Nali LOCAL

Sustainability Solutions (Pty) Ltd

Environmental and Development Consultants

DRAFT BASIC ASSESSMENT REPORT

DEVELOPMENT OF A RESIDENTIAL DWELLING UNIT

PORTION 39 OF THE FARM KALKHEUWEL 493-JQ, MOGALE CITY LOCAL MUNICIPALITY

GAUT 002/22-23/E3517

For:

MOSES SELEKE

MARCH 2023

t: 012 676 8315 c: 0824517120 f: 086 694 1178 e: pirate.ncube@mail.com web: nalisustainabilitysolutions.co.za
P.O. Box: P. Bag X1, Stand1829, Irene Farm Villages, PvR, 0045 Address: 65 Country Club Way, Irene Farm Villages, Centurion, 0045

Reg# 2012/180460/07 | VAT# 4290263229

TABLE OF CONTENTS

SECTION F: APPENDICES **41**

Appendix A: Locality Maps
Appendix A[1]: Locality Plan
Appendix A[2]: Preferred Location
Appendix A[3]: Alternative Location

Appendix B: Site Photographs
Appendix C: Facility illustration(s)
Appendix D: Route position information

Appendix E: Public Participation information
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&Ap

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

Appendix G: Specialist reports
Appendix G[1]: Ecological Assessment Report
Appendix G2: Ecological Footprint Survey
Appendix G3: Geotechnical Investigation Report
Appendix G4: HIA

Appendix H: Draft EMPr

Appendix I: Other information

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)

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.

2. This application form is current as of 8 December 2014. It is the responsibility of the EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.

3. **A draft Basic Assessment Report must be submitted, for purposes of comments within a period of thirty (30) days, to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken.**

4. **A draft Basic Assessment Report (1 hard copy and two CD's) must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application.**

5. Five (5) copies (3 hard copies and 2 CDs-PDF) of the final report and attachments must be handed in at offices of the relevant competent authority, as detailed below.

6. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.

7. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.

8. An incomplete report may lead to an application for environmental authorisation being refused.

9. **Any report that does not contain a titled and dated full colour large scale layout plan of the proposed activities including a coherent legend, overlain with the sensitivities found on site may lead to an application for environmental authorisation being refused.**

10. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the application for environmental authorisation being refused.

11. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.

12. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.

13. Although pre-application meeting with the Competent Authority is optional, applicants are advised to have these meetings prior to submission of application to seek guidance from the Competent Authority.

DEPARTMENTAL DETAILS

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

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

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

(For official use only)

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

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

N/A

Is a closure plan applicable for this application and has it been included in this report? if not, state reasons for not including the closure plan. No

No closure of the proposed dwelling house is anticipated

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?

The public participation process is currently underway. Inputs from the authorities will be included in the final

SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

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

Development of a dwelling unit on Portion 39 of the Farm Kalkheuwel 493-JQ, Mogale City, Gauteng Province

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	NO

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

N/A

If yes, have you applied for the authorisation(s)?	YES	NO
If yes, have you received approval(s)? (attach in appropriate appendix)	YES	NO

2. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List of legislation, policies and/or guidelines that are applicable to the application

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	National & Provincial	27 November 1998
The National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008	National & Provincial	06 March 2008
The National Water Act, 1998 (Act No. 36 of 1998)	National Department of Water and Sanitation	26 August 1998
National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) (NEM: AQA)	National & Provincial	24 February 2005
National Heritage Resources Act, 1999 (Act No. 45 of 1965 (NHRA)	National & Provincial	April 1999
Occupational Health and Safety Act (No 85 of 1993)	National Department of Labour	23 June 1993
World Heritage Convention Act (Act No. 49 of 1999	National/Provincial	1993
Magaliesberg Biosphere Reserve	National/Provincial	2015
EIA Regulations GN 983 (Listing Notice 1 and Listing Notice 3)	National and Provincial	8 December 2014
Gauteng Provincial Environmental Management Framework	Provincial	May 2014
Red List Plant Species Guidelines	Provincial	26 June 2006
Gauteng Noise Control Regulations, 1999	Provincial	1999

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

Legislation, policy of guideline	Description of compliance
National Environmental Management Act No. 107 of 1998 (NEMA)	The National Environmental Management Act (Act No. 107 of 1998) (NEMA) is the overarching framework for environmental legislation as well as the Regulations for Environmental Impact Assessment. It sets out the principles that serve as a general framework for environmental planning, as guidelines by reference to which organs of state must exercise their functions and guide other laws concerned with the protection or management of the environment. The application considers the environmental and socio-economic conditions in compliance with the NEMA principles.
The National Environmental Management: Biodiversity Act (Act 10 of 2004)	The Act provides for the management and conservation of South Africa's biodiversity within the framework of the NEMA. Areas of high biodiversity need to be protected. The site has no important biodiversity features. Should any protected species be found on site, these will be managed in consultation with GDARDE.
The National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008	No waste management license would be required for the construction or operational phases of the proposed activity. Only a limited amount of solid construction waste will be stored and handled on the site, before being hauled away and deposited at the nearest registered landfill site.
The National Water Act, 1998 (Act No. 36 of 1998)	The Act provides for the management of South Africa's water resources. It aims to ensure that the Republic's water resources are protected, used, developed, conserved and controlled. According to the Act, any proposed water uses must be specified and registered and/or licensed. Similarly, any modifications to drainage lines on site must be investigated in terms of water use requirements. The proposed development will not require any water licenses or permits
National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) (NEM: AQA)	During the construction phase, dust and the generation of noise can become a significant factor, especially to the surrounding landowners. However, if the development is well planned and the mitigating measures proposed in the EMPr are successfully implemented the proposed development's contribution to air pollution and the generation of air pollution can become less significant
National Heritage Resources Act, 1999 (Act No. 45 of 1999 (NHRA)	The Act aims to promote the good management of the national heritage resources. According to the Act the South African Heritage Resources Agency (SAHRA) must be notified during the early planning phases of a project for any development that meet certain criteria. The Agency has been notified as required. Any artefacts uncovered during the construction phase will be reported to SAHRA as provided for in the EMPr.
Occupational Health and Safety Act (No 85 of 1993)	The Act provides for the health and safety of persons at work and for the health and safety of persons in connection with the use of machinery; the protection of persons other than persons at work, against hazards to health and safety arising out of or in connection with the activities of persons at work. The EMPr provides for measures to ensure that objectives of the Act are met on this site.
World Heritage Convention Act (Act No. 49 of 1999)	The site is within the COHWHS where the The Taung Skull Fossil Site is located. The latter is the place where in 1924 the celebrated Taung Skull – a specimen of the species Australopithecus africanus – was found. Makapan Valley, also in the site, features in its many archaeological caves' traces of human occupation and evolution dating back some 3.3 million years. The area contains essential elements that define the origin and evolution of humanity. Fossils found there have enabled the identification of several

Legislation, policy of guideline	Description of compliance
	specimens of early hominids, more particularly of Paranthropus, dating back between 4.5 million and 2.5 million years, as well as evidence of the domestication of fire 1.8 million to 1 million years ago.
Magaliesberg Biosphere Reserve	According to UNESCO, Biosphere reserves are 'learning places for sustainable development'. They are sites for testing interdisciplinary approaches to understanding and managing changes and interactions between social and ecological systems, including conflict prevention and management of biodiversity. They are places that provide local solutions to global challenges. Biosphere reserves include terrestrial, marine and coastal ecosystems. Each site promotes solutions reconciling the conservation of biodiversity with its sustainable use.
EIA Regulations GN 983 (Listing Notice 1)	The proposed development constitutes an activity listed under GN R. 983 and GN R.985 and therefore a Basic Assessment Report process is being followed to obtain authorization from the GDARD.
Gauteng Provincial Environmental Management Framework	The aim of the EMF is to guide the protection and enhancement of environmental assets and natural resources along with development patterns to ensure sustainable environmental management and development patterns within and around the Gauteng Province. The development site is located in Zone 4 of the EMF. The specific EMF requirements in this regard are that: no listed activities may be excluded from environmental assessment requirements. .
Red List Plant Species Guidelines	The purpose of the guidelines is to promote the conservation of Red List Plant Species in Gauteng, which are species that face risk of extinction in the wild. By protecting Red List Plant Species, conservation of diverse landscapes is promoted which forms part of the overall environmental preservation of diverse ecosystems, habitats, communities, populations, species and genes in Gauteng. No red data species were encountered on site according to the ecological report.
Gauteng Noise Control Regulations, 1999	During the construction phase the impact of noise could be problematic, but such impacts are generally short term. One should note that practical mitigation measures for noise pollution are low, but certain measures can be implemented to mitigate the severity. These measures have been provided for in the EMPr
Spatial Development Framework for Mogale City	The property is located in Ward 33 per the IDP and Spatial Development Framework of Mogale City. The area where the site is located is predominantly undeveloped farm portions utilised for residential, tourism and game farming related activities. The proposed development is line with the objectives of the RSDF in this regard.

Applicable EIA Regulations

Notice	Activity	Details
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.
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
Listing Notice 3	4	The development of a road wider than 4 metres with a reserve less than 13,5 metres. c. Gauteng i. A protected area identified in terms of NEMPAA, excluding conservancies; ii;

		iii. iv. Sites identified as Critical Biodiversity Areas (CBAs) or Ecological Support Areas (ESAs)…; v. Sites identified within threatened ecosystems …; vi. Sensitive areas identified in an environmental management framework adopted by the relevant environmental authority; vii…; viii…; ix. Sites or areas identified in terms of an international convention; x…; xi. or xii.

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

The process that was followed to reach a conclusion on the proposed development site consisted for the following steps:

- Consideration of suitability and desirability of the site;
- Consideration of ecological and social-economic implications of the proposed development; and
- Consideration of possible development alternatives on the property.

These considerations were defined and informed by several inherent development limitations that include:

Limited development footprint in comparison to available developable area of the property

Given the environmental sensitivity of the site there is a deliberate confinement of the area earmarked for the footprint of the proposed development. The proposed development entails construction of only one (1) residential dwelling unit on the property and thus limited use of the site. The total area of application site is 14 Hectares (Ha) and approximately 700 - 750.50 m^2 of the site is dedicated to the footprint of the proposed dwelling unit. Therefore, the dwelling occupies 0,0054% of the property.

Single use of the property

Given the extent of the property i.e. 14 Hectares (Ha), there are multitudes possible uses that present various development opportunities. While these are available for implementation, they have however not been considered. This single use renders the proposed development having restrained consequences for the receiving environment.

No introduction of land use processes that result in environmental degradation

There are no additional land use processes initiated associated with the proposed construction of a dwelling structure. These additional land use processes, that result in direct onset of environmental degradation in the form leapfrog and urban sprawl developments, include land division, sub-division and township establishment outside the urban edge.

Location of the development in an a less sensitive potion of the site

From the outcomes of a Footprint Plant Search Report, it is noted that property is dominated by indigenous vegetation of the Carletonville Dolomite Grassland. While this is the case, it is concluded that the proposed

establishment of a house will be located in an area that does not have any sensitive habitats or species. This part of the property is mostly invested with alien invasive plants.

In light of the above development constraints and considered environmental sensitivities, the proposal is inherently restricted in terms of its implications for ecological conditions and surrounding area. Also, the proposed dwelling house is located in a less sensitive area compared to the rest of the property. Furthermore, the proposed development type (i.e. land use type) is the most basic. This is in the context of the need to ensure environmental protection while still exercising property and development rights by the property owner. In this regard less than 0.01% (i.e. less than one hundredth) of the total area of the property is earmarked for development purposes.

Description of the alternatives considered.

No.	Alternative type,	Description
1	Location of structure	The proposal entails the construction of a residential dwelling unit and associated infrastructure of approximately 750 m² (total footprint of about 2000m^2) located close to the Kalkheuwel West road, away from the ridge slopes and the stream. The proposed residential building is within an area where similar one-farm dwelling units are already established.
2	Location of structure	Construction of a residential dwelling unit and associated infrastructure of approximately 750 m² (total footprint of about 2000m2) located on lower reaches of the ridge facing the stream. The proposed development is located on Portion 39 of the Farm Kalkheuwel 493-JQ in Mogale City.

