BASIC ASSESSMENT REPORT

COMMENT PERIOD:

10 November 2017 to 10 December 2017

Greengate Ext 68

Portion 60 of the Farm Rietvallei 180 I.Q. within the Mogale City Local Municipality Area, Gauteng Province.

Applicant:

Vista Developments and Investments (Pty) Ltd

Werner van Zyl

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Cresta

2118

November 2017

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Project Reference:
21633
GDARD Reference:
Gaut 002/17-18/E2093
Report Reference:
21633_BAR_1_1
Report Date:
November 2017
Report Status:
Public Review

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? No

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

No closure plan is included as the development is a permanent development and the establishment of a new private school within the study area. Internal and External water, sewage and stormwater services with public open space forms part of this application

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.

N/A

Have State Departments including the competent authority commented? NO

If no, why?

The BAR will be submitted to the relevant State Departments and will be circulated for review from 10 November 2017 to 10 December 2017.

Comments are expected to be received from the State Departments during this period and will be included within the final Basic Assessment Report which will be forwarded to GDARD the authority on the project for decision-making.

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DOCUMENT PROGRESS

1. DISTRIBUTION LIST

Date	Report Reference Number	Document Distribution	Number of Copies
November 2017	21633_BAR_D0	INTERNAL REVIEW	INTERNAL REVIEW
November 2017	21633_BAR_1_1	INTERNAL REVIEW	INTERNAL REVIEW

2. AMENDMENTS ON DOCUMENT

Date	Report Reference Number		Description of amendment
November 2017	21633_BAR_D0	21633_BAR_D1	Minor amendments; Finalise for Public Review
November	21633_BAR_D1	21633_BAR_1_1	Minor amendments; Finalise for Public Review

SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

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

Greengate Ext. 68 (Portion 60 of the Farm Rietvallei 180 I.Q.)

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

National Department of Water and Sanitation – National Water Act, 1998 (Act No. 36 of 1998)
South African Heritage Resources Agency – National Heritage Resources Act, 1999 (Act No. 25 of 1999)

Legislation	**Competent Authority**
National Water Act, 1998 (Act No 36 of 1998)	Department of Water and Sanitation
National Heritage Resources Act, 1999 (Act No. 25 of 1999)	South African Heritage Resources Agency

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

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.	Department of Environmental Affairs (DEA) & Gauteng Department of Agriculture and Rural Development (GDARD)	27 November 1998 2 September 2014
National Water Act [NWA], 1998 (Act, No 36 of 1998)	Department of Water and Sanitation (DWS)	26 August 1998
National Heritage Resources Act, 1999 (Act No 25 of 1999)	South African Heritage Resources Agency (SAHRA) & Provincial Heritage Resources Authority Gauteng (PHRA-G)	14 April 1999
Water-Use Licensing. The policy Procedure for licensing stream flow reduction activities	DWS	November 1999
Generic Water Use Authorization Application Process – External Guideline	DWS	2007
Water Use Authorization Application Process – External Guideline	DWS	2007
Guideline on Need and Desirability	DEA&DP	2010
Guideline on Alternatives	DEA&DP	2010
Guideline on Public Participation	DEA&DP	2011
IEMS Guideline series	DEA	2014

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

Legislation, policy of guideline	Description of Compliance
DWS, 1999. - Water-use licensing: The policy and procedure for licensing stream flow reduction activities, November1999	Compliance in terms of NWA, 1998 for water uses in terms of sections 21(c) and (i) for the proposed Greengate Ext 68 (Ptn 60 Rietvallei). This policy is applicable for **Section 21(c)** impeding or diverting the flow of water in a watercourse at the proposed Greengate Ext 68 (Ptn 60 Rietvallei). This policy is also applicable in terms of **Section 21(i)** of the NWA, 1998 for altering the beds, banks and characteristics of a watercourse.
DWS, 2007a. Department of Water and Sanitation – Generic Water Use Authorization Application Process – External Guideline – November 2007	Compliance in terms of NWA, 1998 for water uses in terms of sections 21(c) and (i) for the proposed Greengate Ext 68 (Ptn 60 Rietvallei). This policy is applicable for **Section 21(c)** impeding or diverting the flow of water in a watercourse at the proposed Greengate Ext 68 (Ptn 60 Rietvallei). This policy is also applicable in terms of **Section 21(i)** of the NWA, 1998 for altering the beds, banks and characteristics of a watercourse.
DWS, 2007b. Water Use Authorization Application Process – External Guideline – August 2007	Compliance in terms of NWA, 1998 for water uses in terms of sections 21(c) and (i) for the proposed Greengate Ext 68 (Ptn 60 Rietvallei). This policy is applicable for **Section 21 c** impeding or diverting the flow of water in a watercourse at the proposed Greengate Ext 68 (Ptn 60 Rietvallei). This policy is also applicable in terms of **Section 21(i)** of the NWA, 1998 for altering the beds, banks and characteristics of a watercourse.
DEA&DP, 2010a. Guideline on Need and Desirability	The need and desirability considers the different stages of an EIA. It considers individual questions of the needs, the impacts and effects on the environment. The Need and Desirability provides information and guidance for applicants when considering the need and desirability in terms of NEMA and the EIA Regulations.
DEA&DP, 2010b. Guideline on Alternatives	This guideline is applicable to this proposed development in terms of a description of feasible and reasonable alternatives. Different alternatives are considered and this guideline describes what each alternative involves and how these alternatives should be considered. The No-Go alternative is compulsory and must always be included.
DEA&DP, 2011. Guideline on Public Participation	Public participation processes have been followed with the consideration of the guideline as it provides the public or stakeholders with the scale of anticipated impacts, the public sensitivity to the project, indicates the types of potentially affected parties, the public participation mechanisms, whether it be public meetings, open days or press releases, etc. This guideline indicates how the EAP, Applicant and affected landowners can participate in a basis assessment and/or EIA.
DEA, 2014 – IEMS Guideline series	Compliance with the Integrated Environmental Management Series in terms of the NEMA, 1999 (EIA Regulations, 2014) for the proposed Rose Interchange. The guideline series informs the EAP of how the EIAs, public participation process, the listed activities in terms of the EIA Regulations, 2014 compare in an user friendly manner.

National Environmental Management Act (NEMA), 1998 (Act No. 107 of 1998)	The following activities are triggered in terms of Section 24(2) of NEMA and the associated EIA Regulations, 2014 (GN R 982 of 4 December 2014) for:
	• Listing Notice 1 (GN R 983 of 4 December 2014):
	  ○ Activity 9, 10, 12(xii)(a), 19(i), 27 & 28
	• Listing Notice 3 (GN R 985 of 4 December 2014):
	  ○ Activity 4, 14(xi)(a)(b)(iv)
	The triggered activities from part of this application and basic assessment process.

National Water Act (NWA), 1998 (Act No. 36 of 1998)	The following water uses are triggered in terms of Section 21 of the NWA: • **Section 21(c)** impeding or diverting the flow of water in a watercourse for the proposed Greengate Ext 68 (Ptn 60 Rietvallei). • **Section 21(i)** – altering the beds, banks, characteristics and flow of water within a watercourse for the proposed Greengate Ext 68 (Ptn 60 Rietvallei). A Water Use License (WUL) is being applied for concurrently with this application.

SAHRA, 1999 – National Heritage Resources Act, 1999 (Act No. 25 of 1999) for Section 38(8)	The EMPr has included management measures in the event of any heritage and/or cultural findings during the construction phase.

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:

Different development options were considered. Same was analysed during a town planning exercise to evaluate the different options that will be in line with the Mogale City Local Municipality: Muldersdrift Precinct Plan for the area. The layout was designed and completed as phase 1. The environmental site assessments informed the layout and same was amended to accommodate the sensitive areas including the required buffer areas. The layout was the again amended as phase 2 to include same. Phase 3 included options in respect of the development options.

The proposed Greengate Ext 68 will be established with the aim to provide much needed relief in terms of educational facilities and institutional arrangements in the Muldersdrift area, Mogale City Local Municipality.

Configurations in terms of layout have been investigated to accommodate the most schooling infrastructure with the least impact on the site and environment. The proposed layout will house 4 courts, crèche, 9 ablution blocks (boys & girls' bathrooms) two sports fields, an administrative building, school hall, 16 classrooms and 12 grassy resting areas. Parking facilities for teachers will also be catered for.

On the western section of the site on portion 69 of the farm Rietvallei 180 IQ a wetland system exists, and this will be dedicated to open space.

External and Internal services including roads, water, sewer and stormwater reticulation also forms part of this application and for crossing the wet areas a water use license will be undertaken for approval from Department of Water and Sanitation.

The proposed development will facilitate the development of an institutional development considering the wetland system with two access, an entrance and exist gate to the development.

Provide a description of the alternatives considered:

No.	**Alternative type**, either alternative: site on property, properties, activity, design, technology, energy, operational or other(provide details of "other")	**Description**
1	Proposal	The proposed township development (study site) is situated in the Gauteng Province of South Africa. The development is proposed to be constructed on portion 60 of the Farm Rietvallei 180 IQ. The study site is situated in close proximity to the M47 Road (Hendrik Potgieter Road approximately 1,2km away. (26°03'14.26"S, 27° 51'04.33"E). The purpose of the proposed development will be to provide educational facilities to the local communities of Muldersdrift, Ruimsig, Featherbrooke Estate and surrounding areas. The proposed school development will encompass classrooms, administrative buildings, ablution blocks, parking and a crèche. A total of 9 ablution blocks, 4 courts, a school hall with recreational areas and sports fields are proposed. This proposal was selected as it will provide educational services, increase the economic viability of the area and on a staged manner, phase in with the upgrades proposed on the Mogale City Master Traffic Plan, which may result in not over-exhaustion of roads and traffic flow. The use zone is zoned for educational and the development proposed will consist of three storages with a coverage of 20% and a building line of 5m on the street frontage. Two stands are zoned for "educational" Civil services for internal and external services including water, sewer, stormwater and roads also forms part of this application.

2	Alternative 1	The proposed township development (study site) is situated in the Gauteng Province of South Africa. The development is proposed to be constructed on portion 60 of the Farm Rietvallei 180 IQ. The study site is situated near the M47 Road (Hendrik Potgieter Road approximately 1,2km away. (26°03'14.26"S, 27° 51'04.33"E). The purpose of the proposed development will be to provide business facilities to the local communities of Muldersdrift, Ruimsig, Featherbrooke Estate and surrounding areas. The proposed business units will encompass the creation of a high-density area, which will ultimately have an impact on the traffic volumes and result in heavy traffic volumes all round during the day and the roads currently can't accommodate the higher traffic volumes. The use zone is zoned for business 1 and the development proposed will consist of a coverage of 90,18% and a public open space on one stand covering 9,82%. Civil services for internal and external services including water, sewer, stormwater and roads also forms part of this application.

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

N/A

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)***	8.1168 ha
Alternatives:	
Alternative 1 (if any)	8.1168 ha
Alternative 2 (if any)	
	Ha/ m^2

or, for linear activities:

	Length of the activity:
Proposed activity (Section A)	
Proposed activity (Section B)	
Alternatives:	
Alternative 1 (if any)	
Alternative 2 (if any)	
	m

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

	Size of the site/servitude:
Proposed activity	81168 m^2
Alternatives:	
Alternative 1 (if any)	81168 m^2
Alternative 2 (if any)	
	m^2

5. SITE ACCESS

Proposal (Section A & B)

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

Describe the type of access road planned:

The proposed development will be accessed via the existing gravel road running on the southern boundary of portion 60 of the Farm Rietvallei 180 IQ. It is situated north of the intersection of Phillip and the unnamed Road in the Rietvallei Area.

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

Alternative 1

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

Describe the type of access road planned:

The proposed development will be accessed via the existing gravel road running on the southern boundary of portion 60 of the Farm Rietvallei 180 IQ. It is situated north of the intersection of Phillip and the unnamed Road in the Rietvallei Area.

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

Alternative 2

Does ready access to the site exist, or is access directly from an existing road? YES NO

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

Describe the type of access road planned:

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

PLEASE NOTE: Points 7 to 9 of Section A must be duplicated where relevant for alternatives

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

(only complete when applicable)

6. LAYOUT OR ROUTE PLAN

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

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

- The following should serve as a guide for scale issues on the layout plan:
  - A0 = 1: 500
  - A1 = 1: 1000
  - A2 = 1: 2000
  - A3 = 1: 4000
  - A4 = 1: 8000 (±10 000)

Shapefiles of the activity must be included in the electronic submission on the CD's;

- the property boundaries and Surveyor General numbers of all the properties within 50m of the site;
- the exact position of each element of the activity as well as any other structures on the site;
- the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, sewage pipelines, septic tanks, storm water infrastructure;
- servitudes indicating the purpose of the servitude;
- sensitive environmental elements on and within 100m of the site or sites (including the relevant buffers as prescribed by the competent authority) including (but not limited thereto):
  - Rivers and wetlands;
  - the 1:100 and 1:50 year flood line;
  - ridges;
  - cultural and historical features;
  - areas with indigenous vegetation (even if it is degraded or infested with alien species);
- Where a watercourse is located on the site at least one cross section of the water course must be included (to allow the position of the relevant buffer from the bank to be clearly indicated)

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

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

Refer to Appendix A3

7. SITE PHOTOGRAPHS

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

Refer to Appendix B

8. FACILITY ILLUSTRATION

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

Refer to Appendix A3

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

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

Instructions for completion of Section B for linear activities

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

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

Instructions for completion of Section B for location/route alternatives

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

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

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

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

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

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

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

1. PROPERTY DESCRIPTION

Property description: (Including Physical Address and Farm name, portion etc.)	The proposal layout alternative is located on the Farm Rietvallei 180 IQ on portion 60. It is surrounded by portions 59, 31, 64 and 61 of the Farm Rietvallei 180 IQ. An unnamed gravel road forms the southern boundary to the site. An existing house and entrance gate is located along the unnamed gravel road.

