazardous waste. Slips will be kept on site for inspection purposes.

Will the activity produce solid waste during its operational phase?

YES X	NO

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

Unknown m^3

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

General Waste:

The solid waste consists of general waste generated by the residents residingin the complex as well as the restaurant and guest house. This waste will filter into the municipal waste stream. The development will make use of the waste removal company employed by the Council to remove all general waste form the site during the operational period.

Has the municipality or relevant service provider confirmed that sufficient air space exists for treating/disposing of the solid waste to be generated by this activity?	YES	**NO X**

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

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

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?	YES	**NO X**

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

Is the activity that is being applied for a solid waste handling or treatment facility?	YES	**NO X**

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

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

None

Liquid effluent (other than domestic sewage)

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	YES	**NO X**
If yes, what estimated quantity will be produced per month?	m^3	
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the liquid effluent to be generated by this activity(ies)?	YES	NO

Will the activity produce any effluent that will be treated and/or disposed of on site?	Yes	**NO X**
If yes, what estimated quantity will be produced per month?	m^3	

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

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

Will the activity produce effluent that will be treated and/or disposed of at another facility?	YES	**NO X**

If yes, provide the particulars of the facility:

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

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

The Owners could implement a water-harvesting facility that collects rainwater in tanks. This can then be used for the bathrooms or to water the plants and rinse off the paved areas. Water efficiency will be investigated and discussed during the finalization of the SDP between the Developer, and the Architect.

Liquid effluent (domestic sewage)

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?	**YES X**	NO
If yes, what estimated quantity will be produced per month?	Unknown m^3	
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the domestic effluent to be generated by this activity(ies)?	YES	**NO X – please note that the municipality indicated that the upgrade of services are not required**

Will the activity produce any effluent that will be treated and/or disposed of on site?	YES	**NO X**

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

Emissions into the atmosphere

Will the activity release emissions into the atmosphere?	**YES X**	NO
If yes, is it controlled by any legislation of any sphere of government?	YES	**NO X**

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

Normal vehicular emissions associated with residents and patrons of the restaurant and guest house.

2. WATER USE

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

Municipal X	Directly from water board	groundwater	river, stream, dam or lake	other	the activity will not use water

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

If Yes, please attach proof of assurance of water supply, e.g. yield of borehole, in the appropriate Appendix

Does the activity require a water use permit from the Department of Water Affairs?	**YES X**	NO

If yes, list the permits required

A General Authorisation is required for the site (GA).

If yes, have you applied for the water use permit(s)?	YES	**NO X – the application will be submitted by the WUL Consultant**
If yes, have you received approval(s)? (attached in appropriate appendix)	YES	NO

3. POWER SUPPLY

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

The proposed development is currently being supplied by Mogale Local Municipality. Additional power is not required for the development.

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

4. ENERGY EFFICIENCY

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

In terms of the architectural design guidelines the development will focus on other eco-friendly features, including solar panels and energy-reducing glass for lower electricity consumption. In areas that are not constantly manned, motion sensors limit unnecessary lighting. In addition, the by using natural paint colors it would allow it to blend in with the surroundings. The use of LED lighting throughout the Development will be encouraged. Light-emitting diode (LED) fixtures emit an evenly distributed light that requires less energy than conventional lighting.

Another example is the use of a reflective coating on the roof. Dark-colored roofs absorb the heat of the sun, which then requires more air conditioning in your store to keep things cool. Reflective or white-coated roofs help minimize heat absorption and reduce cooling energy use by 15 percent to 20 percent

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

Alternative energy sources such as solar panels are for the discretion of the house owner. To be installed by the house owner and not prescribed by the developer.

SECTION E: IMPACT ASSESSMENT

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

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

- GDARD:
  - To be completed once received
  - Public Response: To be completed once received
- Mogale City, Environmental Department – will be updated once comments are received.

Summary of response from the practitioner to the issues raised by the interested and affected parties (including the manner in which the public comments are incorporated or why they were not included)
(A full response must be provided in the Comments and Response Report that must be attached to this report):

Will be updated once comments are received.

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

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

As a means of determining the significance of the various impacts that can or may be associated with the proposed project, a series of assessment criteria were used for each impact. These criteria include an examination of the nature, extent, duration, intensity and probability of the impact occurring, and assessing whether the impact will be positive or negative for the natural as well as biophysical environments at, and surrounding, the site. The following criteria have been adapted from those proposed in the EIA Guideline Document (April 1998).

1. Nature

This is an appraisal of the type of effect the activity would have on the affected environment. This description includes what is being affected and how.

2. Extent

This indicates the spatial area that may be affected by the impact and further describes the possibility that adjoining areas may be impacted upon. This includes four classes that are listed as follows:

- ❑ Local (extending only as far as the site);
- ❑ Limited (limited to the site and it's immediate surrounds);
- ❑ Regional (extending beyond immediate surrounds to affect a larger area); and
- ❑ National or international.

3. Duration

This refers to the period of time that the impact may be operative for (i.e. the lifetime of the impact). This includes the following four classes that are listed as follows:

- Short (i.e. 0 - 5 years);
- Medium (i.e. 5 - 15 years);
- Long (i.e. > 15 years and/or where natural processes will return following the cessation of the activity or following human intervention);
- Permanent (i.e. where mitigation either by natural process or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient).

4. Intensity

This indicates whether the impact is likely to be destructive or have a lesser effect. Three such classes of intensity are defined, and these are listed as:

- Low (i.e. where natural, cultural and social functions and processes are not affected by the development);
- Medium (i.e. where the natural, cultural and/or social functions and processes are affected by the development but can continue in a modified way);
- High (i.e. where natural, cultural and/or social functions or processes are altered to the extent that it will temporarily or permanently cease).

5. Probability

This refers to the likelihood of the impact actually occurring. The following four classes are used to describe the probability of the impact:

- Improbable (i.e. low possibility of the impact);
- Probable (i.e. a distinct possibility exists that the impact will occur);
- Highly probable (i.e. more than likely that the impact will occur);
- Definite (i.e. the impact will occur regardless of any preventative mitigation/measures).

6. Significance

The significance of the impact (i.e. whether it will lead to a marked change in the environment or not) is determined though a synthesis of the aspects produced in terms of their nature, duration, intensity, extent and probability. Four classes of significance exist including:

- None (i.e. the impact will not have an influence on the decision and requires no mitigation);

- Low (i.e. the impact will have a limited influence on the decision and requires mitigation to manage the environment);
- Medium (i.e. it is likely to have an influence on the decision and requires mitigation)
- High (i.e. Mitigation is required and this may not be sufficient to ensure that the environment is not detrimentally affected by the proposed development).

TABLE 1: Criteria for the Rating of Classified Impacts:

Low impact (4 -6 points)	A low impact has no permanent impact of significance. Mitigation measures are feasible and are readily instituted as part of a standing design, construction or operating procedure.
Medium impact (7 -9 points)	Mitigation is possible with additional design and construction inputs.
High impact (10 -12 points)	The design of the site may be affected. Mitigation and possible remediation are needed during the construction and/or operational phases. The effects of the impact may affect the broader environment.
Very high impact (13 - 20 points)	Permanent and important impacts. The design of the site may be affected. Intensive remediation is needed during construction and/or operational phases. Any activity which results in a "very high impact" is likely to be a fatal flaw.
Status	Denotes the perceived effect of the impact on the affected area.
Positive (+)	Beneficial impact.
Negative (-)	Deleterious or adverse impact.
Neutral (/)	Impact is neither beneficial nor adverse.
It is important to note that the status of an impact is assigned based on the status quo – i.e. should the project not proceed. Therefore, not all negative impacts are equally significant.	

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

CONSTRUCTION PHASE

Proposal: 20 residential units and the transformation of the existing house into a guesthouse with 20 rooms, the existing restaurant to remain as is:

Potential Impact

1. Air Quality

Activity	Potential Air Pollutants	Description of Impact
Site clearing and vegetation removal	Particulate matter (PM_{10}, $PM_{2.5}$), dust	Wind-blown dust from cleared areas, especially during dry/windy conditions.
Excavation and earthworks	Dust and particulates	Increased fugitive dust emissions from soil disturbance.
Hauling and movement of construction vehicles	Diesel emissions (NOx, SO_2, CO), dust	Gaseous emissions from vehicle exhaust; dust from vehicle movement.

	Storage and handling of construction materials	Fine particulates (dust), cement dust	Airborne dust from material storage piles and transfer.
	Construction of internal roads	Bitumen fumes (if applicable), dust	Dust from road base construction; potential hydrocarbon emissions from materials.
	Installation of services	Dust and exhaust emissions	Trenching and compacting operations produce dust; equipment generates emissions.
	Concrete mixing on-site	Cement dust, particulate matter	Airborne emissions during mixing, especially if not contained.

Significance rating – before mitigation

*Where **E** = Extent, **D** = Duration, **I** = Intensity and **P** = Probability of occurrence*

Air Quality: Construction Phase – prior to mitigation					**Status**	**/**
Potential Impact: dust fall out, general emissions & smoke from open fires	**Prior Mitigation**				**Significance Rating Prior Mitigation**	
	E	**D**	**I**	**P**	**Low 5**	
Findings: Smoke from open fires; emissions from construction vehicles and dust fall out from site clearance activities, stockpiles, and vehicular movement on temporary haul routes and excavations	**1**	**1**	**1**	**2**		

Proposed Mitigation Measures

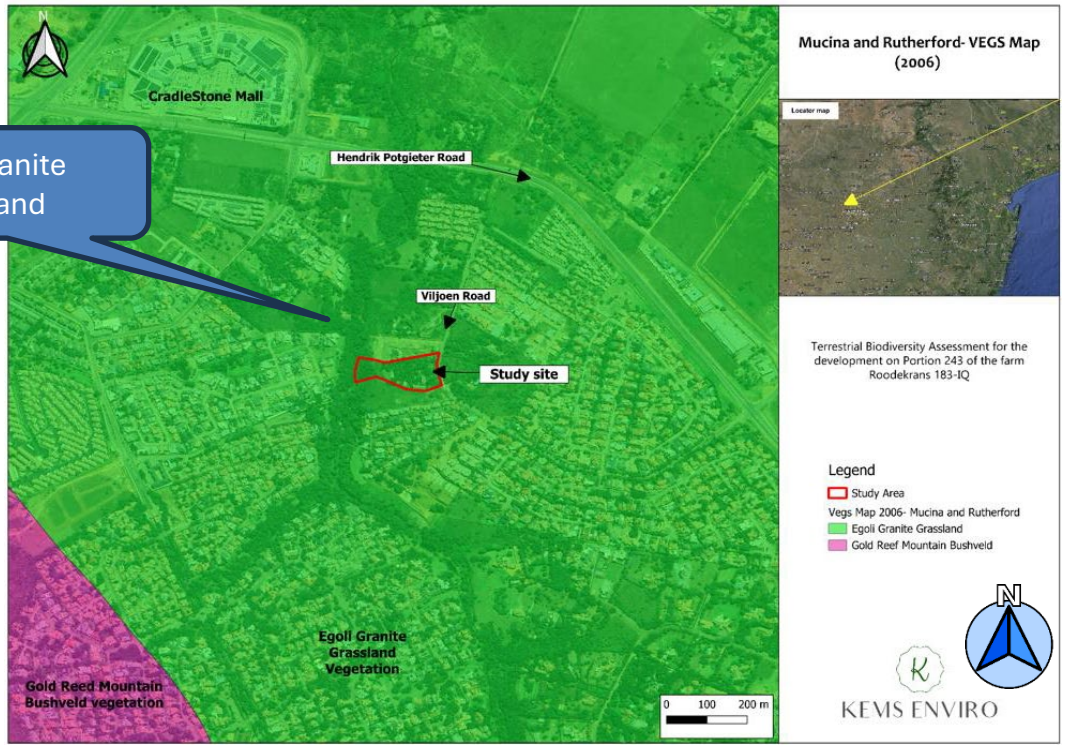
Source of Impact	Mitigation Measure
Dust from site clearing and earthworks	• Limit vegetation clearance to active construction zones only. • Wet exposed soil and stockpiles during dry and windy conditions. • Implement phased clearing to reduce exposed surface area.
Dust from roads and vehicle movement	• Use water bowsers to regularly wet unpaved roads. • Enforce speed limits (e.g., 20 km/h) for construction vehicles. • Pave or stabilize frequently used haul routes.
Emissions from construction vehicles	• Ensure equipment is regularly maintained and complies with emissions standards. • Avoid idling of engines. • Use fuel-efficient or electric-powered equipment where feasible.
Handling of cement and dusty materials	• Store cement in sealed containers or under cover. • Avoid open mixing of concrete; use ready-mix where possible. • Clean up spills immediately and avoid dry sweeping.
Stockpiles and material storage	• Cover stockpiles or use windbreaks. • Locate away from the 32m buffer and residential receptors.
On-site burning of waste	• Prohibit open burning of construction or organic waste. • Arrange for licensed disposal or recycling.

<table>
<tr><td></td><td>General:
❑ Maintain an Complaints Register;
❑ Stockpile heights to be restricted to 2m, tops must be flattened;
❑ Water truck must be on site. Apply water or other dust suppressive methods to temporary road surfaces during construction;
❑ Lower speed limits on construction site. This can reduce dust emissions by 22%;
❑ Upgrade entrance and exit roads to be used by construction vehicles by: (1) improving the particle size, shape and mineral types that make up the surface and base materials of the entrance and exit roads and (2) add surface gravel to reduce the source of dust emission; and
❑ Minimise the volume of material tracked-out onto road surfaces by construction vehicles by: (1) filling in muddy areas with gravel or other surface material and (2) stabilising shoulders of roads with gravel/vegetation.</td></tr>
<tr><td>Significance rating – after mitigation measures</td><td>Where E = Extent, D = Duration, I = Intensity and P = Probability of occurrence
<table>
<tr><td colspan="5">Air Quality: Construction Phase – after mitigation</td><td>Status</td><td>/</td></tr>
<tr><td rowspan="2">Potential Impact: dust fall out, general emissions & smoke from open fires</td><td colspan="4">Prior Mitigation</td><td colspan="2">Significance Rating Prior Mitigation</td></tr>
<tr><td>E</td><td>D</td><td>I</td><td>P</td><td colspan="2" rowspan="5">Low 5</td></tr>
<tr><td rowspan="4">Findings: Smoke from open fires – will be contained to equipment provided. Dust fall out from vehicular movement on temporary haul routes and excavations will be minimal due to adequate dust suppression. Stockpile heights may not exceed 2m, tops must be flattened.</td><td>1</td><td>1</td><td>1</td><td>2</td></tr>
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<tr><td>Risk assessment if mitigation measures are not implemented</td><td>The only impact associated with the construction phase is dust fall out. Should dust suppression measures not be implemented, it would result in complaints from adjacent landowners, especially during the dry, winter months. It is therefore imperative that dust fall out be monitored by the Contractor and that a water truck is on site to mitigate dust fall out.
Overall Significance Rating of = 10 (High) should dust suppression methods not be applied during construction</td></tr>
</table>

Potential Impact	**2. Ecological Systems**
	1. Biome Classification • **Vegetation Type:** Egoli Granite Grassland • **Bioregion:** Grassland Biome • **VEGMAP Code:** Gm10 • **Source:** Mucina & Rutherford (2006); SANBI VEGMAP (2018) • **Occurrence:** Predominantly in central Gauteng, including parts of Mogale City and Johannesburg.

