DRAFT BASIC ASSESSMENT REPORT

FOR

PROPOSED SAGEWOOD FILLING STATION
(ERVEN 1323 AND 1324 SAGEWOOD EXT 6)

REF: GAUT 002/20-21/E2822

PREPARED FOR:
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On behalf of

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April 2021
Enq: E. Minnaar/ D. De Lange

REPORT DETAILS

Title:	Draft Basic Assessment for proposed Sagewood Filling Station (Erven 1323 & 1324 SAGEWOOD EXT 6) REF: GAUT 002/20-21/E2822
Purpose of this report:	The purpose of this BA Report is to: • Present the proposed project and the need for the project; • Describe the affected environment at a sufficient level of detail to facilitate informed decision-making; • Provide an overview of the BA Process being followed, including public consultation; • Assess the predicted positive and negative impacts of the project on the environment; • Provide recommendations to avoid or mitigate negative impacts and to enhance the positive benefits of the project; • Provide an Environmental Management Programme (EMPr) for the proposed project. This BA Report is the Draft Version submitted to the Gauteng Department of Agriculture and Rural Development (GDARD) and I&AP's for review.
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Date:	April 2021

ENVIRONMENTAL ASSESSMENT PRACTITIONER

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1.2 Qualifications

Delia de Lange

- LLB (Pretoria),
- BSc Geography (Pretoria)
- BSc (Hons) Geography (Pretoria)
- Masters in Development and Management (NWU)
- 13 years of experience in the environmental management field

1.3 Professional Affiliation

*INTERNATIONAL ASSOCIATION FOR IMPACT ASSESSMENT (*IAIA)

1.4 Verification Statement

I, Delia de Lange declare under oath that of –

1) The correctness of the information provided in the reports;
2) The inclusion of comments and inputs from stakeholders and I&AP's;
3) The inclusion of inputs and recommendations from the specialist reports where relevant;
4) Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs by interested and affected parties.

_____ April 2021
Signature Date

CONTENT OF A BA REPORT (2014 EIA REGULATIONS, AS AMENDED)

SCOPE OF ASSESSMENT AND CONTENT OF BA REPORT	SECTION
1) A basic assessment report must contain all the information that is necessary for the competent authority to consider and come to a decision on the application, and must include - (a) details of – i. the EAP who prepared the report; and	Page iii
ii. the expertise of the EAP, including a curriculum vitae;	Appendix H - EMPr
(b) the location of the activity, including: (i) the 21 digit Surveyor General code of each cadastral land parcel; (ii) where available, the physical address and farm name; (iii) where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties;	Section A & B
(c) a plan which locates the proposed activity or activities applied for as well as associated structures and infrastructure at an appropriate scale; or, if it is- (i) a linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken; or (ii) on land where the property has not been defined, the coordinates within which the activity is to be undertaken;	Section A Appendix A
(d) a description of the scope of the proposed activity, including- (i) all listed and specified activities triggered and being applied for; and (ii)a description of the activities to be undertaken including associated structures and infrastructure;	Section A
(e) a description of the policy and legislative context within which the development is proposed including- (i) an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks, and instruments that are applicable to this activity and have been considered in the preparation of the report; and (ii) how the proposed activity complies with and responds to the legislation and policy context, plans, guidelines, tools frameworks, and instruments;	Section A
(f) a motivation for the need and desirability for the proposed development including the need and desirability of the activity in the context of the preferred location;	Section E
(g) a motivation for the preferred site, activity and technology alternative;	Section E
(h) a full description of the process followed to reach the proposed preferred alternative within the site, including: (i) details of all the alternatives considered; (ii) details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs; (iii) a summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them; (iv) the environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects; (v) the impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and	Section A Section A Section C Section C Section B Section E

SCOPE OF ASSESSMENT AND CONTENT OF BA REPORT	SECTION
probability of the impacts, including the degree to which these impacts- (aa) can be reversed (bb) may cause irreplaceable loss of resources; and (cc) can be avoided, managed or mitigated; (vi) the methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives; (vii) positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects; (viii) the possible mitigation measures that could be applied and level of residual risk; (ix) the outcome of the site selection matrix; (x) if no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such; and (xi) a concluding statement indicating the preferred alternatives, including preferred location of the activity;	Section E Section E Section E Section E - Section E
(i) a full description of the process undertaken to identify, assess and rank the impacts the activity will impose on the preferred location through the life of the activity, including- (i) a description of all environmental issues and risks that were identified during the environmental impact assessment process; and (ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures;	Section E
(j) an assessment of each identified potentially significant impact and risk, including- (i) cumulative impacts; (ii) the nature, significance and consequences of the impact and risk; (iii) the extent and duration of the impact and risk; (iv) the probability of the impact and risk occurring; (v) the degree to which the impact and risk can be reversed; (vi) the degree to which the impact and risk may cause irreplaceable loss of resources; and (vii) the degree to which the impact and risk can be avoided, managed or mitigated;	Section E
(k) where applicable, a summary of the findings and impact management measures identified in any specialist report complying with Appendix 6 to these Regulations and an indication as to how these findings and recommendations have been included in the final report;	-
(l) an environmental impact statement which contains- (i) a summary of the key findings of the environmental impact assessment; (i) a map at an appropriate scale which superimposes the proposed activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers; and (iii) a summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;	Section E
(m) based on the assessment, and where applicable, impact management measures from specialist reports, the recording of the proposed impact management objectives, and the impact management outcomes for the development for inclusion in the EMPr	Appendix H
(n) any aspects which were conditional to the findings of the assessment either by the EAP or specialist which are to be included as conditions of authorisation;	Section E
(o) a description of any assumptions, uncertainties, and gaps in	Section E

SCOPE OF ASSESSMENT AND CONTENT OF BA REPORT	SECTION
knowledge which relate to the assessment and mitigation measures proposed;	
(p) a reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation;	Section E
(q) where the proposed activity does not include operational aspects, the period for which the environmental authorisation is required, the date on which the activity will be concluded, and the post construction monitoring requirements finalised;	Not applicable
(r) an undertaking under oath or affirmation by the EAP in relation to: (i) the correctness of the information provided in the reports; (ii) the inclusion of comments and inputs from stakeholders and I&APs; (iii) the inclusion of inputs and recommendations from the specialist reports where relevant; and (iv) any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties; and	Page ii
(s) where applicable, details of any financial provisions for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts;	Not applicable
(t) any specific information that may be required by the competent authority; and	Not applicable
(u) any other matters required in terms of section 24(4)(a) and (b) of the Act	Not applicable

EXECUTIVE SUMMARY

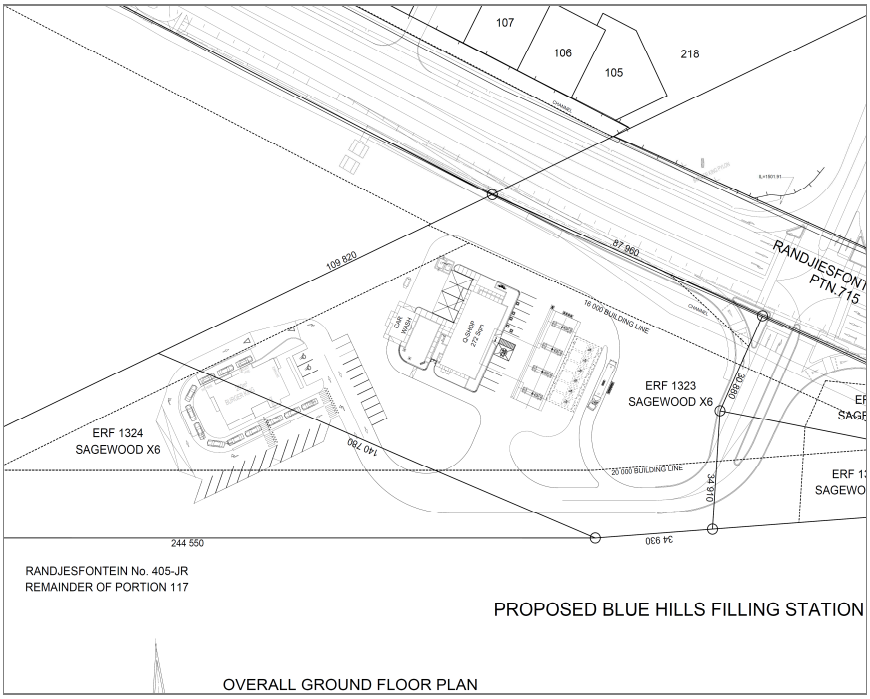
Introduction

Eris Property Group (Pty) Ltd appointed Lokisa Environmental Consulting CC to obtain an Environmental Authorisation from the Gauteng Department of Agriculture and Rural Development (GDARD) for the proposed development of a Filling Station to be situated on Erven 1323 and 1324 Sagewood Ext. 6 ("the site") within the jurisdiction of the City of Johannesburg Metropolitan Municipality.

Project description

The proposed project entails the construction of a Filling station that is to accommodate 115 000 litres (5 x 23 000 litres) of fuel on site. The site is situated directly south of Olifantsfontein Road and directly east of the Blue Hills Shopping Centre with the following development details:

- 5 x 23 000 litre fuel tanks;
- Convenience shop measuring 272 m^2 ;
- Take-away / sitting down facility or drive through facility measuring 260 m^2;
- Parking bays to be provided on site.
- Fuel pumps to be situated parallel to Olifantsfontein Road with the convenience shop situated to the west of the fuel pumps.
- Car wash situated west of the convenience shop.



Regulatory Environmental Requirements

GDARD is the lead authority carrying out the authorisation process in accordance with the National Environmental Management Act (Act No. 107 of 1998, "NEMA") (as amended).

The EIA process, applicable to this application, is determined by the Amendments to the Environmental Impact Assessment Regulations, 2014, published in Government Notice 982 (as amended in 2017) promulgated under Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998).

The EIA regulations inter alia describe the procedure for EIA and provide a description of activities that would require authorisation through either 1) a Basic Assessment (in terms of Government Notices R983 and R985 of 2014 (as amended 2017) or 2) Scoping and Environmental Impact Assessment (in terms of Government Notice R984 of 2014 (as amended 2017).

The listed activity associated with the proposed development falls within GN R983. The Basic Assessment (BA) procedure will apply to this application.

Basic Assessment Report

The required Basic Assessment (BA) process is being conducted in 3 phases namely:
Phase 1: Project inception;
Phase 2: Basic Assessment and Environmental Management Programme; and
Phase 3: Authority review and response.

The report provides a description of the activity, description of property and location and a description of Environment, Public Participation Process followed, Legislation, Need and Desirability, Significant Impacts and Management as well as Mitigation.

Alternatives

The following types of alternatives in addition to the No-Go alternative were investigated:

- Type of activity;
- Property on which activity will take place;
- Operational aspects of activity (storm water provision; underground tanks);
- Design or layout of activity; and
- Regulatory process alternative.

Should the No-Go option be followed, it will entail not using the site and maintaining the site as it is. This will present both direct and indirect negative environmental and socio economic impacts such as:

- Further deterioration of the site

- Land invasion may occur
- Loss of investment
- The upgrade of the stormwater on the R562 and signaled access will not take place
- No employment opportunities will be created

Public Participation

Lokisa Environmental Consulting CC conducted the Public Participation for the proposed Filling Station development. During the Public Participation Process, it was noted that engaging stakeholders even before developments are built could achieve the best impacts. It is for this reason that the PPP that forms part of the EIA becomes the basis for stakeholder engagement process.

During the PPP, the aim was to ensure that the full range of stakeholders was informed about the development throughout the period in question. In order to achieve this, a number of key activities have taken place and will continue to take place.

Environmental Impact Assessment

The impacts of the project activities were determined by identifying the environmental aspects and then undertaking an environmental risk assessment to determine the significant environmental aspects.

The environmental impact assessment has considered all phases of the project, namely, construction and operational phases. Should the site however be developed for the purpose as per the BAR, being that for a Filling Station (and associated uses), it seems unlikely that decommissioning will be required at a later stage.

The rating system used is applied to the potential impact on the receiving environment and includes an objective evaluation of the mitigation of the impact. During the EIA, the impact of the proposed development on the biophysical and socio-economic environment was assessed. It was this assessment that allowed the EAP to make an informed analysis and provide an opinion on the proposed development.

Please see below a summary of the identified impacts and their pre-mitigation and post-mitigation impact significance rating scores.

Summary of identified Impacts – Proposal

Potential Impacts	Signifi-cance rating of impacts	Signifi-cance rating of impacts after mitigation
CONSTRUCTION PHASE		
1.1 Dust /Air pollution **The generation of dust associated with construction activities & earthworks**	**Low**	**Very Low**

2.1 Visual Impacts and light pollution	**Very Low**	**Very Low**
2.2 Bulk earthworks	**Very Low**	**Very Low**
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	**Low**	**Low**
3.2 Soil Pollution	**Low**	**Very Low**
3.3 Disturbance of surface geology for development foundations	**Low**	**Very Low**
3.4 Geotechnical Constraints	**Low**	**Very Low**
4.1 Site clearing and the removal of vegetation	**High**	**Medium**
4.2 Degradation, destruction of habitats/ ecosystem, loss of natural vegetation/ wildlife	**High**	**Medium**
4.3 Impacts on fauna and flora and loss of RDL faunal and floral species	**Low**	**Low**
4.4 Invasive Species	**Medium**	**Low**
5.1 Storm water flow and drainage	**Low**	**Low**
6.1 Noise / vibration	**Low**	**Very Low**
7.1 Safety and Security	**Medium**	**Low**
7.2 Economic opportunities	**Positive - Medium**	**Positive – Medium**
7.3 Hygiene	**Very Low**	**Very Low**
8.1 Destruction of cultural / heritage sites	**Insignificant**	**Insignificant**
9.1 Traffic – Construction vehicles	**Low**	**Very Low**
10.1 Waste	**Very Low**	**Very Low**
10.2 Pressure on existing infrastructure and services	**Very Low**	**Very Low**
OPERATIONAL PHASE		
1.1 Air pollution	**Medium**	**Low**
2.1 Alien invasion	**Low**	**Very Low**
3.1 Noise	**Medium**	**Low**
4.1 Socio-economic impact on existing filling stations. Competitor filling stations in the area.	**Medium**	**Medium**
4.2 Economic opportunities	**High (Positive)**	**High (Positive)**
5.1 The buildings and advertising signs may be visually intrusive. Lights from the service/filling station may be visually intrusive.	**Medium**	**Low**
6.1 Safety and Security:	**Medium**	**Low**
7.1 Hydrocarbons spilled from storage tanks and possible small spills of oil, diesel and petrol spilled on paved surfaces have the potential of contaminating groundwater.	**Medium**	**Low**
7.2 Storm Water and Drainage – Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another	**High**	**Medium**
8.1 Traffic – vehicles from the Filling station	**Medium**	**Low**
8.2 Access to the proposed development	**Medium**	**Low**
9.1 Visibility and accessibility (Layout of the filling station)	**Medium**	**Low**
10.1 Waste	**Medium**	**Low**
10.2 Pressure on existing infrastructure and services	**Medium**	**Low**

The potential impacts for Alternative 1 are similar to that of the proposal with the only exception being the impacts anticipated in terms of visibility and accessibility from Olifantsfontein Road as a result of the alternative layout of the filling station during the operational phase.

Conclusion

The development of the Sagewood Filling Station will have an impact on the immediate biophysical environment. However the biophysical impact of the development will be limited in a regional context and will be more than offset by the socio-economic benefits of the development such as comparative land use and economic opportunities.

The site and the entire surrounding area are within the original extent of Egoli Granite Grassland, which is a threatened ecosystem, with a status of 'Endangered'. However, there are no high sensitivity areas, habitats, or 'no-go' zones within the study area and the development falls within Zone 1 of the GPEMF and forms a natural extension of the Blue Hills Shopping Centre.

There are no protected trees, RDL plant or animal species present in the study area. There are no watercourses on the site, including rivers, streams and wetlands. There are also no distinctive drainage lines in the study area.

One orange data listed (ODL) floral species was observed during field investigations, namely, *Hypoxis hemerocallidea* (African potato). An independent specialist must locate, lift and relocate the ODL plants prior to the commencement of construction activities.

A few scattered plants of *Aloe greatheadii* and *Ledebouria spp* were found on site. These species are not on the official RDL and ODL plant species list of Gauteng Province and are therefore not official ODL plant species. However, due to their continual decline it is the opinion of the specialist that these plants should be considered priority and should be lifted and relocated.

Positive impacts from the proposed development include Economic Opportunities during the construction phase (Positive – Medium) and Economic Opportunities during the operational phase (Positive – High).

The proposed Sagewood filling station will have a short term impact ranging from very low to high during the construction phase, and a long term impact ranging from low to high during the operational phase, but will result in positive benefits to the community during the operational phase if the correct mitigation measures are implemented during the construction and operational phases.

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Appendix C: Facility illustration(s)

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Appendix E: Public participation information

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- Appendix 2 – Written notices issued to I&APs and Stakeholders
- Appendix 3 – Proof of newspaper advertisements
- Appendix 4 – Communications to and from I&APs and Stakeholders
- Appendix 5 – Minutes of any public and/or stakeholder meetings
- Appendix 6 – Comments and Responses Report
- Appendix 7 – Comments from I&APs on Basic Assessment (BA) Report
- Appendix 8 – Comments from I&APs on amendments to the BA Report
- Appendix 9 – Copy of the register of I&APs
- Appendix 10 – Comments from I&APs on the application
- Appendix 11 – Other

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

Appendix G: Specialist Reports

Appendix H: EMPr

Appendix I: Other information

DEFINITIONS

Activity (Development)	An action either planned or existing that may result in environmental impacts through pollution or resource use. For the purpose of this report, the terms 'activity' and 'development' are freely interchanged.
Alternatives	Different means of meeting the general purpose and requirements of the activity, which may include site or location alternatives; alternatives to the type of activity being undertaken; the design or layout of the activity; the technology to be used in the activity and the operational aspects of the activity.
Applicant	The project proponent or developer responsible for submitting an environmental application to the relevant environmental authority for environmental authorisation.
Biodiversity	The diversity of animals, plants and other organisms found within and between ecosystems, habitats, and the ecological complexes.
Construction	The building, erection or establishment of a facility, structure or infrastructure that is necessary for the undertaking of a listed or specified activity but excludes any modification, alteration or expansion of such a facility, structure or infrastructure and excluding the reconstruction of the same facility in the same location, with the same capacity and footprint.
Cumulative impact	The impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.
Decommissioning	The demolition of a building, facility, structure or infrastructure.
Direct Impact	Impacts that are caused directly by the activity and generally occur at the same time and at the same place of the activity. These impacts are usually associated with the construction, operation or maintenance of an activity and are generally quantifiable.
Ecosystem	A dynamic system of plant, animal (including humans) and micro-organism communities and their non-living physical environment interacting as a functional unit. The basic structural unit of the biosphere, ecosystems are characterised by interdependent interaction between the component species and their physical surroundings. Each ecosystem occupies a space in which macro-scale conditions and interactions are relatively homogenous
Environment	In terms of the National Environmental Management Act (NEMA) (No 107 of 1998)(as amended), "Environment" means the surroundings within which humans exist and that are made up of: a) the land, water and atmosphere of the earth; b) micro-organisms, plants and animal life; c) any part or combination of (i) of (ii) and the interrelationships among and between them; and d) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and wellbeing.
Environmental Assessment	The generic term for all forms of environmental assessment for projects, plans, programmes or policies and includes methodologies or tools such as environmental impact assessments, strategic environmental assessments and risk assessments.
Environmental Authorisation	An authorisation issued by the competent authority in respect of a listed activity, or an activity which takes place within a sensitive environment.]
Environmental Assessment Practitioner (EAP)	The individual responsible for planning, management and coordination of environmental impact assessments, strategic environmental assessments, environmental management programmes or any other appropriate environmental instrument introduced through the EIA Regulations.
Environmental Management	Ensuring that environmental concerns are included in all stages of development, so that development is sustainable and does not exceed the carrying capacity of the environment.
Environmental Management	A detailed plan of action prepared to ensure that recommendations for enhancing or ensuring positive impacts and limiting or preventing negative

