TURN180
ENVIRONMENTAL CONSULTANTS

REGISTRATION NUMBER: 2018/110720/07

DRAFT BASIC ASSESSMENT REPORT

THE PROPOSED ESTABLISHMENT OF A PUBLIC FILLING STATION AND A GENERAL BUSINESS AREA ON AGRICULTRUAL HOLDING 312 IN THE VAAL-HARTS SETTLEMENT B, HARTSWATER, NORTHERN CAPE PROVINCE

JUNE 2023

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(For official use only)

File Reference Number:	
Application Number:	
Date Received:	

Basic Assessment Report in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. This report format is current as of 07 April 2017. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
3. 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.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. 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 rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?	**YES ✓**	NO

If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix I.

1. ACTIVITY DESCRIPTION

a) Describe the project associated with the listed activities applied for

The proposed project entails the establishment of a fuel filling station, truck stop, ablution facilities, convenience store and accompanying restaurant and take-away shop on the road between the towns Hartswater and Pampierstad in the Northern Cape Province, located in the northern parts of the Vaalharts irrigation scheme. The preferred location for this project is on the southern portion of Agricultural Holding 312 of the Vaal-Harts Settlement B. The site covers an area of 4.56 hectares (ha) and is located approximately seven kilometres (km) from the N18 towards Hartswater (10 km from Hartswater town) and four kilometres from Pampierstad within the Phokwane Local Municipality, an administrative area in the Frances Baard District of the Northern Cape Province. The site will be rezoned for the appropriate purposes (Business land use – Zone 3) with the Frances Baard District Municipality, as it is currently zoned for agricultural land use.

The proposed project has the following objectives: to supply fuel (diesel, petrol, paraffin) to residents of Pampierstad, farmers and truck/bus drivers; provide a convenience store, restaurant and take-away shop to service the community; and to provide a truck stop with 10 parking spaces for truck drivers as well as ablution facilities.

The development will consist of a filling station which, with supporting facilities, which will have a footprint of 181 m^2 (0.0181 ha), shade canopies with a footprint of 252 m^2 (0.00252 ha), an ablution area of 94 m^2 (0.0094 ha) footprint, a convenience store, restaurant and take-away shop with a footprint of 1066 m^2 (0.1066 ha) and a paved area of 5 777 m^2 (0.5777 ha). In total, the development will have a direct footprint of approximately 7 370 m^2 (0.737 ha). A portion of the site will be left undeveloped, however, more than 2 ha of indigenous vegetation will likely be cleared.

The proposed development requires the storage and handling of hazardous substance on the site. These include mainly petrol and diesel, but other petrochemical substances like engine oil and paraffin may also be stored on the site as part of products for sale at the filling station. The filling station will have 4 underground tanks, each with a capacity of 23 000 L. Two tanks will be used for diesel storage (46 000 L diesel) and two tanks for petrol (46 000 L petrol). At the onset of the project, a total volume of 92 000 L (92 cubic metres) of dangerous goods will be stored. More than 80 000 L (80 cubic metres) of dangerous goods will therefore be stored and handled. Expansion to the storage capacity to 184 000 L (another four storage tanks for diesel and petrol) may be considered by the applicant as a potential future prospect.

b) Provide a detailed description of the listed activities associated with the project as applied for

Listed activity as described in GN 327, 325 and 324	Description of project activity
Example: ***GN 327 Item xx xx): The construction of a bridge where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.***	***A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built over the Orange river***
GN 327 Item 14: The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres.	Underground storage tanks for petroleum products (petrol and diesel) will be installed on the site, with pumping systems. Each will have the capacity of 23 000 L (23 m^3). In total a volume of 92 000 L (92 m^3) will be stored
GN 327 Item 27: The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for – (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.	The area of the proposed site is 4.56 ha and contains indigenous vegetation which will be cleared for the development.
GN 327 Item 28: Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development: (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare; excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.	The area is currently zoned and used for agriculture (grazing). The area will be rezoned for Business (Zone 3) with the Frances Baard District Municipality.

2. FEASIBLE AND REASONABLE ALTERNATIVES

"alternatives", in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

(a) the property on which or location where it is proposed to undertake the activity;
(b) the type of activity to be undertaken;
(c) the design or layout of the activity;
(d) the technology to be used in the activity;
(e) the operational aspects of the activity; and
(f) the option of not implementing the activity.

Describe alternatives that are considered in this application as required by Appendix 1 (3)(h), Regulation 2014. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.
The determination of whether 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. 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.

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 degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

a) Site alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
Agricultural Holding 312, Vaalharts-Settlement B The preferred site is located on agricultural land owned by an entity of the Applicant. The site is degraded and adjacent to cultivated land to the northeast and natural vegetation to the west. The road between Pampierstad and Hartswater runs along the southern boundary of the site.	27°47'21.29"S	24°43'3.49"E
A – South-eastern corner of the site	27°47'24.10"S	24°43'9.18"E
B – South-western corner of the site	27°47'25.25"S	24°43'2.83"E
C – North-western corner of the site	27°47'16.86"S	24°42'57.51"E
D – Northern-most corner of the site	27°47'15.30"S	24°43'0.51"E
E – Eastern (1) corner of the site	27°47'19.36"S	24°43'3.47"E
F – Eastern (2) corner of the site	27°47'18.63"S	24°43'5.10"E
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

NOTE: No alternative sites exist because the land is owned by the applicant (Mr GP Olivier)

In the case of linear activities:

Alternative:	**Latitude (S):**	**Longitude (E):**
Alternative S1 (preferred)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		
Alternative S2 (if any)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		
Alternative S3 (if any)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

In the case of an area being under application, please provide the co-ordinates of the corners of the site as indicated on the lay-out map provided in Appendix A of this form.

b) Lay-out alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
The preferred alternative layout consists of an area of 2.83 ha with the entrance on the southern road. The access road has one entry land and two exit lanes. The south and south-eastern portions are dedicated to the filling station (tank farm, containment slab, oil/water separator, vent pipes, delivery pipes to the 3 islands with 2 pumps each at the customer service point, and a canopy over the pumps), is located in the southern and central parts of the area. The building including the convenience store, restaurant and take-away shop is approximately 12m to the north of the canopy and pump area. To the north of the building (behind), the ablution facilities and container accommodation is located with the offices behind it (further to the north). Parallel to the road on the south-western portion of the site, a taxi rank and container shelter is located. The surface at/around the building, ablution facilities and taxi rank will be paved. The north-western and western portions of the site is allocated for the truck stop. This area has a gravel surface. Sewer pipes run from the ablution facilities and the building to a main pipe conveying sewage in a westerly direction to the		

conservancy tank on the western boundary of the site. A second sewer pipe enters the conservancy tank from the taxi rank. Two wastewater tanks are located behind the offices on the eastern boundary of the property with a pipe conveying wastewater from the oil/water separator at the tank farm. Three domestic water tanks are located on the eastern most corner of the site in the fenced area with the offices.		
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 4		

Note: Layout alternatives were considered in the planning phase, however, the alternatives are only design alternatives and do not mitigate or alter the environmental impacts. Therefore, they are not included as layout alternatives. The design alternatives are attached in Appendix C.

c) Technology alternatives

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)

Alternative 1 (preferred alternative)		
Alternative 2		
Alternative 3		

e) No-go alternative

The no-go alternative will leave the site as is:
A single residential house is located on the southern boundary of the site with an access road connecting to Kolong Street. The site contains Camel Thorn trees and a geophytic species (these are protected species) that will remain intact.

Paragraphs 3 – 13 below should be completed for each alternative.