The Vegetation Unit of the Site is illustrated by Mucina & Rutherford (2006):

Egoli Granite grassland



Key Characteristics:

Attribute	Description
Geology & Soils	Shallow, nutrient-poor, sandy soils derived from granite and granitic gneiss.
Topography	Undulating plains and low hills.
Rainfall	Summer rainfall region, averaging 600–750 mm/year.
Climate	Warm summers, mild to cool winters with occasional frost.
Vegetation Structure	Species-rich short to medium height grassland with scattered shrubs and forbs.
Dominant Grasses	Themeda triandra, Eragrostis curvula, Aristida congesta, Tristachya leucothrix.
Notable Forbs & Geophytes	Helichrysum, Hypoxis, Zantedeschia spp., various orchid species.

According C Plan 3.3 the western portion of the site is located within an Ecologically Support Area and "Irreplaceable" area:

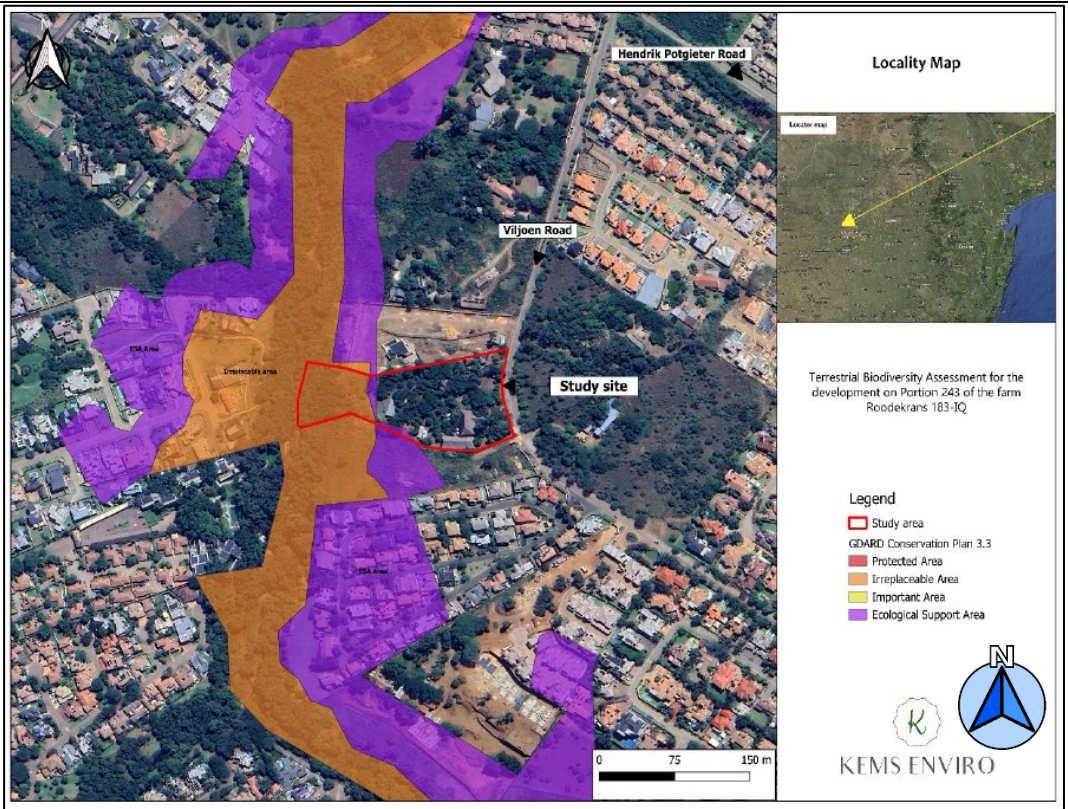


Figure 4: Gauteng C Plan 3.3

Further, the site is not located within an area identified by the 2018 National Protected Areas Expansion Strategy (NPAES). The Cradle of Humankind World Heritage Site borders on the northern side of the N14 Highway which is 2.2km away.

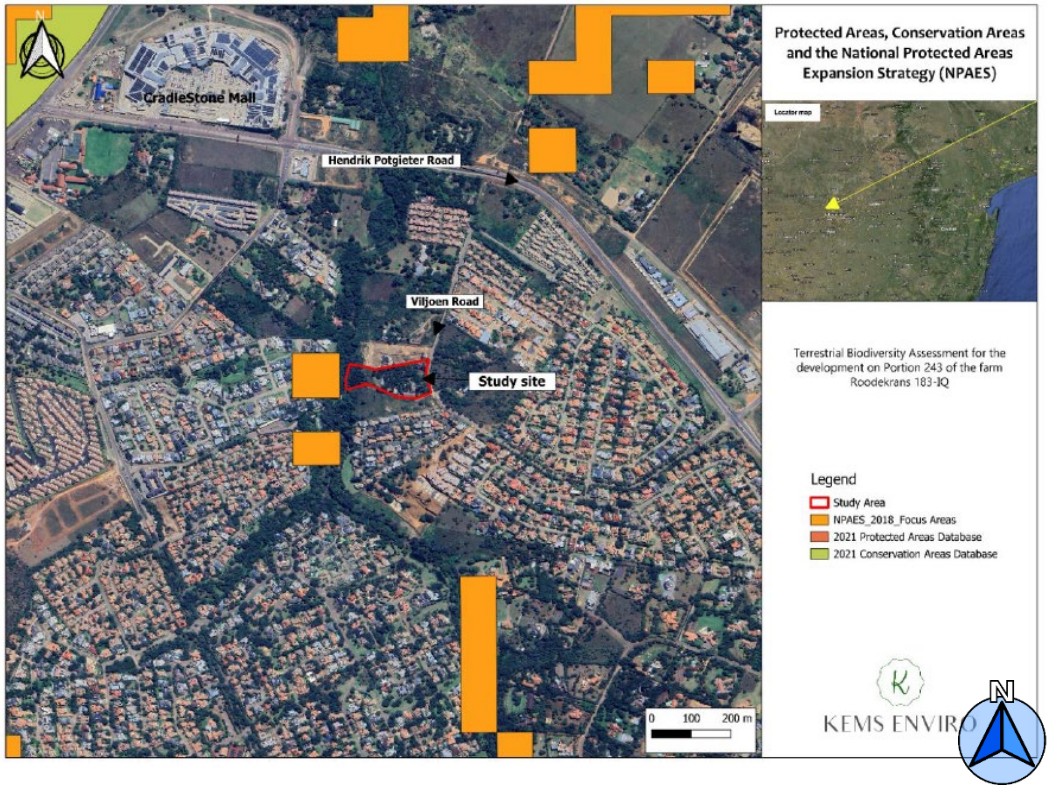


Figure 5: Protected and Conservation areas

Site specific: Historical photographs indicate that the study site has been used for residential purposes. Please refer to the images below taken from Google Earth. The

-Historical Photo 2010:



-Historical Photo of 2013:



-Historical Photo of 2017:



-Historical Photo 2019:



-Current Imagery, March 2025:



It is clear that the status quo of the site has prevailed. The wetland system has not been impacted on by the residential activities on site. In contrast, the surrounding urban area has densified, impacting on the grassland biome and aquatic system.

The ecological system/receiving environment is therefore compromised by existing development and it is concluded that the footprint size and scale of the proposed development is of such a small nature that it would not negatively impact on the existing ecological status of the site and larger surrounding area. The development would have a low- to no impact on the Egoli Granite Grassland as the urban development observed throughout the greater area has significantly contributed to the loss of the ecosystem. The opinion is held that development of a residential erven related infrastructure would therefore not contribute to further loss of this critically endangered Ecosystem.

Significance rating – before mitigation

*Where **E** = Extent, **D** = Duration, **I** = Intensity and **P** = Probability of occurrence*

Ecological Systems: Construction Phase – prior to mitigation		**Status**	**/**
Potential Impact: Impact on the Egoli Granite Grassland and watercourse – Muldersdrift-se-Loop	**Prior Mitigation**	**Significance Rating Prior Mitigation**	

		E	D	I	P	
	Findings: **Egoli Granite Grassland: the** vegetation of the larger study area is much disturbed. The landscaped areas, mixed alien and indigenous vegetation are not considered sensitive. The alien invasive species should be removed. No Red List or Orange List species occur on the study site itself. The EAP concluded that the development would have a low impact on the vegetation of the Egoli Granite Grassland biome and would not contribute to further loss of this critically endangered Ecosystem.	1	1	1	1	**Low 4**

Proposed Mitigation Measures	❑ The site must be fenced off. ❑ Construction should be limited to daylight hours. ❑ The construction footprint must be fenced off before commencement of activity. ❑ The contractor must ensure that no faunal species are disturbed, trapped, hunted or killed during the construction phase. Conservation-orientated clauses should be built into contracts for construction personnel, complete with penalty clauses for non-compliance. ❑ During the construction phase there will be increased surface runoff and a decreased water quality (with increased silt load and pollution). Completing construction during the winter months would mitigate the environmental impact. ❑ Where possible, **work should be restricted to one area at a time**, as this will give the smaller birds, mammals and reptiles a chance to weather the disturbance in an undisturbed zone close to their natural territories.

Significance rating – after mitigation measures

*Where **E** = Extent, **D** = Duration, **I** = Intensity and **P** = Probability of occurrence*

Ecological Systems: Construction Phase – after mitigation					**Status**	/
Potential Impact: Loss of vegetation.	**Prior Mitigation**				**Significance Rating Prior Mitigation**	
	E	**D**	**I**	**P**		
• **Findings:** the ecological state of the larger area is significantly disturbed. No Red List or Orange List species occur within the larger study site.	**1**	**1**	**1**	**1**	**Low 4**	

Risk assessment if mitigation measures are not implemented

The most important mitigation measure to be applied is:

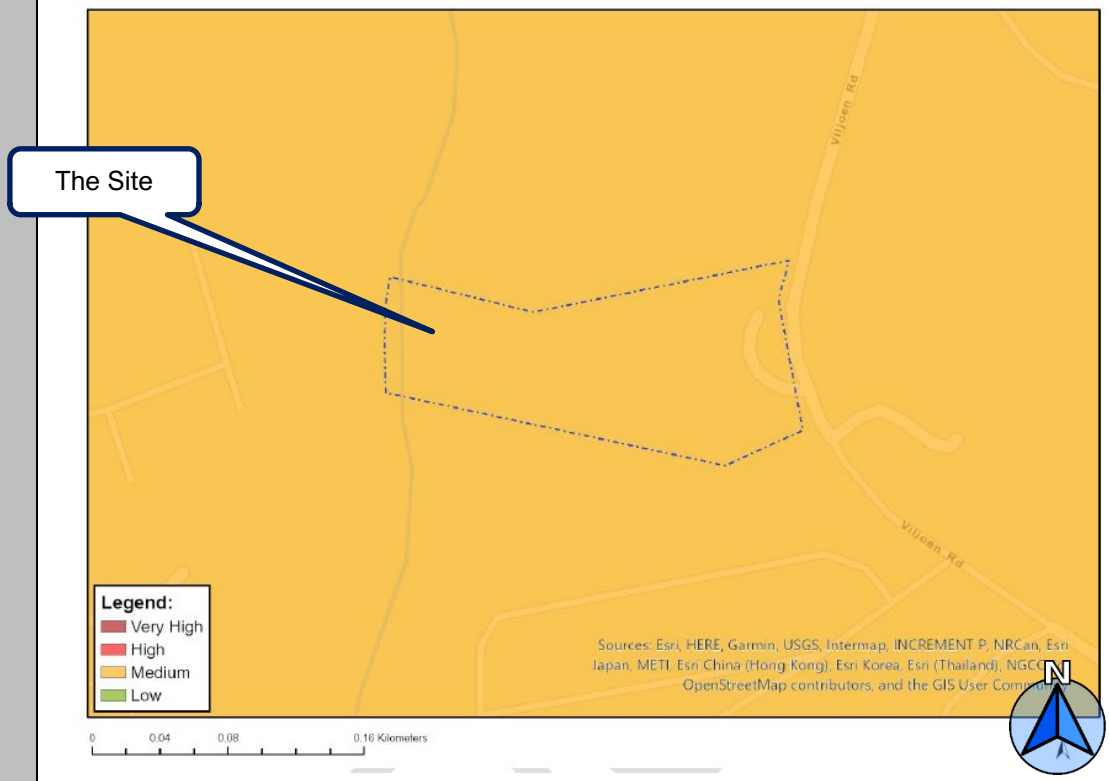
• Fencing off of the construction footprint before commencement of construction activities.

In addition, if any herpetological species are encountered or exposed during the construction phase, they should be removed and relocated to natural areas in the vicinity. During the construction phase there will be increased surface runoff and a decreased water quality (with increased silt load and pollution). Completing construction during the winter months would mitigate the environmental impact. Storm water management on site must take cognizance of possible pollution arising from the site, with emphasis on hydrocarbon pollution.

The Overall Significance Rating of = 4 (Low) would apply, if *the construction area is not fenced off before commencement of activity*

Potential Impact	**3. Faunal Abundance & Diversity**
	According to the National Screening Tool for the larger area, the faunal diversity of the site is rated as having a "Medium" sensitivity:

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



The following stable represents a summary of the species identified as sensitive in the Screening Tool Report (STR):

Species Name	Common Name	Habitat	Conservation Status	Key Environmental Threats
Aloeides dentatis dentatis	Roodepoort Copper	Found in South Africa and Lesotho, associated with host plants like Hermannia depressa or Lotononis eriantha.	Vulnerable	Habitat loss, climate change, overgrazing
Chrysospalax villosus	Rough-haired Golden Mole	Endemic to South Africa, inhabits sandy soils in grasslands, meadows, and along edges of marshes.	Endangered	Urban expansion, agricultural activities, habitat fragmentation
Crocidura maquassiensis	Makwassie Musk Shrew	Found in South Africa, Eswatini, and Zimbabwe. Prefers rocky areas, grasslands along rivers, and coastal forests.	Least Concern	Habitat degradation, pollution
Hydrictis maculicollis	Spotted-necked Otter	Native to sub-Saharan Africa, inhabits lakes and larger rivers. Prefers clear-water habitats for hunting by sight.	Near Threatened	Water pollution, habitat loss, hunting
Kinixys lobatsiana	Lobatse Hingeback Tortoise	Endemic to southern Africa, found in Acacia and Combretum woodlands, bushveld, and thornveld, often on rocky hillsides.	Vulnerable	Illegal pet trade, habitat destruction, wildfires
Clonia uvarovi	Uvarov's Clonia (Bush Cricket)	Occurs in tall woodland savannah areas in South Africa. Habitats are under pressure from grazing,	Data Deficient	Habitat loss, climate change

		cultivation, and urban development.		