2. ACTIVITY POSITION

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

Alternative:	**Latitude (S):**	**Longitude (E):**
	26.05397	27.85117

In the case of linear activities:

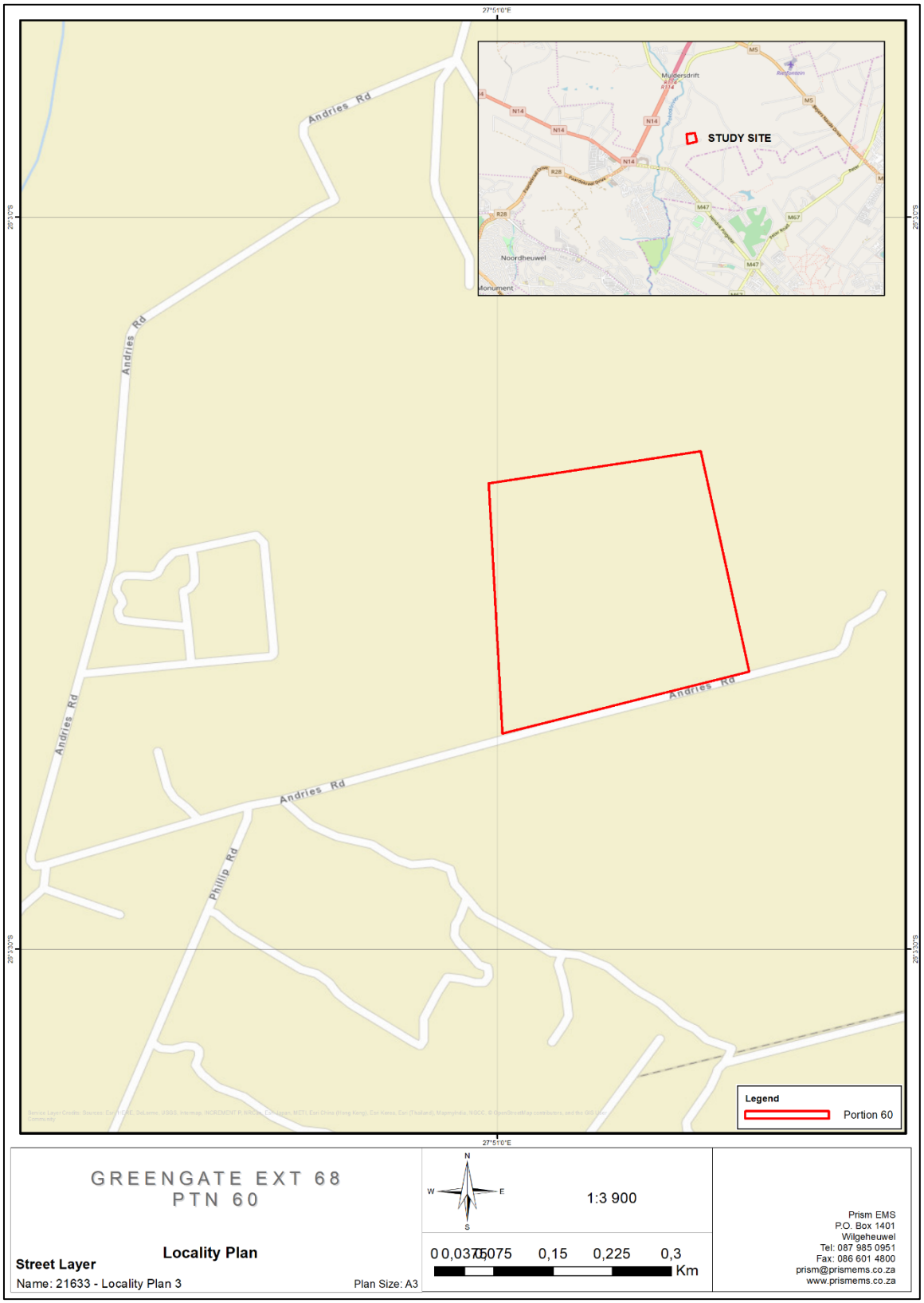
Alternative:	**Latitude (S):**	**Longitude (E):**
• Starting point of the activity	°	°
• Middle point of the activity	°	°
• End point of the activity	°	°

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 | ~~No~~

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

PROPOSAL – SECTION A																				
T	0	I	Q	0	0	0	0	0	0	0	0	0	1	8	0	0	0	0	6	0



3. GRADIENT OF THE SITE

Indicate the general gradient of the site.

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

4. LOCATION IN LANDSCAPE

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

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

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

Shallow water table (less than 1.5m deep)	~~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.

7. GROUNDCOVER

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

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

Natural veld - good condition % =	Natural veld with scattered aliens % =	Natural veld with heavy alien infestation % =	Veld dominated by alien species % =	Landscaped (vegetation) % = 3
Sport field % =	Cultivated land % = 80	Paved surface (hard landscaping) % = 2	Building or other structure % = 10	Bare soil % =

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

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

If YES, specify and explain:

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

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:

Was a specialist consulted to assist with completing this section			YES	~~NO~~
If yes complete specialist details				
Name of the specialist:	Nico-Ronaldo Retief Pr.Sci.Nat.			
Qualification(s) of the specialist:	M.Sc. Zoology SACNASP 400134/10			
Postal address:	PO Box 1401, Wilgeheuwel			
Postal code:	1736			
Telephone:	011 475 0210	Cell:	087 985 0951	
E-mail:	prism@prismems.co.za	Fax:	086 601 4800	
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				
Refer to **APPENDIX G.**				

Signature of specialist: _____

Date: 6 November 2017

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):	35. Provincial Road	36. Road		

NOTE: Each block represents an area of 250m X 250m

NORTH

1,2	**1,7**	**31**	**31**	**31**
1,7	**1,2,**	**31**	**31**	**31**
1,7, 36	**1,2, 36**	**1, 7, 10, 36**	**1, 7, 36**	**31**
36	**1,7**	**1,7**	**1,7**	**1,7**
36	**1,7**	**1,7**	**1,7**	**1,7**

WEST EAST

SOUTH

= Site

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

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

Have specialist reports been attached	YES
If yes indicate the type of reports below	

The following specialist report has been attached:

- Wetland Assessment
- Heritage Assessment
- Ecological Assessment

Refer to Appendix G.

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.

Mogale City Local Municipality, Randfontein Local Municipality, Westonaria Local Municipality and Merafong City are constituent local municipalities of the West Rand District Municipality. Mogale City LM covers an area of approximately 110 000

ha, with Krugersdorp being the major CBD. It is accessible from all major centers of Gauteng and Northwest Province, namely Johannesburg, Pretoria, Midrand, Hartebeespoort Dam, Randfontein and Soweto, to name but a few places.

Mogale City LM is located at the West of the Gauteng Province. It also forms part of the broader West Rand District Municipality, which consists of the four local municipalities mentioned previously.

Mogale City is made up of the following areas:

- Kagiso and Rietvallei 1, 2 & 3
- Azaadville
- Krugersdorp and surrounding area
- Munsieville
- Muldersdrift
- Tarlton
- Magaliesburg
- Hekpoort

The Mogale City Local Municipality: Muldersdrift Precinct Plan confirms that the subject property is located in an area demarcated for medium density residential development. It also mentions that there is an acute lack of educational facilities in the area demarcated for medium density residential development.

The need for social facilities (including educational amenities) in the area under consideration is confirmed in various planning policies and strategic policy frameworks of the Mogale City Local Municipality. The locational circumstances of the subject property will afford residents of the larger Muldersdrift precinct the opportunity to reside, work, enjoy recreational activities as well as have access to community facilities in close proximity of one another.

The proposed development will create a number of employment opportunities during the construction and operational phases of the proposed development and therefore skills training and social upliftment will also be achieved from this perspective.

The subject property is located in close proximity to numerous arterial routes in the north eastern quadrant of Mogale City Local Municipality which attribute increases the appeal and contributes to the feasibility of the proposed development.

The Muldersdrift Region is experiencing exponential growth which can partly be ascribed to the ease of access the Region has in terms of other precincts in and around Mogale city, City of Johannesburg, as well as, the City of Tshwane. The development trend of properties in the precinct further confirms the aforementioned notion. The development will result in positive impacts on the local economy and afford local residents the opportunity to enrol their children to schools in close proximity to their residences and / or place of employment.