Programme (EMPr)	environmental impacts are implemented during the life cycle of a project. This EMPr focuses on the construction phase, operation (maintenance) phase and decommissioning phase of the proposed project.
Environmental Impact	Change to the environment (biophysical, social and/ or economic), whether adverse or beneficial, wholly or partially, resulting from an organisation's activities, products or services.
Environmental Issue	A concern raised by a stakeholder, interested or affected parties about an existing or perceived environmental impact of an activity.
Fatal Flaw	Issue or conflict (real or perceived) that could result in developments being rejected or stopped. In the context of an environmental impact assessment a fatal flaw can be termed as an environmental issue that cannot be mitigated by any means
General Waste	Household waste, construction rubble, garden waste and certain dry industrial and commercial waste, which does not pose an immediate threat to man or the environment.
Groundwater	Water in the ground that is in the zone of saturation from which wells, springs, and groundwater run-off are supplied.
Hazardous Waste	Waste that may cause ill health or increase mortality in humans, flora and fauna.
Hydrology	The science encompassing the behaviour of water as it occurs in the atmosphere, on the surface of the ground, and underground.
Important areas	Sites that are important for the conservation of biodiversity in Gauteng; (Gauteng C-Plan Version 3)
Indirect Impacts	Indirect or induced changes that may occur as a result of the activity. These types if impacts include all of the potential impacts that do not manifest immediately when the activity is undertaken or which occur at a different place as a result of the activity.
Interested and Affected Party (I&AP)	Any person, group of persons or organisation interested in or affected by an activity; and any organ of state that may have jurisdiction over any aspect of the activity.
Irreplaceable areas	Sites, which are essential in meeting targets set for the conservation of biodiversity in Gauteng; (Gauteng C-Plan Version 3)
Mitigate	The implementation of practical measures designed to avoid, reduce or remedy adverse impacts or enhance beneficial impacts of an action.
No-Go Option	In this instance the proposed activity would not take place, and the resulting environmental effects from taking no action are compared with the effects of permitting the proposed activity to go forward.
Public Participation Process	A process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to, specific matters.
Rehabilitation	A measure aimed at reinstating an ecosystem to its original function and state (or as close as possible to its original function and state) following activities that have disrupted those functions.
Sensitive Environments	Any environment identified as being sensitive to the impacts of the development.
Significance	Significance can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. magnitude, intensity, duration and likelihood). Impact significance is the value placed on the change by different affected parties (i.e. level of significance and acceptability). It is an anthropocentric concept, which makes use of value judgements and science-based criteria (i.e. biophysical, social and economic).
Stakeholder Engagement	The process of engagement between stakeholders (the proponent, authorities and I&APs) during the planning, assessment, implementation and/or management of proposals or activities.
Sustainable Development	Development which meets the needs of current generations without hindering future generations from meeting their own needs.
Undeveloped	means that no facilities, structures or infrastructure have been effected upon the land or property during the preceding 10 years
Urban areas	means areas situated within the urban edge (as defined or adopted by the

	competent authority), or in instances where no urban edge or boundary has been defined of adopted, it refers to areas situated within the edge of built-up areas
Vacant	Means not occupied for the purpose of its lawful land use during the preceding ten year period
Watercourse	Means (a) a river or spring; (b) a natural depression in which water flows regularly or intermittently; (c) a wetland, lake or dam into which, or from which, water flows; and (d) any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse, and a reference to a watercourse includes, where relevant, its bed and bank
Wetland	Means land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil

ABBREVIATIONS

BID	Background Information Document
CoJ	City of Johannesburg Metropolitan Municipality
C- Plan	Gauteng Conservation Plan Version 3.3
GDARD	Gauteng Department of Agriculture and Rural Development
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EC	Environmental Consultant
EISD	Environment and Infrastructure Services Department
EMPr	Environmental Management Programme
Ha	Hectares
HIA	Heritage Impact Assessment
I&APs	Interested and Affected Parties
IDP's	Integrated Development Plans
Km	Kilometers
LDO	Land Development Objectives
m	Meters
NEMA	National Environmental Management Act
NDP	The National Development Plan
NGO's	Non-Governmental Organisations
OHSA	Occupational Health and Safety Act
PHRA-G	Provincial Heritage Resources Authority - Gauteng
(Pty) Ltd	Proprietary Limited
SAHRA	South African Heritage Resources Agency
UST	Underground Storage Tank

GAUTENG PROVINCE
AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

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

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.
2. This application form is current as of 8 December 2014. It is the responsibility of the EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
3. **A draft Basic Assessment Report must be submitted, for purposes of comments within a period of thirty (30) days, to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken.**
4. **A draft Basic Assessment Report (1 hard copy and two CD's) must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application.**
5. Five (5) copies (3 hard copies and 2 CDs-PDF) of the final report and attachments must be handed in at offices of the relevant competent authority, as detailed below.
6. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
7. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
8. An incomplete report may lead to an application for environmental authorisation being refused.
9. **Any report that does not contain a titled and dated full colour large scale layout plan of the proposed activities including a coherent legend, overlain with the sensitivities found on site may lead to an application for environmental authorisation being refused.**
10. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the application for environmental authorisation being refused.
11. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.
12. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.
13. Although pre-application meeting with the Competent Authority is optional, applicants are advised to have these meetings prior to submission of application to seek guidance from the Competent Authority.

DEPARTMENTAL DETAILS

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

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Department central telephone number: (011) 240 2500

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

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

N/A

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

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

The Activity applied for does not relate to the decommissioning or the closure of a facility and it is not envisaged that the development will be decommissioned.

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

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

If no, state reasons for not attaching the list.

Please refer to Appendix I

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

If no, why?

Comment from the State Departments and the competent authority on the Draft BAR has been requested and is awaited.

SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

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

Proposed Sagewood Filling Station

Select the appropriate box

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

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

YES	NO

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

1. **Application for the amendment of the City of Johannesburg Land Use Scheme (Rezoning), in terms of Section 21 of the City of Johannesburg Municipal Planning By-Law, 2016, from Special for shops, gymnasium auto bank teller machine crèche and restaurants to Public Garage.**

2. **Application for a site licence and retail licence from the Department of Energy in terms of the Petroleum Products Act 120 of 1977. The application will only be approved once the Environmental Authorisation has been obtained.**

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

2. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	**National & Provincial**	**27 November 1998**
NEMA EIA Regulations, 2014 (Government Notice Nos. GN R982, R983, R984, R985) as amended 2017. **<u>Activities listed under GN R983 (Listing Notice 1):</u>** **<u>Activity 14</u> – 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.**	**National Department of Environmental Affairs and GDARD**	**2014**

<u>Activities listed under GN R985 (Listing Notice 3):</u> **<u>Activity 12</u> – The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. c. Gauteng. i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; ii. Within Critical Biodiversity Areas or Ecological Support Areas identified in the Gauteng Conservation Plan or bioregional plans.**		
National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	**National Department of Environmental Affairs and GDARD**	**2004**
National Environmental Management: Waste Act (Act No. 59 of 2008) (NEM:WA)	**National Department of Environmental Affairs and GDARD**	**2008**
National Water Act (Act No. 36 of 1998)	**Department of Water and Sanitation**	**1998**
National Heritage Resources Act (Act No. 25 of 1999)	**SAHRA**	**1999**
Occupational Health & Safety Act (Act No. 85 of 1993) (OHSA) as amended in July 2001, Including Major Hazard Installation Regulation, GNR 692, 30 July 2001.	**National Government**	**2001**
Mineral and Petroleum Resources Development Act 2002 (Act No. 28 of 2002)	**National & Provincial**	**2002**
Petroleum Products Act 120 of 1977	**National Department of Energy**	**1977**
Conservation of Agricultural Resources Act (Act No. 43 of 1983)	**Department of Agriculture Forestry and Fisheries**	**1983**
Reconstruction and Development Programme	**National & Provincial**	**1995**
National Development Plan	**National Planning Commission**	**2011**
National Screening Tool	**National Department of Environmental**	**2019**

	Affairs	
Gauteng Conservation Plan (C-Plan Version 3.3)	**GDARD**	**2011**
Gauteng Provincial Environmental Management Framework	**GDARD**	**2015**
Gauteng Spatial Development Framework	**Provincial**	**2011**
The Gauteng Department of Agriculture and Rural Development's (GDARD) Requirements for Biodiversity Assessments (Version 3)	**Gauteng Department of Agriculture and Rural Development**	**March 2014**
City of Johannesburg Spatial Development Framework 2040	**City of Johannesburg**	**2016**
City of Johannesburg Integrated Development Plan 2020/2021	**City of Johannesburg**	**2020/2021**
City of Johannesburg Metropolitan Municipality By-Laws	**City of Johannesburg**	**-**

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

Legislation, policy of guideline	Description of compliance
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	**NEMA establishes the basis for environmental governance and sets out the principles for decision-making on matters affecting the environment. The principles of the Act are provided in Section 2 and it is the responsibility of all organs of state to take these principles into account when making decisions that could affect the environment.** **The proposed development does not occur in contrast with the principles and main objective of the Act.**
NEMA EIA Regulations, 2014 (Government Notice Nos. GN R982, R983, R984, R985) as amended 2017.	**The EIA process, applicable to this application, is determined by the Environmental Impact Regulations published in Government Notice R982 in Government Gazette No 38282 of 4 December 2014 promulgated under Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and amended in 2017.** **The EIA regulations inter alia describe the procedure for EIA and provide a description of activities that would require authorisation through either 1) a Basic Assessment (in terms of Government Notices R983 and R985 of 2014) or 2) Scoping and Environmental Impact Assessment (in terms of Government Notice R984 of 2014).** **An application is submitted in terms of Chapter 4 of the EIA Regulations as the proposed development triggers activities that require a Basic Assessment.**
National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	**The objectives of this Act are:** **Within the framework of the National Environmental Management Act, to provide for –** **(i) the management and conservation of biological diversity within the Republic and of the components of such biological diversity;** **(ii) the use of indigenous biological resources in a sustainable manner and**

	(ii) the fair and equitable sharing among stakeholders of benefits arising from bio-prospecting involving indigenous biological resources. **The proposed development does not occur in contrast with the objectives of the Act.**
National Environmental Management: Waste Act (Act No. 59 of 2008) (NEM:WA)	**The objective of this act is to protect health, well-being, and the environment by providing measures for-** • **Minimising consumption of natural resources;** • **Avoiding and minimising the generation of waste;** • **Reducing, reusing, recycling and recovering waste;** • **Treating and safely disposing of waste as last resort;** • **Preventing pollution and ecological degradation;** • **Securing ecologically sustainable development while promoting justifiable economic and social development.** **The proposed development does not occur in contrast with the objectives of the Act.**
National Water Act (Act No. 36 of 1998)	**The purpose of this Act is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways that takes into account amongst other factors:** • **Promoting equitable access to water** • **Redressing the results of past racial and gender discrimination;** • **Promoting the efficient, sustainable and beneficial use of water in the public interest;** • **Facilitating social and economic development;** • **Providing for growing demand for water;** • **Protecting aquatic and associated ecosystems and their biological diversity;** • **Reducing and preventing pollution and degradation of water resources;** • **Meeting international obligations** • **Promoting dam safety;** • **Managing floods and drought.** **The proposed development does not occur in contrast with the objectives of the Act.**
National Heritage Resources Act (Act No. 25 of 1999)	**Heritage resources have lasting value in their own right and provide evidence of the origins of South African society and, as they are valuable, finite, non-renewable and irreplaceable, they must be carefully managed to ensure their survival.** **A Heritage Impact Assessment was conducted and is included under Appendix G. The assessment concluded that the impact of the project on heritage resources is low and the project can commence based on the adherence to the recommendations in the report and the approval of SAHRA.**
Occupational Health & Safety Act (Act No. 85 of 1993) (OHSA) as amended in	**The main objective of the Act is to provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of in connection with the activities of persons at work; to establish an advisory council for occupational health and**

July 2001, Including Major Hazard Installation Regulation, GNR 692, 30 July 2001.	**safety; and to provide for matters connected herewith.** **The proposed development site and crew are to be managed in strict accordance with the Occupational Health and Safety Act (Act No. 85 of 1993) (OHSA) and the National Building Regulations.**
Conservation of Agricultural Resources Act (Act No. 43 of 1983)	**The proposed development will ensure that no agricultural resources are impacted upon.**
Mineral and Petroleum Resources Development Act 2002 (Act No. 28 of 2002)	**The Act governs the acquisition, use and disposal of mineral rights. The purpose of the Act is to make provision for equitable access to and sustainable development of the nation's mineral and petroleum resources; and to provide for matters connected therewith.** **The objectives of the Act are to:** • **Recognise the internationally accepted right of the state to exercise sovereignty over all the mineral and petroleum resources within the Republic;** • **Give effect to the principal of the state's custodians of the nation's mineral and petroleum resources;** • **Promote equitable access to the nation's mineral and petroleum resources to all the people of South Africa;** • **Substantially and meaningfully expand opportunities for historically disadvantaged persons; including women, to enter the mineral and petroleum industries and to benefit from the exploitation of the nation's mineral and petroleum resources;** • **Promote economic growth and mineral and petroleum resources development in the Republic;** • **Promote employment and advance the social and economic welfare of all South Africans;** • **Give effect to section 24 of the Constitution by ensuring that the nation's mineral and petroleum resources are developed in an orderly and ecologically sustainably manner while promoting justifiable social and economic development and;** • **Ensure the holders of mining and production rights contribute towards the socio economic development of the areas in which they are operating.** **The proposed development of the filling station will not impact on any mineral rights and the proposed development does not contrast with the objectives of the Act.**
Petroleum Products Act 120 of 1977	**The purpose of the Act is to provide for the saving of petroleum products and an economy in the cost of distribution thereof, and for the maintenance and control of a price therefore, for control of the furnishing of certain information regarding petroleum products; and for the rendering of services of a particular kind, or services of a particular standard, in connection with motor vehicles and to provide for matters incidental thereto.** **The proposed development does not occur in contrast with the**

	purpose of the Act.
Reconstruction and Development Programme	**One of the six principles of the Reconstruction and Development programme is meeting basic needs and building the infrastructure.** **The RDP integrates growth, development, reconstruction, redistribution and reconciliation into a unified programme. The key link is an infrastructural programme that will provide access to modern and effective services such as electricity, water, telecommunications, transport, health, education and training for all our people.** **The proposed development does not contrast with one of the six principles of the RDP.**
National Development Plan	**The National Development Plan (NDP) offers a long-term perspective. It defines a desired destination and identifies the role different sectors of society need to play in reaching that goal.** **As a long-term strategic plan, it serves four broad objectives:** • **Providing overarching goals for what the nation want to achieve by 2030.** • **Building consensus on the key obstacles to us achieving these goals and what needs to be done to overcome those obstacles.** • **Providing a shared long-term strategic framework within which more detailed planning can take place in order to advance the long-term goals set out in the NDP.** • **Creating a basis for making choices about how best to use limited resources.** **The Plan aims to ensure that all South Africans attain a decent standard of living through the elimination of poverty and reduction of inequality. The core elements of a decent standard of living identified in the Plan are:** • **Housing, water, electricity and sanitation** • **Safe and reliable public transport** • **Quality education and skills development** • **Safety and Security** • **Quality health care** • **Social protection** • **Employment** • **Recreation and leisure** • **Clean environment** • **Adequate nutrition** **The proposed development does not occur in contrast with the NDP.**
National Screening Tool	**The National Web based Environmental Screening Tool is a geographically based web-enabled application which allows a proponent intending to submit an application for Environmental Authorisation in terms of the Environmental Impact Assessment Regulations (2014) as amended, to screen the proposed site for any environmental sensitivity.** **Objectives of the screening tool:** • **The National Development Plan calls for an efficient and**

effective environmental legislative process including the Environmental Impact Assessment Process.

- **The development of the National Web based Environmental Screening Tool forms part of ensuring on-going improvement of the EIA process to ensure efficiency and effectiveness.**
- **The Screening Tool aims to flag areas of potential environmental sensitivity in relation to a proposed site and development footprint.**
- **The tool enables the applicant to manipulate the development footprint on a site to avoid environmental sensitivities.**
- **The report generates a list of specialist assessments that should form part of the assessment reports to be submitted with the EIA application based on the national sector classification and the sensitivity of the site.**
- **Supports the implementation of the Assessment Protocols.**
- **Assessment Protocols provide minimum information to be included in a specialist report to facilitate the decision making process.**
- **The tool identifies any specific exclusions, restriction, prohibitions or any exceptions to the EIA process that apply to a particular site as well as any site specific information that must be consulted in relation to the site.**
- **In time to provide a mechanism to collect new environmental information surveyed or compiled by the specialists through the preparation of assessment reports for verification by data custodians for incorporation into relevant national data sets.**

The Screening Tool also provides site specific EIA process and review information. Further to this, the Screening Tool identifies related exclusions and/or specific requirements including specialist studies applicable to the proposed site and or development, based on the national sector classification and the environmental sensitivity of the site.

Finally the Screening Tool allows for the generating of a Screening Report referred to in Regulation 16(1)(v) of the Environmental Impact Assessment Regulations 2014, as amended, whereby a Screening Report is required to accompany any application for Environmental Authorisation. In light of the above mentioned, a Screening Tool Report was prepared for the site and is included as an annexure to the Application Form.

According to the National Screening Tool the following summaries of the development footprint environmental sensitivities were identified.

Theme	Very High sensitivity	High Sensitivity	Medium Sensitivity	Low Sensitivity
Agriculture Theme			X	
Animal Species Theme			X	
Aquatic Biodiversity Theme				X

	Archaeological and Cultural Heritage Theme			X	
	Civil Aviation Theme		X		
	Defence Theme			X	
	Plant Species Theme			X	
	Terrestrial Biodiversity Theme	X			

The Biodiversity Impact Assessment, dated March 2021, states the following with regard to the National Screening Tool: "During field investigations the DEA Screening Tool assessment, was verified (ground-truthed). The aquatic and terrestrial were found to be as per the DEA Screening Tool. However, large areas that are know totally transformed with township / townhouse developments cannot, in reality, be considered to have a terrestrial sensitivity of 'very high', but that of 'low'. However, the larger Egoli Granite Grassland area needs to be viewed as having an overall terrestrial sensitivity of 'very high'.

It was verified that the plant species sensitivity is 'medium', as per the DEA Screening Tool assessment. However, during field investigations it was determined that the animal species sensitivity is more that of 'low' than 'medium'."

Gauteng Conservation Plan (C-Plan Version 3.3)	**GDARD's (Gauteng Department of Agriculture and Rural Development) C-Plan (Gauteng Conservation Plan Version 3.3) was used to determine the sensitivities of the site and is provided in the figure below.** **Conservation planning was started in Gauteng in the year 2000 and the aim was to revise the C-Plan at least every 5 years. C-Plan Version 1 was produced in 2001 and was followed by version 2 in 2005. Version 2 was refined in 2007 and was named Version 2.1. The small size of the province made it feasible to conduct an extensive biodiversity survey, named BGAP, which aimed to provide the information on spatial occurrence of biodiversity necessary for rigorous conservation planning. C-Plan 3 represents priority areas for biodiversity conservation in the Gauteng province.** **An extract of the sensitivities that could affect the site in terms of the C-Plan is provided below for ease of reference.**