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

The intention is to develop a single residential unit on the property. The footprint of the proposed house is in an area that does not have any sensitive habitats or species. This location is further considered ideal given the fact that the pproposed dwelling house is situated in close proximity to an existing road *viz.* Eland Drive East. This reduces the need for establishment of a new access road. Also, in terms of sense of place, the surrounding properties have similar land use pattern of a single residential dwelling unit. Thus, alternative uses or locations would be considered less optimal usage of the site. The site is also owned by the applicant.

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)***	2000m^2
Alternatives:	
Alternative 1 (if any)	2000m^2
Alternative 2 (if any)	2000m^2

Proposed schedule of rights

Description	**Development Area**	***Total property Area Hectares***
Portion 39 of the Farm Kalkheuwel 493-JQ in Mogale City	**Main House:** - Ground Floor Area: 497.5 m^2 - Porte Chochere : 12,0 m^2 - Covered Patio: 62.8 m^2	14,5639 Hectares

Zoning: Agriculture	- Garages and Store: 103.8 m^2 - Staff accommodation: 18.1m^2 Mancave/Gazebo: 56.1 m^2	
TOTAL	**0,7507ha**	14,5639 hectares

An illustration of the house plan indicating the various areas is presented in Appendix A[1]:

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

	Size of the site/servitude:
Site of the Proposed activity	14.5639
Alternatives:	
Alternative 1 (if any)	
Alternative 2 (if any)	
	Ha/m^2

5. SITE ACCESS

Proposal

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		

Describe the type of access road planned:

The site is proposed to be accessed from Kalkheuwel West Road.

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

The position of the access road on site presented in Appendix A[2]: Concept Site Plan

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		

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).

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

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;
  - A3 = 1: 4000
- 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 , 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.

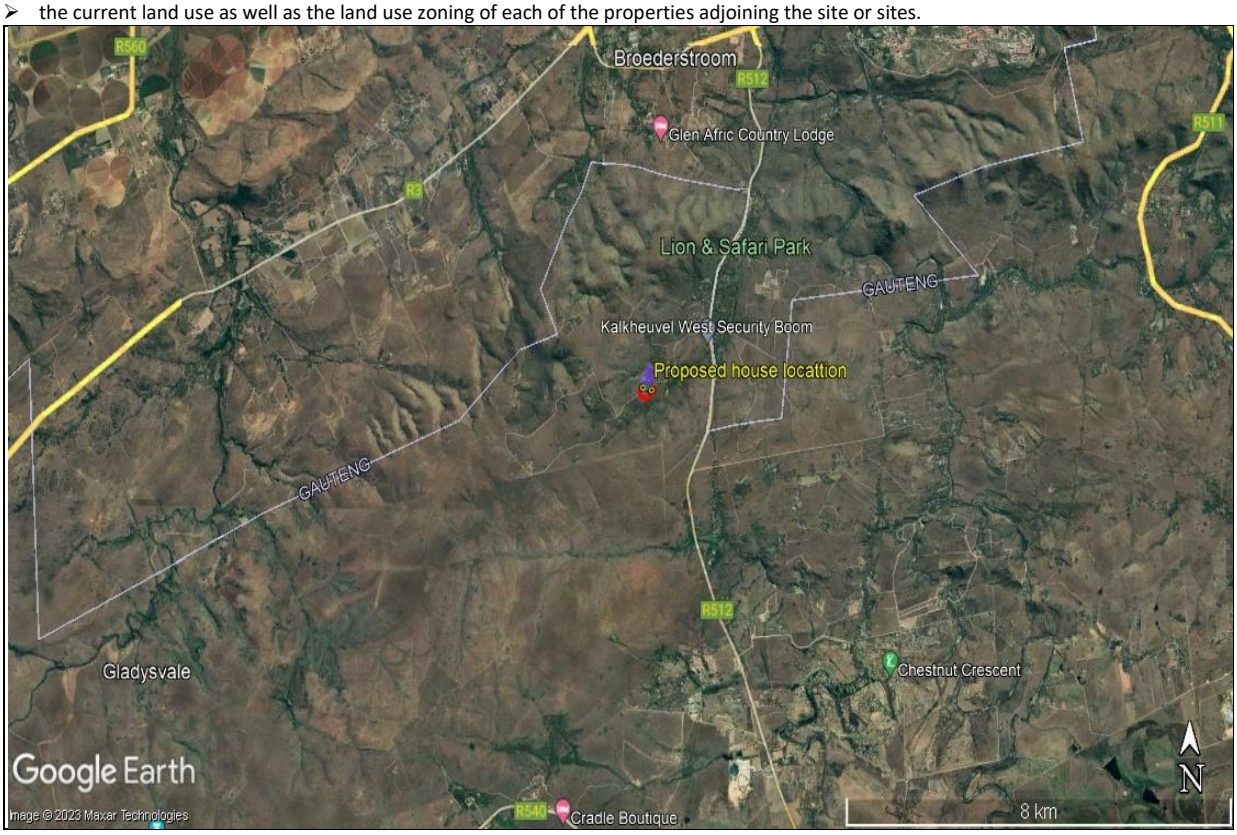


Figure1: Locality Map.

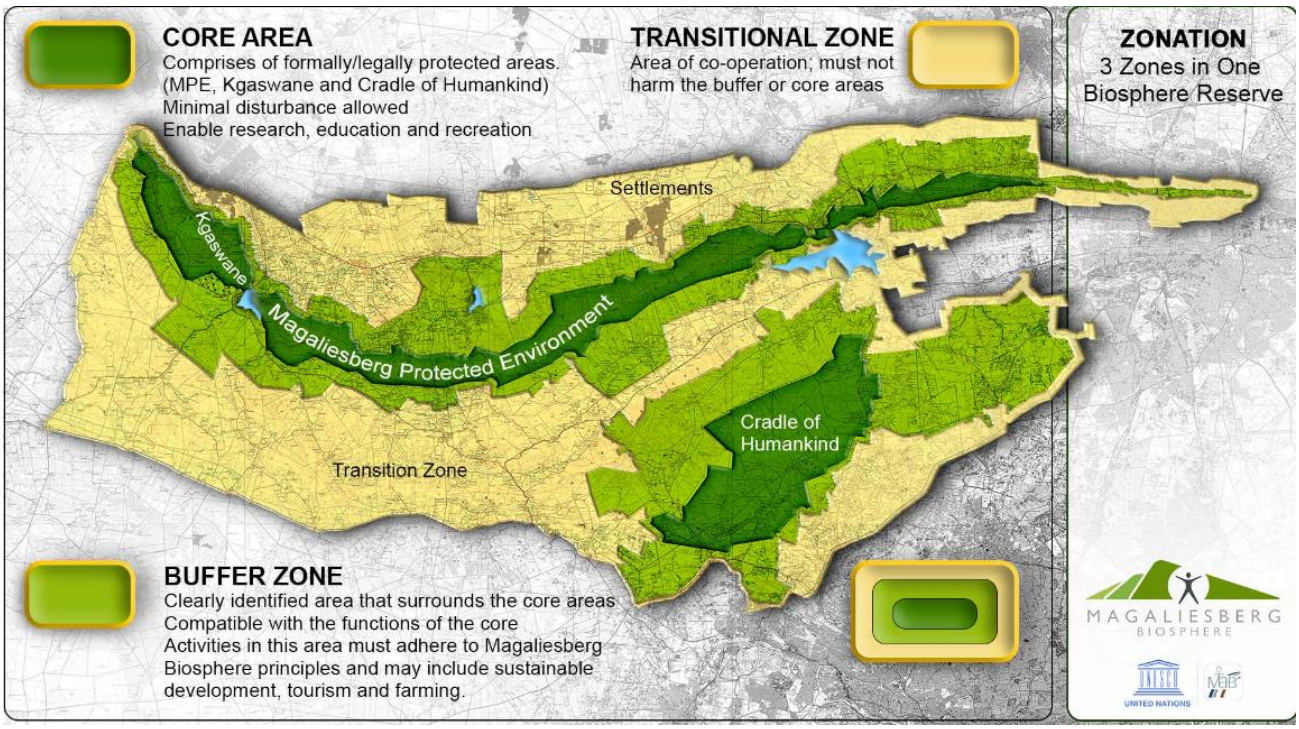


Figure 2: COH an Magaliesberg Biosphere Reserve

7. SITE PHOTOS

Site photographs are included as **Appendix B**

8. FACILITY ILLUSTRATION

Facility illustration is presented in **Appendix C**

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

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

This section has not been duplicated as the alternatives are within the same site and the difference is the physical location of the house . The significant differences are captured in the Assessment section.

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 **N/A** 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 cosempleted and attached chronological order, etc.

Section B - Section of Route **N/A** (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 39 of the Farm Kalkheuwel 493-JQ 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):**
	-25.856520° S	**27.872632 E**

In the case of linear activities:

Alternative:	**Latitude (S):**	**Longitude (E):**
Starting point of the activity	°	°
Middle point of the activity	°	°
End point of the activity	°	°

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 **0**

The 21 digit Surveyor General code of each cadastral land parcel

PROPOSAL	**T**	**O**	**J**	**Q**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**3**	**9**	**0**	**0**	**0**	**3**	**9**

3. GRADIENT OF THE SITE

gradient of the site.

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

4. LOCATION IN LANDSCAPE

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

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

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

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

(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

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

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

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**

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

According to the GAPA layer, the site has low agricultural potential. Therefore, the development is appropriately located as it will not compromise agricultural resources in the province.

7. GROUNDCOVER

All identified rare or endangered species or other elements have been indicated on the sensitivity map.

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

Natural veld - good condition % = 80	Natural veld with scattered aliens % =10	Natural veld with heavy alien infestation % =5	Veld dominated by alien species % = 0	Landscaped (vegetation) % =0
Sport field % =0	Cultivated land % = 0	Paved surface (hard landscaping) % =0	Building or other structure % =0	Bare soil % = 5

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

If YES, specify and explain:

The H*ypoxis hemerocallidea and Holothrix randii plant species were found on site.* These are outside of the development footprint.

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

If YES, specify and explain:

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

If YES, specify and explain:

The project area falls within a CBA, Magaliesberg Biosphere Reserve, the Fossil Hominid Site of SA, across a Class 1 Ridge, and within the LC Carletonville Dolomite Grassland vegetation type.

Three (3) habitat units were identified during the assessment and included Carletonville Dolomite Grassland, Class 1 ridge habitat and two wetlands. The sensitivity of these habitats ranged from High to Very High with the Carletonville Dolomite Grassland and wetlands regarded as having a high sensitivity, predominantly due to the intact nature of these areas which support indigenous vegetation and provide habitat for various faunal species including Species of Conservation Concern (SCC). The Class 1 Ridge habitat has been assigned a Very High sensitivity due to the unique intact habitat to biodiversity, including Near Threatened (NT) plant species and habitat to faunal Species of Conservation Concern. NT plant species *viz*. *Holothrix randii* was noted on site within the Class 1 Ridge Habitat. *Hypoxis hemerocallidea*, another Orange listed plant species, was also recorded within the study area. These are both located outside development footprint.

The above environmental features are indicated in figures below.