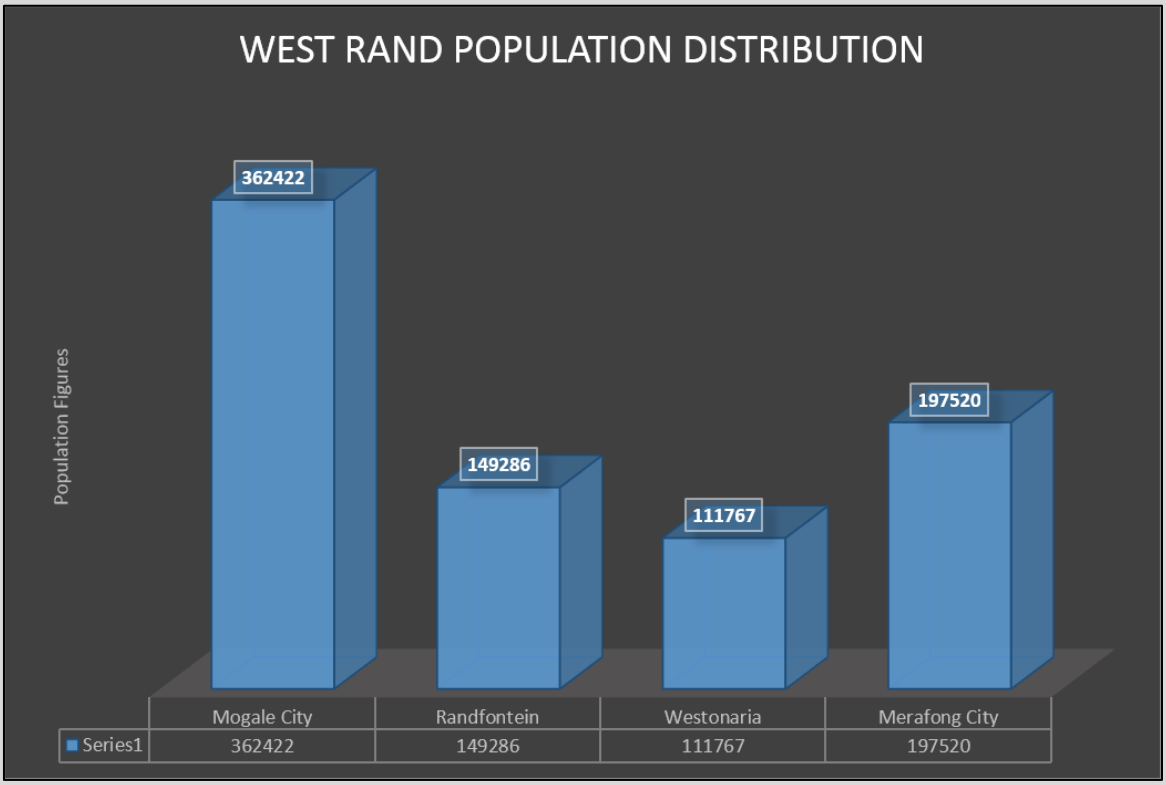


Figure 1 – West Rand Population Distribution

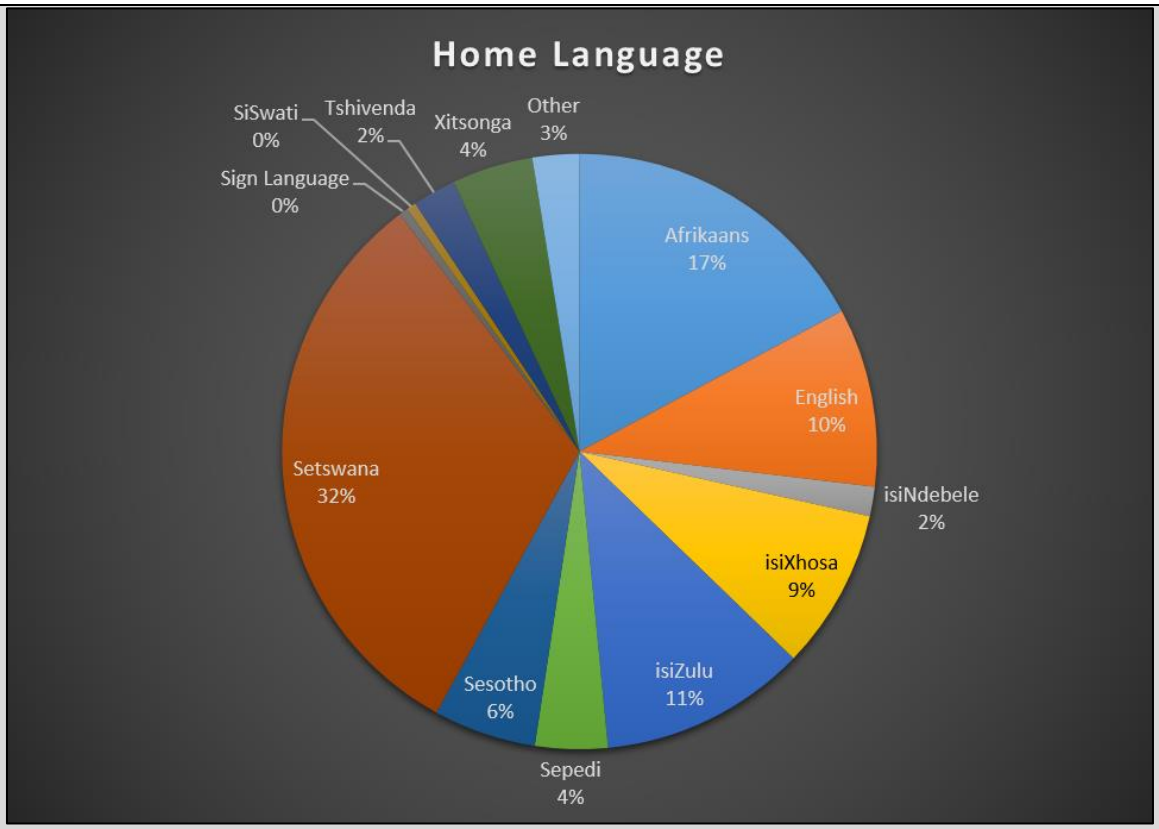


Figure 2 – Home language

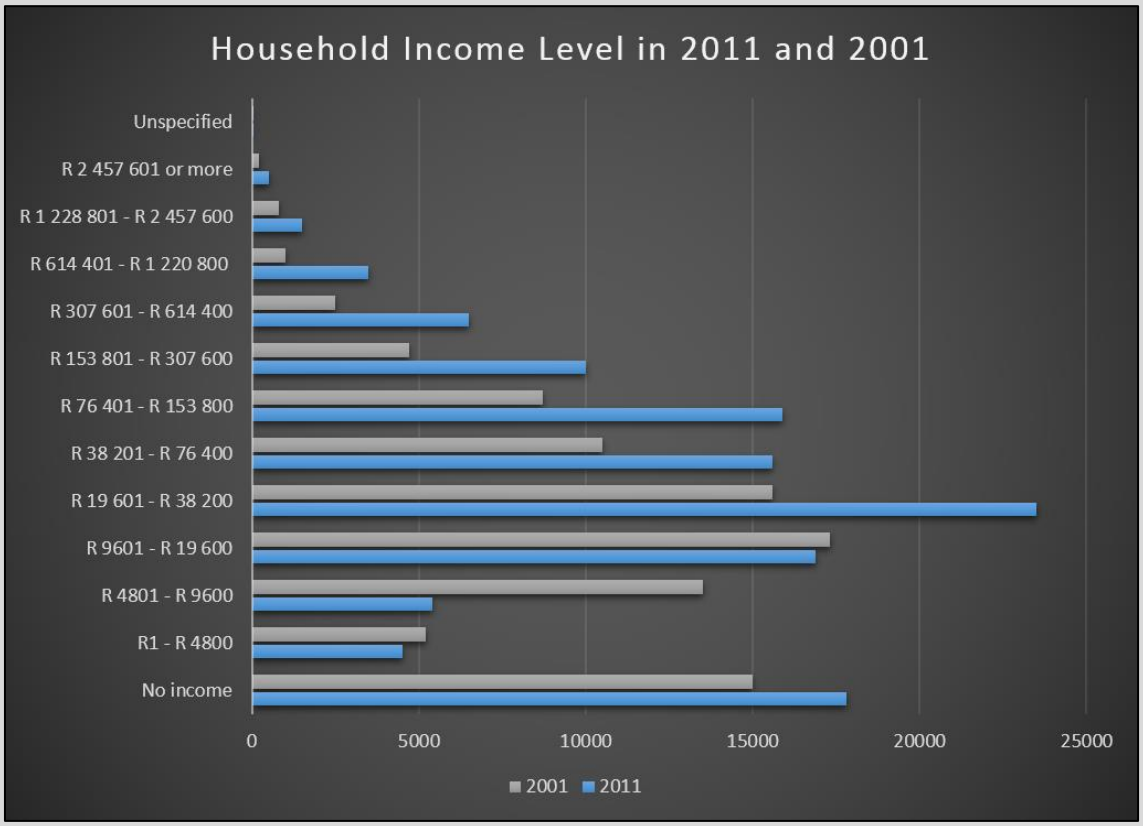
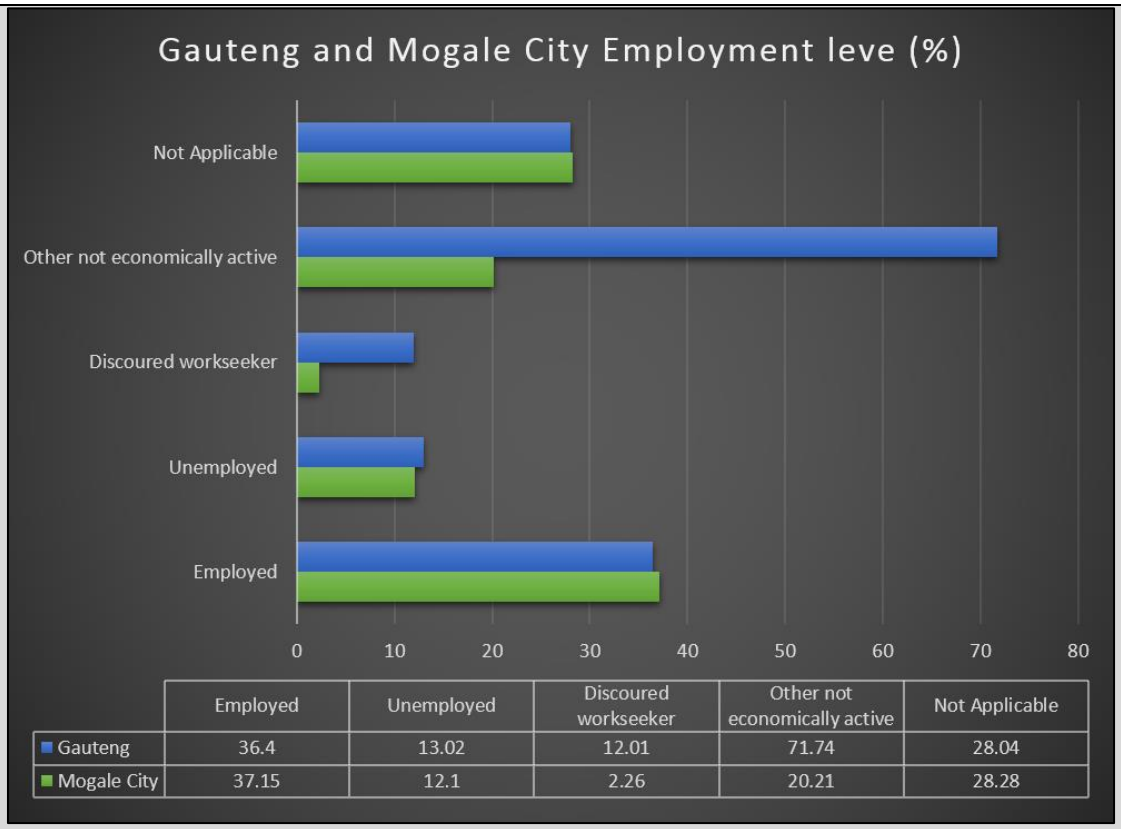
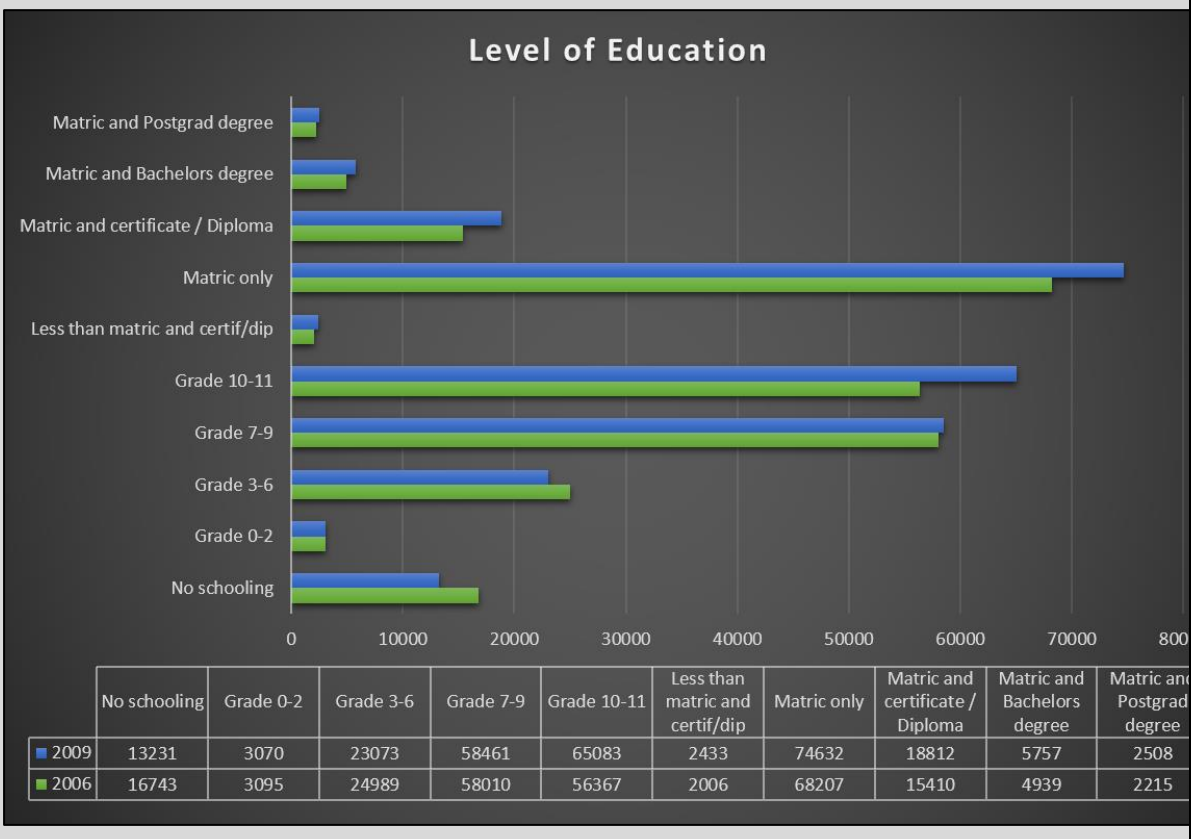


Figure 3 – Household Income



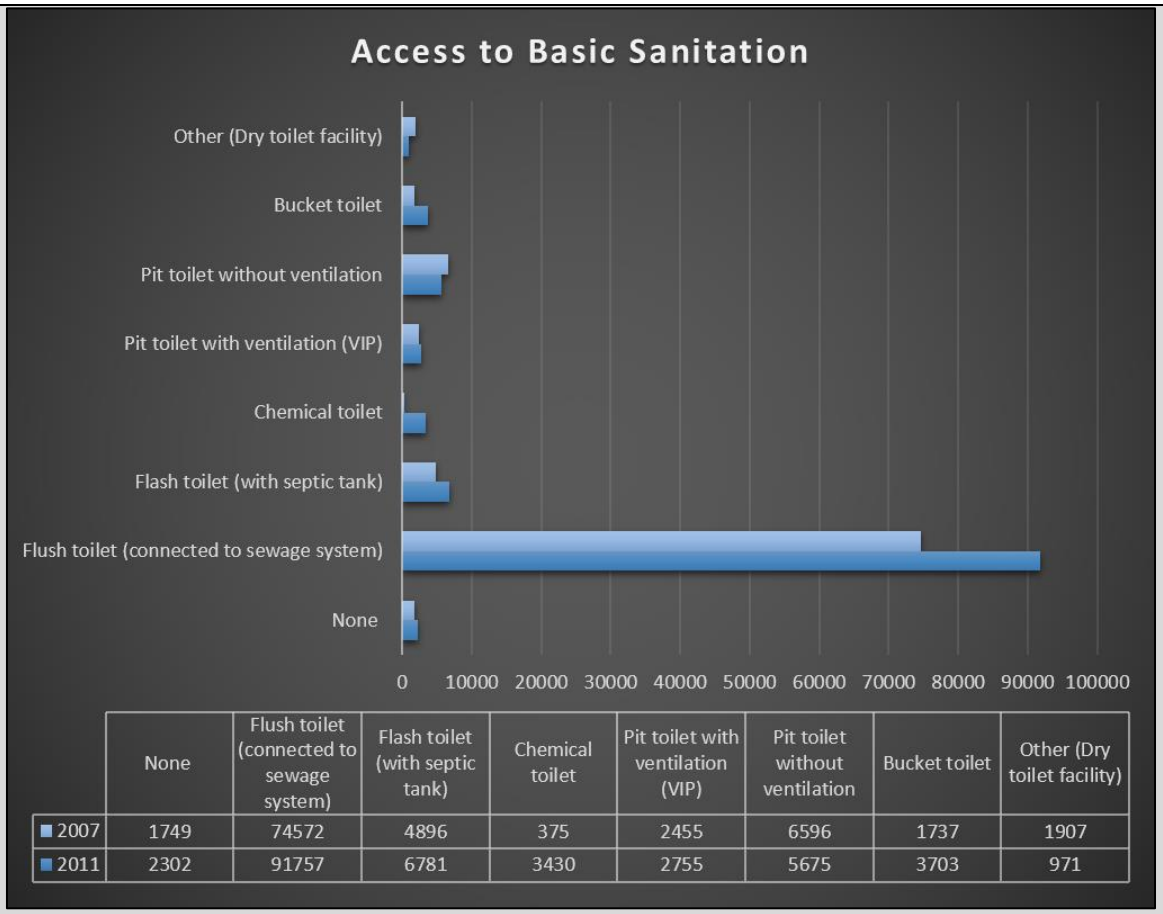
	Employed	Unemployed	Discoured workseeker	Other not economically active	Not Applicable
Gauteng	36.4	13.02	12.01	71.74	28.04
Mogale City	37.15	12.1	2.26	20.21	28.28

Figure 4 – Employment level



	No schooling	Grade 0-2	Grade 3-6	Grade 7-9	Grade 10-11	Less than matric and certif/dip	Matric only	Matric and certificate / Diploma	Matric and Bachelors degree	Matric and Postgrad degree
2009	13231	3070	23073	58461	65083	2433	74632	18812	5757	2508
2006	16743	3095	24989	58010	56367	2006	68207	15410	4939	2215

Figure 5 – Education level



	None	Flush toilet (connected to sewage system)	Flash toilet (with septic tank)	Chemical toilet	Pit toilet with ventilation (VIP)	Pit toilet without ventilation	Bucket toilet	Other (Dry toilet facility)
2007	1749	74572	4896	375	2455	6596	1737	1907
2011	2302	91757	6781	3430	2755	5675	3703	971

