BASIC ASSESSMENT REPORT – FINAL REPORT

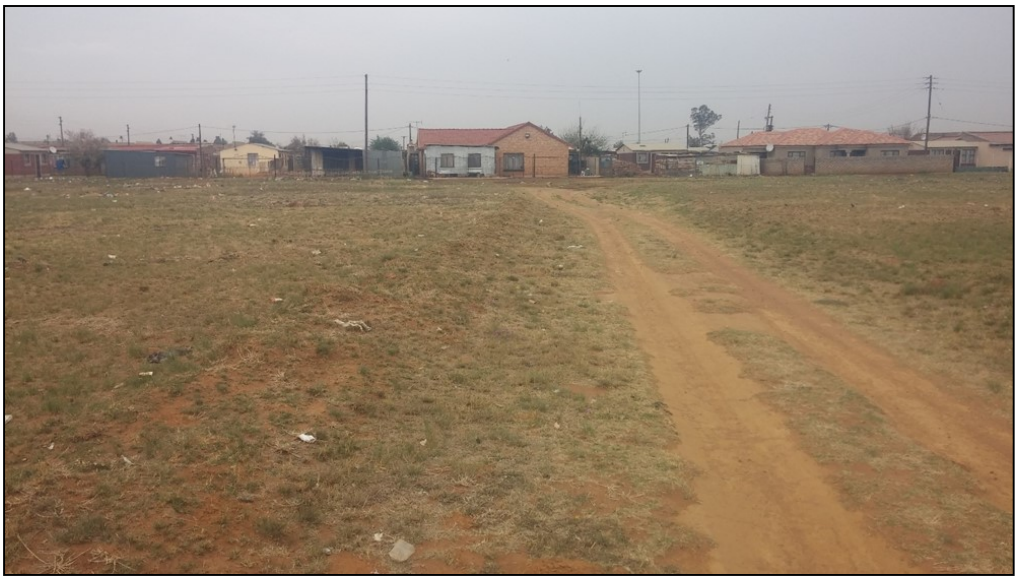
Proposed Filling Station and Retail Centre on Holding 63, Johandeo, Emfuleni Local Municipality

DATE: 17 October 2017

Ref Number Gaut: 002/16-17/E0140

Report Number 2017-R128

Prepared for Stone Cold Enterprise 10 (Pty) Ltd



Prepared By

NS Environmental
Environmental Consultancy

Tel: 031 502 1822
Cell: 083 648 2967
Fax: 086 537 9397
nishal@nsenvironmental.co.za
http://www.nsenvironmental.co.za
PO Box 65065, Reservoir Hills, Durban, 4090
Block 1a, Kingfisher Office Park, 28 Siphosethu Road, Mount Edgecombe, 4302

Report Status	Date	Authorised
Public draft	04 September 2017	Nishal Sewruttan
Final report	17 October 2017	Nishal Sewruttan

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.

The submission was unfortunately delayed because the specifications of the fuel tanks were not received timeously from the project team.

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

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

The proposed development of a filling station and retail centre is not a decommissioning or closure project.

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?

This is the public draft report. All comments received will be attached in the Final Basic Assessment Report

SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

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

The proposed construction of a filling station and a retail centre on Johandeo holding 63 located within the Sedibeng Municipality.

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?

No	Yes
X	

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

The application will require a General Authorisation (low risk) under the National Water Act from the Department of Water and Sanitation (DWS) for construction within 500m of a wetland

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

2. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	National Department of Environmental Affairs (DEA)	27 November 1998
Environmental Impact Assessment (EIA) Regulations promulgated on the 4th December 2014	National Department of Environmental Affairs (DEA) and the Gauteng Department of Agriculture and Rural Development (GDARD)	04 December 2014
National Water Act (Act No. 36 of 1998)	Department of Water and Sanitation (DWS)	1998
South Africa's Constitution, 1996 (Act No. 108 of 1996)	The State	1996
Occupational Health & Safety Act, 1993 (Act No. 85 of 1993)	Department of Labour	1993
Environmental Conservation Act, 1989 (Act No. 73 of 1989) (ECA).	National Department of Environmental Affairs (DEA)	1989

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

Legislation, policy of guideline	Description of compliance
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	The National Environmental Management Act (Act No. 107 of 1998) (NEMA) is the overarching framework for environmental legislation as well as the Regulations for Environmental Impact Assessment. It sets out the principles that serve as a general framework for environmental planning, as guidelines by reference to which organs of state must exercise their functions and guide other laws concerned with the protection or management of the environment. The application takes into account the environmental and socio-economic conditions in compliance with the NEMA principles
Environmental Impact Assessment (EIA) Regulations promulgated on the 4th December 2014	According to the National Environmental Management Act (Act no. 107 of 1998), EIA Regulations a Basic Assessment process should be undertaken for the proposed development.
National Water Act (Act No. 36 of 1998)	A wetland is located within 500m of the site boundary. Any development or construction within a 500m radius from the delineated boundary of any wetland or pan will require either a Water Use License (WULA) or general authorisation (GA) issued by the Department of Water & Sanitation (DWS). GA's are required for low risk activities while WULA's are required for medium to high risk activities.
South Africa's Constitution, 1996 (Act No. 108 of 1996)	Chapter 2 of the Bill of Rights that forms part of The Constitution of South Africa provides for an 'environmental right', and in terms of Section 7, the State is obliged to respect, promote and fulfill the rights in the Bill of Rights. An obligation is therefore placed on the State to give effect to the environmental right and this is achieved through the right of everyone: • To an environment that is not harmful to their health or well-being, • To have the environment protected, for the benefit of present and future generations, though reasonable legislative and other measures that: • Prevent pollution and ecological degradation, • Promote conservation, • Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development. The development must therefore align itself with the above principles

Occupational Health & Safety Act, 1993 (Act No. 85 of 1993)	The Occupational Health and Safety Act provides for the health and safety of persons at work and for the health and safety of persons in connection with the use of machinery; the protection of persons other than persons at work, against hazards to health and safety arising out of or in connection with the activities of persons at work. The Act must therefore by complied with during the construction and operational phases of the development.
National Heritage Resources Act, 1999 (Act No. 45 of 1999 (NHRA)	Section 38 of the NHRA states that the South African Heritage Resources Agency (SAHRA) must be notified of developments greater than 5000m^2. A heritage impact assessment has been conducted in accordance with the NHRA

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

Alternatives are defined in the Regulations as "different means of meeting the general purpose and requirements of the activity". In terms of the NEMA EIA Regulations alternatives must be assessed and evaluated by the EAP at a scale and level that enables adequate comparison with the proposed development. The EAP must provide opportunities for stakeholder input in terms of the identification and evaluation of alternatives. When considering alternatives, the criterion to be taken into account is "any feasible and reasonable alternatives to the activity and any feasible and reasonable modifications or changes to the activity that may minimize harm to the environment".