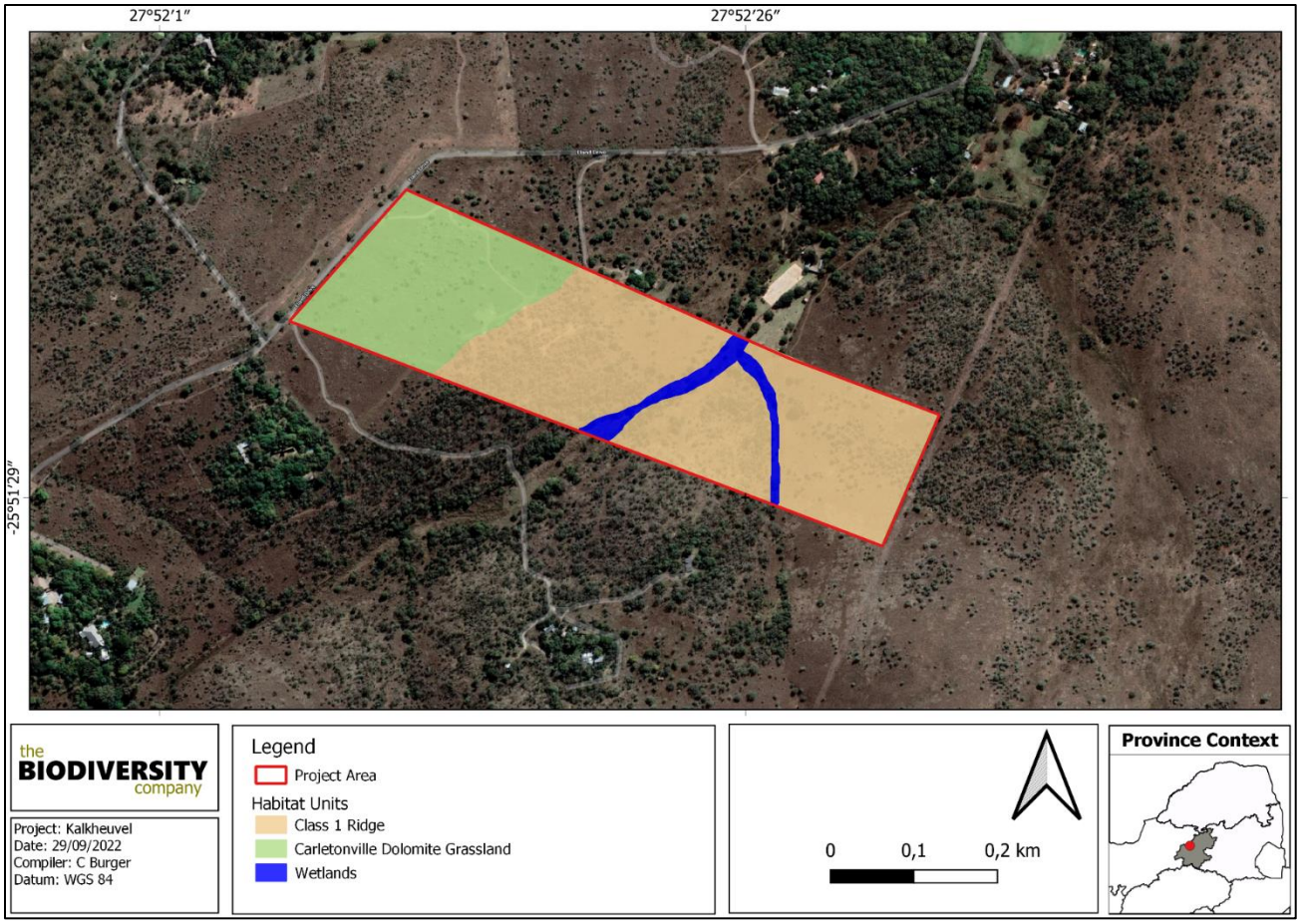


Figure 3: Habitats identified in the Project Area

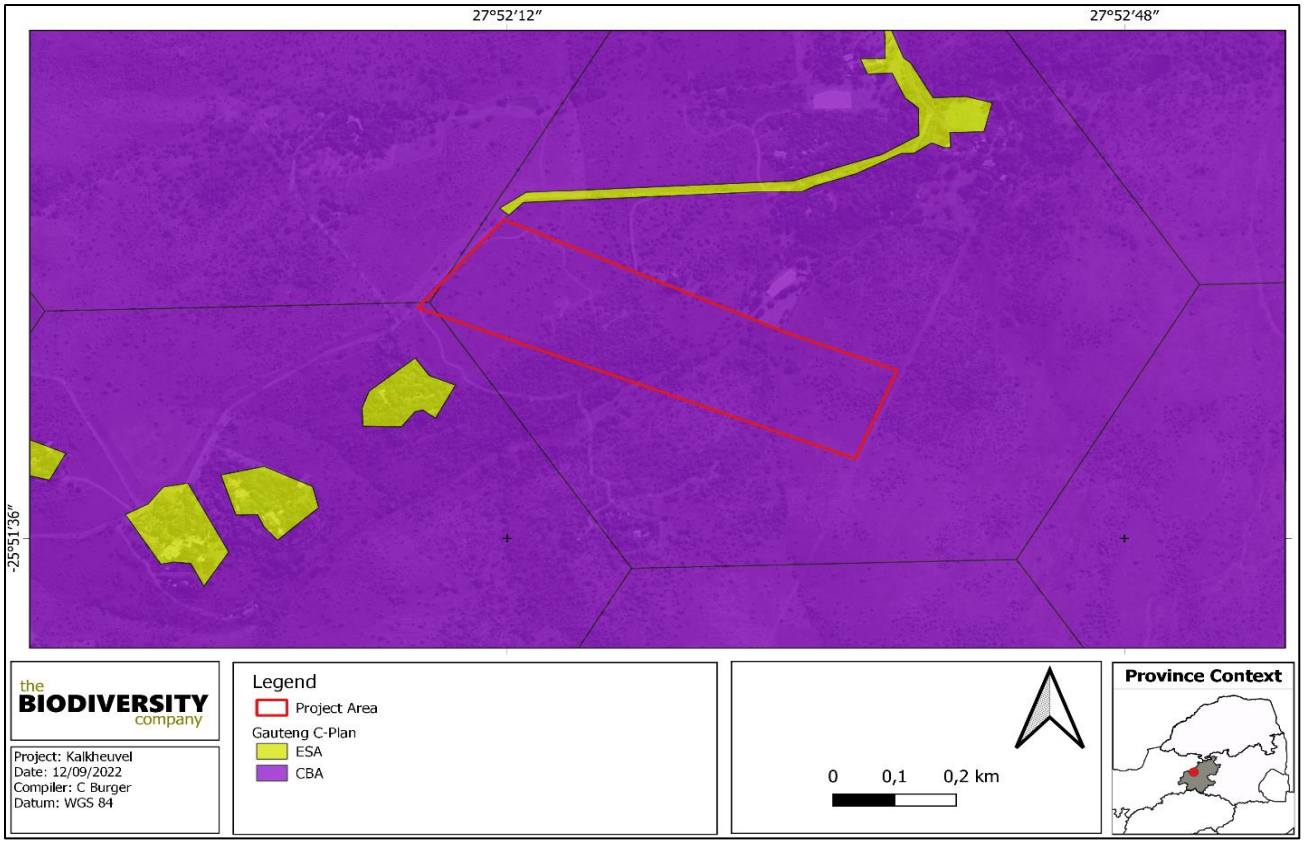


Figure 4: Map illustrating the Gauteng CBA and ESA map dataset relevance

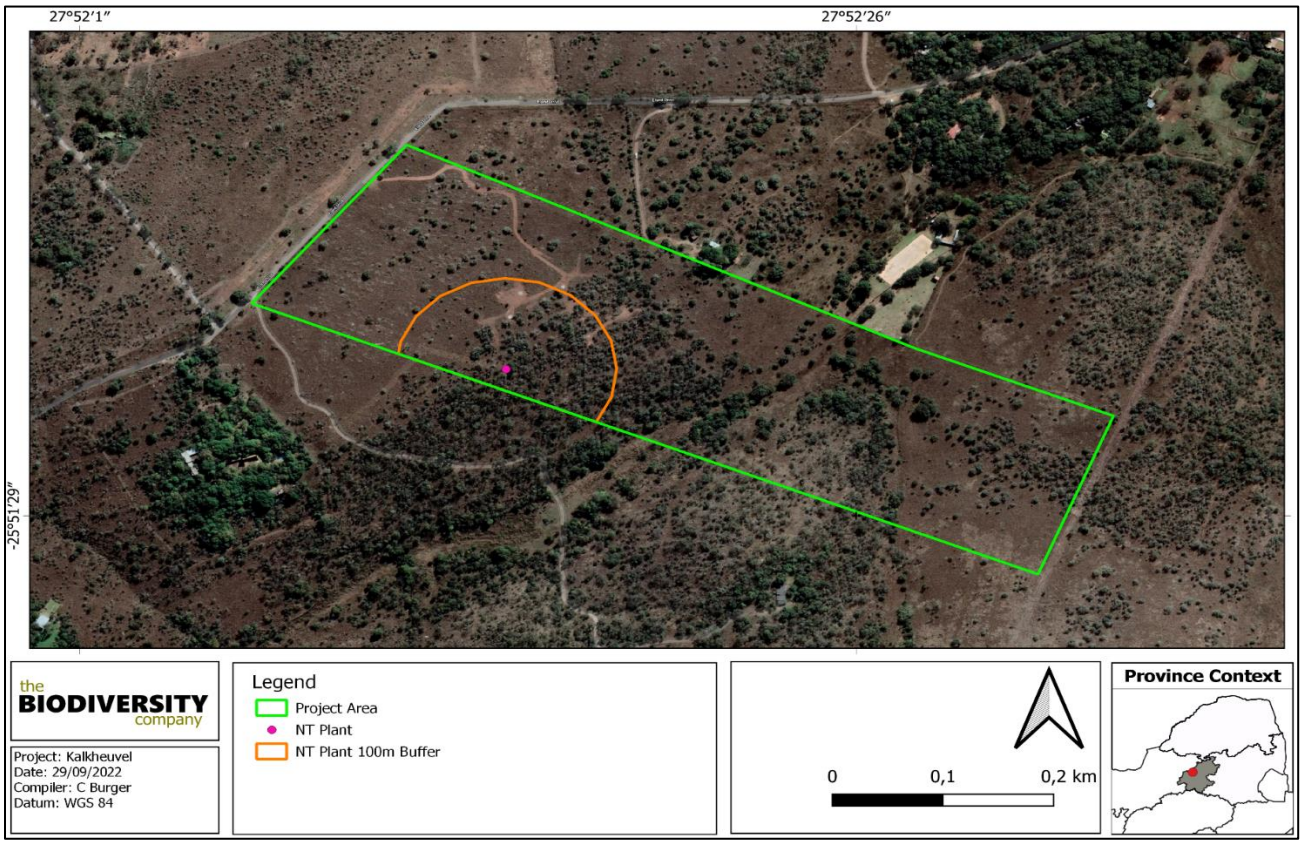


Figure 5: Map illustrating the location of the NT plant species and its associated buffer

Wetlands

Five (5) natural wetland hydrogeomorphic (HGM) units belonging to two (2) HGM types (channelled valley bottom, and unchannelled valley bottom) were identified within the 500 m regulated area surrounding the broader project area. Of these, two channelled valley bottom wetlands (HGM 1 and HGM 2) were found to traverse the central and eastern portion of the project area.

Both HGM 1 and HGM 2, the channelled valley bottom wetlands traversing the central portion of the project area, scored "Moderately High" for ecosystem service benefits. This can mainly be attributed to the ability of the system to attenuate floods, stream flow regulation, trapping sediment, erosion control, and biodiversity maintenance.

In terms of the Terrestrial Ecology and Wetland Baseline and Impact Assessment study conducted for the site, the delineated wetland systems have been scored overall Present ecological state (PES) ratings of Moderately Modified (class C). Figure 5 below indicates the location of the wetlands within the study area.