Figure 6 – Access to basic services

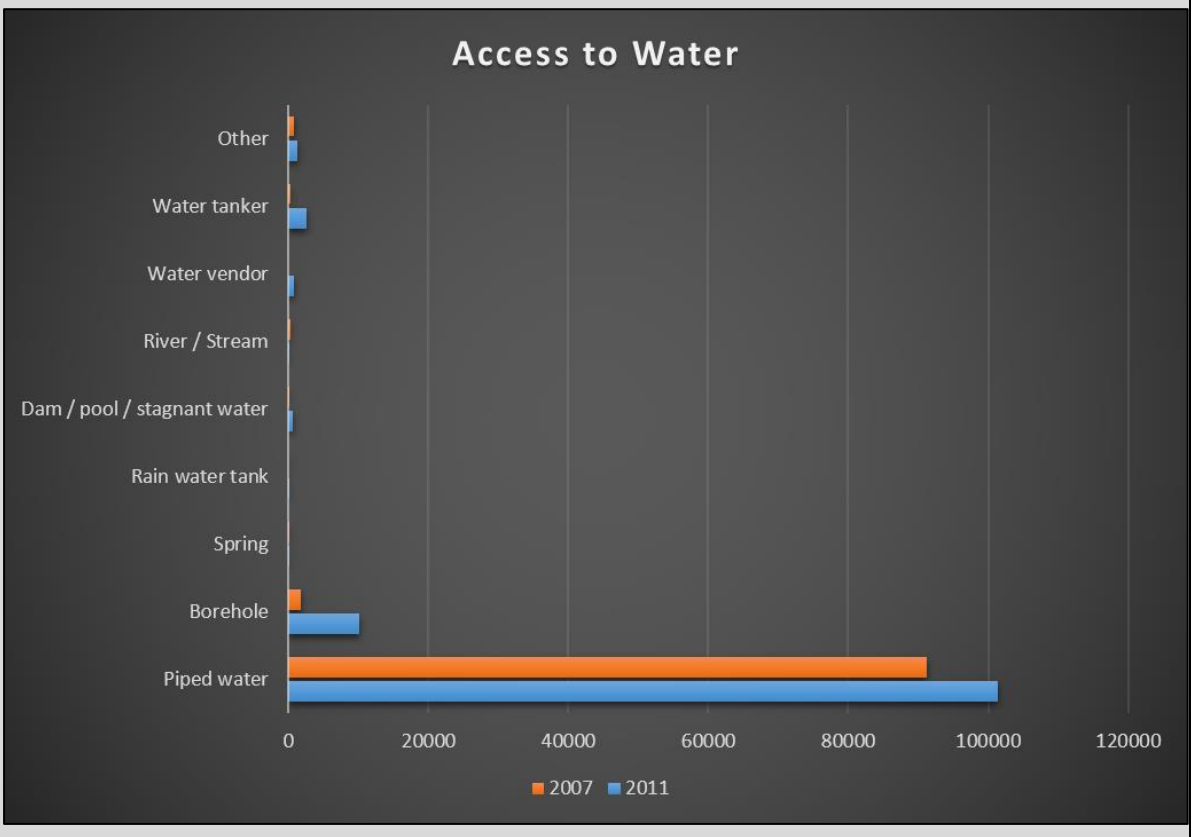


Figure 7 – Access to water

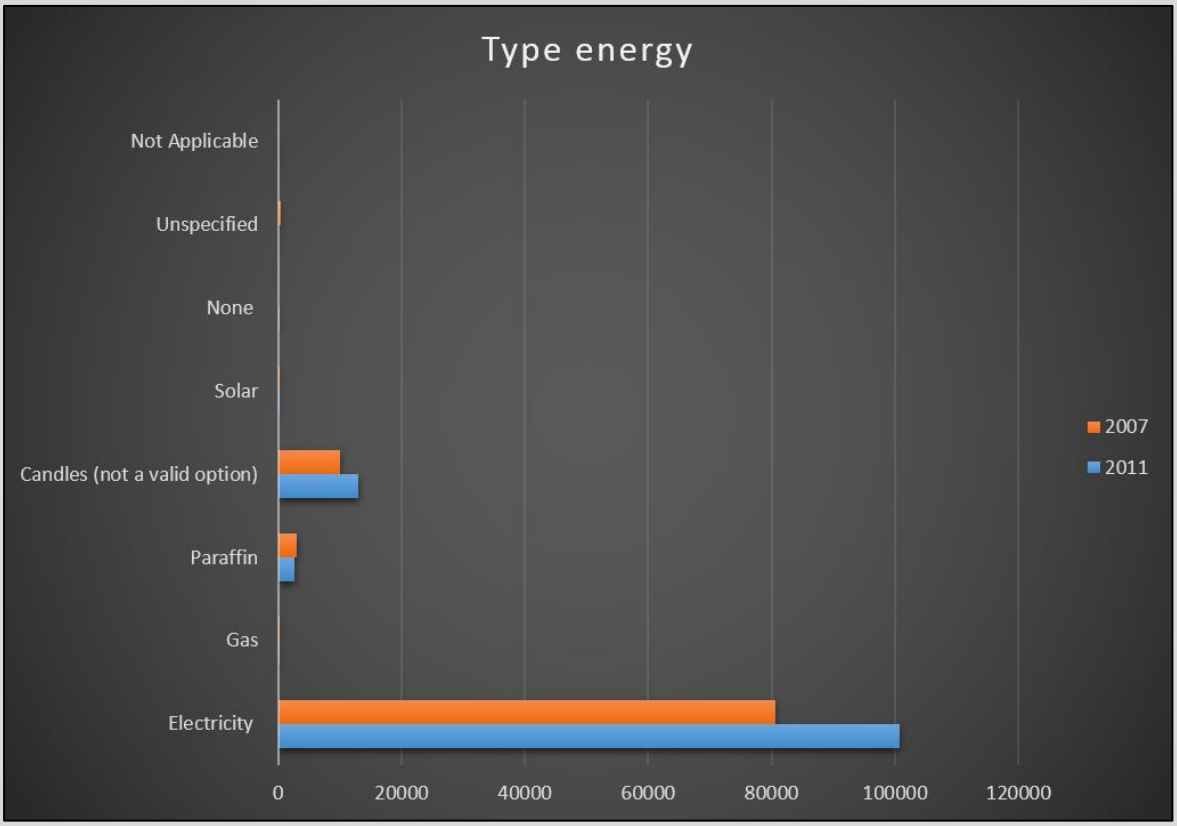


Figure 8 – Type of energy utilization

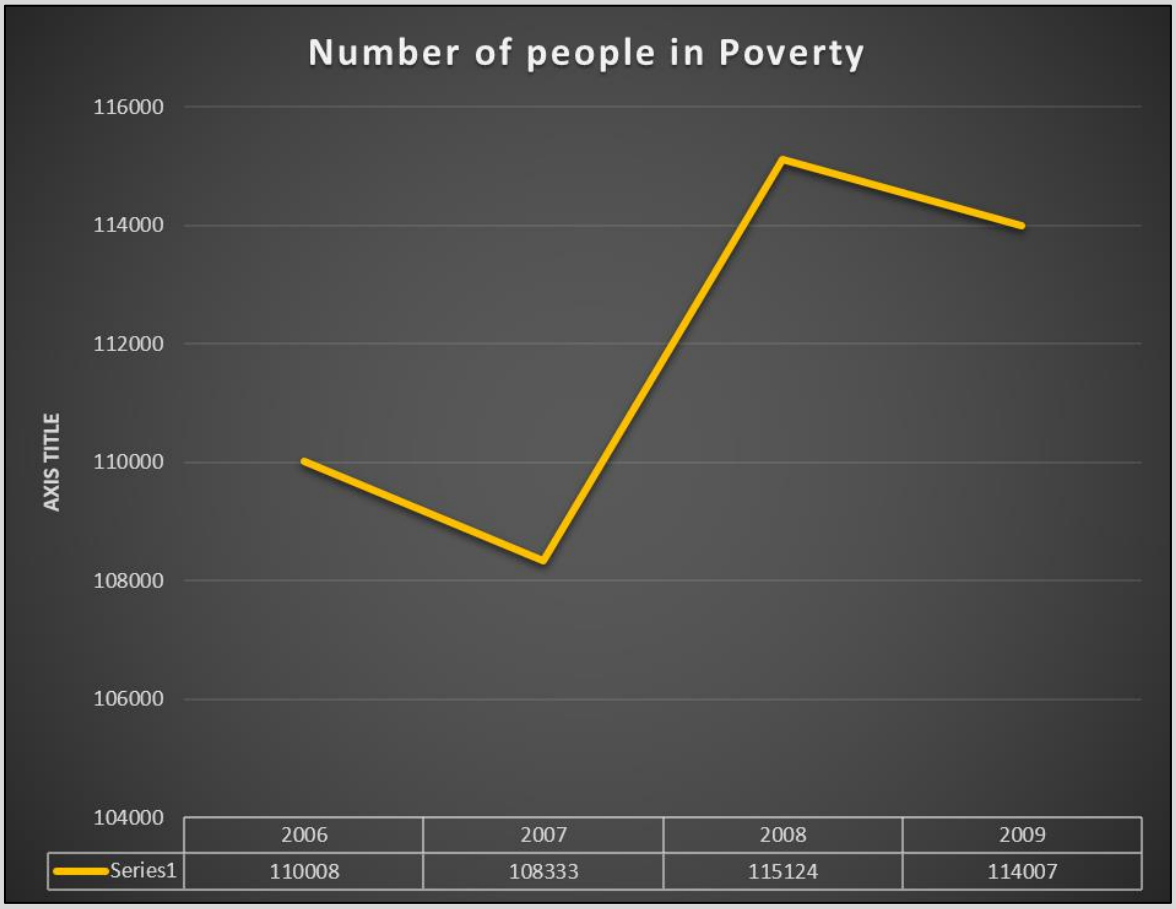


Figure 9 – Number of people in Poverty

With reference to the above graphs, the proposed development falls within an environment, which will uplift the socio-economic character of the area. Job creation will be encouraged and this will be included within the Environmental Management Programme contained in Appendix H.

10. CULTURAL/HISTORICAL FEATURES

Please be advised that if Section 38 of the National Heritage Resources Act, 1999 (Act No. 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:

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

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

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

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

SECTION C: PUBLIC PARTICIPATION (REGULATION 41)

The Environmental Assessment Practitioner must conduct public participation process 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 will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least thirty (30) calendar days before the submission of the application to the competent authority.

Was the draft report submitted to the local authority for comment?	~~YES~~	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 Basic Assessment Report is herewith circulated.

The comment period starts on 10 November 2017 and will run until 10 December 2017.

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 following is a summary of comments received from various stakeholders and I&APs:

- The Cradle of Humankind World Heritage Site indicated that they have no interest in the project.
- Various stakeholders requested to be registered as Interested and Affected Parties.
- Positive comments regarding the improvement of the general area.
- Improvements in terms of crime control and job creation.
- Support towards the initiative.
- Request for more information regarding number of stands and progress regarding the EIA.
- Prevention of squatting in the area.
- Concerns regarding the impacts on the quality of life.
- Concern regarding the impacts on the roads, access and increased traffic.
- Concern regarding noise and air pollution
- Concern regarding water and electricity supply already being strung under pressure in the area.

Copies of the written comments received to date are attached in Appendix E4.

The draft Basic Assessment Report will be subjected to a public review period which will commence on 10 November 2017. All comments received during this public review will be incorporated in the Comments and Responses Report.

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

3. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

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

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

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&APs

Please refer to the Appendix E contained with the Basic Assessment Report.

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.	**0**	(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?	35 m^3	

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

The contractor will be responsible for the removal of all solid construction waste and disposing of it at an approved dumping site or landfill on a regular basis. No waste may collect onsite for an extended period of time as this will attract rodents, pests and flies. Litter bins or steel containers must be provided and placed in convenient locations for the workers to dispose of domestic waste produced. These bins should be emptied on a regular basis.

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

In order to comply with legal requirements, should there be any excess solid construction waste after recycling options have been exhausted, the waste will be transported to the nearest-licensed waste disposal facility for appropriate disposal.

Will the activity produce solid waste during its operational phase?	YES	~~NO~~
If yes, what estimated quantity will be produced per month?	30`m^3	

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

Mogale City Local Municipality waste collectors under contract by the municipality will collect the domestic trash on a weekly basis. Paper recycling will be encouraged whereby paper will be collected on a weekly basis by Mpact Recycling. Recycling will be encouraged and separate containers will be located at the Curro School for the separation of glass, plastic etc.

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)?

All solid waste will be disposed of at an approved landfill or dumping site as determined by the Developer in liaison with the local authorities. It is anticipated that waste will be taken to the Magaliesberg 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:

All materials that can be recycled will be separated from the general waste and disposed of at recycling facilities. Spoil material which could be used for landscaping purposes will be extracted at kept neatly intact and in a controlled manner as to prevent erosion by the wind and water.

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?		m^3
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the liquid effluent to be generated by this activity(ies)?	~~YES~~	NO

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

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

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

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

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?		33,6 m^3 calculated for 120 individuals per day
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 of.

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:

Dust will be generated during the construction phase and will be regulated under the National Dust Control Regulations, 2013 (GN R 827).

During the construction phase, it is expected that there will be short term dust generation as well as emissions from vehicles and machinery. However, the dust and emissions will have short-term duration and therefore a limited impact in terms of extent and severity. Appropriate dust suppression measures will be implemented to reduce the impacts as required and will be regulated under the National Dust Control Regulation, 2013 (GN R 827). It is recommended that construction vehicles remain serviced and maintained in good mechanical condition to minimise possible exhaust emission.

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: liters

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

Does the activity require a water use permit from the Department of Water Affairs?	YES	~~NO~~
If yes, list the permits required		

Water use License Application in terms of Section 21 (c) and (i) for the wetland system located on part of Ptn 60 and Ptn 61 of the Farm Rietvallei 180 IQ.

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 e.g. Municipality / Eskom / Renewable energy source:

Electricity will be obtained from the Mogale City Local Municipality.

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

Not Applicable.

4. ENERGY EFFICIENCY

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

The buildings shall comply to the following regulations:

- Orientation and shading: SAN 204;
- External walls: SANS 10400 XA;
- Fenestration: SANS 10400 XA;
- Roof assemblies: SANS 10400 XA;
- Floors with in slab heating: SANS 10400 XA;
- Energy demanding services or control: SANS 204;
- Hot water systems: SANS 10400 or, Certification of fenestration by approved competent person, Rational design (SANS 10400-XA) by approved competent person in terms of annual demand and consumption, Certification of annual energy demand and consumption equalling or less than reference building complying to SANS 10400-XA.

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

Not Applicable.

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 following is a summary of comments received from various stakeholders and I&APs:

- The Cradle of Humankind World Heritage Site indicated that they have no interest in the project.
- Various stakeholders requested to be registered as Interested and Affected Parties.
- Positive comments regarding the improvement of the general area.
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- Concerns regarding the impacts on the quality of life.
- Concern regarding the impacts on the roads, access and increased traffic.
- Concern regarding noise and air pollution
- Concern regarding water and electricity supply already being strung under pressure in the area.

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):

The proposed Greengate Ext 68 (Ptn 60 Rietvallei) will be located within the Mogale City Local Municipality, more specifically within the Muldersdrift area at the Farm Rietvallei 180 IQ ptn 60.

The comment made by the COHWHS is noted and you've been excluded from future correspondence regarding the proposed development. All parties, stakeholders and Mogale City Local Municipality IDM have been included and registered on the project database as requested.

All comments regarding the improvement of the general area has been noted as well as the support I&APs provided. More information regarding the layouts, designs and motivation will be included with the Basic Assessment Report during the Public Review period.

We believe that by providing the services to the local community, that squatting will be removed from the site and that the quality of life will be enhanced as well and the economic enhancement of the general area.

Traffic within the general area, may increase. Crime is not anticipated to increase.

The quality of life for the general area will be bettered and this proposed development will contribute to the Mogale City LM's IDP where it states "*that their Mission is to create a people centred and economical viable city where all have equal access to education and skills enhancement programmes.*". They also want to promote social and economic development within the Municipality through the provision of education.

- Linking educational institutions, at all levels, with government and business organisations;
- Promoting a culture of life-long learning and innovation throughout all educational, governmental, business and community organisations;
- Developing comprehensive education, training and leadership development programmes that focus on the most disadvantaged sectors of the community (i.e. youth, women, the disabled and the aged);

Noise and air pollution will be low to medium and with mitigation measures provided and suggested mitigation from the EMPr contained in Appendix H, these can be reduced and minimized.