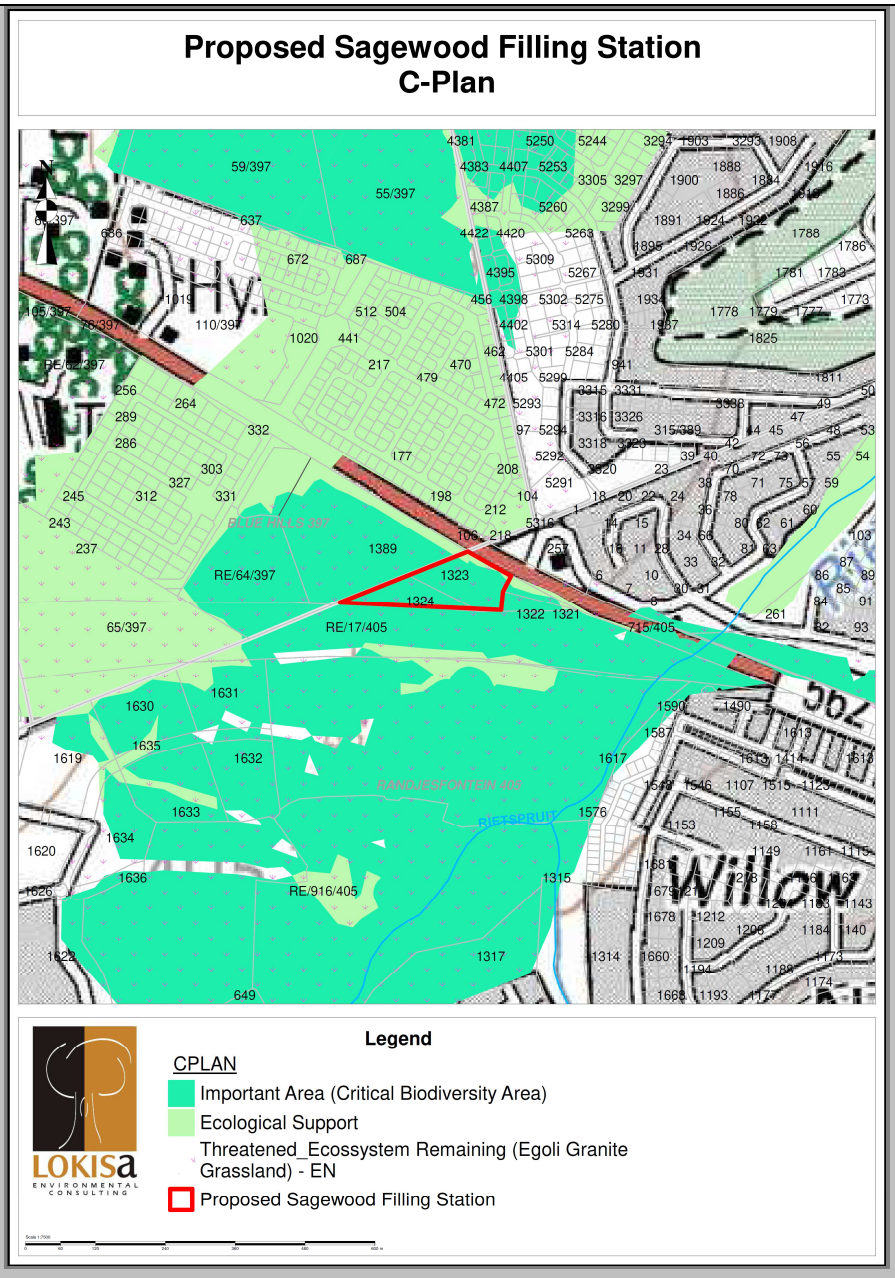


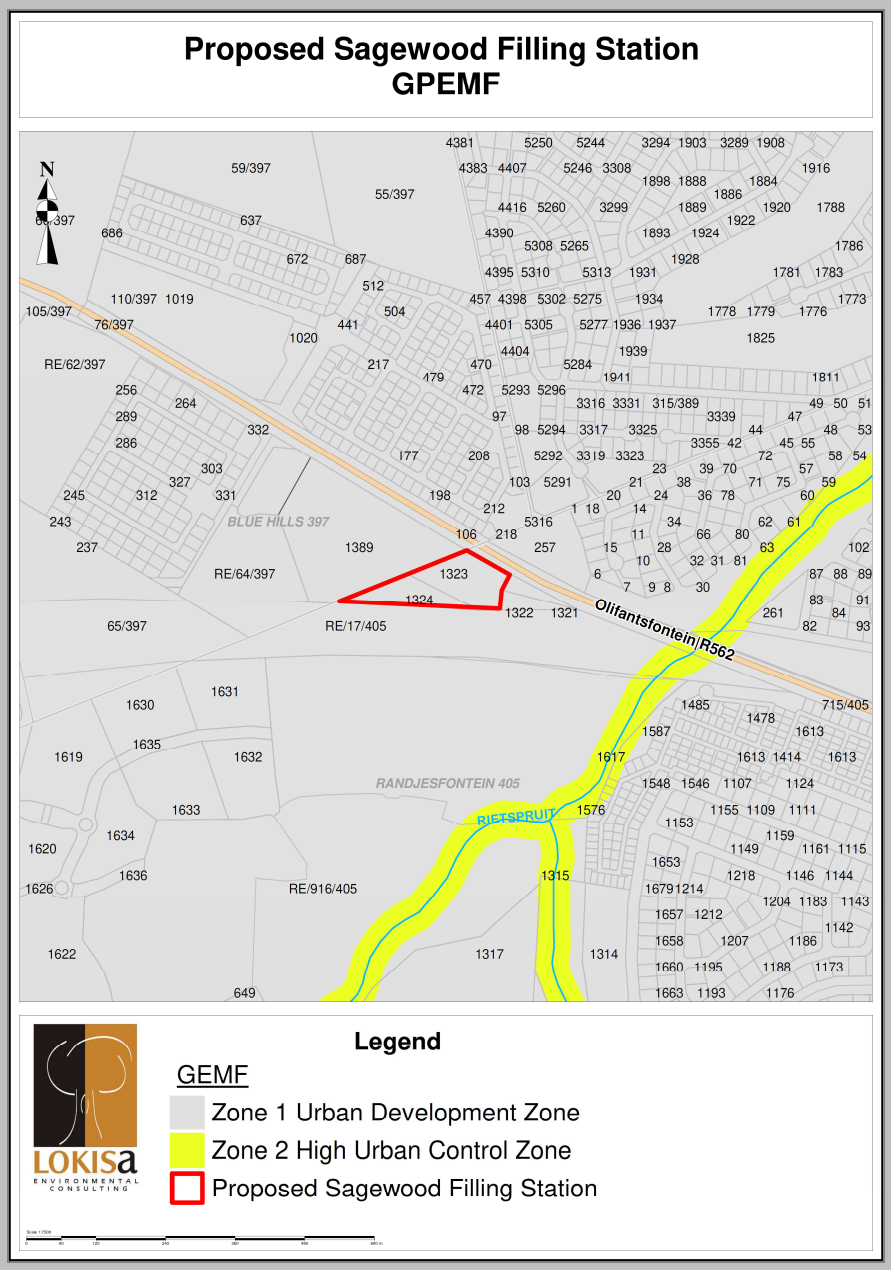
Figure 1: C-Plan

According to GDARD's conservation plan (C-Plan version 3.3), the study site is not situated within any national priority areas such as protected areas. However, the study site is within a demarcated Critical Biodiversity Area (CBA – Important) and within a small narrow Ecological Support Area (ESA) strip that runs along Olifantsfontein Road.

The site and the entire surrounding area are within the original extent of Egoli Granite Grassland, which is a threatened ecosystem, with a status of 'Endangered'.

The figure below indicates the Critical Biodiversity and Ecological Support area on a Google Earth Image.

	 **Figure 2: Critical Biodiversity Area on Google Earth image**
Gauteng Provincial Environmental Management Framework	**The guiding objectives that emerged during the course of the development of the GEMF are:** • **To facilitate the optimal use of current industrial, mining land and other suitable derelict land for the development of non-polluting industrial and large commercial developments.** • **To protect Critical Biodiversity Areas (CBAs as defined in C-Plan 3.3) within urban and rural environments.** • **To ensure the proper integration of Ecological Support Areas (ESAs as defined in C-Plan 3.3) into rural land use change and development.** • **To use ESAs as defined in municipal bioregional plans in spatial planning of urban open space corridors and links within urban areas.** • **To focus on the sustainability of development through the implementation of initiatives such as:** ➢ **Energy efficiency programmes, plans and designs;** ➢ **Waste minimisation, reuse and recycling;** ➢ **Green infrastructure in urban areas; and** ➢ **Sustainable Drainage Systems (SuDS).** **The Environmental Management Zones (EMZ) were derived from the desired state, the environmental sensitivity as well the unique control areas as identified in sections 1, 2 and 3. The EMZs were also presented to the Gauteng Planning Forum 6 where it was generally accepted as a suitable contribution to facilitate appropriate development in Gauteng. The EMZs also took the Gauteng Growth and Management Perspective, 2014, into account and is therefore aligned to the general development policy for Gauteng.** **Five EMZs were identified and overlaying those a further six Special Management Areas were identified where specific planning and policy measures are necessary to achieve the development objective of those areas.**

	According to the GPEMF, the site is identified as the following Environmental Management Zone: ➢ **Zone 1: Urban Development Zone** **An extract of the zones that could affect the site in terms of the GPEMF is provided below for ease of reference.**  **Figure 3: GPEMF** **According to the GPEMF, 2015 the proposed development is conditionally compatible with zone 1.**
Gauteng Spatial Development Framework	**The GSDF are in pursuit of planning for shared, equitable, sustainable and inclusive growth and development in the country. The Gauteng Provincial Government (GPG) seeks to:** • **provide a clear future provincial spatial structure that is robust**

	to accommodate growth and sustainability; • **specify a clear set of spatial objectives for municipalities to achieve in order to ensure realisation of the future provincial spatial structure;** • **propose a set of plans that municipalities have to prepare in their pursuit of these objectives;** • **provide a common language and set of shared planning constructs for municipalities to use in their planning processes and plans; and** • **enable and direct growth.** **The proposed development does not occur in contrast with the objectives of the GPG.**
The Gauteng Department of Agriculture and Rural Development's (GDARD) Requirements for Biodiversity Assessments (Version 3)	**The document provides guidelines for the minimum requirements for all biodiversity assessments when development is proposed.** **A Biodiversity Impact Assessment was conducted and the report is included under Appendix G.**
City of Johannesburg Spatial Development Framework 2040	**The Spatial Development Framework (SDF) for Johannesburg 2040 is a city-wide spatial policy document that identifies the main challenges and opportunities in the city, sets a spatial vision for the future city, and outlines a set of strategies to achieve that vision.** **The core objective of the SDF 2040 is to create a spatially just world class African city. The SDF 2040 is premised on spatial transformation, defined through the principles of equity, justice, resilience, sustainability and urban efficiency which it seeks to translate into a development policy.** **The SDF is not a static master plan; it is rather a dynamic model of strategic planning that will be cyclically reviewed, adjusting its focus and direction based on city transformation that takes place on the ground.** **The proposed development does not occur in contrast with the SDF.**
City of Johannesburg Integrated Development Plan 2020/2021	**Through the five-year IDP, annual Service Delivery and Budget Implementation Plan (SDBIP) as well as Business Plans of City departments and entities, the City has identified several strategic interventions and operational plans to address developmental challenges of its residents.** **The Johannesburg 2040 Growth and Development Strategy (GDS) provides a lens through which we can view the Johannesburg of the future. As part of the Joburg 2040 strategy, the City has four Growth and Development Outcomes that it aims to achieve by 2040 through the following primary drivers – human and social development, environment and services, economic growth and good governance. These outcomes are:**

	• **Outcome 1: Improved quality of life and development-driven resilience for all** • **Outcome 2: Provide a resilient, liveable, sustainable urban environment – underpinned by smart infrastructure supportive of a low carbon economy.** • **Outcome 3: An inclusive, job-intensive, resilient, competitive and smart economy that harnesses the potential of citizens.** • **Outcome 4: A high performing metropolitan government that proactively contributes to and builds a sustainable, socially inclusive, locally integrated and globally competitive Gauteng City Region.** **In an effort towards the realisation of the four GDS outcomes, the City has identified eleven strategic priories, which are:** • **Priority 1: Financial Sustainability** • **Priority 2: Good governance** • **Priority 3: Integrated sustainable human settlements** • **Priority 4: Sustainable Service Delivery** • **Priority 5: Economic development** • **Priority 6: Safer City** • **Priority 7: Job opportunity and creation** • **Priority 8: Active and engaged citizenry** • **Priority 9: Sustainable Environmental Development** • **Priority 10: Smart City** • **Priority 11: Minimising the impact of the COVID 19 Pandemic** **The proposed development does not occur in contrast with the IDP.**
City of Johannesburg Metropolitan Municipality By-Laws	**The proposed development will comply with the relevant City of Johannesburg By-Laws.**

3. ALTERNATIVES

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

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

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

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

In terms of the NEMA Regulations, 2014 (as amended, 2017), the definition of alternatives is given as: 'Alternatives' in relation to a proposed activity, means different means of meeting the general purpose and requirement of the activity, which may include alternatives to the –

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

Alternatives can therefore be used to achieve the same result as the originally proposed project in a way that potentially offset the negative implication of the original plan. However, alternatives that are to be considered must be reasonable and feasible.

(a) Location Alternative

There are not many public garages along Summit Road or Olifantsfontein Road and the inclusion of a public garage and the facilities that are associated with a public garage will be beneficial to the surrounding area.

The proposed property is further very accessible through the major road network and can be easily reached. The positive function of the proposed filling station in an urban setting can be regarded as both needed and desirable and therefore no location alternatives were investigated.

b) Type of Activity Alternatives

No alternatives were investigated in terms of the type of activity because the site will be zoned "Public Garage" which means the type of activity proposed will be applicable for this site.

(c) Design / Layout Alternatives

Two (2) different layout alternative options were investigated as alternatives and are discussed in the section below.

(d) Technology Alternatives

The following energy saving and water saving technology alternatives have been assessed for the proposed development and are encouraged.

- **Solar water heater - As regular geysers are the biggest consumers of domestic electricity. Solar hot water cylinders can remain connected to the**

regular supply in case of back up required over cloudy or very cold periods. The electrical back-up should be managed with a timer switch. Unsightly storage tanks can be hidden in the roof void and need not be visible.

- **Floor Insulation and Roof / Ceiling Insulation - Up to 15% of the energy used to heat up residences in winter are lost through the floor. 30 mm of high density polystyrene below the concrete of a new house will reduce the heat loss through the floor significantly. Up to 35% of the energy used to heat up residences in winter is lost through the roof. Roof insulation will ensure comfort by reducing heat loss in winter and keeping the heat out in summer.**
- **Lighting - Low energy lamps will be used for interior and exterior lighting, with timers or light sensors for switching where necessary.**
- **Rain water harvesting - Rain water harvesting is a technique used for collecting, storing and using rainwater. The water can be used for toilet flushing, washing machines, dishwashers, garden irrigation, car washings and the swimming pool. This can be achieved by constructing the roof in such a manner that allows for the capturing of rain water, piped into a single or large tanks and a pressure booster pump supplies the water to tap points or an irrigation system. The collection and use of rain water will supplement non-potable water needs and assist to alleviate the pressure on the water supply.**

Energy saving measures i.e. solar panels, rainwater harvesting, insulated building designs and Light Emitting Diodes (LEDs) lighting will be considered in the design as the applicant is committed to designing environmentally-friendly facilities, and therefore different energy saving and water saving technology were not investigated.

No other reasonable or feasible alternatives in terms of the technology aspects of the activity were investigated.

(e) Operational Alternatives

The alternative of installing the tanks underground or aboveground was investigated and it was deemed feasible to install the tanks underground. The underground storage was chosen because this will allow the applicant to maximize the use of their property (i.e. freeing up more land for productive uses), it will reduce fire and explosion risks and the restriction to the capacity of fuel to be stored is minimal. Furthermore the storage of the tanks underground will not have a negative visual impact.

(f) No-Go Option

The No-Go option was investigated and is discussed under Section E of this report.

Provide a description of the alternatives considered

No.	**Alternative type**, either alternative: site on property, properties, activity, design, technology, energy, operational or other(provide details of "other")	**Description**

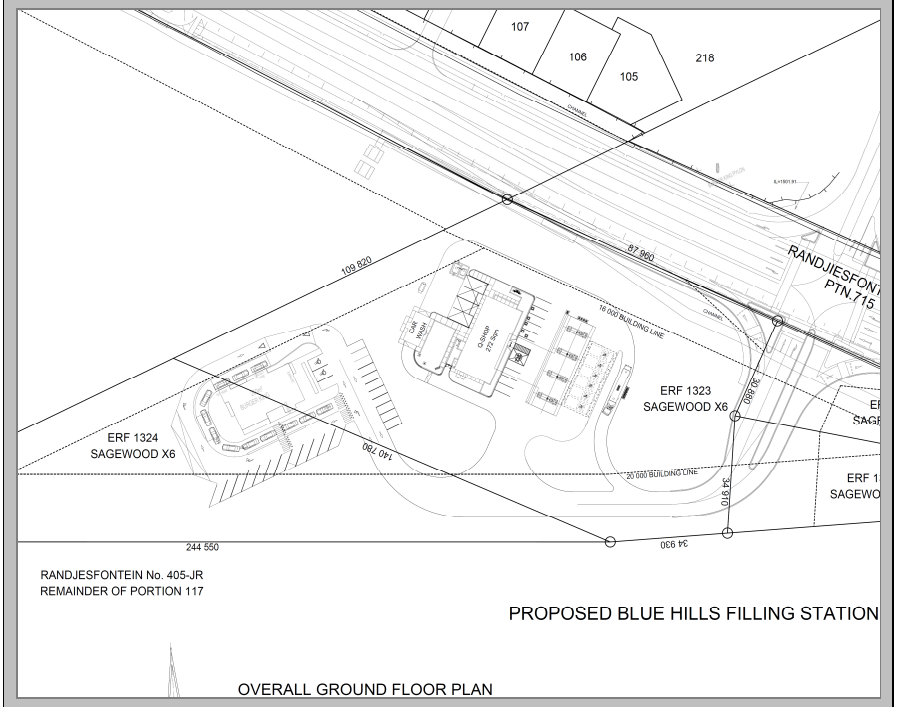
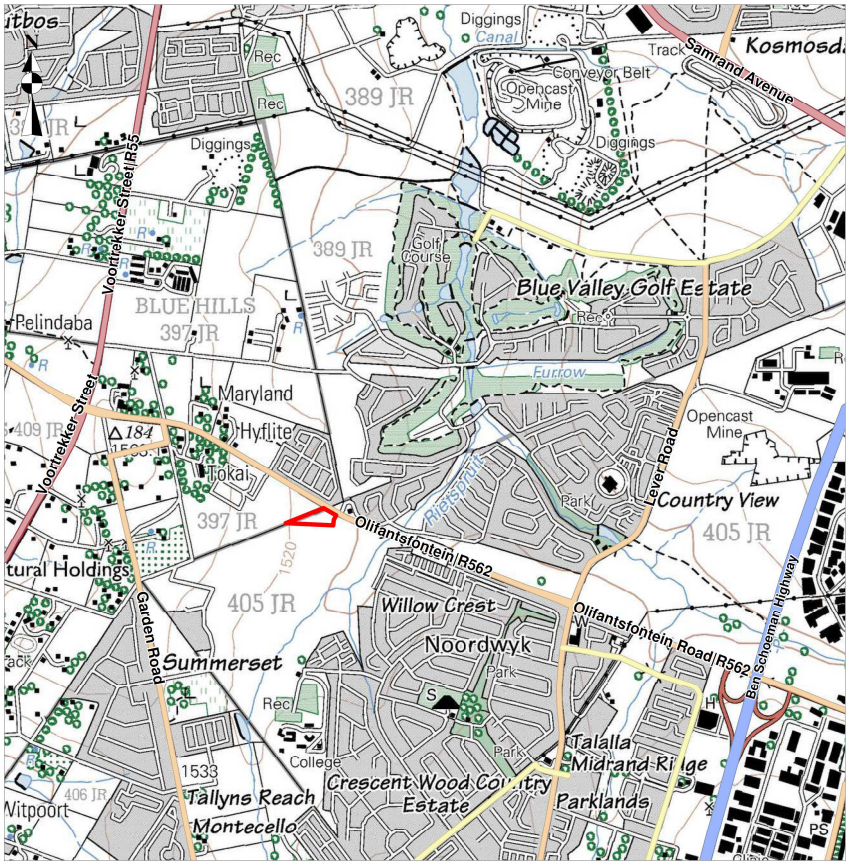
1	**Proposal**	**<u>Project description</u>** **The proposed project entails the construction of a Filling station that is to accommodate 115 000 litres (5 x 23 000 litres) of fuel on site. Please see below for the development details:** • **5 x 23 000 litre fuel tanks;** • **Convenience shop measuring 272 m^2 ;** • **Take-away / sitting down facility or drive through facility measuring 260 m^2;** • **Parking bays to be provided on site.** • **Fuel pumps to be situated parallel to Olifantsfontein Road with the convenience shop situated to the west of the fuel pumps.** • **Car wash situated west of the convenience shop.**  **Figure 4: Site Layout (Proposal)** **<u>Project locality</u>** **The site is situated directly south of Olifantsfontein Road and directly east of the Blue Hills Shopping Centre, Sagewood x 6.**

Figure 5: Adjacent Land uses

The property immediately to the west of the site is developed with the Blue Hills Shopping Centre and the proposed development forms an extension thereof. The property abutting the site to the east is vacant and the Rietspruit is situated approximately 230m east of the site. Sagewood Manor Residential Estate abuts the Rietspruit to the east. The planned national freeway (PWV 5) is situated directly south of the property as well the Encore, Etude and Forte Residential Estates. The area to the north of the site and Olifantsfontein Road is developed with Summit View Residential Estate. Other than the PWV 5 and the abutting shopping centre, residential land uses are predominant in the immediate vicinity with a range of densities.

Proposed Sagewood Filling Station
Locality Map



Legend

Proposed Sagewood Filling Station

Figure 6: Locality of the site

The site is currently zoned "Special for shops, gymnasium auto bank teller machine crèche and restaurants" and will be rezoned to "Public Garage".

<u>Bulk Services Statement</u>
Civil Concepts (Pty) Ltd was appointed for the planning and design of the civil engineering infrastructure for the proposed Sagewood filling station.