3. PHYSICAL SIZE OF THE ACTIVITY

a) Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Alternative:	**Size of the activity:**
Alternative A1[1] (preferred activity alternative)	28 323 m^2
Alternative A2 (if any)	m^2
Alternative A3 (if any)	m^2

or, for linear activities:

Alternative:	**Length of the activity:**
Alternative A1 (preferred activity alternative)	m
Alternative A2 (if any)	m
Alternative A3 (if any)	m

b) Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Alternative:	**Size of the site/servitude:**
Alternative A1 (preferred activity alternative)	45 600 m^2
Alternative A2 (if any)	m^2
Alternative A3 (if any)	m^2

4. SITE ACCESS

Does ready access to the site exist?	**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 Traffic Impact Assessment recommends an entrance from the public road (MR933) into the site with a right-turning lane of at least 80m from the east and a left turn lane of 65m from the west. The entrance will make provision for one entrance lane and two exit lanes (one providing for vehicles turning left and the other for vehicles turning right upon exit). A stop sign will be provided for vehicles exiting the site. To ensure vehicles moving on the site does not affect vehicles entering the site, an entrance road of 20 m between the site boundary and the first turn off will be provided. The above description is indicated in the layout plan.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

[1] "Alternative A.." refer to activity, process, technology or other alternatives.

5. LOCALITY MAP

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (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 map must indicate the following:

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s;)
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (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 degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection).

6. LAYOUT/ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- the property boundaries and numbers of all the properties within 50 metres of the site;
- the current land use as well as the land use zoning of the site;
- the current land use as well as the land use zoning each of the properties adjoining the site or sites;
- the exact position of each listed activity applied for (including alternatives);
- servitude(s) indicating the purpose of the servitude;
- a legend; and
- a north arrow.

7. SENSITIVITY MAP

The layout/route plan as indicated above must be overlain with a sensitivity map that indicates all the sensitive areas associated with the site, including, but not limited to:

- watercourses;
- the 1:100 year flood line (where available or where it is required by DWS);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas.

The sensitivity map must also cover areas within 100m of the site and must be attached in Appendix A.

8. SITE PHOTOGRAPHS

Colour photographs from the centre 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 Appendix B to this report**.** It must be supplemented with additional photographs of relevant features on the site, if applicable.

9. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of at least 1:200 as Appendix C 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.

10. ACTIVITY MOTIVATION

Motivate and explain the need and desirability of the activity (including demand for the activity):

1. Is the activity permitted in terms of the property's existing land use rights?	YES	**NO ✓**	Please explain
The property is currently zoned for agricultural land use and will have to be rezoned for Business (Zone 3) with the Frances Baard District Municipality in Hartswater.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	**YES ✓**	NO	Please explain
The planned activities are in line with the SDF of the Frances Baard District Municipality. The activities will provide employment opportunities for the local community during the construction and operational phase. It is considered that the development will have a positive impact on other small businesses. The SDF encourages the development of Green Infrastructure, which the proposed project is considering as it will make use of solar energy in addition to ESKOM power. The SDF encourages the consideration of the rezoning of low potential agricultural land to other land uses as it promotes sustainable economic development.			
(b) Urban edge / Edge of Built environment for the area	**YES ✓**	NO	Please explain
The development will take place outside of the town on land that is currently zoned for agricultural land use.			
(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g., would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	**YES ✓**	NO	Please explain
It is in line with the IDP as it will contribute to economic growth in the local area (Pampierstad and Hartswater).			
(d) Approved Structure Plan of the Municipality	YES	NO	Please explain
The structure plan of the municipality is unavailable.			

(e) An Environmental Management Framework (EMF) adopted by the Department (e.g., Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	**YES ✓**	NO	Please explain
The proposed project will not compromise the integrity of existing environmental priorities for the area. The site is already modified and degraded and its development is not a threat to the conservation of biodiversity. The site is not located in a protected area or critical biodiversity area where its preservation would be paramount.			
(f) Any other Plans (e.g., Guide Plan)	YES	NO	Please explain
N/A			
3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e., is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?	YES	**NO ✓**	Please explain
The type of proposed development is not identified as a priority.			
4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g., development is a national priority, but within a specific local context it could be inappropriate.)	**YES ✓**	NO	Please explain
The community would greatly benefit by the development of this project as it will create employment opportunities and encourage economic growth in the area.			
5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)	YES	**NO ✓**	Please explain
Municipal power supply is available at the site. Water infrastructure is not available at the site, but a Water Use Licence will be applied for to make use of a borehole on the site and of the Vaal-Harts irrigation scheme. Sanitation services are not available at the site. Infrastructure for sanitation (conservancy tanks) will be used and serviced frequently. The applicant will be responsible for its maintenance and services.			

6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)	YES	**NO ✓**	Please explain
Infrastructure planning is not provided for by the municipality for this type of development. The developer will provide their own infrastructure where not available from the municipality (water, sewage).			
7. Is this project part of a national programme to address an issue of national concern or importance?	YES	**NO ✓**	Please explain
This project does not address an issue of national importance or concern.			
8. 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 ✓**	NO	Please explain
This location is adjacent to the road between Hartswater and Pampierstad. Economically, this is a favoured location. There are no watercourses or wetlands at this location and the site is already degraded regarding biodiversity and vegetation, therefore it is also favoured from a development perspective. The surrounding area is cultivated land used for agriculture. To the west of the site, there is natural vegetation which is not degraded although encroachment into this area from the proposed site is present.			
9. Is the development the best practicable environmental option for this land/site?	YES	NO	Please explain
The location of this site is the most practical for a service station and an ideal location for a filling station as it is between the towns of Hartswater and Pampierstad. Therefore, it is a good economic option.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	**YES ✓**	NO	Please explain
The negative impacts of this land use/development are mainly associated with environmental impacts. However, due to the topography of the site, the area of the site, the present vegetation, lack of water courses/wetlands on the site and current aesthetic value of the location environmental impacts are deemed to be minimal and it is possible to mitigate and minimize these impacts. In addition, the positive socio-economic benefits of the proposed development are sufficient to outweigh the negative impacts as employment opportunities will be created during the planning, construction and operational phase, and economic activity in this area will be encouraged due to this development.			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	**YES ✓**	NO	Please explain
The presence of a filling station, convenience store, restaurant, and take-away place as well as the truck stop with ablution facilities can encourage other activities like small shops, stalls for handmade products etc in this area.			

12. Will any person's rights be negatively affected by the proposed activity/ies?	YES	**NO ✓**	Please explain
The site will be developed by the landowner. No heritage value is associated with the site.			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	**YES ✓**	NO	Please explain
The proposed site is located outside of the urban edge of Pampierstad, although the proposed development is not expected to compromise the "urban edge" as it involves a filling station and subsidiary activities.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES	**NO ✓**	Please explain
The project is not classified as any of the 17 SIPs, either in the type of development or in the location of its development.			
15. What will the benefits be to society in general and to the local communities?			Please explain
The availability of products and services (fuel, food, ablution facilities) for commuters between Pampierstad and Hartswater, as well as truck drivers and the community of Pampierstad will benefit the local community. Society in general will benefit by the creation of employment opportunities during the construction phase and about 20 employment opportunities during the operational phase. The additional economic activity in this area will contribute to and stimulate the economic growth of this area.			
16. Any other need and desirability considerations related to the proposed activity?			Please explain
No			
17. How does the project fit into the National Development Plan for 2030?			Please explain
The project encourages economic development in an area with very little economic diversity (agriculture and commercial activities related to small settlements)			
18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.			
The effects on the environment, socio-economic conditions, and heritage as a result of the activities and project as a whole is well considered before the commencement of the activity. The operational phase of the project will enhance the socio-economic conditions of the local community regarding service provision, accessibility and availability and the environmental impacts will be minimized through management and mitigation. No impact on heritage is expected to occur as there are no remnants or historical features on the site. Therefore, the socio-economic benefits will be maximised, and the environmental disadvantages or impacts will be minimized to ensure this project contributes to sustainable development. The severity of environmental impacts is well considered before the commencement of any activities. Community involvement will be encouraged through the public participation process.			