This proposed filling station and retail centre consists of one site alternative and two layout alternatives. The above principles were applied during the assessment of the two layout alternatives. The public participation process has also provided an opportunity to assess different alternatives, if necessary.

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	NS Environmental (Pty) Ltd were appointed by Stone Cold Enterprise 10 (Pty) Ltd. to conduct an Environmental Basic Assessment for the proposed filling station and retail centre on Holding 63, Johandeo located within the Emfuleni Local Municipality which forms part of the Sedibeng District Municipality. The project includes a filling station and associated facilities (retail facilities, food outlets, hardware store and internal roads) at the corner of Makholong Street and the Golden Highway (R28) in the established township of Johandeo, located south west of Sebokeng in Gauteng. The development footprint will be 21 339m^2. The following infrastructure will be used for the storage and dispensing of fuel: • 2x 43 000L tanks compartmentalized in 6 sections • The underground storage tanks will be designed and installed in accordance with the SABS 089-3-1999, Third Edition. Code of practice - The petroleum industry, Part 3: The installation of

		underground storage tanks, pumps/dispensers and pipework at service station and consumer installations. • The material composition of tanks will consist of double wall steel tanks with fibre glass reinforced polyester resin or endoprene polyurethane on the outer layer. • The tank dimensions are 8850mm length with Diameter of 2500mm • The products to be stored in the tanks include Unleaded 93, Unleaded 95 and Diesel 50ppm • Number of fuel bowsers will be 6 hose pumps per island
2	Alternative 1	**Alternative 1** Alternative 1 is a layout alternative. De Waal Street, which traverses the site to the north-east and is currently not operating as a functional road, is excluded from the layout (Appendix C). This is the major difference between Alternative 1 and 2. The other minor differences between the alternative 1 and 2 relative to the area (in square metres of the filling station and the retail components) **Alternative 2** During the early planning stages of the project, the design of the layout did not exclude De Waal Street. It was anticipated that De Waal Street could be realigned to fall outside the study site. However, this realignment did not materialise. Therefore, the major difference between the alternatives is the inclusion of De Waal Street in alternative 2. **No-go Alternative** The no-go alternative will result in the development not materialising. The site will continue to be used for informal purposes. Undesirable environmental impacts such as soil erosion and the dumping of waste will likely continue.
3	Alternative 2	
	Etc.	

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)***	21 339m^2
Alternatives:	
Alternative 1 (if any)	
Alternative 2 (if any)	

Ha/ m^2

or, for linear activities:

	Length of the activity:
Proposed activity	n/a
Alternatives:	
Alternative 1 (if any)	n/a
Alternative 2 (if any)	n/a

m/km

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

	Size of the site/servitude:
Proposed activity	21 339m^2
Alternatives:	
Alternative 1 (if any)	n/a
Alternative 2 (if any)	n/a

Ha/m^2

5. SITE ACCESS

Proposal

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

Describe the type of access road planned:

n/a

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

Describe the type of access road planned:

n/a

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

Describe the type of access road planned:

n/a

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

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

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

(only complete when applicable)

6. LAYOUT OR ROUTE PLAN

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

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

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

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

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

7. SITE PHOTOGRAPHS

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

8. FACILITY ILLUSTRATION

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

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

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

Instructions for completion of Section B for linear activities

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

Section B has been duplicated for sections of the route | **N/A** | times

Instructions for completion of Section B for location/route alternatives

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

Section B has been duplicated for location/route alternatives | **N/A** | 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.)	Johandeo is located in Sebokeng township in southern Gauteng, near the industrial city of Vanderbijlpark. The geographical coordinates are (26° 36‘8.24“S) (27° 48‘58.84“E). The proposed site is formally described as Holding 63, Johandeo. The site falls within the jurisdiction of the Emfuleni Local Municipality forming part of the Sedibeng District Municipality. The proposed site is approximately 12 km from Vanderbijlpark and 15 km from Vereeningeng. The site is located at the corner of Makholong Street and the Golden Highway (R28), south west of Sebokeng.

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° 36‘8.24“S	27° 48‘58.84“E

In the case of linear activities:

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

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 ☐

The 21 digit Surveyor General code of each cadastral land parcel

PROPOSAL	T	O	I	Q	0	1	8	2	0	0	0	0	0	0	6	3	0	0	0	0	0
ALT. 1																					
ALT. 2																					
etc.																					

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

According to the Geotech Report the site is characterized by a relatively flat open piece of land adjacent to the R28 Main Road (Golden Highway) in the east.

4. LOCATION IN LANDSCAPE

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

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

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

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

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

b) are any caves located on the site(s) | YES | NO X |

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

Latitude (S):	**Longitude (E):**
°	°

c) are any caves located within a 300m radius of the site(s) YES | NO X

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

Latitude (S):	**Longitude (E):**
°	°

d) are any sinkholes located within a 300m radius of the site(s) YES | NO X

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

Latitude (S):	**Longitude (E):**
°	°

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

6. AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 4)? 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 % = 20	Natural veld with heavy alien infestation % =40	Veld dominated by alien species % =	Landscaped (vegetation) % =
Sport field % =	Cultivated land % =	Paved surface (hard landscaping) % =	Building or other structure % =	Bare soil % = 40

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 **NO X**

If YES, specify and explain:

n/a

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

If YES, specify and explain:

n/a

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

If YES, specify and explain:

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

If yes complete specialist details

Name of the specialist:	However, a specialist was appointed to undertake the Wetland Assessment. The report has assisted in completing this section.
Qualification(s) of the specialist:	
Postal address:	
Postal code:	
Telephone:	Cell:
E-mail:	Fax:

Are any further specialist studies recommended by the specialist? YES NO

If YES, specify:

If YES, is such a report(s) attached?	YES	NO
If YES list the specialist reports attached below		

Signature of specialist: _____ Date:

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

8. LAND USE CHARACTER OF SURROUNDING AREA

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

1. Vacant land X	2. River, stream, wetland X	3. Nature conservation area	4. Public open space	5. Koppie or ridge
6. Dam or reservoir	7. Agriculture X	8. Low density residential	9. Medium to high density residential X	10. Informal residential X
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 X	20. Sport facilities X
21. Golf course/polo fields	22. Airport[N]	23. Train station or shunting yard[N]	24. Railway line[N] X	25. Major road (4 lanes or more)[N] X
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 X	
Other land uses (describe):				