Site Specific Discussion:

Species Name	Common Name	Habitat	Comments/Discussion
Aloeides dentatis dentatis	Roodepoort Copper	Found in South Africa and Lesotho, associated with host plants like Hermannia depressa or Lotononis eriantha.	The presence of the Roodepoort Copper butterfly is dependent on the availability of its host plants. These host plants were not identified during the site survey. For a detailed summary of the habitat conditions on site, please refer to the Flora Impact Assessment
Chrysospalax villosus	Rough-haired Golden Mole	Endemic to South Africa, inhabits sandy soils in grasslands, meadows, and along edges of marshes.	The habitat found on site is not suitable for the Golden Mole.
Crocidura maquassiensis	Makwassie Musk Shrew	Found in South Africa, Eswatini, and Zimbabwe. Prefers rocky areas, grasslands along rivers, and coastal forests.	The Makwassie shrew prefers rocky areas. The site is partially developed and landscaped. Furthermore the remaining habitat is not suitablefor the Shrew.
Hydrictis maculicollis	Spotted-necked Otter	Native to sub-Saharan Africa, inhabits lakes and larger rivers. Prefers clear-water habitats for hunting by sight.	These otters prefer freshwater habitats with good water quality and well-vegetated margins, feeding mainly on fish, crabs, and frogs. DeWetsWild+1DeWetsWild+1 Given that Muldersdrift features perennial watercourses and riparian vegetation, it presents suitable habitat for the Spotted-necked Otter. However, without direct evidence such as sightings, tracks, or spraint analysis, their presence in this specific area cannot be confirmed.
Kinixys lobatsiana	Lobatse Hingeback Tortoise	Endemic to southern Africa, found in Acacia and Combretum woodlands, bushveld, and thornveld, often on rocky hillsides.	The remaining habitat found on site is not suitable for the hinged back tortoise.
Clonia uvarovi	Uvarov's Clonia (Bush Cricket)	Occurs in tall woodland savannah areas in South Africa. Habitats are under pressure from grazing, cultivation, and urban development.	The remaining habitat found on site is not suitable for the bush cricket.

It must be noted of all the species listed, only the Swamp Musk Shrew and the Otter, may have the potential to be found within the area. The other species have not been sighted in the area and are mostly found within protected areas. Taking the potential impact that the development might have on the above species, a 32m buffer zone was delineated along the wetland system.

Significance rating – before mitigation

*Where **E** = Extent, **D** = Duration, **I** = Intensity and **P** = Probability of occurrence*

Faunal Diversity: Construction Phase – prior to mitigation	**Status**	**/**

	Potential Impact: Loss of habitat vegetation; specie migration and loss of species due to trapping and killing and construction activities.	**Prior Mitigation**				**Significance Rating Prior Mitigation**
		E	**D**	**I**	**P**	**Low 4**
	Findings: The habitat is significantly disturbed, and it was concluded that it is unlikely that any rare and endangered species would make use of the habitat on a permanent basis.	**1**	**1**	**1**	**1**	

Proposed Mitigation Measures

- ❑ The site must be fenced off.
- ❑ Consecution during the drier months would mitigate specie loss.
- ❑ Construction should be limited to daylight hours.
- ❑ The construction footprint must be fenced off before commencement of activity.
- ❑ The contractor must ensure that no faunal species are disturbed, trapped, hunted or killed during the construction phase. Conservation-orientated clauses should be built into contracts for construction personnel, complete with penalty clauses for non-compliance.
- ❑ Where possible, **work should be restricted to one area at a time**, as this will give the smaller birds, mammals and reptiles a chance to weather the disturbance in an undisturbed zone close to their natural territories.

Significance rating – after mitigation measures

*Where **E** = Extent, **D** = Duration, **I** = Intensity and **P** = Probability of occurrence*

Faunal Diversity: Construction Phase – after mitigation					**Status**	**/**
Potential Impact: Loss of habitat vegetation; specie migration and loss of specie due to trapping and killing	**Prior Mitigation**				**Significance Rating Prior Mitigation**	
	E	**D**	**I**	**P**	**Low 4**	
• **Findings:** The habitat is significantly disturbed, and it was concluded that it is unlikely that any rare and endangered species would make use of the habitat on a permanent basis.	**1**	**1**	**1**	**1**		

Risk assessment if mitigation measures are not implemented

The most important mitigation measure to be applied is:

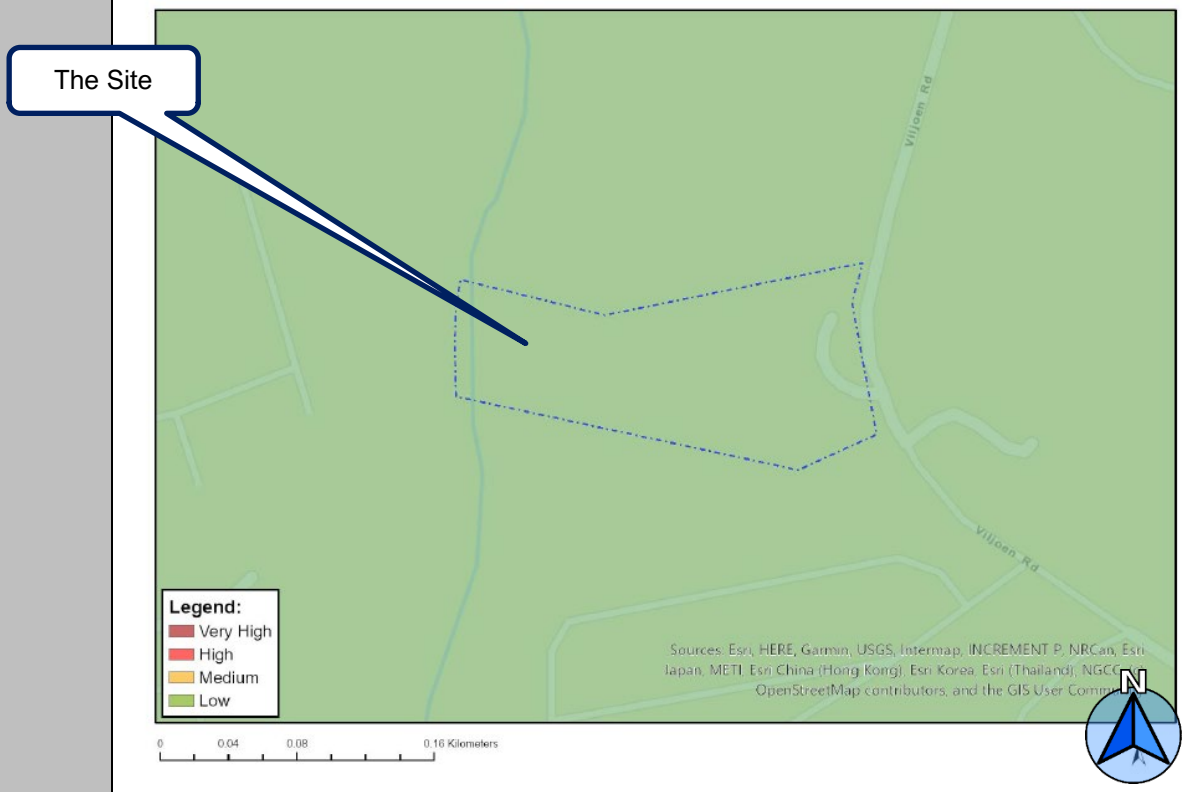
• Fencing off the construction footprint before commencement of construction activities.

In addition, if any herpetological species are encountered or exposed during the construction phase, they should be removed and relocated to natural areas in the vicinity. Completing construction during the winter months would mitigate the environmental impact.

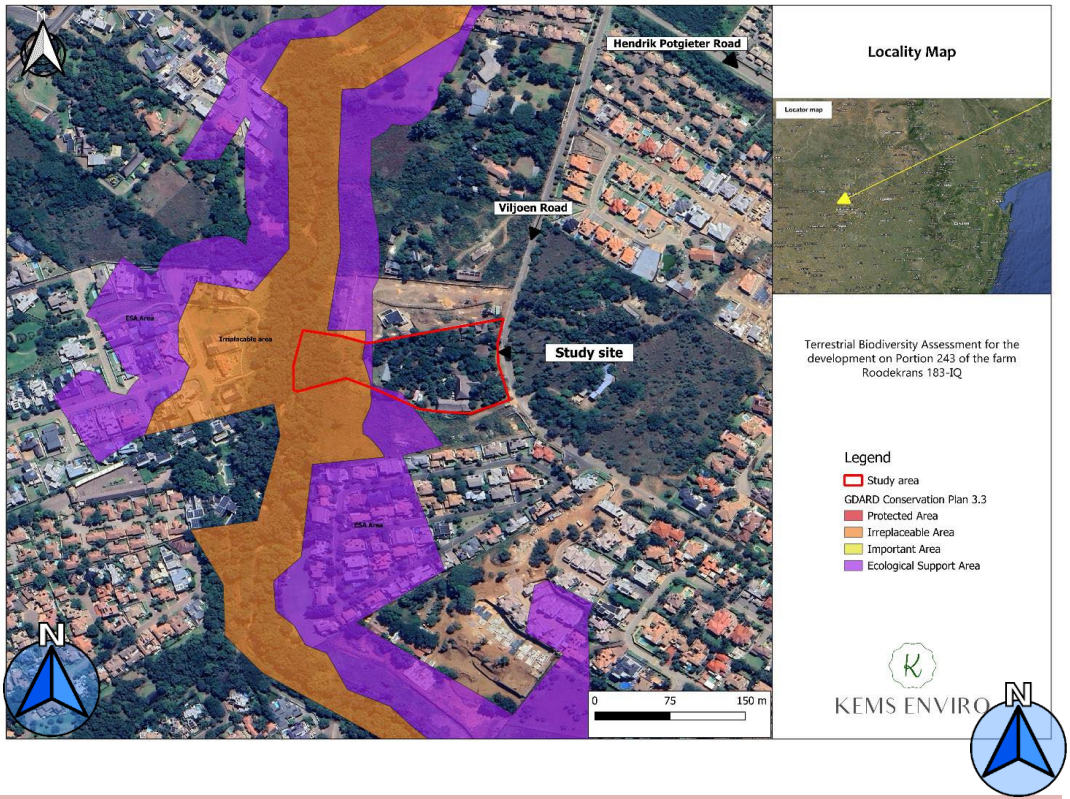
The Overall Significance Rating of = 4 (Low) would apply, if *the construction area is not fenced off before commencement of activity*

Potential Impact	**4. Floral Diversity**
	General: Tin terms of the terrestrial sensitivity the subject site lies in the quarter degree square 2627BB (Roodepoort). Mucina & Rutherford (2006) classified the area as Egoli Granite Grassland, a gently to moderately undulating landscape on the Highveld plateau supporting short to medium high, dense, tufted grassland dominated almost entirely by Themeda triandra and accompanied by a variety of other grasses such as Elionurus muticus, Eragrosyis racemosa, Heteropogon contortus and Tristachya leucothrix. It is in places undisturbed, with scattered small wetlands, narrow stream alluvia and pans. Occasional ridges or rocky outcrops interrupt the continuous grassland cover. This vegetation unit comprises shale, sandstone or mudstone, or the intrusive Karoo Suite dolerites which feature prominently. The soil is deep and red on the flat plains. The Screening Tool report therefore indicated that the terrestrial sensitivity rating for the site is 'Very High". However, in terms of Plant Species the Screening Tool report gave a rating of "Low":

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



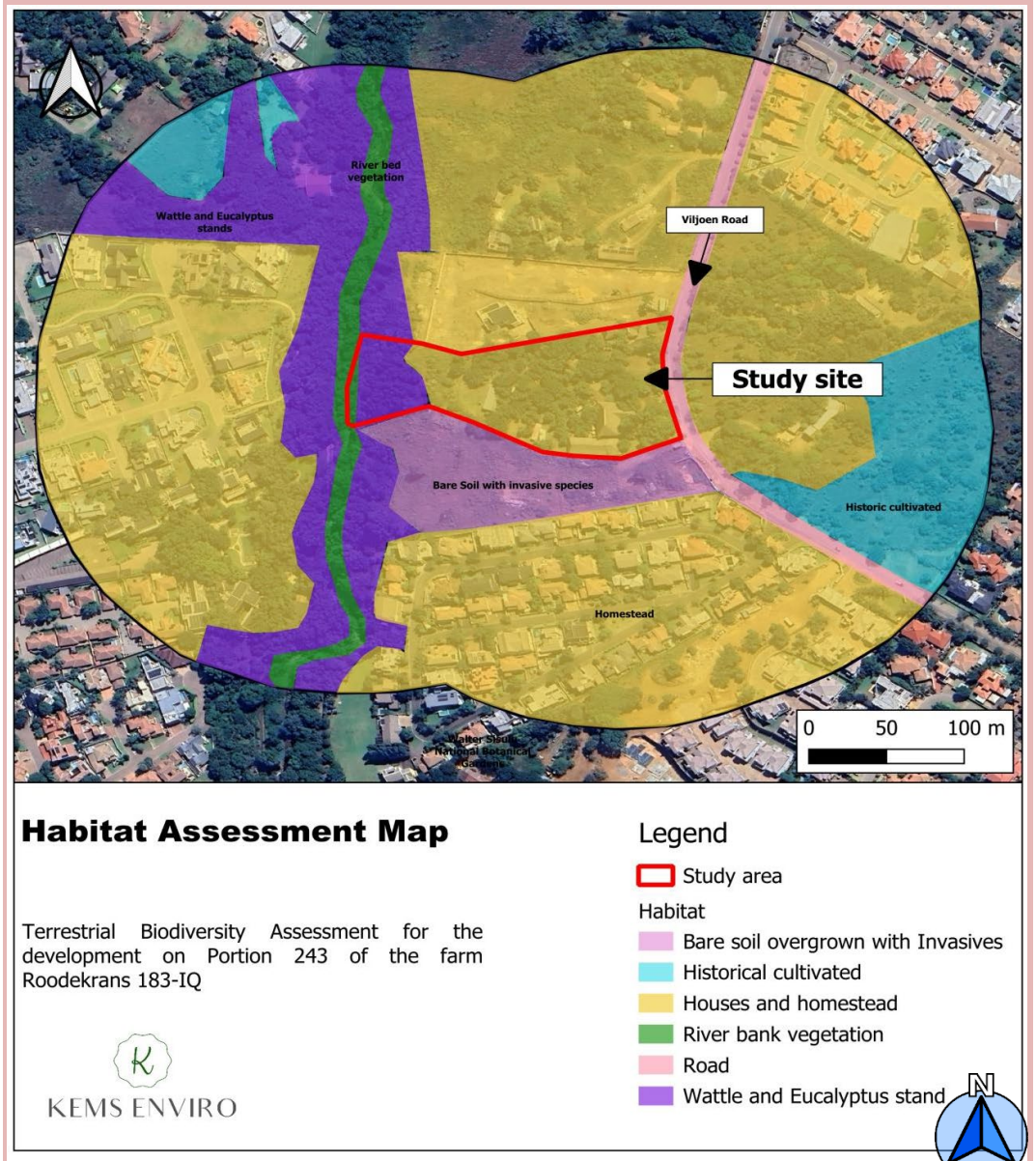
In terms of C.Plan 3.3 the site is located within an area identified as an "irreplaceable area" and a small piece of "Ecological Support Area":



Site Specific Discussion:

A Flora assessment was conducted by KEMS Environental. The following represents a summary of the findings of the site survey:

Habitat Assessment MAP for the study site:



A site visit was conducted on 20 July 2024. The site characteristics confirmed that the entire site was transformed, and that the area designated as "Irreplaceable area" by C Plan 3.3 was subjected to dumping and the area closer to the river was overgrown with black wattles and did not contain any indigenous vegetation. The Site Ecological Importance (SEI) was calculated using the methods developed in the Species Environmental Assessment Guidelines of 2022 (Version 2.1). The SEI indicated that most of the site had a Very Low Site Ecological Importance with a medium SEI for the riverbanks. This was done to preserve the corridors offered by the riparian system. It must be stated that exotic plants have overgrown the river system and that these alien invasive plants hinder the survival of indigenous plant species.