Water and electricity in the general area is lacking, however each application for a development will have to be presented at the municipality for approvals. The Applicant has forwarded these applications to the municipality and these have been accepted by the municipality and the municipality has provided support and indicated that they can cater for this proposed initiative.

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

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

The standard methodology used in the environmental impact assessment to determine the significance rating of the potential impacts are outlined in this section.

Significance

The **significance** of an impact is defined as the combination of the **consequence** of the impact occurring and the **probability** that the impact will occur. The nature and type of impact may be direct or indirect and may also be positive or negative, refer to Table 1 below for the specific definitions.

Table 1: Nature and type of impact.

	Nature and Type of Impact:		
IMPACT	**Direct**	Impacts that are caused directly by the activity and generally occur at the same time and place as the activity	
	Indirect	Indirect or induced changes that may occur as a result of the activity. These include all impacts that do not manifest immediately when the activity is undertaken or which occur at a different place as a result of the activity	
	Cumulative	Those impacts associated with the activity which add to, or interact synergistically with existing impacts of past or existing activities, and include direct or indirect impacts which accumulate over time and space	
	Positive	Impacts affect the environment in such a way that natural, cultural and / or social functions and processes will benefit significantly, and includes neutral impacts (those that are not considered to be negative	
	Negative	Impacts affect the environment in such a way that natural, cultural and/or social functions and processes will be comprised	

Table 2 presents the defined criteria used to determine the **consequence** of the impact occurring which incorporates the extent, duration and intensity (severity) of the impact.

Table 2: Consequence of the Impact occurring.

CONSEQUENCE	**Extent of Impact:**		
	Site	Impact is limited to the site and immediate surroundings, within the study site boundary or property (immobile impacts)	
	Neighbouring	Impact extends across the site boundary to adjacent properties (mobile impacts)	
	Local	Impact occurs within a 5km radius of the site	
	Regional	Impact occurs within a provincial boundary	
	National	Impact occurs across one or more provincial boundaries	
	Duration of Impact:		
	Incidental	The impact will cease almost immediately (within weeks) if the activity is stopped, or may occur during isolated or sporadic incidences	
	Short-term	The impact is limited to the construction phase, or the impact will cease within 1 - 2 years if the activity is stopped	
	Medium-term	The impact will cease within 5 years if the activity is stopped	
	Long-term	The impact will cease after the operational life of the activity, either by natural processes or by human intervention	
	Permanent	Where mitigation either by natural process or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient	
	Intensity or Severity of Impact:		
	Low	Impacts affect the environment in such a way that natural, cultural and/or social functions and processes are not affected	
	Low-Medium	Impacts affect the environment in such a way that natural, cultural and/or social functions and processes are modified insignificantly	
	Medium	Impacts affect the environment in such a way that natural, cultural and/or social functions and processes are altered	
	Medium-High	Impacts affect the environment in such a way that natural, cultural and / or social functions and processes are severely altered	
	High	Impacts affect the environment in such a way that natural, cultural and / or social functions and processes will permanently cease	

The probability of the impact occurring is the likelihood of the impacts actually occurring, and is determined based on the classification provided in **Table 3**.

Table 3: Probability and confidence of impact prediction.

PROBABILITY	**Probability of Potential Impact Occurrence:**		
	Improbable	The possibility of the impact materialising is very low either because of design or historic experience	
	Possible	The possibility of the impact materialising is low either because of design or historic experience	
	Likely	There is a possibility that the impact will occur	
	Highly Likely	There is a distinct possibility that the impact will occur	
	Definite	The impact will occur regardless of any prevention measures	

The **significance** of the impact is determined by considering the consequence and probability without taking into account any mitigation or management measures and is then ranked according to the ratings listed in Table 4. The level of confidence associated with the impact prediction is also considered as low, medium or high (Table 5).

Table 4: Significance rating of the impact.

SIGNIFICANCE	**Significance Ratings:**		
	Low	Neither environmental nor social and cultural receptors will be adversely affected by the impact. Management measures are usually not provided for low impacts	
	Low-Medium	Management measures are usually encouraged to ensure that the impacts remain of Low-Medium significance. Management measures may be proposed to ensure that the significance ranking remains low-medium	
	Medium	Natural, cultural and/or social functions and processes are altered by the activities, and management measures must be provided to reduce the significance rating	
	Medium-High	Natural, cultural and/or social functions and processes are altered significantly by the activities, although management measures may still be feasible	
	High	Natural, cultural, and/or social functions and processes are adversely affected by the activities. The precautionary approach will be adopted for all high significant impacts and all possible measures must be taken to reduce the impact	

Table 5: Level of confidence of the impact prediction.

CONFIDENCE	**Level of Confidence in the Impact Prediction:**		
	Low	Less than 40% sure of impact prediction due to gaps in specialist knowledge and/or availability of information	
	Medium	Between 40 and 70% sure of impact prediction due to limited specialist knowledge and/or availability of information	
	High	Greater than 70% sure of impact prediction due to outcome of specialist knowledge and/or availability of information	

Once significance rating has been determined for each impact, management and mitigation measures must be determined for all impacts that have a significance ranking of Medium and higher in order to attempt to reduce the level of significance that the impact may reflect.

The EIA Regulations, 2014 specifically require a description is provided of the degree to which these impacts:

- can be reversed;
- may cause irreplaceable loss of resources; and
- can be avoided, managed or mitigated.

Based on the proposed mitigation measures the EAP will determined a mitigation efficiency (Table 6) whereby the initial significance is re-evaluated and ranked again to affect a significance that incorporates the mitigation based on its effectiveness. The overall significance is then re-ranked and a final significance rating is determined.

Table 6: Mitigation efficiency.

MITIGATION EFFICIENCY	**Mitigation Efficiency**		
	None	Not applicable	
	Very Low	Where the significance rating stays the same, but where mitigation will reduce the intensity of the impact. Positive impacts will remain the same	
	Low	Where the significance rating reduces by one level, after mitigation	
	Medium	Where the significance rating reduces by two levels, after mitigation	
	High	Where the significance rating reduces by three levels, after mitigation	
	Very High	Where the significance rating reduces by more than three levels, after mitigation	

The reversibility is directly proportional the "Loss of Resource" where no loss of resource is experienced, the impact is completely reversible; where a substantial "Loss of resource" is experienced there is a medium degree of reversibility; and an irreversible impact relates to a complete loss of resources, i.e. irreplaceable (Table 7).

Table 7: Degree of reversibility and loss of resources.

DEGREE REVERSABILITY & LOSS OF RESOURCES	**Loss of Resources:**		
	No Loss	No loss of social, cultural and/or ecological resource(s) are experienced. Positive impacts will not experience resource loss	
	Partial	The activity results in an insignificant or partial loss of social, cultural and/or ecological resource(s)	
	Substantial	The activity results in a significant loss of social, cultural and/or ecological resource(s)	
	Irreplaceable	The activity results in the complete and irreplaceable social, cultural and/or ecological loss of resource(s)	
	Reversibility:		
	Irreversible	Impacts on natural, cultural and/or social functions and processes are irreversible to the pre-impacted state in such a way that the application of resources will not cause any degree of reversibility	
	Medium Degree	Impacts on natural, cultural and/or social functions and processes are partially reversible to the pre-impacted state if less than 50% resources are applied	
	High Degree	Impacts on natural, cultural and/or social functions and processes are partially reversible to the pre-impacted state if more than 50% resources are applied	
	Reversible	Impacts on natural, cultural and/or social functions and processes are fully reversible to the pre-impacted state if adequate resources are applied	

Cumulative Impacts

It is important to assess the natural environment using a systems approach that will consider the cumulative impact of various actions. Cumulative impact refers to the impact on the environment, which results from the incremental impact of the actions when added to other past, present and reasonably foreseeable future actions regardless of what agencies or persons undertake such actions. Cumulative impacts can result from individually minor, but collectively significant actions or activities taking place over a period of time. Cumulative effects can take place frequently and over a period of time that the effects cannot be assimilated by the environment.

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.

For **Proposal:**

CONSTRUCTION PHASE								
	IMPACTS				SIGNIFICANCE (WOM)	MANAGEMENT & MITIGATION MEASURES	MITIGATION EFFICIENCY	SIGNIFICANCE (WM)
	TYPE	DESCRIPTION	CUMULATIVE	NATURE				
Atmospheric Emissions	Direct	Dust emissions	No	Negative	Low	Dust suppression measures will be implemented during the construction phase to minimise dust generated by construction activities.	High	Low
	Direct	Emissions from vehicles and equipment (CO2, NOx, SOx, VOC's etc.)	No	Negative	Low	All construction vehicles will be maintained such as to operate efficiently. Idling times of machinery to be minimised.	Low	Low
	Indirect	Noise	No	Negative	Low-Medium	All construction vehicles will be maintained such as to operate efficiently. Idling times of machinery to be minimised. Operations shall not occur before or after normal working hours. Noise monitoring should be undertaken as spot checks. When required noise mufflers should be utilized to reduced noise. It is important to keep an open channel of communication between all stakeholders and keep record of any concerns raised.	High	Low
Discharge to Water	Direct	Sewage	No	Negative	Low	Use of chemical toilets to workers. Not using the bush for toilet facilities. 1 toilet to 20 workers.	Medium	Low
	Direct	Silt	Yes	Negative	Low	Stormwater management will be properly implemented as per the engineering design such as to minimise silt discharge into surrounding systems during rainstorm events.	Medium	Low
	Direct	Surface water run-off	Yes	Negative	Low	Stormwater management will be properly implemented as per the engineering design such as to minimise silt discharge into surrounding systems during rainstorm events.	Medium	Low
	Direct	Contamination of water from hazardous substances	Yes	Negative	Low	Measures will be implemented to ensure that no hydrocarbons and/or other pollutant liquids are spilt, and if so, they are contained, and a clean-up protocol followed.	Medium	Low
	Direct	Disturbance of natural drainage lines	No	Negative	Low-Medium	Discharge and divert stormwater to sediment trap to allow particulate matter to settle out. Under no circumstances may any area be used for ablution purposes. Vehicles to be serviced under controlled conditions. No construction rubble to be dumped.	High	Low
	Direct	Disturbance/pollution of groundwater	No	Negative	Low-Medium	Measures will be implemented to ensure that no hydrocarbons and/or other pollutant liquids are spilt, and if so, they are contained, and a clean-up protocol followed.	High	Low
	Direct	Disturbance of aquatic ecological systems	Yes	Negative	Low	Measures will be implemented to ensure that disturbances to aquatic ecological systems are prevented as far as possible.	Medium	Low

Waste Generation	Direct	Domestic waste	No	Negative	Low	A waste management system will be formulated and implemented on site. All employees will be subjected to induction to understand the environmental management requirement on site. Domestic waste will be removed from the site by a certified waste contractor. Waste disposal certificates will be kept on record.	High	Low
	Direct	Construction waste	No	Negative	Medium	All construction waste will be placed in a demarcated area and disposed of accordingly. This area will be bermed to prevent the dispersal of said waste by wind and rain. Waste disposal certificates will be kept on record.	Medium	Low-Medium
	Direct	Hazardous waste	No	Negative	Low-Medium	All hazardous waste will be stored in a bunded and lockable area. Hazardous waste will be removed from the site by a certified waste contractor. Waste disposal certificates will be kept on record.	Medium	Low
Soil Alteration	Direct	Loss of topsoil	Yes	Negative	Low-Medium	Impact on the environment is expected to be of minimal importance	Medium	Low
	Indirect	Loss of land capability	No	Negative	Low	Impact on the environment is expected to be of minimal importance	High	Low
	Indirect	Alteration of topography	No	Negative	Low	The impact on the environment is expected to be Low. Topography is general flat, and the development infrastructure will contribute to an established environment.	High	Low
	Direct	Soil pollution	No	Negative	Medium	Measures will be implemented to ensure that no hydrocarbons and/or other pollutant liquids are spilt, and if so, they are contained, and a clean-up protocol followed.	High	Low-Medium
Resource Consumption	Indirect	Electricity consumption	No	Negative	Low-Medium	Services agreement to be drawn up by consortium. Fair usage and minimisation of over usage.	High	Low
	Direct	Water consumption	No	Negative	Low	Water use license to be obtained from DWS. Fair usage and care not to over use the water resources.	High	Low
	Indirect	Fuel consumption	No	Negative	Low	All construction vehicles will be maintained such as to operate efficiently. Idling times of machinery to be minimised.	Medium	Low
	Indirect	Raw materials consumption	No	Negative	Low	Raw materials will be used efficiently. Recycling will be implemented on applicable waste streams.	Medium	Low
Effects on Biodiversity	Direct	Loss of habitat	Yes	Negative	Low-Medium	Maintenance of the wetland corridor by following recommendations of wetland specialist.	Medium	Low
	Indirect	Loss of fauna	No	Negative	Low	Maintenance of the wetland corridor by following recommendations of wetland specialist. No trapping or snaring of wild animals if any. Nesting sites should not be disturbed.	Medium	Low
	Direct	Loss of flora	No	Negative	Low-Medium	Mitigation measures proposed in EMPr and recommendations to be followed proposed by Ecologist.	High	Low
	Direct	Degradation of ecological systems	No	Negative	Low-Medium	Maintenance of the wetland corridor by following recommendations of wetland specialist. Recommendations proposed by Specialist studies and the EMPr.	Medium	Low