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

NORTH

1			25	9
				9
9	9			
1	19, 20	9		1 & 9
9 & 24	9& 24	1, 2, 9 &24	24, 25	1, 2, 24

WEST EAST

SOUTH

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

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

	YES X	NO
Have specialist reports been attached		

If yes indicate the type of reports below

Geotechnical Report
Wetland Assessment Report
Heritage Impact Assessment
Storm Water Management Plan

The site and its entire 500 m buffer overlaps with the Soweto Highveld Grassland vegetation unit as described by Mucina and Rutherford (2006), which is a listed Threatened Ecosystem (Gm 8) with a Vulnerable conservation status according to the 2011 Schedule (Government Gazette of December 2011) of the National Environmental Biodiversity Act (Act 10 of 2004) (NEMBA). However the site itself has been disturbed by footpaths, vehicle tracks and the dumping of waste . It is surrounded to the west, south and east by low income housing, while the area to the north of Makholong Street remains undeveloped. The majority of the site is vegetated with a grass cover that is interspersed with bare soil patches.

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.

According to Census 2011, Emfuleni Local Municipality has a total population of 721 663. The Emfuleni Local Municipality is one of the three local municipalities comprising the Sedibeng District Municipality in Gauteng, covering an area of 987.45 km².

Johandeo is located in Emfuleni Local Municipality. The total population for Johandeo is 9 878 within 2768 households. The population dynamics of the Johandeo are summarised below:

According to Stats SA;

- The majority of people living in the area are black African
- The majority of people living in the area speak Sesotho
- The highest level of education for the majority of people is secondary school
- The majority of the population either has no income or are low income earners.
- Electricity is the most common source of energy
- The municipality services the majority of the area with clean drinkable water.
- The majority of the toilets are flushable and are connected to the municipal sewerage system.
- The majority of the refuse waste is collected by the local authority (Municipality) or private company at least once every week.

10. CULTURAL/HISTORICAL FEATURES

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

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-

(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;

(b) the construction of a bridge or similar structure exceeding 50m in length;

(c) any development or other activity which will change the character of a site-

(i) exceeding 5 000 m2 in extent; or

(ii) involving three or more existing erven or subdivisions thereof; or

(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or

(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;

(d) the re-zoning of a site exceeding 10 000 m2 in extent; or

(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

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

n/a

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

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

Extract from Heritage Impact Assessment:

The proposed site is situated on an open piece of land on the western fringes of the township of Sebokeng. It measures approximately 3.1ha in size and is situated on the corner of De Waal Street on the northern side and the R28 Main Road on the eastern side. Stands and houses are situated on the western and southern side of the proposed site. The site is relatively flat and has light brown Quaternary sandy soils. The site is devoid of trees and has a good coverage of short grass after the latest spate of heavy rains.

A temporary take-away food business and tyre/vehicle repair shop are situated at the north-eastern extent of the proposed site. Municipal infrastructure, such as water and sewerage systems also cross the site. The remains of two destroyed structures were identified within the study area. These structures were of a recent nature and according to passers-by; they were from approximately 20 years ago. A few pedestrian tracks as used by the local people wind through the proposed site. Illegal dumping occurred at the south-western corner of the proposed site.

No sites or finds of any heritage value or significance was identified within the proposed study area.

Will any building or structure older than 60 years be affected in any way?	Yes	NO X
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)? If yes, please attached the comments from SAHRA in the appropriate Appendix	Yes	NO X

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

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

2. LOCAL AUTHORITY PARTICIPATION

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

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

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

n/a

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

The public draft BAR was made available to the Emfuleni Local Municipality for a 30-day comment period. However, no comments were received from the municipality.

The Background Information Document (BID) was submitted to the local authority and I&APs during the initial 30-day public participation period but no comment has been received to date.

3. CONSULTATION WITH OTHER STAKEHOLDERS

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

Has any comment been received from stakeholders?	Yes	NO X

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

n/a

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

The Background Information Document (BID) was submitted to all identified stakeholders and I&APs during the initial 30-day public participation period but no comment has been received to date. The draft Basic Assessment Report was also made available to I&APs, providing them with a 30-day period to comment. The only comment received thus far was from the Gauteng Department of Agriculture and Rural Development.

4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

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

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

5. APPENDICES FOR PUBLIC PARTICIPATION

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

Appendix E: Public participation information

Appendix E1 – Proof of site notice
Appendix E2 – Written notices issued as required in terms of the regulations
Appendix E3 – Proof of newspaper advertisements
Appendix E4 –Communications to and from interested and affected parties
Appendix E5 – Minutes of any public and/or stakeholder meetings
Appendix E6 - Comments and Responses Report
Appendix E7 –Comments from I&APs on Basic Assessment (BA) Report
Appendix E8 –Comments from I&APs on amendments to the BA Report
Appendix E9 – Copy of the register of I&APs

SECTION D: RESOURCE USE AND PROCESS DETAILS

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

Instructions for completion of Section D for alternatives

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

Section D has been duplicated for alternatives [ ] times (complete only when appropriate)

Section D Alternative No. ["insert alternative number"] (complete only when appropriate for above)

1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	YES X	NO
If yes, what estimated quantity will be produced per month?	30 m^3	

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

The solid waste will be temporarily stored at a designated area on site. The waste will be collected and disposed of at a licensed landfill site on a weekly basis. The recycling and reuse of waste will be encouraged.

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

Waste will be collected and disposed of at a licenced landfill site

Will the activity produce solid waste during its operational phase?	YES X	NO
If yes, what estimated quantity will be produced per month?	40 m^3	

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

Waste will be stored temporarily in a designated area within both the filling station and retail centre. The waste will be collected and disposed of at a licensed landfill site on a weekly basis. The recycling and reuse of waste will be encouraged. Waste disposal bins will be available and visible for the use of employees and shoppers during the operational phase.