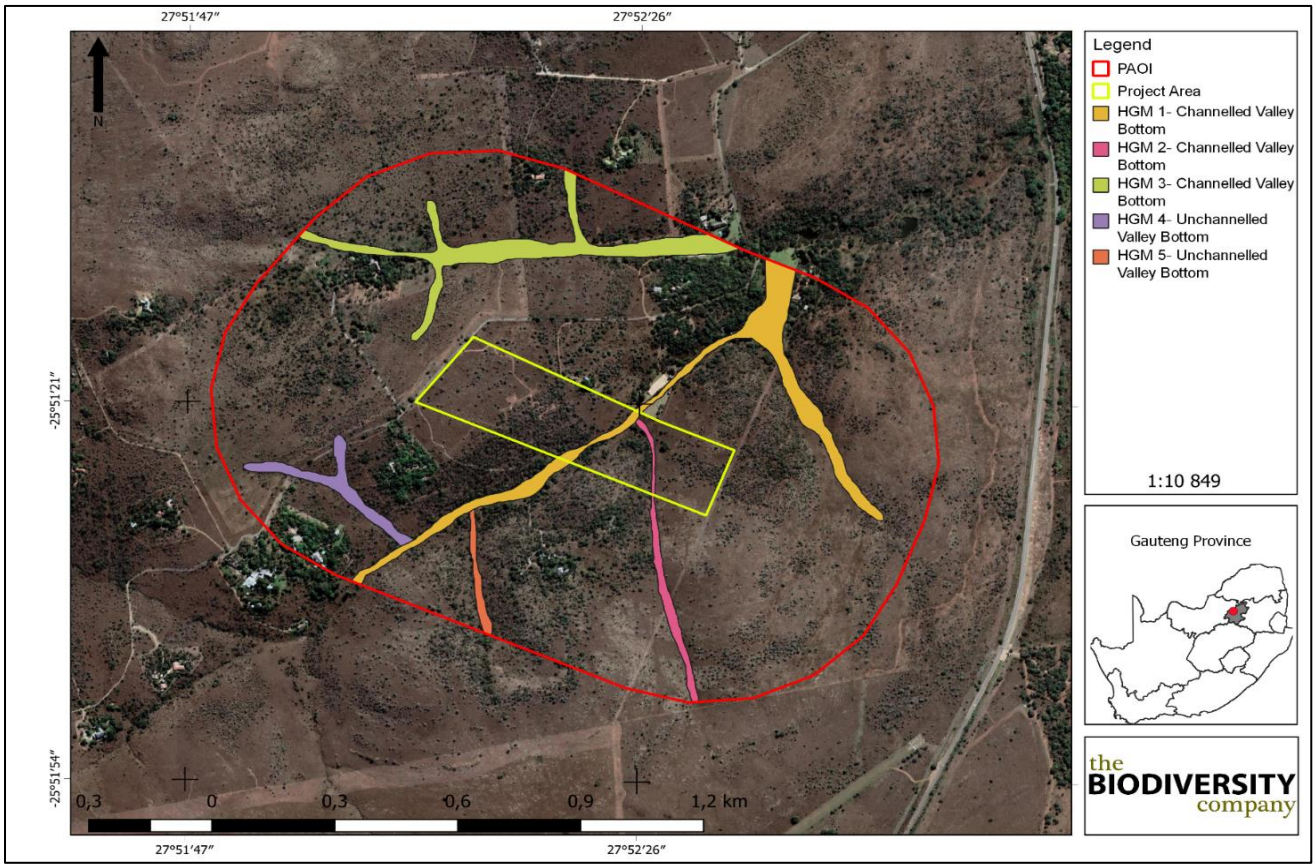


Figure 6: Wetlands delineated within the Project Area

Alien invasive plant species

Three (3) species listed as NEMBA category 1b, *Lantana camara*, *Verbena bonariensis* and *Opuntia ficus-indica* were recorded within the project area. Also *Gomphocarpus fruticosus* was observed on site. Additionally there is moderate infestation by alien vegetation *Xanthorrhoea.* Photographs of the some of the observed IAP species are presented in figure 5.

Lantana Camara	Pom-pom weed	Opuntia ficus-indica

Figure 7: Photographs illustrating some of the IAP flora species recorded within the Project Area -

According to a Footprint Plant Search Study conducted for the site, it was indicated that:

- The study area is of medium ecological function and low conservation importance;
- The proposed development of a house does not constitute high ecological impact; and
- Establishment of a house is considered to be low environmental impact activity as the impacts are centralized on only the development footprint.

Considering the above, it is worth noting that the footprint of the proposed house is outside the ridge and the wetland areas. This is indicated in figure 6 below. The proposed house is also positioned on the portion of the property where there is predominant infestation of alien vegetation *Xanthorrhoea.*

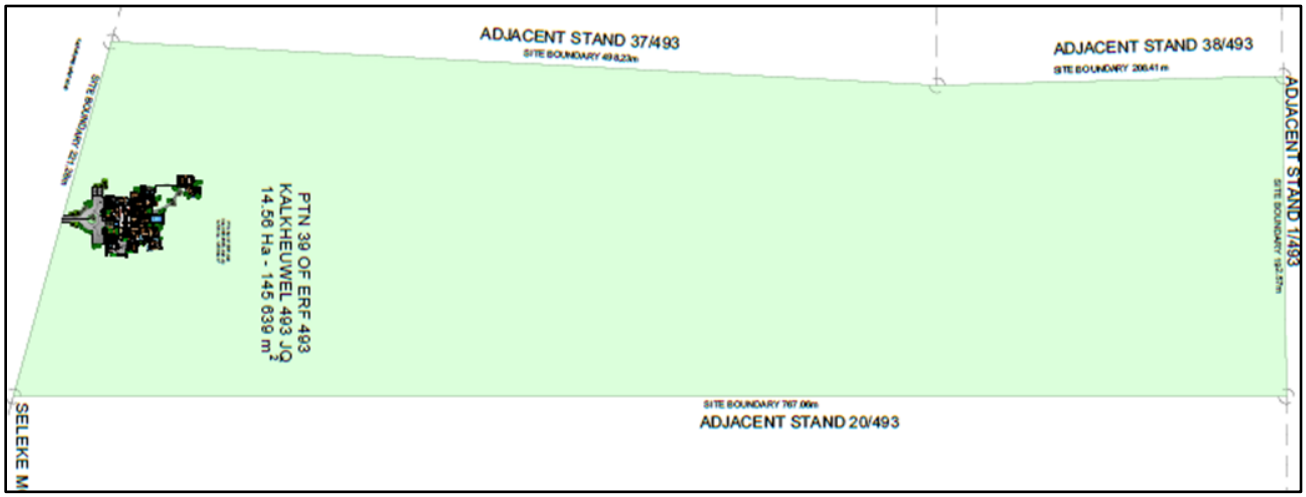


Figure 8. Preferred location of the house

Was a specialist consulted to assist with completing this section			YES (2)	NO
If yes complete specialist details				
Name of the specialist:	1. Carami Burger			
Qualification(s) of the specialist:	Bachelor of Science Honours degree in Ecological Interactions and Ecosystem Resilience			
Postal address:				
Postal code:				
Telephone:		Cell:	27 81 319 1225	
E-mail:	info@thebiodiversitycompany.com	Fax:	27 86 527 1965	
Are any further specialist studies recommended by the specialist?			YES	NO
If YES, specify:				
If YES, is such a report(s) attached?			YES	NO
If YES list the specialist reports attached below				

Signature of specialist: **See attached report** Date:

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

Name of the specialist:	2. Lutendo Ndou			
Qualification(s) of the specialist:				
Postal address:				
Postal code:				
Telephone:		Cell:	(072) 688 7758	
E-mail:	lutendo@matavha.com	Fax:		
Are any further specialist studies recommended by the specialist?			YES	NO
If YES, specify:				
If YES, is such a report(s) attached?			YES	NO
If YES list the specialist reports attached below				

Signature of specialist: **See attached report** Date:

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	
Other land uses (describe):				

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.

			NORTH			
WEST	1,16	1,8	1,5,8	1,8	1,3	EAST
	1,2,16	1,5	1,8	14	1	
	1,	1	SITE	1,8	1	
	1,	1,8	1	1,2	1	
	1,8	1,	1,5	1,5,8	1,2	
			SOUTH			

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

Have specialist reports been attached	YES	NO
If yes indicate the type of reports below		

Ecological Scan	YES	NO
Bulk Services Report: Electricity	YES	NO
Geo-hydrological Assessment	YES	NO
Outline Scheme Report	YES	NO
Township Establishment Proposed Annexure T Planning Memorandum (Appendix G3)	YES	NO
Traffic Impact Study	YES	NO
Heritage Impact Assessment Report	YES	NO
Geotechnical Study (Footprint Specific Dolomite Stability Assessment)	Yes	NO

9. SOCIO-ECONOMIC CONTEXT

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

The site falls within Ward 33 Mogale City Local Municipality. Ward 33 is situated within Muldersdrift cluster wards, in the north-eastern region of the municipal area. The ward where the site is located borders on the south-western areas of the City of Tshwane Metropolitan Municipality.

The site is located within and in close proximity to a few prominent landuses and landmarks of strategic significance to the local as well as the broader community. These include:

- The Cradle of Humankind World Heritage Site (COHWHS); and
- Lanseria Airport.

The COHWHS is internationally recognized and is a key structuring element for the region of the municipality within which the application property is found. In this regard guidelines have been developed and demarcated the COHWHS into primary and secondary zones, and these zones are subjected to land development guidelines based on levels of acceptable change. To be considered together with these is the fact that the site is within Magaliesberg Biosphere Reserve. The guidelines are directly linked to environmental beneficiation with a strong focus on small scale, low impact tourism development.

In terms of the Spatial Development Framework for Mogale City, one of the challenges related to these guidelines is that these parameters do not recognize human settlement within the WHS, though there are indeed settlements that exist there.

In this regard the land use patterns observed, in the area where the application site is located, are dominated by low density, mostly single dwelling structures within fenced farming plots and farm portions. Also, there are tourism and hospitality related low impact developments. These include guest houses, equestrian related farms, game farms and health spa establishments. These farming plots and farm portions, including the application site, are within a fenced-off and boomed rural settlement of Kalkheuwel West Security Boom. Access to the site and the Kalkheuwel West Security Boom settlement is through R512/Phelidaba Road and Eland Drive East.

The proposed development is thus in line with the existing sense of place and predominant land use patterns of the area. As a consequent of the above, the proposed residential dwelling does not conflict with the land uses earmarked for this region.

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

If YES, explain:

N/A

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

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

A Phase 1 Heritage Impact Assessment for a proposed development was conducted and constituted of desktop and field assessment.

Based on outcomes of the Heritage Impact Assessment, there are some cultural heritage sites and features present in the larger geographical area close to the study and proposed development area footprint. These include various Stone Age, Iron Age and recent historical sites. Known palaeontological fossil sites associated with the Cradle of Humankind Area are located in the larger area as well. The closest one to the development area is the Haasgat site. Notwithstanding the above, there are no stone age, iron age and recent historical sites and features that were identified and recorded in the study and development area.

Although it is possible that sites could have been missed as a result of many factors, it is more likely that if any sites are to be found in the proposed new development area these would not be of any high significance. If any are to be found during the development activities care should be taken to avoid any possible negative impacts on these sites. A Heritage Specialist should then also be contacted to undertake a site visit to investigate the finds and to provide recommendations on the way forward.

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

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

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

The public participation process is being conducted in accordance with the requirement of the EIA Regulations, 2014.

1. LOCAL AUTHORITY PARTICIPATION

Local authorities are key interested and affected parties in each application and no decision on any application can be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the City of Johannesburg Metropolitan Municipality have been informed of the application and givenleast thirty (30) calendar days to comment of on the Draft BAR.

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

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

The public participation process is currently underway. Comments received from the authority will be recorded, responded to and collated into the Final BAR.

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

2. 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

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

The public participation process is currently underway. Comments received from the stakeholders will be recorded, responded to and collated into the Final BAR.

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

3. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

The public participation processhas been undertaken in accordance with the requirements of the Regulations. The need for a public meeting or any other additional measure will be determined by the responses received from the public.

All comments and responses to each comment of the public / interested and affected party are being recorded in the Comments and Responses Report as prescribed in the regulations and will be attached to the Final BAR.

4. 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&Ap

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	**0**	times	(complete only when appropriate)

Section D Alternative No.	**Proposal**	(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**	NO

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

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

Construction waste will comprise mainly of excess spoil material from ground excavation and trenching activities, vegetation, construction material, general waste from site personnel, paints and solvents.

Spoil material will be reused where possible (as backfill or erosion mitigation works) while excess spoil will need to be disposed of off-site. Spoil material will be hauled with tipper trucks to be a pre-determined spoil site, the area will be covered with a layer of topsoil and re-vegetated.

General waste will be kept in bins within the construction site and will be collected and disposed of into a skip and transported to the nearest landfill site.

Spent canisters for paints and solvents will be the responsibility of the respective contractor and shall be disposed of at a suitably licensed landfill site or recycled as required.

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

- Spoil material will be re-used as backfill material and excess will be disposed of at the nearest registered Municipal Dumping site.
- General waste that is not recyclable will be disposed of at the nearest municipal landfill site;
- Hazardous waste (paint) will be disposed of at hazardous

Will the activity produce solid waste during its operational phase?	**YES**	NO
If yes, what estimated quantity will be produced per month?	Not available	

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

Solid waste will be collected and disposed of by the municipality.

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

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

To be disposed of at licensed landfill site.

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

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

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:

Frequent correspondence between the different contractors on the proposed development will ensure optimum reuse and recycling of materials where possible. Furthermore, it is proposed that all waste construction materials be sorted into recyclable and non-recyclable materials. The recyclable materials should be re-used where possible or disposed of by a recycling company.