	Direct	Disruption of natural corridors	Yes	Negative	Low-Medium	Maintenance of the wetland corridor by following recommendations of wetland specialist.	Medium	Low
Incidents, Accidents and Potential Emergency Situations	Direct	Pollution incidents	No	Negative	Low-Medium	Spillages to be cleaned up immediately. Notification of DWS should groundwater be affected.	Medium	Low
	Direct	Health and safety	No	Negative	Low-Medium	'Health and safety standards will be formulated prior construction and implemented during construction.	Medium	Low
	Indirect	Storage of hydrocarbons	No	Negative	Low	All hazardous materials will be stored in a bunded and lockable area. Material Safety Data Sheet (MSDS) sheets will be available for all hazardous products.	Low	Low
	Indirect	Fire	No	Negative	Low	Fire and emergency plans will be implemented during construction. Adequate firefighting equipment will be instituted as recommended.	Medium	Low
Social	Indirect	Visual impact	No	Negative	Medium	The visual impact of construction activities will be medium term. Bollards and protective barriers as well as safety tape may be utilised around the site. The aesthetics of the area will be bettered by the development of the new infrastructure.	Low	Low-Medium
	Indirect	Safety and security	No	Negative	Low	Site security will ensure that the site is secured, and only authorised access allowed. Appointment of people not to take place on site to reduce a potential influx of work seekers. No informal settlers will be allowed to establish on site.	High	Low
	Indirect	Traffic disruptions	No	Negative	Medium	Traffic warning and calming measures will be put in place when construction activities may impact on traffic flow	Medium	Low-Medium
	Direct	Loss of cultural heritage	No	Negative	Low	Should any human related graves or artefacts be discovered, work should be immediately stopped and SAHRA notified.	High	Low
	Direct	Loss of sense of place	No	Negative	Low-Medium	The site is in a rural setting and the development of the development will provide better access and economic growth to the area.	Medium	Low
	Direct	Change of land use	No	Negative	Low-Medium	Land use will be changed from Agricultural to Institutional and recreational	Medium	Low
Economic	Direct	Decline/increase in economy	Yes	**Positive**	Medium-High	Construction on site will provide employment and skills to the local community. The local economy will benefit in terms of supply of building materials and services.	Very High	**High**
	Direct	Decline/increase in property value	Yes	**Positive**	High	The proposed development will provide better access to the residents of Muldersdrift and Ruimsig. The ease of traffic flow may encourage new property developments in the area especially with other developments and infrastructure EIA applications currently in place to provide an economic boost to the area.	Very High	**High**
	Direct	Employment	Yes	**Positive**	Medium	Construction on site will provide employment and skills to the local community. Wherever possible labour, materials and services will be sourced locally.	High	**Medium-High**
OPERATIONAL PHASE								
Atmospheric Emissions	Not Applicable	Dust emissions	None	None	None	N/A	None	None

	Direct	Emissions from vehicles and equipment (CO2, NOx, SOx, VOC's etc.)	Yes	Negative	Low-Medium	Emissions from vehicle exhaust pipes	High	Low
	Indirect	Noise	No	Negative	Low-Medium	Noise levels will increase with more road users accessing the proposed site area	Medium	Low-Medium
Discharge to Water	Not Applicable	Sewage	None	None	None	N/A	None	None
	Not Applicable	Silt	None	None	None	N/A	None	None
	Not Applicable	Surface water run-off	None	None	None	N/A	0	None
	Not Applicable	Contamination of water from hazardous substances	None	None	None	N/A	None	None
	Not Applicable	Disturbance of natural drainage lines	None	None	None	N/A	None	None
	Not Applicable	Disturbance/pollution of groundwater	None	None	None	N/A	None	None
	Not Applicable	Disturbance of aquatic ecological systems	None	None	None	N/A	None	None
Waste Generation	Direct	Domestic waste	Yes	Negative	Medium	Waste to be collected on a weekly basis by waste contractor. This will fall within the waste stream of Mogale City Local Municipality. Dustbins to be secured in place with closable lids at strategic places within the institutional grounds and surroundings. Recycling to be encouraged at the development with separate receptacles for each item and to be collected by the relevant providers once these bins or containers are full.	High	Low-Medium
	Not Applicable	Construction waste	None	None	None	N/A	None	None
	Not Applicable	Hazardous waste	None	None	None	N/A	None	None
Soil Alteration	Not Applicable	Loss of topsoil	None	None	None	N/A	None	None
	Not Applicable	Loss of land use capacity	None	None	None	N/A	None	None
	Not Applicable	Alteration of topography	None	None	None	N/A	None	None
	Indirect	Soil pollution	No	Negative	Low	Pollution incidences during the operational phase is very minimal to unlikely especially as the engineering designs will make provision for this.	High	Low
Resource Consumption	Not Applicable	Electricity consumption	None	None	None	N/A	None	None

	Not Applicable	Water consumption	None	None	None	N/A	None	None
	Not Applicable	Fuel consumption	None	None	None	N/A	None	None
	Not Applicable	Raw materials consumption	None	None	None	N/A	None	None
Effects on Biodiversity	Not Applicable	Loss of habitat	None	None	None	N/A	None	None
	Not Applicable	Loss of fauna	None	None	None	N/A	None	None
	Not Applicable	Loss of flora	None	None	None	N/A	None	None
	Not Applicable	Degradation of ecological systems	None	None	None	N/A	None	None
	Not Applicable	Disruption of natural corridors	None	None	None	N/A	None	None
Incidents, Accidents and Potential Emergency Situations	Not Applicable	Pollution incidents	None	None	None	N/A	None	None
	Not Applicable	Health and safety	None	None	None	N/A	None	None
	Not Applicable	Storage of hydrocarbons	None	None	None	N/A	None	None
	Not Applicable	Fire	None	None	None	N/A	None	None
Social	Not Applicable	Visual impact	None	None	None	N/A	None	None
	Not Applicable	Safety and security	None	None	None	N/A	None	None
	Not Applicable	Traffic disruptions	None	None	None	N/A	None	None
	Not Applicable	Loss of cultural heritage	None	None	None	N/A	None	None
	Not Applicable	Loss of sense of place	None	None	None	N/A	None	None
	Not Applicable	Change of land use	None	None	None	N/A	None	None
Economic	Direct	Decline/increase in economy	No	**Positive**	Medium-High	Encourage institutional opportunities and economic development and growth	Very High	High

	Not Applicable	Decline/increase in property value	None	None	None	N/A	None	None
	Not Applicable	Employment	None	None	None	N/A	None	None

For **Alternative:**

CONSTRUCTION PHASE								
	IMPACTS				SIGNIFICANCE (WOM)	MANAGEMENT & MITIGATION MEASURES	MITIGATION EFFICIENCY	SIGNIFICANCE (WM)
	TYPE	DESCRIPTION	CUMULATIVE	NATURE				
Atmospheric Emissions	Direct	Dust emissions	No	Negative	Low	Dust suppression measures will be implemented during the construction phase to minimise dust generated by construction activities.	High	Low
	Direct	Emissions from vehicles and equipment (CO2, NOx, SOx, VOC's etc.)	No	Negative	Low	All construction vehicles will be maintained such as to operate efficiently. Idling times of machinery to be minimised.	Low	Low
	Indirect	Noise	No	Negative	Low-Medium	All construction vehicles will be maintained such as to operate efficiently. Idling times of machinery to be minimised. Operations shall not occur before or after normal working hours. Noise monitoring should be undertaken as spot checks. When required noise mufflers should be utilized to reduced noise. It is important to keep an open channel of communication between all stakeholders and keep record of any concerns raised.	High	Low
Discharge to Water	Direct	Sewage	No	Negative	Low	Use of chemical toilets to workers. Not using the bush for toilet facilities. 1 toilet to 20 workers.	Medium	Low
	Direct	Silt	Yes	Negative	Low	Stormwater management will be properly implemented as per the engineering design such as to minimise silt discharge into surrounding systems during rainstorm events.	Medium	Low
	Direct	Surface water run-off	Yes	Negative	Low	Stormwater management will be properly implemented as per the engineering design such as to minimise silt discharge into surrounding systems during rainstorm events.	Medium	Low
	Direct	Contamination of water from hazardous substances	Yes	Negative	Low	Measures will be implemented to ensure that no hydrocarbons and/or other pollutant liquids are spilt, and if so, they are contained, and a clean-up protocol followed.	Medium	Low
	Direct	Disturbance of natural drainage lines	No	Negative	Low-Medium	Discharge and divert stormwater to sediment trap to allow particulate matter to settle out. Under no circumstances may any area be used for ablution purposes. Vehicles to be serviced under controlled conditions. No construction rubble to be dumped.	High	Low

	Direct	Disturbance/pollution of groundwater	No	Negative	Low-Medium	Measures will be implemented to ensure that no hydrocarbons and/or other pollutant liquids are spilt, and if so, they are contained, and a clean-up protocol followed.	High	Low
	Direct	Disturbance of aquatic ecological systems	Yes	Negative	Low	Measures will be implemented to ensure that disturbances to aquatic ecological systems are prevented as far as possible.	Medium	Low
Waste Generation	Direct	Domestic waste	No	Negative	Low	A waste management system will be formulated and implemented on site. All employees will be subjected to induction to understand the environmental management requirement on site. Domestic waste will be removed from the site by a certified waste contractor. Waste disposal certificates will be kept on record.	High	Low
	Direct	Construction waste	No	Negative	Medium	All construction waste will be placed in a demarcated area and disposed of accordingly. This area will be bermed to prevent the dispersal of said waste by wind and rain. Waste disposal certificates will be kept on record.	Medium	Low-Medium
	Direct	Hazardous waste	No	Negative	Low-Medium	All hazardous waste will be stored in a bunded and lockable area. Hazardous waste will be removed from the site by a certified waste contractor. Waste disposal certificates will be kept on record.	Medium	Low
Soil Alteration	Direct	Loss of topsoil	Yes	Negative	Low-Medium	Impact on the environment is expected to be of minimal importance	Medium	Low
	Indirect	Loss of land capability	No	Negative	Low	Impact on the environment is expected to be of minimal importance	High	Low
	Indirect	Alteration of topography	No	Negative	Low	The impact on the environment is expected to be Low. Topography is general flat, and the development infrastructure will contribute to an established environment.	High	Low
	Direct	Soil pollution	No	Negative	Medium	Measures will be implemented to ensure that no hydrocarbons and/or other pollutant liquids are spilt, and if so, they are contained, and a clean-up protocol followed.	High	Low-Medium
Resource Consumption	Indirect	Electricity consumption	No	Negative	Low-Medium	Services agreement to be drawn up by consortium. Fair usage and minimisation of over usage.	High	Low
	Direct	Water consumption	No	Negative	Low	Water use license to be obtained from DWS. Fair usage and care not to over use the water resources.	High	Low
	Indirect	Fuel consumption	No	Negative	Low	All construction vehicles will be maintained such as to operate efficiently. Idling times of machinery to be minimised.	Medium	Low
	Indirect	Raw materials consumption	No	Negative	Low	Raw materials will be used efficiently. Recycling will be implemented on applicable waste streams.	Medium	Low
Effects on Biodiversity	Direct	Loss of habitat	Yes	Negative	Low-Medium	Maintenance of the wetland corridor by following recommendations of wetland specialist.	Medium	Low
	Indirect	Loss of fauna	No	Negative	Low	Maintenance of the wetland corridor by following recommendations of wetland specialist. No trapping or snaring of wild animals if any. Nesting sites should not be disturbed.	Medium	Low

	Direct	Loss of flora	No	Negative	Low-Medium	Mitigation measures proposed in EMPr and recommendations to be followed proposed by Ecologist.	High	Low
	Direct	Degradation of ecological systems	No	Negative	Low-Medium	Maintenance of the wetland corridor by following recommendations of wetland specialist. Recommendations proposed by Specialist studies and the EMPr.	Medium	Low
	Direct	Disruption of natural corridors	Yes	Negative	Low-Medium	Maintenance of the wetland corridor by following recommendations of wetland specialist.	Medium	Low
Incidents, Accidents and Potential Emergency Situations	Direct	Pollution incidents	No	Negative	Low-Medium	Spillages to be cleaned up immediately. Notification of DWS should groundwater be affected.	Medium	Low
	Direct	Health and safety	No	Negative	Low-Medium	'Health and safety standards will be formulated prior construction and implemented during construction.	Medium	Low
	Indirect	Storage of hydrocarbons	No	Negative	Low	All hazardous materials will be stored in a bunded and lockable area. Material Safety Data Sheet (MSDS) sheets will be available for all hazardous products.	Low	Low
	Indirect	Fire	No	Negative	Low	Fire and emergency plans will be implemented during construction. Adequate firefighting equipment will be instituted as recommended.	Medium	Low
Social	Indirect	Visual impact	No	Negative	Medium	The visual impact of construction activities will be medium term. Bollards and protective barriers as well as safety tape may be utilised around the site. The aesthetics of the area will be bettered by the development of the new development infrastructure.	Low	Low-Medium
	Indirect	Safety and security	No	Negative	Low	Site security will ensure that the site is secured, and only authorised access allowed. Appointment of people not to take place on site to reduce a potential influx of work seekers. No informal settlers will be allowed to establish on site.	High	Low
	Indirect	Traffic disruptions	No	Negative	Medium-High	Traffic warning and calming measures will be put in place when construction activities may impact on traffic flow, especially along Hendrik Potgieter Road (M47).	Medium	Medium
	Direct	Loss of cultural heritage	No	Negative	Low	Should any human related graves or artefacts be discovered, work should be immediately stopped and SAHRA notified.	High	Low
	Direct	Loss of sense of place	No	Negative	Low-Medium	The site is in a rural setting and the development of the development will provide better access and economic growth to the area.	Medium	Low
	Direct	Change of land use	No	Negative	Low-Medium	Land use will be changed from Agricultural to Institutional and recreational	Medium	Low
Economic	Direct	Decline/increase in economy	Yes	**Positive**	Medium-High	Construction on site will provide employment and skills to the local community. The local economy will benefit in terms of supply of building materials and services.	Very High	High
	Direct	Decline/increase in property value	Yes	**Positive**	High	The proposed business development will provide better access to the residents of Muldersdrift and Ruimsig. The ease of traffic flow may encourage new property developments in the area especially with other developments and infrastructure EIA applications currently in place to provide an economic boost to the area.	Very High	High

	Direct	Employment	Yes	**Positive**	Medium	Construction on site will provide employment and skills to the local community. Wherever possible labour, materials and services will be sourced locally.	High	Medium-High
OPERATIONAL PHASE								
Atmospheric Emissions	Not Applicable	Dust emissions	None	None	None	N/A	None	None
	Direct	Emissions from vehicles and equipment (CO2, NOx, SOx, VOC's etc.)	Yes	Negative	Low-Medium	Emissions from vehicle exhaust pipes	High	Low
	Indirect	Noise	No	Negative	Low-Medium	Noise levels will increase with more road users especially heavy turning vehicles or industrial vehicles on small roads	Medium	Low
Discharge to Water	Not Applicable	Sewage	None	None	None	N/A	None	None
	Not Applicable	Silt	None	None	None	N/A	None	None
	Not Applicable	Surface water run-off	None	None	None	N/A	0	None
	Not Applicable	Contamination of water from hazardous substances	None	None	None	N/A	None	None
	Not Applicable	Disturbance of natural drainage lines	None	None	None	N/A	None	None
	Not Applicable	Disturbance/pollution of groundwater	None	None	None	N/A	None	None
	Not Applicable	Disturbance of aquatic ecological systems	None	None	None	N/A	None	None
Waste Generation	Direct	Domestic waste	Yes	Negative	Medium-High	Waste to be collected on a weekly basis by waste contractor. This will fall within the waste stream of Mogale City Local Municipality. Dustbins to be secured in place with closable lids. Recycling to be encouraged at the business development with separate receptacles for each item and to be collected by the relevant providers once these bins or containers are full.	High	Medium
	Not Applicable	Construction waste	None	None	None	N/A	None	None
	Not Applicable	Hazardous waste	None	None	None	N/A	None	None
Soil Alteration	Not Applicable	Loss of topsoil	None	None	None	N/A	None	None
	Not Applicable	Loss of land use capacity	None	None	None	N/A	None	None