19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.
It places people and their needs at the forefront by providing economic activity and employment opportunities for the community. It is socially, environmentally, and economically sustainable. All relevant factors were considered in the proposal of this development by making use of an impact assessment.

11. 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, if applicable:

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
National Environmental Management: Biodiversity Act (Act 10 of 2004)	Endangered / Vulnerable vegetation types and Protected Species.	National Department of Forestry, Fisheries and Environment Northern Cape Department of Agriculture, Environmental Affairs, Rural Development and Land Reform	2004
National Forests Act (Act No. 84 of 1998)	Permits need to be obtained for the removal of protected trees.	National Department of Forestry, Fisheries and Environment	1998
National Water Act (Act 26 of 1998)	The project will make use of water resources (abstraction) and will generate wastewater which will have to be managed to prevent the contamination of ground- and surface water sources.	Department of Water and Sanitation	1998
National Heritage Resources Act (Act 25 of 1999)	The project may cause loss to heritage resources as excavation will take place.	South African Heritage Resources Agency (SAHRA)	1999
National Environmental Management Act (Act 107 of 1998)	The project will trigger listed activities under NEMA.	Northern Cape Department of Agriculture, Environmental Affairs, Rural Development and Land Reform	1998

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) 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?	Unknown m^3	

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

Construction solid waste will be removed by a service provider and disposed of at a licenced landfill site. All recyclable waste will be separated from the construction waste and delivered to the appropriate facility.

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

Construction waste will be removed by a certified service provider.

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

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

Solid waste that will be produced is general waste (plastics, glass, tin, paper, food scraps) from the convenience store, take away shop and restaurant. Bins will be available around the site for the collection of general waste. These will be emptied on a regular basis by a service provider or municipal services if available and disposed at a licenced landfill site. Recyclable waste will be collected separately as far as possible and taken to an appropriate facility. Hazardous waste (petrochemical substances) will be stored in bins at the site and removed and disposed of by a licenced service provider.

If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.

Hartswater landfill site **Note:** The applicant will make use of the landfill site provided and used by the municipality.

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

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, then 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 NEM:WA?	**YES** ✓	NO

If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

Note:
Hazardous waste may be generated at the site due to potential spills of petrochemical substances but will be cleaned and stored safely in bins and removed by a licenced service provider. Therefore, it will not be necessary for a waste permit or for a full scoping and EIA.

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

If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

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?	Unknown m^3	
Will the activity produce any effluent that will be treated and/or disposed of on site?	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.

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:	Pampierstad Wastewater Treatment Works		
Contact person:			
Postal address:	Private Bag X3, 24 Hertzog Street, Hartswater		
Postal code:	8570		
Telephone:	053 474 9700	**Cell:**	
E-mail:	info@phokwane.gov.za	**Fax:**	

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

Wastewater will go through an oil/water separator to removed most of the contaminants. It will be stored in wastewater tanks to be emptied by a certified service provider who will recycle the wastewater.

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other that exhaust emissions and dust associated with construction phase activities?	YES	**NO ✓**
If YES, is it controlled by any legislation of any sphere of government?	YES	NO

If YES, the applicant must 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:

Vehicle exhaust emissions during the construction and operational phase.

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?	YES	**NO ✓**

If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority.

e) Generation of noise

Will the activity generate noise?	**YES ✓**	NO
If YES, is it controlled by any legislation of any sphere of government?	YES	NO

Describe the noise in terms of type and level:

Noise is expected during the construction phase of the proposed development, associated with the operation of machinery and typical construction operations. Noise associated with trucks, other vehicles and human activity are expected during the operational phase.

13. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es):

Municipal	**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:	9 500 litres	
Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?	**YES ✓**	NO

If YES, please provide proof that the application has been submitted to the Department of Water Affairs.

Application currently in process.

14. ENERGY EFFICIENCY

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

Solar energy will be used at the proposed project to supplement municipal electricity and to make provision for loadshedding.

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

Solar energy will be installed.

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

1. For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section B and indicate the area, which is covered by each copy No. on the Site Plan.

Section B Copy No. (e.g., A): [ ]

2. Paragraphs 1 - 6 below must be completed for each alternative.

3. Has a specialist been consulted to assist with the completion of this section?

YES	NO
✓	

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D.

Property description/physical address:

Province	Northern Cape Province
District Municipality	Frances Baard District Municipality
Local Municipality	Phokwane Local Municipality
Ward Number(s)	8
Farm name and number	Agricultural Holding 312, Vaalharts Settlement B
Portion number	0
SG Code	C07000070000031200000

Where a large number of properties are involved (e.g., linear activities), please attach a full list to this application including the same information as indicated above.

Current land-use zoning as per local municipality IDP/records:

Agriculture

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.

Is a change of land-use or a consent use application required?

YES	NO
✓	

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

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

Alternative S2 (if any):

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

Alternative S3 (if any):

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

2. LOCATION IN LANDSCAPE

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

2.1 Ridgeline		2.4 Closed valley		2.7 Undulating plain / low hills	✓
2.2 Plateau		2.5 Open valley		2.8 Dune	
2.3 Side slope of hill/mountain		2.6 Plain	✓	2.9 Seafront	
2.10 At sea					

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following?

	Alternative S1:		**Alternative S2 (if any):**		**Alternative S3 (if any):**	
Shallow water table (less than 1.5m deep)	YES	**NO ✓**	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES	**NO ✓**	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES	**NO ✓**	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	**NO ✓**	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	**NO ✓**	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	**NO ✓**	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	**NO ✓**	YES	NO	YES	NO
An area sensitive to erosion	**YES ✓**	NO	YES	NO	YES	NO

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the

completion of this section. Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted.

Note:
A geotechnical specialist was appointed and conducted a geotechnical site investigation on the site to assess the engineering geological character of the site (GeoCalibre Geotechnical Consultancy, December 2022)

4. GROUNDCOVER

Indicate the types of ground cover present on the site. The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition[E]	**Natural veld with scattered aliens[E] ✓**	**Natural veld with heavy alien infestation[E] ✓**	Veld dominated by alien species[E]	Gardens
Sport field	Cultivated land	Paved surface	**Building or other structure ✓**	**Bare soil ✓**

If any of the boxes marked with an "[E] "is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.

Note:
An Ecological Specialist of DPR Ecologists and Environmental Services was consulted. The ecological report is attached in Appendix D.

5. SURFACE WATER

Indicate the surface water present on and or adjacent to the site and alternative sites?

Perennial River	YES	**NO ✓**	UNSURE
Non-Perennial River	YES	**NO ✓**	UNSURE
Permanent Wetland	YES	**NO ✓**	UNSURE
Seasonal Wetland	YES	**NO ✓**	UNSURE
Artificial Wetland	YES	**NO ✓**	UNSURE
Estuarine / Lagoonal wetland	YES	**NO ✓**	UNSURE

If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

Note:
The Harts River flows to the north-west of the site but not directly adjacent to it. According to Van Rensburg (2023) an impact on the river due to the proposed activity is highly unlikely.

6. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

Natural area ✓	Dam or reservoir	Polo fields
Low density residential ✓	Hospital/medical centre	Filling station **H**
Medium density residential	**School** ✓	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential	Church	**Agriculture** ✓
Retail commercial & warehousing	Old age home	River, stream or wetland
Light industrial	Sewage treatment plant **A**	Nature conservation area
Medium industrial **AN**	Train station or shunting yard **N**	Mountain, Koppie or ridge
Heavy industrial **AN**	Railway line **N**	Museum
Power station	Major road (4 lanes or more) **N**	Historical building
Office/consulting room	Airport **N**	Protected Area
Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam **A**	Sport facilities	Archaeological site
Quarry, sand or borrow pit	Golf course	Other land uses (describe)

If any of the boxes marked with an "N" are ticked, how this impact will / be impacted upon by the proposed activity? Specify and explain:

N/A

If any of the boxes marked with an "AN" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

N/A

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

N/A

Does the proposed site (including any alternative sites) fall within any of the following:

Critical Biodiversity Area (as per provincial conservation plan)	YES	**NO** ✓
Core area of a protected area?	YES	**NO** ✓
Buffer area of a protected area?	YES	**NO** ✓
Planned expansion area of an existing protected area?	YES	**NO** ✓
Existing offset area associated with a previous Environmental Authorisation?	YES	**NO** ✓
Buffer area of the SKA?	YES	**NO** ✓

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix A.

7. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site? If YES, explain:	YES	**NO ✓**
	Uncertain	

If uncertain, conduct a specialist investigation by a recognised specialist in the field (archaeology or palaeontology) to establish whether there is such a feature(s) present on or close to the site. Briefly explain the findings of the specialist:

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

If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

Note:
A heritage impact assessment and a paleontological assessment were undertaken in accordance with the National Heritage Resources Act (Act 25 of 1999), which found that it is not a sensitive area regarding heritage resources and that further studies for the site are not required. Refer to Appendix D: Banzai Environmental, Palaeontological Desktop Assessment, 2022 and Loudine Phillips, Heritage Impact Assessment 2022.

8. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Level of unemployment:

47.8% (Frances Baard District Municipality: Integrated Development Plan 2022/23 – 2026/27)

Economic profile of local municipality:

The economy is mostly comprised of agricultural activity (19.9%) and the service sector (19.9%). Trade makes up 19.8% of the local economy. The local municipality contributes 7.5% to the GVA of the Northern Cape Province (Phokwane Local Municipality; Local Economic Development Plan – Section Five: Economic Profile, 2004).

Level of education:

13.6% of the local municipality has no education, 24.1% completed Grade 12 and 6% have higher education (Municipalities of South Africa, 2016). The education level of the local municipality is therefore very low, and the majority of the population is poorly educated.

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R 28 550 137	
What is the expected yearly income that will be generated by or as a result of the activity?	R 10 558 111.00	
Will the activity contribute to service infrastructure?	YES	**NO ✓**
Is the activity a public amenity?	**YES ✓**	NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	150	
What is the expected value of the employment opportunities during the development and construction phase?	R 10 000 000*	
What percentage of this will accrue to previously disadvantaged individuals?	80%	
How many permanent new employment opportunities will be created during the operational phase of the activity?	20	
What is the expected current value of the employment opportunities during the first 10 years?	R 15 036 000.00 (total for first ten years, excluding inflation)	
What percentage of this will accrue to previously disadvantaged individuals?	80%	

Note: A value of R 10 000 000 is estimated for the value of employment opportunities in the development and construction phase of the activity, including direct and indirect employment opportunities created. Direct employment opportunities refer to building contractors and those involved with the construction process. Indirect employment opportunities are, for example, consulting services, manufacturing, and retail.

9. BIODIVERSITY

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult http://bgis.sanbi.org or BGIShelp@sanbi.org. Information is also available on compact disc (cd) from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/ EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as Appendix D to this report.

a) Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)

Systematic Biodiversity Planning Category				**If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan**
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	**Other Natural Area (ONA)** ✓	No Natural Area Remaining (NNR)	

b) Indicate and describe the habitat condition on site

Habitat Condition	**Percentage of habitat condition class (adding up to 100%)**	**Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).**
Natural	7%	The area is classified as an Other Natural Area (ONA), meaning it is considered to consist of natural vegetation although it is not essential of conservation purposes and has a low conservation value. Protected species (*Vachellia erioloba, Harpagophytum procumbens*) are present. Refer to Van Rensburg (2023)
Near Natural (includes areas with low to moderate level of alien invasive plants)	10%	Some parts of the site are only slightly disturbed.
Degraded (includes areas heavily invaded by alien plants)	77%	The majority of the site is modified and degraded from the natural condition. Infestation by exotic weeds and invasive trees (invasive alien species) are significant. Habitat and species diversity is low. The site has a sparse grass layer and a poorly developed shrub layer. Refer to Van Rensburg (2023)
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	6%	A disused homestead is present on the site, adjacent to the road.

c) Complete the table to indicate:

(i) the type of vegetation, including its ecosystem status, present on the site; and

(ii) whether an aquatic ecosystem is present on site.

Terrestrial Ecosystems		**Aquatic Ecosystems**						
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	Critical	Wetland (including rivers, depressions, channelled and unchanneled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline	
	Endangered							
	Vulnerable							
	Least Threatened ✓	YES	**NO** ✓	UNSURE	YES	**NO** ✓	YES	**NO** ✓

d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)

The site is comprised of Schmidtsdrif Thornveld. Two protected species were identified on the site, namely the tree *Vachellia erioloba* and the geophyte *Harpagophytum procumbens*. No special habitats were identified.

The vegetation on the site is degraded, with the pioneer species, *Cynodon dactylon*, dominating in the grass layer indicating disturbance in the ecosystem. Herbaceous species consist in majority of pioneer species, also indicating disturbance. These species include *Salvia stenophylla, Nolletia sp., Helichrysum argyrosphaerum, Arctotis arctotheca, Commelina eckloniana* and *Gazania krebsiana*. In both the grass and herbaceous layer climax species and those normally associated with this vegetation type are present as isolated species and not well represented. Additionally, geophytic species which one can expect to encounter in this area are poorly represented. Similarly, the shrub layer is largely represented by pioneer species that proliferate in degraded areas. A few species of the indigenous species, *Tarchonanthus camphoratus* and *Grewia flava*, remains on site.

The tree layer is largely undisturbed and is dominated by *Vachellia karroo*, *Vachellia erioloba*, *Ziziphus mucronate* and *Searsia lancea*.

Many exotic weeds and invasive trees are also present on the site. The site is already disturbed and heavily modified from the original condition. The protected species *Vachellia karroo* and *Harpagophytum procumbens* would both require permits for removal, which will likely be necessary in the construction phase. However, as mitigation measure as many as possible of the larger species should be left on site and incorporated into the development.

Refer to Van Rensburg (2023) for the full ecological report attached in Appendix D.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	Noord-Kaap Bulletin/Northern Cape Bulletin	
Date published	25 May 2023	
Site notice position	**Latitude**	**Longitude**
	-27.790189	24.718448
Date placed	29 October 2022	

Include proof of the placement of the relevant advertisements and notices in Appendix E1.

2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 41(2)(e) and 41(6) of GN 733.

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 733

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Marinda Olivier	Marinda Olivier Trust	082 948 2122, marinda@loumarlandbou.co.za
Louis Olivier	Loumar Familietrust	louis@vharts.co.za
Glenn Murdoch	Neighbour	glennmurdoch1@gmail.com
Tshepo Pharasi (Department of Education on behalf of ER Motswaledi Intermediate School)	Neighbour	eurekaboikanyo@ncdoe.gov.za

Personal information withheld in terms of the POPI Act (Act 14 of 2013)

Include proof that the key stakeholder received written notification of the proposed activities as Appendix E2. This proof may include any of the following:

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or
- or any other proof as agreed upon by the competent authority.

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
None to date: the draft BAR is currently being circulated for comment.	

4. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to the Final BAR as Appendix E3.