Liquid effluent (other than domestic sewage)

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	YES	**NO**
If yes, what estimated quantity will be produced per month?	N/A	
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**
If yes, what estimated quantity will be produced per month?	N/A	

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

N/A

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**

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:

Liquid effluent (domestic sewage)

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

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

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

The proposed development will connect to a septic tank.

Emissions into the atmosphere

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

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:

During construction, there will be localized liberation of dust due to excavations and the hauling of materials around the site. Localised exhaust emissions will also occur. Once the construction work is completed there will be limited private vehicular emissions.

2. WATER USE

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

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

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:		N/A
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	**NO**

If yes, list the permits required

If yes, have you applied for the water use permit(s)?	YES	NO
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 house will be supplied with electricity by Eskom.

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

N/A

4. ENERGY EFFICIENCY

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

Energy saving measures such as energy saving lighting choices will be implemented during operation. Further alternative and energy saving measures could be included in the design of house.

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

The following alternative energy sources can be considered:

Solar

Use of solar power for water heating and outside lighting will be encouraged this development.

SECTION E: IMPACT ASSESSMENT

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

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

The public participation process is currently underway. Comments received from Registered Interested and Affected Parties will be recorded, responded to and collated into the Final BAR.

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):

N/A

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

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

The beneficial and adverse impacts of the proposed development have been discussed below.

Nature: classification of whether the impact is positive or negative, direct or indirect.

Extent: spatial scale of impact and classified as:

- **Site:** the impacted area is the whole or significant portion of the site.
- **Local**: Within a radius of 2 km of the construction site.
- **Regional:** the impacted area extends to the immediate, surrounding and neighbouring properties.
- **National**: the impact can be considered to be of national significance.

Duration: Indicates what the lifetime of the impact will be and is classified as:

- **Short term**: The impact will either disappear with mitigation or will be mitigated through natural process in a span shorter than the construction phase.
- **Medium term**: The impact will last for the period of the construction phase, where after it will be entirely negated.
- **Long term**: The impact will continue or last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter. The only class of impact which will be non-transitory.
- **Permanent**: Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient.

Intensity: Describes whether an impact is destructive or benign;

- **Low**: Impact affects the environment in such a way that natural, cultural and social functions and processes are not affected.
- **Moderate**: Affected environment is altered, but natural, cultural and social functions and processes continue albeit in a modified way.
- **High**: Natural, cultural and social functions and processes are altered to the extent that they temporarily cease.
- **Very High**: Natural, cultural and social functions and processes are altered to extent that they permanently cease.
- **Probability**: Describes the likelihood of an impact actually occurring:
- **Improbable**: Likelihood of the impact materialising is very low
- **Possible**: The impact may occur
- **Highly Probable**: Most likely that the impact will occur
  - **Definite**: Impact will certainly occur.

Significance: Based on the above criteria the significance of issues the total number of points scored for each impact indicates the level of significance of the impact, and is rated as:

- **Low:** the impacts are less important.
- **Medium:** the impacts are important and require attention; mitigation is required to reduce the negative impacts.
- **High:** the impacts are of great importance. Mitigation is therefore crucial.

Cumulative: In relation to an activity, means the impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.

Mitigation: Where negative impacts are identified, mitigation measures (ways of reducing impacts) have been identified. An indication of the degree of success of the potential mitigation measures is given per impact.

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

Significance Rating of classified impacts (Extent + Duration + intensity) x Probability)		
Impact	**Points**	**Description**
Low	**3 – 23**	An acceptable impact for which mitigation is desirable but not essential. The impact by itself is insufficient even in combination with other low impacts to prevent the development being approved. These impacts will result in either positive or negative medium to short term effects on the social and/or natural environment.
Medium	**24 -37**	An important impact which requires mitigation. The impact is insufficient by itself to prevent the implementation of the project but which in conjunction with other impacts may prevent its implementation. These impacts will usually result in either a positive or negative medium to long-term effect on the social and/or natural environment.

High	**38-43**	A serious impact, if not mitigated, may prevent the implementation of the project (if it is a negative impact). These impacts would be considered by society as constituting a major and usually a long-term change to the (natural &/or social) environment and result in severe effects or beneficial effects.
Very high	**44- 48**	A very serious impact which, if negative, may be sufficient by itself to prevent implementation of the project. The impact may result in permanent change. Very often these impacts are unmitigatable and usually result in very severe effects, or very beneficial effects
Status	Denotes the perceived effect of the impact on the affected area	
Positive (+)	Beneficial impact	
Negative (-)	Adverse impact	
Negative impacts are shown with a (-) while positive ones are indicated as (+)		

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.

Potential impacts:	**Significance rating of impacts**		**Proposed mitigation:**	**Significance rating of impacts after mitigation:**		**Risk of the impact and mitigation not being implemented**
	Alt 1	**Alt 2**		**Alt 1**	**Alt 2**	
DESIGN AND PLANNING PHASE						
Construction camp Placement of camp and infrastructure could impact on fauna and flora habitats	**-ve**	**-ve**	Construction camp to be placed in an area which is less environmentally sensitive and already disturbed and	**-ve**	**-ve**	**Low**
CONSTRUCTION PHASE						
Job opportunities Creation of job opportunities during the construction phase	**+ve**	**+ve**	No mitigation required	**+ve**	**+ve**	
Geology and soils: • Destabilisation of surface geology as a result of excavations. • Potential erosion, degradation and loss of topsoil due to construction activities as well as stormwater runoff.	**-ve**	**-ve**	• Site disturbances must be limited to the areas where structures will be constructed. • Excavated rocks and boulders to be used for erosion protection on site. • Excess material from excavations together with construction rubble must be appropriately disposed of. • Suitable excavated material is to be stockpiled next to excavations for use as backfill. Areas to be backfilled must be cleared of all unsuitable material and debris. • Topsoil should only be exposed for minimal periods of time and adequately stockpiled to prevent loss through runoff. The soil is to be used during rehabilitation or within the site. • All stockpiles must be restricted to designated areas. • Areas susceptible to erosion must be protected by installing the necessary temporary and/or permanent drainage works to	**-ve**	**-ve**	**Low**

			prevent surface water from being concentrated in streams. • Any tunnels or erosion channels developing during the construction period shall be backfilled and compacted. • Cleared areas to be effectively stabilised to prevent and control soil erosion.			
Topography and slopes Alteration of topography due to stockpiling of soil, building material, debris and waste material on site.	**-ve**	**-ve**	• No stockpiling of soil and other material on areas in a manner to pose obtrusive visual impact; • Precautionary and design measures proposed by the engineer must be implemented. • Temporary stabilisation of slopes using geo-textiles; and installation of gabions and reno-mattresses where necessary.	**-ve**	**-ve**	**Low**
Biodiversity (fauna and flora) • Destruction, loss and fragmentation of habitats, functional ecosystems and the vegetation community.	**-ve**	**-ve**	• The project footprint must be kept as small as possible and be strategically located outside the Class 1 ridge area as well as the Near Threatened (NT) plant species buffer • No workers or machinery is to be allowed outside of the fenced off construction areas.	**-ve**	**-ve**	**Low**
• Introduction of Invasive Alien Plant (IAP) species and invasive fauna.	**-ve**	**-ve**		**-ve**	**-ve**	**Low**
• Displacement of the indigenous faunal community (including SCC) due to habitat loss, direct mortalities, and disturbance (road collisions, noise, dust, light, vibration, and poaching).	**-ve**	**-ve**	• Workers must be limited to areas under construction within the site and access to the riverine area must be strictly regulated during construction). • Mobile toilets must be provided in order to minimize un-authorised traffic of construction workers outside of the designated areas. • All temporary stockpile areas including litter and dumped material and rubble must be removed on completion of construction. • The Contractor must ensure that no faunal species are disturbed, trapped, hunted or killed during the construction phase. Fines must be imposed and immediate dismissal of any employee who is found attempting to snare or otherwise harms faunal species. All animals captured must be released in appropriate habitat away from the development	**-ve**	**-ve**	**Low**
Air Quality:	**-ve**	**-ve**	• Dust suppression measures must be implemented on access roads	**-ve**	**-ve**	**Low**

• Certain activities have the potential to be sources of fugitive dust during construction on site These include: • Dust from access roads. • Dust from area cleared for construction. • Emissions from construction machinery and equipment. • Trucks transporting spoil and fill material.			and working areas during dry periods. Water used for this purpose must be in quantities that do not result in the generation of run-off. • Adherence to speed limits on site roads to prevent the liberation of dust into the atmosphere must be enforced • All site workers will need to wear the appropriate PPE • Transported material that can be blown-off as dust must be covered to limit dust generation.			
Noise: Likely increase in noise pollution due to, among others, the excavations and site clearing, construction vehicles and construction staff, operation of cement mixer machine, blasting and or drilling.	**-ve**	**-ve**	• All equipment and activities to comply with noise regulations. • Silencer units in vehicles and equipment to be maintained in good working order. • Workers working in area where the 8-hour ambient noise levels exceed 85dBA must have the appropriate Personal Protective Equipment (PPE). • Work should be carried out between 7am and 5pm and no work should be carried out during Sundays and public holidays. • Any blasting to be carried out as per the applicable laws.	**-ve**	**-ve**	**Low**
Visual Intrusion & Light pollution Pollution may occur due to the following: • Littering and illegal dumping on the site and surrounding. • Removal of vegetation may cause visual exposure/intrusion. • Unsightly construction waste pile may be visually intrusive; • Lights from the contractor's camp and the construction site could be visually intrusive.	**-ve**	**-ve**	• The site must be managed properly and all rubbish and rubble removed to a registered waste disposal facility. • Excess soil and bedrock should be disposed of at an appropriate facility. A certificate of disposal must be obtained for any waste that is disposed of. • Refuse bins must be provided on site and these must be emptied regularly. Waste must not remain on site for more than 2 weeks. • The construction camp must be properly screened and located closer to the access road. • Indigenous plants or trees must be retained to provide screens to make the construction site less visually intrusive. • Advertising signs should blend in with the environment. • Light pollutions should be minimised. Lighting on site is to be sufficient for safety and security purposes, but shall not be intrusive	**-ve**	**-ve**	**Low**

			to neighbouring residents, disturb wildlife. • Construction activities must be limited to the daylight hours. • Should overtime/night work be authorised, the Contractor shall be responsible to ensure that lighting does not cause undue disturbance to neighbouring residents. In this situation low flux and frequency lighting shall be utilised.			
Waste: Waste generation could have a negative impact on the environment, if not controlled adequately. Waste streams likely to include domestic waste, spent grinding material, mixed concrete, paint cans and brushes, construction rubble and other construction waste	**-ve**	**-ve**	• General waste disposal bins must be made available for use on site. General waste should be placed in a water tight container and disposed of on a regular basis. • Where possible construction waste should be recycled or reused. • Waste should be temporarily stored on site for a limited period only while awaiting disposal. • Records of all waste taken off site and disposed of must be kept as evidence. • Building rubble must be re-used, where possible, where this is not possible, the rubble to be disposed of at an appropriate site. Burning of waste material will not be permitted. • Hazardous materials generated through spillages during construction and maintenance periods must be cleaned up using absorbent material provided in spill kits on site, and must be disposed of accordingly at a hazardous waste landfill. Absorbent materials used to clean up spillages should be disposed of in a separate hazardous waste bin. All hazardous waste to be disposed of in a registered hazardous waste disposal facility. • The storage area for hazardous material must be concreted, bunded, covered, labelled and well ventilated. • Employees to be provided with appropriate PPE for handling hazardous materials.	**-ve**	**-ve**	**Low**
Traffic Additional traffic generated owing to construction vehicles and heavy vehicles delivering materials to the site.	**-ve**	**-ve**	• Access to the site to utilise existing access road. • Construction vehicles are not to be parked on the roads thereby blocking the way to the neighbouring properties.	**-ve**	**-ve**	**Low**