The "Low" sensitivity rating given to the site is supported by the fact that the site has always been utilised. Furthermore, the transformation and urban activities in the surrounding area has greatly affected the plant species found within the extended area. There were no plants of Special Conservation Concern recorded on site and the field data corresponds with the data received from the DFFE screening tool which indicated a Low sensitivity for SCC plants. Eight plant species was identified on and around the site that is listed in the Alien and Invasive Species. These plants need to be controlled in

<table>
<tr><td></td><td>accordance with the NEMBA Act. The specialist study concluded that the development would have a Low impact on the vegetation type of the Egoli Granite Grassland as there are no indigenous vegetation left on site. The area identified as irreplaceable area by C Plan 3.3 is currently rubbish dump and areas closer to the river is overgrown with alien invasive plants.</td></tr>
<tr><td>Significance rating – before mitigation</td><td>Where E = Extent, D = Duration, I = Intensity and P = Probability of occurrence
<table>
<tr><td colspan="5">Floral Diversity: Construction Phase – prior to mitigation</td><td>Status</td><td>/</td></tr>
<tr><td rowspan="2">Potential Impact: Loss of Egoli Granite grassland.</td><td colspan="4">Prior Mitigation</td><td colspan="2">Significance Rating Prior Mitigation</td></tr>
<tr><td>E</td><td>D</td><td>I</td><td>P</td><td rowspan="5" colspan="2">Low 4</td></tr>
<tr><td rowspan="4">Findings: The existing vegetation found in the wetland will be protected within the 32m buffer zone. No Red List or Orange List species occur on the study site. No Egoli Granite Grassland is present on the study site.</td><td>1</td><td>1</td><td>1</td><td>1</td></tr>
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<tr><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td>Proposed Mitigation Measures</td><td>❑ The site must be fenced off. The 32m buffer zone must be clearly delineated before commencement of construction.
❑ Construction should be limited to daylight hours.
❑ Outside lighting should be designed to minimize impacts on important pollinators. All outside lighting should be directed away from sensitive areas. Fluorescent and mercury vapour lighting should be avoided and sodium vapour (yellow) lights should be used wherever possible.</td></tr>
<tr><td>Significance rating – after mitigation measures</td><td>Where E = Extent, D = Duration, I = Intensity and P = Probability of occurrence
<table>
<tr><td colspan="5">Faunal Diversity: Construction Phase – after mitigation</td><td>Status</td><td>/</td></tr>
<tr><td rowspan="2">Potential Impact: Loss of vegetation.</td><td colspan="4">Prior Mitigation</td><td colspan="2">Significance Rating Prior Mitigation</td></tr>
<tr><td>E</td><td>D</td><td>I</td><td>P</td><td rowspan="5" colspan="2">Low 4</td></tr>
<tr><td rowspan="4">• Findings: The vegetation of the larger area is significantly disturbed, and it was concluded that it is unlikely that any sensitive vegetation would be impacted on.</td><td>1</td><td>1</td><td>1</td><td>1</td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td>Risk assessment if mitigation measures are not implemented</td><td>The most important mitigation measure to be applied is:
• Demarcation of the 32m buffer before commencement of activity.
• Fencing off of the construction footprint before commencement of construction activities.
The Overall Significance Rating of = 4 (Low) would apply, if the construction area is not fenced off before commencement of activity</td></tr>
</table>

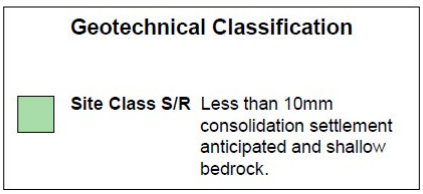
Potential Impact	5. Geological Conditions
	General: According to the 1 : 250 00 West Rand geological sheet (2626), the site is underlain by mafic and ultra mafic rocks, mainly altered to serpentinite, talc chlorite schist's and amphibolites, more commonly known as greenstones. These rocks belong to the Swaziland Supergroup which form part of a primitive crustal remnant which has been intruded by Basement Granites. To the south of the site the very prominent Witwatersrand Ridge can be seen. This ridge is the base of the Witwatersrand Supergroup which lies unconformably over the much older greenstones. No evidence of faulting or dykes are present across the site. The site is situated on the northern pediment slope of the Witwatersrand ridge. As a result of the resistant Orange Grove Quartzite ridge locally protecting the residual greenstone soils from erosion, a thick mantle of residual soils have

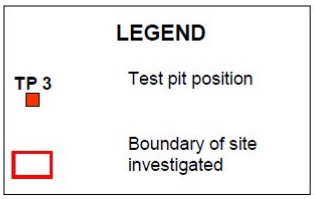
been formed below north facing talus and upper pediment slopes. No structural features of significance are known to occur in the area.

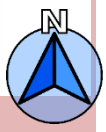
Site Specific Discussion:

- On 22nd July 2024, five test pits were excavated by hand at positions that were selected on the site:









The findings of the Geotechnical Survey are as follow:

1. No groundwater seepage was recorded in any test pit, however seasonal fluctuations of the level of the perched water table must be anticipated.
2. The Collapse Potential test and the Consolidation test results completed on the residual talc schist indicated that these soils are marginally compressible.
3. In terms of the National Home Builders Registration Council (NHBRC) of 2016 site classification system, the site has been classified as:
   - S/R Less than 10mm consolidation settlement anticipated and shallow bedrock.

The following foundation- and design solutions are proposed by the Geotechnical Engineer:

- No development will be permitted within the 1:100 year flood line.
- It is recommended that structures built within this zone should be founded using normal strip footings placed on dense to very dense residual talc schist or very soft rock talc schist at an average depth of 0.6m. The maximum allowable bearing capacity of the residual talc schist is 100kPa, and on the talc schist bedrock bearing pressures must not exceed 300kPa.
- It is expected that the excavation class will be "soft" according to SABS 1200 D: Earthworks, up to a depth of 1.0m. It is anticipated that the excavation will be "intermediate" and "hard" beyond a depth of 1.0m and it must also be expected that some "boulder" excavation will be encountered throughout the site.
- It must be anticipated that corestones and boulders may be encountered in the excavations. Areas of shallow bedrock immediately beneath the surface may be exposed, and limited blasting may be required for service trenches.

Significance rating – before mitigation	*Where **E** = Extent, **D** = Duration, **I** = Intensity and **P** = Probability of occurrence*

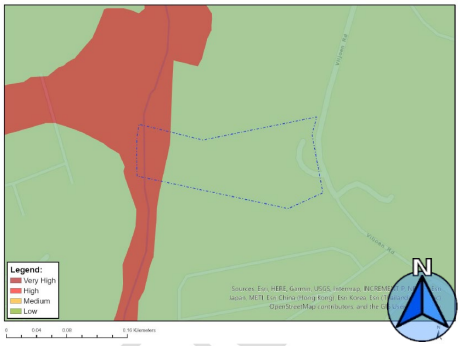
Geotechnical Conditions: Construction Phase – prior to mitigation	**Status**	**/**

	Potential Impact: Construction impacts associated with trenching, foundations, excavations, site clearance etc	**Prior Mitigation**				**Significance Rating Prior Mitigation**
		E	**D**	**I**	**P**	**Low 4**
	Findings: The site is suitable for the proposed development. All recommendations made in the Geotechnical report to be implemented	**1**	**1**	**1**	**1**	
	•					

Proposed Mitigation Measures	▪ Please refer to the attached Geotechnical Report for all proposed mitigation measures. The following measures are taken from the report: o *No development will be permitted within the 1:100 year flood line.* o *Negligible consolidation settlement is anticipated under assumed applied pressures of less than 100kPa and total settlements of less than 10mm have been determined, using the assumptions presented in section 3.1. It is recommended that structures built within this zone should be founded using normal strip footings placed on dense to very dense residual talc schist or very soft rock talc schist at an average depth of 0.6m. The maximum allowable bearing capacity of the residual talc schist is 100kPa, and on the talc schist bedrock bearing pressures must not exceed 300kPa.* o *The soil classification varies fro G6 to G7 material and may therefore be used in the construction of the terraces and as in-situ sub-grade. Suitable materials for use in the sub-base and base course layers must be imported from a commercial source.* o *It is good practice to implement sound stormwater management around each building and it is therefore suggested that the precautions presented below are considered to limit the amount of moisture reaching the foundation and thereby reducing the risk of settlement occurring.*
Significance rating – after mitigation measures	*Where **E** = Extent, **D** = Duration, **I** = Intensity and **P** = Probability of occurrence*

Faunal Diversity: Construction Phase – after mitigation					**Status**	**/**
Potential Impact: Installation of services, construction of roads and top strucutres.	**Prior Mitigation**				**Significance Rating Prior Mitigation**	
	E	**D**	**I**	**P**	**Low 4**	
• **Findings:** Potential impacts are mitigated successfully after implementation of all measures proposed in the geotechnical report	**1**	**1**	**1**	**1**		

Risk assessment if mitigation measures are not implemented	**The Overall Significance Rating of = 4 (Low) would apply, if *all measures proposed in the geotechnical report is implemented.***

Potential Impact	**6. Wetland Assessment Report**
	General: The National Screening Tool report indicates the sensitivity of the wetland as follows: MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY  The sensitivity features identified by the Screening Tool are:

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Very High	Wetlands_Mesic Highveld Grassland Bioregion (Valley-bottom)

Furthermore, the following represents a summary of the conservation importance of the study site in relation to:

1. **Gauteng Spatial Development Framework:** the study site is located within a Critical Biodiversity Area.
2. **National Freshwater Ecosystem Priority Areas (NFEPA):** According to SANBI (2023), the systems are located within a sub-quaternary catchment considered important as a Freshwater Ecosystem Priority Area (FEPACODE = 2) . River FEPAs are important for achieving biodiversity targets for river ecosystems and threatened fish species and should therefore remain in a good condition in order to contribute to national biodiversity goals and support sustainable use of water resources.
3. **The National Biodiversity Assessment (NBA):** According to the SAIIAE (2018), no wetland seeps or valley bottoms were identified within the study area.

Site Specific Discussion:

Therefore, an aquatic biodiversity assessment report was prepared for the site. The assessment was conducted by BioBlue Environmental Sustainability (Pty) Ltd. Please refer to the attached Aquatic Biodiversity Assessment Report. The findings of the report are summarised as follow:

- A site visit was undertaken on the 5th of August 2024. The survey period therefore reflects a dry, winter season survey.
- The selection of the aquatic sampling sites was based on the location of the proposed Township development:

Table 4-1: Sampling sites for the aquatic biodiversity assessment

Watercourse	Site	GPS Coordinates		Location description
		Latitude	Longitude	
Muldersdrift se loop	**Roodekrans**	26° 4'5.94"S	27°50'25.96"E	The site is located adjacent to the Study Area.

The sampling point is located adjacent to the study area only one water resource was evaluated. Please refer to page 12 of the report for the map of the sampling sites. The following table represents a description of the sampling sites and indication of conditions recorded at the sampling areas:

Table 5-1: Description and visual assessment of the upstream sampling site Roodekrans

Roodekrans							
Upstream View			Downstream View				
							
Watercourse							
Site Description	The site Roodekrans is in a the Muldersdrift se loop a tributary of the Crocodile River and is located adjacent to the proposed township development.						
GPS co-ordinates	26° 4'5.94"S ;27°50'25.96"E						
Habitat	The flow of the stream was reduced by a couple of historical weirs within the stream, all the habitats were available to conduct an SASS 5 evaluation although stones in current and vegetation were limited.						
In Situ water Quality	The water was clear, and brown algae were observed on substrates which is common in lotic systems. The majority of the in situ chemical parameters fall outside the accepted range.						
Quaternary Catchment	A21E						
Water Management Area	Limpopo (WMA 1)						
Ecoregion	Highveld –11.01						
Watercourse Type	Lotic order 1 stream						
Surface Water Dimensions	Width: 2-5m; Depth: 0.5						
Velocity-depth Classes	Shallow and moderate flow of water.						
DATE	**SAMPLER**	**IHAS**	**IHI**	**WQ**	**Diatoms**	**SASS5**	**FRAI**
31/07/2024	Z. Liebenberg M. Du Preez	**Adequate**	**D**	**Poor**	**N/A**	**N/A**	**N/A**
Existing Treats	The area is surrounded by industrial areas, residential areas, informal settlements and urban infrastructures -roads, footpaths etc.						

The following table taken from the Aquatic report, summarises the results and findings of the Flow Survey taken in August 2024:

Table 5-2: The IHI results for the sampling sites during the August 2024 low flow survey

Site	**Roodekrans**
River	Muldersdrift se loop
Position	Adjacent to the proposed township development.
Condition	Monotone
Instream Habitat	
IHI %	**50**
IHI Class	**D**
Impacts	Flow-, channel- and bed modifications. Bad water quality exotic macrophytes and inundation effects.
Riparian Habitat	
RHI %	**40**
RHI Class	**D**
Impacts	Flow-, channel- and bed modifications. Bad water quality exotic macrophytes and inundation.
Final IHIA Score	**45**
Ecological Category (EC)	**D**
Total Ecological Class	**Largely Modified**

It is therefore established that the site on the Muldersdrift-se-loop is classed as **Largely modified (D Category)** with severe flow -and bed modification with a concession of weirs. There is an abundance of exotic macrophytes on the riverbank and erosion are starting to occur. The water quality is poor, and inundation effects are eminent with developments occurring on the riverbank and water abstraction.