	Not Applicable	Alteration of topography	None	None	None	N/A	None	None
	Indirect	Soil pollution	No	Negative	Low	Pollution incidences during the operational phase is very minimal to unlikely especially as the engineering designs will make provision for this.	High	Low
Resource Consumption	Not Applicable	Electricity consumption	None	None	None	N/A	None	None
	Not Applicable	Water consumption	None	None	None	N/A	None	None
	Not Applicable	Fuel consumption	None	None	None	N/A	None	None
	Not Applicable	Raw materials consumption	None	None	None	N/A	None	None
Effects on Biodiversity	Not Applicable	Loss of habitat	None	None	None	N/A	None	None
	Not Applicable	Loss of fauna	None	None	None	N/A	None	None
	Not Applicable	Loss of flora	None	None	None	N/A	None	None
	Not Applicable	Degradation of ecological systems	None	None	None	N/A	None	None
	Not Applicable	Disruption of natural corridors	None	None	None	N/A	None	None
Incidents, Accidents and Potential Emergency Situations	Not Applicable	Pollution incidents	None	None	None	N/A	None	None
	Not Applicable	Health and safety	None	None	None	N/A	None	None
	Not Applicable	Storage of hydrocarbons	None	None	None	N/A	None	None
	Not Applicable	Fire	None	None	None	N/A	None	None
Social	Not Applicable	Visual impact	None	None	None	N/A	None	None
	Not Applicable	Safety and security	None	None	None	N/A	None	None
	Indirect	Traffic disruptions	No	Negative	Medium	Traffic calming measures, as more business users will utilise the roads and area.	Medium	Low-Medium
	Not Applicable	Loss of cultural heritage	None	None	None	N/A	None	None

	Not Applicable	Loss of sense of place	None	None	None	N/A	None	None
	Not Applicable	Change of land use	None	None	None	N/A	None	None
Economic	Direct	Decline/increase in economy	No	**Positive**	Medium-High	Encourage business opportunities and economic development and growth	Very High	High
	Not Applicable	Decline/increase in property value	None	None	None	N/A	None	None
	Not Applicable	Employment	None	None	None	N/A	None	None

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

Specialist studies were undertaken in support of the proposed development. These are contained in Appendix G. No shortcomings are anticipated nor gaps in knowledge.

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.

Decommissioning is not envisaged. This is a permanent development. Hence the decommissioning phase has not been assessed. Furthermore, decommissioning of such a site will likely require a separate environmental authorization at the time of decommissioning.

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

Refer to Appendix G for the Wetland Assessment, Ecological Assessment and Heritage Studies.

Refer to Appendix I for other information pertaining to the proposed development in terms of engineering information.

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

Not Applicable.

4. CUMULATIVE IMPACTS

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

Cumulative impacts are those impacts that are created as a result of the combination of impacts of the proposed project, with impacts of other projects or operations, to cause related impacts. These impacts occur when the incremental impact of the project, combined with the effects of other past, present and reasonably foreseeable future projects, are cumulatively considered. The assessment of cumulative impacts on a site-specific basis is however complex especially if many of the impacts occurs on a much wider scale than the site currently being assessed and evaluated.

Cumulative impacts relating to the proposed township development include:

- Increased stormwater runoff due to the increase in paved surfaces;
- Ground- or surface water contamination due to vehicles onsite, and construction and operational waste, as well as the possibility of contaminated storm water runoff; and
- Increased construction traffic to vehicles used by the new institutional development during its construction.

Waste if not properly managed may result in vermin, rodents and impacts to the surrounding properties adjacent to the proposed institutional site. Infiltration of hydrocarbons, leachates and improper discharge of wastewater may result in pollution of water resources, which may impact on the groundwater resources and drinking water. This may result in erosion through water and the loss of topsoil, which will result in the loss of a valuable commodity. Dust pollution and carbons from the vehicular movements combined with water may result in the production of carbon dioxide and hydrogen which may result in explosions due to its flammability and the combination being very poisonous.

Positive cumulative impacts of the proposed development are:

- Job creation and economic improvement for educational facility development; and
- Skills transfer to the immediate community surrounding the development.

Based on the nature and extent of the proposed project, it is concluded that the potential impacts related to the proposed Greengate Ext 68 can be mitigated to an acceptable level from an environmental perspective.

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 proposal considers 2 stands zoned for “educational” with a height of 3 storeys. This alternative is the most preferred option as it will conform to the needs within the Muldersdrift Precinct of educational needs. It also considers the wetland

system located on the western portion of the site. This proposal will comply with the Mogale City SDF and the Muldersdrift Precinct Plan

The site selected is ideal from both a socio-economic and environmental point of view. The site location is cost-effective solution and efficient as access to the site already exists. The proposed development is surrounded by mostly vacant land with rural residential dwellings.

Access to the proposed development is proposed by the existing public roadway situated across Ptn 29 of the Farm Rietvallei 180 IQ (to be upgraded as part of the development). The need for social facilities (including educational amenities) in the area under consideration is confirmed in various planning policies and strategic policy frameworks of the Mogale City Local Municipality.

The proposed development will create many employment opportunities during the constructions and operational phase of the development and therefore skills training and social upliftment will also be achieved from this perspective.

The subject property is near numerous arterial routes in the north-eastern quadrant of Mogale City Local Municipality which attribute increases the appeal and contributes to the feasibility of the proposed development.

The development proposal will result in positive impacts on the local economy and afford residents the opportunity to enrol their children to schools near their residences and/or place of employment.

External services:

External Storm water emanating from the development will discharge into an attenuation dam where after it will discharge through a new tower spillway structure on the north-western corner of the development and flow via a 375mm dia link Stormwater Outlet pipe, laid across its northern western boundary, into the existing piped stormwater system.

Internal stormwater drainage will be managed on surface, where after an underground piped drainage system will be installed for the 1:5-year return period storm. Allowance had been made for the 1:50 year storm to traverse the site in defined channels (which includes the internal road system) without causing any damages to buildings. Both the piped (for minor storm) and overland (for major storm) stormwater systems will discharge into the attenuation pond on the north-eastern corner of the site where after it will be conveyed to the existing municipal system

The external water reticulation for the proposed developments will connect into an existing 110mm Diameter main water pipe located in Andries Road reserve on the south boundary of the site. A bulk water meter, sluice valve and fire Hydrant will be installed at the entrance of the development

The sewerage reticulation will connect into an existing 160mm Diameter sewer pipe further down (North of the development) in the position from Mogale City Water. The new sewer link will be a 160mm dia. Class 34 uPVC solid wall pipe. Manholes and spacing thereof will comply with Mogale City Water's requirements.

As the new link sewer pipe (and V-drain channel) will be laid across the northern western boundary of the adjacent portion, 5m wide servitude will be registered along this boundary for municipal services and storm water drainage.

Internal services:

The internal water reticulation system will tie into an existing 110mm Dia water main located in the Andries Road Reserve area. The internal water will comprise of a series of Class 12 uPVC (Z-lock) water pipes of various diameters extending into the development.

The internal sewerage reticulation will connect into the new 160mm dia link sewer main on the north-western boundary of the site. All internal pipes will be 160mm dia. Class 34 uPVC solid wall

Stormwater drainage will be managed on surface, where after an underground piped drainage system will be installed for the 1:5-year return period storm. Allowance had been made for the 1:50 year storm to traverse the site in defined channels (which includes the internal road system) without causing any damages to buildings. Both the piped (for minor storm) and overland (for major storm) stormwater systems will discharge into the attenuation pond on the north-western corner of the site where after it will be conveyed to the existing municipal system as previously described. The attenuation pond will be of adequate size to retain the additional flow due to development for the 1:5 year, 1:25 year, and 1:50 year return period scenarios

Based on the findings of the specialist studies undertaken through the Basic Assessment process, no environmental fatal flaws have been identified because of the construction of the proposed development.

The most significant impact because of the proposed activity can be seen in the tables above. The potential of these impacts can effectively be mitigated with the utilisation of the EMPr contained in **Appendix H**.

Alternative

The alternative considers 1 erf with "Business 1" development units and 1 erf with public open space. This alternative is not considered the ultimate option to conform to the needs within the Muldersdrift Precinct of educational needs. It does include the wetland system located on the western portion of the site, however it does not comply with the Mogale City SDF and the Muldersdrift Precinct Plan. This alternative may result in increased traffic volumes due to heavy vehicles using the local roads and more peak hour traffic from businesses and degrade local road quality more. Furthermore, noise levels may increase if this alternative is approved due to more vehicles per peak hour.

The proposed development will create many employment opportunities during the constructions and operational phase of the development and therefore skills training and social upliftment will also be achieved from this perspective.

Based on the findings of the specialist studies undertaken through the Basic Assessment process, no environmental fatal flaws have been identified. Socially the consideration of business on the subject site, may result in higher noise levels and traffic volumes per peak hour, whereas educational / institutional as for the proposal will result in early morning and late afternoon traffic and limited noise due to children playing during breaks.

Alternative 2

No-go (compulsory)

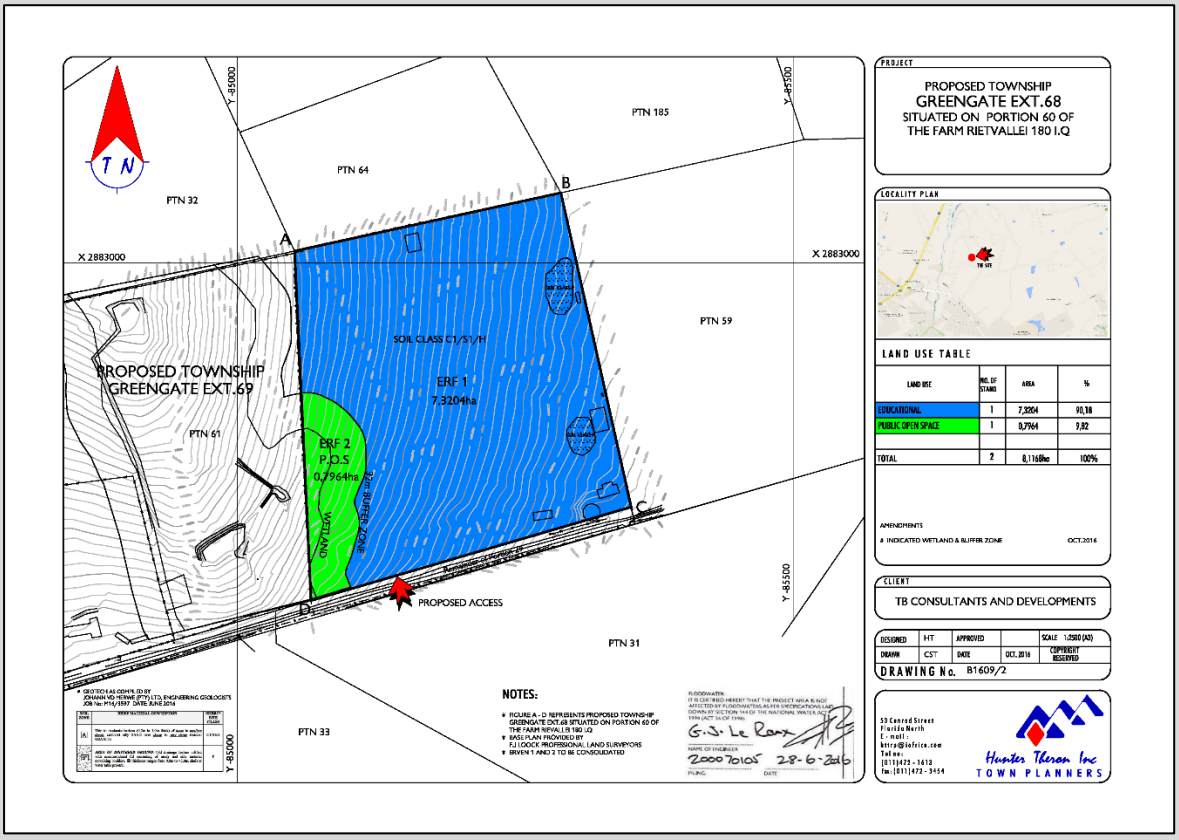
Should the proposed Greengate Ext 68 not proceed, possible job creation and increase in properties and the economic boost may not occur. The demand for institutional arrangements will not be possible or feasible and huge money loss will occur. The site will remain unchanged.

By not approving the proposed development, the general area may not be economically uplifted neither will job opportunities and skills development be encouraged neither will it comply with the Muldersdrift Precinct Plan or to the Mogale City SDF.

The No-go alternative is therefore not preferred as it will not be feasible.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:



The proposal considers 2 stands zoned for "educational" with a height of 3 storeys. This alternative is the most preferred option as it will conform to the needs within the Muldersdrift Precinct of educational needs. It also considers the wetland system located on the western portion of the site. This proposal alternative will comply with the Mogale City SDF and the Muldersdrift Precinct Plan

The site selected is ideal from both a socio-economic and environmental point of view. The site location is cost-effective solution and efficient as access to the site already exists. The proposed development is surrounded by mostly vacant land with rural residential dwellings.

Access to the proposed development is proposed by the existing public roadway situated across Ptn 29 of the Farm Rietvallei 180 IQ. (road to be upgraded as part of the development). The need for social facilities (including educational amenities) in the area under consideration is confirmed in various planning policies and strategic policy frameworks of the Mogale City Local Municipality.