<u>Water Reticulation:</u>
There is an existing 160mmØ PVC-U reticulation pipe running along the southern side of the road reserve of Olifantsfontein Road. The 160mmØ PVC-U water reticulation pipe is connected

		to other reticulation pipes on the corner of Olifantsfontein Road / African View Street intersection. **The intension is to extend the existing 160mmØ PVC-U water pipe up to the north-western boundary of the site with a new110mmØ water connection and municipal meter.** **An internal water network will be designed and constructed to municipal standards.** ***Sewer Reticulation:*** **There is an existing 160mmØ sewer running along Olifantsfontein Road up to the north-western corner of Erven 1323 and 1656 Sagewood Extension 6. The existing 160mmØ sewer pipe crosses Olifantfontein Road in a northerly direction towards Blue Hills Ext 21. The existing sewer manhole near the erf boundary can provide a sewer connection for the proposed development.** **An internal sewer network will be designed and constructed to municipal standards.** ***Stormwater Reticulation:*** **The total site area is 16 830 m^2 therefore a Stormwater Management Report is required for the proposed development.** **There is an existing concrete stormwater channel along Olifantsfontein Road on the northern side of the road reserve that flow in an easterly direction and discharge in to the Rietspruit.** **The site slopes generally in an eastern direction at an average slope of 5.2%. The runoff from the property currently drains overland in an eastern direction towards the Rietspruit. The internal stormwater drainage of the site will be collected at an attenuation pond. The estimated volume of the attenuation pond for the development site of 16 840 m^2 is approximately 600m^3. The attenuation pond outlet will discharge the pre-development flow into a stormwater earth channel located inside the road reserve of Olifantsfontein Road. This channel will discharge the stormwater above the 1:100 year flood line of the Rietspruit.** **The stormwater collected on the forecourt will be discharged into an oil separator that is connected to the internal sewer network.** ***Roads:*** **The proposed filling station will generate a negligible number of new trips as a filling station is generally not a trip generator.** **It is anticipated that the drive thru components of the development may generate 279 and 310 trips during the morning and afternoon peak hours, respectively.** **The Olifantsfontein Road / Combretum Avenue priority controlled junction has to convert to a signalised junction and the developer**

		will construct the fourth-leg (southern approach) of the junction to obtain access to the proposed filling station development.  **Figure 7: Proposed access to the development** **The proposed upgrades as per the External Transport Assessment (March 2021) for the The Olifantsfontein Road / Combretum Avenue priority controlled junction include the following:** • **Signalisation of the Junction;** • **Northern Approach – Provide an additional thru lane;** • **Eastern Approach – Provide an exclusive left-turn slip lane with a 60m storage length;** • **Western Approach – Provide an exclusive right-turn lane with a 60m storage length;** • **Southern Approach – Provide a thru lane, a left turn slip lane of 25m storage length, an exclusive right turning lane with 25m storage length, and an exit lane.**

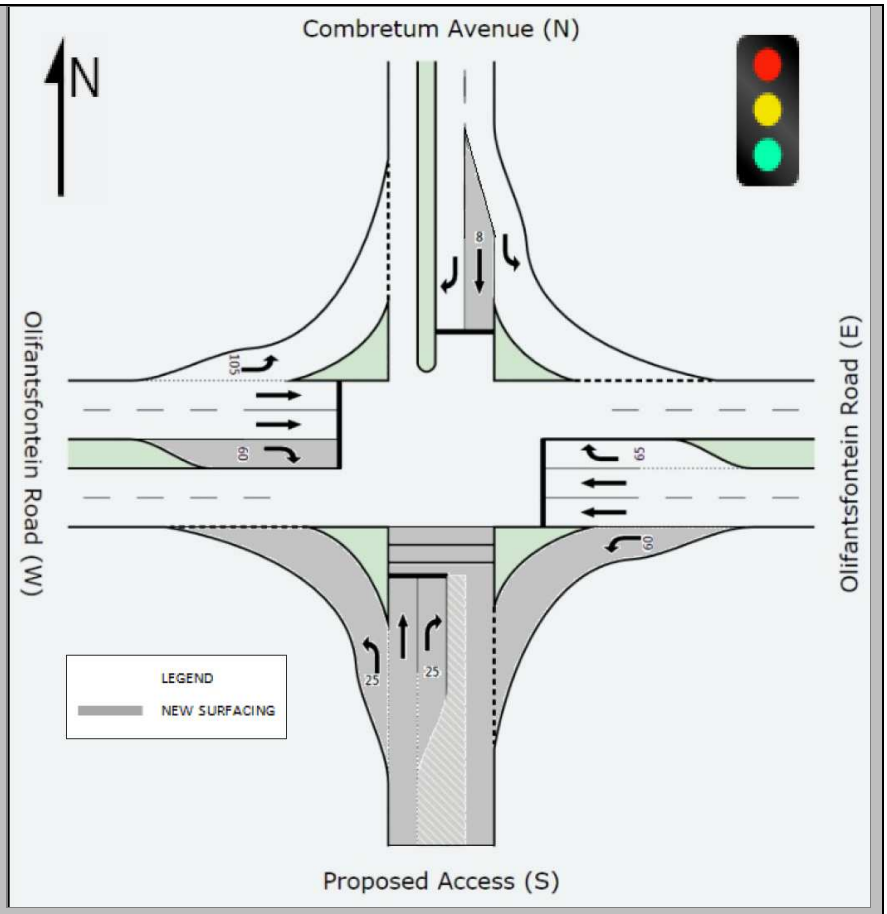


Figure 8: Proposed Road Upgrades

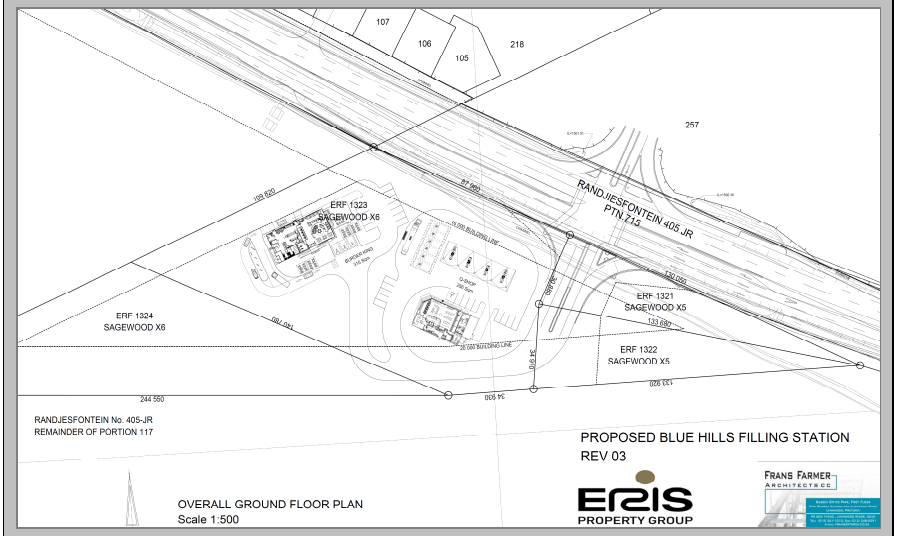
<u>Tank installation</u>
Tanks are to be installed according to applicable South African National Standards.

<u>Regulatory process</u>
In terms of the national Environmental Management Act, 1998 (Act No 107 of 1998) and associated EIA Regulations published in 2014 (as amended), an environmental authorisation should be obtained from the relevant decision making authority, prior to the commencement of certain listed activities that may result in potential negative impacts on the environment.

Authorisation is sought in terms of Activity 14 in Listing Notice 1, Government Notice R983 and Activity 12 in Listing Notice 3, Government Notice R985 of the EIA regulations published on 4 December 2014 (as amended in 2017).

<u>Activity 14</u> (Listing Notice 1): 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

<u>Activity 12</u> (Listing Notice 3): The clearance of an area of 300

		square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. c. Gauteng. i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; ii. Within Critical Biodiversity Areas or Ecological Support Areas identified in the Gauteng Conservation Plan or bioregional plans.
2	**Alternative 1 – Design or layout of Activity**	**With Alternative 1 the development details are as follows:** • **5 x 23 000 litre fuel tanks;** • **Convenience shop measuring 256 m² ;** • **Take-away / sitting down facility or drive through facility measuring 315 m²;** • **Parking bays to be provided on site.** • **Fuel pumps to be situated perpendicular to Olifantsfontein Road with the convenience shop situated to the south of the fuel pumps.**  **Figure 9: Site Layout (Alternative 1)**
3	Alternative 2	**No other alternative presented.**
	Etc.	

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

Not Applicable

4. PHYSICAL SIZE OF THE ACTIVITY

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

	Size of the activity:
Proposed activity ***(Total environmental (landscaping, parking, etc.) and the building footprint)***	**± 10 098 m²**
Alternatives:	

Alternative 1 (if any)	**± 10 098 m²**
Alternative 2 (if any)	

Ha/ m²

or, for linear activities:

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

m/km

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

	Size of the site/servitude:
Proposed activity	**16 830m²**
Alternatives:	
Alternative 1 (if any)	**16 830m²**
Alternative 2 (if any)	

Ha/m²

5. SITE ACCESS

Proposal

Does ready access to the site exist, or is access directly from an existing road?	YES	**NO**
If NO, what is the distance over which a new access road will be built		**± 100 m**

Describe the type of access road planned:

The Olifantsfontein Road / Combretum Avenue priority controlled junction is to be converted to a signalised junction and the developer will construct the fourth-leg (southern approach) of the junction to obtain access to the proposed filling station development.

Figure 10: Proposed access to the development

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

Alternative 1

Does ready access to the site exist, or is access directly from an existing road?	YES	**NO**
If NO, what is the distance over which a new access road will be built		**± 100 m**

Describe the type of access road planned:

Access will be similar to that of the Proposal.

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

Alternative 2

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

Describe the type of access road planned:

Not Applicable

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

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

Section A 6-8 has been duplicated [ ] Number of times

(only complete when applicable)

6. LAYOUT OR ROUTE PLAN

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

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

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

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

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

Refer to Appendix A for the Site Plans

7. SITE PHOTOGRAPHS

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

Refer to Appendix B for the Site Photographs

8. FACILITY ILLUSTRATION

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

None

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

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

Instructions for completion of Section B for linear activities

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

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

Instructions for completion of Section B for location/route alternatives

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

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

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

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

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

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

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

1. PROPERTY DESCRIPTION

Property description: (Including Physical Address and Farm name, portion etc.)	**Erven 1323 and 1324 Sagewood Extension 6**

2. ACTIVITY POSITION

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

Alternative:	**Latitude (S):**	**Longitude (E):**
	-25.945919°	**28.108647°**

In the case of linear activities:

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

- End point of the activity

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

Addendum of route alternatives attached **Not Applicable**

The 21 digit Surveyor General code of each cadastral land parcel

Proposal & Alternative 1	**T**	**0**	**J**	**R**	**0**	**5**	**8**	**7**	**0**	**0**	**0**	**0**	**1**	**3**	**2**	**3**	**0**	**0**	**0**	**0**	**0**
Proposal & Alternative 1	**T**	**0**	**J**	**R**	**0**	**5**	**8**	**7**	**0**	**0**	**0**	**0**	**1**	**3**	**2**	**4**	**0**	**0**	**0**	**0**	**0**

3. GRADIENT OF THE SITE

Indicate the general gradient of the site.

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

4. LOCATION IN LANDSCAPE

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

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

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

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

A Geotechnical Investigation, dated March 2021 was carried out on the proposed site by Crossman, Pape & Associates. The Site Geology / Soil Profile as per the investigation can be described as follows:

Available geological maps indicate that the area of investigation is underlain by granite of the Halfway House Granite Suite. This was confirmed during the present investigation. Residual soils have developed from the weathering of the granite bedrock. A layer of transported hillwash soil occurs as the upper soil layer across the site.

The upper soil layer across the entire site comprises very loose to loose pinholed silty gravelly sand with abundant grassroots within the upper 200mm. This horizon is of transported hillwash origin and extends to depths ranging between 0.2m and 0.5m below ground surface (average depth of 0.35m).

The upper transported hillwash horizon is underlain by pedogenic soils in all of the test pits excavated across the site, and generally comprises loose to medium dense moderately cemented and ferruginised silty sandy gravel or gravelly sand. This

horizon is of nodular ferricrete origin. The nodular ferricrete was noted in all instances to grade into dense to very dense moderately to strongly cemented and ferruginised hardpan ferricrete with depth. This horizon extends to depths ranging between 0.6m and 0.9m below ground surface (average depth of 0.8m).

The pedogenic soils are in turn underlain in four test pits (namely test pits TP1 to TP4) by medium dense to dense becoming very dense moderately to strongly cemented with relic jointing in places slightly clayey silty sand. This horizon is of reworked residual granite origin, and extends to depths ranging between 1.1m and 1.6m below ground surface (average depth of 1.5m).

In test pits TP3 and TP4, the reworked residual granite was observed grading into a dense becoming very dense / very soft rock jointed silty sand. This horizon is of residual granite origin, and extends depths ranging between 1.2m and 1.85m below ground surface (average depth of 1.55m).

Refusal of test pits TP1 to TP4 occurred within the very dense reworked residual granite or residual / very soft rock granite, while test pits TP5 to TP10 occurred within the very dense hardpan ferricrete soils.

Zones of moderate groundwater seepage were encountered in all of the test pits excavated across the site, except in test pit TP6, at depths ranging between 0.6m and 0.9m below ground surface (average depth of 0.75m).

The Geotechnical Investigation is included under Appendix G.

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

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

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

Latitude (S):	**Longitude (E):**
°	°

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

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

Latitude (S):	**Longitude (E):**
°	°

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

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

Latitude (S):	**Longitude (E):**
°	°

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

6. AGRICULTURE

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

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

7. GROUNDCOVER

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

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

Natural veld - good	**Natural veld**	Natural veld with	Veld dominated by	Landscaped

condition % =	**with scattered aliens % = 90**	heavy alien infestation % = 90	alien species % = 5	(vegetation) % =
Sport field % =	Cultivated land % =	Paved surface (hard landscaping) % =	Building or other structure % =	**Bare soil % = 10**

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

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

The site and the entire surrounding area are within the original extent of Egoli Granite Grassland, which is a threatened ecosystem, with a status of 'Endangered'.

There are no protected trees, RDL plant or animal species present in the study area.

During field investigations no red data listed (RDL) (Critically endangered, endangered or vulnerable) species were observed. One orange data listed (ODL) floral species was observed during field investigations, namely, *Hypoxis hemerocallidea* (African potato). An independent specialist must locate, lift and relocate the ODL plants prior to the commencement of construction activities.

A few scattered plants of *Aloe greatheadii* and *Ledebouria spp* were found on site. These species are not on the official RDL and ODL plant species list of Gauteng Province and are therefore not official ODL plant species. However, due to their continual decline it is the opinion of the specialist that these plants should be considered priority and should be lifted and relocated.

No ground orchids (*Habenaria* sp), which are on the Gauteng Province's ODL plant list, are likely to occur in the study area or even the greater assessment area due to lack of ideal habitat. *Habenaria barbertoni* and *Habenaria kraenzliniana* are both species that have been recorded in the region, but prefer rocky ground and koppies.

***Habenaria bicolor* is the most likely to be found in the area as it prefers well-drained grasslands at around an elevation of 1 600m (www.redlist.sanbi.org).**

It is recommended that a green zone / public open space be created along the southern and eastern boundaries of the study area. The priority plants species lifted may be relocated into this area.

If YES, specify and explain:

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

The site and the entire surrounding area are within the original extent of Egoli Granite Grassland, which is a threatened ecosystem, with a status of 'Endangered'.

There are no protected trees, RDL plant or animal species present in the study area.

It is highly likely that a few scattered ODL plants are present in the greater Assessment Area, but the proposed project will have no impact on these. The most

likely priority plants to be present in the greater assessment area include: *Boophone disticha, Eucomis autumnalis and Hypoxis hemerocallidea* (African potato).

No ground orchids (*Habenaria* sp), which are on the Gauteng Province's ODL plant list, are likely to occur in the study area or even the greater assessment area due to lack of ideal habitat. *Habenaria barbertoni* and *Habenaria kraenzliniana* are both species that have been recorded in the region, but prefer rocky ground and koppies.

***Habenaria bicolor* is the most likely to be found in the area as it prefers well-drained grasslands at around an elevation of 1 600m (www.redlist.sanbi.org).**

If YES, specify and explain:

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

According to GDARD's Conservation Plan (C-Plan version 3.3), the study site is not situated within any national priority areas such as protected areas. However, the study site is within a demarcated Critical Biodiversity Area (CBA – Important) and within a small narrow Ecological Support Area (ESA) strip that runs along Olifantsfontein Road.

The site and the entire surrounding area are within the original extent of Egoli Granite Grassland, which is a threatened ecosystem, with a status of 'Endangered'.

There are no high sensitivity areas, habitats, or 'no-go' zones within the study area (See figure below).

Figure 11: Sensitivity Map

There are no watercourses on the Site, including rivers, streams and wetlands. There are also no distinctive drainage lines in the study area.

On the Northern-eastern side of the Site, along the existing Olifants Road, there is what looks like a wetland. This is not a sustainable or natural wetland, but is created by channeled stormwater run-off from the shopping mall and road that is released into this area (See figure below).

Figure 12: Wet area along the North-eastern side of the site

There are no natural watercourses on the site itself, but the Rietspruit is situated approximately 220 m South to East of the outer boundary of the Site. Due to the low gradient / slope and grassy vegetation the stream flows slowly, resulting in associated valley bottom wetlands. The small spruit (stream) sometimes has a distinctive main channel and sometimes not.

The PES of the wetland and Rietspruit was determined to be a Category D (Largely Modified) that is 'Largely modified'

The EIS was determined to be a Moderate (Category C) that is a "*Wetland that are considered to be ecologically important and sensitive on a provincial or local scale. The biodiversity of these wetlands is not usually sensitive to flow and habitat modifications. They play a small role in moderating the quantity and quality of water of major rivers*." The watercourse is likely to be of greater "importance" in that is "connected" to a number of water systems along it greater length. However, the impact of urban stormwater, sewage spills, impeding structures (bridges, boundary walls, etc.) will have a significant impact on these natural inter-connections.

If YES, specify and explain:

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

If yes complete specialist details

Name of the specialist:	**Johannes Oren Maree (Flori Scientific Services)**

Qualification(s) of the specialist:	**Pr.Sci.Nat Reg. no. 400077/91**		
Postal address:	**P.O. Box 7222, Modimolle**		
Postal code:	**0510**		
Telephone:	**-**	Cell:	**082 564 1211**
E-mail:	**johannes@flori.co.za**	Fax:	**-**

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

Signature of specialist:	**See attached report**	Date:	**March 2021**

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

8. LAND USE CHARACTER OF SURROUNDING AREA

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

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

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

NORTH

	9, 13	**9**	**1, 9**	**9**	**2, 9, 21**
	9, 25	**9, 13, 25**	**9, 25**	**9, 25**	**2, 9, 25**
WEST	**1, 9**	**13**		**1, 9**	**2, 9, 20**
	1, 9	**1, 9**	**1, 9**	**1, 9**	**1, 2, 9**

EAST

1, 9	1, 9	1, 9	1, 9	1, 2, 9

SOUTH

Figure 13: Land uses within 500m radius of the site

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

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

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

- **Biodiversity Impact Assessment**
- **Heritage Impact Assessment**
- **Geotechnical Investigation**
- **External Transport Assessment**
- **Bulk Services Statement Report**
- **Motivating Memorandum**

9. SOCIO-ECONOMIC CONTEXT

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

The project site falls within Midrand, which was established as a municipality in 1981 in an area known as Halfway House, named after its position between Pretoria and Johannesburg. Midrand however ceased to be an independent town and the area was incorporated in the City of Johannesburg Metropolitan Municipality in 2000 and now forms part of Region A.

Midrand is about 152.87km^2 in size with an estimated population of 87.387 people (2011). The population is represented by Black African 54.47%, White 24.22%, Indian/Asian 16.97%, Coloured 3.29%, and Other 1.04%. English and isiZulu are the

most spoken languages in the area.

The Midrand area is relatively modern, having experienced much growth in the last decade. Many businesses have relocated to the Midrand area due to its proximity to good highway links and its location in the economic centre of Gauteng Province. The Midrand area is therefore a thriving business node and home to the offices of many major corporations.

The population in Region A is relatively young, with 24 percent being between the ages of 20 and 29. The formal residential areas are home to prosperous and well-educated residents, while most of the people living in the townships and informal settlements are poor, with low levels of school education. In the Midrand area, approximately 70 percent of residents earn less than R2 500 a month, while 34 percent earn no income at all.

https://en.wikipedia.org/wiki/Midrand
https://census2011.adrianfrith.com/place/798004
https://www.joburg.org.za/about_/regions/Pages/Region%20A%20-%20Diepsloot,%20Midrand/about-us.aspx

10. CULTURAL/HISTORICAL FEATURES

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

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

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

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

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

The proposed project is in an area that has been developed from prior to 1967. The surrounding area has been completely transformed for residential and commercial developments. These activities would have impacted on surface indicators of heritage resources if any ever existed in the study area. The proposed project is in an area that is generally speaking of low heritage significance with few cultural heritage sites on record (e.g., Kusel,2007, Van Schalkwyk 2013, Van der Walt,2015 a and b, 2016, 2017 and 2018) The lack of heritage sites of significance was

confirmed during the site survey, and no significant heritage resources were noted. The impact of the project on heritage resources is low and the project can commence based on the adherence to the recommendations in this report and the approval of SAHRA.

Recommendations for condition of authorisation

The following recommendations for Environmental Authorisation apply and the project may only proceed based on approval from SAHRA:

- **Implementation of a chance find procedure for the project (as outlined below).**

Chance Find Procedures

The possibility of the occurrence of subsurface finds cannot be excluded. Therefore, if during construction any possible finds such as stone tool scatters, artefacts or bone and fossil remains are made, the operations must be stopped, and a qualified archaeologist must be contacted for an assessment of the find and therefor chance find procedures should be put in place as part of the EMP. A short summary of chance find procedures is discussed below.

This procedure applies to the developer's permanent employees, its subsidiaries, contractors and subcontractors, and service providers. The aim of this procedure is to establish monitoring and reporting procedures to ensure compliance with this policy and its associated procedures. Construction crews must be properly inducted to ensure they are fully aware of the procedures regarding chance finds as discussed below.

- **If during the pre-construction phase, construction, operations or closure phases of this project, any person employed by the developer, one of its subsidiaries, contractors and subcontractors, or service provider, finds any artefact of cultural significance or heritage site, this person must cease work at the site of the find and report this find to their immediate supervisor, and through their supervisor to the senior on-site manager.**
- **It is the responsibility of the senior on-site Manager to make an initial assessment of the extent of the find and confirm the extent of the work stoppage in that area.**
- **The senior on-site Manager will inform the ECO of the chance find and its immediate impact on operations. The ECO will then contact a professional archaeologist for an assessment of the finds who will notify the SAHRA.**

Reasoned Opinion

The overall impact of the project is considered acceptable based on the adherence to the recommendations in this report and approval from SAHRA prior to development. The socio-economic benefits also outweigh the possible impacts of the development if the correct mitigation measures are implemented for the project.

Potential risk

Potential risks to the proposed project are the occurrence of intangible features and unrecorded cultural resources (of which graves are the highest risk). This can cause delays during construction, as well as additional costs involved in mitigation, as well as require additional layout changes.

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)? If yes, please attached the comments from SAHRA in the appropriate Appendix	YES	**NO**

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

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

2. LOCAL AUTHORITY PARTICIPATION

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

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

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

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

Comments from the City of Johannesburg were requested and are awaited.

3. CONSULTATION WITH OTHER STAKEHOLDERS

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

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

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

Transnet Pipelines
Not affected

Sasol Gas
Not affected

Eskom
Not affected

City of Johannesburg: EISD
Requested to be registered as an I&AP and requested that the report be submitted to the CoJ.

Dept. of Rural Development and Land Reform: Regional Land Claims Commission
We confirm that as at the date of this letter (26/02/2021) no land claims appear on our database in respect of the Property. This includes the database for claims lodged by 31 December 1998; and those lodged between 1 July 2014 and 27 July 2016 in terms of the Restitution of Land Rights Amendment Act, 2014.