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

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

It is anticipated that the waste will be disposed of at the municipal 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 X

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

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

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

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

The sorting of waste for recycling purposes must be encouraged by the operators of the retail centre and filling station. Waste recycling bins for the different categories of waste must be made available around the retail centre and filling station

Liquid effluent (other than domestic sewage)

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	YES	NO X
If yes, what estimated quantity will be produced per month?		N/A 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 onsite?	YES	NO X
If yes, what estimated quantity will be produced per month?		N/A m^3

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

N/A

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

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

If yes, provide the particulars of the facility:

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

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

Liquid effluent (domestic sewage)

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?	YES X	NO
If yes, what estimated quantity will be produced per month?		100 m^3
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the domestic effluent to be generated by this activity(ies)?	YES	NO X

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

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

N/A

Emissions into the atmosphere

Will the activity release emissions into the atmosphere?	YES	NO X
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:

Not applicable

2. WATER USE

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

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

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

If yes, list the permits required

N/A

If yes, have you applied for the water use permit(s)?	YES	NO X
If yes, have you received approval(s)? (attached in appropriate appendix)	YES	NO

3. POWER SUPPLY

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

Municipality

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

n/a

4. ENERGY EFFICIENCY

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

The development must utilize energy saving light bulbs during the operational phase

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

The use of solar geysers must be considered and encouraged during the operational phase

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.

No issues have been raised by I&APs thus far. All comments and issues received on the This public draft report will be addressed in the final Basic Assessment Report

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):

A Comments and Response Report will be available in the final BAR

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

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

Environmental impact assessment must consider the geographical extent, severity, duration and probability of impacts on the environment and whether such impacts are positive (beneficial) or negative (detrimental). Each impact is also assessed according to the various project stages such as planning, construction, operational and decommissioning phases. Mitigation measures are then recommended to reduce the significance of each impact. Environmental impacts of all alternatives will be assessed and rated using the following indicators:

- Geographical (spatial) extent of the impact
  - Site: impacting the site only.
  - Local: Impacting both the site and surrounding areas.
  - Municipal: Impacting the municipal area
  - Provincial: Impacting the province
  - National: Impacting the country
  - Global: Impacting the global environment

- Severity of the impact
  - 4 - Very high
  - 3 – High
  - 2 – Moderate
  - 1 – Low

- Duration of the impact
  - 4 – Permanent
  - 3 – Long term: More than 20 years
  - 2 – Medium term: 5 – 20 years
  - 1 – Short term: less than 5 years

- Probability of the impact occurring
  - 4 – Definite
  - 3 – Likely
  - 2 – Possible
  - 1 – Unlikely

Significance assessment

The determination of the significance of environmental impacts is based on a combination of the impact severity, duration, and probability. The allocated values of these indicators are multiplied against each other, providing a final value. This final value is then categorised into the following categories:

Score	Category	Significance of Environmental Impact
48 - 64	**Very high**	Permanent and irreversible change to the natural, cultural, social, or socio-economic environment. Society would probably view these impacts as catastrophic.
32 - 47	High	Society would probably view these impacts in a serious light. Project redesign/alteration measures may be required to reduce the environmental impact. Mitigation measures will be required the construction and operational phases to reduce the significance of the environmental impact to acceptable levels
16 - 31	Moderate	Moderate impacts have the potential to negatively affect the environment. Mitigation measures are necessary to reduce the significance of the environmental impact.
1 - 15	Low	Low or no impact to the environmental. Impacts are usually short term and are unlikely to pose a significant threat to 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.

Environmental Impact Assessment - Alternative 1 and 2

Environmental Criteria					Before Mitigation						After Mitigation						
Environmental Component	Environmental Impact	Phase	Positive or Negative	Direct, Indirect, or Cumulative Impact	Spatial	Severity	Duration	Probability	Score	Significance Assessment	Mitigation measures	Spatial	Severity	Duration	Probability	Score	Significance Assessment
Socio-Economic	Job creation	Construction & Operational	Positive	Direct	Local	3	4	4	48	Very High	Employment of the local community must be encouraged	Municipal	3	4	4	48	Very High
Waste management	Pollution	Construction	Negative	Indirect	Local	3	2	3	18	Moderate	• Recycling and Re-Use of waste must be encouraged. • Waste disposal bins must be made available for the use by construction staff. • Construction waste must be collected and disposed at a licensed landfill site. • Waste must be stored temporarily in a designated area onsite. • The burning of waste is prohibited. • All hazardous waste, including contaminated soil, must be disposed at a registered hazardous waste disposal facility. • Absorbent materials used to clean up spillages must be disposed of in a separate hazardous waste bin.	Site	1	2	2	4	Low
Socio-Economic Environment	Increased Traffic	Construction	Negative	Indirect	Local	3	2	3	18	Moderate	• Caution will be taken to ensure construction vehicles are not parked close to the road and do not block the way to the neighbouring properties. • Clear signs should be displayed along the road and entrance indicating a construction site. • Construction times should be adhered to. Construction should be during 8am-5pm, off peak times. • The delivery of construction equipment and material should be limited to hours outside peak traffic times (including weekends).	Local	2	2	2		

Socio-Economic Environment	Noise Pollution	Construction	Negative	Indirect	Local	3	2	4	24	Moderate	• Work must be carried out between 7am and 5pm and no work must be done on weekends and public holidays • Equipment must be fitted with silencers as far as possible to reduce noise. •All machinery must be maintained and kept in good working order • Neighbouring landowners must be informed prior to the initiation of noisy activities e.g. high intensity drilling.	Site	1	2	2	4	Low
Socio-Economic Environment	Health and Safety	Construction	Negative	Indirect	Site	4	1	4	16	Moderate	• The construction site must be fenced off to prohibit unauthorised access. Site access must be strictly controlled. • All employees, contractors and sub- contractors must wear appropriate PPE. • Open excavations must be clearly marked. • Appropriate health and safety signage must be displayed on site. • A first aid kit must be available on site • All incidents must recorded in a incident register	Site	1	1	1	1	Low
Topography and Soil	Soil erosion	Construction	Negative	Indirect	Site	3	2	3	18	Moderate	• A Stormwater Management Plan (SWMP) must be implemented during the construction and operational phases to prevent erosion • Soil must not be exposed for elongated periods of time • Soil disturbance and vegetation removal must be minimised. • All areas that are susceptible to erosion must be protected • Disturbed and non-developable areas must be revegetated after construction has been completed. • The specialist geotechnical recommendations must be implemented	Site	1	2	2	4	Low
Soil and groundwater resources	Contamination from hydrocarbons	Construction	Negative	Indirect	Local	3	2	3	18	Moderate	• Absorbent spill kits must be provided to clean up any spillages of hazardous material. • Construction staff must be trained on the correct management of spillages and precautionary measures that to prevent spillages.	Site	2	2	2	8	Low