			• Clear signs should be displayed and entrance to the site indicating a construction site and turning construction vehicles.			
Safety and security A construction site can be a dangerous place and thus could result in harm to people and property and by their nature act as a magnet to the unemployed, resulting in large numbers of people gathering around the site.	**-ve**	**-ve**	• The construction area to be fenced off to prohibit unauthorised entry. • Health and Safety measures to be implemented and continuously monitored during construction. • All construction staff must have the appropriate PPE. • Staff handling chemicals or hazardous materials must be trained in the use of the substances and the environmental, health and safety consequences of incidents. • Record and report any environmental, health and safety incidents to the responsible person. • Signs should be erected to warn of construction activities. • The site and crew are to be managed in strict accordance with the Occupational Health and Safety Act (Act No. 85 of 1993) and the National Building Regulations • All structures that are vulnerable to high winds must be secured. • All manhole openings are to be covered and clearly demarcated with danger tape. • Potentially hazardous areas such as trenches are to be cordoned off and clearly marked at all times. • The Contractor is to ensure traffic safety at all times, and shall implement road safety precautions for this purpose. • All vehicles and equipment used on site must be operated by appropriately trained and / or licensed individuals in compliance with all safety measures as laid out in the Occupational Health and Safety Act (Act No. 85 of 1993) (OHSA). • An environmental awareness training programme for all workers shall be put in place by the Contractor. Before commencing with any work, all workers shall be appropriately briefed about the EMPr and relevant occupational health and safety issues. • Access to fuel and other equipment stores is to be strictly controlled.	**-ve**	**-ve**	**Low**

			• No unauthorized firearms are permitted on site. • Emergency procedures must be available on site and communicated to all. • Adequate emergency facilities must be provided for the treatment of any emergency on the site. • The nearest emergency service provider must be identified during all phases of the project as well as its capacity and the magnitude of accidents it will be able to handle. Emergency contact numbers are to be displayed conspicuously at prominent • The basic spill control kit must be available at each construction camp within the site.			
OPERATIONAL PHASE						
Employment opportunities created. Opportunities will be created in the maintenance of the house.	**+ve**	**+ve**	No mitigation measures required	**+ve**	**+ve**	
Fauna and flora • Continued fragmentation and degradation of functional habitats and ecosystems (including that caused by spill events); • Continuing spread of IAP and weed species; and • Ongoing displacement and direct mortalities of the faunal community (including SCC) due to continued disturbance (road collisions, noise, light, dust, vibration, poaching, etc.).	**-ve**	**-ve**	• Prevent the significant loss and fragmentation of vegetation communities within the CBA, Class 1 ridge and 'Critically Endangered' wetland areas in the project area; • Reduce the negative fragmentation effects of the development and enable the safe movement of fauna species; • Prevent the direct and indirect loss and disturbance of flora and fauna species and communities, including SCC; • Maintenance activities to ensure that there is no invasion by alien vegetation; • Light pollution should be minimised. Lighting to be sufficient for safety and security purposes, but shall not be intrusive to neighbouring residents, disturb wildlife. Yellow sodium lights can be used as they do not attract as many invertebrates (insects) at night and will not disturb wildlife. • Littering, rubbish and illegal dumping on the site is NOT allowed. • Exposed areas should be rehabilitated with a grass mix that blends in with the surrounding vegetation. The grass mix should	**-ve**	**-ve**	**Low**

			consist of indigenous grasses adapted to the local environmental conditions.			
Waste management: –i.e. Domestic general wastes generated could cause pollution.	**-ve**	**-ve**	• Domestic waste should be placed in a watertight container and disposed of on a regular basis. • All equipment that has the potential for spillages or leakages shall be equipped with drip-trays. • Oil/effluent spill/leak must be cleaned immediately and any contaminated soil must be removed and disposed of through a recognisable waste disposal method.	**-ve**	**-ve**	**Low**
Visual Intrusion & Light Pollution due to the following: • New house will alter the visual characteristics of the site and the surroundings. • Littering, rubbish and illegal dumping on the site is visually intrusive • The building may be visually intrusive. • Lights from the house may be visually intrusive.	**-ve**	**-ve**	• Light pollution should be minimised. Lighting on site is to be sufficient for safety and security purposes, but shall not be intrusive to neighbouring residents, disturb wildlife, or interfere with road traffic. • Littering, rubbish and illegal dumping on the site is NOT allowed. • Refuse must be contained and disposed of at the Municipal landfill site. • The buildings may not be visually intrusive. • All lights used for non-security purposes should be energy efficient for example compact fluorescent lights (CFL). • Outside lights will have to be downward shining (eyelid type), low wattage and should not be positioned to face away from neighbouring properties.	**-ve**	**-ve**	**Low**
Noise: There is likely to be an increase in noise due to the people around the new house.	**-ve**	**-ve**	Appropriate noise control measures to be implemented in order not to have impact on the surrounding environment and immediate neighbours.	**-ve**	**-ve**	**Low**
Compliance with spatial plans and policies	**+ve**	**+ve**	No mitigation required. The proposed development is aligned with the objectives of the SDF.	**+ve**	**+ve**	-
Increase in municipal tax base	**+ve**	**+ve**	No mitigation required. Land improvements lead to increased tax contributions to the municipality.	**+ve**	**+ve**	-

No Go				
Potential impacts:	**Significance rating of impacts**	**Proposed mitigation:**	**Rating after mitigation:**	**Risk of impact and mitigation not implemented**
Job opportunities	**-ve**	Creation of job opportunities related to maintenance of the undeveloped site	**-ve**	**High**
Geology and soils	**+ve**	No mitigation required.	**+ve**	**Low**
Topography and slope	**-ve**	No mitigation required.	**-ve**	**Low**
Fauna and flora	**-ve**	Introduction of land restoration measures reduce perpetuating negative impacts associated with the unmanaged environment.	**+ve**	**High**
Air quality		No mitigation required.		**Low**
Noise		No mitigation required.		**Low**
Visual impact	**+ve**	No mitigation required.	**+ve**	**Low**
Waste management		No mitigation required.		**Low**
Impeded traffic flow		No mitigation required.		**Low**
Safety and security	**-ve**	The development and occupation of the site will result in increased security.	**-ve**	**Low**
Compliance with spatial plans	**+ve**	The development and occupation of the site is in line with the spatial plans.	**+ve**	**Low**
Increase in tax base	**-ve**	Exercise of approved rights will result in perpetuating negative impacts associated with the unmanaged environment.	**-ve**	**High**

Specialist reports that were used to fill in the above tables and attached in Appendix.

Biodiversity Assessment
Terrestrial Ecological Scan Investigation
Geotech Assessment

Describe any gaps in knowledge or assumptions made in the assessment of the environment and the impacts associated with the proposed development.

It is also assumed that all the specialist studies and findings of the assessment of this proposed dwelling structure are correct.

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.

The proposed development will not have any impacts that would result from decommissioning.

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

N/A

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 impacts result from the incremental impact of the proposed activity on a common resource when added to the impacts of other past, present, or reasonably foreseeable future activities. This section provides a description and analysis of the potential cumulative effects of the proposed dwelling structure.

The effects of such changes on the biophysical environment and the socio-economic conditions are also considered.

Cumulative impacts analysis

For the most part, cumulative impacts or aspects thereof are too uncertain to be quantifiable, due to mainly lack of data availability and accuracy. This is particularly true of cumulative impacts arising from potential or future projects, the design or details of which may not be finalised or available and the direct and indirect impacts of which have not yet been assessed.

Given the limited detail available regarding such future developments, the analysis that follows is of a generic nature and focuses on key issues and sensitivities for the proposed activity and how these might be influenced by cumulative impacts with other activities. In most cases, only qualitative assessments of cumulative impacts are possible, i.e. they are not formally rated.

In summary, potential cumulative impacts created from the establishment of the proposed dwelling structure could be reduced should mitigation measures be implemented.

Geo-hydrological impacts

The main concerns in terms of possible groundwater contamination from the proposed construction of a house are during the construction phase. Spillages can occur which may impact both the soil and groundwater environment.

Although the potential of the proposed development to impact on the groundwater is considered to be low, mitigation or monitoring measures to prevent any negative impacts on the aquifer will nonetheless have to be implemented.

Mitigation measures should focus on minimising possible subsurface and surface water contamination as well as minimising changes to the characteristics of surface water flow into drainage channels and wetlands which could lead to water pollution and contamination. The areas along the down-gradient drainage channel are regarded as sensitive in terms of surface water and groundwater pollution.

The proposed dwelling structure is therefore expected to have no impact on the groundwater if mitigation measures are implemented.

Fauna and flora

The most critical aspect to consider when assessing negative cumulative impacts specific to the project pertains to the loss of Carletonville Dolomite Grassland as well as edge effect to the Class 1 ridge and wetlands.

According to the 2018 National Biodiversity Assessment, the total amount of Carletonville Dolomite Grassland habitat within 30 km of the project amounts to 5296.62 Ha. However, when considering the transformation that has taken place within this radius – 4479,9 Ha remains. Therefore, the area within 30 Km of the project has experienced approximately 15,42 % loss in natural habitat of this vegetation type. Considering this context, the proposed residential dwelling structure will be approximately 700m² or 0.07 Ha in extent. This means that the total amount of remaining habitat lost as a result of the project in the region amounts to 0.001% (the development as a percentage of the total remaining habitat).

Table Loss of local greenbelt and wetland habitat as a result of the project activities

	Total Habitat (ha)	Tot. Remaining Habitat (ha)	Total Historical Loss	Project Footprint (ha)	Cumulative Habitat Lost
Project cumulative effects (Spatial)	5296,62	4479,9	15,42 %	0.07	**0.001%**

The overall cumulative impact assessment is presented in the table above. Although the region has experienced a loss in natural habitat over the past years, the total functional area lost as a result of the proposed project may be considered relatively small and as such the overall cumulative effect of the project may be regarded as negligible.

Employment opportunities
The construction of a dwelling house will, albeit minimal, result in additional job opportunities being created.

Economic development in the area
This development will add to the market confidence for economic development in the area.

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

The short-term environmental impacts of the activity include increased construction vehicles, erosion, possible dust, and noise pollution and employment opportunities during the construction phase.

The study area affected by ecologically significant attributes in the form of Carletonville Dolomite Grassland, Class 1 ridge and wetlands. However, there is significant infestation of alien vegetation on the site. Also, the proposed dwelling structure is in line with the existing land use patterns and spatial planning policy prescripts. Additionally, the footprint of the proposed dwelling structure constitutes a significantly low area of less than 0.005% of the study area. As a result, the proposed development will not have a significant negative impact on the ecology of the area.

The reports conclude that from an ecological perspective the site is suitable for development as proposed. Negative impacts especially associated with the construction phase and operational phases can be mitigated. The ecological risks associated with the development are low.

The positive impacts (short and long term) include the following:

- A general improved aesthetics and outlook of the site as a result of clearing of alien vegetation and reduced opportunities for illegal dumping of waste;
- Improved conditions of the property and surrounding environment related to site management measures that are as a result of occupation of the site; and
- Increased job opportunities in the area.

The implementation of mitigation measures identified above and in the attached EMPr is expected to result in the minimisation the negative impacts to acceptable levels. The overall environmental and socio-economic benefits associated with the proposed development far outweigh the short term negative impacts that may result from the development. If the recommendations in the EMPr are implemented and monitored, then the proposed development as outlined will not have negative impacts on society and the environment.

No-go (compulsory)

The no-go option will result in the application site staying in its current state. There is noticeable infestation of alien invasive plant species. Ironically there is also existence of ecologically significant features. This is especially the case given the topographic conditions and regional location. If left undeveloped, there is the possibility of further infestation of invasive alien plant species that will persist. This will have significant negative impacts on the immediate and surrounding environment in the medium to long term period.

The proposed development will result in full and appropriate utilisation of the site and increased security in the area. Also allowing for appropriate management of the site that include eradication of alien invasive plant species. During construction and operational phase the project will result in job opportunities.

This option will result in the above positive impacts associated with the proposal not being realised. At a sub-area and regional level, this option will result in lost developmental opportunities especially in the context of the Spatial Development Framework.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

Potential impacts: (Preferred Alternative)	Significance rating of impacts	Significance rating of impacts after mitigation:
CONSTRUCTION PHASE		
Job opportunities	+ve	+ve
Geology and soils	-ve	-ve
Topography and slopes	-ve	-ve
Biodiversity (fauna and flora)	-ve	-ve
Noise	-ve	-ve
Visual Intrusion & Light pollution	-ve	-ve
Waste	-ve	-ve
Traffic	-ve	-ve
Safety and security	-ve	-ve
Operational phase		
Employment opportunities created	+ve	+ve
Fauna and flora	-ve	-ve
Waste management	-ve	-ve
Visual Intrusion & Light Pollution	-ve	-ve
Noise	-ve	-ve
Compliance with spatial plans and policies	+ve	+ve
Increase in municipal tax base	+ve	+ve

For proposal:

After mitigation, the significance of all impacts in the short-term, are rated as low. Positive impacts of medium significance would be realised in terms of improved management of the environment. Also, there will be increased employment opportunities as well as compliance with the spatial plans.