Whilst the Commission takes reasonable care to ensure the accuracy of the information it provides, there are various factors that are beyond the Commission's control, particularly relating to claims that have lodged but not yet been gazetted such as:

1. Some Claimants referred to properties they claim dispossession of rights in land against using historical property descriptions which may not match the current property description; and

2. Some Claimants provided the geographic descriptions of the land they claim without mentioning the particular actual property description they claim dispossession of rights in land against.

The Commission therefore does not accept any liability whatsoever if through the process of further investigation of claims it is found that there is in fact a land claim in respect of the above property.

If you are aware of any change in the description of the above property after 19 June 1913 kindly supply us with such description so as to enable us to do a further search.

Egoli Gas

Egoli Gas currently has no gas mains that would be affected by your proposed location of work, as indicated in the plan that you submitted. Your proposed work should be carried out while maintaining the following minimum requirements:

1. All work in a road reserve, within the boundaries of the COJ, shall be in accordance with the latest approved Code of Practice for work within the road reserve of the COJ.
2. Should you smell gas during any excavation or want to report a gas leak please contact 011 726 4702 after hours, or 011 356 5000 working hours.
3. This wayleave approval will be valid for 6 months from the date indicated above. Egoli Gas will not be liable for any costs that may be incurred as a result of changes/alterations to its gas network during this 6 month period.
4. Should a period of 6 months expire without any construction taking place, a new application will have to be submitted for approval.

Dark Fibre Africa

This serves as a notification to the application that was received by DFA dated, 20201/02/18. The proposed work affects the Dark Fibre Africa Optical Fibre Infrastructure and because of that, listed below are the terms and conditions to consider and adhere to:

1. The DFA Fibre Optical route is indicated on the attached drawing provided by our wayleave administrator. The “exact-position” of the route cannot be guaranteed.
2. DFA has approved the planned work from the documents received and reference above.
3. If your planned work exceeds the boundaries of the demarcated portion of the map / drawing provided; you will be required to submit a supplementary application to DFA in order to identify existing DFA infrastructure outside this area.
4. Should DFA suffer damage and/or loss as a result of your works, DFA shall hold you liable for such damage and/or loss.
5. Please note that the DFA network is live and caries traffic for a number of subscribers. If you damage the network, the subscribers will have a claim against DFA for which you will also be held liable.
6. The applicant or employed contractor must contact the relevant DFA Preventative Maintenance at least 5 working days prior to commencement of work to arrange a site/kick of meeting.
7. Damaged Infrastructure must immediately be reported in writing to Judy Phalane, judy.phalane@dfafrica.co.za. For immediate assistance call +27 11 202 4700 for all damages caused to DFA infrastructure.
8. Cable Protection Slabs, which are precast concrete slabs used for the protection of DFA’s underground cables and other services, must be used when installing services near DFA.
9. The standard cable protection slab is 900mm x 200mm x 75 thick. The slab will be reinforced with 3.55mm high tensile wires at 100mm center in both directions.
10. Minimum depth of DFA cable cannot be guaranteed and may differ from descriptions on municipality wayleave conditions. The position can vary from a minimum of 300mm to 1200mm in depth in municipal road reserves. This depth may be less in the road

carriage way. The DFA Preventative Maintenance department must be contacted 48 hours prior to excavation in these locations.

11. In some locations, a warning plastic marker tape has been placed as an indication that DFA network is in the vicinity. Should this marker be removed for construction purposes, DFA preventative maintenance must be contacted in order to arrange new warning tape to be installed by your contractor in accordance with DFA specifications.
12. Any excavations by means of self-propelled mechanical machinery, including equipment used for drilling/boring, demolishing and or compaction of soil be executed closer than 500mm from buried DFA optical cables, must be authorized by a DFA official during an on-site meeting before such excavation is to take place. Such excavations may not be executed directly above the DFA infrastructure at any time unless prior written approval is obtained.
13. No blasting may be executed near the proximity of DFA optical fibre infrastructure without supervision of a DFA preventative Maintenance Officer.
14. This approval letter is valid for 6 months from date of issue. The applicant must re-apply to DFA wayleave administration at services@dfafrica.co.za in Gauteng/ Pretoria, serviceskzn@dfafrica.co.za in Kwa Zulu Natal, serviceswr@dfafrica.co.za in Western Region, after the expiration thereof. If a contactor works under an expired DFA wayleave, DFA officials shall serve a stop work order to the contractor until the conditions are rectified.
15. The applicant, or employed contractor responsible for the projector maintenance work as stated in the applicant's letter must at all times have on their person or on site: a. The Services Affected letter; b. Call Before you Dig Letter; and c. Drawing / Map supplied by DFA. Should the documentation not be available on request DFA officials may order the contractor to cease all works liaise with the local authorities / municipality for penalties until such approvals are made available and presented to the officer.
16. This approval shall be withdrawn and of no effect should: The applicant does not comply with any of the conditions set out above paragraphs 1 to 15.
17. If you require Dark Fibre Africa Services to be relocated to a new position to accommodate your project please be advised that Relocation of Dark Fibre Africa's established infrastructure may take up to a minimum of 12 weeks for completion (commencing after settlement of the relocation costs have been received in full) unless prior arrangements and/or written agreements are conveyed and authorized by DFA officials for specialized projects and/or emergency relocations. Please note: Costs for re-positioning of DFA infrastructure may be for your firm's account. Please call 012 443 1000 to arrange a site meeting. DFA will not be held liable for any delays to your project caused by DFA relocation projects whatsoever.
18. DFA Important Contact Information: Network Operating Centre: 0800 628 662; Wayleave Administrator: Sharon Madia; Email: sharon.madia@dfafrica.co.za

Please refer to Appendix E, Appendix 4 for the Services Affected letter; the Call Before you Dig Letter; and the Drawing / Map supplied by DFA.

SAHRA

Please kindly note that review and comment on all development projects and NID's is conducted through the online SAHRIS system (https://sahris.sahra.org.za). You are therefore advised to create an account (if you do not have one already) and lodge a section 38 application as a case to obtain official comments. The application will guide you in terms of what documents are required, you must attach all development studies to the case with the appropriate authorizations.

Once you have completed your application it will be reviewed timeously with a formal comment(s) and recommendations provided from SAHRA through the SAHRIS system.

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

4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

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

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

5. APPENDICES FOR PUBLIC PARTICIPATION

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

Appendix 1 – Proof of site notice

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

Appendix 3 – Proof of newspaper advertisements

Appendix 4 –Communications to and from interested and affected parties

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

Appendix 6 - Comments and Responses Report

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

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

Appendix 9 – Copy of the register of I&APs

SECTION D: RESOURCE USE AND PROCESS DETAILS

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

Instructions for completion of Section D for alternatives

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

Section D has been duplicated for alternatives	**0**	times	(complete only when appropriate)

Section D Alternative No.	**0**	(complete only when appropriate for above)

1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	**YES**	NO
If yes, what estimated quantity will be produced per month?	**80m^3**	

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

Building rubble not used for in filling will be disposed of at licensed landfill site.

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

The material is to be removed to a licensed Landfill site.

Will the activity produce solid waste during its operational phase?	**YES**	NO
If yes, what estimated quantity will be produced per month?	**15m^3**	

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

General waste and hazardous waste will be collected and stored separately according to the specific requirements of the waste type.

General waste will be disposed at a licensed Landfill site.

Hazardous waste will be collected by an approved waste disposal service provider and will be disposed of at an approved hazardous waste disposal site.

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

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

Not Applicable

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

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

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

Used lubricating oils, used hydraulic oils and water contaminated with oil are considered hazardous waste. However any hazardous waste will be collected and disposed by an approved waste disposal service provider.

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

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

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

Recycling at the source

Liquid effluent (other than domestic sewage)

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

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

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

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

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

If yes, provide the particulars of the facility:

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

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

Liquid effluent (domestic sewage)

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?	**YES**	NO
If yes, what estimated quantity will be produced per month?	**± 59.7 m^3**	
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the domestic effluent to be generated by this activity(ies)?	YES	**NO**

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

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

Emissions into the atmosphere

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

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

If no, describe the emissions in terms of type and concentration:

Emissions during construction will mostly be in the form of dust and smoke during the construction phase.

Emissions may be in the form of gas being released from the tank vents during filling, vehicle refueling and motor vehicle exhausts. Odours may arise from the waste generated on site if not disposed of appropriately.

2. WATER USE

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

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

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

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

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

If yes, list the permits required

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

3. POWER SUPPLY

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

Municipal

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

4. ENERGY EFFICIENCY

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

The installation and promotion of technologically advanced energy efficient systems, components and upgrades, as well as innovative use of recycled building materials is strongly encouraged.

- **Lighting - Low energy lamps should be used for interior and exterior lighting.**

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

1. **The use of energy efficient, sustainable environmentally-friendly building materials and products is highly recommended. This includes:**
   - **Non-toxic paints;**
   - **Low volatile organic compounds (V.0.C) coatings and materials.**
   - **Locally sourced and or produced materials.**
   - **Limited use of energy intensive building materials such as concrete, aluminium etc.**
2. **The use of exotic timber is generally discouraged unless FSC certified from a sustainably harvested source.**

SECTION E: IMPACT ASSESSMENT

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

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

Savanna Hills Home Owners Association

The Savanna Hills HOA at its meeting held on 23 February 2021, resolved as follows:

a. **That the SHEHOA has no objection to the proposed development of the filling station on stand 1323 & 1324 Sagewood Ext 6.**
b. **That (a) above be made subject to the installation of a four-way traffic light at the entrance to the Estate and the crossing with R 562 Olifantsfontein.**
c. **That (a) above be made subject to the overall improvement of the stormwater that flood down the R562 and into the Estate.**
d. **That the Estate Manager be mandated to be nominated as the contact person on behalf of the SHEHOA.**
e. **That the notice be distributed to all owners with a request to register as interested and affected parties as well and to emphasize the need for the traffic light as well as the improvement of the storm water from the R562 into the Estate.**

A. Mogale

Agrees with the building of the filling station on the following conditions:

1. **That a 4 way traffic light is erected at the Savanna Hills Estate gate and R562.**
2. **That the storm water on R562 be upgraded.**

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

Table 1: Comments and Response Report

ISSUE	NAME	RESPONSE
Not Affected.	T. Hadebe Transnet Pipelines	None required.
Not Affected.	R Mphofu Sasol Gas	None required.
Not Affected.	Eskom	None required.
Requested to be registered as an I&AP and requested that the report be submitted to the CoJ.	E. Allers City of Johannesburg: EISD	The CoJ EISD has been registered as an I&AP and the Draft BAR will be submitted to the CoJ once finalised.
We confirm that as at the date of this letter (26/02/2021) no land claims appear on our database in respect of the Property. This includes the database for claims lodged by 31 December 1998; and those lodged between 1 July 2014 and 27 July 2016 in terms of the Restitution of Land Rights Amendment Act, 2014. Whilst the Commission takes reasonable care to ensure the accuracy of the information it provides, there are various factors that are beyond the Commission's control, particularly relating to claims that have lodged but not yet been gazetted such as: 1. Some Claimants referred to properties they claim dispossession of rights in land against using historical property descriptions which may not match the current property description; and 2. Some Claimants provided the geographic descriptions of the land they claim without mentioning the particular actual property description they claim dispossession of rights in land against. The Commission therefore does not accept any liability whatsoever if through the process of further investigation of claims it is found that there is in fact a land claim in respect of the above property. If you are aware of any change in the description of the above property after 19 June 1913 kindly supply us with such description so as to enable us to do a further	D. Kgole DALRRD: Regional Land Claims Commissioner	Noted. No response required.

ISSUE	NAME	RESPONSE
search.		
Egoli Gas currently has no gas mains that would be affected by your proposed location of work, as indicated in the plan that you submitted. Your proposed work should be carried out while maintaining the following minimum requirements: 1. All work in a road reserve, within the boundaries of the COJ, shall be in accordance with the latest approved Code of Practice for work within the road reserve of the COJ. 2. Should you smell gas during any excavation or want to report a gas leak please contact 011 726 4702 after hours, or 011 356 5000 working hours. 3. This wayleave approval will be valid for 6 months from the date indicated above. Egoli Gas will not be liable for any costs that may be incurred as a result of changes/alterations to its gas network during this 6 month period. 4. Should a period of 6 months expire without any construction taking place, a new application will have to be submitted for approval.	Egoli Gas	Egoli Gas has confirmed that no gas mains are affected by the proposed project however the minimum requirements will be considered and maintained.
This serves as a notification to the application that was received by DFA dated, 20201/02/18. The proposed work affects the Dark Fibre Africa Optical Fibre Infrastructure and because of that, listed below are the terms and conditions to consider and adhere to: 19. The DFA Fibre Optical route is indicated on the attached drawing provided by our wayleave administrator. The “exact-position” of the route cannot be guaranteed. 20. DFA has approved the planned work from the documents received and reference above. 21. If your planned work exceeds the boundaries of the demarcated portion of the map / drawing provided; you will be required to submit a supplementary application to DFA in order to identify existing DFA infrastructure outside this area. 22. Should DFA suffer damage and/or loss as a result of your works, DFA shall hold you liable for such damage and/or loss. 23. Please note that the DFA network is live and caries traffic for a number of subscribers. If you damage the network, the subscribers will have a claim against DFA for which you will also be held liable. 24. The applicant or employed contractor must contact the relevant DFA Preventative Maintenance at least 5 working days prior to commencement of work to arrange a site/kick of meeting. 25. Damaged Infrastructure must immediately be reported in writing to Judy	Dark Fibre Africa (DFA)	Dark Fibre Africa’s terms and conditions will be considered and adhered to.

ISSUE	NAME	RESPONSE
Phalane, judy.phalane@dfafrica.co.za. For immediate assitance call +27 11 202 4700 for all damages caused to DFA infrastructure. 26. Cable Protection Slabs, which are precast concrete slabs used for the protection of DFA's underground cables and other services, must be used when installing services near DFA. 27. The standard cable protection slab is 900mm x 200mm x 75 thick. The slab will be reinforced with 3.55mm high tensile wires at 100mm center in both directions. 28. Minimum depth of DFA cable cannot be guaranteed and may differ from descriptions on municipality wayleave conditions. The position can vary from a minimum of 300mm to 1200mm in depth in municipal road reserves. This depth may be less in the road carriage way. The DFA Preventative Maintenance department must be contacted 48 hours prior to excavation in these locations. 29. In some locations, a warning plastic marker tape has been placed as an indication that DFA network is in the vicinity. Should this marker be removed for construction purposes, DFA preventative maintenance must be contacted in order to arrange new warning tape to be installed by your contractor in accordance with DFA specifications. 30. Any excavations by means of self-propelled mechanical machinery, including equipment used for drilling/boring, demolishing and or compaction of soil be executed closer than 500mm from buried DFA optical cables, must be authorized by a DFA official during an on-site meeting before such excavation is to take place. Such excavations may not be executed directly above the DFA infrastructure at any time unless prior written approval is obtained. 31. No blasting may be executed near the proximity of DFA optical fibre infrastructure without supervision of a DFA preventative Maintenance Officer. 32. This approval letter is valid for 6 months from date of issue. The applicant must re-apply to DFA wayleave administration at services@dfafrica.co.za in Gauteng/ Pretoria, serviceskzn@dfafrica.co.za in Kwa Zulu Natal, serviceswr@dfafrica.co.za in Western Region, after the expiration thereof. If a contactor works under an expired DFA wayleave, DFA officials shall serve a stop work order to the contractor until the conditions are rectified. 33. The applicant, or employed contractor responsible for the projector maintenance work as stated in the applicant's letter must at all times have on their person or on site: a. The Services Affected letter; b. Call Before you Dig Letter; and c. Drawing / Map supplied by DFA. Should the documentation not		

ISSUE	NAME	RESPONSE
be available on request DFA officials may order the contractor to cease all works liaise with the local authorities / municipality for penalties until such approvals are made available and presented to the officer. 34. This approval shall be withdrawn and of no effect should: The applicant does not comply with any of the conditions set out above paragraphs 1 to 15. 35. If you require Dark Fibre Africa Services to be relocated to a new position to accommodate your project please be advised that Relocation of Dark Fibre Africa's established infrastructure may take up to a minimum of 12 weeks for completion (commencing after settlement of the relocation costs have been received in full) unless prior arrangements and/or written agreements are conveyed and authorized by DFA officials for specialized projects and/or emergency relocations. Please note: Costs for re-positioning of DFA infrastructure may be for your firm's account. Please call 012 443 1000 to arrange a site meeting. DFA will not be held liable for any delays to your project caused by DFA relocation projects whatsoever. 36. DFA Important Contact Information: Network Operating Centre: 0800 628 662; Wayleave Administrator: Sharon Madia; Email: sharon.madia@dfafrica.co.za Please refer to Appendix E, Appendix 4 for the Services Affected letter; the Call Before you Dig Letter; and the Drawing / Map supplied by DFA.		
Please kindly note that review and comment on all development projects and NID's is conducted through the online SAHRIS system (https://sahris.sahra.org.za). You are therefore advised to create an account (if you do not have one already) and lodge a section 38 application as a case to obtain official comments. The application will guide you in terms of what documents are required, you must attach all development studies to the case with the appropriate authorizations. Once you have completed your application it will be reviewed timeously with a formal comment(s) and recommendations provided from SAHRA through the SAHRIS system.	A. Matabane SAHRA	The project will be uploaded to the online SAHRIS system and proof thereof will be provided.
The Savanna Hills HOA at its meeting held on 23 February 2021, resolved as follows: a. That the SHEHOA has no objection to the proposed development of the filling station on stand 1323 & 1324 Sagewood Ext 6. b. That (a) above be made subject to the installation of a four-way traffic light at the entrance to the Estate and the crossing with R 562 Olifantsfontein.	Savanna Hills Home Owners Association	a. Noted. b. The proposed road upgrades as per the External Transport Assessment (March 2021) for the The Olifantsfontein Road / Combretum Avenue priority controlled

ISSUE	NAME	RESPONSE
c. That (a) above be made subject to the overall improvement of the stormwater that flood down the R562 and into the Estate. d. That the Estate Manager be mandated to be nominated as the contact person on behalf of the SHEHOA. e. That the notice be distributed to all owners with a request to register as interested and affected parties as well and to emphasize the need for the traffic light as well as the improvement of the storm water from the R562 into the Estate.		junction include the following: • Signalisation of the Junction; • Northern Approach – Provide an additional thru lane; • Eastern Approach – Provide an exclusive left-turn slip lane with a 60m storage length; • Western Approach – Provide an exclusive right-turn lane with a 60m storage length; • Southern Approach – Provide a thru lane, a left turn slip lane of 25m storage length, an exclusive right turning lane with 25m storage length, and an exit lane. c. There is an existing concrete stormwater channel along Olifantsfontein Road on the northern side of the road reserve that flow in an easterly direction and discharge in to the Rietspruit. The site slopes generally in an eastern direction at an average slope of 5.2%. The runoff from the property currently drains overland in an eastern direction towards the Rietspruit. The internal stormwater drainage of the site will be collected at an attenuation pond. The estimated volume of the attenuation pond for the development site of 16 840 m^2 is approximately 600 m^3. The attenuation pond outlet will discharge the pre-development flow into a stormwater earth channel located inside the road reserve of Olifantsfontein Road. This

ISSUE	NAME	RESPONSE
		channel will discharge the stormwater above the 1:100 year flood line of the Rietspruit. The provision of services to the development is expected to improve the current stormwater provision. d. Noted. e. In a telephonic discussion between Elaine Minnaar from Lokisa and the Estate Manager it was confirmed that the Savanna Hills HOA would notify their residents of the project and the need to register.
Agrees with the building of the filling station on the following conditions: 1. That a 4 way traffic light is erected at the Savanna Hills Estate gate and R562. 2. That the storm water on R562 be upgraded.	A. Mogale	1. The proposed road upgrades as per the External Transport Assessment (March 2021) for the The Olifantsfontein Road / Combretum Avenue priority controlled junction include the following: • Signalisation of the Junction; • Northern Approach – Provide an additional thru lane; • Eastern Approach – Provide an exclusive left-turn slip lane with a 60m storage length; • Western Approach – Provide an exclusive right-turn lane with a 60m storage length; • Southern Approach – Provide a thru lane, a left turn slip lane of 25m storage length, an exclusive right turning lane with 25m storage length, and an exit lane. 2. There is an existing concrete stormwater channel along Olifantsfontein Road on the

ISSUE	NAME	RESPONSE
		northern side of the road reserve that flow in an easterly direction and discharge in to the Rietspruit. The site slopes generally in an eastern direction at an average slope of 5.2%. The runoff from the property currently drains overland in an eastern direction towards the Rietspruit. The internal stormwater drainage of the site will be collected at an attenuation pond. The estimated volume of the attenuation pond for the development site of 16 840 m^2 is approximately 600 m^3. The attenuation pond outlet will discharge the pre-development flow into a stormwater earth channel located inside the road reserve of Olifantsfontein Road. This channel will discharge the stormwater above the 1:100 year flood line of the Rietspruit. The provision of services to the development is expected to improve the current stormwater provision.