As for **Habitat, the Integrated Habitat Assessment** conducted for the site indicated that: the watercourse has **very good** habitats to support a variety of macro-invertebrates and fish. There was sufficient bedrock, stones in current (SIC), together with gravel, sand, and mud (GSM) present at the sites. Instream vegetation was sampled, but the vegetation out of current and aquatic vegetation were limited.

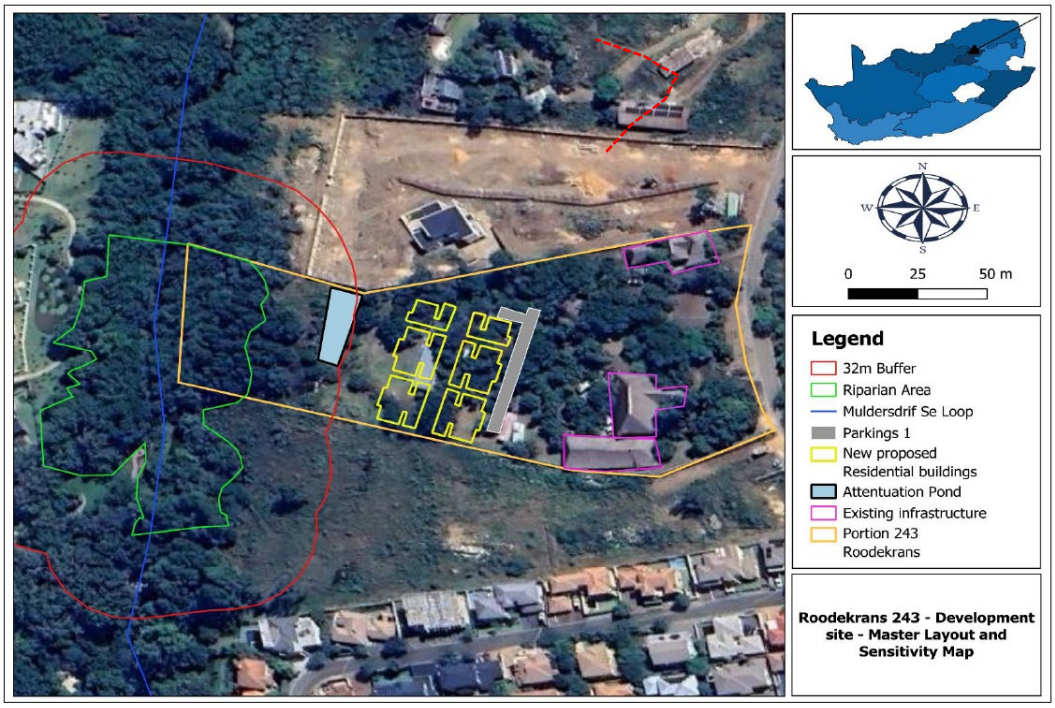
In terms of the **insitu water quality for the sample sites, the test results found that:** nitrite, total oxidised nitrogen (TON), orthophosphate and turbidity concentrations exceeded the recommended TWQR and RQO limits at the sampling site. Increased COD, nitrate, TON, orthophosphates and turbidity are indications of industrial influences on the water system. Increased COD is commonly associated with mining wastewater, sewage, and urban run-off. An increase in Nitrates, phosphates and Nitrogen are an indication of an increase in industrial waste and nutrients associated with eutrophication. The increase in nutrients causes algae blooms and could mining wastewater, sewage, and urban run-off origins. Overall, the current WQ results indicate bad water quality conditions at the Roodekrans monitoring site.

Macro-invertebrates are well known to have different sensitivities to pollution and habitat transformation and are therefore very useful indicators of pollution. Therefore, the **SASS5 index was used as it is exclusive to riverine systems.** The SASS5 index for the site is 94, with an ASPT score of 5.0. Nineteen families were sampled, and the sensitive species sampled include more than two species *of Baetidae* and Dixidae . Moderately sensitive species like *Aeshnidae* were also sampled. The presence of sensitive species indicates that the WQ and available habitat are bad and not good enough to support a diversity of sensitive macro-invertebrates. The site on the Muldersdrift se loop i.e., Roodekrans was classified as **Seriously Modified (E Category)**.

Finally, the **Present Ecological State of the Site (PES) was calculated** and the overall Ecostatus of the Muldersdrift se loop is **Seriously Modified (D) which indicates a large loss of natural habitat, biota and basic ecosystem functions have occurred. This is in agreement with the desktop Ecostatus for this river.** Please refer to the report in **Annexure G**.

To protect the riparian area, a 32m buffer zone was delineated. The buffer to be implemented is as follows:

Buffer Zone Delineation:



Significance rating – before mitigation	*Where **E** = Extent, **D** = Duration, **I** = Intensity and **P** = Probability of occurrence*		
	Wetland Assessment: Construction Phase – prior to mitigation	**Status**	**/**

	Potential Impact: Wetlands-, watercourse- and or riparian systems	**Prior Mitigation**				**Significance Rating Prior Mitigation**
		E	**D**	**I**	**P**	**Low 4**
	Findings: – The overall PES of the tributary of the Muldersdrift se loop is Seriusly Modified (E) which indicates that a loss and change of natural habitat and biota have occurred. This is in agreement with the desktop Ecostatus for this river.	**1**	**1**	**1**	**1**	

Proposed Mitigation Measures	❑ No construction activities should occur within the riparian area or 32m buffer except to construct stormwater infrastructure and the proposed attenuation pond. ❑ It is essential to clearly demarcate the construction area and keep it as small as possible to minimize any potential impact on the surrounding system. ❑ All construction materials such sand, and cement must be contained within the construction site and should not enter the streams and riparian areas. ❑ Proper management of stormwater is necessary to reduce runoff from residential development into the aquatic environment and mitigate erosion potential. ❑ It is recommended to conduct monitoring during and after construction to ensure that all guidelines are being followed. ❑ To prevent further spread and establishment, all invasive alien plants (IAPs) along the stream banks within the area near the residential development. The use of herbicides should be minimized due to the risk of contaminating aquatic environments and surface water resources. If chemical application is necessary, it should be done carefully under the supervision of an environmental control officer (ECO). ❑ When controlling alien vegetation, it is advised to only apply herbicide during the active growing season, avoid spraying during unfavourable weather conditions, ensure correct herbicide mixing ratios, use dyes to identify treated areas, and refrain from spraying near surface water.
Significance rating – after mitigation measures	*Where **E** = Extent, **D** = Duration, **I** = Intensity and **P** = Probability of occurrence*

Wetland Assessment: Construction Phase – after mitigation					**Status**	**/**
Potential Impact: Wetlands-, watercourse- and or riparian systems	**Prior Mitigation**				**Significance Rating Prior Mitigation**	
	E	**D**	**I**	**P**	**Low 4**	
• **Findings:** a 32m buffer zone is to be demarcated along the riparian area. The buffer zone can be utilised as an open space as part of the development with landscaping utilising indigenous species.	**1**	**1**	**1**	**1**		

Risk assessment if mitigation measures are not implemented	***The Overall Significance Rating of = 4 (Low) would apply, as No aquatic ecosystems were observed on site.***

Potential Impact	**7. Impact of the proposed Land Use on the subject site**
	The visual character of the area is that of a residential area, located within a changing area where the rural landscape is being replaced with an urban landscape comprising of medium to high residential areas, roads and supporting land uses. The land use proposal for the site is:

LAND USE	NO. OF STAND	ERF NUMBER	AREA	%
RESIDENTIAL 2	1	ERF 1	0,7817	49,89
SPECIAL FOR RESTAURANT AND GUESTHOUSE	1	ERF 2	0,7854	50,11
TOTAL	2		1,5671ha	100%

Total area to be used for development – New and Existing: 15 671m²

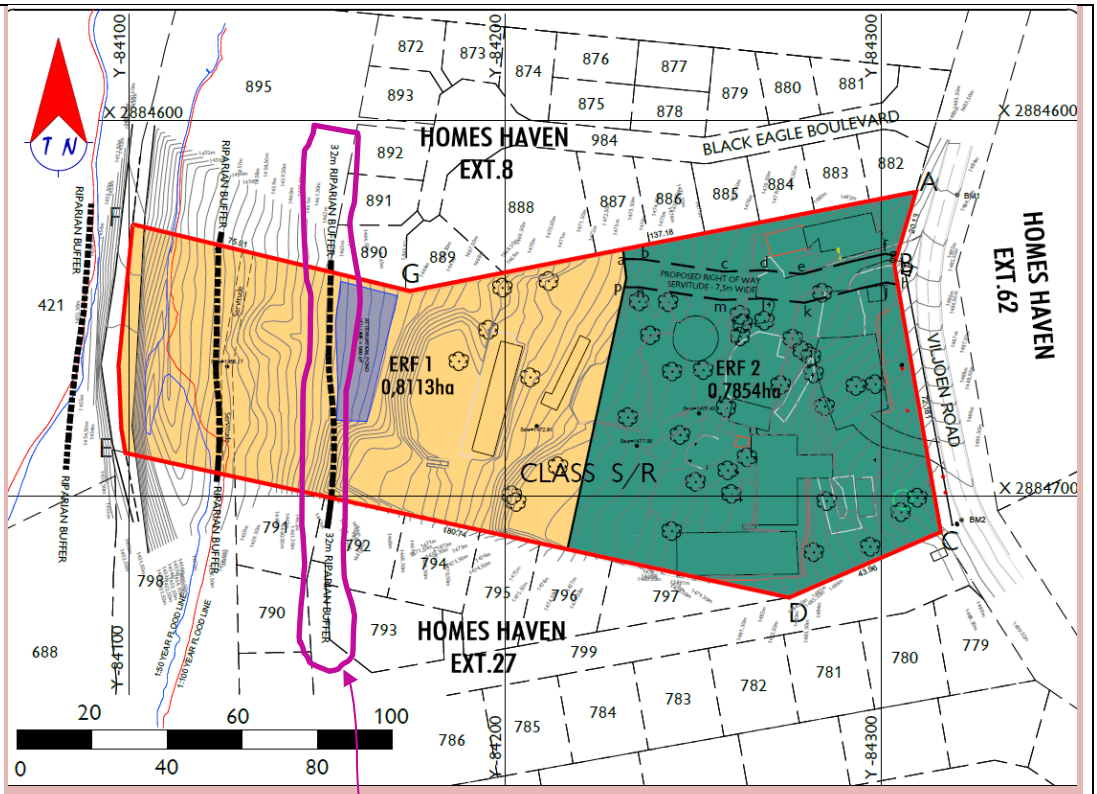
- **Erf2:** this erf contains the existing house and restaurant. The house will be redeveloped into a guesthouse with 10 rooms.
- **Erf 1:** erf1 is 7 817m² and will be zoned "Residential 2" with a proposed density of 25units/hectare. This will allow for the development of 20 residential units in the site.

Site Specific Discussion:

The site is 15 671m² in extent. The site will be subdivided into two erven: Erf 1 will accommodate the new residential dwelling units and Erf 2 will accommodate the existing house and restaurant. The following google earth image shows the existing structures located on the site:



The proposed subdivision and layout plan is as follows:



The layout plan was overlain with the 32m riparian buffer line and the entire development is located outside of the 32m buffer line. Furthermore the development is located outside of the 1:100 year floodline. The conclusion is therefore the the development footprint will not encroach into the 32m buffer line and complies with the recommendations made by the Specialists as well as the buffer requirements of the Department (GDARD).

Significance rating – before mitigation

*Where **E** = Extent, **D** = Duration, **I** = Intensity and **P** = Probability of occurrence*

Land Use Impact Assessment: Construction Phase – prior to mitigation					**Status**	-
Potential Impact: A Increase in building mass visible from the surrounding residential dwelling units, increase in vehicular activity, increase in labourers (during the construction phase) etc. Site clearance, construction activities in close proximity to the buffer zone. Potential pollution and runoff from construction areas.	**Prior Mitigation**				**Significance Rating Prior Mitigation**	
	E	**D**	**I**	**P**	**Very High 12**	
Findings: – the 32m buffer area must be pegged and the construction area must be fenced off so that activities can not encroach into the riparian area.	**3**	**3**	**2**	**4**		

Proposed Mitigation Measures

- ❑ Site to be fenced off;
- ❑ The site must be fenced off with shade netting during the construction phase to limit the visual impact and mitigate encroachment of activities into the riparian area and buffer zone;
- ❑ Property owners on all boundaries must be informed of commencement date.

Significance rating – after mitigation measures

*Where **E** = Extent, **D** = Duration, **I** = Intensity and **P** = Probability of occurrence*

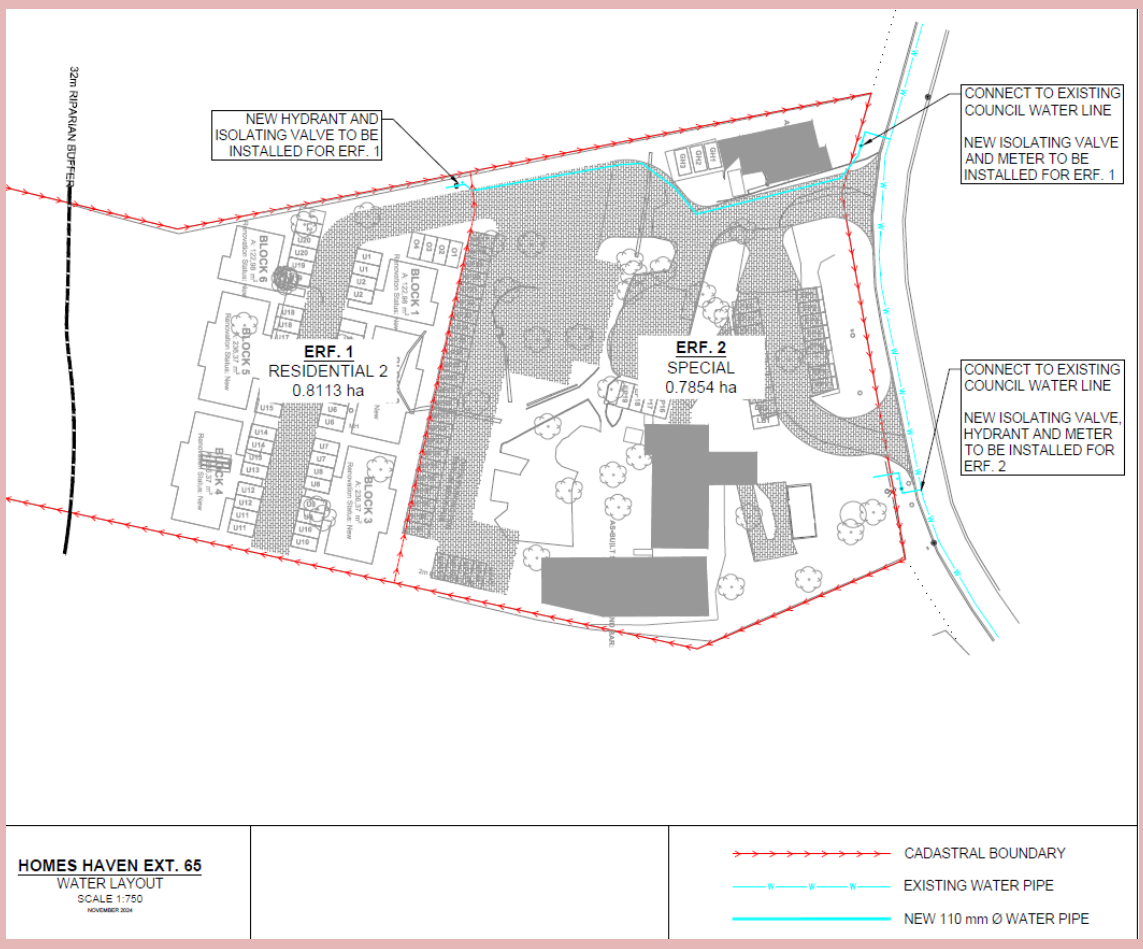
Land Use Impact Assessment: Construction Phase – after mitigation	**Status**	+