Air Quality	Dust generation and exhaust emissions from construction vehicles	Construction	Negative	Indirect	Local	2	2	4	16	Moderate	• Dust minimisation and control measures must be implemented on the construction site at regular intervals. This includes irrigation by water tankers. • The frequency of implementation of dust suppression measures must be increased windy conditions are experienced. • Vegetation clearance must done shortly before construction commences. • Stock piles and spoil heaps must be covered with tarpaulins. • All construction vehicles must be maintained to minimise excessive exhaust emissions	Site	1	2	2	4	Low
Flora	Loss of vegetation	Construction	Negative	Direct	Site	2	3	4	24	Moderate	• Limit vegetation removal to the construction footprint only. Retain natural vegetation as much as possible. • Re-vegetate disturbed areas, which are not intended to be developed, as soon as construction activities have been completed. • Rehabilitation must make use of indigenous vegetation • Indigenous, low maintenance and water wise plants must be utilised in landscaped areas.	Site	1	1	2	2	Low
Soil and groundwater resources	Contamination from hydrocarbons	Operational	Negative	Indirect	Local	3	3	3	27	Moderate	• Any significant spills or leak incidents must be reported in terms of the National Environmental Management Act, 1998 and the National Water Act, 1998. • The accumulated contents of the oil/water separator must be removed by an accredited company. • The oil/water separator must be inspected regularly to ensure that it is functioning at all times. • A closed coupling must be used when fuel is being transferred from the bulk delivery vehicle to the underground storage tanks. • An Emergency Response Plan must be in place for the site, this must clearly describe emergency procedures and include emergency contact numbers. • If contamination or leakage is detected, this Emergency Response Plan must be followed.	Site	2	3	2	12	Low

Archaeology, Palaeontology & Heritage Sites	Disturbance of sites	Construction	Negative	Indirect	Local	3	4	3	36	High	• All finds of human remains must be reported to the nearest police station. • Human remains from the graves of victims of conflict, or any burial ground or part thereof which contains such graves and any other graves that are deemed to be of cultural significance may not be destroyed, damaged, altered, exhumed or removed from their original positions without a permit from the South African Heritage and Resource Agency (SAHRA) • Work in areas where artefacts are found must cease immediately and SAHRA notified. • Under no circumstances must the Contractor, employees, subcontractors or subcontractors' employees remove, destroy or interfere with archaeological artefacts.	National	2	1	2	4	Low

Wetland	Contamination from hydrocarbons	Construction & Operational	Negative	Indirect	Local	4	3	3	36	High	•The stormwater management plan must ensure that all run off from the petrol station forecourt must be captured and allowed to discharge to Sand Oil and Grease Trap (SOG) and suitably sized holding tank. The holding tank will allow removal of the polluted water by mechanical means and discharged at a municipal sewage facility. •All SOG traps must be maintained for the duration of the operational phase •The underground storage tanks (USTs) must have a specialized surface treatment comprising of a polyurethane (Endoprene). •The USTs must have a leak detection system to permanently monitor the integrity of the double skin tank •Inspection wells must be installed for an on-going monitoring of possible leakages. •USTs must have Emergency overfill protection. •Regular integrity tests must be conducted on fuel storage tanks and pipelines. •A groundwater monitoring network must be established including: •A background monitoring borehole •An Impact monitoring borehole, located near the tanks, to assist with early warning of contamination •A monitoring borehole to determine if the contamination plume has migrated off-site. •Groundwater samples must be collected from the boreholes on a biannual basis for analyses	National	2	1	2	4	Low

Environmental Impact Assessment - No-go Alternative

Environmental Criteria				Before Mitigation					
Environmental Component	Environmental Impact	Positive or Negative	Direct, Indirect, or Cumulative Impact	Spatial	Severity	Duration	Probability	Score	Significance Assessment
Socio-Economic Environment	Unemployment	Negative	Indirect	Municipal	2	3	3	18	Moderate
Waste Management	Pollution	Negative	Direct	Municipal	3	4	3	36	High
Geology & Soils	Soil Erosion	Negative	Direct	Local	2	2	4	16	Moderate
Flora	Spread of Alien Invasive Plants	Negative	Direct	Municipal	4	3	3	36	High

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

Johandeo Wetland Impact Report_ver02

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

N/A

4. CUMULATIVE IMPACTS

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

Litter:
• Litter (if wastes are improperly handled, stored and disposed of).

Economic Impacts:
• Increased wealth in the community and trading opportunities created by the proposed development (Positive Impact Noted).

Social Impacts
• Skills development. (Positive Impact Noted).

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

This basic assessment report provides an assessment of both the potential positive and negative impacts anticipated from the proposed filling station and retail centre. Without the implementation of mitigation measures, these impacts reflected a medium to high significance. After the application of mitigation measures, these impacts reflected a low significance.

It is important that the development implement the recommended mitigation measures followed by monitoring during both construction and operation. Provided that the mitigation measures, including specialist recommendations are implemented, it is the recommendation of the EAP that the development be allowed to proceed.

Alternative 1

Alternative 1 is the preferred layout alternative since it achieves developers' goals. Alternative 1 does not pose any significant environmental impacts provided that mitigation measures are implemented.

Alternative 2

Alternative 2 includes a flaw by incorporating De Waal Street into the layout. Therefore Alternative 2 is not the preferred alternative.

No-go (compulsory)

The no-go option is not preferred since the socio-economic opportunities to the local community area, arising from the development, will not materialize

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

The main environmental impact from the proposed development is contamination by hydrocarbons from the filling station. If not mitigated, contamination can significantly impact on the soil and the wetland located to the south (300m) and south-east (170m) from the site. These wetlands are the only environmentally sensitive feature within a 500m radius of the site.

According to the wetland assessment report, petroleum hydrocarbon seepage from leaking underground storage tanks (or spillage during day-to-day operations) may reach the downslope wetland systems. Petroleum hydrocarbons are highly toxic and detrimental to the natural environment and human health. These compounds are, however, eventually broken down by wetland systems.

The wetland assessment has provided a risk assessment according to DWS requirements. The risk assessment, after the application of mitigation measures, reflected a low risk development in relation to the wetlands assessed.

For alternative:

The environmental impacts of both layout alternative 1 and 2 are the same since there are minor differences in the layout.

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.

The location of the proposed filling station and retail centre on Johandeo holding 63 is the preferred site chosen by the applicant due to its development potential and is considered feasible for the following reasons:

- According to the wetland assessment, there are no wetlands, watercourses, or ecological buffers present within the property or within a 150m radius of the property
- No sensitive or threatened species is found on site.
- The site is geologically stable and suitable for development
- No sites or finds of any heritage value or significance were identified within the proposed study area.
- The proposed filling station and retail centre will be of convenience to surrounding residents who currently travel long distances to the nearest filling station and shopping centre.