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

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

Criteria used to determine the Consequence of an Impact

Table 2: Methodology

Rating	Definition of Rating	Score
A. Extent – *the area in which the impact will be expected*		
None		0
Local	Confined to project or study area or part thereof (eg. site)	1
Regional	The region, which may be defined in various ways, eg. Cadastral, catchment, topographic	2
(Inter) national	Nationally or beyond	3
B. Intensity – *the magnitude or size of the impact*		
None		0
Low	Natural and/or social functions and processes are negligibly altered	1
Medium	Natural and/or social functions and processes continue albeit in a modified way	2
High	Natural and/or social functions or processes are severely altered	3
C. Duration – *the time frame for which the impact will be experienced*		
None		0
Short term	Up to 2 years	1
Medium term	2 – 15 years	2
Long Term	More than 15 years	3

The combined score of these three criteria corresponds to a Consequence Rating, as set out in Table below:

Table 3: Methods used to determine the Consequence Score

Combined score (A+B+C)	0 - 2	3 - 4	5	6	7	8-9
Consequence Rating	Not significant	Very low	Low	Medium	High	Very high

Once the consequence is derived, the probability of the impact occurring is considered, using the probability classifications indicated in table below:

Table 4: Probability Classification

Probability of impact – the likelihood of the impact occurring	
Improbable	< 40% chance of occurring
Possible	40% - 70% chance of occurring
Probable	> 70% - 90% chance of occurring
Definite	> 90% chance of occurring

The overall significance of impacts is determined by considering consequence and probability using the rating system indicated in table below:

Table 5: Impact Significance Rating

Significance Rating	Consequence		Probability
Insignificant	Very low	&	Improbable
	Very low	&	Possible
Very Low	Very low	&	Probable
	Very low	&	Definite
	Low	&	Improbable
	Low	&	Possible
Low	Low	&	Probable
	Low	&	Definite
	Medium	&	Improbable
	Medium	&	Possible
Medium	Medium	&	Probable
	Medium	&	Definite
	High	&	Improbable
	High	&	Possible
High	High	&	Probable
	High	&	Definite
	Very high	&	Improbable
	Very high	&	Possible
Very High	Very high	&	Probable
	Very high	&	Definite

In conclusion the impacts are also considered in terms of their status (positive or negative impact) and the confidence in the ascribed impact significance rating. The prescribed system for considering impacts status and confidence (in assessment) is indicated in table below.

Table 6: Impact status and confidence classification

Status of Impact	
Indication of where the impact is adverse (negative) or beneficial (positive)	+ ve (positive – a 'benefit')
	- ve (negative – a 'cost')
	Neutral
Confidence of assessment	
The degree of confidence in predictions based on available information, EAP's judgement and/or specialist knowledge	Low
	Medium
	High

The impact significance rating should be considered by GDARD in their decision-making process based on the implications of ratings ascribed below:

- **Insignificant: the potential impact is negligible and will not have an influence on the decision regarding the proposed activity / development;**
- **Very low: the potential impact should not have any meaningful influence on the decision regarding the proposed activity / development;**
- **Low: the potential impact may not have any meaningful influence on the decision regarding the proposed activity / development;**
- **Medium: the potential impact should influence the decision regarding the proposed activity / development;**
- **High: the potential impact will affect the decision regarding the proposed activity / development;**
- **Very high: The proposed activity should only be approved under special circumstances.**

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

Potential Impacts for the construction and operational phase

Proposal

Table 7: Potential Impacts for the construction and operational phase - Proposal

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confi-dence
CONSTRUCTION PHASE								
1. ISSUE: AIR QUALITY								
1.1 Dust/Air pollution - The generation of fugitive dust associated with construction activities & earthworks.	**Local (1)**	**High (3)**	**Short term (1)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**High**
2. ISSUE: TOPOGRAPHY								
2.1 Visual Impacts • Littering and dumping on site may result in an alteration of the visual character of the site. • Lights from the contractor's camp and the construction site might be visually intrusive	**Local (1)**	**Medium (2)**	**Short term (1)**	**Very Low (4)**	**Definite**	**Very Low & Definite = Very Low**	**-ve**	**High**
2.2 Bulk earthworks: Deep cuttings, high embankments, disposal of spoil and excavations cause local changes to topography	**Local (1)**	**Medium (2)**	**Short term (1)**	**Very Low (4)**	**Definite**	**Very Low & Definite = Very Low**	**-ve**	**High**
3. ISSUE: GEOLOGY AND SOILS								
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	**Local (1)**	**High (3)**	**Short term (1)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**High**
3.2 Soil pollution	**Local (1)**	**High (3)**	**Short term (1)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**High**
3.3 Disturbance of surface geology for development foundations	**Local (1)**	**High (3)**	**Short term (1)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**High**

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
3.4 Geotechnical Constraints	**Local (1)**	**High (3)**	**Short term (1)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**High**
4. ISSUE: FAUNA AND FLORA								
4.1 Site clearing and the removal of vegetation	**Local (1)**	**High (3)**	**Long term (3)**	**High (7)**	**Definite**	**High & Definite = High**	**-ve**	**high**
4.2 Degradation, destruction of habitats/ ecosystem, loss of natural vegetation/ wildlife	**Local (1)**	**High (3)**	**Long term (3)**	**High (7)**	**Definite**	**High & Definite = High**	**-ve**	**high**
4.3 Impacts on fauna and flora and loss of RDL faunal and floral species	**Local (1)**	**Medium (2)**	**Medium term (2)**	**Low (5)**	**Probable**	**Low & Probable = Low**	**-ve**	**high**
4.4 Invasive Species	**Local (1)**	**Medium (2)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & Probable = Medium**	**-ve**	**high**
5. ISSUE: HYDROLOGY								
5.1 Storm water flow and drainage- Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another. This may contribute to flooding, soil erosion, and sedimentation of nearby water bodies.	**Regional (2)**	**Medium (2)**	**Short term (1)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**Medium**
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT								
6. ISSUE: AESTHETICS, LANDSCAPE CHARACTER AND SENSE OF PLACE								
6.1 Noise / vibration	**Local (1)**	**High (3)**	**Short term (1)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**High**
7. ISSUE: SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT								
7.1 Safety and Security	**Region (2)**	**High (3)**	**Short term (1)**	**Medium (6)**	**Probable**	**Medium & Probable = Medium**	**-ve**	**High**
7.2 Economic opportunities	**Region (2)**	**High (3)**	**Short term (1)**	**Medium (6)**	**Probable**	**Medium & Probable = Medium**	**+ve**	**Medium**
7.3 Hygiene	**Local (1)**	**Medium (2)**	**Short term (1)**	**Very Low (4)**	**Probable**	**Very Low & Probable = Very Low**	**-ve**	**High**
8. ISSUE: HISTORICAL ENVIRONMENT								
8.1 Destruction of cultural / heritage sites	**None**	**None**	**None**	**Not Significant (0)**	**Improbable**	**Not Significant & Improbable = Insignificant**	**-ve**	**Low**
9. ISSUE: TRAFFIC								
9.1 Traffic –	**Regional**	**Medium**	**Short**	**Low (5)**	**Probable**	**Low &**	**-ve**	**High**

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
Construction vehicles	(2)	(2)	term (1)			Definite = Low		
10. ISSUE: SERVICES AND WASTE								
10.1 Waste	Local (1)	Medium (2)	Short term (1)	Very Low (4)	Definite	Very Low & Definite = Very Low	-ve	High
10.2 Pressure on existing infrastructure and services	Local (1)	Medium (2)	Short term (1)	Very Low (4)	Probable	Very Low & Probable = Very Low	-ve	High
OPERATIONAL PHASE								
1. ISSUE: AIR QUALITY								
1.1 Air pollution: Vapours produced by fuel are potentially hazardous to human health. These emissions might occur during the maintenance of underground storage tanks from the breather pipes, minor spillages and the dispensing of fuel.	Local (1)	Medium (2)	Long term (3)	Medium (6)	Probable	Medium & Probable = Medium	-ve	Medium
2. ISSUE: FAUNA AND FLORA								
2.1 Alien invasion	Local (1)	Low (1)	Long term (3)	Low (5)	Probable	Low & Probable = Low	-ve	High
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT								
3. ISSUE AESTHETICS, SITE CHARACTER AND SENSE OF PLACE								
3.1 Noise: Noise from the filling station include: Staff at the filling station talking and shouting may be disruptive late at night and on weekends. Music and radio broadcasts over the shop and forecourt may be potentially disruptive.	Local (1)	Medium (2)	Long term (3)	Medium (6)	Definite	Medium & Definite = Medium	-ve	High
4. ISSUE: SOCIO-ECONOMIC								
4.1 Socio-economic impact on existing filling stations. Competitor filling stations in the area.	Region (2)	Low (1)	Long term (3)	Medium (6)	Definite	Medium & Definite = Medium	-ve	Medium
4.2 Economic opportunities	Regional (2)	Medium (2)	Long term (3)	High (7)	Probable	High & Probable = High	+ve	Medium
5. ISSUE: VISUAL IMPACT								
5.1 The buildings and advertising signs may be	Local (1)	Medium (2)	Long term (3)	Medium (6)	Probable	Medium & Probable = Medium	-ve	Medium

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
visually intrusive Light from the service station may be visually intrusive.								
6. ISSUE: SOCIAL WELL BEING AND QUALITY OF THE ENVIRONMENT								
6.1 Safety and Security: Safety and security of staff, customers and property may be compromised as a result of fire risks associated with a filling station as well as crime	**Local (1)**	**Medium (2)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & Probable = Medium**	**-ve**	**Medium**
7. ISSUE:HYDROLOGY								
7.1 Hydrocarbons spilled from storage tanks and possible small spills of oil, diesel and petrol spilled on paved surfaces have the potential of contaminating groundwater	**Regional (2)**	**Low (1)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & Probable = Medium**	**-ve**	**Medium**
7.2 Storm Water and Drainage – Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another	**Regional (2)**	**Medium (2)**	**Long term (3)**	**High (7)**	**Probable**	**High & Probable = High**	**-ve**	**Medium**
8. ISSUE: TRAFFIC								
8.1 Traffic	**Regional (2)**	**Low (1)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & Probable = Medium**	**-ve**	**Medium**
8.2 Access to the proposed development	**Local (1)**	**Medium (2)**	**Long term (3)**	**Medium (6)**	**Definite**	**Medium & Definite = Medium**	**-ve**	**High**
9. ISSUE: VISIBILITY AND ACCESSIBILTY								
9.1 Visibility and accessibility (Layout of the filling station)	**Local (1)**	**Medium (2)**	**Long term (3)**	**Medium (6)**	**Definite**	**Medium & Definite = Medium**	**-ve**	**High**
INFRASTRUCTURE, SERVICES AND WASTE								
10. ISSUE: INFRASTRUCTURE AND WASTE								
10.1 Waste	**Local (1)**	**Medium (2)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & Probable = Medium**	**-ve**	**Medium**
10.2 Pressure on existing infrastructure and services	**Local (1)**	**Medium (2)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & Probable = Medium**	**-ve**	**Medium**

Potential Impacts for the construction and operational phase

Alternative 1

The potential impacts for the construction and operational phase for Alternative 1 are similar to that of the Proposal with the exception being the impacts anticipated in terms of visibility and accessibility from Olifantsfontein Road as a result of the alternative layout of the filling station during the operational phase.

Table 8: Potential impacts for the construction and operational phase - Alternative 1

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confi-dence
OPERATIONAL PHASE								
9. ISSUE: VISIBILITY AND ACCESSIBILTY								
9.1 Visibility and accessibility (Layout of the filling station)	**Local (1)**	**High (3)**	**Long term (3)**	**High (7)**	**Definite**	**High & Definite = High**	**-ve**	**High**

Potential Impacts for the construction and operational phase

NO-GO Alternative

Table 9: Potential impacts for the construction and operational phase - No Go Alternative

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confide nce
1. ISSUE: POSSIBLE FURTHER DEGRADATION OF LAND								
1.1 Alien and invasive plant proliferation of the property site may continue/occur	**Local (1)**	**Medium (2)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & Probable = Medium**	**-ve**	**high**
1.2 Illegal dumping may occur	**Local (1)**	**Medium (2)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & Probable = Medium**	**-ve**	**high**
2. SAFETY AND SECURITY								
2.1 Vagrants may utilise the site and pose a security risk to the surrounding properties	**Region (2)**	**Medium (2)**	**Long term (3)**	**High (7)**	**Probable**	**Medium & Probable = High**	**-ve**	**high**
3. ISSUE: SOCIO- ECONOMIC								
3.1 Land Invasion may occur	**Region (2)**	**Low (1)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & Probable = Medium**	**-ve**	**high**
3.2 Loss of investment	**Region (2)**	**High (3)**	**Long term (3)**	**Very High (8)**	**Definite**	**Very High & Definite = Very High**	**-ve**	**High**
4. ISSUE: EXISTING INFRASTRUCTURE								
4.1 Storm water – Overall improvement of	**Region (2)**	**High (3)**	**Long term (3)**	**Very High (8)**	**Definite**	**Very High & Definite = Very High**	**-ve**	**High**

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confidence
the current stormwater issue on the R562								

Significance Rating for the construction and operational phase

Proposal

Table 10: Significance Rating for the construction and operational phase - Proposal

Potential Impacts	Significance rating of impacts	Proposed mitigation	Significance rating of impacts after mitigation	Risk of the impact and mitigation not being implemented
CONSTRUCTION PHASE				
1. ISSUE: AIR QUALITY				
1.1 Dust /Air pollution **The generation of dust associated with construction activities & earthworks**	**Low**	• Dust generation should be kept to a minimum. • Dust must be suppressed at construction areas during dry periods by the regular application of water or a biodegradable soil stabilisation agent. • Speed limits must be implemented in all areas, including public roads and private property to limit the levels of dust pollution. • Excavating, handling or transporting erodible materials in high wind or when dust plumes are visible must be avoided. • All materials transported to site must be transported in such a manner that they do not fly or fall off the vehicle. This may necessitate covering or wetting friable materials. • No burning of refuse or vegetation is permitted.	**Very Low**	Negative impact to the ambient air quality of the area
2. ISSUE: TOPOGRAPHY				
2.1 Visual Impacts and light pollution	**Very Low**	• Any temporary storage, lay-down areas or accommodation facilities to be setup in existing built-up areas or disturbed areas only. • Ensure small footprint during construction phase. • Site development to be limited to footprint area. • The construction camp must be located as far from residential properties as possible. • Light pollution should be minimised. • Construction / management activities must be limited to the daylight hours between 7:00am and 5:30pm weekdays; 7:00am and 1:30pm on Saturdays. • Lighting on site is to be sufficient for safety and security purposes, but shall not be intrusive to neighbouring residents, disturb wildlife, or interfere with road traffic. • Low flux and frequency lighting must be utilised.	**Very Low**	Negative impact to the visual quality of the area including light pollution
2.2 Bulk earthworks	**Very Low**	• Avoid development on excessively steep	**Very Low**	Negative impact

		slopes. • Avoid cutting steep embankments • Provide the necessary erosion protection measures. • Disturbed surface areas in the construction phase to be rehabilitated. No open trenches to be left. No mounds of soils created during construction to be left. • All construction material, equipment and any foreign objects brought into the area by contractors to be removed immediately after completion of the construction phase.		to the visual quality of the area
3. ISSUE: GEOLOGY AND SOILS				
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	**Low**	• Appropriate erosion and storm water management structures must be installed around the construction site. • Once earthworks are complete, disturbed area are to be stabilised with an appropriate approved method. • Disturbed surfaces to be rehabilitated with locally indigenous grass species. No open trenches to be left. • No mounds of soils created during construction to be left. Soils around erected poles to be leveled and sculptured to the original contours of the surrounding soils.	**Low**	Degradation or impairment of soil quality
3.2 Soil Pollution	**Low**	• Ensure correct position of construction caps, equipment yards, refueling depots, concrete batching plant etc. to avoid areas susceptible to soil and water pollution. • Ensure appropriate handling of hazardous substances • Remediate polluted soil. • All construction vehicles, plant, machinery and equipment must be properly maintained to prevent leaks. • Plant and vehicles are to be repaired immediately upon developing leaks. Drip trays shall be supplied for all repair work undertaken on machinery on site or campsite area. • Drip trays are to be utilised during daily greasing and re-fueling of machinery and to catch incidental spills and pollutants. • Drip trays are to be inspected daily for leaks and effectiveness, and emptied when necessary. This is to be closely monitored during rain events to prevent overflow. • Vehicles to be used during the construction phase are to be kept in good working condition and should not be the source of excessive fumes. • Fuels and chemicals must be stored in adequate storage facilities that are secure, enclosed and bunded.	**Very Low**	Spilled oil prevents water absorption by soil
3.3 Disturbance of surface geology for development foundations	**Low**	• Appropriate erosion and storm water management structures must be installed around the construction site. • Adherence to comments and recommendations in the geotechnical report.	**Very Low**	Negative impact on the geology of the area.
3.4 Geotechnical Constraints	**Low**	• Adherence to comments and recommendations in the geotechnical report.	**Very Low**	Negative impact on the geology of the area.
4. ISSUE: FAUNA AND FLORA				
4.1 Site clearing and the removal of vegetation	**High**	• There is good quality grassland present that will be destroyed by the project. • Vegetation removed during excavation activities may be used as compost on site. This is preferable to burning of material. Burning is not allowed. • Rehabilitation plan for disturbed areas to be compiled and implemented as part of the construction phase of the township including	**Medium**	Loss of and altered floral and faunal species diversity

		related infrastructure.		
4.2 Degradation, destruction of habitats/ ecosystem, loss of natural vegetation/ wildlife	**High**	• No protected trees are within the study site. Therefore, no protected trees will be lost or destroyed. • Most of the project footprint is within fair to good grassland area. • No RDL or ODL plants will be destroyed. Some ODL species are present but these must be removed. • There is good quality grassland present that will be destroyed by the project. • Any priority species encountered must be identified and rescue prior to any excavation or construction activities. • Vegetation removed during excavation activities may be used as compost on site. This is preferable to burning of material. Burning is not allowed. • Care must be taken not to interact directly with any wild-life encountered. • ii. Any bird nests encountered in the grass or on the water must not be interfered with. If encountered must first be discussed with specialist.	**Medium**	Loss of floral and faunal habitat Permanent loss of and altered floral and faunal species diversity
4.3 Impacts on fauna and flora and loss of RDL faunal and floral species	**Low**	• No protected trees are within the study site. Therefore, no protected trees will be lost or destroyed. • No RDL or ODL plants will be destroyed. Some ODL species are present but these must be removed. • Any priority species encountered must be identified and rescue prior to any excavation or construction activities. • Just prior to the commencement of construction activities an independent specialist must locate, lift and relocate the ODL plants and the few Aloe and Ledebouria plants present on site. • It is recommended that a green zone / public open space be created along the southern and eastern boundaries of the study area. The priority plants species lifted may be relocated into this area.	**Low**	Loss of biodiversity
4.4 Invasive Species	**Medium**	• A weed control programme should be implemented in the project area and especially on the fringes and public open space areas.	**Low**	Decline in biological diversity
5. ISSUE: HYDROLOGY				
5.1 Storm water flow and drainage	**Low**	• The proposed development's storm water to be adequately managed. • It is important to ensure vegetation cover as widely as possible, to improve the potential water quality emanating from the site. • During the construction phase of the development, temporary silt fences can be erected to prevent silt from the construction process contaminating the pre-development storm water run-off routes and pre-existing storm water systems down the road. A typical fence consists of a piece of synthetic filter fabric (geotextile) stretched between a series of wooden or metal fence stakes along a horizontal contour level. The stakes are installed on the downhill side of the fence, and the bottom edge of the fabric is trenched into the soil and backfilled on the uphill side. The storm water slowly passes through the fence	**Low**	Soil erosion, flooding and sedimentation of water bodies and loss of habitat.

		while depositing its sediments on the uphill side of the fence. The fence is not designed to concentrate or channel storm water. The fence is installed on a site before soil disturbance begins, and is placed down-slope from the disturbance area. • There are no definite or significant watercourses on site and therefore little to no impeding or impounding of such will take place. • Although there is an watercourse (stream and wetland) 220 m from the Site that can be impacted on. • Proper stormwater infrastructure is part of the development. The existing stormwater released onto the Site from the Shopping Centre must be addressed with the Shopping Centre managers. • Proper infrastructure will also ensure that there is minimal erosion and siltation. • The stormwater run-off needs to be designed so that stormwater is attenuated and released in a dispersed manner not at a concentrated point, which will help the current and future situation where unnatural wetlands are being promoted. • Carefully monitoring of construction is essential to locate and mitigate any erosion observed speedily. Investigations must be conducted after every rain downpour. Any problems need to be rectified immediately to avoid the problem escalating.		
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT				
6. ISSUE: AESTHETICS, LANDSCAPE CHARACTER AND SENSE OF PLACE				
6.1 Noise / vibration	**Low**	• Noise levels shall be kept within acceptable limits, and construction crew must abide by National Noise Laws and local by-laws regarding noise. • No sound amplification equipment such as sirens, loud hailers or hooters are to be used on site except in emergencies and no amplified music is permitted on site. • Construction / management activities involving use of the service vehicle, machinery, hammering etc, must be limited to the hours between 7:00am and 5:30pm weekdays; 7:00am and 1:30pm on Saturdays; no noisy activities may take place on Sundays or Public Holidays. • Activities that may disrupt neighbours (e.g. delivery trucks, excessively noisy activities etc.) must be preceded by notice being given to the affected neighbours at least 24 hours in advance. • Equipment that is fitted with noise reduction facilities (e.g. side flaps, silencers etc.) must be used as per operating instructions and maintained properly during site operations.	**Very Low**	An increase in the ambient noise levels of the area.
7. ISSUE: SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT				
7.1 Safety and Security	**Medium**	• Signs should be erected on all entrance gates to the site camp indicating that no temporary jobs are available, thereby limiting opportunistic labourers and crime. • The site and crew are to be managed in strict accordance with the Occupational Health and Safety Act (Act No. 85 of 1993) and the National Building Regulations • All structures that are vulnerable to high winds must be secured (including toilets). • Potentially hazardous areas such as trenches are to be cordoned off and clearly marked at all times. • The Contractor is to ensure traffic safety at all times, and shall implement road safety	**Low**	Potential criminal activities such as theft might occur.