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address
Department of Education	Mr Tshepo Pharasi	0538396696		eurekaboikanyo@ncdoe.gov.za	Private Bag X5023 156 Barkley Road Homestead Kimberley 8300
Frances Baard District Municipality: Environmental Health	Mr. Kenneth Lucas	0538380970		kenneth.lucas@fbdm.co.za	
Frances Baard District Municipality: Executive Mayor	Ms. HU Buda	0538380904		masego.mosala@fbdm.co.za	
Frances Baard District Municipality: Department Planning and Development	Mr. Freddy Netshivhoda	0538380920		bulelwa.skwet@fbdm.co.za	
Phokwane Local Municipality: Mayor	Cllr. Tebogo Africa	0534749700		info@phokwane.gov.za	Private Bag X3 24 Hertzog Street Hartswater 8570
Phokwane Local Municipality: Councillor Ward 8	Cllr. E. Meyer			info@phokwane.gov.za	Private Bag X3 24 Hertzog Street Hartswater 8570
ER Motswaledi Intermediate School		053 4741791			P.O Box 557 Hartswater 8570

Vaalharts Water		0534560131		info@vhwater.co.za	P.O Box 4 Jan Kempdorp 8550
Department of Agriculture, Environmental Affairs, Rural Development and Land Reform: MEC	Ms. Mase Manopole	0538389100			Private Bag X 5018 162 George Street Kimberley 8300
Department of Agriculture, Environmental Affairs, Rural Development and Land Reform: HOD	Mr. Lerato Wa Modise				Private Bag X 5018 162 George Street Kimberley 8300
Roads and Public Works	Ms. Rozelle Sass	0827276777		rsass@ncpg.gov.za	P.O. Box 3132 Kimberley 8301
Ngwao Boswa Kapa Bokone	R. Timothy	0790369695		rtimothy@nbkb.org.za	1 Monridge Office Park c/o Kekewich Drive & Memorial Road Kimberley
SAHRA		0214624502		info@sahra.org.za	P.O. Box 4637 111 Harrington Street Cape Town 8000
Department of Water and Sanitation		0538308800			Private Bag X6101 28 Central Road Beaconsfield Kimberley 8300

Include proof that the Authorities and Organs of State received written notification of the proposed activities as appendix E4.

In the case of renewable energy projects, Eskom and the SKA Project Office must be included in the list of Organs of State.

6. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for any activities (linear or other) where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub-regulation to the extent and in the manner as may be agreed to by the competent authority.

Proof of any such agreement must be provided, where applicable. Application for any deviation from the regulations relating to the public participation process must be submitted prior to the commencement of the public participation process.

A list of registered I&APs must be included as appendix E5.

Copies of any correspondence and minutes of any meetings held must be included in Appendix E6.

SECTION D: 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.

1. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A (2) of this report.

Activity	Impact summary	Significance	Proposed mitigation
Alternative 1 (preferred alternative)			
Clearance of Vegetation	***Direct impacts:***		
	Loss of naturally occurring vegetation	Low (with mitigation) Moderate (without mitigation)	Limit clearance of vegetation to the area under construction Keep several of the larger Camel Thorn trees intact and incorporate them into the design. Keep the protected geophytic species, *Hapragophytum procumbens*, on site if possible, or relocate it to a suitable and safe location. Plant a Camel Thorn tree for every tree removed from the site in a natural but disturbed area to promote rehabilitation in that area as an offset for this impact. It should be noted that the adjacent natural area to the west of the site is in a much better condition and has a high density, and therefore a high number, of Camel Thorn trees.
	Destruction of Habitat	Low – Moderate (with mitigation) Low - Moderate (without mitigation)	Clearly delineate the area where vegetation may be removed, where material may be stockpiled and where machinery and vehicles may be operated to minimize the size of the habitat subject to destruction. No open fires are allowed as it may lead to veld fires and further destruction of habitat.
	Dust generation	Low (with mitigation) Low - Moderate (without mitigation)	Imposing a speed limit on vehicles to limit dust generation. Using machinery as little as possible during windy conditions. If the above measures are insufficient, dust suppression by spraying water where machinery operates will be considered.

Activity	Impact summary	Significance	Proposed mitigation
	Indirect impacts:		
	Soil Erosion	Low (with mitigation) Low - Moderate (without mitigation)	Construct berms and trenches around all sides of the site to lower the velocity of runoff, allow sufficient time for infiltration and prevent erosion.
	Loss of Topsoil	Low (with mitigation) Low - Moderate (without mitigation)	All topsoil should be stockpiled neatly to be used for levelling and in gardens. Topsoil stockpiles should be kept low (<1,5 m) to limit wind erosion and instability of stockpiles. Removal of topsoil should be clearly delineated and minimized to prevent the unnecessary removal of topsoil. Topsoil stockpiles should be covered with a tarp or canvas to prevent its losses through wind or water erosion, especially before heavy rainfall events or if strong winds are expected. Appropriate stormwater measures should be implemented to avoid erosion. No topsoil may be used for construction purposes.
	Loss of animal species	Low (with mitigation) Low - Moderate (without mitigation)	Any animals found on site should be relocated to a suitable and safe area (e.g., the natural area adjacent to the site) No open fires are allowed. No hunting of animals are allowed
	Establishment of alien and invasive species	Low (with mitigation) Low - Moderate (without mitigation)	Regular removal of alien vegetation during site maintenance and inspection throughout the construction and operational phase.
	Loss of culturally significant resources	Low (with mitigation) Low (without mitigation)	Should any heritage artefact be uncovered, a heritage specialist should be contacted to determine further proceedings. The artefact should be protected and/or incorporated into the development plan.
	Cumulative impacts:		
	Loss of naturally occurring vegetation	Low (with mitigation) Moderate (without mitigation)	Limit clearance of vegetation to the area under construction Keep several of the larger Camel Thorn trees intact and incorporate them into the design. Keep the protected geophytic species, *Hapragophytum procumbens*, on site if possible, or relocate it to a suitable and safe location. Plant a Camel Thorn tree for every tree removed from the site in a natural but disturbed area to promote rehabilitation in that area as an offset for this impact. It should be noted that the adjacent natural area to the west of the site is in a much better condition and has a high density, and therefore a high number, of Camel Thorn trees.
	Destruction of Habitat	Moderate (with mitigation)	Clearly delineate the area where vegetation may be removed, where material may be stockpiled and

Activity	Impact summary	Significance	Proposed mitigation
		Low - Moderate (without mitigation)	where machinery and vehicles may be operated to minimize the size of the habitat subject to destruction. No open fires are allowed as it may lead to veld fires and further destruction of habitat.
	Establishment of alien and invasive species	Low (with mitigation) Low - Moderate (without mitigation)	Regular removal of alien vegetation during site maintenance and inspection throughout the construction and operational phase.
	Loss of Topsoil	Low (with mitigation) Low - Moderate (without mitigation)	All topsoil should be stockpiled neatly to be used for levelling and in gardens. Topsoil stockpiles should be kept low (<1,5 m) to limit wind erosion and instability of stockpiles. Removal of topsoil should be clearly delineated and minimized to prevent the unnecessary removal of topsoil. Topsoil stockpiles should be covered with a tarp or canvas to prevent its losses through wind or water erosion, especially before heavy rainfall events or if strong winds are expected. Appropriate stormwater measures should be implemented to avoid erosion. No topsoil may be used for construction purposes.
	Dust generation	Low (with mitigation) Low - Moderate (without mitigation)	Imposing a speed limit on vehicles to limit dust generation. Using machinery as little as possible during windy conditions. If the above measures are insufficient, dust suppression by spraying water where machinery operates will be considered.
Excavation and Construction	***Direct impacts:***		
	Generation of dust and emissions	Low (with mitigation) Low - Moderate (without mitigation)	Imposing a speed limit on vehicles to limit dust generation. Using machinery as little as possible during windy conditions If the above measures are insufficient, dust suppression by spraying water where machinery operates will be considered.
	Generation of noise	Low (with mitigation) Low (without mitigation)	Noise generation is inevitable. However, this development is far from neighbours and is not likely to disturb them regarding noise generated. Construction will be limited to daytime hours to minimize disturbance.
	Indirect impacts:		
	Change in soil Characteristics	Low (with mitigation) Low - Moderate (without mitigation)	Delineate areas where machinery may drive to prevent unnecessary areas from being compacted. Minimize the footprint of machinery and stockpiles to limit compaction of the subsoil.