7. SPATIAL DEVELOPMENT TOOLS

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

The South African National Biodiversity Institute BGIS Map Viewer (Gauteng Conservation Plan Version 3.3) was used to assess the environmental sensitivity of the site and the surrounding environment. The BGIS indicated that more than 50% of the site was covered by alien invasive *Populous spp* plant species. However, no *Populus spp* is found on site. The Gauteng Conservation Plan did identify a wetland located to the south (300m) and south-east (170m) away from the site. However, no other environmental sensitivities were identified on site or the surrounding environment by the Gauteng Conservation Plan

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
X	

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

N/a

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:

- The applicant must comply with provisions of the National Water Act by submitting an application for a General Authorisation to the Dept. of Water and Sanitation.
- The recommendations of all specialist studies must be implemented
- The development must adhere to the layout (Alternative 1) identified in Appendix C. Any deviation from this plan must be approved by the competent authority
- The underground storage tanks must be designed and installed in accordance with the SABS 089-3-1999, Third Edition. Code of practice - The petroleum industry, Part 3: The installation of underground storage tanks, pumps/dispensers and pipework at service station and consumer installations
- Minimise the areas of disturbance or vegetation clearance. Revegetate areas that have been disturbed as soon as possible. Cut and fill slopes must be stabilised and revegetated as soon as possible during the construction phase.
- Rehabilitation, re-vegetation, and landscaping must consist of indigenous species and protected species.
- The soil exposure period must be kept to a minimum. Rehabilitation of the site must commence once construction has been completed. Disturbed areas must be stabilised to prevent erosion and sedimentation.
- No hazardous substances must be disposed on site or into the surrounding environment. Accidental pollution incidents must be reported to the Project Manager/ECO immediately and shall be cleaned up by the Contractor or a nominated clean-up organisation at the expense of the contractor.

- All alien species must be removed from developed and undeveloped areas of the site once construction is completed. Follow-up alien control must be conducted on an annual basis.

- Contractors must not create open fires for cooking; only gas cookers shall be permitted. Firefighting equipment and a fire response plan, shall be made available and maintained at all camp and construction sites.

- Collected waste must be separated into the different categories of general waste and construction rubble. Separate waste containers for the different waste categories must be provided and located in the construction camp. No waste matter, solid or liquid, shall be discharged into the environment. All building waste and rubble must be removed from site and disposed at a registered landfill.

- Portable ablution facilities must made be available at all times for the construction crew. Waste from these facilities must be disposed at a registered sewage treatment works.

- Dust control measures must be undertaken during the construction phase i.e. dampening the site with a water bowser

- All removed topsoil must be stockpiled and used for rehabilitation of disturbed areas.

- Waste produced during the operational phase must be collected by the municipal waste collection services or a waste contractor and disposed at a licensed landfill.

- All run off from the undercover petrol station forecourt must be captured within the bunded area and allowed to discharge to Sand Oil and Grease Trap (SOG) and suitably sized holding tank. The holding tank will allow removal of the polluted water by mechanical means and discharged at a municipal sewage facility.

- Stormwater must be collected on site and discharged into the existing Emfuleni Municipality stormwater management infrastructure. Stormwater must be managed according to the Municipality's requirements.

- An Environmental Site Officer must be appointed to ensure compliance to the EMP.

- The Environmental Management Programme must be implemented and adhered to (Appendix H).

- The developer must seek to use local suppliers to source building material for construction purposes

- The development must utilize energy saving light bulbs during the operational phase. The use of solar geysers must be considered and encouraged during the operational phase

- Rainwater harvesting tanks must be considered and encourage during the operational phase. Harvested rainwater can be used for the flushing of toilets, cleaning and landscape irrigation. All taps must be fitted with aeration filters to reduce water consumption

<u>Wetland Assessment recommendations:</u>

- Onsite construction (clearing, excavation, stockpiling and vehicle movement)
    - Protect stockpiles of topsoil and subsoil material with silt fences that should be maintained during the entire construction phase on site.
    - Any dewatering that needs to be done from excavated areas during the construction phase should be released into a silt bay that is maintained to trap sediments.
    - Check vehicles regularly for oil leaks and only refuel in designated areas.
    - Provide clearly marked bins for litter and the discard of other waste materials.
    - Provide and maintain portable toilets during the construction phase.

- Hard surface area development
    - The design of a stormwater management plan is required that will help to attenuate runoff and release it without causing erosion.
    - The stormwater management plan must include structural control measures to reduce the velocity of released stormwater and restrict the concentration of flow at outlets. Examples include the incorporation of an attenuation/retention basin on site from which water is slowly released. I addition, the headwall at the stormwater outlet point at the lowest point of the property should be accompanied by energy dissipation features, such as a concrete floor and a reno mattress that is toed-in to prevent scour erosion during rainfall events.
    - New erosion features that develop in close proximity of stormwater outlets must be stabilised once observed.
- Leaking of sewage manholes and pipelines
    - Protect sewage pipelines and manholes from stormwater ingress
    - Consider creating half-moon bunds around man holes that will help to retain leaking sewage should spills occur.
    - Unblock sewage pipelines and manholes when blockages occur and repair pipelines when leaks are detected.
- Spillage of hydrocarbons on surface
    - The stormwater management plan must ensure that all run off from the petrol station forecourt must be captured and allowed to discharge to Sand Oil and Grease Trap (SOG) and suitably sized holding tank. The holding tank

will allow removal of the polluted water by mechanical means and discharged at a municipal sewage facility.

  - All SOG traps must be maintained for the duration of the operational phase of the development.

- Leaking of hydrocarbons from underground storage tanks (UST's)
  - The underground storage tanks (USTs) must have a specialized surface treatment comprising of a polyurethane (Endoprene).
  - The USTs must have a leak detection system to permanently monitor the integrity of the double skin tank
  - Inspection wells must be installed for an on-going monitoring of possible leakages.
  - USTs must have Emergency overfill protection.
  - Regular integrity tests must be conducted on fuel storage tanks and pipelines.
  - A groundwater monitoring network must be established including:
    - A background monitoring borehole
    - An Impact monitoring borehole, located near the tanks, to assist with early warning of contamination
    - A monitoring borehole to determine if the contamination plume has migrated off-site.
  - Groundwater samples must be collected from the boreholes on a biannual basis. Samples must be analyzed by an accredited laboratory. Both the collection of samples and the assessment of the laboratory results must be conducted by an environmental consultant that has expertise in hydrocarbon contamination.
  - The USTs must be installed according to SANS 10089-3 (2010): The petroleum industry Part 3: The installation, modification, and decommissioning of underground storage tanks, pumps/dispensers and pipework at service stations and consumer installations
  - The USTs must be installed according to the selected petroleum company's Engineering Guidelines and specifications
  - The USTs should furthermore be regularly inspected to ensure that the tanks are maintained as required by industry standards.