		precautions for this purpose when works are undertaken on or near public roads. • Necessary Personal Protective Equipment (PPE) and safety gear appropriate to the task being undertaken is to be provided to all site personnel (e.g. hard hats, safety boots, masks etc.). • All vehicles and equipment used on site must be operated by appropriately trained and / or licensed individuals in compliance with all safety measures as laid out in the Occupational Health and Safety Act (Act No. 85 of 1993) (OHSA). • An environmental awareness training programme for all staff members shall be put in place by the Contractor. Before commencing with any work, all staff members shall be appropriately briefed about the EMP and relevant occupational health and safety issues. • All construction workers shall be issued with ID badges and clearly identifiable uniforms. • Access to fuel and other equipment stores is to be strictly controlled. • Emergency procedures must be produced and communicated to all the employees on site. This will ensure that accidents are responded to appropriately and the impacts thereof are minimised. This will also ensure that potential liabilities and damage to life and the environment are avoided. • Adequate emergency facilities must be provided for the treatment of any emergency on the site. • The nearest emergency service provider must be identified during all phases of the project as well as its capacity and the magnitude of accidents it will be able to handle. Emergency contact numbers are to be displayed conspicuously at prominent locations around the construction site and the construction crew camps at all times. • The Contractor must have a basic spill control kit available at each construction crew camp and around the construction site. The spill control kits must include absorptive material that can handle all forms of hydrocarbon as well as floating blankets / pillows that can be placed on water courses. • The Contractors site must be located on the high side of the site so any leakages or spillages will be contained on site. • Hunting, camping, the collection of wood and any other activities must be prohibited from the neighbouring unoccupied properties.		
7.2 Economic opportunities	**Positive - Medium**	• Make use of local labour • Provide clear and realistic information regarding employment opportunities and other benefits for local communities in order to prevent unrealistic expectations. • Provide skills training for construction workers.	**Positive – Medium**	A large influx of uncontrolled numbers of people coming to the site seeking employment opportunities. This might also pose a security risk.
7.3 Hygiene	**Very Low**	• The Contractor shall make available safe drinking water fit for human consumption at the site offices and all other working areas. • Washing and toilet facilities shall be provided on site and in the Contractors camp. • Adequate numbers of chemical toilets must be maintained in the Contractors camp to service the staff using this area. At least 1 toilet must	**Very Low**	Unhealthy working conditions on project site

		be available per 20 workers using the camp. Toilet paper must be provided. • The chemical toilets servicing the camp must be maintained in a good state, and any spills or overflows must be attended to immediately. • The chemical toilets must be emptied on a regular basis. • HIV AIDS awareness and education should be undertaken by all Contractor staff.		
8. ISSUE: HISTORICAL ENVIRONMENT				
8.1 Destruction of cultural / heritage sites	**Insignifi-cant**	Chance Find Procedures The possibility of the occurrence of subsurface finds cannot be excluded. Therefore, if during construction any possible finds such as stone tool scatters, artefacts or bone and fossil remains are made, the operations must be stopped, and a qualified archaeologist must be contacted for an assessment of the find and therefor chance find procedures should be put in place as part of the EMP. A short summary of chance find procedures is discussed below. This procedure applies to the developer's permanent employees, its subsidiaries, contractors and subcontractors, and service providers. The aim of this procedure is to establish monitoring and reporting procedures to ensure compliance with this policy and its associated procedures. Construction crews must be properly inducted to ensure they are fully aware of the procedures regarding chance finds as discussed below. • If during the pre-construction phase, construction, operations or closure phases of this project, any person employed by the developer, one of its subsidiaries, contractors and subcontractors, or service provider, finds any artefact of cultural significance or heritage site, this person must cease work at the site of the find and report this find to their immediate supervisor, and through their supervisor to the senior on-site manager. • It is the responsibility of the senior on-site Manager to make an initial assessment of the extent of the find and confirm the extent of the work stoppage in that area. • The senior on-site Manager will inform the ECO of the chance find and its immediate impact on operations. The ECO will then contact a professional archaeologist for an assessment of the finds who will notify the SAHRA.	**Insignifi-cant**	Impairment of heritage resources / Depletion of archaeological record of the area.
9. ISSUE:TRAFFIC				
9.1 Traffic – Construction vehicles	**Low**	• The contractor is to ensure traffic safety at all times and shall implement road safety precautions. • Signs should be erected on all entrance gates • Speed limits should be implemented and adhered to. • Care must be taken with heavy machinery used on the project. All access roads used during construction must be monitored and maintained.	**Very Low**	Uncontrolled traffic issues.
10. ISSUE: SERVICES AND WASTE				
10.1 Waste	**Very Low**	• Adequate number of waste disposal receptacles is to be positioned at strategic locations within the development. • No burning of waste. • Waste will be collected and removed off-site to a registered waste site. • Fires and camp sites should be prohibited on Site. • Excavated soils, rocks and or building waste material may not be simply dumped in any	**Very Low**	Waste that is not disposed of correctly mainly leads to the following: • Environmental degradation • Water pollution • Infestation by rodents and

		open veld, neighbouring properties, or even on site. • All hazardous materials must be stored appropriately to prevent these contaminants from entering the water environment; • All excess materials brought onto site for construction to be removed after construction.		potential disease causing vectors
10.2 Pressure on existing infrastructure and services	**Very Low**	• Integrity of existing services to be ensured.	**Very Low**	Damage to infrastructure resulting in liability costs
OPERATIONAL PHASE				
1. ISSUE: AIR QUALITY				
1.1 Air pollution	**Medium**	• Standard vents fitted to the breather pipes minimise the loss of vapours. • Emissions from the Filling station will be of low level and thus disperse into the atmosphere. • The emissions from the Filling Station would be dispersed according to the prevailing wind direction, with increased distance the concentration of the emitted particles will decrease.	**Low**	Alien infestation
2. ISSUE: FAUNA AND FLORA				
2.1 Alien invasion	**Low**	• A weed control programme should be implemented in the project area and especially on the fringes and public open space areas.	**Very Low**	Alien infestation
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT				
3. ISSUE AESTHETICS, SITE CHARACTER AND SENSE OF PLACE				
3.1 Noise: Noise from the filling station include: Staff at the filling station talking and shouting may be disruptive late at night and on weekends. Music and radio broadcasts over the shop and forecourt may be potentially disruptive.	**Medium**	• Ensure acceptable noise levels	**Low**	An increase in the ambient noise levels of the area
4. ISSUE: SOCIO-ECONOMIC				
4.1 Socio-economic impact on existing filling stations. Competitor filling stations in the area.	**Medium**	• None	**Medium**	-
4.2 Economic opportunities	**High (Positive)**	• Implement local labour. • Provide clear and realistic information regarding employment opportunities and other benefits for local communities in order to prevent unrealistic expectations.	**High (Positive)**	A large influx of uncontrolled numbers of people coming to the site seeking employment opportunities. This might also pose a security risk
5 ISSUE: VISUAL IMPACT				
5.1 The buildings and advertising signs may be visually intrusive. Lights from the service/filling station may be visually intrusive.	**Medium**	• The buildings must be regularly painted. • Signs for advertising must conform to the standards of South African Manual for Outdoor Advertising Control (SAMOAC). • Light pollution should be minimised • Lighting on site is to be sufficient for safety and security purposes, but shall not be intrusive to neighbouring residents, disturb wildlife, or interfere with road traffic • All lights used for non-security purposes should be energy efficient for example compact fluorescent lights (CFL). Fluorescent lamps give five times the light and last up to 10 times as long as ordinary bulbs	**Low**	A negative impact to the visual quality of the area.

		• Outside lights will have to be downward shining (eyelid type), low wattage and should not be positioned higher than 1 m above the ground surface • Areas that have been landscaped must be maintained.		
6. ISSUE: SOCIAL WELL BEING AND QUALITY OF THE ENVIRONMENT				
6.1 Safety and Security: Safety and security of staff, customers and property may be compromised as a result of fire risks associated with a filling station as well as crime	**Medium**	• Appropriate measures should be in place for the correct storage and handling of fuel as well as the procedures for dealing with dangerous situations. • Staff should be adequately trained with respect to dealing with crime. • Equipment and materials must be handled by staff that has been adequately trained. • Staff must be adequately updated about safety procedures. • Emergency contact details for the police, Security Company and fire department must be readily available.	**Low**	Fires and explosions
7. ISSUE: HYDROLOGY				
7.1 Hydrocarbons spilled from storage tanks and possible small spills of oil, diesel and petrol spilled on paved surfaces have the potential of contaminating groundwater.	**Medium**	• Strict procedures for the management of the site must be developed and adhered to. • An emergency accidental spillage plan must be in place and workers must be trained to handle such accidents. • Leak detection measures/systems must be implemented in all fuel storage and transmission lines and tanks. • Fuel dispenser pumps must be located on a hardened surface to contain spillages. • Chemical storage areas should be sufficiently contained, and the use of chemicals should be controlled. • The pump, refuelling and forecourt areas should all be located on a hardened surface which drains into a common drain. This drain must feed onsite oil and water separator such as a Zorbit Grease Trap. The accumulated grease and oil must be removed by an accredited company. • Overfill and spillages during tanker refuelling and fuel dispensing should be prevented by the installation of automatic cut off devices. • Tanker delivery driver must be present during delivery of fuel with the emergency cut off switch • In the event of the pump dispenser or the hoses being knocked over or ripped off the fuel supply must be cut off by shear off valves. • Strict procedures for the management of the site must be developed and adhered to. • Staff must be trained to prevent spillages during fuel dispensing. • Staff must be trained adequately so as to identify and minimise the impacts of leaks. • The UST's must comply with the relevant SANS standards with respect to tank manufacture and installation. • UST's must have corrosion protection.	**Low**	Groundwater pollution
7.2 Storm Water and Drainage – Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another	**High**	• The proposed development's storm water to be adequately managed. • It is important to ensure vegetation cover as widely as possible. • The internal stormwater drainage of the site will be collected at an attenuation pond. The estimated volume of the attenuation pond for the development site of 16 840 m^2 is approximately 600 m^3. The attenuation pond outlet will discharge the pre-development flow into a stormwater earth channel located inside the road reserve of Olifantsfontein Road. This channel will discharge the stormwater above the 1:100 year flood line of the Rietspruit.	**Medium**	Increased runoff of storm water

		• The stormwater collected on the forecourt will be discharged into an oil separator that is connected to the internal sewer network.		
8. ISSUE: TRAFFIC				
8.1 Traffic – vehicles from the Filling station	**Medium**	• Compliance to Traffic and Municipal By-Laws.	**Low**	Increased levels of traffic
8.2 Access to the proposed development	**Medium**	• The proposed upgrades as per the External Transport Assessment (March 2021) for the The Olifantsfontein Road / Combretum Avenue priority controlled junction to include the following must be implemented: ➢ Signalisation of the Junction; ➢ Northern Approach – Provide an additional thru lane; ➢ Eastern Approach – Provide an exclusive left-turn slip lane with a 60m storage length; ➢ Western Approach – Provide an exclusive right-turn lane with a 60m storage length; ➢ Southern Approach – Provide a thru lane, a left turn slip lane of 25m storage length, an exclusive right turning lane with 25m storage length, and an exit lane.	**Low**	Compromised traffic safety
9. ISSUE: VISIBILITY AND ACCESSIBILTY				
9.1 Visibility and accessibility (Layout of the filling station)	**Medium**	• The orientation of the filling station to Olifantsfontein Road for the proposal will increase visibility and facilitate quick and easy access from Olifantsfontein Road to the filling station.	**Low**	The filling station will be less visible from Olifantsfontein Road.
INFRASTRUCTURE, SERVICES AND WASTE				
10. ISSUE: INFRASTRUCTURE AND WASTE				
10.1 Waste	**Medium**	• Sorting of waste • Waste yard to be kept clean and neat • Regular cleaning of waste yard so that it does not became a nuisance and terms of odour and vermin	**Low**	Waste that is not disposed of correctly mainly leads to the following: • Environmental degradation • Water pollution • Infestation by rodents and potential disease causing vectors
10.2 Pressure on existing infrastructure and services	**Medium**	• Integrity of existing services in the area to be ensured	**Low**	Damage to infrastructure

Significance Rating for the construction and operational phase – Alternative 1

Alternative 1

The significance rating for Alternative 1 is similar to that of the Proposal with the exception being the impacts anticipated in terms of visibility and accessibility from Olifantsfontein Road as a result of the alternative layout of the filling station during the operational phase.

Table 11: Significance Rating for the construction and operational phase - Alternative 1

Potential Impacts	Signifi-cance rating of impacts	Proposed mitigation	Signifi-cance rating of impacts	Risk of the impact and mitigation not being

			after mitigation	implemented
OPERATIONAL PHASE				
9. ISSUE: VISIBILITY AND ACCESSIBILTY				
9.1 Visibility and accessibility (Layout of the filling station)	**High**	• The orientation of the filling station to Olifantsfontein Road for Alternative 1 will not increase visibility nor facilitate quick and easy access from Olifantsfontein Road to the filling station.	**High**	None

Significance Rating for the construction and operational phase – No-Go Alternative

No Go Alternative

Table 12: Significance Rating for the construction and operational phase - No-Go Alternative

Potential Impacts	Signifi-cance rating of impacts	Proposed mitigation	Signifi-cance rating of impacts after mitigation	Risk of the impact and mitigation not being implemented
1. ISSUE: POSSIBLE FURTHER DEGRADATION OF LAND				
1.1 Alien and invasive plant proliferation of the property site may continue/occur	Medium	• None	Medium	Alien and invasive plant proliferation of the property site may continue/occur
1.2 Illegal dumping may occur	Medium	• None	Medium	Illegal dumping may occur
2. SAFETY AND SECURITY				
2.1 Vagrants may utilise the site and pose a security risk to the surrounding properties	High	• None	High	Vagrants may utilise the site and pose a security risk to the surrounding properties
3. ISSUE: SOCIO- ECONOMIC				
3.1 Land Invasion may occur	Medium	• None	Medium	Land Invasion may occur
3.2 Loss of investment	Very High	• None	Very High	If the No-Go alternative were to be followed it will have a negative financial impact and no employment opportunities will be created.
4. ISSUE: EXISTING INFRASTRUCTURE				
4.1 Storm water – Overall improvement of the current stormwater issue on the R562	Very High	• None	Very High	The no-go alternative will entail leaving the site in its present state and the current stormwater issue on the R562 will not be addressed.

3. COMPARATIVE ASSESSMENT OF ALTERNATIVES

The table below provides a comparative assessment of Alternatives described in Section A of this Basic Assessment Report. The comparative assessment below takes into account the Impact Assessment provided in Section E and the impacts without mitigation are discussed.

Table 13: Comparative Assessment of Alternatives

	Proposal (Preferred Alternative)	Alternative 1
CONSTRUCTION PHASE		
1.1 Dust /Air pollution The generation of dust associated with construction activities & earthworks	Low (5)	Low (5)
	Developing any of the alternatives will result in dust generation. The impact significance is low and the duration of the impact occurrence will be short lived.	
2.1 Visual Impacts and light pollution	Very Low (4)	Very Low (4)
	Developing any of the alternatives will have a visual impact due to the clearance of the site, lighting on site and the contractor's site camp. The impact significance is very low and the duration of the impact will be short lived.	
2.2 Bulk earthworks	Very Low (4)	Very Low (4)
	Developing any of the alternatives will have a visual impact due to the bulk earthworks taking place on site. The impact significance is very low and the duration will be short lived.	
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	Low (5)	Low (5)
	Vehicle operation on site could potentially result in the spillage of lubricants and petroleum products into the soil. Therefore, machinery and vehicles must be kept in good working order. Depending on the nature of spills, contaminated soil must be treated or disposed of at a licensed hazardous landfill site. Soil disturbance, erosion and degradation are further potential impacts which must be mitigated. The average significance of the impact before mitigation is low and short lived.	
3.2 Soil pollution	Low (5)	Low (5)
	Vehicle operation on site could potentially result in the spillage of lubricants and petroleum products into the soil. Therefore, machinery and vehicles must be kept in good working order. Depending on the nature of spills, contaminated soil must be treated or disposed of at a licensed hazardous landfill site. Soil disturbance, erosion and degradation are further potential impacts which must be mitigated. The average significance of the impact before mitigation is low and short lived.	
3.3 Disturbance of surface geology for development foundations	Low (5)	Low (5)
	Developing any of the alternatives will result in a disturbance to surface geology for development foundations. The geological impacts before mitigation are of low significance and short lived.	
3.4 Geotechnical Constraints	Low (5)	Low (5)
	Developing any of the alternatives will result in a disturbance to surface geology for development foundations. The geological impacts before mitigation are of low significance and short lived.	
4.1 Site clearing and the removal of vegetation	High (7)	High (7)
	There is good quality grassland present that will be destroyed by the project. The impact significance is high and will be long term.	
4.2 Degradation, destruction of habitats/ ecosystem, loss of natural vegetation/ wildlife	High (7)	High (7)
	The establishment of the development will result in the removal and loss of vegetation. The impact significance is high and will be long term.	
4.3 Impacts on fauna and flora and loss of RDL faunal and floral species	Low (5)	Low (5)
	No RDL species were observed during field investigations, and although there is always the potential of loss of RDL species The impact significance is low and will be medium term. Just prior to the commencement of construction activities an independent specialist must locate, lift and relocate the ODL plants (*Hypoxis hemerocallidea)* and the few Aloe and Ledebouria plants present on site.	
4.4 Invasive Species	Medium (6)	Medium (6)
	The disturbance of soils, such as digging and excavating always has the real potential negative impact in creating a favourable environment for invasive alien weeds. There is also the reality that seeds may be imported from other areas as well. The impact significance is medium and will be long term.	
5.1 Storm water flow and drainage	Low (5)	Low (5)
	The proposed development's storm water to be adequately managed during the construction phase. The impact significance for storm water flow and drainage for both alternatives is low and short lived.	
6.1 Noise / vibration	Low (5)	Low (5)
	Developing any of the alternatives will result in the generation of noise. This impact will be short lived and the impact significance before mitigation for both alternatives is low.	
7.1 Safety and Security	Medium (6)	Medium (6)
	Developing any of the alternatives has the probability of having an impact on safety and security. The impact significance for all alternatives before mitigation is medium and will be short lived.	
7.2 Economic opportunities	Medium (6) – Positive	Medium (6) – Positive
	The development of any of the alternatives will result in creating job opportunities. The developer should make use of local labour and provide appropriate information regarding possible employment opportunities. The impact significance for all alternatives is medium (positive).	
7.3 Hygiene	Very Low (4)	Very Low (4)
	Developing any of the alternatives has the possibility of having an impact on hygiene. The impact significance is very low and short lived.	