Should the development be approved, and stringent mitigation measures be implemented and adhered to, edge effects from the development as well as adjacent areas can be controlled. This will ultimately contribute to better management of the natural areas associated with the project area.

No-go alternative:

Currently the site is vacant while adjacent properties have single residential dwelling units. Therefore, impacts such as fencing, roads and powerlines are already associated with the area and traverse the project area in the western section.

The no-go option will deprive the owner an opportunity to reside on the property. This will mean that that land management measures such as clearance of alien vegetation, maintenance of site (fire breaks) etc will have to be implemented irrespective of dwelling rights being utilised.
The no-go option will have low negative impacts on the environment in the short term. However, these negative impacts will be pronounced in the long term. This option therefore is not preferred.

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.

Short term environmental impacts of the project during the construction phase include potential increased traffic, dust, noise and surface water contamination. Therefore, impacts are mostly indirect in the form of overall edge effects associated with the implementation of the project. With the implementation of mitigation measures, there is potential for edge effects from the development as well as adjacent areas to be sufficiently controlled and minimised. This will ultimately contribute to positive impacts in the form of a better managed environment benefiting the site and the surrounding natural areas adjacent to the property.

The implementation of mitigation measures identified above and in the attached EMPr is expected to result in these impacts being mitigated to acceptable levels. The socio-economic impacts have been largely positive.

The overall environmental and socio-economic impact associated with the proposed development is considered to be acceptable.

7. SPATIAL DEVELOPMENT TOOLS

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

Gauteng Provincial Environmental Management Framework (GPEM)

The development site is located within the Zone 1 of the GPEMF. According to the GPEMF Development of single dwelling structures in this zone as applied for is permitted.

Red List Plant Species Guidelines

No Red Listed plant species were found on the site.

Gauteng Noise Control Regulations, 1999

- The Regulations control noise pollution. According to the Regulations, the acceptable noise levels in a residential area situated within an urban area is 55dBA and the maximum acceptable noise levels in a rural area is 45dBA.
- Within the construction phase of the proposed activity, the impact of noise could be problematic, but such impacts are generally short term. One should note that practical mitigation measures for noise pollution are low, but certain measures can be implemented to mitigate the severity.

Regional Spatial Development Framework (RSDF)

- The site is located within Ward 33 of Mogale City Local Municipality. The site is within the Cradle of Humankind World Heritage Site (COHWHS) which is a key structuring element. Land development requirements for this prescribe for a strong focus on small scale, low impact tourism developments. While this is the case from the RSDF of Mogale City Local Municipality, there is recognition of the need for allowance of developments related to human settlements within this region.
- The proposed dwelling structure is located within an area of the COHWHS where there are similar farm portions with single dwelling structures. This leads to a low density residential land use pattern.

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	NO

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

Nil

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:

- Areas susceptible to erosion must be protected by installing the necessary protective materials.

- Waste recycling to be promoted and, where possible construction waste should be recycled or reused while specialist service providers are to be appointed to remove waste for disposal at licensed disposal facilities.
- All hazardous substance must be stored on an impervious surface in a designated bunded area able to contain 110 % to the total volume of materials stored at any given time. Containers for organic solvents can only be cleared on site if containers for liquid waste are provided on site.
- Should any potentially culturally significant artefacts or graves be found during construction, the affected site to be cordoned off and an assessment by Cultural Heritage practitioner be done before proceeding with construction.
- The provisions of the EMPr and other conditions in the Specialist reports must be adhered to.
- In order to confirm the presence of Near Threatened or declining plant species, it is recommended that prior to any development; additional brief follow-up surveys (e.g. a walk-through) should be conducted focusing on searching untransformed habitat which could be affected by the proposed construction activities.

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

The proposed development is likely to have short term environmental impacts which will be minimized through implementation of mitigation measures. These impacts are noted to be manageable given the fact that they are classified as low. This is as a result of the footprint of the proposed house positioned in a less sensitive portion of the property. Also the more ecologically sensitive areas of the application site are considered 'no-go' areas and therefore will not be directly affected by the development. Furthermore the footprint of the proposed house is insignificant i.e. less than 0.005% of the total area of the site. Consequently, the cumulative impacts are also considered to be low.

The development of a dwelling structure on the subject site will contribute to improved management of the environment. The farm portion is currently unoccupied and unmanaged leading to unabated deterioration of the environment, especially related to proliferation of alien invasive plant species. Therefore, indirect positive impacts associated with the proposed construction of a house on the site include the management of alien plant species. Additionally direct positive impacts, predominantly during the construction phase, are in the form of creation of job opportunities.

The proposed development is in line with existing land use patterns of the area. It is thus not in conflict with the objectives and aspirations of the Spatial development Framework of Mogale City Local Municipality.

In terms of securing ecological sustainable development and use of natural resources, it is submitted that while the site is located within an ecologically sensitive area, minimal usage of such a resource beyond conservation purposes enhances their value. This is especially the case when such usage, spatially as a ratio of the bigger environment, is negligible. This is to the extent that the negative impacts are low and can possibly be further minimized with the implementation of mitigation measures. Also, when such usage is primarily aimed at long term improvement of conditions of the site.

10. THE PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED*(CONSIDER WHEN THE*

10 years

11. ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr)

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: APPENDICES

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 Plans
Appendix A[1]: Locality Plan
Appendix A[2]: Preferred Location of the Unit
Appendix A[3]: Alternative Location of the Unit

Appendix B: Site Photographs
Appendix C: Facility illustration(s)
Appendix D: Route position information

Appendix E: Public Participation information
Appendix E[1]: Proof of Site Notice
Appendix E[2]: Written Notices Issued
Appendix E[3]: Newspaper Advert
Appendix E[5]: Minutes of Meetings
Appendix E[6]: Comments of Issues Report
Appendix E[7]: Comments and I&Aps on BAR
Appendix E[8]: Copy of Register of I&Aps

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

Appendix G: Specialist reports
Appendix G[1]: Ecological Assessment Report
Appendix G2: Ecological Footprint Survey
Appendix G3: Geotechnical Investigation Report
Appendix G4: HIA