Activity	Impact summary	Significance	Proposed mitigation
	Accidental loss of Animal Species	Low (with mitigation) Low (without mitigation)	If any animals are encountered they should be removed from the site and placed in a suitable area.
	Loss of Land Use	Moderate (With mitigation Moderate – Moderate High (Without mitigation)	Clearly delineate the area that wil be developed to minimize the footprint of the development.
	Loss of culturally significant resources	Low (with mitigation) Low (without mitigation)	
	Cumulative impacts:		
	Generation of dust and emissions	Low (with mitigation) Low - Moderate (without mitigation)	Imposing a speed limit on vehicles to limit dust generation. Using machinery as little as possible during windy conditions If the above measures are insufficient, dust suppression by spraying water where machinery operates will be considered.
Abstraction of groundwater (Construction and Operational Phase)	***Direct impacts:***		
	Decrease in the groundwater reserve.	Low – Moderate (with mitigation) Moderate – High (without mitigation)	Practice water conservation. Install infrastructure that contributes to water conservation. Regulate water abstraction to prevent over abstraction and ensure continual recharge.
	Cumulative Impacts:		
	Decrease in the groundwater reserve.	Low – Moderate (with mitigation) Moderate – High (without mitigation)	Practice water conservation. Install infrastructure that contributes to water conservation. Regulate water abstraction to prevent over abstraction and ensure continual recharge.
Storage and Handling of Hazardous Substances (Construction Phase)	***Direct impacts:***		
	Soil Contamination	Low (with mitigation) Low - Moderate (without mitigation)	Store all hazardous substances in bunds with impermeable surfaces. Inspect bunds and containers regularly to ensure there are no leaks or compromises. Vehicles and machinery should be serviced regularly to prevent spills. Handle petrochemical substances on impermeable surfaces. All stationary vehicles should be fitted with drip trays to contain potential spills. Any spills should immediately be cleaned by removing the contaminated soil and disposing it as hazardous waste.
	Indirect impacts:		
	Contamination of Water Sources	Low (with mitigation) Low - Moderate (without mitigation)	Store all hazardous substances in bunds with impermeable surfaces. Inspect bunds and containers regularly to ensure there are no leaks or compromises.

Activity	Impact summary	Significance	Proposed mitigation
			Vehicles and machinery should be serviced regularly to prevent spills. Handle petrochemical substances on impermeable surfaces. All stationary vehicles should be fitted with drip trays to contain potential spills. Any spills should immediately be cleaned by removing the contaminated soil, cleaning the contaminated surface, and disposing it as hazardous waste to prevent it from washing into the surface water system or seeping into the groundwater system.
	Negative Aesthetic Impact	Low (with mitigation) Low - Moderate (without mitigation)	Hazardous solid waste should be stored in the appropriate skips or bunded bins. Hazardous waste, like contaminated water or oil, should be stored in a designated flow-bin, inside a bund, which is serviced by a certified service provider. Hazardous waste (all) should be removed from site regularly by a certified service provider.
	Cumulative impacts:		
	Contamination of Water Sources	Low (with mitigation) Low - Moderate (without mitigation)	Store all hazardous substances in bunds with impermeable surfaces. Inspect bunds and containers regularly to ensure there are no leaks or compromises. Vehicles and machinery should be serviced regularly to prevent spills. Handle petrochemical substances on impermeable surfaces. All stationary vehicles should be fitted with drip trays to contain potential spills. Any spills should immediately be cleaned by removing the contaminated soil, cleaning the contaminated surface, and disposing it as hazardous waste to prevent it from washing into the surface water system or seeping into the groundwater system.
Storage and Handling of Hazardous Substances (Operational Phase)	***Direct impacts:***		
	Soil Contamination	Low (with mitigation) Moderate – High (without mitigation)	Should a leak or spill occur, immediately contain it and clean it up by removing the contaminated soil or material and dispose it as hazardous waste to prevent it from spreading to a larger area. Prevent spills by storing hazardous substances in bunded areas with impermeable surfaces that has the capacity of 110% of the stored volume. Store hazardous substances (petrol, diesel, paraffin) in underground bunds with impermeable surfaces that has the capacity to store 110% of the total tank volume. When refuelling storage tanks, prevent spills by using drip trays to contain any small spillages.

Activity	Impact summary	Significance	Proposed mitigation
			Inspect nozzles, pipes and valves for defects before refuelling storage tanks. Ensure all employees are familiar with procedures of refuelling safely without spilling. Regularly inspect pump, nozzles, and valves for defects.
	Indirect impacts:		
	Groundwater Contamination	Low – Moderate (with mitigation) Moderate (without mitigation)	Store hazardous substances (petrol, diesel, paraffin) in underground bunds with impermeable surfaces that has the capacity to store 110% of the total tank volume. Install leak detection mechanisms in the tanks and bunds. Regularly inspect the bunds to ensure they are intact. When a spill or leak is noticed in the tank, bund or on the ground, immediately implement containment and clean-up measures (remove contaminated soil and dispose as hazardous waste) and rectify the leak as a matter of great urgency to prevent hazardous substances from reaching the groundwater source. When refuelling storage tanks, prevent spills by using drip trays to contain any small spillages. Inspect nozzles, pipes, and valves for defects before refuelling storage tanks. Ensure all employees are familiar with procedures of refuelling safely without spilling. Regularly inspect pump, nozzles, and valves for defects.
	Surface Water Contamination	Low (with mitigation) Low - Moderate (without mitigation)	Store hazardous substances (petrol, diesel, paraffin) in underground bunds with impermeable surfaces that has the capacity to store 110% of the total tank volume. Should a leak or spill occur, immediately clean it up by removing the contaminated soil or material and dispose it as hazardous waste to prevent it from washing into the surface water system. Stormwater management measures (channels, culverts) should be in place and maintained to divert clean stormwater around the site to prevent it from becoming contaminated. Dirty stormwater should be contained on site to prevent the dirty water from entering the surface water system. Stormwater management measures should be implemented to manage runoff generated on site. This runoff should be contained on site to prevent contaminants from leaving the site. Oil separators should be installed on site.

Activity	Impact summary	Significance	Proposed mitigation
			Dirty stormwater must go through oil separators to remove contaminants before it leaves the site. The site should be levelled to prevent any ponding from occurring on the site. When refuelling storage tanks, prevent spills by using drip trays to contain any small spillages. Inspect nozzles, pipes and valves for defects before refuelling storage tanks. Ensure all employees are familiar with procedures of refuelling safely without spilling. Regularly inspect pump, nozzles and valves for defects.
	Cumulative impacts:		
	Groundwater Contamination	Low - Moderate (with mitigation) Moderate (without mitigation)	Store hazardous substances (petrol, diesel, paraffin) in underground bunds with impermeable surfaces that has the capacity to store 110% of the total tank volume. Install leak detection mechanisms in the tanks and bunds. Regularly inspect the bunds to ensure they are intact. When a spill or leak is noticed in the tank, bund or on the ground, immediately implement containment and clean-up measures (remove contaminated soil and dispose as hazardous waste) and rectify the leak as a matter of great urgency to prevent hazardous substances from reaching the groundwater source. When refuelling storage tanks, prevent spills by using drip trays to contain any small spillages. Inspect nozzles, pipes, and valves for defects before refuelling storage tanks. Ensure all employees are familiar with procedures of refuelling safely without spilling. Regularly inspect pump, nozzles, and valves for defects.
	Surface Water Contamination	Low (with mitigation) Low - Moderate (without mitigation)	Store hazardous substances (petrol, diesel, paraffin) in underground bunds with impermeable surfaces that has the capacity to store 110% of the total tank volume. Should a leak or spill occur, immediately clean it up by removing the contaminated soil or material and dispose it as hazardous waste to prevent it from washing into the surface water system. Stormwater management measures (channels, culverts) should be in place and maintained to divert clean stormwater around the site to prevent it from becoming contaminated. Dirty stormwater should be contained on site to prevent the dirty water from entering the surface water system.