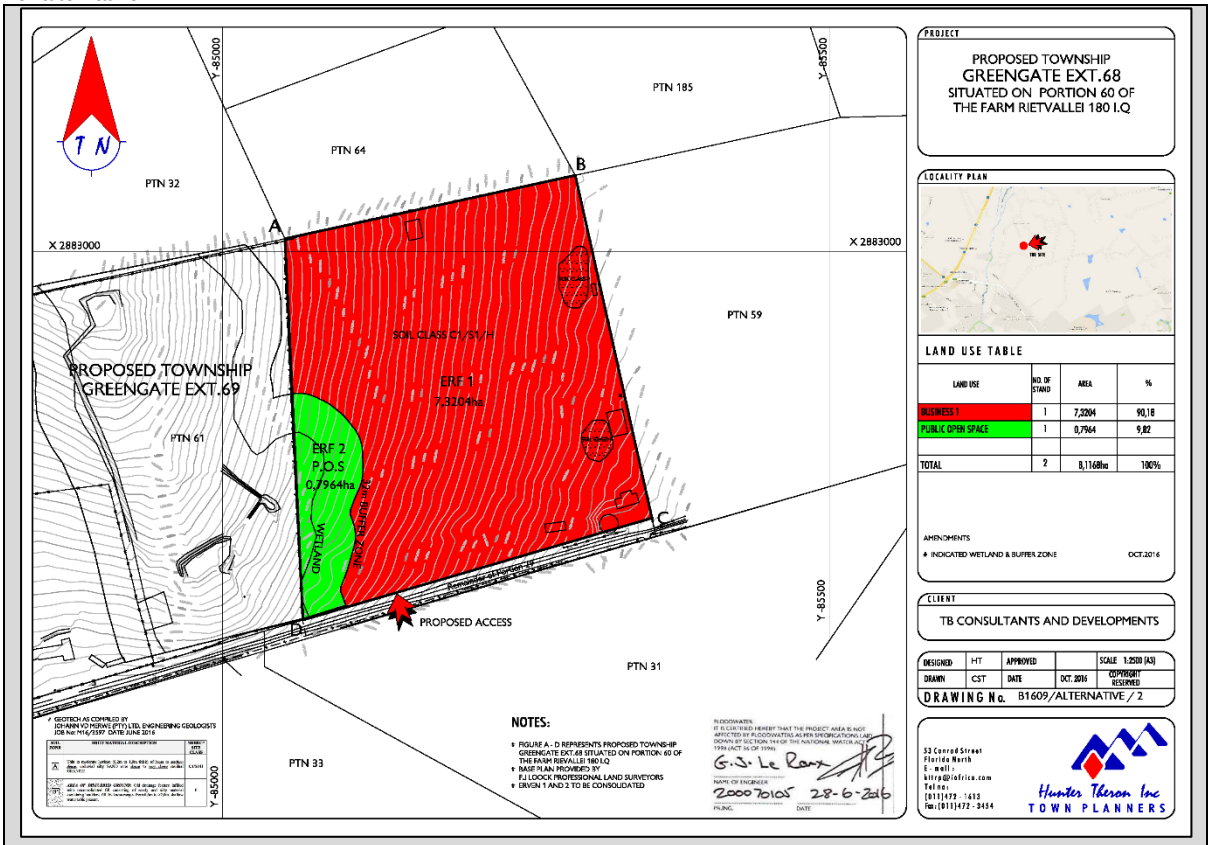
The proposed development will create many employment opportunities during the constructions and operational phase of the development and therefore skills training and social upliftment will also be achieved from this perspective.

The subject property is near numerous arterial routes in the north-eastern quadrant of Mogale City Local Municipality which attribute increases the appeal and contributes to the feasibility of the proposed development.

The development proposal will result in positive impacts on the local economy and afford residents the opportunity to enrol their children to schools near their residences and/or place of employment.

From an environmental perspective, the proposal does not exhibit any sensitive or endangered species. No environmental fatal flaws can be considered onsite. No heritage or significant features were recorded. Ecologically the site has been transformed and the wetland on the western section of the site will be dedicated to open space. With mitigation measures mentioned in this Basic Assessment Report and the attached EMPr contained in Appendix H, these impacts can be mitigated to a minimum.

For alternative:



The alternative considers 1 erf with “Business 1” development units and 1 erf with public open space. This alternative is not considered the ultimate option to conform to the needs within the Muldersdrift Precinct of educational needs. It does include the wetland system located on the western portion of the site, however it does not comply with the Mogale City SDF and the Muldersdrift Precinct Plan. This alternative may result in increased traffic volumes due to heavy vehicles using the local roads and degrade these roads more. Furthermore, noise levels may increase if this alternative is approved and impacts on both social and the bio-physical environments are greater with this option as compared with the educational proposal option.

From an environmental perspective, the same applies as for the proposal site, however socially the business development may result in increased traffic flow especially heavy vehicles, more vehicles per peak hour and degradation of the local roads with increased noise levels

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.

After assessing the environmental related impact in terms of bio-physical and social the proposal was selected as it has the least impact on the environment. Ecologically the site does not exhibit any signs of red data plants or animals as the site has been degraded by human-related activities. No heritage of significance is located within the general area. Although, in the event that any items of heritage or cultural significance are identified, construction activities will immediately cease and the SAHRA will be notified of the findings. Mitigation measures mentioned in the EMPr contained in **Appendix H**, have been developed to assist the contractor during the construction, and post-construction phases of the project to minimize any impacts on the environment.

The Proposal was selected as it was a cost-effective solution and will set out the goals as contained within the Mogale City SDF and Muldersdrift Precinct Plan.

The proposal considers 2 stands zoned to be "Educational" of 3 storeys high and will have a coverage of approximately 20 % per hectare. The total size of the site is 8,1168ha.

As the proposal is bordered by a watercourse on the western border, a water use license is also being undertaken in terms of the National Water Act (NWA), 1998 (Act no. 36 of 1998).

The alternative considers business as compared to educational, the business may result in social issues in terms of increased noise and traffic levels on the local roads, leading to degradation of the local roads within the area.

7. SPATIAL DEVELOPMENT TOOLS

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

The following spatial development tools were applied and/or considered:

1. **GDARD C-PLAN v3** and environmentally sensitive layers were utilized during the compilation of this report.
2. **Gauteng Provincial Environmental Management Framework** was utilized in the compilation of this report. The development falls within zone 1 i.e. the urban development zone.
3. **West Rand District Spatial Development Framework, 2014** for the WRDM has increased it supply of electricity in the last decade. Mogale City LM experienced a slight increase in the total number of households that utilise electricity as means of energy for lighting. The containment of urban sprawl by way of growth management that seeks to advance compaction, residential densification, and in-fill development and mixed land uses within the existing urban fabric. Under Principle 9 and 10 above the Strategic Development Areas identified should also be provided with services in order to unlock and facilitate the development potential of these areas for housing/mixed use projects aimed at eradicating the district housing backlog, and achieving the urban restructuring required. There should thus also be a drive towards continuously expanding service networks in these areas. This report was utilised in the compilation of this report.
4. **Mogale City Spatial Development Framework, 2011** was utilised during the compilation of this report. The site falls within an urban zone.
5. **Muldersdrift Precinct Plan** was utilised in the compilation of this report. The proposed development will aid and contribute to the information contained within the plan for educational facilities' needs.

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):

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:

There are no fatal flaws associated with the proposed development and potential impacts to the environment identified through this process can be mitigated to acceptable levels. The impacts associated with the proposed development on this site are considered acceptable from an environmental perspective, provided that the proposed mitigation measures are implemented.

Relevant conditions to be adhered to include:
The construction and operation of Greengate Ext. 68 should be implemented according to the following conditions to adequately mitigate and manage the identified low to moderate impacts.

Design and Construction Phase:
The following mitigation and management measures should be implemented during the construction phase in order to minimise potential environmental impacts:

- Construction activities should be limited to between 08:00 and 17h30 (in terms of the requirements of the Environment Conservation Act).

- Adopt responsible construction practices aimed at containing the construction activities to specifically demarcated areas thereby limiting the removal of natural vegetation to the minimum.
- Responsible construction practices must be adopted aimed at containing the construction activities to specifically demarcated areas, thereby limiting the removal of natural vegetation to the minimum. The removal of natural vegetation should be limited to the bare minimum and should not be undertaken without proper planning and delineation.
- Any soil must be exposed for the minimum time possible once cleared of vegetation to avoid prolonged exposure to wind and water erosion and to minimise dust generation.

Operation Phase:
The following mitigation and management measures should be implemented during the operation phase in order to minimise potential environmental impacts:

- Waste should be managed as not to be aesthetically appealing or attract pests or rodents.
- Control of alien invasive planet with pesticides.
- Rehabilitation and landscaping within the development should be encouraged.

The construction and operation of the proposed development should be implemented according to an Environmental Management Programme (EMPr) [**Refer to Appendix H**] to adequately mitigate and manage the identified impacts.

The following mitigation and management measures should be implemented during the construction and operation phases of the proposed development in order to minimise potential environmental impacts:

- Adopt responsible construction practices aimed at containing the construction activities to specifically demarcated areas thereby limiting the removal of natural vegetation to the minimum.
- Limit access to the proposed site (during both construction and operational phases) along existing access roads.
- Any soil must be exposed for the minimum time possible once cleared of vegetation to avoid prolonged exposure to wind and water erosion and to minimise dust generation.
- Excavation of soil at the proposed site should be undertaken in such a manner that wind and water erosion of this soil is prevented.
- All litter and site debris must be removed from the site immediately, if applicable.
- The litter and debris from the construction site should not be buried or hidden at the proposed development, if applicable.
- Dust suppression mechanisms should be put in place as to reduce and minimise the dust pollution.
- Indigenous vegetation should be utilized in the rehabilitation of areas not under permanent development once construction is complete.
- Compliance to the wetland buffer zone.

It should be mentioned that although the project does not oblige an Environmental Control Officer (ECO) to be appointed, it is recommended that an ECO be appointed to undertake environmental compliance monitoring once at the beginning of the project and once during the decommissioning, to record compliance with the EMP.

9. NEEDS AND DESIRABILITY OF THE PROPOSED DEVELOPMENT (AS PER GN 792 OF 2012, OR THE UPDATED VERSION OF THIS GUIDELINE)

In terms of the Needs and Desirability as per GN 792 of 2012 the following is applicable:

NEED ('timing'):

Question 1: Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved spatial development framework (SDF) agreed to by the relevant environmental authority? (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP).

The proposed Greengate Ext 68 is intended to alleviate educational pressures within the Muldersdrift precinct area under jurisdiction of the Mogale City LM. The subject property is located in close proximity to numerous arterial routes in the north eastern quadrant of Mogale City Local Municipality which attribute increases the appeal and contributes to the feasibility of the proposed development.

The Muldersdrift Region is experiencing exponential growth which can partly be ascribed to the ease of access the Region has in terms of other precincts in and around Mogale City, City of Johannesburg, as well as, the City of Tshwane. The development trend of properties in the precinct further confirms the afore-mentioned notion. The development proposal will result in positive impacts on the local economy and afford local residents the opportunity to enroll their children to schools in close proximity to their residences and/or place of employment.

Question 2: Should development, or if applicable, expansion of the town/area concerned in terms of this land use (associated with the activity being applied for) occurs here at this point in time?

The proposed development will enhance the general area by supplying the much needed educational relief to the residential developments already approved or still under EIA process. It should therefore be approved as there is a current need for this. The educational facilities will be located in close proximity to residents within the general area.

Question 3: Does the community/area need the activity and the associated land use concerned (is it a societal priority)? This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate).

There is a general need in the area for educational facilities, as well as from the Municipality and therefore this proposed development will alleviate and contribute to economic growth and expansion and job creation.

Question 4: Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development?

The site is currently zoned "Agricultural" however the application does constitute a change of land use and such is a listed activity in terms of the Environmental Conservation Act [ECA], 1989. The site is located in an area earmarked for medium and high density residential development by Mogale City Local Municipality and thus supporting educational facilities like the proposed development will be required.

Question 5: Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)?

The site is located in an area earmarked for medium and high density residential development by the Mogale City Local Municipality and thus supporting educational facilities like the proposed development will be required.

It is the client's intention to develop the said portion with a Private Educational Facility for a school as follows:
2x "Educational" erven

Question 6: Is this project part of a national programme to address an issue of national concern or importance?

The proposed project forms part of the bigger scheme of developments in the Muldersdrift precinct area. It will enhance the municipality, by providing much needed educational facilities to the general area in question.

DESIRABILITY {'placing'):

Question 1: Is the development the best practicable environmental option for this land/site?

Yes, as it will benefit the social context of the area. It will boost the economy and comply to the Mogale City SDF and Muldersdrift Precinct Plan. Job creation will be encouraged and benefits in terms of its locality in closeness to residents of the general area will be encouraged.

Question 2: Would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF as agreed to by the relevant authorities?

No it will not as the proposed development will enhance and better the general state of the area and municipality. It will also provide opportunity for growth and development in the area.

Question 3: Would the approval of this application compromise the integrity of the existing environmental management priorities for the area (e.g. as defined in EMFs), and if so, can it be justified in terms of sustain ability considerations?

No, as the proposed development falls within the urban area and urban edge of the municipality and by following the EMPr contained in Appendix H, the identified impacts can be minimised and effectively mitigated.

Question 4: Do location factors favour this land use (associated with the activity applied for) at this place? (this relates to the contextualisation of the proposed land use on this site within its broader context).

Yes, the proposed site is located within the Muldersdrift Precinct where there is a current need for educational facilities. Accessibility to and from the site is greatly enhanced by the arterial routes.

Question 5: How will the activity or the land use associated with the activity applied for, impact on sensitive natural and cultural areas (built and rural/natural environment)?

The following impacts related to discharges to water include:

- *Siltation,*
- *Sewage,*
- *Surface water run-off,*
- *Hazardous substances contamination,*
- *Disturbances of natural drainage,*
- *Groundwater pollution,*
- *Disturbances to ecological corridors*

The following impacts related to impacts on biodiversity include:

- *Loss of habitat*
- *Loss of fauna*
- *Loss of flora*
- *Disruption of natural corridors*
- *Disturbances to ecological systems.*

Please refer to the Impact Rating Table above.

Question 6: How will the development impact on people's health and wellbeing (e.g. in terms of noise, odours, visual character and sense of place, etc.)?

The following social impacts are applicable:

- *Visual impact*
- *Safety and security*
- *Traffic Disruptions*
- *Loss of cultural heritage*
- *Loss of sense of place*
- *Change of land use*
- *Dust emissions*
- *Vehicular pollution*
- *Noise*

Please refer to the Impact Rating Table above.

Question 7: Will the proposed activity or the land use associated with the activity applied for, result in unacceptable opportunity costs?

No the proposed development will be at the cost of the applicant.

Question 8: Will the proposed land use result in unacceptable cumulative impacts?

Minimal cumulative impacts are anticipated, however by the implementation of the EMPr contained in Appendix H and following mitigation measures mentioned in the Impact Assessment will drastically reduce the cumulative impacts and even eliminate them.

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

The Environmental Authorisation will be required for a period of **10 years**, to ensure that all construction activities are completed.

11. ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPR) (MUST INCLUDE POST CONSTRUCTION MONITORING REQUIREMENTS AND WHEN THESE WILL BE CONCLUDED)

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

EMPr attached ~~YES~~

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

Appendix B: Photographs

Appendix C: Facility Illustration(s)

Appendix D: Route Position Information

Appendix E: Public Participation Information

Appendix F: Water Use License(s) Authorisation, SAHRA Information, Service Letters from Municipalities, Water Supply Information

Appendix G: Specialist Reports

Appendix H: EMPr

Appendix I: Other Information

CHECKLIST

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

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