<u>Geotechnical Assessment recommendations:</u>

- It is considered that the upper 1.0 metre of subsoils classify as SOFT in terms of SANS 1200DA criteria which can easily be removed with a tractor loader backhoe (TLB) of flywheel power approximately 0.10kW per millimetre of tined bucket width.
- It is anticipated that excavations from 1.0 to 2.0 metres below EGL will classify as INTERMEDIATE, which can be efficiently ripped by a bulldozer of mass approximately 35t, fitted with a single-tine ripper suitable for heavy ripping, and of flywheel power approximately 220kW. In addition, consideration can also be given to use of a tracked excavator of flywheel power exceeding 0.10kW per millimeter of tined

bucket width.

- Excavations below 2.0 metres (and where hardpan bedrock is exposed at/near surface level) classify as HARD and will require the use of pneumatic tools and possibly blasting.
- All earthworks should be carried out in a manner to promote stable development of the site. It is recommended that earthworks be carried out along the guidelines given in SANS 1200 (current version).
- Placement of fill layers should be undertaken in layers not exceeding 200mm thick when placed loose and compacted using suitable compaction plant to achieve 93% Modified AASHTO maximum dry density. Density control of placed fill material should be undertaken at regular intervals during fill construction.
- Terraces should be graded to direct water away from the fill edges, and small earth bunds should be constructed along the crest of the fill, to prevent overtopping and erosion of fill embankment slopes. These bunds should be a minimum 450mm wide and 300mm high.
- Boulders larger than 200mm diameter or 1/3 of the layer thickness when loose should be removed from the fill material as these could complicate the compaction works, and also cause piping within fills. Furthermore, large boulders in fills could cause later problems during construction of foundations.
- Cut slopes in soils should be formed to batters of 1 vertical to 1.5 horizontal (34 degrees) and to a height not greater than 1.5m where retaining walls are not provided. Engineered fill slopes should be formed to batters of 1 vertical to 1.5 horizontal provided that the edge of the fill is over constructed and thereafter trimmed back to the required position.
- Cuts in completely to highly weathered bedrock should not exceed gradients of 1 vertical in 1 horizontal (45 degrees).
- Earthworks and drainage measures should be designed in such a way as to prevent ponding of, or high concentrations of, stormwater or groundwater anywhere on the site, both during and after the development.
- The terrace should be shaped to a gradient to prevent water ponding on the surface and should be graded to direct water away from the fill edges and foundations.
- The pavement formation layer for the proposed roads and parking areas should be designed taking into account anticipated traffic loads, volumes and design life of the parking area and roads.
- Due to the poor permeability characteristics of the insitu subsoils as well as the presence of shallow hardpan ferricrete bedrock across portions of the study area, the use of stormwater soakpits is not recommended for the proposed development. As such, all stormwater should be led to discharge to the road hardening in a controlled manner (attenuation tank to Engineer's detail) or directly into the municipal stormwater system which should be designed to cater for such runoff.
- The clayey, nodular ferricrete subsoils in the upper 2.0 metres or so are generally very soft to soft in consistency, and foundations placed at depths less than this may undergo excessive consolidation settlement over time. As such, all foundation loads should be transferred through the nodular ferricrete and placed on hardpan ferricrete bedrock at depth.
- It is recommended that deep strip footings and/or reinforced spread footing foundations (with ground beams spanning between the bases) be used for the proposed structures. All foundation loads should be placed on the hardpan ferricrete bedrock. It is anticipated that foundation depths will range from 0.7 to 2.5

metres below EGL.

- Should the above be adopted then a maximum nett allowable bearing pressure of 150kPa is considered applicable. Total settlement is likely to be less than 5mm with differential settlement taken as 50% of the total.
- A provision for possible movements between floors and walls should be allowed for in the design e.g. provision of construction joints and use of appropriate softboard between walls and floors as per structural engineer's detail.
- All brickwork and foundation footings will need to be reinforced as determined by a Structural Engineer. The use of movement joints should also be considered.
- The surrounding ground should also be graded away from the structure to limit infiltration of water into the subsoils immediately beneath the building.
- Blinding should be cast as soon as foundations have been inspected and approved by SGE.

<u>Recommendations from Heritage Impact Assessment</u>

- The Environmental Control Officer (ECO) of the project must regularly monitor bedrock excavations in case of chance exposure of microfossil remains. In such an event, the ECO must protect the fossil remains and notify SAHRA as soon as possible so that appropriate action (e.g. recording, sampling or collection) can be taken by a professional palaeontologist.

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

There is a need for a filling station and a retail center at the proposed study site. The site is located at the corner of two busy roads, Makholong Street and Golden Highway (R28)/ R553. There are no filling stations or retail centres in the vicinity of the proposed site.

The filling station forms part of a larger development which includes the construction of a retail center which will service the people of Johandeo and the greater Sebokeng community. The proposed retail center will include a hardware store, several retail outlets (Pep and Rage etc.) and food outlets. The retail center in conjunction with the filling station will provide a convenient stop for motorists travelling on the Golden Highway (R28)/R553. The proposed development will also be of convenience to people traveling between Johannesburg and Bloemfontein who prefer using the R553/R28 rather than the N1 freeway.

The development will assist in boosting the local economy of the area. Both skilled and unskilled employment opportunities will be provided both during the construction and operational phases of the project. This will assist in decreasing the unemployment rate for Sebokeng and nationally.

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

Indefinitely

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 X

SECTION F: APPENDIXES

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

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

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

Appendix B: Photographs

Appendix C: Facility illustration(s)
Appendix C1: Layout Alternative 1
Appendix C2: Layout Alternative 2

Appendix D: Route position information – N/A

Appendix E: Public participation information
Appendix E1 – Proof of site notice
Appendix E2 – Written notices issued as required in terms of the regulations
Appendix E3 – Proof of newspaper advertisements
Appendix E4 –Communications to and from interested and affected parties
Appendix E5 – Minutes of any public and/or stakeholder meetings **N/A**
Appendix E6 - Comments and Responses Report **No comments received thus far**
Appendix E7 –Comments from I&APs on Basic Assessment (BA) Report **No comments thus far**
Appendix E8 –Comments from I&APs on amendments to the BA Report **No comments thus far**
Appendix E9 – Copy of the register of I&APs

Appendix F: Water use license(s) authorisation, SAHRA information, service letters from municipalities, water supply information
No comments received thus far