	Potential Impact: increase in building mass visible from the surrounding residential dwelling units, increase in vehicular activity, increase in labourers etc, construction activities adjacent to the sensitive buffer zone.	**Prior Mitigation**		**Significance Rating Prior Mitigation**		
		E	**D**	**I**	**P**	**LOW 2**
	Findings: Impact will be minimal if the area is fenced off prior to commencement of activity.	**1**	**1**	**3**	**3**	
Risk assessment if mitigation measures are not implemented	***The Overall Significance Rating of = 2 (Low) would apply, if mitigation measures proposed are implemented.***					

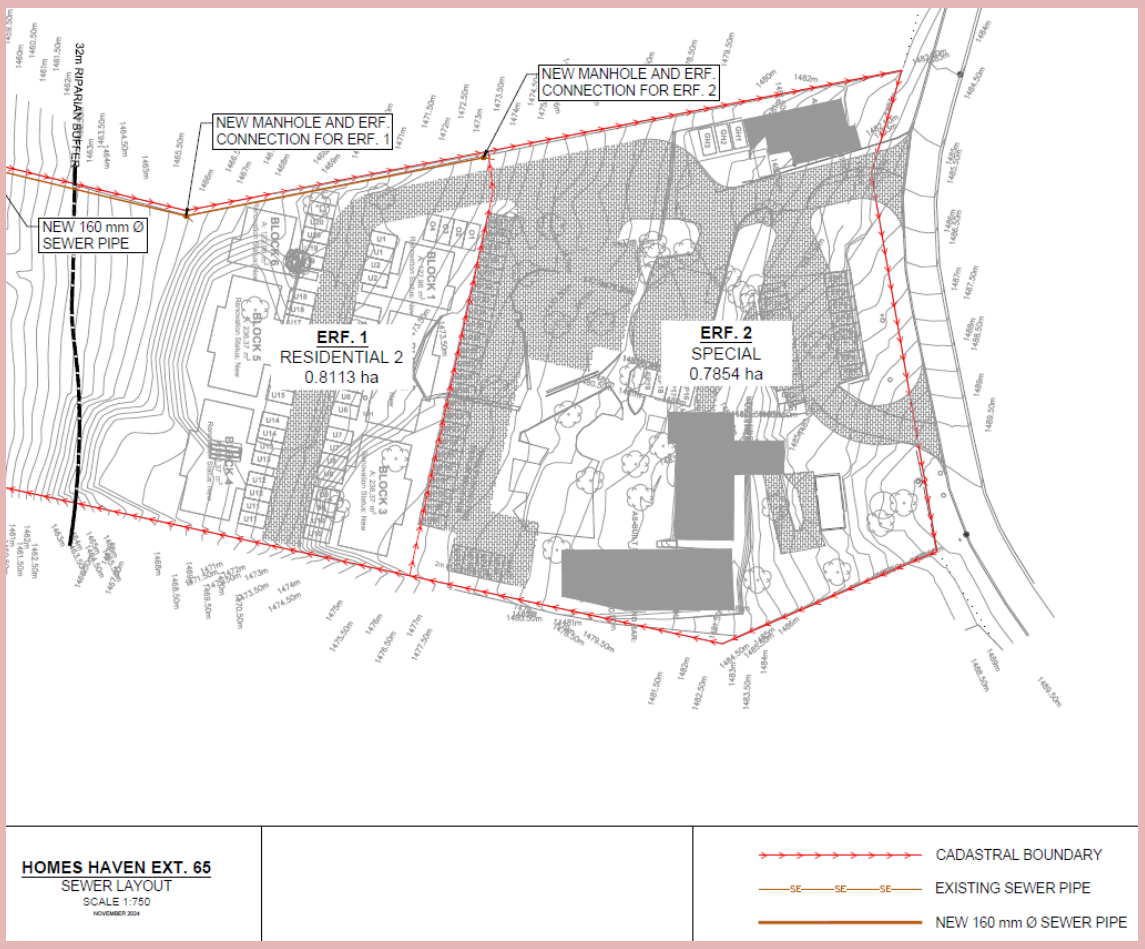
Potential Impact	**8. Civil Engineering Infrastructure**

Site Specific Discussion:

- **Water:** There is an existing water pipe located in Viljoen Road, east of the site, which currently supplies the site with water. Water will be supplied to Erf. 1 via a new 110 mm diameter water line that passes through Erf. 2 along the northern boundary. It is proposed that a new connection be made from the existing council water line in Viljoen Road which will include for an isolating valve and meter. A hydrant and isolating valve will also be installed at the access to Erf. 1. Erf. 2 will obtain its water supply via a new connection off the existing council water line in Viljoen Road. An isolating valve, fire hydrant and water meter will be installed at the access to Erf. 2. The proposed development will have a total water demand by 27.73 Kℓ/day with a peak flow of 1.28 ℓ/sec.



- **Sewer:** There is an existing council sewer pipe that crosses through the western portion of Erf. 1, near the Muldersdrift River. It is proposed that a new 160 mm diameter sewer pipe be installed from the existing council pipe to service both Erf. 1 and Erf. 2. A manhole and connection point will be located at the low point of each erf. to allow each erf. to drain and connect to the existing council line:



The proposed development will have a total sewer demand by 27.73 Kℓ/day with a peak flow of 1.28 ℓ/sec. **The report confirmed that there is existing council water and sewer infrastructure in the area to service the township.** Please refer to the attached Civil Engineering Services Report in **Annexure G**.

Significance rating – before mitigation

*Where **E** = Extent, **D** = Duration, **I** = Intensity and **P** = Probability of occurrence*

Engineering Services: Construction Phase – prior to mitigation					**Status**	-
Potential Impact: Increase in vehicular activity, increase in labourers (during the construction phase) etc. Site clearance, construction activities in close proximity to the buffer zone. Potential pollution and runoff from construction areas. Trenching, Siltation, dust fallout, spreading of alien vegetation etc.	**Prior Mitigation**				**Significance Rating Prior Mitigation**	
	E	**D**	**I**	**P**	**Very High 12**	
Findings: – the 32m buffer area must be pegged and the construction area must be fenced off so that activities cannot encroach into the riparian area.	**3**	**3**	**2**	**4**		

Proposed Mitigation Measures

1. Site Preparation and Clearance:

- ❑ Install sediment barriers (silt fences, sandbags, hay bales) to prevent soil erosion and siltation into water bodies.
- ❑ Clearly demarcate the construction footprint to avoid unnecessary clearing of vegetation.
- ❑ Establish temporary access roads that are well-drained and stabilized to reduce erosion.

<table>
<tr><td></td><td>
❑ Minimize soil compaction by controlling the movement of heavy machinery.
❑ Identify and mark protected tree species and significant vegetation before site clearance.
2. Construction Phase:
❑ Use trenchless technology (e.g., directional drilling) for pipeline crossings under watercourses to avoid direct disturbance.
❑ For open trench methods, time construction activities during the dry season to reduce the risk of runoff.
❑ Ensure stockpiling of soil is away from watercourses and protected from erosion.
❑ Implement stormwater control measures to manage surface runoff.
❑ Ensure spoil material is disposed of in approved locations and not within buffer zones.
❑ Implement dust suppression methods during dry periods.
3. Pollution Prevention:
❑ Store fuels, oils, and chemicals in bunded areas away from the watercourse.
❑ Implement spill response measures and ensure spill kits are readily available.
❑ Prevent cement and concrete runoff from entering the watercourse by using bunded mixing areas.
❑ Regularly inspect and maintain machinery to prevent oil leaks.
4. Rehabilitation and Restoration:
❑ Rehabilitate disturbed areas immediately after construction with indigenous vegetation.
❑ Restore natural contours and stabilize slopes to prevent erosion.
❑ Remove all construction materials, waste, and debris from the site.
❑ Conduct alien vegetation management to prevent invasive species proliferation.
</td></tr>
<tr><td>Significance rating – after mitigation measures</td><td>
Where E = Extent, D = Duration, I = Intensity and P = Probability of occurrence
<table>
<tr><td colspan="5">Engineering Services: Construction Phase – after mitigation</td><td>Status</td><td>+</td></tr>
<tr><td rowspan="5">Potential Impact: Increase in vehicular activity, increase in labourers (during the construction phase) etc. Site clearance, construction activities in close proximity to the buffer zone. Potential pollution and runoff from construction areas. Trenching, Siltation, dust fallout, spreading of alien vegetation etc.</td><td colspan="2">Prior Mitigation</td><td colspan="3">Significance Rating Prior Mitigation</td></tr>
<tr><td>E</td><td>D</td><td>I</td><td>P</td><td rowspan="5">Low 2</td></tr>
<tr><td rowspan="4">Findings: Impact will be minimal if the area is fenced off and all mitigation measures are implemented prior to commencement of activity and during construction.</td><td>1</td><td>1</td><td>3</td><td>3</td></tr>
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<tr><td>Risk assessment if mitigation measures are not implemented</td><td>The Overall Significance Rating of = 2 (Low) would apply, if mitigation measures proposed are implemented.</td></tr>
</table>

<table>
<tr><td>Potential Impact</td><td>9. Traffic Impact</td></tr>
<tr><td></td><td>
General:
The study site is surrounded by the following key streets:
• To the northeast of the applicant site is Hendrik Potgieter Road. The road is a single lane road, with additional turning lanes at the key intersections, including Viljoen Road. The road links the study area with the R28 in the west and the main business areas of Johannesburg in the east. Hendrik Potgieter Road (future K72) is a Class 2 road and falls under the jurisdiction of Gauteng Province.
• To the north the applicant site abuts Viljoen Road. The road is a single lane surfaced road. The section of road located within the boundaries of the Ruimsig Country Estate does not carry through traffic. However, the section of road northeast of Hendrik Potgieter Road serves a wider road network and carries mainly through traffic.
</td></tr>
</table>

It is expected that the development will generate more than 50 peak hour trips. The peak demand is during the weekday morning and weekday afternoon peak hours of the adjacent road network. The applicant site is located within the boundaries of Ruimsig Country Estate, earmarked for the upper market income levels. It is expected that the development will be private vehicle orientated. Considering this, no trip generation adjustment factors are applied.

Site Specific Discussion:

It can be concluded that the development will generate approximately 21 and 53 trips, during the weekday morning and weekday afternoon peak hours respectively. The proposed access arrangements are summarised as follows:

- **Erf 1 (Dwelling & Guest House):** Access from Viljoen Road. One inbound and one outbound lane, with a total width of 7.5m. In the event the inbound lanes are at a later stage separated by means of a median island, then the minimum lane width is 4.5m. No access control is provided at the access point.
- **Erf 2 (Restaurant):** Access from Viljoen Road. One inbound and one outbound lane, with a total width of 7.5m. No access control is provided at the access point. No vertical structures are currently proposed at the site access.
- **Public Transportation:** The applicant site is located within 720m from Hendrik Potgieter Road, a well-established taxi route. No formal stops are provided at the Hendrik Potgieter Road/Viljoen Road intersection and taxis make unscheduled stops as and when required. It is expected that the dwelling units, guest house and restaurant will generate some public transport trips. The current service provided along Hendrik Potgieter Road is sufficient to accommodate the additional demand for the dwelling units and guest house. It is standard practice for restaurant owners to arrange transport for workers, especially staff serving evening seating. Thus, no additional facilities are required.
- **Access Plan:**



Please refer to the Traffic Impact Assessment Report in **Annexure G.**

Significance rating – before mitigation

*Where **E** = Extent, **D** = Duration, **I** = Intensity and **P** = Probability of occurrence*

Traffic Impact: Construction Phase – prior to mitigation					**Status**	-
Potential Impact: Oil and diesel leaks from construction vehicles and machinery. Spillage during refueling and maintenance of construction equipment. Contamination of soil and groundwater through surface runoff. Soil erosion caused by vegetation clearing and earthworks. Runoff carrying sediment into nearby watercourses, increasing	**Prior Mitigation**				**Significance Rating Prior Mitigation**	
	E	**D**	**I**	**P**	**Very High 12**	

	turbidity. Blockage of natural water flow, affecting aquatic habitats.					
	Findings: – the 32m buffer area must be pegged and the construction area must be fenced off so that activities cannot encroach into the riparian area.	**3**	**3**	**2**	**4**	

Proposed Mitigation Measures

Potential Pollution associated with the construction of roads and proposed mitigation measures:

Type of Pollution	Source	Potential Impact	Mitigation Measures
Sediment Pollution	Vegetation clearing, earthworks, stormwater runoff	Increased turbidity, disruption of aquatic habitats, siltation of watercourses.	Erosion control (silt fences, sediment traps), vegetation buffers, minimize site clearing.
Hydrocarbon Pollution (Oil and Fuel)	Construction vehicles, machinery leaks, fuel storage	Contamination of soil, groundwater, and surface water, affecting aquatic life.	Regular maintenance of equipment, spill kits on-site, bunded storage areas for fuels.
Cement and Concrete Contamination	Concrete mixing, cement washout areas	Alkaline runoff into watercourses, increased pH levels, harmful to aquatic species.	Designated washout areas away from watercourses, proper waste disposal, bunded mixing zones.
Chemical Pollution	Lubricants, adhesives, solvents	Groundwater contamination, toxic runoff to streams and wetlands.	Secure storage, use of biodegradable options where possible, regular inspections.
Litter and Solid Waste	Packaging, plastic, metal scraps	Debris entering watercourses, affecting water quality and wildlife.	Waste collection points, regular site clean-ups, proper disposal of waste.
Dust and Airborne Particulates	Excavation, grading, vehicle movement	Dust settling in watercourses, poor air quality for local communities.	Watering of exposed areas, speed control on site, dust suppression measures.
Sewage and Wastewater Discharge	Onsite sanitation facilities	Nutrient loading in watercourses, contamination of drinking water sources.	Proper sanitation management, regular emptying of portable toilets, avoid leakages.
Stormwater Contamination	Uncontrolled runoff, polluted stormwater	Transport of oils, heavy metals, and sediments into watercourses.	Stormwater management systems, retention ponds, oil-water separators.
Herbicide and Pesticide Contamination	Vegetation clearing and maintenance	Toxic runoff affecting aquatic life, contamination of water sources.	Minimize use, avoid application near watercourses, use organic options where possible.
Noise and Vibration Pollution	Heavy machinery, road compaction	Disturbance to terrestrial and aquatic fauna, breeding disruption.	Limit noisy operations during sensitive times, noise barriers, vibration monitoring.