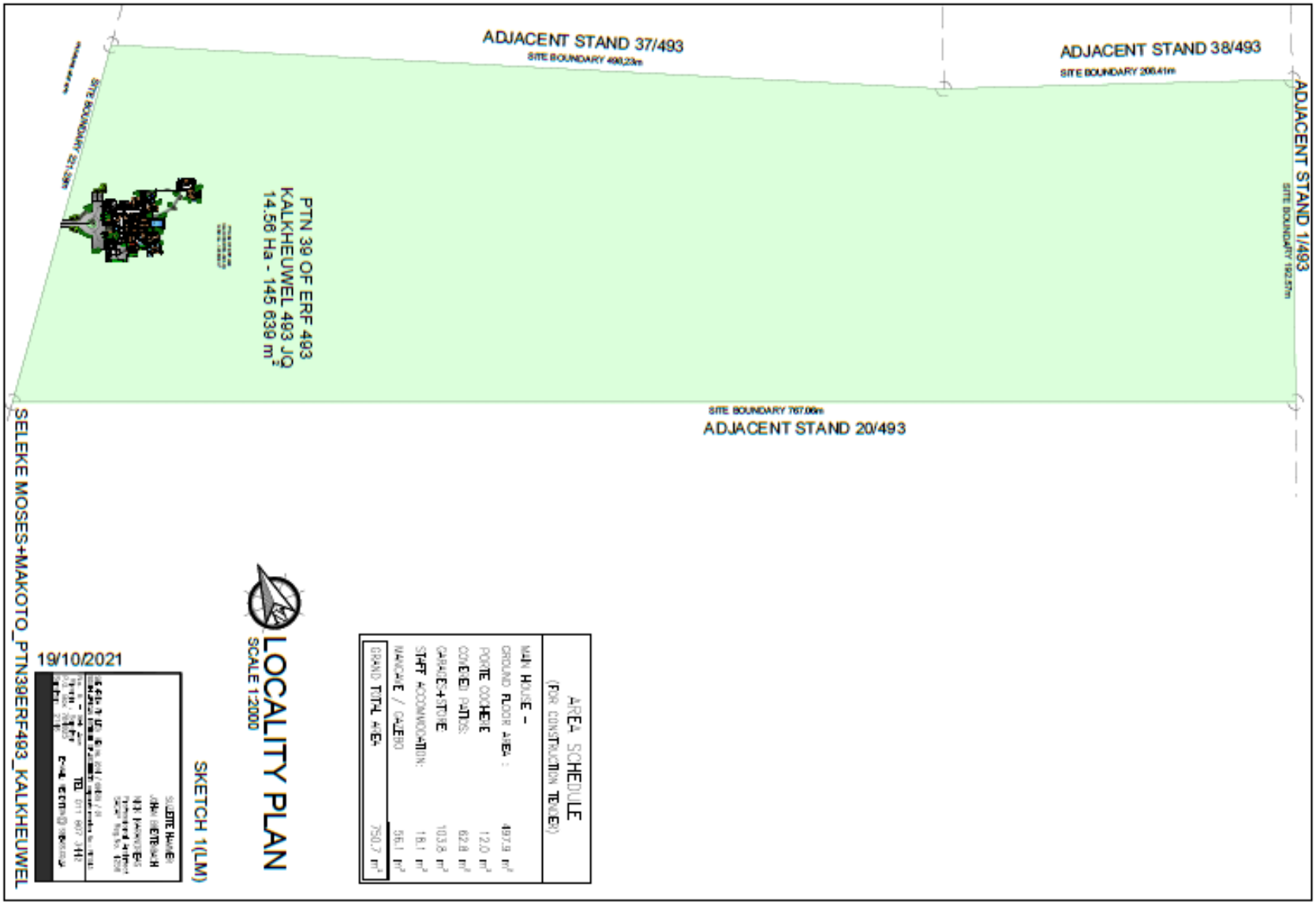
Appendix H: Draft EMPr

Appendix I: Other information

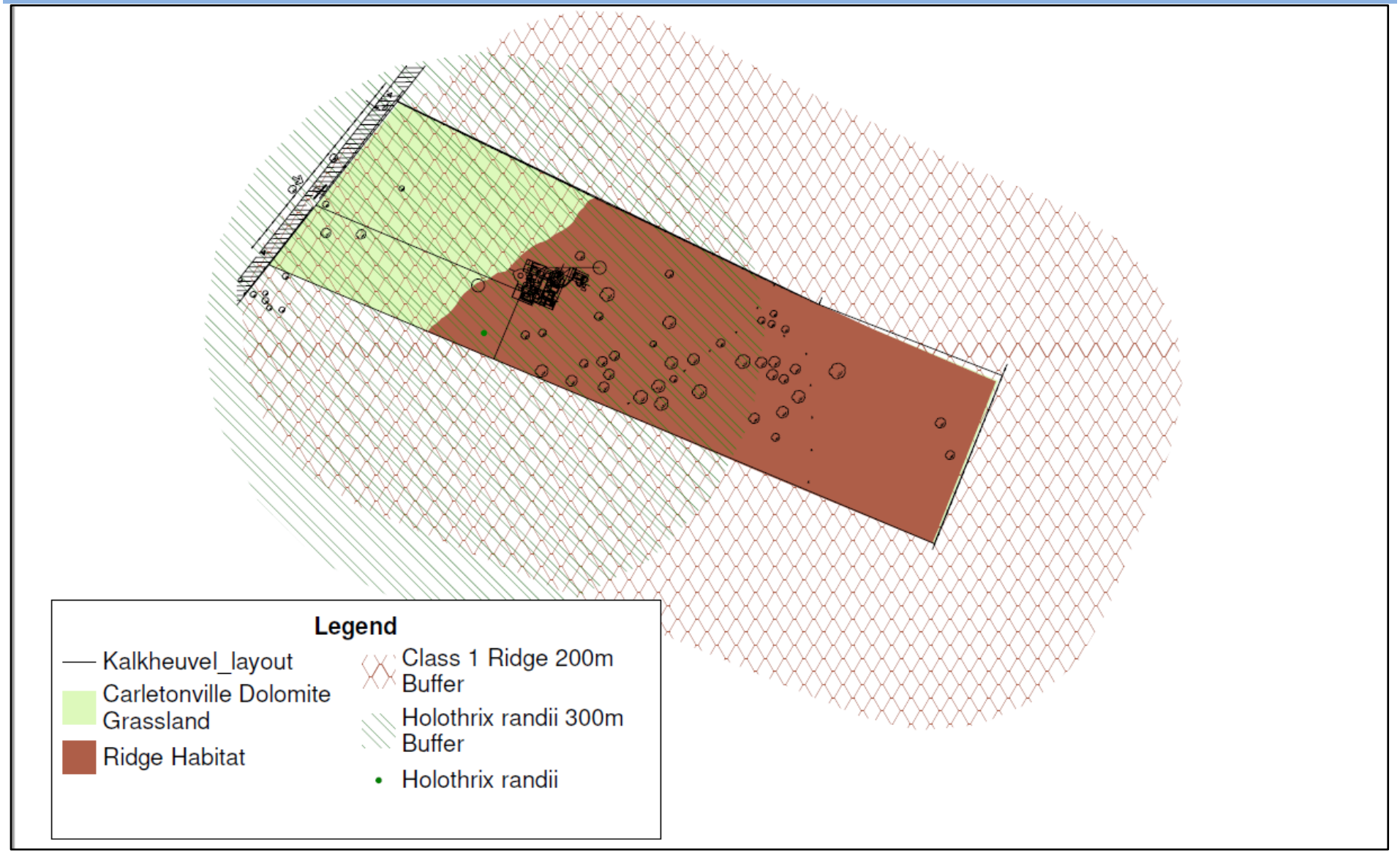
APPENDIX A: SITE AND LAYOUT PLANS

PPENDIX A[1]: LOCALITY PLAN

APPENDIX A²: PREFERRED LOCATION PLAN



APPENDIX A[3]: ALTERNATIVE 2 LOCATION



APPENDIX B: SITE PHOTOGRAPHS

South

South-west

South-East

West

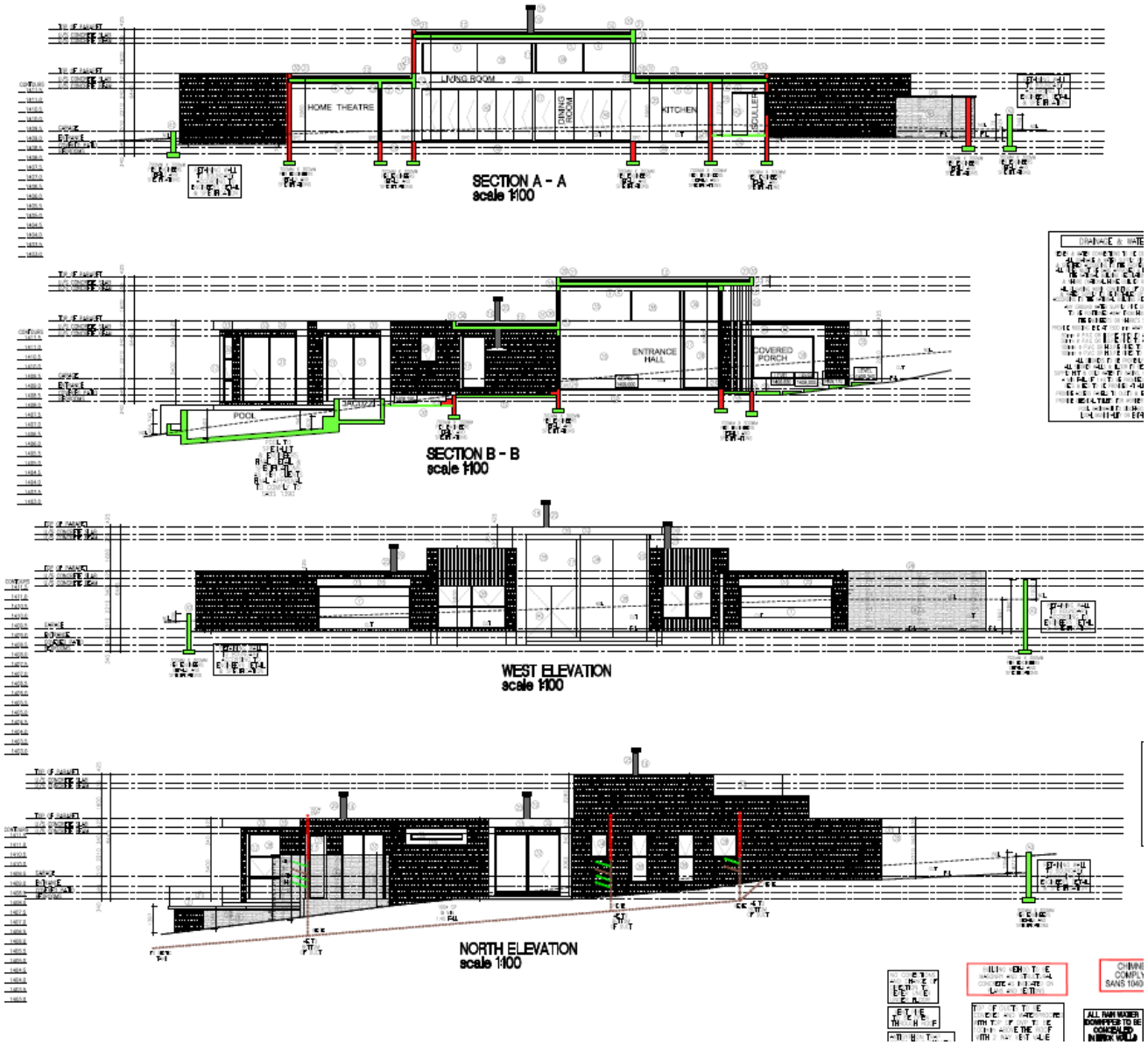
East

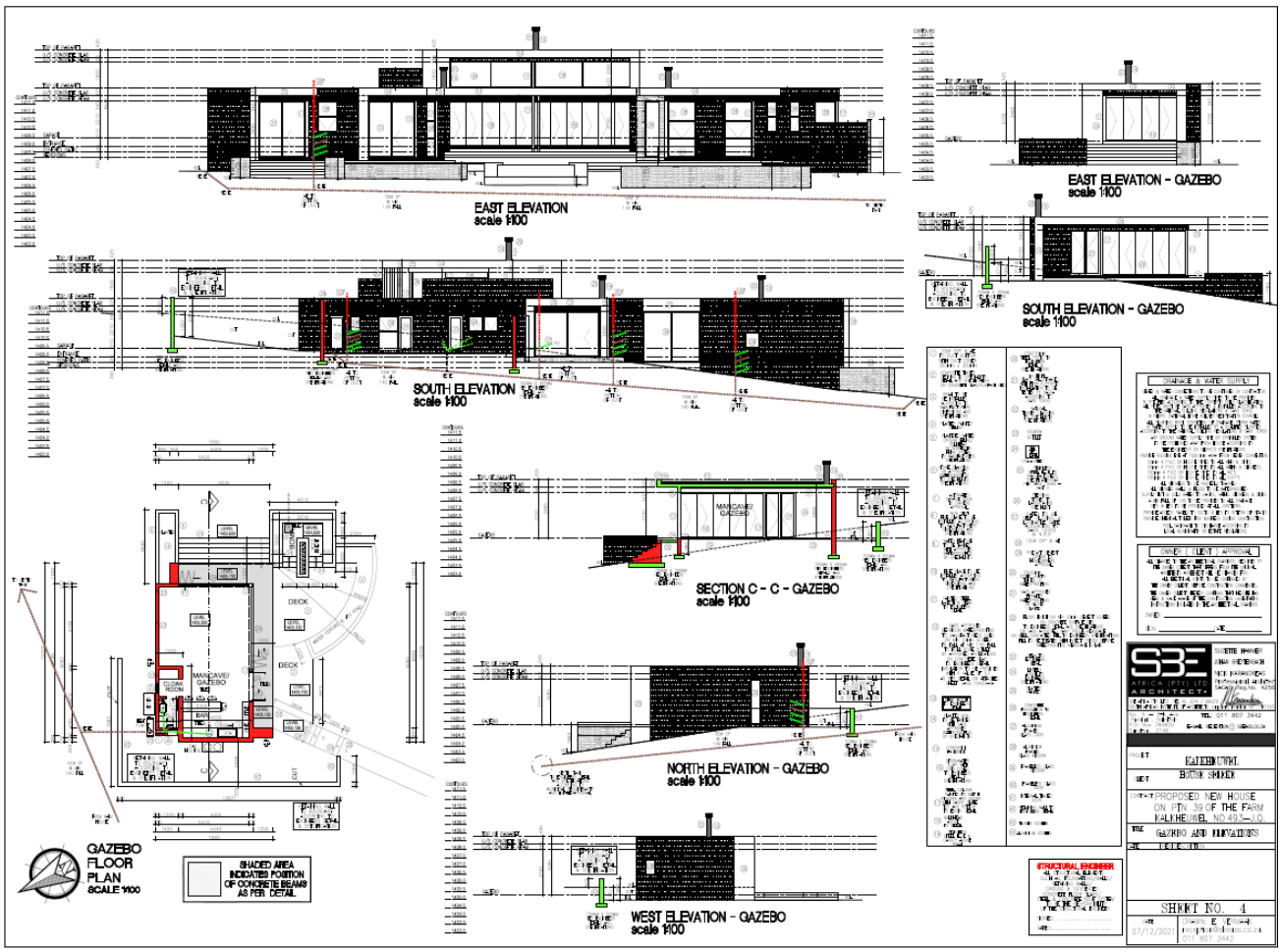
North

North- West

North-East

APPENDIX C: FACILITY ILLUSTRATION




EAST ELEVATION
scale 1:100
EAST ELEVATION - GAZEBO
scale 1:100
SOUTH ELEVATION - GAZEBO
scale 1:100
SOUTH ELEVATION
scale 1:100
SECTION C - C - GAZEBO
scale 1:100
NORTH ELEVATION - GAZEBO
scale 1:100
WEST ELEVATION - GAZEBO
scale 1:100
GAZEBO FLOOR PLAN
SCALE 1:100
SHADED AREA INDICATES POSITION OF CONCRETE BEAMS AS PER DETAIL
DECK
MANGAWEI GAZEBO
KALKHEUWEL
PROPOSED NEW HOUSE ON PTN 39 OF THE FARM KALKHEUWEL NO 493-JQ
GAZEBO AND ELEVATIONS
SHEET NO. 4

APPENDIX D: ROUTE POSITION

N/A

APPENDIX E: PUBLIC PARTICIPATION INFORMATION

To be included in the FBAR

APPENDIX E[1]: PROOF SITE OF NOTICES

APPENDIX E²: WRITTEN NOTICES ISSUED

APPENDIX E³: PROOF OF NEWSPAPER ADVERTISEMENTS

APPENDIX E[4]: COMMUNICATIONS TO AND FROM INTERESTED PARTIES

APPENDIX E[5]: MINUTES OF ANY PUBLIC AND/OR STAKEHOLDER MEETINGS

N/A

APPENDIX E[6]: COMMENTS AND RESPONSES REPORT

APPENDIX E[7]: COMMENTS FROM I&APs ON BASIC ASSESSMENT (BA) REPORT

N/A

APPENDIX E[8]: COPY OF THE REGISTER OF I&APS

APPENDIX F: INFORMATION FROM MUNICIPALITY

Municipal approval

APPENDIX G: SPECIALIST REPORTS

APPENDIX G[1]: ECOLOGICAL ASSESSMENT

APPENDIX G^2: FOOTPRINT ECOLOGICAL ASSESSMENT

APPENDIX G^3: GEOTECHNICAL INVESTIGATION REPORT

APPENDIX G[4]: OUTLINE SCHEME REPORT

APPENDIX H: EMPR

APPENDIX I: OTHER INFORMATION

APPENDIX I[1]: NALI PROFILE

APPENDIX I²: SCREENING TOOL