Activity	Impact summary	Significance	Proposed mitigation
			Stormwater management measures should be implemented to manage runoff generated on site. This runoff should be contained on site to prevent contaminants from leaving the site. Oil separators should be installed on site. Dirty stormwater must go through oil separators to remove contaminants before it leaves the site. The site should be levelled to prevent any ponding from occurring on the site. When refuelling storage tanks, prevent spills by using drip trays to contain any small spillages. Inspect nozzles, pipes and valves for defects before refuelling storage tanks. Ensure all employees are familiar with procedures of refuelling safely without spilling. Regularly inspect pump, nozzles and valves for defects.
	Soil Contamination	Low (with mitigation) Moderate - High (without mitigation)	Should a leak or spill occur, immediately contain it and clean it up by removing the contaminated soil or material and dispose it as hazardous waste to prevent it from spreading to a larger area. Prevent spills by storing hazardous substances in bunded areas with impermeable surfaces that has the capacity of 110% of the stored volume. Store hazardous substances (petrol, diesel, paraffin) in underground bunds with impermeable surfaces that has the capacity to store 110% of the total tank volume. When refuelling storage tanks, prevent spills by using drip trays to contain any small spillages. Inspect nozzles, pipes, and valves for defects before refuelling storage tanks. Ensure all employees are familiar with procedures of refuelling safely without spilling. Regularly inspect pump, nozzles, and valves for defects
Generation and Disposal of Hazardous Waste (Construction Phase)	***Direct impacts:***		
	Soil Contamination	Low (with mitigation) Low - Moderate (without mitigation)	The generation of hazardous waste should be minimized as far as possible. Hazardous waste should be stored in a designated skip or in bins inside a bund to prevent its seepage into the soil. Hazardous waste skips or bins should be emptied frequently by a certified service provider that can dispose of the waste at the appropriate site in the appropriate manner. Should contamination occur, the area should be cleaned properly and all waste, including the contaminated soil, stored in a designated skip.
	Negative Aesthetic Impact	Low (with mitigation) Low - Moderate (without mitigation)	Hazardous waste should be stored in the appropriate skips or bunded bins.

Activity	Impact summary	Significance	Proposed mitigation
			Hazardous waste should be removed from site regularly by a certified service provider.
	Indirect impacts:		
	Water Contamination	Low (with mitigation) Low - Moderate (without mitigation)	The generation of hazardous waste should be minimized as far as possible. Hazardous waste should be stored in a designated skip or in bins inside a bund to prevent its seepage into the groundwater or its washing into the surface water system. Hazardous waste skips or bins should be emptied frequently by a certified service provider that can dispose of the waste at the appropriate site in the appropriate manner. Should contamination occur, the area should be cleaned properly and all waste, including the contaminated soil, stored in a designated skip.
	Cumulative impacts:		
Generation and Disposal of Hazardous Waste (Operational Phase)	***Direct impacts:***		
	Contamination of Soil	Low (with mitigation) Low - Moderate (without mitigation)	Hazardous waste should be stored in a designated skip or bin in a bunded area All materials that contain or came into contact with a hazardous substance should be disposed as hazardous waste. Hazardous waste skips or bins should regularly be emptied by a certified service provider that can dispose of it appropriately.
	Water Contamination	Low (with mitigation) Low - Moderate (without mitigation)	Hazardous waste should be stored in a designated skip or bin in a bunded area All materials that contain or came into contact with a hazardous substance should be disposed as hazardous waste to prevent it from coming into contact with clean water. Hazardous waste skips or bins should regularly be emptied by a certified service provider that can dispose of it appropriately. Contaminated water should run through an oil separator to remove any petrochemical substances.
	Indirect impacts:		
	Cumulative impacts:		
Generation and disposal of waste (excluding hazardous waste) (Construction Phase)	***Direct impacts:***		
	Negative Aesthetic Impact	Low (with mitigation) Low - Moderate (without mitigation)	Store waste in designated areas according to its type (e.g., construction, recyclable and general). Have the bins frequently emptied by a certified service provider to dispose the waste in the appropriate manner to prevent it from entering the surface water system.
	Indirect impacts:		

Activity	Impact summary	Significance	Proposed mitigation
	Water Contamination	Low (with mitigation) Low - Moderate (without mitigation)	Store waste according to type in designated and clearly marked bins or skips to prevent it from entering the surface water system. Have the bins frequently emptied by a certified service provider to dispose the waste in the appropriate manner to prevent it from entering the surface water system.
	Cumulative impacts:		
	Water Contamination	Low (with mitigation) Low - Moderate (without mitigation)	Store waste according to type in designated and clearly marked bins or skips to prevent it from entering the surface water system. Have the bins frequently emptied by a certified service provider to dispose the waste in the appropriate manner to prevent it from entering the surface water system.
Generation and disposal of waste (excluding hazardous waste) (Operational Phase)	***Direct impacts:***		
	Negative Aesthetic Impact	Low (with mitigation) Low - Moderate (without mitigation)	Separate bins for the disposal of general and recyclable waste should be available on site for customers and employees to separate and dispose of their waste to prevent waste from entering the surrounding environment and potentially contaminating the surface water system.
	Indirect impacts:		
	Water Contamination	Low (with mitigation) Low - Moderate (without mitigation)	Separate bins for the disposal of general and recyclable waste should be available on site for customers and employees to separate and dispose of their waste to prevent waste from entering the surrounding environment and potentially contaminating the surface water system.
	Cumulative impacts:		
Generation of Wastewater (Operational Phase)	***Direct impacts:***		
	Negative Aesthetic Impact	Low (with mitigation) Low - Moderate (without mitigation)	The conservancy tank will regularly be serviced and emptied to prevent it from overflowing as good housekeeping practices. The conservancy tank will regularly be inspected for leaks which will be fixed as a matter of urgency upon occurrence as good housekeeping practices. Wastewater from other activities will go through an oil separator before it is collected in a wastewater tank where it will be stored and serviced similarly to the conservancy tank to prevent water contamination.
	Indirect impacts:		
	Water contamination	Low (with mitigation) Low - Moderate (without mitigation)	The conservancy tank will regularly be serviced and emptied to prevent it from overflowing to prevent water contamination.

Activity	Impact summary	Significance	Proposed mitigation
			Stormwater management measures (channels, culverts) should be in place and maintained to divert clean stormwater around the site to prevent it from becoming contaminated. Dirty stormwater should be contained on site to prevent the dirty water from entering the surface water system. Stormwater management measures should be implemented to manage runoff generated on site. This runoff should be contained on site to prevent contaminants from leaving the site Oil separators should be installed on site. Dirty stormwater must go through oil separators to remove contaminants before it leaves the site. The site should be levelled to prevent any ponding from occurring on the site. The conservancy tank will regularly be inspected for leaks which will be fixed as a matter of urgency upon occurrence to prevent water contamination. Wastewater from other activities will be collected in a tank or flow-bin where it will go through an oil separator before it is released into the environment, or it will be stored and serviced similarly to the conservancy tank to prevent water contamination.
	Cumulative impacts:		
	Water contamination	Low (with mitigation) Low - Moderate (without mitigation)	The conservancy tank will regularly be serviced and emptied to prevent it from overflowing to prevent water contamination. Stormwater management measures (channels, culverts) should be in place and maintained to divert clean stormwater around the site to prevent it from becoming contaminated. Dirty stormwater should be contained on site to prevent the dirty water from entering the surface water system. Stormwater management measures should be implemented to manage runoff generated on site. This runoff should be contained on site to prevent contaminants from leaving the site Oil separators should be installed on site. Dirty stormwater must go through oil separators to remove contaminants before it leaves the site. The site should be levelled to prevent any ponding from occurring on the site. The conservancy tank will regularly be inspected for leaks which will be fixed as a matter of urgency upon occurrence to prevent water contamination. Wastewater from other activities will be collected in a tank or flow-bin where it will go through an oil separator before it is released into the environment, or it will be stored and serviced similarly to the conservancy tank to prevent water contamination.
Alternative 2			
	Direct impacts:		

Activity	Impact summary	Significance	Proposed mitigation
	Indirect impacts:		
	Cumulative impacts:		
Alternative 3			
	Direct impacts:		
	Indirect impacts:		
	Cumulative impacts:		
No-go option			
	Direct impacts:		
	No environmental impacts	N/A	N/A
	Indirect impacts:		
	No employment opportunities created	Low – Moderate	No mitigation for this impact in the no-go alternative.
	Cumulative impacts:		

A complete impact assessment in terms of Regulation 19(3) of GN 733 must be included as Appendix F.

2. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity 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.

Alternative A (preferred alternative)

The environmental impacts of the proposed development will be kept to the immediate area (site). Where possible the probability of occurrence are minimised. All negative impacts will have a low or low to moderate significance if mitigation and management measures are sufficiently implemented and maintained.

Loss of naturally occurring vegetation – the impact will be minimized by clearly delineating the area that will be cleared of vegetation. Protected species will only be removed if absolutely necessary and permits will be obtained for its removal before it is removed. The site is degraded with alien and invasive vegetation present. Only the immediate area (site) will be affected. An offset will be determined by planting a number of the protected species in a natural area as replacement for those removed. This will also minimise the impact of vegetation loss. Open fires on and around the site will not be allowed as it may lead to the further loss of vegetation.
Destruction of Habitat – the impact will be minimized by clearly delineating the area that will be cleared of vegetation. Open fires on and around the site will not be allowed as it may lead to the further loss of habitat.
Loss of animal species – the impact will be minimized by clearly delineating the area that will be cleared of vegetation and where vehicles/machinery will move. Animal species may be lost when clearance of vegetation or excavation and construction takes place. In order to mitigate this impact,

animals found on site will be relocated to the adjacent natural area. The site will be cleared in a north-south direction, starting at the eastern boundary of the site to allow animals to move towards the natural area and not get trapped between agricultural land and the construction site. Killing/hunting of animals on and around the site will not be allowed. Open fires on and around the site will not be allowed as it may lead to the loss of animals.

Establishment of alien and invasive species – When the site is disturbed, it allows the entrance and establishment of alien and invasive species. This impact will be minimized by clearly delineating the area that will be cleared of vegetation and where vehicles will move to minimize the disturbance of natural areas. Alien and invasive species will regularly be cleared from the site to prevent its distribution outside of the site.

Loss of topsoil – Loss of topsoil will be minimized by removing topsoil from the site along with/after clearance of vegetation took place and stockpiling it around the site to be used for levelling and garden purposes after construction. It will not be used for any construction purposes. The impact will further be minimised by clearly delineating the area where topsoil must be removed and stockpiled. Stockpiles will be kept below 1.5 m to minimize the potential wind erosion of the stockpiles.

Soil Erosion – The impact will be minimized by implementing thorough stormwater management measures (berms, trenches) that will decrease the velocity of runoff and contain potentially contaminated runoff on the site to prevent soil erosion.

Soil contamination – this impact can be minimised by limiting it to the site and practicing diligent cleaning procedures, ensuring minimal loss of soil during the construction phase. During the operational phase the largest part of the site will be paved, which will prevent soil contamination from small spills. At the truck stop, however, diligent clean-up measures must be practiced as this area will not be paved and will be covered in gravel. Hazardous substances will not be stored or handled on this area. The only spills expected at the truck stop are from potentially leaking/dripping vehicle engines.

Dust Generation – Dust will be generated when clearing vegetation, excavating and when construction takes place. This will be minimized by enforcing a speed limit on vehicles/machinery on site and minimizing the use of machinery during windy conditions. Should dust become problematic in the surrounding area, dust suppression by spraying water will be considered.

Loss of culturally significant resources – Any culturally significant resources found on site will be protected until a specialist can investigate the resource and advise on the further procedure.

Negative aesthetic impact – This impact will be minimized by practicing good housekeeping, i.e., keeping the site neat, organised and clean, during construction and operation phases.

Surface and groundwater contamination – this impact can be minimized during the construction phase by limiting the impact to the site (stormwater management, berms, trenches, wastewater tanks, bunds, regular inspections of hazardous substance storage and handling systems) and practicing diligent cleaning procedures where water became contaminated. There are no watercourses or wetlands on the site. It can be eliminated regarding the day-to-day operations of the site by implementing mitigation measures as listed in the Impact Assessment (Appendix F).

Decrease in water reserve capacity – the groundwater reserve of the area may decrease as this site will rely solely on groundwater as its water source. By diligently practicing water conservation during the construction and operational phases, this impact will be minimized as the aquifer will be allowed to recharge.

Generation of noise – noise will be generated during the construction phase, but the impact will be limited by only working in the daytime. This is a temporary impact. Noise during the operational phase will be that associated with human activities and is not expected to be problematic.

Loss of land use – the site is currently zoned for agriculture. It will not be possible to use the site for any other land use after it has been developed.

Employment opportunities – during the planning, construction and operational phase direct and indirect employment opportunities will be created which will have a positive impact on the economy of the area and on the economic prospects of the community.
With the appropriate mitigation and management measures, the overall negative impact of the proposed activity will be low to moderate, or low. The impacts will only occur directly on the site and not impact the surrounding area.
The positive socio-economic impact of the proposed development will be encouraged.

In conclusion, the significance of the negative impacts can be kept low through appropriate mitigation measures.

Alternative B

Alternative C

No-go alternative (compulsory)

The no-go alternative will have no adverse impacts on the environment.
The no-go alternative will have no positive impacts on the socio-economic condition of the area.

SECTION E. RECOMMENDATION OF 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)?	**YES** ✓	NO

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process 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.

All information is sufficient to make a well-informed decision regarding the proposed development. The following conditions and mitigation measures are recommended for inclusion in the authorisation should the competent authority grant it.

Protection of biodiversity:

- Permits for the removal or relocation of all protected plant species must be obtained before any activity commences on the site.
- The site must be kept clear of alien vegetation.

Soil:

- Remove topsoil from site and stockpile it for later use in stockpiles not exceeding 1.5 m.
- Topsoil may not be used for construction activities.

Water Use:

- The applicant must register their water use with the Vaal-Harts Scheme or apply for a Water Use Licence with the Department of Water Affairs and Sanitation, if required.
- Prepare and implement a stormwater management plan before commencing with construction activities.
- Water conservation must be practiced. Water conserving infrastructure/appliances must be used as far as possible.

Development Footprint:

- The site footprint must be minimized (referring to stockpiling, storage of waste, movement of vehicles and machinery which may cause compaction of soil, soil contamination, or contaminate runoff).

Waste Management:

- A contract with a service provider for the removal of hazardous waste, general waste, construction waste and recyclable waste, and wastewater must be in place before construction commences.
- Record must be kept of waste removal indicating the date and volume of waste removed from the site, and the details of the service provider collecting the waste.
- Waste must be stored in bins with lids.

Management of Hazardous Substances:

- Install leak detection mechanisms in storage tanks.

General:

- Ensure all employees are familiar with the procedures regarding water conservation, waste separation, storage and disposal, handling of hazardous substances, and clean-up of hazardous substance spills.
- All mitigation measures as laid out in the EMPr must be adhered to.

Is an EMPr attached?

YES ✓	NO

The EMPr must be attached as Appendix G.

The details of the EAP who compiled the BAR and the expertise of the EAP to perform the Basic Assessment process must be included as Appendix H.

If any specialist reports were used during the compilation of this BAR, please attach the declaration of interest for each specialist in Appendix I.

Any other information relevant to this application and not previously included must be attached in Appendix J.

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EAPASA REGISTERED EAP

_____ _____

SIGNATURE OF EAP DATE

SECTION F: APPENDIXES

The following appendixes must be attached:

Appendix A: Maps

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

Appendix J: Additional Information