Significance rating – after mitigation measures

*Where **E** = Extent, **D** = Duration, **I** = Intensity and **P** = Probability of occurrence*

Traffic Impact: Construction Phase – after mitigation					**Status**	**+**
Potential Impact: Oil and diesel leaks from construction vehicles and machinery. Spillage during refuelling and maintenance of construction equipment. Contamination of soil and groundwater through surface runoff. Soil erosion caused by vegetation clearing and earthworks. Runoff carrying sediment into nearby watercourses, increasing turbidity. Blockage of natural water flow, affecting aquatic habitats.	**Prior Mitigation**		**Significance Rating Prior Mitigation**			
	E	**D**	**I**	**P**	**Low 2**	
Findings: Impact will be minimal if the area is fenced off and all mitigation measures are implemented prior to commencement of activity and during construction.	**1**	**1**	**3**	**3**		

Risk assessment if mitigation measures are not implemented	***The Overall Significance Rating of = 2 (Low) would apply, if mitigation measures proposed are implemented.***

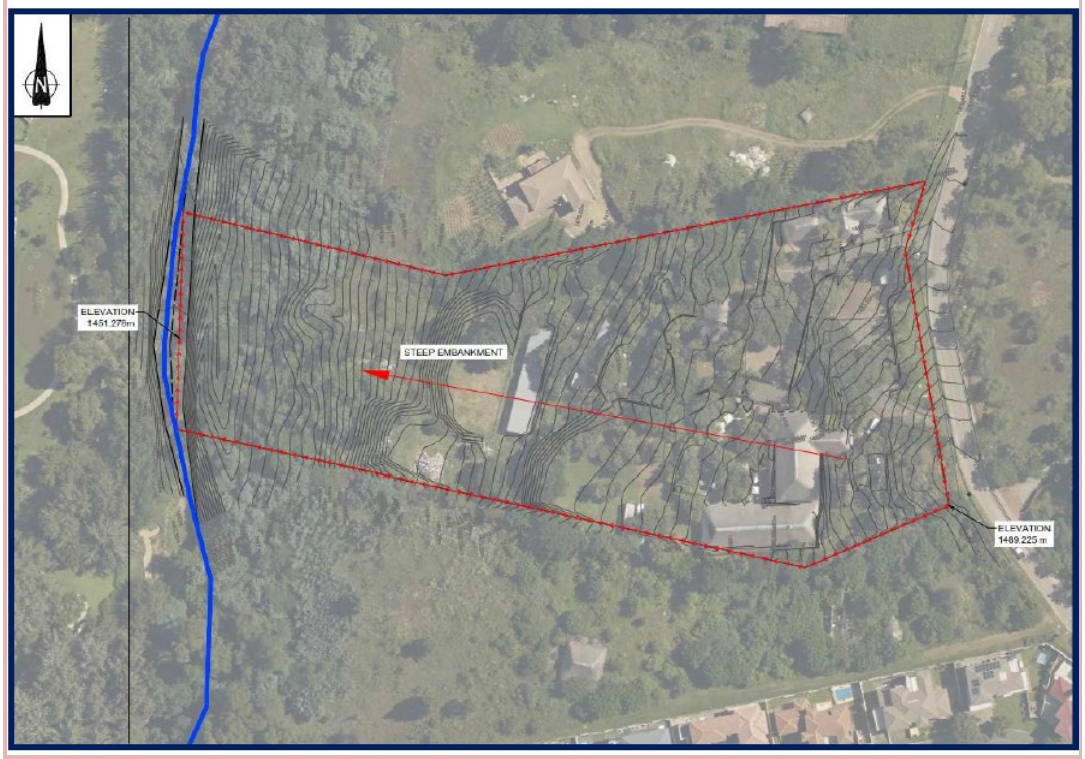
Potential Impact	**10. Stormwater Management**

General:

Elevation across the site ranges from 1489.225 m to 1451.278 m. The natural ground of the site falls in a north westerly direction. The site is at an elevation of 1489.225 m at the southeastern corner and falls to an elevation of 1451.278 m along the western boundary near the Muldersdrift-se-Loop. The average slope of the natural ground is 17.25%. There is a steep embankment located approximately 80 east of the river. The site is affected by a 1:100 year flood line as well as a 32 m riparian buffer as a result of the Muldersdrift-se-Loop along the western boundary. There are existing dwellings on the site which will remain as is. There are a number of medium to large trees scattered around the site with the remainder of the site covered in grass.

Site Specific Discussion:

Figure 2 below indicates the current topography and land use.



- **Proposed Storm Water Management**

Run-off from both Erf. 1 and Erf. 2 will be collected via a conventional piped storm water system and stored in a trapezoidal grass-lined attenuation pond located on Erf. 1. The pond will be sized to accommodate run-off from both Erf. 1 and Erf. 2. Run-off will be released from the attenuation pond via a controlled outlet to discharge onto the flood plain and into the Muldersdrift River.

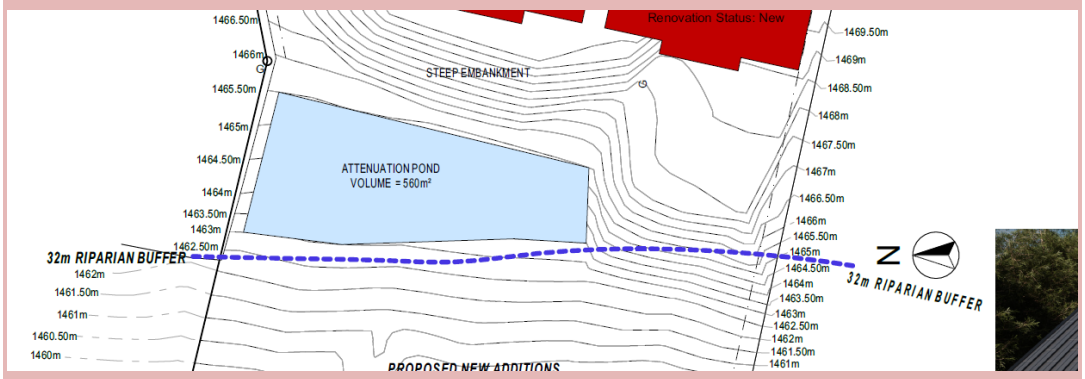
- **Attenuation pond:**

Mogale Municipality requirements regarding attenuation are that the difference between the 1:5 year pre-developed flow and the 1:25 year post-developed flow be stored on site and released at the 1:5 year pre-developed flow rate. The pond will be situated above the 32 m riparian buffer zone, on the eastern portion of Erf. 1.

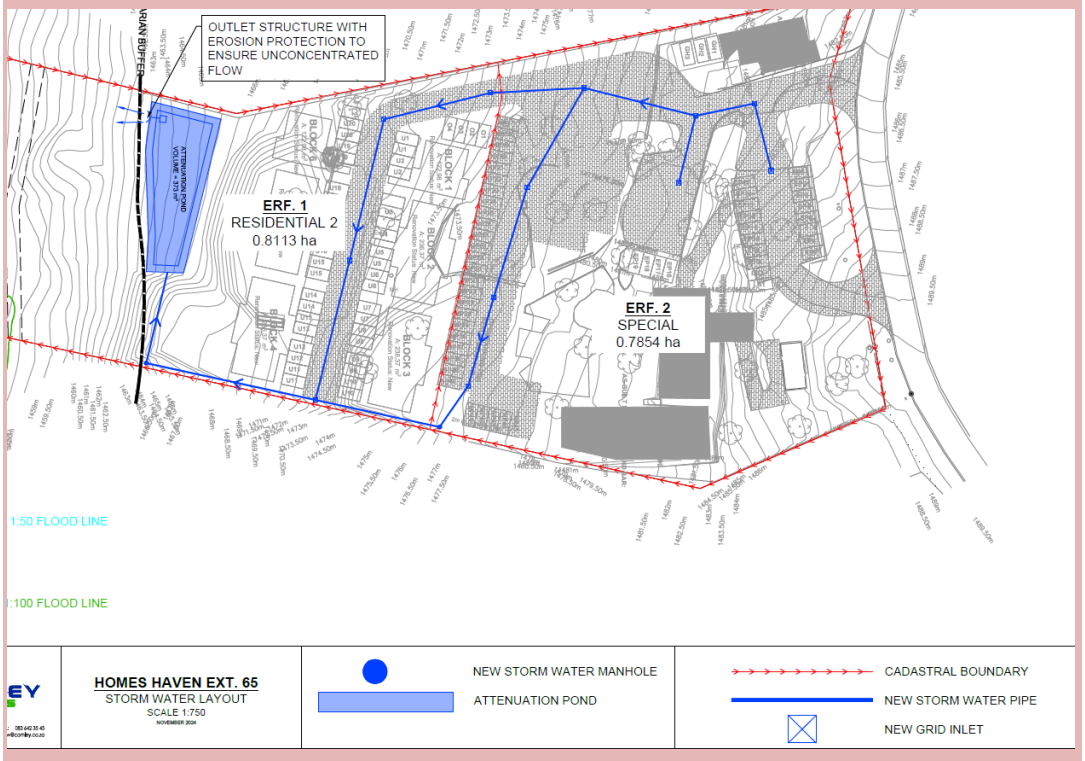
  - The pond will be sized to contain the total required storage volume of 373 m3 as calculated using the Hydrograph Generation and Reservoir Routing calculation.

- The outlet from the pond will be the conventional tower type arrangement with an outlet pipe discharging run-off towards the Muldersdrift River. All infrastructure will be built outside of the 1:100 year flood line as well as the 32 m riparian buffer. An erosion control spreader box is recommended at the end of the outlet pipe to limit erosion to the surrounding area.
- The outlet from the pond is sized to release a flow rate no higher than the combined (Erf. 1 + Erf. 2) 1:5 year pre-developed flow rate of 0.08 m3/s for storms smaller than the 1:25 year recurrence.
- The grass lined attenuation pond will allow water to infiltrate and recharge ground water resources below the pond.
- All attenuation control measures will be located within the site and maintained by the owner.

Snapshot taken from the Site Development Plan – **Annexure C:**



The following snapshot was taken from the stormwater management report:



The above figure illustrates the stormwater pipe route with the attenuation pond and outlet.

Please refer to the Stormwater Management Report in **Annexure G.**

Significance rating – before mitigation

*Where **E** = Extent, **D** = Duration, **I** = Intensity and **P** = Probability of occurrence*

Stormwater Management: Construction Phase – prior to mitigation					**Status**	-
Potential Impact: Oil and diesel leaks from construction vehicles and machinery. Spillage during refuelling and maintenance of construction equipment. Contamination of	**Prior Mitigation**				**Significance Rating Prior Mitigation**	
	E	**D**	**I**	**P**	**Very High 12**	

	soil and groundwater through surface runoff. Soil erosion caused by vegetation clearing and earthworks. Runoff carrying sediment into nearby watercourses, increasing turbidity. Blockage of natural water flow, affecting aquatic habitats.					
	Findings: – the 32m buffer area must be pegged and the construction area must be fenced off so that activities cannot encroach into the riparian area. This must be done before commencement of activities on site.	**3**	**3**	**2**	**4**	

Proposed Mitigation Measures

Potential Pollution associated with the construction of roads and proposed mitigation measures:

Type of Pollution	Source	Potential Impact	Mitigation Measures
Sediment Pollution	Vegetation clearing, earthworks, stormwater runoff	Increased turbidity, disruption of aquatic habitats, siltation of watercourses.	Erosion control (silt fences, sediment traps), vegetation buffers, minimize site clearing.
Hydrocarbon Pollution (Oil and Fuel)	Construction vehicles, machinery leaks, fuel storage	Contamination of soil, groundwater, and surface water, affecting aquatic life.	Regular maintenance of equipment, spill kits on-site, bunded storage areas for fuels.
Cement and Concrete Contamination	Concrete mixing, cement washout areas	Alkaline runoff into watercourses, increased pH levels, harmful to aquatic species.	Designated washout areas away from watercourses, proper waste disposal, bunded mixing zones.
Chemical Pollution	Lubricants, adhesives, solvents	Groundwater contamination, toxic runoff to streams and wetlands.	Secure storage, use of biodegradable options where possible, regular inspections.
Litter and Solid Waste	Packaging, plastic, metal scraps	Debris entering watercourses, affecting water quality and wildlife.	Waste collection points, regular site clean-ups, proper disposal of waste.
Dust and Airborne Particulates	Excavation, grading, vehicle movement	Dust settling in watercourses, poor air quality for local communities.	Watering of exposed areas, speed control on site, dust suppression measures.
Sewage and Wastewater Discharge	Onsite sanitation facilities	Nutrient loading in watercourses, contamination of drinking water sources.	Proper sanitation management, regular emptying of portable toilets, avoid leakages.
Stormwater Contamination	Uncontrolled runoff, polluted stormwater	Transport of oils, heavy metals, and sediments into watercourses.	Stormwater management systems, retention ponds, oil-water separators.
Herbicide and Pesticide Contamination	Vegetation clearing and maintenance	Toxic runoff affecting aquatic life, contamination of water sources.	Minimize use, avoid application near watercourses, use organic options where possible.
Noise and Vibration Pollution	Heavy machinery, road compaction	Disturbance to terrestrial and aquatic fauna, breeding disruption.	Limit noisy operations during sensitive times, noise barriers, vibration monitoring.

Significance rating – after mitigation measures

*Where **E** = Extent, **D** = Duration, **I** = Intensity and **P** = Probability of occurrence*

Stormwater Management: Construction Phase – after mitigation					**Status**	**+**
Potential Impact: Oil and diesel leaks from construction vehicles and machinery. Spillage during refuelling and maintenance of construction equipment. Contamination of soil and groundwater through surface runoff. Soil erosion caused by vegetation clearing and earthworks. Runoff carrying sediment into nearby watercourses, increasing turbidity. Blockage of natural water flow, affecting aquatic habitats.	**Prior Mitigation**				**Significance Rating Prior Mitigation**	
	E	**D**	**I**	**P**	**Low 2**	
Findings: Impact will be minimal if the area is fenced	**1**	**1**	**3**	**3**		

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	off and all mitigation measures are implemented prior to commencement of activity and during construction.					
Risk assessment if mitigation measures are not implemented	***The Overall Significance Rating of = 2 (Low) would apply, if mitigation measures proposed are implemented.***					

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

- Town Planning Memorandum
- Site Development Plan
- Terrestrial and Flora Assessment Report.
- Aquatic Biodiversity Assessment Report.
- Traffic Impact Assessment Report.
- Engineering Services Report.
- Stormwater Management Report.
- Geotechnical Report.