8.1 Destruction of cultural / heritage sites	Insignificant (0)	Insignificant (0)
	The impact significance for this foreseen impact is insignificant, however, the possibility of the occurrence of cultural or heritage material cannot be excluded for any of the alternatives. Therefore a chance find procedure needs to be applied for any of the sites.	
9.1 Traffic – Construction vehicles	Low (5)	Low (5)
	Developing any of the alternatives will have an impact on traffic due to construction vehicles moving in and out of the construction site and contractor's camp. The impact significance is low and the impact will be short lived.	
10.1 Waste	Very Low (4)	Very Low (4)
	Developing any of the alternatives will result in the generation of waste. Waste generated must be removed and disposed of at a registered landfill site. The impact significance is very low and will be short lived.	
10.2 Pressure on existing infrastructure and services	Very Low (4)	Very Low (4)
	The Integrity of existing services to be ensured and phased, rather than indiscriminate clearing of the site to be undertaken. Services Agreements to be in place. The impact significance during construction is very low and will be short lived.	
OPERATIONAL PHASE		
1.1 Air pollution	Medium (6)	Medium (6)
	Developing any of the alternatives has the possibility of having an impact on air quality during the operational phase. The possibility of this impact will be reduced by the implementation of adequate mitigation measures provided. Therefore the impact significance is medium and the duration is long term.	
2.1 Alien invasion	Low (5)	Low (5)
	There is always a possibility for the occurrence of alien invasion for all alternatives, due to the disturbance of the site. The impact significance is low and the duration will be long term.	
3.1 Noise: Noise from the filling station include: Staff at the filling station talking and shouting may be disruptive late at night and on weekends. Music and radio broadcasts over the shop and forecourt may be potentially disruptive.	Medium (6)	Medium (6)
	Developing any of the alternatives will have impact on noise due to the nature of the development. The impact significance for both alternatives is medium and the duration is long term.	
4.1 Socio-economic impact on existing filling stations. Competitor filling stations in the area.	Medium (6)	Medium (6)
	Developing any of the alternatives will have an impact on the existing filling stations in the area. The impact significance is medium and the duration is long term.	
4.2 Economic opportunities	High (7)	High (7)
	Developing any of the alternatives will create economic opportunities and the impact significance is high with long term duration.	
5.1 The buildings and advertising signs may be visually intrusive. **Lights from the service/filling station may be visually intrusive.**	Medium (6)	Medium (6)
	Developing any of the alternatives will have a visual impact. The impact significance is medium and the duration is long term.	
6.1 Safety and Security: **Safety and security of staff, customers and property may be compromised as a result of fire risks associated with a filling station as well as crime**	Medium (6)	Medium (6)
	There is always a possibility that the safety and security of the site might be negatively influenced during the operational phase of any of the alternatives due to the nature of the development (fire risks, criminal activities). The impact significance is medium and the duration is long term.	
7.1 Hydrocarbons spilled from storage tanks and possible small spills of oil, diesel and petrol spilled on paved surfaces have the potential of contaminating groundwater.	Medium (6)	Medium (6)
	Developing any of the alternatives poses a threat on possible groundwater contamination. Mitigation measures should be in place to prevent or mitigate the impact should it occur. The impact significance is medium and the duration is long term.	
7.2 Storm Water and Drainage – Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another	High (7)	High (7)
	Developing any of the alternatives will result in a need for the proper management of storm water. The internal stormwater drainage of the site will be collected at an attenuation pond. The provision of services to the development is expected to improve the current stormwater provision. The impact significance is high and the duration is long term.	
8.1 Traffic – vehicles from the filling station	Medium (6)	Medium (6)
	According to the External Transport Assessment the proposed filling station will generate a negligible number of new trips as a filling station is generally not a trip generator. The impact	

	significance is medium and the duration is long term.	
8.2 Access to the proposed development	Medium (6)	Medium (6)
	The site will gain full access off the proposed fourth leg of the Olifantsfontein Road / Combretum Avenue junction. The impact significance is medium and the duration is long term.	
9.1 Visibility and accessibility (Layout of the filling station)	Medium (6)	High (7)
	The orientation of the filling station to Olifantsfontein Road for the proposal will increase visibility and facilitate quick and easy access from Olifantsfontein Road to the filling station. This orientation furthermore ensures that the Q-shop acts as a visual buffer between the forecourt and the fast food outlet and the dwellings situated to the north west of Olifantsfontein Road. The impact significance is medium and the duration is long term.	The orientation of the filling station to Olifantsfontein Road for Alternative 1 will not increase visibility nor facilitate quick and easy access from Olifantsfontein Road to the filling station. The placement of the forecourt and the fast food outlet adjacent to Olifantsfontein Road ensures maximum visual exposure but also could affect the residential area to the north in terms of light pollution. The impact significance is high and the duration is long term.
8.1 Waste	Medium (6)	Medium (6)
	The operational phase of any of the alternatives will result in the creation of waste. The impact significance is medium and the duration is long term.	
8.2 Pressure on existing infrastructure and services	Medium (6)	Medium (6)
	The development of any of the alternatives will have an impact on the existing services and infrastructure. The impact significance is medium and the duration is long term.	
TOTAL	**182**	**183**

There is a very little difference in terms of how alternatives score however the Proposal is preferred when compared to Alternative 1 because the orientation of the filling station (especially the petrol pumps) to Olifantsfontein Road for the Proposal will increase visibility and facilitate quick and easy access from Olifantsfontein Road to the filling station.

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

- **Biodiversity Impact Assessment**
- **Heritage Impact Assessment**
- **Geotechnical Investigation**
- **External Transport Assessment**
- **Bulk Services Statement Report**
- **Motivating Memorandum**

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

No impact assessment can be completely certain of the exact nature and extent of the various impacts that would result from a given development activity. However, this assessment strives to limit any uncertainties by optimising the collection of base data, and by following a rigorous impact assessment methodology.

The following are listed as gaps and or assumptions:

- **All information provided by the Applicant and Professional Team to the EAP was correct and valid at the time it was provided.**
- **The EAP does not accept any responsibility in the event that additional information comes to light at a later stage of the process.**
- **All data from unpublished research is valid and accurate.**
- **The scope of this investigation is limited to assessing the potential environmental impacts associated with the proposed establishment of a Public Garage.**

The assumptions and limitations for the Biodiversity Impact Assessment are as follows:

- **All information regarding the project as provided by the Client is taken to be accurate;**
- **This study looks at the biodiversity of the study area, which includes terrestrial ecology (fauna and flora) and aquatic ecology (watercourses, surface water).**
- **Field investigations were conducted on 11 February 2021, which is during the wet season (summer season) for the region. Sufficient summer rainfall had already fallen in the area to conduct a reasonable investigation. Due to the small size of the study area, no additional field investigations are required, including a dry season (winter season) assessment. Therefore, no additional site visits are required in terms of the ecology.**
- **Due to the small size of the study area, as well as specialist knowledge of the area from other studies and field investigations in the area, no other specialist studies in terms of ecological assessments are necessary or recommended by the Specialist.**
- **Precise buffer zones or exact GPS positions cannot be made using generalised corridors or KML files on Google Earth. However, the buffer zones, delineations, etc. drawn on maps and obtained in kml files, shapefiles, etc. are accurate to within 2-3m;**
- **Standard and acceptable methodologies were used, as required and used in South Africa.**
- **The latest data sets were used in terms of obtaining and establishing background information and desktop reviews for the project. The data sets were taken to be accurate, but were verified and refined during field investigations (ground-truthing). This includes the important DEA Screening Tool assessment.**
- **No specific or highly specialised scientific equipment were used except standard soil augers, hand-held Garmin GPS instruments, relevant computer programmes, etc.**
- **There were no limitations encountered that hindered the project or potentially impacted on the outcomes of the study. All areas of the study site and other areas requested to investigate where able to be accessed with ease and with the full assistance of landowners.**

The limitations, constraints and knowledge gaps for the Heritage Impact Assessment are as follows:

- **The authors acknowledge that the brief literature review is not exhaustive on the literature of the area. Due to the nature of heritage resources and pedestrian surveys, the possibility exists that some features or artefacts may not have been discovered/recorded and the possible occurrence of graves and other cultural material cannot be excluded. Similarly, the depth of cultural deposits and the extent of heritage sites cannot be accurately determined due its subsurface nature. This report only deals with the footprint area of the proposed development and consisted of non-intrusive surface surveys. This study did not assess the impact on medicinal plants and intangible heritage as it is assumed that these components would have been highlighted through the public consultation process if relevant. It is possible that new information could come to light in future, which might change the results of this Impact Assessment.**
- **Due to the subsurface nature of heritage resources and limited archaeological visibility due to high vegetation cover, the possibility of discovery of heritage resources during the construction phase cannot be excluded. This limitation is successfully mitigated with the implementation of a chance find procedure.**

4. IMPACTS THAT MAY RESULT FROM THE DECOMMISSIONING AND CLOSURE PHASE

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

Proposal

Potential impacts:	**Significance rating of impacts(positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**

Decommissioning and closure phase

No decommissioning is envisaged but should it take place the potential impacts are described below (Proposal & Alternative 1):

Direct impacts

- **Waste**
- **Visual impacts**
- **Dust**
- **Noise**
- **Deep excavations**
- **Fires and explosions might occur**

Indirect impacts

- **Construction traffic**
- **Security**
- **Spread of alien vegetation**

Socio Economic

The decommissioning of the site will result in a loss of revenue for the local economy and the loss of jobs at the site. In the short term the decommissioning phase will create jobs.

Cumulative impacts

- **Increased run off of water**
- **Socio economic losses**
- **Ground water and surface water pollution**

Mitigation

The site will only be decommissioned if it is no longer needed.

- **Decommissioning should take place during the dry winter months**
- **Dismantling of equipment must be conducted by an accredited contractor**
- **Deep excavations must be cordoned off prior to being back filled**
- **Once the site has been filled it must be rehabilitated**

Significance Rating –Decommissioning Phase

Table 14: Significance Rating - Decommissioning Phase

Potential impacts	**Significance rating of impacts**	**Proposed mitigation**	**Significance rating of impacts after mitigation**
Waste	**High**	**Waste to be taken and spoiled at a licensed landfill**	**Medium**

		site.	
Visual	**High**	**Rehabilitation plan**	**Medium**
Dust	**High**	**Dust suppression methods to be utilised**	**Medium**
Noise	**High**	**Working hours should be adhered to**	**Medium**
Deep excavations	**High**	**Rehabilitation plan**	**Medium**
Fires and explosions	**High**	**Adherence to the necessary safety standards for the prevention of fires and explosions**	**Medium**

Alternative 1

Potential impacts:	**Significance rating of impacts(positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
The impacts are similar to that of the Proposal.				

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

None

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

No decommissioning is envisaged.

Rehabilitation costs involved will be determined as part of the tendering process.

5. CUMULATIVE IMPACTS

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

***Cumulative impacts*:**

Visual impact (positive)

- **The current state of the site from a visual perspective is not appealing; therefore the development of the site will improve the visual quality of the area.**

Surface Water Pollution

- **Spillages of oil, lubricants and fuel from construction vehicles, plant and machinery have the potential to contaminate surface water bodies.**

Increased run off of water

- **Stormwater run-off has the potential to erode the topsoil and result in sedimentation of water bodies if not controlled.**

Ground Water Pollution

- **The construction phase could result in increased infiltration of contaminants into the ground water and soil.**

- **Spillages of oil, lubricants and fuel from construction vehicles, plant and machinery has the potential to contaminate the soil and groundwater.**
- **Cement mixing and the storage of fuel must be conducted so as to prevent contamination of the soil and groundwater.**

Economic impact
- **Job opportunities**

Cumulative impacts:
The cumulative impacts can decreased significantly if the following are adhered to:
- **On site filtration (Zorbit Grease Trap) and recycling mini plant for forecourt runoff and for the convenience shop. The accumulated grease and oil must be removed by an accredited company.**
- **Landscaping of the grounds must be done as soon as possible with indigenous vegetation so as to decrease storm water infiltration, decrease erosion and decrease storm water runoff.**
- **The installation of the Underground Storage Tanks follows SANS specifications:**

6. ENVIRONMENTAL IMPACT STATEMENT

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

Proposal

The development of the Sagewood Filling Station will have an impact on the immediate biophysical environment. However the biophysical impact of the development will be limited in a regional context and will be more than offset by the socio-economic benefits of the development such as comparative land use and economic opportunities.

The site and the entire surrounding area are within the original extent of Egoli Granite Grassland, which is a threatened ecosystem, with a status of 'Endangered'. However, there are no high sensitivity areas, habitats, or 'no-go' zones within the study area and the development falls within Zone 1 of the GPEMF and forms a natural extension of the Blue Hills Shopping Centre..

There are no protected trees, RDL plant or animal species present in the study area. There are no watercourses on the site, including rivers, streams and wetlands. There are also no distinctive drainage lines in the study area.

One orange data listed (ODL) floral species was observed during field investigations, namely, *Hypoxis hemerocallidea* (African potato). An independent specialist must locate, lift and relocate the ODL plants prior to the commencement of construction activities.

A few scattered plants of *Aloe greatheadii* and *Ledebouria spp* were found on site. These species are not on the official RDL and ODL plant species list of Gauteng Province and are therefore not official ODL plant species. However, due to their continual decline it is the opinion of the specialist that these plants should be considered priority and should be lifted and relocated.

Positive impacts from the proposed development include Economic Opportunities during the construction phase (Positive – Medium) and Economic Opportunities

during the operational phase (Positive – High).

The proposed Sagewood filling station will have a short term impact ranging from very low to high during the construction phase, and a long term impact ranging from low to high during the operational phase, but will result in positive benefits to the community during the operational phase if the correct mitigation measures are implemented during the construction and operational phases

Please see below a summary of the identified impacts and their pre-mitigation and post-mitigation impact significance rating scores.

Table 15: Summary of identified Impacts – Proposal

Potential Impacts	Signifi-cance rating of impacts	Signifi-cance rating of impacts after mitigation
CONSTRUCTION PHASE		
1.1 Dust /Air pollution The generation of dust associated with construction activities & earthworks	Low	Very Low
2.1 Visual Impacts and light pollution	Very Low	Very Low
2.2 Bulk earthworks	Very Low	Very Low
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	Low	Low
3.2 Soil Pollution	Low	Very Low
3.3 Disturbance of surface geology for development foundations	Low	Very Low
3.4 Geotechnical Constraints	Low	Very Low
4.1 Site clearing and the removal of vegetation	High	Medium
4.2 Degradation, destruction of habitats/ ecosystem, loss of natural vegetation/ wildlife	High	Medium
4.3 Impacts on fauna and flora and loss of RDL faunal and floral species	Low	Low
4.4 Invasive Species	Medium	Low
5.1 Storm water flow and drainage	Low	Low
6.1 Noise / vibration	Low	Very Low
7.1 Safety and Security	Medium	Low
7.2 Economic opportunities	Positive - Medium	Positive – Medium
7.3 Hygiene	Very Low	Very Low
8.1 Destruction of cultural / heritage sites	Insignificant	Insignificant
9.1 Traffic – Construction vehicles	Low	Very Low
10.1 Waste	Very Low	Very Low
10.2 Pressure on existing infrastructure and services	Very Low	Very Low
OPERATIONAL PHASE		
1.1 Air pollution	Medium	Low
2.1 Alien invasion	Low	Very Low
3.1 Noise	Medium	Low
4.1 Socio-economic impact on existing filling stations. Competitor filling stations in the area.	Medium	Medium
4.2 Economic opportunities	High (Positive)	High (Positive)
5.1 The buildings and advertising signs may be visually intrusive. Lights from the service/filling station may be visually intrusive.	Medium	Low
6.1 Safety and Security:	Medium	Low
7.1 Hydrocarbons spilled from storage tanks and possible small spills of oil, diesel and petrol spilled on paved surfaces have the potential of contaminating groundwater.	Medium	Low
7.2 Storm Water and Drainage – Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another	High	Medium
8.1 Traffic – vehicles from the Filling station	Medium	Low
8.2 Access to the proposed development	Medium	Low
9.1 Visibility and accessibility (Layout of the filling station)	Medium	Low
10.1 Waste	Medium	Low
10.2 Pressure on existing infrastructure and services	Medium	Low

Alternative 1

The potential impacts for Alternative 1 are similar to that of the proposal with the only exception being the impacts anticipated in terms of visibility and accessibility from Olifantsfontein Road as a result of the alternative layout of the filling station during the operational phase.

Table 16: Summary of identified Impacts - Alternative 1

Potential Impacts	Signifi-cance rating of impacts	Signifi-cance rating of impacts after mitigation
OPERATIONAL PHASE		
9.1 Visibility and accessibility (Layout of the filling station)	High	High

~~Alternative 2~~

No-go (compulsory)

The do-nothing ("No-go") option would entail not using the site and maintaining the site as it is. This will present both direct and indirect negative environmental and socio economic impacts such as:

- **Further deterioration of the site**
- **Escalation of dumping and disturbances on site**
- **Land invasion may occur**
- **Loss of investment**
- **The current stormwater issue on the R562 will not be addressed**
- **No employment opportunities will be created**

7. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

The impacts of the proposed activities have been summarised under Paragraph 5 above.

For alternative 1:

The impacts of the proposed activities have been summarised under Paragraph 5 above.

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

The proposal entails the development of the site for the purpose of a filling station which will accommodate 115m^3 of fuel on site.

The site falls within Zone 1 of the GPEMF, 2015 and according to the GPEMF, 2015, the proposed development is conditionally compatible with Zone 1.

The External Transport Assessment concluded that the Olifantsfontein Road / Combretum Avenue priority controlled junction has to convert to a signalised junction and the developer will construct the fourth-leg (southern approach) of the junction to obtain access to the proposed filling station development.

The Bulk Services Statement concluded that all the required engineering services, in respect of roads, storm water, potable water and sewer can be supplied to the proposed development.

From an ecological perspective the site and the entire surrounding area are within the original extent of Egoli Granite Grassland, which is a threatened ecosystem, with a status of 'Endangered'. However, there are no high sensitivity areas, habitats, or 'no-go' zones within the study area.

Just prior to the commencement of construction activities an independent specialist must locate, lift and relocate the ODL plants (*Hypoxis hemerocallidea)* and the few Aloe and Ledebouria plants present on site.

No buildings, structures and or other features of cultural or heritage significance will be impacted upon, however a chance find procedure will be incorporated in the Environmental Management Programme.

The orientation of a filling station is critical for visibility from the main road as well as for quick access from the main road into the filling station and back to the main road.

The Proposal is therefore preferred to Alternative 1, as the parallel orientation of the filling station (especially the petrol pumps) to Olifantsfontein Road will increase visibility and facilitate quick and easy access from Olifantsfontein Road to the filling station, as opposed to the perpendicular orientation of the filling station to Olifantsfontein as per Alternative 1. The orientation of the forecourt and Quick shop as per the Proposal will also reduce the visual impact on the land uses north of Olifantsfontein Road.

8. SPATIAL DEVELOPMENT TOOLS

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

Gauteng Spatial Development Framework, 2011

Gauteng Province adopted the Gauteng Spatial Development Framework (GSDF, 2011) as the core policy framework intended to guide decisions relating to the location and nature of physical development in the Province. The GSDF seeks to achieve the following:

- **Creation of a functionally integrated natural open space system and protection of the rural parts of the province for agricultural, recreational (walking and cycling), biodiversity and aquifer management purposes;**
- **The containment of urban sprawl by way of growth management that seeks to advance compaction, residential densification, and in-fill development, and mixed land uses within the existing urban fabric which will promote walking and cycling;**
- **The social and economic integration of disadvantaged communities into the urban system, particularly those on the urban periphery;**
- **The establishment of a hierarchy of nodes coupled with the improvement of linkages and connectivity between these nodes and areas of economic opportunity;**
- **Land use-public transport integration through nodal and corridor development;**
- **The promotion of viable public transport systems and reduction of reliance on**

private mobility with strong emphasis on densification along the priority public transport routes, especially rail and BRT routes which form the basis of the IRPTN movement system;

- **Public transport routes become the priority areas for densification and infill development; and**
- **The urban system's existing and proposed road network is used to reinforce and shape the urban form as a growth management tool.**

9. RECOMMENDATION OF THE PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the Environmental Assessment Practitioner as bound by professional ethical standards and the code of conduct of EAPASA).

YES	NO

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

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

ISSUE	ENVIRONMENTAL MANAGEMENT REQUIREMENTS
Construction	**Short-term nuisance impacts must be managed as they occur. This includes dust control, erosion prevention, noise control through appropriate construction hours etc.**
Surface Water Pollution	**Storm water management measures must be installed as required, and regularly maintained. Storm water must be channelled through the separators/sediment traps systems before being allowed to flow into the storm water management system of the area.**
Invasive Species	**A weed control programme should be implemented in the project area and especially on the fringes and public open space areas.**
Pollution	**Regular leak detection and proper surface water management will keep the risk low.**
Air quality	**Vapour release from filling station activities can be limited using equipment that automatically limit the release pathway, or specifically return vapour to the storage tanks. Any unnecessary exposure of liquid fuels must be prevented.**
Noise	**Noise from vehicles and equipment can be reduced by the strategic placement of signage, low walling elements or landscaping. The use of noisy machinery at night must be limited as the absorption capacity of the surroundings will be at its lowest.**
Lighting	**External lighting must be limited in order to blend in with the immediate area. Illuminated signage and areas must not be 'floodlit', but rather specifically and for a particular purpose – such as backlighting that does not illuminate more than just the display in front of the light source. Appropriate screening can also be provided to prevent the lights of vehicles entering or exiting the site from becoming a nuisance.**
Socio-Economic	**The development of a new Filling station facility will increase the employment opportunities in the area.**

Safety and Security	**Activities must adhere to relevant National and Fuel Retailer-Specific Safety Standards concerning fuel handling equipment installation and use. Specifically, all installations must have integral automatic safety systems and the potential presence of open flames or point sources of heating that exceed the flashpoint of the fuel within close proximity to the fuel storage and handling areas must be eliminated.** **Mitigation is possible in terms of the maintenance and operation of fuel delivery tankers, the caution exercised during filling of the storage tanks on site, and the quality and operation of the pump equipment used during service of customers' vehicles.**
Rehabilitation	**Rehabilitation plan for disturbed areas to be compiled and implemented as part of the construction phase of the township including related infrastructure.**
Decommissioning	**Similar to the construction phase, care must be taken to prevent the undue exposure of soils, as this could lead to erosion and sedimentation of watercourses. Any building rubble or stockpiling must be removed to a registered facility, or preferably used in another application.** **Any contaminated soils must be excavated separately and disposed of at an appropriate disposal site.**

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

The need for the proposed filling station and fast food outlet is as a result of the site being situated adjacent to an existing Shopping Centre and it's accessibility through the major road network

There are not many public garages along Summit Road as well as Olifantsfontein Road, and the inclusion of a filling station to the Blue Hills Shopping Centre will be beneficial to the surrounding area.

The positive function of the filling station in its urban setting can be regarded as both needed and desirable as it fulfils a positive economic purpose and it should be allowed to function optimally and to its full potential, the addition of the convenience store as well as a quick serving restaurant will add to the full utilization of the site.

Is has become common that a filling station is accompanied by a convenience store/ shop as many patrons whilst filling their petrol tanks up, most often get a refreshment and everyday goods at these shops. Besides the everyday goods being sold to patrons at convenience stores, many people actually use the store/ public garage as a rest point between peak traffic times so as to spend a bit of time away from the long snail-paced movements and to rather enjoy a refreshment as well as a possible restroom break.

The use of a convenience store as well as quick service restaurants has become reliant on the running of a petrol station and both are seen as a vital component to the other as both need to run for the site to be used optimally.

The project will additionally provide job opportunities to skilled and unskilled workers on a temporary and permanent basis and will provide the opportunity for to refueling in close proximity to Residential land uses.

11. THE PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED
(consider when the activity is expected to be concluded)

Medium term (2-15 years)

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

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

EMPr attached	**YES**

SECTION F: APPENDIXES

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

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

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

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Route position information

Appendix E: Public participation information

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

Appendix G: Specialist reports

Appendix H: EMPr

Appendix I: Other information

CHECKLIST

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

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