Appendix G: Specialist reports
Appendix G1: Geotechnical Assessment
Appendix G2: Heritage Impact Assessment
Appendix G3: Storm Water Management Plan
Appendix G4: Wetland Assessment
Appendix G5: Engineering Services (water)

Appendix H: EMPr

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) – Layout Alternative 1

Layout Alternative 2

Appendix D: Route position information – N/A

Appendix E: Public participation information

Appendix E1 – Proof of site notice

Appendix E2 – Written notices issued as required in terms of the regulations

Appendix E3 – Proof of newspaper advertisements

Appendix E4 –Communications to and from interested and affected parties - Proof of postage and courier of Public Draft BAR

Appendix E5 – Minutes of any public and/or stakeholder meetings

None

Appendix E6 - Comments and Responses Report

Name	Dept./ Organisation	Contact No.	Email	Comment	EAP's Response
Xoliswa Bobelo	Gauteng Department of Agriculture and Rural Development	011 240 3391	Xoliswa.Bobelo@gauteng.gov.za	**1. Alignment of the activity with applicable legislations and policies** The establishment has a direct bearing on the National Environmental Management Act (NEMA) (Act 107 of 1998) at both national and provincial levels. The proposed development corresponds with the activity applied for under the Environmental Impact Assessment Regulations, 2017, (GN 327), Listing Notice 1 published under NEMA. Furthermore, the site falls within Zone 1 of the Gauteng Provincial Environmental Management Programme (2015) which is conditionally compatible with the land uses within the surrounding neighborhood.	Comment noted
				2. Alternatives Motivation has been given for the reasons that no alternative sites have been considered and the reasons for the proposed activity have also been justified. The proposal mentions the layout alternative only, therefore it must still be included in the final BAR. However, it must be inclusive of the No-go option, water and energy saving technologies.	Comment noted. The No-go alternative has been described under "Description" and assessed under "Environmental Impact Assessment". Water and energy saving measures have been included in "Energy Efficiency" and "Recommendations of the Practitioner"

Name	Dept./ Organisation	Contact No.	Email	Comment	EAP's Response
				3. Significant rating of impacts The identification, assessment and rating of impacts that has been provided in the draft BAR must form part of the final BAR	Comment noted
				4. Locality map and layout plans or facility illustrations A site plan, locality map and layout for the development has been attached in the report and they must still be attached in the final BAR	Comment noted
				5. EMPr An Environmental Management Plan (EMPr) is attached in the report and must still be attached in the final BAR	Comment noted
				6. Public participation process It is noted that the draft report has been circulated for comments. Any further comments and responses from key stakeholders including proof of consultation, written notice, site notice, and newspaper advertisement must be attached in the appropriate appendices in the final BAR	Comment noted
				7. Specific Issues a. Kindly reflect the exact footprint size of the proposed activity because it is contradicting. In the application form it reflects 2 hectares in extent, in the report under report Description, it reflects 2.1339 ha while in the report under Cultural/Historical Features: Extract from Heritage Impact Assessment it reflects 3.1 hectares in extent	The exact footprint is 2.1339 Ha (21 339m^2)

Appendix E7 –Comments from I&APs on Basic Assessment (BA) Report

GAUTENG PROVINCE
AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

Reference: Gaut 002/16-17/E0140
Enquiries: Xoliswa Bobelo
Telephone: 011 240 3391
E-mail: Xoliswa.Bobelo@gauteng.gov.za

NS Environmental (Pty) Ltd.
P.O. Box 65065
Reservoir Hills
Durban
4090

Tel No: 031 502 1822
Email: nishal@nsenvironmental.co.za

Dear Mr. Nishal Sewruttan

COMMENTS ON THE DRAFT BASIC ASSESSMENT REPORT (DBAR): THE PROPOSED CONSTRUCTION OF A FILLING STATION AND A RETAIL CENTRE ON HOLDING 63 AT JOHANDEO AGRICULTURAL HOLDINGS, EMFULENI LOCAL MUNICIPALITY

The Draft Basic Assessment Report (DBAR) regarding the above-mentioned development received by the Department on 11 September 2017 has reference.

The proposal entails a filling station and associated facilities such as retail facilities, food outlets, hardware store and internal roads.

The Department hereby comments as follows:

1. Alignment of the activity with applicable legislations and policies

The establishment has a direct bearing on the National Environmental Management Act (NEMA) (Act No. 107 of 1998) (as amended) at both national and provincial levels. The proposed development corresponds with the activity applied for under the Environmental Impact Assessment (EIA) Regulations, 2017, (GN R.327) Listing notice1 published under the National Environmental Management Act (NEMA) (Act No. 107 of 1998) (as amended). Furthermore the site falls within Zone 1 of the Gauteng Provincial Environmental Management Programme (2015) which is conditionally compatible with the land uses within the surrounding neighbourhood.

2. Alternatives

Motivation has been given for the reasons that no alternative sites have been considered and the reasons for the proposed activity have also been justified. The proposal mentions the Layout Alternative only, therefore it must still be included in the final BAR, however it must be inclusive of the No-go option, water and energy saving technologies.

3. Significant rating of impacts

The identification, assessment and rating of impacts that has been provided in the DBAR must form part of the final BAR.

4. Locality map and layout plans or facility illustrations

A site plan, locality map and a layout diagram for the development has been attached in the report and they must still be attached in the final BAR.

5. EMPr

An Environmental Management Programme (EMPr) is attached in the report and it must still be attached in the final BAR.

6. Public participation process

It is noted that the draft report has been circulated for comments. Any further comments and responses from key stakeholders including proof of consultation, written notice, site notice, and newspaper advertisement must be attached in appropriate appendices in the final BAR.

7. Specific issues

a. Kindly reflect the exact footprint size of the proposed activity because it is contradicting, in the Application form it reflects 2 hectares in extent, in the report under Description it reflects 2.1339 hectares in extent while in the report under Cultural/ Historical Features: Extract from Heritage Impact Assessment it reflects 3.1 hectares in extent.

If you have any queries regarding this letter, contact the official at the contact details provided above.

Yours faithfully

Mr. D. Motaung
Acting Director: Impact Management
Date: 29/09/2017

Appendix E8 –Comments from I&APs on amendments to the BA Report

Appendix E9 – Copy of the of I&AP register

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

No comments received thus far

Appendix G: Specialist reports

Appendix G1: Geotechnical Assessment

Appendix G2: Heritage Impact Assessment

Appendix G3: Storm Water Management Plan

Appendix G4: Wetland Assessment

Appendix G5: Engineering Services (water)

Appendix H: EMPr

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.