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

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

At this stage it is unclear whether the proposed project will be decommissioned. Should decommissioning be required, the impacts would be similar to those listed for the construction phase.

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

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

4. CUMULATIVE IMPACTS

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

Cumulative Impact Assessment Matrix:

Impact Description	Significance Rating	Spatial Extent	Duration	Proposed Mitigation Measures
Habitat Fragmentation and Loss	High	Local to Regional	Permanent	Implement the 32m ecological corridor along the watercourse; restrict clearing; rehabilitate disturbed areas with indigenous species.
Surface Water Pollution	High	Local	Medium-term	Install silt fences, manage runoff, bund concrete washout areas, and implement spill control measures.
Groundwater Contamination	Medium	Local to Regional	Long-term	Ensure proper pipeline installation, regular inspection, and spill prevention measures.
Increased Flood Risk and Altered Hydrology	High	Local to Regional	Long-term	Construct stormwater management systems, retention ponds, and permeable surfaces to reduce runoff.
Erosion and Sedimentation	High	Local	Short-term to Medium-term	Implement erosion control measures (gabions, revegetation), restrict clearing to dry seasons.
Loss of Biodiversity	High	Local to Regional	Permanent	Preserve buffer zones, minimize site clearance, restore disturbed habitats with indigenous flora.
Air and Noise Pollution	Medium	Local	Short-term	Water roads to suppress dust, enforce noise restrictions, maintain equipment to reduce emissions.
Visual Impact and Landscape Alteration	Medium	Local	Long-term	Design aesthetically pleasing landscapes, preserve natural features, and rehabilitate disturbed areas.
Increased Human Activity and Encroachment	Medium	Local	Long-term	Establish clear boundaries, promote community awareness, and monitor access to sensitive areas.
Climate Change Implications	Medium	Regional	Long-term	Incorporate green building techniques, increase vegetation cover, promote energy efficiency.

5. ENVIRONMENTAL IMPACT STATEMENT

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

Proposal

Potential Impact	Extent	Duration	Likelihood	Intensity	Significance
1. Air Quality	Limited	Short	Probable occurrence	Low	Low
2. Ecological systems	Local	Permanent	Improbable occurrence	Low	Low
3. Faunal Abundance and Diversity	Local	Permanent	Definite occurrence	Low	Low
4. Floral Abundance and Diversity	Local	Permanent	Probable occurrence	Low	Low
5. Geology	Local	Permanent	Definite occurrence	unknown	unknown
7. Engineering Services	Local	Permanent	Improbable occurrence	unknown	unknown
8. Aquatic Biodiversity	Local	Permanent	Definite occurrence	Low	Low

9. Traffic & Infrastructure	Limited	Permanent	Definite occurrence	unknown	unknown

Alternative 1

None

Alternative 2

No-go (compulsory)

The no-go scenario implies that no development takes place on the site and that the site remains as is. This scenario will imply that the site would remain undeveloped and will be vulnerable to dumping:

Potential Impact	Extent	Duration	Likelihood	Intensity	Significance
1. Air Quality	Local	Permanent	Improbable occurrence	None	None
2. Heritage Assessment	Local	Permanent	Improbable occurrence	None	None
3. Ecological systems	Local	Permanent	Definite occurrence	High	Medium - Low
4. Faunal Abundance and Diversity	Local	Permanent	Definite occurrence	High	High
5. Floral Abundance and Diversity	Local	Permanent	Definite occurrence	High	High
6. Geology	Local	Permanent	Improbable occurrence	None	None
7. Engineering services	Local	Permanent	Improbable occurrence	None	None
8. Surface Water	Local	Permanent	Definite occurrence	High	Medium
9. Topography	Local	Permanent	Improbable occurrence	None	None
11. Traffic & Infrastructure	Limited	Permanent	Improbable occurrence	None	None

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

The impact of the proposed development on the site will be local and permanent with a definite occurrence and a low significance.

For alternative:

None

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

Environmental Impact Statement and Recommendation for Authorisation

1. Project Overview and Description

The proposed project involves the construction of residential dwelling units, internal roads, installation of water and sewer pipelines, and landscaping activities adjacent to a watercourse within an existing residential estate. The development aims to enhance housing infrastructure while ensuring compliance with the National Environmental Management Act (NEMA), Act No. 107 of 1998, and the EIA Regulations (2014, as amended).

2. Environmental Impact Assessment Summary

The Environmental Impact Assessment (EIA) identified several key impacts, including habitat fragmentation, surface water pollution, groundwater contamination, increased flood risk, erosion, loss of biodiversity, and changes to the local hydrological regime. Cumulative impacts were also assessed, highlighting potential long-term implications on water quality, ecological integrity, and habitat connectivity.

3. Key Environmental Considerations

The project is located adjacent to a sensitive watercourse, which forms part of a riparian ecosystem. Key considerations include safeguarding the aquatic habitat, preventing sedimentation and pollution, and maintaining the natural hydrological flow. Adherence to buffer zones and sustainable construction practices are essential to minimize adverse impacts.

4. Mitigation Measures Implemented

A series of mitigation measures are recommended, including but not limited to:

- Erosion control measures such as silt fences, sediment traps, and vegetation buffers.
- Bunded storage of hazardous materials, proper spill response plans, and regular equipment maintenance.
- Controlled site clearance to minimize habitat loss and the preservation of indigenous flora.
- Establishment of stormwater management systems to manage runoff and prevent flooding.
- Buffer zones of at least 32m from the watercourse to protect the riparian environment.

5. Residual Impacts and Cumulative Effects

Despite the implementation of mitigation measures, some residual impacts may persist, particularly in terms of altered hydrology and minor sediment runoff. However, the application of stringent environmental management plans (EMPs) and regular monitoring will significantly reduce these impacts. Cumulative impacts include incremental habitat fragmentation and increased stormwater runoff; these can be mitigated through strategic planning and rehabilitation measures.

6. Recommendation for Authorisation

Based on the findings of the EIA and the proposed mitigation measures, it is recommended that the project be authorised with strict adherence to the Environmental Management Programme (EMP). Conditions for authorization should include ongoing monitoring of water quality, regular ecological assessments, and enforcement of buffer zones to protect the watercourse. Compliance with NEMA principles of sustainable development, prevention of pollution, and the duty of care must be upheld throughout the project lifecycle.

7. Conclusion

The proposed development can proceed with minimal environmental impact if all recommended mitigation measures and monitoring activities are implemented effectively. It is therefore concluded that the project is compliant with the principles of sustainable development as mandated by NEMA, and conditional authoriastion is supported.

7. SPATIAL DEVELOPMENT TOOLS

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

The relevant spatial planning tools and integrated development plans as well as the Minimum Requirements for Biodiversity Assessments, 2014 of the Gauteng Department of Agriculture and Rural Development (GDARD, 2014) and relevant legislation, as discussed in Section 2 of this Report, was utilized during the decision-making process.

8. RECOMMENDATION OF THE PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the Environmental Assessment Practitioner as bound by professional ethical standards and the code of conduct of EAPASA).	**YES X**	NO

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

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

OPINION OF THE EAP:

It is the opinion of the EAP that no fatal flaws are associated with the proposed development and that all impacts can be adequately mitigated to reduce the risk or significance of impacts to an acceptable level. The significance of the benefits associated with the proposed development outweighs the significance of the negative aspects. It is the opinion of the EAP that this Basic Assessment Report contains sufficient information to allow the Gauteng Department of Agriculture and Rural Development to make an informed decision. It is therefore recommended that the application for Environmental Authorisation should be approved on condition that the recommended mitigation measures stated herein are effectively implemented.

RECOMMENDATIONS OF THE EAP:

All mitigation measures which have been outlined in this report as well as in the Environmental Management Programme (EMPr) must be fully adhered to. In addition, the following recommendations have been made:

Pre-Construction:

- The EMPr must form part of the contractor's tender documentation prior to appointment;
- The no development allowed within the riparian line as demarcated on the layout plan. This recommendation must be implemented;
- All alien and invasive plants must be removed;
- The riparian line must be demarcated before commencement of construction; and
- The construction site must be fenced off before commencement of activities on site.
- Notice must be given to surrounding landowners and businesses informing them of the intended date of commencement of construction;

Construction Phase:

- An ECO must be employed to ensure that the construction activities remain within the designated area and that no unauthorised activities occur;
- The ECO should submit site audits detailing the applicant's compliance with the EMPr;
- An efficient stormwater management system as explained in the stormwater management plan, must be implemented during construction;
- Workers must be educated on environmental management aspects;

Operational Phase:

- Water efficient systems, such as dual-flush toilets and water-efficient taps should be used to use water sparingly; and
- Waste removal must be properly managed at all times.

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

.1 Is the activity permitted in terms of the property's existing land use rights?			
No, an application was submitted in terms of Section 51 of the Mogale City Spatial Planning and Land Use Management By-Law, 2018, for the establishment of a township on **PORTION 243 (PORTION OF PORTION 76) OF THE FARM ROODEKRANS 183 IQ.**			
9.2 Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	**YES X**	NO	Please explain
Yes, the proposed development is located inside the urban development Boundary of Mogale City within a priority densification zone.			
(b) Urban edge / Edge of Built environment for the area	**YES X**	NO	Please explain
The proposed development site is located inside the urban development boundary of Mogale City.			
(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	**YES X**	NO	Please explain
(d) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	**YES X**	NO	Please explain
Yes, the site itself is not sensitive in terms of vegetation. All development will be located outside of the 32m buffer zone.			
1. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?	**YES X**	NO	Please explain
The development would contribute to service delivery with specific reference to the integration of the undeveloped site into the urban fabric.			
2. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)	**YES X**	NO	Please explain
The site is located within an existing residential estate and complements the land uses developed on the adjacent erven.			
3. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)	**YES X**	NO	Please explain
Yes, bulk services are located on the boundary of the property and in close proximity to the site. **The upgrade of existing services is not required.**			
4. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)	**YES X**	NO	Please explain
Yes, bulk services are available within the area and at the site. Upgrade of existing services is not required for this development.			
5. Is this project part of a national programme to address an issue of national concern or importance?	YES	**NO X**	Please explain
No			
6. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	**YES X**	NO	Please explain
7. Is the development the best practicable environmental option for this land/site?	**YES X**	NO	Please explain

The site is within an existing residential estate and the proposed use align with the surrounding developments.			
8. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	**YES X**	NO	Please explain
Due to the disturbed nature of a portion of the site, it is concluded that there are no significant environmental impacts on the terrain and impacts identified for this area can be mitigated successfully.			
9. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES	**NO X**	Please explain
The development will complement the existing residential and retail activities found in the area.			
10. Will any person's rights be negatively affected by the proposed activity/ies?	YES	**NO X**	Please explain
11. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	YES	**NO X**	Please explain
The proposed development is located inside the urban development.			
12. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	**YES**	**NO X**	Please explain
13. What will the benefits be to society in general and to the local communities?			Please explain
The site currently occupies Berlin Bear Pub, various outbuildings along the eastern side of the property. The pub will remain. A guest house will be developed within the existing dwelling unit and additional residential units will be developed on Erf 1.			
14. Any other need and desirability considerations related to the proposed activity?			Please explain
The proposed township is in line with the policy for the area as well as the need for residential accommodation within this area.			
15. How does the project fit into the National Development Plan for 2030?			Please explain
There is an ever increasing need for a variety of residential accommodation and this site lends itself for such development. In terms of the Muldersdrift Precinct Plan 2024 Precinct Plan the site is located in an area earmarked for medium/high density development. Development of the subject site will encourage fair land markets and will keep up with the current trend of the area while ensuring the utilization of the site to its maximum potential			
16. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.			

	Relevant IEM Objective	Relevance to Project/BA Process
2	The general objective of integrated environmental management is to –	
(a)	promote the integration of the principles of environ-mental management set out in section 2 into the making of all decisions which may have a significant effect on the environment:	The Assessment process has taken into account the environmental and economic aspects of the proposed activity.
(b)	Identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimizing negative impacts. maximizing benefits, and promoting compliance with the principles of environmental management set out in section 2;	An impact assessment has been undertaken as part of the Basic Assessment Process.
(c)	ensure that the effects of activities on the environment receive adequate consideration before actions are taken in connection with them;	
(d)	ensure adequate and appropriate opportunity for public participation in decisions that may affect the environment;	A comprehensive public participation process is in the process of being undertaken as part of the Basic Assessment Process. The draft BAR has been made available on first notification of all I&AP's. All comments received on the DBAR will be included in the FBAR.
(e)	ensure the consideration of environmental attributes in management and decision-making which may have a significant effect on the environment; and	An impact assessment has been undertaken as part of the Basic Assessment Process.
(f)	identify and employ the modes of environmental management best suited to ensuring that a particular activity is pursued in accordance with the principles of environmental management set out in section 2.	A summary of the relevant Principles and how they have been considered are contained in the table below

Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account:

	NEMA Principle	Relevance to Project/BA Process
4 (a)	Sustainable development requires the consideration of all relevant factors including the following:	
i	That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;	This Basic Assessment Report identifies potential impacts and provides mitigation measures to avoid/reduce /minimise environmental impacts and disturbance to the surrounding environment.
ii	that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;	
iii	that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;	This Assessment Report identified potential impacts and provides measures to avoid, reduce and minimize environmental impacts and disturbance to the surrounding environment.

iv	that waste is avoided, or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner;	The proposed activities, i.e. construction of top structures and installation of services will aim to ensure that separation of waste takes place during the construction phase as well as the operational phase.
vii	that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and	The Basic Assessment report includes uncertainties and assumptions which will be considered by the applicant to ensure that a cautious approach is adopted.
viii	that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.	This Basic Assessment Report identifies potential impacts and provides measures to avoid/ reduce/ minimize environmental impacts and disturbance to the surrounding environment.
c	Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.	This Basic Assessment Report identifies potential impacts and provides measures to avoid/ reduce/ minimize environmental impacts and disturbance to the surrounding environment.
e	Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle.	The public participation process will be fair, transparent and inclusive allowing all potential I&AP's to raise concerns related to the proposed project.
f	The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.	An Environmental Management Programme has been compiled. This is a "living" document and should be updated throughout the lifetime of the Facility to ensure that the Applicant takes responsibility for the consequences of the development and any unforeseen impacts that result from the development.
g	Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognizing all forms of knowledge, including traditional and ordinary knowledge.	The Public Participation Report (once completed) will provide an account of the detailed public participation process undertaken to date to ensure that the public are provided with an opportunity to play an active role in the decision-making process. The public participation process should be fair, transparent and inclusive.

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

For a 10 year period

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

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

EMPr attached	Yes

SECTION F: APPENDIXES

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

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

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

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Route position information

Appendix E: Public participation information

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

Appendix G: Specialist reports

Appendix H: EMPr

Appendix I: Other information

CHECKLIST

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

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